

APPENDIX E

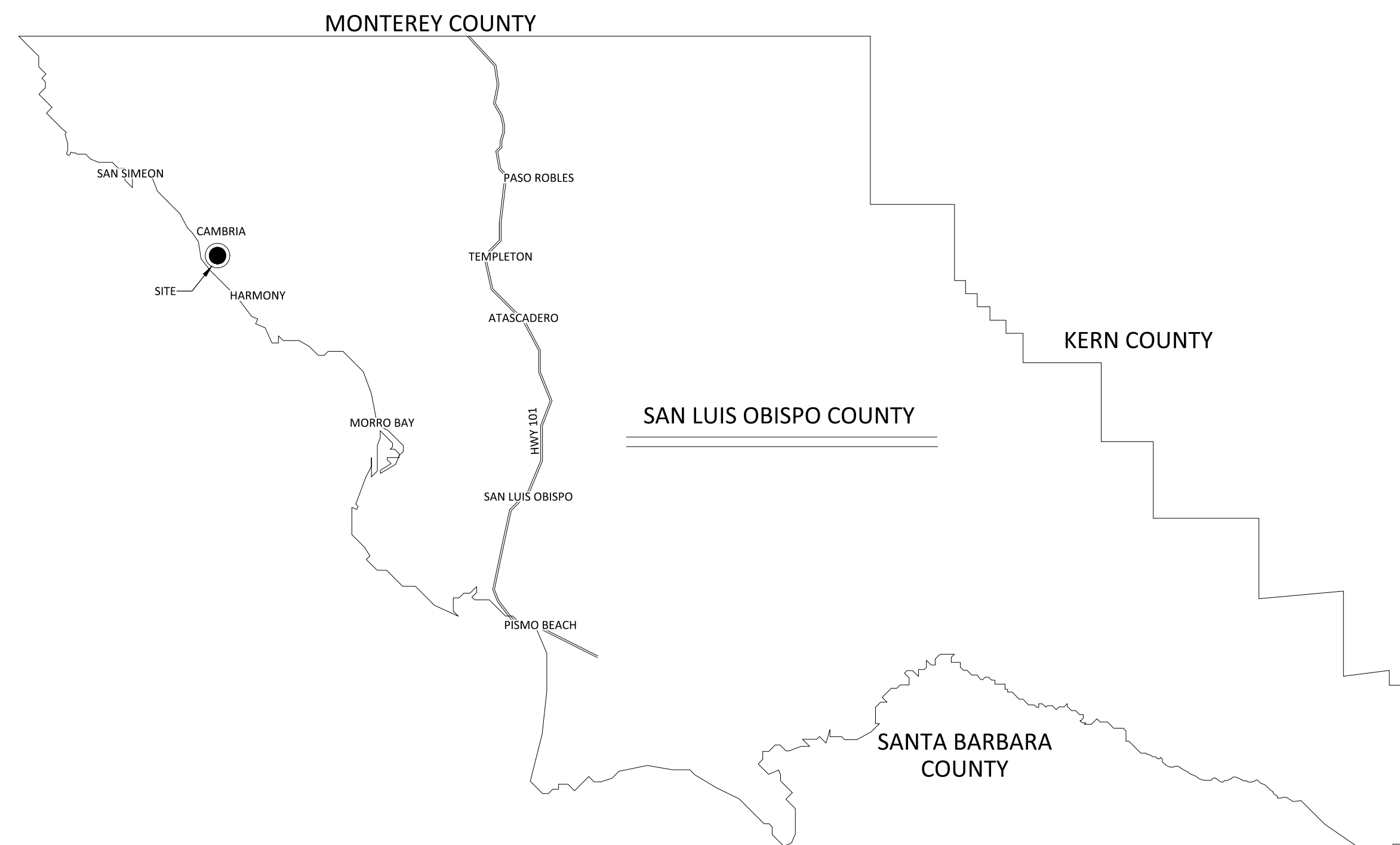
Drawings

CONSTRUCTION DRAWINGS FOR CAMBRIA COMMUNITY SERVICES DISTRICT CAMBRIA, CA



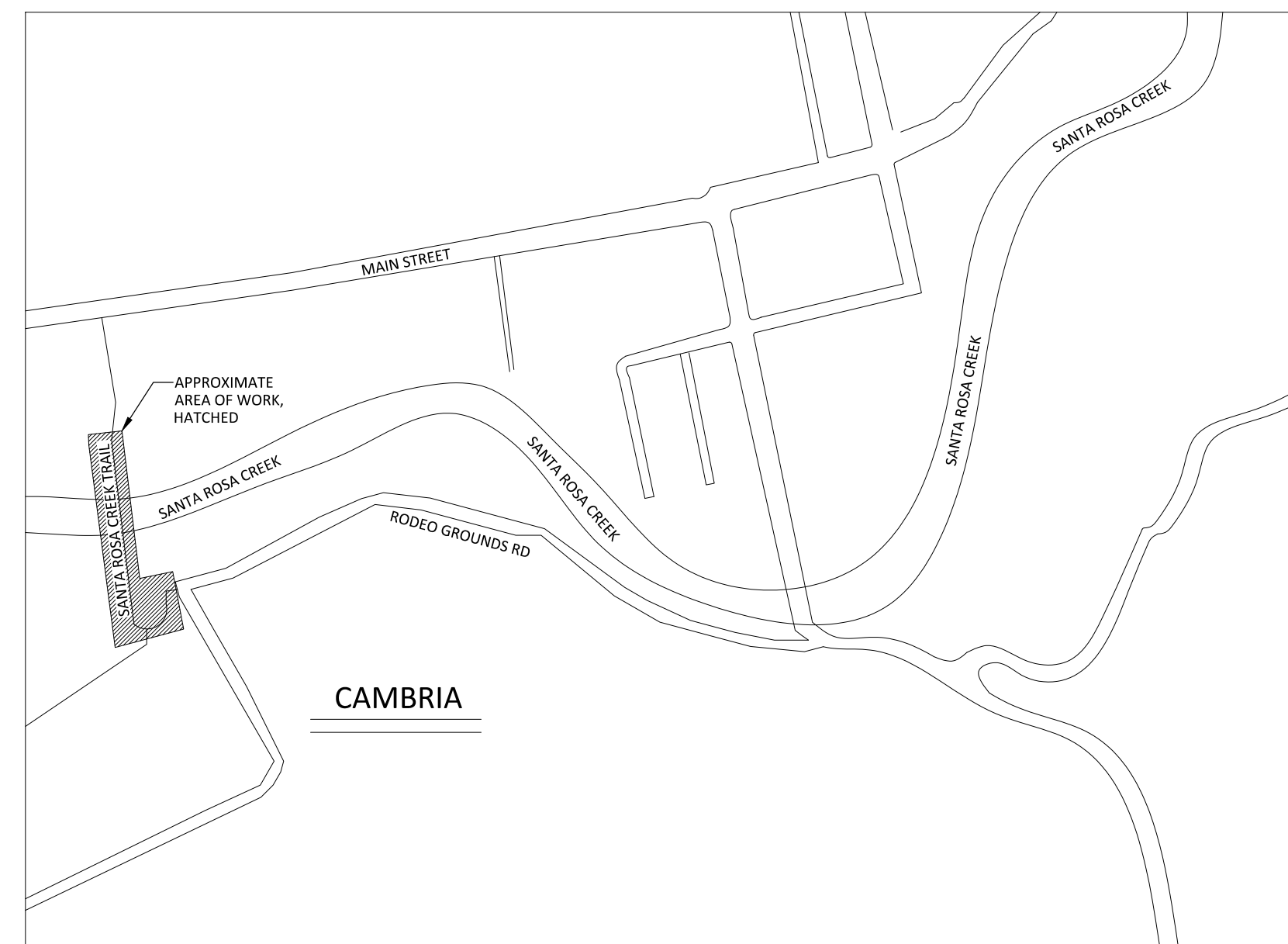
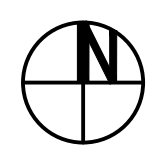
ZONE 2 TO 7 SANTA ROSA CREEK BRIDGE WATERLINE PROJECT

MAY 2021



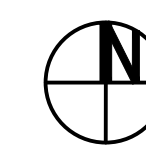
LOCATION MAP

NOT TO SCALE



VICINITY MAP

NOT TO SCALE



SHEET INDEX	
G-001	COVER SHEET
G-002	GENERAL NOTES
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S-002	SPECIAL INSPECTION
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S-301	STRUCTURAL DETAILS



SSG Structural Engineers, LLP
11111 Camino Real, Suite 200
San Diego, CA 92121
Tel: 619.444.2200 Fax: 619.444.2202

CAMBRIA COMMUNITY SERVICES DISTRICT

APPROVED: _____ DATE _____
CITY ENGINEER ORIGINAL SIGNED DATE _____

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NO.	DATE	APPROVED	REVISIONS

CAMBRIA COMMUNITY SERVICES DISTRICT
ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT
COVER SHEET

11-2021-06
PROJECT NO.

G-001
DWG. NO.

SHT. 1 OF 11



MICHAEL E. PAROLINI, S.E. 05.26.2021

GENERAL NOTES

GENERAL NOTES

1. STATIONING AND DISTANCES SHOWN ON THE DRAWINGS ARE BASED ON HORIZONTAL MEASUREMENTS PROJECTED FROM THE PIPE CENTERLINE UNLESS NOTED OTHERWISE.
2. UTILITIES, BOTH EXISTING AND THOSE NOTED AS FUTURE WHICH MAY OR MAY NOT EXIST AT THE TIME OF CONSTRUCTION, ARE SHOWN ON THESE PLANS FOR THE CONVENIENCE OF THE CONTRACTOR. SUBSURFACE UTILITY DATA ARE DEPICTED TO LEVEL C AS DEFINED IN "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA", C/ASCE 38-02. NOT ALL LATERALS ARE SHOWN.
3. VIDEO DOCUMENT THE EXISTING CONDITIONS OF THE WORK AREA AND PROPERTIES ADJACENT TO THE PROJECT, AND SUBMIT THE VIDEO TO THE DISTRICT PRIOR TO THE START OF CONSTRUCTION. PROTECT ADJACENT PROPERTIES DURING WORK AND REPAIR DAMAGE TO LANDSCAPING, PAVING, IRRIGATION, STRUCTURES, ETC., CAUSED BY THE WORK.
4. VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION. LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
5. VERIFY DIMENSIONS AND CONDITIONS AT THE SITE BEFORE STARTING WORK. ANY CONFLICTS BETWEEN DETAILS OR DIMENSIONS ON THE DRAWINGS SHALL BE REPORTED PROMPTLY TO THE DISTRICT'S REPRESENTATIVE WHO WILL DETERMINE THE INTENT OF THE DRAWINGS.
6. UPON LEARNING OF THE EXISTENCE AND LOCATIONS OF ANY UNDERGROUND FACILITIES NOT SHOWN OR SHOWN INACCURATELY ON THESE PLANS OR NOT PROPERLY MARKED BY THE UTILITY OWNER, IMMEDIATELY NOTIFY THE DISTRICT AND THE DISTRICT'S REPRESENTATIVE BY TELEPHONE AND IN WRITING.
7. COORDINATE UNDERGROUND UTILITY MARKING WITH THE LOCAL UNDERGROUND SERVICE ALERT JURISDICTION (CALL 811) PRIOR TO CONSTRUCTION.
8. TAKE PRECAUTIONARY MEASURES TO PROTECT UTILITIES AND STRUCTURES SHOWN AS WELL AS ANY AND ALL OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO ORIGINAL DESIGN CONDITION AND/OR THE APPLICABLE REQUIREMENTS OF THE AFFECTED UTILITY AT THE CONTRACTOR'S EXPENSE. APPROVAL BY CMWD SHALL ALSO BE REQUIRED.
9. USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD OR UNDERGROUND POWER, GAS, OR OTHER UTILITIES SO AS TO PROTECT ALL PERSONNEL AND EQUIPMENT. PROTECT FROM DAMAGE INCURRED DURING CONSTRUCTION ALL OVERHEAD UTILITY LINES WHETHER SHOWN OR NOT SHOWN ON THESE PLANS. NOTIFY UTILITY COMPANIES PRIOR TO ANY WORK IN OVERHEAD LOCATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR COST INCURRED.
10. PRESERVE ALL SURVEY MARKERS AND MONUMENTATION. THOSE REQUIRING REMOVAL SHALL BE RE-ESTABLISHED IN ACCORDANCE WITH THE LOCAL GOVERNING AUTHORITY.
11. LIMIT CONSTRUCTION ACTIVITIES TO THE RIGHT-OF-WAY, EASEMENTS, AND DESIGNATED AREAS SHOWN ON THE DRAWINGS.
12. AT THE CLOSE OF EACH WORKING SHIFT, WHERE A NEXT SHIFT WILL NOT IMMEDIATELY FOLLOW, INSTALL PIPE END CAPS AND CONSTRUCT TRENCH RAMPS AT THE END OF THE EXCAVATION. PREVENT UNAUTHORIZED ENTRY INTO THE OPEN PIPE AND TRENCH. PROVIDE SECURITY FENCING AT ALL TIMES AROUND WORK AREA.
13. ALL SPECIFICATIONS, DRAWINGS, AND DETAILS INCLUDED IN THE CONTRACT DOCUMENTS SHALL FULLY APPLY TO THE WORK WHETHER SPECIFICALLY REFERENCED OR NOT.
14. GROUND WATER PUMPED FROM EXCAVATION MAY BE DISCHARGED IN ACCORDANCE WITH APPLICABLE PERMITS AND REGULATIONS. GROUND WATER SHALL NOT BE DISCHARGED TO THE STREET OR SURROUNDING AREA WITHOUT A PERMIT. NO DISCHARGE TO SANITARY SEWERS WILL BE ALLOWED UNLESS PRIOR PERMISSION IS GRANTED BY THE DISTRICT.
15. MAINTAIN THE WORK AREA IN A NEAT, CLEAN, AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF THE DISTRICT, DISTRICT'S REPRESENTATIVE AND AGENCY WITH LOCAL JURISDICTION. STREETS SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCES BEING CONTROLLED AT ALL TIMES.
16. MAINTAIN A COMPLETE AND ACCURATE RECORD OF ALL CHANGES IN CONSTRUCTION FROM THAT SHOWN IN THESE PLANS AND SPECIFICATIONS FOR THE PURPOSE OF PROVIDING A BASIS FOR RECORD DRAWINGS. THE CONTRACTOR SHALL NOTE DEVIATIONS FROM THE PLANS ON A SET OF PLANS SPECIFICALLY SET ASIDE FOR THIS PURPOSE. ANY CHANGES SHALL BE MADE ON THE ORIGINALS OF THE PLANS. NO CHANGES FROM THAT SHOWN ON THESE PLANS AND SPECIFICATIONS SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
17. ALL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CMWD STANDARD SPECIFICATIONS, UNLESS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS.
18. ALL PIPE, FITTINGS, MATERIALS, AND INSTALLATION SHALL CONFORM TO THE LATEST EDITIONS OF THE STANDARD SPECIFICATIONS REFERENCED IN THE PLANS AND SPECIFICATIONS UNLESS NOTED OTHERWISE.
19. IF CHANGES TO THESE CONSTRUCTION PLANS ARE REQUIRED DUE TO FIELD CONDITIONS, WHICH ARE NOT SHOWN ON THE PLANS, SUCH PROPOSED CHANGES SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW BY THE OWNER PRIOR TO CONSTRUCTION.
20. CITY STREETS ARE TO REMAIN OPEN TO THROUGH TRAFFIC AT ALL TIMES.
21. PROVIDE FOR SAFE TRAFFIC CONTROL IN AND AROUND THE SITE. THIS MAY INCLUDE BUT SHALL NOT BE LIMITED TO SIGNS, FLASHING LIGHTS, BARRICADES AND FLAG PERSONS AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE. TRAFFIC CONTROL MEASURES SHALL COMPLY WITH CALTRANS STANDARDS, CALIFORNIA TRAFFIC MANUAL (MOST RECENT EDITION), REQUIREMENTS OF CITY AND COUNTY ENCROACHMENT PERMITS.

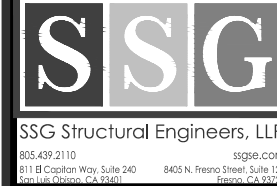
PIPELINE NOTES

1. COORDINATE ALL TIE-INS OF NEW WATER MAINS TO EXISTING WATER MAINS WITH THE DISTRICT TO MINIMIZE SERVICE INTERRUPTIONS. PROVIDE AT LEAST 5 WORKING DAYS NOTICE PRIOR TO CONSTRUCTION. CONNECTIONS TO EXISTING SYSTEM SHALL OCCUR BETWEEN THE HOURS OF 8:00 AM AND 4:00 PM AND BE COORDINATED WITH THE DISTRICT. ALL SHUTDOWNS REQUIRE 3-WEEKS NOTICE.
2. THE WATER SYSTEM, INCLUDING LATERALS, SHALL BE HYDROSTATICALLY TESTED PRIOR TO PLACING STREET PAVEMENT OR CONCRETE.
3. PRIOR TO FILLING OF THE PIPELINE, ALL COMBINATION AIR RELEASE VALVES SHALL BE IN THE OPEN POSITION.
4. WATER LINES SHALL HAVE A MINIMUM COVER OF 36 INCHES, UNLESS OTHERWISE NOTED.
5. ADJUST VALVE BOXES, FIRE HYDRANT BREAK-OFF FLANGES, METER BOXES, ETC. TO FINISH GRADES AFTER CURBS AND GUTTERS, SIDEWALKS, AND STREETS HAVE BEEN CONSTRUCTED AT NO COST TO DISTRICT.
6. FIRE HYDRANTS, METER BOXES AND BLOWOFFS SHALL BE LOCATED NO CLOSER THAN 5-FEET FROM BEGINNING OF CURB RETURN, DRIVEWAY OR ANY OTHER UTILITY.
7. WORK SHALL BE DONE IN ACCORDANCE WITH THE APPROPRIATE ENCROACHMENT PERMITS.
8. ALL MATERIALS IN CONTACT WITH POTABLE WATER OR WITH CHEMICALS IN CONTACT WITH POTABLE WATER ARE TO BE NSF-61 CERTIFIED.
9. SHEETING AND SHORING OF TRENCHES IS REQUIRED FOR WORKER PROTECTION IN CONFORMANCE WITH THE GENERAL CONDITIONS. SHEET AND SHORE TRENCHES TO PROTECT AGAINST:
 - a. DAMAGE TO UTILITIES, FACILITIES, AND PROPERTY
 - b. ADDITIONAL EXCAVATION AND BACKFILL
 - c. ADDITIONAL PAVEMENT
 - d. OTHER COSTS AND LIABILITIES ARISING FROM SOIL INSTABILITY
10. ONLY DISTRICT PERSONNEL SHALL OPERATE DISTRICT FACILITIES SUCH AS PUMPS AND VALVES.
11. INSTALL OWNER FURNISHED MARKER BALLS ALONG PIPELINE ALIGNMENT WITH ONE MARKER PER JOINT AND AT EACH CHANGE IN DIRECTION.

EROSION CONTROL NOTES

1. COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD AND DISTRICT STANDARD SPECIFICATIONS.
2. DRIVEWAYS AND CONSTRUCTION ENTRANCES SHALL BE PROTECTED AGAINST EROSION AND TRACKING OF MUD AND DEBRIS AT ALL TIMES, INCLUDING EVENINGS, WEEKENDS AND HOLIDAYS. SUCH PROTECTION MAY BE MODIFIED TO PROVIDE ACCESS TO THE WORK SITE DURING WORK HOURS.
3. ALL STOCKPILES SHALL BE PROTECTED AGAINST WIND AND WATER EROSION, IMMEDIATELY UPON PLACEMENT AND REMOVAL FROM STREET AT THE END OF EACH DAY. SUCH PROTECTION SHALL REMAIN IN PLACE UNTIL USE OR REMOVAL OF THE STOCKPILE, REGARDLESS OF THE TIME OF YEAR.
4. ALL FRESH CUT AND FILL SLOPES SHALL BE IMMEDIATELY PROTECTED BY INSTALLATION OF EROSION CONTROL DEVICES, AND UNTIL PERMANENT EROSION CONTROL IS ESTABLISHED.
5. PERMANENT EROSION CONTROL MEASURES SHALL BE FULLY ESTABLISHED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. (TO BE COMPLETED NO LESS THAN 30 DAYS PRIOR TO REQUEST FOR FINAL APPROVAL.)
6. WASTE MATERIALS SHALL NOT BE WASHED OFFSITE. THIS INCLUDES BUT IS NOT LIMITED TO SOIL, PAINT, GROUT, COLOR COAT, CONCRETE DUST, SAW RESIDUES, GRINDINGS, AND OIL.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE PLACEMENT OF EROSION CONTROL DEVICES AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.

AGENCY/UTILITY		
AGENCY	CONTACT	PHONE NUMBER
CAMBRIA COMMUNITY SERVICES DIRECT - PROJECT MANAGER	RAY DIENZO	(805) 927-6119 EXT. 109
UNDERGROUND SERVICE ALERT		811



CAMBRIA COMMUNITY SERVICES DISTRICT

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CAMBRIA COMMUNITY SERVICES DISTRICT
 ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT
GENERAL NOTES



Know what's below.
Call before you dig.



MICHAEL E. PAROLINI, S.E. 05.26.2021

11-2021-06
PROJECT NO.

G-002
DWG. NO.

SHT. 2 OF 11



CAMBRIA COMMUNITY SERVICES DISTRICT

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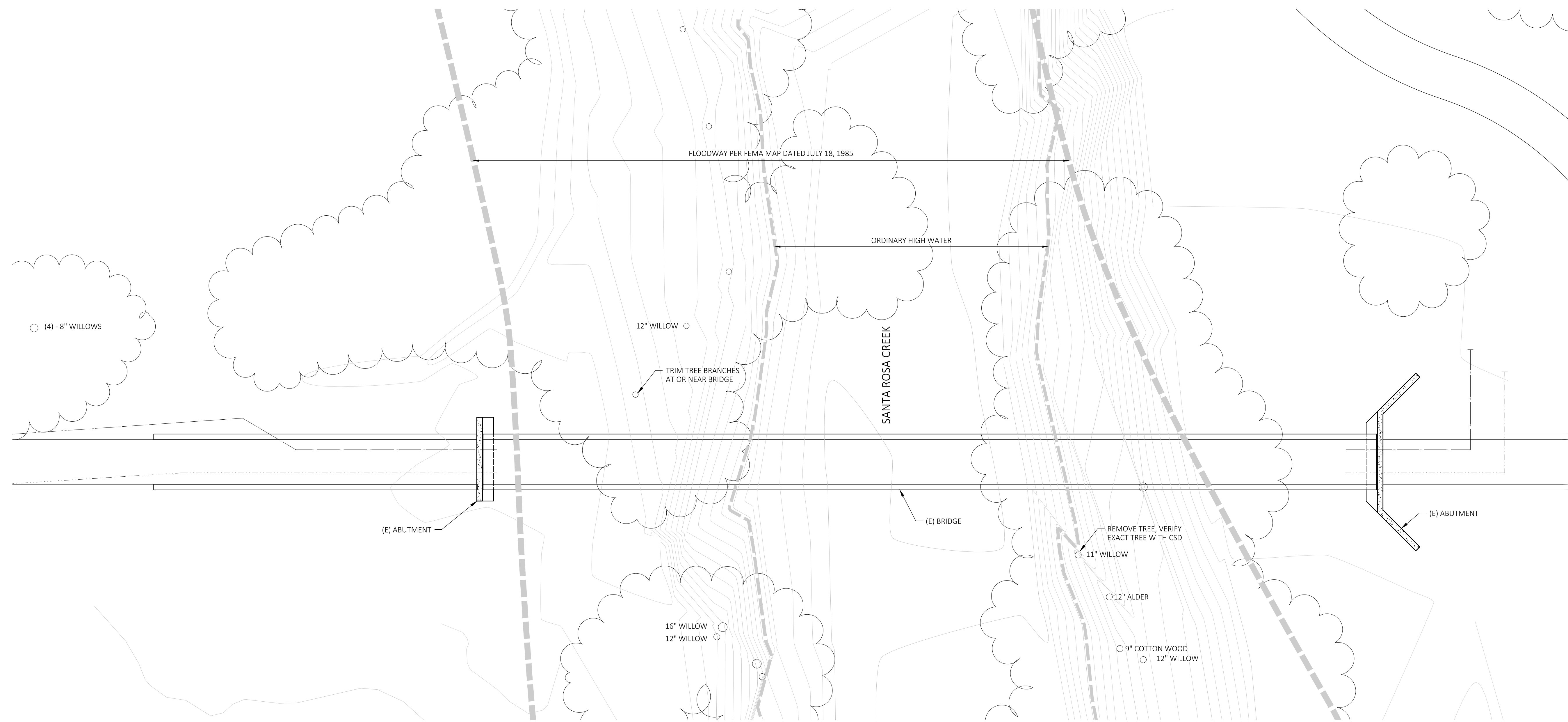
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CAMBRIA COMMUNITY SERVICES DISTRICT
 ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT
TREE REMOVAL PLAN

11-2021-06
 PROJECT NO.

G-003
 DWG. NO.

SHT. 3 OF 11



TREE REMOVAL PLAN

SCALE: 1" = 10'-0"

NOTES:

1. PROTECT ALL TREES IN PLACE. TRIM TREES AND VEGETATION AS REQUIRED FOR PIPE INSTALLATION.
2. COORDINATE TREE REMOVAL WITH CSD WHERE NOTED ON PLAN



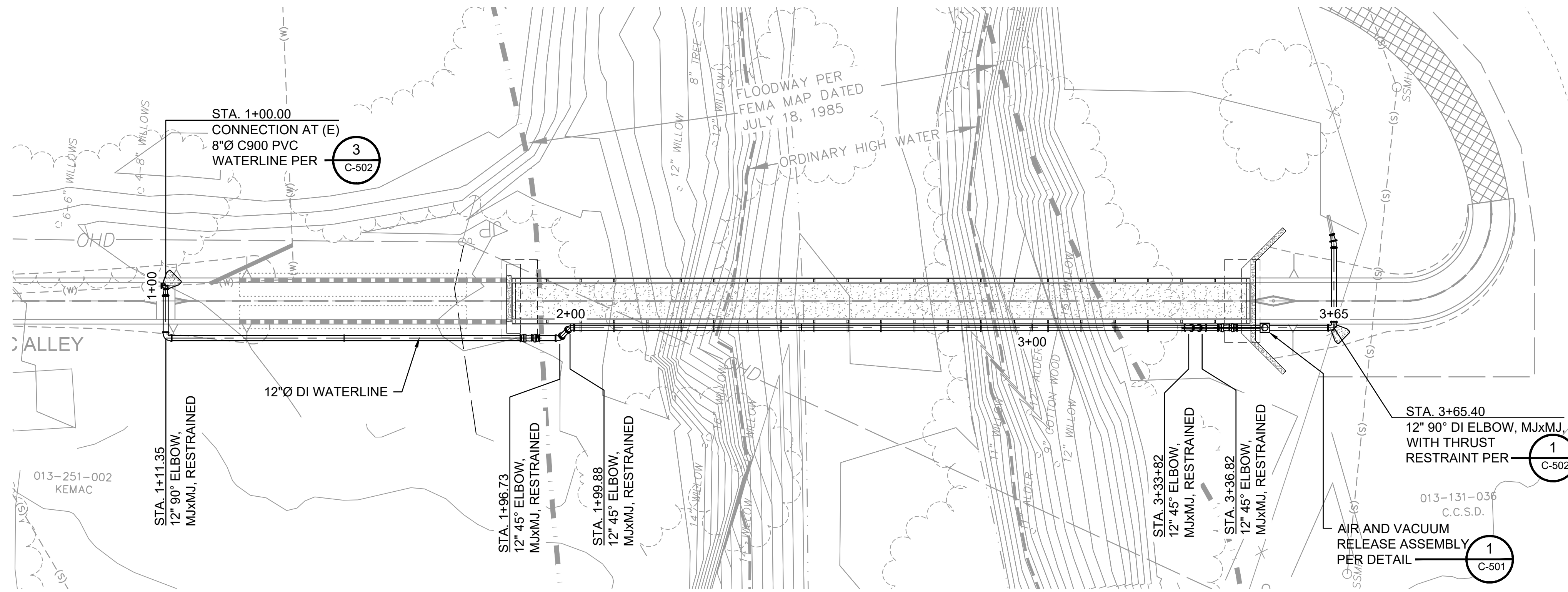
MICHAEL E. PAROLINI, S.E. 05.26.2021



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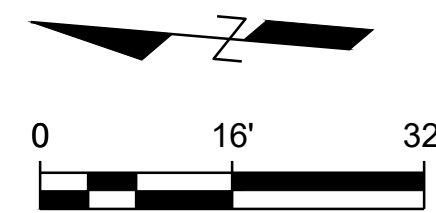


SSG Structural Engineers, LLP
11111 Wilshire Blvd., Suite 1000
Beverly Hills, CA 90210
Tel: 310.277.1111 Fax: 310.277.1112



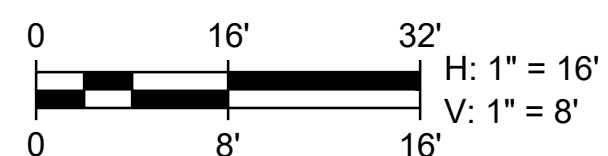
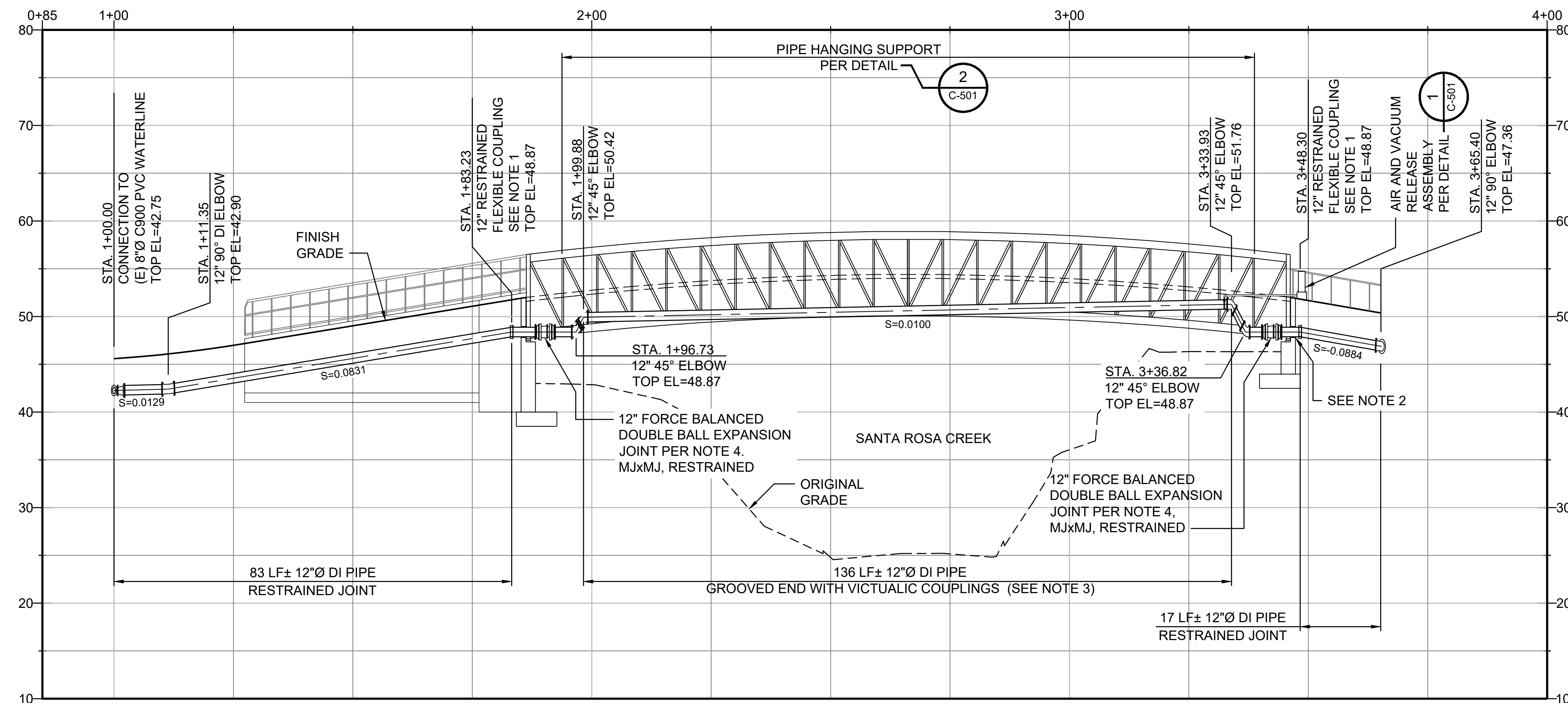
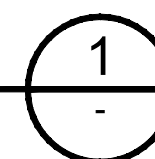
NOTES:

1. JOINTS TO BE FASTENED WITH RESTRAINED FLEXIBLE COUPLINGS, EBBA IRON SERIES 3800 OR APPROVED EQUAL. MAXIMUM DEFLECTION BETWEEN STICKS OF PIPE NOT TO EXCEED 4-DEGREES.
2. CORE EXISTING CONCRETE ABUTMENT FOR 12" Ø PIPE PENETRATION AT SAME ELEVATION OF EXISTING PIPE PENETRATION.
3. EXPOSED JOINTS WITHIN LIMITS SHOWN ON PLANS SHALL BE GROOVED END, FASTENED WITH VICTAULIC STYLE 31 COUPLINGS PER SPECIFICATION SECTION 402040.
4. FURNISH AND INSTALL FORCE BALANCED DOUBLE BALL FLEXIBLE EXPANSION JOINT CAPABLE OF ACCOMMODATING 1/2" OF EXPANSION, EBAA IRON FLEX-TEND OR APPROVED EQUAL.
5. CONTRACTOR TO VERIFY LOCATION OF AIR AND VACUUM RELEASE ASSEMBLY IN THE FIELD WITH OWNER'S REPRESENTATIVE.



STA. 1+00 to STA. 3+65.40

SCALE: 1" = 16'



John C. Hanlon, PE
DATE May 26, 2021

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DRAWN	JPF	CITY ENGINEER	
CHECKED		ORIGINAL SIGNED DATE	
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CAMBRIA COMMUNITY SERVICES DISTRICT
ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT
PLAN AND PROFILE
STA. 1+00 to STA. 3+65.40

11-2021-06
PROJECT NO.

C-101
DWG. NO.



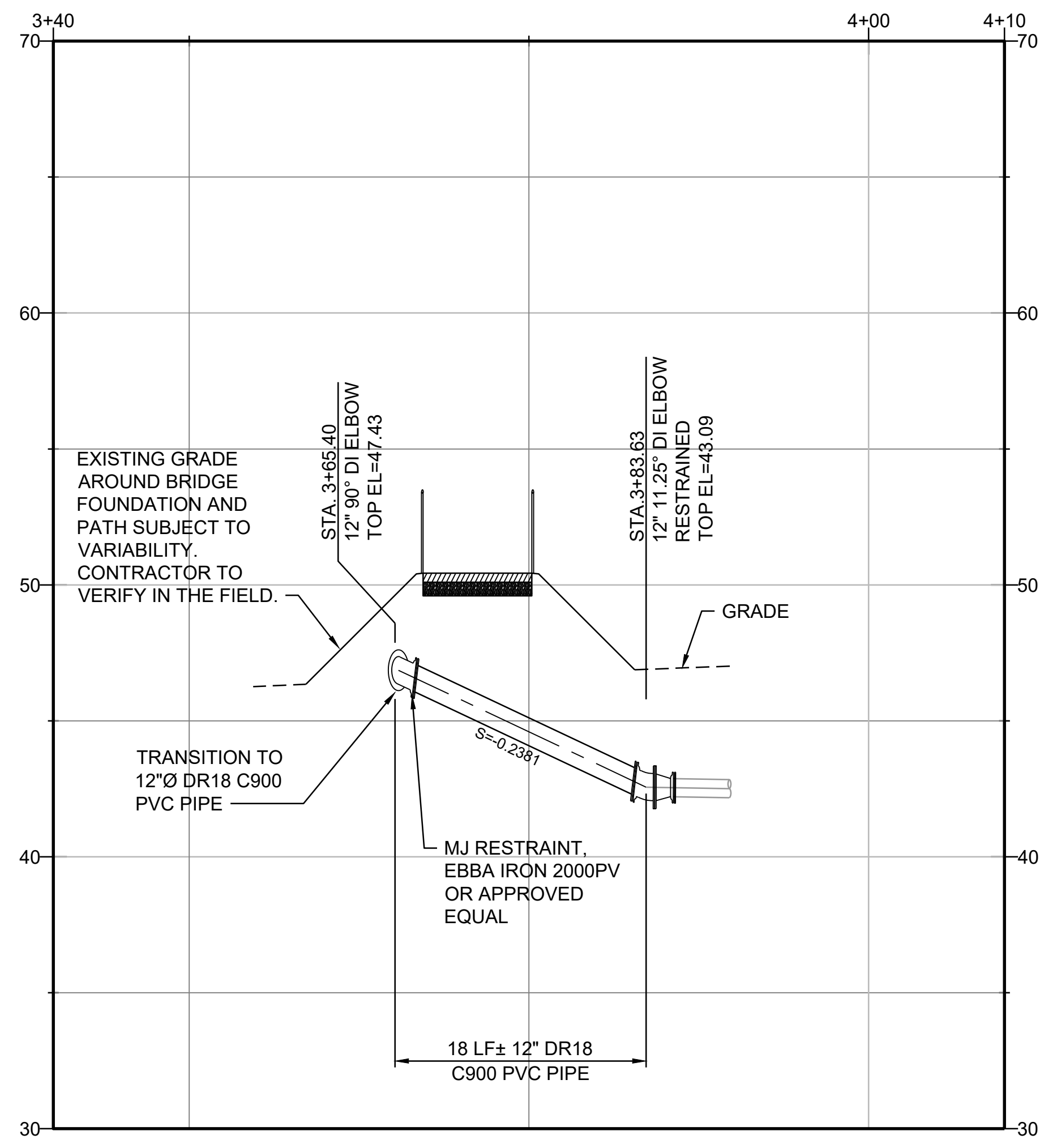
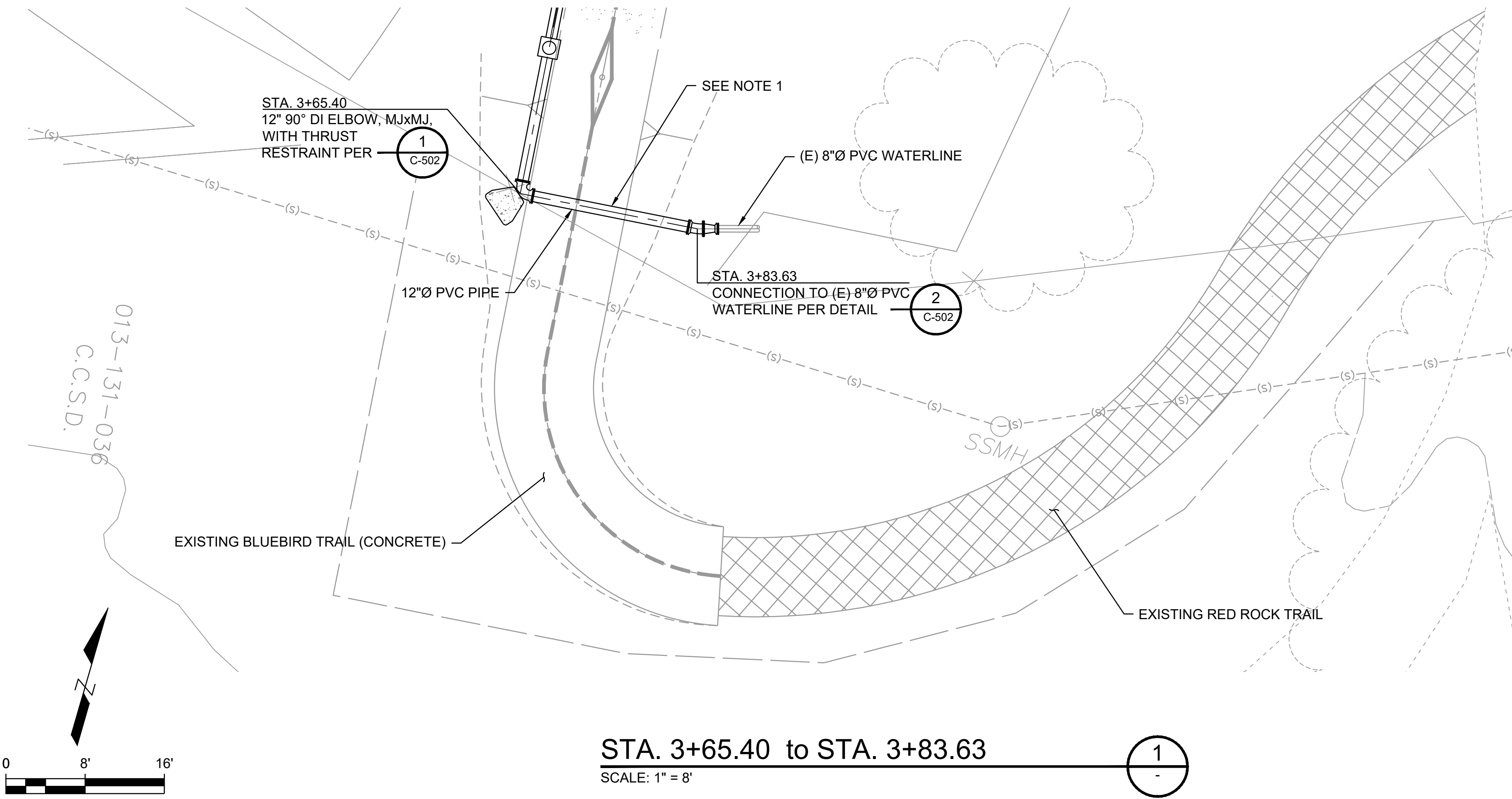
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SSG Structural Engineers, LLP

NOTES:

- SEE STRUCTURAL SHEETS FOR REPAIR OF CONCRETE SLAB. STRIPING TO BE REPAIRED TO MATCH EXISTING.



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NO.	REVISIONS

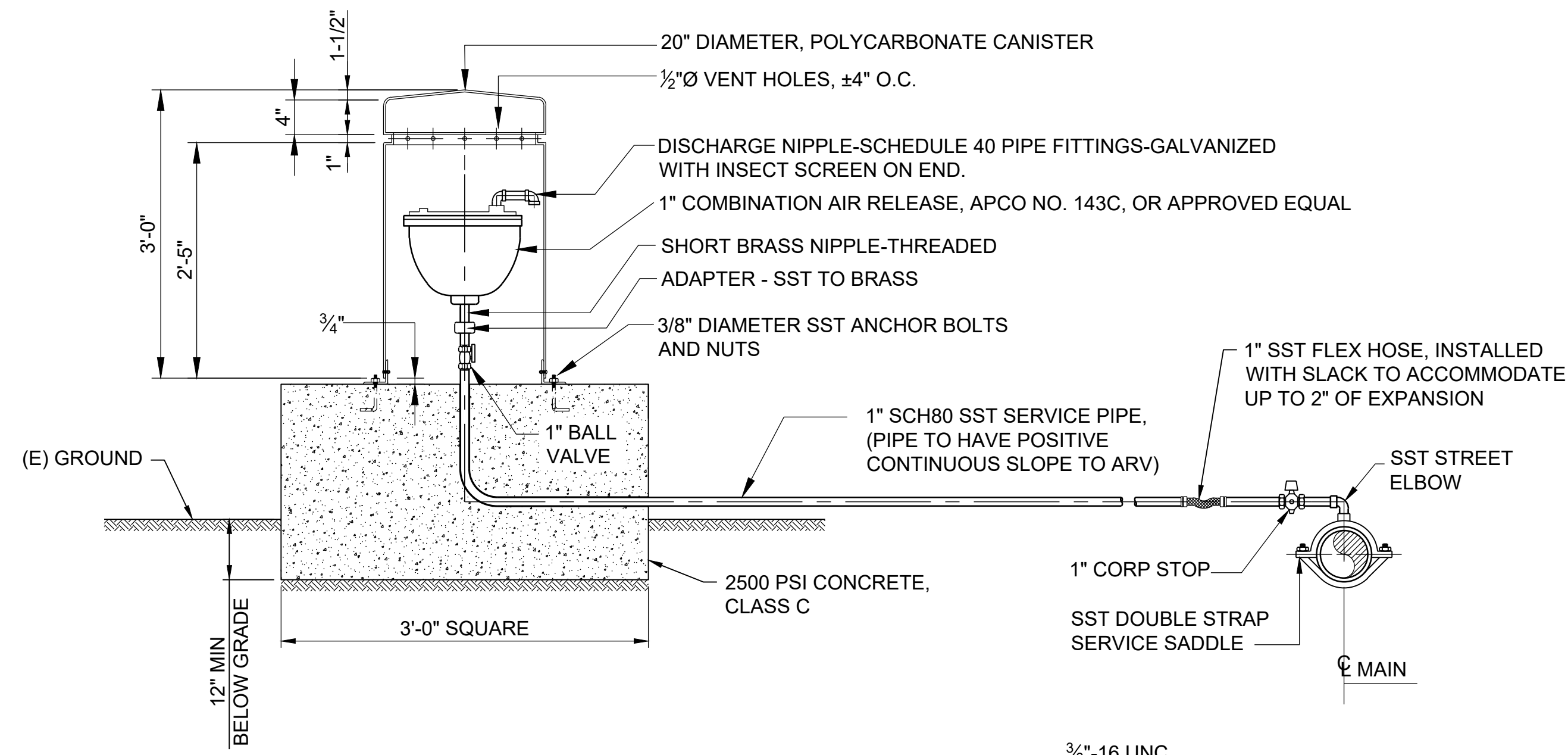
CAMBRIA COMMUNITY SERVICES DISTRICT
 ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT
 PLAN AND PROFILE
 STA. 3+65.40 TO STA. 3+83.63

11-2021-06
 PROJECT NO.

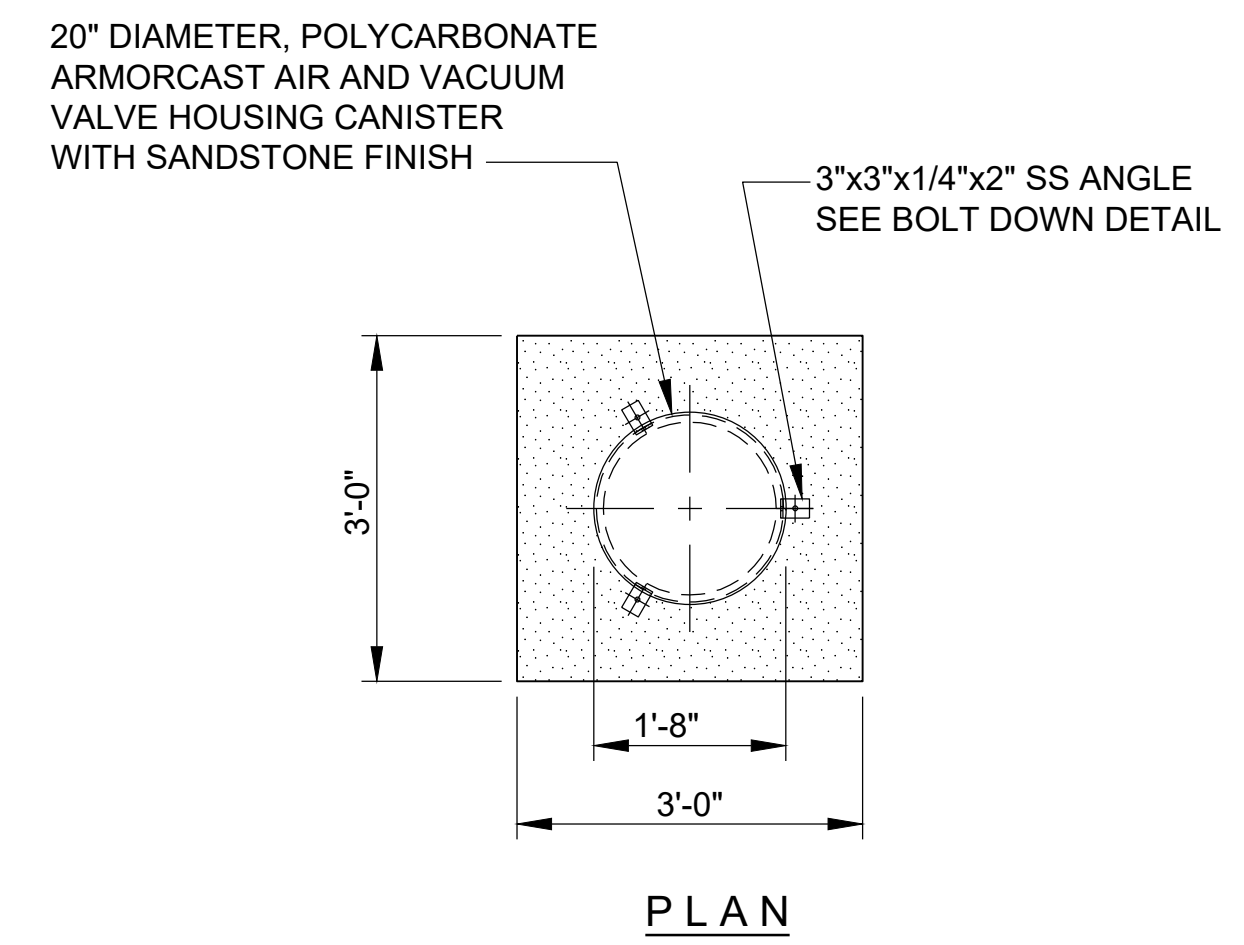
C-102
 DWG. NO.



John E. Hanlon, PE
 DATE May 26, 2021



SECTION

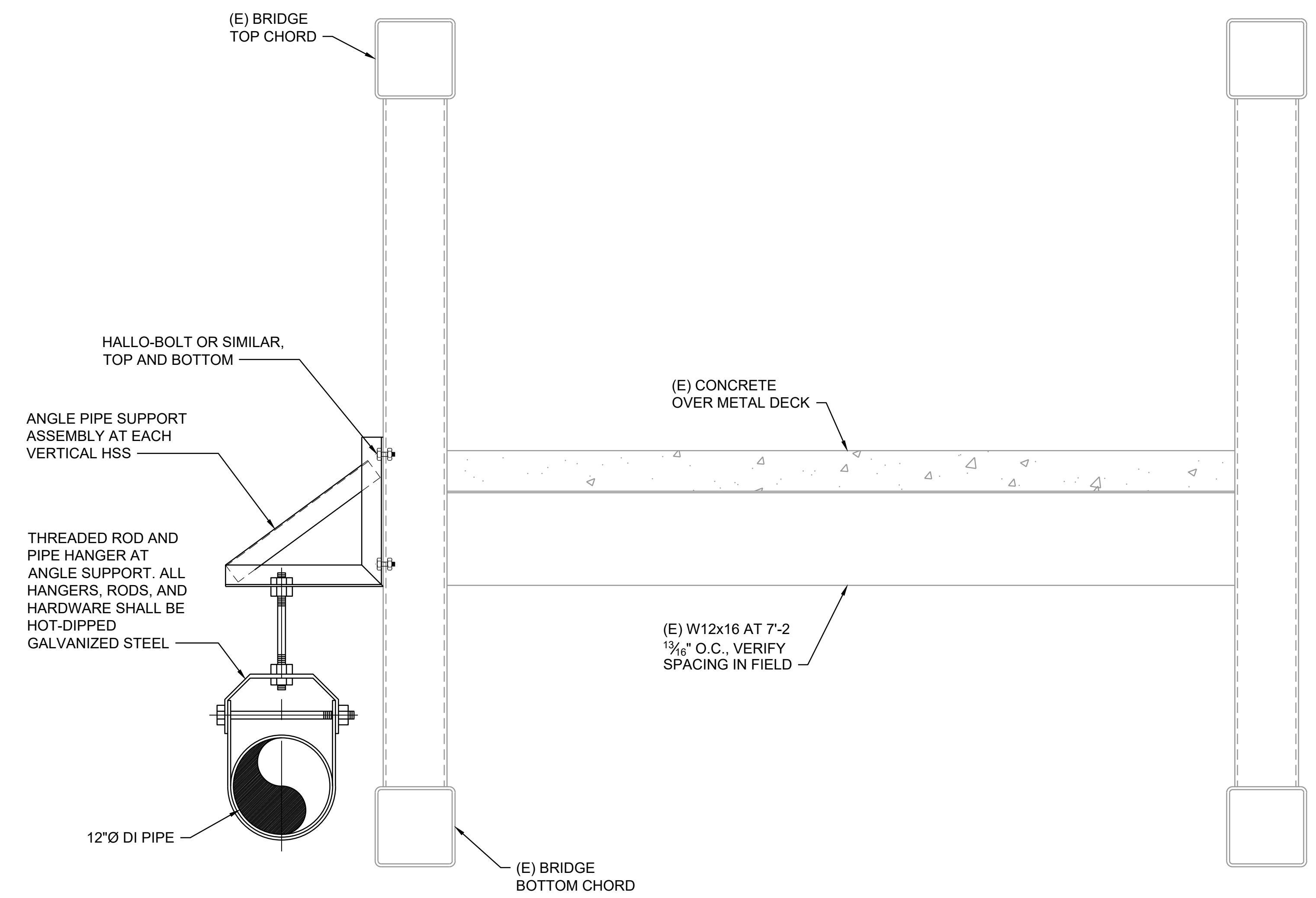


PLAN

AIR RELEASE VALVE ASSEMBLY

NOT TO SCALE

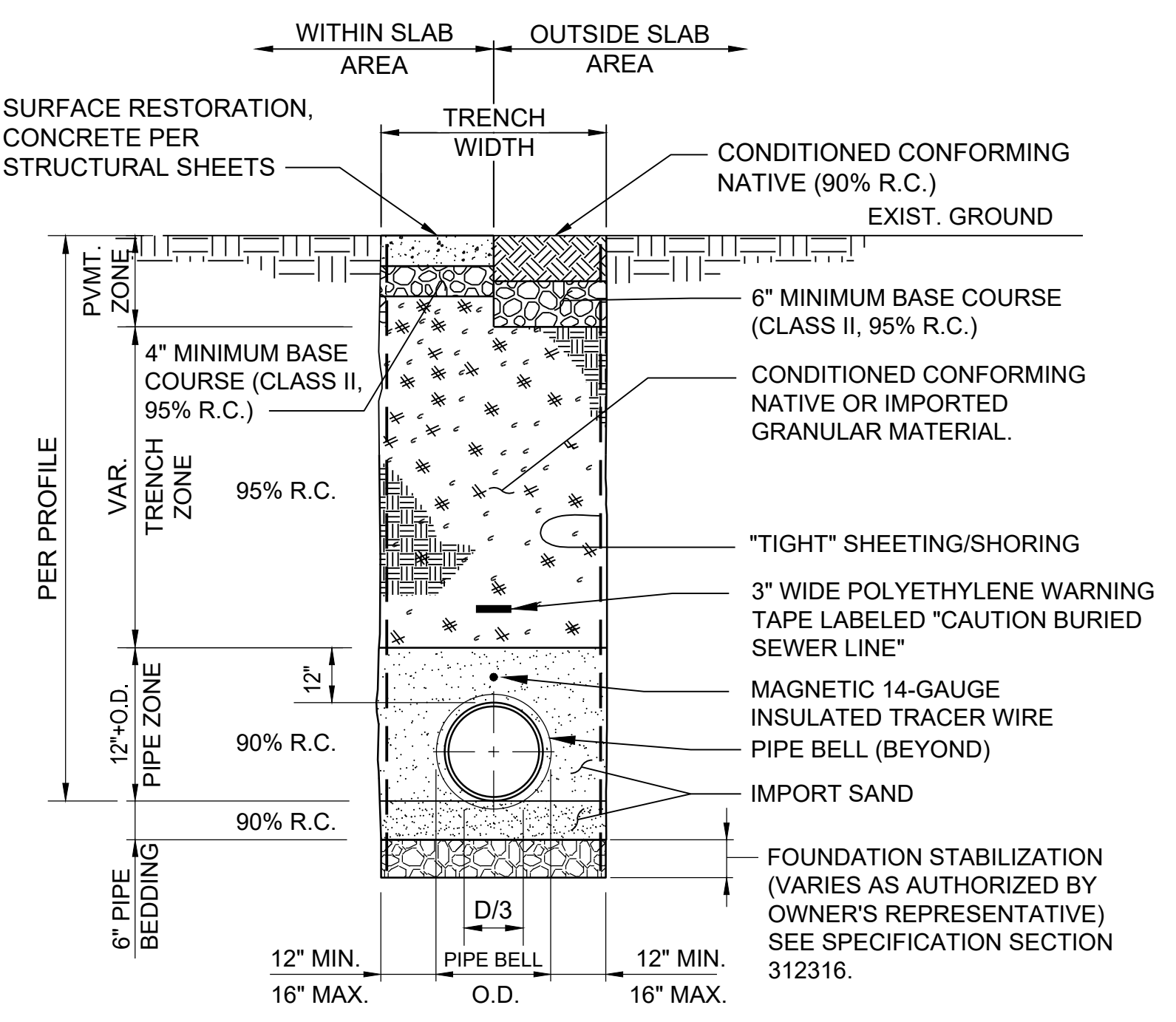
1



HANGING PIPE SUPPORT

NOT TO SCALE

2



NOTES:

- WHERE MINIMUM 3' COVER BETWEEN CROWN OF PIPE AND TOP OF GRADE CANNOT BE ACHIEVED, TRENCH TO BE BACKFILLED WITH ONE OR TWO SACK SAND CEMENT SLURRY TO WITHIN 1' OF GRADE.

TRENCH DETAIL

NOT TO SCALE

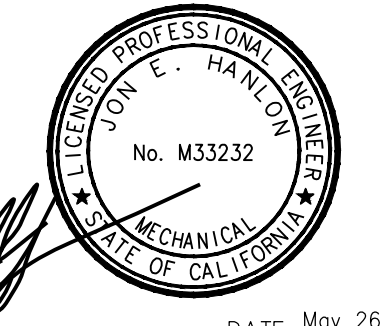
3



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DATE			

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CAMBRIA COMMUNITY SERVICES DISTRICT
 ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT
 CIVIL DETAILS - 1



John E. Hanlon, PE

DATE May 26, 2021

11-2021-06 PROJECT NO.

C-501 DWG. NO.

SHT. 6 OF 11



Know what's below.
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SSG Structural Engineers, LLP

1000 W. ...

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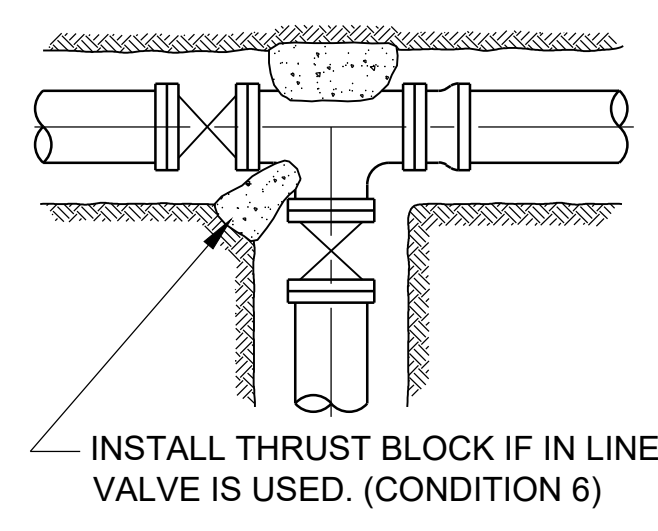
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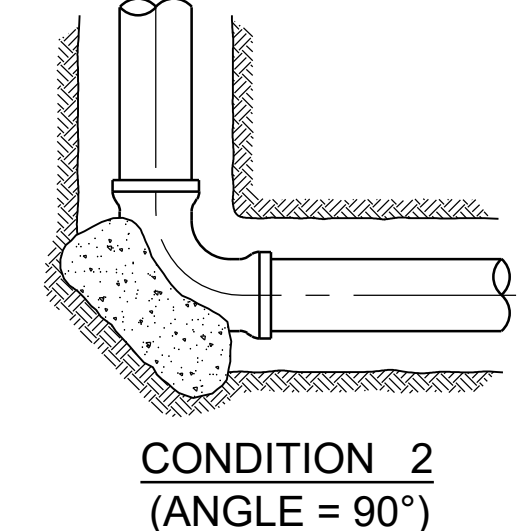
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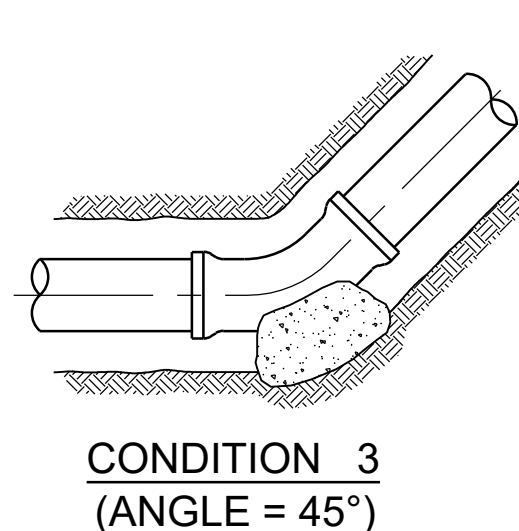
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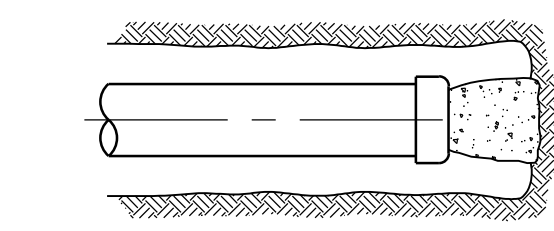
CONDITION 1
(OUTLET OR FIRE HYDRANT)



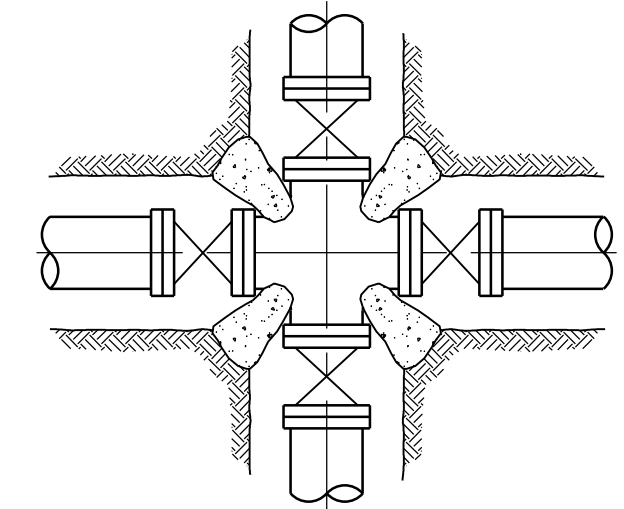
CONDITION 2
(ANGLE = 90°)



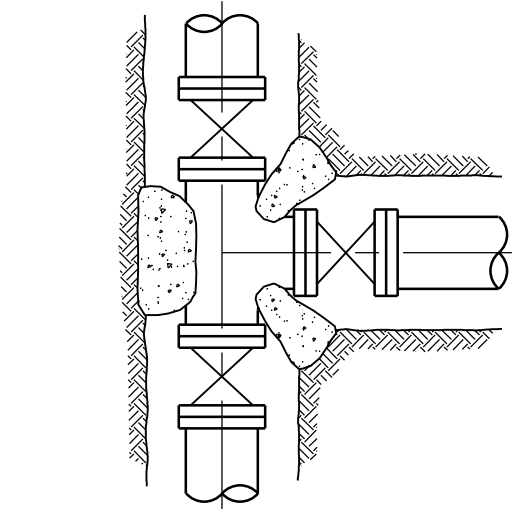
CONDITION 3
(ANGLE = 45°)



CONDITION 4
(END CAP)



CONDITION 5
(MAINLINE CROSS)

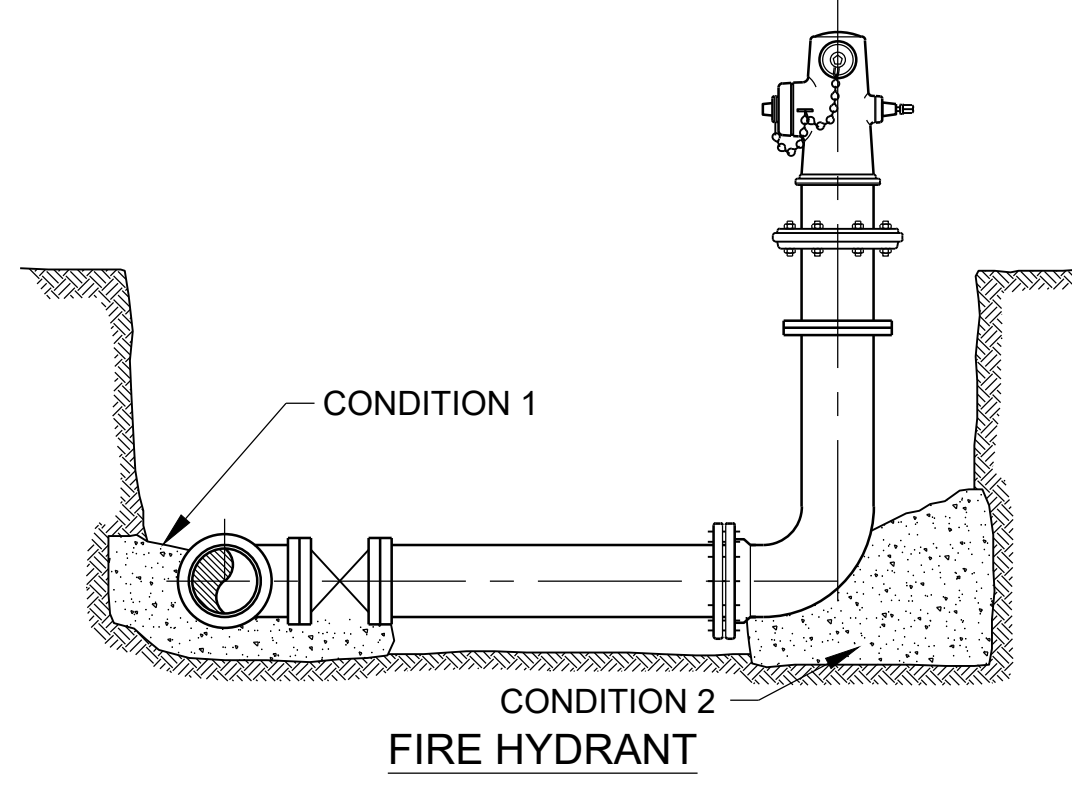


CONDITION 6
(MAINLINE TEE)

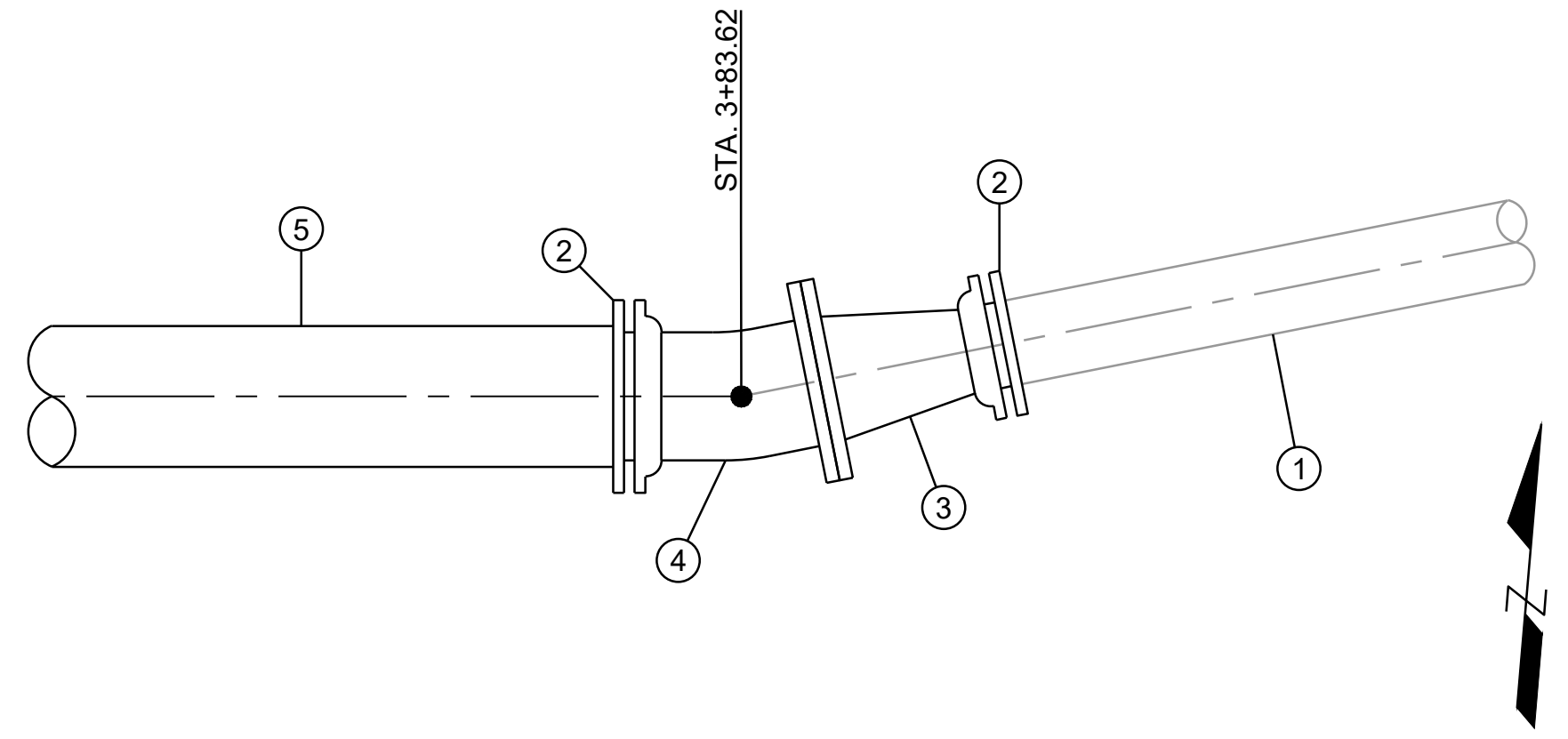
PIPE SIZE	THRUST BLOCK BEARING AREA IN SQ. FT.					
	CONDITION					
	1	2	3	4	5	6
6"	6.0	9.0	5.0	6.0	5 EACH	5 EACH
8"	11.0	15.5	8.4	11.0	9 EACH	9 EACH
10"	18.0	25.3	13.7	18.0	15.5 EACH	15.5 EACH
12"	25.5	36.0	19.5	25.5	23 EACH	23 EACH
14"	34.6	49.0	26.5	34.6	30 EACH	30 EACH

- NOTES:
1. SIZE THRUST BLOCK ACCORDING TO THE LARGEST OUTLET DIAMETER ON TEE OR CROSS.
 2. ALL THRUST BLOCK BEARING FACES SHALL BE POURED AGAINST UNDISTURBED SOIL OR APPROVED COMPACTED MATERIAL.
 3. THRUST BLOCK CONCRETE SHALL BE CLASS "C" PER SPECIFICATION SECTION 312316.

TYPICAL THRUST BLOCK DETAIL
NOT TO SCALE

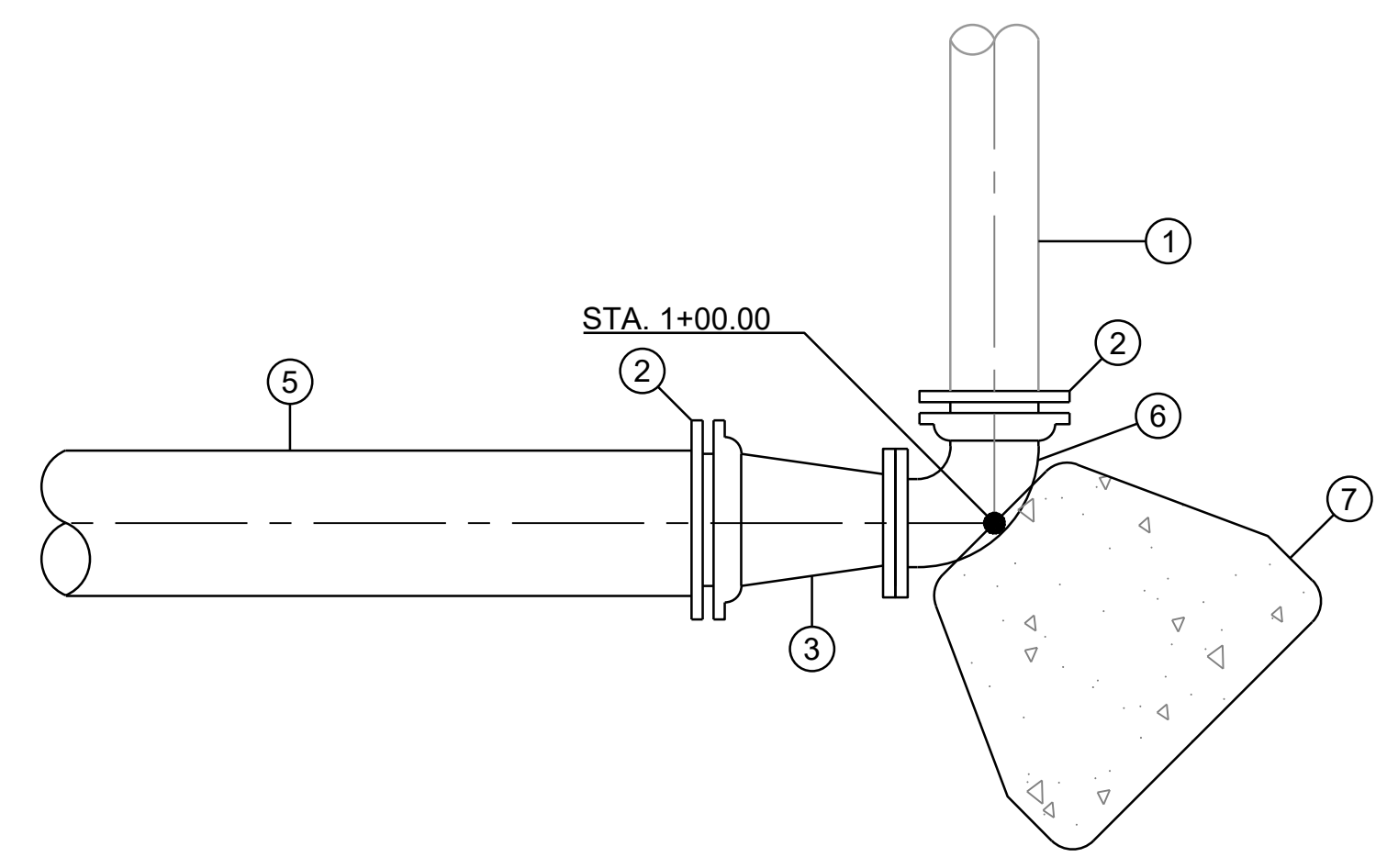
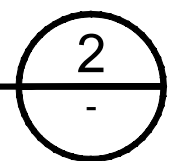


CONDITION 2
FIRE HYDRANT



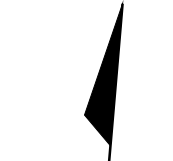
CONNECTION DETAIL - STA. 3+83.63

SCALE: 3/4" = 1'-0"



CONNECTION DETAIL - STA. 1+00.00

SCALE: 3/4" = 1'-0"



MATERIALS LIST:

- | TAG | DESCRIPTION |
|-----|--|
| ① | (E) 8"Ø DR18 C900 PVC PIPE |
| ② | MJ RESTRAINT, EBAA IRON 2000PV OR APPROVED EQUAL |
| ③ | 8"x12" DI REDUCER, FLGxMJ, RESTRAINED |
| ④ | 12" 11.25° DI ELBOW, FLGxMJ, RESTRAINED |
| ⑤ | 12"Ø DR18 C900 PVC PIPE |
| ⑥ | 8" 90° DI ELBOW, FLG xMJ, RESTRAINED |
| ⑦ | CONCRETE THRUST BLOCK PER THRUST BLOCK SHALL BE SIZED FOR 12" PIPE |

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CITY ENGINEER		ORIGINAL SIGNED DATE	

CAMBRIA COMMUNITY SERVICES DISTRICT
ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT
CIVIL DETAILS - 2

11-2021-06
PROJECT NO.

C-502
DWC NO.

SHT. 7 OF 11



John E. Hanlon, PE
DATE May 26, 2021

STRUCTURAL NOTES

GENERAL NOTES

- THE FOLLOWING NOTES, TYPICAL DETAILS AND SCHEDULES SHALL APPLY TO ALL PHASES OF THIS PROJECT UNLESS OTHERWISE SHOWN OR NOTED.
- SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE MINIMUM STANDARDS OF THE 2016 EDITION OF THE CALIFORNIA BUILDING CODE (CBC) AND SUCH OTHER REGULATING AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK. THE CONTRACTOR SHALL HAVE A CURRENT COPY OF THE CBC ON THE JOB SITE.
- THE "CONTRACT OR CONSTRUCTION DOCUMENTS" SHALL CONSIST OF THESE NOTES, DETAILS, SCHEDULES, PLANS, AND DRAWINGS, AS WELL AS ATTACHED SPECIFICATIONS.
- ALL SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO MATERIALS AND PRODUCTS, SHALL BE THOSE PUT FORTH IN THE "CONTRACT OR CONSTRUCTION DOCUMENTS". NO SUBSTITUTIONS SHALL BE PERMITTED TO BE USED OR ASSUMED TO BE USED IN THE BIDDING OR CONSTRUCTION PROCESS WITHOUT WRITTEN APPROVAL BY THE ENGINEER OF RECORD.
- THE CONTRACTOR SHALL EXAMINE THE "CONTRACT OR CONSTRUCTION DOCUMENTS" AND SHALL NOTIFY THE ARCHITECT OR ENGINEER OF RECORD OF ANY DISCREPANCIES HE MAY FIND BEFORE PROCEEDING WITH THE WORK.
- ALL INFORMATION ON EXISTING CONDITIONS SHOWN ON DRAWINGS ARE BASED ON PRESENT KNOWLEDGE AVAILABLE, BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY THE ARCHITECT OR ENGINEER OF RECORD OF ANY DISCREPANCIES BETWEEN ACTUAL SITE CONDITIONS AND INFORMATION SHOWN ON OR IN THE "CONTRACT OR CONSTRUCTION DOCUMENTS" BEFORE PROCEEDING WITH WORK.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD OF ANY CONDITION WHICH IN HIS OPINION MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS OF THE STRUCTURE.
- ALL WORK SHALL CONFORM TO THE BEST PRACTICE PREVAILING IN THE VARIOUS TRADES COMPRISING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES.
- THESE "CONTRACT OR CONSTRUCTION DOCUMENTS" REPRESENT THE FINISHED STRUCTURE, AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
- INSPECTION AND APPROVAL FOR FABRICATOR'S SHOPS USED FOR FABRICATION OF STRUCTURAL LOAD BEARING MEMBERS, COMPONENTS, MATERIALS OR ASSEMBLIES SHALL CONFORM TO CBC SECTION 1704.2.5.
 - LABELING (AS REQUIRED OR SPECIFIED) SHALL BE PROVIDED IN ACCORDANCE WITH CBC SECTION 1703.5.
 - EVALUATION AND FOLLOW-UP INSPECTION SERVICES (AS REQUIRED OR SPECIFIED), SHALL CONFORM TO CBC SECTION 1703.6.
- THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE DRAWINGS AND GENERAL NOTES.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND SHORING FOR ALL STRUCTURAL MEMBERS AS REQUIRED FOR STRUCTURAL STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE PROPER ALIGNMENT OF THE STRUCTURE AFTER THE INSTALLATION OF ALL STRUCTURAL AND FINISH MATERIALS. THIS SHALL INCLUDE ANY NECESSARY PRELOADING OF THE STRUCTURE TO DETERMINE FINAL POSITION OF THE COMPLETED WORK.
- OBSERVATION VISITS TO THE PROJECT SITE BY FIELD REPRESENTATIVES OF THE ENGINEER OF RECORD (SUPPORT SERVICES) SHALL NOT INCLUDE INSPECTIONS OF SAFETY OR PROTECTIVE MEASURES, NOR CONSTRUCTION PROCEDURES, TECHNIQUES OR METHODS. ANY SUPPORT SERVICES PERFORMED BY ENGINEER OF RECORD DURING ANY PHASE OF CONSTRUCTION, SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES (AS REQUIRED BY ANY REGULATING GOVERNMENTAL AGENCY, E.G. THE AUTHORITY HAVING JURISDICTION) PROVIDED BY OTHERS. THESE SUPPORT SERVICES, WHETHER OF MATERIAL OR WORK, ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DOCUMENTS, BUT DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
- PROVIDE OPENINGS AND SUPPORTS AS REQUIRED PER TYPICAL DETAILS AND NOTES FOR MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT, VENTS, DUCTS, PIPING, ETC. ALL MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT SHALL BE PROPERLY "SWAY BRACED" AGAINST LATERAL FORCES.
- THESE NOTES, DETAILS, DRAWINGS AND SPECIFICATIONS (CONTRACT OR CONSTRUCTION DOCUMENTS) DO NOT CARRY NECESSARY PROVISIONS FOR CONSTRUCTION SAFETY. THESE DOCUMENTS AND ALL PHASES OF CONSTRUCTION HEREBY CONTEMPLATED ARE TO BE GOVERNED, AT ALL TIMES, BY APPLICABLE PROVISIONS OF THE CURRENT CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT.
- WHERE ANY CONFLICT OCCURS BETWEEN THE REQUIREMENTS OF FEDERAL, STATE AND LOCAL LAWS, CODES, ORDINANCES, RULES AND REGULATIONS, THE MOST STRINGENT SHALL GOVERN.
- REFER TO THE ARCHITECTURAL DRAWINGS TO COORDINATE WITH STRUCTURAL DRAWINGS. ANY DISCREPANCY BETWEEN THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER OF RECORD FOR CLARIFICATION BEFORE START OF CONSTRUCTION.
- WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
- DRAWINGS (NOTES, SCHEDULES, DETAILS AND PLANS) SHALL HAVE PRECEDENCE OVER STRUCTURAL CALCULATIONS.
- IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE GENERAL NOTES OR SPECIFICATIONS, THEN THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR CALLED FOR.
- THE CONTRACTOR SHALL HAVE A COPY OF THE PROJECT SOILS INVESTIGATION ON THE JOB SITE.
- ASTM DESIGNATION AND ALL STANDARDS REFER TO THE LATEST AMENDMENTS.
- THESE STRUCTURAL "CONTRACT OR CONSTRUCTION DOCUMENTS" SHALL NOT BE MODIFIED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
- ONLY STRUCTURAL WORKING DRAWINGS APPROVED BY THE AUTHORITY HAVING JURISDICTION ARE PERMITTED TO BE USED FOR CONSTRUCTION ON THIS PROJECT. ALL OTHER DRAWINGS OR DOCUMENTS ARE OBSOLETE AND ARE NOT PERMITTED ON THE JOB SITE, NOR SHALL THEY BE USED FOR ANY CONSTRUCTION PURPOSES. CONTRACTORS USING UNAPPROVED DRAWINGS OR DOCUMENTS ARE SOLELY RESPONSIBLE FOR ALL WORK NOT PERFORMED IN ACCORDANCE WITH THE "APPROVED" DRAWINGS.

SHOP DRAWINGS AND CONTRACTOR SUBMITTAL REVIEW

- SHOP DRAWINGS OR CONTRACTOR SUBMITTALS SHOULD BE PROVIDED FOR THE FABRICATION (OR MIXING) OF THE FOLLOWING (BUT NOT LIMITED TO) COMPONENTS OR ELEMENTS.
 - STRUCTURAL STEEL
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCTION AND APPROVAL OF ALL SHOP DRAWINGS.
- WHEN THE CONTRACTOR SUBMITS SHOP DRAWINGS OR OTHER SUBMITTALS TO ARCHITECT/ENGINEER OF RECORD FOR REVIEW, SUBMITTAL PACKAGE SHALL CONTAIN SUFFICIENT COPIES THAT ARCHITECT/ENGINEER OF RECORD MAY RETAIN A COMPLETE COPY OF SUBMITTAL PACKAGE. IN ADDITION, THE CONTRACTOR SHALL ALLOW SUFFICIENT TIME TO THOROUGHLY REVIEW SUBMITTAL PACKAGE (10 WORKING DAYS, MINIMUM).
- REVIEW OF SHOP DRAWINGS OR CONTRACTOR SUBMITTAL BY ARCHITECT/ENGINEER OF RECORD DOES NOT IN ANY WAY CONSTITUTE APPROVAL OF SUBMITTAL PACKAGE. ARCHITECT/ENGINEER OF RECORD'S REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND CONTRACT DOCUMENTS. REVIEW SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE CONTRACT DOCUMENTS.

DEMOLITION NOTES

- SAFETY NOTE:
 - IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL O.S.H.A. REQUIREMENTS.
 - THE ARCHITECT, ENGINEER OF RECORD, AND THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS. FORMS SHALL ALSO BE ADEQUATELY BRACED AND SHORED.
- SHORE BEAMS WHERE NECESSARY TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE.
- NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING STRUCTURE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND LOCATION OF ALL SHORING.

FOUNDATIONS NOTES

- BASIS: SEE STRUCTURAL DESIGN VALUES CHART
- UNEXPECTED SOIL CONDITIONS: ALLOWABLE VALUES AND FOUNDATION DESIGN ARE BASED UPON SOIL CONDITIONS SHOWN BY TEST BORINGS. ACTUAL SOIL CONDITIONS WHICH DEVIATE APPRECIABLY FROM THAT SHOWN IN THE TEST BORINGS SHALL BE REPORTED TO THE PROJECT SOILS ENGINEER IMMEDIATELY.
- SEE PROJECT SOILS INVESTIGATION FOR COMPACTION, FILL, BACKFILLING, AND SITE PREPARATION REQUIREMENTS AND PROCEDURES.
- EXCAVATE TO REQUIRED DEPTHS AND DIMENSIONS (AS INDICATED IN DRAWINGS AND PROJECT SOILS INVESTIGATION), CUT SQUARE AND SMOOTH WITH FIRM LEVEL BOTTOMS. CARE SHALL BE TAKEN NOT TO OVER-EXCAVATE. FOUNDATION AT LOWER ELEVATION AND PREVENT DISTURBING OF SOILS AROUND HIGHER ELEVATION.
- FOOTINGS SHALL BE POURED IN NEAT EXCAVATIONS, WITHOUT SIDE FORMS WHENEVER POSSIBLE.
- CARRY ALL FOUNDATIONS TO REQUIRED DEPTHS INTO COMPACTED FILL OR NATURAL SOIL (AS PER STRUCTURAL PLANS AND DETAILS, AND PROJECT SOILS INVESTIGATION).
- FOUNDATIONS SHALL NOT BE POURED UNTIL ALL REQUIRED REINFORCING STEEL, SLEEVES, INSERTS, CONDUITS, PIPES, ETC. AND FORMWORK IS PROPERLY PLACED AND INSPECTED BY THE AUTHORITY HAVING JURISDICTION.
- ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY PROJECT SOILS ENGINEER, PRIOR TO FORMING AND PLACEMENT OF REINFORCING OR CONCRETE.
- THE SIDES AND BOTTOMS OF EXCAVATIONS WHICH ARE TO HAVE CONCRETE CONTACT MUST BE MOISTENED SEVERAL TIMES JUST PRIOR TO POURING UPON THEM.
- DE-WATER FOOTINGS, AS REQUIRED, TO MAINTAIN DRY WORKING CONDITIONS.

REINFORCING STEEL

- ALL REINFORCING STEEL SHALL BE DEFORMED INTERMEDIATE GRADE BARS CONFORMING TO ASTM A615, GRADE 60 (F_y = 60 KSI) UNLESS NOTED OTHERWISE.
 - GRADE 40 (F_y = 40 KSI) MAY BE USED FOR #3 BARS AND SMALLER.
- REINFORCING STEEL SHALL NOT BE WELDED, UNLESS SPECIFICALLY NOTED OTHERWISE.
- WELDING OF REINFORCING STEEL (WHERE SPECIFICALLY NOTED OR DETAILED) SHALL CONFORM TO ACI 318-14, SECTION 26.6.4 AND AWS D1.4. WELDED REBAR SHALL BE LOW-ALLOY STEEL CONFORMING TO ASTM A706.
- TO HOLD REINFORCING BARS IN THEIR TRUE POSITION AND PREVENT DISPLACEMENT, STANDARD TIE AND ANCHORAGE DEVICES MUST BE PROVIDED. PLACING OF REINFORCEMENT SHALL CONFORM TO ACI 318-14 SECTION 26.6.2.
- SHOP DRAWINGS FOR FABRICATION OF ANY REINFORCING STEEL SHALL BE APPROVED BY CONTRACTOR AND SUBMITTED TO ARCHITECT OR ENGINEER OF RECORD, FOR THEIR REVIEW, PRIOR TO FABRICATION.
- REFER TO TYPICAL DETAILS FOR MINIMUM SPLICE LENGTH AND MINIMUM RADIUS OF BEND OF REINFORCING STEEL.
- ALL REINFORCING STEEL SPLICES SHALL BE STAGGERED 24", UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE.
- ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- FABRICATION, ERECTION AND PLACEMENT OF REINFORCING STEEL SHALL CONFORM TO CONCRETE REINFORCING STEEL INSTITUTE OF STANDARD PRACTICE.
- ALL WELDED WIRE MESH SHALL CONFORM TO ASTM A185. LAP ALL WIRE MESH TWO MODULES.
- REINFORCING STEEL SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIAL LIKELY TO IMPAIR BOND.
- EPOXY-COATED REINFORCEMENT (WHERE SPECIFICALLY NOTED OR DETAILED) SHALL CONFORM TO ASTM A775.

CONCRETE

- ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH (F_c) AS OUTLINED BELOW AT 28 DAYS. ALL CONCRETE SHALL BE REGULAR WEIGHT (UNLESS SPECIFICALLY NOTED OTHERWISE).
 - CONCRETE FOR FOOTINGS AND SLAB ON GRADE: 3,000 PSI W/C = 0.45 MAX.
- MAXIMUM FLY ASH CONTENT SHALL BE 15%, BY WEIGHT, OF TOTAL CEMENTITIOUS MATERIALS AND SHALL CONFORM TO ASTM C618.
- ALL CONCRETE WORK SHALL COMPLY WITH CBC CHAPTER 19 AND ACI 318-14 AND LATEST EDITION OF ACI MANUAL OF CONCRETE PRACTICE.
- SPECIAL INSPECTION (AS REQUIRED OR SPECIFIED) SHALL CONFORM TO CBC CHAPTER 17.
- CEMENT SHALL BE PORTLAND CEMENT TYPE II/IV AND SHALL CONFORM TO ASTM C150.
- AGGREGATES SHALL CONFORM TO ASTM C33, PROVIDE AGGREGATES FROM A SINGLE SOURCE.
- WATER SHALL CONFORM TO ASTM C94 AND BE POTABLE.
- ALL SPLICES ARE TO BE CLASS B UNLESS SPECIFICALLY NOTED OTHERWISE.
- WHERE NOT SPECIFICALLY DETAILED, THE MINIMUM CONCRETE COVER ON REINFORCING STEEL SHALL BE:
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH OR WEATHER: 3"
 - CONCRETE PLACED AGAINST FORMS, BUT EXPOSED TO EARTH OR WEATHER: 2"
 - SLABS, WALL & JOISTS, NOT EXPOSED TO EARTH OR WEATHER: 7/8"
 - BEAMS, GIRDBERS & COLUMNS, NOT EXPOSED TO EARTH OR WEATHER: 1 1/2"
- REINFORCING BARS LARGER THAN #8 ARE NOT PERMITTED UNLESS SPECIFICALLY DETAILED OR NOTED OTHERWISE.
- LOCATION OF ALL CONSTRUCTION JOINTS, OTHER THAN SPECIFIED, SHALL BE APPROVED BY ARCHITECT/ENGINEER OF RECORD PRIOR TO POURING. CONSTRUCTION JOINTS SHALL BE THOROUGHLY AIR AND WATER CLEANED AND HEAVILY ROUGHENED SO AS TO EXPOSE COARSE AGGREGATES. ALL SURFACES TO RECEIVE CONCRETE SHALL BE MAINTAINED CONTINUOUSLY WET AT LEAST THREE HOURS IN ADVANCE OF POURING.
- ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, INSERTS AND ANY OTHER HARDWARE TO BE SET IN CONCRETE SHALL BE WELL SECURED IN POSITION PRIOR TO POURING OF CONCRETE.

CONCRETE(CONT.)

- THE CONTRACTOR SHALL OBTAIN APPROVAL FROM ARCHITECT/ENGINEER OF RECORD PRIOR TO PLACING SLEEVES, PIPES, DUCTS, CHASES, CORING AND OPENINGS ON OR THROUGH STRUCTURAL CONCRETE BEAMS, WALLS, FLOORS AND ROOF SLABS, UNLESS SPECIFICALLY DETAILED OR NOTED. ALL PIPES OR CONDUITS PASSING THROUGH CONCRETE MEMBERS SHALL BE SLEEVED WITH STANDARD STEEL PIPES. SEE TYPICAL DETAIL FOR PIPE THROUGH FOOTING.
- VIBRATE ALL CONCRETE (INCLUDING SLABS ON GRADE) AS IT IS PLACED, WITH A MECHANICAL VIBRATOR OPERATED BY EXPERIENCED PERSONNEL. THE VIBRATOR SHALL BE USED TO CONSOLIDATE THE CONCRETE, NOT TRANSPORT IT. REINFORCING AND FORMS SHALL NOT BE VIBRATED.
- FORMWORK DESIGN AND REMOVAL SHALL CONFORM TO ACI 318-14 SECTION 26.11. REMOVE FORMS IN ACCORDANCE WITH THE FOLLOWING MINIMUM SCHEDULE:
 - SIDE FORMS OF FOOTINGS: MINIMUM 48 HOURS
 - EDGE FORMS OF SLAB ON GRADE: MINIMUM 24 HOURS
 - WALL/RETAINING WALL FORMS: 72 HOURS & 70% OF DESIGN STRENGTH
 - COLUMN FORMS: 72 HOURS & 70% OF DESIGN STRENGTH
 - ELEVATED BEAMS AND SLABS: 14 DAYS & 80% OF DESIGN STRENGTH
- CONCRETE SHALL NOT FREE FALL MORE THAN SIX FEET. USE TREMIE, PUMP OR OTHER APPROVED METHODS.
- CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF 5 DAYS AFTER PLACEMENT.
- THE CONTRACTOR MAY USE CONCRETE ADMIXTURES AS A CONSTRUCTION MEANS AND METHODS TO EXECUTE "CONTRACT OR CONSTRUCTION DOCUMENTS". USE OF ADMIXTURE IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
- MIX DESIGNS SHALL BE PREPARED BY AN APPROVED TESTING LABORATORY, SIGNED BY A LICENSED ENGINEER AND SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL.
- ONLY ONE GRADE OF CONCRETE SHALL BE ALLOWED ON PROJECT SITE AT ANY ONE TIME
- UNLESS SPECIFICALLY DETAILED OR NOTED OTHERWISE, CONSTRUCTION AND CONTROL JOINTS SHALL BE PROVIDED IN ALL CONCRETE SLABS, AND SHALL BE LOCATED SUCH THAT THE AREA WITHIN JOINTS DOES NOT EXCEED 375 SQ. FT., AND IS ROUGHLY SQUARE.
 - FOR ALL STRUCTURAL SLABS (SUSPENDED OR ONGRADE) WHERE ARCHITECTURAL "EXPOSED" CONDITIONS ARE DESIRED, THE CONTRACTOR SHALL PROVIDE CONTROL JOINT LAYOUT FOR REVIEW BY ARCHITECT OR ENGINEER OF RECORD.
- EVERY OPENING (EXCEEDING 24" IN EITHER DIRECTION) SHALL HAVE A MINIMUM OF 2-#5 (U.N.O.) DIRECTLY ADJACENT TO ALL SIDES AS WELL AS TOP AND BOTTOM (UNLESS AT FOUNDATION). REINFORCING BARS SHALL EXTEND A MINIMUM OF 24" PAST EDGE OF OPENING.
- DOWEL ALL CONCRETE WALLS AND COLUMNS TO SUPPORTING CONCRETE WITH BARS OF THE SAME SIZE AND SPACING AS VERTICAL BARS IN WALL AND COLUMNS. DO NOT "HICKEY" BARS. ALL DOWELS SHALL BE VERTICAL.
- AT THE END, AS WELL AS TOP, OF WALLS SHALL BE A MINIMUM OF 2-#5 CONTINUOUS (U.N.O.).
- CONCRETE STRENGTH SHALL BE VERIFIED BY STANDARD CYLINDER TESTS (IN ACCORDANCE WITH CBC SECTION 1705.3) MADE BY AN APPROVED TESTING LABORATORY.
- CONCRETE PLACED WHEN THE AIR TEMPERATURE HAS FALLEN TO, OR IS EXPECTED TO FALL BELOW 40° SHALL CONFORM TO ACI 318-14 SECTION 26.5.4, AND ACI 306R-16.
- CONCRETE PLACED DURING HOT WEATHER SHALL CONFORM TO ACI 318-14 SECTION 26.5.5, AND ACI 305R-14.
- CONDUITS AND SLEEVES PLACED WITHIN STRUCTURAL CONCRETE SHALL NOT BE TIED DIRECTLY TO STRUCTURAL REINFORCEMENT.
 - 1" CONCRETE COVER SHALL BE MAINTAINED AROUND ALL REINFORCEMENT.

STRUCTURAL STEEL AND WELDING

- ALL STRUCTURAL STEEL CONSTRUCTION SHALL CONFORM TO AISC 360-10 AND AISC 341-10.
 - FABRICATION OF ALL STRUCTURAL STEEL SHALL BE DONE IN THE SHOP OF AN APPROVED FABRICATOR. INSPECTION AND APPROVAL FOR FABRICATOR'S SHOPS USED FOR FABRICATION OF STRUCTURAL LOAD BEARING MEMBERS, COMPONENTS, MATERIALS OR ASSEMBLIES SHALL CONFORM TO CBC SECTION 1704.2.5.
- ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
 - ANGLES, CHANNELS, PLATES, BARS, ROUNDS, AND OTHER MISCELLANEOUS SHAPES: SHALL CONFORM TO ASTM A588 AND SHALL HAVE A MINIMUM YIELD STRESS (F_y) OF 36 KSI.
- SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL STRUCTURAL STEEL AND WELDING, IN ACCORDANCE WITH CBC CHAPTER 17.
- ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED AND WELDED IN ACCORDANCE WITH AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS (AISC 360-10) AND CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES (AISC 303-10).
- ALL WELDING SHALL BE DONE BY QUALIFIED AND CERTIFIED WELDERS.
- NO FIELD WELDING PERMITTED, UNLESS SPECIFICALLY NOTED OTHERWISE.
- SHOP DRAWINGS FOR THE FABRICATION OF ANY STRUCTURAL STEEL SHALL BE APPROVED BY THE CONTRACTOR AND SUBMITTED TO ARCHITECT OR ENGINEER OF RECORD FOR THEIR REVIEW, PRIOR TO FABRICATION.
- NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. BURNING OF HOLES IS NOT PERMITTED.
- ALL STRUCTURAL STEEL SHALL BE PAINTED ONE SHOP COAT AND FIELD TOUCHED-UP, AS NECESSARY, WITH APPROVED "ZINC RICH" OR OTHER HIGH QUALITY EXTERIOR PRIMER.
- ALL BOLTS SHALL CONFORM TO ASTM, A307 (U.N.O.)
- ALL WELDING SHALL CONFORM TO 'AWS D1.1 AND D1.8' SPECIFICATIONS FOR WELDING. (E-70XX ELECTRODES).
- ALL HEADED STUDS (FOR CONCRETE ANCHORAGE) SHALL BE MANUFACTURED BY 'NELSON' OR APPROVED EQUAL.
- WHERE FILLET WELD SIZE IS NOT INDICATED, USE 'AWS' MINIMUM SIZE BASED ON THE THICKNESS OF THE THINNER PART BEING WELDED, AS SPECIFIED IN AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS (AISC 360-10), SECTION J2.2.
- ALL BUTT WELDS TO BE COMPLETE JOINT PENETRATION, UNLESS SPECIFICALLY NOTED OTHERWISE.
- WELDER QUALIFICATION REQUIREMENTS, WELDING PROCEDURE AND WELDING ELECTRODES FOR ALL STRUCTURAL STEEL (EXCEPT STRUCTURAL SHEET STEEL, SEE STEEL DECKING) SHALL CONFORM TO CBC SECTIONS 1705.2.1 AND 2204.1.
- PROVIDE HOT DIP GALVANIZING OR 3" MINIMUM CONCRETE COVER AROUND ALL STRUCTURAL STEEL BELOW GRADE.
- STRUCTURAL STEEL EMBEDDED INTO CONCRETE OR MASONRY SHALL BE UNPAINTED. ASTM A1852 BOLTS ARE AN ACCEPTABLE SUBSTITUTION FOR A325 BOLTS.

STRUCTURAL DESIGN VALUES

All values reported are unfactored and strength level, unless noted otherwise


Gravity Design Data		Value
Dead Loads:		
Bridge Dead Load		125 psf
Pipe Dead Load (Water Filled)		255 pif
Live Loads:		
Bridge Live Load		85 psf
Vehicle Live Load		10,000 lb
Snow Loads:		
Ground Snow Load, P _s		0 psf
Deflection Criteria:		
Roof, Total Load		L/240
Roof, Live Load		L/360
Floor, Total Load		L/240
Floor, Live Load		L/360
Wind Design Data		
Design Wind Speed (3-sec gust), V _{ULT}		110 mph
Design Wind Speed (3-sec gust), V _{ASD}		85 mph
Risk Category		I
Exposure Category		C
Applicable Internal Pressure Coefficient		± 0.18
Design Wind Pressure(s) for Components & Cladding (Not specifically designed by the Registered Design Professional, and to be modified by applicable factors per ASCE 7)		q _s = 24 psf
Earthquake Design Data		
Risk Category		I
Importance Factor, I _e		1.0
Mapped Spectral Response Accelerations		S ₁ = 1.578 g S _{0.1} = 0.595 g
Site Class		D
Spectral Response Coefficients		S _w = 1.052 g S _{0.1} = 0.595 g
Seismic Design Category		D

ABBREVIATIONS


A.B.	Anchor Bolt	IBC	International Building Code
ABV.	Above	ICC	International Code Council
ACI	American Concrete Institute	ID	Inside Diameter
ADD'L	Additional	IN.	Inch, Inches
ADI	Adjacent	INT.	Interior
AHI	Authority Having Jurisdiction		
AISC	American Institute of Steel Construction	ksi	Kips per Square Inch
APPROX.	Approximate(ly)	LL	Live Load
ASCE	American Society of Civil Engineers		
ASTM	American Society of Testing and Materials	MAX.	Maximum
ATR	All Thread Rod	MB	Mechanical Bolt
AWS	American Welding Society	MECH.	Mechanical
		MFR.	Manufactured, Manufacturer
		MIN.	Minimum
		MPH	Miles per Hour
		MTL.	Metal
BLDG.	Building		
B.O.	Bottom of _____		
BOT	Bottom		
BRG.	Bearing	(N)	New
b/t	Between	N.T.S.	Not to Scale
CAC	California Administrative Code	o.c.	On Center
CANT.	Cantilever	/o/	Over
CBC	California Building Code	OD	Outside Diameter
CIP	Cast-in-place	PEN.	Penetration
CJ	Control Joint	PL	Plate
CIP	Complete Joint Penetration	PJP	Partial Joint Penetration
CL	Centerline	psi	Pounds per Square Inch
CLR.	Clear	PSF	Pounds per Square Foot
COL	Column	PS	Perforated
CONC.	Concrete	PWF	Puddle Weld
CONN.	Connection		
CONT.	Construction		
CONT.	Continue, Continuous	Q.A.	Quality Assurance
CSK.	Countersink	Q.C.	Quality Control
Ø	Diameter		
DBL	Double	REBAR	Reinforcing Bar
DCW	Demand Critical Weld	REINF.	Reinforcement
DEM	Demolition	RET.	Retaining
DEMO	Demolition	REQ'D	Required
DIAG.	Diagonal		
DL	Dead Load	S.F.	Square Feet
DWGS.	Drawings	SHT.	Sheet
EA.	Each	SIM.	Similar
E.F.	Each Face	SMS	Sheet Metal Screw
ELEC.	Electric, Electrical	SQ.	Square
ELEV.	Elevation	STAGG'D	Staggered
EMBED.	Embedded, Embedment	STD.	Standard
EOR	Engineer of Record	STL.	Steel
EQ.	Equal	SEOR	Structural Engineer of Record
EQUIP.	Equipment	T&B	Top and bottom
E.W.	Each Way	THR'D	Threaded
(E)	Existing	T.O.	Top of _____
EXP.	Expansion	TRL.	Triple
EXT.	Exterior	TYP.	Typical
FAB.	Fabricated	U.N.O.	Unless Noted Otherwise
FDN.	Foundation		
F.F.	Finish floor	VERT.	Vertical
FLR.	Floor	VIF	Verify in Field
F.O.	Face of _____		
FRMG.	Framing	w/	With
FT.	Foot/Feet	w/c	Water/Cement Ratio
FTG.	Footing	WSS	Welded Steel Stud
		WT.	Weight
		WWM	Welded Wire Mesh
GA.	Gauge		
GALV.	Galvanized		
GEOR	Geotechnical Engineer of Record		
HD.	Holdown		
HORIZ.	Horizontal		
HSS	Hollow Steel Section		
HT.	Height		

SYMBOLS


	Concrete Footing
	Concrete Wall
	Elevation Reference
	Detail Number Reference Sheet Number Reference



**Know what's below.
Call before you dig.**



MICHAEL E. PAROLINI, S.E. 05.26.2021



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CAMBRIA COMMUNITY SERVICES DISTRICT

DESIGN APPROVED: JMK
DRAWN: JMK
CHECKED: JMK
DATE: _____

CITY ENGINEER: _____ ORIGINAL SIGNED DATE: _____

NO. _____

DATE APPROVED: _____

DATE DRAWN: _____

DATE CHECKED: _____

REVISIONS

CAMBRIA COMMUNITY SERVICES DISTRICT
ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT

STRUCTURAL NOTES

11-2021-06 PROJECT NO.
S-001 DWG. NO.
SHT. 8 OF 11

SPECIAL INSPECTION

GENERAL NOTES

- All Special Inspection shall be provided in accordance with CBC Section 1704 and 1705.
- Where Special Inspection is required, all inspection or testing shall be provided by an "approved agency" in accordance with CBC Section 1702.1, 1703.1 and 1704.1.
- Special Inspectors shall keep records of inspections. The Special Inspector shall furnish inspection reports to the Authority Having Jurisdiction, and to the Architect or Engineer of Record. Reports shall indicate that work inspected was done in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the Authority Having Jurisdiction and to the Architect or Engineer of Record prior to the completion of that phase of work. A final report documenting required Special Inspections and correction of any discrepancies noted in the inspections shall be submitted at a point in time agreed upon by the permit applicant and the Authority Having Jurisdiction prior to the start of work.
- Special Inspectors shall be approved by local Authority Having Jurisdiction in accordance with CBC Section 1704.2.1.
- Local Authority Having Jurisdictions may require Special Inspection for "Special Cases" in accordance with CBC Section 1705.1.1
- Contractor's responsibility: Each contractor responsible for the construction of a Main Lateral-Force-Resisting System, listed in the Statement of Special Inspection shall submit a written statement of responsibility to the Authority Having Jurisdiction and the owner prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain the following:
 - Acknowledgement of awareness of the special requirements contained in the statement of special inspections;
 - Acknowledgement that control will be exercised to obtain conformance with the construction documents approved by the Authority Having Jurisdiction;
 - Procedures for exercised control within the contractor's organization, the method and frequency of reporting and the distribution of the reports; and
 - Identification and qualifications of the person(s) exercising such control and their position(s) in the organization.
- Refer to Special Inspection requirements by other disciplines not included herein.

SPECIAL CASES

Verification and Inspection	Continuous	Periodic
Adhesive anchors (Epoxy)		
1. Inspection of anchors installed in hardened concrete. Installed in horizontally or upwardly inclined orientations to resist sustained tension loads. (Concrete shall be cured for a minimum of 21 days)	✓	
2. All other installations of adhesive anchors.		✓
Mechanical anchors		
1. Inspection of anchors installed in hardened concrete.		✓

STEEL CONSTRUCTION^{4b}

Verification and Inspection	Continuous	Periodic
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Required verification and inspection of steel construction

1. Material verification of structural steel, cold-formed steel deck, high-strength bolts, nuts and washers:		
a. For structural steel, identification markings to conform to AISC 360, or ASTM Standards specified in approved Construction Documents. Manufacturer's certificate of compliance required.		✓
2. Material verification of structural steel or cold-form steel deck:		
a. Identification markings to conform to ASTM standards specified in the approved construction documents.		✓
b. Manufacturer's certified test reports.		✓
3. Inspection of high-strength bolting:		
a. Snug-tight joints		✓
b. Pretensioned and slip-critical joints using turn-of-nut with matchmarking, twist off bolt or direct tension indicator methods of installation		✓
c. Pretensioned and slip-critical joints using turn-of-nut without matchmarking or calibrated wrench methods of installation	✓	
4. Material verification of weld filler materials:		
a. Identification markings to conform to AWS specification in the approved Construction Documents		✓
b. Manufacturer's certificate of compliance required		✓
5. Inspection of welding:		
a. Structural steel and cold formed steel deck:		
1) Complete and partial joint penetration groove welds	✓	
2) Multi-pass fillet welds	✓	
3) Single-pass fillet welds > 5/16"	✓	
4) Plug and slot welds	✓	
5) Single-pass fillet welds ≤ 5/16"		✓
6) Floor and roof deck welds ⁵		✓
b. Reinforcing steel: ⁶		
1) Verification of weldability of reinforcing steel other than ASTM A706.		✓
2) Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement.	✓	
3) Shear reinforcement	✓	
4) Other reinforcing steel		✓
6. Inspection of steel frame joint details for compliance:		
a. Details such as bracing and stiffening		✓
b. Member locations		✓
c. Application of joint details at each connection		✓
Inspection tasks prior to welding		
1. Welding procedure specifications (WSPs) available	✓	
2. Manufacturer certifications for welding consumables available	✓	
3. Material identification (type/grade)		✓
4. Welder identification system ⁶		✓
5. Fit-up of groove welds (including joint geometry) Joint preparation, dimensions, cleanliness, tacking, backing type and fit		✓
6. Configuration and finish of access holes		✓
7. Fit-up of fillet welds Dimensions, cleanliness, tacking		✓
8. Check welding equipment		
Inspection tasks during welding		
1. Use of qualified welders		✓
2. Control and handling of welding consumables Packaging, exposure control		✓
3. No welding over cracked tack welds		✓
4. Environmental conditions Wind speed within limits, precipitation and temperature		✓

STEEL CONSTRUCTION, CONTINUED

Verification and Inspection	Continuous	Periodic
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Inspection tasks during welding (Continued)

5. WPS followed Settings on welding equipment, travel speed, selected welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained min./max., proper position (F, V, H, OH)		✓
6. Welding techniques Interpass and final cleaning, each pass within profile limitations		✓
Inspection tasks after welding		
1. Welds cleaned		✓
2. Size, length and location of welds	✓	
3. Welds meet visual acceptance criteria Crack prohibition, weld/base-metal fusion, crater cross section, weld profiles, weld size, undercut, porosity	✓	
4. Arc strikes	✓	
5. k-Area ⁷	✓	
6. Backing removed and weld tabs removed (if required)	✓	
7. Repair activities	✓	
8. Document acceptance or rejection of welded joint or member	✓	
Inspection tasks prior to bolting⁸		
1. Manufacturer's certifications available for fastener materials	✓	
2. Fasteners marked in accordance with ASTM requirements		✓
3. Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)		✓
4. Proper bolting procedure selected for joint detail		✓
5. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements		✓
6. Pre-installation certification testing by installation personnel observed and documented for fastener assemblies and methods used		✓
7. Proper storage provided for bolts, nuts, washer and other fastener components		✓
Inspection tasks during bolting		
1. Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required		✓
2. Joint brought to the snug-tight condition prior to the pretensioning operation		✓
3. Fastener component not turned by the wrench prevented from rotating		✓
4. Fasteners are pretensioned in accordance with the RSCS specification, progressing systematically from the most rigid point toward the free edges, see Minimum Bolt Pretension table below		✓
Inspection tasks after bolting		
1. Document acceptance or rejection of bolted connections	✓	
Notes: Steel Construction		
a. CBC Section 1705.2 and Table 1705.2.2		
b. CBC Section 1707.11.1		
c. AWS D1.3		
d. AWS D1.4, ACI 318: Section 3.5.2		
e. The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low-stress type.		
f. When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 inches of the weld		
g. All methods of installation for high strength bolts shall require verification of pre-tension by a Skidmore-Welhelm calibrator for each batch or source of bolts used (see minimum pre-tension chart below).		
Minimum Bolt Pretension (kips)		
Bolt size, inches	Group A (A325, etc.)	Group B (A490, etc.)
1/2" Diameter	12	15
3/8" Diameter	19	24
1/2" Diameter	28	35
3/4" Diameter	39	49
1" Diameter	51	64
1 1/8" Diameter	56	80
1 1/4" Diameter	71	102
1 3/8" Diameter	85	121
1 1/2" Diameter	103	148



CAMBRIA COMMUNITY SERVICES DISTRICT

APPROVED: _____ DATE _____

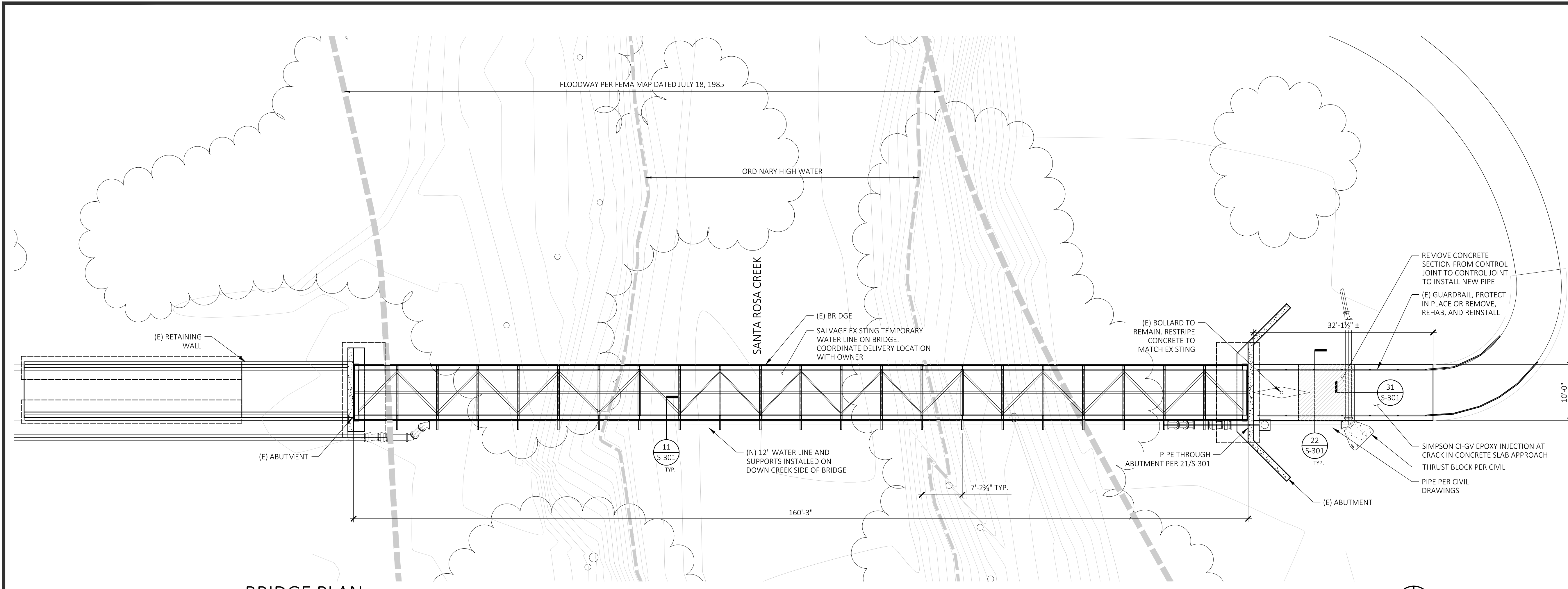
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NO.	DATE	APPROVED	DESIGN	DRAWN	CHECKED	MEP	REVISIONS

CAMBRIA COMMUNITY SERVICES DISTRICT
 ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT
SPECIAL INSPECTION

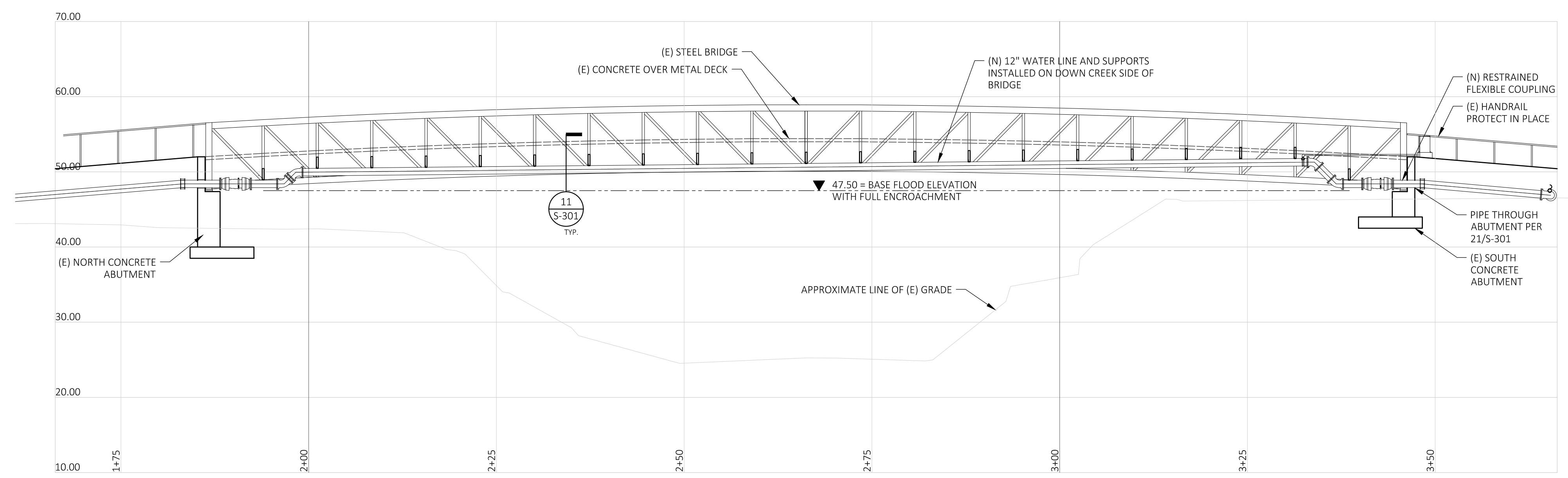
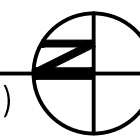
11-2021-06
PROJECT NO.
S-002
DWG. NO.





BRIDGE PLAN
SCALE: 1" = 10'-0"

(VERIFY ALL DIMENSIONS WITH EXISTING CONDITIONS)



BRIDGE ELEVATION
SCALE: 1" = 10'-0"

(VERIFY ALL DIMENSIONS WITH EXISTING CONDITIONS)

GENERAL BRIDGE AND PIPE NOTES:

1. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
2. VERIFY ALL EXISTING DIMENSIONS IN THE FIELD
3. PIPE HANGER ASSEMBLY SHALL BE GALVANIZED STEEL.
4. NO WORK SHALL OCCUR FROM THE CREEK.



CAMBRIA COMMUNITY SERVICES DISTRICT	
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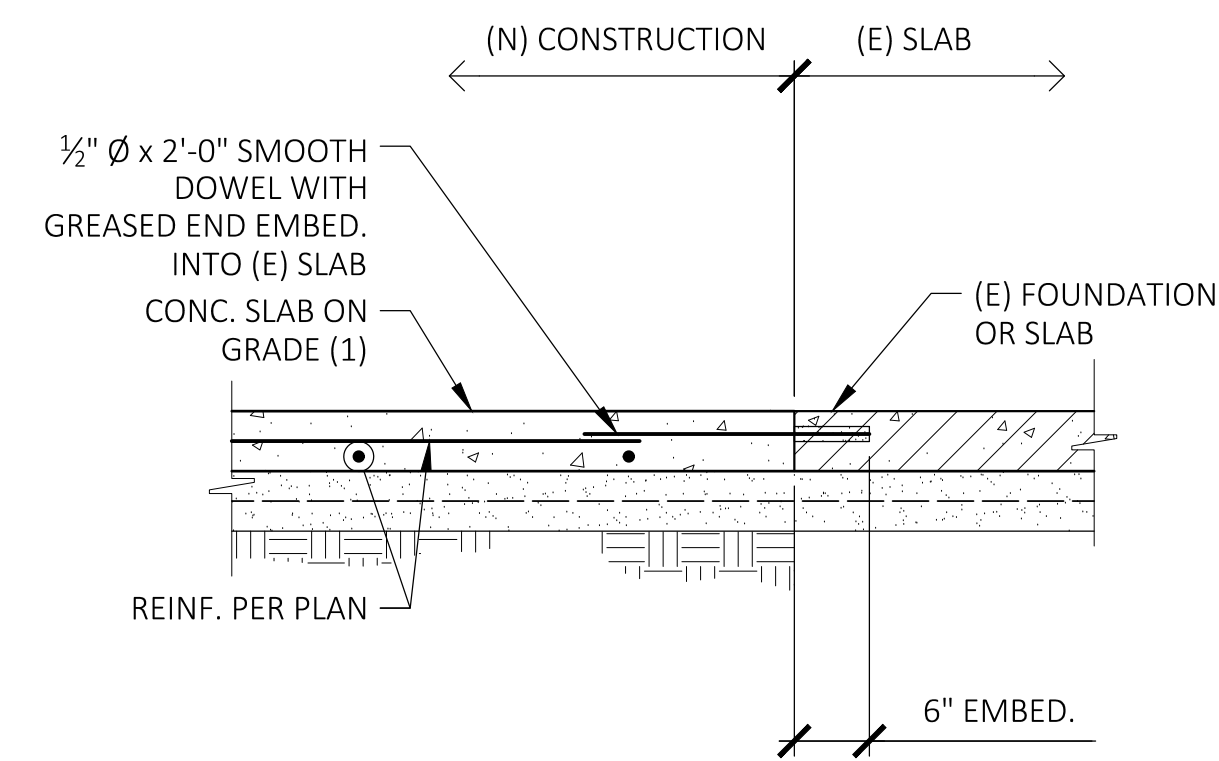
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CAMBRIA COMMUNITY SERVICES DISTRICT
ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT
PLAN AND ELEVATION

11-2021-06
PROJECT NO.
S-201
DWG. NO.



MICHAEL E. PAROLINI, S.E. 05.26.2021

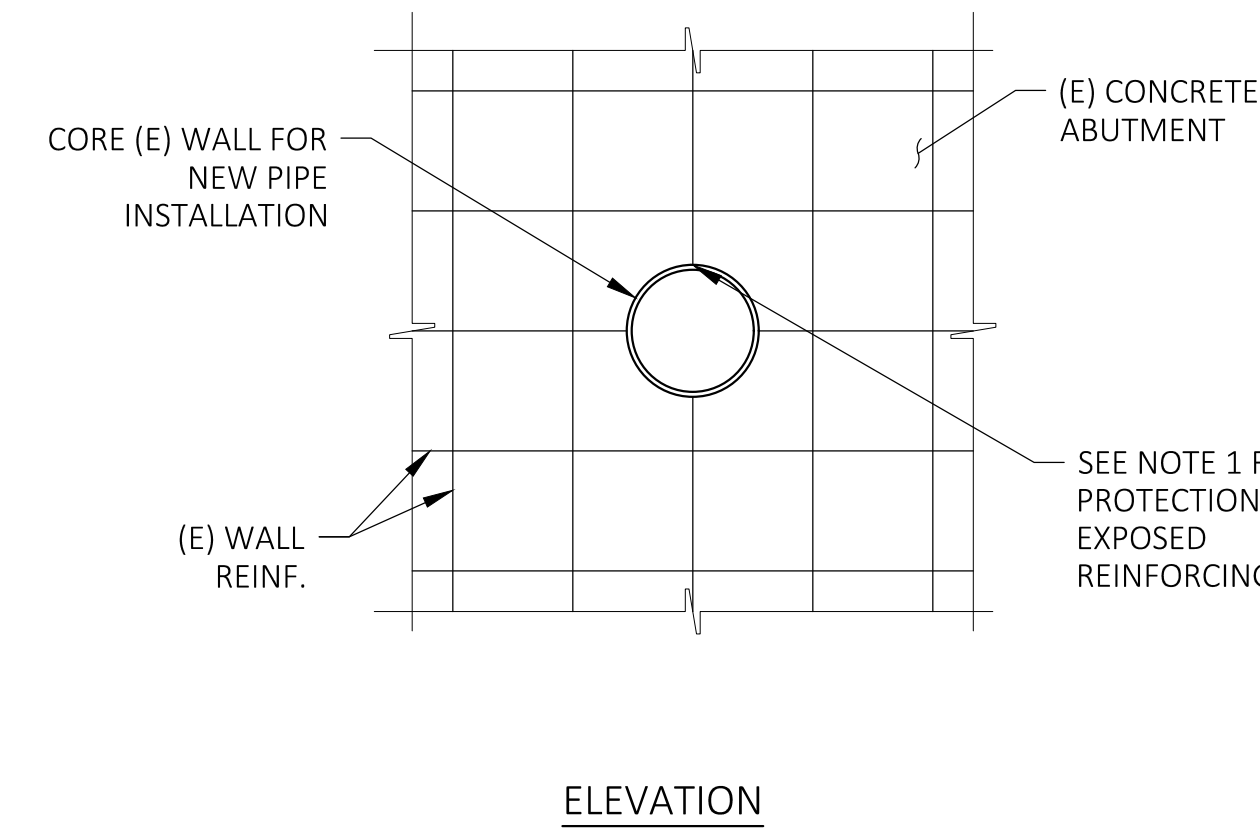


NOTES: (#)
1. SEE FOUNDATION PLAN AND NOTES

(N) SLAB AT (E) FDN.

N.T.S.

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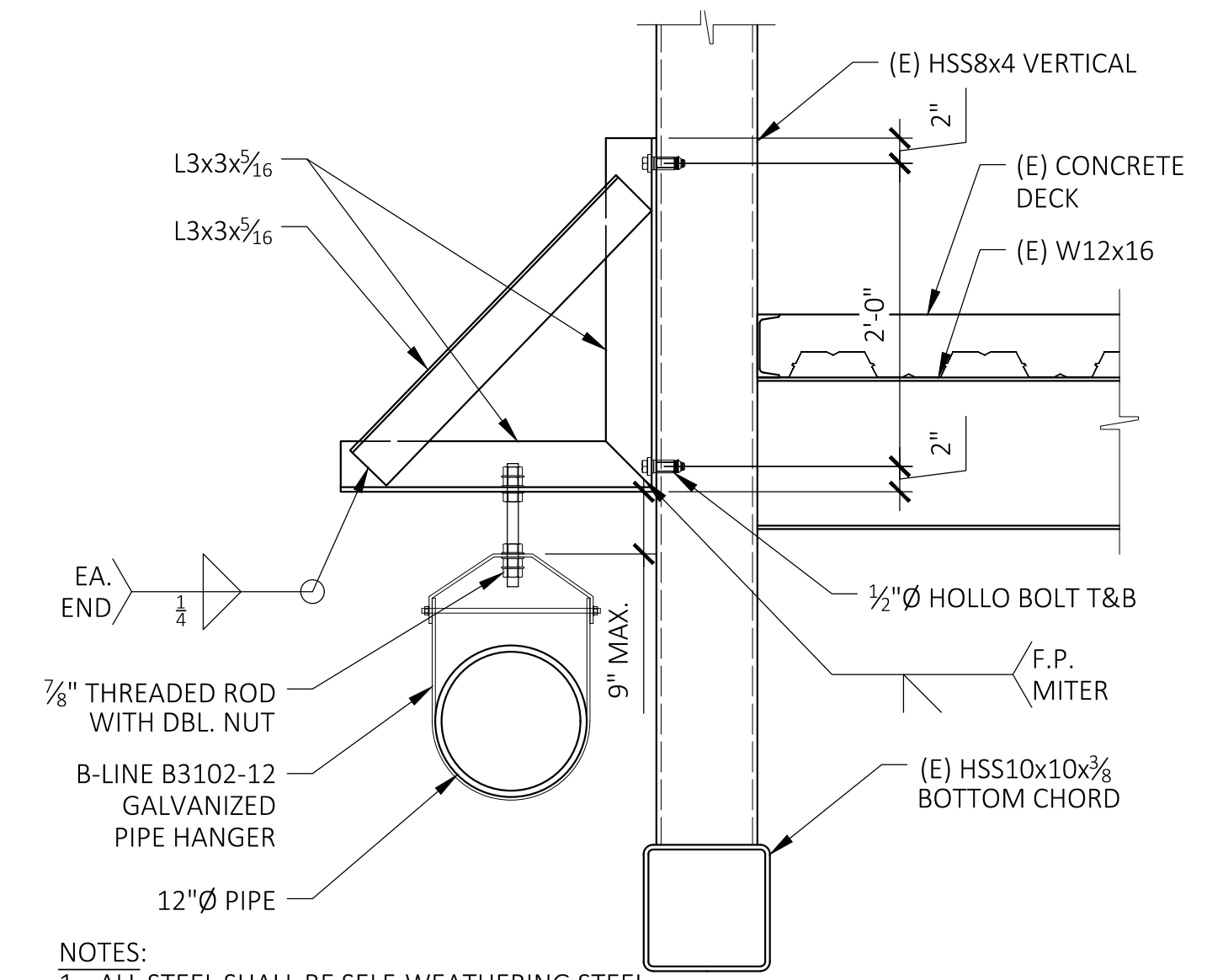


NOTES:
1. APPLY SIKATOP ARMATEC-110 EPOXEM TO ALL EXPOSED REINFORCEMENT AFTER OPENING HAS BEEN CORED

CORE IN CONCRETE

N.T.S.

21

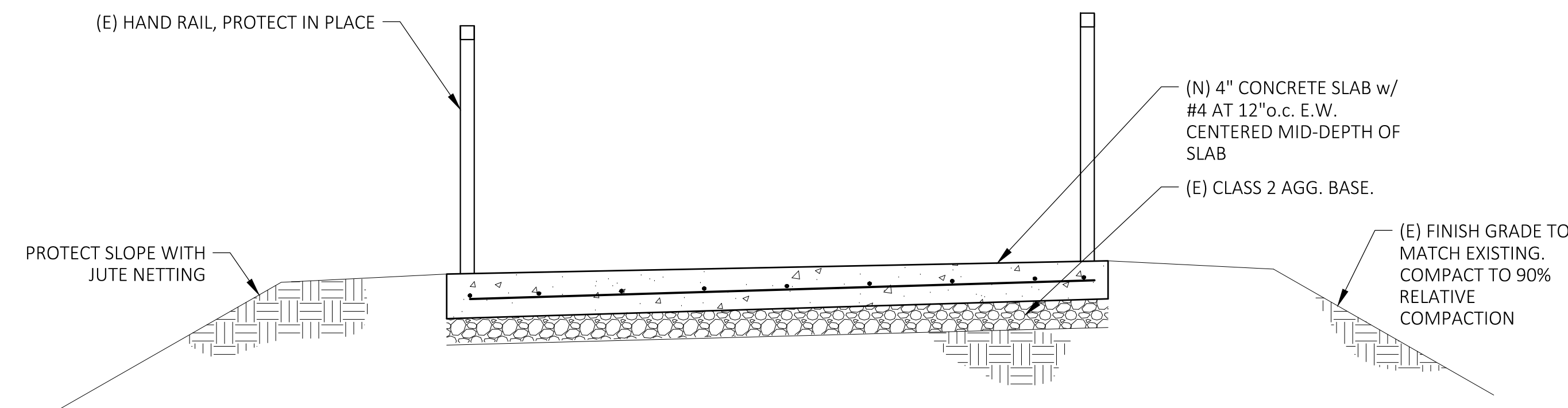


NOTES:
1. ALL STEEL SHALL BE SELF-WEATHERING STEEL

PIPE TO BRIDGE CONNECTION

N.T.S.

11



APPROACH SLAB SECTION

N.T.S.

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CAMBRIA COMMUNITY SERVICES DISTRICT
ZONE 2 TO ZONE 7 SANTA ROSA BRIDGE WATERLINE PROJECT
STRUCTURAL DETAILS

11-2021-06
PROJECT NO.

S-301
DWG. NO.

SHT. 11 OF 11

