



CALICO PHASE 2 ADVANCE WASTEWATER TREATMENT PROJECT

FOR

**CALICO GHOST TOWN REGIONAL PARK
YERMO, CALIFORNIA
PROJECT NO.: 30.30.0074**

WARNING

ALL INDIVIDUALS INTERESTED IN BIDDING ON THIS PROJECT MUST OBTAIN THE FINAL DESIGN PLANS AND SPECIFICATIONS FROM THE DEPARTMENT MANAGING THE PROJECT OR AS OTHERWISE STATED IN THE ADVERTISEMENT FOR BIDS FOR THE PROJECT. DO NOT USE THE PLANS AND SPECIFICATIONS POSTED ON THE CLERK OF THE BOARD'S WEBSITE FOR BIDDING THE PROJECT.



SECTION G

CONTRACT DRAWINGS

CALICO PHASE 2 ADVANCED WASTEWATER TREATMENT PROJECT

FOR

**CALICO GHOST TOWN REGIONAL PARK
YERMO, CALIFORNIA**

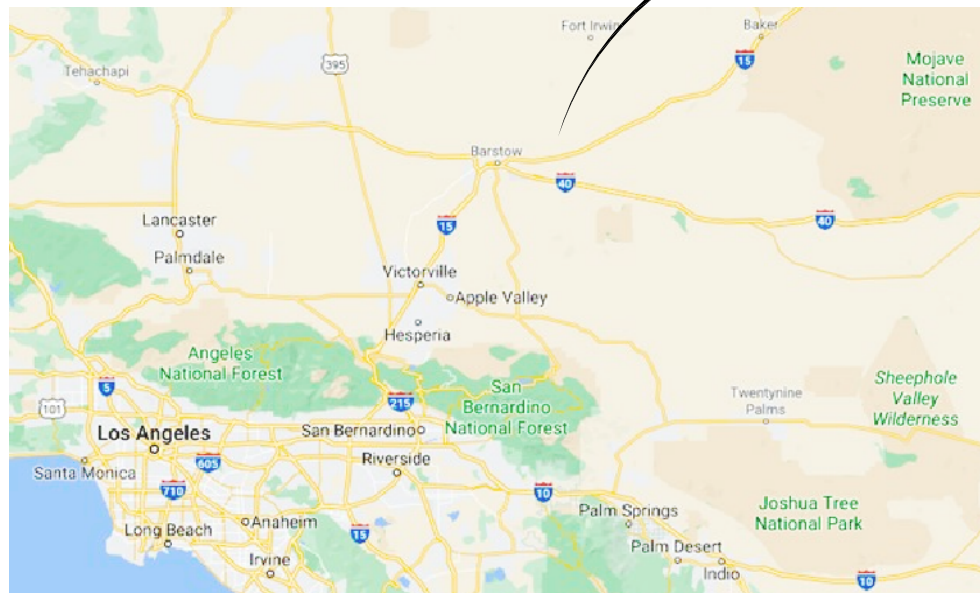
PROJECT NO.:30.30.0074



COUNTY OF SAN BERNARDINO DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS

CALICO GHOST TOWN PHASE 2 ADVANCED WASTEWATER TREATMENT

PROJECT



AREA VICINITY MAP

JUNE 2021



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CALICO GHOST TOWN REGIONAL PARK
36600 GHOST TOWN ROAD,
YERMO, CALIFORNIA 92398



SITE VICINITY MAP

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COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWWT
GENERAL
INDEX

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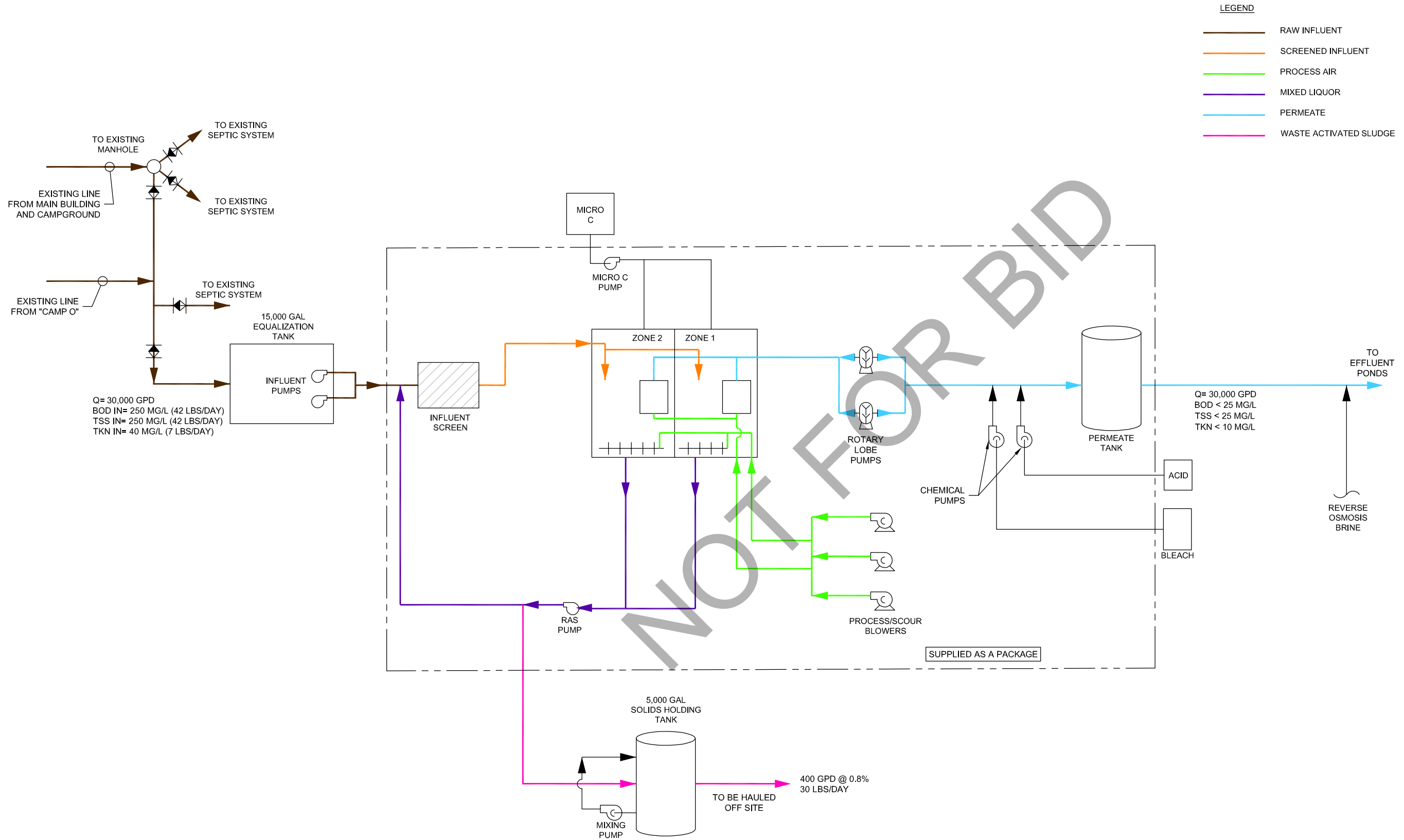
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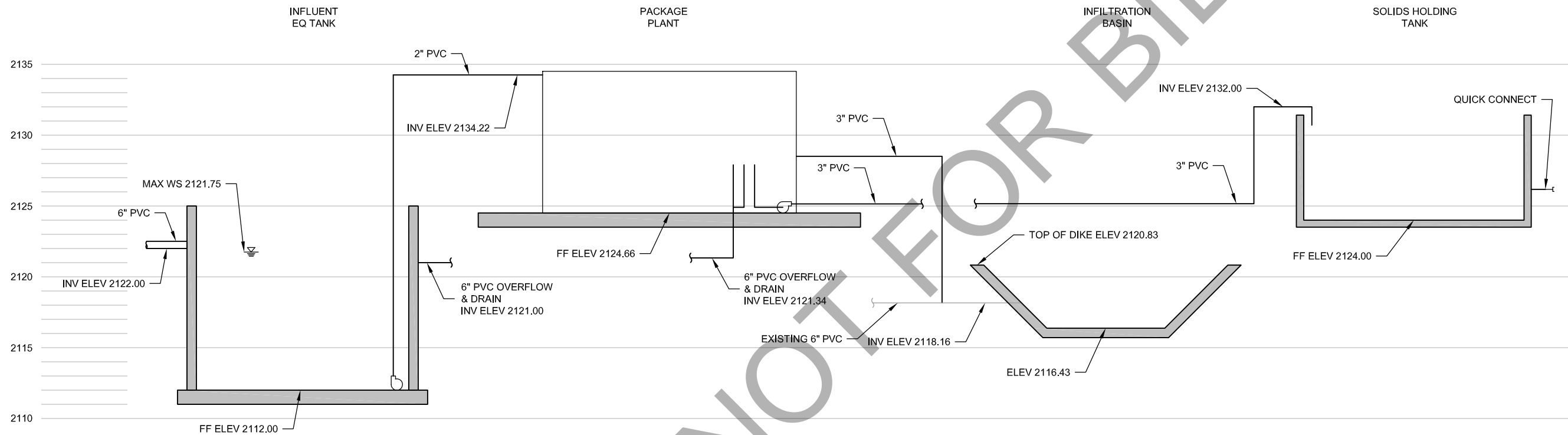

 6/16/21
 _____ DATE
 PROJECT ENGINEER
 _____ DATE
 RECOMMENDED
 _____ DATE

5/18/2021 C:\USERS\BRETT.PRATT\AQUA ENGINEERING\SAN BERNARDINO COUNTY - 001817.C CALICO WWTP PRELIMINARY DESIGN\050 DRAFTING\03000 GENERAL\000400G004 PROCESS FLOW DIAGRAM.DWG



DRAWING IS TO SCALE		IF BAR MEASURES:		1" = FULL SCALE		1/2" = HALF SCALE	
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HYDRAULIC PROFILE
SCALE: NTS



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COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWT
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HYDRAULIC PROFILE

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Albert A. Webb
PROJECT ENGINEER
RECOMMENDED
6/16/21
DATE
DATE
DATE

DRAWING NO.
00G005
SHEET 5 of 58

5/21/2021 C:\USERS\BRETT.PRATT\AQUA ENGINEERING\SAN BERNARDINO COUNTY - 001817.C CALICO WWTP PRELIMINARY DESIGN\050 DRAFTING\000 GENERAL\000-00G006 STRUCTURAL NOTES.DWG

STRUCTURAL DESIGN CRITERIA:

1. DESIGN LOADS:
ROOF SLOPE 1:2
A. DEAD LOAD = 10 PSF
B. LIVE LOAD = 20 PSF (REDUCIBLE)
COLLATERAL LOAD = 10 PSF
2. ALL REQUIRED FILL AND BACKFILL SHALL BE
COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY
DENSITY OBTAINABLE BY THE A.S.T.M. DESIGNATION
D-1557-12 TEST METHOD OF COMPACTION.
FLOORING OR JETTING IS NOT PERMITTED.
3. SEISMIC DESIGN CRITERIA: 2019 C.B.C. WITH SEISMIC
COEFFICIENTS PER SECTION 1613 SEISMIC
PROVISIONS
LATITUDE = 34.9411° N
LONGITUDE = 116.8674° W
SITE CLASS = D
MAPPED SPECTRAL ACCELERATION, Ss = 1.727 g
MAPPED SPECTRAL ACCELERATION, S1 = 0.599 g
SITE COEFFICIENT, Fa = 1.2
SITE COEFFICIENT, Fv = 1.5
SPECTRAL ACCELERATION, Sms = 2.073 g
DESIGN SPECTRAL ACCELERATION, Sds = 1.382 g
RISK CATEGORY = III
SEISMIC DESIGN CATEGORY = D
4. WIND LOAD: 130 MPH, EXPOSURE "C"
5. ALL WORK SHALL BE DONE IN CONFORMANCE WITH 2019 CBC
AND THE SOILS REPORT AS PREPARED BY:
LANDMARK GEO-ENGINEERS AND GEOLOGISTS
780 NORTH 4TH STREET
EL CENTRO, CA 92243
(760) 370-3000
PROJECT NO : LCI REPORT NO.: LP20154
DATED : OCTOBER 16, 2020

DEFERRED SUBMITTALS

1. THE FOLLOWING PORTIONS OF THE PROJECT ARE DEFERRED SUBMITTAL
ITEMS AND HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD.

A. STAIRS
B. GRATING AND SUPPORTS
C. GUARDRAILS
D. MECHANICAL UNITS/COMPONENTS/AND ANCHORAGE
(EXCEPT AS INDICATED ON PLANS)
E. PRE-ENGINEERED METAL BUILDING
2. DEFERRED SUBMITTAL ITEMS SHALL BE DESIGNED BY A CIVIL OR
STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
STRUCTURAL CALCULATION AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE
ENGINEER OF RECORD FOR REVIEW.
3. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE
ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND
INDICATED THAT THEY HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND
TO BE IN GENERAL CONFORMANCE WITH THE DESIGN DOCUMENTS.
4. WHEN APPLICABLE CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON ROOF. LOAD SHALL NOT EXCEED
THE DESIGN LIVE LOAD PER SQUARE FOOT. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR
BRACING.
5. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS
SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

GENERAL STRUCTURAL NOTES:

1. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS, INCLUDING ALL EXISTING AND NEW DIMENSIONS, PRIOR TO
THE START OF WORK. ANY APPROVAL OF SUBMITTALS OR SHOP DRAWINGS BY THE PROJECT MANAGER AND/ OR COUNTY
REPRESENTATIVE SHALL NOT RELIEVE CONTRACTOR OF HIS RESPONSIBILITIES. IT IS CONTRACTOR'S SOLE RESPONSIBILITY
TO MEET ALL REQUIREMENTS OF CONTRACT PLANS, CONTRACT SPECIFICATIONS, CURRENT CODES, INDUSTRY STANDARDS
AND PRACTICES, AND ALL OTHER APPLICABLE STANDARDS.
2. CONTRACTOR SHALL COORDINATE STRUCTURAL DRAWINGS WITH OTHER DRAWINGS PRIOR TO THE START OF WORK.
CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY. DO NOT PROCEED WITH WORK UNTIL DISCREPANCY HAS
BEEN RESOLVED.
3. UNLESS OTHERWISE NOTED, USE TYPICAL DETAILS WHERE APPLICABLE.
4. SHEET NOTES AND DETAILS SHOWN ON A PARTICULAR STRUCTURAL SHEET SHALL TAKE PRECEDENCE OVER GENERAL
NOTES AND TYPICAL DETAILS.
5. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS. TYPICAL DETAILS AND GENERAL NOTES ARE
MINIMUM REQUIREMENTS TO BE USED WHEN CONDITIONS ARE NOT SHOWN OTHERWISE.
6. CONTRACTOR SHALL SUBMIT THE FOLLOWING SHOP DRAWINGS TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL
PRIOR TO START OF FABRICATION:

A. STRUCTURAL STEEL
B. REINFORCING BARS
C. CONCRETE MIX DESIGN
D. PRE-ENGINEERED METAL BUILDING
E. EQUIPMENT ANCHORING
F. METAL STAIRS
G. STAINLESS STEEL OR ALUMINUM GUARDRAIL
7. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY OF ALL PERSONNEL AND THE PROTECTION OF
ALL PROPERTY ON THE PROJECT SITE AT ALL TIMES. THE PRESENCE OF COUNTY REPRESENTATIVE SHALL NOT RELIEVE
CONTRACTOR OF HIS RESPONSIBILITIES. SHOULD ANY DAMAGE TO EXISTING PROPERTY OCCUR, CONTRACTOR SHALL SUBMIT
PROPOSED REMEDY TO THE COUNTY FOR REVIEW AND APPROVAL, AND REPAIR THE DAMAGE TO THE SATISFACTION OF
COUNTY REPRESENTATIVE AT NO COST TO THE COUNTY.
8. CONTRACTOR SHALL SUBMIT ANY SUBSTITUTION OF SPECIFIED MATERIAL TO THE COUNTY FOR REVIEW AND APPROVAL
PRIOR TO INSTALLATION. SEE GENERAL CONDITION OF CONTRACT SPECIFICATION FOR MINIMUM NUMBER OF DAYS REQUIRED
FOR COUNTY REPRESENTATIVE'S REVIEW AND APPROVAL. ANY DELAY AS A RESULT OF NONCONFORMANCE TO THIS
REQUIREMENT SHALL BE THE SOLE RESPONSIBILITY OF CONTRACTOR.
9. ALL WORK SHALL CONFORM TO THE 2019 CALIFORNIA BUILDING CODE STANDARDS, AND THE REGULATIONS OF THE STATE
OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES.
10. THE STRUCTURAL DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF
CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING
CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO
CONSTRUCTION EQUIPMENT, THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE,
STRUCTURAL DAMAGE OR OTHER OBJECTIONABLE CONDITIONS CAUSED BY HIS OPERATIONS.
11. STRUCTURAL DRAWINGS, AS PART OF CONTRACT DOCUMENTS, INDICATE INFORMATION SUFFICIENT TO CONVEY DESIGN
INTENT. IF ERRORS, INCONSISTENCIES OR OMISSIONS ARE DISCOVERED, PROMPTLY NOTIFY PROJECT MANAGER BEFORE
PROCEEDING WITH WORK.
12. THESE NOTES AND SPECIFICATION ON STRUCTURAL DRAWINGS GOVERN IN CASE OF CONFLICT WITH OTHER SPECIFICATION.
NOTIFY PROJECT MANAGER OF CONFLICTS WITH OTHER SPECIFICATIONS IMMEDIATELY.
13. NO PORTION OF STRUCTURAL RELATED WORK, INCLUDING SHOP DRAWING DEVELOPMENT, SHALL BE PERFORMED WITHOUT
CONSIDERING REQUIREMENTS OF CONTRACT DOCUMENTS IN THEIR ENTIRETY.
14. CONDITIONS SHOWN OR NOTED AS EXISTING ARE BASED ON INFORMATION CURRENTLY AVAILABLE WHEN DRAWINGS WERE
PREPARED. NO WARRANTY IS IMPLIED AS TO ACCURACY OF THESE EXISTING CONDITIONS.
15. CONTRACTOR SHALL INVESTIGATE THE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR
BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE
PROJECT MANAGER SHALL BE NOTIFIED IMMEDIATELY.
16. TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND COMPARE WITH CONTRACT DOCUMENTS. IF ERRORS,
INCONSISTENCIES OR OMISSIONS ARE DISCOVERED, PROMPTLY NOTIFY PROJECT MANAGER BEFORE PROCEEDING WITH
WORK.
17. CONTRACT DOCUMENTS DO NOT INDICATE METHOD OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE CONSTRUCTION
MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AS REQUIRED, CONTRACTOR SHALL PROVIDE ADEQUATE
PROCEDURES, SHORING, BRACING, AND ERECTION PROCEDURES COMPLYING WITH NATIONAL, STATE AND LOCAL SAFETY
ORDINANCES.
18. MODIFICATIONS OR SUBSTITUTIONS: DESIGN, MATERIALS, EQUIPMENT AND PRODUCTS OTHER THAN THOSE INDICATED OR
SPECIFIED MAY BE CONSIDERED FOR USE PROVIDED A WRITTEN REQUEST, SUBJECT TO REVIEW, IS SUBMITTED TO PROJECT
MANAGER AND GOVERNING CODE AUTHORITY PRIOR TO USE OR INCLUSION ON ANY SHOP DRAWING.
19. ANY CHANGE, MODIFICATION OR ALTERATION OF THESE PLANS SHALL BE AT THE SOLE RISK OF THE PERSON MAKING OR
CAUSING THE SAME. ALL CHANGE, MODIFICATION, AND/OR ALTERATION TO THE APPROVED CONSTRUCTION DOCUMENT SHALL
BE REVIEWED AND APPROVED BY PROJECT MANAGER, ARCHITECT OF RECORD AND BY BUILDING AND SAFETY PRIOR TO
FABRICATION AND INSTALLATION.
20. SHOP DRAWING SUBMITTALS:
A. SUBMIT SHOP DRAWINGS TO PROJECT MANAGER AS INDICATED OR SPECIFIED FOR REVIEW
AND ACCEPTANCE PRIOR TO FABRICATION. REVIEW WILL BE FOR GENERAL CONFORMANCE
WITH DESIGN INTENT CONVEYED IN CONTRACT DOCUMENTS.
B. SHOP DRAWINGS ARE NOT A PART OF CONTRACT DOCUMENTS. THEREFORE, PROJECT MANAGER'S REVIEW DOES NOT
CONSTITUTE AN AUTHORIZATION TO DEVIATE FROM TERMS AND
CONDITIONS OF THE CONTRACT.
C. SUBMIT SHOP DRAWINGS AND CALCULATIONS TO GOVERNING CODE AUTHORITY WHEN
SPECIFICALLY INDICATED OR REQUESTED.
D. MAINTAIN ALL REVIEWED SHOP DRAWINGS ACCEPTED AT THE SITE DURING CONSTRUCTION.
21. WHEN APPLICABLE CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON ROOF. LOAD SHALL NOT EXCEED
THE DESIGN LIVE LOAD PER SQUARE FOOT. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR
BRACING.
22. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS
SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

STRUCTURAL AND MISCELLANEOUS STEEL NOTES:

1. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC
303 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, LATEST EDITION.
2. STRUCTURAL SHAPES AND PLATES SHALL CONFORM TO AISI 316 STAINLESS STEEL U.N.O.
3. ERECTION AND SHOP DETAIL DRAWINGS SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR REVIEW PRIOR TO
FABRICATION AND ERECTION. SUBMIT AS REQUIRED BY TECHNICAL SPECIFICATION SECTION 013300 - CONTRACTOR
SUBMITTALS.
4. ALL STRUCTURAL STEEL SHALL BE FABRICATED IN THE SHOP OF A LICENSED FABRICATOR AND SHOP DRAWINGS
SHALL BE SUBMITTED TO THE PROJECT MANAGER THROUGH THE ARCHITECT FOR APPROVAL PRIOR TO
FABRICATION.
5. ALL BOLTS SHALL BE STAINLESS STEEL CONFORM TO A.S.T.M. F593 BOLT AND HAVE SPECIAL INSPECTION REQUIRED.
6. ALL BOLT HOLES FOR STEEL MEMBERS SHALL BE TRUE, BURNING OF HOLES FOR CONNECTIONS WILL NOT BE
PERMITTED. BOLT HOLES SHALL BE MAXIMUM 1/16" OVERSIZED, U.N.O.
7. PROVIDE FULL BEARING ON UNTHREADED PORTION OF BOLT SHANK FOR ALL STEEL CONNECTIONS.
8. ALL BOLT SPACING IN STRUCTURAL STEEL CONNECTIONS TO BE 3" MIN. BETWEEN BOLTS AND
1 1/2" MIN. EDGE DISTANCE, UNLESS NOTED OTHERWISE.
9. ALL NUTS FOR STRUCTURAL STEEL CONNECTIONS SHALL BE HEAVY HEXAGONAL NUTS, U.N.O.
10. PROVIDE BEVELED WASHERS UNDER NUTS AT STEEL CONNECTIONS, WHEN THE BEVEL EXCEEDS 1:2.
11. PROVIDE LEVELING NUTS FOR ALL BOLTS AT BEAM SEATS AND COLUMN BASE PLATES.
12. ALL WELDING SHALL COMPLY WITH AWS D1.6 AND SHALL BE DONE BY WELDERS CERTIFIED FOR THE TYPE OF
WELDING TO BE PERFORMED. WELDING OF REBAR SHALL CONFORM TO AWS D1.4.
13. ALL SHOP WELDING SHALL BE DONE BY A FABRICATOR APPROVED BY THE DEPARTMENT OF BUILDING AND SAFETY,
PER CBC SECTION 1701.7. IN LIEU OF FABRICATOR APPROVAL, THE OWNER MAY EMPLOY A SPECIAL INSPECTOR,
WHICH IS TO BE APPROVED BY THE DEPARTMENT OF BUILDING AND SAFETY, WHO WILL INSPECT ALL PHASES OF
SHOP WELDING DURING SUCH THEIR CREDENTIALS FOR REVIEW AND APPROVAL BY THE DEPARTMENT OF BUILDING
AND SAFETY PRIOR TO THE START OF FABRICATION OR INSPECTION.
14. ALL WELDS USED ON STRUCTURAL MEMBERS AND CONNECTIONS SHALL BE DONE WITH E70XX ELECTRODES OR
E7XT-X WIRE THAT CAN PRODUCE WELDS WITH A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS @ 0° F, AS
DETERMINED BY THE APPROPRIATE AWS CLASSIFICATION TEST METHOD OR MANUFACTURER CERTIFICATION.
15. WHERE WELDS SHOWN ON THE DESIGN DRAWINGS ARE DESIGNATED AS "DEMAND CRITICAL", THE E70XX
ELECTRODES OR E7XT-X WIRE MUST PROVIDE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS @ -20° F AS
DETERMINED BY THE APPROPRIATE AWS CLASSIFICATION TEST METHOD OR MANUFACTURER CERTIFICATION AND 40
FT-LBS @ 70° F AS DETERMINED BY AISC SEISMIC DESIGN MANUAL, APPENDIX X OR OTHER APPROVED METHOD.
16. ALL FIELD WELDING EXCEPT MINOR OR TACK WELDING SHALL BE DONE BY CERTIFIED WELDERS UNDER THE
OBSERVATION OF AN APPROVED SPECIAL INSPECTOR, SUCH INSPECTOR SHALL SUBMIT HIS/HER CREDENTIALS FOR
REVIEW OF APPROVAL BY THE DEPARTMENT OF BUILDING AND SAFETY PRIOR TO REPORTING TO THE JOBSITE.
17. ALL STUDS WELDED TO STEEL BEAMS AND COLUMNS SHALL BE NELSON STUDS OR OTHER APPROVED MFG.
18. STRUCTURAL STEEL MEMBERS REQUIRED TO BE FIREPROOFED, NEED NOT BE PAINTED.
19. EXCEPT WHERE NOTED, ALL CARBON STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A 123 AND, IF
DAMAGED, SHALL BE TOUCHED UP WITH GALVANOX, AS MANUFACTURED BY CARBOLINE COMPANY, OR APPROVED
EQUIVALENT.
20. ALL SPECIAL INSPECTIONS FOR STRUCTURAL AND MISCELLANEOUS STEEL AND THE FREQUENCY OF INSPECTION
SHALL BE AS REQUIRED BY CBC SECTION 1705.2 AND AISC 360, LATEST EDITION, AS PRESENTED ON VERIFICATION
AND INSPECTION NOTES AND TABLES.



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1/2		B		06/01/2021							
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DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
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GENERAL
STRUCTURAL NOTES

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6/16/21	DATE
PROJECT ENGINEER	DATE
RECOMMENDED	DATE

DRAWING NO.
00G006
SHEET 6 of 58

C:\USERS\KENNETH.BAETZ\AQUA ENGINEERING\SAN BERNARDINO COUNTY - 001817.C CALICO WWTP PRELIMINARY DESIGN\050 DRAFTING\000 GENERAL\000-00G007 STRUCTURAL NOTES.DWG 5/25/2021

CONCRETE:

1.

NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE WITHOUT THE PROJECT MANAGERS PRIOR REVIEW AND WRITTEN APPROVAL.
2.

OPENINGS THROUGH SLABS OR WALLS NOT SHOWN ON STRUCTURAL DRAWINGS WHICH WOULD INTERRUPT REINFORCING BARS SHALL NOT BE MADE WITHOUT THE APPROVAL OF THE COUNTY REPRESENTATIVE. PIPES BIGGER THAN 1" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY THE COUNTY REPRESENTATIVE.
3.

ALL REINFORCING, EMBEDMENTS, INSERTS, ETC., SHALL BE POSITIVELY SECURED IN PROPER LOCATION BEFORE CONCRETE IS PLACED. PROVIDE SUFFICIENT SUPPORTS TO PREVENT DISPLACEMENT DURING PLACING AND FINISHING OPERATIONS.
4.

FORMS SHALL BE PROPERLY CONSTRUCTED CONFORMING TO CONCRETE SURFACES AS SHOWN ON THE DRAWINGS. FORMS SHALL BE SUFFICIENTLY TIGHT TO PREVENT LEAKAGE, SUFFICIENTLY STRONG AND BRACED TO MAINTAIN THEIR SHAPE AND ALIGNMENT UNTIL NO LONGER NEEDED TO SUPPORT THE CONCRETE. FORMS AND SHORING SHALL NOT BE REMOVED UNTIL THE CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO WITHSTAND ALL LOADS TO BE IMPOSED WITHOUT EXCESSIVE STRESS, CREEP OR DEFLECTION.
5.

CONCRETE SHALL BE MIXED AND PLACED IN ACCORDANCE WITH ACI 318-14 AND ACI 350-06.
6.

HORIZONTAL CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS, AND THE HARDENED CONCRETE SURFACES SHALL BE TREATED BY SAND-BLASTING OR OTHER APPROVED MEANS TO EXPOSE FIRMLY EMBEDDED AGGREGATES PRIOR TO POURING ADDITIONAL CONCRETE IN CONTACT WITH THESE SURFACES.
7.

CONCRETE SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 14-DAYS.
8.

USE CAST-IN-PLACE CONCRETE FOR ALL CONCRETE WORK.
9.

CONCRETE SHALL BE REINFORCED UNLESS SPECIFICALLY NOTED "NOT REINFORCED".
10.

CONCRETE MIX DESIGN GREATER THAN 2500 P.S.I. SHALL BE PREPARED BY AN APPROVED TESTING LABORATORY AND SHALL BE STAMPED AND SIGNED BY A LICENSED ENGINEER, IN THE STATE OF JURISDICTION. MIX DESIGN SHALL THEN BE SUBMITTED TO THE PROJECT MANAGER FOR REVIEW.
11.

CONCRETE SHALL BE CURED AND PROTECTED IN ACCORDANCE WITH ACI 308, CHAPTER 12.
12.

CONCRETE SHALL NOT FREE FALL MORE THAN FIVE FEET. USE TREMIE OR PUMP.
13.

ALL CONCRETE WITH 28 DAY STRENGTH GREATER THAN 2500 P.S.I. SHALL BE INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS AND FREQUENCY OF INSPECTION DEFINED IN CBC TABLE 1705.3. ANY EXCEPTIONS TO THIS REQUIREMENT WILL BE STATED ON THE PLANS OR SPECIFIC DETAILS.
14.

SLEEVES NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL BE LOCATED BY THE TRADES INVOLVED AND SHALL BE REVIEWED BY THE PROJECT MANAGER BEFORE THE CONCRETE IS PLACED. CHECK WITH ALL TRADES TO ENSURE PROPER PLACEMENT OF OPENINGS, SLEEVES, CURBS, CONDUITS, ETC., RELATED TO THE WORK. PIPES, CONDUITS OR DUCTS MAY PASS THRU STRUCTURAL CONCRETE IN EMBEDDED SLEEVES BUT SHALL NOT BE EMBEDDED IN STRUCTURAL SLABS, WALLS, CONTINUOUS FOOTINGS, GRADE BEAMS, SPREAD FOOTINGS, ETC. UNLESS SPECIFICALLY APPROVED BY THE PROJECT MANAGER. THE SPREAD FOOTING MAY BE LOWERED TO ALLOW THE PASSAGE OF PIPES, CONDUITS, OR DUCTS THROUGH NON STRUCTURAL SLABS. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ELEVATIONS OF ALL FOUNDATIONS, COORDINATING WORK OF ALL TRADES PRIOR TO ANY PLACEMENT OF CONCRETE AND SHALL NOTIFY THE PROJECT MANAGER OF FIELD MODIFICATIONS.
15.

ALL CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28-DAYS, UNLESS NOTED OTHERWISE. THE WATER TO CEMENT RATIO SHALL NOT EXCEED 5-GAL. PER SACK OF CEMENT. MINIMUM OF 6 SACKS OF CEMENT PER CUBIC YARD. MAX. SLUMP = 4"
16.

ALL CONCRETE SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
17.

ALL CEMENT SHALL CONFORM TO A.S.T.M. C-150, TYPE V, LOW ALKALI FOR PORTLAND CEMENT.
18.

FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33 FOR STANDARD WEIGHT CONCRETE.
19.

ALL AGGREGATES SHALL CONFORM TO TECHNICAL SPECIFICATION SECTION 033000.
20.

FURNISH AND INSTALL CONCRETE AS INDICATED IN THE PLANS AND FOLLOWING NOTES AND IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

FOUNDATION/SITE PREPARATION

1.

ALL SITE GRADING, FILLS AND SOIL PREPARATION SHALL CONFORM TO THE SPECIFICATIONS AND ALL WORK SHALL BE DONE UNDER THE SUPERVISION OF THE COUNTY REPRESENTATIVE AND A MATERIAL TESTING LABORATORY HIRED OR EMPLOYED BY THE COUNTY.
2.

DO NOT BACKFILL BEHIND CONCRETE WALLS UNTIL THE FLOOR, SLABS, BEAMS, ETC., WHICH ARE REQUIRED FOR STABILITY OF THE WALLS HAVE ATTAINED THEIR FULL CONCRETE DESIGN STRENGTH IN 28 DAYS. NOTE THAT IF FULL CONCRETE DESIGN STRENGTH IS ACHIEVED BEFORE 28 DAYS, A MINIMUM OF 21 DAYS OF CURING MUST BE ALLOWED PRIOR TO BACKFILLING.
3.

THE SOIL REPORT IN ITS ENTIRETY IS INCLUDED AS PART OF THE CONTRACT DOCUMENTS. FOR RECOMMENDED SOIL BEARING PRESSURE, FOUNDATION MATERIAL AND SITE GRADING, SEE SOILS AND GEOLOGICAL REPORT BY:

LANDMARK GEO-ENGINEERS AND GEOLOGISTS
LCI REPORT NO.: LP20154 DATED OCTOBER 16,2020
ALLOWABLE BEARING PRESSURE: 2,000 P.S.F.
4.

FILL AND BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH THE SOILS REPORT AND ASTM TEST METHOD D-1557-94. FLOODING OR JETTING NOT PERMITTED.
5.

FILL AND FOUNDATION EXCAVATION SHALL BE OBSERVED AND APPROVED BY THE PROJECT MANAGER PRIOR TO PLACING CONCRETE.
6.

ALL FILL AND BACKFILL MATERIAL SHALL BE APPROVED BY THE PROJECT MANAGER PRIOR TO PLACEMENT.

ADHESIVE ANCHORS FOR CONCRETE:

1.

ANCHOR EMBEDMENT AND NOMINAL DIAMETER OF STUD SHALL BE AS SHOWN ON DRAWINGS.
2.

ADHESIVE STUD ASSEMBLIES SHALL CONSIST OF A THREADED STUD, FLAT WASHER, AND HEX NUT.
3.

OTHER ADHESIVE ANCHORING SYSTEMS SHALL ONLY BE USED WITH THE APPROVAL OF THE PROJECT MANAGER.
4.

HILTI ADHESIVE SYSTEMS:

A. SLOW CURE: HIT RE-500-VS ICC ESR-3814
B. STUD MATERIAL SHALL BE THREADED ROD CONFORMING TO ASTM F593 CW2 (316) FOR STAINLESS STEEL APPLICATIONS, U.N.O.
5.

NUTS SHALL CONFORM TO ASTM F594 FOR STAINLESS STEEL APPLICATIONS.
6.

FLAT WASHERS SHALL CONFORM TO ASTM 316 STAINLESS STEEL WASHER.
7.

GALVANIZED STUDS, WHERE CALLED FOR, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A 123. UNLESS NOTED OTHERWISE NUTS AND WASHERS SHALL BE SUPPLIED WITH A HOT DIP GALVANIZED FINISH. BOLTS AND NUTS SHALL HAVE THEIR THREADS CHASED AFTER GALVANIZING.
8.

STUD PROTECTION FROM FACE OF CONCRETE SHALL BE DETERMINED BY THE CONTRACTOR, CONSIDERING THE THICKNESS OF THE GROUT, THICKNESS OF THE MATERIAL THROUGH WHICH THE BOLT MUST PROJECT, WASHER THICKNESS, NUT THICKNESS, PLUS A MINIMUM OF ¼" PROJECTION BEYOND THE FACE OF NUT.
9.

DRILL TYPE, HOLE DIAMETER AND PREPARATION SHALL BE AS REQUIRED BY THE ADHESIVE SYSTEM MANUFACTURER.
10.

SPECIAL INSPECTION, IN ACCORDANCE WITH THE REQUIREMENTS OF CBC TABLE 1705.3, IS REQUIRED DURING INSTALLATION OF ALL STUD BOLTS.
11.

CONCRETE SHALL HAVE THE DESIGNATED COMPRESSIVE STRENGTH OR HIGHER AT THE TIME ANCHORS ARE INSTALLED.

CONCRETE REINFORCING STEEL:

1.

REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60. ALL REINFORCING BARS TO BE WELDED SHALL BE ASTM A706 GRADE 60.
2.

ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," ACI 318, THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315, AND ACI 350.
3.

ALL REINFORCING SHALL BE SECURELY TIED AND BRACED IN PLACE PRIOR TO POURING CONCRETE.
4.

UNLESS NOTED OTHERWISE PROVIDE CONTINUOUS REINFORCEMENT WHERE POSSIBLE. REINFORCING BARS MARKED CONTINUOUS SHALL BE SPLICED WITH A LAP OF 48 BAR DIAMETERS IN CONCRETE (24" MIN.). SEE TABLE BELOW FOR REINFORCEMENT LAP FOR NON-BUILDING STRUCTURES.
5.

BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES SHALL BE PLASTIC TIPPED.
6.

BEAM AND SLAB REINFORCING SHALL NOT BE SLEEVED OR OTHERWISE INTERRUPTED EXCEPT AS SHOWN ON THE STRUCTURAL DRAWINGS.
7.

CONTRACTOR SHALL SUBMIT REINFORCEMENT MILL TEST REPORTS FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT.
8.

CONTRACTOR SHALL SUBMIT REINFORCING BAR LAYOUTS AND DETAILS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. REINFORCEMENT AND EMBEDMENTS SHALL BE ACCURATELY POSITIONED AND SECURED AGAINST DISPLACEMENT PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO PREVENT DAMAGE OR DISPLACEMENT DUE TO CONSTRUCTION TRAFFIC ON REINFORCEMENT.
9.

IT IS THE RESPONSIBILITY OF THE REINFORCING BARS SUBCONTRACTOR TO REVIEW THE CONTRACT DRAWINGS. SHOP DRAWINGS MUST INDICATE ALL PENETRATIONS LARGER THAN 6 INCH DIAMETER AND PROVIDE THE NECESSARY TRIM REINFORCEMENT.
10.

BEFORE ANY CONCRETE IS PLACED, IN-PLACE REINFORCING STEEL SHALL BE INSPECTED BY THE COUNTY REPRESENTATIVE. ANY ERRORS OR DISCREPANCIES SHALL BE CORRECTED BEFORE CONCRETE IS PLACED. NOTIFY THE ENGINEER OR OWNER'S REPRESENTATIVE NOT LESS THAN 72 HOURS BEFORE REINFORCING STEEL INSPECTION IS REQUIRED.
11.

USE LOW HYDROGEN ELECTRODES, GRADE E-70 FOR WELDED REINFORCING BARS U.N.O.
12.

PROVIDE THE FOLLOWING MINIMUM COVERING OF CONCRETE, UNLESS NOTED OTHERWISE:

BELOW GRADE (UNFORMED)..... 3" CLR.
BELOW GRADE (FORMED)..... 2" CLR.

REBAR SPLICE IN CONCRETE
STRUCTURE (INCH)

1. FOR ALL DEFORMED BARS EXCEPT TOP BARS:

BAR NO.	CONCRETE STRENGTH (PSI)					
	2,000	2,500	3,000	3,500	4,500	5,000
# 3	19.6	17.6	16.0	15.6	15.6	15.6
# 4	26.2	23.4	21.4	19.8	18.5	16.5
# 5	32.7	29.3	26.7	24.7	23.1	20.7
# 6	39.2	35.1	32.0	29.7	27.7	24.8
# 7	45.8	41.0	37.4	34.6	32.4	29.0
# 8	54.8	49.0	44.7	41.4	38.7	34.7
# 9	69.3	62.0	56.6	52.4	49.0	43.9
# 10	85.6	76.6	69.9	64.7	60.5	54.1
# 11	103.6	92.7	84.6	78.3	73.3	65.5

2. FOR ALL DEFORMED TOP BARS ONLY:

BAR NO.	CONCRETE STRENGTH (PSI)					
	2,000	2,500	3,000	3,500	4,500	5,000
# 3	25.5	22.8	20.8	20.3	20.3	20.3
# 4	34.0	30.4	27.8	25.7	24.0	21.5
# 5	42.5	38.0	34.7	32.1	30.1	26.9
# 6	51.0	45.6	41.7	38.6	36.1	32.3
# 7	59.5	53.2	48.6	45.0	42.1	37.6
# 8	71.2	63.7	58.2	53.8	50.4	45.1
# 9	90.2	80.6	73.6	68.1	63.7	57.0
# 10	111.3	99.5	90.9	84.1	78.7	70.4
# 11	134.7	120.5	110.0	101.8	95.2	85.2

"TOP REINF." REFERS TO REINF. STEEL SO PLACED THAT MORE THAN 12" OF FRESH CONC. IS CAST IN THE MEMBER BELOW THE REINFORCEMENT



DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE		ORIGINAL		DESIGN		DRAWN		CHECKED		REVISIONS									
		NO.	DATE	0	06-01-2021	NG	CAL	JRL											

COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWT
GENERAL
STRUCTURAL NOTES

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AQUA ENGINEERING 533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

Nicholas Antk 6/16/21 DATE
PROJECT ENGINEER DATE
RECOMMENDED DATE

DRAWING NO.

00G007

SHEET 7 of 58

5/24/2021 C:\USERS\BRETT.PRATT\AQUA ENGINEERING\SAN BERNARDINO COUNTY - 001817.C\CALICO WWTP PRELIMINARY DESIGN\050 DRAFTING\000 GENERAL\000-J0G008 SPECIAL INSPECTION.DWG

SUMMARY OF SPECIAL INSPECTION

REQUIRED VERIFICATION AND INSPECTION OF SOILS		
VERIFICATION AND INSPECTION	CONTINUOUS INSPECTION	PERIODIC INSPECTION
1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	—	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIALS.	—	X
3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.	—	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	X	—
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	—	X

- A. THE SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO THE CALLED INSPECTIONS REQUIRED BY CBC 2019 CHAPTER 1 SECTION 110. THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE IN ADDITION TO, AND NOT SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY THE AUTHORITY'S BUILDING INSPECTOR.
- B. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE LOCAL GOVERNING AGENCIES DEVELOPMENT SERVICES, TO PERFORM THE TYPE OF INSPECTION SPECIFIED.
- EXCEPTIONS:
1. SOILS INSPECTIONS BY THE SOILS ENGINEER OF RECORD.
 2. SMOKE CONTROL SYSTEM, BY THE MECHANICAL ENGINEER OF RECORD.
 3. WHEN WAIVED BY THE BUILDING OFFICIAL.
- C. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION.
- D. SPECIALLY INSPECTED WORK THAT IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.
- E. THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY LOCAL GOVERNING AGENCIES, FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS AND EQUIPMENTS.
- F. A PROPERTY OWNER'S FINAL REPORT OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED BY THE PROPERTY OWNER, PROPERTY OWNER'S AGENT OF RECORD, ARCHITECT OF RECORD, OR ENGINEER OF RECORD.
- G. AN APPLICATION TO PERFORM OFF-SITE FABRICATION MUST BE SUBMITTED TO THE AUTHORITY FOR APPROVAL PRIOR TO FABRICATION.
- H. A CERTIFICATE OF COMPLIANCE OF OFF-SITE FABRICATION MUST BE COMPLETED AND SUBMITTED TO THE AUTHORITY PRIOR TO ERECTION OF PREFABRICATED COMPONENTS.
- I. FABRICATOR MUST BE APPROVED BY THE AUTHORITY FOR THE FABRICATION OF MEMBERS AND ASSEMBLIES ON THE PREMISES OF THE FABRICATOR'S SHOP.

SUMMARY OF SPECIAL INSPECTION

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION		
VERIFICATION AND INSPECTION	CONTINUOUS INSPECTION	PERIODIC INSPECTION
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:		
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	—	X
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	—	X
2. INSPECTION OF HIGH-STRENGTH BOLTING:		
a. BEARING-TYPE CONNECTIONS.	—	X
b. SLIP-CRITICAL CONNECTIONS.	—	X
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL:		
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	—	X
b. MANUFACTURERS' CERTIFIED MILL TEST REPORTS.	—	X
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:		
a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	—	X
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	—	X
5. INSPECTION OF WELDING:	—	—
a. STRUCTURAL STEEL:	X	—
1) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS.	X	—
2) MULTIPASS FILLET WELDS.	X	—
3) SINGLE-PASS FILLET WELDS > 5/16"	—	X
4) SINGLE-PASS FILLET WELDS < 5/16"	—	X
5) FLOOR AND ROOF DECK WELDS.	—	X
b. REINFORCING STEEL:		
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706.	—	X
2) REINFORCING STEEL-RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS AND SHEAR REINFORCEMENT.	X	—
3) SHEAR REINFORCEMENT.	X	—
4) OTHER REINFORCING STEEL.	—	X
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:		
a. DETAILS SUCH AS BRACING AND STIFFENING.	—	X
b. MEMBER LOCATIONS.	—	X
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	—	X

SUMMARY OF SPECIAL INSPECTION

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION		
VERIFICATION AND INSPECTION	CONTINUOUS INSPECTION	PERIODIC INSPECTION
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	—	X
2. REINFORCING BAR WELDING:	—	X
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706;		X
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND	X	
c. INSPECT ALL OTHER WELDS.		
3. INSPECT ANCHORS CAST IN CONCRETE	—	X
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. b.		
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.		X
5. VERIFYING USE OF REQUIRED DESIGN MIX.	—	X
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	—
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	—
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	—	X

SUMMARY OF SPECIAL INSPECTION

STRUCTURAL OBSERVATION, INSPECTIONS AND TESTING		
VERIFICATION AND INSPECTION	CONTINUOUS INSPECTION	PERIODIC INSPECTION
1. ALL SHOP WELDING SHALL BE BY A LICENSED FABRICATOR APPROVED BY DEPARTMENT OF BUILDING AND SAFETY PER 2019 C.B.C. SECTION 1704 IN LIEU OF FABRICATOR APPROVAL. THE OWNER MAY EMPLOY A SPECIAL INSPECTOR, WHICH IS APPROVED BY THE DEPARTMENT OF BUILDING AND SAFETY, WHO WILL INSPECT ALL PHASES OF SHOP WELDING DURING SUCH TIMES THE WELDING IS TAKING PLACE.	X	—
2. ALL FIELD WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS.	X	—
3. FULL PENETRATION WELDS AND FILLET WELDS 5/16" OR LARGER SHALL BE DONE UNDER THE OBSERVATION OF AN APPROVED SPECIAL INSPECTOR, SUCH INSPECTOR SHALL SUBMIT HIS/HER CREDENTIALS FOR REVIEW AND APPROVAL BY THE DEPARTMENT OF BUILDING AND SAFETY AND ENGINEER OF RECORD PRIOR TO REPORTING TO THE JOB SITE.		
4. FILLET WELD 1/4" OR SMALLER SHALL BE DONE UNDER THE OBSERVATION OF AN APPROVED SPECIAL INSPECTOR. SUCH INSPECTOR SHALL SUBMIT HIS/HER CREDENTIALS FOR REVIEW AND APPROVAL BY THE DEPARTMENT OF BUILDING AND SAFETY AND ENGINEER OF RECORD PRIOR TO REPORTING TO THE JOB SITE.	—	X
5. IN ADDITION TO THE REGULAR INSPECTION, THE FOLLOWING ITEMS, REQUIRE SPECIAL INSPECTION PER 2019 C.B.C.		
a. SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION.	X	—
b. STRUCTURAL CONCRETE OVER 2500 P.S.I.	X	—
c. FIELD WELDING SHALL BE CONTINUOUS INSPECTED BY AN APPROVED SPECIAL INSPECTOR.	X	—
d. ANCHORS SYSTEM IN CONCRETE:		
HILTI KWIK BOLT TZ EXPANSION ANCHORS ICC ES-ESR #1917		
HILTI HIT HY 200 EPOXY ANCHORS ICC ES-ESR #3187		
OR EQUIVALENT APPROVED BY EOR.		
NOTE: PRE-DRILL HOLE 1/8" LARGER THAN ALL THREAD DIAMETER OR REBAR DIAMETER. CLEAN HOLE OUT THOROUGHLY FOR EPOXY INSERTED. "SPECIAL INSPECTION REQUIRED".		
e. BRACED FRAME AND MOMENT FRAME WELD CONNECTIONS SHALL BE TESTED BY NON-DESTRUCTIVE METHOD PER SECTION 1703. FULL PENETRATION WELDS SHALL BE TESTED 100 PERCENT BY ULTRASONIC TESTING OR BY RADIOGRAPHY. ALL BACKING BARS AND PLATE SHALL BE REMOVED AFTER FULL PENETRATION WELDS AND SHALL BE FOLLOWED UP WITH A 5/16" CONTINUOUS FILLET WELD.		



DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE		ORIGINAL		DESIGN		DRAWN		CHECKED		REVISIONS	
1		NO.		DATE		JRL		CAL			
1/2		B		06/01/2021							
0											

COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWT
GENERAL
SPECIAL INSPECTION INSTRUCTIONS

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DRAWING NO.

00G008

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6/16/21 DATE
PROJECT ENGINEER
RECOMMENDED DATE