



Services of the San Francisco Public Utilities Commission

CITY AND COUNTY OF SAN FRANCISCO  
PUBLIC UTILITIES COMMISSION  
WASTEWATER ENTERPRISE



SOUTHEAST WATER POLLUTION CONTROL PLANT  
BIOSOLIDS DIGESTER FACILITIES PROJECT

February 8, 2021

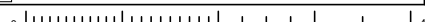
CIVIC DESIGN REVIEW  
PHASE 3

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000-G-00-0001

# INDEX TO DRAWINGS

INCLUDED IN SUBMITTAL	DRAWING NUMBER	SHEET TITLE	INCLUDED IN SUBMITTAL	DRAWING NUMBER	SHEET TITLE	INCLUDED IN SUBMITTAL	DRAWING NUMBER	SHEET TITLE			
<b>000 - GENERAL SITEWIDE</b>											
<b>GENERAL</b>											
*	000-G-01-0001	COVER	*	000-L-15-4001	ENLARGED GRADING PLAN - FACILITY 600 ENTRY COURT	*	600-A-05-3002	BUILDING SECTION			
*	000-G-01-0003	INDEX TO DRAWINGS 1	*	000-L-16-1001	OVERALL LANDSCAPE IRRIGATION PLAN	*	600-A-05-3003	BUILDING SECTION			
*	000-G-01-0004	INDEX TO DRAWINGS 2	*	000-L-16-1005	LANDSCAPE IRRIGATION PLAN - AREA B3	*	600-A-05-3004	BUILDING SECTION			
*	000-G-01-0005	INDEX TO DRAWINGS 3	*	000-L-16-1008	LANDSCAPE IRRIGATION PLAN - AREA C3	*	600-A-05-3005	BUILDING SECTION			
*	000-G-01-7003	CIVIL LEGEND, SYMBOLS, AND GENERAL NOTES	*	000-L-17-1001	OVERALL PLANTING PLAN	*	600-A-05-3006	BUILDING SECTION			
*	000-G-01-7004	CIVIL ABBREVIATIONS AND GENERAL NOTES	*	000-L-17-1005	LANDSCAPE PLANTING PLAN - AREA B3	*	600-A-05-3007	BUILDING SECTION			
*	000-G-01-7005	LANDSCAPE NOTES	*	000-L-17-1008	LANDSCAPE PLANTING PLAN - AREA C3	*	600-A-05-3008	WALL SECTION			
*	000-G-01-7006	LANDSCAPE LEGENDS	*	000-L-17-4001	ENLARGED PLANTING PLAN - FACILITY 600 ENTRY COURT	*	600-A-05-3009	WALL SECTION			
*	000-G-01-7007	WATER FEATURE SYMBOLS	*	000-L-17-4002	ENLARGED PLANTING PLAN - G-07 AND G-N7 VEHICLE AND PEDESTRIAN GATES	*	600-A-05-3010	WALL SECTION			
*	000-G-01-7008	LANDSCAPE ABBREVIATIONS	<b>ARCHITECTURAL</b>			*	600-A-05-4001	CLADDING ELEVATIONS			
*	000-G-01-7014	ARCHITECTURAL LEGEND AND SYMBOLS	*	000-A-75-5001	ARCHITECTURAL WALL TYPES	*	600-A-05-4002	CLADDING ELEVATIONS			
*	000-G-01-7015	ARCHITECTURAL ABBREVIATIONS	*	000-A-75-5003	DOOR TYPES	*	600-A-05-4003	CLADDING ELEVATIONS			
*	000-G-01-8109	DISABILITY ACCESS & TITLE 24 ENVELOPE FORMS-600	*	000-A-75-5004	WINDOW TYPES	*	600-A-05-4004	CLADDING ELEVATIONS			
*	000-G-01-8110	TITLE 24 ENVELOPE FORMS (CONTINUED)-600	*	000-A-75-5005	WINDOW TYPES	*	600-A-05-4005	CLADDING ELEVATIONS			
*	000-G-01-8111	TITLE 24 ENVELOPE FORMS (CONTINUED)-600	*	000-A-75-5006	WINDOW TYPES	*	600-A-05-7001	OVERALL BASEMENT FINISH PLAN			
*	000-G-01-8112	TITLE 24 ENVELOPE FORMS (CONTINUED)-600	*	000-A-75-5007	WINDOW TYPES	*	600-A-05-7002	OVERALL FIRST FLOOR FINISH PLAN			
*	000-G-01-8113	TITLE 24 ENVELOPE FORMS-610	*	000-A-75-5008	WINDOW TYPES	*	600-A-05-7003	OVERALL SECOND FLOOR FINISH PLAN			
*	000-G-01-8114	TITLE 24 ENVELOPE FORMS (CONTINUED)-610	*	000-A-75-5009	CHANNEL GLASS TYPES	*	600-A-05-7004	OVERALL THIRD FLOOR FINISH PLAN			
*	000-G-01-8115	TITLE 24 ENVELOPE FORMS (CONTINUED)-610	*	000-A-75-5010	CHANNEL GLASS TYPES	*	600-A-05-7005	OVERALL FOURTH FLOOR FINISH PLAN			
*	000-G-01-8116	DISABILITY ACCESS & TITLE 24 ENVELOPE FORMS - 615	*	000-A-75-5011	CHANNEL GLASS TYPES	*	600-A-05-7006	OVERALL FIRST FLOOR FURNITURE PLAN			
*	000-G-01-8117	TITLE 24 ENVELOPE FORMS (CONTINUED)-615	*	000-A-75-6001	FINISH SCHEDULE	*	600-A-05-7007	OVERALL SECOND FLOOR FURNITURE PLAN			
*	000-G-01-8118	TITLE 24 ENVELOPE FORMS (CONTINUED)-615	*	000-A-75-6002	FINISH SCHEDULE	*	600-A-05-7008	OVERALL FOURTH FLOOR FURNITURE PLAN			
*	000-G-01-8119	TITLE 24 ENVELOPE FORMS (CONTINUED)-615	*	000-A-75-6003	FINISH SCHEDULE	*	600-A-10-1001	BASEMENT PLAN AREA A			
*	000-G-01-8120	TITLE 24 ENVELOPE FORMS (CONTINUED)-615	*	000-A-75-6004	DOOR SCHEDULE	*	600-A-10-1002	BASEMENT PLAN AREA B			
*	000-G-01-8121	TITLE 24 ENVELOPE FORMS - 607	*	000-A-75-6005	DOOR SCHEDULE	*	600-A-10-1003	BASEMENT PLAN AREA C			
*	000-G-01-8122	TITLE 24 ENVELOPE FORMS (CONTINUED) - 607	*	000-A-75-6006	DOOR SCHEDULE	*	600-A-10-1004	BASEMENT PLAN AREA D			
*	000-G-01-8123	TITLE 24 ENVELOPE FORMS (CONTINUED) - 607	*	000-A-75-6007	LOUVER SCHEDULE	*	600-A-10-1005	BASEMENT PLAN AREA E			
*	000-G-01-8124	TITLE 24 ENVELOPE FORMS (CONTINUED) - 607	*	000-A-75-6008	FURNITURE AND LOOSE EQUIPMENT SCHEDULE	*	600-A-10-1006	BASEMENT PLAN AREA F			
*	000-G-01-8125	TITLE 24 ENVELOPE FORMS (CONTINUED) - 607	*	000-A-75-6009	EXTERIOR FINISH SCHEDULE	*	600-A-10-1007	BASEMENT REFLECTED CEILING PLAN AREA A			
*	000-G-01-8126	TITLE 24 ENVELOPE FORMS (CONTINUED) - 607	<b>600 - SOLIDS PRETREATMENT</b>			*	600-A-10-1008	BASEMENT REFLECTED CEILING PLAN AREA B			
*	000-G-01-8127	TITLE 24 ENVELOPE FORMS-921	<b>LANDSCAPING</b>			*	600-A-10-1009	BASEMENT REFLECTED CEILING PLAN AREA C			
*	000-G-01-8128	TITLE 24 ENVELOPE FORMS (CONTINUED)-921	*	600-L-05-4001	GREEN ROOF PLANTING PLAN	*	600-A-10-1010	BASEMENT REFLECTED CEILING PLAN AREA D			
*	000-G-01-8129	TITLE 24 ENVELOPE FORMS (CONTINUED)-921	*	600-L-05-4002	GREEN ROOF IRRIGATION PLAN	*	600-A-10-1011	BASEMENT REFLECTED CEILING PLAN AREA E			
*	000-G-01-8130	TITLE 24 ENVELOPE FORMS (CONTINUED)-921	*	600-L-05-5001	PLANTING DETAILS	*	600-A-10-1012	BASEMENT REFLECTED CEILING PLAN AREA F			
*	000-G-01-8131	TITLE 24 ENVELOPE FORMS (CONTINUED)-921	*	600-L-05-5002	IRRIGATION DETAILS	*	600-A-10-7001	BASEMENT PARTIAL PLAN/RCP/ELEVATIONS			
*	000-G-01-8132	TITLE 24 ENVELOPE FORMS (CONTINUED)-921	*	600-L-20-4001	WATER FEATURE SITE PLAN	*	600-A-20-1001	FIRST FLOOR PLAN AREA A			
<b>CIVIL</b>									*	600-A-20-1002	FIRST FLOOR PLAN AREA B
*	000-C-14-1001	OVERALL SITE AND PAVING PLAN	*	600-L-20-4002	WATER FEATURE FINISHES PLAN	*	600-A-20-1003	FIRST FLOOR PLAN AREA C			
*	000-C-14-1003	SITE AND PAVING PLAN - AREA A3	*	600-L-20-4003	WATER FEATURE BASIN CONCRETE AND PENETRATION PLAN	*	600-A-20-1004	FIRST FLOOR PLAN AREA D			
*	000-C-14-1005	SITE AND PAVING PLAN - AREA B3	*	600-L-20-4004	WATER FEATURE PIPING PLAN	*	600-A-20-1005	FIRST FLOOR PLAN AREA E			
*	000-C-14-1007	SITE AND PAVING PLAN - AREA C2	*	600-L-20-5001	ELEVATIONS	*	600-A-20-1006	FIRST FLOOR PLAN AREA F			
*	000-C-14-1008	SITE AND PAVING PLAN - AREA C3	*	600-L-20-5002	ENLARGED PLANS	*	600-A-20-1007	FIRST FLOOR REFLECTED CEILING PLAN AREA A			
*	000-C-14-1009	SITE AND PAVING PLAN - AREA C4	*	600-L-20-5003	SECTIONS	*	600-A-20-1008	FIRST FLOOR REFLECTED CEILING PLAN AREA B			
*	000-C-14-1010	SITE AND PAVING PLAN - AREA C5	*	600-L-20-5004	SECTIONS	*	600-A-20-1009	FIRST FLOOR REFLECTED CEILING PLAN AREA C			
*	000-C-14-1011	SITE AND PAVING PLAN - AREA D3	*	600-L-20-5005	WATERPROOFING DETAILS	*	600-A-20-1010	FIRST FLOOR REFLECTED CEILING PLAN AREA D			
*	000-C-14-1012	SITE AND PAVING PLAN - AREA D4	*	600-L-20-5006	DETAILS	*	600-A-20-1011	FIRST FLOOR REFLECTED CEILING PLAN AREA E			
*	000-C-14-1013	SITE AND PAVING PLAN - AREA D5	*	600-L-20-5007	DETAILS	*	600-A-20-1012	FIRST FLOOR REFLECTED CEILING PLAN AREA F			
*	000-C-14-1014	SITE AND PAVING PLAN - AREA E4	*	600-L-20-5008	STRUCTURAL DETAILS	*	600-A-20-7001	FIRST FLOOR PARTIAL PLAN/RCP			
*	000-C-14-1015	SITE AND PAVING PLAN - AREA E5	*	600-L-20-6001	WATER FEATURE P&ID	*	600-A-20-7002	FIRST FLOOR PARTIAL PLAN			
<b>LANDSCAPING</b>									*	600-A-20-7003	FIRST FLOOR PARTIAL RCP
*	000-L-14-1001	OVERALL LAYOUT PLAN	<b>ARCHITECTURAL</b>			*	600-A-20-7004	FIRST FLOOR PARTIAL PLAN/RCP			
*	000-L-14-1005	LANDSCAPE LAYOUT PLAN - AREA B3	*	600-A-05-0001	CODE OVERVIEW	*	600-A-20-7005	FIRST FLOOR PARTIAL PLAN/RCP/ELEVATIONS			
*	000-L-14-1007	LANDSCAPE LAYOUT PLAN - AREA C2	*	600-A-05-0002	CODE REVIEW BASEMENT PLAN	*	600-A-20-7006	FIRST FLOOR PARTIAL PLAN/RCP/ELEVATIONS			
*	000-L-14-1008	LANDSCAPE LAYOUT PLAN - AREA C3	*	600-A-05-0003	CODE REVIEW FIRST FLOOR PLAN	*	600-A-20-7101	FIRST FLOOR ELEVATIONS			
*	000-L-14-1011	LANDSCAPE LAYOUT PLAN - AREA D3	*	600-A-05-0004	CODE REVIEW SECOND FLOOR PLAN	*	600-A-20-7102	FIRST FLOOR ELEVATIONS			
*	000-L-14-1012	LANDSCAPE LAYOUT PLAN - AREA D4	*	600-A-05-0005	CODE REVIEW THIRD FLOOR PLAN	*	600-A-20-7103	FIRST FLOOR ELEVATIONS			
*	000-L-14-1014	LANDSCAPE LAYOUT PLAN - AREA E4	*	600-A-05-0006	CODE REVIEW FOURTH FLOOR PLAN	*	600-A-20-7104	FIRST FLOOR ELEVATIONS			
*	000-L-14-4001	ENLARGED LAYOUT PLAN - FACILITY 600 ENTRY COURT	*	600-A-05-1001	OVERALL BASEMENT PLAN						
*	000-L-14-4002	ENLARGED LAYOUT PLAN - G-07 AND G-N7 VEHICLE AND PEDESTRIAN GATES	*	600-A-05-1002	OVERALL FIRST FLOOR PLAN						
*	000-L-14-5001	LANDSCAPE DETAILS	*	600-A-05-1003	OVERALL SECOND FLOOR PLAN						
*	000-L-14-5002	LANDSCAPE DETAILS	*	600-A-05-1004	OVERALL THIRD FLOOR PLAN						
*	000-L-14-5003	LANDSCAPE DETAILS	*	600-A-05-1005	OVERALL FOURTH FLOOR PLAN						
*	000-L-14-5004	LANDSCAPE DETAILS	*	600-A-05-1006	OVERALL FOURTH FLOOR SLAB PLAN						
*	000-L-14-5005	LANDSCAPE DETAILS	*	600-A-05-1007	OVERALL ROOF PLAN						
*	000-L-14-5006	LANDSCAPE DETAILS	*	600-A-05-1008	OVERALL BASEMENT REFLECTED CEILING PLAN						
*	000-L-14-5007	LANDSCAPE DETAILS	*	600-A-05-1009	OVERALL FIRST FLOOR REFLECTED CEILING PLAN						
*	000-L-14-5008	LANDSCAPE DETAILS	*	600-A-05-1010	OVERALL SECOND FLOOR REFLECTED CEILING PLAN						
*	000-L-14-5009	LANDSCAPE DETAILS	*	600-A-05-1011	OVERALL THIRD FLOOR REFLECTED CEILING PLAN						
*	000-L-14-5010	LANDSCAPE DETAILS	*	600-A-05-1012	OVERALL FOURTH FLOOR REFLECTED CEILING PLAN						
*	000-L-14-5011	LANDSCAPE DETAILS	*	600-A-05-2001	NORTH ELEVATION						
*	000-L-14-5012	LANDSCAPE DETAILS	*	600-A-05-2002	EAST ELEVATION						
*	000-L-14-5013	LANDSCAPE DETAILS	*	600-A-05-2003	SOUTH ELEVATION						
*	000-L-14-5014	LANDSCAPE DETAILS	*	600-A-05-2004	WEST ELEVATION						
*	000-L-14-5015	LANDSCAPE DETAILS	*	600-A-05-3001	BUILDING SECTION						
*	000-L-14-5016	LANDSCAPE DETAILS									
*	000-L-15-1001	OVERALL GRADING PLAN									
*	000-L-15-1008	LANDSCAPE GRADING PLAN - AREA C3									



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ELEVATION  
DATUM  
  
CITY

BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. LAMBERT
PROJECT MANAGER	T. STIGERS	DESIGNED	T. EASTMAN
APPROVED	D. GREEN	CHECKED	R. FRANKENFIELD
NO.	DATE	DESCRIPTION	BY
REVISIONS			

<b>CONTRACT NO. WW-647R</b>		
CITY AND COUNTY OF SAN FRANCISCO		
<b>PUBLIC UTILITIES COMMISSION</b>		
INFRASTRUCTURE DIVISION		
ENGINEERING MANAGEMENT BUREAU		
<b>SOUTHEAST WATER POLLUTION CONTROL PLANT</b>		
<b>BIOSOLIDS DIGESTER FACILITIES PROJECT</b>		
GENERAL SITEWIDE		
<b>INDEX TO DRAWINGS 1</b>		
CHECKED / APPROVED	DRAWN	
SECTION MANAGER	DESIGNED	
WWE O&M MANAGER	SCALE	DATE
	AS SHOWN	Feb 8, 2021
APPROVED	APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU		
WWE ENGINEERING MANAGER		
PLAN NO.	DRAWING / FILE NO.	REVISION
	<b>000-G-01-0003</b>	

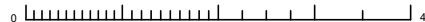
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<b>600 - SOLIDS PRETREATMENT</b>								
ARCHITECTURAL								
*	600-A-30-1001	SECOND FLOOR PLAN AREA A	*	600-A-69-5011	DETAILS	*	610-A-10-1006	LOWER BASEMENT REFLECTED CEILING PLAN AREA A
*	600-A-30-1002	SECOND FLOOR PLAN AREA B	*	600-A-69-5012	DETAILS	*	610-A-10-1007	LOWER BASEMENT REFLECTED CEILING PLAN AREA B
*	600-A-30-1003	SECOND FLOOR PLAN AREA C	*	600-A-69-5013	DETAILS	*	610-A-10-1008	LOWER BASEMENT REFLECTED CEILING PLAN AREA C
*	600-A-30-1004	SECOND FLOOR PLAN AREA D	*	600-A-69-5014	DETAILS	*	610-A-10-1009	LOWER BASEMENT REFLECTED CEILING PLAN AREA D
*	600-A-30-1005	SECOND FLOOR PLAN AREA E	*	600-A-69-5015	DETAILS	*	610-A-10-1010	LOWER BASEMENT REFLECTED CEILING PLAN AREA E
*	600-A-30-1006	SECOND FLOOR PLAN AREA F	*	600-A-69-7001	DETAILS	*	610-A-20-1001	UPPER BASEMENT PLAN AREA A
*	600-A-30-1007	SECOND FLOOR REFLECTED CEILING PLAN AREA A	*	600-A-69-7002	DETAILS	*	610-A-20-1002	UPPER BASEMENT PLAN AREA B
*	600-A-30-1008	SECOND FLOOR REFLECTED CEILING PLAN AREA B	*	600-A-69-7003	DETAILS	*	610-A-20-1003	UPPER BASEMENT PLAN AREA C
*	600-A-30-1009	SECOND FLOOR REFLECTED CEILING PLAN AREA C	*	600-A-69-7004	DETAILS	*	610-A-20-1004	UPPER BASEMENT PLAN AREA D
*	600-A-30-1010	SECOND FLOOR REFLECTED CEILING PLAN AREA D	*	600-A-69-7005	DETAILS	*	610-A-20-1005	UPPER BASEMENT PLAN AREA E
*	600-A-30-1011	SECOND FLOOR REFLECTED CEILING PLAN AREA E	*	600-A-69-7006	DETAILS	*	610-A-20-1006	UPPER BASEMENT REFLECTED CEILING PLAN AREA A
*	600-A-30-1012	SECOND FLOOR REFLECTED CEILING PLAN AREA F	*	600-A-69-7007	DETAILS	*	610-A-20-1007	UPPER BASEMENT REFLECTED CEILING PLAN AREA B
*	600-A-30-7001	SECOND FLOOR PARTIAL PLAN/RCP	*	600-A-69-7008	DETAILS	*	610-A-20-1008	UPPER BASEMENT REFLECTED CEILING PLAN AREA C
*	600-A-30-7002	SECOND FLOOR PARTIAL PLAN/RCP	*	600-A-69-7009	DETAILS	*	610-A-20-1009	UPPER BASEMENT REFLECTED CEILING PLAN AREA D
*	600-A-30-7003	SECOND FLOOR PARTIAL PLAN/RCP	*	600-A-99-9001	3D PERSPECTIVE VIEWS	*	610-A-20-1010	UPPER BASEMENT REFLECTED CEILING PLAN AREA E
*	600-A-30-7004	SECOND FLOOR PARTIAL PLAN	*	600-A-99-9002	3D PERSPECTIVE VIEWS	*	610-A-30-1001	FIRST FLOOR PLAN AREA A
*	600-A-30-7005	SECOND FLOOR PARTIAL RCP	<b>607 - STEAM GENERATION</b>			*	610-A-30-1002	FIRST FLOOR PLAN AREA B
*	600-A-30-7101	SECOND FLOOR ELEVATIONS	ARCHITECTURAL			*	610-A-30-1003	FIRST FLOOR PLAN AREA C
*	600-A-30-7102	SECOND FLOOR ELEVATIONS	*	607-A-05-0001	CODE REVIEW	*	610-A-30-1004	FIRST FLOOR PLAN AREA D
*	600-A-30-7103	SECOND FLOOR ELEVATIONS	*	607-A-05-0002	CODE REVIEW PLAN	*	610-A-30-1005	FIRST FLOOR PLAN AREA E
*	600-A-30-7104	SECOND FLOOR ELEVATIONS	*	607-A-05-1001	OVERALL GROUND FLOOR PLAN	*	610-A-40-1001	ROOF PLAN AREA A
*	600-A-30-7105	SECOND FLOOR ELEVATIONS	*	607-A-05-1002	OVERALL ROOF PLAN	*	610-A-40-1002	ROOF PLAN AREA B
*	600-A-30-7106	SECOND FLOOR ELEVATIONS	*	607-A-05-1003	OVERALL GROUND FLOOR RELECTED CEILING PLAN ELEVATIONS	*	610-A-40-1003	ROOF PLAN AREA C
*	600-A-30-7107	SECOND FLOOR ELEVATIONS	*	607-A-05-2001	ELEVATIONS	*	610-A-40-1004	ROOF PLAN AREA D
*	600-A-40-1001	THIRD FLOOR PLAN AREA A	*	607-A-05-3001	BUILDING SECTIONS	*	610-A-40-1005	ROOF PLAN AREA E
*	600-A-40-1002	THIRD FLOOR PLAN AREA B	*	607-A-10-1001	GROUND FLOOR PLAN AREA A	*	610-A-63-1001	STAIR 1 AND 2 PARTIAL PLANS
*	600-A-40-1003	THIRD FLOOR PLAN AREA C	*	607-A-10-1002	GROUND FLOOR PLAN AREA B	*	610-A-63-1002	STAIR 1 AND 2 SECTION
*	600-A-40-1004	THIRD FLOOR PLAN AREA D	*	607-A-10-1003	GROUND FLOOR PLAN AREA C	*	610-A-63-1003	STAIR 1 AND 2 SECTION
*	600-A-40-1005	THIRD FLOOR REFLECTED CEILING PLAN AREA A	*	607-A-10-1004	GROUND FLOOR PLAN AREA D	*	610-A-63-1004	STAIR 1 AND 2 SECTION
*	600-A-40-1006	THIRD FLOOR REFLECTED CEILING PLAN AREA B	*	607-A-10-1005	GROUND FLOOR PLAN AREA E	*	610-A-63-1005	STAIR 1 AND 2 PARTIAL ELEVATIONS
*	600-A-40-1007	THIRD FLOOR REFLECTED CEILING PLAN AREA C	*	607-A-10-1006	GROUND FLOOR PLAN REFLECTED CEILING PLAN AREA A	*	610-A-63-1006	STAIR 1 AND 2 PARTIAL ELEVATIONS
*	600-A-40-1008	THIRD FLOOR REFLECTED CEILING PLAN AREA D	*	607-A-10-1007	GROUND FLOOR PLAN REFLECTED CEILING PLAN AREA B	*	610-A-63-1007	ELEVATOR PARTIAL PLANS
*	600-A-40-4001	LOWER ROOF PLAN	*	607-A-10-1008	GROUND FLOOR PLAN REFLECTED CEILING PLAN AREA C	*	610-A-63-1008	ELEVATOR PARTIAL ELEVATIONS
*	600-A-40-7001	THIRD FLOOR PARTIAL PLAN/RCP/ELEVATIONS	*	607-A-10-1009	GROUND FLOOR PLAN REFLECTED CEILING PLAN AREA D	*	610-A-63-1009	ELEVATOR PARTIAL ELEVATIONS
*	600-A-50-1001	FOURTH FLOOR PLAN AREA A	*	607-A-10-1010	GROUND FLOOR PLAN REFLECTED CEILING PLAN AREA E	*	610-A-63-1010	ELEVATOR SECTIONS
*	600-A-50-1002	FOURTH FLOOR PLAN AREA B	*	607-A-20-1001	ROOF PLAN AREA A	*	610-A-63-1011	ELEVATOR SECTIONS
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*	600-A-50-1005	FOURTH FLOOR REFLECTED CEILING PLAN AREA A	*	607-A-20-1004	ROOF PLAN AREA D	*	610-A-69-5002	DETAILS
*	600-A-50-1006	FOURTH FLOOR REFLECTED CEILING PLAN AREA B	*	607-A-20-1005	ROOF PLAN AREA E	*	610-A-69-5003	DETAILS
*	600-A-50-1007	FOURTH FLOOR REFLECTED CEILING PLAN AREA C	*	607-A-69-5001	DETAILS	*	610-A-69-5004	DETAILS
*	600-A-50-1008	FOURTH FLOOR REFLECTED CEILING PLAN AREA D	*	607-A-99-9001	3D PERSPECTIVE VIEWS	*	610-A-69-5005	DETAILS
*	600-A-50-4001	FOURTH FLOOR SLAB PLAN	<b>610 - ANAEROBIC DIGESTION</b>			*	610-A-69-5006	DETAILS
*	600-A-50-7001	FOURTH FLOOR PARTIAL PLAN	ARCHITECTURAL			*	610-A-69-5007	DETAILS
*	600-A-50-7002	FOURTH FLOOR PARTIAL RCP	*	610-A-05-0001	CODE OVERVIEW	*	610-A-69-5008	DETAILS
*	600-A-50-7003	FOURTH FLOOR PARTIAL PLAN/RCP	*	610-A-05-0002	CODE REVIEW LOWER BASEMENT PLAN	*	610-A-69-5009	DETAILS
*	600-A-50-7004	FOURTH FLOOR PARTIAL PLAN/RCP	*	610-A-05-0003	CODE REVIEW UPPER BASEMENT PLAN	*	610-A-69-5010	DETAILS
*	600-A-50-7005	FOURTH FLOOR PARTIAL PLAN/RCP	*	610-A-05-0004	CODE REVIEW FIRST FLOOR PLAN	*	610-A-69-5011	DETAILS
*	600-A-50-7101	FOURTH FLOOR ELEVATIONS	*	610-A-05-0005	CODE REVIEW TOP LEVEL PLAN	*	610-A-69-5012	DETAILS
*	600-A-50-7102	FOURTH FLOOR ELEVATIONS	*	610-A-05-1001	OVERALL LOWER BASEMENT PLAN	*	610-A-99-9001	3D PERSPECTIVE VIEW
*	600-A-50-7103	FOURTH FLOOR ELEVATIONS	*	610-A-05-1002	OVERALL UPPER BASEMENT PLAN	*	610-A-99-9002	3D PERSPECTIVE VIEW
*	600-A-50-7104	FOURTH FLOOR ELEVATIONS	*	610-A-05-1003	OVERALL FIRST FLOOR PLAN			
*	600-A-50-7105	FOURTH FLOOR ELEVATIONS	*	610-A-05-1004	OVERALL TOP LEVEL PLAN			
*	600-A-50-7106	FOURTH FLOOR ELEVATIONS	*	610-A-05-1005	OVERALL LOWER BASEMENT REFLECTED CEILING PLAN			
*	600-A-50-7107	FOURTH FLOOR ELEVATIONS	*	610-A-05-1006	OVERALL UPPER BASEMENT REFLECTED CEILING PLAN			
*	600-A-60-4001	UPPER ROOF PLAN	*	610-A-05-2001	WEST AND EAST KEY ELEVATIONS			
*	600-A-63-1001	STAIR 1 PARTIAL PLANS	*	610-A-05-2002	SOUTH AND NORTH KEY ELEVATIONS			
*	600-A-63-1002	STAIR 1 SECTIONS	*	610-A-05-2003	ELECTRICAL BUILDING ELEVATIONS			
*	600-A-63-1003	STAIR 1 SECTIONS	*	610-A-05-3001	BUILDING SECTIONS			
*	600-A-63-1004	STAIR 2 PARTIAL PLANS	*	610-A-05-3002	BUILDING SECTIONS			
*	600-A-63-1005	STAIR 2 SECTIONS	*	610-A-05-3003	BUILDING SECTIONS			
*	600-A-63-1006	STAIR 2 SECTIONS	*	610-A-05-3004	BUILDING SECTIONS			
*	600-A-63-1007	STAIR 3 PARTIAL PLAN / SECTIONS	*	610-A-05-3005	BUILDING SECTIONS			
*	600-A-63-1008	ELEVATOR PARTIAL PLAN / SECTIONS	*	610-A-05-3006	BUILDING SECTION			
*	600-A-63-4001	STAIR 1 ELEVATIONS	*	610-A-05-3007	BUILDING SECTIONS			
*	600-A-63-4002	STAIR 2 ELEVATIONS	*	610-A-05-3008	WALL SECTIONS			
*	600-A-69-5001	DETAILS	*	610-A-05-4001	CLADDING ELEVATIONS			
*	600-A-69-5002	DETAILS	*	610-A-10-1001	LOWER BASEMENT PLAN AREA A			
*	600-A-69-5003	DETAILS	*	610-A-10-1002	LOWER BASEMENT PLAN AREA B			
*	600-A-69-5004	DETAILS	*	610-A-10-1003	LOWER BASEMENT PLAN AREA C			
*	600-A-69-5005	DETAILS	*	610-A-10-1004	LOWER BASEMENT PLAN AREA D			
*	600-A-69-5006	DETAILS	*	610-A-10-1005	LOWER BASEMENT PLAN AREA E			
*	600-A-69-5007	DETAILS						
*	600-A-69-5008	DETAILS						
*	600-A-69-5009	DETAILS						
*	600-A-69-5010	DETAILS						

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CITY

Scope II



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. LAMBERT
PROJECT MANAGER	T. STIGERS	DESIGNED	T. EASTMAN
APPROVED	D. GREEN	CHECKED	R. FRANKENFIELD
NO.	DATE	DESCRIPTION	BY
		REVISIONS	APPRD

<b>CONTRACT NO. WW-647R</b>		
CITY AND COUNTY OF SAN FRANCISCO		
<b>PUBLIC UTILITIES COMMISSION</b>		
INFRASTRUCTURE DIVISION		
ENGINEERING MANAGEMENT BUREAU		
<b>SOUTHEAST WATER POLLUTION CONTROL PLANT</b>		
BIOSOLIDS DIGESTER FACILITIES PROJECT		
GENERAL SITEWIDE		
<b>INDEX TO DRAWINGS 2</b>		
CHECKED / APPROVED	DRAWN	
SECTION MANAGER	DESIGNED	
WWE O&M MANAGER	SCALE	DATE
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APPROVED	APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER	
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	<b>000-G-01-0004</b>	

# INDEX TO DRAWINGS

INCLUDED IN SUBMITTAL	DRAWING NUMBER	SHEET TITLE	INCLUDED IN SUBMITTAL	DRAWING NUMBER	SHEET TITLE	INCLUDED IN SUBMITTAL	DRAWING NUMBER	SHEET TITLE
<b>615 - BIOSOLIDS DEWATERING</b>								
ARCHITECTURAL								
*	615-A-05-0001	CODE OVERVIEW	*	615-A-63-4001	STAIR 1 ELEVATIONS			
*	615-A-05-0002	CODE REVIEW BASEMENT PLAN	*	615-A-63-4002	STAIR 1 ELEVATIONS			
*	615-A-05-0003	CODE REVIEW FIRST FLOOR PLAN	*	615-A-63-4003	STAIR 2 ELEVATIONS			
*	615-A-05-0004	CODE REVIEW SECOND FLOOR PLAN	*	615-A-63-4004	STAIR 2 ELEVATIONS			
*	615-A-05-0005	CODE REVIEW THIRD FLOOR PLAN	*	615-A-69-5001	DETAILS			
*	615-A-05-1001	OVERALL BASEMENT PLAN	*	615-A-69-5002	DETAILS			
*	615-A-05-1002	OVERALL FIRST FLOOR PLAN	*	615-A-69-5003	DETAILS			
*	615-A-05-1003	OVERALL SECOND FLOOR PLAN	*	615-A-69-5004	DETAILS			
*	615-A-05-1004	OVERALL THIRD FLOOR PLAN	*	615-A-69-5005	DETAILS			
*	615-A-05-1005	OVERALL ROOF PLAN	*	615-A-69-5006	DETAILS			
*	615-A-05-1006	OVERALL BASEMENT REFLECTED CEILING PLAN	*	615-A-69-5007	DETAILS			
*	615-A-05-1007	OVERALL FIRST FLOOR REFLECTED CEILING PLAN	*	615-A-69-7001	DETAILS			
*	615-A-05-1008	OVERALL SECOND FLOOR REFLECTED CEILING PLAN	*	615-A-69-7002	DETAILS			
*	615-A-05-1009	OVERALL THIRD FLOOR REFLECTED CEILING PLAN	*	615-A-99-9001	3D PERSPECTIVE VIEW			
*	615-A-05-2001	NORTH ELEVATION	*	615-A-99-9002	3D PERSPECTIVE VIEW			
*	615-A-05-2002	EAST ELEVATION						
*	615-A-05-2003	SOUTH ELEVATION						
*	615-A-05-2004	WEST ELEVATION						
*	615-A-05-3001	BUILDING SECTION						
*	615-A-05-3002	BUILDING SECTION						
*	615-A-05-3003	BUILDING SECTION						
*	615-A-05-3004	BUILDING SECTION						
*	615-A-05-3005	BUILDING SECTION						
*	615-A-05-3006	BUILDING SECTION						
*	615-A-05-4001	CLADDING ELEVATIONS						
*	615-A-05-7001	OVERALL FIRST FLOOR FINISH PLAN						
*	615-A-05-7002	OVERALL SECOND FLOOR FINISH PLAN						
*	615-A-05-7003	OVERALL THIRD FLOOR FINISH PLAN						
*	615-A-05-7004	OVERALL THIRD FLOOR FURNITURE PLAN						
*	615-A-10-1001	BASEMENT PLAN AREA C						
*	615-A-10-1002	BASEMENT FLOOR REFLECTED CEILING PLAN AREA C						
*	615-A-20-1001	FIRST FLOOR PLAN AREA A						
*	615-A-20-1002	FIRST FLOOR PLAN AREA B						
*	615-A-20-1003	FIRST FLOOR PLAN AREA C						
*	615-A-20-1004	FIRST FLOOR PLAN AREA D						
*	615-A-20-1005	FIRST FLOOR REFLECTED CEILING PLAN AREA A						
*	615-A-20-1006	FIRST FLOOR REFLECTED CEILING PLAN AREA B						
*	615-A-20-1007	FIRST FLOOR REFLECTED CEILING PLAN AREA C						
*	615-A-20-1008	FIRST FLOOR REFLECTED CEILING PLAN AREA D						
*	615-A-20-7001	FIRST FLOOR PARTIAL FINISH AND REFLECTED CEILING PLAN						
*	615-A-20-7101	FIRST FLOOR ELEVATIONS						
*	615-A-20-7102	FIRST FLOOR ELEVATIONS						
*	615-A-30-1001	SECOND FLOOR PLAN AREA A						
*	615-A-30-1002	SECOND FLOOR PLAN AREA B						
*	615-A-30-1003	SECOND FLOOR PLAN AREA C						
*	615-A-30-1004	SECOND FLOOR PLAN AREA D						
*	615-A-30-1005	SECOND FLOOR REFLECTED CEILING PLAN AREA A						
*	615-A-30-1006	SECOND FLOOR REFLECTED CEILING PLAN AREA B						
*	615-A-30-1007	SECOND FLOOR REFLECTED CEILING PLAN AREA C						
*	615-A-30-1008	SECOND FLOOR REFLECTED CEILING PLAN AREA D						
*	615-A-30-7001	SECOND FLOOR PARTIAL PLAN/RCP/ELEVATIONS						
*	615-A-40-1001	THIRD FLOOR PLAN AREA A						
*	615-A-40-1002	THIRD FLOOR PLAN AREA B						
*	615-A-40-1003	THIRD FLOOR PLAN AREA C						
*	615-A-40-1004	THIRD FLOOR PLAN AREA D						
*	615-A-40-1005	THIRD FLOOR REFLECTED CEILING PLAN AREA A						
*	615-A-40-1006	THIRD FLOOR REFLECTED CEILING PLAN AREA B						
*	615-A-40-1007	THIRD FLOOR REFLECTED CEILING PLAN AREA C						
*	615-A-40-1008	THIRD FLOOR REFLECTED CEILING PLAN AREA D						
*	615-A-40-7001	THIRD FLOOR PARTIAL FINISH AND REFLECTED CEILING PLAN						
*	615-A-40-7002	THIRD FLOOR PARTIAL FINISH AND REFLECTED CEILING PLAN						
*	615-A-40-7101	THIRD FLOOR ELEVATIONS						
*	615-A-40-7102	THIRD FLOOR ELEVATIONS						
*	615-A-40-7103	THIRD FLOOR ELEVATION						
*	615-A-40-7104	THIRD FLOOR ELEVATIONS						
*	615-A-40-7105	THIRD FLOOR ELEVATIONS						
*	615-A-50-1001	ROOF PLAN AREA A						
*	615-A-50-1002	ROOF PLAN AREA B						
*	615-A-50-1003	ROOF PLAN AREA C						
*	615-A-50-1004	ROOF PLAN AREA D						
*	615-A-63-1001	STAIR 1 PARTIAL PLANS						
*	615-A-63-1002	STAIR 1 SECTIONS						
*	615-A-63-1003	STAIR 2 PARTIAL PLAN						
*	615-A-63-1004	STAIR 2 SECTIONS						
*	615-A-63-1005	ELEVATOR PLAN						
*	615-A-63-1006	ELEVATOR SECTIONS						
*	615-A-63-1007	MEZZANINE PARTIAL PLAN						
			<b>661 - PIPE GALLERY</b>					
			ARCHITECTURAL					
			*	661-A-05-1001	CODE REVIEW PLAN			
			<b>921 - W2 PUMP STATION</b>					
			ARCHITECTURAL					
			*	921-A-05-0001	CODE REVIEW			
			*	921-A-05-0002	CODE REVIEW PLAN			
			*	921-A-05-1001	OVERALL PLANS/SECTION			
			*	921-A-05-2001	ELEVATIONS			
			*	921-A-99-9001	3D PERSPECTIVE VIEWS			

Scope II

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BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. LAMBERT
PROJECT MANAGER	T. STIGERS	DESIGNED	T. EASTMAN
APPROVED	D. GREEN	CHECKED	R. FRANKENFIELD
NO.	DATE	DESCRIPTION	BY
REVISIONS			

<b>CONTRACT NO. WW-647R</b>		
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<b>INDEX TO DRAWINGS 3</b>		
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SECTION MANAGER	DESIGNED	
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	AS SHOWN	Feb 8, 2021
APPROVED	APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER	
PLAN NO.	DRAWING / FILE NO.	REVISION
	<b>000-G-01-0005</b>	





SYMBOLS & LEGEND

EXISTING		EXISTING		EXISTING		CIVIL GENERAL NOTES	
	BIKE LANE		AIR HIGH-PRESSURE		AC PAVEMENT	<ol style="list-style-type: none"> <li>THE LOCATION, MATERIAL INDICATED, AND/OR ELEVATIONS OF UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS AND REFERENCE DRAWINGS ARE APPROXIMATE ONLY. INFORMATION WAS TAKEN FROM PLANS AND RECORDS OF THE VARIOUS UTILITIES AND AGENCIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY COMPANIES SO THAT THOSE COMPANIES MAY MARK THE LOCATIONS OF THEIR LINES PRIOR TO EXCAVATION. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT 811 OR (800) 642-2444 AT LEAST FIVE WORKING DAYS BEFORE EXCAVATING. CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY APPROVALS AND/OR PERMITS, PROTECT THE EXISTING FACILITIES, AND TO FIELD VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES AT LEAST ONE WEEK PRIOR TO THE CONSTRUCTION IN THAT LOCATION.</li> <li>CONTRACTOR SHALL PROVIDE SUPPORT FOR ALL UTILITIES EXPOSED DURING CONSTRUCTION. CONTRACTOR SHALL NOT DISTURB THE LOCATIONS, ALIGNMENTS, AND ELEVATIONS OF EXISTING PIPING AND CONCRETE ENCASED ELECTRICAL CONDUITS, UNLESS OTHERWISE INDICATED ON DRAWINGS OR APPROVED BY CITY REPRESENTATIVE. CONTRACTOR SHALL COORDINATE AND COMPLY WITH THE REQUIREMENTS FOR RELOCATING EXISTING UTILITIES ESTABLISHED BY THE UTILITY OWNERS.</li> <li>CONTRACTOR SHALL DEVELOP AND PROVIDE DETAILED DEMOLITION PLAN DESIGN PER SECTION 02 41 00. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT DESIGNATED FOR DEMOLITION AND REMOVAL AND REPLACEMENT. ALL DAMAGED EXISTING IMPROVEMENTS AND THOSE IMPROVEMENTS WHICH HAVE BEEN REMOVED OR TEMPORARILY RELOCATED SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION EQUAL OR BETTER THAN PRIOR TO CONSTRUCTION. IMPROVEMENTS DESIGNATED FOR DEMOLITION SHALL BE DEMOLISHED AND DISPOSED OF BY THE CONTRACTOR.</li> <li>THE WORK ARE ADJACENT TO OR CROSSING EXISTING UNDERGROUND HIGH-VOLTAGE ELECTRIC TRANSMISSION LINES AND HIGH-PRESSURE NATURAL GAS TRANSMISSION LINES. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHILE WORKING IN THE VICINITY OF THESE TRANSMISSION LINES. CONTRACTOR SHALL COMPLY WITH EQUIPMENT AND WORKER SEPARATION CRITERIA ESTABLISHED BY THE UTILITY OWNER.</li> <li>CONTRACTOR SHALL EXPOSE ALL EXISTING BURIED UTILITIES PRIOR TO BEGINNING CONSTRUCTION EXCAVATION TO VERIFY THE LOCATION AND DEPTH OF THOSE UTILITIES. ANY DEVIATIONS FROM THE LOCATIONS SHOWN SHALL BE IMMEDIATELY REPORTED TO THE CITY REPRESENTATIVE. EXISTING UTILITIES MAY BE FRAGILE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES OR ANY DISRUPTION OF UTILITY SERVICE DURING CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH SECTIONS 00 73 20 AND 01 11 13.</li> <li>CONTRACTOR SHALL BE ADVISED THAT OTHER PROJECTS MAY BE TAKING PLACE ON ADJOINING AREAS DURING THIS CONTRACT. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE WORK OF OTHERS. SEE SPECIFICATION DIVISIONS 0 &amp; 1 AND OTHER APPLICABLE SECTIONS FOR WORK RESTRICTIONS AND CONSTRAINTS.</li> <li>EXISTING DRAINAGE CULVERTS, DITCHES, MONUMENTS, PAVEMENT, SIGNALS, LIGHTS, AND ALL OTHER EXISTING IMPROVEMENTS THAT ARE NOT DESIGNATED FOR DEMOLITION THAT ARE REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS AND STANDARD SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION OVER THE IMPROVEMENTS. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO MATCH PRECONSTRUCTION CONDITIONS, OR BETTER, AFTER COMPLETION OF THE PROJECT. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE TO AND THROUGH EXISTING DRAINAGE FACILITIES FROM ALL NEWLY-PATCHED DEPRESSIONS.</li> <li>CONTRACTOR SHALL PERFORM TRENCHING OPERATIONS AND CONFINED SPACE ENTRIES IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF CAL/OSHA TITLE 8, STATE, AND CITY REQUIREMENTS.</li> <li>PIPELINE STATIONING SHOWN IN THESE PLANS ARE HORIZONTAL DISTANCES MEASURED ON A LEVEL PLANE. ALL PIPELINE LAYOUT AND FABRICATION SHOP DRAWINGS SHALL ACCOUNT FOR POTENTIAL VARIATIONS IN THE FIELD. CONTRACTOR SHALL RECORD AND REPORT ACTUAL DIMENSIONS, DEPTHS, AND LOCATIONS OF ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS TO THE CONSTRUCTION ADMINISTRATOR, AND INCORPORATE THE ACTUAL DIMENSIONS INTO RECORD DRAWINGS.</li> <li>CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL SURPLUS EXCAVATION MATERIALS AND DEBRIS FROM THE SITE AT A PROPER DISPOSAL SITE, AND SHALL MAINTAIN THE SITE IN A NEAT AND ORDERLY CONDITION BEFORE NOTICE OF COMPLETION IS ISSUED.</li> <li>CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, COUNTY, AND CITY LAWS AND ORDINANCES RELATING TO THE SAFETY AND CHARACTER OF WORK, EQUIPMENT AND LABOR PERSONNEL. THIS SHALL INCLUDE, BUT IS NOT LIMITED TO, THE SHORING OF TRENCHES, VENTILATION OF CONFINED SPACES, ADHERENCE TO NOISE RESTRICTIONS, CONFORMANCE TO TRAFFIC CONTROL REQUIREMENTS INCLUDING THE PROVISION AND MAINTENANCE OF BARRICADES, AND THE PREPARATION AND IMPLEMENTATION OF TRAFFIC CONTROL PLANS AS REQUIRED.</li> <li>ENCROACHMENT PERMITS WILL BE REQUIRED FOR THE WORK FROM GOVERNING/REGULATORY AGENCIES. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND ABIDE BY ALL REQUIREMENTS THEREOF.</li> <li>CONTRACTOR SHALL REFER TO SPEC SECTION 00 31 00 FOR AVAILABLE PROJECT INFORMATION, SUCH AS GEOTECHNICAL DATA REPORT, GEOTECHNICAL INTERPRETIVE REPORT, HAZARDOUS MATERIAL RENOVATION SURVEY REPORT, AND ENVIRONMENTAL INVESTIGATION REPORTS.</li> <li>THESE PIPE SERVICE SYMBOLS ARE NO LONGER USED FOR DESIGNATING NEW PIPING BUT PROVIDED TO AID UNDERSTANDING OF EXISTING UTILITIES ON THE BACKGROUND DRAWINGS. FOR A COMPLETE LISTING OF PIPING SERVICE ABBREVIATIONS, SEE FLOW STREAM DESIGNATIONS ON SHEET 000-G-01-7011.</li> </ol>	
	CABLE BOX		CHAIN LINK FENCE		BENCH		
	CATCH BASIN, STORM WATER INLET		CONTOUR		BOTTOM OF SLOPE		
	CLEAN OUT		DIGESTER GAS (NOTE 14)		BUILDING		
	CONCRETE PILLAR		DIRT ROAD		CONCRETE WALL WITH COLUMN		
	CONTROL POINT		DISTRIBUTED CONTROL SYSTEM		CONCRETE SEWER		
	ELECTRIC BOX		ELECTRIC LINE		CONCRETE WALL		
	ELECTRIC MANHOLE		FENCELINE		CURB AND GUTTER		
	ELECTRIC PULLBOX		FORCE MAIN		DIRECTION OF SURFACE FLOW		
	ELECTRIC STRUCTURE		GAS (NOTE 14)		ELEVATIONS		
	ELECTROLIER		OVERHEAD ELECTRIC		FACILITY NUMBER (SEP 200 = FACILITY 200)		
	FIRE HYDRANT		HYDRAULIC CHANNELS (NOTE 14)		GRASS		
	FIRE DEPARTMENT CONNECTION (FDC)		PROPERTY LINE, ROW		GRATING		
	GAS VALVE		RAILROAD		GROUND		
	GATE CONTROL PANEL		RETAINING WALL		LENGTH OF RADIUS		
	GATE POST		SANITARY SEWER (NOTE 14)		PEBBLE		
	GUARD POST/BOLLARD		SECURITY CAMERA SYSTEM		SIDEWALK		
	GUY ANCHOR		SECURITY FIBER PATHWAY		SLOPE OF GRADE		
	HANDICAP PARKING SPOT		TELECOMMUNICATION		STATION		
	HANDICAP RAMP		TEMPORARY FENCE		STEEL		
	IRRIGATION CONTROL VALVE		TRENCH BOUNDARY		STONE		
	LIGHT POLE		UNKNOWN UTILITIES		STRUCTURE LINES		
	MONITORING WELL		UTILITY EASEMENT		TEMPORARY CONSTRUCTION EASEMENT		
	MONITORING WELL VALVE		NO. 1 WATER		TOP OF THE SLOPE		
	PG&E PULL BOX		NO. 2 WATER				
	PG&E MANHOLE		NO. 3 WATER				
	POST		WATER LINE (NOTE 14)				
	POWER POLE/LIGHT		WOODEN FENCE				
	POWER POLE						
	RAILROAD SIGNAL						
	RISER/PIPE						
	SEWER MANHOLE/VAULT						
	SIGN						
	SIGNAL POLE						
	SPEED LIMIT SIGN						
	SPOT ELEVATION						
	SPRINKLER						
	SPRINKLER VALVE BOX						
	STREET LIGHT PULLBOX						
	SURVEY POINT						
	TELEPHONE VAULT						
	TELEPHONE PULLBOX						
	TELEPHONE MANHOLE						
	TOP OF CURB						
	TOP OF WALL						
	TRAFFIC SIGNAL PULL BOX						
	TREE, SIZE AND TYPE						

PROPOSED WORK

	DEMOLITION AREA		DIRECT BURIED DUCT BANK		GUARD POST/BOLLARD
	GRAVEL		TELECOMMUNICATION CONDUIT(S)		HYDRANT
	LANDSCAPE AREA		VEHICLE GUARDRAIL		MANHOLE
	NEW ASPHALT		ANGLE		PLATE OR PROPERTY LINE
	REINFORCED CONCRETE		CATCH BASIN		PILES
	ROAD MARKING		CENTER LINE		POTHOLE
	NEW UTILITIES		DESIGN POINT (NUMBER AND ELEVATION)		SEP GATE
	FUTURE UTILITIES		DIRECTIONAL ARROW MARKING		SLOPE OF FINISHED GRADE
	TO BE ABANDONED IN PLACE OR DEMOLISHED AND REMOVED AS REQUIRED FOR NEW CONSTRUCTION		ELECTRICAL MANHOLE OR HANDHOLE		SOIL BORING
	FENCE		FINISH GRADE SPOT ELEVATION		
	FINISH GRADE CONTOURS				
	NORTH ARROW				
	REINFORCED CONCRETE DUCT BANK				

SUBSURFACE UTILITIES DATA NOTES

- "QUALITY LEVEL A" DATA POINTS INDICATED BY SYMBOL
- ALL "QUALITY LEVEL A" ELEVATIONS ARE FOR THE TOP OF THE UTILITY UNLESS OTHERWISE NOTED. SEE DWG 000-C-18-6014 TO 000-C-18-6018 FOR POTHOLING POINTS TABLE.
- ALL UTILITIES DEPICTED AT "QUALITY LEVEL D" UNLESS OTHERWISE NOTED.

CONTRACT NO. WW-647R

CITY AND COUNTY OF SAN FRANCISCO  
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**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
 BIOSOLIDS DIGESTER FACILITIES PROJECT  
 GENERAL SITEWIDE

CIVIL LEGEND, SYMBOLS, AND GENERAL NOTES

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SECTION MANAGER	DESIGNED
WWW O&M MANAGER	SCALE AS SHOWN
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MANAGER, ENGINEERING MANAGEMENT BUREAU	WWW ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.
REVISIONS	REVISION NO.

000-G-01-7003



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	N. WATERMAN
NO.	DATE	DESCRIPTION	BY

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**FOR CONSTRUCTION**  
 Scope II

ELEVATION DATUM  
 CITY



<b>A</b>			(E) EXISTING				RWQCB	REGIONAL WATER QUALITY CONTROL BOARD			
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	EATUR	EMPTY ACCORDING TO UTILITY RECORDS	JPB	JOINT POWERS BOARD				<b>OTHER</b>		
AAUTUR	UTILITY ABANDONED ACCORDING TO UTILITY RECORDS	EB	EXPANSION BOLT/ANCHOR	L			S	SOUTH	@	AT	
AAV	AIR AND VACUUM VALVES	EC	END OF CURVE	LBS	LENGTH POUNDS		S/C	SAWCUT AND CONFORM	#	NUMBER	
AB	AGGREGATE BASE	ECC	ECCENTRIC	LF	LINEAR FEET		SCAV	SEWAGE COMBINATION AIR/VACUUM	&	AND	
AC	ASPHALTIC CONCRETE	ED	EDITION	LG	LONG		SCH	SCHEDULE			
ACWS	ASPHALT CONCRETE WEARING SURFACE	EDB	ELECTRIC DUCT BANK	LOX	LIQUID OXYGEN		SCS	SECURITY CAMERA SYSTEM			
ACP	ASBESTOS CEMENT PIPE	EF	EACH FACE	LT	LEFT		SEC	SECTION			
AD	AREA DRAIN	ELEC	ELECTRICAL	<b>M</b>			SEP	SOUTHEAST WATER POLLUTION CONTROL PLANT			
ADJ	ADJACENT	EMBED	EMBEDMENT	M	MOTOR		SFP	SECURITY FIBER PATHWAY			
ALIGN	ALIGNMENT	EMH	ELECTRICAL MANHOLE	MAT'L	MATERIAL		SFPC	SAN FRANCISCO PLUMBING CODE			
ALT	ALTERNATIVE	ENT	ENTRANCE	MAX	MAXIMUM		SFPW	SAN FRANCISCO PUBLIC WORKS			
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	EOI	END OF SURFACE	MECH	MECHANICAL		SIM	SIMILAR			
APPROX	APPROXIMATE	EORI	END OF RECORD INFORMATION	MEMB	MEMBRANE		SPEC	SPECIFICATION			
ART	ARTICLE	EP	EDGE OF PAVEMENT	MFR'D	MANUFACTURED		SQ	SQUARE			
ARV	AIR RELEASE VALVES	EQ	EQUAL	MGD	MILLION GALLONS PER DAY		SS	STAINLESS STEEL			
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	EQUIV	EQUIVALENT	MH	MANHOLE		SSD	SATURATED SURFACE DRY			
ASSY	ASSEMBLY	EV	ELECTRIC VEHICLE	MIN	MINIMUM		ST	STREET			
AWG	AMERICAN WIRE GAUGE	EW	EACH WAY	MISC	MISCELLANEOUS		STA	STATION			
AWWA	AMERICAN WATER WORKS ASSOCIATION	(E), EX	EXISTING	MJ	MECHANICAL JOINT		STD	STANDARD			
		EXT	EXTERIOR	MMRP	MITIGATION MONITORING AND REPORTING PROGRAM		STL	STEEL			
		EXTN	EXTENSION				SW	SIDEWALK			
<b>B</b>				<b>N</b>			<b>T</b>				
BC	BEGIN OF CURVE	FABR	FABRICATION, FABRICATE OR FABRICATED	N	NORTH		T	TELECOMMUNICATION CONDUITS			
BDFP	BIOSOLIDS DIGESTER FACILITIES PROJECT	FC	FACE OF CURB	(N)	NEW		TC	TOP OF CURB			
BF	BLIND FLANGE	FDC	FIRE DEPARTMENT CONNECTION	NBS	NATIONAL BUREAU OF STANDARDS		TCA	TEMPORARY CONSTRUCTION ACCESS			
BFP	BACK FLOW PREVENTER			NC	NORMALLY CLOSED		TCDW	TOP OF CURB DRIVEWAY			
BLDG	BUILDING	FF	FINISHED FLOOR	NF	NEAR FACE		TCE	TEMPORARY CONSTRUCTION EASEMENT			
BLK	BLOCK	FG	FINISHED GRADE	NIC	NOT IN CONTRACT		TEL	TELEPHONE			
BLW	BELOW	FH	FIRE HYDRANT	NID	NOMINAL INSIDE DIAMETER		TEMP	TEMPORARY			
BOB	BOTTOM OF BANK	FIG	FIGURE	NO	NUMBER		TG	TOP OF GRATE			
BOS	BACK OF SIDEWALK	FL	FLOWLINE	NOM	NOMINAL		THK	THICK OR THICKNESS			
BW	BOTH WAYS	FLEX	FLEXIBLE	NS	NEAR SIDE		THRU	THROUGH			
		FLG	FLANGE	NTS	NOT TO SCALE		TOC	TOP OF CURB			
		FLGD	FLANGED	NUM	NUMBER		TOS	TOP OF SLAB			
<b>C</b>				<b>O</b>			TOW	TOP OF WALL			
CL	CENTERLINE	FLR	FLOOR				TP	TOP OF PAVING			
CAP	CAPACITY	FM	FORCE MAIN				TYP	TYPICAL			
CAV	COMBINATION AIR VALVES	FO	FIBER OPTIC CABLE								
CB	CATCH BASIN	FOC	FACE OF CONCRETE	OC	ON CENTER						
CCSF	CITY AND COUNTY OF SAN FRANCISCO	FPC	FLEXIBLE PIPE COUPLING	OD	OUTSIDE DIAMETER						
CDD	CITY DISTRIBUTION DIVISION	FPS	FEET PER SECOND	OHE	OVER HEAD ELECTRICAL LINE						
CEM	CEMENT	FT	FEET OR FOOT								
CH, CHAP	CHAPTER	FTG	FOOTING	<b>P</b>			<b>U</b>				
CLR	CLEAR			PAVMT	PAVEMENT		UE	UNDERGROUND ELECTRIC			
CI	CAST IRON	G	GAS	PCC	PORTLAND CEMENT CONCRETE		UG	UNDERGROUND			
CIP	CAST-IN-PLACE	GA	GAGE OR GAUGE				UGC	UNDERGROUND CONDUIT			
CJ	CONSTRUCTION JOINT	GAL	GALLON	PE	PERMANENT EASEMENT		UL	UNDERWRITERS LABORATORIES			
CML	CEMENT MORTAR LINED	GALV	GALVANIZED	PG&E	PACIFIC GAS AND ELECTRIC		UNO	UNLESS NOTED OTHERWISE			
CMLC	CEMENT MORTAR LINED AND COATED	GB	GRADE BREAK	PI	POINT OF INTERSECTION		UPRR	UNION PACIFIC RAILROAD			
CO	CLEANOUT	GL	GRID LINE	PL	PROPERTY LINE		USA	UNDERGROUND SERVICE ALERT			
COL	COLUMN	GND	GROUND	PLT	PLANT						
CONC	CONCRETE	GRD	GRADE	PREFAB	PREFABRICATED		<b>V</b>				
CONN	CONNECTION			PO	PUSH-ON JOINT		V	VALVE			
COR	CORNER	<b>H</b>		PP	POWER POLE		VAR	VARIES OR VARIABLE			
CP	CONTROL POINT	H	HANDICAP (PARKING)	PUE	PUBLIC UTILITY EASEMENT		VCP	VITRIFIED CLAY PIPE			
CPLG	COUPLING	H/B	HOSE BIBB	PVC	POLYVINYL CHLORIDE		VIF	VERIFY IN FIELD			
CTR	CENTER	HDPE	HIGH DENSITY POLYETHYLENE	PWC	PUBLIC WORKS CODE		VERT	VERTICAL			
				<b>Q</b>							
<b>D</b>							<b>W</b>				
D	DEPTH	HDR	HEADER	QTY	QUANTITY		W	WEST OR WATER			
DB	DUCT BANK	HGT	HEIGHT				W/	WITH			
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY	HH	HANDHOLE	<b>R</b>			W/O	WITHOUT			
DCS	DISTRIBUTED CONTROL SYSTEM	HMA	HOT MIX ASPHALT CONCRETE	R, RAD	RADIUS		WD	WIDTH			
DG	DIGESTER GAS	HP	HORIZONTAL	RC	REINFORCED CONCRETE		WM	WATER METER			
DGL	DIGESTER GAS LINE	HPFS	HIGH PRESSURE DISTRIBUTED FIRE SYSTEM	RCP	REINFORCED CONCRETE PIPE		WP	WATER PROOFING			
DI	DUCTILE IRON	H/P	HIGH POINT	RD	ROUND		WS	WATER SURFACE			
DIA	DIAMETER	HPN	HIGH PRECISION NETWORK	RED	REDUCER OR REDUCING		WWF	WELDED WIRE FABRIC			
DIAG	DIAGONAL	HPND	HIGH PRECISION NETWORK DENSIFICATION	REF	REFERENCE OR REFER						
DIP	DUCTILE IRON PIPE	HV	HIGH VOLTAGE	REIN	REINFORCE OR REINFORCED						
DISCH	DISCHARGE	HYD	HYDRANT	REINF	REINFORCEMENT						
DPW	DEPARTMENT OF PUBLIC WORKS			RE-STL	REINFORCING STEEL						
DR	DOOR	<b>I</b>		REQD	REQUIRED						
DTL	DETAIL	ID	INSIDE DIAMETER	RESIL	RESILIENT						
DW	DRIVEWAY	I.E.	THAT IS	REV	REVISION						
DWG	DRAWING	IN	INCH	RMJ	RESTRAINED MECHANICAL JOINT						
		INC	INCORPORATED	RBPB	REDUCED PRESSURE BACKFLOW PREVENTER						
<b>E</b>		INSL	INSULATION OR INSULATED	RPO	RESTRAINED PUSH-ON JOINT						
E	EAST	INV	INVERT	RT	RIGHT						
		IRRG	IRRIGATION	ROW	RIGHT OF WAY						
		<b>J</b>		RWD	REDWOOD						

**CIVIL GENERAL NOTES (CONTINUED)**


- UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL PIPING SHALL HAVE A MINIMUM OF 12" CLEARANCE FROM NEAREST PIPELINE.
- CONTRACTOR SHALL PROVIDE A 36" MINIMUM COVER OR BURY FROM FINISHED GRADE TO TOP OF PIPING UNLESS OTHERWISE SHOWN OR DIRECTED. CONCRETE ENCASE SHALLower PIPING PER TYPICAL DETAIL S3201 SUBJECT TO CITY REPRESENTATIVE'S APPROVAL.
- INSTALL DETECTABLE WARNING TAPE AND TRACER WIRE OVER BURIED PIPING IN ACCORDANCE WITH SPECIFICATION SECTION 04 05 45.
- WHenever NEW PIPING, CONDUIT, UNDERGROUND STRUCTURE CONFLICTS WITH EXISTING UTILITIES, THE CONTRACTOR SHALL COORDINATE WITH THE EXISTING UTILITIES OWNER FOR RELOCATION AS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL EXPOSE THE EXISTING ITEMS, VERIFY LOCATION AND ELEVATION PRIOR TO FABRICATION OF NEW PIPING OR CONDUIT, AND SUBMIT SHOP DRAWINGS FOR REVIEW BY CITY REPRESENTATIVE. SOME OF THE EXISTING UTILITIES AS SHOWN ON THE DRAWINGS ARE LOCATED FROM AVAILABLE INFORMATION AND ARE SHOWN FOR THE CONTRACTOR'S CONVENIENCE. NOT ALL THE EXISTING UTILITIES ARE SHOWN ON THE DRAWINGS. SUBMITTALS SHALL BE MADE AT LEAST (4) WEEKS PRIOR TO PLANNED INSTALLATION OF NEW FACILITIES. MINIMUM COVER SHALL BE MAINTAINED PER SPECIFICATIONS AND DRAWINGS.
- ALL PIPING JOINTS FOR PRESSURE PIPES SHALL BE RESTRAINED TYPE JOINTS AS SPECIFIED IN PIPING SCHEDULE AND SPECIFICATION. THRUST BLOCKS SHALL NOT BE ALLOWED UNLESS OTHERWISE SHOWN OR DIRECTED BY THE CITY REPRESENTATIVE.
- CONTRACTOR SHALL INCLUDE IN HIS BID 40 BOLLARDS AND 20 GUARD POSTS INSTALLED PER DETAIL C3001 AND C3002 RESPECTIVELY. LOCATIONS OF BOLLARDS AND GUARD POSTS SHALL BE DETERMINED IN THE FIELD BY THE CITY REPRESENTATIVE PRIOR TO FINAL GRADING AND PAVING.
- CONTRACTOR SHALL ADJUST NEW AND EXISTING MANHOLE FRAMES AND COVERS TO FINISHED SURFACE ELEVATION PER DETAIL C2029 AND SPEC SECTION 33 05 13 PRIOR TO FINAL GRADING AND PAVING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING AN EROSION CONTROL PLAN THAT COMPLY WITH REQUIREMENTS IN SPEC SECTIONS 01 57 13 AND 01 57 23. THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN ADEQUATE DRAINAGE PATTERNS AT THE SITE. WATER SHALL NOT BE ALLOWED TO POND OR STAND DUE TO CONTRACTOR'S ACTIVITIES.
- CONTRACTOR SHALL COMPLY WITH ENVIRONMENTAL PROCEDURES RELATED TO THE HAZARDOUS MATERIALS REMOVAL AND DISPOSAL REQUIREMENTS IN SPEC SECTIONS 01 35 43, 01 35 44, 02 27 80, 02 41 00, 02 80 13, 02 81 10, AND 02 81 85.
- FOR NEW NATURAL GAS SERVICE, PG&E IS RESPONSIBLE FOR CONSTRUCTING THE CONNECTION POINT (TEE OR SLEEVE), ISOLATION VALVE, SERVICE LATERAL, AND GAS METER/VAULT PER PG&E STANDARD PLAN AND SPECIFICATION. BDFP CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION, PERMITTING, PAVEMENT RESTORATION, AND ALL PIPING DOWNSTREAM FROM PG&E'S GAS METER.
- UNLESS NOTED OTHERWISE, FOR NEW WATER SERVICE, CDD IS RESPONSIBLE FOR CONSTRUCTING THE CONNECTION POINT (TEE OR SLEEVE), ISOLATION VALVE, SERVICE LATERAL, AND FLOW METER/VAULT PER CDD STANDARD PLAN AND SPECIFICATION. BDFP CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION, PERMITTING, PAVEMENT RESTORATION, AND ALL PIPING DOWNSTREAM FROM CDD'S TERMINATION POINT, INCLUDING THE REQUIRED BACKFLOW PREVENTION DEVICE.
- UNLESS NOTED OTHERWISE, FOR NEW FIRE SERVICE CONNECTION, CDD IS RESPONSIBLE FOR CONSTRUCTING THE CONNECTION POINT (TEE OR SLEEVE), ISOLATION VALVE, AND SERVICE LATERAL TO APPROXIMATELY 1-FOOT BEHIND THE BACK OF CURB PER CDD STANDARD PLAN AND SPECIFICATION. BDFP CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION, PERMITTING, PAVEMENT RESTORATION, AND ALL PIPING DOWNSTREAM FROM CDD'S TERMINATION POINT, INCLUDING THE REQUIRED BACKFLOW PREVENTION DEVICE.
- UNLESS NOTED OTHERWISE, FOR NEW FIRE HYDRANT WITHIN THE PUBLIC RIGHT OF WAY, CDD IS RESPONSIBLE FOR CONSTRUCTING THE CONNECTION POINT (TEE OR SLEEVE), ISOLATION VALVE, LATERAL, RISER, AND HYDRANT.
- UNLESS NOTED OTHERWISE, CDD SHALL BE RESPONSIBLE FOR RELOCATING, ABANDONING, AND REMOVING EXISTING WATER SERVICE AND PIPELINE UNLESS OTHERWISE SHOWN OR DIRECTED BY THE CITY REPRESENTATIVE. FOR CDD STANDARD SPECIFICATION AND DETAILS, SEE [HTTPS://SFWater.org/INDEX.aspx?page=570](https://sfwater.org/index.aspx?page=570).
- BDFP CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING, DISINFECTING, AND TESTING OF DRINKING WATER COMPONENTS AND FACILITIES ASSOCIATED WITH THE BDFP PROJECT PER CDD STANDARD SPECIFICATION PRIOR TO BEING PUT INTO OPERATION.
- BDFP CONTRACTOR SHALL BE RESPONSIBLE FOR WATER AND FIRE SERVICES LATERAL EXCAVATION, SHORING, PERMITTING, AND PAVEMENT RESTORATION.
- RIM ELEVATIONS OF PROPOSED SEWER MANHOLES AND CATCH BASINS SHOWN IN THE PIPE PROFILES ARE APPROXIMATE AND SHALL BE ADJUSTED TO CONFORM TO FINISHED GRADE ELEVATIONS.
- ALL WALKING SURFACES PAVING AND ACCESSIBLE ROUTE FINISHES SHALL BE AT LEAST AS SLIP-RESISTANT AS A MEDIUM SALTED FINISH AND CONFORM TO THE SFPW ORDER 176112, WHICHEVER IS MORE RESTRICTIVE.

<b>CONTRACT NO. WW-647R</b>			
CITY AND COUNTY OF SAN FRANCISCO			
<b>PUBLIC UTILITIES COMMISSION</b>			
INFRASTRUCTURE DIVISION			
ENGINEERING MANAGEMENT BUREAU			
<b>SOUTHEAST WATER POLLUTION CONTROL PLANT</b>			
<b>BIOSOLIDS DIGESTER FACILITIES PROJECT</b>			
GENERAL SITEWIDE			
<b>CIVIL ABBREVIATIONS AND GENERAL NOTES</b>			
CHECKED / APPROVED		DRAWN	
PROJECT ENGINEER D. GREEN	DESIGNED I. POPESCU		
PROJECT MANAGER T. STIGERS	DESIGNED K. KAI	WWW O&M MANAGER	SCALE AS SHOWN
APPROVED K. KAI	CHECKED N. WATERMAN	DATE Feb 24, 2020	
APPROVED		APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU		WWW ENGINEERING MANAGER	
PLAN NO.		DRAWING / FILE NO.	
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Scope II

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ELEVATION DATUM  
**CITY**



REGISTERED PROFESSIONAL ENGINEER  
FAN KAI  
No. C-60024  
CIVIL  
STATE OF CALIFORNIA

BIOSOLIDS DIGESTER FACILITIES PROJECT  
CONSULTANT TEAM

**Brown and Caldwell** **ch2m**  
BLACK & VEATCH

PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	N. WATERMAN
NO.	DATE	DESCRIPTION	BY



LANDSCAPE GENERAL NOTES

1. ALL WORK TO BE PERFORMED SHALL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES OF GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE PROJECT.
2. PROTECT ALL UTILITIES, IMPROVEMENTS AND STRUCTURES WHETHER SHOWN ON THE DRAWINGS AND RESTORE TO NEW CONDITION AT NO ADDITIONAL COST TO THE CITY IF DAMAGED DURING THE COURSE OF WORK.
3. COORDINATE ALL WORK TO PREVENT CONFLICTS BETWEEN TRADES AND REPORT CONFLICTS OR INCONGRUITIES BETWEEN NEW IMPROVEMENTS AND EXISTING FACILITIES TO THE CITY REPRESENTATIVE BEFORE STARTING WORK WHICH IS AFFECTED THEREBY.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND PROVIDING ALL QUANTITIES OF MATERIALS SHOWN ON THE DRAWINGS. QUANTITIES PROVIDED ARE FOR CONVENIENCE ONLY.

LAYOUT NOTES

1. VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE CITY REPRESENTATIVE BEFORE PROCEEDING.
2. WRITTEN DIMENSIONS SUPERCEDE SCALED DIMENSIONS.
3. ALL DIMENSIONS SHOWN SHALL BE MEASURED HORIZONTALLY.

GRADING NOTES

1. VERIFY ALL GRADES IN THE FIELD BEFORE PROCEEDING WITH WORK, INCLUDING EXISTING IMPROVEMENTS. ANY DISCREPANCIES SHALL BE REPORTED TO THE CITY REPRESENTATIVE IMMEDIATELY.
2. ALL GROUND SURFACES IN PLANTING AND PAVING AREAS SHALL BE FINISHED TO UNIFORM GRADE, DRAINING PROPERLY AND FREE OF STANDING WATER.
3. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW GRADES.
4. WHERE NEW PAVEMENT ABUTS EXISTING PAVEMENT, FINISH GRADES SHALL BE FLUSH UNLESS OTHERWISE NOTED.
5. EASE TOP AND TOE OF ALL SLOPES TO PROVIDE SMOOTH TRANSITIONS BETWEEN GROUND PLANES.
6. THE CITY REPRESENTATIVE RESERVES THE RIGHT TO MAKE ADJUSTMENTS IN THE FINISH GRADES AS THE WORK PROGRESSES.
7. THE CONTRACTOR SHALL VERIFY EXISTING GRADES AND SITE CONDITIONS BEFORE PROCEEDING WITH ANY WORK.

PLANTING NOTES

1. ALL PLANTING AREAS TO RECEIVE AMENDED SOIL PROFILES, IRRIGATION, AND 3" MULCH LAYER.
2. ALL TREES TO RECEIVE TREE STAKING.

IRRIGATION NOTES

1. THE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. PIPING, VALVES AND EQUIPMENT SHOWN WITHIN PAVED AREAS ARE FOR CLARITY ONLY. INSTALL WITHIN LANDSCAPE AREAS WHEN POSSIBLE. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, REDUCERS, ETC. WHICH MAY BE REQUIRED. PROVIDE ALL ITEMS SHOWN AND NOT SHOWN TO PROVIDE FOR A COMPLETE AND OPERABLE SYSTEM.
2. NOTIFY AND COORDINATE IRRIGATION WORK WITH OTHER DISCIPLINES FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUITS OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING, STRUCTURE, ETC. BEFORE CONSTRUCTION. WHERE A CONFLICT MAY EXIST WITH WELL/DOMESTIC WATER AND IRRIGATION LINES, THE WW/DW LINE SHALL HAVE PRECEDENCE. CONTROL VALVE LOCATIONS SHALL BE APPROVED BY THE CITY REPRESENTATIVE PRIOR TO BEGINNING OF WORK.
3. THE REMOTE CONTROL VALVES SPECIFIED ON THE DRAWINGS ARE OF A PRESSURE REDUCING TYPE. SET THE DISCHARGE PRESSURE FOR EACH VALVE PER IRRIGATION LEGEND FOR A SPECIFIC GROUP OF SPRINKLER HEADS.
4. FLUSH AND ADJUST SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER-SPRAY ONTO ROADWAYS, AND/OR BUILDINGS. SELECT THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND THROTTLE THE PRESSURE REGULATOR AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM.
5. SET SPRINKLER HEADS PERPENDICULAR TO THE FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE NOTED ON THE DRAWINGS.
6. THE SPRINKLER SYSTEM DESIGN IS BASED ON 40 PSI OPERATING PRESSURE. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE CITY REPRESENTATIVE.
7. ALL IRRIGATION PIPING SHALL FOLLOW THE LATEST EDITION OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA) GUIDELINES FOR DISTRIBUTION OF NON-POTABLE WATER STANDARDS FOR PIPING, WARNING TAPE, OUTLETS, HOSE BIBS, ETC.,
8. PIPE SIZING SHOWN ON THE DRAWINGS IS TYPICAL. AS CHANGES IN LAYOUT OCCUR DURING STAKING AND CONSTRUCTION THE SIZE MAY NEED TO BE ADJUSTED ACCORDINGLY.
9. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETE, 100% HEAD TO HEAD COVERAGE OF ALL PLANTED AREAS OF THE CONTRACT. ALERT CITY REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK IF AN AREA WILL REQUIRE EXTRA WORK TO ACHIEVE HEAD TO HEAD COVERAGE OF PLANTED AREAS.
10. NOT ALL IRRIGATION EQUIPMENT IS SHOWN ON THE DRAWINGS FOR REASONS OF CLARITY.
11. ALL PIPING, SHALL BE SLEEVED WHEN CROSSING UNDER ANY DRIVEWAY AND/OR ROADWAY. REFER TO STANDARD DETAILS FOR INFORMATION.
12. TRIM, ADJUST OR ADD SPRINKLER HEADS AS REQUIRED AROUND TREES, LIGHT POLES, STREET SIGNS, MONUMENTS OR FIRE HYDRANTS. SPRINKLER HEAD SPRAY PATTERN SHALL NOT INTERFERE WITH OR DAMAGE THESE ITEMS.
13. THE IRRIGATION WORK INCLUDES FIELD-INSTALLED ELECTRICAL WIRING AND CONDUITS BETWEEN THE CONTROLLER AND THE REMOTE CONTROL VALVES. SEE SPECIFICATION 32 80 00 FOR WIRE SIZE AND INSTALLATION.
14. THESE DRAWINGS COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT IRRIGATION ORDINANCE AND SECTION F OF THE SAN FRANCISCO PUBLIC UTILITIES COMMISSION RULES AND REGULATIONS GOVERNING WATER SERVICE CUSTOMERS AND THE REQUIREMENTS FOR THE EFFICIENT USE OF WATER IN THIS LANDSCAPE DESIGN PLAN HAVE BEEN APPLIED.

WATER FEATURE GENERAL NOTES

1. The drawings and specifications, and all copies thereof, are legal instruments of service for the use of the City and Authorized Representatives on the designated property only.
2. Specifications, which may be bound separately, are part of these Contract Documents.
3. The Contractor shall carefully study and compare the drawings prior to construction, and shall at once report to the owner/architect any error, inconsistency, or omission the contractor may discover. If the Contractor performs any work knowing it to be contrary to applicable laws, ordinances, rules and regulations without prior notice to the owner/architect, the contractor shall assume full responsibility, and shall bear all costs attributable thereto.
4. The Contractor shall verify all dimensions, elevations and existing conditions prior to starting work and report any discrepancies in writing to City Representative. Any work installed in conflict with the Architectural drawings, shall be corrected by the Contractor at their expense.
5. The Contractor shall notify a City Representative immediately if needed design information is not shown or is unclear.
6. The Contractor is responsible for the accurate placement and configuration of the water feature on the site.
7. No deviation from the drawings shall be made without written approval.
8. Larger scale drawings take precedence over smaller scale drawings.
9. The use of the word "provide" in connection with any item specified is intended to mean that such shall be furnished, installed and connected, where so required, except as noted otherwise.
10. All material stored on site shall be properly stacked and protected to prevent damage and deterioration until use. Failure to protect materials may be a cause for rejection of work.
11. When ± sign is placed adjacent to a given dimension, it indicates that the actual dimension may vary due to existing conditions or that the dimension is not consistent throughout the condition. Verify before proceeding with the work. Discrepancies between the given dimension and actual dimensions are to be brought to Fluidity's attention for the resolution before proceeding with construction.
12. The Contractor shall obtain all necessary Permits and Approvals for all construction and work related thereto.
13. The Contractor shall be responsible for scheduling and coordinating the work for all utilities and services.
14. All symbols and abbreviations used on the drawings are considered to be construction standards. Questions regarding the same or their exact meaning, shall be directed to a City Representative.
15. Written dimensions shall take precedence over scale. The Contractor shall not scale drawings. The Contractor is to inform a City Representative of errors of dimensioning in the drawings for resolution of intent, which is to be provided by a City Representative, and in a timely manner, knowing of the Contractor's need for rapidity during construction

Submittals

1. Prior to submitting shop drawings, the Contractor shall submit for a City Representative review, a Construction Schedule, which details the estimated quantity of shop drawings and the date the shop drawings will be received by the fountain designer. In accordance with the shop drawing schedule, the fountain designer will return the shop drawing items as stipulated project-wide.
  2. The Contractor is to review each submittal prior to forwarding to a City Representative. The Contractor is to sign each submittal verifying that the following is addressed:
    - a) The shop drawing is requested
    - b) The shop drawing is based on the latest design
    - c) The design professional's comments from previous submittals are addressed
    - d) The work is coordinated among all construction trades
    - e) Revisions from previous submittals are clearly marked by circling or clouds
    - f) Submittal is complete
    - g) Submittal does not include substitution request
    - h) Submittal shall include a stamp indicating project name and location, submittal number, specification section number
  3. A City Representative shall return, without comment, submittals which the Contractor has not stamped or which do not meet the above requirements. A City Representative's review of submittals shall be for general conformance with the design intent.
- Refer specifications for items that require submittals and shop drawings for the water feature designer's review

Architectural

1. Construction tolerance for water feature finishes that deal directly with water performance (i.e. weirs) shall be ±1/16". Special exceptions may apply, when resolved with a City Representative and documented in written form.
2. Where no construction details are shown or noted for a part of the work, such details shall be similar to those shown for similar conditions, and shall be used subject to review and approval by a City Representative.
3. All finishes plan dimensions are to centerline of paver joints, unless noted otherwise.
4. All open joints at removable pavers shall be 1/4", unless noted otherwise.
5. Contractor shall coordinate with all equipment manufacturer's for equipment rough-in requirements.
6. Coordinate and verify with all other trades (i.e. Architectural, Landscape, Structural, Civil, Plumbing, Electrical, etc.) the size and location of piping, trenches, sleeves, special bolting for equipment conduit etc., through, under and above concrete slabs.
7. All pre-manufactured adjustable paver supports (i.e. Bison Jacks, Buzon Jacks, Pave-El's,) shall be secured in place, as required by manufacturer for said product, in conjunction with waterproofing manufacturer requirements.
8. Cut stone tolerance shall be ±1/32".
9. All finishes shall be uniform regarding material, color, texture, thickness and veining, unless noted otherwise. Veining to be oriented in same direction, unless noted otherwise. Variety in natural materials is understood, but in all cases the latitude of tolerances must be established prior to procurement, such as lightest and darkest allowable colors, etc.
10. All removable pavers shall rest firmly on specified supports.
11. All removable pavers shall have a minimum thickness of 2", unless noted otherwise.
12. All stone sealants and cement grouts shall match in color the stones for which they are used. Tool flush and texture similarly to the stone finish, unless noted otherwise.
13. All stone finishes delivered to job site or cut on site shall be inspected to be free of damage (i.e. nicks, cracks). Damaged stone shall not be installed.
14. All shims used for leveling shall be water resistant, and must support dead and live loads without deflection. All shims shall be glued in place to fixed surface, or otherwise made permanent.
15. Stainless steel water troughs shall be welded continuously watertight.
16. For proper water display, all nozzles shall be placed in the center of their stone opening, unless noted otherwise. Tolerance shall be ±1/8" from center, in any horizontal direction. All nozzles shall be set with a vertical tolerance of ±1/8", unless noted otherwise.
17. All nozzles shall be placed in final destination and tested for desired display performance, before applying surrounding finishes. Secure nozzles in place to prevent potential misalignment. Swivel type nozzles shall be secured tightly, and may require spot welding to assure desired placement.
18. For proper light display, all lights shall be placed in the center of their stone opening, unless noted otherwise. Tolerance shall be ±1/4" from center, in a horizontal and vertical direction, unless noted otherwise. For angled light displays, refer to drawings for tolerances.
19. All lights shall be placed in final destination and tested for desired display performance, before applying surrounding finishes. Secure lights in place to prevent potential misalignment.
20. All stainless steel weirs shall be provided with a slotted opening at fastener location, for adjustability. Weir shall be adjustable in the vertical and direction ±1/2" (12mm). In some instances, horizontal adjustability is also required. Contractor to verify.

Structural

21. For Water Feature Structural information, refer to Project's Structural Drawings for this portion of the work, see sheets 600-S-20 series and 600-S-05 series of drawings. Water Feature designer's drawings do not cover Structural information and do not represent the Structural Engineering discipline.

CONTRACT NO. WW-647R

CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

SOUTHEAST WATER POLLUTION CONTROL PLANT  
 BIOSOLIDS DIGESTER FACILITIES PROJECT

GENERAL SITEWIDE

LANDSCAPE NOTES

**SAN FRANCISCO PUBLIC WORKS**  
 BUILDING DESIGN & CONSTRUCTION DIVISION  
 BUREAU OF LANDSCAPE ARCHITECTURE

PROJECT LANDSCAPE ARCHITECT	A. ALFONSO	DRAWN	D. ALCANTARA ORTIZ
SECTION MANAGER	T. ESTERBROOKS	DESIGNED	N. ANCEL
APPROVED	T. ESTERBROOKS	CHECKED	J. COOPER



**FOR CONSTRUCTION**  
 Scope II

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ELEVATION DATUM  
 CITY

NO.	DATE	REV #1	DESCRIPTION	TSE	TE

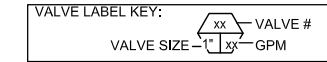
PROJECT MANAGER	ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.	REVISION NO.
	<b>000-G-01-7005</b>	<b>1</b>

# PLANTING LEGEND

SYMBOL	ABBR.	BOTANICAL NAME	COMMON NAME	QTY	SIZE	SPACING	NOTES	WATER USE
<b>TREES</b>								
	GRE ROB	GREVILLIA ROBUSTA	SILKY OAK TREE	11	36" BOX	SEE PLAN	MATCHED SPECIES	MOD
	QUE ROB	QUERCUS ROBUR 'FASTIGIATA'	COLUMNAR ENGLISH OAK	5	36" BOX	SEE PLAN	MATCHED SPECIES	MOD
	MAG CHA	MAGNOLIA CHAMPACA	GOLDEN CHAMPACA	7	36" BOX	SEE PLAN	MATCHED SPECIES	LOW
	EXISTING TREE TO REMAIN							
	EXISTING TREE TO STUMP GRIND							
<b>SHRUBS / GROUND COVER</b>								
	FES MAI	FESTUCA MAIREI 'GREENLEE'S FORM'	ATLAS FESCUE	517	1 GAL	24" OC	MATCHED SPECIES	LOW
	DAS WHE	DASYLIRION WHEELERI	YUCCA BLUE SOTOL	35	5 GAL	48" OC	MATCHED SPECIES	LOW
	DIA TAS	DIANELLA TASMANICA	FLAX LILY	82	1 GAL	24" OC	MATCHED SPECIES	LOW
	DIE VEG	DIETES VEGETA	FORTNIGHT LILY	142	5 GAL	36" OC	MATCHED SPECIES	LOW
	NEP WAL	NEPETA x WALKER'S LOW	CATMINT	27	5 GAL	36" OC	MATCHED SPECIES	LOW
	ALO STR	ALOE STRIMA	CORAL ALOE	214	5 GAL	36" OC	MATCHED SPECIES	LOW

# IRRIGATION LEGEND

SYMBOL	MFR	DESCRIPTION	EQUAL
	-	EXISTING 2.5" MAINLINE	-
	-	PROPOSED 2.5" PVC MAINLINE	-
	-	LATERAL LINE: SCHEDULE 40 PVC, SIZE AS INDICATED ON SCHEDULE, THIS SHEET	-
	-	POC AT WATER METER	-
	-	(N) 2" WATER METER BY OTHERS (SFPUC) CONTRACTOR TO COORDINATE AND PAY FOR INSTALL	-
	FEBCO	(N) 2" BACKFLOW PREVENTER IN STAINLESS STEEL GUARDSHACK CAGE, TO BE CERT. BY CONTRACTOR. CONTRACTOR TO COORDINATE CERTIFICATION WITH SFPUC	NKE
	HUNTER	1 QTY. HUNTER 12C-800-SS (WALL MOUNT) FOR PEDESTAL MOUNT ICC-PED-SS OR SS-16SS, MOUNT IN STAINLESS STEEL ENCLOSURE (PED-SS) A SOLAR SYNC ET GAUGE, REMOTE CONTROL HANDSETS, ROAM XL (2 QTY)	NKE
	RAINBIRD	FLOW SENSOR	-
	HUNTER	1" QUICK COUPLER, HQ-44LRC SPRING LOADED LOCKABLE CAP, AS REQUIRED, SEE PLAN	NKE
	HUNTER	1BV BRASS SOLENOID VALVE W/BRASS BALL VALVE ISOLATION VALVE, SEE DETAIL, SIZE AS REQUIRED	NKE
	HUNTER	2" PRESSURE REGULATING MASTER REMOTE CONTROL VALVE AND VALVE BOX, NORMALLY CLOSED	NKE
	NIBCO	GATE VALVE: LINE SIZE, AS REQ.	NKE



SYMBOL	MFR	DESCRIPTION	GPM	EQUAL
<b>ROTATORS</b>				
	HUNTER	POP-UP; PROS-12-MP-MPSS & MP CORNER	.44, .39	NKE
	HUNTER	POP-UP; PROS-12-END STRIP-L & R	.22, .22	NKE
	HUNTER	POP-UP; PROS-12-MP-1000 (360 & 90-210) Radius 8'-15'	Q .21/H .42/F .84	NKE
	HUNTER	POP-UP; PROS-12-MP-2000-(360 & 90-210) Radius 13'-21'	Q .43/H .77/F 1.48	NKE
	HUNTER	POP-UP; PROS-12-MP-3000-(360 & 90-210) Radius 22'-30'	Q .86/H 1.82/F 3.64	NKE
<b>BUBBLERS</b>				
	HUNTER	ROOT WATERING SYSTEM, 36" (2 PER TREE)	.50	RAINBIRD

**LATERAL PIPING SIZE SCHEDULE**

GPM	PIPE SIZE (SCH 40 PVC) DOWNSTREAM OF RCV
8 OR LESS	3/4" DIA
13	1" DIA
23	1 1/4" DIA
32	1 1/2" DIA
53	2" DIA
74	2 1/2" DIA
116 OR MORE	3" DIA

**QUICK COUPLER PIPING SIZES**

QC QUANTITY	PIPE SIZE (NOMINAL SCH 40 GS)
1	1 1/4" DIA
2	1 1/2" DIA
3	2" DIA
4	2 1/2" DIA
5	2 1/2" DIA
6 OR MORE	3" DIA

**NOTE:**  
IRRIGATION PIPING DOWNSTREAM OF THE REMOTE CONTROL UNIT SHALL BE SIZED PER THE CHART ABOVE WHEN NOT INDICATED ON THE PLAN DRAWINGS. REFER TO THE IRRIGATION LEGEND FOR SPRINKLER FLOW RATES (GPM). NO PIPING DOWNSTREAM OF THE REMOTE CONTROL VALVE TO THE SPRINKLER SHALL BE SIZED SMALLER THAN THE SPRINKLER THREADED INLET SIZE.

**NOTE:**  
QUICK COUPLER PIPING SHALL BE SIZED PER THE CHART ABOVE WHEN NOT INDICATED ON THE PLAN DRAWINGS.

# LAYOUT & MATERIALS LEGEND

SYMBOL	NAME	BOD DESCRIPTION	DETAIL
	CAMPUS FENCE	N/A	SEE LANDSCAPE LAYOUT PLANS, SHEETS 000-L-14-1005 THROUGH 000-L-14-4002.
	VEHICULAR 24' SWING GATE	N/A	
	VEHICULAR 32' SWING GATE	N/A	
	PEDESTRIAN GATE	N/A	
	ACCENT BAND	PRECAST BANDING	
	UNIT PAVER	8" HEX PAVER MEDIUM GREY	
	THERMOPLASTIC PAVING		
	PLANTING AREA	1 GALLON & 5 GALLON	

**CONTRACT NO. WW-647R**  
CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE  
**LANDSCAPE LEGENDS**

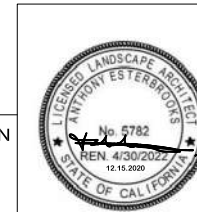
CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Jan 22, 2021
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. <b>000-G-01-7006</b>	DRAWING / FILE NO. <b>1</b>

SAN FRANCISCO PUBLIC WORKS  
BUILDING DESIGN & CONSTRUCTION DIVISION  
BUREAU OF LANDSCAPE ARCHITECTURE

PROJECT LANDSCAPE ARCHITECT A. ALFONSO	DRAWN D. ALCANTARA ORTIZ
SECTION MANAGER T. ESTERBROOKS	DESIGNED N. ANCEL
APPROVED T. ESTERBROOKS	CHECKED J. COOPER

NO.	DATE	REV #1	DESCRIPTION	TSE	TE

REVISIONS













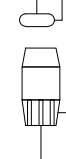
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











ELEVATION DATUM  
CITY












**MECHANICAL EQUIPMENT SYMBOLS**

-  AIR COMPRESSOR
-  FILTER
-  CARTRIDGE FILTER
-  BASKET STRAINER
-  WYE STRAINER
-  END SUCTION CENTRIFUGAL PUMP
-  SUBMERSIBLE PUMP
-  SUBMERSIBLE PUMP
-  SUBMERSIBLE PUMP
-  SUMP PUMP
-  VERTICAL TURBINE PUMP












**VALVE SYMBOLS**  
(ANSI Z32.2.3)

-  GATE VALVE
-  GLOBE VALVE
-  NEEDLE VALVE
-  BUTTERFLY VALVE
-  CHECK VALVE
-  BALL VALVE
-  AUTOMATIC AIR VENT
-  DIAPHRAGM VALVE
-  PRESSURE REGULATING VALVE  
(ARM INDICATES SIDE OF VALVE CONTROLLED)
-  VALVE ACTUATOR  
MOTOR (M) OR PNEUMATIC (P)
-  3-WAY VALVE
-  PRESSURE RELIEF VALVE











**ELECTRICAL EQUIPMENT SYMBOLS**

-  PUMP
-  LIGHT FIXTURE
-  DISCONNECT
-  CIRCUIT BREAKER
-  TRANSFORMER, SINGLE PHASE
-  TRANSFORMER, 3 PHASE,  
DELTA PRIMARY, WYE SECONDARY
-  MOTOR STARTER
-  VARIABLE FREQUENCY DRIVE
-  DC POWER SUPPLY






**FITTING SYMBOLS**  
(ANSI Z32.2.3)

-  BLIND FLANGE
-  REDUCER (CONCENTRIC)
-  REDUCER (ECCENTRIC)
-  CAP (BELL & SPIGOT)
-  CAP (SCREWED)
-  FLOOR DRAIN
-  FLOOR SINK
-  HOSE BIBB
-  HOSE CONNECTION
-  PIPE AWAY FROM VIEWER
-  PIPE TOWARD VIEWER

**INSTRUMENT SYMBOLS**  
(ANSI/ISA S5.1-1984)

-  OTHER INSTRUMENT IDENTIFIER
-  INSTRUMENT FUNCTION IDENTIFIER
-  TAG NUMBER
-  FIELD-MOUNTED INSTRUMENT
-  PANEL-MOUNTED INSTRUMENT
-  NORMALLY INACCESSIBLE INSTRUMENT
-  INSTRUMENTS SHARING COMMON HOUSING
-  PILOT LIGHT
-  INTERLOCK LOGIC
-  RESET FOR LATCHING ACTUATOR

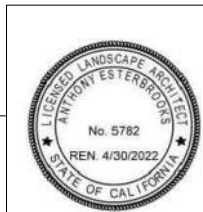
**LINE SYMBOLS**  
(ANSI Z32.2.3)


-  CONCEALED IN SLAB OR UNDERGROUND
-  ELECTRICAL SIGNAL
-  FLOW DIRECTION
-  HOSE OR FLEXIBLE TUBING
-  LINE SIZE

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 SAN FRANCISCO PUBLIC WORKS BUILDING DESIGN & CONSTRUCTION DIVISION BUREAU OF LANDSCAPE ARCHITECTURE	
PROJECT LANDSCAPE ARCHITECT D. FROEHLICH	DRAWN D. ALCANTARA ORTIZ
SECTION MANAGER J. COOPER	DESIGNED C. EIDEM
APPROVED T. ESTERBROOKS	CHECKED N. ANCEL
NO.	DATE
DESCRIPTION	BY
APPROD	
REVISIONS	

<b>CONTRACT NO. WW-647R</b>	
CITY AND COUNTY OF SAN FRANCISCO <b>PUBLIC UTILITIES COMMISSION</b> INFRASTRUCTURE DIVISION ENGINEERING MANAGEMENT BUREAU	
<b>SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT</b>	
GENERAL SITEWIDE <b>WATER FEATURE SYMBOLS</b>	
CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE
	DATE
APPROVED	AS SHOWN
	Oct 1, 2020
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. <b>000-G-01-7007</b>	DRAWING / FILE NO.
	REVISION NO.

LANDSCAPE ABBREVIATIONS

<b>A</b>		GND	GROUND	RD	ROUND
AB	AGGREGATE BASE	GRD	GRADE	RED	REDUCER OR REDUCING
AC	ASPHALTIC CONCRETE	GS	GALVANIZED STEEL	REF	REFERENCE OR REFER
AD	AREA DRAIN	<b>H</b>		REIN	REINFORCE OR REINFORCED
ADA	AMERICAN DISABILITIES ACT	H	HIGH	REINF	REINFORCEMENT
ADJ	ADJACENT	HDPE	HIGH DENSITY POLYETHELENE	RE-STL	REINFORCING STEEL
ADD'L	ADDITIONAL	HDR	HEADER	REQD	REQUIRED
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	HGT	HEIGHT	RESIL	RESILENT
APPROX	APPROXIMATE	HORIZ	HORIZONTAL	REVISION	
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	HP	HIGH POINT	RIM	RIM ELEVATION
ASSY	ASSEMBLY	HPS	HIGH POINT OF SWALE	ROW	RIGHT OF WAY
AVE	AVENUE	HSS	HOLLOW STRUCTURAL STEEL	RT	RIGHT
AWG	AMERICAN WIRE GAUGE	HV	HIGH VOLTAGE	RWD	REDWOOD
		HYD	HYDRANT	<b>S</b>	
<b>B</b>		<b>I</b>		SAD	SEE ARCHITECTURAL DRAWINGS
BC	BOTTOM OF CURB	ID	INSIDE DIAMETER	SCD	SEE CIVIL DRAWINGS
BFP	BACK FLOW PREVENTER	IE	INVERT ELEVATION	SCH	SCHEDULE
BLDG	BUILDING	IN	INCH	SEC	SECTION
BLW	BELOW	INC	INCORPORATED	SED	SEE ELECTRICAL DRAWINGS
BOC	BACK OF CURB	INFO	INFORMATION	SEG	SEGMENTS
BOD	BASIS OF DESIGN	INSL	INSULATION OR INSULATED	SEP	SOUTHEAST WATER POLLUTION CONTROL PLANT
BR	BOTTOM OF RAMP	INV	INVERT	SF	SQUARE FEET
BS	BOTTOM OF STEP	IRRG	IRRIGATION	SGED	SEE GEOTECHNICAL ENGINEERING DRAWINGS
BW	BOTTOM OF WALL	<b>L</b>		SIM	SIMILAR
		L	LENGTH	SJ	SCORE JOINT
<b>C</b>		LBS	POUNDS	SMD	SEE MECHANICAL DRAWINGS
CL	CENTERLINE	LF	LINEAR FEET	SPECS	SPECIFICATION(S)
CB	CATCH BASIN	LOW	LIMIT OF WORK	SQ	SQUARE
CCSF	CITY AND COUNTY OF SAN FRANCISCO	LP	LOW POINT	SS	STAINLESS STEEL
		LT	LIGHT	SSD	SEE STRUCTURAL DRAWINGS
CIP	CAST-IN-PLACE	<b>M</b>		SSDPWSF	STANDARD SPECIFICATIONS OF DEPARTMENT OF PUBLIC WORKS OF SAN FRANCISCO
CJ	CONSTRUCTION JOINT	MAT'L	MATERIAL	ST	STREET
CL	CHAIN LINK	MAX	MAXIMUM	STA	STATION
CLR	CLEAR	MECH	MECHANICAL	STD	STANDARD
CO	CLEANOUT	MEMB	MEMBRANE	STL	STEEL
COL	COLUMN	MFR	MANUFACTURER	SW	SIDEWALK
CONC	CONCRETE	MH	MANHOLE	<b>T</b>	
CONT	CONTINUOUS	MIN	MINIMUM	TC	TOP OF CURB
CTR	CENTER	MISC	MISCELLANEOUS	TEMP	TEMPORARY
		MTA	MUNICIPAL TRANSPORTATION AGENCY	TF	TOP OF FENCE
<b>D</b>		<b>N</b>		THK	THICK OR THICKNESS
DEG	DEGREE	N	NORTH	THRU	THROUGH
DIA	DIAMETER	(N)	NEW	TP	TOP OF PIPE
DIAG	DIAGONAL	NIC	NOT IN CONTRACT	TS	TOP OF STEP
DTL	DETAIL	NKE	NO KNOWN EQUAL	TR	TOP OF RAMP
DWG(S)	DRAWING(S)	NO	NUMBER	TW	TOP OF WALL
		NOM	NOMINAL	TYP	TYPICAL
<b>E</b>		NTS	NOT TO SCALE	<b>U</b>	
E	EAST	<b>O</b>		UNO	UNLESS NOTED OTHERWISE
(E)	EXISTING	OC	ON CENTER	UPRR	UNION PACIFIC RAILROAD
EA	EACH	OD	OUTSIDE DIAMETER	<b>V</b>	
EG	EXISTING GRADE	<b>P</b>		V	VALVE
EJ	EXPANSION JOINT	PA	PLANTED AREA	VAR	VARIABLE
EL	ELEVATION	PAVMT	PAVEMENT	VCP	VITRIFIED CLAY PIPE
ELEC	ELECTRICAL	PERF	PERFORATED	VERT	VERTICAL
ENT	ENTRANCE	PL	PROPERTY LINE	VIF	VERIFY IN FIELD
EQ	EQUAL	POB	POINT OF BEGINNING	<b>W</b>	
EXT	EXTERIOR	POC	POINT OF CONNECTION	W	WEST
EXTN	EXTENSION	PREFAB	PREFABRICATED	W/	WITH
		PSI	POUNDS PER SQUARE INCH	W/O	WITHOUT
<b>F</b>		PVC	POLYVINYL CHLORIDE	WP	WATER PROOFING
FABR	FABRICATION, FABRICATE(D)	<b>Q</b>		WU	WATER USE
FF	FINISHED FLOOR	QC	QUICK COUPLER	WWW	WELDED WIRE MESH
FFE	FINISHED FLOOR ELEVATION	QTY	QUANTITY	<b>X</b>	
FG	FINISHED GRADE	<b>R</b>		XFMR	TRANSFORMER
FIG	FIGURE	R	RADIUS	<b>OTHER</b>	
FIN	FINISH(ED)	RC	REINFORCED CONCRETE	#	NUMBER
FLEX	FLEXIBLE	RCP	REINFORCED CONCRETE PIPE		
FLR	FLOOR				
FOC	FACE OF CURB				
FS	FINISH SURFACE				
FT	FEET OR FOOT				
FTG	FOOTING				
<b>G</b>					
GAL	GALLON				
GALV	GALVANIZED				
GB	GRADE BREAK				

WATER FEATURE ABBREVIATIONS

<b>ABBREVIATIONS</b>		<b>INSTRUMENT ABBREVIATIONS</b>	
(ANSI Y1.1)			
<b>A</b>		<b>O</b>	
ABV	ABOVE	OD	OUTSIDE DIAMETER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	OPER	OPERATING
AUX	AUXILIARY	OWL	OPERATING WATER LEVEL
<b>B</b>		<b>P</b>	
BEL	BELOW	POC	POINT OF CONNECTION
BC	BOLT CIRCLE	PCV	PRESSURE CONTROL VALVE
BL FLG	BLIND FLANGE	PRV	PRESSURE REDUCING VALVE
BOP	BOTTOM OF PIPE	PSI	POUNDS PER SQUARE INCH
BOT	BOTTOM	PSV	PRESSURE SUSTAINING VALVE
BTU	BRITISH THERMAL UNITS	PVC	POLY VINYL CHLORIDE
BW	BACKWASH	<b>R</b>	
<b>C</b>		RED	REDUCE
CL	CENTER LINE	RPM	REVOLUTIONS PER MINUTE
CI	CAST IRON	<b>S</b>	
CLG	CEILING	SDWL	SHUT DOWN WATER LEVEL
CONC	CONCENTRIC	SS	STAINLESS STEEL
CONT	CONTINUATION OR CONTINUED	SUCT	SUCTION
CU	COPPER	<b>T</b>	
CUST	CUSTOM	TBE	THREAD BOTH ENDS
CW	COLD WATER	THD	THREAD
<b>D</b>		TOE	THREAD ONE END
DCW	DOMESTIC COLD WATER	<b>U</b>	
DISCH	DISCHARGE	UNO	UNLESS NOTED OTHERWISE
<b>E</b>		<b>V</b>	
ECC	ECCENTRIC	VT	VENT
EL	ELEVATION	VERT	VERTICAL
ELL	ELBOW	<b>W</b>	
EXP	EXPOSED	W/	WITH
ETC	ET CETERA	WL	WATER LEVEL
<b>F</b>		W/O	WITHOUT
FIN FL	FINISHED FLOOR		
FG	FINISHED GRADE		
FLG	FLANGE		
FTG	FITTING		
FRP	FIBERGLASS REINFORCED PLASTIC		
<b>G</b>			
GA	GAGE		
<b>H</b>			
HB	HOSE BIBB		
HC	HOSE CONNECTION		
HG	MERCURY		
HP	HORSE POWER		
HWC	HIGH WATER CUTOFF		
<b>I</b>			
ID	INSIDE DIAMETER		
ICW	INDUSTRIAL COLD WATER		
<b>L</b>			
LWC	LOW WATER CUTOFF		
<b>M</b>			
MEP	MECHANICAL ELECTRICAL & PLUMBING		
<b>N</b>			
NIC	NOT IN CONTRACT		
NC	NORMALLY CLOSED		
NO	NORMALLY OPEN		

**OTHER INSTRUMENT IDENTIFIERS**

0-1	ON/OFF
HOA	HAND/OFF/AUTO
E/P	VOLTAGE TO PRESSURE TRANSDUCER
I/P	CURRENT TO PRESSURE TRANSDUCER
E/S	VOLTAGE TO SPEED TRANSDUCER
I/S	CURRENT TO SPEED TRANSDUCER

- NOTES:**
- FOR PIPING SERVICE ABBREVIATIONS, SEE FLOW STREAM DESIGNATIONS ON SHEET 000-G-01-7011.
  - FOR EQUIPMENT TAG ABBREVIATIONS, SEE EQUIPMENT DESIGNATIONS ON SHEET 000-G-01-7011.

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ELEVATION DATUM  
**CITY**



SAN FRANCISCO PUBLIC WORKS BUILDING DESIGN & CONSTRUCTION DIVISION BUREAU OF LANDSCAPE ARCHITECTURE	
PROJECT LANDSCAPE ARCHITECT D. FROEHLICH	DRAWN D. ALCANTARA ORTIZ
SECTION MANAGER J. COOPER	DESIGNED C. EIDEM
APPROVED T. ESTERBROOKS	CHECKED N. ANCEL
NO.	DATE
DESCRIPTION	BY
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.
000-G-01-7008	

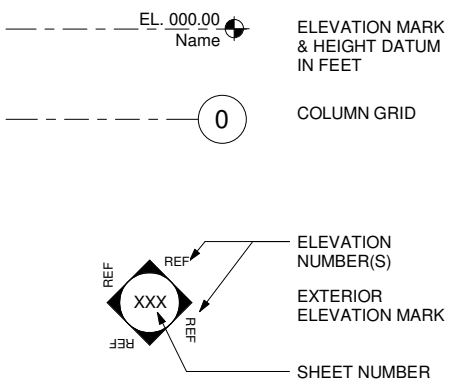
**CONTRACT NO. WW-647R**  
CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT**  
GENERAL SITEWIDE  
**LANDSCAPE ABBREVIATIONS**

CHECKED / APPROVED	DRAWN
DESIGNED	DESIGNED
WWE O&M MANAGER	SCALE
	AS SHOWN
	DATE
	Oct 1, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.
000-G-01-7008	

**GENERAL NOTES**

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING CONDITIONS AND DIMENSIONS ON THE JOB SITE. IN CASE OF AN INCONSISTENCY IN THE CONTRACT DOCUMENTS AND OR DISCREPANCIES BETWEEN THE DOCUMENTS AND FIELD CONDITIONS NOT CLARIFIED BY ADDENDUM, NOTIFY THE CITY REPRESENTATIVE FOR CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK.
2. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LAWS, CODES AND REGULATORY AGENCIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO THOSE NOTED IN THE CODE DATA SECTION ON THE SHEET.
3. PROTECT AND OBEY ALL LOCAL LAWS, ORDINANCES AND RULES, REGULATIONS, AND ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL SITE AND BUILDING DEMOLITION NECESSARY TO PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS.
5. USE EXTREME CAUTION IN THE REMOVAL OF ANY ITEM AND PROVIDE PROTECTION OF PERSONNEL AND OTHERS IN ALL DEMOLITION WORK. CONFORM TO ALL OSHA REQUIREMENTS AND GOVERNING CODES, TYPICAL, DURING CONSTRUCTION. THE CONTRACTOR ALONE IS RESPONSIBLE FOR JOB SITE SAFETY. SITE REVIEW OF THE CONSTRUCTION BY THE ARCHITECT AND /OR ENGINEER, IF ANY, IS TO INTERPRET DOCUMENTS AND DOES NOT INCLUDE SAFETY PROCEDURES OR OPERATIONS.
6. EXISTING CONSTRUCTION AND LANDSCAPING INTENDED TO REMAIN SHALL BE PROTECTED AT ALL TIMES DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR OR REPLACE ALL EXISTING ELEMENTS DISTURBED DURING THE CONSTRUCTION PROCESS. WHERE EXISTING CONSTRUCTION IS CUT, DAMAGED OR MODIFIED, PATCH WITH MATERIALS TO MATCH IN KIND, QUALITY, FINISH AND PERFORMANCE.
7. SECURE AND PAY FOR ALL PERMITS, FEES AND LICENCES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
8. VERIFY THAT NO CONFLICTS EXIST IN THE LOCATION OF ANY AND ALL MECHANICAL, TELEPHONE, ELECTRICAL, IRRIGATION AND LIGHTING EQUIPMENT (INCLUDING ALL PIPING, DUCT AND CONDUIT ROUTING) AND THAT ALL REQUIRED CLEARANCES FOR THE INSTALLATION AND MAINTENANCE OF EQUIPMENT ARE PROVIDED.
9. DO NOT SCALE DRAWINGS. USE WRITTEN OR SPECIFIED DIMENSIONS. LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS. CONTACT THE CITY REPRESENTATIVE FOR CONFLICTS AND MISSING DIMENSIONS.
10. THE TERM "PROVIDE" MEANS FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE. THE TERMS "FURNISH" OR "SUPPLY" MEAN SUPPLY AND DELIVER TO PROJECT. THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT, FROM INSPECTING AND UNLOADING, TO COMPLETION IN PLACE, READY FOR INTENDED USE.
11. REVIEW THE CONSTRUCTION DOCUMENTS AND FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
12. ANY/ALL EXISTING UTILITIES REMOVED, SHALL BE TERMINATED BACK TO THE NEAREST USEFUL SOURCE OR REROUTED AS SHOWN ON DWGS.
13. SEAL ALL SLAB, WALL AND CRAWLSPACE PENETRATIONS AS REQUIRED BY BUILDING AND FIRE CODE.
14. DISPOSE OF ITEMS AND MATERIALS IN A LEGAL MANNER ON A DAILY OR WEEKLY BASIS AS THE WORK PROCEEDS.
15. ERECT AND INSTALL ALL WORK LEVEL, PLUMB, SQUARE, TRUE, STRAIGHT AND IN PROPER ALIGNMENT.
16. ONLY NEW ITEMS OF RECENT MANUFACTURE, OF STANDARD QUALITY, FREE FROM DEFECTS, WILL BE PERMITTED ON THE WORK. REMOVE REJECTED ITEMS IMMEDIATELY FROM THE WORK AND REPLACE WITH THE ITEMS OF THE QUALITY SPECIFIED. FAILURE TO REMOVE THE REJECTED MATERIALS AND EQUIPMENT SHALL NOT RELIEVE THE CONTRACTOR FROM THE QUALITY AND CHARACTER REQUIREMENTS FOR THE ITEMS USED NOR FROM ANY OTHER OBLIGATION IMPOSED ON HIM BY THE CONTRACT.
17. PROVIDE WOOD OR METAL BLOCKING AS ALLOWED BY BUILDING CLASSIFICATION IN WALLS BEHIND WALL-HUNG SHELVES, CASEWORK, PANEL BOARDS, ETC. INCLUDING NIC ITEMS.
18. DIMENSIONS ARE TO STRUCTURAL COLUMN CENTERLINE OR FACE OF FINISH(FOF) UNLESS NOTED OTHERWISE. DIMENSIONS NOTED AS "CLR" ARE FROM FOF TO FOF OR EDGE OF OBJECT, UNLESS NOTED OTHERWISE.
19. WHEN PROJECT IS COMPLETE, CLEAN AND POLISH ALL NEW GLASS, HARDWARE, AND OTHER SUCH ITEMS WITH FACTORY FINISHES, REMOVE ALL DUST WITH TREATED CLOTH OR VACUUM CLEANERS. BUILDING INTERIOR, EXTERIOR AND ROOF SHALL BE PROFESSIONALLY CLEANED PRIOR TO CITY MOVE-IN.
20. CONTRACTOR TO PROVIDE AS-BUILT DOCUMENTS FOR ALL WORKS AT THE CONCLUSION OF CONSTRUCTION.
21. THE CONTRACTOR IS RESPONSIBLE FOR TIMELY CONSTRUCTION OF ALL MOCKUPS FOR EACH ASSEMBLY INDICATED TO REQUIRE MOCKUPS IN THE APPROPRIATE SPECIFICATIONS SECTION. ALL WORK CALLED OUT TO BE REQUIRED IN EACH MOCKUP MUST BE INCLUDED FOR THE MOCKUPS TO BE CONSIDERED COMPLIANT.

**SYMBOLS**



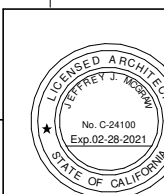
**LEGEND**

ROOM NAME	ROOM NAME AND NUMBER
600-1011	ROOM NAME AND NUMBER
150 SF	
A	WINDOW TAG
D101	DOOR TAG
B10	WALL TAG
###-LXX	LOUVER TAG
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
Start Point Symbol	START POINT
A####	STANDARD DETAIL

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ELEVATION  
DATUM  
CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	B. WILLIAMS
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
REVISIONS			

<b>CONTRACT NO. WW-647R</b>		
CITY AND COUNTY OF SAN FRANCISCO		
<b>PUBLIC UTILITIES COMMISSION</b>		
INFRASTRUCTURE DIVISION		
ENGINEERING MANAGEMENT BUREAU		
<b>SOUTHEAST WATER POLLUTION CONTROL PLANT</b>		
BIOSOLIDS DIGESTER FACILITIES PROJECT		
GENERAL SITESIDE		
<b>ARCHITECTURAL LEGEND AND SYMBOLS</b>		
CHECKED / APPROVED	DRAWN	
SECTION MANAGER	DESIGNED	
WWE O&M MANAGER	SCALE	DATE
	AS SHOWN	Oct 1, 2020
APPROVED	APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER	
PLAN NO.	DRAWING / FILE NO.	REVISION
<b>000-G-01-7014</b>		

Letter	Abbreviation	Description	Letter	Abbreviation	Description	Letter	Abbreviation	Description
<b>A</b>	AAF	ABOVE ACCESS FLOOR	<b>F</b>	FA	FABRIC	<b>M</b>	M	METER
	AB	ANCHOR BOLT		FAB	FABRICATION		(M)	MATCH
	AC	ASPHALT CONCRETE		FCF	FACTORY FINISH		MATL	MATERIAL
	ACS	ACCESSIBLE		FD	FLOOR DRAIN		MAX	MAXIMUM
	ACM	ALUMINUM COMPOSITE MATERIAL		FE	FIRE EXTINGUISHER		MC	MEDICINE CABINET
	ACT	ACOUSTIC CEILING TILE		FEC	FIRE EXTINGUISHER CABINET		MDF	MEDIUM DENSITY FIBER BOARD
	AD	AREA DRAIN		FF	FINISH FLOOR		MECH	MECHANICAL
	ADA	AMERICANS WITH DISABILITIES ACT		FF&E	FURNITURE, FINISHES, AND EQUIPMENT		MEMB	MEMBRANE
	ADDL	ADDITIONAL		FG	FIBERGLASS		MFR	MANUFACTURER
	ADJ	ADJACENT		FHC	FINE HOSE CABINET		MH	MANHOLE
	AFF	ABOVE FINISH FLOOR		FIG	FIGURE		MJ	MECHANICAL JOINT
	AFG	ABOVE FINISH GRADE		FIN	FINISH		MIN	MINIMUM
	ALT	ALTERNATE		FIXT	FIXTURE		MISC	MISCELLANEOUS
	ALUM	ALUMINUM		FL	FLOOR		MM	MILLIMETER
	AMP	AMPERE		FLG	FLANGE		MOD	MODIFIED
	ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE		FLUOR	FLUORESCENT		MR	MOISTURE RESISTANT
	APPROX	APPROXIMATE		FND	FOUNDATION		MTD	MOUNTED
	ARCH	ARCHITECTURAL		FO	FACE OF		MTG	MOUNTING
	ASSY	ASSEMBLY		FOC	FACE OF CONCRETE		MTL	METAL
	ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS		FOF	FACE OF FINISH		MULL	MULLION
	ATD	AIR TRANSFER DUCT		FOM	FACE OF MASONRY			
	AV	AUDIO VISUAL		FOS	FACE OF STEEL		<b>N</b>	NORTH
	AVG	AVERAGE		FOW	FACE OF WALL		N	NEW
				FP	FIRE PANEL		(N)	NOT APPLICABLE
	<b>B</b>	BOARD		FRP	FIBER REINFORCED PLASTIC		N/A	NAPKIN DISPENSER
	BD	BUILDING		FS	FIRE SHUTTER		ND	NOT IN CONTRACT
	BLDG	BLOCKING		FT	FEET		NIC	NUMBER
	BLK	BOTTOM OF		FTG	FOOTING		NO	NOMINAL
	BO	BOTTOM OF CONCRETE		FURR	FURRING		NOM	NOT RATED
	BOC	BOTTOM OF CONCRETE		FUT	FUTURE		NR	NOT TO SCALE
	BOS	BOTTOM OF STEEL					NTS	
	BOT	BOTTOM		<b>G</b>	GAUGE		<b>O</b>	OVER
	BUR	BUILT-UP ROOF		GA	GALLON		O/	OVER ALL
	BYND	BEYOND		GAL	GALVANIZED		OA	ON CENTER
	B/T	BETWEEN		GALV	GRAB BAR		OC	OUTSIDE DIAMETER
				GB	GENERAL CONTRACTOR		OD	OPPOSITE HAND
	<b>C</b>	CHANNEL		GC	GARBAGE DISPOSAL		OH	OPENING
	C	CENTER TO CENTER		GD	GLASS		OPNG	OPPOSITE
	C TO C	CENTER TO CENTER		GL	GROUND		OPP	OPTIONAL
	CAB	CABINET		GND	GALLONS PER MINUTE		OPT	ORIGINAL
	CBC	CALIFORNIA BUILDING CODE		GPM	GALVANIZED SHEET METAL		ORIG	OUTSIDE
	CER	CERAMIC		GSM	GYP SUM		OS	ORIENTED STRAND BOARD
	CFM	CUBIC FEET PER MINUTE		GYP	GYP SUM WALL BOARD		OSB	OWNER SUPPLIED & OWNER INSTALLED
	CG	CORNER GUARD		GYP BD			OSD	OWNER SUPPLIED & CONTRACTOR INSTALLED
	CGL	COLUMN GRID LINE					OSOI	
	CIP	CAST IN PLACE		<b>H</b>	HEIGHT		OSCI	
	CJ	CONTROL JOINT		H	HOSE BIB			
	CLG	CEILING		HB	HOLLOW CORE		<b>P</b>	PARTICLE BOARD
	CLOS	CLOSET		HC	HANDICAPPED		PBDB	PLAN END
	CLR	CLEAR		HCP	HIGH DENSITY OVERLAY		PERP	PERPENDICULAR
	CM	CENTIMETER		HDO	HEXAGON		PH	PENTHOUSE
	CMU	CONCRETE MASONRY UNIT		HEX	HORIZONTAL		PL	PLATE
	CNTR	COUNTER		HORIZ	HOLLOW METAL		PL	PLASTIC
	CO	CLEANOUT		HM	HOUR		PLAM	PLASTIC LAMINATE
	COL	COLUMN		HR	HOLLOW STRUCTURAL SECTION		PYWD	PLYWOOD
	CONC	CONCRETE		HSS	HEIGHT		PNL	PANEL
	COND	CONDITION		HT	HEATING, VENTILATION, & AIR CONDITIONING		POLYISO	POLYISOCYANURATE INSULATION
	CONT	CONTINUOUS		HVAC	HERTZ		PR	PRESSURE
	CONST	CONSTRUCTION					PROVD	PROVIDED
	COORD	COORDINATE		<b>I</b>	INSIDE FACE		PSI	POUND PER SQUARE INCH
	CPLG	COUPLING		IF	INCHES		PSIG	POUND PER SQUARE INCH GAUGE
	CPT	CARPET		IN	INTERIOR		PT	PRESSURE TREATED
	CSCI	CONTRACTOR SUPPLIED & CONTRACTOR INSTALLED		INT	INSTALL		PTD	PAINTED
	CT	CERAMIC TILE		INST	INSULATION		PTTD	PAPER TOWEL DISPENSER
	CTR	CENTER		INSUL			PTN	PARTITION
	CTSK	COUNTER SUNK		<b>J</b>	JANITOR		PVC	POLYVINYL CHLORIDE
	CU	CUBIC		JAN	JOINT			
				JT			<b>Q</b>	QUANTITY
	<b>D</b>	DOUBLE					QTY	
	DBL	DEGREE		<b>K</b>	KILOGRAM			
	DEG	DEMOLITION		KG	KNEE SPACE		<b>R</b>	REMOVE
	DEMO	DOUGLAS FIR		KS			(R)	RADIUS
	DF	DIAMETER					RAD	REFLECTED CEILING PLAN
	DIA	DIMENSION		<b>L</b>	LENGTH		RCP	ROOF DRAIN
	DIM	DISPENSER		L	LIQUID APPLIED MEMBRANE		RD	REINFORCING/REINFORCEMENT
	DISP	DOWN		LAM	POUNDS		REINF	REQUIRED
	DN	DOWNSPOUT		LBS	REQUIREMENTS		REQS	REVISION
	DS	DETAIL		LF	REFERENCE		REV	REFRIGERATOR
	DET	DISHWASHER		LOC	RESILIENT		REF	RESILIENT FLOORING
	DWG	DRAWING		LVL	ROOM		REFR	ROUGH OPENING
	DWR	DRAWER		LVT			RESIL	
							RF	
	<b>E</b>	EXISTING					RM	
	(E)	EACH					RO	
	EA	EXPANSION JOINT						
	EJ	ELECTRICAL						
	ELEC	ELEVATION						
	ELEV	ENCLOSED						
	ENCL	EDGE OF SLAB						
	EOS	EQUAL						
	EQ	EQUIPMENT						
	EQUIP	ELEVATOR						
	EVTR	EXPANSION						
	EXP	EXTERIOR						
	EXT							

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BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	B. WILLIAMS
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
REVISIONS			

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ARCHITECTURAL ABBREVIATIONS		
CHECKED / APPROVED	DRAWN	
SECTION MANAGER	DESIGNED	
WWW O&M MANAGER	SCALE	DATE
	AS SHOWN	Oct 1, 2020
APPROVED	APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWW ENGINEERING MANAGER	
PLAN NO.	DRAWING / FILE NO.	REVISION
000-G-01-7015		





### DISABILITY ACCESS COMPLIANCE FOR CITY PROJECTS

Applicants to fill in project name + address before scanning this form onto their plans.  
For Alterations, add SF DBI – DA-02 checklist & form(s) as applicable

Biosolids Digester Facilities

Southeast Plant - Bldg 600

Leave Area Below Blank – for PW BDC Disability Access Coordinator (DAC) Staff Use

**DESIGN PHASE: Public Works Building Design and Construction DAC has reviewed & approved:**

- Pre-application meeting(s) / site permit review
- SF DBI DA-02 Checklist / Technical Infeasibility Request forms
- Playground ADA Inventory form
- Accessible Means of Egress plans
- Elements exempt from accessibility requirements, per 11B-203
- Exempt HVAC, reroofing, electrical or cosmetic work *only*, not affecting accessibility elements
- FINAL CONSTRUCTION PLANS FOR PERMIT APPLICATIONS**

**CONSTRUCTION PHASE: The following inspections, if selected, are required:**

Call 415-557-4676 to schedule inspection(s).

- ROUGH FRAMING**, after plumbing & electrical rough-in is complete, prior to cover
- BRAILLE / TACTILE SIGNAGE**, including proofs and color samples prior to fabrication
  - Door opening force and closing speed (after final air balance, if applicable)
  - Power door operator testing and signage per BHMA A156.19
  - Play Area equipment, use zones and accessible routes
  - Off-site curb ramps, blue zone parking spaces and passenger loading zones
- INSPECTION AT 95% ~ 98% COMPLETE**, but prior to or as-needed for T.C.O.
- FINAL INSPECTION ON PROJECT**, sign-off on SF-DBI Job Card, if applicable

Arfaraz Khambatta, CASp Public Works, BDC Disability Access Coordinator

Date

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**

CEC-NRCC-ENV-01-E (Revised 01/16)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-ENV-01-E

Envelope Component Approach

Page 1 of 7

Project Name: Bldg 600 - Southeast Water Pollution Control Plant Biosolids Digester Facilities Project

Date Prepared: 7/25/19

**A. GENERAL INFORMATION**

01	Project Location:	750 Phelps St.	06	Compliance Method:	<input checked="" type="checkbox"/> Component <input type="checkbox"/> Unconditioned (file Affidavit)
02	CA City and Zip Code:	San Francisco, 94124	07	Building Front Orientation:	180
03	Climate Zone:	3	08	Phase of Construction:	<input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Additions <input type="checkbox"/> Alteration
04	Total Conditioned Floor Area:	20,225 SF	09	Building Occupancy:	<input checked="" type="checkbox"/> Nonresidential <input type="checkbox"/> High Rise Residential <input type="checkbox"/> Hotel/Motel Guest Room
05	Building Type:	<input type="checkbox"/> Schools (Public Schools) <input type="checkbox"/> Relocatable Public School Building <input checked="" type="checkbox"/> Conditioned Spaces <input checked="" type="checkbox"/> Unconditioned Spaces <input type="checkbox"/> Skylight Area for Large Enclosed Space > 5000 ft <sup>2</sup> (If checked, include the NRCC-ENV-04-E with submittal)			

**B. ENVELOPE DETAILS - FRAMED**

01	02	03	04	05	06	07	08		09	10	11
Tag/ID	Assembly Type	Frame Material	Frame Depth	Frame Spacing	Cavity R-value	Continuous Insulation R-value	Appendix JA4 Reference Table	Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
F2	Wall	Metal	6	24	R19	R2	4.3.3	B25	0.123	0.151	
H2	Wall	Metal	6	16	R19	R2	4.3.3	B6	0.134	0.151	
10.5" Fbr Cmmt	Wall	Metal	6	16	R19	R8	4.3.3	G6	0.074	0.082	
A2	Wall	Metal	6	16	R19	0	4.3.3	A6	0.183	0.151	
12"	Wall	Metal	4 (dbl)	16	0	0	4.33	A1	0.229	0.069	Double wall U-factor per JA4.1.2.4

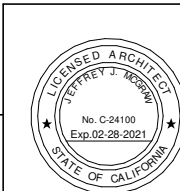
**C. ENVELOPE DETAILS - NON-FRAMED**

01	02	03	04	05	06	07	08	09	10
----	----	----	----	----	----	----	----	----	----

**FOR CONSTRUCTION**  
Scope II

FOR THE SOLE USE OF THE DOCUMENT RECIPIENT - DO NOT CITE, COPY, OR CIRCULATE WITHOUT THE EXPRESSED PERMISSION OF THE SFPUC.

ELEVATION DATUM  
CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
Brown and Caldwell		ch2m	
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
		REVISIONS	

<b>CONTRACT NO. WW-647R</b>			
CITY AND COUNTY OF SAN FRANCISCO <b>PUBLIC UTILITIES COMMISSION</b> INFRASTRUCTURE DIVISION ENGINEERING MANAGEMENT BUREAU			
SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT			
GENERAL SITEWIDE <b>DISABILITY ACCESS &amp; TITLE 24 ENVELOPE FORMS-600</b>			
CHECKED / APPROVED	DRAWN		
SECTION MANAGER	DESIGNED		
WWE O&M MANAGER	SCALE	DATE	
	AS SHOWN	Oct 1, 2020	
APPROVED	APPROVED		
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER		
PLAN NO.	DRAWING / FILE NO.	REVISION	
<b>000-G-01-8109</b>			

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**

CEC-NRCC-ENV-01-E (Revised 01/16)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-ENV-01-E

Envelope Component Approach

Page 2 of 7

Project Name: Bldg 600 - Southeast Water Pollution Control Plant Biosolids Digester Facilities Project

Date Prepared: 7/25/19

Tag/ID	Assembly Type	Assembly Materials	Thickness (inches)	Interior or Core Insulation R-Value	Continuous Insulation R-Value	Appendix JA4 Reference Table		Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
Roof	Roof	Conc/Mtl Deck	8.5		30	4.2.6	J5	0.031	.039	

**D. ENVELOPE DETAILS - MASS**

01	02	03	04	05	06	07	08		09	10	11
Tag/ID	Mass Type	Density (lb/ft <sup>3</sup> )	Mass Thickness (inches)	Furring Strip Thickness (inches)	Interior Insulation R-Value	Exterior Insulation R-Value	Appendix JA4 Reference Table	Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
22" Conc	Solid Conc	144	22.75	N/A	0	0	4.3.6	J5	0.63	0.65	
18" Conc	Solid Conc	144	18.75	N/A	0	0	4.3.6	J5	0.63	0.65	
Floor	Solid Conc	144	12	N/A	0	0	4.4.6	A1	0.269	0.269	
12" Conc	Solid Conc	144	12	N/A	0	0	4.3.6	J5	0.63	0.65	

**E. ROOFING PRODUCTS (COOL ROOF)**

01	02	03	04	05	06	07	08	09	10	11
Mass Roof 25 lb/ft <sup>2</sup> or Greater	Roof Pitch	CRRP Product ID Number	Product Type	Proposed			Minimum Required			Comments
				Aged Solar Reflectance <sup>1</sup>	Thermal Emittance	SRI <sup>2</sup> (Optional)	Aged Solar Reflectance	Thermal Emittance	SRI (Optional)	
<input checked="" type="checkbox"/>	<=2:12	0700-0022	Field-Applied Coat	<input type="checkbox"/> 0.72	0.89	88.42	0.63	0.75		

- An aged solar reflectance less than 0.63 is allowed provided the maximum roof/ceiling U-factor in TABLE 140.3 is not exceeded

High-rise residential buildings and Hotels and Motels with low-sloped roofs in Climate Zones 1 through 8, 12, and 16 are exempt from aged Solar Reflectance and thermal emittance requirements.  
 High-rise residential and Hotels/Motels with steep-sloped roofs in Climate Zones 1 and 16 are exempt from aged Solar Reflectance and thermal emittance requirements.  
 The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempt from aged Solar Reflectance and thermal emittance requirements.  
 To apply Liquid Field Applied Coatings, the coating must be applied across the entire roof surface and meet the dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §110.8(i)(4). Select the applicable coating:  
 Aluminum-Pigmented Asphalt Roof Coating  Cement-Based Roof Coating  Other \_\_\_\_\_  
**NOTES:**  
 1. Check the box if the aged Solar Reflectance was not available in the Cool Roof Council's Rated Product Directory, then use the equation in Section 110.8(i)(2):  $aged = 0.2 + 8(P_{initial} - 0.2)$  to obtain a calculated aged solar reflectance value. Where  $P_{initial}$  is the Initial Solar Reflectance found in the directory and 8 is either 0.65 for field applied coatings or 0.70 for all other roofing products other than Field-Applied Coating.  
 2. Calculate the SRI Value by using the SRI Worksheet and enter the resulting value in the SRI column above and attach a copy of the SRI Worksheet (NRCC-ENV-03-E) to this compliance document.

**F. AIR BARRIER**

01	02	03	04	05
Name	Air Barrier Material Type	Air Barrier Assembly Type	Whole Building Air Leakage Testing	Comments
N/A				
Add Row	Remove Last			

**G. FENESTRATION PROPOSED AREAS AND EFFICIENCIES**

01	02	03	04	05	06	07	08	09	10	11	12
Tag/ID	Fenestration Type	Surface Area	Orientation	# of Panes	Max U-Factor	Max (R)SHGC	Min VT	Label	Overhang	Condition Status	Comments
117	Glazed Door	2.25	East	1	0.41	.13	.56	NFRC	Yes	New	
117	Storefront Transom	7.5	East	1	0.41	.11	.56	NFRC	Yes	New	

S3	Storefront	22	West	1	0.41	.19	.56	NFRC	Yes	New	
S2	Storefront	70	South	4	0.41	.18	.56	NFRC	Yes	New	
S7	Storefront	57	South	4	0.41	.11	.56	NFRC	Yes	New	Window onto covered balcony
S5	Storefront	40.5	North	2	0.41	.25	0.56	NFRC	No	New	
CG2	Channel Glass Wall	70	East	2	0.25	.31	.37	NFRC	Yes	New	
C10	Curtain Wall	137	East	8	0.41	.21	.56	NFRC	Yes	New	
C15	Curtain Wall	72	East	4	0.41	.15	.56	NFRC	Yes	New	
C16	Curtain Wall	298	East	12	0.41	.16	.56	NFRC	Yes	New	
C13	Curtain Wall	1588	North	65	0.41	.22	.56	NFRC	Yes	New	
C14	Curtain Wall	298	West	12	0.41	.16	.56	NFRC	Yes	New	
C11	Curtain Wall	67.5	West	4	0.41	.23	.56	NFRC	Yes	New	
114G	Glazed Door	2.25	East	1	0.41	0.13	.56	NFRC	Yes	New	
114G	Fixed Transom	7.5	East	1	0.41	0.25	.56	NFRC	Yes	New	
120B	Glazed Door	4.5	West	2	0.41	0.11	.56	NFRC	Yes	New	Interior glazing
114F	Glazed Door	6	North	1	0.41	.20	.56	NFRC	Yes	New	Interior glazing
114B	Glazed Door	6	North	1	0.41	.20	.56	NFRC	Yes	New	Interior glazing

114A	Glazed Door	6	West	1	0.41	.11	0.56	NFRC	Yes	New	Interior glazing
112A	Glazed Door	6	North	1	0.41	.20	0.56	NFRC	Yes	New	Interior glazing
201	Glazed Door	25	East	4	0.41	.11	0.56	NFRC	Yes	New	Door onto covered balcony
213B	Glazed Door	6	East	1	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
212B	Glazed Door	6	East	1	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
S32	Storefront	35	East	2	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
S33	Storefront	60	East	3	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
213	Glazed Door	13	East	2	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
W34	Fixed Window	30	East	2	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
W34	Fixed Window	30	East	2	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
202A	Glazed Door	2.25	North	1	0.41	0.20	0.56	NFRC	Yes	New	Interior glazing
209E	Glazed Door	6	West	1	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
W33	Fixed Window	100	West	4	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
W33	Fixed Window	100	West	4	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
209F	Glazed Door	6	West	4	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
203	Glazed Door	2.25	South	1	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing

403	Glazed Door	2.25	South	1	0.41	0.11	0.56	NFRC	Yes	New	Interior glazing
Add Row	Remove Last										

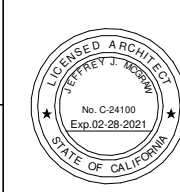
**H. ENVELOPE MANDATORY MEASURES**  
 Indicate location on building plans of Mandatory Envelope Measures Note Block: 000-G-01-8109

**INSTRUCTIONS TO APPLICANT ENVELOPE COMPLIANCE & WORKSHEETS (check box if worksheet are included)**  
 For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, please refer to the Energy Commission website.  
 NRCC-ENV-01-E Certificate of Compliance. Required on plans for all submittals.  
 NRCC-ENV-04-E Use when minimum skylight requirements for large enclosed spaces are required in climate zones 2 through 15. Optional on plans.

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: Jeff McGraw  
 Documentation Author Signature: [Signature]  
 Signature Date: 7/25/19  
 Company: MWA Architects  
 Address: 135 Main St., Ste. 550  
 City/State/Zip: San Francisco, CA 94105  
 Phone: 415-957-2750  
**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.  
 Responsible Designer Name: Jeff McGraw  
 Responsible Designer Signature: [Signature]  
 Date Signed: 7/25/19  
 Company: MWA Architects  
 Address: 135 Main St., Ste. 550  
 City/State/Zip: San Francisco, CA 94105  
 License #: C-24100  
 Phone: 415-957-2750

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIO SOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE  
**TITLE 24 ENVELOPE FORMS (CONTINUED)-600**  
 CHECKED / APPROVED: [Signature] DRAWN: [Signature]  
 SECTION MANAGER: [Signature] DESIGNED: [Signature]  
 WWS O&M MANAGER: [Signature] SCALE: AS SHOWN DATE: Oct 1, 2020  
 APPROVED: [Signature] APPROVED: [Signature]  
 MANAGER, ENGINEERING MANAGEMENT BUREAU: [Signature] WWS ENGINEERING MANAGER: [Signature]  
 PLAN NO. **000-G-01-8110** DRAWING / FILE NO. [Signature] REVISION: [Signature]

**BIO SOLIDS DIGESTER FACILITIES PROJECT**  
 CONSULTANT TEAM  
  
  
  
 PROJECT ENGINEER: D. GREEN DRAWN: A. HARM  
 PROJECT MANAGER: T. STIGERS DESIGNED: A. HARM  
 APPROVED: J. MCGRAW CHECKED: G. ROBLEY  
 NO. DATE DESCRIPTION BY APPRD



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**FOR CONSTRUCTION**  
 Scope II

ELEVATION DATUM  
 CITY

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**  
 CEC-NRCC-ENV-02-E (Revised 09/16)  
 CERTIFICATE OF COMPLIANCE  
 Fenestration Worksheet  
 Project Name: Bldg 600-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19  
 Page 1 of 4

**A. WINDOWS DETAILS WORKSHEET - §140.3(a)6B, C and D**  
 NOTE: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Site-built fenestration less than 1,000 ft<sup>2</sup>, see Reference Nonresidential Appendix NA6.  
 Prescriptively, skylights shall have a glazing material or diffuser that has a measured haze value greater than 90%, determined according to ASTM D1003, or other test method approved by the Energy Commission.

Tag/ID	Window Type (e.g. Window-1)	Surface Area	Fenestration						Overhang				
			U-Factor		SHGC		VT		Dimensions		Calculated		
			Proposed	Allowed	Proposed	Allowed	Proposed	Allowed	H	V	H/V	(R)SHGC Proposed	Max (R)SHGC Allowed
117	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	8.75	11	0.795	0.13	0.23
117	Storefront Transom	7.5	0.41	0.41	0.25	0.26	0.56	0.46	8.75	6.75	1.296	0.11	0.26
S3	Storefront	22	0.41	0.41	0.25	0.26	0.56	0.46	1	3.5	0.286	0.19	0.26
S2	Storefront	70	0.41	0.41	0.25	0.26	0.56	0.46	1	3.5	0.286	0.18	0.26
S7	Storefront	57	0.41	0.41	0.25	0.26	0.56	0.46	12.75	0.01	1.275	0.11	0.26
S5	Storefront	40.5	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26
CG2	Channel Glass Wall	70	0.25	0.41	0.26	0.26	0.37	0.46	1	8.75	0.114	0.26	0.26
C10	Curtain Wall	137	0.41	0.41	0.25	0.26	0.56	0.46	1.5	12.5	0.12	0.21	0.26
C15	Curtain Wall	72	0.41	0.41	0.25	0.26	0.56	0.46	6.5	12.5	0.52	0.15	0.26
C16	Curtain Wall	298	0.41	0.41	0.25	0.26	0.56	0.46	6.5	14	0.464	0.16	0.26
C13	Curtain Wall	1588	0.41	0.41	0.25	0.26	0.56	0.46	6	16	0.375	0.22	0.26
C14	Curtain Wall	298	0.41	0.41	0.25	0.26	0.56	0.46	6.5	14	0.464	0.16	0.26
C11	Curtain Wall	67.5	0.41	0.41	0.25	0.26	0.56	0.46	1	12.5	0.08	0.23	0.26
114G	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	3	4	0.75	0.13	0.23
114G	Storefront Transom	7.5	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26
120B	Glazed Door	4.5	0.41	0.45	0.23	0.23	0.56	0.17	77	16.5	4.667	0.11	0.23
114F	Glazed Door	6	0.41	0.45	0.23	0.23	0.56	0.17	16	16.5	0.97	0.2	0.23

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**  
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 Date Prepared: 7/25/19  
 Page 2 of 4

114B	Glazed Door	6	0.41	0.45	0.23	0.23	0.56	0.17	16	16.5	0.97	0.2	0.23
114A	Glazed Door	6	0.41	0.45	0.23	0.23	0.56	0.17	110	16.5	6.667	0.11	0.23
112A	Glazed Door	6	0.41	0.45	0.23	0.23	0.56	0.17	59	16.5	3.576	0.2	0.23
201	Glazed Door	25	0.41	0.45	0.23	0.23	0.56	0.17	21	13.5	1.556	0.11	0.23
213B	Glazed Door	6	0.41	0.45	0.23	0.23	0.56	0.17	108	13.5	8	0.11	0.23
212B	Glazed Door	6	0.41	0.45	0.23	0.23	0.56	0.17	75	10.5	7.143	0.11	0.23
S32	Storefront	35	0.41	0.36	0.25	0.26	0.56	0.46	75	11.5	6.522	0.11	0.26
S33	Storefront	60	0.41	0.36	0.25	0.26	0.56	0.46	75	11.5	6.522	0.11	0.26
213C	Glazed Door	13	0.41	0.45	0.23	0.23	0.56	0.17	75	12.5	6	0.11	0.23
W34	Fixed Window	30	0.41	0.36	0.25	0.25	0.56	0.42	75	11	6.818	0.11	0.25
W34	Fixed Window	30	0.41	0.36	0.25	0.25	0.56	0.42	75	11	6.818	0.11	0.25
202A	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	9.5	10.5	0.905	0.2	0.23
209E	Glazed Door	6	0.41	0.45	0.23	0.23	0.56	0.17	47	10.5	4.476	0.11	0.23
W33	Fixed Window	100	0.41	0.36	0.25	0.25	0.56	0.42	47	10.5	4.476	0.11	0.25
W33	Fixed Window	100	0.41	0.36	0.25	0.25	0.56	0.42	47	10.5	4.476	0.11	0.25
209F	Glazed Door	6	0.41	0.45	0.23	0.23	0.56	0.17	47	10.5	4.476	0.11	0.23
203	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	25	10.5	2.381	0.11	0.23
403	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	25	9	2.778	0.11	0.23

Add Row Remove Last

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**  
 CEC-NRCC-ENV-02-E (Revised 09/16)  
 CERTIFICATE OF COMPLIANCE  
 Fenestration Worksheet  
 Project Name: Bldg 600-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19  
 Page 4 of 4

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: Jeff McGraw  
 Signature: [Signature]  
 Date: 7/25/19  
 Company: MWA Architects  
 Address: 135 Main St., Ste. 550  
 City/State/Zip: San Francisco, CA 94105  
 Phone: 415-957-2750

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.  
 Responsible Designer Name: Jeff McGraw  
 Signature: [Signature]  
 Date Signed: 7/25/19  
 Company: MWA Architects  
 Address: 135 Main St., Ste. 550  
 City/State/Zip: San Francisco, CA 94105  
 License: C-24100  
 Phone: 415-957-2750

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**  
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 Project Name: Bldg 600-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19  
 Page 3 of 4

**B. WEST WINDOW AREA CALCULATION - See §140.3(a)5A**  
 01. Gross West Exterior Wall Area: 2,256 ft<sup>2</sup> × 0.40 = 902.4 ft<sup>2</sup> 40% of Gross West Facing Exterior Wall Area; or  
 02. West Display Linear Perimeter: 160 FT × 6 ft = 960 ft<sup>2</sup> West Display Perimeter Area  
 03. Enter Larger of 01 or 02: 960 ft<sup>2</sup> Maximum Standard West Area  
 04. Enter Proposed West Window Area: 387.5 ft<sup>2</sup> Proposed West Window Area  
 Note: If the PROPOSED WEST WINDOW AREA is greater than the MAXIMUM STANDARD WEST AREA then the envelope component approach may not be used.

**C. WINDOW AREA CALCULATION (for all other orientations other than West) - See §140.3(a)5A**  
 01. Gross Exterior Wall Area: 7,310 ft<sup>2</sup> × 0.40 = 2,924 ft<sup>2</sup> 40% of Gross Exterior Wall Area or  
 02. Linear Display Perimeter: 491 FT × 6 ft = 2,946 ft<sup>2</sup> Display Perimeter Area  
 03. Enter the Larger of 01 or 02: 2,946 ft<sup>2</sup> Maximum Standard Area  
 04. Enter Proposed Window Area: 2730 ft<sup>2</sup> Proposed Window Area  
 Note: If the PROPOSED WINDOW AREA is greater than the MAXIMUM STANDARD AREA then the envelope component approach may not be used.

**D. SKYLIGHT AREA CALCULATION - See §140.3(a)6A**

	ACTUAL GROSS ROOF AREA	STANDARD ALLOWED SKYLIGHT AREA
01. IF Atrium/Skylight Height is ≤ 55 ft, or	ft <sup>2</sup> × 0.05 =	0 ft <sup>2</sup>
02. IF Atrium/Skylight Height is > 55 ft	ft <sup>2</sup> × 0.10 =	0 ft <sup>2</sup>
03. Proposed Skylight Area (from plans)	ft <sup>2</sup>	
04. Skylight SSR% = Proposed Skylight Area Divided by Actual Gross Roof Area =	%	
05. Haze material value greater than 90% according to ASTM D1003, or other approved method by the Energy Commission	Yes No	

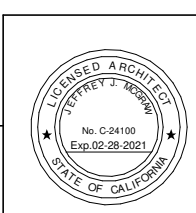
1. If the SKYLIGHT SSR % is less than or equal to 5% then choose the appropriate column in Table 140.3-B and C and row in Table 140.3-D.  
 2. If the SKYLIGHT SSR % is greater than 5% then the Envelope Component Approach may not be used.

**E. RELOCATABLE PUBLIC SCHOOL BUILDINGS - See §140.3(a)8**  
 Option 1  
 For Specific Climate Zone, use Table 140.3-B - Prescriptive Envelope Criteria.  
 Specific Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans.  
 Indicate location from the building plans:  
 Option 2  
 For Any (All) Climate Zone, use Table 140.3-D - Prescriptive Envelope Criteria.  
 Any (All) Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans.  
 Indicate location from the building plans:

**FOR CONSTRUCTION**  
 Scope II

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ELEVATION DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM

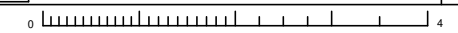
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

NO. DATE DESCRIPTION BY APPR'D

REVISIONS

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU  
 SOUTHEAST WATER POLLUTION CONTROL PLANT  
 BIOSOLIDS DIGESTER FACILITIES PROJECT  
 GENERAL SITEWIDE  
 TITLE 24 ENVELOPE FORMS (CONTINUED)-600

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWW O&M MANAGER	SCALE AS SHOWN DATE Oct 1, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWW ENGINEERING MANAGER
PLAN NO. 000-G-01-8111	DRAWING / FILE NO. REVISION




CERTIFICATE OF COMPLIANCE		NRCC-ENV-03-E
Solar Reflectance Index Calculation Worksheet		(Page 1 of 2)
Project Name: <b>Bldg 600 - Southeast Water Pollution Control Plant Biosolids Digester Facility</b> Date Prepared: 7/25/19		

A. Product Information		
01	CRRC Product ID Number	0700-0022
02	Manufacturer	Garland
03	Brand	White Knight
04	Model	WC
05	Product Type	Field-Applied Coating
06	Roof Slope	less than or equal to 2:12

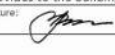
B. SRI Calculations		
01	Aged Reflectance Listed with CRRC	Yes <input checked="" type="radio"/> No <input type="radio"/>
02	CRRC Listed Aged Solar Reflectance	0.72
03	Initial Solar Reflectance	
04	Calculated Aged Solar Reflectance	
05	Thermal Emittance	0.89

C. Results		
01	Solar Reflective Index	88.42421164

CERTIFICATE OF COMPLIANCE		NRCC-ENV-03-E
Solar Reflectance Index Calculation Worksheet		(Page 2 of 2)
Project Name: <b>Bldg 600 - Southeast Water Pollution Control Plant Biosolids Digester Facility</b> Date Prepared: 7/25/19		

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 1. I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: **Jeff McGraw** Documentation Author Signature:   
 Company: **MWA Architects** Signature Date: **7/25/19**  
 Address: **135 Main St., Ste. 550** CEA/HERS Certification Identification (if applicable):  
 City/State/Zip: **San Francisco, CA 94105** Phone: **415-957-2750**

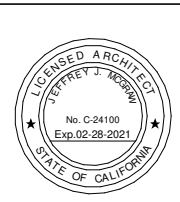
**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: **Jeff McGraw** Responsible Designer Signature:   
 Company: **MWA Architects** Date Signed: **7/25/19**  
 Address: **135 Main St., Ste. 550** License: **C-24100**  
 City/State/Zip: **San Francisco, CA 94105** Phone: **415-957-2750**

**FOR CONSTRUCTION**  
 Scope II

**FOR THE SOLE USE OF THE DOCUMENT RECIPIENT - DO NOT CITE, COPY, OR CIRCULATE WITHOUT THE EXPRESSED PERMISSION OF THE SFPUC.**

ELEVATION DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
REVISIONS			

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE

**TITLE 24 ENVELOPE FORMS (CONTINUED)-600**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Oct 1, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. <b>000-G-01-8112</b>	DRAWING / FILE NO. REVISION



STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/16)  
 CERTIFICATE OF COMPLIANCE  
 Envelope Component Approach  
 Project Name: Bldg 610-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19  
 CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-01-E  
 Page 1 of 5

**A. GENERAL INFORMATION**

01	Project Location:	750 Phelps St.	06	Compliance Method:	<input checked="" type="checkbox"/> Component <input type="checkbox"/> Unconditioned (file Affidavit)
02	CA City and Zip Code:	San Francisco, 94124	07	Building Front Orientation:	90 deg
03	Climate Zone:	3	08	Phase of Construction:	<input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Additions <input type="checkbox"/> Alteration
04	Total Conditioned Floor Area:	2,486 sf	09	Building Occupancy:	<input checked="" type="checkbox"/> Nonresidential <input type="checkbox"/> High Rise Residential <input type="checkbox"/> Hotel/Motel Guest Room
05	Building Type:	<input type="checkbox"/> Schools (Public Schools) <input type="checkbox"/> Relocatable Public School Building <input checked="" type="checkbox"/> Conditioned Spaces <input type="checkbox"/> Unconditioned Spaces <input type="checkbox"/> Skylight Area for Large Enclosed Space > 5000 ft <sup>2</sup> (If checked, include the NRCC-ENV-04-E with submittal)			

**B. ENVELOPE DETAILS - FRAMED**

01	02	03	04	05	06	07	08	09	10	11	
Tag/ID	Assembly Type	Frame Material	Frame Depth	Frame Spacing	Cavity R-value	Continuous Insulation R-value	Appendix JA4 Reference Table	Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments

**C. ENVELOPE DETAILS - NON-FRAMED**

01	02	03	04	05	06	07	08	09	10	
Tag/ID	Assembly Type	Assembly Materials	Thickness (inches)	Interior or Core Insulation R-Value	Continuous Insulation R-value	Appendix JA4 Reference Table	Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
Roof	Roof	Conc/Mtl Deck	12		30	4.2.6	J8	.031	.039	

**D. ENVELOPE DETAILS - MASS**

01	02	03	04	05	06	07	08	09	10	11

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/16)  
 CERTIFICATE OF COMPLIANCE  
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 CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-01-E  
 Page 2 of 5

Tag/ID	Mass Type	Density (lb/ft <sup>3</sup> )	Mass Thickness (inches)	Furring Strip Thickness (inches)	Interior Insulation R-Value	Exterior Insulation R-Value	Appendix JA4 Reference Table	Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
Wall Int	Solid Conc	144	12	N/A	N/A	N/A	4.3.6	J5	0.63	0.65	
Wall Ext	Solid Conc	144	12	N/A	N/A	N/A	4.3.6	J5	0.63	0.65	
Wall Ext	Solid Conc	144	24	N/A	N/A	N/A	4.3.6	J5	0.63	0.65	

**E. ROOFING PRODUCTS (COOL ROOF)**

01	02	03	04	05	06	07	08	09	10	11
Mass Roof 25 lb/ft <sup>2</sup> or Greater	Roof Pitch	CRRC Product ID Number	Product Type	Aged Solar Reflectance <sup>1</sup>	Thermal Emittance	SRI <sup>2</sup> (Optional)	Aged Solar Reflectance	Thermal Emittance	SRI (Optional)	Comments
<input checked="" type="checkbox"/>	<= 2:12	0700-0022	Field-Applied Coat	<input type="checkbox"/> 0.72	0.89	88	0.63	0.75		

- An aged solar reflectance less than 0.63 is allowed provided the maximum roof/ceiling U-factor in TABLE 140.3 is not exceeded  
 - High-rise residential buildings and Hotels and Motels with low-sloped roofs in Climate Zones 1 through 8, 12, and 16 are exempted from aged Solar Reflectance and thermal emittance requirements  
 - High-rise residential and Hotels/Motels with steep-sloped roofs in Climate Zones 1 and 16 are exempt from aged Solar Reflectance and thermal emittance requirements  
 - The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempt from aged Solar Reflectance and thermal emittance requirements  
 - To apply Liquid Field Applied Coatings, the coating must be applied across the entire roof surface and meet the dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §110.8(j)(4). Select the applicable coating:  
 Aluminum-Pigmented Asphalt Roof Coating  Cement-Based Roof Coating  Other

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

STATE OF CALIFORNIA  
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 CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-01-E  
 Page 3 of 5

**NOTES:**  
 1. Check the box if the aged Solar Reflectance was not available in the Cool Roof Council's Rated Product Directory, then use the equation in Section 110.8(j)(2):  $Paged = 0.2 + 6(P_{initial} - 0.2)$  to obtain a calculated aged solar reflectance value. Where  $P_{initial}$  is the initial Solar Reflectance found in the directory and  $\delta$  is either 0.65 for field applied coatings or 0.70 for all other roofing products other than Field-Applied Coating.  
 2. Calculate the SRI Value by using the SRI-Worksheet and enter the resulting value in the SRI column above and attach a copy of the SRI-Worksheet (NRCC-ENV-03-E) to this compliance document.

**F. AIR BARRIER**

01	02	03	04	05
Name	Air Barrier Material Type	Air Barrier Assembly Type	Whole Building Air Leakage Testing	Comments
				N/A

**G. FENESTRATION PROPOSED AREAS AND EFFICIENCIES**

01	02	03	04	05	06	07	08	09	10	11	12
Tag/ID	Fenestration Type	Surface Area	Orientation	# of Panes	Max U-Factor	Max (R)SHGC	Min VT	Label	Overhang	Condition Status	Comments
FF109	Glazed Door	2.25	West	1	0.41	0.25	0.56	NFRC	N	New	
FF109	Storefront Transom	7.5	West	1	0.41	0.25	0.56	NFRC	N	New	
FF111A	Glazed Door	2.25	West	1	0.41	0.25	0.56	NFRC	N	New	
FF111A	Storefront Transom	7.5	West	1	0.41	0.25	0.56	NFRC	N	New	
FF111B	Glazed Door	4.5	West	2	0.41	0.25	0.56	NFRC	N	New	
FF111B	Storefront Transom	15	West	1	0.41	0.25	0.56	NFRC	N	New	

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
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 CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-01-E  
 Page 4 of 5

**H. ENVELOPE MANDATORY MEASURES**

Indicate location on building plans of Mandatory Envelope Measures Note Block: 000-G-01-8113

**INSTRUCTIONS TO APPLICANT ENVELOPE COMPLIANCE & WORKSHEETS (check box if worksheet are included)**

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, please refer to the Energy Commission website.

NRCC-ENV-01-E Certificate of Compliance. Required on plans for all submittals.  
 NRCC-ENV-04-E Use when minimum skylight requirements for large enclosed spaces are required in climate zones 2 through 15. Optional on plans.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/16)  
 CERTIFICATE OF COMPLIANCE  
 Envelope Component Approach  
 Project Name: Bldg 610-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19  
 CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-01-E  
 Page 5 of 5

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jeff McGraw  
 Signature: [Signature]  
 Date: 7/25/19

Company: MWA Architects  
 Address: 135 Main St., Ste. 550  
 City/State/Zip: San Francisco, CA 94105  
 Phone: 415-957-2750

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Jeff McGraw  
 Signature: [Signature]  
 Date Signed: 7/25/19  
 Company: MWA Architects  
 Address: 135 Main St., Ste. 550  
 City/State/Zip: San Francisco, CA 94105  
 License: C-24100  
 Phone: 415-957-2750

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

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 10/6/2020 8:59:51 PM

FOR CONSTRUCTION  
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ELEVATION DATUM  
 CITY

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

BIOSOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM

**Brown and Caldwell** **ch2m**  
 BLACK & VEATCH

PROJECT ENGINEER: D. GREEN  
 PROJECT MANAGER: T. STIGERS  
 APPROVED: J. MCGRAW

DRAWN: A. HARM  
 DESIGNED: A. HARM  
 CHECKED: G. ROBLEY

CHECKED / APPROVED: [Signature]  
 SECTION MANAGER: [Signature]  
 WWS O&M MANAGER: [Signature]  
 APPROVED: [Signature]  
 MANAGER, ENGINEERING MANAGEMENT BUREAU: [Signature]  
 WWS ENGINEERING MANAGER: [Signature]

SCALE: AS SHOWN  
 DATE: Oct 30, 2020

PLAN NO.: 000-G-01-8113  
 DRAWING / FILE NO.: [Blank]  
 REVISION: [Blank]

CONTRACT NO. WW-647R  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU  
 SOUTHEAST WATER POLLUTION CONTROL PLANT  
 BIOSOLIDS DIGESTER FACILITIES PROJECT  
 GENERAL SITEWIDE  
 TITLE 24 ENVELOPE FORMS-610

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**

CEC-NRCC-ENV-02-E (Revised 09/16)

CALIFORNIA ENERGY COMMISSION  
NRCC-ENV-02-E

**CERTIFICATE OF COMPLIANCE**

Fenestration Worksheet

Page 1 of 3

Project Name: Bldg 610-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**A. WINDOWS DETAILS WORKSHEET - §140.3(a)6B, C and D**

NOTE: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Site-built fenestration less than 1,000 ft<sup>2</sup>, see Reference Nonresidential Appendix NA6.  
Prescriptively, skylights shall have a glazing material or diffuser that has a measured haze value greater than 90%, determined according to ASTM D1003, or other test method approved by the Energy Commission.

01	02	03	Fenestration					Overhang						
			U-Factor		SHGC		VT	Dimensions			Calculated			
			Proposed	Allowed	Proposed	Allowed	Proposed	Allowed	H	V	H/V	(R)SHGC Proposed	Max (R)SHGC Allowed	
Tag/ID	Window Type (e.g. Window-1)	Surface Area												
FF109	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	0	0		0.23	0.23	
FF109	Storefront Transom	7.5	0.41	0.45	0.25	0.26	0.56	0.17	0	0		0.25	0.26	
FF111A	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	0	0		0.23	0.23	
FF111A	Storefront Transom	7.5	0.41	0.45	0.25	0.26	0.56	0.17	0	0		0.25	0.26	
FF111B	Glazed Door	4.5	0.41	0.45	0.23	0.23	0.56	0.17	0	0		0.23	0.23	
FF111B	Storefront Transom	15	0.41	0.45	0.25	0.26	0.56	0.17	0	0		0.25	0.26	

Add Row Remove Last

**B. WEST WINDOW AREA CALCULATION - See §140.3(a)5A**

01. Gross West Exterior Wall Area	2,363	ft <sup>2</sup> · 0.40 =	945.2 ft <sup>2</sup>	40% of Gross West Facing Exterior Wall Area; or
02. West Display Linear Perimeter	16	FT · 6 ft =	96 ft <sup>2</sup>	West Display Perimeter Area
03. Enter Larger of 01 or 02			945.2 ft <sup>2</sup>	Maximum Standard West Area
04. Enter Proposed West Window Area			39 ft <sup>2</sup>	Proposed West Window Area

Note: If the PROPOSED WEST WINDOW AREA is greater than the MAXIMUM STANDARD WEST AREA then the envelope component approach may not be used.

**C. WINDOW AREA CALCULATION (for all other orientations other than West) - See §140.3(a)5A**

01. Gross Exterior Wall Area	3,083	ft <sup>2</sup> · 0.40 =	1,233.2 ft <sup>2</sup>	40% of Gross Exterior Wall Area or
02. Linear Display Perimeter	0	FT · 6 ft =	0 ft <sup>2</sup>	Display Perimeter Area
03. Enter The Larger of 01 or 02			1,233.2 ft <sup>2</sup>	Maximum Standard Area
04. Enter Proposed Window Area			0 ft <sup>2</sup>	Proposed Window Area

Note: If the PROPOSED WINDOW AREA is greater than the MAXIMUM STANDARD AREA then the envelope component approach may not be used.

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**

CEC-NRCC-ENV-02-E (Revised 09/16)

CALIFORNIA ENERGY COMMISSION  
NRCC-ENV-02-E

**CERTIFICATE OF COMPLIANCE**

Fenestration Worksheet

Page 2 of 3

Project Name: Bldg 610-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**D. SKYLIGHT AREA CALCULATION - See §140.3(a)6A**

	ACTUAL GROSS ROOF AREA	STANDARD ALLOWED SKYLIGHT AREA
01. IF Atrium/Skylight Height is ≤ 55 ft; or	ft <sup>2</sup> · 0.05 =	0 ft <sup>2</sup>
02. IF Atrium/Skylight Height is > 55 ft	ft <sup>2</sup> · 0.10 =	0 ft <sup>2</sup>
03. Proposed Skylight Area (from plans)	ft <sup>2</sup>	
04. Skylight SSR% <sup>1,2</sup> = Proposed Skylight Area Divided by Actual Gross Roof Area =	1.61 %	
05. Haze material value greater than 90% according to ASTM D1003, or other approved method by the Energy Commission		Yes No <input type="radio"/> <input checked="" type="radio"/>

1. If the SKYLIGHT SSR % is less than or equal to 5% then choose the appropriate column in Table 140.3-B and C and row in Table 140.3-D.  
2. If the SKYLIGHT SSR % is greater than 5% then the Envelope Component Approach may not be used.

**E. RELOCATABLE PUBLIC SCHOOL BUILDINGS - See §140.3(a)8**

**Option 1**

For Specific Climate Zone, use Table 140.3-B - Prescriptive Envelope Criteria.

Specific Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans.  
Indicate location from the building plans:

**Option 2**

For Any (All) Climate Zone, use Table 140.3-D - Prescriptive Envelope Criteria.

Any (All) Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans.  
Indicate location from the building plans:

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**

CEC-NRCC-ENV-02-E (Revised 09/16)

CALIFORNIA ENERGY COMMISSION  
NRCC-ENV-02-E

**CERTIFICATE OF COMPLIANCE**

Fenestration Worksheet

Page 3 of 3

Project Name: Bldg 610-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jeff McGraw  
Documentation Author Signature:

Company: MWA Architects  
Signature Date: 7/25/19

Address: 135 Main St., Ste. 550  
City/State/Zip: San Francisco, CA 94105  
CEA/HERS Certification Identification (if applicable):  
Phone: 415-957-2750

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Responsible Designer Name: Jeff McGraw  
Responsible Designer Signature:

Company: MWA Architects  
Date Signed: 7/25/19

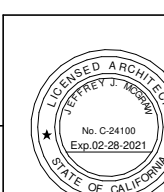
Address: 135 Main St., Ste. 550  
License: C-24100

City/State/Zip: San Francisco, CA 94105  
Phone: 415-957-2750

**FOR CONSTRUCTION**  
Scope II

FOR THE SOLE USE OF THE DOCUMENT RECIPIENT - DO NOT CITE, COPY, OR CIRCULATE WITHOUT THE EXPRESSED PERMISSION OF THE SFPUC.

ELEVATION DATUM  
CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
		REVISIONS	

<b>CONTRACT NO. WW-647R</b>		
CITY AND COUNTY OF SAN FRANCISCO <b>PUBLIC UTILITIES COMMISSION</b> INFRASTRUCTURE DIVISION ENGINEERING MANAGEMENT BUREAU		
SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT GENERAL SITEWIDE		
TITLE 24 ENVELOPE FORMS (CONTINUED)-610		
CHECKED / APPROVED	DRAWN	
SECTION MANAGER	DESIGNED	
WWE O&M MANAGER	SCALE	DATE
	AS SHOWN	Oct 30, 2020
APPROVED	APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER	
PLAN NO.	DRAWING / FILE NO.	REVISION
000-G-01-8114		

STATE OF CALIFORNIA  
**SOLAR REFLECTANCE INDEX CALCULATION WORKSHEET**  
 CEC-NRCC-ENV-03-E (Revised 9/1/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE  
 Solar Reflectance Index Calculation Worksheet (Page 1 of 2)  
 Project Name: **Bldg 610 - Southeast Water Pollution Control Plant Biosolids Digester Facility** Date Prepared: **7/25/19**

A. Product Information		
01	CRRC Product ID Number	0700-0022
02	Manufacturer	Garland
03	Brand	White Knight
04	Model	WC
05	Product Type	Field-Applied Coating
06	Roof Slope	less than or equal to 2:12

B. SRI Calculations		
01	Aged Reflectance Listed with CRRC	Yes <input checked="" type="radio"/> No <input type="radio"/>
02	CRRC Listed Aged Solar Reflectance	0.72
03	Initial Solar Reflectance	
04	Calculated Aged Solar Reflectance	
05	Thermal Emittance	0.89

C. Results		
01	Solar Reflective Index	88.42421164


CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

STATE OF CALIFORNIA  
**SOLAR REFLECTANCE INDEX CALCULATION WORKSHEET**  
 CEC-NRCC-ENV-03-E (Revised 9/1/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE  
 Solar Reflectance Index Calculation Worksheet (Page 2 of 2)  
 Project Name: **Bldg 610 - Southeast Water Pollution Control Plant Biosolids Digester Facility** Date Prepared: **7/25/19**

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 1. I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: **Jeff McGraw** Documentation Author Signature:   
 Company: **MWA Architects** Signature Date: **7/25/19**  
 Address: **135 Main St., Ste. 550** CEA/HERS Certification Identification (if applicable):  
 City/State/Zip: **San Francisco, CA 94105** Phone: **415-957-2750**

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
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Responsible Designer Name: **Jeff McGraw** Responsible Designer Signature:   
 Company: **MWA Architects** Date Signed: **7/25/19**  
 Address: **135 Main St., Ste. 550** License: **C-24100**  
 City/State/Zip: **San Francisco, CA 94105** Phone: **415-957-2750**

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

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ELEVATION DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
REVISIONS			

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE  
**TITLE 24 ENVELOPE FORMS (CONTINUED)-610**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Oct 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. <b>000-G-01-8115</b>	DRAWING / FILE NO. REVISION

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/16)  
 CERTIFICATE OF COMPLIANCE  
 Envelope Component Approach  
 Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19  
 NRCC-ENV-01-E  
 Page 1 of 6  
 CALIFORNIA ENERGY COMMISSION

**A. GENERAL INFORMATION**

01	Project Location:	750 Phelps St.	06	Compliance Method:	<input checked="" type="checkbox"/> Component <input type="checkbox"/> Unconditioned (file Affidavit)
02	CA City and Zip Code:	San Francisco, 94124	07	Building Front Orientation:	180 deg
03	Climate Zone:	3	08	Phase of Construction:	<input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Additions <input type="checkbox"/> Alteration
04	Total Conditioned Floor Area:	26,885 sf	09	Building Occupancy:	<input checked="" type="checkbox"/> Nonresidential <input type="checkbox"/> High Rise Residential <input type="checkbox"/> Hotel/Motel Guest Room
05	Building Type:	<input type="checkbox"/> Schools (Public Schools) <input type="checkbox"/> Relocatable Public School Building <input checked="" type="checkbox"/> Conditioned Spaces <input checked="" type="checkbox"/> Unconditioned Spaces <input checked="" type="checkbox"/> Skylight Area for Large Enclosed Space > 5000 ft <sup>2</sup> (If checked, include the NRCC-ENV-04-E with submittal)			

**B. ENVELOPE DETAILS - FRAMED**

01	02	03	04	05	06	07	08	09	10	11	
Tag/ID	Assembly Type	Frame Material	Frame Depth	Frame Spacing	Cavity R-value	Continuous Insulation R-value	Appendix JA4 Reference Table	Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
H2	Wall	Metal	6	16	R19	2	4.3.3	B6	0.134	0.151	

**C. ENVELOPE DETAILS - NON-FRAMED**

01	02	03	04	05	06	07	08	09	10	
Tag/ID	Assembly Type	Assembly Materials	Thickness (inches)	Interior or Core Insulation R-Value	Continuous Insulation R-Value	Appendix JA4 Reference Table	Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
Roof	Roof	Conc/Mtl Deck	12		30	4.2.6	J8	.031	.039	

**D. ENVELOPE DETAILS - MASS**

01	02	03	04	05	06	07	08	09	10	11
----	----	----	----	----	----	----	----	----	----	----

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/16)  
 CERTIFICATE OF COMPLIANCE  
 Envelope Component Approach  
 Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19  
 NRCC-ENV-01-E  
 Page 2 of 6  
 CALIFORNIA ENERGY COMMISSION

Tag/ID	Mass Type	Density (lb/ft <sup>3</sup> )	Mass Thickness (inches)	Furring Strip Thickness (inches)	Interior Insulation R-Value	Exterior Insulation R-Value	Appendix JA4 Reference		Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
Wall Int	Solid Conc	144	8	N/A	N/A	N/A	4.3.6	F5	0.74	N/A	
Wall Ext	Solid Conc	144	12	N/A	N/A	N/A	4.3.6	J5	0.63	0.65	
Floor	Solid Conc	144	12	N/A	N/A	N/A	4.4.6	A1	0.269	0.269	

**E. ROOFING PRODUCTS (COOL ROOF)**

01	02	03	04	05	06	07	08	09	10	11
Mass Roof 25 lb/ft <sup>2</sup> or Greater	Roof Pitch	CRRC Product ID Number	Product Type	Aged Solar Reflectance <sup>1</sup>	Thermal Emittance	SRI <sup>2</sup> (Optional)	Aged Solar Reflectance	Thermal Emittance	SRI (Optional)	Comments
<input checked="" type="checkbox"/>	<= 2:12	0700-0022	Field-Applied Coat	<input type="checkbox"/> 0.72	0.89	88	0.63	0.75		

- An aged solar reflectance less than 0.63 is allowed provided the maximum roof/ceiling U-factor in TABLE 140.3 is not exceeded  
 - High-rise residential buildings and Hotels and Motels with low-sloped roofs in Climate Zones 1 through 8, 12, and 16 are exempt from aged Solar Reflectance and thermal emittance requirements  
 - High-rise residential and Hotels/Motels with steep-sloped roofs in Climate Zones 1 and 16 are exempt from aged Solar Reflectance and thermal emittance requirements  
 - The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempt from aged Solar Reflectance and thermal emittance requirements  
 - To apply Liquid Field Applied Coatings, the coating must be applied across the entire roof surface and meet the dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §110.8(i)4. Select the applicable coating:  
 Aluminum-Pigmented Asphalt Roof Coating  Cement-Based Roof Coating  Other

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

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STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/16)  
 CERTIFICATE OF COMPLIANCE  
 Envelope Component Approach  
 Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19  
 NRCC-ENV-01-E  
 Page 3 of 6  
 CALIFORNIA ENERGY COMMISSION

**NOTES:**  
 1. Check the box if the aged Solar Reflectance was not available in the Cool Roof Council's Rated Product Directory, then use the equation in Section 110.8(i)2:  $\text{Aged} = 0.2 + 0.8(\text{Initial} - 0.2)$  to obtain a calculated aged solar reflectance value. Where Initial is the Initial Solar Reflectance found in the directory and 8 is either 0.65 for Field applied coatings or 0.70 for all other roofing products other than Field-Applied Coating.  
 2. Calculate the SRI Value by using the SRI-Worksheet and enter the resulting value in the SRI column above and attach a copy of the SRI-Worksheet (NRCC-ENV-03-E) to this compliance document.

**F. AIR BARRIER**

01	02	03	04	05
Name	Air Barrier Material Type	Air Barrier Assembly Type	Whole Building Air Leakage Testing	Comments
				N/A

**G. FENESTRATION PROPOSED AREAS AND EFFICIENCIES**

01	02	03	04	05	06	07	08	09	10	11	12
Tag/ID	Fenestration Type	Surface Area	Orientation	# of Panes	Max U-Factor	Max (R)SHGC	Min VT	Label	Overhang	Condition Status	Comments
S9	Storefront	36	West	1	0.41	0.21	0.56	NFRC	Y	New	
109B	Glazed Door	2.25	North	1	0.41	0.20	0.56	NFRC	Y	New	
109B	Storefront Transom	4.5	North	1	0.41	0.25	0.56	NFRC	N	New	
107B	Glazed Door	4.5	West	1	0.41	0.25	0.56	NFRC	N	New	
109A	Glazed Door	6	East	1	0.41	0.11	0.56	NFRC	Y	New	Interior glazing
C2	Curtainwall	192	North	8	0.41	0.25	0.56	NFRC	N	New	
C2	Curtainwall	192	North	8	0.41	0.27	0.56	NFRC	N	New	

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/16)  
 CERTIFICATE OF COMPLIANCE  
 Envelope Component Approach  
 Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19  
 NRCC-ENV-01-E  
 Page 4 of 6  
 CALIFORNIA ENERGY COMMISSION

C4	C4A	C2	C2	C4	C1	C1	C3	C3	C1	C1	C3	309	201	203	301
Curtainwall	Curtainwall	Curtainwall	Curtainwall	Curtainwall	Curtainwall	Curtainwall	Curtainwall	Curtainwall	Curtainwall	Curtainwall	Curtainwall	Glazed Door	Glazed Door	Glazed Door	Glazed Door
42	21	192	192	42	288	288	63	63	288	288	63	16	2.25	2.25	2.25
North	West	South	South	East	North	North	North	West	South	South	South	East	North	West	North
2	1	8	8	2	8	8	2	2	8	8	2	2	1	1	1
0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.11	0.2	0.11	0.2
0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
NFRC	NFRC	NFRC	NFRC	NFRC	NFRC	NFRC	NFRC	NFRC	NFRC	NFRC	NFRC	NFRC	NFRC	NFRC	NFRC
N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y
New	New	New	New	New	New	New	New	New	New	New	New	New	New	New	New
												Interior glazing	Interior glazing	Interior glazing	Interior glazing

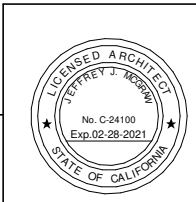
CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

**FOR CONSTRUCTION**  
 Scope II

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ELEVATION DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

NO. DATE DESCRIPTION BY APPD

REVISIONS

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT  
 BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE  
**DISABILITY ACCESS & TITLE 24 ENVELOPE FORMS - 615**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWW O&M MANAGER	SCALE AS SHOWN
DATE	Oct 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWW ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.
<b>000-G-01-8116</b>	REVISION



303	Glazed Door	2.25	West	1	0.41	0.11	0.56	NFRC	Y	New	Interior glazing
Skylight	Skylight	50	Roof	1	0.57	0.5	0.56	NFRC	N	New	
Skylight	Skylight	50	Roof	1	0.57	0.5	0.56	NFRC	N	New	
Skylight	Skylight	50	Roof	1	0.57	0.5	0.56	NFRC	N	New	

Add Row Remove Last

**H. ENVELOPE MANDATORY MEASURES**  
 Indicate location on building plans of Mandatory Envelope Measures Note Block: 000-G-01-8117

**INSTRUCTIONS TO APPLICANT ENVELOPE COMPLIANCE & WORKSHEETS (check box if worksheet are included)**  
 For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, please refer to the Energy Commission website.

- NRCC-ENV-01-E Certificate of Compliance. Required on plans for all submittals.
- NRCC-ENV-04-E Use when minimum skylight requirements for large enclosed spaces are required in climate zones 2 through 15. Optional on plans.

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**  
 CEC-NRCC-ENV-02-E (Revised 09/16) CALIFORNIA ENERGY COMMISSION  
 CERTIFICATE OF COMPLIANCE NRCC-ENV-02-E  
 Fenestration Worksheet Page 2 of 4  
 Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

C1	Curtainwall	288	0.41	0.41	0.25	0.26	0.56	0.46	0	0	0.25	0.26	
C3	Curtainwall	63	0.41	0.41	0.25	0.26	0.56	0.46	0	0	0.25	0.26	
309	Glazed Door	16	0.41	0.45	0.23	0.23	0.56	0.17	104	20	5.2	0.11	0.23
201	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	86	12.5	6.88	0.2	0.23
203	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	118	12.5	9.44	0.11	0.23
301	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	86	20	4.3	0.2	0.23
303	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	118	20	5.9	0.11	0.23
Skylight	Plastic Curb Mtd Skylight	28	0.57	0.88	0.5	NR	0.64	0.64	0	0	0.5	NR	
Skylight	Plastic Curb Mtd Skylight	28	0.57	0.88	0.5	NR	0.64	0.64	0	0	0.5	NR	
Skylight	Plastic Curb Mtd Skylight	28	0.57	0.88	0.5	NR	0.64	0.64	0	0	0.5	NR	
Skylight	Plastic Curb Mtd Skylight	28	0.57	0.88	0.5	NR	0.64	0.64	0	0	0.5	NR	

Add Row Remove Last

**B. WEST WINDOW AREA CALCULATION - See §140.3(a)5A**

01. Gross West Exterior Wall Area	4,557	ft <sup>2</sup> · 0.40 =	1,822.8 ft <sup>2</sup>	40% of Gross West Facing Exterior Wall Area; or
02. West Display Linear Perimeter	218.5	FT · 6 ft =	1,311 ft <sup>2</sup>	West Display Perimeter Area
03. Enter Larger of 01 or 02			1,822.8 ft <sup>2</sup>	Maximum Standard West Area
04. Enter Proposed West Window Area			125 ft <sup>2</sup>	Proposed West Window Area

Note: If the PROPOSED WEST WINDOW AREA is greater than the MAXIMUM STANDARD WEST AREA then the envelope component approach may not be used.

**C. WINDOW AREA CALCULATION (for all other orientations other than West) - See §140.3(a)5A**

01. Gross Exterior Wall Area	12,222	ft <sup>2</sup> · 0.40 =	4,888.8 ft <sup>2</sup>	40% of Gross Exterior Wall Area or
02. Linear Display Perimeter	603	FT · 6 ft =	3,618 ft <sup>2</sup>	Display Perimeter Area
03. Enter The Larger of 01 or 02			4,888.8 ft <sup>2</sup>	Maximum Standard Area
04. Enter Proposed Window Area			2137 ft <sup>2</sup>	Proposed Window Area

Note: If the PROPOSED WINDOW AREA is greater than the MAXIMUM STANDARD AREA then the envelope component approach may not be used.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance September 2016

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION  
 CERTIFICATE OF COMPLIANCE NRCC-ENV-01-E  
 Envelope Component Approach Page 6 of 6  
 Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**1. DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: Jeff McGraw  
 Documentation Author Signature: [Signature]  
 Company: MWA Architects  
 Address: 135 Main St., Ste. 550  
 City/State/Zip: San Francisco, CA 94105  
 Signature Date: 7/25/19  
 CEA/HERS Certification Identification (if applicable):  
 Phone: 415-957-2750

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 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
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Responsible Designer Name: Jeff McGraw  
 Responsible Designer Signature: [Signature]  
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 Address: 135 Main St., Ste. 550  
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 Date Signed: 7/25/19  
 License: C-24100  
 Phone: 415-957-2750

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**  
 CEC-NRCC-ENV-02-E (Revised 09/16) CALIFORNIA ENERGY COMMISSION  
 CERTIFICATE OF COMPLIANCE NRCC-ENV-02-E  
 Fenestration Worksheet Page 1 of 4  
 Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**A. WINDOWS DETAILS WORKSHEET - §140.3(a)6B, C and D**  
 NOTE: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Site-built fenestration less than 1,000 ft<sup>2</sup>, see Reference Nonresidential Appendix NA6.  
 Prescriptively, skylights shall have a glazing material or diffuser that has a measured haze value greater than 90%, determined according to ASTM D1003, or other test method approved by the Energy Commission.

01	02	03	04	05	06	07	08	09	10	11	12	13	14								
														Fenestration						Overhang	
														U-Factor	SHGC	VT	Dimensions	Calculated			
Proposed	Allowed	Proposed	Allowed	Proposed	Allowed	H	V	H/V	(R)SHGC Proposed	Max (R)SHGC Allowed											
S9	Storefront	36	0.41	0.41	0.25	0.26	0.56	0.46	1	6	0.167	0.21	0.26								
109B	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17	8.75	11	0.795	0.23	0.23								
109B	Storefront Transom	4.5	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
107B	Glazed Door	4.5	0.41	0.45	0.23	0.23	0.56	0.17	0	0		0.23	0.23								
109A	Glazed Door	6	0.41	0.45	0.23	0.23	0.56	0.17	53	19	2.789	0.11	0.23								
C2	Curtainwall	192	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C2	Curtainwall	192	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C4	Curtainwall	42	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C4A	Curtainwall	21	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C2	Curtainwall	192	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C2	Curtainwall	192	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C4	Curtainwall	42	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C1	Curtainwall	288	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C1	Curtainwall	288	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C3	Curtainwall	63	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C3	Curtainwall	63	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								
C1	Curtainwall	288	0.41	0.41	0.25	0.26	0.56	0.46	0	0		0.25	0.26								

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance September 2016

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ELEVATION DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE  
**TITLE 24 ENVELOPE FORMS (CONTINUED)-615**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWW O&M MANAGER	SCALE AS SHOWN DATE Oct 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWW ENGINEERING MANAGER
PLAN NO. 000-G-01-8117	DRAWING / FILE NO. REVISION

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**  
 CEC-NRCC-ENV-02-E (Revised 09/16) CALIFORNIA ENERGY COMMISSION

**CERTIFICATE OF COMPLIANCE** NRCC-ENV-02-E

Fenestration Worksheet Page 3 of 4

Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

	ACTUAL GROSS ROOF AREA		STANDARD ALLOWED SKYLIGHT AREA
01. IF Atrium/Skylight Height is ≤ 55 ft; or	12,430	ft <sup>2</sup> · 0.05 =	621.5 ft <sup>2</sup>
02. IF Atrium/Skylight Height is > 55 ft		ft <sup>2</sup> · 0.10 =	0 ft <sup>2</sup>
03. Proposed Skylight Area (from plans)	200	ft <sup>2</sup>	
04. SkylightSSR% <sup>1,2</sup> = Proposed Skylight Area Divided by Actual Gross Roof Area =	1.61	%	
05. Haze material value greater than 90% according to ASTM D1003, or other approved method by the Energy Commission	<input checked="" type="radio"/> Yes <input type="radio"/> No		

1. If the SKYLIGHT SSR % is less than or equal to 5% then choose the appropriate column in Table 140.3-B and C and row in Table 140.3-D.  
 2. If the SKYLIGHT SSR % is greater than 5% then the Envelope Component Approach may not be used.

**E. RELOCATABLE PUBLIC SCHOOL BUILDINGS - See §140.3(a)8**

**Option 1**

For Specific Climate Zone, use Table 140.3-B - Prescriptive Envelope Criteria.  Specific Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans. Indicate location from the building plans:

**Option 2**

For Any (All) Climate Zone, use Table 140.3-D - Prescriptive Envelope Criteria.  Any (All) Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans. Indicate location from the building plans:

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance September 2016

STATE OF CALIFORNIA  
**FENESTRATION WORKSHEET**  
 CEC-NRCC-ENV-02-E (Revised 09/16) CALIFORNIA ENERGY COMMISSION

**CERTIFICATE OF COMPLIANCE** NRCC-ENV-02-E

Fenestration Worksheet Page 4 of 4

Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jeff McGraw Documentation Author Signature:

Company: MWA Architects Signature Date: 7/25/19

Address: 135 Main St., Ste. 550 CEA/HERS Certification Identification (if applicable):

City/State/Zip: San Francisco, CA 94105 Phone: 415-957-2750

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Jeff McGraw Responsible Designer Signature:

Company: MWA Architects Date Signed: 7/25/19

Address: 135 Main St., Ste. 550 License: C-24100

City/State/Zip: San Francisco, CA 94105 Phone: 415-957-2750

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance September 2016

STATE OF CALIFORNIA  
**SOLAR REFLECTANCE INDEX CALCULATION WORKSHEET**  
 CEC-NRCC-ENV-03-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

**CERTIFICATE OF COMPLIANCE** NRCC-ENV-03-E

Solar Reflectance Index Calculation Worksheet (Page 1 of 2)

Project Name: Bldg 615 - Southeast Water Pollution Control Plant Biosolids Digester Facilities Date Prepared: 7/25/19

**A. Product Information**

01	CRRC Product ID Number	0700-0022
02	Manufacturer	Garland
03	Brand	White Knight
04	Model	WC
05	Product Type	Field-Applied Coating
06	Roof Slope	less than or equal to 2:12

**B. SRI Calculations**

01	Aged Reflectance Listed with CRRC	Yes <input checked="" type="radio"/> No <input type="radio"/>
02	CRRC Listed Aged Solar Reflectance	0.72
03	Initial Solar Reflectance	
04	Calculated Aged Solar Reflectance	
05	Thermal Emittance	0.89

**C. Results**

01	Solar Reflective Index	88.42421164
----	------------------------	-------------

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ELEVATION DATUM  
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BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

**CONTRACT NO. WW-647R**

CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE

**TITLE 24 ENVELOPE FORMS (CONTINUED)-615**

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SECTION MANAGER	DESIGNED
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**SOLAR REFLECTANCE INDEX CALCULATION WORKSHEET**  
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CERTIFICATE OF COMPLIANCE NRCC-ENV-03-E  
 Solar Reflectance Index Calculation Worksheet (Page 1 of 2)  
 Project Name: **Bldg 615 - Southeast Water Pollution Control Plant Biosolids Digester Facility** Date Prepared: 7/25/19

A. Product Information		
01	CRRC Product ID Number	0700-0022
02	Manufacturer	Garland
03	Brand	White Knight
04	Model	WC
05	Product Type	Field-Applied Coating
06	Roof Slope	less than or equal to 2:12

B. SRI Calculations		
01	Aged Reflectance Listed with CRRC	Yes <input checked="" type="radio"/> No <input type="radio"/>
02	CRRC Listed Aged Solar Reflectance	0.72
03	Initial Solar Reflectance	
04	Calculated Aged Solar Reflectance	
05	Thermal Emittance	0.89

C. Results		
01	Solar Reflective Index	88.42421164

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

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**SOLAR REFLECTANCE INDEX CALCULATION WORKSHEET**  
 CEC-NRCC-ENV-03-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-ENV-03-E  
 Solar Reflectance Index Calculation Worksheet (Page 2 of 2)  
 Project Name: **Bldg 615 - Southeast Water Pollution Control Plant Biosolids Digester Facility** Date Prepared: 7/25/19

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 1. I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: **Jeff McGraw** Documentation Author Signature: *[Signature]*  
 Company: **MWA Architects** Signature Date: **7/25/19**  
 Address: **135 Main St., Ste. 550** CEA/HERS Certification Identification (if applicable):  
 City/State/Zip: **San Francisco, CA 94105** Phone: **415-957-2750**

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
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Responsible Designer Name: **Jeff McGraw** Responsible Designer Signature: *[Signature]*  
 Company: **MWA Architects** Date Signed: **7/25/19**  
 Address: **135 Main St., Ste. 550** License: **C-24100**  
 City/State/Zip: **San Francisco, CA 94105** Phone: **415-957-2750**

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

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BIOSOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
REVISIONS			

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT  
 BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE

**TITLE 24 ENVELOPE FORMS (CONTINUED)-615**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Oct 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
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STATE OF CALIFORNIA  
**ENVELOPE – DAYLIT ZONE WORKSHEET**  
 CEC-NRCC-ENV-04-E (Revised 04/16)

CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-04-E

CERTIFICATE OF COMPLIANCE  
 Envelope - Daylit Zone Worksheet  
 Page 1 of 3  
 Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

NOTE: This worksheet applies only to buildings with three or fewer stories, climate zones 2 through 15, having an enclosed conditioned or unconditioned space > 5,000 ft<sup>2</sup> that is directly under a roof with a ceiling height > 15 ft and ≥ 0.5 W/ft<sup>2</sup>, unless exempted by the EXCEPTIONS in §140.3(c).

**A. MINIMUM SKYLIGHT AREA FOR LARGE ENCLOSED SPACES** (requirements in §140.3(c))

01	Enter building plan reference page(s) for large enclosed space 615-A-05-0005, 615-A-05-1004 ; and
02	Enter building plan reference page(s) for daylit zone plans for enclosed space 615-A-05-0005 or attach a separate daylit zone design plan with this form; then <b>Go to Step 1 below.</b>

**B. SKYLIGHT INFORMATION**

Tag/ID	Skylight Type	Number of Skylights	U-factor	SHGC	VTavg	Haze Material Value > 90%	
						Yes	No
01	02	03	04	05	06	07	
Skylight	Plastic curb mounte	4	0.57	0.50	0.64	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**C. CALCULATE DAYLIT AREA** (§140.3(c)1)  
 The minimum Skylit Zone requirements can be met by using either Skylit Daylit Zones or Primary Sidelit Daylit Zones or Combinations.

**Step 1** Calculate the minimum prescriptively required Total Daylit Zone Area, per §140.3(c)1

01	Floor area of enclosed space	A	10,710	ft <sup>2</sup>	Floor area
02	Minimum Prescriptively Required Total Daylit Area is (0.75 x floor area (A) – the area of any permanent obstructions), see §140.3(c)1 & §130.1(d)1A for additional details.	B	8,033	ft <sup>2</sup>	Minimum prescriptively required Total Daylit Zone Area

**Step 2** Calculate Total Daylit Zone Area

03	Skylit Daylit Zone Area ignoring obstructions, determined in accordance with §130.1(d)1A and as shown on the building plans (0.7 x average ceiling height from edge of rough opening of skylight).	C	6,591	ft <sup>2</sup>	Skylit Daylit Zone Area
04	Primary Sidelit Daylit Zone Area determined in accordance with §130.1(d)1B and as shown on the building plans ((window head height x (window width + window head height)) – areas beyond obstructions).	D	4,578	ft <sup>2</sup>	Primary Sidelit Daylit Zone Area
05	Areas of Primary Sidelit Daylit Zone Area that overlap with the Skylit Daylit Zone Area	E	1,567	ft <sup>2</sup>	Overlapping Zone Area
06	Total Daylit Zone Area (F = C+D-E)	F	9,602	ft <sup>2</sup>	Total Daylit Zone Area

**D. COMPARE TOTAL DAYLIT ZONE AREA TO PRESCRIPTIVE MINIMUM**

**Step 1** Compare

01	Check if Total Daylit Zone Area (F) is equal to or greater than Minimum Prescriptively Required Daylit Zone Area (B). <b>Space PASSES if F ≥ B.</b>
----	---

STATE OF CALIFORNIA  
**ENVELOPE – DAYLIT ZONE WORKSHEET**  
 CEC-NRCC-ENV-04-E (Revised 04/16)

CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-04-E

CERTIFICATE OF COMPLIANCE  
 Envelope - Daylit Zone Worksheet  
 Page 2 of 3  
 Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**E. CALCULATE TOTAL SKYLIGHT AREA** (§140.3(c)4)  
 The Total Skylight Area can be met by using either Equation 1 or Equation 2 below.

**Equation 1: Total Skylight Area = (Skylight Area)/(Daylit Zone under Skylights) ≥ 3%**

**Step 1** Calculate the Daylit Zone under Skylights

01	Average Ceiling Height	A	23.75	ft	Average Ceiling Height
02	Total floor area in the space within a horizontal distance of 0.7 times the average ceiling height from the edge of the rough opening	B	6,742	ft <sup>2</sup>	Daylit Zone under Skylight

**Step 2** Calculate the Total Skylight Area

03	Area of Skylight	C	192	ft <sup>2</sup>	Skylight Area
04	Total Skylight Area (D = (C/B) * 100)	D	2.84781964	%	Total Skylight Area

**Equation 2: Total Skylight Area = (Skylight Area) \* (VT<sub>avg</sub>) ≥ 1.5%**

**Step 1** Calculate the Daylit Zone under Skylights

05	Average Ceiling Height	E	23.75	ft	Average Ceiling Height
06	Total floor area in the space within a horizontal distance of 0.7 times the average ceiling height from the edge of the rough opening	F	6,742	ft <sup>2</sup>	Daylit Zone under Skylight

**Step 2** Calculate the Total Skylight Area

07	Area of Skylight	G	192	ft <sup>2</sup>	Skylight Area
08	Average Visible Transmittance (VT <sub>avg</sub> )	H	0.64		Visible Transmittance
09	Total Skylight Area (I = (G / F) * H * 100)	I	1.82260457	%	Total Skylight Area

**F. COMPARE**

**Step 1** Compare

01	Check if Total Skylight Area is equal to or greater than 3% of the total floor area (Equation 1); or 1.5% of the total floor area (Equation 2). <b>Space PASSES if D ≥ 3% using Equation 1; or H ≥ 1.5% using Equation 2.</b>
----	---

STATE OF CALIFORNIA  
**ENVELOPE – DAYLIT ZONE WORKSHEET**  
 CEC-NRCC-ENV-04-E (Revised 04/16)

CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-04-E

CERTIFICATE OF COMPLIANCE  
 Envelope - Daylit Zone Worksheet  
 Page 3 of 3  
 Project Name: Bldg 615-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jeff McGraw  
 Documentation Author Signature:

Company: MWA Architects  
 Signature Date: 7/25/19

Address: 135 Main St., Ste. 550  
 CEA/HERS Certification Identification (if applicable):

City/State/Zip: San Francisco, CA 94105  
 Phone: 415-957-2780

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Responsible Designer Name: Jeff McGraw  
 Responsible Designer Signature:

Company: MWA Architects  
 Date Signed: 7/25/19

Address: 135 Main St., Ste. 550  
 License: C-24100

City/State/Zip: San Francisco, CA 94105  
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**CONTRACT NO. WW-647R**  
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 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIO SOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE

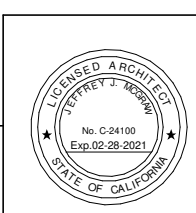
**TITLE 24 ENVELOPE FORMS (CONTINUED)-615**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Oct 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. <b>000-G-01-8120</b>	DRAWING / FILE NO. REVISION

BIO SOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

NO.	DATE	DESCRIPTION	BY	APPRD
REVISIONS				



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STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/18)  
 CERTIFICATE OF COMPLIANCE  
 Envelope Component Approach  
 Project Name: Bldg 607-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 10/30/2020  
 Page 1 of 4

CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-01-E

**A. GENERAL INFORMATION**

01	Project Location:	750 Phelps St.	06	Compliance Method:	<input checked="" type="checkbox"/> Component <input type="checkbox"/> Unconditioned (file Affidavit)
02	CA City and Zip Code:	San Francisco, 94124	07	Building Front Orientation:	90 deg
03	Climate Zone:	3	08	Phase of Construction:	<input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Additions <input type="checkbox"/> Alteration
04	Total Conditioned Floor Area:	396 SF	09	Building Occupancy:	<input checked="" type="checkbox"/> Nonresidential <input type="checkbox"/> High Rise Residential <input type="checkbox"/> Hotel/Motel Guest Room
05	Building Type:	<input type="checkbox"/> Schools (Public Schools) <input type="checkbox"/> Relocatable Public School Building <input checked="" type="checkbox"/> Conditioned Spaces <input type="checkbox"/> Unconditioned Spaces <input type="checkbox"/> Skylight Area for Large Enclosed Space > 5000 ft <sup>2</sup> (if checked, include the NRCC-ENV-04-E with submittal)			

**B. ENVELOPE DETAILS - FRAMED**

01	02	03	04	05	06	07	08	09	10	11
Tag/ID	Assembly Type	Frame Material	Frame Depth	Frame Spacing	Cavity R-value	Continuous Insulation R-value	Appendix JA4 Reference Table Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments

**C. ENVELOPE DETAILS - NON-FRAMED**

01	02	03	04	05	06	07	08	09	10
Tag/ID	Assembly Type	Assembly Materials	Thickness (inches)	Interior or Core Insulation R-Value	Continuous Insulation R-Value	Appendix JA4 Reference Table Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
Roof	Roof	Conc/Mtl Deck	5 1/2		37.5	4.2.6 J8	.031	.039	

**D. ENVELOPE DETAILS - MASS**

01	02	03	04	05	06	07	08	09	10	11

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
 January 2016

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/18)  
 CERTIFICATE OF COMPLIANCE  
 Envelope Component Approach  
 Project Name: Bldg 607-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 10/30/2020  
 Page 2 of 4

CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-01-E

Tag/ID	Mass Type	Density (lb/ft <sup>3</sup> )	Mass Thickness (inches)	Furring Strip Thickness (inches)	Interior Insulation R-Value	Exterior Insulation R-Value	Appendix JA4 Reference Table Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
Wall/Ext	Solid Concr	144	10	N/A	N/A	N/A	4.3.6 J5	0.68	0.65	

**E. ROOFING PRODUCTS (COOL ROOF)**

01	02	03	04	05	06	07	08	09	10	11
Mass Roof 25 lb/ft <sup>2</sup> or Greater	Roof Pitch	CRRC Product ID Number	Product Type	Aged Solar Reflectance <sup>1</sup>	Thermal Emittance	SRI <sup>2</sup> (Optional)	Aged Solar Reflectance	Thermal Emittance	SRI (Optional)	Comments
<input checked="" type="checkbox"/>	<= 2:12	0700-0022	Field-Applied Coat	<input type="checkbox"/> 0.72	0.89	88	0.63	0.75		

**NOTES:**  
 1. Check the box if the aged solar reflectance was not available in the Cool Roof Council's Rated Product Directory, then use the equation in Section 110.8(i)(2):  $\rho_{aged} = 0.2 + \theta(\rho_{initial} - 0.2)$  to obtain a calculated aged solar reflectance value. Where  $\rho_{initial}$  is the initial solar reflectance found in the directory and  $\theta$  is either 0.65 for field applied coatings or 0.70 for all other roofing products other than field-applied coating.  
 2. Calculate the SRI Value by using the SRI-Worksheet and enter the resulting value in the SRI column above and attach a copy of the SRI-Worksheet (NRCC-ENV-03-E) to this compliance document.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
 January 2016

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/18)  
 CERTIFICATE OF COMPLIANCE  
 Envelope Component Approach  
 Project Name: Bldg 607-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 10/30/2020  
 Page 3 of 4

CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-01-E

**F. AIR BARRIER**

01	02	03	04	05
Name	Air Barrier Material Type	Air Barrier Assembly Type	Whole Building Air Leakage Testing	Comments
				N/A

**G. FENESTRATION PROPOSED AREAS AND EFFICIENCIES**

01	02	03	04	05	06	07	08	09	10	11	12
Tag/ID	Fenestration Type	Surface Area	Orientation	# of Panes	Max U-Factor	Max (R)SHGC	Min VT	Label	Overhang	Condition Status	Comments
100A	Glazed Door	2.8	East	2	0.41	0.25	0.56	NFRC	N	New	
100A	Storefront Transom	16	East	1	0.41	0.25	0.56	NFRC	N	New	
100B	Glazed Door	2	West	1	0.41	0.25	0.56	NFRC	N	New	

**H. ENVELOPE MANDATORY MEASURES**

Indicate location on building plans of Mandatory Envelope Measures Note Block: 000-G-01-8121

**INSTRUCTIONS TO APPLICANT ENVELOPE COMPLIANCE & WORKSHEETS (check box if worksheet are included)**

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, please refer to the Energy Commission website.

NRCC-ENV-01-E Certificate of Compliance. Required on plans for all submittals.  
 NRCC-ENV-04-E Use when minimum skylight requirements for large enclosed spaces are required in climate zones 2 through 15. Optional on plans.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
 January 2016

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/18)  
 CERTIFICATE OF COMPLIANCE  
 Envelope Component Approach  
 Project Name: Bldg 607-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 10/30/2020  
 Page 4 of 4

CALIFORNIA ENERGY COMMISSION  
 NRCC-ENV-01-E

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIO SOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE  
**TITLE 24 ENVELOPE FORMS - 607**

BIO SOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM  
**Brown and Caldwell** with **ch2m**  
 BLACK & VEATCH

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

SECTION MANAGER  
 WW E&M MANAGER  
 APPROVED  
 MANAGER, ENGINEERING MANAGEMENT BUREAU

DRAWN  
 DESIGNED  
 SCALE AS SHOWN  
 DATE Dec 30, 2020  
 APPROVED  
 WW ENGINEERING MANAGER

NO. DATE DESCRIPTION BY APPD  
 REVISIONS

000-G-01-8121

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LICENSED ARCHITECT  
 JEFFREY J. MCGRAW  
 No. C-24100  
 Exp. 02-28-2021  
 STATE OF CALIFORNIA



STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**

CEC-NRCC-ENV-01-E (Revised 01/18)

CALIFORNIA ENERGY COMMISSION

NRCC-ENV-01-E


CERTIFICATE OF COMPLIANCE

Page 4 of 4

Project Name: **Bldg 607-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project** Date Prepared: **10/30/2020**

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: <b>Jeff McGraw</b>	Documentation Author Signature: 
Company: <b>MWA Architects</b>	Signature Date: <b>10/30/2020</b>
Address: <b>135 Main St., Ste. 550</b>	(IA) HERS Certification Identification (if applicable):
City/State/Zip: <b>San Francisco, CA 94105</b>	Phone: <b>415-957-2750</b>

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: <b>Jeff McGraw</b>	Responsible Designer Signature: 
Company: <b>MWA Architects</b>	Date Signed: <b>10/30/2020</b>
Address: <b>135 Main St., Ste. 550</b>	License: <b>C-24100</b>
City/State/Zip: <b>San Francisco, CA 94105</b>	Phone: <b>415-957-2750</b>

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

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BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
REVISIONS			

<b>CONTRACT NO. WW-647R</b>		
CITY AND COUNTY OF SAN FRANCISCO <b>PUBLIC UTILITIES COMMISSION</b> INFRASTRUCTURE DIVISION ENGINEERING MANAGEMENT BUREAU		
SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT GENERAL SITEWIDE		
TITLE 24 ENVELOPE FORMS (CONTINUED) - 607		
CHECKED / APPROVED	DRAWN	
SECTION MANAGER	DESIGNED	
WWE O&M MANAGER	SCALE	DATE
	AS SHOWN	Dec 30, 2020
APPROVED	APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER	
PLAN NO.	DRAWING / FILE NO.	REVISION
<b>000-G-01-8122</b>		



**CERTIFICATE OF COMPLIANCE** Page 1 of 3

Project Name: Bldg 607-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 10/30/2020

**A. WINDOWS DETAILS WORKSHEET - §140.3(a)6B, C and D**

NOTE: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Site-built fenestration less than 1,000 ft<sup>2</sup>, see Reference Nonresidential Appendix NA6.

Prescriptively, skylights shall have a glazing material or diffuser that has a measured haze value greater than 90%, determined according to ASTM D1003, or other test method approved by the Energy Commission.

Tag/ID	Window Type (e.g. Window-1)	Surface Area	Fenestration						Overhang						
			U-Factor		SHGC		VT		Dimensions		Calculated				
			Proposed	Allowed	Proposed	Allowed	Proposed	Allowed	H	V	H/V	(R)SHGC Proposed	Max (R)SHGC Allowed		
100A	Glazed Door	2.8	0.41	0.45	0.23	0.23	0.56	0.17						0.23	0.23
100A	Storefront Transom	16	0.41	0.41	0.25	0.26	0.56	0.46						0.25	0.26
100B	Glazed Door	2	0.41	0.45	0.23	0.23	0.56	0.17						0.23	0.23

**B. WEST WINDOW AREA CALCULATION - See §140.3(a)5A**

01. Gross West Exterior Wall Area	216.39	ft <sup>2</sup> · 0.40 =	86.56 ft <sup>2</sup>	40% of Gross West Facing Exterior Wall Area; or
02. West Display Linear Perimeter	59	FT · 6 ft =	354 ft <sup>2</sup>	West Display Perimeter Area
03. Enter Larger of 01 or 02			354 ft <sup>2</sup>	Maximum Standard West Area
04. Enter Proposed West Window Area			2 ft <sup>2</sup>	Proposed West Window Area

Note: If the PROPOSED WEST WINDOW AREA is greater than the MAXIMUM STANDARD WEST AREA then the envelope component approach may not be used.

**C. WINDOW AREA CALCULATION (for all other orientations other than West) - See §140.3(a)5A**

01. Gross Exterior Wall Area	1,303.6	ft <sup>2</sup> · 0.40 =	521.44 ft <sup>2</sup>	40% of Gross Exterior Wall Area or
02. Linear Display Perimeter	261	FT · 6 ft =	1,566 ft <sup>2</sup>	Display Perimeter Area
03. Enter The Larger of 01 or 02			1,566 ft <sup>2</sup>	Maximum Standard Area
04. Enter Proposed Window Area			18.8 ft <sup>2</sup>	Proposed Window Area

Note: If the PROPOSED WINDOW AREA is greater than the MAXIMUM STANDARD AREA then the envelope component approach may not be used.

**CERTIFICATE OF COMPLIANCE** Page 3 of 3

Project Name: Bldg 607-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 10/30/2020

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jeff McGraw  
 Documentation Author Signature:

Company: MWA Architects  
 Signature Date: 10/30/2020

Address: 135 Main St., Ste. 550  
 (EA) HERS Certification Identification (if applicable):

City/State/Zip: San Francisco, CA 94105  
 Phone: 415-957-2750

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Responsible Designer Name: Jeff McGraw  
 Responsible Designer Signature:

Company: MWA Architects  
 Date Signed: 10/30/2020

Address: 135 Main St., Ste. 550  
 License: C-24100

City/State/Zip: San Francisco, CA 94105  
 Phone: 415-957-2750

**CERTIFICATE OF COMPLIANCE** Page 2 of 3

Project Name: Bldg 607-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 10/30/2020

**D. SKYLIGHT AREA CALCULATION - See §140.3(a)6A**

	ACTUAL GROSS ROOF AREA		STANDARD ALLOWED SKYLIGHT AREA
01. IF Atrium/Skylight Height is ≤ 55 ft; or		ft <sup>2</sup> · 0.05 =	0 ft <sup>2</sup>
02. IF Atrium/Skylight Height is > 55 ft		ft <sup>2</sup> · 0.10 =	0 ft <sup>2</sup>
03. Proposed Skylight Area (from plans)		ft <sup>2</sup>	
04. Skylight SSR% <sup>1,2</sup> = Proposed Skylight Area Divided by Actual Gross Roof Area =		0 %	
05. Haze material value greater than 90% according to ASTM D1003, or other approved method by the Energy Commission			Yes <input type="radio"/> No <input type="radio"/>

1. If the SKYLIGHT SSR % is less than or equal to 5% then choose the appropriate column in Table 140.3-B and C and row in Table 140.3-D.  
 2. If the SKYLIGHT SSR % is greater than 5% then the Envelope Component Approach may not be used.

**E. RELOCATABLE PUBLIC SCHOOL BUILDINGS - See §140.3(a)8**

**Option 1**

For Specific Climate Zone, use Table 140.3-B - Prescriptive Envelope Criteria.

Specific Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans.  
 Indicate location from the building plans:

**Option 2**

For Any (All) Climate Zone, use Table 140.3-D - Prescriptive Envelope Criteria.

Any (All) Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans.  
 Indicate location from the building plans:

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ELEVATION DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

**CONTRACT NO. WW-647R**

CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE

**TITLE 24 ENVELOPE FORMS (CONTINUED) - 607**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWW O&M MANAGER	SCALE AS SHOWN DATE Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWW ENGINEERING MANAGER
PLAN NO. <b>000-G-01-8123</b>	DRAWING / FILE NO. REVISION

STATE OF CALIFORNIA  
**SOLAR REFLECTANCE INDEX CALCULATION WORKSHEET**  
 CEC-NRCC-ENV-03-E (Revised 01/16)



CERTIFICATE OF COMPLIANCE		NRCC-ENV-03-E
Solar Reflectance Index Calculation Worksheet		(Page 1 of 2)
Project Name: Bldg 607 - Southeast Water Pollution Control Plant Biosolids Digester Facility	Date Prepared: 10/30/2020	

A. Product Information		
01	CRRC Product ID Number	0700-0022
02	Manufacturer	Garland
03	Brand	White Knight
04	Model	WC
05	Product Type	Field-Applied Coating
06	Roof Slope	less than or equal to 2:12

B. SRI Calculations		
01	Aged Reflectance Listed with CRRC	Yes <input checked="" type="radio"/> No <input type="radio"/>
02	CRRC Listed Aged Solar Reflectance	0.72
03	Initial Solar Reflectance	
04	Calculated Aged Solar Reflectance	
05	Thermal Emittance	0.89

C. Results		
01	Solar Reflective Index	88.42421164

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

STATE OF CALIFORNIA  
**SOLAR REFLECTANCE INDEX CALCULATION WORKSHEET**  
 CEC-NRCC-ENV-03-E (Revised 01/16)



CERTIFICATE OF COMPLIANCE		NRCC-ENV-03-E
Solar Reflectance Index Calculation Worksheet		(Page 2 of 2)
Project Name: Bldg 607 - Southeast Water Pollution Control Plant Biosolids Digester Facility	Date Prepared: 10/30/2020	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name: Jeff McGraw	Documentation Author Signature:
Company: MWA Architects	Signature Date: 10/30/2020
Address: 135 Main St., Ste. 550	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: San Francisco, CA 94105	Phone: 415-957-2750

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Responsible Designer Name: Jeff McGraw	Responsible Designer Signature:
Company: MWA Architects	Date Signed: 10/30/2020
Address: 135 Main St., Ste. 550	License: C-24100
City/State/Zip: San Francisco, CA 94105	Phone: 415-957-2750

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

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BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
REVISIONS			

<b>CONTRACT NO. WW-647R</b>		
CITY AND COUNTY OF SAN FRANCISCO <b>PUBLIC UTILITIES COMMISSION</b> INFRASTRUCTURE DIVISION ENGINEERING MANAGEMENT BUREAU		
SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT GENERAL SITEWIDE		
TITLE 24 ENVELOPE FORMS (CONTINUED) - 607		
CHECKED / APPROVED	DRAWN	
SECTION MANAGER	DESIGNED	
WWE O&M MANAGER	SCALE	DATE
	AS SHOWN	Dec 30, 2020
APPROVED	APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER	
PLAN NO.	DRAWING / FILE NO.	REVISION
<b>000-G-01-8124</b>		

STATE OF CALIFORNIA  
**SOLAR READY AREAS**  
 CEC-NRCC-SRA-01-E (Revised 07/16)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-SRA-01-E  
 Solar Ready Areas (Page 1 of 3)  
 Project Name: Bldg 607 - Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 10/30/2020

**A. General Information**

Project Address: 750 Phelps St. San Francisco, CA 94124

**Building Type:**  
 Hotel/Motel building with ten stories or fewer  High-rise multi-family building with ten stories or fewer  
 Other nonresidential building with three stories or fewer  
 Solar-ready requirements do not apply to hotel/motel buildings and high-rise multifamily building with more than ten stories or other nonresidential buildings with more than three stories.

**Type of Construction:**  New Construction  Addition that increases roof area by more than 2,000 ft<sup>2</sup>  
 Solar-ready requirements do not apply to alterations or additions that increase the roof area by 2,000 ft<sup>2</sup> or less.

**B. Solar-Ready**

(Choose Path 01, 02, 03, 04, or 05 from below)

**01. Allocated Solar Zone**  
 NRCC-SRA-02-E Minimum Solar Zone Area Worksheet is required to be submitted

**Minimum Solar Zone Area (ft<sup>2</sup>)**  
 This is quantity [C] from NRCC-SRA-02-E Minimum Solar Zone Area Worksheet: 68.66

**Proposed Solar Zone Area (ft<sup>2</sup>)**  
 This is quantity [S] from NRCC-SRA-02-E Minimum Solar Zone Area Worksheet: 0

The construction documents will indicate a location for inverters and metering equipment and a pathway for routing of conduit from the solar zone to the point of interconnection with the electrical service. The construction documents will indicate a pathway for routing of plumbing from the solar zone to the water heating system.

A copy of the construction documents or a comparable document indicating information about the solar zone and interconnection pathways will be provided to the occupant.

If the designer certifies that all above requirements have been met and the Proposed Solar Zone Area meets or exceeds the Minimum Solar Zone Area, the building complies, otherwise it does not comply.  does not comply  complies

**02. Permanently Installed Solar Photovoltaic (PV) System**

Total Roof Area (ft <sup>2</sup> ) <sup>*</sup> [A]	Minimum Nameplate DC Power Rating (watts) [B] = A x 1watt/ft <sup>2</sup>
0	0

<sup>\*</sup> New construction: report total roof area; Additions: report newly added roof area

Will the proposed building have a permanently installed solar electric system that meets or exceeds the Minimum Nameplate DC Power Rating?  
 If yes, a NRCI-SPV-01-E Certificate of Installation: Solar Photovoltaic System documenting the installed system must be submitted as a condition of final approval.  Yes  No

Please check box to right if answered yes to all questions in this section.  EXEMPT

**03. Permanently Installed Solar Water Heating System**

Will the building have a permanently installed solar water heating system?  Yes  No  
 If yes, a NRCI-STH-01-E Certificate of Installation: Solar Water Heating System documenting the installed system must be submitted as condition of final approval.

Is the annual solar savings fraction equal to or greater than 0.2 in climate zones 1 through 9 or 0.35 in climate zones 10 through 16?  Yes  No

Annual Solar Savings Fraction	How was Annual Solar Savings Fraction Calculated?

Please check box to right if answered yes to all questions in this section.  EXEMPT

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance July 2016

STATE OF CALIFORNIA  
**SOLAR READY AREAS**  
 CEC-NRCC-SRA-01-E (Revised 07/16)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-SRA-01-E  
 Solar Ready Areas (Page 2 of 3)  
 Project Name: Bldg 607 - Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 10/30/2020

**04. Smart Thermostats and Alternative Efficiency Measure**

Is the building a high-rise multifamily building with ten stories or fewer?  Yes  No

Will all thermostats in each dwelling unit comply with Reference Joint Appendix 5 (JAS) and will they be capable of receiving and responding to Demand Response Signals prior to granting of an occupancy permit by the enforcing agency?  Yes  No

Will one of the following alternative efficiency measures be installed?  Yes  No

- A dishwasher that meets or exceeds the ENERGY STAR Program requirements with either a refrigerator that meets or exceeds the ENERGY STAR Program requirements or a whole house fan driven by an electronically commutated motor; or
- A home automation system capable of, at a minimum, controlling the appliances and lighting of the dwelling and responding to demand response signals; or
- Alternative plumbing piping to permit the discharge from the clothes washer and all showers and bathtubs to be used for an irrigation system in compliance with the California Plumbing Code and any applicable local ordinances; or
- A rainwater catchment system designed to comply with the California Plumbing Code and any applicable local ordinances, and that uses rainwater flowing from at least 65% of the available roof area.

Please check box to right if answered yes to all questions in this section.  EXEMPT

**05. Roof is Designed for Vehicle Traffic, Parking or for Helipad**

Will the roof be designed and approved to be used for vehicular traffic, parking or for a helipad?  Yes  No

Please provide building plan reference: \_\_\_\_\_

Please check box to right if answered yes to all questions in this section.  EXEMPT

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance July 2016

STATE OF CALIFORNIA  
**SOLAR READY AREAS**  
 CEC-NRCC-SRA-01-E (Revised 07/16)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-SRA-01-E  
 Solar Ready Areas (Page 3 of 3)  
 Project Name: Bldg 607 - Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 10/30/2020

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jeff McGraw Documentation Author Signature:

Company: MWA Architects Signature Date: 10/30/2020

Address: 135 Main St. Ste. 550 DEA/HERS Certification Identification (if applicable):

City/State/Zip: San Francisco, CA 94105 Phone: 415-957-2750

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Jeff McGraw Responsible Designer Signature:

Company: MWA Architects Date Signed: 10/30/2020

Address: 135 Main St. Ste. 550 License: C-24100

City/State/Zip: San Francisco, CA 94105 Phone: 415-957-2750

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance July 2016

\*\*SOLAR READY ROOFS ARE LOCATED WITHIN 250' OF FACILITY

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ELEVATION  
 DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
REVISIONS			

<b>CONTRACT NO. WW-647R</b>		
CITY AND COUNTY OF SAN FRANCISCO <b>PUBLIC UTILITIES COMMISSION</b> INFRASTRUCTURE DIVISION ENGINEERING MANAGEMENT BUREAU		
SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT GENERAL SITEWIDE		
TITLE 24 ENVELOPE FORMS (CONTINUED) - 607		
CHECKED / APPROVED	DRAWN	
SECTION MANAGER	DESIGNED	
WWW O&M MANAGER	SCALE	DATE
	AS SHOWN	Dec 30, 2020
APPROVED	APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWW ENGINEERING MANAGER	
PLAN NO.	DRAWING / FILE NO.	REVISION
000-G-01-8125		

Solar Zone Area (requirements in §110.10(b)1B)  
 This worksheet applies to hotel/motel occupancies and high-rise multifamily buildings with ten stories or fewer, and all other nonresidential buildings with three stories or fewer that comply with the solar zone requirement through Compliance Path A: Allocated Solar Zone in the NRCC-SRA-01-E Certificate of Compliance Solar Ready Areas.  
 The worksheet applies to all additions that increase the roof area by more than 2,000 ft<sup>2</sup>.

**A. General Information**

Project Address: 750 Phelps St. San Francisco, CA 94124

Total Roof Area:  Less than or equal to 10,000 ft<sup>2</sup>  Greater than 10,000 ft<sup>2</sup> Phase of Construction:  New Construction  Addition that increases roof area by more than 2,000 ft<sup>2</sup>

**Step 1: Determine Minimum Solar Zone Area**

Calculate the minimum solar zone area using one of the two options provided below. Use option 2 if your roofs and overhangs are shaded.

**Method 1: Minimum Solar Zone Area Based on Total Roof Area (requirements in 110.10(b)1B)**

New Construction: Total roof area (ft <sup>2</sup> )	A	457.78
Additions: Total roof area added to building (ft <sup>2</sup> )		
New Construction: Area of roof covered with skylights (ft <sup>2</sup> )	B	0
Additions: Area of new roof area covered with skylights (ft <sup>2</sup> )		
Minimum solar zone area	C = 0.15 x (A - B)	68.667

Note: For additions, if AS 2,000 ft<sup>2</sup> then addition does not need to comply with solar zone requirements

**Method 2: Minimum Solar Zone Area Based on Potential Solar Zone (requirements in Exception 3 to 110.10(b)1B)**

The enforcement agency may require additional documentation that describes how the reduced solar zone area was determined.

Method/Tool(s) used to quantify annual solar access: (for example, "Software X", "CAD Tool Y")		
Area of low-sloped roof (ratio of rise to run of 2:12 or less) where the annual solar access is 70% or greater.* (ft <sup>2</sup> )	D	
Area of steep-sloped roof (ratio of rise to run is greater than 2:12) that is oriented between 110° and 270° and annual solar access is 70% or greater.* (ft <sup>2</sup> )	E	
Minimum solar zone area	F = 0.5 x (D + E)	0

\* For new construction consider total roof area; for additions consider newly added roof area

Minimum solar zone area (either C or F) (ft <sup>2</sup> )	G	68.667
--	---	--------

**Step 2: Allocated Solar Zone Subareas**

Subarea ID	Building Plan Reference	Slope of Roof or Overhang	If Steep Slope, roof or overhang oriented between 110° and 270°	Subarea complies with Part 9 of Title 24 <sup>A</sup>	Plane containing the solar zone is free of obstructions <sup>B</sup>	Subarea is located the appropriate distance from obstructions <sup>C</sup>	Smallest dimension is greater than 5 feet	Subarea meet minimum area requirement <sup>D</sup>	Subarea Qualifies <sup>E</sup>	Area (ft <sup>2</sup> )
H	I	J	K	L	M	N	O	P	Q	R
A-05-1001		Low	NA		No				No	0

Proposed Solar Zone Area (ft<sup>2</sup>) (sum of all qualifying subareas) [S] 0

A. The solar zone shall comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other Parts of Title 24 or in any requirements adopted by a local jurisdiction.  
 B. No obstructions, including but not limited to, vents, chimneys, architectural features, and roof mounted equipment, shall be located in the solar zone.  
 C. Solar zone must be located no closer than twice the distance, measured in the horizontal plane, of the height difference between the highest obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.  
 D. If the building roof area ≤ 10,000 ft<sup>2</sup> then minimum area is 80 ft<sup>2</sup>. If building roof area > 10,000 ft<sup>2</sup> then minimum area is 160 ft<sup>2</sup>.  
 E. Check "yes" if answers to questions in columns K through P are "yes".

Building complies with Minimum Solar Zone Area requirement is Proposed Solar Zone Area [S] is equal to or greater than the Minimum Solar Zone Area [G] **NOT COMPLIANT**

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: Jeff McGraw Documentation Author Signature: [Signature]  
 Company: MWA Architects Signature Date: 10/30/2020  
 Address: 135 Main St., Ste. 550 CEA/HERS Certification Identification (if applicable):  
 City/State/Zip: San Francisco, CA 94105 Phone: 415-957-2750

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

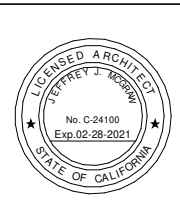
I certify the following under penalty of perjury, under the laws of the State of California:  
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ELEVATION DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE  
**TITLE 24 ENVELOPE FORMS (CONTINUED) - 607**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. <b>000-G-01-8126</b>	DRAWING / FILE NO. REVISION

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/18)  
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE  
 NRCC-ENV-01-E  
 Envelope Component Approach  
 Page 1 of 5

Project Name: Bldg 921-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19

**A. GENERAL INFORMATION**

01	Project Location:	750 Phelps St.	06	Compliance Method:	<input checked="" type="checkbox"/> Component <input type="checkbox"/> Unconditioned (file Affidavit)
02	CA City and Zip Code:	San Francisco, 94124	07	Building Front Orientation:	90 deg
03	Climate Zone:	3	08	Phase of Construction:	<input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Additions <input type="checkbox"/> Alteration
04	Total Conditioned Floor Area:	961 sf	09	Building Occupancy:	<input checked="" type="checkbox"/> Nonresidential <input type="checkbox"/> High Rise Residential <input type="checkbox"/> Hotel/Motel Guest Room
05	Building Type:	<input type="checkbox"/> Schools (Public Schools) <input type="checkbox"/> Relocatable Public School Building <input checked="" type="checkbox"/> Conditioned Spaces <input type="checkbox"/> Unconditioned Spaces <input type="checkbox"/> Skylight Area for Large Enclosed Space > 5000 ft <sup>2</sup> (If checked, include the NRCC-ENV-04-E with submittal)			

**B. ENVELOPE DETAILS - FRAMED**

01	02	03	04	05	06	07	08	09	10	11	
Tag/ID	Assembly Type	Frame Material	Frame Depth	Frame Spacing	Cavity R-value	Continuous Insulation R-value	Appendix JA4 Reference Table	Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments

**C. ENVELOPE DETAILS - NON-FRAMED**

01	02	03	04	05	06	07	08	09	10	
Tag/ID	Assembly Type	Materials	Thickness (inches)	Interior or Core Insulation R-Value	Continuous Insulation R-Value	Appendix JA4 Reference Table	Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
Roof	Roof	Conc/Mtl Deck	12		30	4.2.6	J8	.031	.039	

**D. ENVELOPE DETAILS - MASS**

01	02	03	04	05	06	07	08	09	10	11
----	----	----	----	----	----	----	----	----	----	----

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
 January 2016

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/18)  
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE  
 NRCC-ENV-01-E  
 Envelope Component Approach  
 Page 2 of 5

Project Name: Bldg 921-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19

Tag/ID	Mass Type	Density (lb/ft <sup>3</sup> )	Mass Thickness (inches)	Furring Strip Thickness (inches)	Interior Insulation R-Value	Exterior Insulation R-Value	Appendix JA4 Reference Table	Cell	Proposed U-Factor	Required U-Factor from Tables 140.3-B, C, or D	Field Inspection Comments
Wall Int	Solid Conc	144	12	N/A	N/A	N/A	4.3.6	J5	0.63	0.65	
Wall Ext	Solid Conc	144	12	N/A	N/A	N/A	4.3.6	J5	0.63	0.65	
Wall Ext	Solid Conc	144	24	N/A	N/A	N/A	4.3.6	J5	0.63	0.65	

**E. ROOFING PRODUCTS (COOL ROOF)**

01	02	03	04	05	06	07	08	09	10	11
Mass Roof 25 lb/ft <sup>2</sup> or Greater	Roof Pitch	CRRR Product ID Number	Product Type	Aged Solar Reflectance <sup>1</sup>	Thermal Emittance	SRI <sup>2</sup> (Optional)	Aged Solar Reflectance	Thermal Emittance	SRI (Optional)	Comments
<input checked="" type="checkbox"/>	<= 2:12	0700-0022	Field-Applied Coat	<input type="checkbox"/> 0.72	0.89	88	0.63	0.75		

**NOTES:**

- An aged solar reflectance less than 0.63 is allowed provided the maximum roof/ceiling U-factor in TABLE 140.3 is not exceeded
- High-rise residential buildings and Hotels and Motels with low-sloped roofs in Climate Zones 1 through 8, 12, and 16 are exempted from aged Solar Reflectance and thermal emittance requirements
- High-rise residential and Hotels/Motels with steep-sloped roofs in Climate Zones 1 and 16 are exempt from aged Solar Reflectance and thermal emittance requirements
- The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempt from aged Solar Reflectance and thermal emittance requirements
- To apply Liquid Field Applied Coatings, the coating must be applied across the entire roof surface and meet the dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §110.8(i)(4). Select the applicable coating:

Aluminum-Pigmented Asphalt Roof Coating  Cement-Based Roof Coating  Other

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
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CERTIFICATE OF COMPLIANCE  
 NRCC-ENV-01-E  
 Envelope Component Approach  
 Page 3 of 5

Project Name: Bldg 921-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19

**NOTES:**

1. Check the box if the aged Solar Reflectance was not available in the Cool Roof Council's Rated Product Directory, then use the equation in Section 110.8(i)(2):  $P_{aged} = 0.2 + 0.8(P_{initial} - 0.2)$  to obtain a calculated aged solar reflectance value. Where  $P_{initial}$  is the Initial Solar Reflectance found in the directory and 0.8 is either 0.65 for field applied coatings or 0.70 for all other roofing products other than Field-Applied Coating.
2. Calculate the SRI Value by using the SRI-Worksheet and enter the resulting value in the SRI column above and attach a copy of the SRI-Worksheet (NRCC-ENV-03-E) to this compliance document.

**F. AIR BARRIER**

01	02	03	04	05
Name	Air Barrier Material Type	Air Barrier Assembly Type	Whole Building Air Leakage Testing	Comments
				N/A

**G. FENESTRATION PROPOSED AREAS AND EFFICIENCIES**

01	02	03	04	05	06	07	08	09	10	11	12
Tag/ID	Fenestration Type	Surface Area	Orientation	# of Panes	Max U-Factor	Max (R)SHGC	Min VT	Label	Overhang	Condition Status	Comments
100A	Glazed Door	4.5	South	2	0.41	0.25	0.56	NFRC	N	New	
100A	Storefront Transom	15	South	1	0.41	0.25	0.56	NFRC	N	New	
100B	Glazed Door	2.25	West	1	0.41	0.25	0.56	NFRC	N	New	
101A	Glazed Door	2.25	East	1	0.41	0.25	0.56	NFRC	N	New	

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
 January 2016

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
 January 2016

STATE OF CALIFORNIA  
**ENVELOPE COMPONENT APPROACH**  
 CEC-NRCC-ENV-01-E (Revised 01/18)  
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE  
 NRCC-ENV-01-E  
 Envelope Component Approach  
 Page 4 of 5

Project Name: Bldg 921-Southeast Water Pollution Control Plant Biosolids Digester Facilities Project  
 Date Prepared: 7/25/19

**NOTES:**

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**F. AIR BARRIER**

01	02	03	04	05
Name	Air Barrier Material Type	Air Barrier Assembly Type	Whole Building Air Leakage Testing	Comments
				N/A

**G. FENESTRATION PROPOSED AREAS AND EFFICIENCIES**



01	02	03	04	05	06	07	08	09	10	11	12
Tag/ID	Fenestration Type	Surface Area	Orientation	# of Panes	Max U-Factor	Max (R)SHGC	Min VT	Label	Overhang	Condition Status	Comments
100A	Glazed Door	4.5	South	2	0.41	0.25	0.56	NFRC	N	New	
100A	Storefront Transom	15	South	1	0.41	0.25	0.56	NFRC	N	New	
100B	Glazed Door	2.25	West	1	0.41	0.25	0.56	NFRC	N	New	
101A	Glazed Door	2.25	East	1	0.41	0.25	0.56	NFRC	N	New	

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
 January 2016

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
 January 2016

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE  
**TITLE 24 ENVELOPE FORMS-921**

BIOSOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM  
 

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY


CHECKED / APPROVED	DRAWN	
SECTION MANAGER	DESIGNED	
WWE O&M MANAGER	SCALE AS SHOWN	DATE Oct 30, 2020
APPROVED	APPROVED	
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER	
PLAN NO. <b>000-G-01-8127</b>	DRAWING / FILE NO.	REVISION

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 10/6/2020 9:00:14 PM

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES  
 0 1 2 3 4



**H. ENVELOPE MANDATORY MEASURES**

Indicate location on building plans of Mandatory Envelope Measures Note Block: 000-G-01-8125

**INSTRUCTIONS TO APPLICANT ENVELOPE COMPLIANCE & WORKSHEETS (check box if worksheet are included)**

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, please refer to the Energy Commission website.

NRCC-ENV-01-E Certificate of Compliance. Required on plans for all submittals.

NRCC-ENV-04-E Use when minimum skylight requirements for large enclosed spaces are required in climate zones 2 through 15. Optional on plans.

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jeff McGraw  
 Documentation Author Signature:   
 Company: MWA Architects  
 Signature Date: 7/25/19  
 Address: 135 Main St., Ste. 550  
 City/State/Zip: San Francisco, CA 94105  
 Phone: 415-957-2750  
 CEA/HERS Certification Identification (if applicable):  
 City/State/Zip: San Francisco, CA 94105  
 Phone: 415-957-2750

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

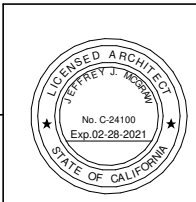
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ELEVATION  
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 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY
NO.	DATE	DESCRIPTION	BY
REVISIONS			

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT  
 BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE

**TITLE 24 ENVELOPE FORMS (CONTINUED)-921**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN
DATE	Oct 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.
<b>000-G-01-8128</b>	REVISION

**A. WINDOWS DETAILS WORKSHEET - §140.3(a)6B, C and D**  
 NOTE: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Site-built fenestration less than 1,000 ft<sup>2</sup>, see Reference Nonresidential Appendix NA6.  
 Prescriptively, skylights shall have a glazing material or diffuser that has a measured haze value greater than 90%, determined according to ASTM D1003, or other test method approved by the Energy Commission.

01	02	03	Fenestration						Overhang					
			U-Factor		SHGC		VT		Dimensions		Calculated			
			Proposed	Allowed	Proposed	Allowed	Proposed	Allowed	H	V	H/V	(R)SHGC Proposed	Max (R)SHGC Allowed	
Tag/ID	Window Type (e.g. Window-1)	Surface Area												
100A	Glazed Door	4.5	0.41	0.45	0.23	0.23	0.56	0.17				0.23	0.23	
100A	Storefront Transom	15	0.41	0.41	0.25	0.26	0.56	0.46				0.25	0.26	
100B	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17				0.23	0.23	
101A	Glazed Door	2.25	0.41	0.45	0.23	0.23	0.56	0.17				0.23	0.23	

**B. WEST WINDOW AREA CALCULATION - See §140.3(a)5A**

01. Gross West Exterior Wall Area	2,256	ft <sup>2</sup> · 0.40 =	902.4 ft <sup>2</sup>	40% of Gross West Facing Exterior Wall Area, or
02. West Display Linear Perimeter	160	FT · 6 ft =	960 ft <sup>2</sup>	West Display Perimeter Area
03. Enter Larger of 01 or 02			960 ft <sup>2</sup>	Maximum Standard West Area
04. Enter Proposed West Window Area			387.5 ft <sup>2</sup>	Proposed West Window Area

Note: If the PROPOSED WEST WINDOW AREA is greater than the MAXIMUM STANDARD WEST AREA then the envelope component approach may not be used.

**C. WINDOW AREA CALCULATION (for all other orientations other than West) - See §140.3(a)5A**

01. Gross Exterior Wall Area	7,310	ft <sup>2</sup> · 0.40 =	2,924 ft <sup>2</sup>	40% of Gross Exterior Wall Area or
02. Linear Display Perimeter	491	FT · 6 ft =	2,946 ft <sup>2</sup>	Display Perimeter Area
03. Enter The Larger of 01 or 02			2,946 ft <sup>2</sup>	Maximum Standard Area
04. Enter Proposed Window Area			2730 ft <sup>2</sup>	Proposed Window Area

Note: If the PROPOSED WINDOW AREA is greater than the MAXIMUM STANDARD AREA then the envelope component approach may not be used.

**D. SKYLIGHT AREA CALCULATION - See §140.3(a)6A**

	ACTUAL GROSS ROOF AREA	STANDARD ALLOWED SKYLIGHT AREA
01. IF Atrium/Skylight Height is ≤ 55 ft; or	ft <sup>2</sup> · 0.05 =	0 ft <sup>2</sup>
02. IF Atrium/Skylight Height is > 55 ft	ft <sup>2</sup> · 0.10 =	0 ft <sup>2</sup>
03. Proposed Skylight Area (from plans)	ft <sup>2</sup>	
04. SkylightSSR% <sup>1,2</sup> = Proposed Skylight Area Divided by Actual Gross Roof Area =	%	
05. Haze material value greater than 90% according to ASTM D1003, or other approved method by the Energy Commission		Yes No ○ ○

1. If the SKYLIGHT SSR % is less than or equal to 5% then choose the appropriate column in Table 140.3-B and C and row in Table 140.3-D.  
 2. If the SKYLIGHT SSR % is greater than 5% then the Envelope Component Approach may not be used.

**E. RELOCATABLE PUBLIC SCHOOL BUILDINGS - See §140.3(a)8**

**Option 1**

For Specific Climate Zone, use Table 140.3-B - Prescriptive Envelope Criteria.

Specific Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans.  
 Indicate location from the building plans:

**Option 2**

For Any (All) Climate Zone, use Table 140.3-D - Prescriptive Envelope Criteria.

Any (All) Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans.  
 Indicate location from the building plans:

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jeff McGraw  
 Documentation Author Signature: [Signature]  
 Company: MWA Architects  
 Signature Date: 7/25/19  
 Address: 135 Main St., Ste. 550  
 City/State/Zip: San Francisco, CA 94105  
 CEA/HERS Certification Identification (if applicable):  
 Phone: 415-957-2750

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

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Responsible Designer Name: Jeff McGraw  
 Responsible Designer Signature: [Signature]  
 Company: MWA Architects  
 Date Signed: 7/25/19  
 Address: 135 Main St., Ste. 550  
 License: C-24100  
 City/State/Zip: San Francisco, CA 94105  
 Phone: 415-957-2750

**FOR CONSTRUCTION**  
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ELEVATION DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM

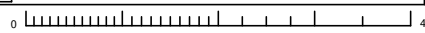
PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE

**TITLE 24 ENVELOPE FORMS (CONTINUED)-921**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Oct 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. <b>000-G-01-8129</b>	DRAWING / FILE NO. REVISION



CERTIFICATE OF COMPLIANCE NRCC-ENV-03-E  
 Solar Reflectance Index Calculation Worksheet (Page 1 of 2)  
 Project Name: **Bldg 921 - Southeast Water Pollution Control Plant Biosolids Digester Facility** Date Prepared: **7/25/19**

A. Product Information		
01	CRRC Product ID Number	0700-0022
02	Manufacturer	Garland
03	Brand	White Knight
04	Model	WC
05	Product Type	Field-Applied Coating
06	Roof Slope	less than or equal to 2:12

B. SRI Calculations		
01	Aged Reflectance Listed with CRRC	Yes <input checked="" type="radio"/> No <input type="radio"/>
02	CRRC Listed Aged Solar Reflectance	0.72
03	Initial Solar Reflectance	
04	Calculated Aged Solar Reflectance	
05	Thermal Emittance	0.89

C. Results		
01	Solar Reflective Index	88.42421164

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

CERTIFICATE OF COMPLIANCE NRCC-ENV-03-E  
 Solar Reflectance Index Calculation Worksheet (Page 2 of 2)  
 Project Name: **Bldg 921 - Southeast Water Pollution Control Plant Biosolids Digester Facility** Date Prepared: **7/25/19**

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: **Jeff McGraw** Documentation Author Signature: 

Company: **MWA Architects** Signature Date: **7/25/19**

Address: **135 Main St., Ste. 550** CEA/HERS Certification Identification (if applicable):

City/State/Zip: **San Francisco, CA 94105** Phone: **415-957-2750**

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Responsible Designer Name: **Jeff McGraw** Responsible Designer Signature: 

Company: **MWA Architects** Date Signed: **7/25/19**

Address: **135 Main St., Ste. 550** License: **C-24100**

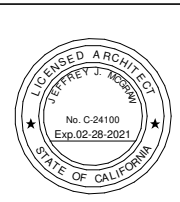
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CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

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ELEVATION  
 DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

NO. DATE DESCRIPTION BY APPRD

REVISIONS

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT  
 BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE

**TITLE 24 ENVELOPE FORMS (CONTINUED)-921**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Oct 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. <b>000-G-01-8130</b>	DRAWING / FILE NO. REVISION

STATE OF CALIFORNIA  
**SOLAR READY AREAS**  
 CEC-NRCC-SRA-01-E (Revised 07/16) CALIFORNIA ENERGY COMMISSION

**CERTIFICATE OF COMPLIANCE** NRCC-SRA-01-E  
 Solar Ready Areas (Page 1 of 3)

Project Name: Bldg 921 - Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**A. General Information**  
 Project Address: 750 Phelps St. San Francisco, CA 94124  
 Building Type:  
 Hotel/Motel building with ten stories or fewer  High-rise multi-family building with ten stories or fewer  
 Other nonresidential building with three stories or fewer  
 Solar-ready requirements do not apply to hotel/motel buildings and high-rise multifamily building with more than ten stories or other nonresidential buildings with more than three stories.  
 Type of Construction:  New Construction  Addition that increases roof area by more than 2,000 ft<sup>2</sup>  
 Solar-ready requirements do not apply to alterations or additions that increase the roof area by 2,000 ft<sup>2</sup> or less.

**B. Solar-Ready**  
 (Choose Path 01, 02, 03, 04, or 05 from below)  
 01. Allocated Solar Zone  
 NRCC-SRA-02-E Minimum Solar Zone Area Worksheet is required to be submitted  
 Minimum Solar Zone Area (ft<sup>2</sup>) 150.45  
 This is quantity [G] from NRCC-SRA-02-E Minimum Solar Zone Area Worksheet  
 Proposed Solar Zone Area (ft<sup>2</sup>) 0  
 This is quantity [S] from NRCC-SRA-02-E Minimum Solar Zone Area Worksheet  
 The construction documents will indicate a location for inverters and metering equipment and a pathway for routing of conduit from the solar zone to the point of interconnection with the electrical service. The construction documents will indicate a pathway for routing of plumbing from the solar zone to the water heating system.  
 A copy of the construction documents or a comparable document indicating information about the solar zone and interconnection pathways will be provided to the occupant.  
 If the designer certifies that all above requirements have been met and the Proposed Solar Zone Area meets or exceeds the Minimum Solar Zone Area, the building complies, otherwise it does not comply.  does not comply  complies

02. Permanently Installed Solar Photovoltaic (PV) System

Total Roof Area (ft <sup>2</sup> )* [A]	Minimum Nameplate DC Power Rating (watts) [B] = A x 1watt/ft <sup>2</sup>
	0

\* New construction: report total roof area; Additions: report newly added roof area

Will the proposed building have a permanently installed solar electric system that meets or exceeds the Minimum Nameplate DC Power Rating?  
 If yes, a NRCC-SPV-03-E Certificate of Installation: Solar Photovoltaic System documenting the installed system must be submitted as a condition of final approval.  
 Yes  No  
 Please check box to right if answered yes to all questions in this section.  EXEMPT

03. Permanently Installed Solar Water Heating System

Will the building have a permanently installed solar water heating system?  
 If yes, a NRCC-STH-03-E Certificate of Installation: Solar Water Heating System documenting the installed system must be submitted as condition of final approval.  
 Yes  No

Is the annual solar savings fraction equal to or greater than 0.2 in climate zones 1 through 9 or 0.35 in climate zones 10 through 16?  
 Yes  No

Annual Solar Savings Fraction	How was Annual Solar Savings Fraction Calculated?

Please check box to right if answered yes to all questions in this section.  EXEMPT

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance July 2016

STATE OF CALIFORNIA  
**SOLAR READY AREAS**  
 CEC-NRCC-SRA-01-E (Revised 07/16) CALIFORNIA ENERGY COMMISSION

**CERTIFICATE OF COMPLIANCE** NRCC-SRA-01-E  
 Solar Ready Areas (Page 2 of 3)

Project Name: Bldg 921 - Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

04. Smart Thermostats and Alternative Efficiency Measure

Is the building a high-rise multifamily building with ten stories or fewer?  Yes  No

Will all thermostats in each dwelling unit comply with Reference Joint Appendix 5 (JAS) and will they be capable of receiving and responding to Demand Response Signals prior to granting of an occupancy permit by the enforcing agency?  Yes  No

Will one of the following alternative efficiency measures be installed?  Yes  No

- A dishwasher that meets or exceeds the ENERGY STAR Program requirements with either a refrigerator that meets or exceeds the ENERGY STAR Program requirements or a whole house fan driven by an electronically commutated motor; or
- A home automation system capable of, at a minimum, controlling the appliances and lighting of the dwelling and responding to demand response signals; or
- Alternative plumbing piping to permit the discharge from the clothes washer and all showers and bathtubs to be used for an irrigation system in compliance with the California Plumbing Code and any applicable local ordinances; or
- A rainwater catchment system designed to comply with the California Plumbing Code and any applicable local ordinances, and that uses rainwater flowing from at least 65% of the available roof area.

Please check box to right if answered yes to all questions in this section.  EXEMPT

05. Roof is Designed for Vehicle Traffic, Parking or for Heliport

Will the roof be designed and approved to be used for vehicular traffic, parking or for a heliport.  Yes  No

Please provide building plan reference \_\_\_\_\_

Please check box to right if answered yes to all questions in this section.  EXEMPT

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance July 2016

STATE OF CALIFORNIA  
**SOLAR READY AREAS**  
 CEC-NRCC-SRA-01-E (Revised 07/16) CALIFORNIA ENERGY COMMISSION

**CERTIFICATE OF COMPLIANCE** NRCC-SRA-01-E  
 Solar Ready Areas (Page 3 of 3)

Project Name: Bldg 921 - Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: Jeff McGraw Documentation Author Signature:   
 Company: MWA Architects Signature Date: 7/25/19  
 Address: 135 Main St. Ste. 550 CEA/HERS Certification Identification (if applicable):  
 City/State/Zip: San Francisco, CA 94105 Phone: 415-957-2750

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Responsible Designer Name: Jeff McGraw Responsible Designer Signature:   
 Company: MWA Architects Date Signed: 7/25/19  
 Address: 135 Main St. Ste. 550 License: C-24100  
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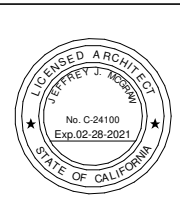
CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance July 2016

\*\*SOLAR READY ROOFS ARE LOCATED WITHIN 250' OF FACILITY

**FOR CONSTRUCTION**  
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ELEVATION  
 DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	A. HARM
PROJECT MANAGER	T. STIGERS	DESIGNED	A. HARM
APPROVED	J. MCGRAW	CHECKED	G. ROBLEY

NO.	DATE	DESCRIPTION	BY	APPRD.
REVISIONS				

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT  
 BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE  
**TITLE 24 ENVELOPE FORMS (CONTINUED)-921**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Oct 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. <b>000-G-01-8131</b>	DRAWING / FILE NO. REVISION

Project Name: Bldg 921- Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

Solar Zone Area (requirements in §110.10(b)18)  
 This worksheet applies to hotel/motel occupancies and high-rise multifamily buildings with ten stories or fewer, and all other nonresidential buildings with three stories or fewer that comply with the solar zone requirement through Compliance Path A: Allocated Solar Zone in the NRCC-SRA-01-E Certificate of Compliance Solar Ready Areas.  
 The worksheet applies to all additions that increase the roof area by more than 2,000 ft<sup>2</sup>.

**A. General Information**

Project Address: 750 Phelps St., San Francisco, CA 94124  
 Total Roof Area:  Less than or equal to 10,000 ft<sup>2</sup>  Greater than 10,000 ft<sup>2</sup>  
 Phase of Construction:  New Construction  Addition that increases roof area by more than 2,000 ft<sup>2</sup>

**Step 1: Determine Minimum Solar Zone Area**

Calculate the minimum solar zone area using one of the two options provided below. Use option 2 if your roofs and overhangs are shaded.

**Method 1: Minimum Solar Zone Area Based on Total Roof Area (requirements in 110.10(b)18)**

New Construction: Total roof area (ft <sup>2</sup> )	A	1,003
Additions: Total roof area added to building (ft <sup>2</sup> )		
New Construction: Area of roof covered with skylights (ft <sup>2</sup> )	B	0
Additions: Area of new roof area covered with skylights (ft <sup>2</sup> )		
Minimum solar zone area	C = 0.15 x (A - B)	150.45

Note: For additions, if A ≤ 2,000 ft<sup>2</sup> then addition does not need to comply with solar zone requirements

**Method 2: Minimum Solar Zone Area Based on Potential Solar Zone (requirements in Exception 3 to 110.10(b)18)**

The enforcement agency may require additional documentation that describes how the reduced solar zone area was determined.

Method/Tool(s) used to quantify annual solar access: (for example, "Software X", "CAD Tool Y")		
Area of low-sloped roof (ratio of rise to run of 2:12 or less) where the annual solar access is 70% or greater.* (ft <sup>2</sup> )	D	
Area of steep-sloped roof (ratio of rise to run is greater than 2:12) that is oriented between 110° and 270° and annual solar access is 70% or greater.* (ft <sup>2</sup> )	E	
Minimum solar zone area	F = 0.5 x (D + E)	0

\* For new construction consider total roof area; for additions consider newly added roof area

Minimum solar zone area (either C or F) (ft <sup>2</sup> )	G	150.45
--	---	--------

Project Name: Bldg 921- Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**Step 2: Allocated Solar Zone Subareas**

Subarea ID	Building Plan Reference	Slope of Roof or Overhang	If Steep Slope, roof or overhang oriented between 110° and 270°	Subarea complies with Part 9 of Title 24 <sup>A</sup>	Plane containing the solar zone is free of obstructions <sup>B</sup>	Subarea is located the appropriate distance from obstructions <sup>C</sup>	Smallest dimension is greater than 5 feet	Subarea meet minimum area requirement <sup>D</sup>	Subarea Qualifies <sup>E</sup>	Area (ft <sup>2</sup> )
H	I	J	K	L	M	N	O	P	Q	R
	A-05-1001	Low	NA		No				No	0
Add Row	Remove Last									

Proposed Solar Zone Area (ft<sup>2</sup>) (sum of all qualifying subareas)[S] 0

- A. The solar zone shall comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other Parts of Title 24 or in any requirements adopted by a local jurisdiction.  
 B. No obstructions, including but not limited to, vents, chimneys, architectural features, and roof mounted equipment, shall be located in the solar zone.  
 C. Solar zone must be located no closer than twice the distance, measured in the horizontal plane, of the height difference between the highest obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.  
 D. If the building roof area ≤ 10,000 ft<sup>2</sup> then minimum area is 80 ft<sup>2</sup>. If building roof area > 10,000 ft<sup>2</sup> then minimum area is 160 ft<sup>2</sup>.  
 E. Check "yes" if answers to questions in columns K through P are "yes".

Building complies with Minimum Solar Zone Area requirement is Proposed Solar Zone Area [S] is equal to or greater than the Minimum Solar Zone Area [G] **NOT COMPLIANT**

Project Name: Bldg 921- Southeast Water Pollution Control Plant Biosolids Digester Facilities Project Date Prepared: 7/25/19

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

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**FOR CONSTRUCTION**  
 Scope II

ELEVATION DATUM  
 CITY



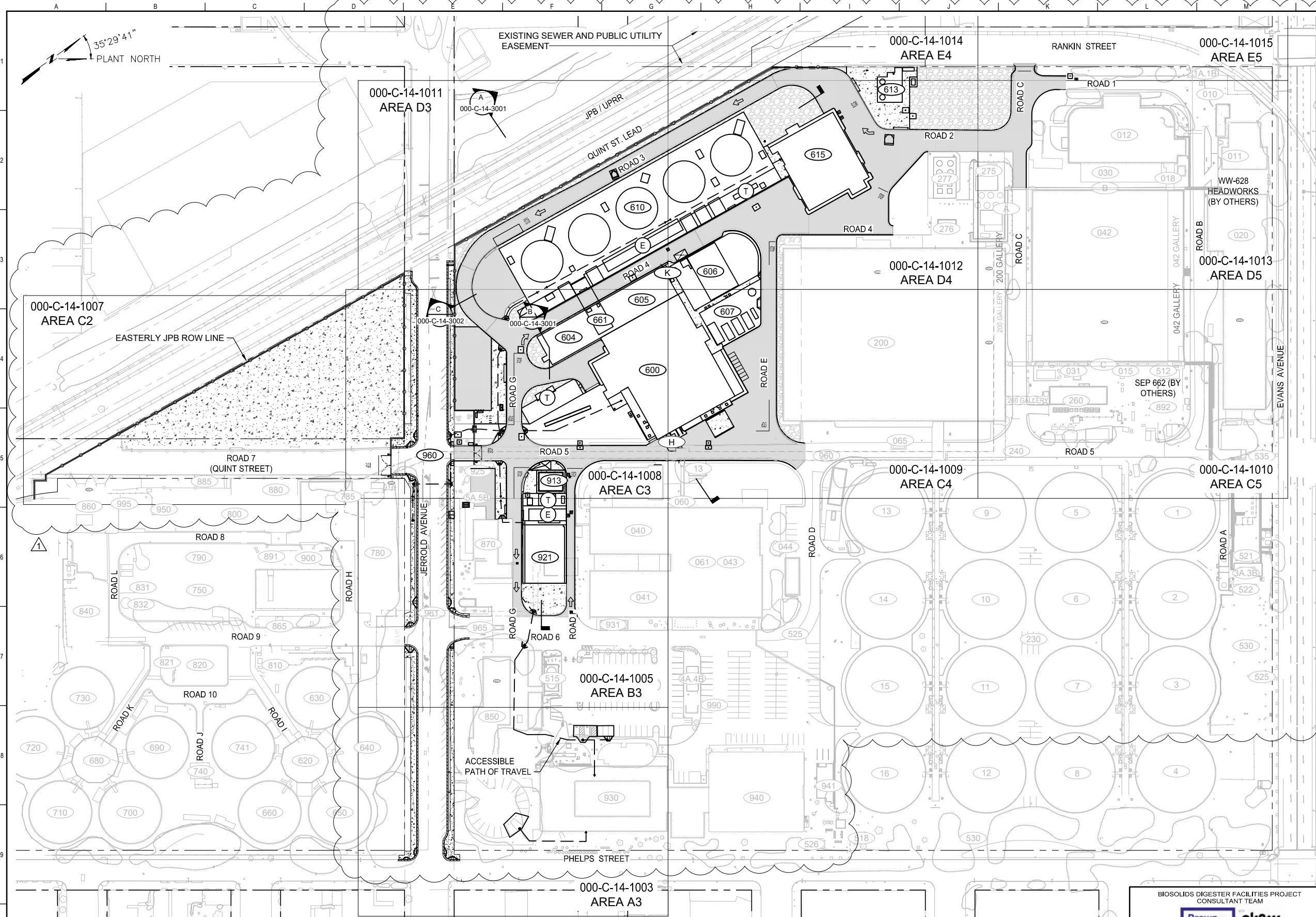
BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM

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**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIOSOLIDS DIGESTER FACILITIES PROJECT**  
 GENERAL SITEWIDE  
**TITLE 24 ENVELOPE FORMS (CONTINUED)-921**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Oct 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. <b>000-G-01-8132</b>	DRAWING / FILE NO. REVISION





**GENERAL SHEET NOTES**

1. LIMIT OF PAVING WORK BETWEEN DESIGN PACKAGES:
  - 1.1. THE MATCH LINE BETWEEN THE MAIN BDFP PACKAGE AND THE JERROLD AVENUE STREETScape IMPROVEMENTS PACKAGE IS THE PROPERTY LINE ALONG JERROLD AVENUE, UNO.
  - 1.2. LANDSCAPING PAVING AROUND FACILITY 600 AND THE NEW PEDESTRIAN GATE IS NOT SHOWN. FOR LANDSCAPING PAVING INFORMATION, SLD 000-L-14-1005 AND 000-L-14-1008.
2. SEE DRAWINGS 000-G-01-7003 AND 000-G-01-7004 FOR CIVIL LEGEND SYMBOLS, ABBREVIATIONS AND NOTES.
3. SEE DRAWINGS 000-C-15-1001 TO 000-C-15-1015 FOR YARD PIPING INFORMATION.
4. SEE DRAWINGS 000-C-17-1001 TO 000-C-17-1015 FOR GRADING INFORMATION.

**FACILITIES:**

- (000) SITE WIDE
- (012) (E) NEW HEADWORKS
- (020) HEADWORKS (BY OTHERS)
- (040) (E) SEDIMENTATION BLDG NO. 1
- (041) (E) SEDIMENTATION BLDG NO. 2
- (042) (E) SEDIMENTATION BLDG NO. 3 (PS PUMPING)
- (060) (E) WEST PUMP ROOM (PS PUMPING)
- (061) (E) CENTRAL PUMP ROOM (PS PUMPING)
- (260) (E) SECONDARY SLUDGE CONTROL BUILDING (WAS PUMPING)
- (600) SOLIDS PRETREATMENT
- (604) DIGESTION COOLING TOWERS
- (605) THERMAL HYDROLYSIS
- (606) SOLIDS ODOR CONTROL
- (607) STEAM GENERATION
- (610) ANAEROBIC DIGESTION
- (613) WASTE GAS BURNERS
- (615) BIOSOLIDS DEWATERING
- (661) PIPE GALLERY
- (913) IRON CHLORIDE STORAGE TANKS
- (921) W2 PUMP STATION
- (960) (E) GALLERY
- (961) (E) JERROLD AVENUE UNDERCROSSING
- (E) ELECTRICAL ROOM
- (T) TRANSFORMERS
- (H) PIPE CHASE (BURIED)
- (K) PIPE TRENCH (GRD ACCESSIBLE)

**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE  
**OVERALL SITE AND PAVING PLAN**

CHECKED / APPROVED	DRAWN	
SECTION MANAGER	DESIGNED	
WWE O&M MANAGER	SCALE	DATE
APPROVED	AS SHOWN	Dec 3, 2020
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER	
PLAN NO.	DRAWING / FILE NO.	REVISION NO.
000-C-14-1001		1

- LEGEND:**
- ASPHALT CONCRETE
  - CONCRETE
  - GRAVEL

PLAN  
 SCALE: 1"=80'

**FOR CONSTRUCTION**  
 Scope II

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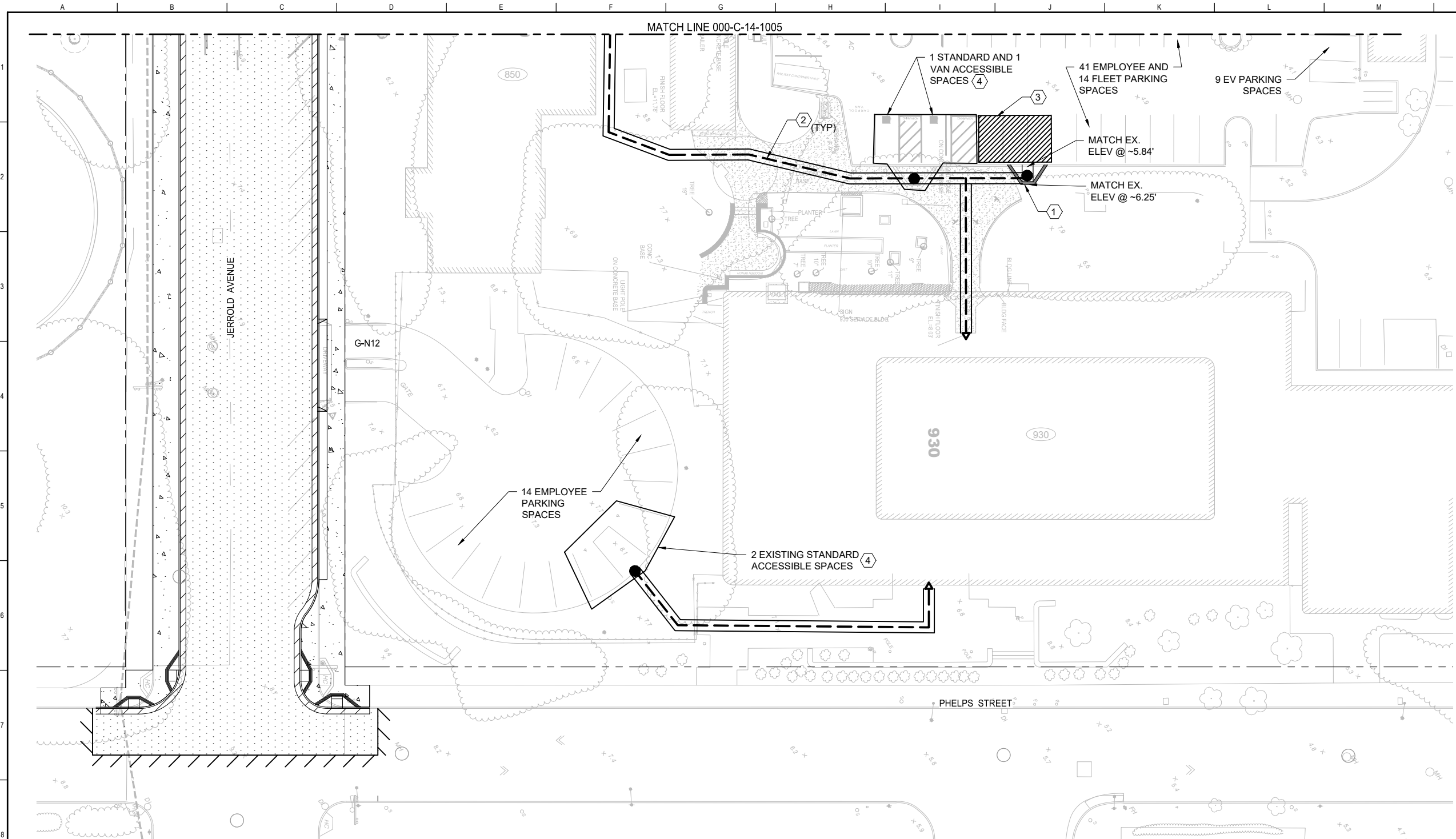
ELEVATION DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH

NO.	DATE	DESCRIPTION	TSE	KFK
1	12/03/20	REV #1		
		REVISIONS	BY	APPROV

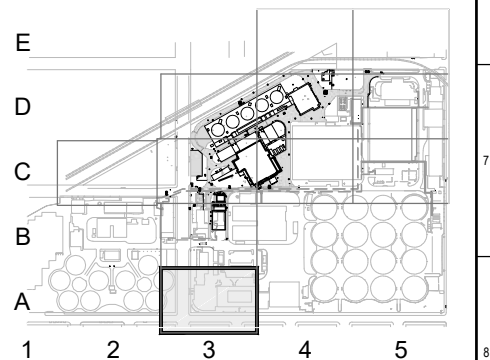


**GENERAL SHEET NOTES**

- FOR SITE FENCE AND GATES INFORMATION, SEE LANDSCAPING DRAWINGS.
- FOR JERROLD AVENUE LAYOUT AND PAVING IMPROVEMENTS DRAWINGS, SEE JERROLD AVENUE STREETSCAPE IMPROVEMENTS DRAWINGS. THE MATCH LINE BETWEEN THE MAIN BDFP PACKAGE AND THE JERROLD AVENUE IMPROVEMENTS PACKAGE IS THE PROPERTY LINE ALONG JERROLD AVENUE, UNO.
- FOR SITE ELECTRICAL, DATA, AND LIGHTING INFORMATION, SEE ELECTRICAL DRAWINGS 000-E-14-1001 TO 000-E-14-1015.

**SHEET KEY NOTES**

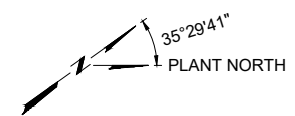
- STANDARD CURB RAMP PER DETAIL C9027 - C9032, SHALL ALIGN WITH THE ACCESS AISLE BETWEEN THE PARKING SPACES. CENTER-TO-CENTER SPACING OF THE DOMES SHALL BE 2.3' - 2.4'. THE COLOR OF THE DETECTABLE WARNING SHALL CONFORM TO FEDERAL STANDARD 595B TABLE IV, COLOR 33538 "FEDERAL YELLOW".
- 48" WIDE ACCESSIBLE PATH OF TRAVEL PER CALIFORNIA BUILDING CODE SECTION 11B-206.2.2. SEE DESIGN NOTES ON DETAIL A9211 AND A9212. EXACT PATH SHALL BE DETERMINED IN THE FIELD BY THE CITY REPRESENTATIVE. CONTRACTOR SHALL SUBMIT ACCESSIBLE PATH DESIGN INDICATING THE DIMENSIONS, SLOPES, AND ELEVATIONS FOR APPROVAL BY THE CITY REPRESENTATIVE PRIOR TO GRADING AND PAVING. REGRADE AND REPAVE AS NEEDED TO PROVIDE A PATH WITH LONGITUDINAL SLOPE OF 4.5% MAX AND CROSS SLOPE OF 1.5% MAX.
- CONVERT EXISTING FLEET PARKING SPACES TO ONE STANDARD AND ONE VAN ACCESSIBLE EV PARKING STALLS PER DETAIL A9212. SUBMIT SHOP DRAWINGS FOR REVIEW.
- UPDATE EXISTING STRIPING, PAVING DECAL, DIMENSIONS, AND SIGNS OF THE ACCESSIBLE SPACES TO CONFORM WITH CURRENT SFPW REQUIREMENTS PER DETAIL A9211. SUBMIT SHOP DRAWINGS FOR REVIEW.



**KEY PLAN**  
1" = 500'

BDFP PARKING ZONE SUMMARY TABLE						
TOTAL EMPLOYEE PARKING SPACES	TOTAL FLEET PARKING SPACES	TOTAL EV PARKING SPACES	STANDARD ACCESSIBLE PARKING SPACES	VAN ACCESSIBLE PARKING SPACES	STANDARD ACCESSIBLE EV PARKING SPACES	VAN ACCESSIBLE EV PARKING SPACES
55	14	9	3	1	1	1

**PLAN**  
SCALE: 1"=20'



- LEGEND:**
- ASPHALT CONCRETE
  - CONCRETE
  - GRAVEL

**FOR CONSTRUCTION**  
Scope II

FOR THE SOLE USE OF THE DOCUMENT RECIPIENT - DO NOT CITE, COPY, OR CIRCULATE WITHOUT THE EXPRESSED PERMISSION OF THE SFPUC.

ELEVATION DATUM  
**CITY**

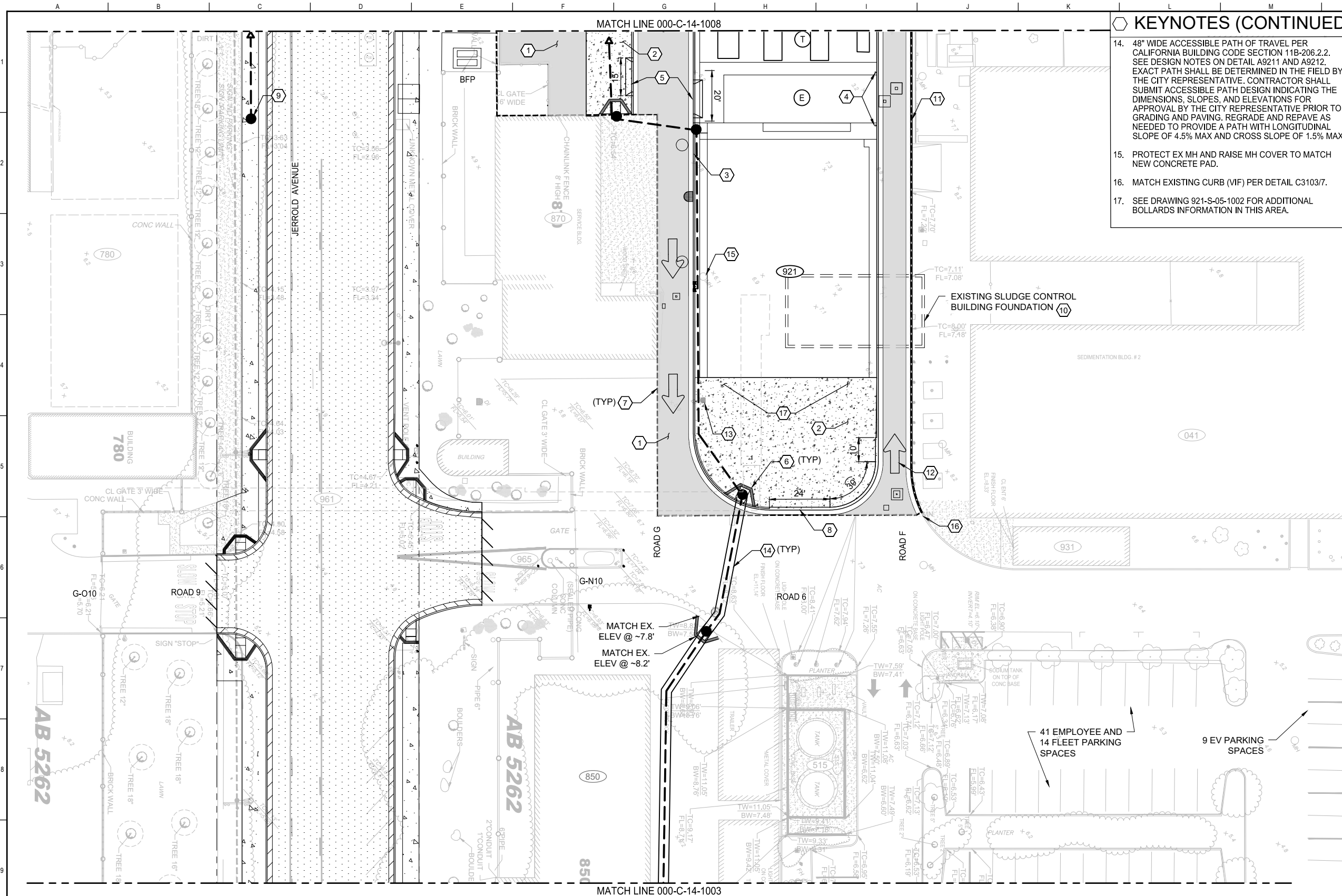


BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
Brown and Caldwell		ch2m BLACK & VEATCH	
PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH
NO.	DATE	DESCRIPTION	BY
REVISIONS			

**CONTRACT NO. WW-647R**  
CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
BIOSOLIDS DIGESTER FACILITIES PROJECT

GENERAL SITEWIDE			
SITE AND PAVING PLAN - AREA A3			
CHECKED / APPROVED	DRAWN		
SECTION MANAGER	DESIGNED		
WWE O&M MANAGER	SCALE	DATE	
	AS SHOWN	Dec 30, 2020	
APPROVED	APPROVED		
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER		
PLAN NO.	DRAWING / FILE NO.	REVISION NO.	
000-C-14-1003			

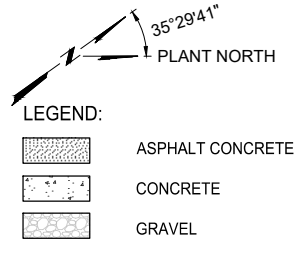
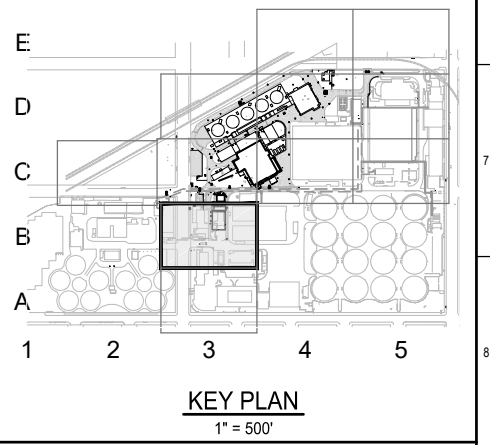




- ### KEYNOTES (CONTINUED)
- 48" WIDE ACCESSIBLE PATH OF TRAVEL PER CALIFORNIA BUILDING CODE SECTION 11B-206.2.2. SEE DESIGN NOTES ON DETAIL A9211 AND A9212. EXACT PATH SHALL BE DETERMINED IN THE FIELD BY THE CITY REPRESENTATIVE. CONTRACTOR SHALL SUBMIT ACCESSIBLE PATH DESIGN INDICATING THE DIMENSIONS, SLOPES, AND ELEVATIONS FOR APPROVAL BY THE CITY REPRESENTATIVE PRIOR TO GRADING AND PAVING. REGRADE AND REPAVE AS NEEDED TO PROVIDE A PATH WITH LONGITUDINAL SLOPE OF 4.5% MAX AND CROSS SLOPE OF 1.5% MAX.
  - PROTECT EX MH AND RAISE MH COVER TO MATCH NEW CONCRETE PAD.
  - MATCH EXISTING CURB (VIF) PER DETAIL C3103/7.
  - SEE DRAWING 921-S-05-1002 FOR ADDITIONAL BOLLARDS INFORMATION IN THIS AREA.

- ### GENERAL SHEET NOTES
- FOR SITE FENCE AND GATES INFORMATION, SEE LANDSCAPING DRAWINGS.
  - FOR JERROLD AVENUE LAYOUT AND PAVING INFORMATION, SEE JERROLD AVENUE STREETSCAPE IMPROVEMENTS DRAWINGS. THE MATCH LINE BETWEEN THE MAIN BDDP PACKAGE AND THE JERROLD AVENUE IMPROVEMENTS PACKAGE IS THE PROPERTY LINE ALONG JERROLD AVENUE, UNO.
  - FOR SITE ELECTRICAL, DATA, AND LIGHTING INFORMATION, SEE ELECTRICAL DRAWINGS 000-E-14-1001 TO 000-E-14-1015.

- ### SHEET KEY NOTES
- ASPHALT CONCRETE PAVING PER DETAIL C3103/5.
  - CONCRETE PAVING PER DETAIL C3103/1.
  - PLANT CURB AND GUTTER PER DETAIL C3103/7.
  - BOLLARD PER DETAIL C3001.
  - CONCRETE DRIVEWAY PER DETAIL C9004.
  - STANDARD CURB RAMP PER DETAIL C9027 - C9032. CENTER-TO-CENTER SPACING OF THE DOMES SHALL BE 2.3' - 2.4'. THE COLOR OF THE DETECTABLE WARNING SHALL CONFORM TO FEDERAL STANDARD 595B TABLE IV, COLOR 33538 "FEDERAL YELLOW".
  - MATCH EXISTING ASPHALT PER DETAIL C3103/4.
  - APPROXIMATELY 64-FT OF ROLLED CURB PER DETAIL C1012.
  - SITE ARRIVAL POINT AT BUS STOP FOR EAST-BOUND #23 ON SOUTH SIDE OF JERROLD AVE.
  - DEMOLISH AND REMOVE EXISTING SLUDGE CONTROL BUILDING FOUNDATION AS REQUIRED, SSD.
  - PROTECT EXISTING RAISED CONCRETE SLAB AND HANDRAIL IN PLACE.
  - TYPE I 10-FT ARROW PER CALTRANS STD PLAN A24A.
  - PROTECT EX CB AND RAISE GRATE TO MATCH FINISHED GRADE.



PLAN  
SCALE: 1"=20'

**FOR CONSTRUCTION**  
Scope II

FOR THE SOLE USE OF THE DOCUMENT RECIPIENT - DO NOT CITE, COPY, OR CIRCULATE WITHOUT THE EXPRESSED PERMISSION OF THE SFPUC.

ELEVATION DATUM  
CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT  
CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH

NO.	DATE	DESCRIPTION	BY	APPRD
REVISIONS				

CONTRACT NO. WW-647R

CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU

SOUTHEAST WATER POLLUTION CONTROL PLANT  
BIOSOLIDS DIGESTER FACILITIES PROJECT

GENERAL SITEWIDE  
SITE AND PAVING PLAN - AREA B3

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN
DATE	Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. 000-C-14-1005	DRAWING / FILE NO.
	REVISION NO.

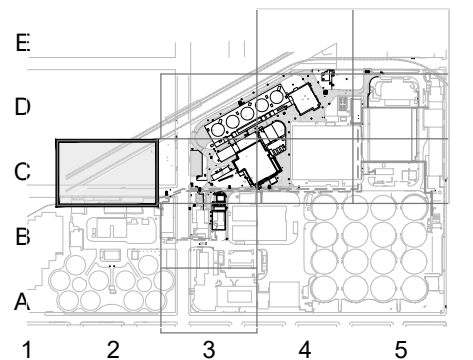


**GENERAL SHEET NOTES**

- FOR SITE FENCE AND GATES INFORMATION, SEE LANDSCAPING DRAWINGS.
- FOR JERROLD AVENUE LAYOUT AND PAVING INFORMATION, SEE JERROLD AVENUE STREETSCAPE IMPROVEMENTS DRAWINGS. THE MATCH LINE BETWEEN THE MAIN BDFP PACKAGE AND THE JERROLD AVENUE IMPROVEMENTS PACKAGE IS THE PROPERTY LINE ALONG JERROLD AVENUE, UNO.
- FOR SITE ELECTRICAL, DATA, AND LIGHTING INFORMATION, SEE ELECTRICAL DRAWINGS 000-E-14-1001 TO 000-E-14-1015.

**SHEET KEY NOTES**

- EXISTING RETAINING WALL TO REMAIN. CAMPUS FENCE PER DWG 000-L-14-5007. CONTRACTOR SHALL EXPOSE ALL EXISTING BURIED UTILITIES PRIOR TO GRADE BEAM AND PILE CONSTRUCTION. FOR YARD PIPING INFORMATION, SEE CIVIL DRAWINGS 000-C-15-1001 TO 000-C-15-1015.
- TIE-IN NEW CAMPUS FENCE WITH EXISTING FENCE (VIF) AS DIRECTED BY THE CITY REPRESENTATIVE, SEE LANDSCAPING DRAWINGS.

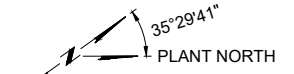


**KEY PLAN**  
1" = 500'

**CONTRACT NO. WW-647R**  
CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE  
**SITE AND PAVING PLAN - AREA C2**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN
DATE	Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.
<b>000-C-14-1007</b>	
REVISION NO.	



**LEGEND:**

	ASPHALT CONCRETE
	CONCRETE
	GRAVEL

**PLAN**  
SCALE: 1"=20'

**FOR CONSTRUCTION**  
Scope II

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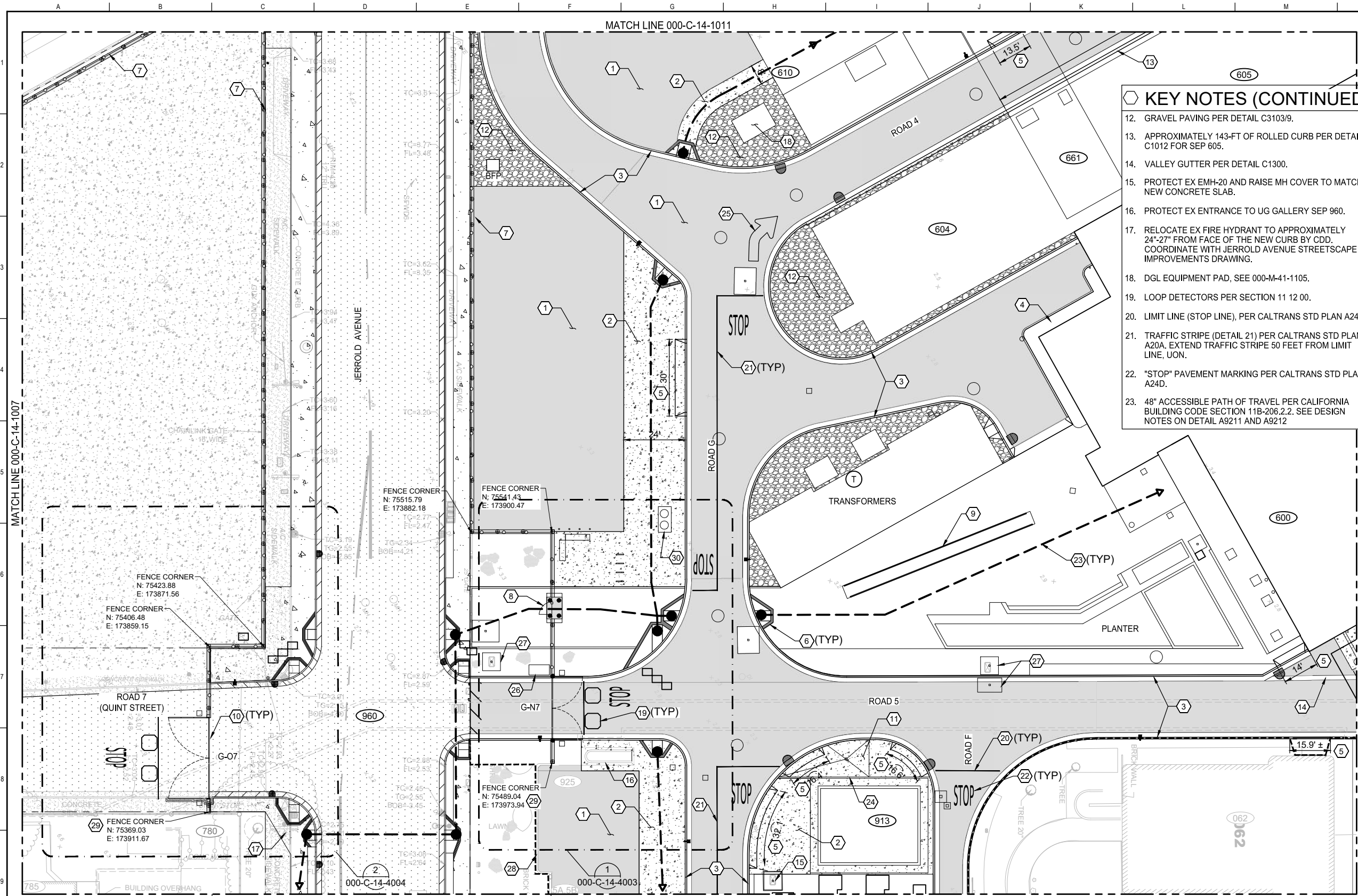
ELEVATION DATUM  
**CITY**



BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH
NO.	DATE	DESCRIPTION	BY
		REVISIONS	APPRD





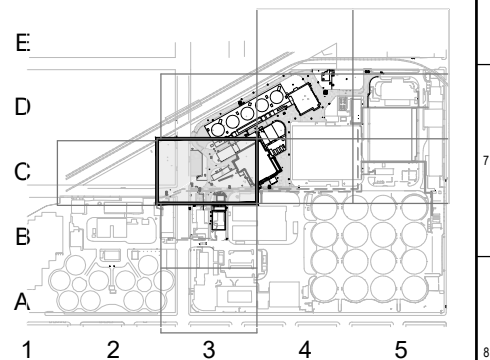
- ### KEY NOTES (CONTINUED)
- GRAVEL PAVING PER DETAIL C3103/9.
  - APPROXIMATELY 143-FT OF ROLLED CURB PER DETAIL C1012 FOR SEP 605.
  - VALLEY GUTTER PER DETAIL C1300.
  - PROTECT EX EMH-20 AND RAISE MH COVER TO MATCH NEW CONCRETE SLAB.
  - PROTECT EX ENTRANCE TO UG GALLERY SEP 960.
  - RELOCATE EX FIRE HYDRANT TO APPROXIMATELY 24"-27" FROM FACE OF THE NEW CURB BY CDD. COORDINATE WITH JERROLD AVENUE STREETSCAPE IMPROVEMENTS DRAWING.
  - DGL EQUIPMENT PAD, SEE 000-M-41-1105.
  - LOOP DETECTORS PER SECTION 11 12 00.
  - LIMIT LINE (STOP LINE), PER CALTRANS STD PLAN A24G.
  - TRAFFIC STRIPE (DETAIL 21) PER CALTRANS STD PLAN A20A. EXTEND TRAFFIC STRIPE 50 FEET FROM LIMIT LINE, UON.
  - "STOP" PAVEMENT MARKING PER CALTRANS STD PLAN A24D.
  - 48" ACCESSIBLE PATH OF TRAVEL PER CALIFORNIA BUILDING CODE SECTION 11B-206.2.2. SEE DESIGN NOTES ON DETAIL A9211 AND A9212

### GENERAL SHEET NOTES

- FOR SITE FENCE AND GATES INFORMATION, SEE LANDSCAPING DRAWINGS.
- FOR FACILITY 600 ENTRY COURT LAYOUT AND PAVING INFORMATION, SEE DWG 000-L-14-4001.
- FOR JERROLD AVENUE LAYOUT AND PAVING INFORMATION, SEE JERROLD AVENUE STREETSCAPE IMPROVEMENTS DRAWINGS. THE MATCH LINE BETWEEN THE MAIN BDFP PACKAGE AND THE JERROLD AVENUE IMPROVEMENTS PACKAGE IS THE PROPERTY LINE ALONG JERROLD AVENUE, UNO.
- FOR SITE ELECTRICAL, DATA, AND LIGHTING INFORMATION, SEE ELECTRICAL DRAWINGS 000-E-14-1001 TO 000-E-14-1015.

### SHEET KEY NOTES

- ASPHALT CONCRETE PAVING PER DETAIL C3103/5.
- CONCRETE PAVING PER DETAIL C3103/1.
- PLANT CURB AND GUTTER PER DETAIL C3103/7.
- CONCRETE SIDEWALK PER DETAIL C1011 AND PLANT CURB PER DETAIL C3103/8. 4-FT SIDEWALK WIDTH TYP. UNLESS OTHERWISE INDICATED ON DRAWING.
- CONCRETE DRIVEWAY PER DETAIL C9004.
- STANDARD CURB RAMP PER DETAIL C9027 - C9032. CENTER-TO-CENTER SPACING OF THE DOMES SHALL BE 2.3' - 2.4'. COLOR OF THE DETECTABLE WARNING SHALL BE YELLOW COLOR APPROXIMATE TO 33538 OF SAE AMS-STD-595A.
- CAMPUS FENCE PER DWG 000-L-14-5007. EXISTING RETAINING WALL ALONG THE UPRR TO REMAIN. CONTRACTOR SHALL EXPOSE ALL EXISTING BURIED UTILITIES PRIOR TO GRADE BEAM AND PILE CONSTRUCTION. FOR YARD PIPING INFORMATION, SEE CIVIL DRAWINGS 000-C-15-1001 TO 000-C-15-1015.
- PEDESTRIAN GATE PER DWG 000-L-14-5012 AND CONFORM TO RECESSED DOOR CLEARANCE REQUIREMENTS PER DETAIL A9203/8.
- WATER FEATURE, SEE DWG 600-L-20-4001.
- VEHICULAR SWINGING GATES, SEE DWG 000-L-14-4002.
- CONCRETE SLAB PER DETAIL C3104. CONCRETE CHEMICAL CONTAINMENT PAD AND GRATING SHALL BE LINED IN ACCORDANCE WITH SECTION 09 96 35. CONCRETE SLAB SHALL HAVE MOISTURE VAPOR BARRIER IN ACCORDANCE WITH SECTION 07 13 00.



KEY PLAN  
1" = 500'

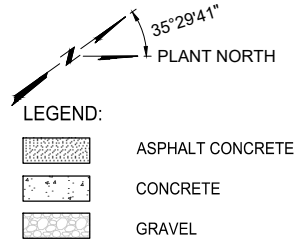
**CONTRACT NO. WW-647R**  
CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE  
**SITE AND PAVING PLAN - AREA C3**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN
DATE	Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.
<b>000-C-14-1008</b>	
REVISIONS	REVISION NO.

- PLANT CURB PER DETAIL C3103/8.
- TYPE IV (R) ARROW PER CALTRANS STD PLAN A24A.
- NG METER AND REGULATOR (BY OTHERS), SEE 000-C-15-4001.
- PROTECT EX EMH AND RAISE MH COVER TO MATCH FINISHED GRADE.
- PROTECT EXISTING WALL TO REMAIN.
- TIE-IN NEW CAMPUS FENCE WITH EXISTING WALL (VIF) AS DIRECTED BY THE CITY REPRESENTATIVE, SEE LANDSCAPING DRAWINGS.
- DGL CONDENSATE WELLS, SEE 000-M-41-1103.



PLAN  
SCALE: 1"=20'

**FOR CONSTRUCTION**  
Scope II

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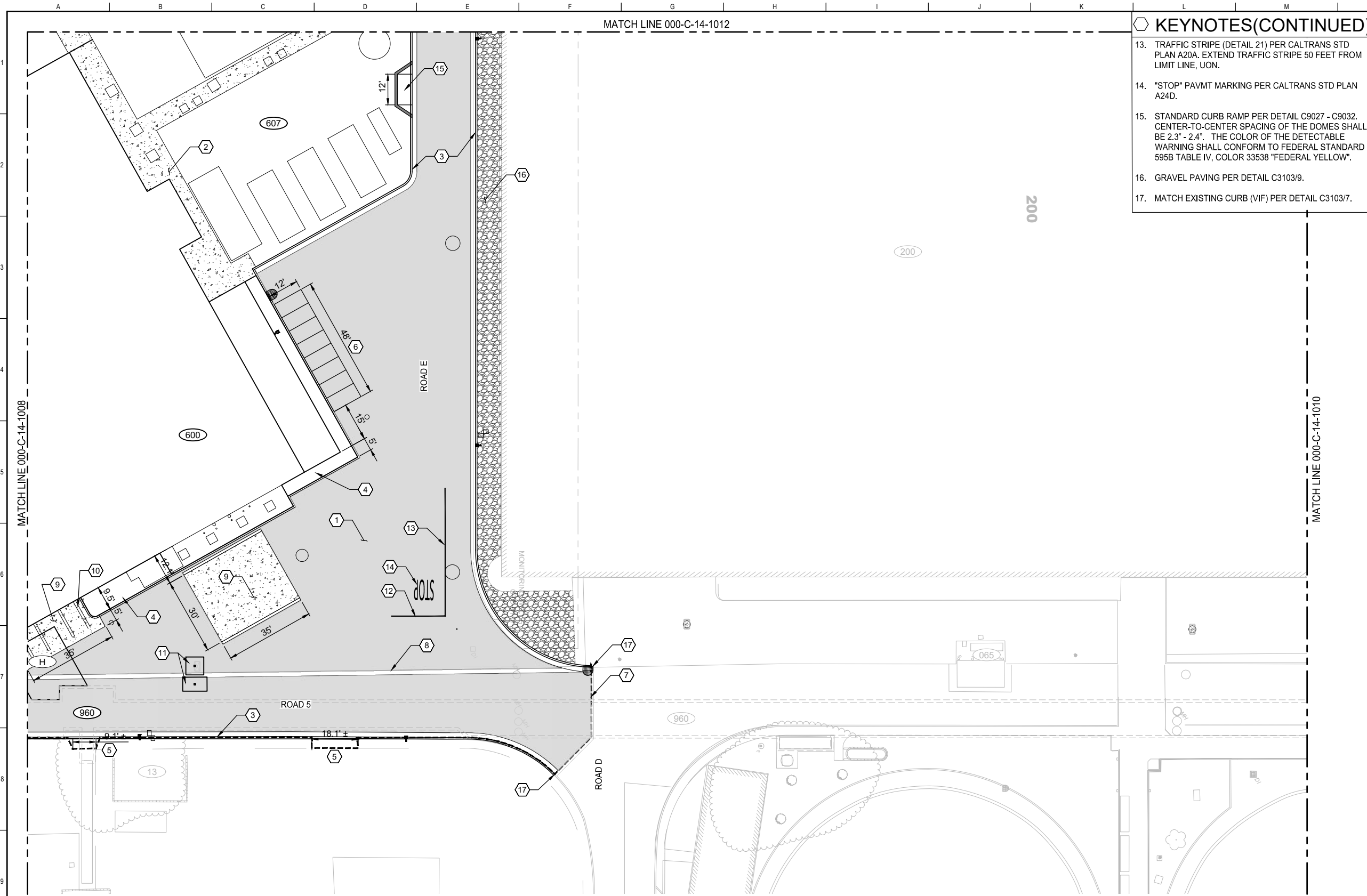
ELEVATION DATUM  
CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT  
CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH
NO.	DATE	DESCRIPTION	BY
		REVISIONS	APPRD

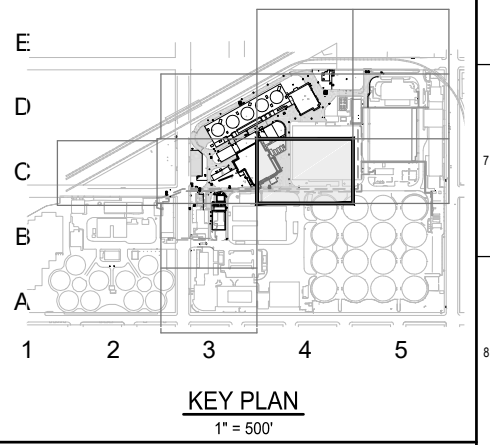




- ### KEYNOTES(CONTINUED)
- TRAFFIC STRIPE (DETAIL 21) PER CALTRANS STD PLAN A20A. EXTEND TRAFFIC STRIPE 50 FEET FROM LIMIT LINE, UON.
  - "STOP" PAVMT MARKING PER CALTRANS STD PLAN A24D.
  - STANDARD CURB RAMP PER DETAIL C9027 - C9032. CENTER-TO-CENTER SPACING OF THE DOMES SHALL BE 2.3" - 2.4". THE COLOR OF THE DETECTABLE WARNING SHALL CONFORM TO FEDERAL STANDARD 595B TABLE IV, COLOR 33538 "FEDERAL YELLOW".
  - GRAVEL PAVING PER DETAIL C3103/9.
  - MATCH EXISTING CURB (VIF) PER DETAIL C3103/7.

- ### GENERAL SHEET NOTES
- FOR FACILITY 600 ENTRY COURT LAYOUT AND PAVING INFORMATION, SEE DWG 000-L-14-4001.
  - FOR SITE ELECTRICAL, DATA, AND LIGHTING INFORMATION, SEE ELECTRICAL DRAWINGS 000-E-14-1001 TO 000-E-14-1015.

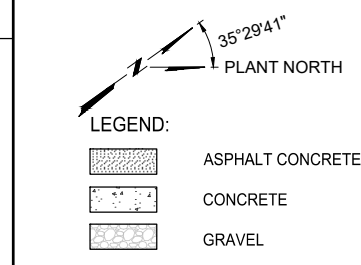
- ### SHEET KEY NOTES
- ASPHALT CONCRETE PAVING PER DETAIL C3103/5.
  - CONCRETE PAVING PER DETAIL C3103/1.
  - PLANT CURB AND GUTTER PER DETAIL C3103/7.
  - CONCRETE SIDEWALK PER DETAIL C1011 AND PLANT CURB PER DETAIL C3103/8. 4-FT SIDEWALK WIDTH TYP. UNLESS OTHERWISE INDICATED ON DRAWING.
  - CONCRETE DRIVEWAY PER DETAIL C9004.
  - ELECTRICAL CART PARKING (6'X12' EACH, TOTAL OF 8). PAINT PER SECTION 32 17 23.
  - MATCH EXISTING ASPHALT PER DETAIL C3103/4.
  - VALLEY GUTTER PER DETAIL C1300.
  - CONCRETE SLAB PER DETAIL C3104. CONTRACTOR TO COORDINATE TOP OF CONCRETE ELEVATION WITH STRUCTURAL DRAWING 600-S-20-1005.
  - EMBEDDED 40# T-RAILS IN CONCRETE SLAB (12-FT IN LENGTH), 2 T-RAILS PER WHEEL FOR A TOTAL OF 8. CONTRACTOR TO COORDINATE WITH STRUCTURAL DRAWING 600-S-20-1005 FOR EXACT LOCATION OF T-RAILS FROM INSIDE OF SEP 600 AND FIELD ADJUST TO MATCH.
  - PROTECT EX EMH AND RAISE MH COVER TO MATCH FINISHED GRADE.
  - LIMIT LINE (STOP LINE), PER CALTRANS STD PLAN A24G.



**CONTRACT NO. WW-647R**  
CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
BIOSOLIDS DIGESTER FACILITIES PROJECT

GENERAL SITEWIDE  
**SITE AND PAVING PLAN - AREA C4**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN
DATE	Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. 000-C-14-1009	DRAWING / FILE NO.
	REVISION NO.



PLAN  
SCALE: 1"=20'

**FOR CONSTRUCTION**  
Scope II

FOR THE SOLE USE OF THE DOCUMENT  
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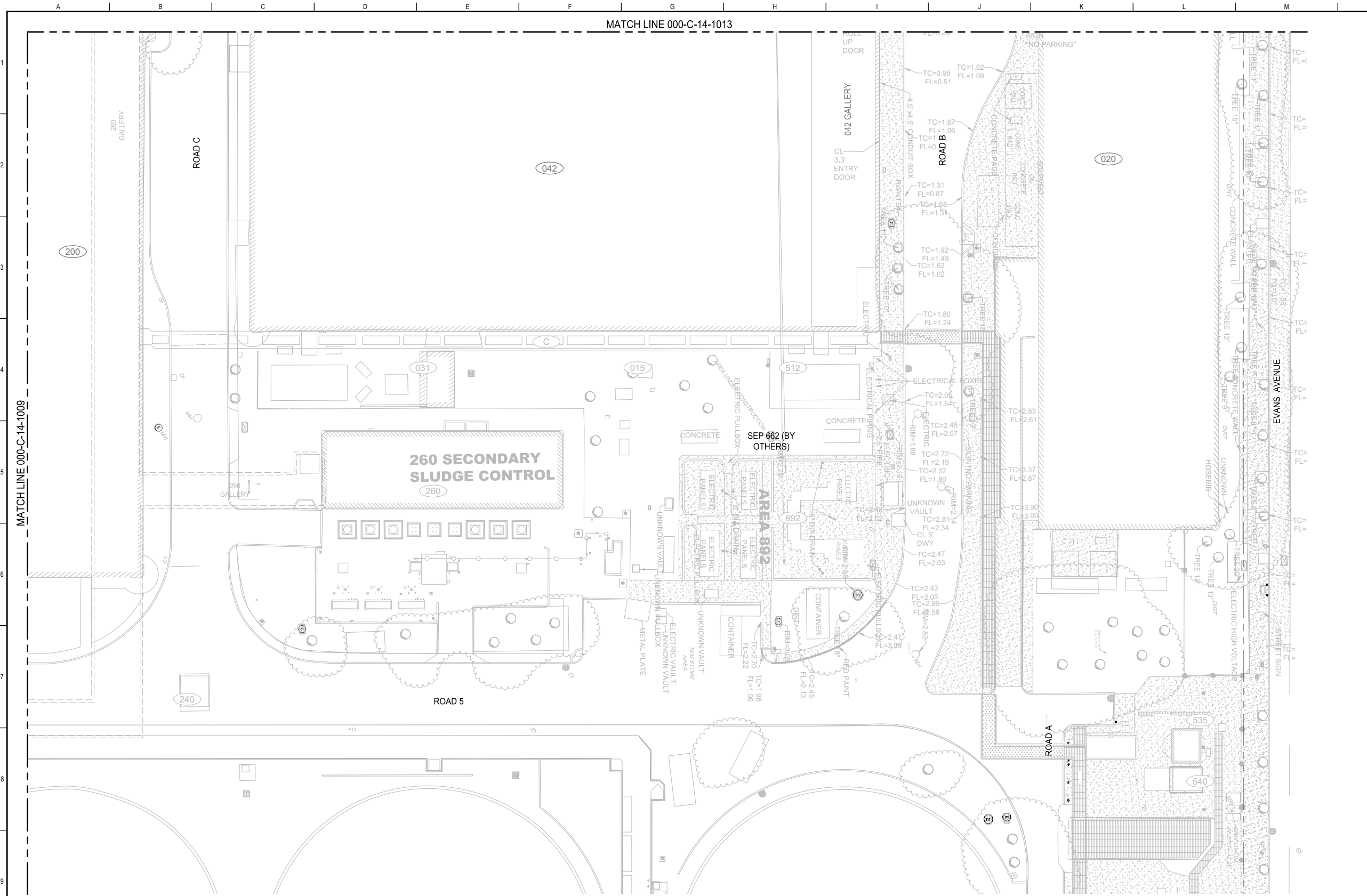
ELEVATION  
DATUM  
CITY



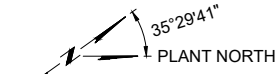
BIOSOLIDS DIGESTER FACILITIES PROJECT  
CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH
NO.	DATE	DESCRIPTION	BY
		REVISIONS	APPRD

MATCH LINE 000-C-14-1013



PLAN  
SCALE: 1"=20'



- LEGEND:
- ASPHALT CONCRETE
  - CONCRETE
  - GRAVEL

**FOR CONSTRUCTION**  
Scope II

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ELEVATION DATUM  
CITY

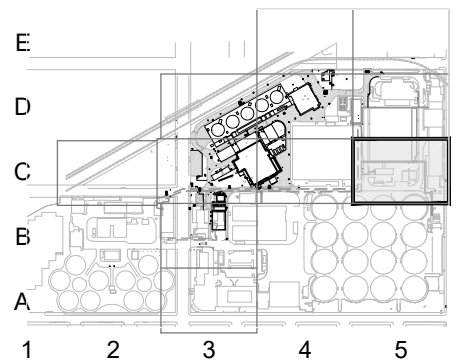


BIOSOLIDS DIGESTER FACILITIES PROJECT CONSULTANT TEAM			
PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH
NO.	DATE	DESCRIPTION	BY
REVISIONS			

**GENERAL SHEET NOTES**

- NO PROPOSED SITE PAVING WORK IN THIS AREA.
- FOR SITE ELECTRICAL, DATA, AND LIGHTING INFORMATION, SEE ELECTRICAL DRAWINGS 000-E-14-1001 TO 000-E-14-1015.

**SHEET KEY NOTES**



KEY PLAN  
1" = 500'

CONTRACT NO. WW-647R

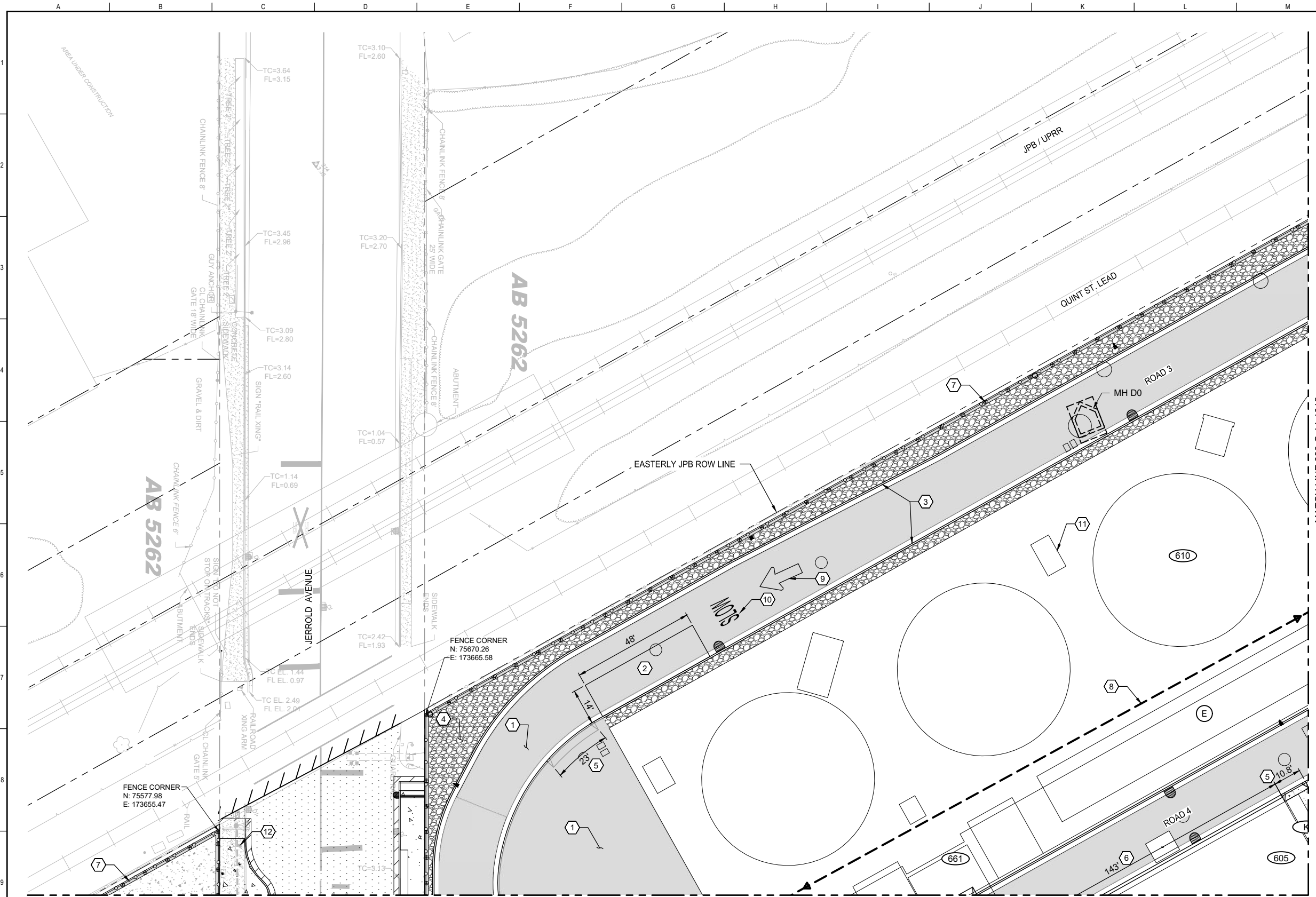
CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU

SOUTHEAST WATER POLLUTION CONTROL PLANT  
BIOSOLIDS DIGESTER FACILITIES PROJECT

SITE AND PAVING PLAN - AREA C5

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN
DATE	Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.
000-C-14-1010	
REVISION NO.	



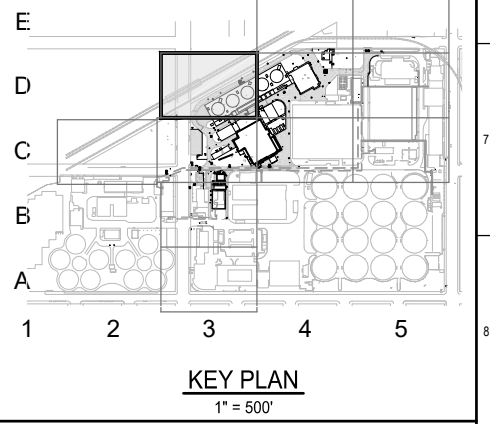


**GENERAL SHEET NOTES**

- FOR SITE FENCE AND GATES INFORMATION, SEE LANDSCAPING DRAWINGS.
- FOR JERROLD AVENUE LAYOUT AND PAVING IMPROVEMENTS DRAWINGS. THE MATCH LINE BETWEEN THE MAIN BDFP PACKAGE AND THE JERROLD AVENUE IMPROVEMENTS PACKAGE IS THE PROPERTY LINE ALONG JERROLD AVENUE, UNO.
- FOR SITE ELECTRICAL, DATA, AND LIGHTING INFORMATION, SEE ELECTRICAL DRAWINGS 000-E-14-1001 TO 000-E-14-1015.

**SHEET KEY NOTES**

- ASPHALT CONCRETE PAVING PER DETAIL C3103/5.
- 14'X48' PARKING AREA FOR THE TEMPORARY STEAM BOILER SYSTEM. PAINT OUTLINE PER SECTION 32 17 23.
- PLANT CURB AND GUTTER PER DETAIL C3103/7.
- GRAVEL PAVING PER DETAIL C3103/9.
- CONCRETE DRIVEWAY PER DETAIL C9004.
- APPROXIMATELY 143-FT OF ROLLED CURB PER DETAIL C1012 FOR SEP 605.
- CAMPUS FENCE PER DWG 000-L-14-5007. EXISTING RETAINING WALL ALONG THE UPRR TO REMAIN. CONTRACTOR SHALL EXPOSE ALL EXISTING BURIED UTILITIES PRIOR TO GRADE BEAM AND PILE CONSTRUCTION. FOR YARD PIPING INFORMATION, SEE CIVIL DRAWINGS 000-C-15-1001 TO 000-C-15-1015
- ACCESSIBLE PATH OF TRAVEL PER CALIFORNIA BUILDING CODE SECTION 11B-206.2.2.
- TYPE I 10-FT ARROW PER CALTRANS STD PLAN A24A.
- "SLOW" PAVEMENT MARKING PER CALTRANS STD PLAN A24D.
- OUTSIDE AIR INTAKE TOWER. NO IDLING ZONE SIGN AT THE CURBSIDE ADJACENT TO THE INTAKE TOWER (BY OTHERS).
- PROTECT EXISTING FIRE HYDRANT. COORDINATE WITH JERROLD AVENUE STREETScape IMPROVEMENTS DRAWING.

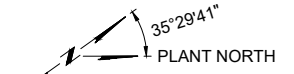


**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE

**SITE AND PAVING PLAN - AREA D3**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN
DATE	Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. 000-C-14-1011	DRAWING / FILE NO.
	REVISION NO.



- LEGEND:**
- ASPHALT CONCRETE
  - CONCRETE
  - GRAVEL

MATCH LINE 000-C-14-1008

**PLAN**  
 SCALE: 1"=20'

**FOR CONSTRUCTION**  
 Scope II

FOR THE SOLE USE OF THE DOCUMENT RECIPIENT - DO NOT CITE, COPY, OR CIRCULATE WITHOUT THE EXPRESSED PERMISSION OF THE SFPUC.

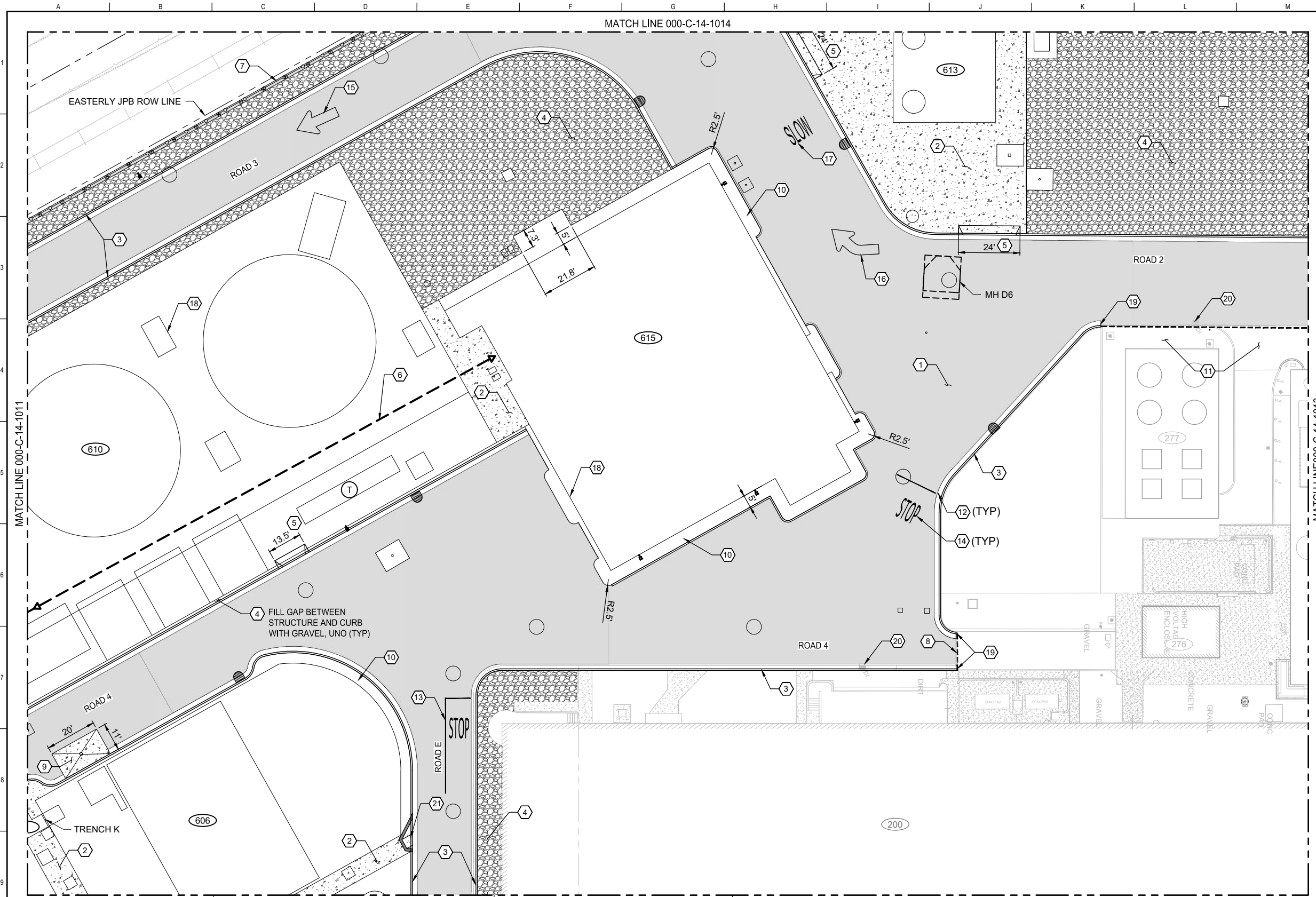
ELEVATION DATUM  
 CITY



BIOSOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH

NO.	DATE	DESCRIPTION	BY	APPRD
REVISIONS				

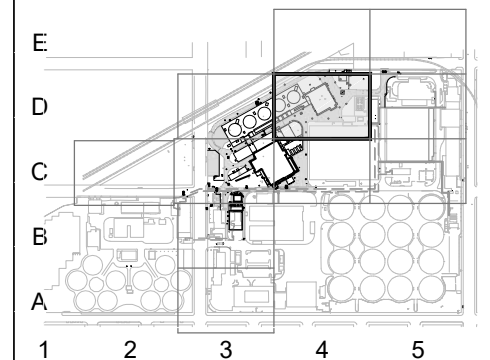


**GENERAL SHEET NOTES**

- FOR SITE FENCE AND GATES INFORMATION, SEE LANDSCAPING DRAWINGS.
- FOR SITE ELECTRICAL, DATA, AND LIGHTING INFORMATION, SEE ELECTRICAL DRAWINGS 000-E-14-1001 TO 000-E-14-1015.

**SHEET KEY NOTES**

- ASPHALT CONCRETE PAVING PER DETAIL C3103/5.
- CONCRETE PAVING PER DETAIL C3103/1.
- PLANT CURB AND GUTTER PER DETAIL C3103/7.
- GRAVEL PAVING PER DETAIL C3103/9.
- CONCRETE DRIVEWAY PER DETAIL C9004.
- ACCESSIBLE PATH OF TRAVEL PER CALIFORNIA BUILDING CODE SECTION 11B-206.2.2.
- CAMPUS FENCE PER DWG 000-L-14-5007. CONTRACTOR SHALL EXPOSE ALL EXISTING BURIED UTILITIES PRIOR TO GRADE BEAM AND PILE CONSTRUCTION. FOR YARD PIPING INFORMATION, SEE CIVIL DRAWINGS 000-C-15-1001 TO 000-C-15-1015.
- MATCH EXISTING ASPHALT PAVING PER DETAIL C3103/4.
- 11'X20' CONCRETE CHEMICAL CONTAINMENT PAD PER C3104. CONCRETE AND GRATING SHALL BE LINED IN ACCORDANCE WITH SECTION 09 96 35 - CHEMICAL RESISTANCE COATING. CONCRETE SLAB SHALL HAVE MOISTURE VAPOR BARRIER IN ACCORDANCE WITH 07 13 00 - WATER PROOFING SYSTEMS.
- CONCRETE SIDEWALK PER DETAIL C1011 AND PLANT CURB PER DETAIL C3103/8. 4-FT SIDEWALK WIDTH TYP. UNLESS OTHERWISE INDICATED ON DRAWING.
- RESTORE SEP 275 AND 277 (LIQUID OXYGEN SYSTEM) CONCRETE PAVING IF DAMAGED (MATCH EXISTING). WORK NEAR THE LIQUID OXYGEN (LOX) TANKS (SEP 275 AND 277) SHALL BE SUBJECT TO THE RESTRICTIONS SPECIFIED IN SECTION 01 11 00, SUPPLEMENT 1.
- LIMIT LINE (STOP LINE), PER CALTRANS STD PLAN A24G.



**KEY PLAN**  
1" = 500'

**CONTRACT NO. WW-647R**

CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE  
**SITE AND PAVING PLAN - AREA D4**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN DATE Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO. 000-C-14-1012	DRAWING / FILE NO. REVISION NO.

**KEY NOTES (CONTINUED)**

- TRAFFIC STRIPE (DETAIL 21) PER CALTRANS STD PLAN A20A. EXTEND TRAFFIC STRIPE 50 FEET FROM LIMIT LINE, UON.
- "STOP" PAVEMENT MARKING PER CALTRANS STD PLAN A24D.
- TYPE I 10-FT ARROW PER CALTRANS STD PLAN A24A.
- TYPE IV (R) ARROW PER CALTRANS STD PLAN A24A.
- "SLOW" PAVEMENT MARKING PER CALTRANS STD PLAN A24D.
- OUTSIDE AIR INTAKE TOWER OR LOUVER. NO IDLING ZONE SIGN AT THE CURBSIDE ADJACENT TO THE INTAKE TOWER OR LOUVER (BY OTHERS).

- MATCH EXISTING CURB (VIF) PER DETAIL C3103/7.
- ADJUST CATCH BASIN RIM ELEVATION TO FINISHED GRADE AS REQUIRED.
- STANDARD CURB RAMP PER DETAIL C9027 - C9032. CENTER-TO-CENTER SPACING OF THE DOMES SHALL BE 2.3' - 2.4'. THE COLOR OF THE DETECTABLE WARNING SHALL CONFORM TO FEDERAL STANDARD 595B TABLE IV, COLOR 33538 "FEDERAL YELLOW".

35°29'41" PLANT NORTH

**LEGEND:**

- ASPHALT CONCRETE
- CONCRETE
- GRAVEL

**FOR CONSTRUCTION**  
Scope II

**FOR THE SOLE USE OF THE DOCUMENT RECIPIENT - DO NOT CITE, COPY, OR CIRCULATE WITHOUT THE EXPRESSED PERMISSION OF THE SFPUC.**

ELEVATION DATUM  
CITY



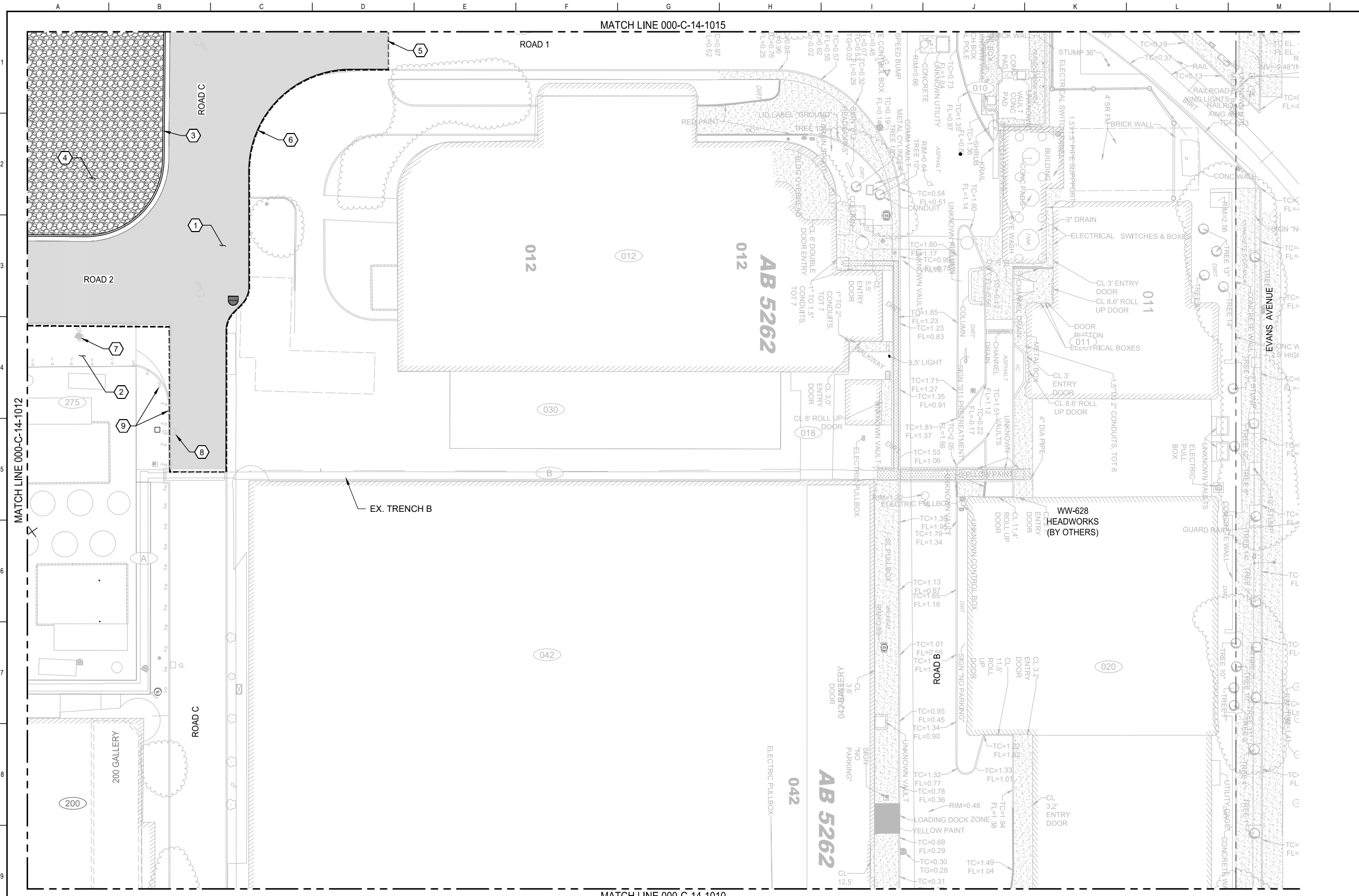
BIOSOLIDS DIGESTER FACILITIES PROJECT  
CONSULTANT TEAM

**Brown and Caldwell** **ch2m**  
BLACK & VEATCH

PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH

NO.	DATE	DESCRIPTION	BY	APPRD
REVISIONS				



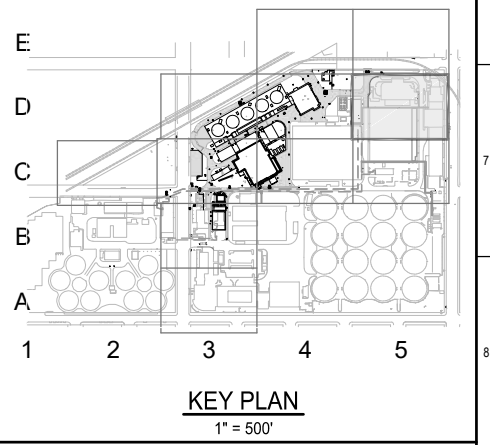


**GENERAL SHEET NOTES**

- FOR SITE FENCE AND GATES INFORMATION, SEE LANDSCAPING DRAWINGS.
- FOR SITE ELECTRICAL, DATA, AND LIGHTING INFORMATION, SEE ELECTRICAL DRAWINGS 000-E-14-1001 TO 000-E-14-1015.

**SHEET KEY NOTES**

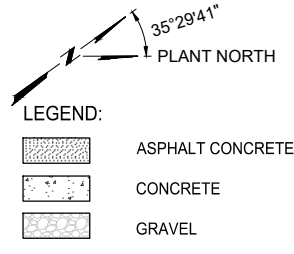
- ASPHALT CONCRETE PAVING PER DETAIL C3103/5.
- RESTORE SEP 275 LOADING PAD CONCRETE PAVING IF DAMAGED (MATCH EXISTING). WORK NEAR THE LIQUID OXYGEN (LOX) TANKS (SEP 275 AND 277) SHALL BE SUBJECT TO THE RESTRICTIONS SPECIFIED IN SECTION 01 11 00, SUPPLEMENT 1.
- PLANT CURB AND GUTTER PER DETAIL C3103/7.
- GRAVEL PAVING PER DETAIL C3103/9.
- MATCH EXISTING ASPHALT PAVING PER DETAIL C3103/4.
- APPROXIMATE LOCATION OF NEW CURB (BY OTHERS). COORDINATE FINAL PAVING AS DIRECTED BY THE CITY REPRESENTATIVE.
- IF DAMAGE, RESTORE EXISTING AREA DRAIN AND RECONNECT DRAIN PIPE TO THE NEAREST MH AS DIRECTED BY THE CITY REPRESENTATIVE.
- ADJUST CATCH BASIN RIM ELEVATION TO FINISHED GRADE AS REQUIRED.
- RESTORE EXISTING CURB AND BOLLARDS AS NEEDED.



**CONTRACT NO. WW-647R**  
 CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
 INFRASTRUCTURE DIVISION  
 ENGINEERING MANAGEMENT BUREAU  
**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE  
**SITE AND PAVING PLAN - AREA D5**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN
DATE	DATE
Dec 30, 2020	Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.
000-C-14-1013	
REVISION NO.	



**PLAN**  
 SCALE: 1"=20'

**FOR CONSTRUCTION**  
 Scope II

**FOR THE SOLE USE OF THE DOCUMENT RECIPIENT - DO NOT CITE, COPY, OR CIRCULATE WITHOUT THE EXPRESSED PERMISSION OF THE SFPUC.**

**ELEVATION DATUM**  
 CITY

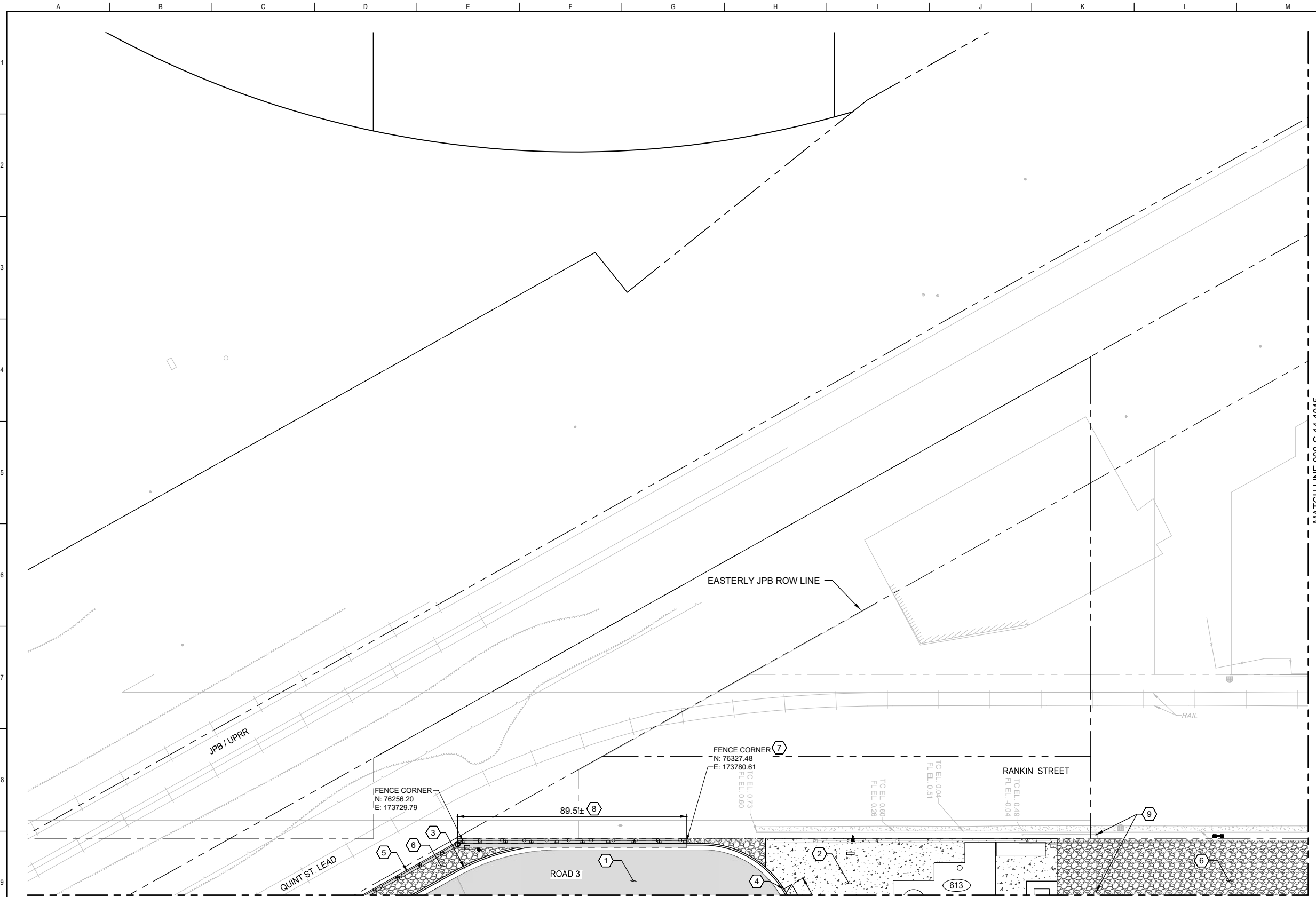


BIOSOLIDS DIGESTER FACILITIES PROJECT  
 CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH

NO.	DATE	DESCRIPTION	BY	APPRD
REVISIONS				



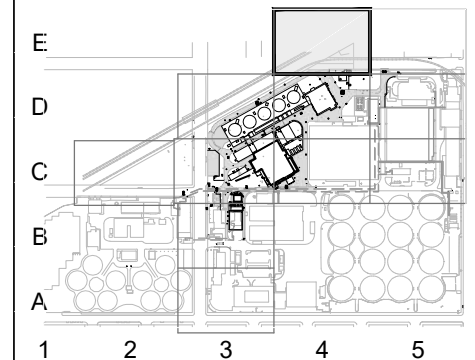


**GENERAL SHEET NOTES**

- FOR SITE FENCE AND GATES INFORMATION, SEE LANDSCAPING DRAWINGS.
- FOR SITE ELECTRICAL, DATA, AND LIGHTING INFORMATION, SEE ELECTRICAL DRAWINGS 000-E-14-1001 TO 000-E-14-1015.

**SHEET KEY NOTES**

- ASPHALT CONCRETE PAVING PER DETAIL C3103/5.
- CONCRETE PAVING PER DETAIL C3103/1.
- PLANT CURB AND GUTTER PER DETAIL C3103/7.
- CONCRETE DRIVEWAY PER DETAIL C9004.
- CAMPUS FENCE PER DWG 000-L-14-5007. CONTRACTOR SHALL EXPOSE ALL EXISTING BURIED UTILITIES PRIOR TO GRADE BEAM AND PILE CONSTRUCTION. FOR YARD PIPING INFORMATION, SEE CIVIL DRAWINGS 000-C-15-1001 TO 000-C-15-1015.
- GRAVEL PAVING PER DETAIL C3103/9.
- TIE-IN NEW CAMPUS FENCE WITH EXISTING WALL (VIF) AS DIRECTED BY THE CITY REPRESENTATIVE. SEE LANDSCAPING DRAWINGS. PROTECT EXISTING CONCRETE WALL COLUMN (VIF) AND CONCRETE WALL NORTH OF THE COLUMN.
- RETAINING WALL PER STRUCTURAL DWG 000-S-14-5002. FOR TOP OF WALL ELEVATION, SEE DWG 000-C-17-1014. CAMPUS FENCE ON TOP OF THE RETAINING WALL PER DWG 000-L-14-5007.
- PROTECT EXISTING GUY WIRE (VIF).



**KEY PLAN**  
1" = 500'

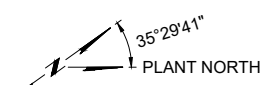
**CONTRACT NO. WW-647R**

CITY AND COUNTY OF SAN FRANCISCO  
**PUBLIC UTILITIES COMMISSION**  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU

**SOUTHEAST WATER POLLUTION CONTROL PLANT**  
**BIOSOLIDS DIGESTER FACILITIES PROJECT**

GENERAL SITEWIDE  
**SITE AND PAVING PLAN - AREA E4**

CHECKED / APPROVED	DRAWN
SECTION MANAGER	DESIGNED
WWE O&M MANAGER	SCALE AS SHOWN
DATE	Dec 30, 2020
APPROVED	APPROVED
MANAGER, ENGINEERING MANAGEMENT BUREAU	WWE ENGINEERING MANAGER
PLAN NO.	DRAWING / FILE NO.
<b>000-C-14-1014</b>	
REVISION NO.	



- LEGEND:**
- ASPHALT CONCRETE
  - CONCRETE
  - GRAVEL

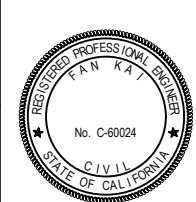
**PLAN**  
SCALE: 1"=20'

MATCH LINE 000-C-14-1012

**FOR CONSTRUCTION**  
Scope II

**FOR THE SOLE USE OF THE DOCUMENT RECIPIENT - DO NOT CITE, COPY, OR CIRCULATE WITHOUT THE EXPRESSED PERMISSION OF THE SFPUC.**

ELEVATION DATUM  
**CITY**



BIOSOLIDS DIGESTER FACILITIES PROJECT  
CONSULTANT TEAM

PROJECT ENGINEER	D. GREEN	DRAWN	I. POPESCU
PROJECT MANAGER	T. STIGERS	DESIGNED	K. KAI
APPROVED	K. KAI	CHECKED	J. SMITH

NO.	DATE	DESCRIPTION	BY	APPRD
REVISIONS				