

REHABILITATION OF
GRUPES RESERVOIR DAM

NID ID# CT00057 STATE ID# 9003
NEW CANAAN CONNECTICUT
FIRST TAXING DISTRICT OF THE CITY OF NORWALK WATER DEPARTMENT
CONTRACT NO. DWSRF RES 2023-02

OWNER/OPERATOR:

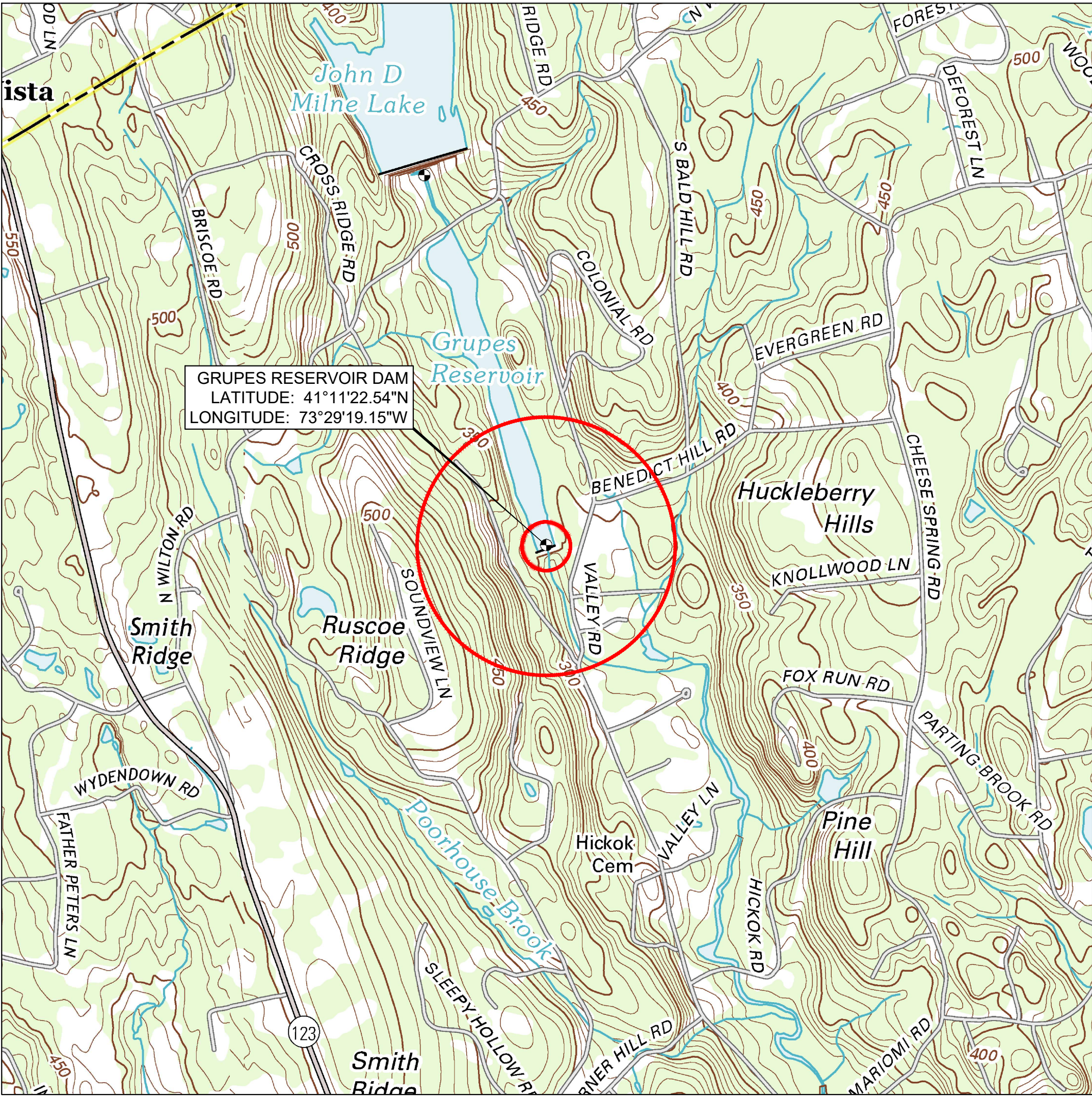


FIRST TAXING DISTRICT
OF THE CITY OF NORWALK,
WATER DEPARTMENT
12 NEW CANAAN AVENUE
NORWALK, CONNECTICUT 06851
(203) 847-7387

PROJECT ENGINEER:



GZA GEOENVIRONMENTAL, INC.
249 VANDERBILT AVENUE
NORWOOD, MA 02062





PROJECT SITE LOCUS PLAN

SOURCE: DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGS
NORTH AMERICAN VERTICAL DATUM OF 1988
CONTOUR INTERVAL 10 FEET
SHOWING 500 FOOT AND HALF-MILE RADII



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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT							
COVER SHEET AND INDEX OF DRAWINGS							
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GENERAL CONDITIONS:

1. THE CONTRACTOR SHALL VERIFY EXISTING DIMENSIONS, ELEVATIONS, AND BATHYMETRY (TO THE EXTENT NECESSARY) PRIOR TO THE START OF WORK.

2. LOCATIONS OF UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY, AND ARE NOT WARRANTED TO BE CORRECT. ALL EXISTING UTILITIES SHALL BE VERIFIED FOR SERVICE, SIZE, INVERT ELEVATION, LOCATIONS, ETC. PRIOR TO START OF ANY WORK IN THE GENERAL AREA. NOTIFY ENGINEER IN WRITING OF ANY AND ALL DISCREPANCIES PRIOR TO COMMENCING ANY WORK. CONTRACTOR MUST NOTIFY THE OWNER (DISTRICT) AND "CONNECTICUT CALL BEFORE YOU DIG" (DIAL 811, 1-800-922-4455, OR AT WWW.CBYD.COM) AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION.

3. THE CONTRACTOR'S ATTENTION IS CALLED TO THE PRESENCE OF OVERHEAD WIRES WITHIN AND AROUND THE PROPOSED WORK AREA. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID THE OVERHEAD WIRES AND UTILITIES WHILE PERFORMING THE WORK. ANY RE-LOCATION OF OVERHEAD WIRES SHALL BE COORDINATED WITH THE DISTRICT AND THE APPROPRIATE UTILITY OWNER.

4. TEMPORARY BENCH MARKS AND STATION PK NAILS AND/OR STAKE/TACKS WILL BE SET BY THE CONTRACTOR'S SURVEYOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINDING, VERIFYING, AND RE-SETTING (IF NECESSARY) CONTROL BENCHMARKS NECESSARY FOR THE WORK OF THE CONTRACT.

5. THE RESPONSIBILITY FOR SAFETY IN, ON, OR ABOUT THE JOBSITE SHALL BE THAT OF THE CONSTRUCTION CONTRACTOR. THESE DRAWINGS DO NOT INCLUDE COMPONENTS WHICH MAY BE NECESSARY FOR CONSTRUCTION SAFETY.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL DURING THE WORK OF THE CONTRACT. TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE, AT MINIMUM, AS REQUIRED BY THE PROJECT PLANS, SPECIFICATIONS, AND PERMIT CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL MEASURES NECESSARY FOR THE PREVENTION OF SEDIMENT DISCHARGE OR EROSION AT THE SITE. SEE DWG. G6 FOR TEMPORARY SEDIMENT AND EROSION CONTROL NOTES.

7. SPECIFIC AREAS HAVE BEEN DESIGNATED AND DELINEATED ON THE PLANS AS POTENTIAL CONTRACTOR STAGING AREAS. THE CONTRACTOR SHALL SUBMIT A DETAILED LAYOUT PLAN TO THE DISTRICT FOR APPROVAL. THE PLAN SHALL ACCOUNT FOR ALL SITE PARKING, TRAILERS, EQUIPMENT, MATERIAL HANDLING STORAGE AND SANITARY PROVISIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY SIGNAGE, FENCING, SAFETY, SEDIMENT/EROSION CONTROL, IMPROVEMENTS, RESTORATIONS ETC. IN THESE AREAS. AREA WITHIN THE LIMITS OF THE WORK MAY BE USED FOR TEMPORARY STORAGE, HAUL ROADS, PARKING, ETC.; HOWEVER, NO ADDITIONAL CONSIDERATION OR PAYMENT WILL BE MADE FOR WORK NECESSARY TO RE-GRADE SUCH AREAS OR RELOCATE ANY MATERIALS OR EQUIPMENT TEMPORARILY STORED WITHIN THE LIMITS OF THE WORK.

8. IF THE CONTRACTOR REQUIRES AND IDENTIFIES ADDITIONAL STAGING AREAS ON THE DISTRICT'S PROPERTY, THE CONTRACTOR SHALL MAKE A WRITTEN REQUEST TO THE DISTRICT AND ENGINEER DESCRIBING THE NEED AND LOCATION OF THE PROPOSED AREA. NO GUARANTEE IS MADE THAT ADDITIONAL LAY-DOWN AREAS WILL BE MADE AVAILABLE.

9. NO CONCRETE, MORTAR, FUELS, OILS, OR SOLVENTS ARE TO BE DISCHARGED INTO STREAM OR RESERVOIR. ALL EQUIPMENT AND TOOLS SHALL BE CLEANED AND/OR RE-FUELED IN A DIKE AREA AS FAR AWAY FROM THE RESERVOIR OR STREAM AS PRACTICABLE.

10. THE CONTRACTOR AND HIS SUBCONTRACTORS SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION, EXCEPT WHERE SPECIFICALLY DETAILED IN THE PLANS AND SPECIFICATIONS. LIKEWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEQUENCE OF THE WORK, EXCEPT WHERE SPECIFICALLY DETAILED IN THE PLANS AND SPECIFICATIONS. SEE SHEET G1 FOR ANTICIPATED CONSTRUCTION SEQUENCE NOTES.

11. THE CONTRACTOR IS SPECIFICALLY INFORMED THAT THE RESTORATION REQUIREMENT APPLIES TO ALL AREAS DISTURBED AS A RESULT OF THE PROJECT. THE CONTRACTOR SHALL RESTORE AREAS DISTURBED BY CONSTRUCTION AS PER THE PLANS AND SPECIFICATIONS. WHERE NO SPECIFIC INSTRUCTION IS GIVEN, RESTORATION SHALL BE TO THE ORIGINAL CONDITION AND AT NO ADDITIONAL COST TO THE DISTRICT.

12. IN THE EVENT OF THE DISCOVERY OF THE PRESENCE OF AN ENDANGERED PLANT OR ANIMAL IN THE WORK AREA OR STAGING AREAS, ALL WORK IN THE IMMEDIATE AREA OF THE FIND SHALL STOP AND THE DISTRICT AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY. WORK IN THE IMMEDIATE AREA SHALL BE DISCONTINUED UNTIL CLEARANCE IS GRANTED BY THE DISTRICT.

13. IN THE EVENT OF THE DISCOVERY OF A PREVIOUSLY UNKNOWN ARCHEOLOGICAL SITE, POTENTIAL CULTURAL ARTIFACTS OR RESOURCES, OR ANY OTHER UNUSUAL ITEMS OR CONDITIONS, ALL WORK IN THE IMMEDIATE AREA OF THE FIND SHALL STOP AND THE DISTRICT AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY. WORK IN THE IMMEDIATE AREA SHALL BE DISCONTINUED UNTIL CLEARANCE IS GRANTED BY THE DISTRICT.

14. IN ACCORDANCE WITH CTDEEP DAM SAFETY PERMIT DS-201814638, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO SUBSTANTIALLY COMPLETE THE WORK OF THIS CONTRACT PRIOR TO NOVEMBER 1, 2024. THE CONTRACTOR SHALL NOTIFY THE DISTRICT PRIOR TO SEPTEMBER 6, 2024 IF AN EXTENSION OF TIME FOR COMPLETION IS ANTICIPATED TO BE NECESSARY. IT SHOULD BE NOTED THAT THERE IS NO GUARANTEE THAT AN EXTENSION WILL BE GRANTED BEYOND NOVEMBER 1, 2024.
7. THE LOCATIONS OF UTILITIES OR OTHER UNDERGROUND MAN-MADE FEATURES WERE ASCERTAINED WITH REASONABLE CARE AND RECORDED IN GOOD FAITH FROM VARIOUS SOURCES, INCLUDING THE RECORDS OF MUNICIPAL AND OTHER PUBLIC SERVICE CORPORATIONS, AND THEREFOR THE LOCATION OF KNOWN UTILITIES MAY ONLY BE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXISTENCE AND LOCATION OF ALL SUBSURFACE UTILITIES, LINES, CABLES AND PIPES THAT MAY AFFECT PERFORMANCE OF THE WORK.

8. PRIOR TO THE COMMENCEMENT OF WORK, THE ENGINEER AND THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE THE EXTENT OF CLEARING AND GRUBBING AND THE SPECIFIC LOCATIONS IN WHICH TREE PROTECTION IS REQUIRED.

9. THE CONTRACTOR SHALL USE EVERY PRECAUTION NECESSARY AND PERFORM THE WORK TO PREVENT DAMAGE, INJURY, POLLUTION OR DESTRUCTION; SHALL PROTECT ALL TREES AND OTHER WOODY PLANTS WHICH ARE TO REMAIN. SHALL TAKE SPECIAL CARE TO TO PROTECT ALL NATURAL VEGETATION AND SURROUNDINGS; SHALL STORE MATERIALS IN SUCH A MANNER AS TO PREVENT LEACHING WHICH WOULD BE INJURIOUS TO SOILS AND PLANTS; AND SHALL REPAIR ALL DAMAGE TO WOODY PLANTS WHICH ARE TO REMAIN BY APPROVED HORTICULTURAL METHODS.

10. SITE RESTORATION TO FOLLOW LOCAL ORDINANCES.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GUARDING AND PROTECTING OPEN AND UNATTENDED EXCAVATIONS AND OTHER POTENTIALLY HAZARDOUS LOCATIONS IN AND ADJACENT TO AREA LAWFULLY FREQUENTED BY ANY PERSON. SUCH GUARDING AND PROTECTION SHALL CONSIST OF ANY ONE, OR A COMBINATION OF THE FOLLOWING:

A. A SUBSTANTIAL FENCE OR BARRICADE, NOT LESS THAN FOUR (4) FEET IN HEIGHT AND MOUNTED ON SATISFACTORY SUPPORTS SPACED AT INTERVALS OF NOT MORE THAN TEN (10) FEET. WARNING SIGNS READING "DANGER KEEP OUT" SHALL BE MOUNTED ON THE FENCE OR BARRICADE, AS REQUIRED BY THE ENGINEER, AT NO MORE THAN ONE HUNDRED (100) FOOT INTERVALS. THE SIGNS SHALL BE 16"x24" WITH FIVE (5) INCH BLACK LETTERS ON A WHITE BACKGROUND. ALL FENCES, BARRICADES AND WARNING SIGNS SHALL BE FURNISHED, ERECTED, RELOCATED, MAINTAINED AND REMOVED AS REQUIRED.

B. FORTY-EIGHT (48) INCH EXTENSION OF THE TRENCH SHEETING ABOVE THE GROUND SURFACE ADJACENT TO THE EXCAVATION.

C. A SUBSTANTIAL COVERING OVER THE EXCAVATION. WHERE IT IS POSSIBLE THAT VEHICLES WOULD MOVE OVER SUCH COVERING, THE COVERING SHALL BE OF SUFFICIENT STRENGTH TO WITHSTAND THE LOADING.

12. ROCK EXCAVATION, BOULDERS AND SURPLUS EXCAVATED MATERIAL, WHICH, IN THE OPINION OF THE ENGINEER, CANNOT BE USED AS BACKFILL SHALL BE USED IN OTHER PORTIONS OF THE WORK AS DIRECTED BY THE ENGINEER OR IF NOT SO DIRECTED SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AT A DISPOSAL SITE SUPPLIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DISTRICT.

13. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 4-1/2" (54") UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.

14. ALL NEW WATER MAIN FITTINGS SHALL BE RESTRAINED, AS SPECIFIED, IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS SHOWN ON THE CONTRACT DOCUMENTS.

15. THRUST BLOCKS AND RESTRAINED JOINTS WILL BE REQUIRED FOR ALL FITTINGS AND HYDRANTS. SEE DETAILS FOR THRUST BLOCK REQUIREMENTS AND RESTRAINED JOINT LENGTHS.

16. THE CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH THE HYDROSTATIC TESTING PROCEDURES CONTAINED WITHIN ITEM 700, WATER MAINS AND APPURTENANCES.

17. UNLESS OTHERWISE SPECIFIED, WHERE WATER MAINS ARE TO BE ABANDONED, THE CONTRACTOR SHALL REMOVE ALL VALVES, HYDRANTS, VALVE BOXES, AND COVERS OFF MAINS AND SHALL SEAL ALL ENDS OF MAINS. IN ADDITION, CONCRETE AND OTHER STRUCTURES SHALL BE REMOVED, SHALL BE BROKEN DOWN TO A DEPTH OF FOUR (4) FEET BELOW GRADE, SHALL HAVE BOTTOM SLAB BROKEN UP IN SUCH A MANNER AS TO PREVENT WATER FROM BEING TRAPPED, AND SHALL HAVE THE ENTIRE OPENING FILLED IN AND COMPACTED IN ACCORDANCE WITH THE PROVISIONS OF ITEM 205, TRENCH EXCAVATION AND BACKFILL AND AS DIRECTED BY THE ENGINEER. UNLESS SPECIFIC ITEMS ARE PROVIDED FOR IN THE BID PROPOSAL, THE COST OF THIS WORK SHALL BE DEEMED INCLUDED IN THE PRICES BID FOR ALL ITEMS OF WORK.

18. THE CONTRACTOR SHALL SECURELY COVER ALL NEW HYDRANTS NOT YET ACTIVATED AND EXISTING HYDRANTS WHOSE WATER SUPPLY HAS BEEN TURNED OFF WITH A BRIGHTLY COLORED, WEATHER RESISTIVE COVER, SUPPLIED BY THE DISTRICT, THAT BEARS THE STENCILED WARNING: "HYDRANT OUT OF SERVICE". THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER TO ENSURE THAT THE LOCAL FIRE DEPARTMENT IS INFORMED OF THE INOPERABLE HYDRANTS. THIS BAG SHALL BE MAINTAINED UNTIL THE HYDRANT IS ACTIVATED OR REMOVED.

19. THE CONTRACTOR SHALL ADJUST ALL VALVE BOXES AND FIRE HYDRANTS TO THE FINAL FINISH GRADE, THE COST OF THIS WORK SHALL BE DEEMED INCLUDED IN THE PRICES BID FOR ALL ITEMS OF WORK.

20. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE DISTRICT FOR A WATER OUTAGE DURING CONSTRUCTION AT LEAST 48 HOURS PRIOR TO THE OUTAGE.

5. THE RESERVOIR LEVEL IS REGULATED VIA THE OUTLET WORKS, AND BY DIVERSION OF OUTFLOW FROM MILNE RESERVOIR LOCATED UPSTREAM, WHICH DISCHARGES TO GRUPES RESERVOIR. THE RESERVOIR WATER LEVELS AND STREAM FLOWS TYPICALLY FLUCTUATE IN RESPONSE TO BASEFLOW AND/OR RAINFALL EVENTS. AT THE CONTRACTOR'S REQUEST, THE DISTRICT WILL ATTEMPT TO REGULATE THE LEVEL OF GRUPES RESERVOIR TO THE EXTENT POSSIBLE, HOWEVER, THE DISTRICT MAKES NO GUARANTEE REGARDING THE RESERVOIR WATER SURFACE ELEVATIONS OR INFLOWS FLOWS AT THE START OF OR AT ANY TIME DURING THE PROJECT.

6. ANY TEMPORARY PUMPS UTILIZED AT THE SITE MUST BE PROPERLY BAFFLED AGAINST EXCESSIVE NOISE. PUMPS OR GENERATORS WHICH UTILIZE LIQUID FUEL MUST BE PLACED WITHIN AN IMPERMEABLE SECONDARY CONTAINMENT AREA WITH SUFFICIENT CAPACITY TO CONTAIN THE FULL VOLUME OF THE FUEL TANK.

7. PUMP OR SIPHON INTAKES, IF USED, SHALL BE PLACED SUCH THAT SEDIMENT AND DEBRIS ENTRAINMENT IS MINIMIZED.

8. WATER PUMPED FROM EXCAVATIONS MUST BE PASSED THROUGH A SEDIMENTATION TANK OR OTHER SUCH BEST MANAGEMENT PRACTICE (BMP) FEATURE PRIOR TO BEING DISCHARGED BACK TO A SURFACE WATER BODY.

9. FOLLOWING TREATMENT IN AN APPROPRIATE BMP, WATER PUMPED FROM EXCAVATIONS SHOULD GENERALLY BE DISCHARGED SUCH THAT IT ENTERS THE BROOK, RATHER THAN BACK INTO THE WORK AREA.

10. THE DISCHARGE AREA FOR THE PUMP OR SIPHON OUTLET MUST BE PROPERLY PROTECTED TO PREVENT EROSION BY HIGH VELOCITY FLOW.

11. DISCHARGE FLOW VELOCITY FROM PUMPS OR SIPHONS OVER UNPROTECTED, VEGETATED GROUND MUST NOT EXCEED A MAXIMUM OF 1 FOOT PER SECOND. DISCHARGE FLOW VELOCITY FROM PUMPS OR SIPHONS WITHIN UNPROTECTED PORTIONS OF THE SPILLWAY DISCHARGE CHANNEL SHALL NOT EXCEED A MAXIMUM 3 FEET PER SECOND. IN THE EVENT EROSION RESULTS FROM VELOCITIES OF THESE MAGNITUDES, THE CONTRACTOR SHALL TAKE STEPS TO MITIGATE THE EROSION OR SHALL REDUCE DISCHARGE FLOW VELOCITY.

12. THOUGH NOT ANTICIPATED TO PERFORM THE REHABILITATION WORK, THE CONTRACTOR MAY ELECT TO INSTALL A TEMPORARY COFFERDAM DURING CONSTRUCTION OF THE PROPOSED IMPROVEMENTS ALONG GRUPES RESERVOIR OR THE DOWNSTREAM CHANNEL. PER SECTION 01565, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, MAINTENANCE, AND REMOVAL OF ANY WATER CONTROL SYSTEM USED. THE CONTRACTOR'S WATER CONTROL METHODS SHALL INCLUDED PROVISIONS FOR EMERGENCY EVACUATION OF THE WORK AREA IN THE EVENT OF SIGNIFICANT FLOODING. THE TEMPORARY COFFERDAM MAY BE CONSTRUCTED OF SAND BAGS, EITHER STANDARD SIZE OR LARGE SIZE "SUPER SACKS", A STEEL FRAME, CONCRETE BLOCKS, CONCRETE JERSEY BARRIERS, OR OTHER SIMILAR STRUCTURAL ELEMENTS COMBINED WITH AN IMPERMEABLE MEMBRANE OR FACING. THE ALIGNMENT OF THE COFFERDAM SHALL BE DETERMINED BY THE CONTRACTOR; HOWEVER, THE COFFERDAM SHALL NOT EXTEND BEYOND THE PROJECT BOUNDARY AS SHOWN ON THE PLANS. THE ACTUAL ALIGNMENT OF THE COFFERDAM MAY BE VARIED TO ACCOMMODATE ACTUAL CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR INVESTIGATING AND VERIFYING RESERVOIR BOTTOM CONDITIONS PRIOR TO SELECTION OF COFFERDAM TYPE AND INSTALLATION.

ANTICIPATED CONSTRUCTION SEQUENCE:

THE INTENT OF THIS ANTICIPATED CONSTRUCTION SEQUENCE IS TO PROVIDE GUIDANCE TO THE CONTRACTOR TOWARDS MEETING THE TERMS AND CONDITIONS OF ENVIRONMENTAL PROTECTION PERMITS AND BEST MANAGEMENT PRACTICES AND THEREFORE IS NOT CONSIDERED COMPLETE. IT IS RECOGNIZED AND EXPECTED THAT ONE OR MORE ITEMS WILL BE PERFORMED CONCURRENTLY. CERTAIN ASPECTS OF THIS ANTICIPATED CONSTRUCTION SEQUENCE MAY BE ALTERED BY THE CONTRACTOR WITH APPROVAL FROM THE DISTRICT OR ENGINEER, EXCEPT AS REQUIRED BY PERMIT CONDITIONS AND SPECIFIC INSTRUCTIONS CONTAINED IN THE SPECIFICATIONS.

1. DEVELOP PROJECT SCHEDULE, PREPARE SWPPP, APPLY FOR ANY NECESSARY ADDITIONAL PERMITS (E.G., CONSTRUCTION GENERAL PERMIT), AND BEGIN PREPARATION OF SUBMITTALS PRIOR TO START OF WORK AT SITE.

2. MOBILIZE ALL NECESSARY EQUIPMENT, PERSONNEL, AND MATERIAL TO THE SITE AND DEPLOY TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES, INCLUDING PERIMETER SILT FENCE BARRIERS, COMPOST SOCKS, CONSTRUCTION ENTRANCES, AND OTHER BMPS. NOTIFY THE DISTRICT, ENGINEER, AND PERMITTING/REGULATORY AGENCIES, IF REQUIRED, SCHEDULE AND CONDUCT SITE WALK TO INSPECT SEDIMENT AND EROSION CONTROL MEASURES.

3. MODIFY SEDIMENT AND EROSION CONTROL MEASURES AS REQUIRED. WORK MAY PROCEED ONCE APPROVAL HAS BEEN PROVIDED BY THE DISTRICT, ENGINEER, AND PERMITTING/REGULATORY AGENCIES.

4. CLEAR AND GRUB STAGING AREAS AND PROVIDE CONSTRUCTION ACCESS TO THE SITE. PROVIDE TEMPORARY FACILITIES AS DESCRIBED IN THE CONTRACT DOCUMENTS.

5. CLEAR AND GRUB WORK AREAS ALONG EAST SIDE OF GRUPES RESERVOIR.

6. IN CONJUNCTION WITH THE DISTRICT, LOWER THE LEVEL OF GRUPES RESERVOIR IN ORDER TO PERFORM REPAIRS TO THE DAM AND ANCILLARY STRUCTURES IN THE DRY (TO THE

- EXTENT PRACTICABLE). LOWERING OF GRUPES RESERVOIR SHALL NOT EXCEED 18 MONTHS AND ONE GROWING SEASON (APRIL THROUGH SEPTEMBER).

7. RE-LOCATE OVERHEAD WIRES AND/OR UNDERGROUND UTILITIES AS NECESSARY AND AS DESCRIBED IN THE CONTRACT DOCUMENTS. INSTALL NEW ELECTRICAL SERVICE AS SHOWN.

8. CONSTRUCT NEW WATER MAIN AS DESCRIBED IN THE CONTRACT DOCUMENTS PRIOR TO OR IN CONJUNCTION WITH BERM AND WALL CONSTRUCTION.

9. CONSTRUCT PARAPET/RETAINING WALLS ALONG EAST SIDE OF GRUPES RESERVOIR (MAY REQUIRE LOWERED RESERVOIR LEVELS IN SOME AREAS).

10. CONSTRUCT EARTHEN EMBANKMENT ALONG EAST SIDE OF GRUPES RESERVOIR, AND RE-GRADE EXISTING HIGH GROUND AND ACCESS ROAD AS SHOWN ON THE DRAWINGS.

11. DEMOLISH EXISTING STONE MASONRY WALL IN AREA OF PROPOSED CAST-IN-PLACE TRAINING/RETAINING WALL. REPAIR REMAINDER OF STONE MASONRY AT THE DAM ABUTMENT, TO REMAIN. (WILL REQUIRE LOWERED RESERVOIR LEVEL TO COMPLETE).

12. CONSTRUCT CAST-IN-PLACE TRAINING/RETAINING WALL. (MAY REQUIRE LOWERED RESERVOIR LEVELS IN SOME AREAS).

13. REMOVE VALVE WITHIN EXISTING 30-INCH CHAMBER INLINE WITH GATEHOUSE AND REPLACE WITH SOLID SECTION OF PIPE. ABANDON CHAMBER BY BACKFILLING WITH GROUT OR CLSM. (WILL REQUIRE LOWERED RESERVOIR LEVEL TO COMPLETE).

14. ABANDON 16-INCH VALVE CHAMBER BY BACKFILLING WITH GROUT OR CLSM. (WILL REQUIRE LOWERED RESERVOIR LEVEL TO COMPLETE).

15. CONSTRUCT CAST IN PLACE CONCRETE CAP ON TOP OF DAM. (MAY REQUIRE LOWERED RESERVOIR LEVEL TO COMPLETE).

16. CONSTRUCT NEW CAST IN PLACE RETAINING WALL, STAIRS, AND EARTHEN EMBANKMENT AT LEFT ABUTMENT.

17. DEMOLISH EXISTING STAIRS AT RIGHT ABUTMENT.

18. REMOVE AND REPLACE EXISTING BRIDGE OVER SPILLWAY AND CATWALK TO GATEHOUSE.

19. RE-POINT DOWNSTREAM FACE OF DAM.

20. INSTALL POST-TENSIONED ANCHORS ALONG TOP OF DAM.

21. CONSTRUCT EARTHEN BERM AT RIGHT DAM ABUTMENT.

22. CONSTRUCT AUXILIARY SPILLWAY INVERT SILL AT RIGHT DAM ABUTMENT. (MAY REQUIRE LOWERED RESERVOIR LEVEL TO COMPLETE).

23. REMOVE LOOSE BOULDERS AND TREES FROM AUXILIARY SPILLWAY CHANNEL, AND RE-GRADE CHANNEL SIDE SLOPES AS NECESSARY.

24. DEMOLISH EXISTING AUXILIARY SPILLWAY CHANNEL CROSSING AND INSTALL NEW ARTICULATED BLOCK CROSSING.

25. DEMOLISH EXISTING CHLORINATION BUILDING FOUNDATION TO 4" BELOW GRADE AND BACKFILL.

26. RE-LINE LOW-LEVEL OUTLET PIPE TO GATEHOUSE. (WILL REQUIRE LOWERED RESERVOIR LEVEL TO COMPLETE).

27. RAISE GATEHOUSE FLOOR AND RE-CONSTRUCT GATEHOUSE (MAY REQUIRE LOWERED RESERVOIR LEVEL TO COMPLETE).

28. REPLACE OPERATORS AND GATES WITHIN GATEHOUSE. (WILL REQUIRE LOWERED RESERVOIR LEVEL TO COMPLETE).

29. LOAM AND SEED RE-WORKED AREAS AS NOTED ON THE CONTRACT DOCUMENTS. RESTORE ALL DISTURBED AREAS; COVER OR MULCH NEWLY-SEEDED AREAS.

30. MAKE ALL MISCELLANEOUS SITE RESTORATIONS TO STAGING AREAS, FENCING, UTILITIES, PAVEMENT, OR OTHER FACILITIES CAUSED AS A RESULT OF THE WORK AND/OR MOBILIZATION/DEMOBILIZATION.

31. DEMOBILIZE FROM THE JOB SITE; REMOVE ALL TEMPORARY STRUCTURES, TRASH, DEBRIS, AND OTHER MATERIAL FROM THE SITE. REMOVE TEMPORARY SEDIMENT AND EROSION CONTROLS WHERE APPROPRIATE. NOTIFY THE DISTRICT, ENGINEER, AND PERMITTING/REGULATORY AGENCIES OF FINAL STABILIZATION. SCHEDULE AND CONDUCT SITE WALK TO INSPECT SITE, IF NECESSARY.

32. PROVIDE ONGOING MAINTENANCE AND MONITORING OF NEWLY-VEGETATED AND RESTORED AREAS PER THE CONTRACT DOCUMENTS.

WATER MAIN GENERAL NOTES:

1. THE CONTRACTOR SHALL PERFORM ALL LAYOUT WORK NECESSARY FOR THE SATISFACTORY EXECUTION OF THE CONSTRUCTION SHOWN ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL EMPLOY COMPETENT PERSONNEL AND ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THIS SHALL INCLUDE BUT SHALL NOT BE LIMITED TO STAKEOUT, LAYOUT AND ELEVATIONS FOR THE WATER MAINS AND APPURTENANCES AS SHOWN AND REQUIRED CONSISTENT WITH THE CURRENT PRACTICES OF THE DISTRICT.

2. THE STAKEOUT SURVEY SHALL PROCEED IMMEDIATELY FOLLOWING THE AWARD OF THE CONTRACT AND SHALL BE EXPEDITIOUSLY PROGRESSED TO COMPLETION IN A MANNER AND AT A RATE SATISFACTORY TO THE ENGINEER. THE CONTRACTOR SHALL KEEP THE ENGINEER FULLY INFORMED AS TO THE PROGRESS OF THE STAKEOUT SURVEY.

3. THE LOCATION OF NEW VALVES AND FIRE HYDRANTS ON THE CONTRACT DRAWINGS ARE APPROXIMATE. PRIOR TO THE START OF INSTALLATION OF NEW VALVES AND FIRE HYDRANTS, THE EXACT FIELD LOCATION SHALL BE APPROVED BY THE ENGINEER.

4. ALL TEST PITS ON THE CONTRACT DRAWINGS AND THOSE DIRECTED BY THE ENGINEER MUST BE COMPLETED AFTER THE STAKE OUT BUT BEFORE THE START OF WORK.

5. THE CONTRACTOR SHALL EXCAVATE TEST PITS AS REQUIRED TO LOCATE EXISTING WATER MAINS AT LOCATIONS WHERE NEW WATER MAINS ARE TO BE CONNECTED; DETERMINE EXACT LOCATION AND SIZE OF EXISTING WATER MAINS AT INTERSECTIONS AND VERIFY ALL UTILITY INFORMATION NEEDED, AND AT LOCATIONS DIRECTED BY THE ENGINEER.

6. BORINGS, ROCK PROBES, AND TEST PITS ARE SHOWN ON THE DRAWINGS. REFER TO AVAILABLE LOGS PROVIDED IN CONTRACT DOCUMENTS.



WATER CONTROL NOTES:

1. TEMPORARY WATER CONTROL (BOTH SURFACE AND GROUNDWATER) BY THE CONTRACTOR SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 01565 OF THE SPECIFICATIONS. AT THE CONTRACTOR'S REQUEST, THE DISTRICT WILL ATTEMPT TO REGULATE THE LEVEL OF GRUPES RESERVOIR TO THE EXTENT POSSIBLE AS PART OF THE WATER CONTROL PLANS IN ORDER TO MINIMIZE FLOWS THROUGH THE WORK AREA.

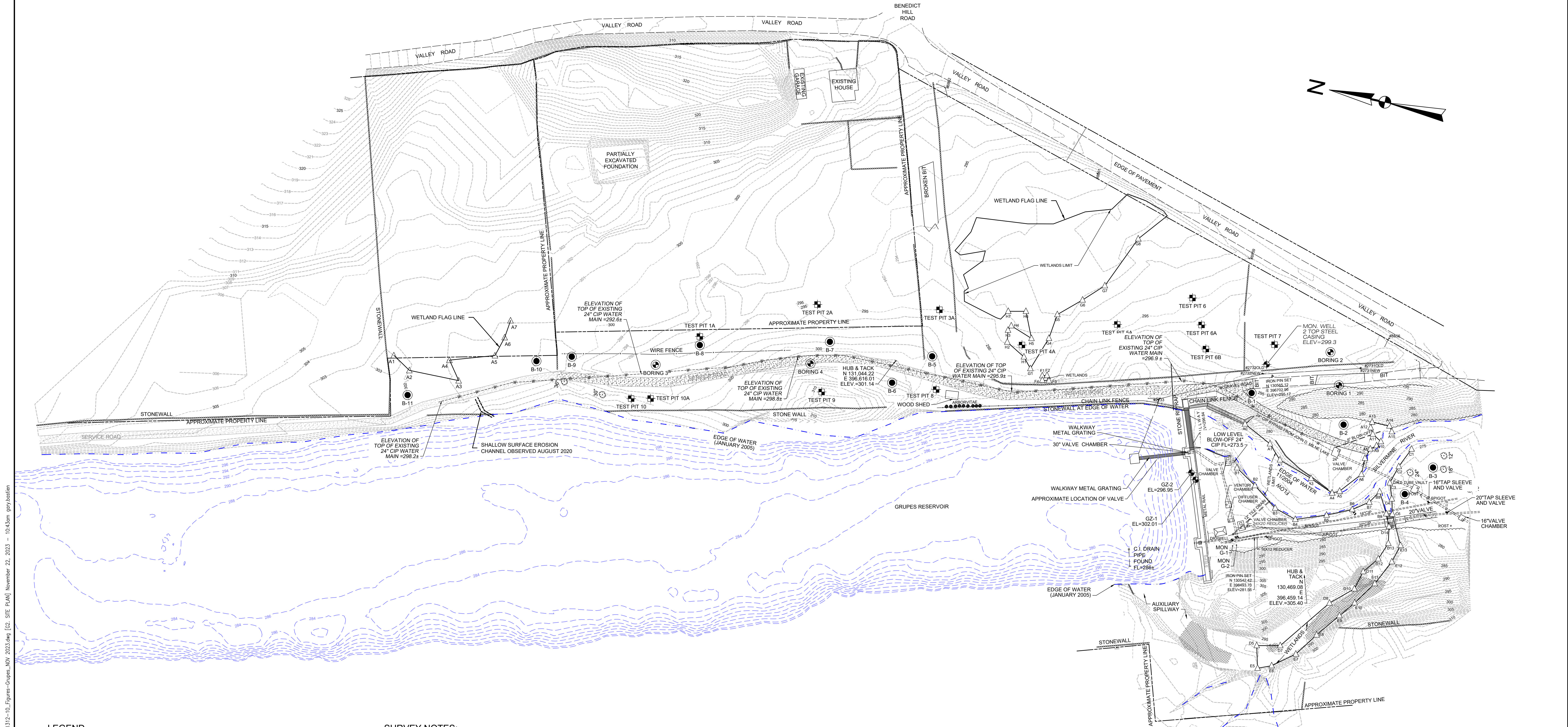
2. IT IS ANTICIPATED THAT FULL OR PARTIAL DRAWDOWN OF THE RESERVOIR WILL BE ALLOWED FROM NOVEMBER THROUGH MAY. IT IS ALSO ANTICIPATED THAT DRAWDOWN MAY NOT BE POSSIBLE FROM JUNE THROUGH OCTOBER. ACTUAL DRAWDOWN PERIODS WILL BE DICTATED BY DISTRICT OPERATIONAL REQUIREMENTS AND PERMITTING/REGULATORY AGENCIES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY WATER CONTROL, SURFACE WATER AND GROUNDWATER NECESSARY TO EXECUTE AND COMPLETE THE WORK OF THE CONTRACT SUBJECT TO THE RESTRICTIONS CONTAINED IN THE CONTRACT AND PROJECT PERMITS. ANY CONTROLS SHOWN IN THE CONTRACT DRAWINGS AND/OR MENTIONED IN THE TECHNICAL SPECIFICATIONS SHALL BE CONSIDERED MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL EMPLOY WHATEVER SUPPLEMENTARY MEASURES NECESSARY TO PROTECT THE SITE AND THE WORKS.

4. ALL TEMPORARY WATER CONTROL MEASURES SHALL BE IMPLEMENTED IN CONJUNCTION WITH APPROPRIATE SEDIMENT AND EROSION CONTROL MEASURES SO AS TO MITIGATE TO THE GREATEST EXTENT POSSIBLE RELEASE OF SEDIMENT INTO WATER BODIES AND POTENTIAL EROSION OF SOIL.

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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT				
GENERAL NOTES				
PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com			PREPARED FOR:  FIRST TAXING DISTRICT OF THE CITY OF NORWALK WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	DRAWING G1 SHEET NO. 2 OF 49	
DESIGNED BY: JGD	DRAWN BY: ADP/SMW/GRB	SCALE: N.T.S.		
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO.		





LEGEND

- TEST BORING PERFORMED BY SOIL TESTING, INC. AUGUST 2016
- ⊕ TEST PIT PERFORMED BY GEI CONSULTANTS, AUGUST 2008
- ⊙ TEST BORING PERFORMED BY GEI CONSULTANTS, MARCH 2006
- ⊕ TEST BORING WITH VIBRATING WIRE PIEZOMETERS PERFORMED BY GZA GEOENVIRONMENTAL, JULY 2012.
- 5 FOOT MAJOR CONTOUR (SEE NOTE 1)
- 1 FOOT MINOR CONTOUR (SEE NOTE 1)
- 2-FOOT BATHYMETRIC CONTOUR (SEE NOTE 4)
- APPROXIMATE PROPERTY BOUNDARY (SEE NOTE 2)
- EDGE OF PAVEMENT
- EDGE OF WATER
- CHAIN LINK FENCE
- WIRE FENCE
- EXISTING WATER MAIN
- EDGE OF BORDERING VEGETATIVE WETLAND (SEE NOTE 6)
- EXPOSED BEDROCK
- GRAVEL ROAD

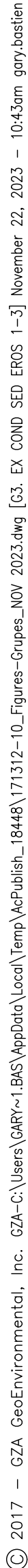
SURVEY NOTES:

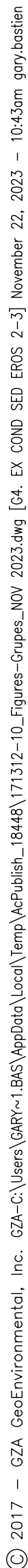
- ELEVATIONS ARE REFERENCED TO NGVD29. HORIZONTAL DATUM IS REFERENCED TO NAD27(CTGS 3330417)
- THE BASE MAP WAS DEVELOPED FROM ELECTRONIC FILES PROVIDED BY WILLIAM BRIAN HEARN, L.S. ENTITLED "TOPOGRAPHIC SURVEY GRUPES RESERVOIR DAM NEW CANAAN, CT" DATED: JANUARY 2005, ORIGINAL SCALE: 1" = 20', CAD FILE: GRUPES06.DWG AND BY CR ENVIRONMENTAL INC. ENTITLED "BATHYMETRIC CONTOUR MAP GRUPES RESERVOIR NEW CANAAN, CT" DATED: 04-22-2002, ORIGINAL SCALE: 1" = 40 METERS, PDF FILE: GRUPES BATHYMETRY.PDF
- THE LOCATION AND ELEVATION OF THE SELECTED SITE FEATURES WERE DETERMINED BY SURVEY. THE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
- BATHYMETRY OBTAINED FROM ELECTRONIC FILE FROM CR ENVIRONMENTAL, INC., SURVEYED DATED 4/22/2002 - HORIZONTAL GRID: UTM ZONE 18, NAD 83, METERS; VERTICAL REFERENCE: NGVD 29, FEET
- TOP OF WATER MAIN ELEVATIONS PROVIDED AS PART OF THE 2005 HEARN SURVEY.
- WETLANDS DELINEATED BY A GZA SOIL SCIENTIST ON SEPT. 16, 2012, AND CONFIRMED IN AUGUST 2014 AND AGAIN IN AUGUST 2020. WETLAND FLAGS SHOWN HEREON WERE LOCATED BY SURVEY.



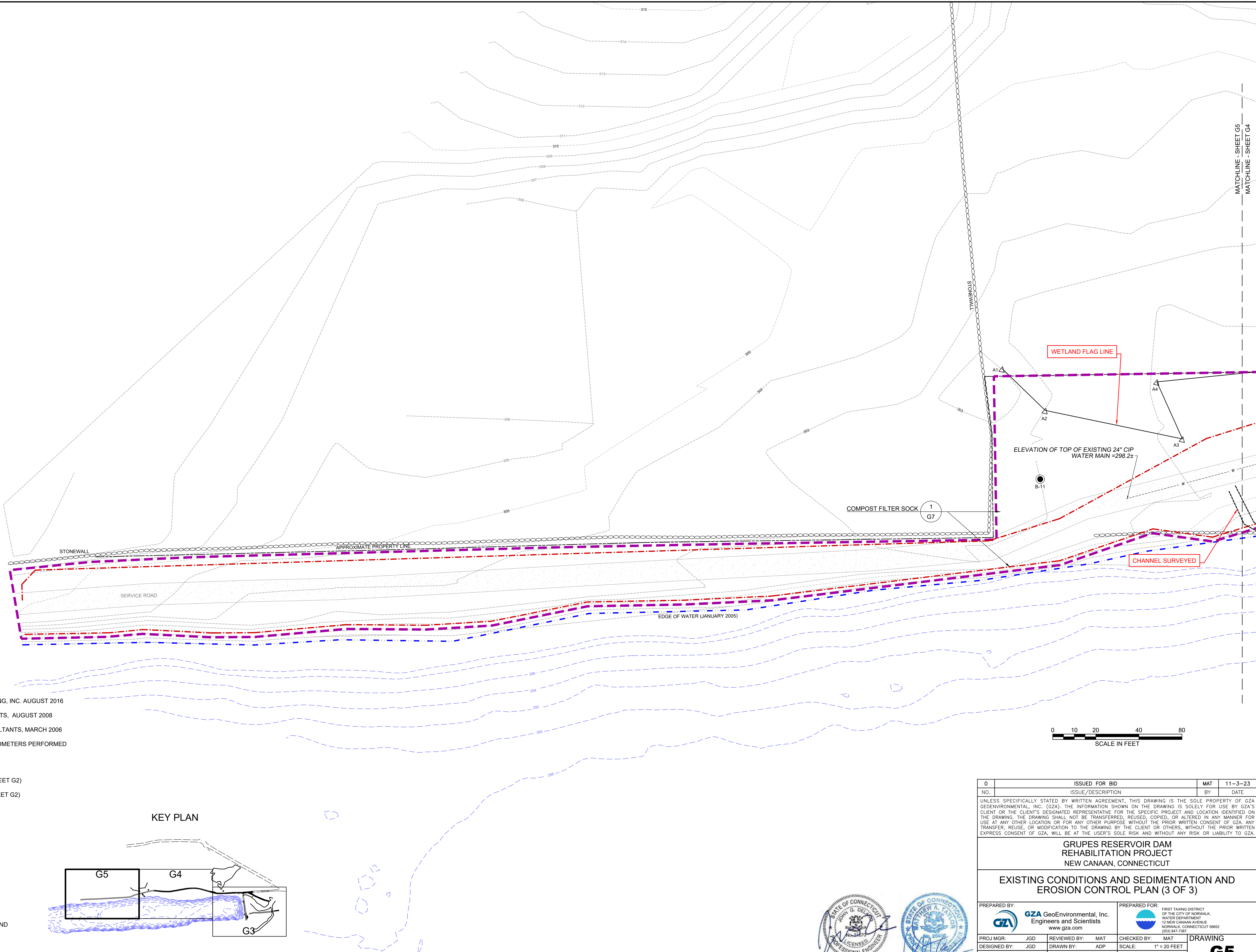
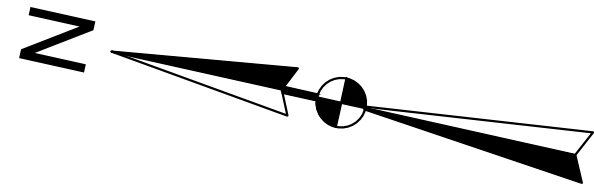
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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
EXISTING CONDITIONS SITE PLAN			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387
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		DRAWING	G2
		SHEET NO.	3 OF 49







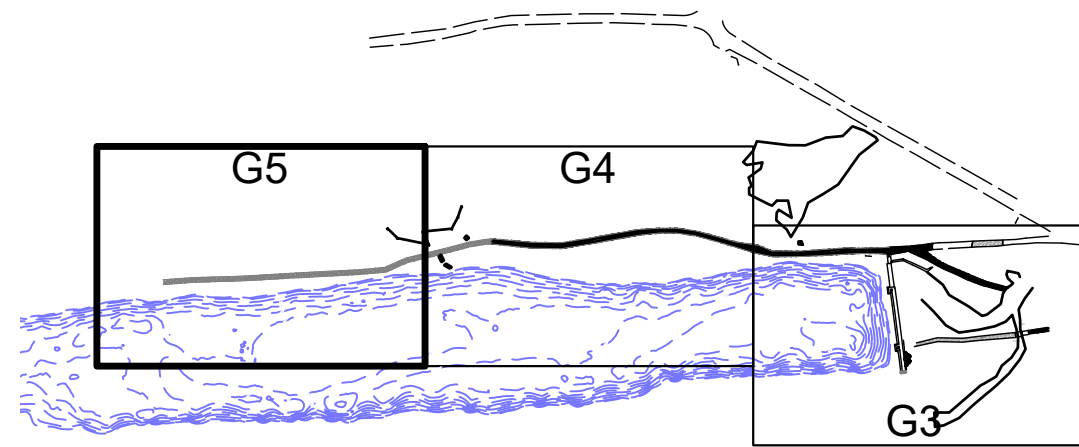
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LEGEND

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- ⊕ TEST BORING WITH VIBRATING WIRE PIEZOMETERS PERFORMED BY GZA GEOENVIRONMENTAL, JULY 2012.
- PROJECT BOUNDARY
- 5 FOOT MAJOR CONTOUR (SEE NOTE 1 SHEET G2)
- 1 FOOT MINOR CONTOUR (SEE NOTE 1 SHEET G2)
- BATHYMETRY (SEE NOTE 3 SHEET G2)
- APPROXIMATE PROPERTY BOUNDARY
- EDGE OF PAVEMENT
- EDGE OF WATER
- ○ ○ CHAIN LINK FENCE
- x x x WIRE FENCE
- W --- W --- W EXISTING WATER MAIN
- COMPOST FILTER SOCK
- △ EDGE OF BORDERING VEGETATIVE WETLAND
- EXPOSED BEDROCK
- GRAVEL ROAD

KEY PLAN



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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
EXISTING CONDITIONS AND SEDIMENTATION AND EROSION CONTROL PLAN (3 OF 3)			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	DRAWING
DESIGNED BY: JGD	DRAWN BY: ADP	SCALE: 1" = 20 FEET	G5
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO:	
SHEET NO. 6 OF 49			



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1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A STORMWATER POLLUTION CONTROL PLAN (SWPCP) AND OBTAINING A CONSTRUCTION GENERAL PERMIT FROM CTDEP. COPY OF THE APPROVED SWPCP, SIGNED BY ALL RESPONSIBLE PARTIES, SHALL BE KEPT ON SITE AT ALL TIMES. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PLAN.
2. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE CONSTRUCTED WITHIN ACCORDANCE WITH ITEM 210 OF THE FDWD STANDARD SPECIFICATIONS, THE APPROVED SWPCP AND THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL".
3. LAND DISTURBANCE SHALL BE KEPT TO THE MINIMUM NECESSARY FOR CONSTRUCTION OPERATIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES NECESSARY TO EXECUTE AND COMPLETE THE WORK OF THE CONTRACT, IN COMPLIANCE WITH THE TERMS AND CONDITIONS CONTAINED IN THE CONTRACT AND PROJECT PERMITS. CONTROLS SHOWN ON THE CONTRACT DRAWINGS AND MENTIONED IN THE TECHNICAL SPECIFICATIONS SHALL BE CONSIDERED MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL EMPLOY WHATEVER SUPPLEMENTARY MEASURES NECESSARY TO PROTECT WETLANDS, WATERS, AND ADJACENT AREAS FROM DISTURBANCE OR DISCHARGE OF SEDIMENTS.
5. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLAN OR ELSEWHERE AS ORDERED BY THE DISTRICT, ENGINEER AND/OR THE TOWN.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SEDIMENT AND EROSION CONTROLS TO MEET THE CONDITIONS OF ALL APPLICABLE PERMITS AND REGULATIONS. SUCH CONTROLS SHALL BE INSTALLED WHEREVER THE POTENTIAL EXISTS FOR THE DISTURBANCE OF LAND OR THE TRANSPORT OF SEDIMENT.
7. THE CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE OF THE WORK ZONE, EXCEPT TO THE MINIMUM EXTENT NECESSARY FOR ACCESS AND ACCOMPLISHMENT OF THE WORK SHOWN.
8. THE CONTRACTOR ALONE SHALL BE RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENT DISCHARGE THROUGHOUT THE DURATION OF THE PROJECT AND UNTIL FINAL STABILIZATION. IT SHALL BE HIS RESPONSIBILITY TO PROTECT THE RESERVOIR, DISCHARGE CHANNEL, AND ADJACENT WETLANDS FROM SEDIMENT AND/OR POLLUTANTS ORIGINATING FROM ANY WORK DONE ON OR IN SUPPORT OF THE PROJECT, INCLUDING SEDIMENT DUE TO EROSION FROM STORMWATER RUNOFF.
9. ALL NECESSARY PRECAUTIONS AND MEASURES SHALL BE TAKEN TO PREVENT MIGRATION INTO WATER BY SILT, SEDIMENT, FUELS, SOLVENTS, LUBRICANTS, CONCRETE, GROUT, OR ANY OTHER POLLUTANTS ASSOCIATED WITH CONSTRUCTION PROCEDURES.
10. ACTUAL LOCATIONS OF EROSION CONTROLS AND BMPs MAY VARY DUE TO FIELD CHANGES, ONGOING CONSTRUCTION, ACCESS NEEDS, WEATHER, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING THESE CHANGES AND ADJUSTING EROSION CONTROLS AND BMP LOCATIONS ACCORDINGLY. IN PARTICULAR, THE CONTRACTOR SHALL COORDINATE THE INSTALLATION AND RELOCATION OF BMPs WITH PROJECT PHASING, AS NECESSARY.
11. ALL EROSION CONTROLS AND BMPs SHALL REMAIN IN PLACE, EXCEPT AS OTHERWISE NECESSARY, UNTIL CONSTRUCTION IS COMPLETED AND FINAL STABILIZATION IS ACHIEVED. ALL SILT FENCING SHALL BE REMOVED UPON SUBSTANTIAL COMPLETION OF THE PROJECT SUCH THAT ONLY STRAW BALES ARE LEFT IN PLACE. STRAW BALES SHALL BE BROKEN UP AND SPREAD AS MULCH PRIOR TO FINAL STABILIZATION.
12. THE CONTRACTOR SHALL POST COPIES OF THE PROJECT PERMITS AND AUTHORIZATIONS PROMINENTLY AT THE SITE. THE CONTRACTOR SHALL POST A SIGN WITH THE PROPER CONNECTICUT DEEP FILE NUMBER DISPLAYED PROMINENTLY AT THE SITE.
13. THE CONTRACTOR SHALL MAINTAIN A SUPPLY OF COMPOST SOCKS, SILT FENCE, STRAW BALES, AND ANTI-TRACKING CRUSHED STONE ON SITE FOR UNEXPECTED EROSION CONTROL NEEDS.

BEST MANAGEMENT PRACTICES:

INSPECTION AND MAINTENANCE

- SEDIMENT AND EROSION CONTROLS AND BEST MANAGEMENT PRACTICES (BMPs) SHALL BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION AT THE SITE. NO WORK WHICH SHALL DISTURB THE SITE OR CREATE THE POTENTIAL FOR SEDIMENT RELEASE SHALL COMMENCE UNTIL THE SEDIMENT AND EROSION CONTROLS HAVE BEEN INSPECTED AND APPROVED BY THE DISTRICT, ENGINEER, AND REGULATORY AGENCIES INCLUDING THE NEW CANAAN INLAND WETLANDS COMMISSION. ALL CONTROLS AND BMPs SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT, THEIR REPRESENTATIVE, AND REGULATORY AGENCIES INCLUDING CT DEEP AND NEW CANAAN INLAND WETLANDS COMMISSION AT ANYTIME THEREAFTER.
- PERIODIC INSPECTION, MAINTENANCE, AND CLEANING OF TEMPORARY EROSION OF SEDIMENT CONTROL MEASURES AND BMPs SHALL BE REQUIRED. ALL CONTROLS AND BMPs SHALL BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF RAINFALL EVENTS OF 0.5 INCHES OR GREATER. ROUTINE INSPECTION AND MAINTENANCE WILL REDUCE THE CHANCE OF POLLUTING STORMWATER BY FINDING AND CORRECTING PROBLEMS BEFORE THE NEXT RAIN EVENT. A SITE MAINTENANCE LOG SHALL BE PREPARED AND UPDATED AS PER THE SWPCP.
- THE FOCUS OF THE INSPECTION WILL BE TO DETERMINE: 1) WHETHER OR NOT THE MEASURE WAS INSTALLED / PERFORMED CORRECTLY; 2) WHETHER OR NOT THERE HAS BEEN ANY DAMAGE TO THE MEASURE SINCE IT WAS INSTALLED OR PERFORMED; AND 3) WHAT SHOULD BE DONE TO CORRECT ANY PROBLEMS WITH THE MEASURE. EACH MEASURE IS TO BE OBSERVED TO DETERMINE IF IT IS STILL EFFECTIVE. IN SOME CASES, SPECIFIC MEASUREMENTS MAY BE TAKEN TO DETERMINE IF MAINTENANCE OF THE MEASURES IS REQUIRED.

SITE MANAGER

- PRIOR TO CONSTRUCTION, A SITE MANAGER WILL BE DESIGNATED BY THE CONTRACTOR TO BE RESPONSIBLE FOR INSTALLATION, MONITORING, INSPECTION, AND CORRECTION OF EROSION AND SEDIMENT CONTROL MEASURES.

REPORTING AND RECORD KEEPING

- IN ADDITION TO THE AFORESAIDED INSPECTION AND MAINTENANCE PROCEDURES, THE CONTRACTOR IS TO KEEP A RECORD OF THE FOLLOWING INFORMATION:
 - o THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR IN A PARTICULAR AREA;
 - o THE DATES WHEN CONSTRUCTION ACTIVITIES CEASE IN AN AREA, TEMPORARILY OR PERMANENTLY;
 - o THE DATES WHEN AN AREAS IS STABILIZED, TEMPORARILY OR PERMANENTLY;
 - o A COPY OF THE STORMWATER POLLUTION CONTROL PLAN (SWPCP) AND ALL REPORTS GENERATED DURING CONSTRUCTION ACTIVITIES ARE TO BE RETAINED AS REQUIRED BY REGULATION.

CONSTRUCTION SITE ENTRANCE

- TO REDUCE THE TRACKING OF SEDIMENT FROM THE CONSTRUCTION SITE ONTO OTHER AREAS OF THE PROPERTY AND/OR PUBLIC ROADS, AS WELL AS THE PRODUCTION OF AIRBORNE DUST, A STABILIZED CONSTRUCTION ENTRANCE IS TO BE ESTABLISHED AS SHOWN AND AT ANY ADDITIONAL AUTHORIZED PERMANENT CONSTRUCTION STAGING AREA. THE ENTRANCE IS TO CONSIST OF A 6-INCH THICK PAD OF CRUSHED STONE UNDERLAIN WITH FILTER FABRIC OR A BITUMINOUS CONCRETE APRON AND SHALL BE CONSTRUCTED ON LEVEL GROUND.
- ADDITIONAL TEMPORARY CONSTRUCTION SITE ENTRANCES MAY BE ADDED AROUND THE SITE PER THE CONTRACTOR'S APPROVED WORK PLAN.
- KEEP ALL ADJACENT PAVED ROADWAYS CLEAN. SWEEP AT THE END OF THE DAY AND PRIOR TO FORECASTED STORMS.

SITE CLEARING

- PRIOR TO ANY SITE CLEARING ACTIVITIES, SEDIMENT CONTROL BARRIERS (COMPOST FILTER SOCKS SHALL BE PLACED DOWNSLOPE) ALONG THE OUTER LIMIT OF DISTURBANCE. CLEARING IS TO BE LIMITED TO THOSE AREAS OF PROPOSED WORK. DISTURBED AREAS ARE TO BE KEPT TO A MINIMUM. NO TREE WITH A BREAST HEIGHT DIAMETER OF GREATER THAN 6 INCHES SHALL BE CLEARED FROM STAGING AREAS WITHOUT PRIOR APPROVAL FROM THE DISTRICT.
- BRUSH SHALL BE CHIPPED AND REMOVED FROM SITE. STUMPS TO BE TRANSPORTED OFF-SITE; DO NOT BURY. TOPSOIL FROM DISTURBED AREAS SHALL BE STRIPPED AND

STOCKPILED FOR USE IN FINAL LANDSCAPING.

DUST CONTROL

- STANDARD DUST CONTROL MEASURES, INCLUDING THE USE OF WATER TRUCKS AND MISTING SHALL BE USED AS NECESSARY. CALCIUM CHLORIDE SHALL NOT BE USED.

STAGING AREAS

- THE CONTRACTOR MAY ESTABLISH LAYDOWN AND STAGING AREAS IN WHICH TO STORE EQUIPMENT AND MATERIALS IN AREAS SHOWN ON CONTRACTOR'S WORK PLAN AND APPROVED BY THE DISTRICT. LOCATION OF ADDITIONAL AREAS, IF NEEDED, SHALL BE COORDINATED WITH AND SHALL BE SUBJECT TO APPROVAL BY THE DISTRICT.

- STAGING AREAS SHALL BE ENCIRCLED WITH APPROPRIATE EROSION CONTROL MEASURES AND ORANGE TEMPORARY BARRIER FENCING MESH. AT THE CONTRACTOR'S OPTION, OR AS DIRECTED BY THE DISTRICT, TEMPORARY CHAIN LINK FENCING MAY BE REQUIRED TO LIMIT PUBLIC ACCESS OR VANDALISM.

STOCKPILED MATERIALS

- STOCKPILES OF SOIL CREATED DURING CONSTRUCTION ACTIVITIES ARE TO BE SURROUNDED WITH COMPOST SOCKS, STRAW BALES, AND/OR SILT FENCE WHERE POSSIBLE. OTHER ALTERNATIVES UTILIZED MAY INCLUDE GRAVEL FILTER BERMS OR SIMILAR MEASURES LAID AROUND THE PERIMETER OF THE STOCKPILE. STOCKPILES OF ERODIBLE MATERIAL ARE TO BE COVERED PRIOR TO INCLEMENT WEATHER WITH A MINIMUM OF 20 MIL POLYETHYLENE SHEETING. STOCKPILES LEFT IN PLACE LONGER THAN TWO WEEKS SHALL BE TEMPORARILY STABILIZED AS DESCRIBED HEREIN.

EQUIPMENT FUELING

- EQUIPMENT FUELING AND OTHER ACTIVITIES INVOLVING PETROLEUM, OIL, OR OTHER POTENTIALLY HAZARDOUS SUBSTANCES ARE TO BE PERFORMED AT PRE-APPROVED, DESIGNATED AREAS WITH APPROPRIATE SPILL PREVENTION AND CONTROL MEASURES. THIS AREA IS TO BE LOCATED BEHIND A DIKED OR BERMED AREA, AWAY FROM CATCH BASINS AND OTHER DRAINAGE STRUCTURES. PORTABLE SECONDARY CONTAINMENT IS TO BE USED, AND SORBENT MATERIALS ARE TO BE PLACED AROUND THE PERIMETER OF THE FUELING AREA. FUELING SHALL TAKE PLACE AS FAR AWAY FROM THE RESERVOIR, STREAM, OR OTHER RESOURCE AREAS AS PRACTICABLE.

CONSTRUCTION DEWATERING

- CONSTRUCTION Dewatering may be required during portions of construction which require excavation or other activities where groundwater may interfere with the work. Construction dewatering discharge to a surface water body shall be pre-treated for sediment removal by passing through an appropriately sized fractionation / sedimentation tank or other best management practice (BMP) feature prior to discharge.
- Appropriate outlet protection, consisting of riprap channel lining, a level spreader, or other such measure shall be provided at the discharge point of any dewatering feature to reduce velocities and enhance sedimentation prior to discharge.

TEMPORARY STABILIZATION

- WHEN NECESSARY, TEMPORARY SLOPE PROTECTION SHALL BE PROVIDED BY INSTALLING COMPOST FILTER SOCKS AT THE TOE OF FILLS OR CUT SLOPES. IF ADDITIONAL STABILIZATION IS NEEDED, THEN THE CONTRACTOR SHALL INSTALL MATTING, SUCH AS STRAW, JUTE, WOOD FIBER, OR BIO OR PHOTO-DEGRADABLE MESH AT NO ADDITIONAL COST TO THE DISTRICT.
- IN THE EVENT THAT DISTURBED AREAS OR STOCKPILES AT THE SITE ARE TO BE LEFT UN-WORKED FOR MORE THAN TWO WEEKS, THE AREAS SHALL BE MULCHED WITH STRAW AT A RATE OF 100 LBS. PER 1,000 S.F. TO HELP CONTROL EROSION. TWO INCHES OF WOOD CHIP MULCH MAY ALSO BE USED AS TEMPORARY COVER.
- IN THE EVENT THAT DISTURBED AREAS OR STOCKPILES AT THE SITE ARE TO BE LEFT UN-WORKED FOR MORE THAN ONE MONTH, THE AREAS SHALL BE TOPSOILED AND SEEDED AS PER THE SPECIFICATIONS AND AT NO ADDITIONAL COST TO THE DISTRICT.
- LEAVE THE SURFACE OF ALL EXCAVATIONS AND FILLS IN A FIRM AND STABLE CONDITION AT

THE END OF EACH DAY. ROLL OR OTHERWISE TREAT THE SURFACE AS NEEDED.

SITE RESTORATION

- STABILIZATION OF DISTURBED AREAS OR NEW SOIL FILLS SHALL BE IMPLEMENTED WITHIN 14 DAYS AFTER GRADING OR CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. APPROPRIATE VEGETATIVE SOIL STABILIZATION IS TO BE USED TO MINIMIZE EROSION. TEMPORARY AND PERMANENT VEGETATIVE COVER IS TO BE ESTABLISHED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, USING HYDRO-SEEDING, BROADCASTING, OR OTHER APPROVED TECHNIQUES.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF PREVIOUSLY VEGETATED UPLAND AREAS DISTURBED BY CONSTRUCTION ACTIVITIES. RESTORATION OF UPLAND AREAS SHALL CONSIST OF REPLACEMENT OF TOPSOIL OR PLACEMENT OF IMPORTED LOAM AS NEEDED SUCH THAT A MINIMUM OF 6 INCHES OF SUITABLE MATERIAL IS PRESENT AND APPROPRIATELY, LIMED, FERTILIZED, GRADED, AND SCARIFIED.

- WHERE NOT OTHERWISE SPECIFIED, DISTURBED UPLAND AREAS BEYOND THE 100' WETLAND BUFFER ZONE SHALL THEN BE SEEDDED WITH AN APPROVED SEED MIX AT A RATE OF 2 POUNDS OF LIVE SEED PER 1,000 S.F. SEEDING RATE SHALL BE DOUBLED FOR DORMANT SEEDING. SEED MIX FOR AREAS BEYOND THE 100' UPLAND REVIEW AREA SHALL BE AS FOLLOWS OR AS APPROVED BY THE ENGINEER:

CREEPING RED FESCUE	50%
KENTUCKY 31	25%
DOMESTIC RYE	10%
RED TOP	5%
LADINO CLOVER	5%

- WHERE NOT OTHERWISE SPECIFIED, DISTURBED UPLAND AREAS WITHIN THE 100' UPLAND REVIEW AREA SHALL THEN BE SEEDDED WITH AN APPROVED SEED MIX AT A RATE OF 1 POUND OF LIVE SEED PER 1,000 S.F. SEEDING RATE SHALL BE DOUBLED FOR DORMANT SEEDING. SEED MIX FOR AREAS WITHIN THE 100' WETLAND BUFFER ZONE SHALL BE AS FOLLOWS OR AS APPROVED BY THE ENGINEER:

THE NEW ENGLAND EROSION CONTROL/RESTORATION MIX (MOIST SITES) TYPICALLY CONTAINS THE FOLLOWING:

SWITCHGRASS (PANICUM VIRGATUM),
VIRGINIA WILD RYE (ELYMUS VIRGINICUS),
CREEPING RED FESCUE (FESTUCA RUBRA),
FOX SEDGE (CAREX VULPINOIDEA),
CREEPING BENTGRASS (AGROSTIS STOLONIFERA),
SOFT RUSH (JUNCUS EFFUSUS),
NEW ENGLAND ASTER (ASTER NOVAE-ANGLIAE),
GRASS (ELEGANTIS),
NODDING BUR MARIGOLD (BIDENS CERNUA),
GREEN BURLUSH (SCIRPUS ATROVIRENS),
JOE-PYE WEED (EUPATORIUM MACULATUM),
BONESET (EUPATORIUM PERFOLIATUM),
BLUE VERVAIN (VERBENA HASTATA).

- RESTORED AREAS SHALL BE ROLLED AND THEN APPROPRIATELY MULCHED WITH STRAW, STRAW, WOOD CHIPS OR OTHER APPROVED WEED-FREE MATERIAL. BIO OR PHOTO-DEGRADABLE EROSION CONTROL FABRIC IS ALSO ACCEPTABLE FOR POST-RESTORATION STABILIZATION. ON FLAT SURFACES AND ON SLOPES OF 3:1 OR FLATTER, MULCH OR EROSION CONTROL MATTING SHALL TO BE USED AFTER PERMANENT SEEDING TO PROTECT SOIL FROM THE IMPACT OF FALLING RAIN AND TO INCREASE THE CAPACITY OF THE SOIL TO ABSORB WATER. FOR STEEPER SLOPES, EROSION CONTROL MATTING PER DETAIL 7, SHEET G7 SHALL BE USED.

- * FINAL STABILIZATION SHALL BE CONSIDERED COMPLETE WHEN ALL SOIL-DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY PERCENT HAS BEEN ESTABLISHED OR EQUIVALENT STABILIZATION MEASURES (SUCH AS THE USE OF MULCHES OR EROSION CONTROL MATTING) HAVE BEEN EMPLOYED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES. ACHIEVEMENT OF FINAL STABILIZATION SHALL BE DETERMINED BY THE DISTRICT.



- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL VEGETATED SURFACES, INCLUDING WATERING, FERTILIZING, AND RE-SEEDING UNTIL ESTABLISHMENT CONDITIONS ARE MET AND UNTIL THE END OF THE CONTRACTUAL MAINTENANCE PERIOD.

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GRUPES RESERVOIR DAM
REHABILITATION PROJECT
NEW CANAAN, CONNECTICUT

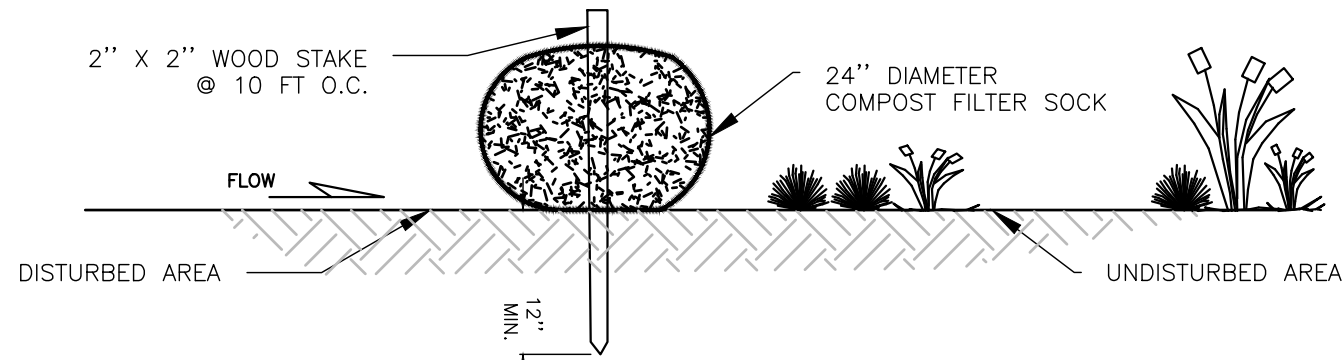
SEDIMENTATION AND EROSION CONTROL NOTES

PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR:  FIRST TAKING DISTRICT OF THE CITY OF NORWALK WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ. MGR.: JGD DESIGNED BY: JGD DATE: NOVEMBER 2023	REVIEWED BY: MAT DRAWN BY: ADP/SMW PROJECT NO. 01.0171312.10	CHECKED BY: MAT SCALE: N.T.S. REVISION NO.	DRAWING G6 SHEET NO. 7 OF 49



TEMPORARY SEDIMENT AND EROSION CONTROL BARRIER NOTES:

1. FILTER SOCK SHALL BE MADE OF 100% ORGANIC HESSIAN FABRIC (BURLAP) OR BIO-DEGRADABLE 5 MIL HDPE (NO LONGER THAN 6 MONTHS). REPLACEMENT NEEDED AFTER 6 MONTHS.
2. ORGANIC MATTER CONTENT SHALL BE BETWEEN 20 –100% (DRY WEIGHT BASIS) AS DETERMINED BY ASTM D2974 (METHOD A) STANDARD TEST METHODS FOR MOISTURE, ASH, AND ORGANIC MATTER OF PEAT AND OTHER ORGANIC SOILS.
3. MOISTURE CONTENT SHALL BE <150% BY DRY WEIGHT (<60% BY WET WEIGHT) AS MEASURED BY ASTM D2216 STANDARD TEST METHOD FOR LABORATORY DETERMINATION OF WATER CONTENT OF SOIL AND ROCK AND ASTM D2974 (CITED ABOVE).

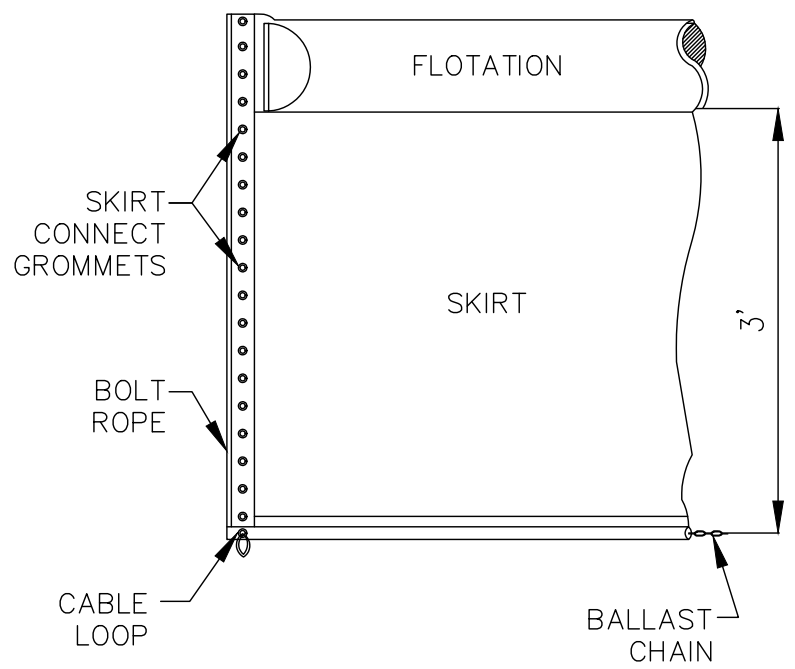


4. PARTICLE SIZE IS MEASURED BY SIEVING SHALL BE AS FOLLOWS:

SIEVE SIZE	% PASSING
75MM	100%
19MM	70–100%
#4	30– 75%
#20	20–40%

NO PARTICLE MAY BE LONGER THAN 150MM
5. SOLUBLE SALTS SHALL BE <5.0 MMHOS/CM (DS/M).
6. THE PH SHALL BE BETWEEN 5.5 AND 8.0.
7. FILTER SOCKS MUST BE PLACED PARALLEL TO CONTOUR WITH BOTH ENDS OF THE SOCK EXTENDED UPSLOPE AT A 45 DEGREE ANGLE TO THE REST OF THE SOCK TO PREVENT END-AROUNDS.
8. THE CONTRACTOR SHALL MAINTAIN THE FILTER TUBES IN A FUNCTIONAL CONDITION AT ALL TIMES, INCLUDING INSPECTIONS AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
9. FOR REMOVAL, THE CONTRACTOR SHALL RAKE OUT SO THAT FILTER MATERIAL IS NO GREATER THAN 3" IN DEPTH ON SOIL SUBSTRATE.

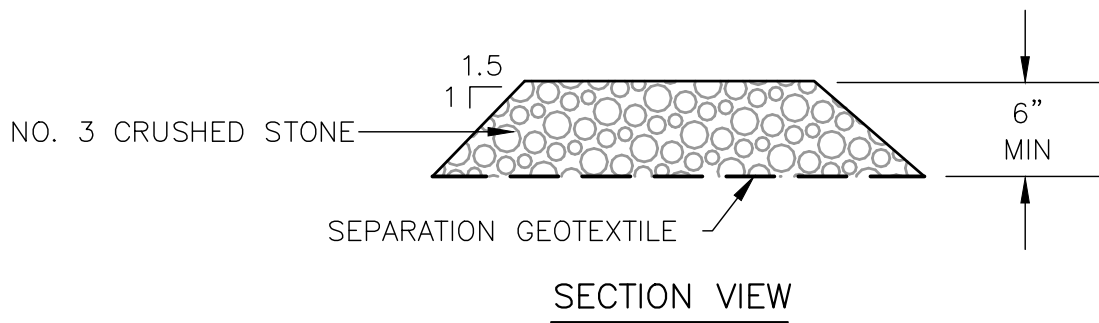
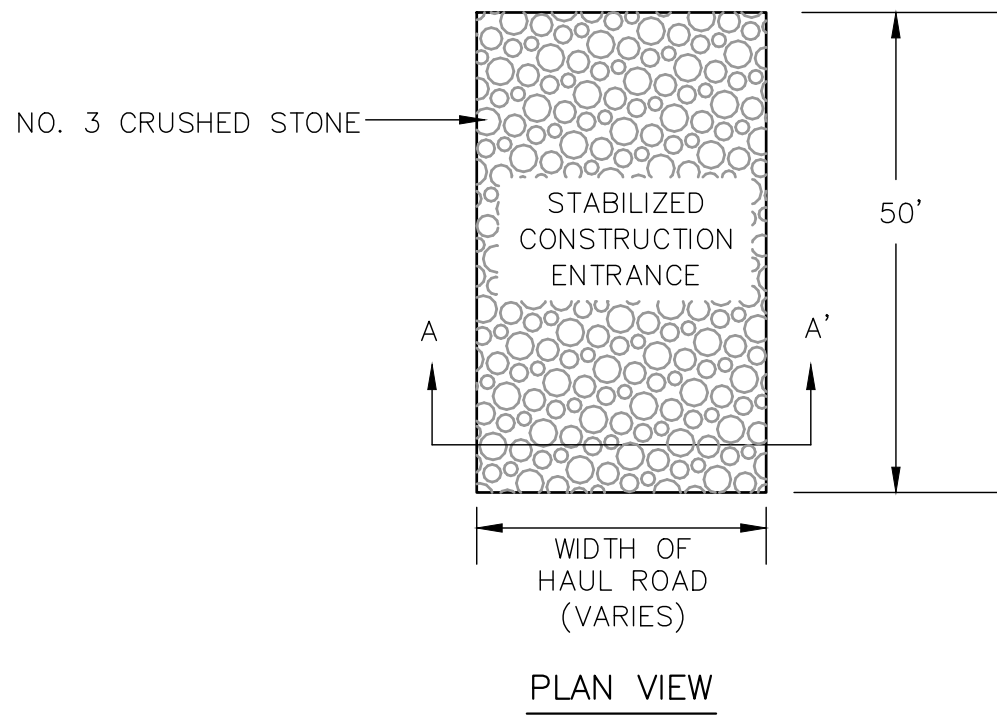
1
G3
COMPOST FILTER SOCK
EROSION CONTROL BARRIER
NOT TO SCALE



NOTES:

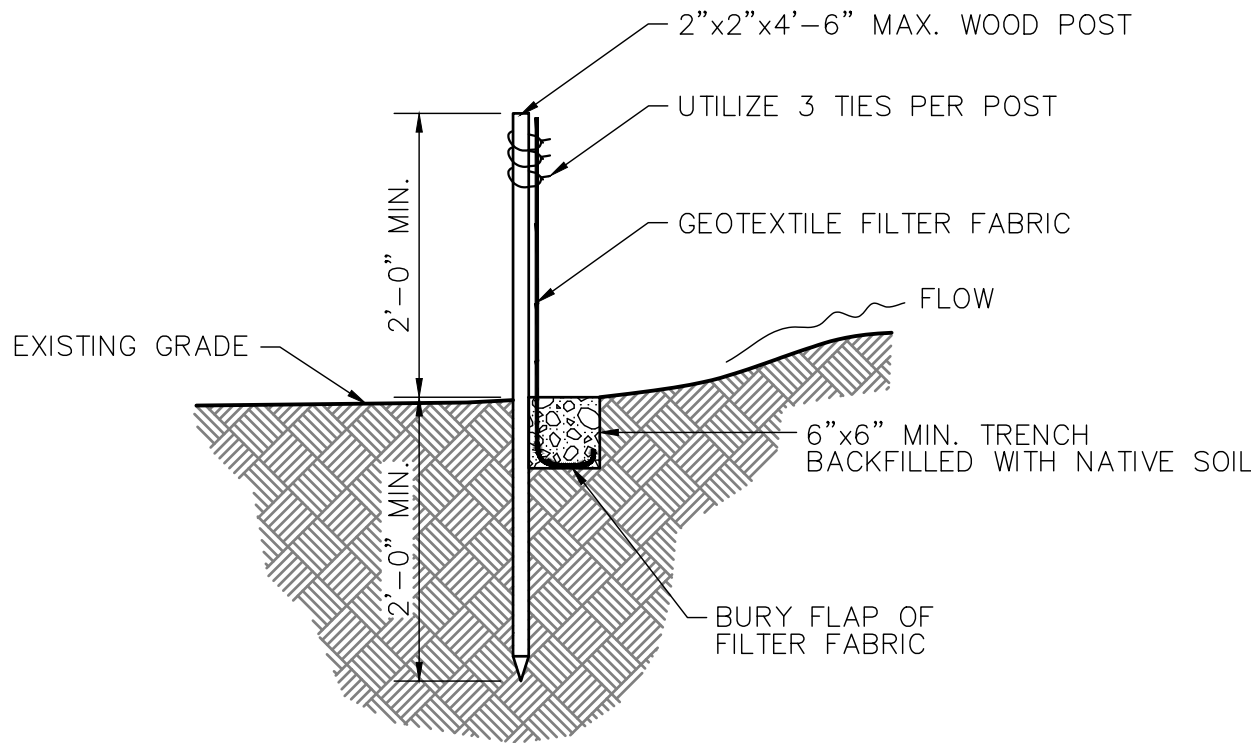
1. ANCHOR CURTAIN LOCATED AT ENDS OF BANK.
2. ANCHOR CURTAIN AT INTERMEDIATE POINTS WITH CONCRETE ANCHOR BLOCKS.

2
G3
FLOATING TURBIDITY CURTAIN
NOT TO SCALE



NOTE: REMOVE AT END OF PROJECT AND RESTORE AREA.

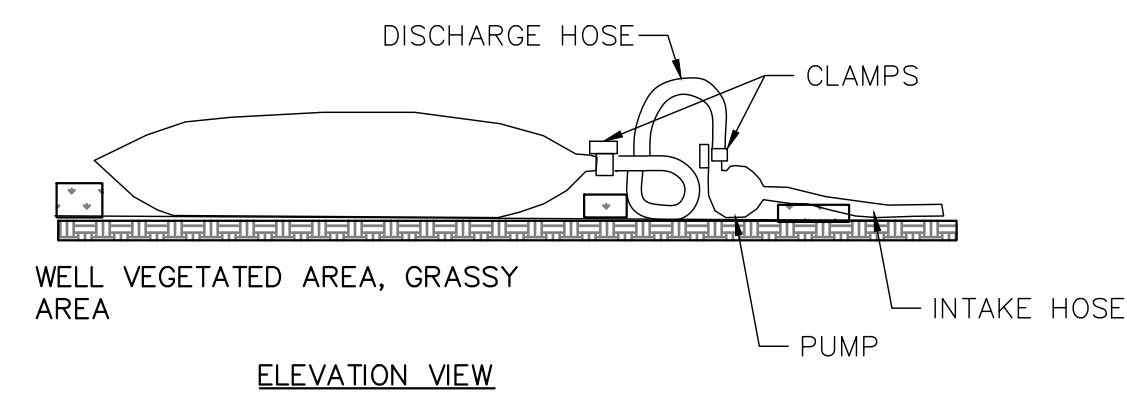
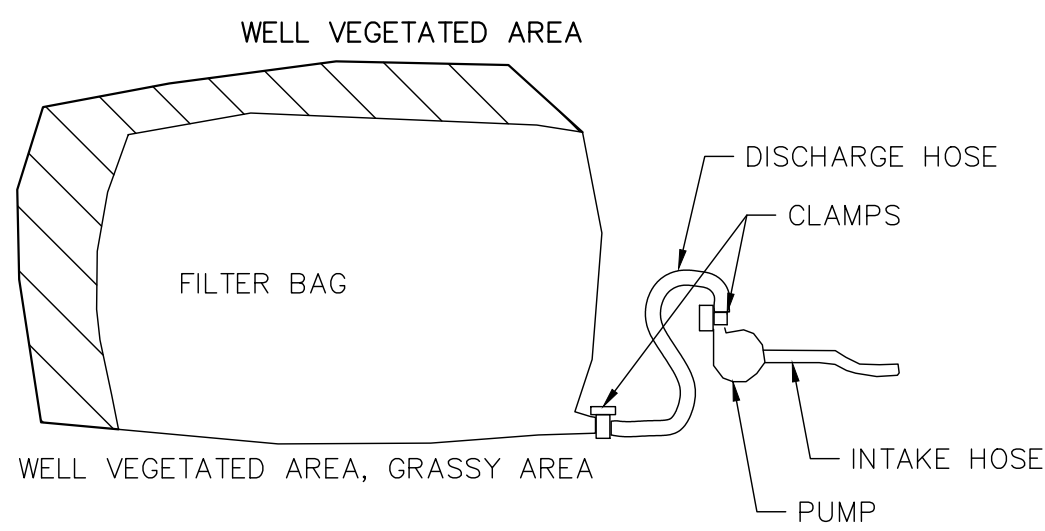
3
G8
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



NOTES:

1. SPACING OF WOOD FENCE POST NOT TO EXCEED 6'-0".
2. THE FILTER FABRIC SHOULD BE SECURELY ATTACHED TO THE WOOD POST.

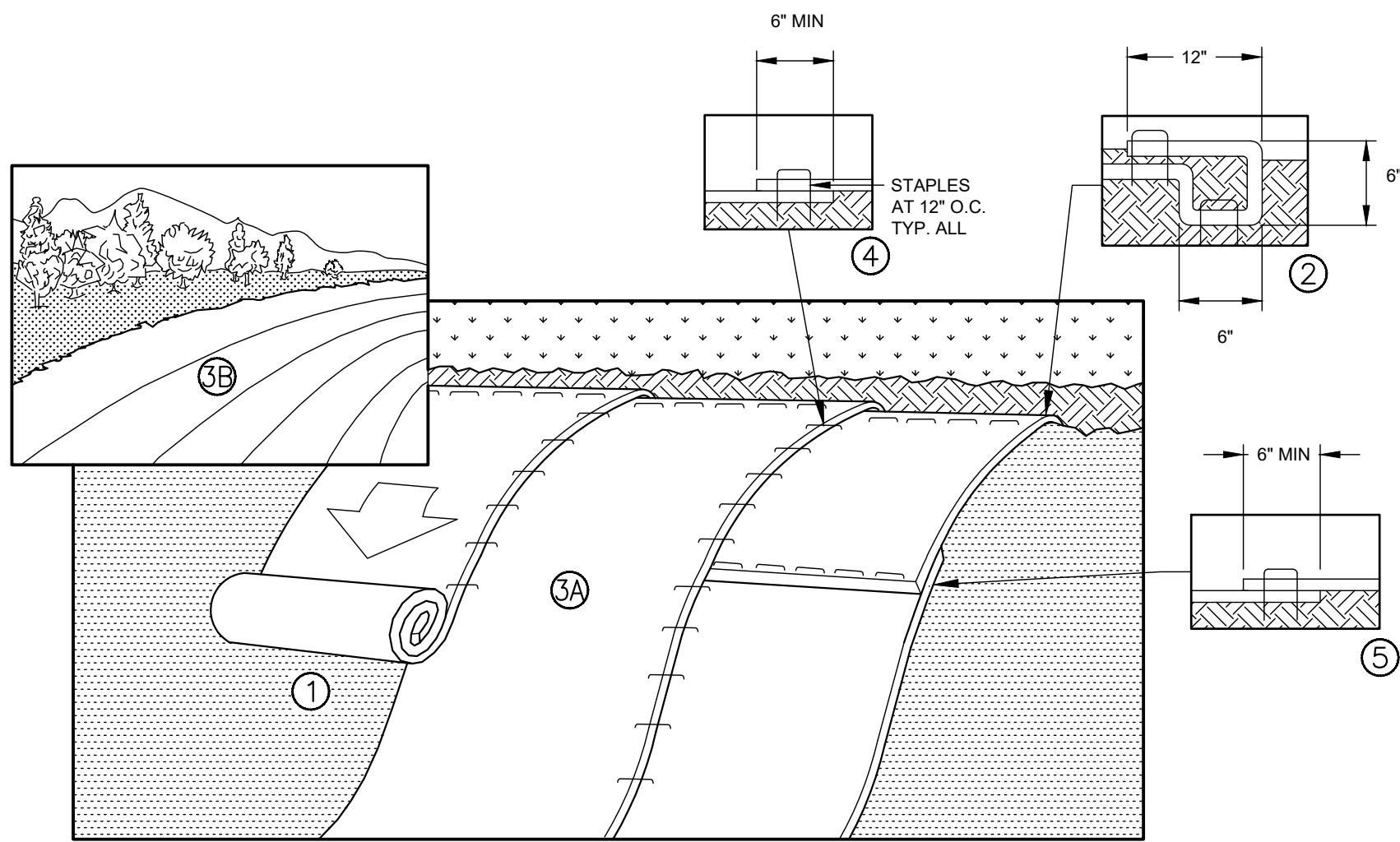
5
G3
SILT FENCE INSTALLATION
DETAIL
NOT TO SCALE



4
-
PUMPED WATER FILTER BAG
DETAIL
NOT TO SCALE

PUMPED WATER FILTER BAG NOTES:

1. CONTRACTOR SHALL LOCATE FILTER BAG TO COMPLY WITH REQUIREMENTS BELOW. LOCATION IS SUBJECT TO APPROVAL BY THE ENGINEER.
2. FILTER BAGS SHALL BE USED TO FILTER WATER PUMPED FROM DEWATERING OPERATIONS AND EXCAVATIONS PRIOR TO DISCHARGING.
3. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. CONTRACTOR SHALL PROVIDE A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY (FOR DISPOSAL PURPOSES).
4. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL.
5. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
6. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
7. FILTER BAGS SHALL BE SURROUNDED BY EITHER COMPOST FILTER SOCK OR STRAW BALE CONTAINMENT. (SEE TYPICAL DETAILS, THIS SHEET)
8. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
9. THE PUMPING RATE SHALL BE NO GREATER THAN 100 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.
10. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.



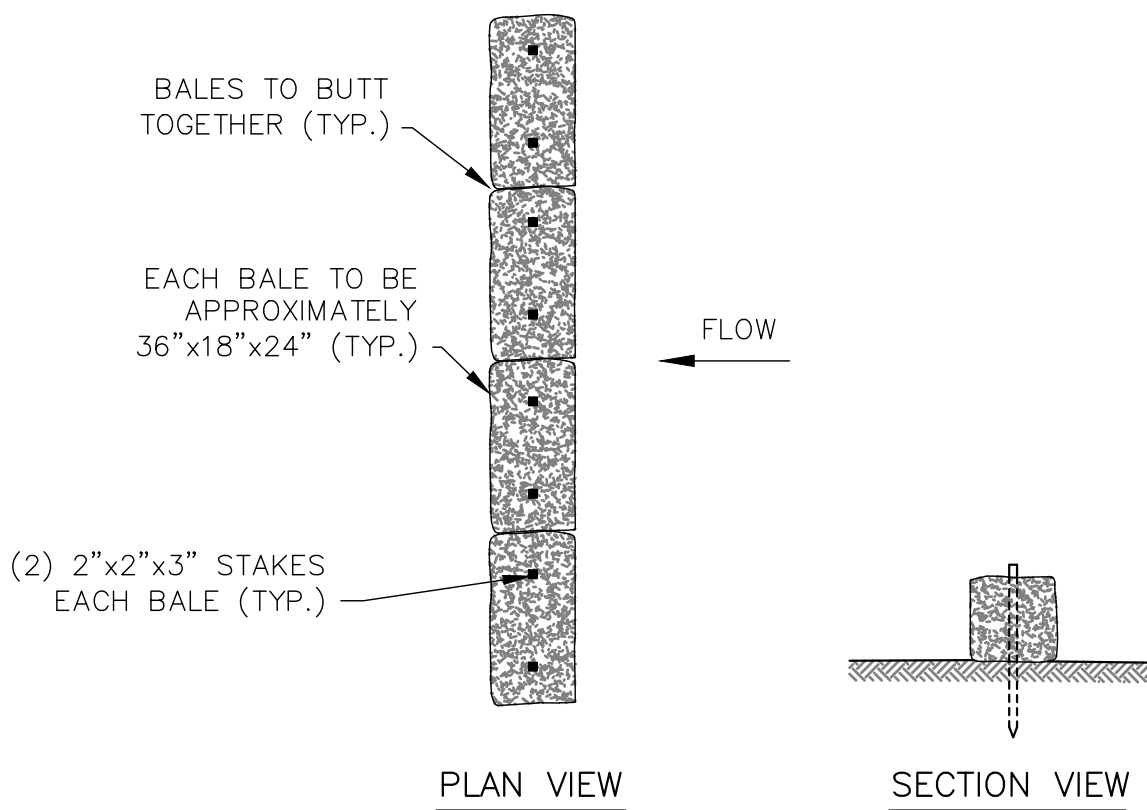
7
-
SLOPE INSTALLATION DETAIL OF TEMPORARY
EROSION CONTROL BLANKET
NOT TO SCALE

NOTES:

1. PRODUCT TO BE NORTH AMERICAN GREEN ERONET S75 OR APPROVED EQUAL.
2. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLES OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE ECB's.

INSTALLATION NOTES:

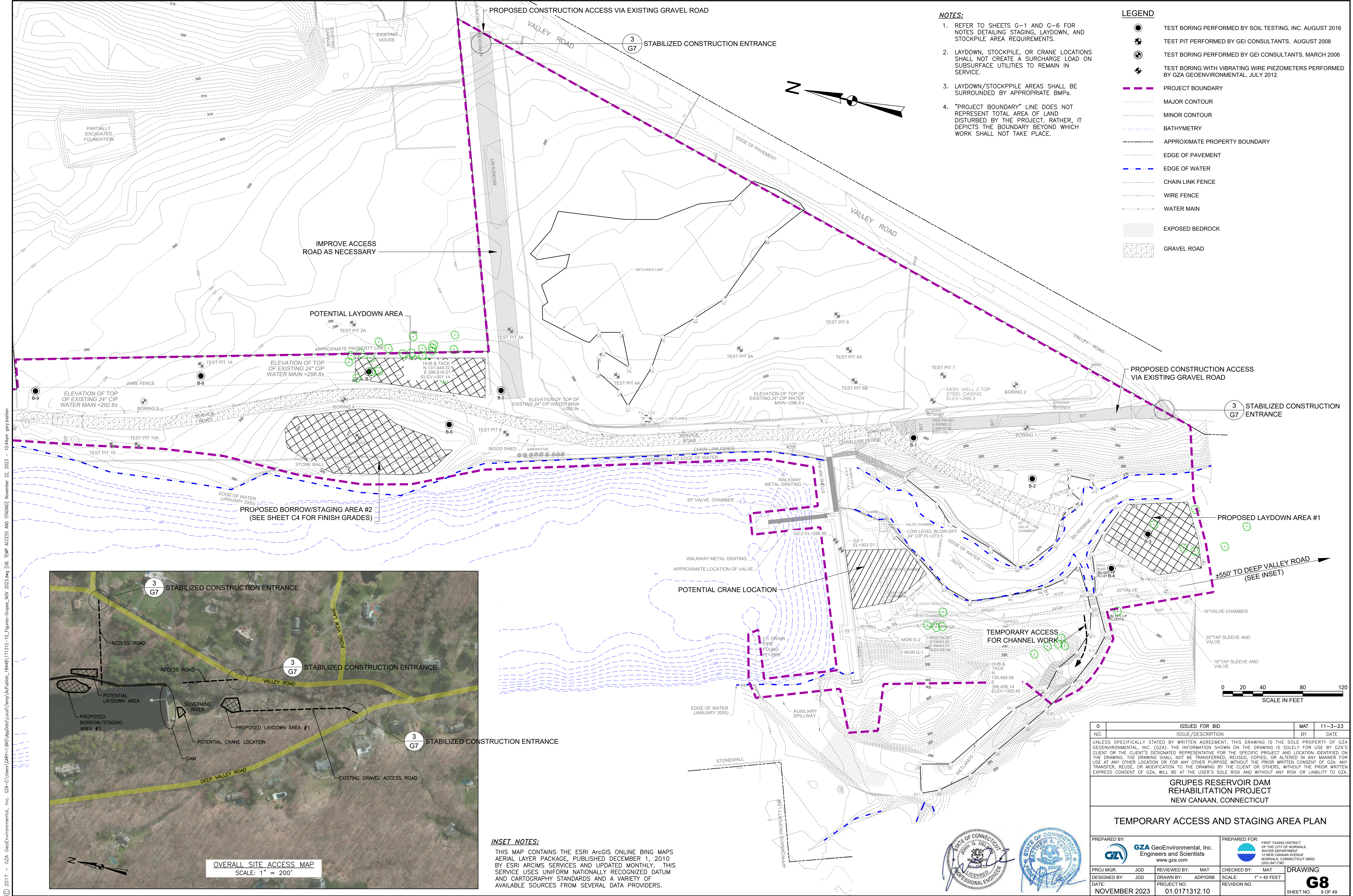
1. PREPARE SOIL BEFORE INSTALLING THE TEMPORARY EROSION CONTROL BLANKETS (ECB's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE ECB's IN A 6" DEEP x 6" WIDE TRENCH WITH APPROXIMATELY 12" OF ECB EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE ECB's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF ECB BACK OVER SEED AND COMPACTED SOIL. SECURE ECB's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE ECB's.
3. ROLL THE ECB's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. UNROLL ECB's WITH NETTING SIDE FACING UP. ALL ECB's SHALL BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE MANUFACTURER'S INSTALLATION GUIDE. IF NO GUIDANCE IS GIVEN, STAPLES ARE TO BE PLACED ALTERNATELY IN COLUMNS (IN THE DIRECTION OF THE SLOPE) 2 FEET APART, AND IN ROWS (ACROSS THE SLOPE) THREE FEET APART.
4. THE EDGES OF PARALLEL ECB's SHALL BE STAPLED WITH A 6-INCH MINIMUM OVERLAP.
5. CONSECUTIVE ECB's SPICED DOWN THE SLOPE SHALL BE PLACED END OVER END (SHINGLE STYLE) WITH THE UPSLOPE BLANKET OVERLAPPING THE DOWNSLOPE BLANKET BY A MINIMUM OF 6 INCHES. STAPLE THROUGH OVERLAPPED AREA, AT APPROXIMATELY 12" O.C. ACROSS ENTIRE ECB WIDTH.

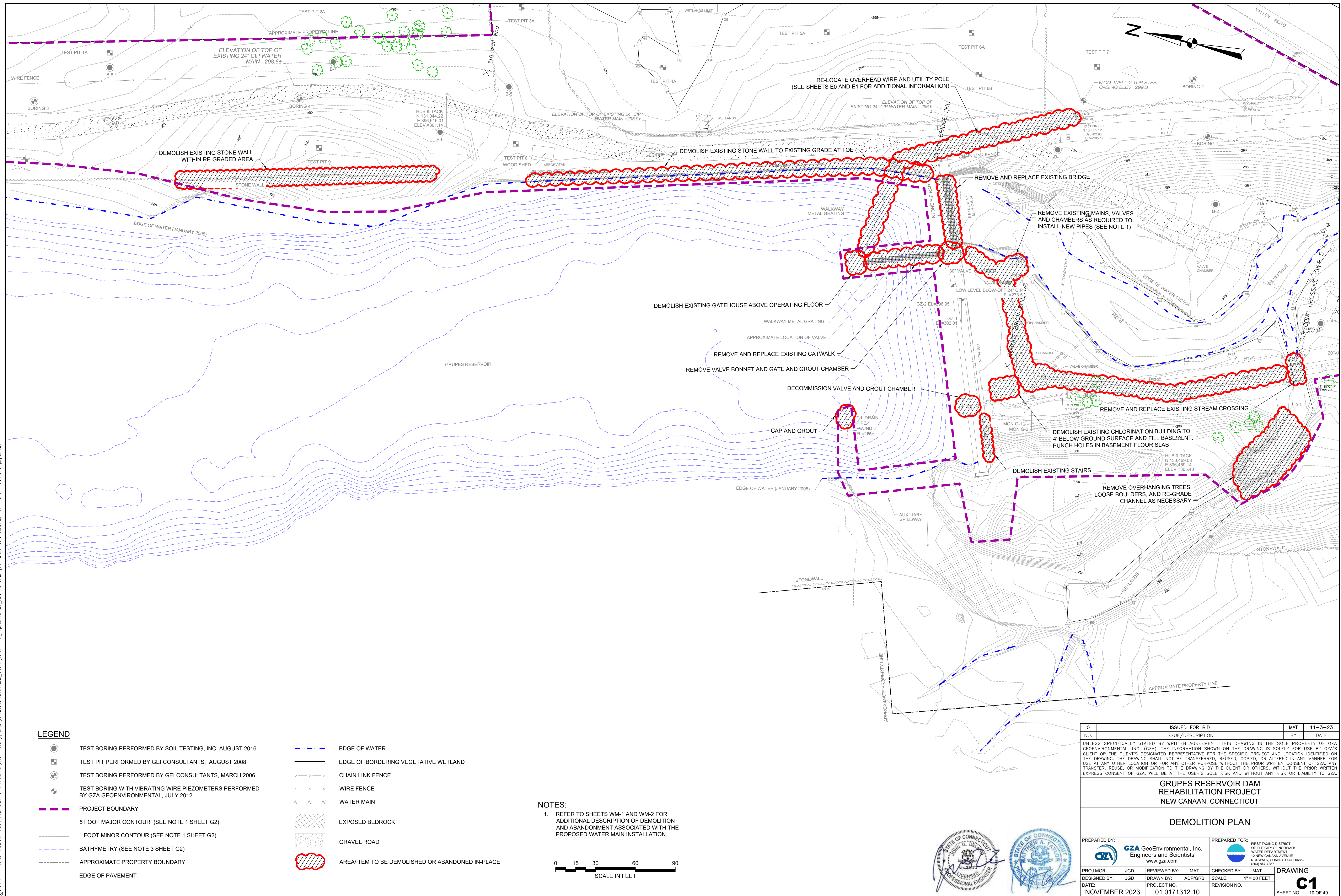


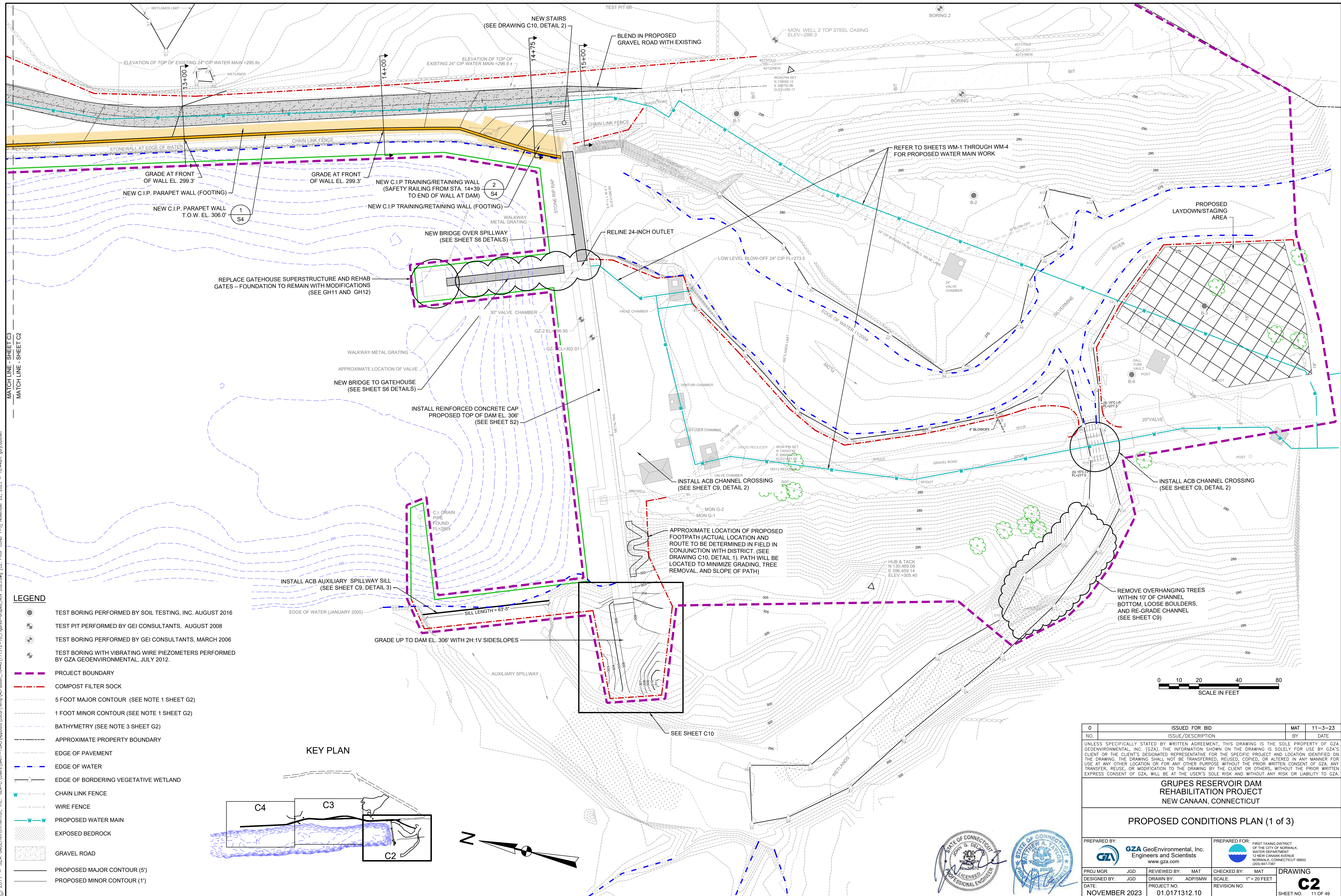
6
-
STRAW BALE DETAIL
NOT TO SCALE

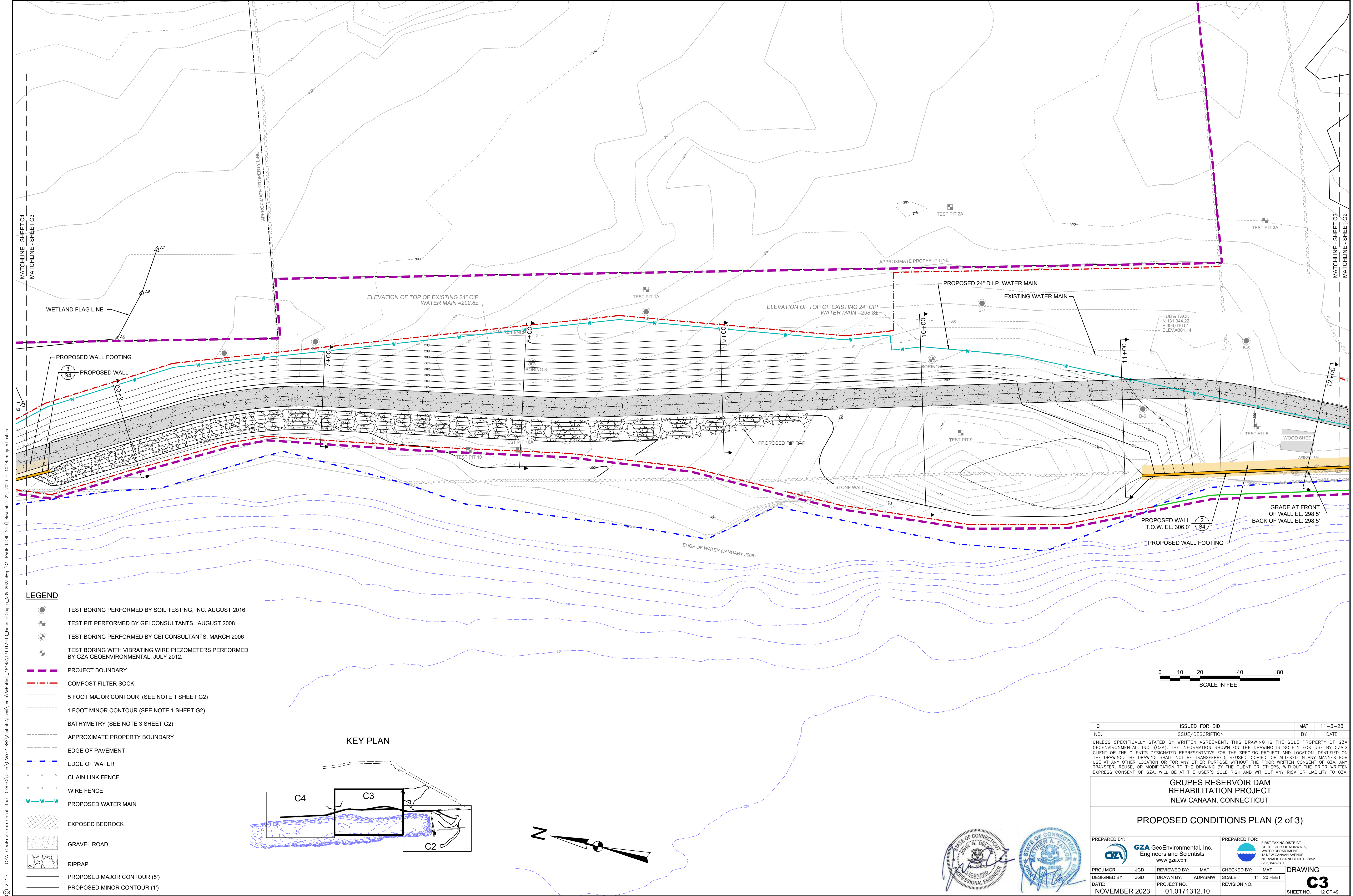
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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
SEDIMENTATION AND EROSION CONTROL DETAILS			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	DRAWING
DESIGNED BY: JGD	DRAWN BY: ADP/SMW	SCALE: N.T.S	G7
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO:	
SHEET NO. 8 OF 49			







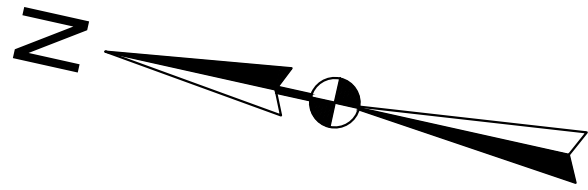
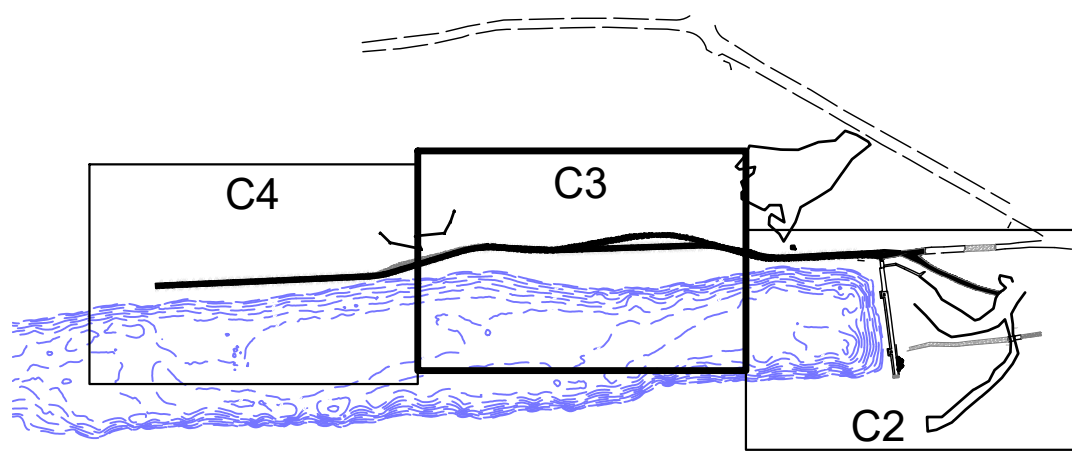




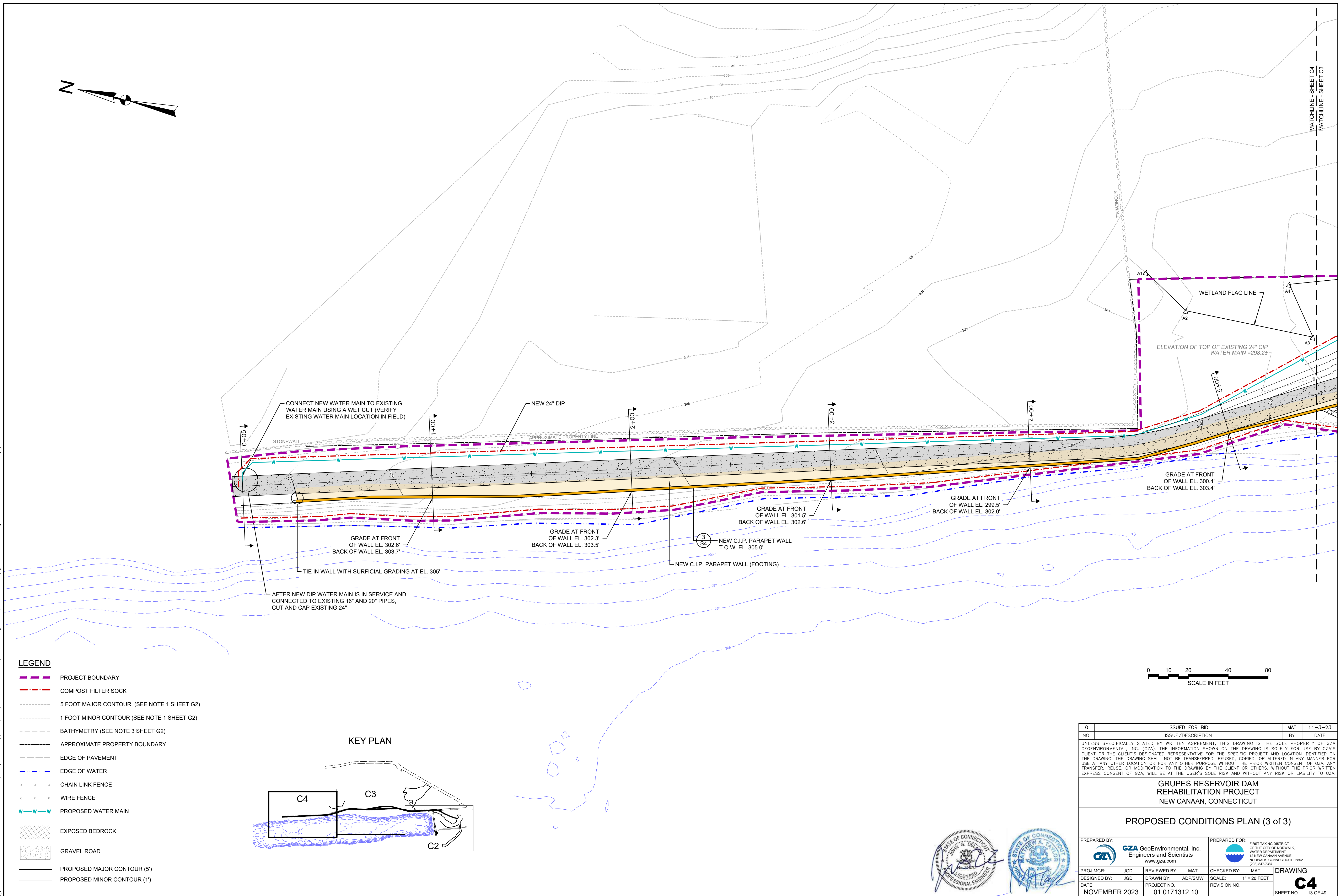
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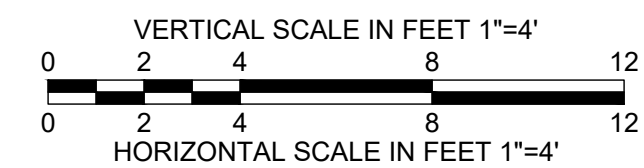
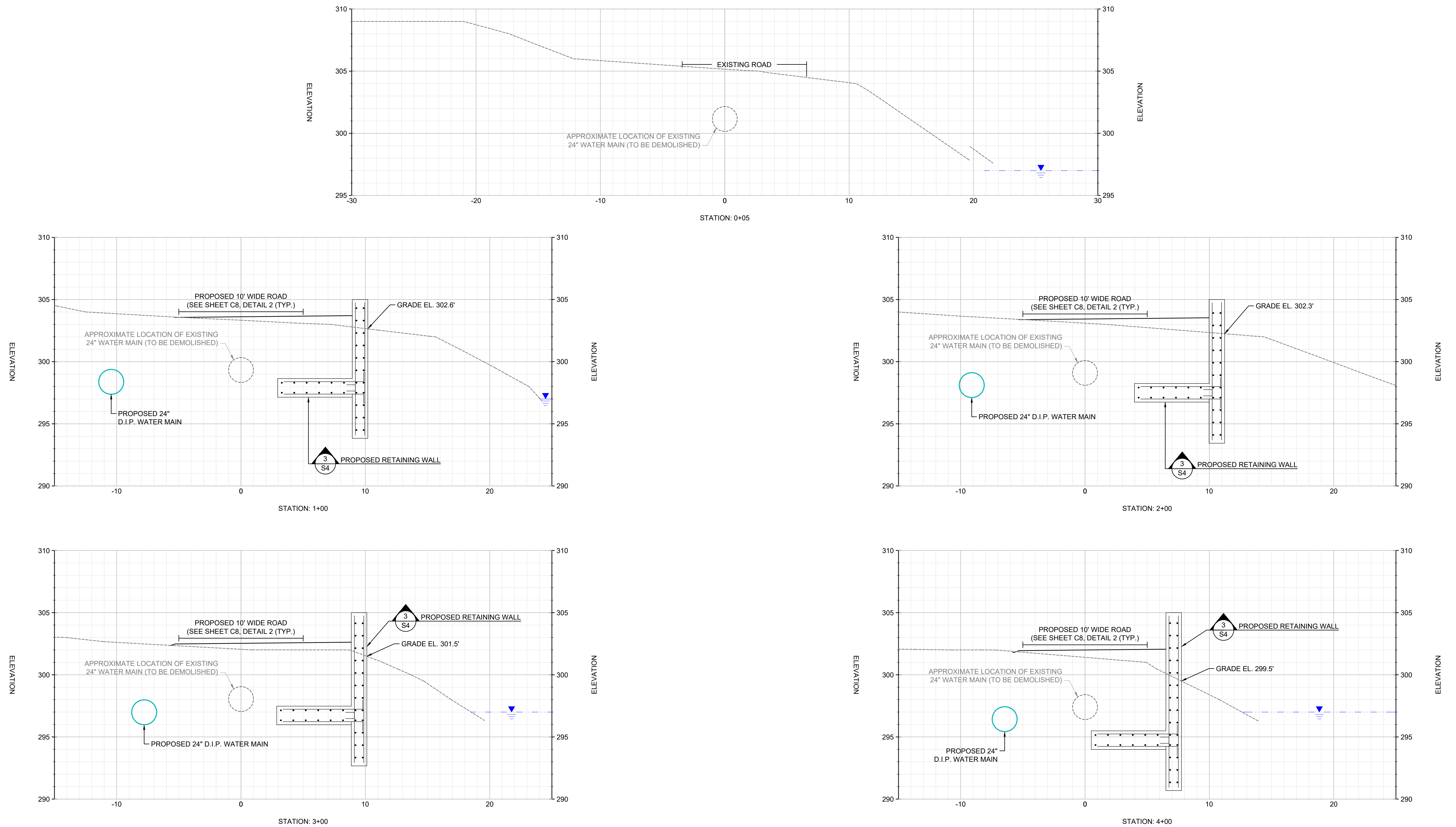
- LEGEND**
- TEST BORING PERFORMED BY SOIL TESTING, INC. AUGUST 2016
 - ⊕ TEST PIT PERFORMED BY GEI CONSULTANTS, AUGUST 2008
 - ⊕ TEST BORING PERFORMED BY GEI CONSULTANTS, MARCH 2006
 - ⊕ TEST BORING WITH VIBRATING WIRE PIEZOMETERS PERFORMED BY GZA GEOENVIRONMENTAL, JULY 2012.
 - PROJECT BOUNDARY
 - .-.- COMPOST FILTER SOCK
 - 5 FOOT MAJOR CONTOUR (SEE NOTE 1 SHEET G2)
 - 1 FOOT MINOR CONTOUR (SEE NOTE 1 SHEET G2)
 - BATHYMETRY (SEE NOTE 3 SHEET G2)
 - APPROXIMATE PROPERTY BOUNDARY
 - EDGE OF PAVEMENT
 - EDGE OF WATER
 - ○ ○ CHAIN LINK FENCE
 - x x x WIRE FENCE
 - W-W-W PROPOSED WATER MAIN
 - EXPOSED BEDROCK
 - GRAVEL ROAD
 - RIPRAP
 - PROPOSED MAJOR CONTOUR (5')
 - PROPOSED MINOR CONTOUR (1')



KEY PLAN




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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
PROPOSED CONDITIONS PLAN (2 of 3)			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	DRAWING
DESIGNED BY: JGD	DRAWN BY: ADP/SMW	SCALE: 1" = 20 FEET	C3
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO:	SHEET NO. 12 OF 49





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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT				
EAST SERVICE ROAD TYPICAL CROSS SECTIONS (1 OF 4)				
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PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	DRAWING	
DESIGNED BY: JGD	DRAWN BY: ADP	SCALE: 1" = 4'	C5	
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO.	SHEET NO. 14 OF 49	

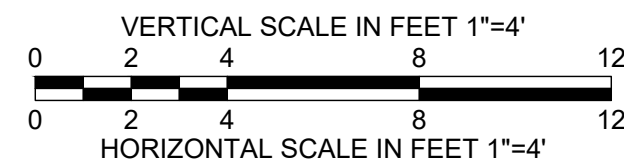
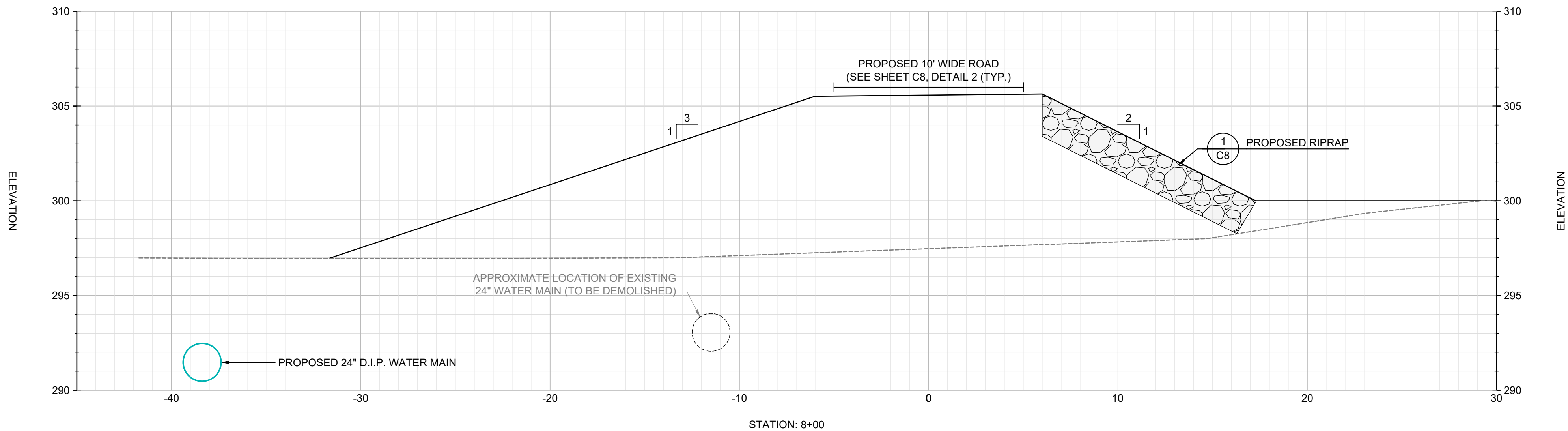
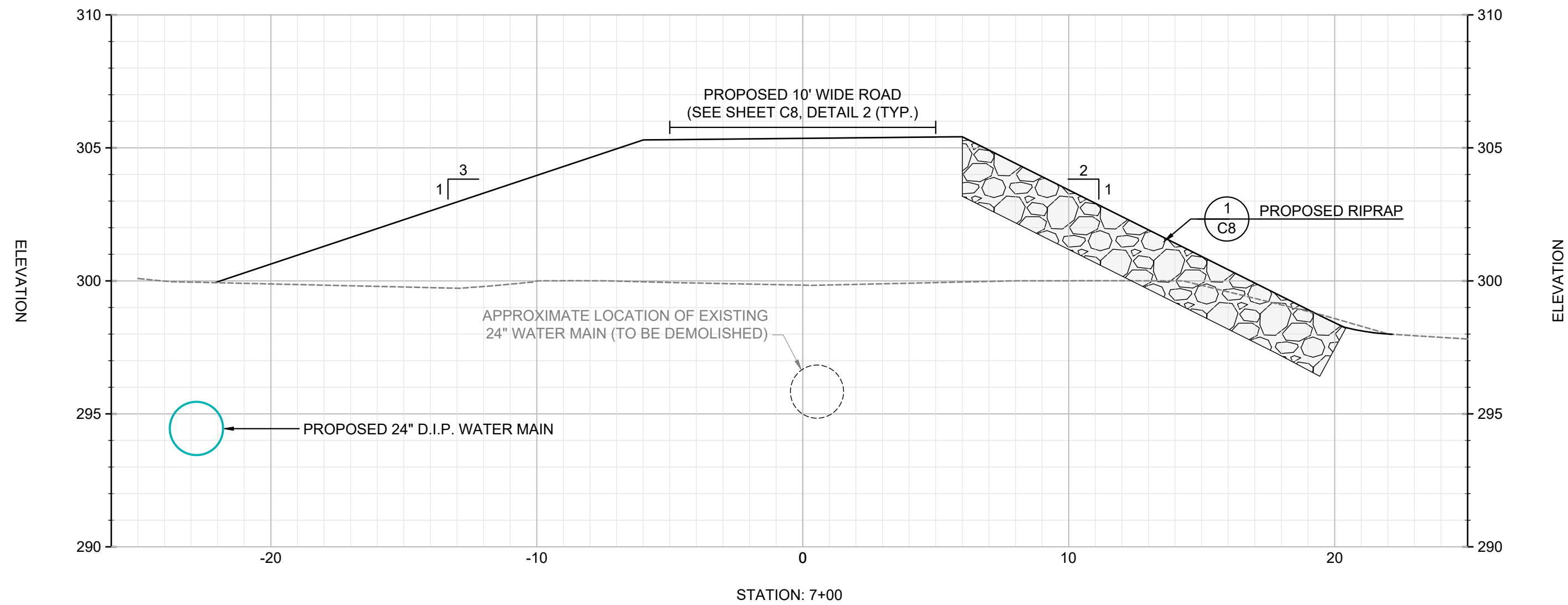
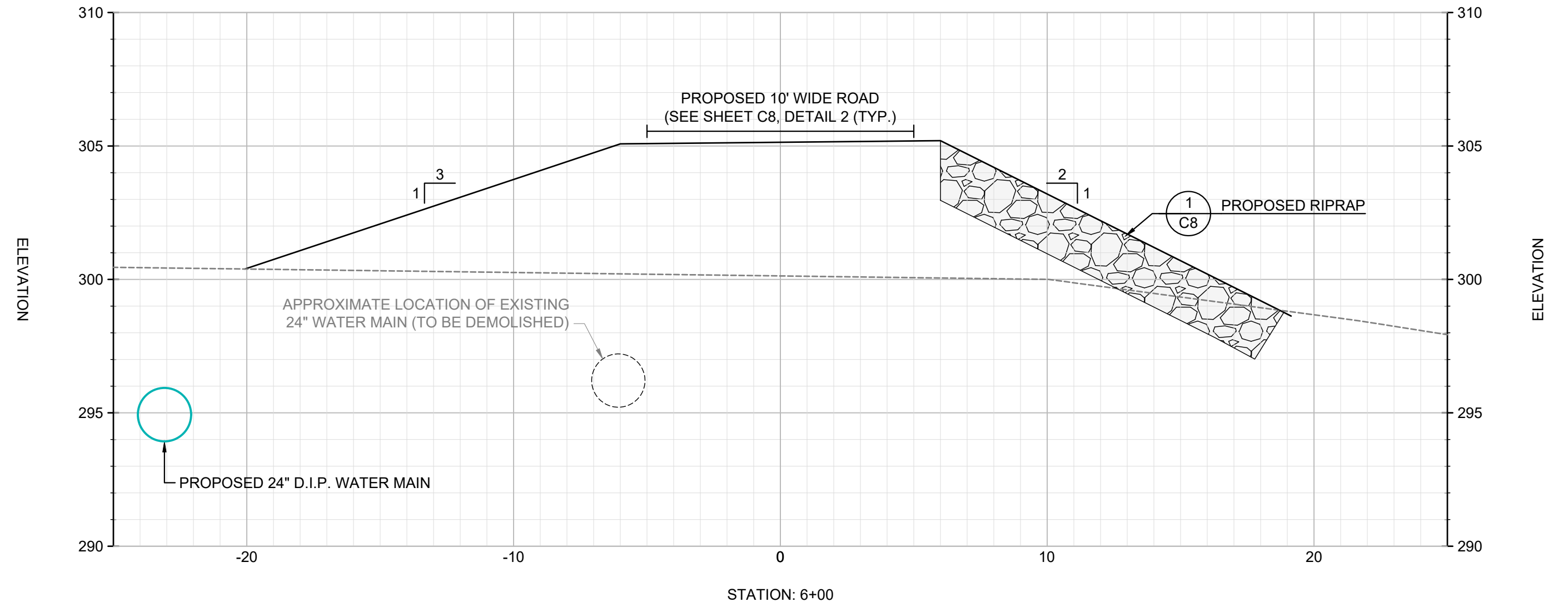
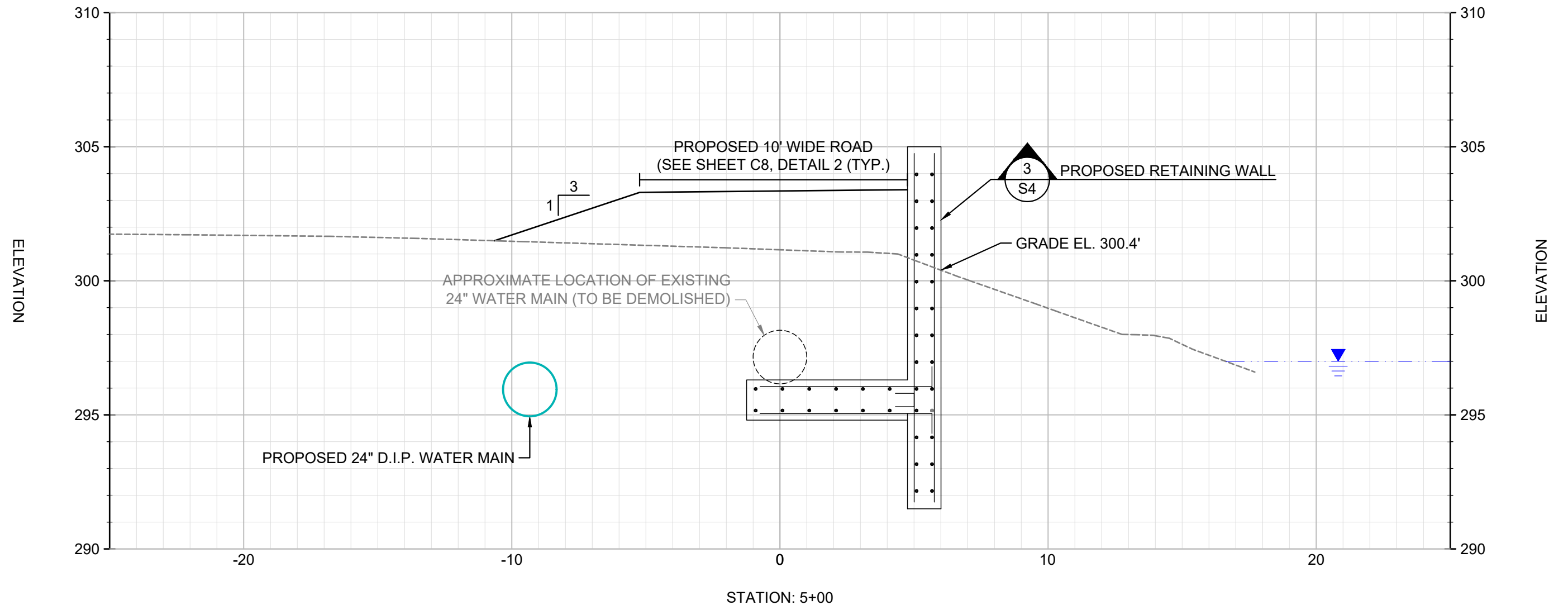
LEGEND

 PROPOSED GRADE
 EXISTING GRADE
 WATER SURFACE ELEVATION

NOTES:

1. RETAINING WALLS TO INCLUDE FORM LINER FINISH ON BOTH FACES OF WALL SECTIONS WITH EXPOSED HEIGHT GREATER THAN OR EQUAL TO 1.5 FEET. SEE DETAILS ON SHEET S4 FOR ADDITIONAL INFORMATION.

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LEGEND

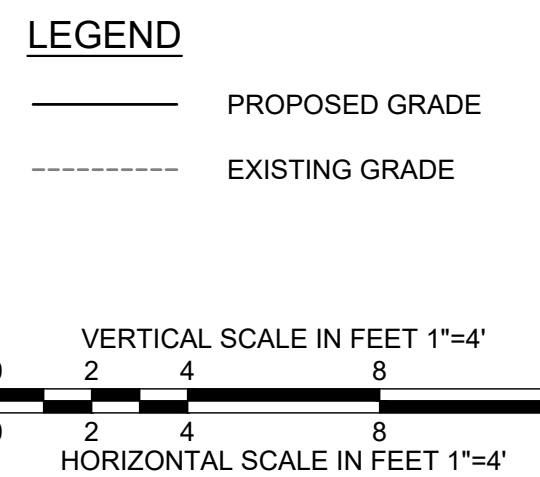
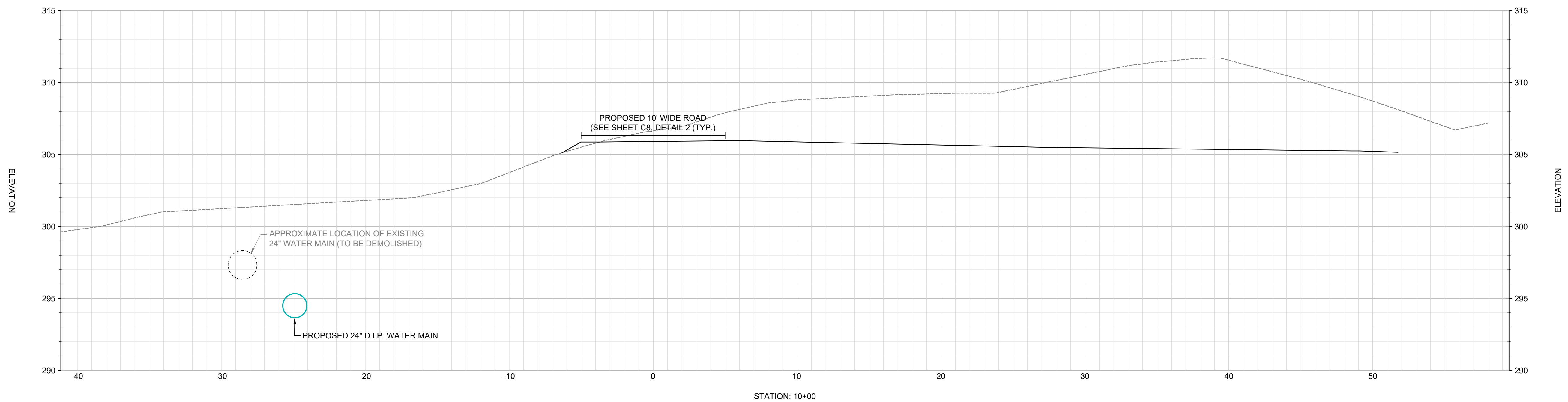
— PROPOSED GRADE
- - - EXISTING GRADE
— PROPOSED RIPRAP



NOTES:

1. RETAINING WALLS TO INCLUDE FORM LINER FINISH ON BOTH FACES OF WALL SECTIONS WITH EXPOSED HEIGHT GREATER THAN OR EQUAL TO 1.5 FEET. SEE DETAILS ON SHEET S4 FOR ADDITIONAL INFORMATION.

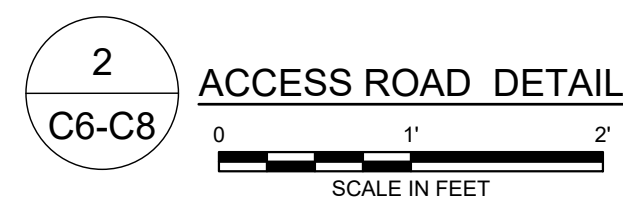
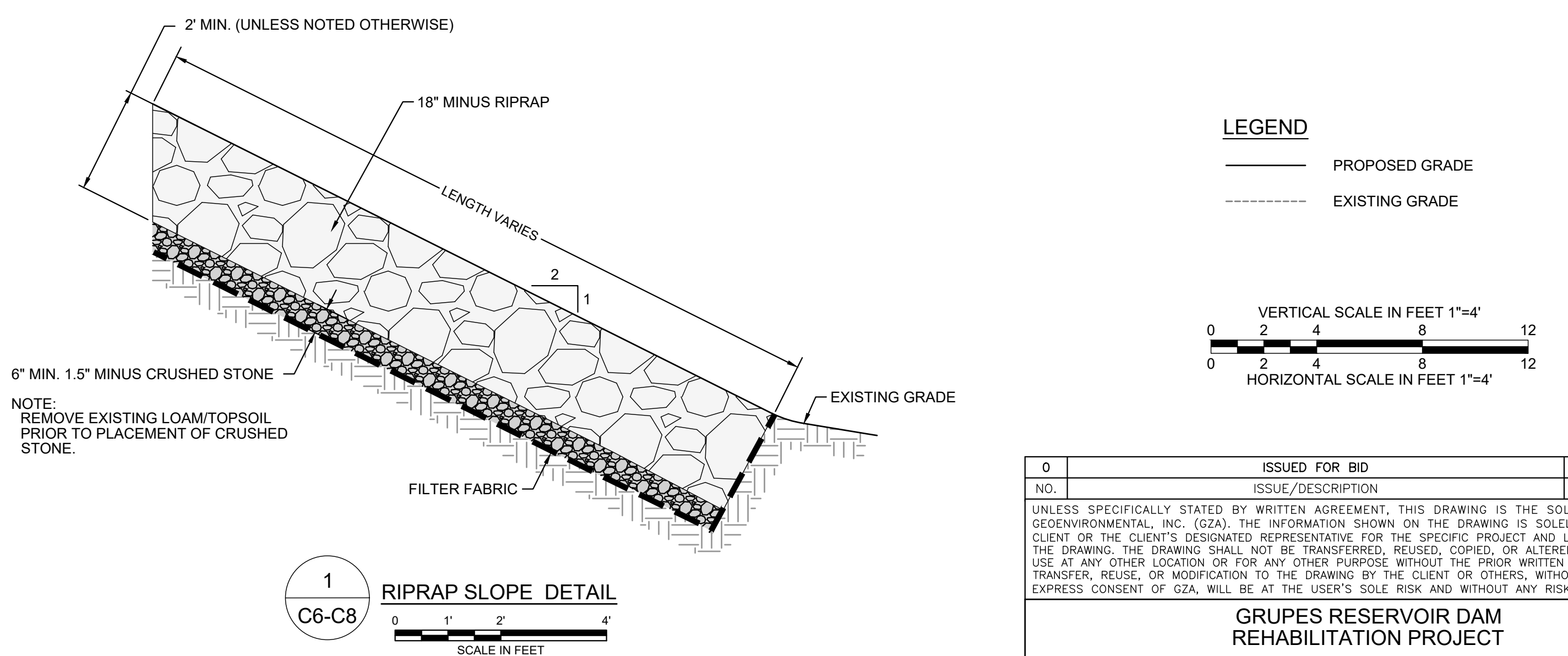
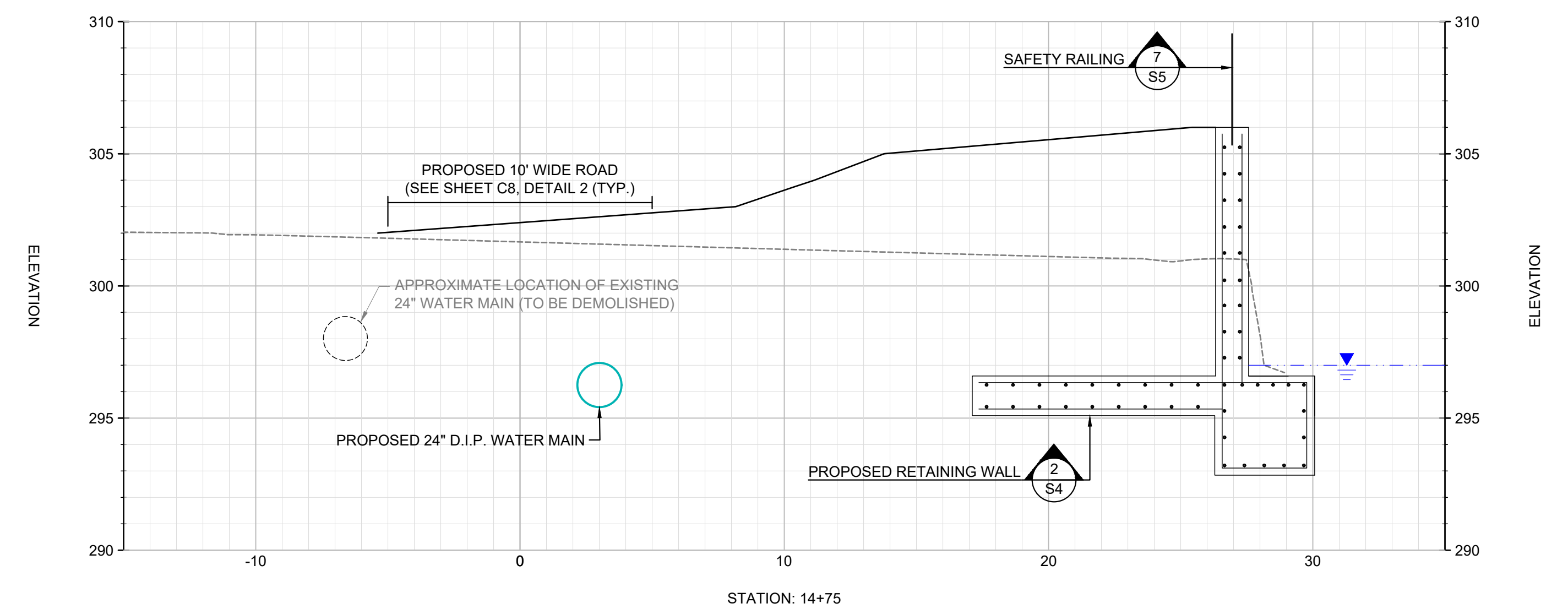
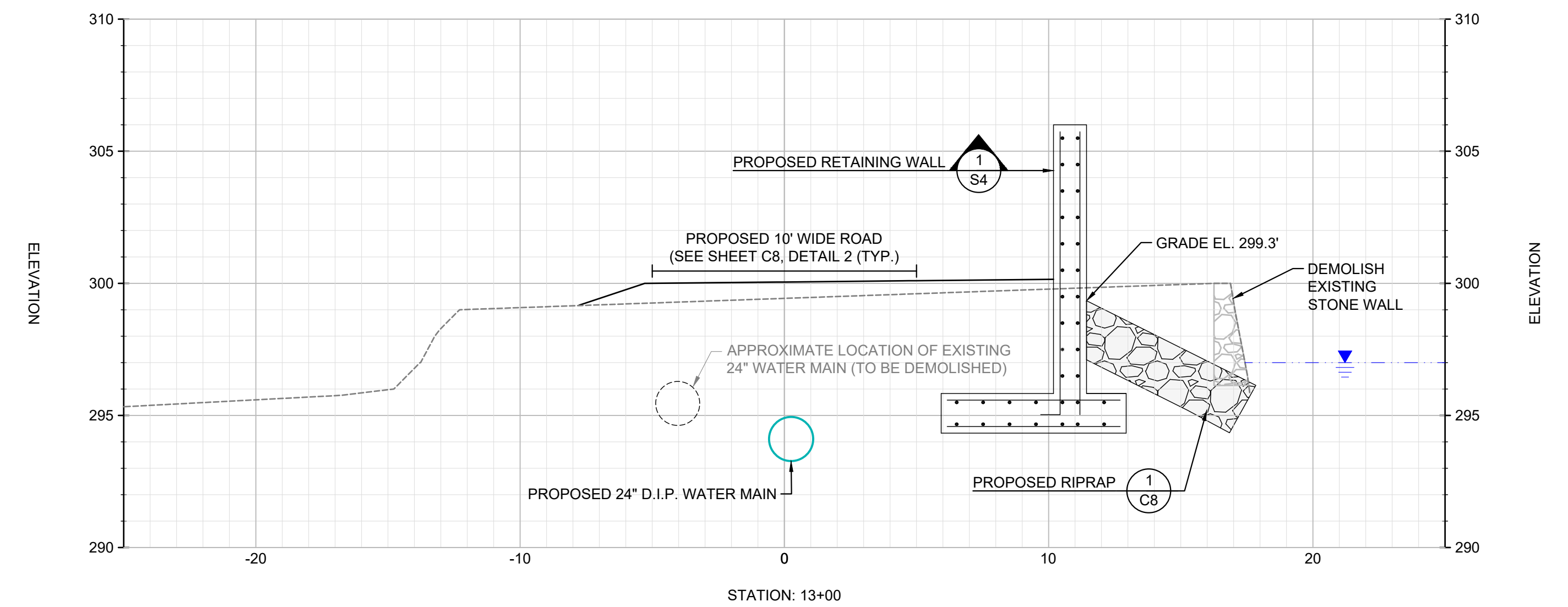




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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
EAST SERVICE ROAD TYPICAL CROSS SECTIONS (2 OF 4)			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387
PROJ MGR:	JGD	REVIEWED BY:	MAT
DESIGNED BY:	JGD	DRAWN BY:	ADP
DATE:	NOVEMBER 2023	PROJECT NO:	01.0171312.10
		CHECKED BY:	MAT
		SCALE:	1" = 4'
		REVISION NO.	
			DRAWING C6 SHEET NO. 15 OF 49

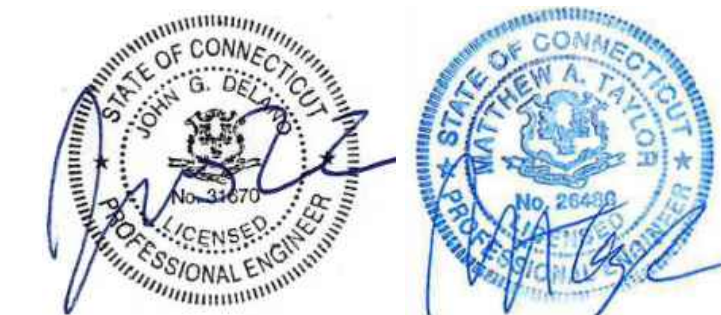


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<p align="center"> GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT </p>			
<p align="center">EAST SERVICE ROAD TYPICAL CROSS SECTIONS (3 OF 4)</p>			
<p>PREPARED BY:</p> <p align="center">  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com </p>		<p>PREPARED FOR:</p> <p align="center">  FIRST TOWN DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 1620 CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387 </p>	
<p>PROJ. MGR: JGD</p> <p>DESIGNED BY: JGD</p> <p>DATE: NOVEMBER 2023</p>	<p>REVIEWED BY: MAT</p> <p>DRAWN BY: ADP</p> <p>PROJECT NO. 01.01771312.10</p>	<p>CHECKED BY: MAT</p> <p>SCALE: 1" = 4'</p> <p>REVISION NO.</p>	<p>DRAWING</p> <p align="center">C7</p> <p>SHEET NO. 16 OF 49</p>





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<p>GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT</p>							
<p>EAST SERVICE ROAD TYPICAL CROSS SECTIONS (4 OF 4)</p>							
<p>PREPARED BY:</p> <p> G2A GeoEnvironmental, Inc. Engineers and Scientists www.g2a.com</p>				<p>PREPARED FOR:</p> <p> TOWN OF NEW CANAAN WATER DEPARTMENT 1 NEW CANAAN ROAD NEW CANAAN, CONNECTICUT 06852 (203) 647-1381</p>			
<p>PROJ MGR: JSD</p> <p>DESIGNED BY: JSD</p> <p>DATE: NOVEMBER 2023</p>		<p>REVIEWED BY: MAT</p> <p>DRAWN BY: ADP</p> <p>PROJECT NO: 01.0171312.10</p>		<p>CHECKED BY: MAT</p> <p>SCALE: 1" = 4'</p> <p>REVISION NO.</p>		<p>DRAWING</p> <p>C8</p> <p>SHEET NO. 17 OF 49</p>	



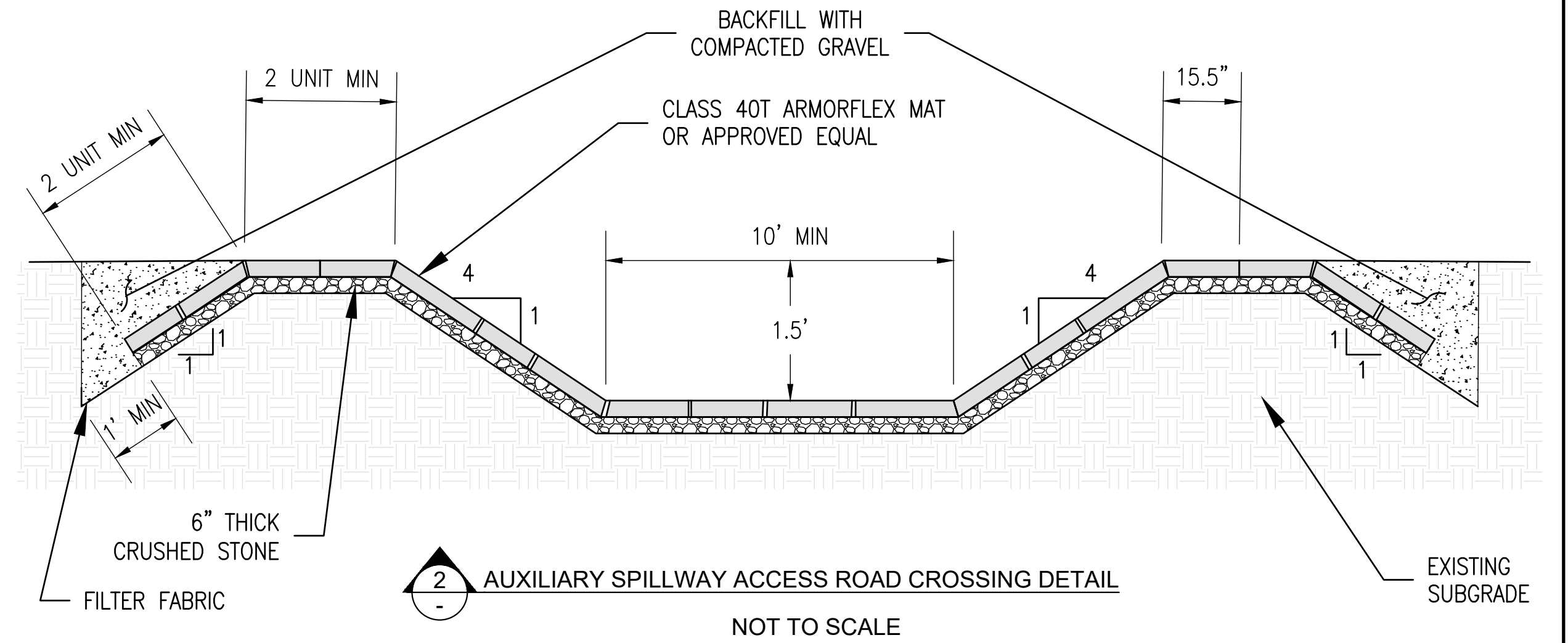


1A AUXILIARY SPILLWAY CHANNEL IMPROVEMENTS - LOOKING UPSTREAM

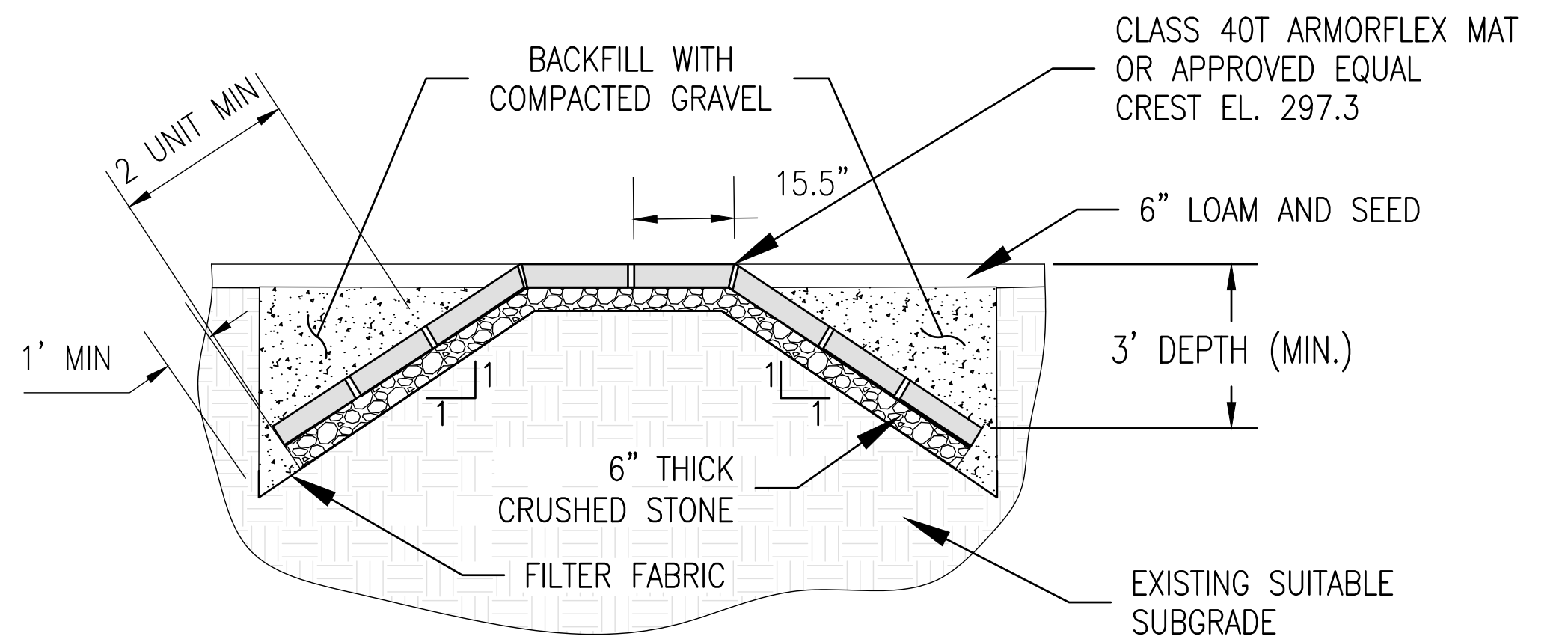


REMOVE OVERHANGING TREES WITHIN 10' OF CHANNEL BOTTOM, LOOSE BOULDERS AND RE-GRADE SLOPE TO 2H:1V. (LIMITS TO BE DETERMINED IN FIELD IN CONJUNCTION WITH ENGINEER AND ADJUSTED BASED ON ACCESS)

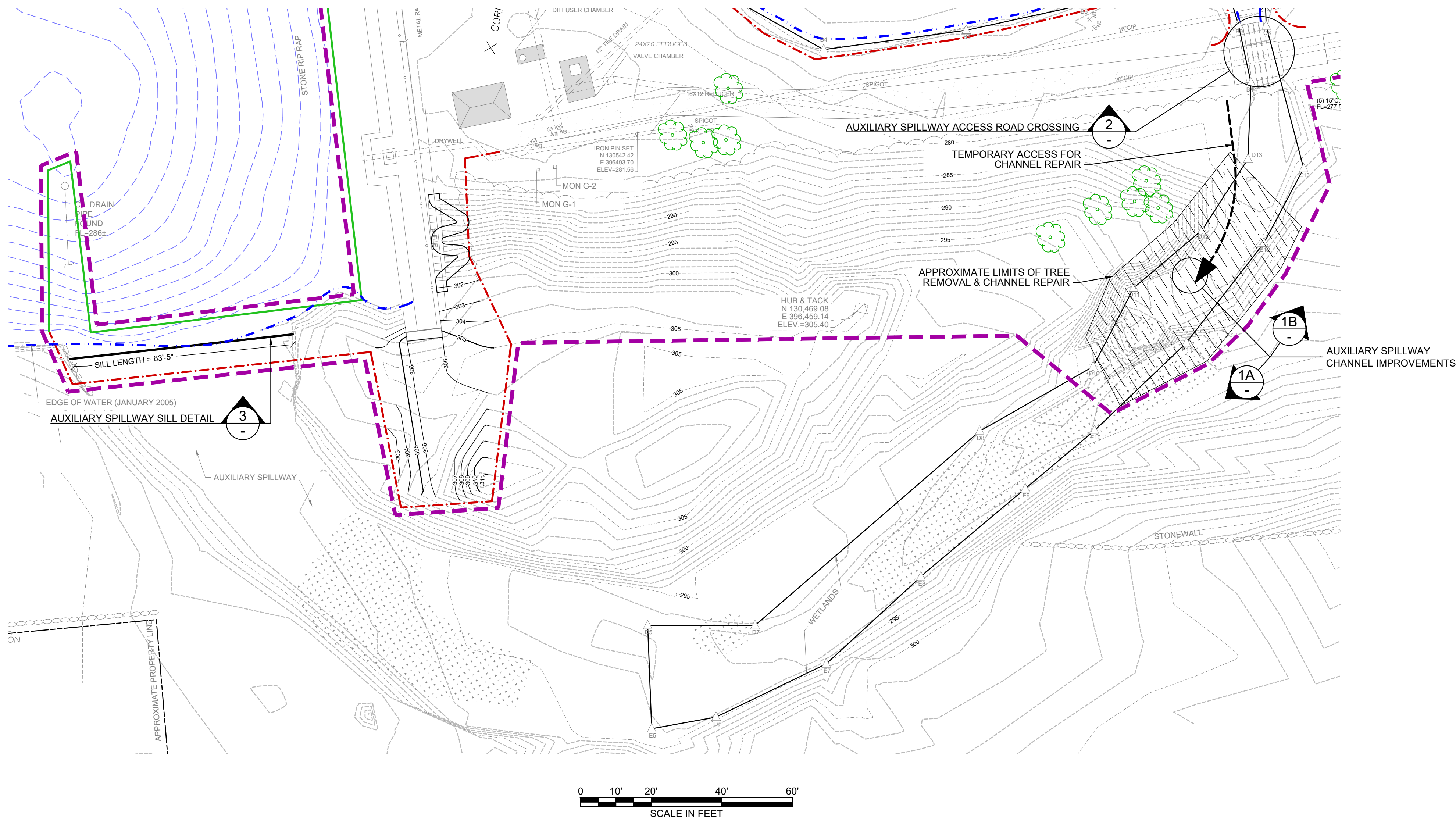
1B AUXILIARY SPILLWAY CHANNEL IMPROVEMENTS - LOOKING DOWNSTREAM



2 AUXILIARY SPILLWAY ACCESS ROAD CROSSING DETAIL
NOT TO SCALE

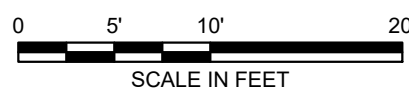


3 AUXILIARY SPILLWAY SILL DETAIL
NOT TO SCALE



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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
AUXILIARY SPILLWAY IMPROVEMENTS - DETAILS			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387
PROJ MGR:	JGD	REVIEWED BY:	MAT
DESIGNED BY:	JGD	DRAWN BY:	ADP
DATE:	NOVEMBER 2023	PROJECT NO:	01.0171312.10
		CHECKED BY:	MAT
		SCALE:	N.T.S.
		REVISION NO.	
		DRAWING	C9
		SHEET NO.	18 OF 49









1. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING RELOCATION OF EXISTING ELECTRICAL SERVICE.
2. FINAL LAYOUT OF RAILINGS, FENCE POSTS, AND GATES SHALL BE ADJUSTED IN THE FIELD BASED ON THE LOCATION OF THE PRE-FABRICATED BRIDGES ALONG WITH THE LOCATION OF REBAR AND EXPANSION/CONSTRUCTION JOINTS WITHIN THE NEW CAST-IN-PLACE CONCRETE SITE FEATURES.

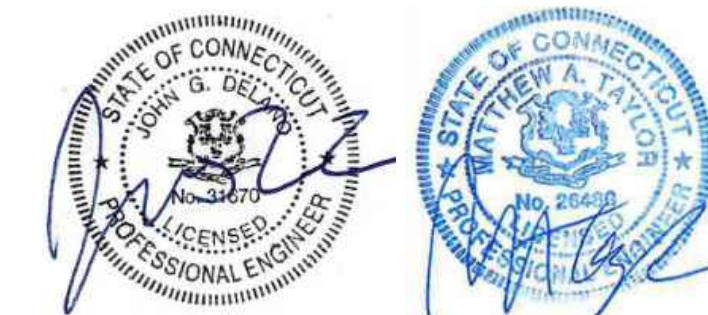


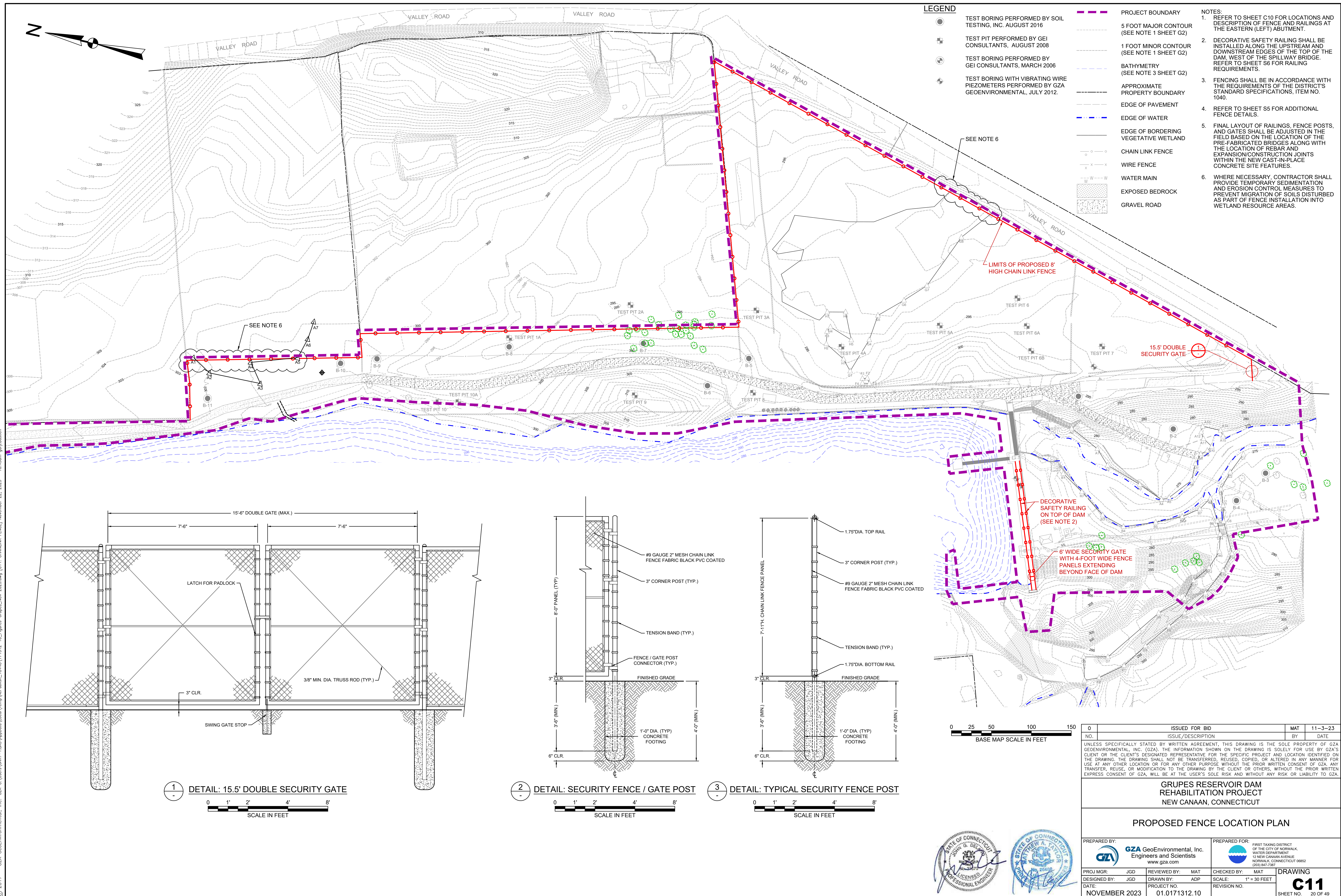
1. CAST IN PLACE STAIRS TO BE POURED ON 6" THICK LAYER OF 3/4-INCH CRUSHED STONE BEDDING, OVERLAYING COMPACTED STRUCTURAL FILL.
2. SEE DETAIL 4 SHEET S4 FOR ABUTMENT STAIRS REINFORCEMENT DETAIL.



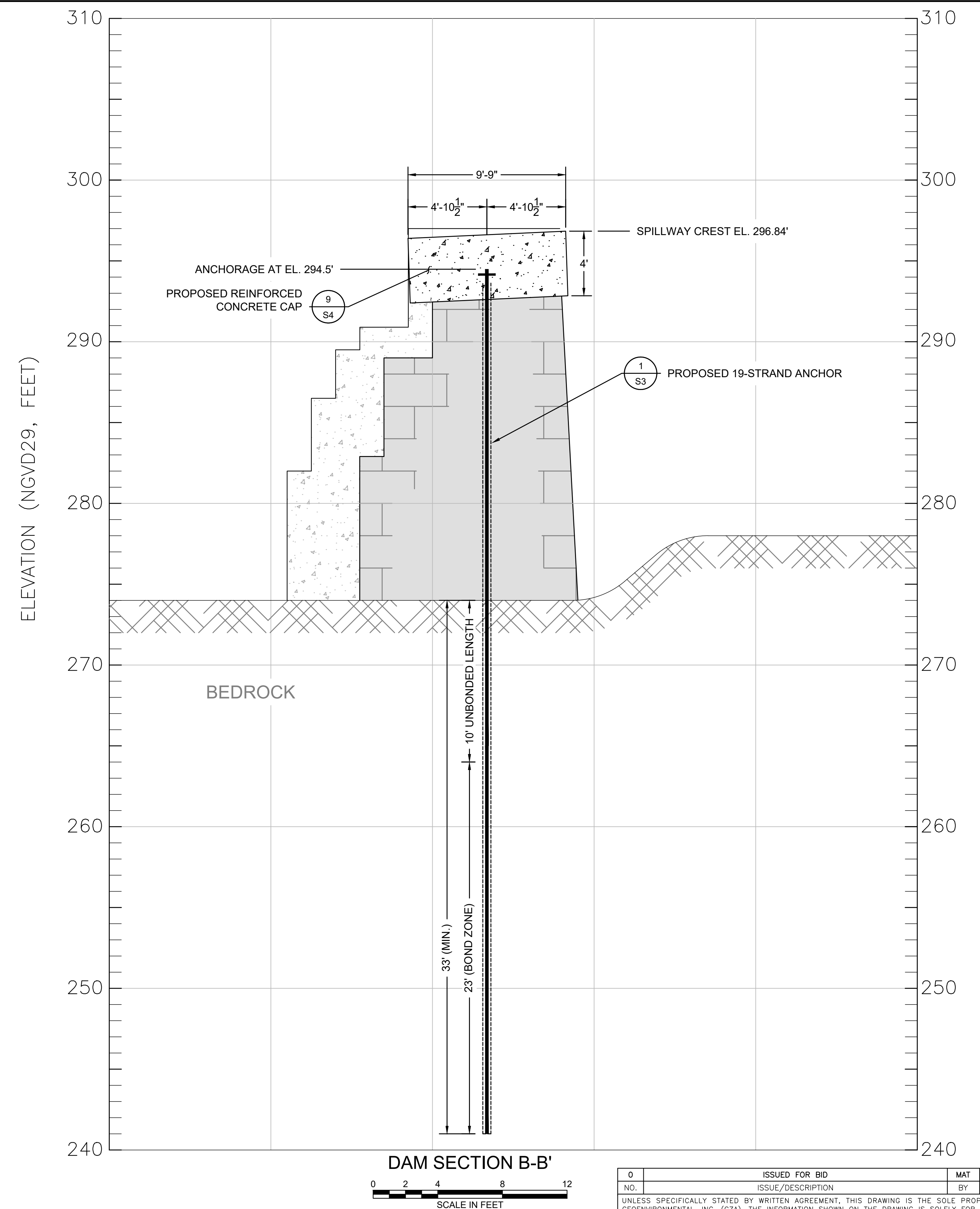
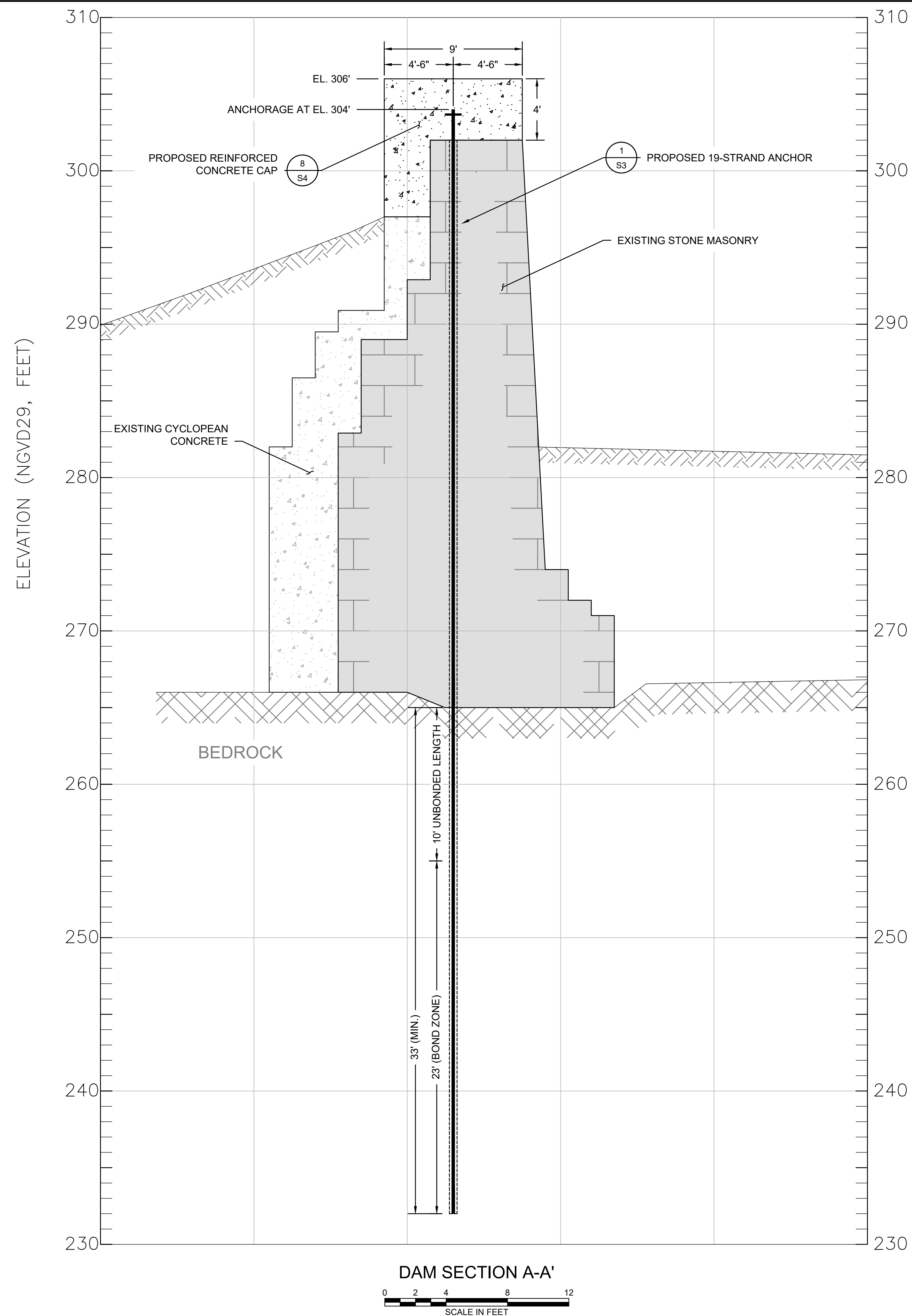
	PROPOSED CHAIN LINK FENCE
	EXISTING CHAIN LINK FENCE
	PROPOSED MAJOR CONTOUR (5')
	PROPOSED MINOR CONTOUR (1')
	PROPOSED 4' THICK REINFORCED CONCRETE CAP
	PROPOSED 3' THICK REINFORCED CONCRETE CAP

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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT					
TYPICAL DETAILS AND PROPOSED ABUTMENT MODIFICATIONS					
PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com			PREPARED FOR:  FIRST TAXING DISTRICT OF THE CITY OF NORWALK WATER DEPARTMENT 24 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 947-7867		
PROJ MGR: JGD DESIGNED BY: JGD DATE: NOVEMBER 2023	REVIEWED BY: MAT DRAWN BY: ADP PROJECT NO: 01.0171312.10	CHECKED BY: MAT SCALE: 1" = 2' REVISION NO.	DRAWING C10 SHEET NO. 19 OF 49		





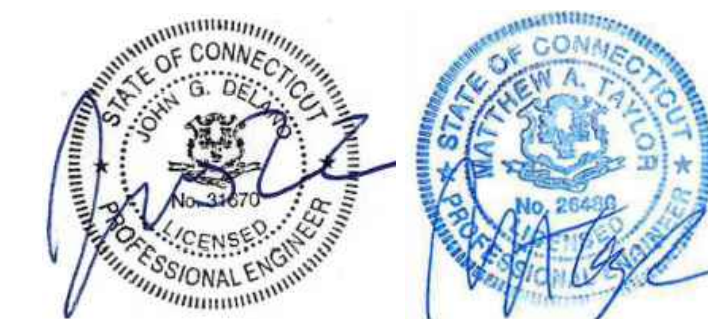


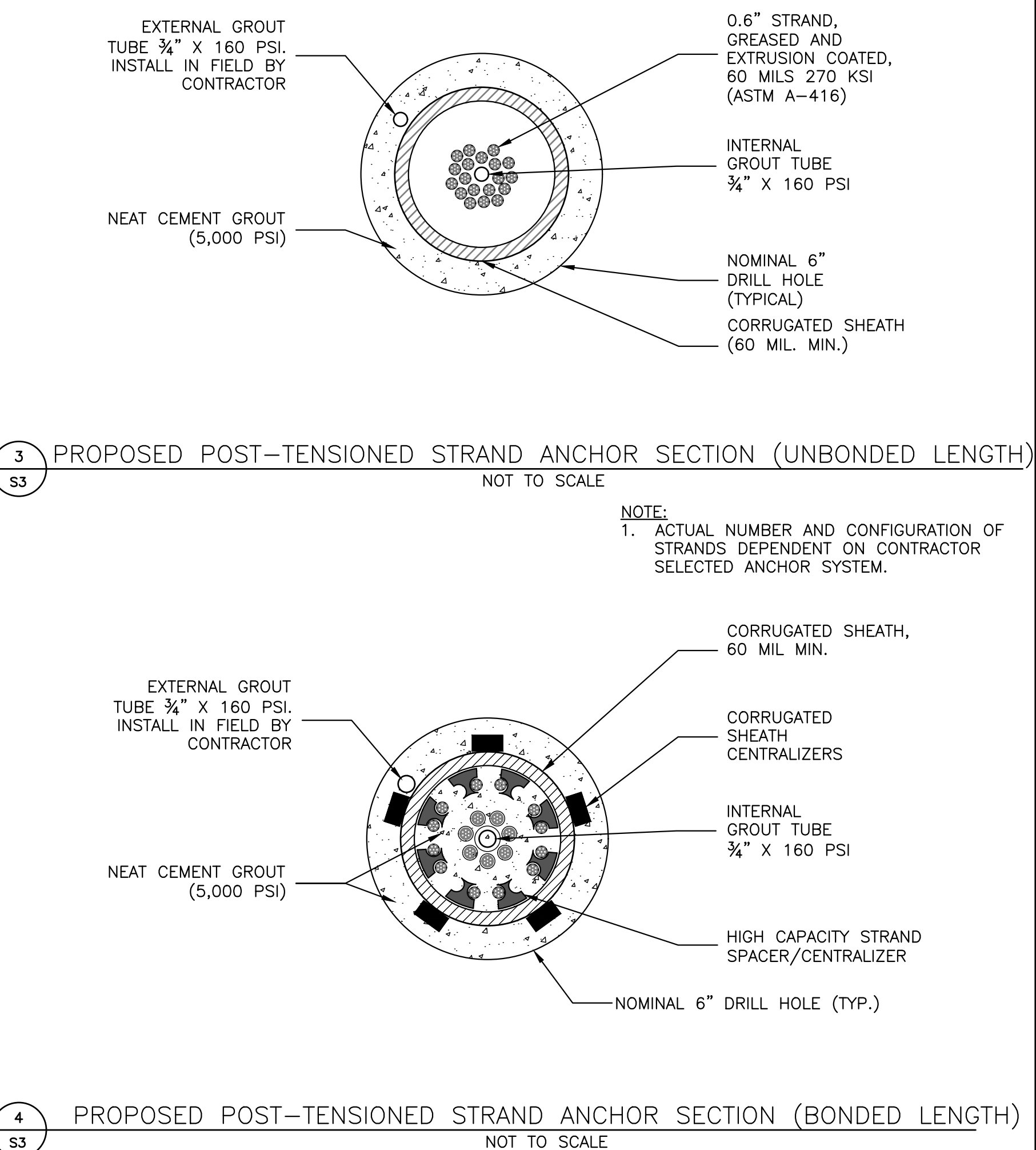
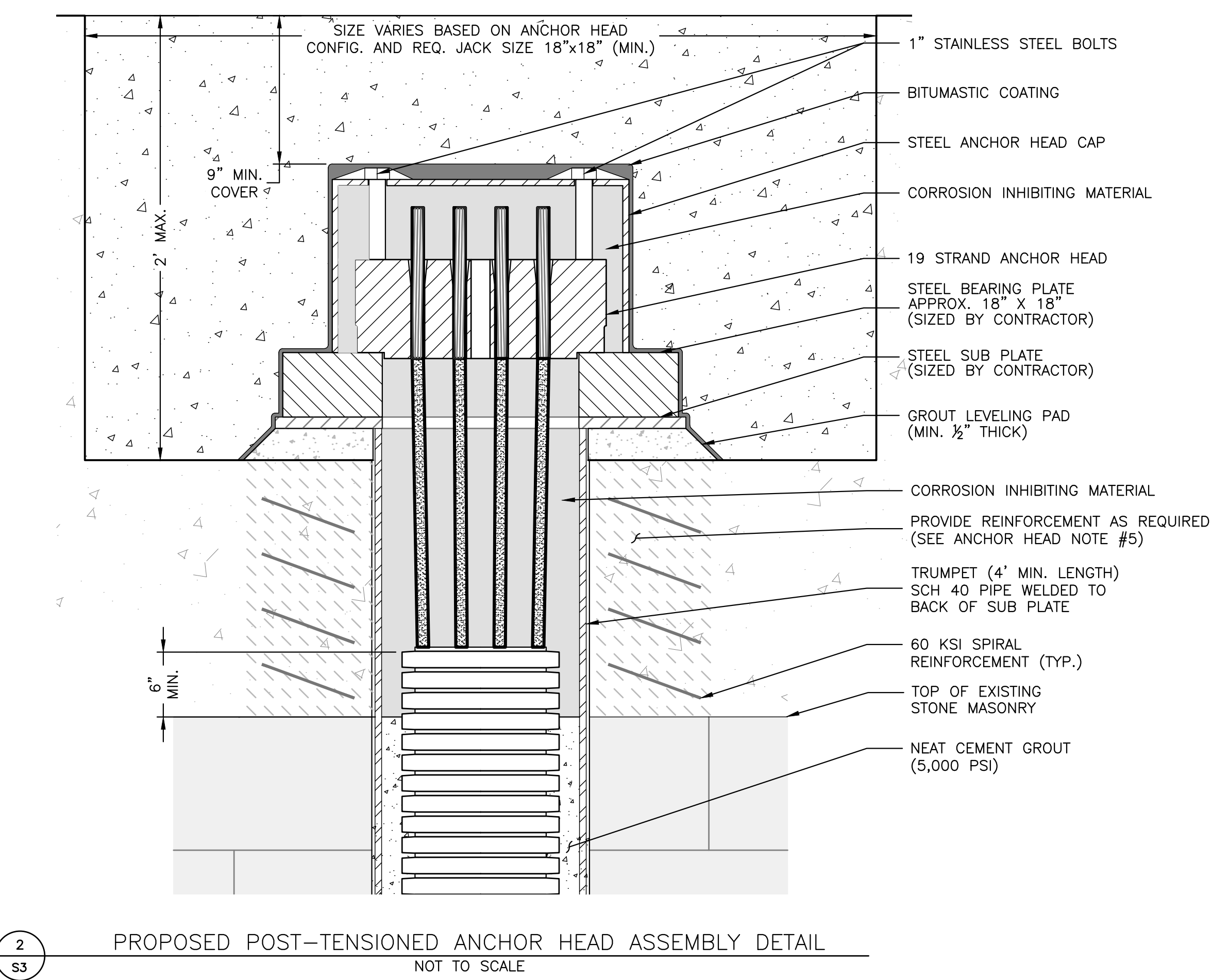
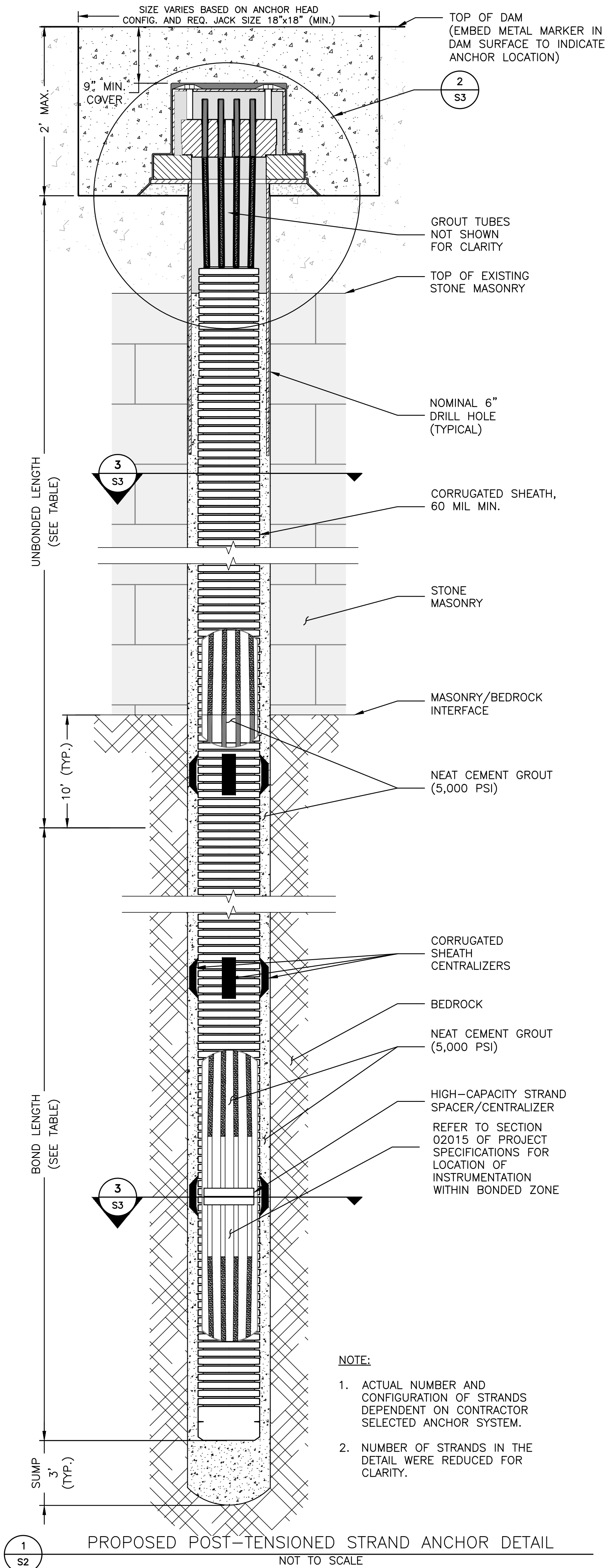


SOURCE:

1. CROSS-SECTIONS BASED ON DRAWINGS 10 & 11 FROM PHASE II INVESTIGATION REPORT PREPARED BY ROALD HAASTAD, 1982.
2. ELEVATIONS MODIFIED BY SURVEY BY HEARN LAND SURVEY, 2006 AND 2012.
3. DAM HEIGHT AND MATERIAL ZONES MODIFIED BY RESULTS OF 2012 BORINGS THROUGH DAM BY GZA.

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<p>GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT</p>							
<p>POST-TENSIONED ANCHOR SECTIONS</p>							
<p>PREPARED BY:</p> <p>GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com</p>				<p>PREPARED FOR:</p> <p>FIRST TAKING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN ROAD NORWALK, CONNECTICUT 06852 (203) 441-7367</p>			
<p>PROJ. MGR:</p> <p>DESIGNED BY:</p> <p>DATE:</p>		<p>REVIEWED BY:</p> <p>DRAWN BY:</p> <p>PROJECT NO.</p>		<p>CHECKED BY:</p> <p>SCALE:</p> <p>REVISION NO.</p>		<p>MAT</p> <p>1" = 4'</p> <p>DRAWING</p> <p>S2</p>	
<p>NOVEMBER 2023</p>		<p>01.0171312.10</p>				<p>SHEET NO. 22 OF 49</p>	





POST-TENSIONED STRAND ANCHOR NOTES:

1. THE CONTRACTOR WILL BE REQUIRED TO DESIGN, SUPPLY AND INSTALL STRAND ANCHORS THAT WILL DEVELOP THE REQUIRED LOAD-CARRYING CAPACITY AND SATISFY THE MINIMUM REQUIREMENTS SHOWN ON THE CONTRACT DRAWINGS AND IN THE PROJECT SPECIFICATIONS.
2. ANCHOR STRANDS SHALL BE DOUBLE CORROSION PROTECTED AND CONSIST OF 7-WIRE, LOW-RELAXATION STEEL CONFORMING TO ASTM A416.
3. STRAND ANCHORS SHALL BE MANUFACTURED BY DYWIDAG-SYSTEMS INTERNATIONAL OR APPROVED EQUAL. ANCHOR UNITS TYPICALLY INCLUDES WEDGES, WEDGE PLATE, BEARING PLATE, STRANDS, SHEATHING, TRUMPET, AND CENTRALIZERS. CONTRACTOR TO VERIFY, SUPPLY, AND INSTALL.
4. STRAND ANCHORS TO BE INSTALLED AND TESTED IN ACCORDANCE WITH THE CURRENT EDITION OF "RECOMMENDATIONS FOR PRESTRESSED ROCK AND SOIL ANCHORS" OF THE POST TENSIONING INSTITUTE (PTI). CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE COMPLETE INSTALLATION PER SECTION 02455 OF THE PROJECT SPECIFICATIONS.
5. MINIMUM BOND LENGTH IN BEDROCK SHALL BE VERIFIED WITH PERFORMANCE TESTING OF THE TEST ANCHOR AND STRAND ANCHORS IN ACCORDANCE WITH SECTIONS 02455 AND 02457 OF THE PROJECT SPECIFICATIONS AND PTI RECOMMENDATIONS.
6. ALL PRODUCTION STRAND ANCHORS SHALL BE PROOF TESTED TO 133% OF THE DESIGN LOAD (885.9 KIPS). SEE SECTION 02457 OF THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. TEST ANCHOR SHALL BE TESTED TO A MAXIMUM TEST LOAD OF 885.9 KIPS. (REFER TO SHEET S1 FOR THE APPROXIMATE TEST ANCHOR LOCATION.)
8. THE PRODUCTION STRAND ANCHOR LOCKOFF LOAD SHALL BE 67% OF THE ULTIMATE TENSILE LOAD. MINIMUM DESIGN LOAD SHALL BE 666.1 KIPS (AFTER LOSSES).
9. BONDED LENGTH OF STRAND ANCHORS SHALL BEGIN 10 FEET BELOW THE TOP OF BEDROCK AT EACH ANCHOR LOCATION.
10. GROUT SHALL BE NEAT CEMENT GROUT WITH AN UNCONFINED COMPRESSIVE STRENGTH (f'c) OF 3000 PSI OR GREATER AT 5 DAYS. GROUT SHALL HAVE f'c GREATER THAN 5000 PSI AT 28 DAYS.
11. SEE SECTIONS 02455 AND 02457 OF THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING STRAND ANCHORS AND ANCHOR LOAD TESTING, RESPECTIVELY.

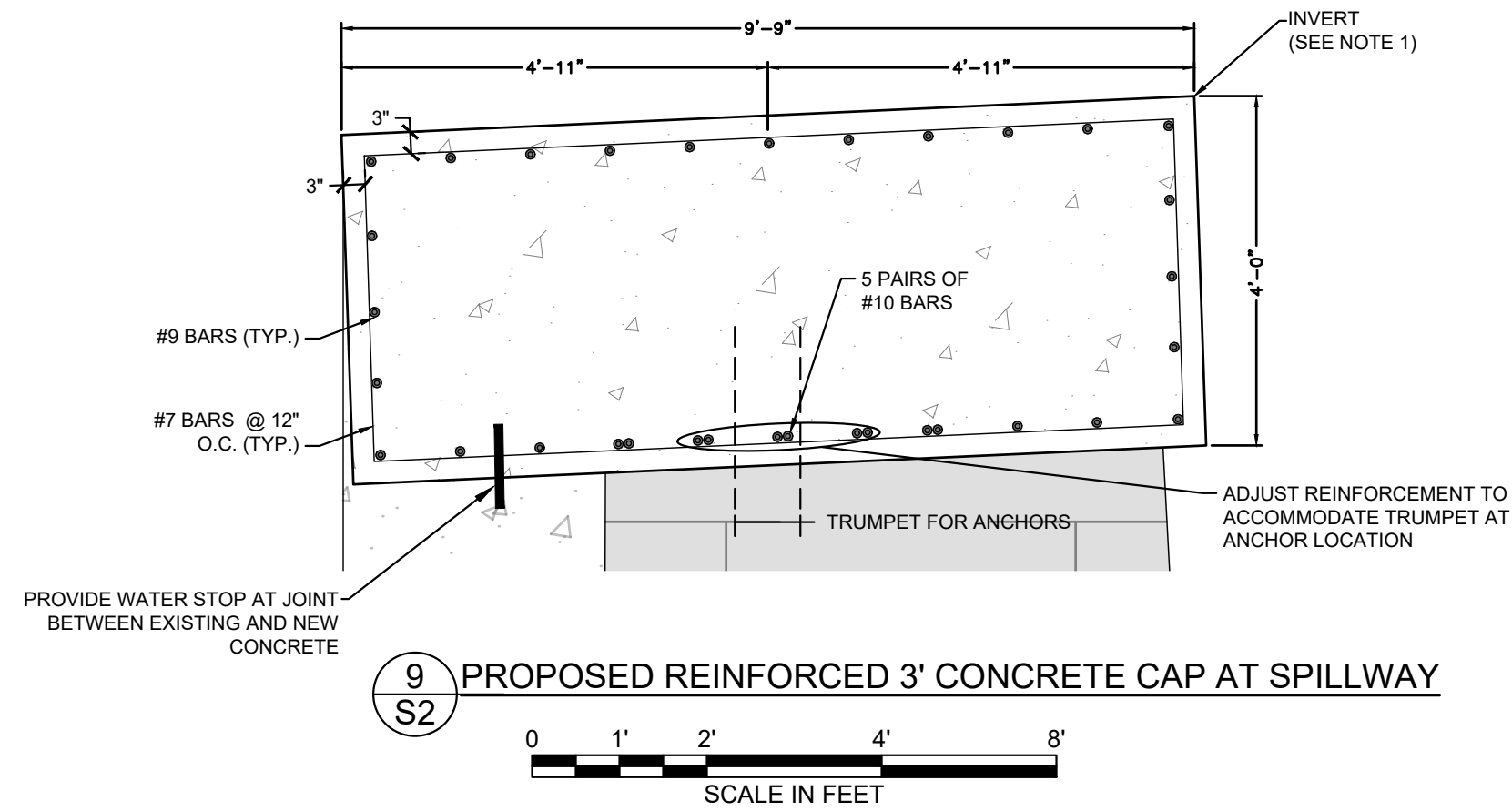
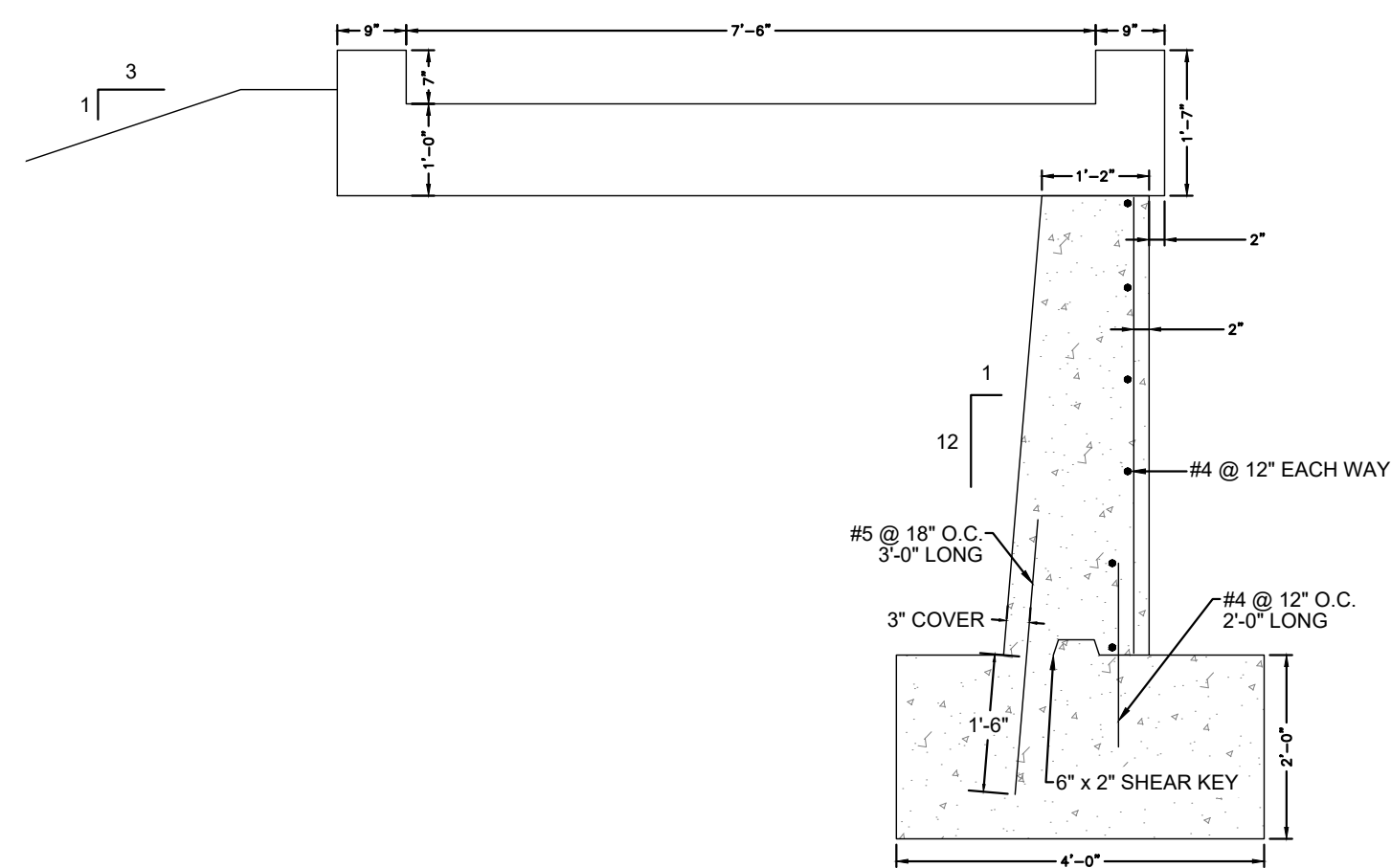
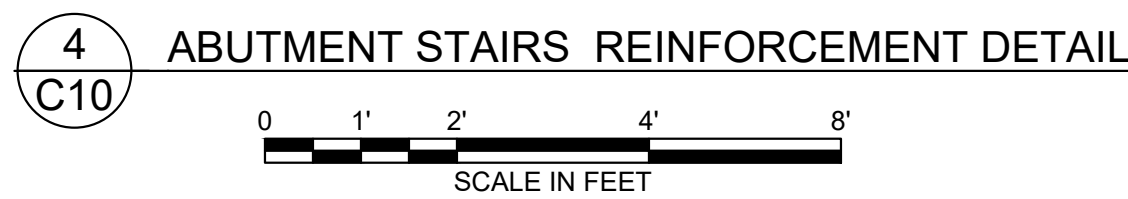
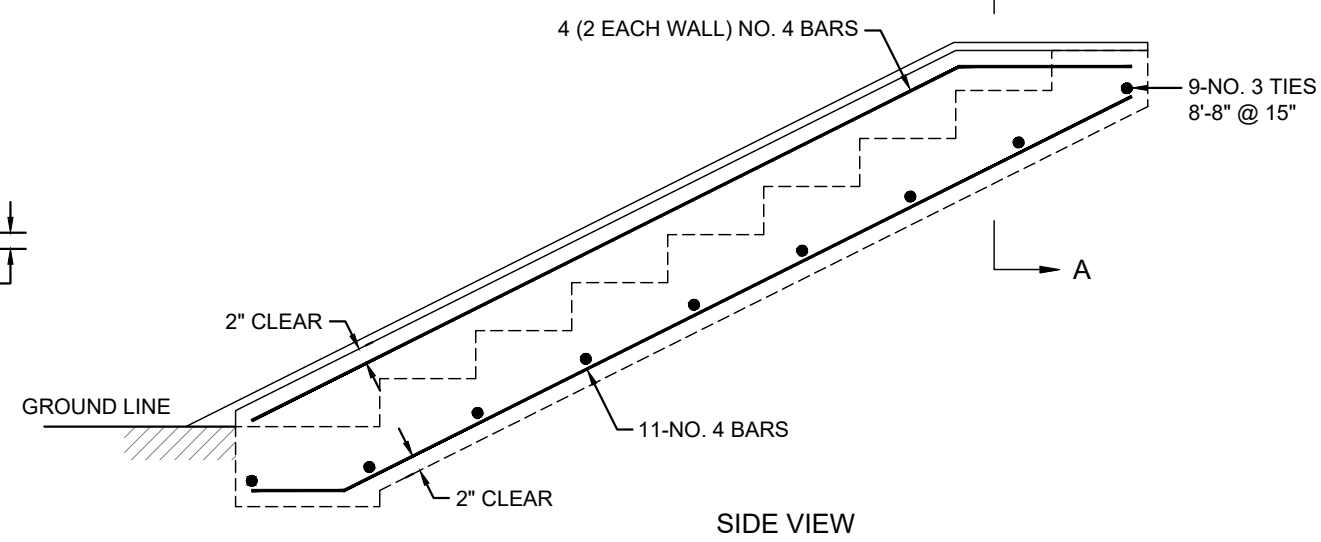
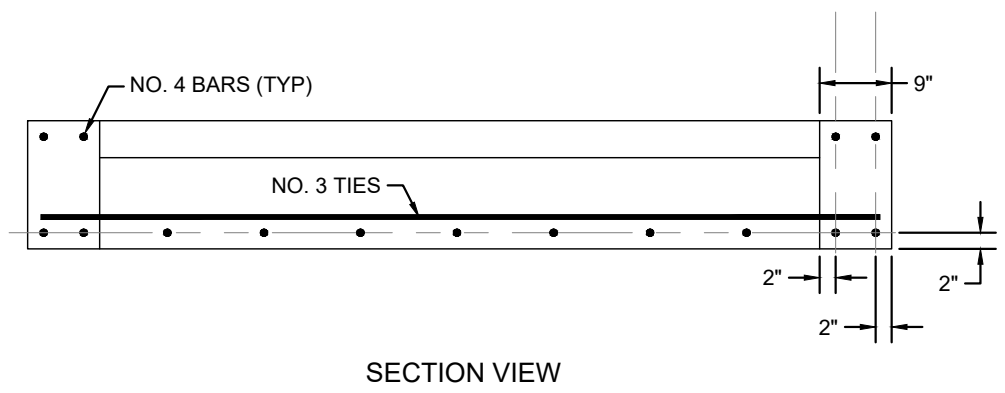
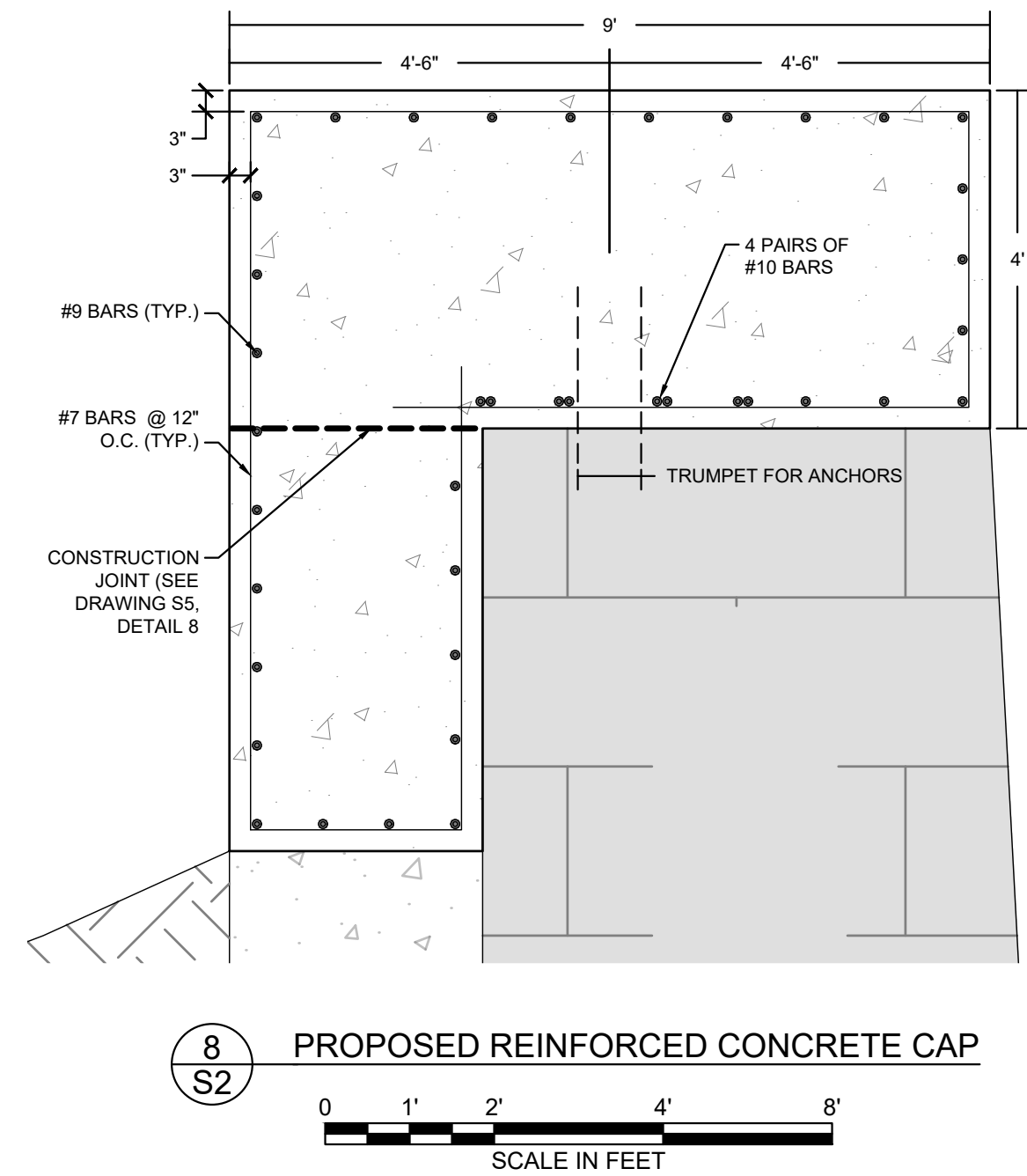
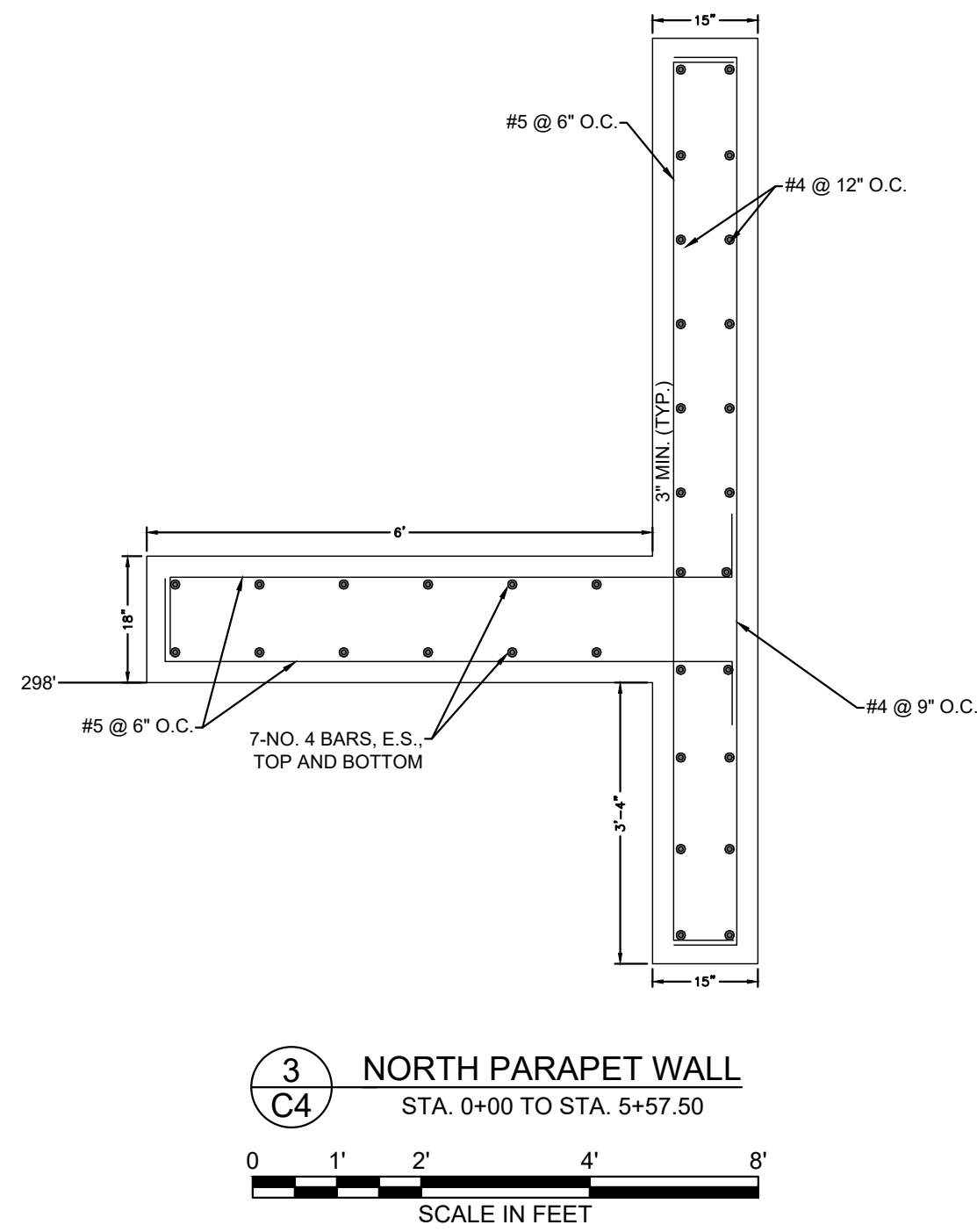
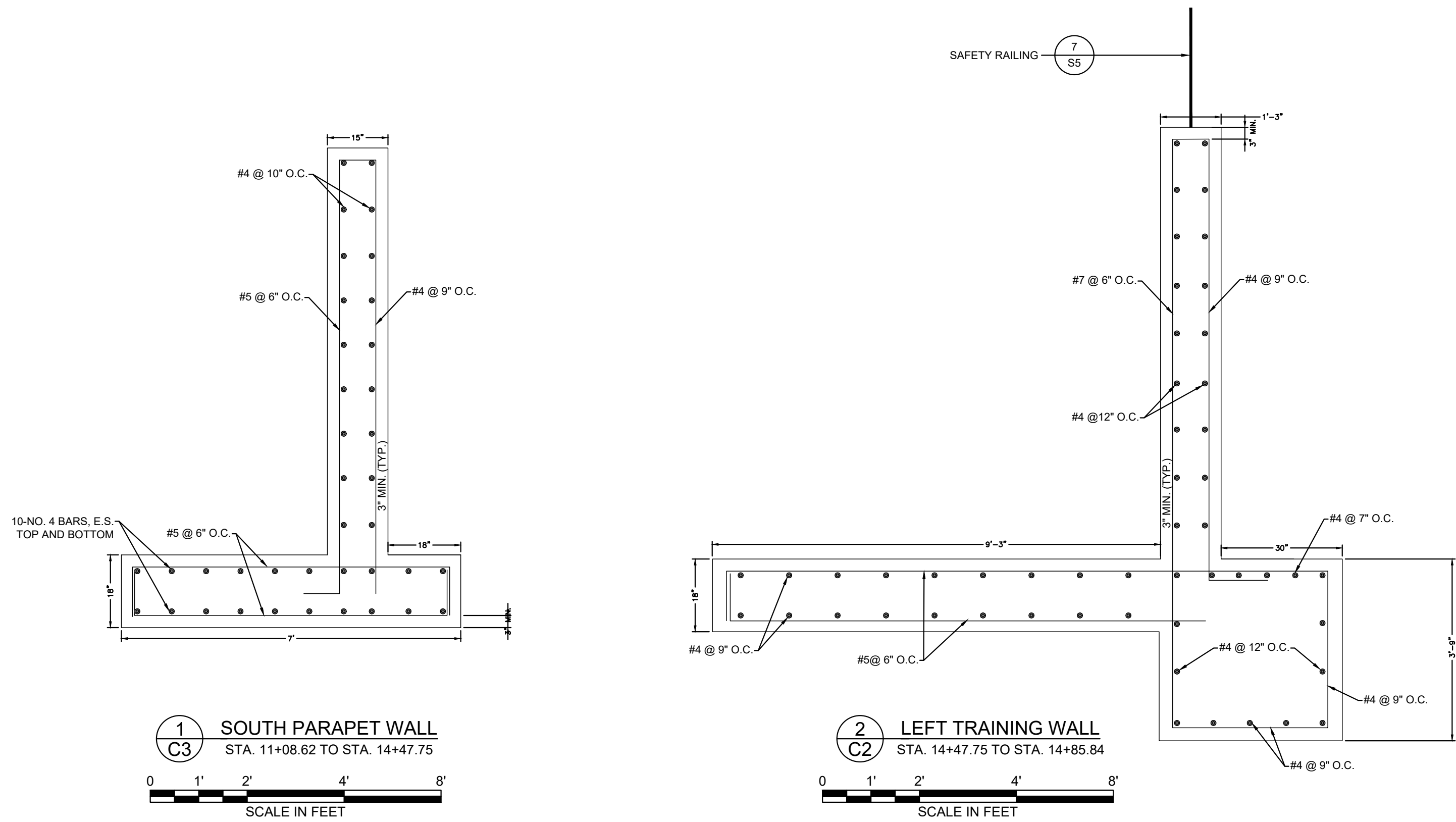
POST-TENSIONED ANCHOR HEAD ASSEMBLY NOTES:

1. ANCHOR HEAD AND BEARING PLATES SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A36, A588, A709 OR A572, OR EQUIVALENT.
2. THE ACTUAL COMPONENTS AND DIMENSIONS OF THE ANCHOR HEAD ASSEMBLY WILL BE DETERMINED BY THE CONTRACTOR.
3. TRUMPETS FILLED WITH CORROSION INHIBITOR SHALL HAVE A PERMANENT SEAL BETWEEN THE TRUMPET AND THE FREE STRESSING LENGTH CORROSION PROTECTION.
4. ANCHOR POCKET DEPTH AND DIAMETER DEPENDS ON FINAL ANCHOR HEAD CONFIGURATION, INSTRUMENTATION AND POST-TENSIONED JACK REQUIREMENTS. AT A MINIMUM, POCKETS SHALL BE MADE WATER-TIGHT AND PROVIDE A MINIMUM OF 9" OF COVER. POCKETS SHALL BE 18"x18" (MIN).
5. THE CONTRACTOR'S ANCHOR HEAD DESIGN SHALL INCLUDE DETAILS OF ADDITIONAL SPIRAL REINFORCEMENT BELOW THE BEARING PLATES, AS MAY BE NECESSARY TO PROVIDE SUFFICIENT CONFINEMENT TO THE ANCHORAGE.

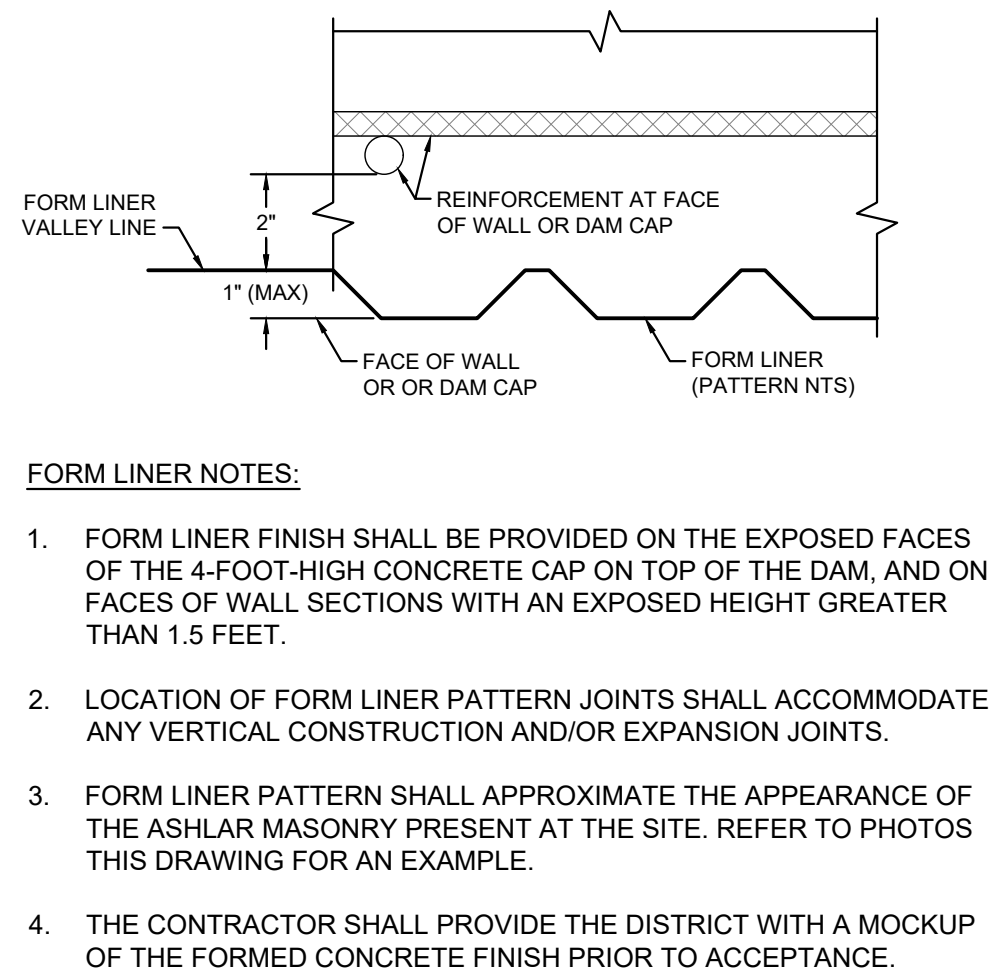
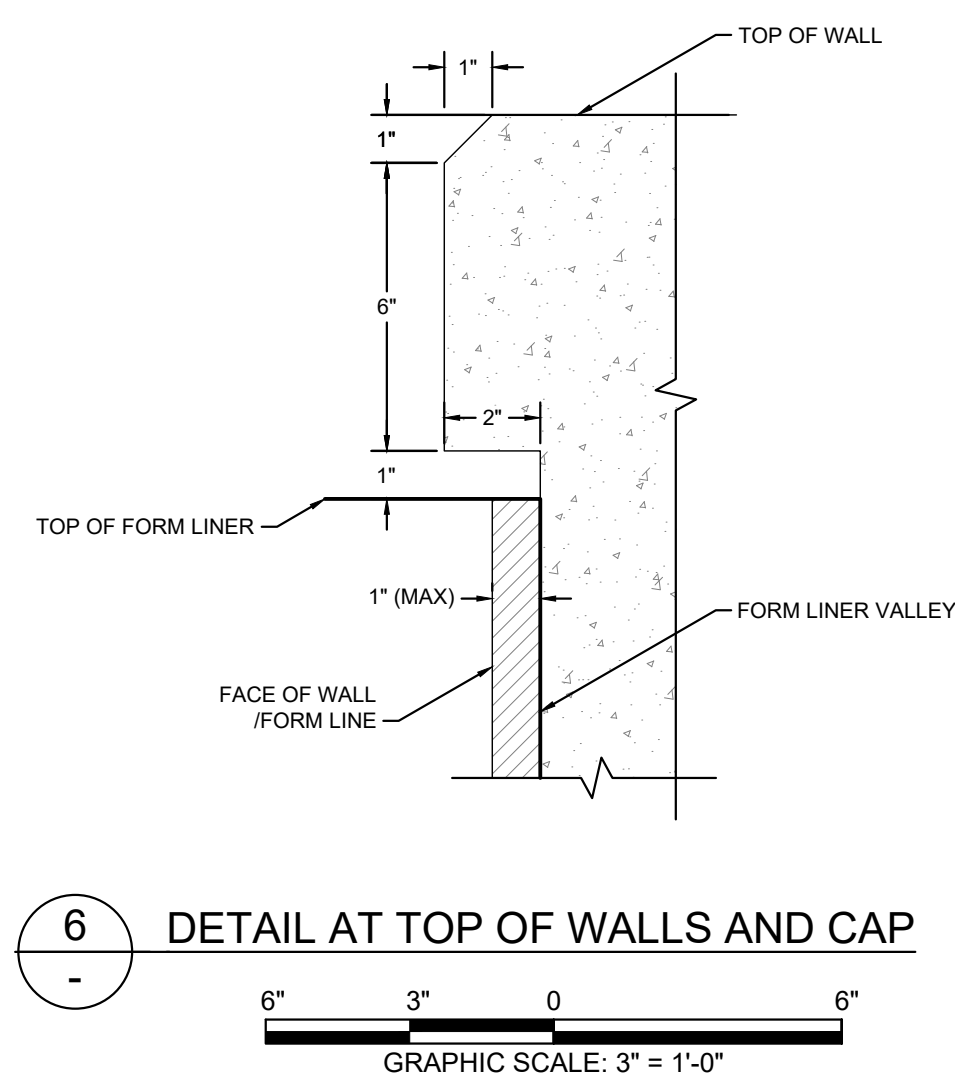
PROPOSED POST-TENSIONED STRAND ANCHOR DATA														
ANCHOR NO.	NORTHING	EASTING	MIN. ULTIMATE TENSILE LOAD (KIP)	MIN. REQ. NO. OF STRANDS	MIN. DESIGN LOAD (KIP)	% ULT.	MIN. LOCKOFF LOAD (KIP)	% ULT.	MIN. HOLE DIA. (IN.)	MIN. BONDED LENGTH (FT.)	ESTIMATED UNBONDED LENGTH (FT.)	EST. TOTAL LENGTH (FT.)	MAX. DEVIATION FROM VERTICAL (DEGREES)	NOTES
1	796554.1057	630626.6107	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
2	796568.9250	630631.9446	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
3	796583.7443	630637.2785	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
4	796598.5636	630642.6124	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
5	796613.3829	630647.9463	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
6	796628.2023	630653.2802	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
7	796643.0216	630658.6141	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
8	796657.8409	630663.9480	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
9	796672.6602	630669.2819	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
10	796687.4795	630674.6158	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
11	796702.2988	630679.9497	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
12	796717.1181	630685.2836	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
13	796731.9375	630690.6174	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
14	796746.7568	630695.9513	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
15	796761.5761	630701.2852	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	
TA-1	796757.8713	630699.9518	1112.4	19	666.1	60%	745.3	67%	6"	23'	40'	63'	±3°	TEST ANCHOR

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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
POST-TENSIONED STRAND ANCHOR DETAILS			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	FIRST TAXING DISTRICT OF THE CITY OF NORWALK WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387
PROJ MGR:	JGD	REVIEWED BY:	MAT
DESIGNED BY:	JGD	DRAWN BY:	ADP/SMW
DATE:	NOVEMBER 2023	PROJECT NO:	01.0171312.10
		CHECKED BY:	MAT
		SCALE:	N.T.S.
		REVISION NO.	
			DRAWING S3 SHEET NO. 23 OF 49





NOTE:
1. DEMOLISH EXISTING MASONRY TO INSTALL NEW CONCRETE CAP AT EXISTING SPILLWAY INVERT ELEVATION.

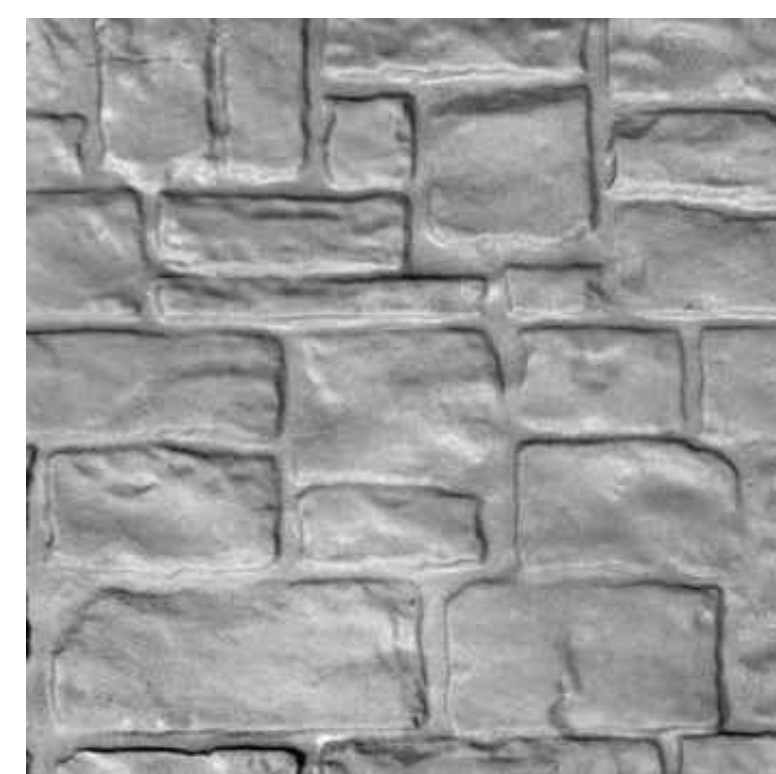


FORM LINER NOTES:

- FORM LINER FINISH SHALL BE PROVIDED ON THE EXPOSED FACES OF THE 4-FOOT-HIGH CONCRETE CAP ON TOP OF THE DAM, AND ON FACES OF WALL SECTIONS WITH AN EXPOSED HEIGHT GREATER THAN 1.5 FEET.
- LOCATION OF FORM LINER PATTERN JOINTS SHALL ACCOMMODATE ANY VERTICAL CONSTRUCTION AND/OR EXPANSION JOINTS.
- FORM LINER PATTERN SHALL APPROXIMATE THE APPEARANCE OF THE ASHLAR MASONRY PRESENT AT THE SITE. REFER TO PHOTOS THIS DRAWING FOR AN EXAMPLE.
- THE CONTRACTOR SHALL PROVIDE THE DISTRICT WITH A MOCKUP OF THE FORMED CONCRETE FINISH PRIOR TO ACCEPTANCE.



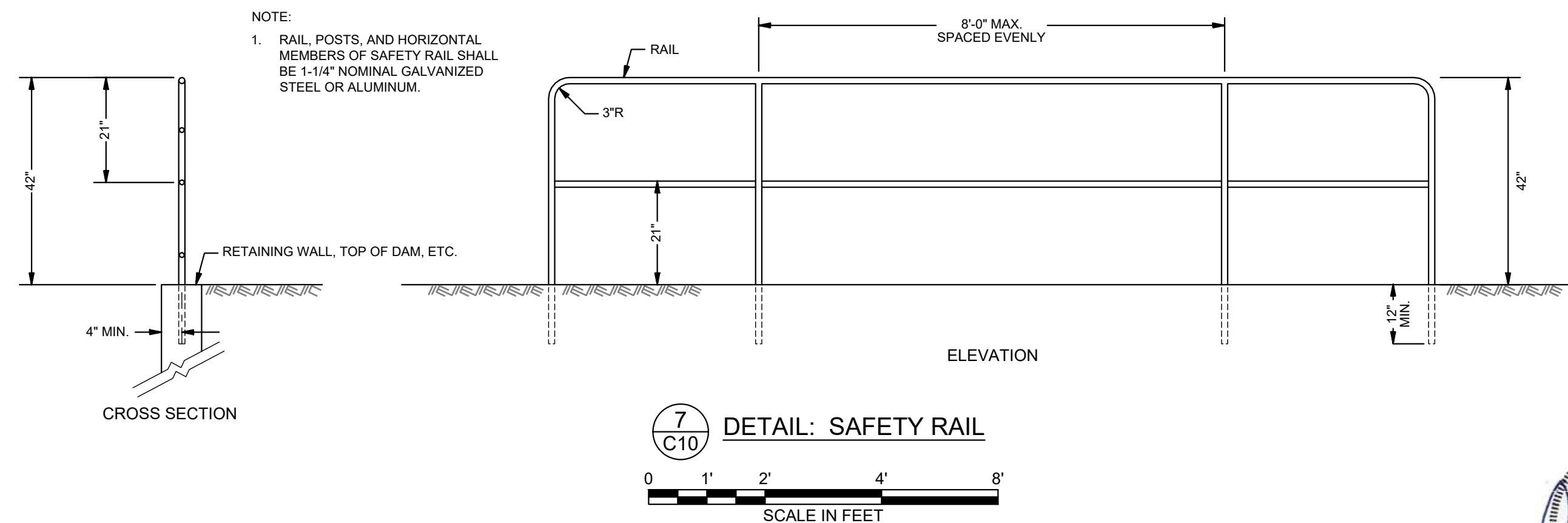
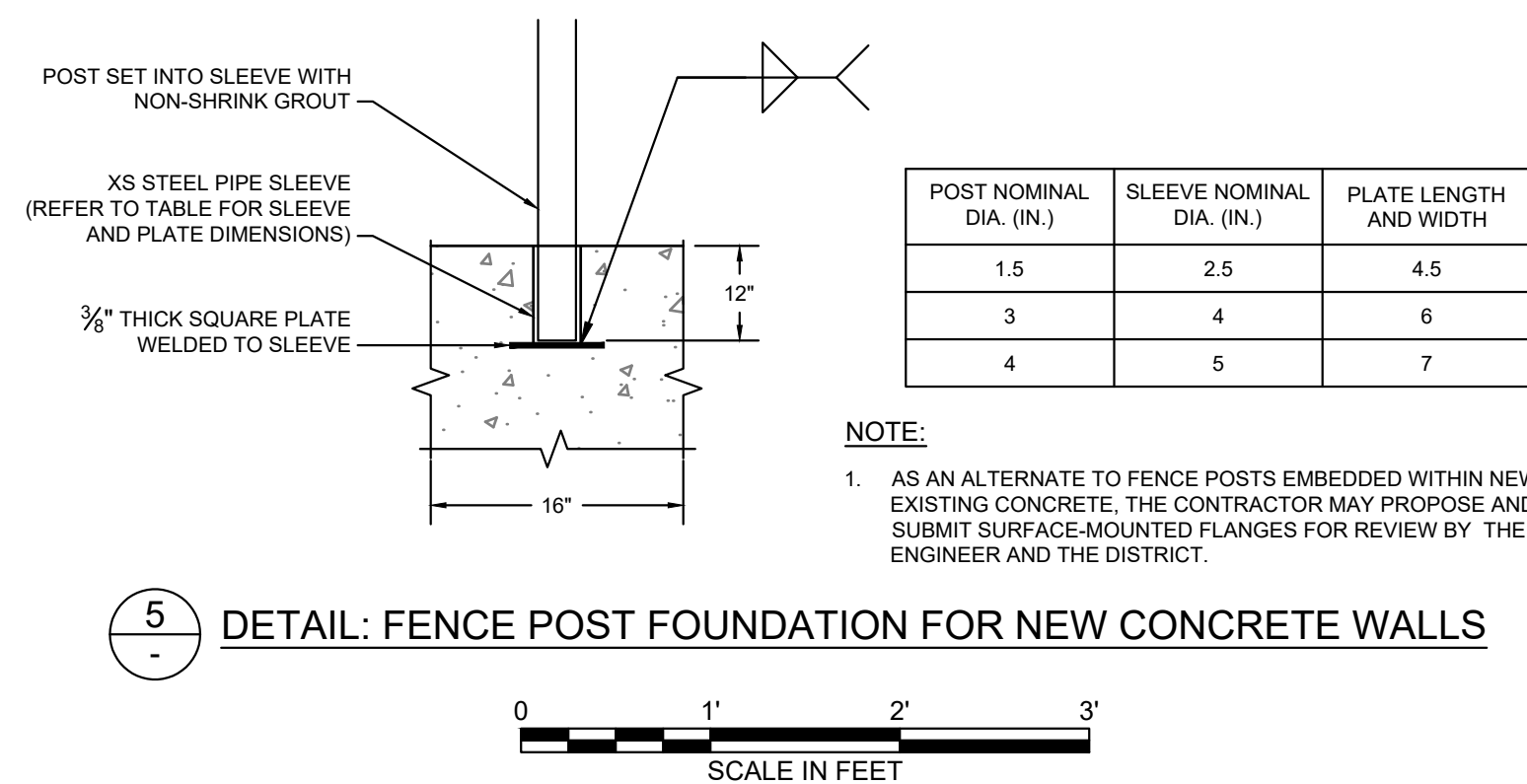
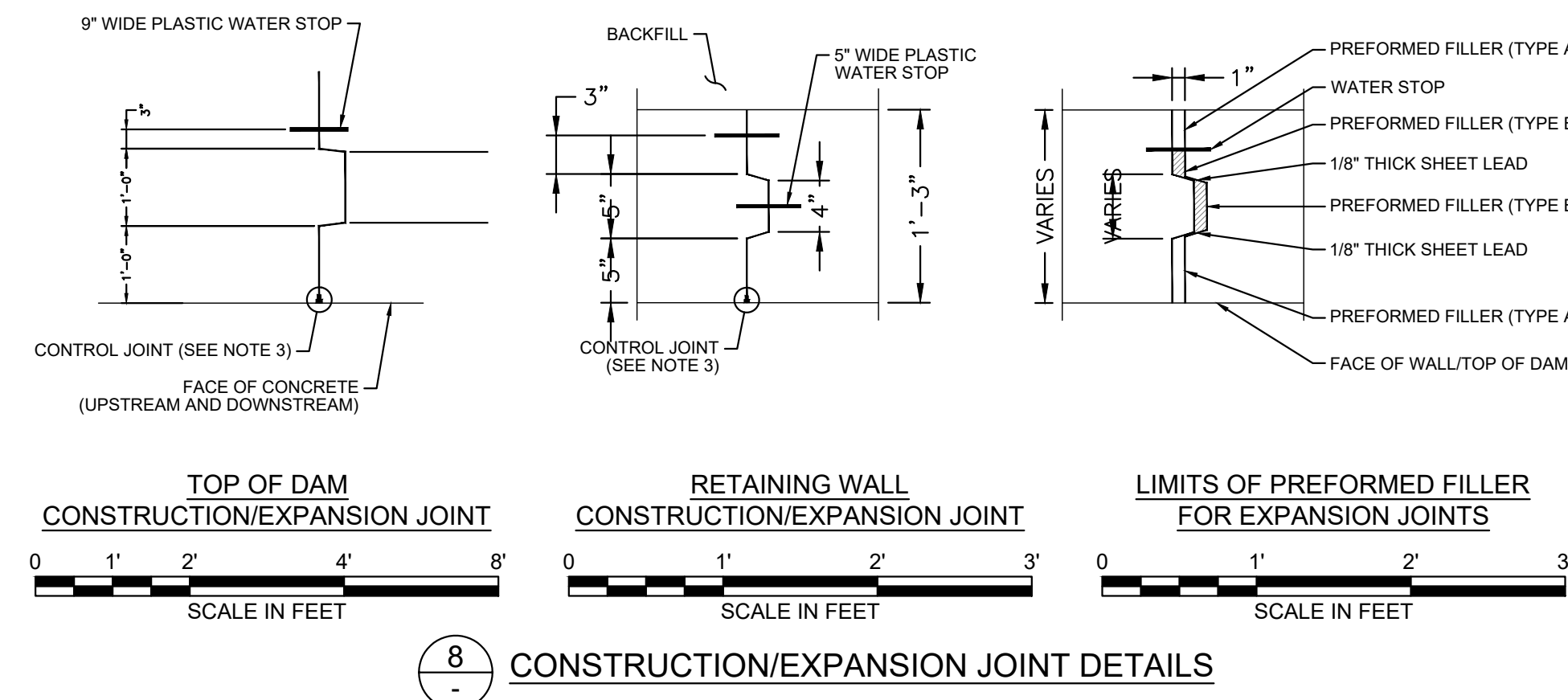
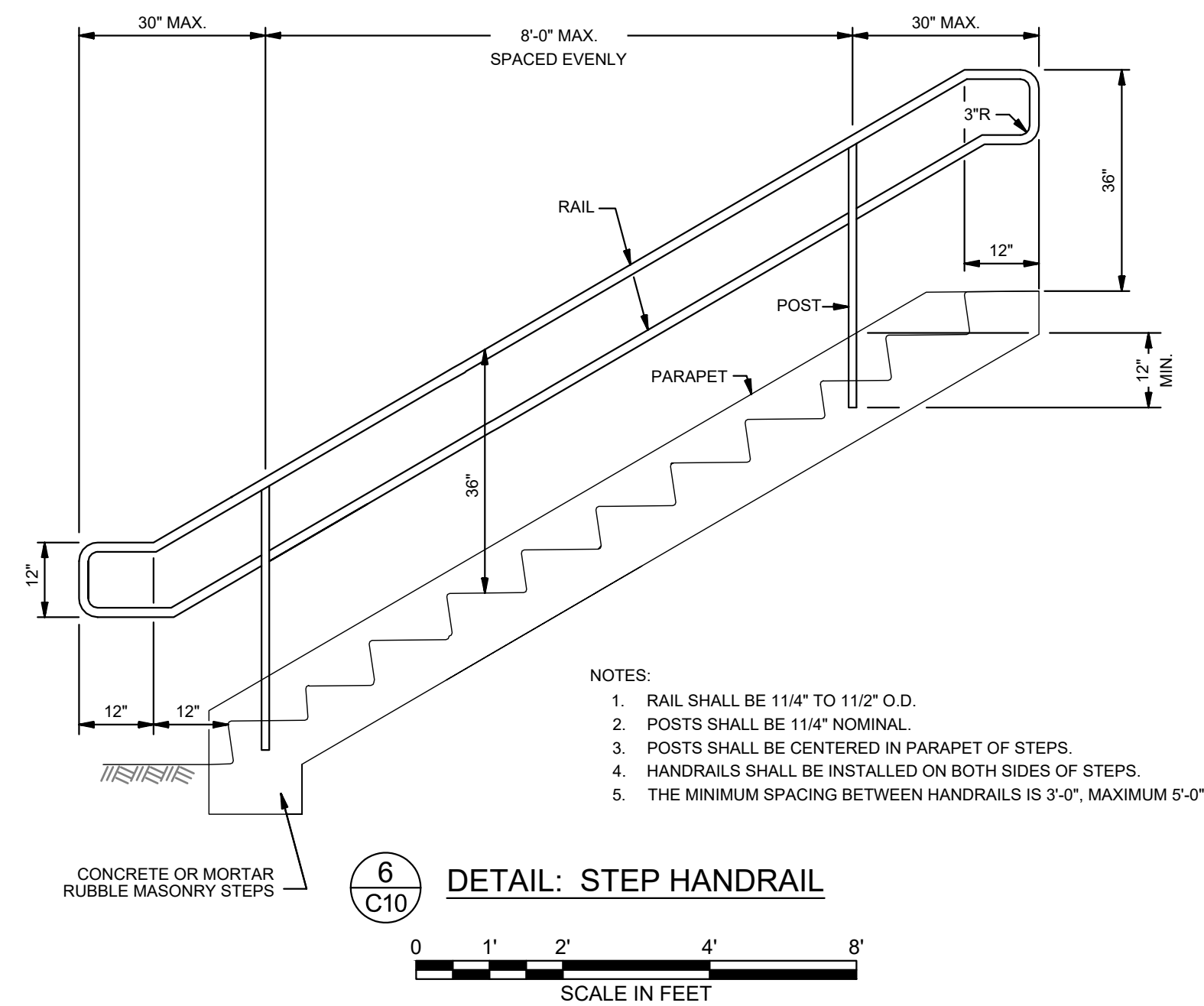
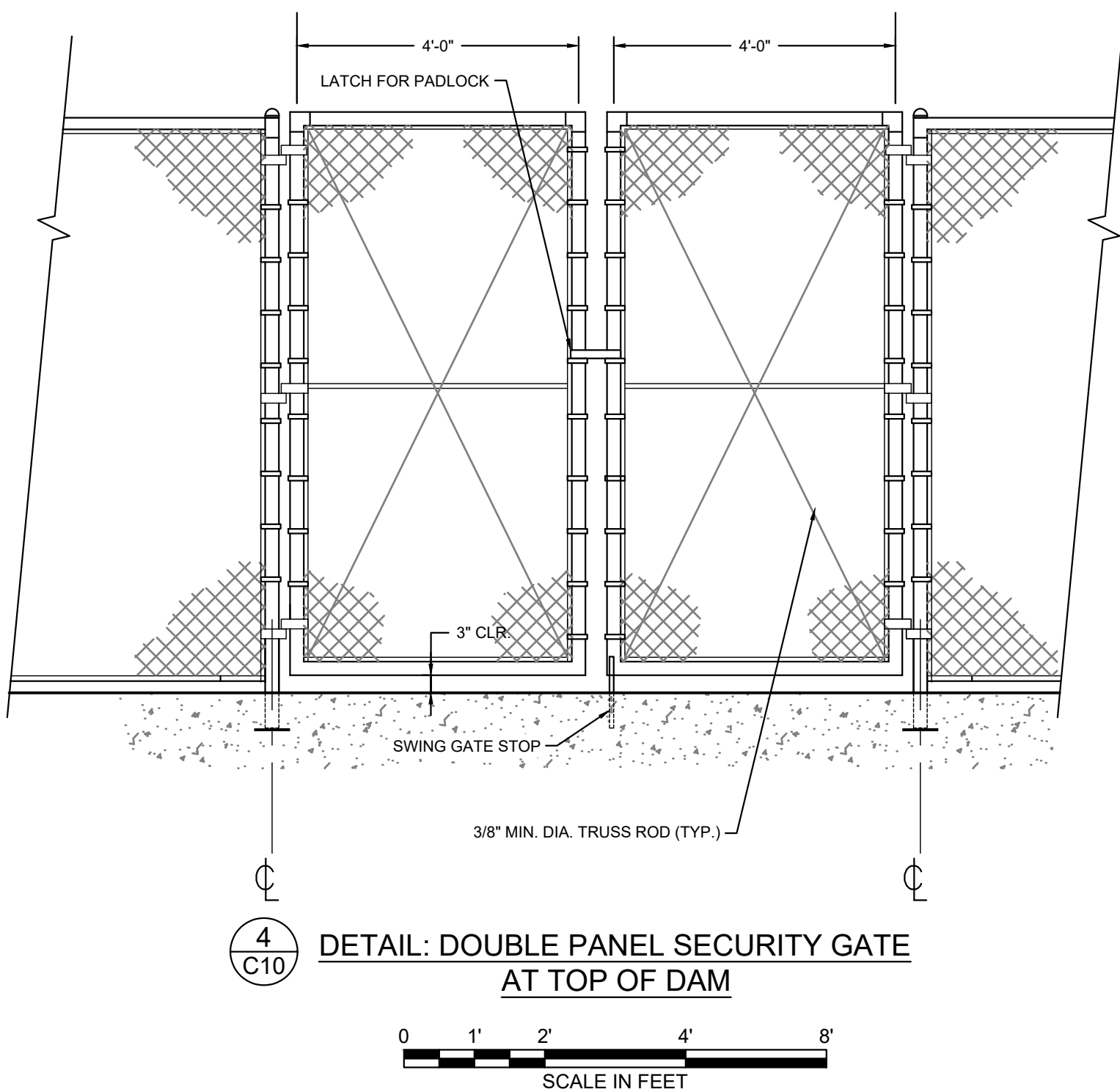
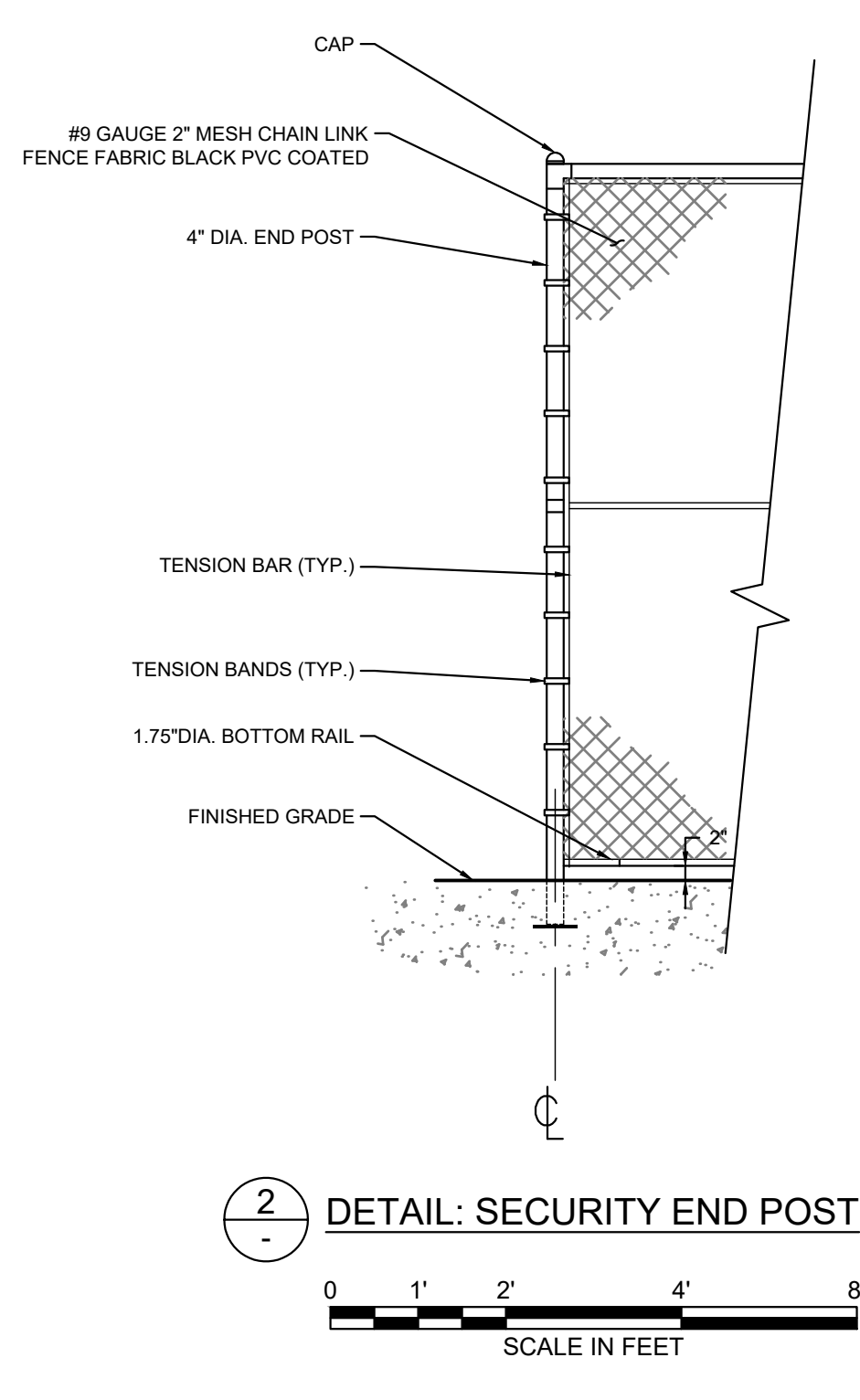
TYPICAL FORM LINER ELEVATION - PHOTO
N.T.S



FORM LINER PATTERN - PHOTO
N.T.S



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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
CAST-IN-PLACE CONCRETE SECTIONS & DETAILS (1 OF 2)			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387
PROJ MGR:	JGD	REVIEWED BY:	MAT
DESIGNED BY:	JGD	DRAWN BY:	ADP
DATE:	NOVEMBER 2023	PROJECT NO:	01.0171312.10
		CHECKED BY:	MAT
		SCALE:	AS SHOWN
		REVISION NO.	
		DRAWING	S4
		SHEET NO.	24 OF 49



POST NOMINAL DIA. (IN.)	SLEEVE NOMINAL DIA. (IN.)	PLATE LENGTH AND WIDTH
1.5	2.5	4.5
3	4	6
4	5	7


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GRUPES RESERVOIR DAM
REHABILITATION PROJECT
NEW CANAAN, CONNECTICUT

CAST-IN-PLACE CONCRETE SECTIONS & DETAILS (2 OF 2)

PREPARED BY:

 **GZA** GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:  FIRST TAXING DISTRICT
OF THE CITY OF NORWALK,
WATER DEPARTMENT
12 NEW CANAAN AVENUE
NORWALK, CONNECTICUT 06852

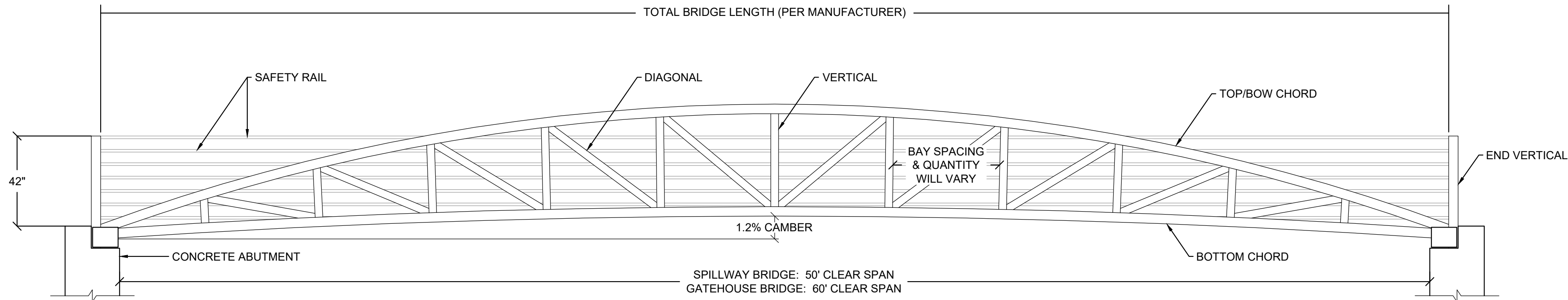
PROJ MGR:	JGD
DESIGNED BY:	JGD
DATE:	NOVEMBER 2023

REVIEWED BY:	MAT
DRAWN BY:	ADP
PROJECT NO.	01.0171312.10

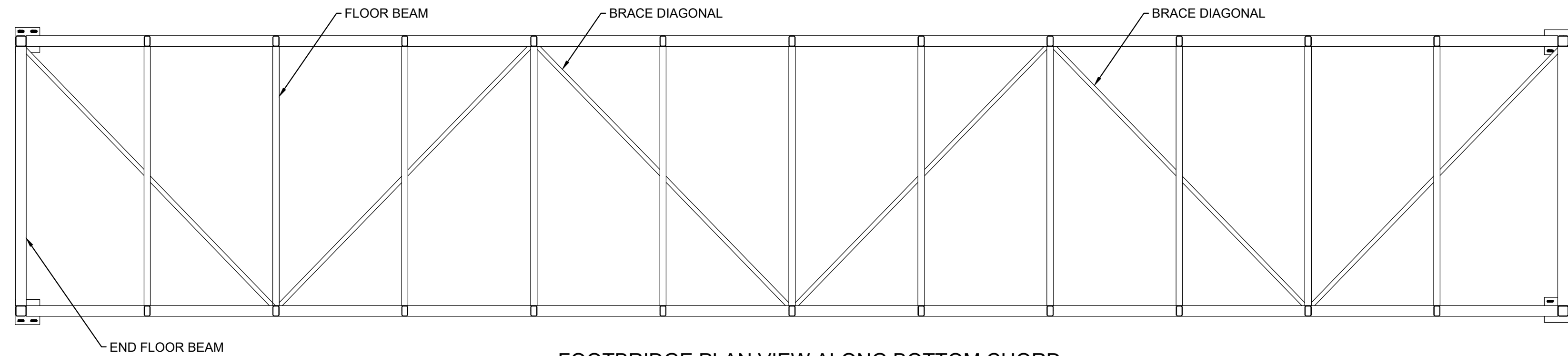
CHECKED BY: MAT	DRAWING S5 SHEET NO. 25 OF
SCALE: 1" = 2'	
REVISION NO.	

S5

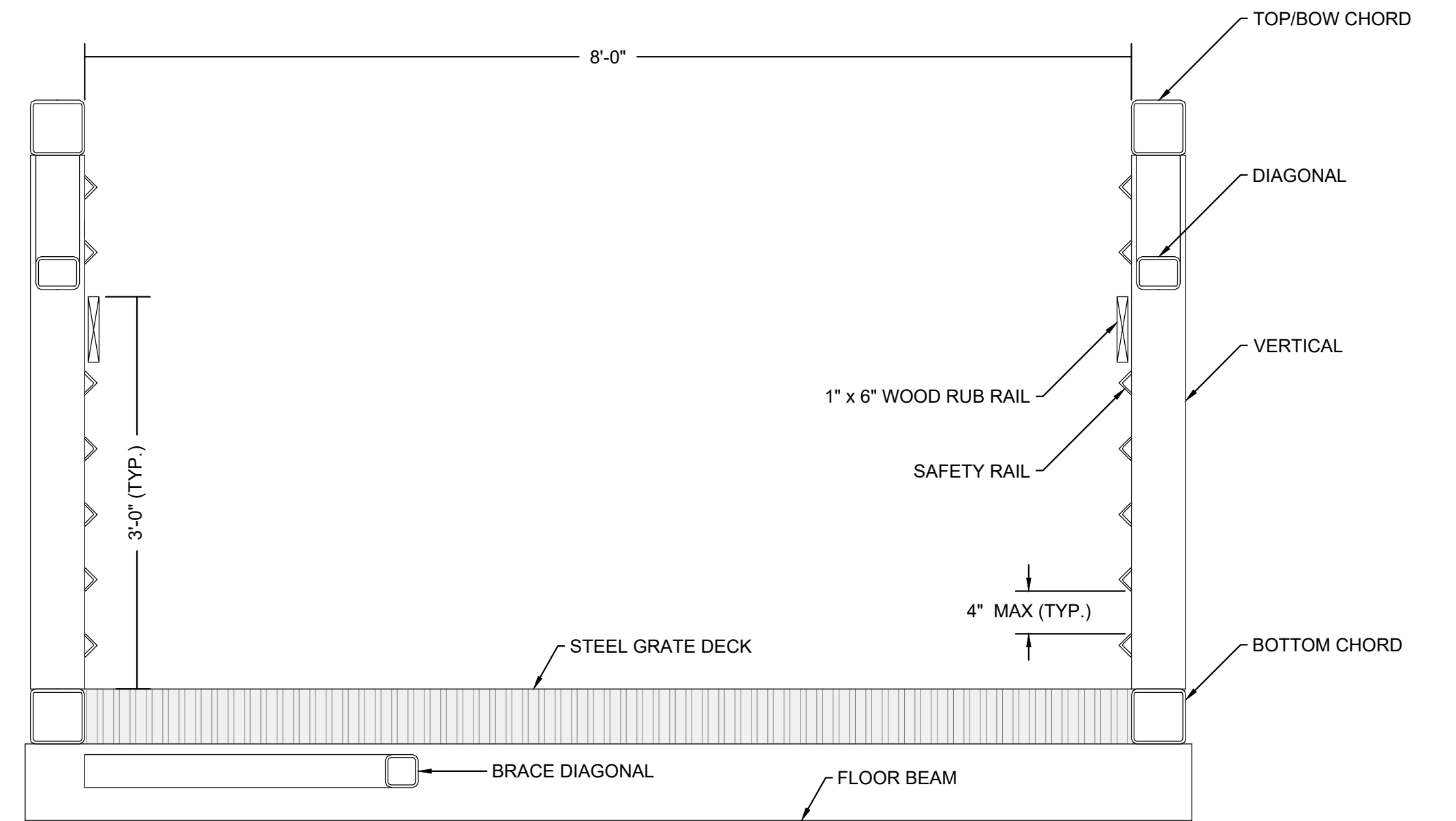
© 2017 - GZA GeoEnvironmental, Inc. GZA\GZANOR\Jobs\170.000-179.999\171312\171312-10\Drawings\GZA\171312-10_Figures-Grapec_Sc_GH11-12_WL_E_A_M0V_2023.dwg [S6: BRIDGE DETAILS] November 22, 2023 - 10:59am gpi.baitlen



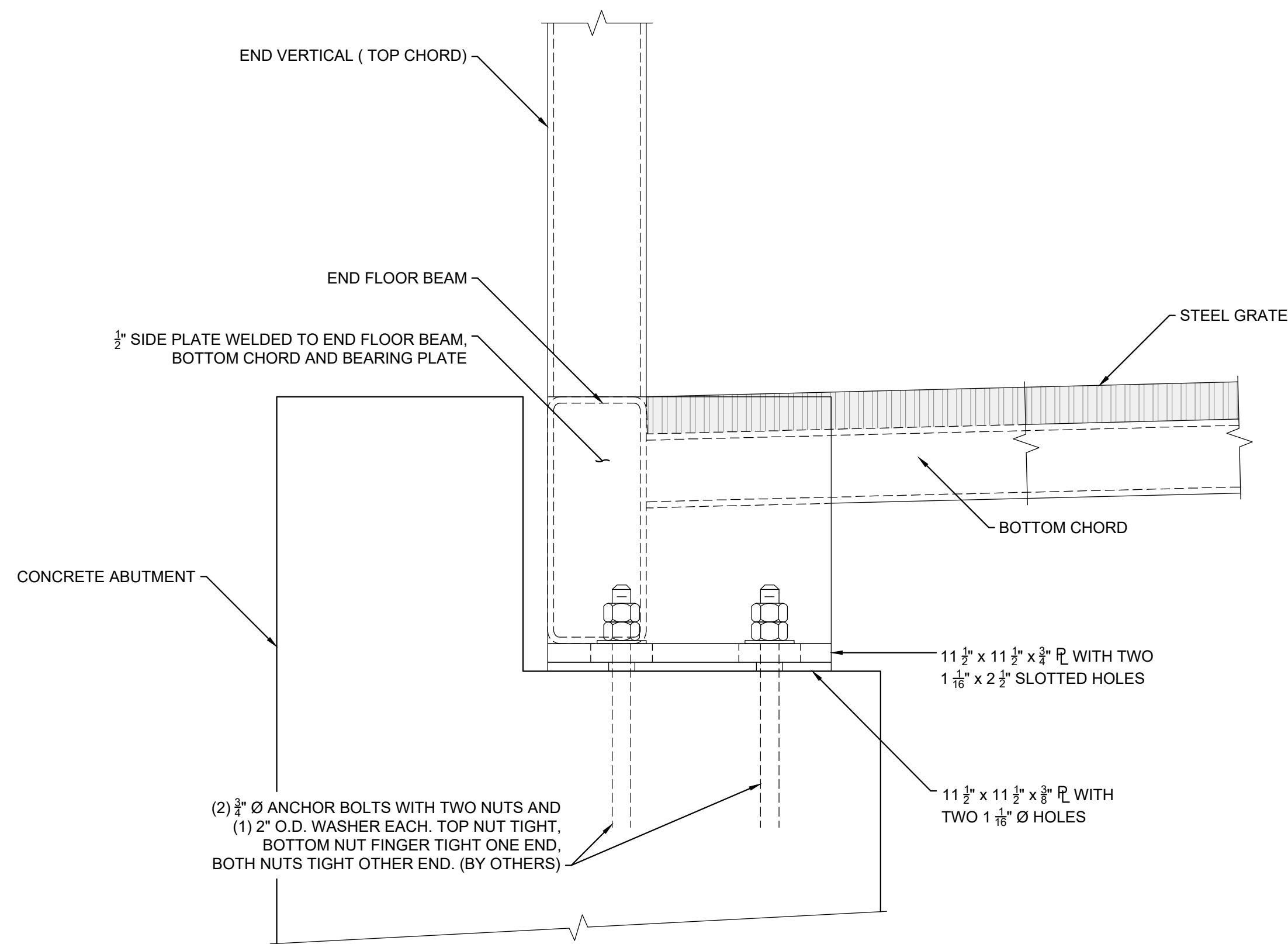
FOOTBRIDGE ELEVATION VIEW



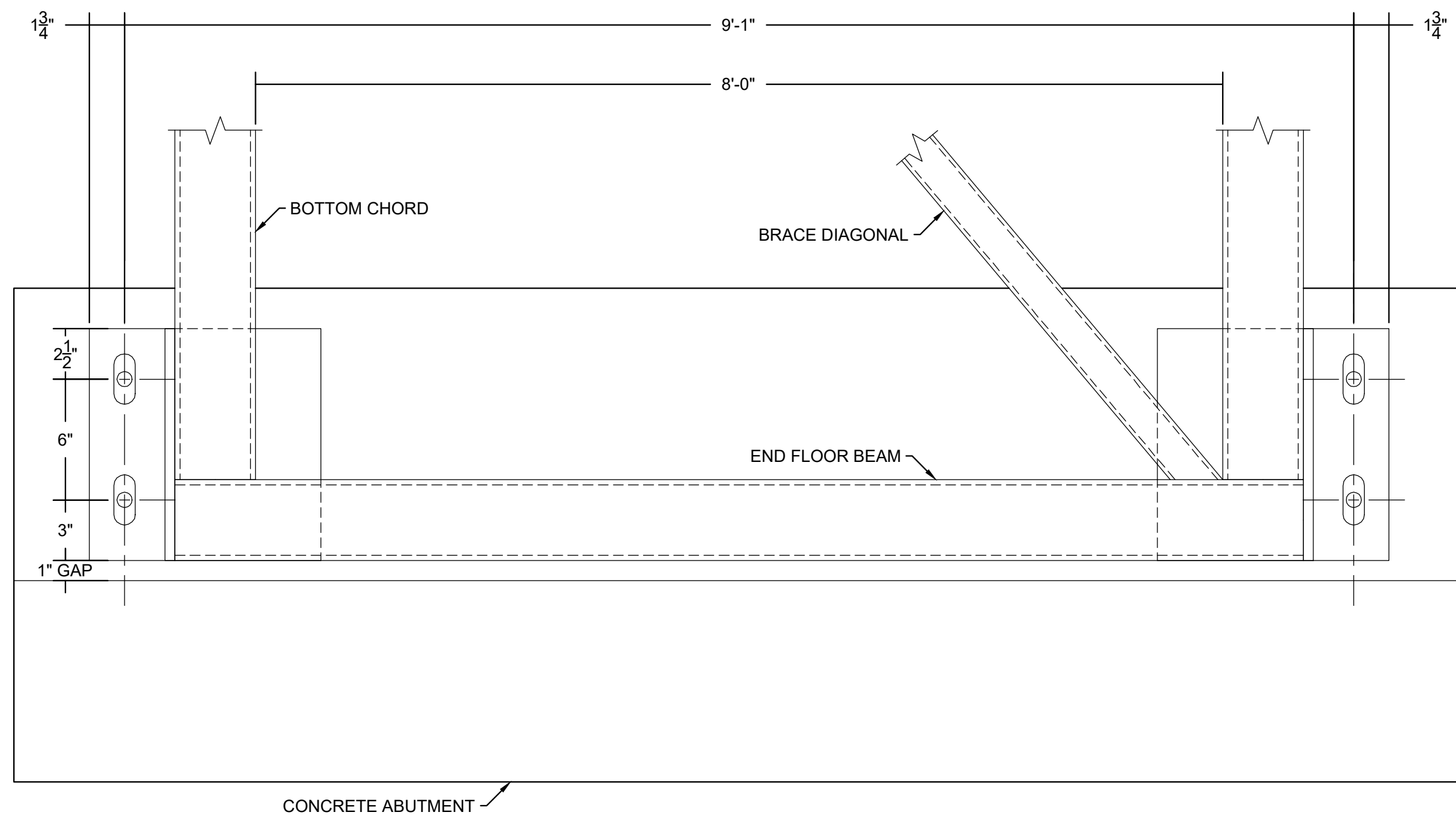
FOOTBRIDGE PLAN VIEW ALONG BOTTOM CHORD



FOOTBRIDGE CROSS SECTION



BEARING ASSEMBLY - SIDE VIEW

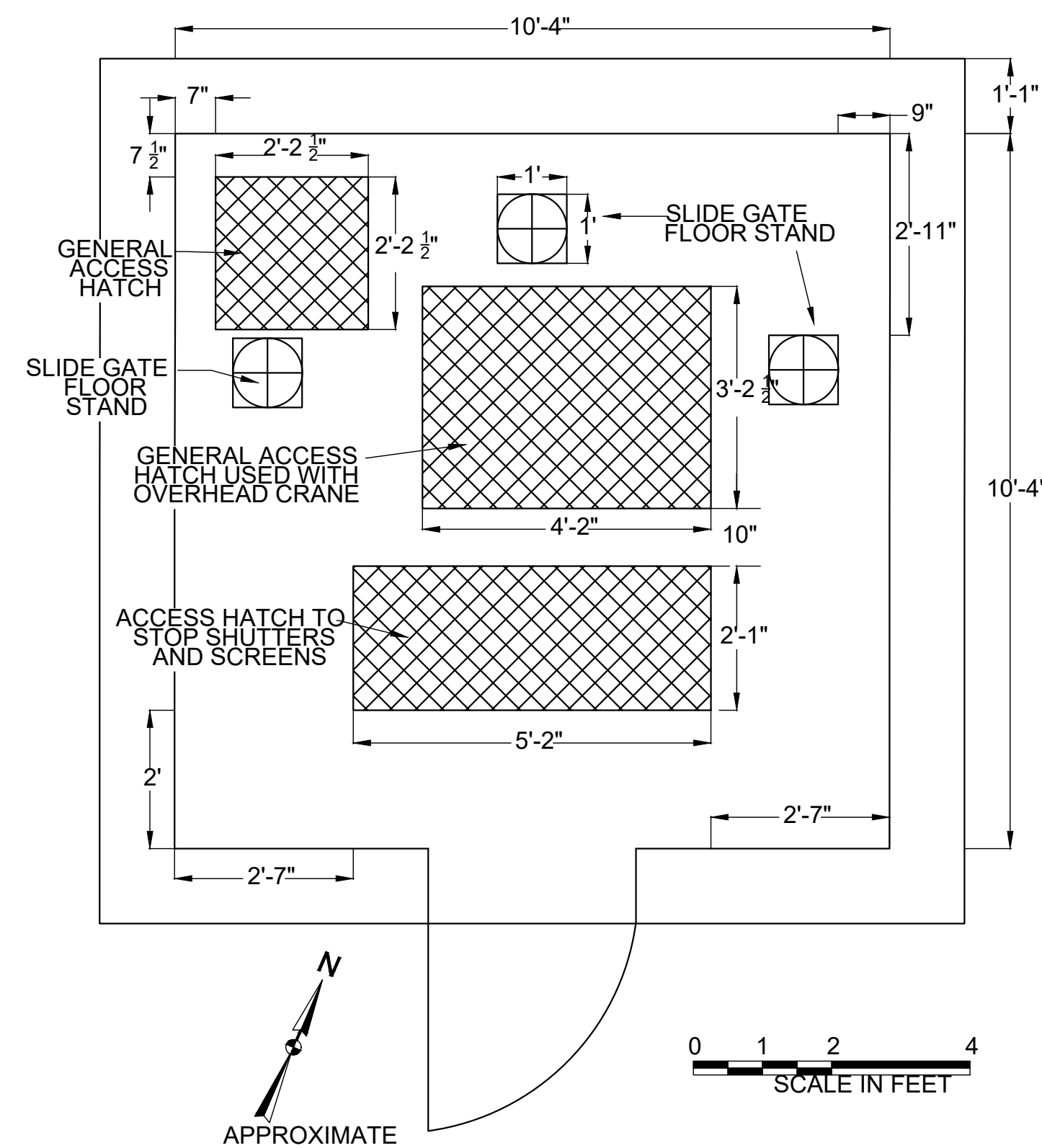


BEARING ASSEMBLY - PLAN VIEW

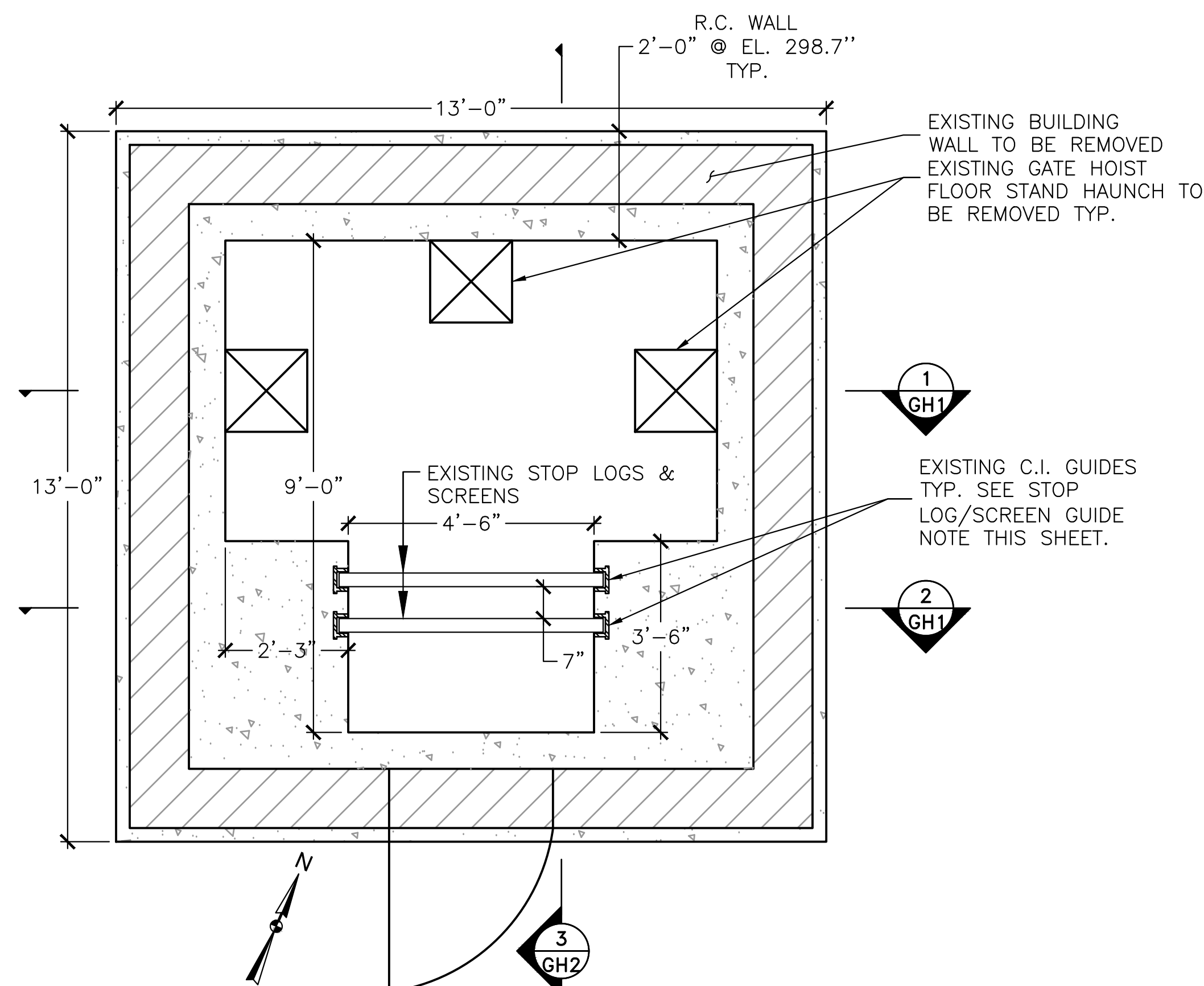
- NOTE:
1. CONTRACTOR TO PROVIDE PRE-ENGINEERED PRE-FABRICATED BRIDGE. ACCEPTABLE MANUFACTURERS INCLUDE CONTECH, ENGINEERED SOLUTIONS LLC, OR OTHER MANUFACTURERS ACCEPTABLE TO DISTRICT.
 2. ELEVATIONS, SECTIONS, AND DETAILS ARE INTENDED TO CONVEY OVERALL DESIGN INTENT. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL.
 3. CONTRACTOR SHALL CONFIRM ALL APPLICABLE DIMENSIONS AT DAM AND APPLICABLE GATEHOUSE PRIOR TO ORDERING BRIDGE.
 4. CONTRACTOR SHALL PROVIDE A DECORATIVE SAFETY (PEDESTRIAN) RAILING FOR THE TOP OF DAM AT THE LOCATION SHOWN ON SHEET C11. THE SAFETY RAILING SHALL MATCH THE SAFETY RAILING ON THE PRE-FABRICATED BRIDGE.

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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
GATEHOUSE AND SPILLWAY FOOTBRIDGE DETAILS AND NOTES			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	FIGURE S6 SHEET NO. 26 OF 49
DESIGNED BY: JGD	DRAWN BY: ADP/SMW	SCALE: N.T.S.	
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO:	



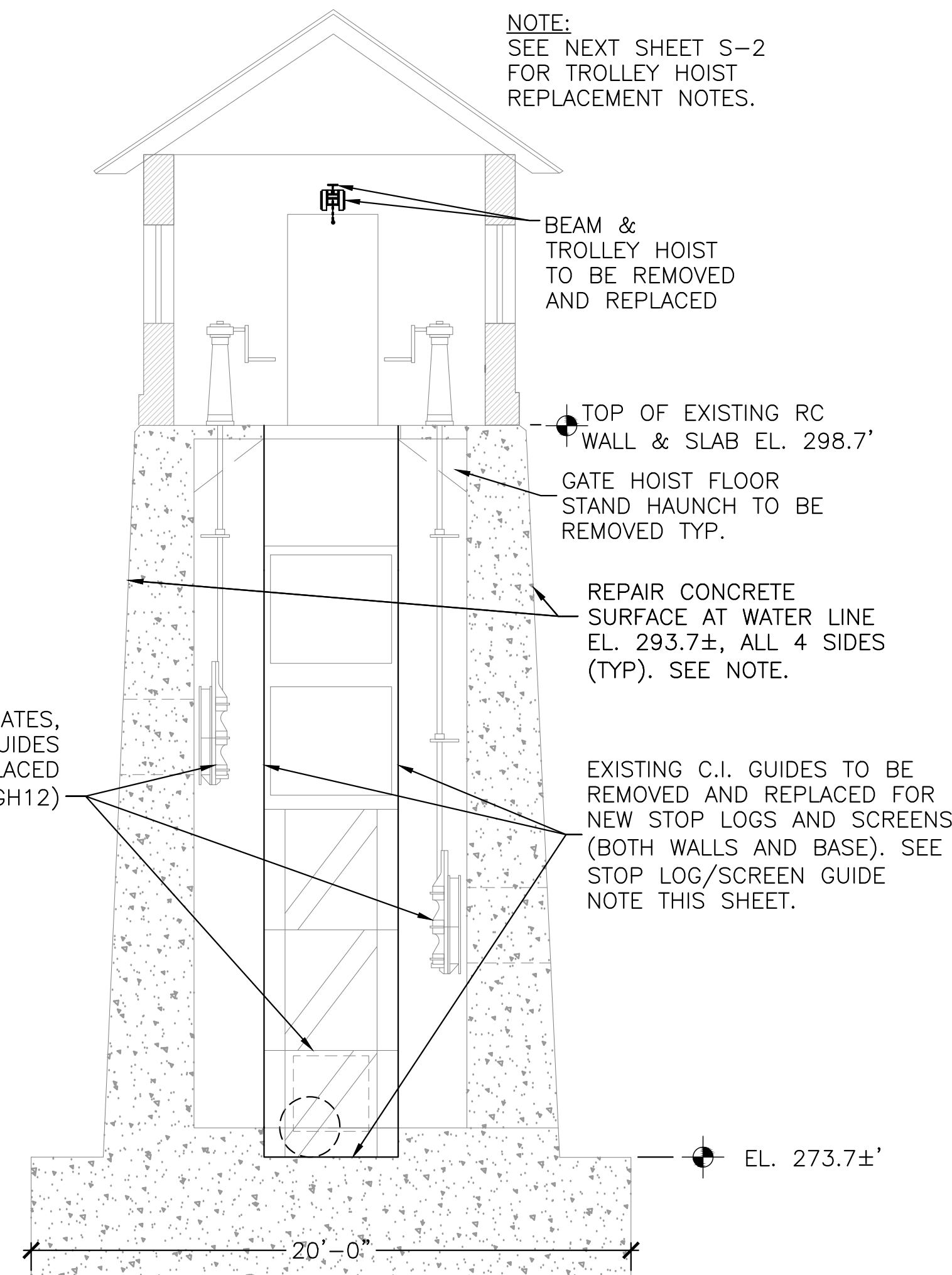


EXISTING GATEHOUSE FLOOR PLAN
1/2" = 1'-0"

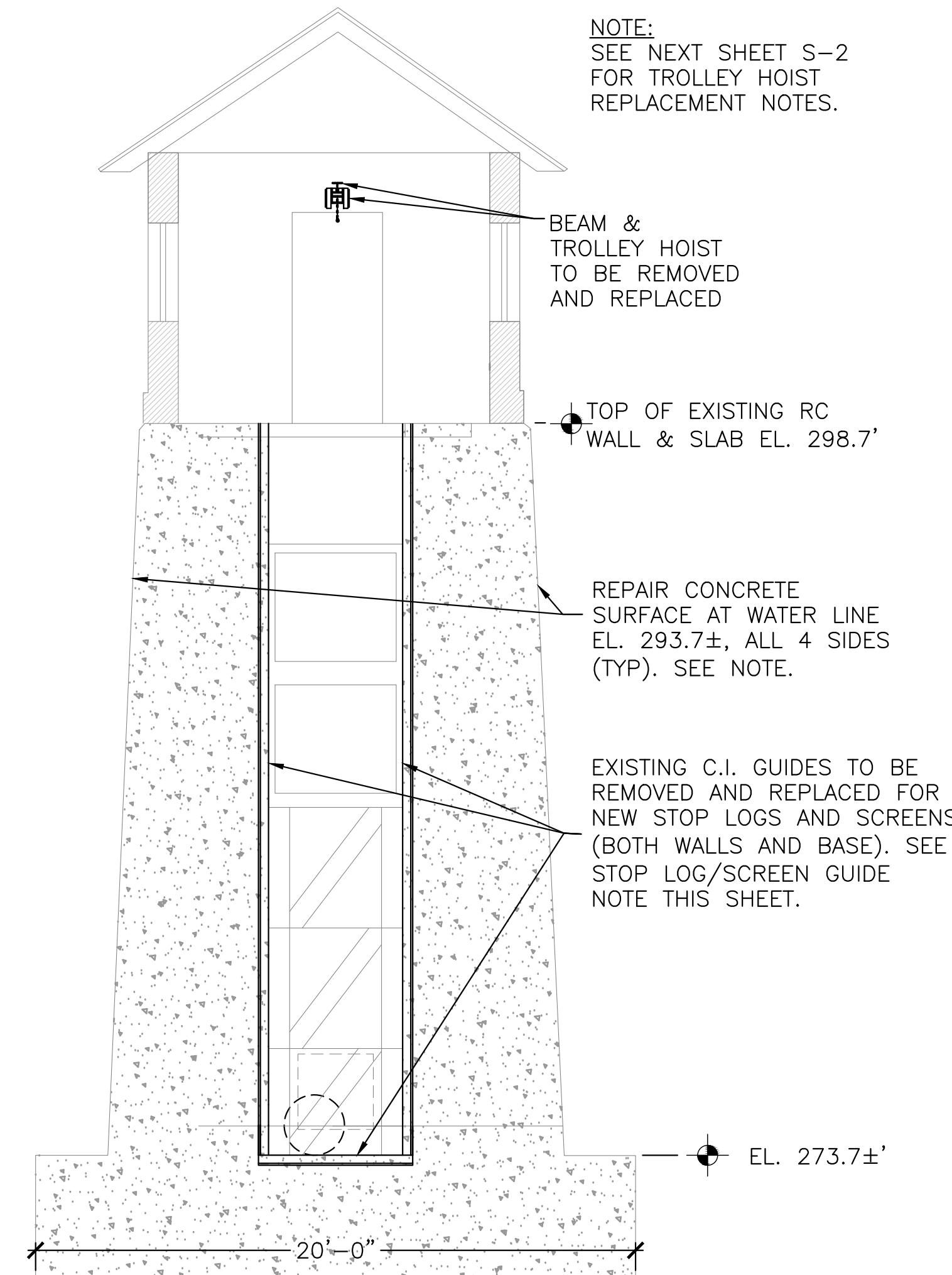


EXISTING GATEHOUSE PLAN (FLOOR REMOVED)
1/2" = 1'-0"

EXISTING SLIDE GATES, OPERATORS, STEMS, AND GUIDES TO BE REMOVED AND REPLACED (SEE SHEETS GH11 AND GH12)



EXISTING GATEHOUSE SECTION 1
1/2" = 1'-0"



EXISTING GATEHOUSE SECTION 2
1/2" = 1'-0"

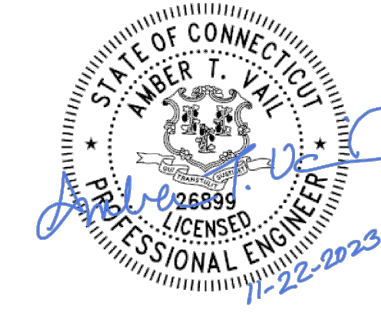
SEE SHEET GH2 FOR GENERAL NOTES AND MATERIAL NOTES.

STOP LOG/SCREEN GUIDES NOTES:

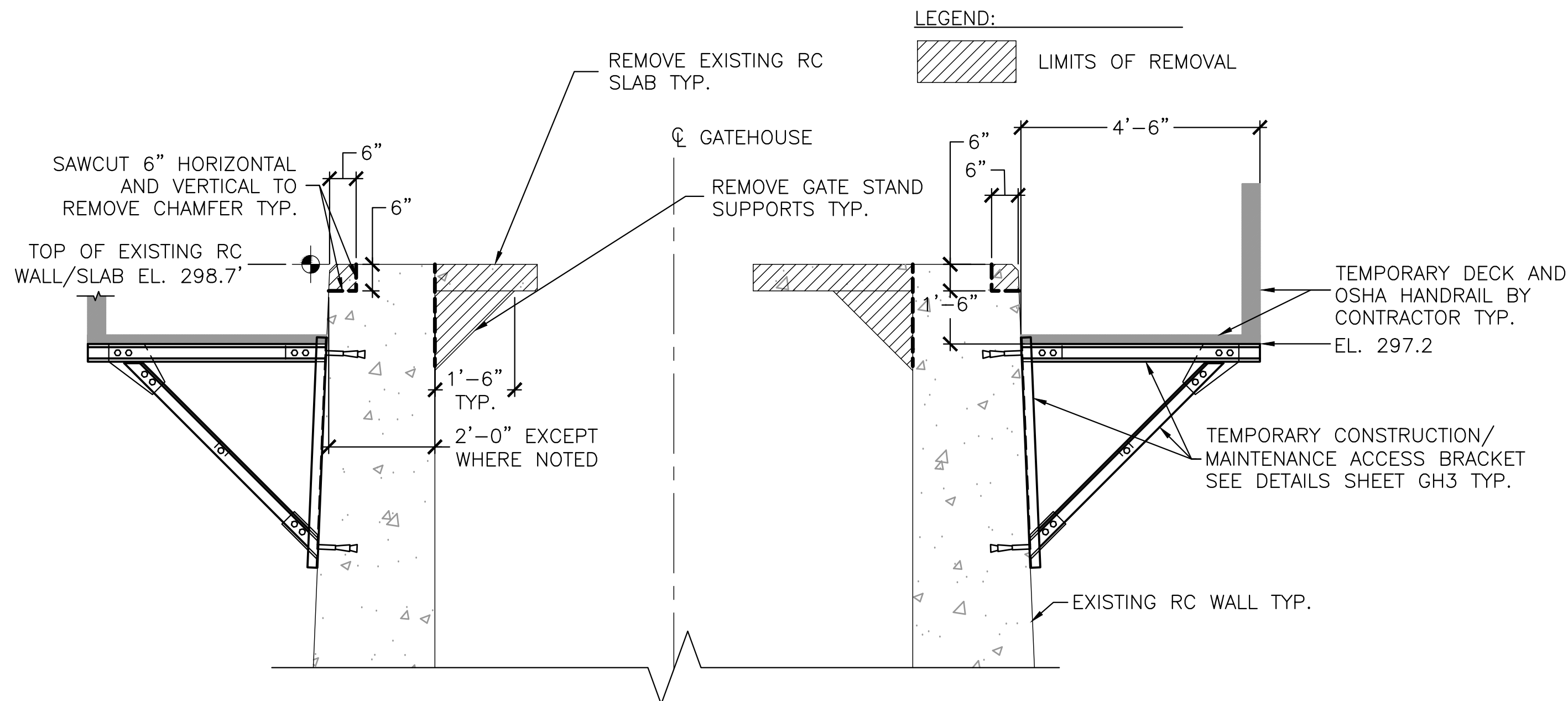
1. SAWCUT AND CHIP/HAMMER CONCRETE WALLS AND FLOOR AS REQUIRED TO REMOVE EXISTING C.I. STOP LOG & SCREEN GUIDES. REMOVE EXISTING GUIDES FROM WALLS AND FLOOR.
2. INSTALL ANCHORS FOR NEW STOP LOG AND SCREEN GUIDES IN ACCORDANCE WITH AN APPROVED SUBMITTAL. SUBMITTAL SHALL INCLUDE: ANCHOR TYPE, SIZE SPACING, REQUIRED PENETRATION AND SUPPORTING CALCULATIONS. GUIDES SHALL BE ANCHORED AT BASE AND WALLS.
3. INSTALL NEW GUIDES IN ACCORDANCE WITH AN APPROVED SUBMITTAL.
4. GROUT NEW GUIDES INTO PLACE.

CONCRETE FACE REPAIRS NOTES:

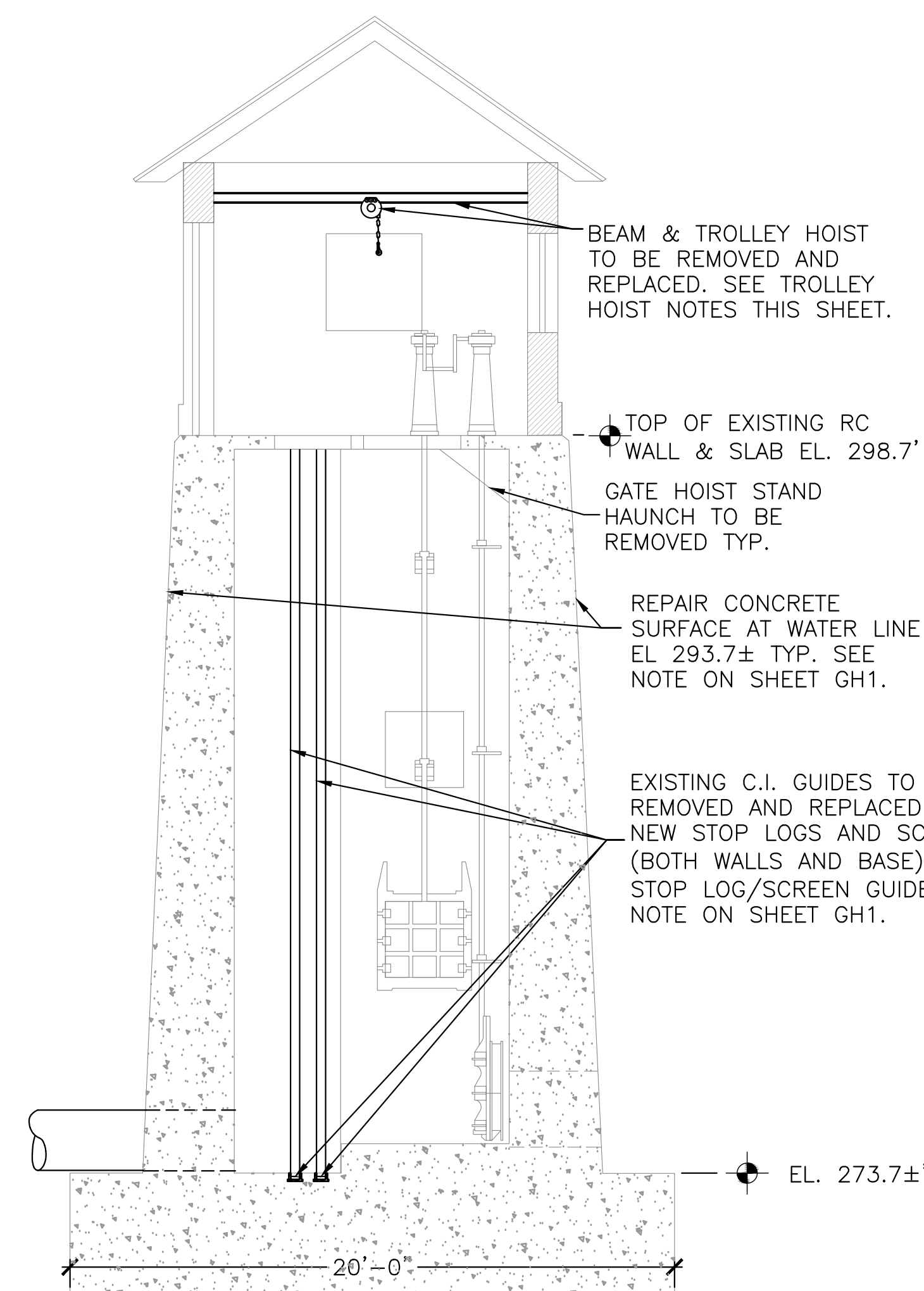
1. CONCRETE FACE SHALL BE REPAIRED AT THE WATERLINE (EL. 293.70±) AS DIRECTED BY THE ENGINEER.
2. CHIP OUT LOOSE CONCRETE.
3. PREPARE SURFACE WITH AN EPOXY BONDING AGENT.
4. REPAIR CONCRETE FACE WITH PATCHING MORTAR WORKING PATCHING MORTAR INTO VOIDS.



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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
EXISTING CONDITIONS AND DEMOLITION AT GATEHOUSE (1 OF 2)			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387
PROJ MGR:	JGD	REVIEWED BY:	MAT
DESIGNED BY:	JGD	DRAWN BY:	JAR
DATE:	NOVEMBER 2023	SCALE:	AS NOTED
		CHECKED BY:	MAT
		REVISION NO.	
		FIGURE	GH1
		SHEET NO.	27 OF 49



EXISTING RC SLAB AND FOUNDATION LIMITS OF REMOVAL

$$1/2'' = 1'-0''$$


EXISTING GATEHOUSE PLAN SECTION 3

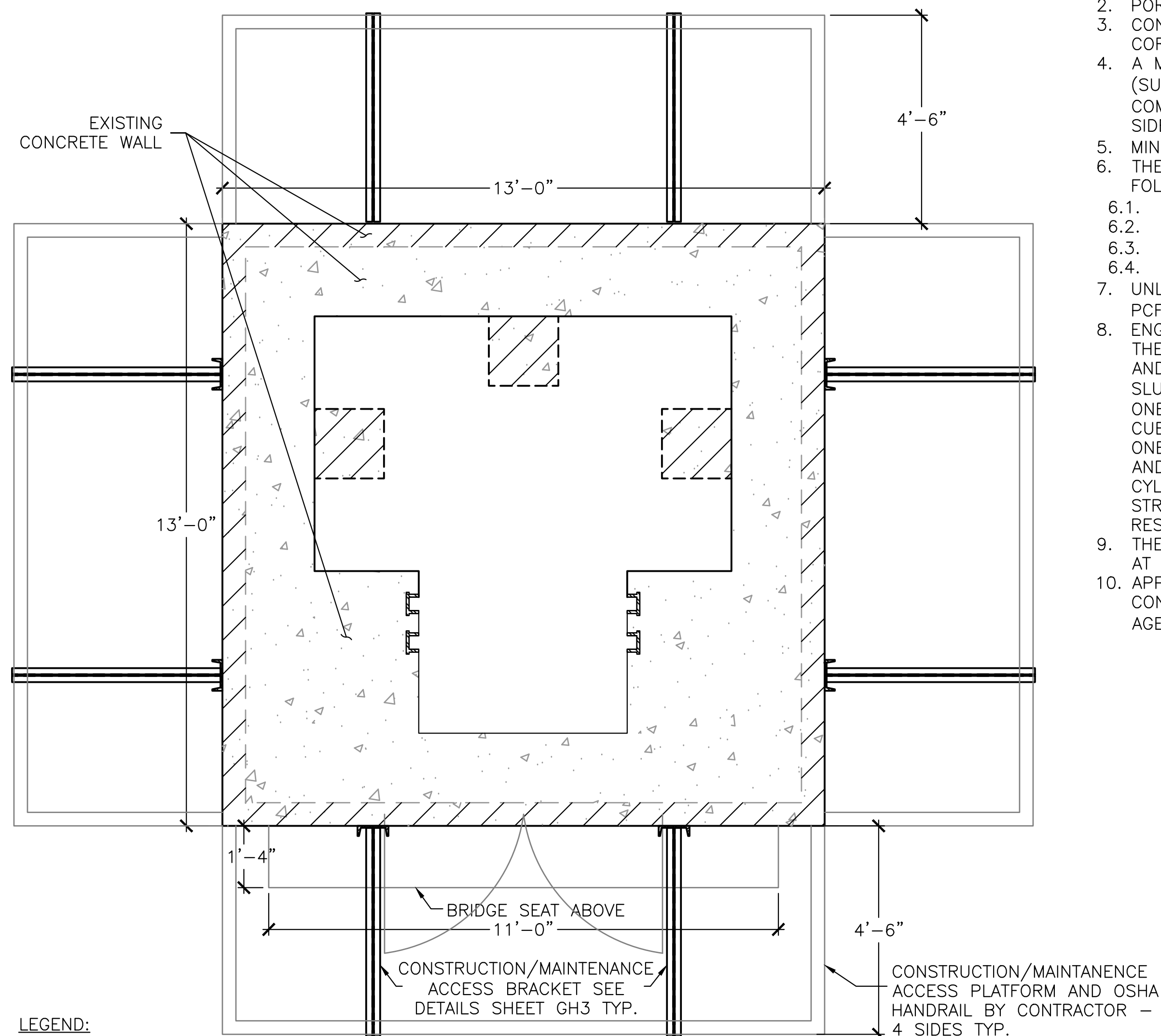
$$1/2'' = 1'-0''$$

TROLLEY HOIST REPLACEMENT NOTES:

1. INSTALL NEW 1,000# CAPACITY TROLLEY HOIST IN NEW GATEHOUSE ON W4x13 RAIL BEAM AS SHOWN ON ARCHITECTURAL PLANS.
2. HOIST SHALL BE JET $\frac{1}{2}$ TON; 1/2SS-1C OR APPROVED EQUAL.
3. INSTALL W4x13 TROLLEY BEAM RAIL MIN. 8'-6" ABOVE FINISHED FLOOR AS SHOWN ON ARCHITECTURAL PLANS, OR AS APPROVED.

MAXIMUM UNFACTORED END REACTIONS OF
HOIST RAIL BEAM:

DEAD LOAD*: 100#
LIVE LOAD**: 1,450#
TOTAL UNFACTORED END REACTION: 1,550#
*DEAD LOAD INCLUDES 27# ALLOWANCE FOR
MISC.
**LIVE LOAD INCLUDES 25% ALLOWANCE FOR
DYNAMIC EFFECTS.



LEGEND:

LIMITS OF CONCRETE REMOVAL
ABOVE ELEVATION 298.7'

EXISTING CONCRETE WALL BELOW ELEVATION 298.7'

LIMITS OF CONSTRUCTION/MAINTENANCE PLATFORM BY
CONTRACTOR 1/2" = 1'-0"

$$1/2'' = 1'-0''$$

GENERAL NOTES:

1. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL CODES.
2. THE CONTRACTOR SHALL REPORT ANY CHANGES IN SITE CONDITIONS SO THAT THE EFFECT ON THE DESIGN CAN BE EVALUATED.
3. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO EXCAVATING OR INSTALLING THE PROPOSED STRUCTURAL SLAB.
4. PROPOSED LOADING OTHER THAN THAT STATED ABOVE MUST BE SUBMITTED TO GZA FOR EVALUATION AND WRITTEN NOTICE TO PROCEED PRIOR TO APPLICATION OF LOAD.
5. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD UPON DISCOVERY OF ANY DISCREPANCIES IN DIMENSIONS SHOWN ON THESE PLANS.
6. MAXIMUM LIVE LOAD (INCLUDING EQUIPMENT) IS 100 PSF.

MATERIAL NOTES:

STEEL REINFORCING:



1. ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM 615 GRADE 60. DESIGN, DETAILING, FABRICATION AND PLACING OF REINFORCING BARS AND BAR SUPPORTS SHALL BE IN ACCORDANCE WITH THE ACI 318 CODE AND DETAILING MANUAL.
2. ALL SLAB REINFORCING SHALL BE SUPPORTED ON SLAB BOLSTERS SPACED NO FURTHER THAN 4'-0" O.C. EACH WAY. SLAB REINFORCING TO BE LOCATED 3" CLEAR FROM FACE OF SLAB OR WALLS, TYPICAL.

STRUCTURAL STEEL:

1. STEEL PLATE, ANGLES, AND CHANNELS SHALL BE ASTM A36 ($F_y=36$ KSI).
2. STEEL W SECTIONS SHALL BE ASTM A992 ($F_y=50$ KSI).
3. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) STANDARD D1.1. ALL WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED IN THE TYPE OF WELD REQUIRED USING E70XX ELECTRODES.
4. BOLTS SHALL BE DIAMETER SHOWN ON DRAWINGS, ASTM A325 HIGH STRENGTH BOLTS. BOLTS SHALL BE INSTALLED SNUG TIGHT. ALL BOLT HOLES SHALL BE DRILLED OR PUNCHED STANDARD HOLES. TORCH CUT HOLES ARE NOT ACCEPTABLE.

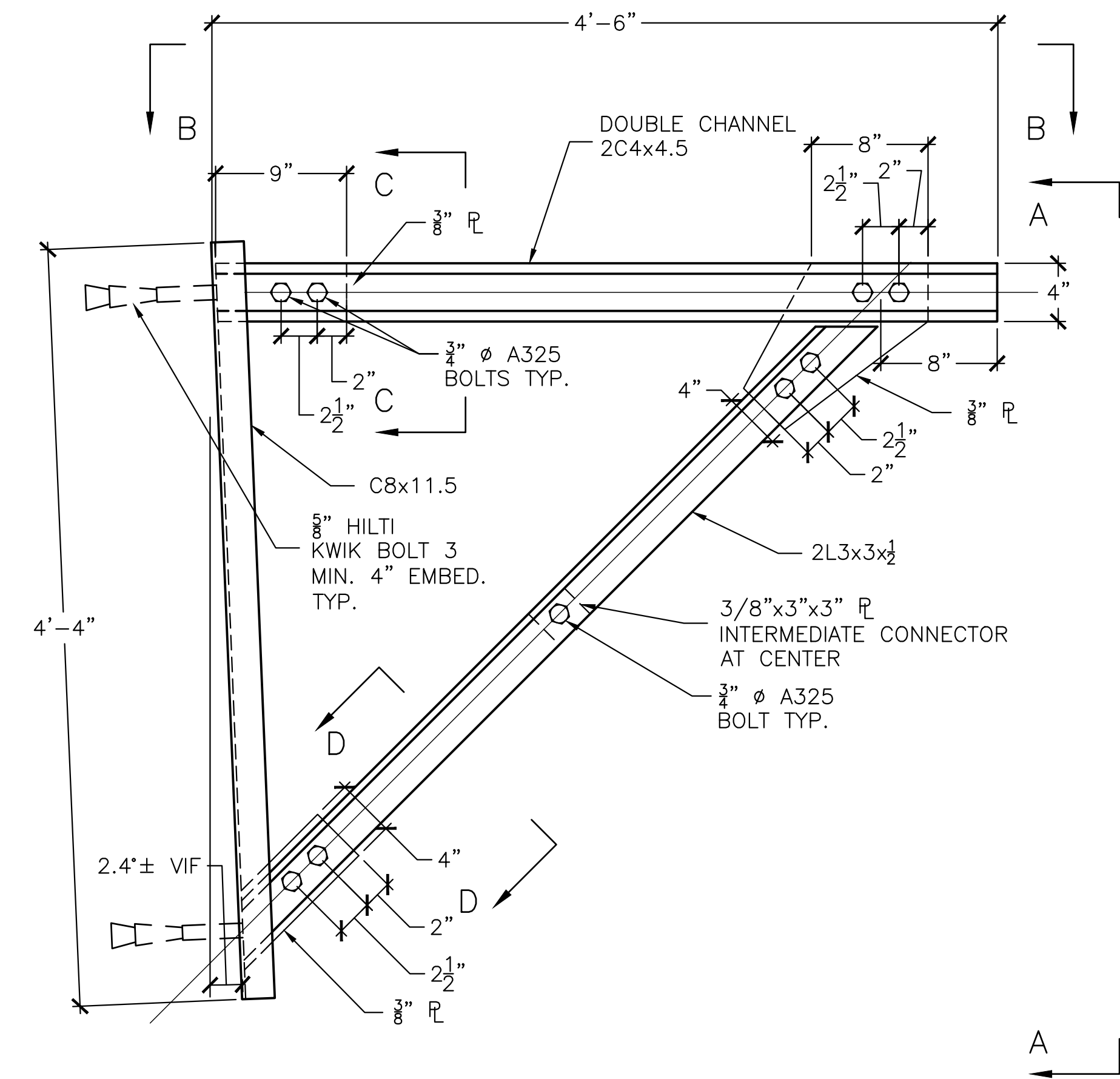
CONCRETE:

1. CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-19 OR LATEST EDITION) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301 LATEST EDITION).
2. PORTLAND CEMENT SHALL BE TYPE II.
3. CONCRETE SHALL BE CHLORIDE & SULFIDE RESISTANT AND INCLUDE CORROSION INHIBITOR ADMIXTURE.
4. A MINIMUM OF TWO COATS OF A HIGH SOLID CURING MEMBRANE (SUPER AQUA-CURE VOX, MANUFACTURED BY EUCLID CHEMICAL COMPANY, OR APPROVED EQUIVALENT) SHALL BE APPLIED TO THE TOP SIDE OF THE EXPOSED CONCRETE.
5. MINIMUM 28 DAY COMPRESSIVE STRENGTH ($f'c$) = 4,000PSI.
6. THE CONCRETE MIX SHALL BE PROPORTIONED TO HAVE THE FOLLOWING PROPERTIES AT THE TIME OF PLACEMENT:
 - 6.1. MAXIMUM AGGREGATE SIZE - $3/4"$
 - 6.2. MAXIMUM WATER TO CEMENT RATIO = 0.45
 - 6.3. SLUMP - $4" - 5"$
 - 6.4. AIR CONTENT = $6\% \pm 1.5\%$.
7. UNLESS OTHERWISE NOTED CONCRETE SHALL BE NORMAL WEIGHT (150 PCF).
8. ENGAGE A QUALIFIED INDEPENDENT TESTING AGENCY ACCEPTABLE TO THE OWNER TO PERFORM TESTING OF CONCRETE AND TO MAKE, CURE AND TEST CYLINDERS. CONCRETE SHALL BE FIELD TESTED FOR SLUMP (ASTM C143), TEMPERATURE AND AIR CONTENT (ASTM C231). ONE SET OF 4 TEST CYLINDERS SHALL BE MADE FOR EVERY 20 CUBIC YARDS OF CONCRETE PLACED BUT IN NO CASE LESS THAN ONE SET FOR EACH DAY'S PLACEMENT. CYLINDERS SHALL BE MADE AND TESTED IN ACCORDANCE WITH ASTM C172, C31 AND C39. ONE CYLINDER SHALL BE TESTED FOR UNCONFINED COMPRESSIVE STRENGTH AT 7 DAYS, 14 DAYS AND 28 DAYS WITH ONE HELD IN RESERVE.
9. THE CONCRETE SHALL BE PLACED SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN INDICATED ON THE DRAWINGS.
10. APPLY EPOXY BONDING AGENT PRIOR TO POURING ANY NEW CONCRETE AGAINST EXISTING CONCRETE. APPLY EPOXY BONDING AGENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

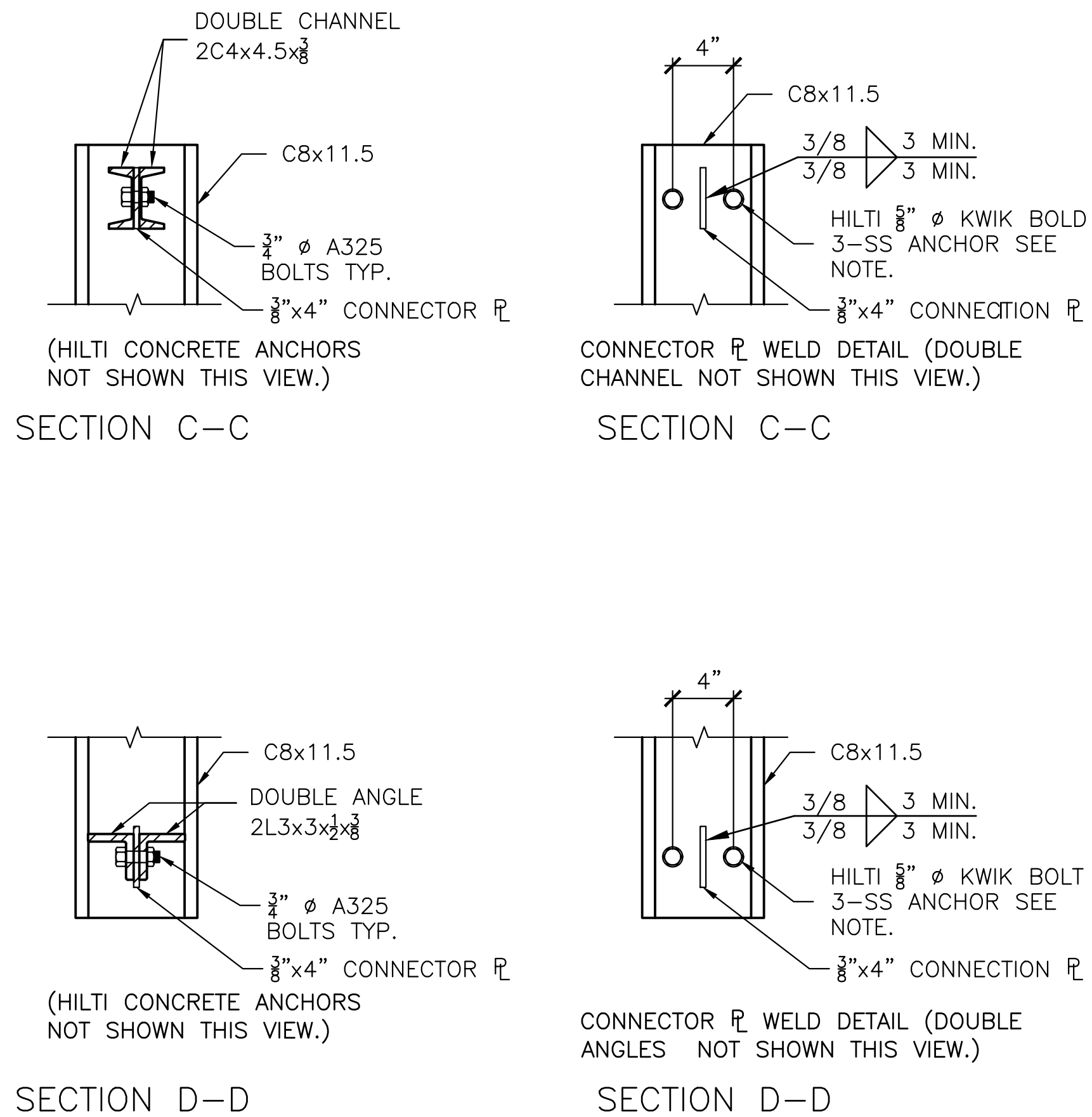
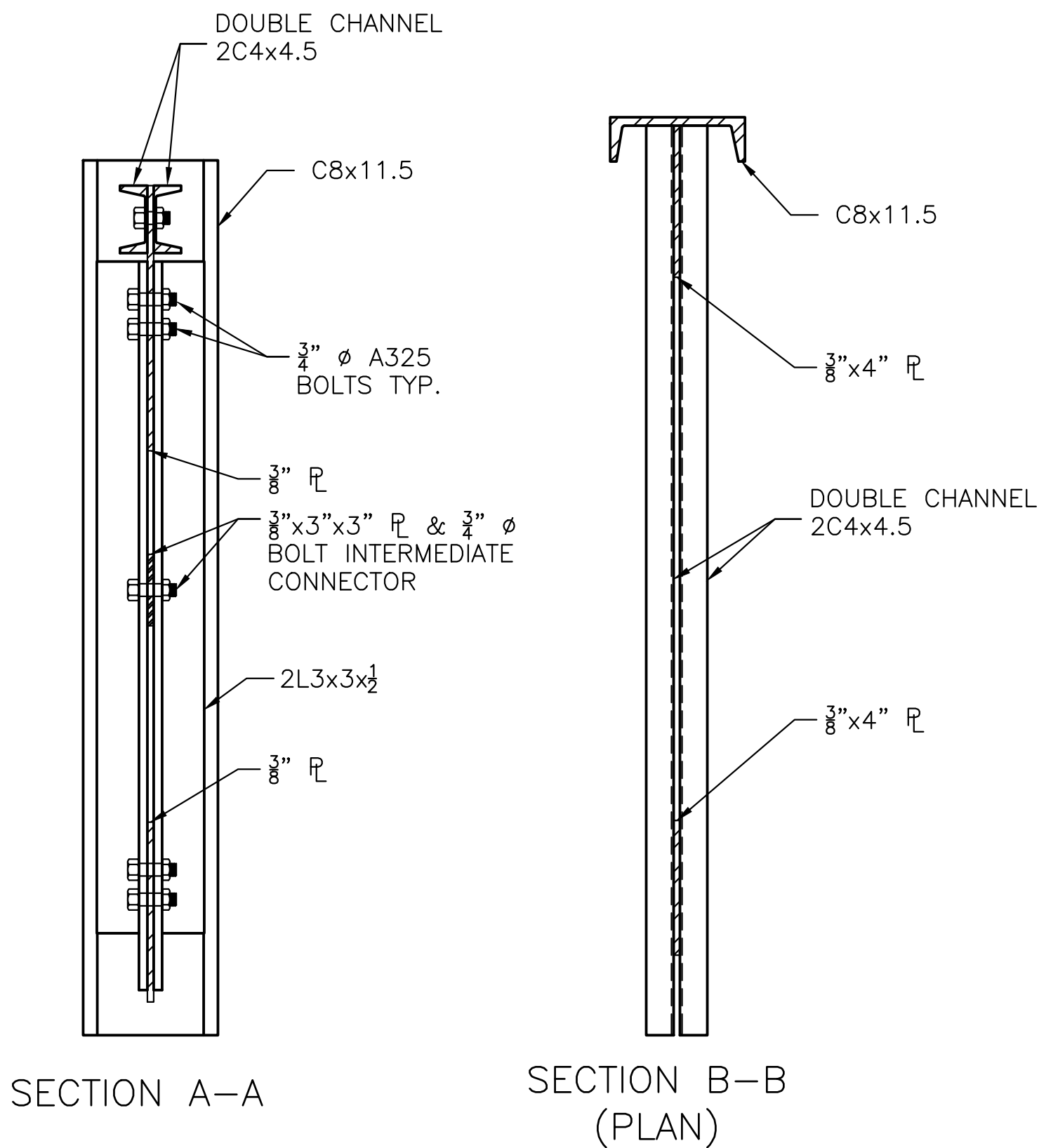
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<p>GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT</p>							
<p>EXISTING CONDITIONS AND DEMOLITION AT GATEHOUSE (2 OF 2)</p>							
<p>PREPARED BY:</p> <p> GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com</p>				<p>PREPARED FOR:</p> <p> FIRST TAXING DISTRICT OF THE CITY OF NEWBURGH, WATER DEPARTMENT 12 NEW CANAAN AVENUE NEWBURGH, CONNECTICUT 06062 (203) 847-7387</p>			
<p>PROJ. MGR:</p> <p>JGD</p>		<p>REVIEWED BY:</p> <p>MAT</p>		<p>CHECKED BY:</p> <p>JGD</p>		<p>FIGURE</p> <p>GH2</p>	
<p>DESIGNED BY:</p> <p>JGD</p>		<p>DRAWN BY:</p> <p>JAT</p>		<p>SCALE:</p> <p>AS NOTED</p>		<p>SHEET NO.</p> <p>28 OF 49</p>	
<p>DATE:</p> <p>NOVEMBER 2023</p>		<p>PROJECT NO.</p> <p>01.0171312.10</p>		<p>REVISION NO.</p> <p></p>			



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CONSTRUCTION/MAINTENANCE ACCESS BRACKET
ELEVATION DETAIL 1-1/2" = 1'-0"

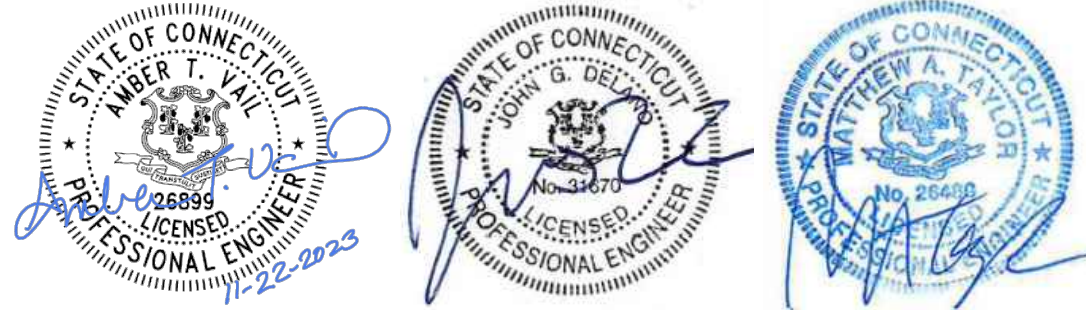


CONSTRUCTION/MAINTENANCE ACCESS BRACKET DETAIL SECTIONS
1-1/2" = 1'-0"

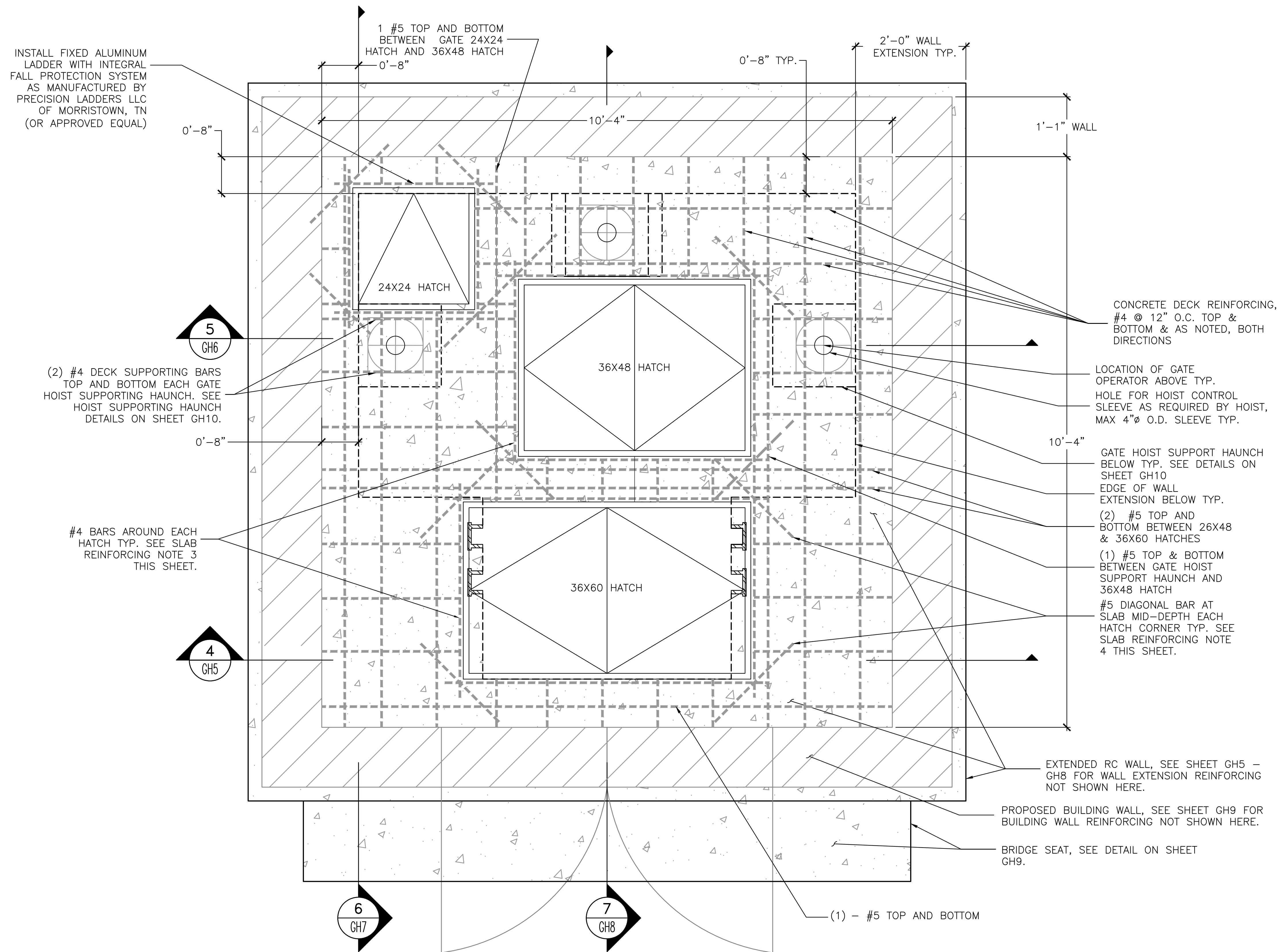
- CONSTRUCTION ACCESS NOTES:**
1. TEMPORARY CONSTRUCTION/MAINTENANCE ACCESS PLATFORM BRACKETS SHOWN HEREON REPRESENT MINIMUM DESIGN REQUIREMENTS, AND A POSSIBLE DESIGN SCENARIO.
 2. CONTRACTOR SHALL SUBMIT FOR APPROVAL ENGINEERED DESIGN PLANS FOR PERMANENT CONSTRUCTION & MAINTENANCE ACCESS PLATFORM. SUBMITTAL SHALL INCLUDE CONSTRUCTION DRAWINGS, AND SUPPORTING CALCULATIONS, AND BE STAMPED BY AN ENGINEER LICENSED IN THE STATE OF CONNECTICUT.
 3. CONTRACTOR SHALL CONSTRUCT ACCESS PLATFORM IN ACCORDANCE WITH AN APPROVED SUBMITTAL. ACCESS PLATFORM SHALL BE CONSTRUCTED ON ALL FOUR SIDES OF THE GATEHOUSE.
 4. ACCESS PLATFORM SHALL BE BUILT ON CONSTRUCTION/MAINTENANCE ACCESS BRACKET, FURNISHED BY THE CONTRACTOR, AND DETAILED IN THESE DRAWINGS (MIN. 2 BRACKETS PER SIDE OF GATEHOUSE).
 5. ACCESS PLATFORM SHALL BE DESIGNED TO MIN. LIVE LOAD = 100 PSF. PLATFORM DEAD LOAD ABOVE ACCESS BRACKET SHALL NOT EXCEED 50 PSF.
 6. ACCESS PLATFORM SHALL MEET OSHA AND APPLICABLE BUILDING CODE REQUIREMENTS, INCLUDING OSHA REQUIREMENTS FOR HANDRAIL.
 7. ACCESS PLATFORM SHALL SERVE TO Laterally BRACE ACCESS BRACKETS.

- HILTI CONCRETE ANCHOR NOTES:**
1. ACTUAL ANCHOR SIZE AND EMBEDMENT TO BE BASED UPON LOADS FROM CONTRACTOR'S DESIGN OF SUPPORT BRACKET.
 2. INSTALL CONSTRUCTION/ MAINTENANCE ACCESS BRACKET WITH HILTI 5/8" Ø KWIK BOLT 3-SS STAINLESS STEEL ANCHORS, (4 ANCHORS PER BRACKET).
 3. INSTALL WITH MIN. 4" EMBEDMENT INTO CONCRETE.
 4. INSTALL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
GATEHOUSE CONSTRUCTION/MAINTENANCE ACCESS BRACKET DETAILS			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387
PROJ MGR:	JGD	REVIEWED BY:	MAT
DESIGNED BY:	JGD	DRAWN BY:	JAR
DATE:	NOVEMBER 2023	PROJECT NO:	01.0171312.10
		CHECKED BY:	MAT
		SCALE:	AS NOTED
		REVISION NO.	
			FIGURE GH3 SHEET NO. 29 OF 49



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GENERAL NOTES:

1. PROPOSED CONSTRUCTION/MAINTENANCE ACCESS BRACKETS AND PLATFORM NOT SHOWN THIS VIEW.
2. ALIGN INSIDE OF 24x24 HATCH FRAME WITH INSIDE OF NORTH AND WEST GATEHOUSE WALL EXTENSION AS SHOWN.
3. WALL EXTENSION AND GATE HOIST HAUNCH REINFORCING NOT SHOWN FOR CLARITY.

ACCESS HATCH NOTES:

1. HATCHES SHALL BE BY EJ (EJCO.COM) OR APPROVED EQUAL, PER THE SCHEDULE BELOW

HATCH OPENING	OUTSIDE DIM.	MODEL
24x24 HATCH	26- $\frac{1}{2}$ "X26- $\frac{1}{2}$ "	H24241001
36X48 HATCH	38- $\frac{1}{2}$ "X50- $\frac{1}{2}$ "	H36481101
36X60 HATCH	38- $\frac{1}{2}$ "X62- $\frac{1}{2}$ "	H30481001

2. FRAMES FOR HATCHES SHALL BE EMBEDDED IN OR OTHERWISE ANCHORED TO SLAB OPENING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

SLAB REINFORCING NOTES:

1. MAIN REINFORCING TO BE #4 @ 12" O.C. BOTH DIRECTIONS TOP AND BOTTOM, WITH 1 $\frac{1}{2}$ " CLEAR COVER.
2. SLAB REINFORCING SHALL INCLUDE #4 BAR MID-DEPTH AROUND EACH HATCH (ALL FOUR SIDES). BARS SHALL EXTEND MIN. 4" BEYOND EDGE OF HATCH.
3. SLAB REINFORCING SHALL INCLUDE 24" #4 DIAGONAL BARS AT MID DEPTH AT HATCH CORNERS.

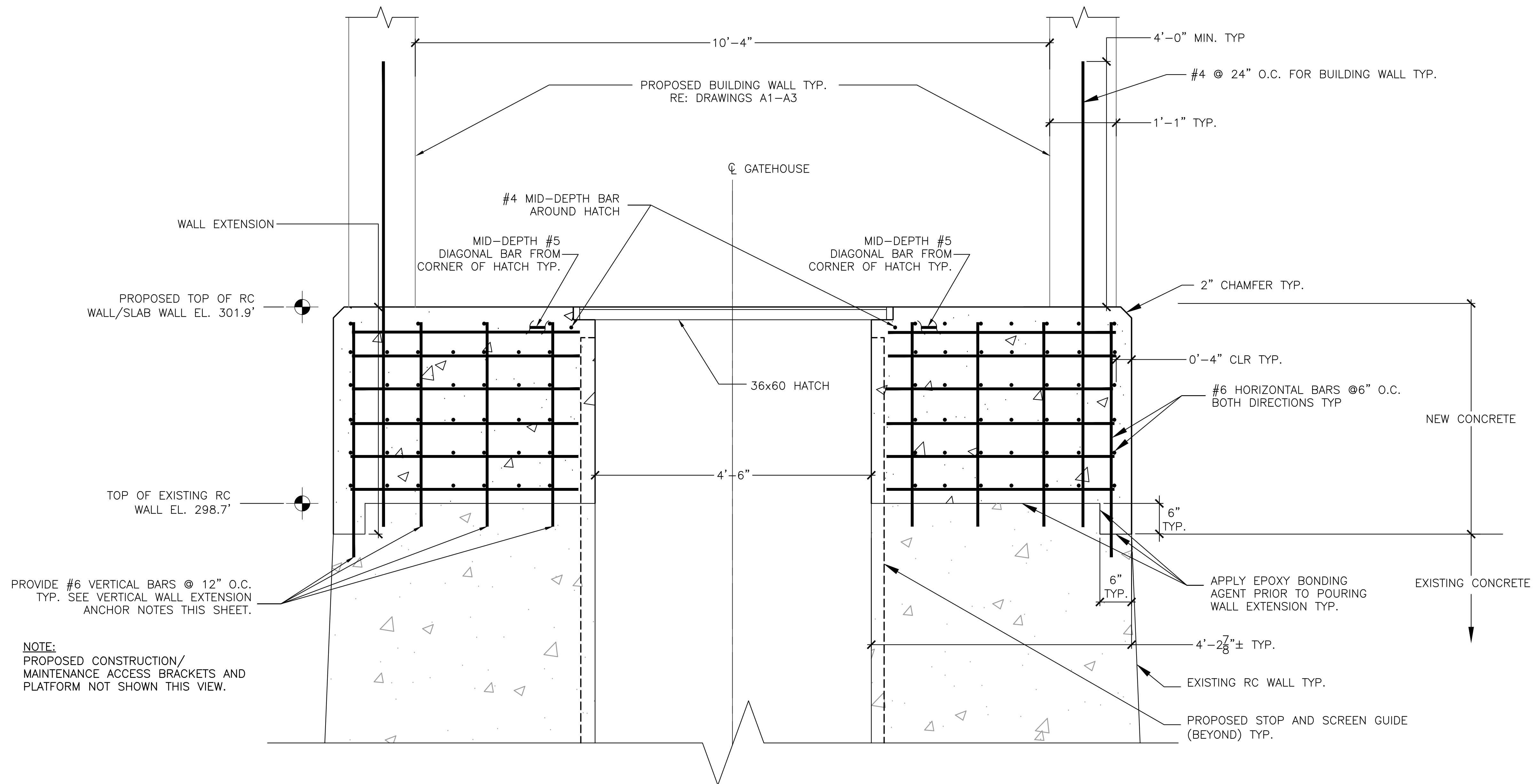
PROPOSED FLOOR SLAB PLAN

1" = 1'-0"

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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
GATEHOUSE FLOOR RAISING PLAN AND DETAILS GATEHOUSE DECK PLAN			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	FIGURE
DESIGNED BY: JGD	DRAWN BY: JAR	SCALE: AS NOTED	GH4
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO:	
SHEET NO. 30 OF 49			



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VERTICAL WALL EXTENSION EPOXY ANCHOR NOTE:

1. EPOXY ANCHOR BARS INTO EXISTING CONCRETE USING HILTI RE-500V3 EPOXY, MIN. 6" EMBEDMENT.
2. EPOXY ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

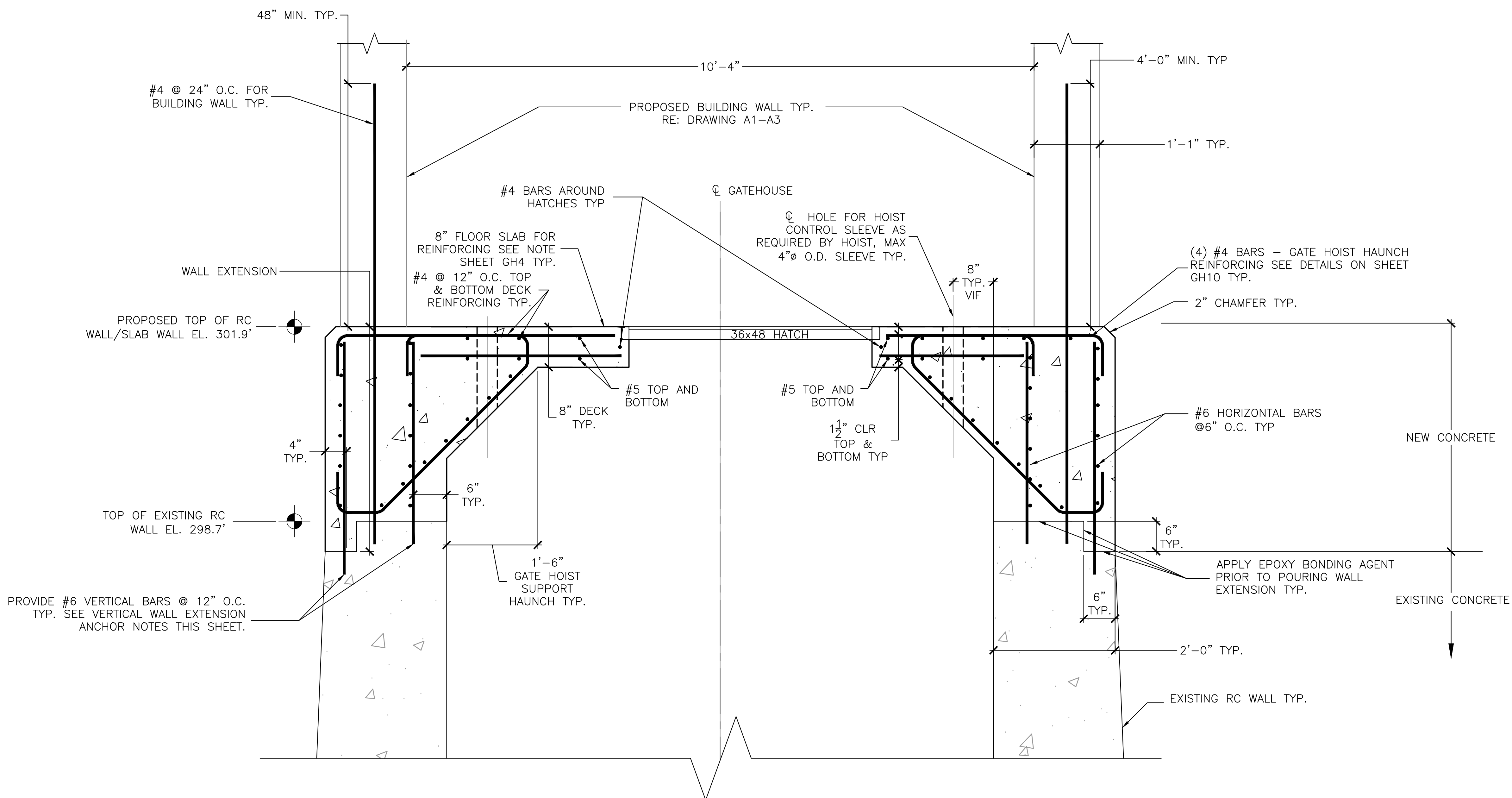
4
GH4

GATEHOUSE FLOOR SECTION

1" = 1'-0"



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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
GATEHOUSE FLOOR RAISING PLAN AND DETAILS DECK AND WALL SECTION			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	FIGURE
DESIGNED BY: JGD	DRAWN BY: JAR	SCALE: AS NOTED	GH5
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO:	
SHEET NO. 31 OF 49			





5
GH4

GATEHOUSE FLOOR SECTION

$$1'' = 1' - 0''$$

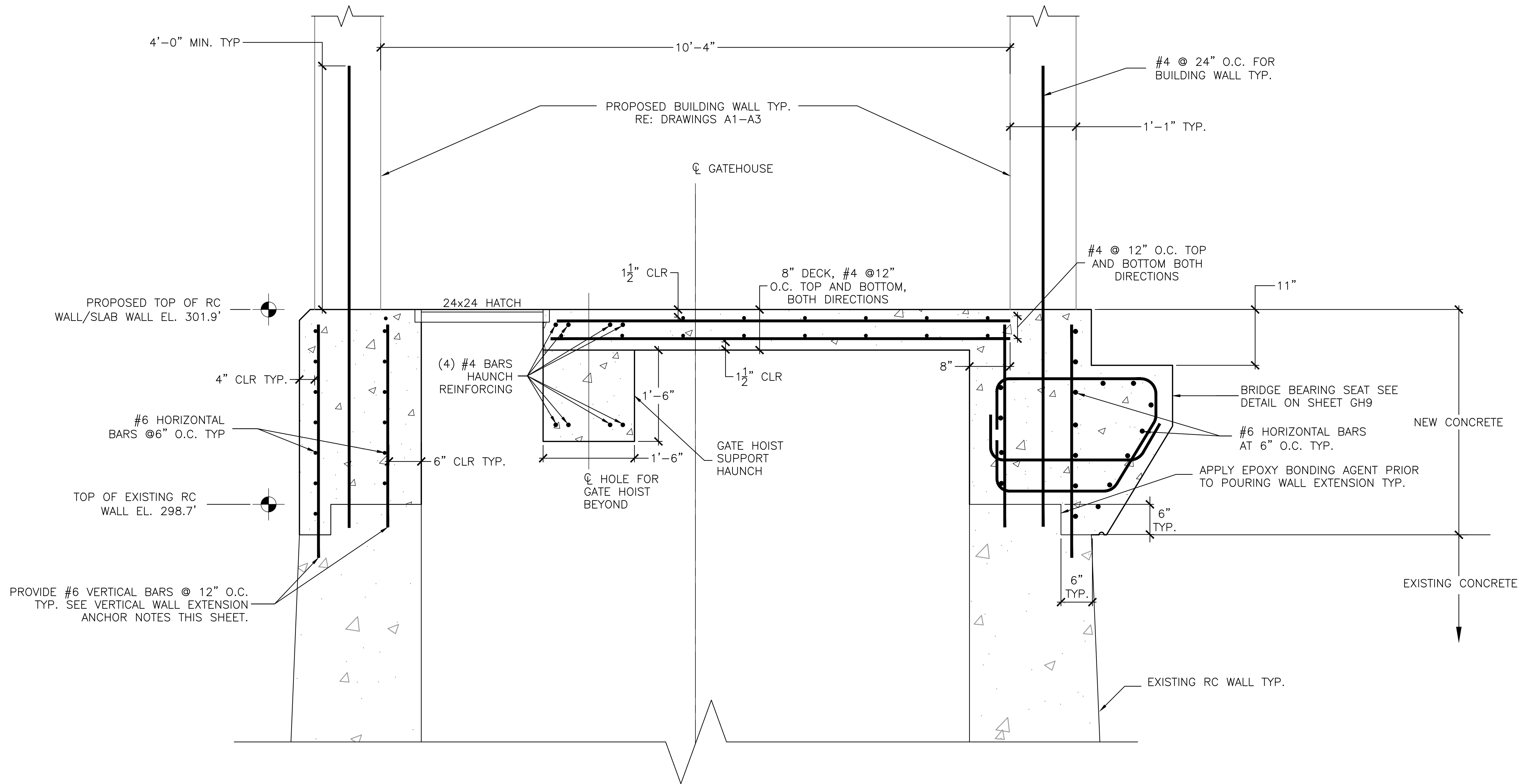
VERTICAL WALL EXTENSION EPOXY ANCHOR NOTE:

1. EPOXY ANCHOR BARS INTO EXISTING CONCRETE USING HILTI RE-500V3 EPOXY ANCHORS, MIN. 6" EMBEDMENT.
2. EPOXY ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT				
GATEHOUSE FLOOR RAISING PLAN AND DETAILS DECK AND WALL SECTION				
PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com			PREPARED FOR:  FIRST TAKING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD DESIGNED BY: JGD DATE: NOVEMBER 2023	REVIEWED BY: MAT DRAWN BY: JAR PROJECT NO: 01.0171312.10	CHECKED BY: JAR SCALE: AS NOTED REVISION NO:	FIGURE GH6 SHEET NO. 32 OF 49	



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VERTICAL WALL EXTENSION EPOXY ANCHOR NOTE:

1. EPOXY ANCHOR BARS INTO EXISTING CONCRETE USING HILTI RE-500V3 EPOXY ANCHORS, MIN. 6" EMBEDMENT.
2. EPOXY ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

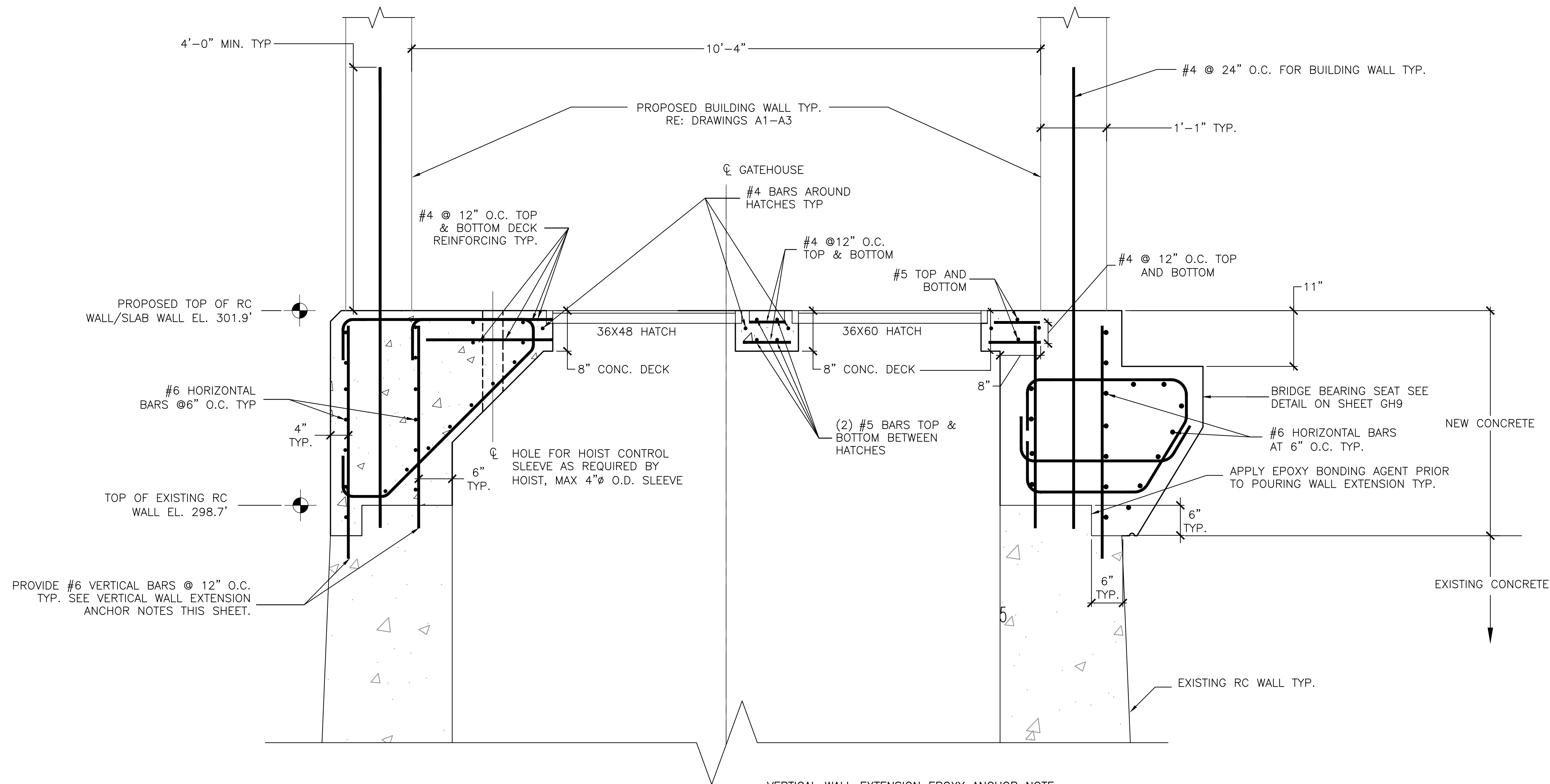
6
GH4

GATEHOUSE FLOOR SECTION
1" = 1'-0"



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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
GATEHOUSE FLOOR RAISING PLAN AND DETAILS DECK AND WALL SECTION			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387
PROJ MGR:	JGD	REVIEWED BY:	MAT
DESIGNED BY:	JGD	DRAWN BY:	JAR
DATE:	NOVEMBER 2023	SCALE:	AS NOTED
		CHECKED BY:	MAT
		REVISION NO.	
		PROJECT NO.	01.0171312.10
		FIGURE	GH7
		SHEET NO.	33 OF 49

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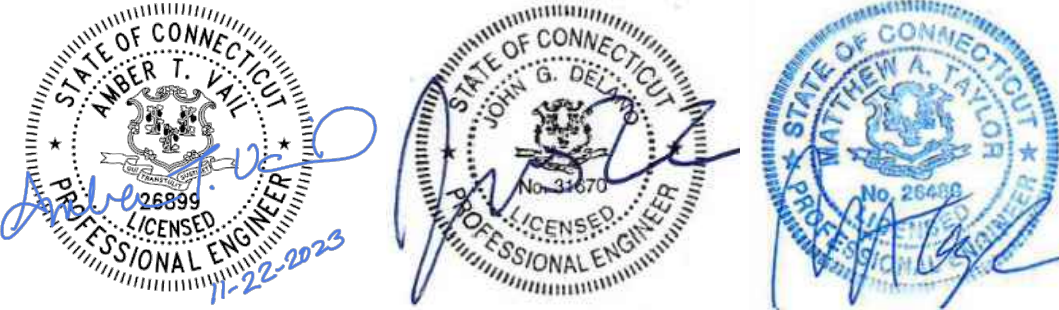


VERTICAL WALL EXTENSION EPOXY ANCHOR NOTE:

1. EPOXY ANCHOR BARS INTO EXISTING CONCRETE USING HILTI RE-500V3 EPOXY ANCHORS, MIN. 6" EMBEDMENT.
2. EPOXY ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

7
GH4

GATEHOUSE FLOOR SECTION
1" = 1'-0"

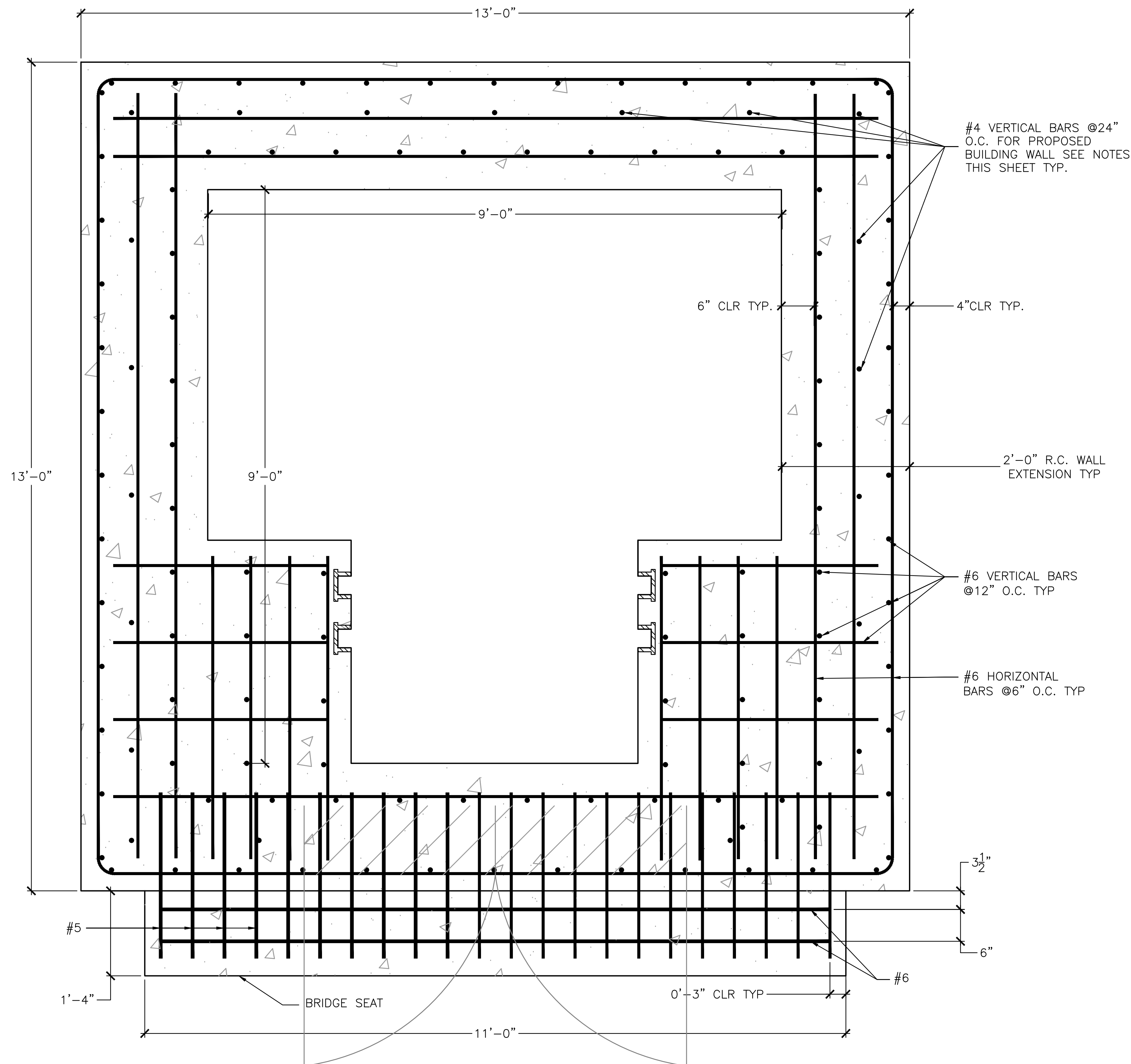


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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
GATEHOUSE FLOOR RAISING PLAN AND DETAILS DECK AND WALL SECTION			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	FIGURE
DESIGNED BY: JGD	DRAWN BY: JAR	SCALE: AS NOTED	GH8
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO:	SHEET NO. 34 OF 49

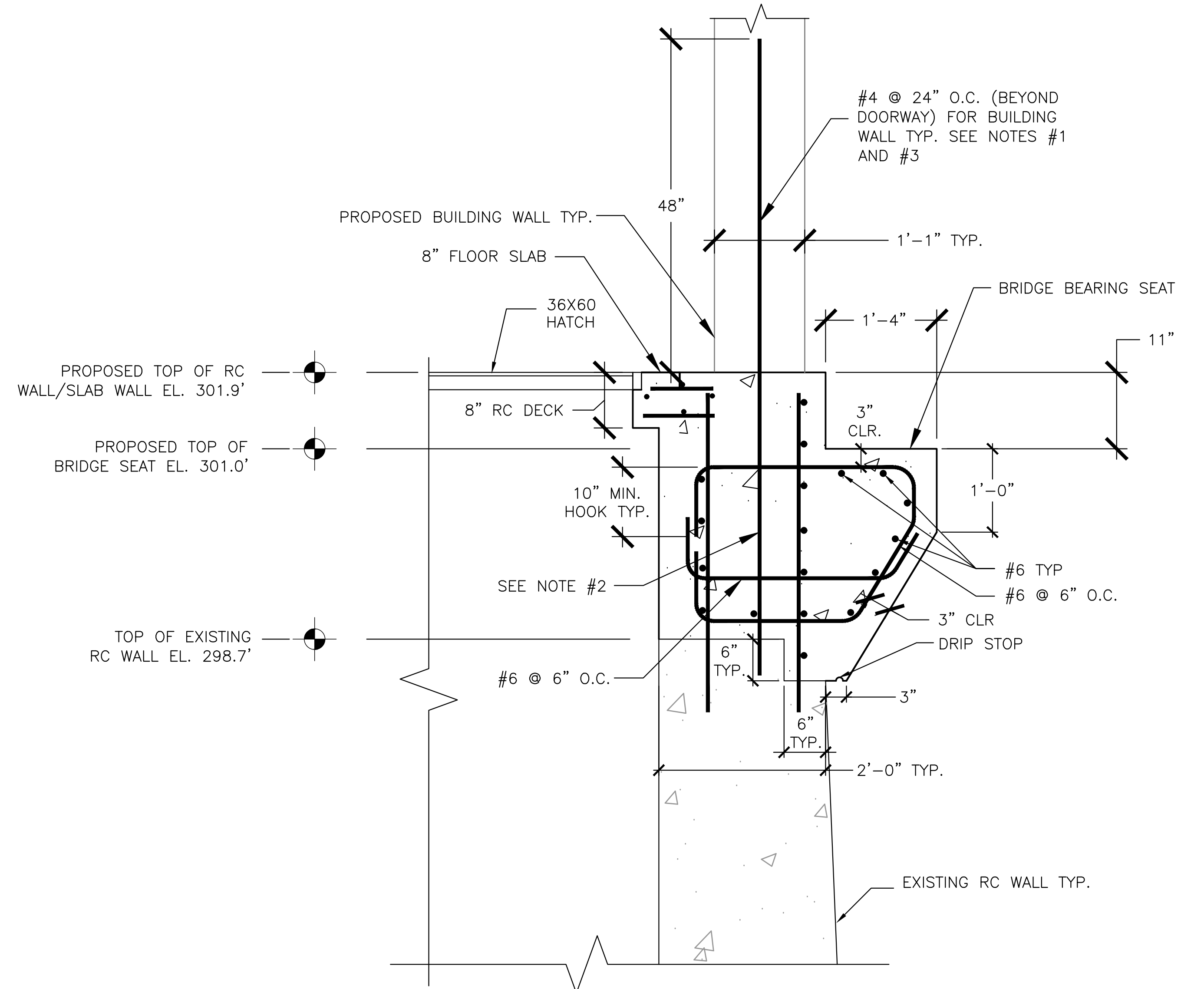
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NOTES:

1. VERTICAL #4 BARS FOR PROPOSED BUILDING WALL SHALL BE CENTERED IN PROPOSED WALL.
2. VERTICAL #6 BARS SHALL BE EMBEDDED MIN. 38" INTO NEW CONCRETE GATEHOUSE FOUNDATION EXTENSION.
3. EXTEND REBAR INTO NEW GATEHOUSE CMU WALLS MIN. 48" ABOVE NEW SLAB.



REINFORCED CONCRETE WALL EXTENSION & BRIDGE SEAT
REINFORCING PLAN 1" = 1'-0"

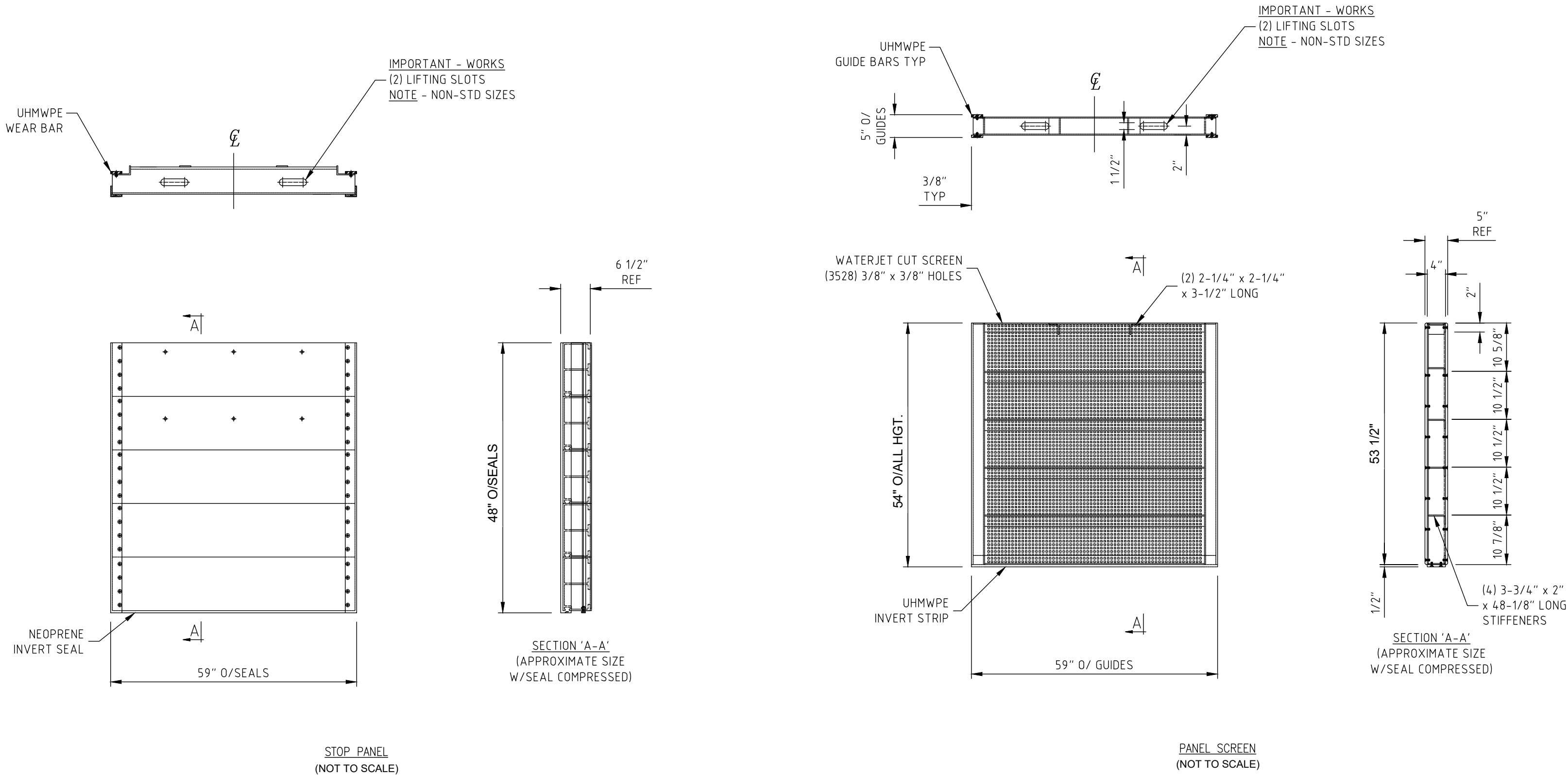


BRIDGE SEAT SECTION DETAIL

1" = 1'-0"

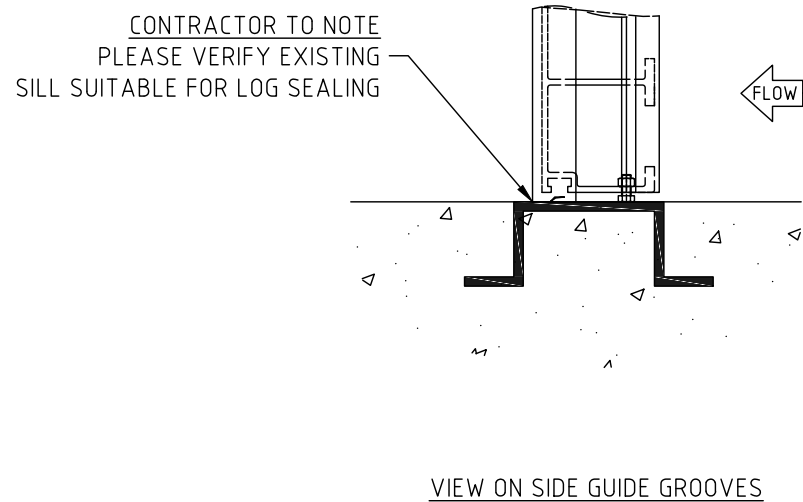
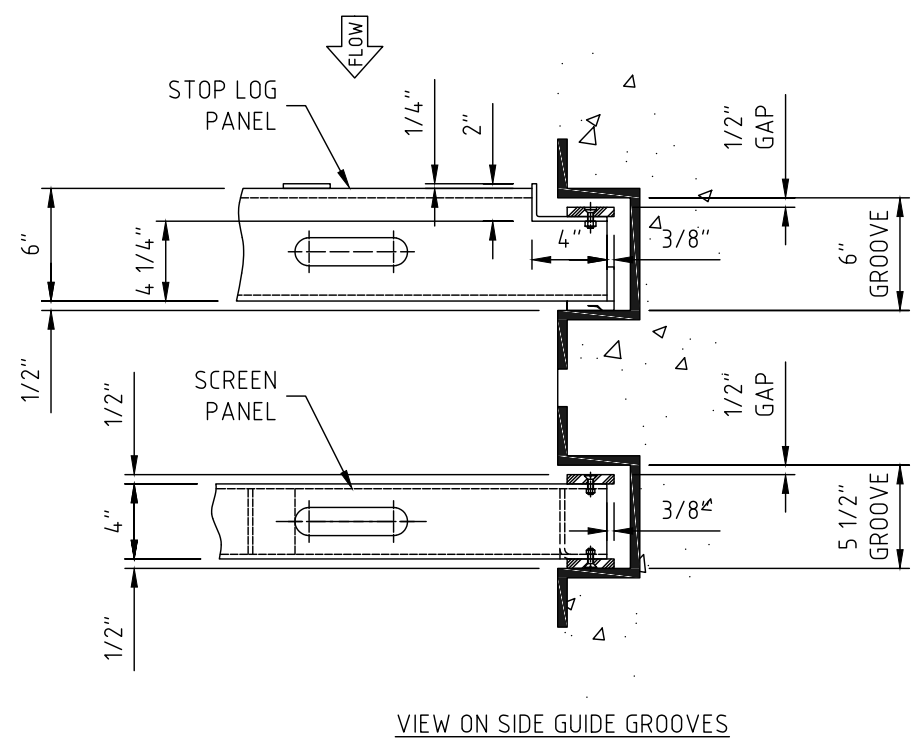
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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
GATEHOUSE CONCRETE WALL & BRIDGE SEAT REINFORCING PLAN AND DETAILS			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	FIGURE
DESIGNED BY: JGD	DRAWN BY: JAR	SCALE: AS NOTED	GH9
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO:	SHEET NO. 35 OF 49





STOP PANEL
(NOT TO SCALE)

PANEL SCREEN
(NOT TO SCALE)



STOP PANEL AND SCREEN GUIDE DETAILS

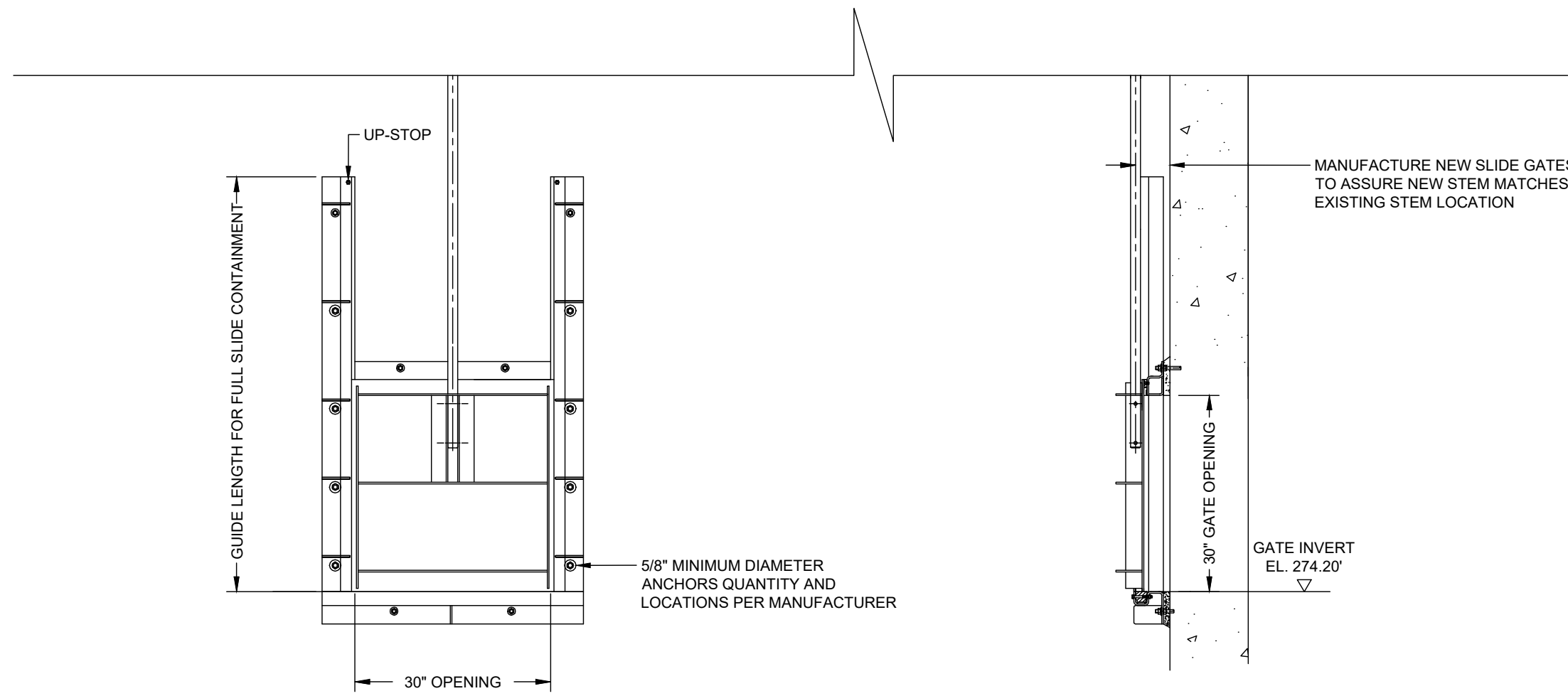
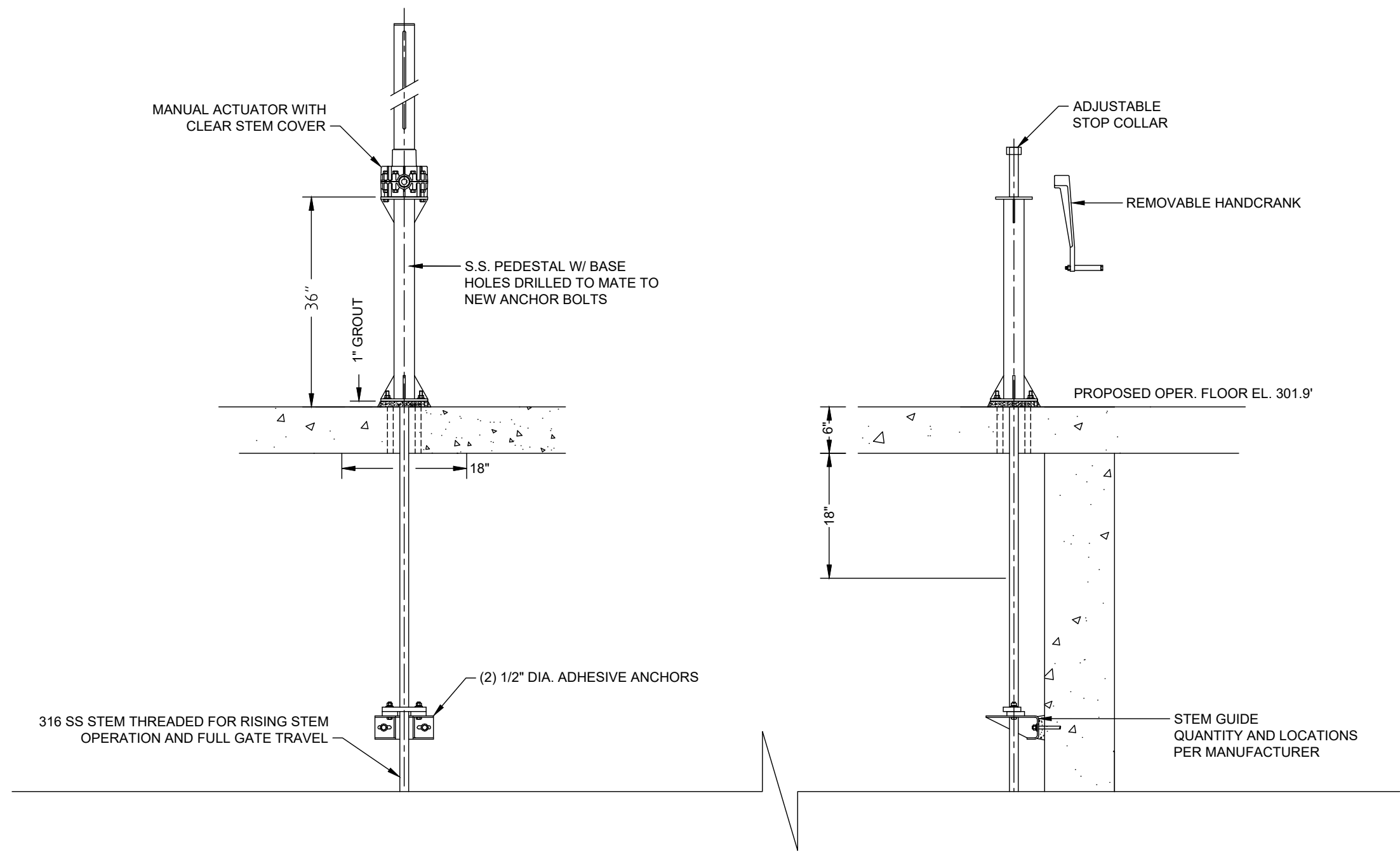


PLATE AND HORIZONTAL & VERTICAL GATE STIFFENERS
TO BE MINIMUM 1/4" THICK SS BAR OR STRUCTURAL MEMBER

- NOTES:
1. SCREEN IS TO BE AS MANUFACTURED BY WHIPPS OR APPROVED EQUAL.
 2. REFER TO SHEETS GH1 AND GH2 FOR INFORMATION REGARDING REHABILITATION OF STOP SHUTTER/SCREEN SLOTS.
 3. TYPICAL DETAILS SHOWN HEREON ARE INTENDED TO CONVEY THE DESIRED EQUIPMENT TO BE PROVIDED.
 4. STOP PANELS AND SCREENS TO BE EXTRUDED ALUMINUM AS MANUFACTURED BY WHIPPS, INC.
 5. CONTRACTOR TO VERIFY DIMENSIONS WITHIN GATEHOUSE AND SUBMIT ENGINEERED SHOP DRAWINGS AND CALCULATIONS FOR APPROVAL.



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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
GATE HOUSE OPERATOR IMPROVEMENTS (2 OF 2)			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	FIGURE
DESIGNED BY: JGD	DRAWN BY: ADP/SMW	SCALE: N.T.S	GH12
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO:	SHEET NO. 38 OF 49



Donald W. Peters

STATE OF CONNECTICUT
DONALD W. PETERS
LICENSE NO. 3786
MECHANICAL ENGINEERING
PROFESSIONAL ENGINEER

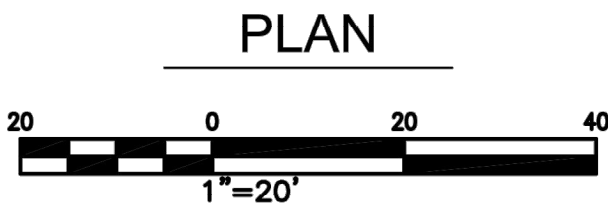
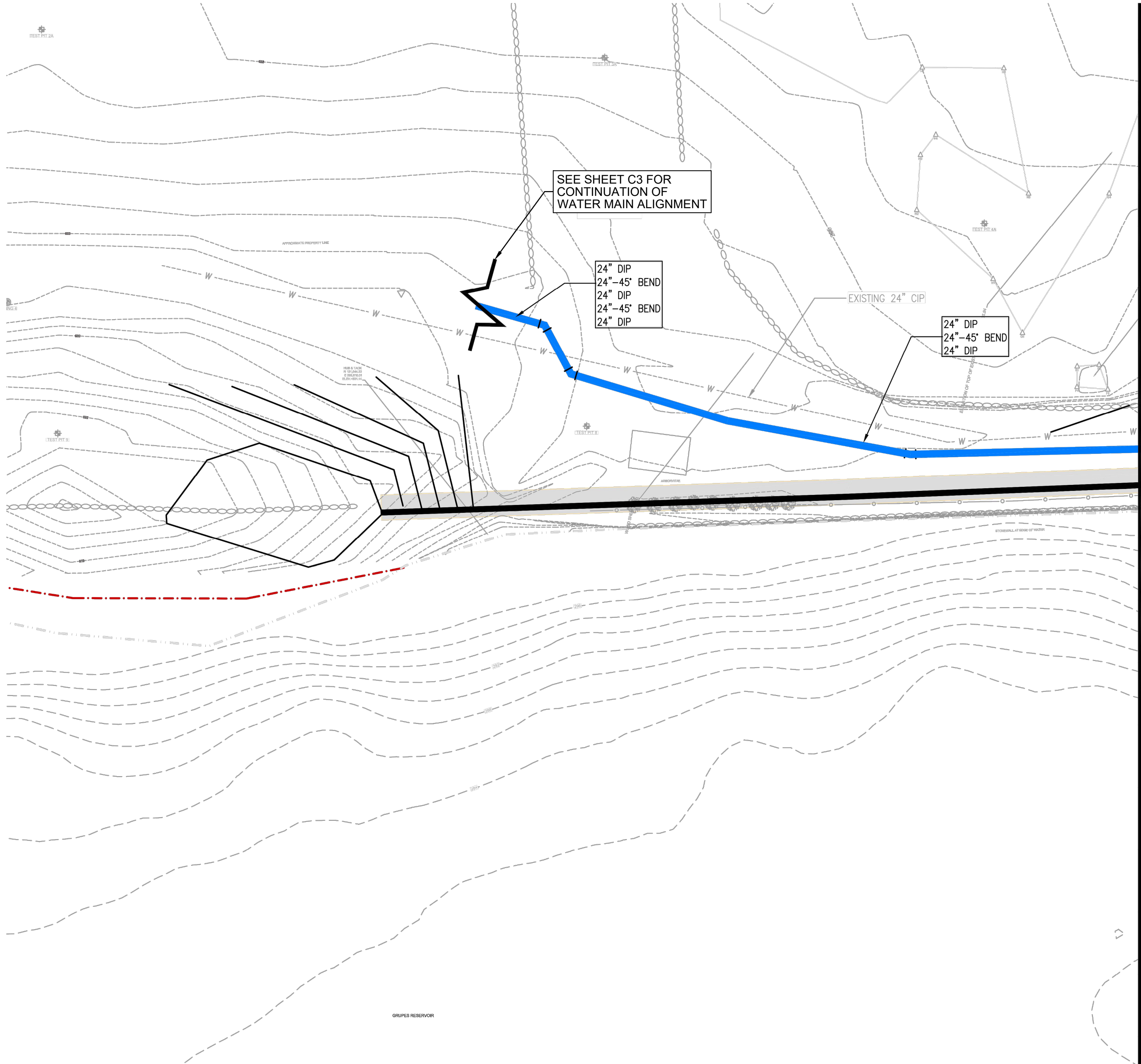
1. ALL STOCK PILED MATERIAL TO HAVE PERIMETER EROSION CONTROL MEASURES INSTALLED.
2. REMOVE ALL EXISTING GATEBOXES FROM ABANDONED WATER MAINS.
3. ALL BOULDERS REMOVED FROM TRENCH ARE TO BE SET TO THE SIDE TO BE MEASURED BY THE ENGINEER AND CONTRACTOR'S REPRESENTATIVE: CONTRACTOR IS RESPONSIBLE TO REMOVE FROM THE SITE.
4. ALL FITTINGS ARE MECHANICAL JOINT WITH CONCRETE THRUST BLOCKS PER FIRST DISTRICT WATER DEPARTMENT STANDARD SPECIFICATIONS AND STANDARDS.
5. TEST PITS ARE TO BE PAID UNDER ITEM 205, TRENCH EXCAVATION AND BACKFILL.
6. WATER MAIN DESIGN PROVIDED BY DISTRICT TO GZA ON NOVEMBER 10, 2016.



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		TITLE/DESCRIPTION		BY		DATE	
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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT							
WATER MAIN PLAN (1 OF 2)							
PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com				PREPARED FOR:  CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7392			
PROJ MGR: JGD		REVIEWED BY: MAT		CHECKED BY: MAT		FIGURE WM1 SHEET NO. 39 OF 49	
DESIGNED BY: JGD		DRAWN BY: ADP/SMW		SCALE: N.T.S			
DATE: NOVEMBER 2023		PROJECT NO: 01.0171312.10		REVISION NO:			

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NOTES

1. ALL STOCK PILED MATERIAL TO HAVE PERIMETER EROSION CONTROL MEASURES INSTALLED.
2. REMOVE ALL EXISTING GATEBOXES FROM ABANDONED WATER MAINS.
3. ALL BOULDERS REMOVED FROM TRENCH ARE TO BE SET TO THE SIDE TO BE MEASURED BY THE ENGINEER AND CONTRACTOR'S REPRESENTATIVE: CONTRACTOR IS RESPONSIBLE TO REMOVE FROM THE SITE.
4. ALL FITTINGS ARE MECHANICAL JOINT WITH CONCRETE THRUST BLOCKS PER FIRST DISTRICT WATER DEPARTMENT STANDARD SPECIFICATIONS AND STANDARDS.
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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT				
WATER MAIN PLAN (2 OF 2)				
PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com			PREPARED FOR:  FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR: JGD	REVIEWED BY: MAT	CHECKED BY: MAT	FIGURE WM2 SHEET NO. 40 OF 49	
DESIGNED BY: JGD	DRAWN BY: ADP/SMW	SCALE: N.T.S.		
DATE: NOVEMBER 2023	PROJECT NO: 01.0171312.10	REVISION NO:		





1. USE ABOVE DETAIL WHEN 4.5" MIN. COVER OVER NEW WATERMAIN CANNOT BE ACHIEVED/MAINTAINED VERIFY WITH ENGINEER PRIOR TO WATERMAIN INSTALLATION.
2. PROVIDE CONCRETE ENCASEMENT WHERE 18" MINIMUM SEPERATION CANNOT BE MAINTAINED, OR AS DIRECTED BY THE ENGINEER
3. PLEASE REFER TO STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH DRINKING WATER SECTION, WATER MAIN DESIGN AND CONSTRUCTION GUIDELINES' STANDARDS WHEN CROSSING A UTILITY, OR AS DIRECTED BY THE ENGINEER.

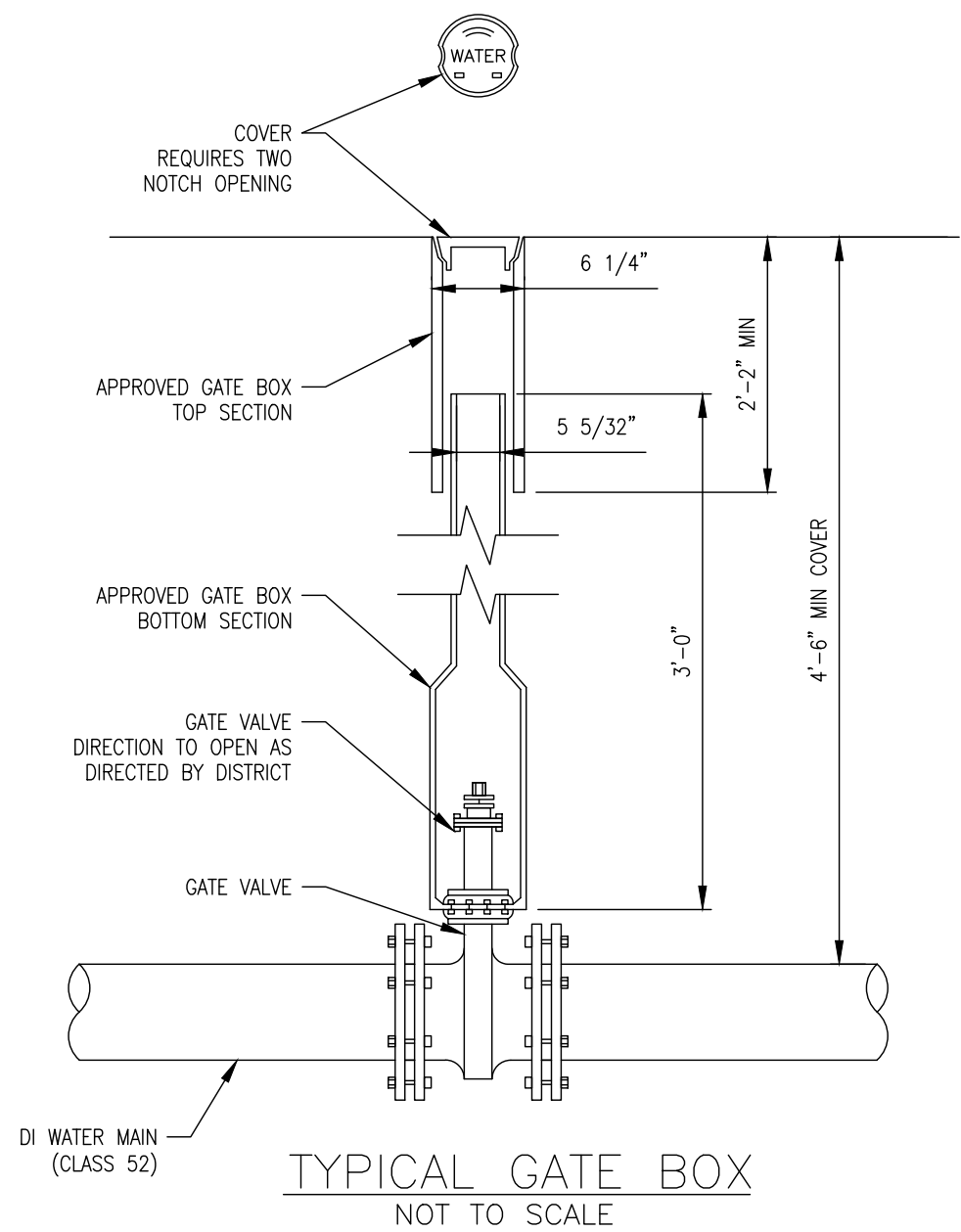


NOTES:

1. ALL CONCRETE THRUST BLOCKS TO BE PLACED AGAINST UNDISTURBED EARTH.
2. THRUST BLOCKS TO BE USED AT ALL FITTINGS, HYDRANTS, AND AS DIRECTED BY THE ENGINEER.
3. FIELD LOC GASKETS MAY BE REQUIRED TO BE INSTALLED PER THE ENGINEER'S DIRECTION.

1. WATER MAIN DESIGN PROVIDED BY DISTRICT TO GZA ON NOVEMBER 10, 2016.

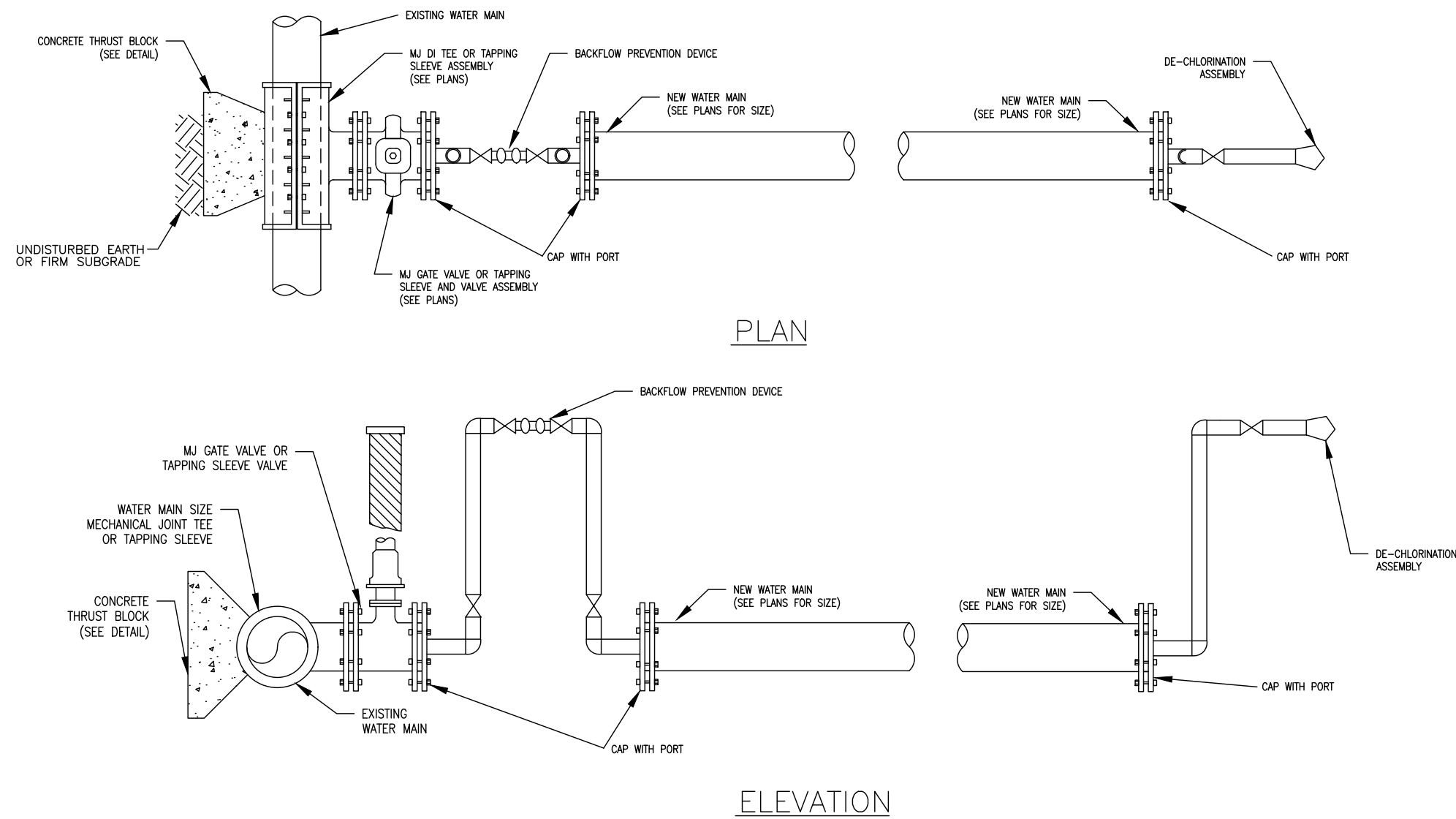
0	ISSUED FOR BID	MAT	11-3-23
NO.	ISSUE/DESCRIPTION	BY	DATE
<p>UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.</p>			
<p align="center">GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT</p>			
<p align="center">WATER MAIN DETAILS (1 OF 2)</p>			
<p>PREPARED BY:</p> <p align="center">  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com </p>		<p>PREPARED FOR:</p> <p align="center">  FIRST TAXING DISTRICT OF THE CITY OF NEWCANAAN, WATER DEPARTMENT 12 NEW CANAAN AVENUE NEWCANAAN, CONNECTICUT 06852 (203) 647-1787 </p>	
<p>PROJ. MGR: JGD</p> <p>DESIGNED BY: JGD</p> <p>DATE: NOVEMBER 2023</p>	<p>REVIEWED BY: MAT</p> <p>DRAWN BY: ADP/SMW</p> <p>PROJECT NO. 01.0171312.10</p>	<p>CHECKED BY: MAT</p> <p>SCALE: N.T.S.</p> <p>REVISION NO.</p>	<p>FIGURE</p> <p align="center">WM3</p> <p>SHEET NO. 41 OF 49</p>



TYPICAL GATE BOX
NOT TO SCALE

NOTES:

1. INSULATE FOR MAINS/GATES 12" AND SMALLER.



PLAN

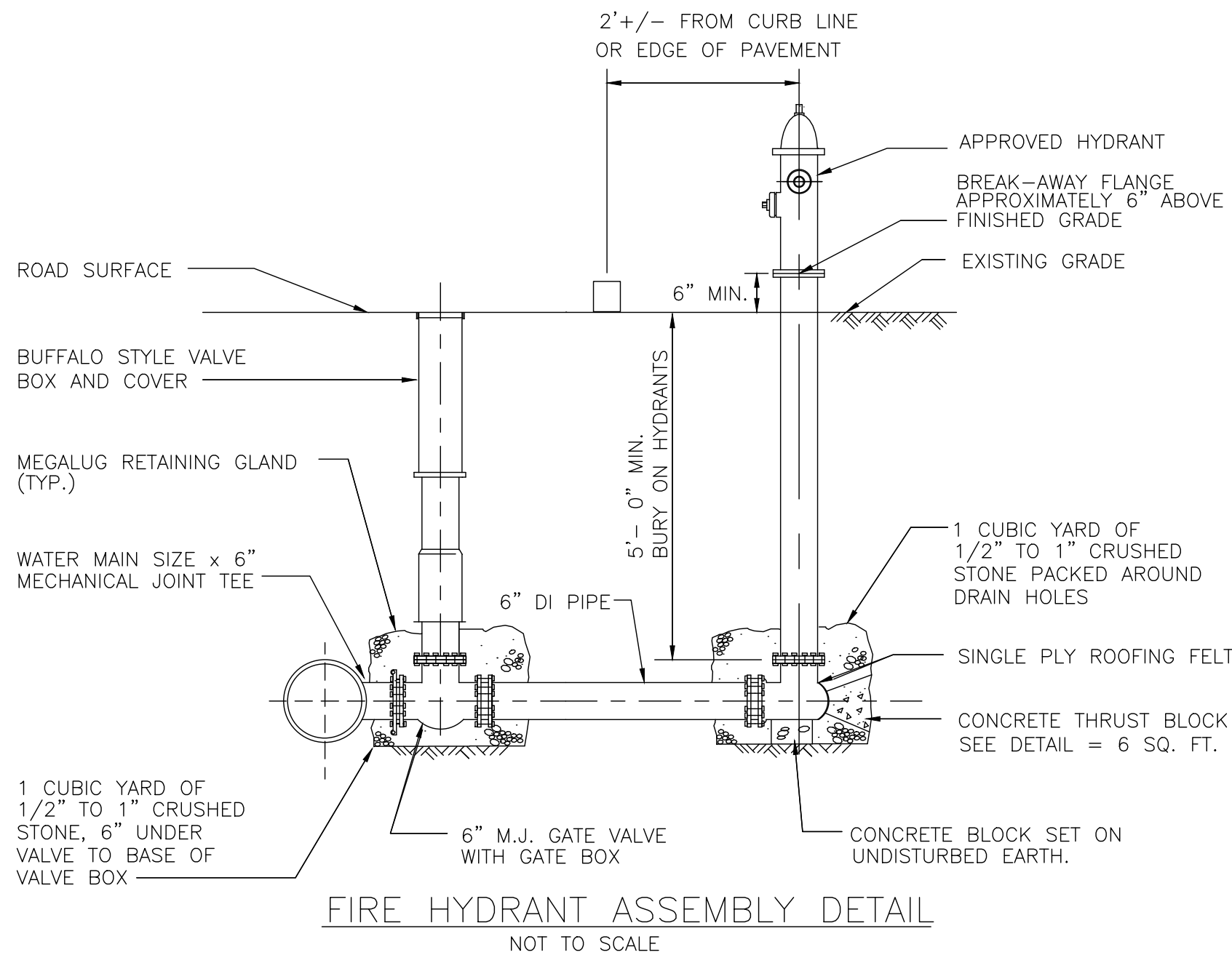
ELEVATION

STANDARD TESTING AND
CHLORINATING ASSEMBLY

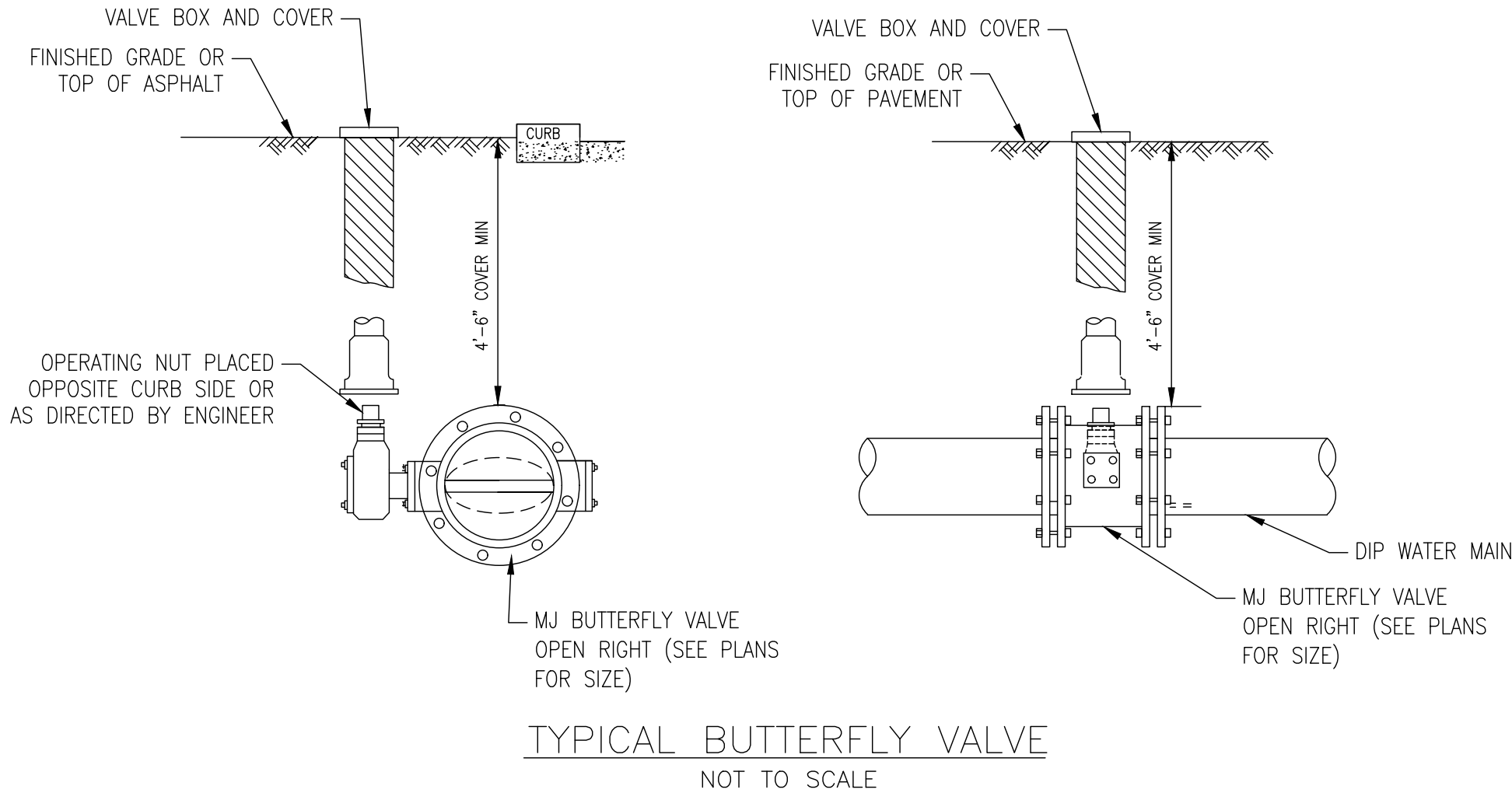
NOT TO SCALE

NOTES:

1. BACKFLOW PREVENTION DEVICE MUST BE INSTALLED BETWEEN EXISTING WATER FACILITIES AND NEW (UNTESTED) WATER FACILITIES.
1. NEW MAIN CAN BE FILLED FOR TESTING BY CHOICE OF THE CONTRACTOR (EXISTING WATER MAIN, FIRE HYDRANT, ETC.) AND SHALL BE APPROVED BY THE ENGINEER.
2. SEE ITEM 700, IN THE FIRST TAXING DISTRICT WATER DEPARTMENT STANDARD SPECIFICATIONS, FOR DETAILS ON TESTING AND CHLORINATING OF NEW WATER MAINS.



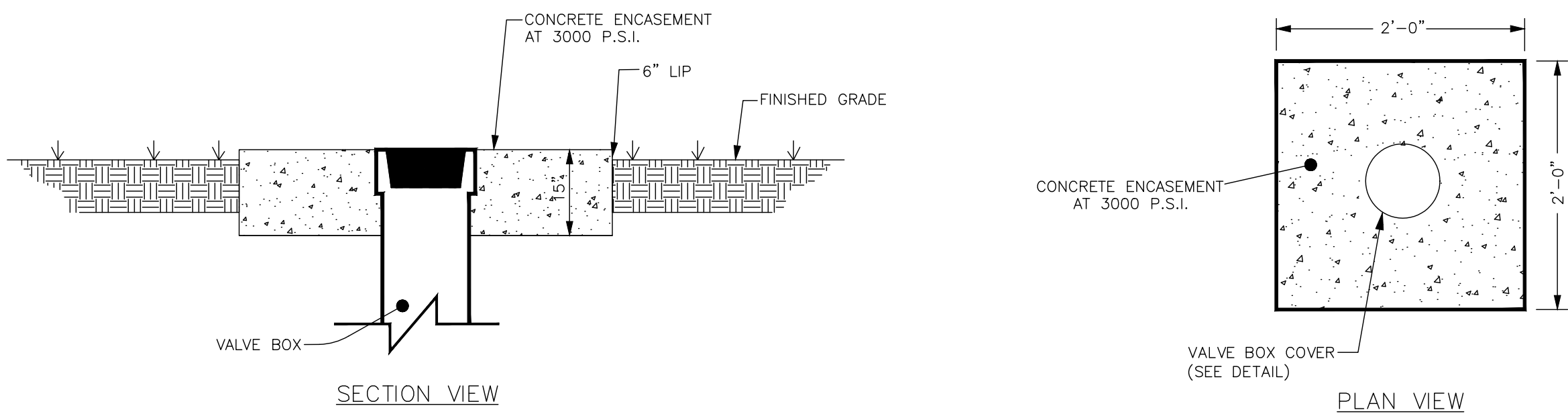
FIRE HYDRANT ASSEMBLY DETAIL
NOT TO SCALE



TYPICAL BUTTERFLY VALVE
NOT TO SCALE

NOTE

1. WATER MAIN DESIGN PROVIDED BY DISTRICT TO GZA ON NOVEMBER 10, 2016.



SECTION VIEW

PLAN VIEW

VALVE BOX CONCRETE ENCASEMENT DETAIL
NOT TO SCALE

0	ISSUED FOR BID	MAT	11-3-23
NO.	ISSUE/DESCRIPTION	BY	DATE
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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
WATER MAIN DETAILS (1 OF 2)			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387
PROJ MGR:	JGD	REVIEWED BY:	MAT
DESIGNED BY:	JGD	DRAWN BY:	ADP/SMW
DATE:	NOVEMBER 2023	PROJECT NO:	01.0171312.10
		CHECKED BY:	MAT
		SCALE:	N.T.S
		REVISION NO.	
			FIGURE WM4 SHEET NO. 42 OF 49

LIGHTING FIXTURE SCHEDULE				
TYPE	MANUFACTURER	VOLTAGE	LAMPS	FIXTURE DESCRIPTION
A	PHILIPS DAY-BRITE V2WLE35L835-4-UNV OR APPROVED EQUAL	120V	3500 LUMEN LED ARRAY (3500K)	SEALED INDUSTRIAL LED FIXTURE WITH ONE-PIECE MOLDED FIBERGLASS BODY; LED OPTIMIZED ACRYLIC LENSE; CONTINUOUS BODY GASKET; STAINLESS STEEL CAM LATHCES; INTEGRAL LED DRIVER; 100,000 HOUR L70 LED METRIC; UL LISTED FOR WET LOCATION. PROVIDE WITH TOP BRACKETS AND CHAIN HANGERS.
B	STERNBERG LIGHTING 66BU-INCAND-MED-WA-SI DISTRICT STANDARD - NO SUBSTITUTIONS	120V	MED BASE 9W LED (4000K)	DECORATIVE EXTERIOR WALL SCONCE FIXTURE WITH CAST ALUMINUM FINIAL AND BODY; SIX SIDED CLEAR TEXTURED SIDE LENSES; MEDIUM BASE SOCKET; WALL MOUNT BRACKET; SWEDISH IRON FINISH. PROVIDE WITH 9W FROSTED LENS LED LAMP WITH MEDIUM BASE, LAMP SHALL BE RATED FOR ENCLOSED FIXTURE USE AND DAMP LOCATION LISTED.
NOTES:				
1. REFER TO THE ELECTRICAL SPECIFICATIONS FOR ADDITIONAL GENERAL REQUIREMENTS.				
2. FIXTURES SHALL BE UL OR ETL LISTED.				
3. ALL NECESSARY MOUNTING HARDWARE, HANGERS, BRACKETS, YOKES, RAILS, STEMS, CHAINS, JOINERS, ETC., SHALL BE FURNISHED AND INSTALLED AS NEEDED TO INSTALL FIXTURES.				
4. REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR SPECIFIC DETAILS, ARRANGEMENT, MOUNTING HEIGHTS, CEILING CONSTRUCTION, ETC., COLORS AND FINISHES SHALL BE SELECTED BY THE ARCHITECT.				
5. FIXTURES SHALL BE SEISMICALLY SUPPORTED AS REQUIRED BY THE APPLICABLE BUILDING CODE.				

ELECTRIC UNIT HEATER SCHEDULE										
SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	LOCATION	AIR FLOW (CFM)	CAPACITY		ELECTRICAL		WEIGHT (LBS)	REMARKS
					KW	STAGES	VOLTS	PHASE		
UH-1	QMARK MUH03-21	H	GATEHOUSE	350	3.0	1	240	1ø	27	1
UNIT HEATER TYPES: H=HORIZONTAL V=VERTICAL										
REMARKS: 1. PROVIDE WITH WALL BRACKET, NON-PROGRAMMABLE LINE VOLTAGE THERMOSTAT AND DISCONNECT SWITCH.										

GENERAL SECURITY SYSTEM NOTES

- SECURITY SYSTEM COMPONENTS, WIRING AND TESTING WILL BE PROVIDED UNDER A SEPARATE CONTRACT. SCOPE OF WORK FOR THIS PROJECT SHALL BE TO PROVIDE THE INFRASTRUCTURE TO SUPPORT THE OWNER'S SECURITY EQUIPMENT INSTALLATION.
- INFRASTRUCTURE REQUIREMENTS INCLUDE;
A. BACKBOXES AND CONDUIT FROM DEVICE TO PANEL LOCATIONS UP.
B. POWER FOR EQUIPMENT.
C. NYLON DRAG LINES IN ALL EMPTY CONDUITS.
- COORDINATE ALL WORK WITH THE ARCHITECT, OWNER AND SECURITY SYSTEM INSTALLER.

GENERAL SCADA SYSTEM NOTES

- SCADA SYSTEM COMPONENTS, WIRING AND TESTING WILL BE PROVIDED UNDER A SEPARATE CONTRACT. SCOPE OF WORK FOR THIS PROJECT SHALL BE TO PROVIDE THE INFRASTRUCTURE TO SUPPORT THE OWNER'S SCADA EQUIPMENT INSTALLATION.
- INFRASTRUCTURE REQUIREMENTS INCLUDE;
A. BACKBOXES AND CONDUIT FROM DEVICE AND PANEL LOCATIONS UP TO CEILING.
B. POWER FOR EQUIPMENT.
C. NYLON DRAG LINES IN ALL EMPTY CONDUITS.
- COORDINATE ALL WORK WITH THE ARCHITECT, OWNER AND SCADA SYSTEM INSTALLER.

ELECTRICAL SYMBOL LIST			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PANELBOARD		WALL MOUNTED LIGHT FIXTURE
	DISCONNECT SWITCH		PENDANT MOUNTED LIGHT FIXTURE
	FUSED DISCONNECT SWITCH		ELECTRONIC TIME CLOCK
	ELECTRICAL MOTOR	S	SINGLE POLE TOGGLE SWITCH
	BRANCH CIRCUIT WIRING	S ₃	THREE-WAY TOGGLE SWITCH
	HOMERUN TO PANELBOARD, UNLESS INDICATED OTHERWISE SHALL BE CONNECTED TO A 1 POLE, 20 AMP CIRCUIT BREAKER	St	LINE VOLTAGE THERMOSTAT SWITCH
	BRANCH CIRCUIT WIRING, SWITCHED		EQUIPMENT ENCLOSURE, ELECTRICAL, ENCLOSURE OR SITE HANDHOLE. TYPE AS INDICATED ON DRAWINGS.
	JUNCTION BOX (4" SQ MINIMUM)		
	SPECIAL PURPOSE RECEPTACLE (TYPE AS NOTED)		
	DUPLEX WALL MOUNTED RECEPTACLE		
	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTION		
	CARD READER, SEE DETAIL 5/E3 FOR ADDITIONAL REQUIREMENTS.		


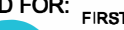
ELECTRICAL ABBREVIATIONS					
A/AMP	AMPERE	F	FAHRENHEIT	P	POLE
AC	ALTERNATING CURRENT	FA	FIRE ALARM	PE	PRIMARY ELECTRICAL SERVICE
ACU	AIR CONDITIONING UNIT	FACP	FIRE ALARM CONTROL PANEL	PF	POWER FACTOR
AFF	ABOVE FINISHED FLOOR	FC	FOOT CANDLE	PH/ø	PHASE
AFG	ABOVE FINISHED GRADE	FCU	FAN COIL UNIT	PNL	PANEL
AHU	AIR HANDLING UNIT	G	GROUND	PVC	POLYVINYL CHLORIDE CONDUIT
AIC	AMPS INTERRUPTING CURRENT	GFI	GROUND FAULT INTERRUPTER	RE	REMOVE EXISTING
ATS	AUTOMATIC TRANSFER SWITCH	HP	HORSE POWER	RL	RELOCATE EXISTING
AWG	AMERICAN WIRE GAUGE	HPS	HIGH PRESSURE SODIUM	RM	ROOM
BSMT	BASEMENT	HR	HOURL	RMC	RIGID METAL CONDUIT
C	CONDUIT	HZ	HERTZ	RR	REMOVE AND REPLACE ON NEW SURFACE
CATV	CABLE TELEVISION	IG	ISOLATED GROUND	RTU	ROOFTOP UNIT
C/B	CIRCUIT BREAKER	IN	INCHES	SE	SECONDARY ELECTRICAL SERVICE
CKT	CIRCUIT	JB	JUNCTION BOX	SPEC	SPECIFICATION
COMP	COMPRESSOR	KCMIL	THOUSAND CIRCULAR MILS	SWBD	SWITCHBOARD
CP	CONDENSATE PUMP	KVA	KILOVOLT AMPERE	TELE	TELECOMMUNICATIONS/TELEPHONE
CT	CURRENT TRANSFORMER	KW	KILOWATT	TV	TELEVISION
CU	CONDENSING UNIT, COPPER	MAX	MAXIMUM	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
CUH	CABINET UNIT HEATER	MAU	MAKE UP AIR UNIT		
.	DEGREE	MCC	MOTOR CONTROL CENTER		
D/A/ø	DIAMETER	MCCB	MOLDED CASE CIRCUIT BREAKER	T/TX	TRANSFORMER
DN	DOWN	MH	METAL HALIDE	TYP	TYPICAL
DWG	DRAWING	MIN	MINIMUM	UH	UNIT HEATER
E, ETR	EXISTING TO REMAIN	MLO	MAIN LUGS ONLY	UON	UNLESS OTHERWISE NOTED
EF	EXHAUST FAN	NA	NOT APPLICABLE	V	VOLTS
ELEC	ELECTRICAL	NEC	NATIONAL ELECTRIC CODE	VA	VOLT AMPERE
ELEV	ELEVATOR	NIC	NOT IN CONTRACT	VAC	VOLTS ALTERNATING CURRENT
EMT	ELECTRIC METALLIC TUBING	NL	NEW LOCATION OF EXISTING	W	WATT, WIRE
EUH	ELECTRIC UNIT HEATER	NR	RELOCATED	WG	WIRE GUARD
EW	ELECTRIC WATER COOLER	NTS	NEW TO REPLACE EXISTING	WM	WIREMOLD SURFACE RACEWAY
EWI	ELECTRIC WATER HEATER		NOT TO SCALE	WP	WEATHERPROOF

PANEL:			EP-1		MAIN: 200A, MLO			NOTES:					
LOCATION:			IN GATEHOUSE		V & PH: 120/240V, 1PH, 3W			WITH INTEGRAL TVSS					
MOUNTING:			SURFACE		A.I.C. 22								
BREAKER					PHASE LOAD - KVA						BREAKER		
NO.	A	P	DESCRIPTION		LOAD KVA	A	B	LOAD KVA	DESCRIPTION		A	P	NO.
1	20	1	BUILDING LIGHTING		0.10	1.60		1.50	UNIT HEATER		20	2	2
3	20	1	SCADA PANEL		1.40		2.90	1.50	UH-1		-	-	4
5	20	1	RECEPTACLES		0.54	1.04		0.50	SECURITY EQUIPMENT		20	1	6
7	20	1	FUTURE BRIDGE LIGHTING		0.20		0.20		SPARE		20	1	8
9	20	1	SPARE			0.00			SPARE		20	1	10
11	20	1	SPARE				0.00		SPARE		20	1	12
13	20	1	SPARE			0.00			SPACE		20	1	14
15	20	1	SPACE				0.00		SPACE		20	1	16
17	20	1	SPACE			0.00			SPACE		20	1	18
19	20	1	SPACE				0.00		SPACE		20	1	20
21	20	1	SPACE			0.00			SPACE		20	1	22
23	20	1	SPACE				0.00		SPACE		20	1	24
25	20	1	SPACE			0.00			SPACE		20	1	26
27	20	1	SPACE				0.00		SPACE		20	1	28
29	20	1	SPACE			0.00			SPACE		20	1	30
TOTAL LOAD PER PHASE:					2.64		3.10						
TOTAL LOAD ON PANEL:					5.74								

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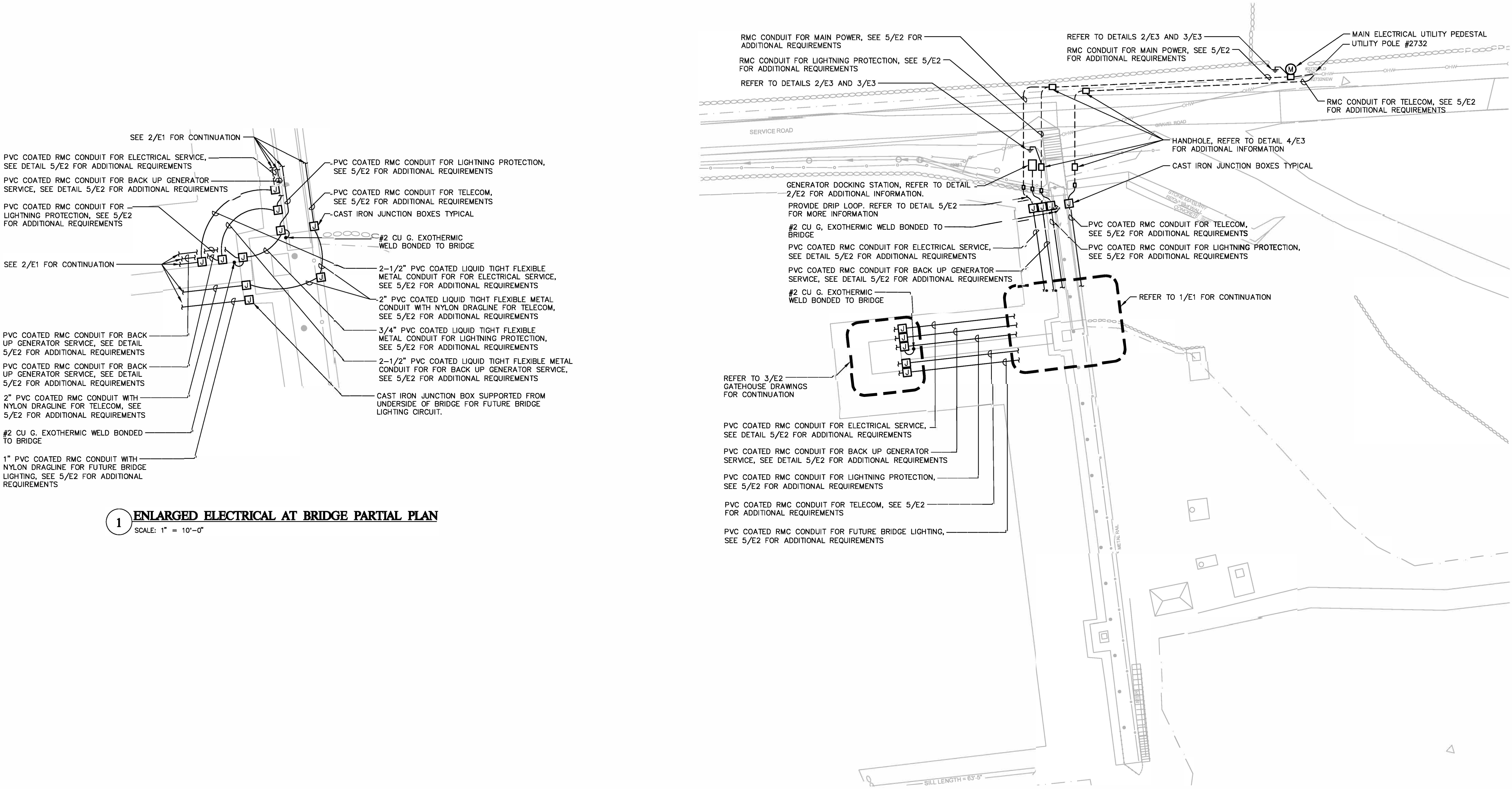
GRUPES RESERVOIR DAM
REHABILITATION PROJECT
NORWALK, CONNECTICUT

ELECTRICAL SYMBOLS, NOTES,
ABBREVIATIONS AND SCHEDULES

PREPARED BY:		 811 Middle Street Middletown, CT 06457 Tel: 860.632.1952 Fax: 860.632.1788 CLES-050622000		PREPARED FOR:		 FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANNAN AVENUE NORWALK, CONNECTICUT 06852 (203) 947-7387	
Consulting Engineering Services, Inc.							
PROJ MGR:	RSM	REVIEWED BY:	SRC	CHECKED BY:	RSM	DRAWING E0 SHEET NO.	
DESIGNED BY:	RSM	DRAWN BY:	RWA	SCALE:	N.T.S.		
DATE:	July 2023	PROJECT NO.	01.0171312.10	REVISION NO.			

GENERAL ELECTRICAL POWER NOTES

- ALL NEW CIRCUITS SHALL BE 2#12,1#12G,3/4"C., TO NEW 20A-1P CIRCUIT BREAKER IN PANEL INDICATED UNLESS OTHERWISE NOTED.
- ALL 120VAC BRANCH CIRCUITS EXCEEDING 150' LENGTH SHALL BE INCREASED TO 2#10,1#10G,3/4"C., UNLESS OTHERWISE NOTED.
- ALL RECEPTACLES WITHIN 6' OF SOURCES OF WATER SHALL BE GFI.
- ALL DEVICES SHALL BE LABELED WITH SOURCE PANEL AND CIRCUIT NUMBER.
- REFER TO DRAWING EO FOR SYMBOLS LIST.



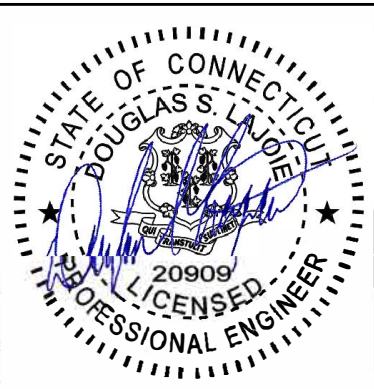
1 ENLARGED ELECTRICAL AT BRIDGE PARTIAL PLAN
SCALE: 1" = 10'-0"


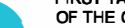
2 GATEHOUSE ELECTRICAL SERVICE PLAN
SCALE: 1" = 10'-0"

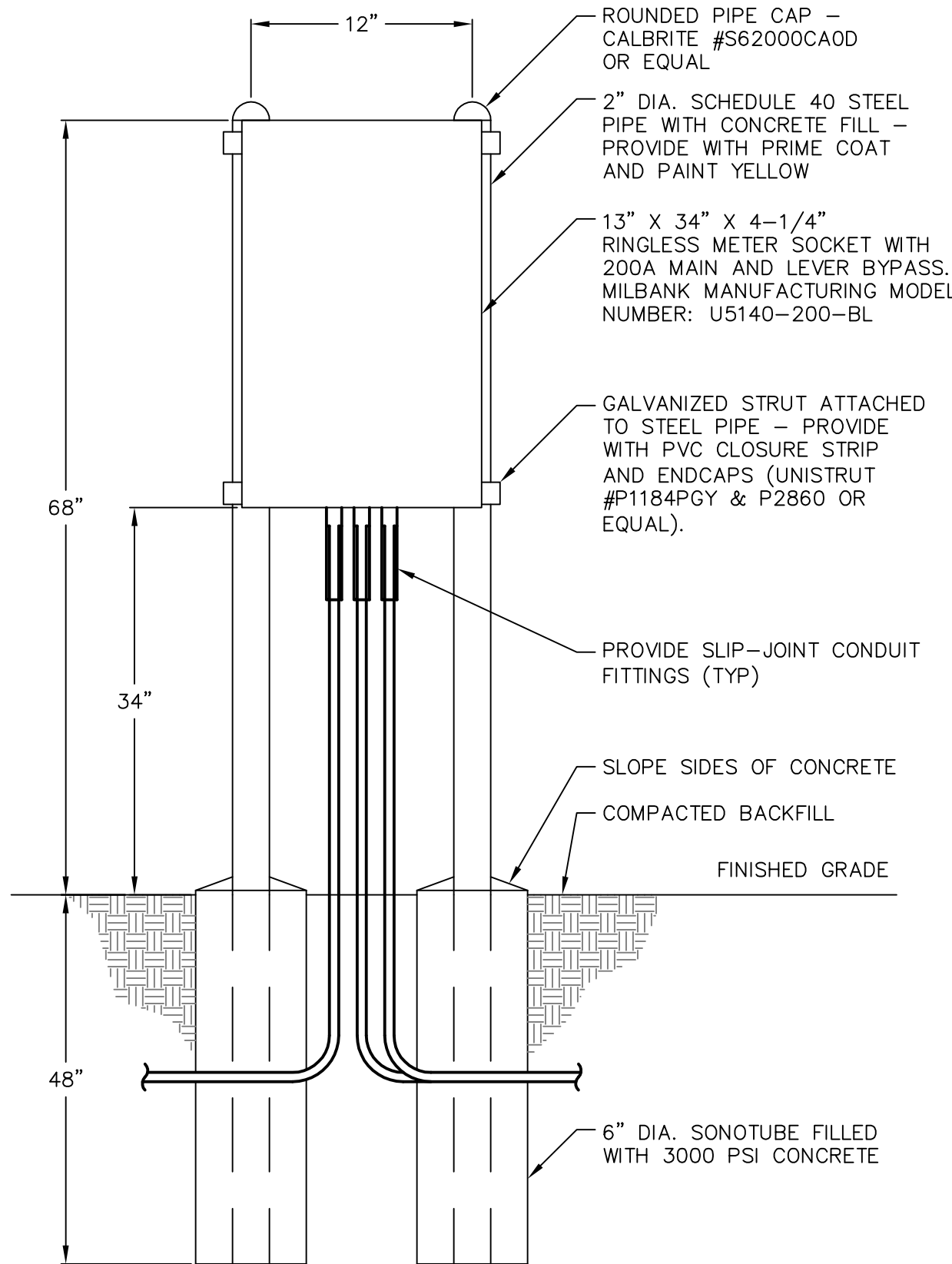
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GRUPES RESERVOIR DAM
REHABILITATION PROJECT
NORWALK, CONNECTICUT

ELECTRICAL SITE PLAN



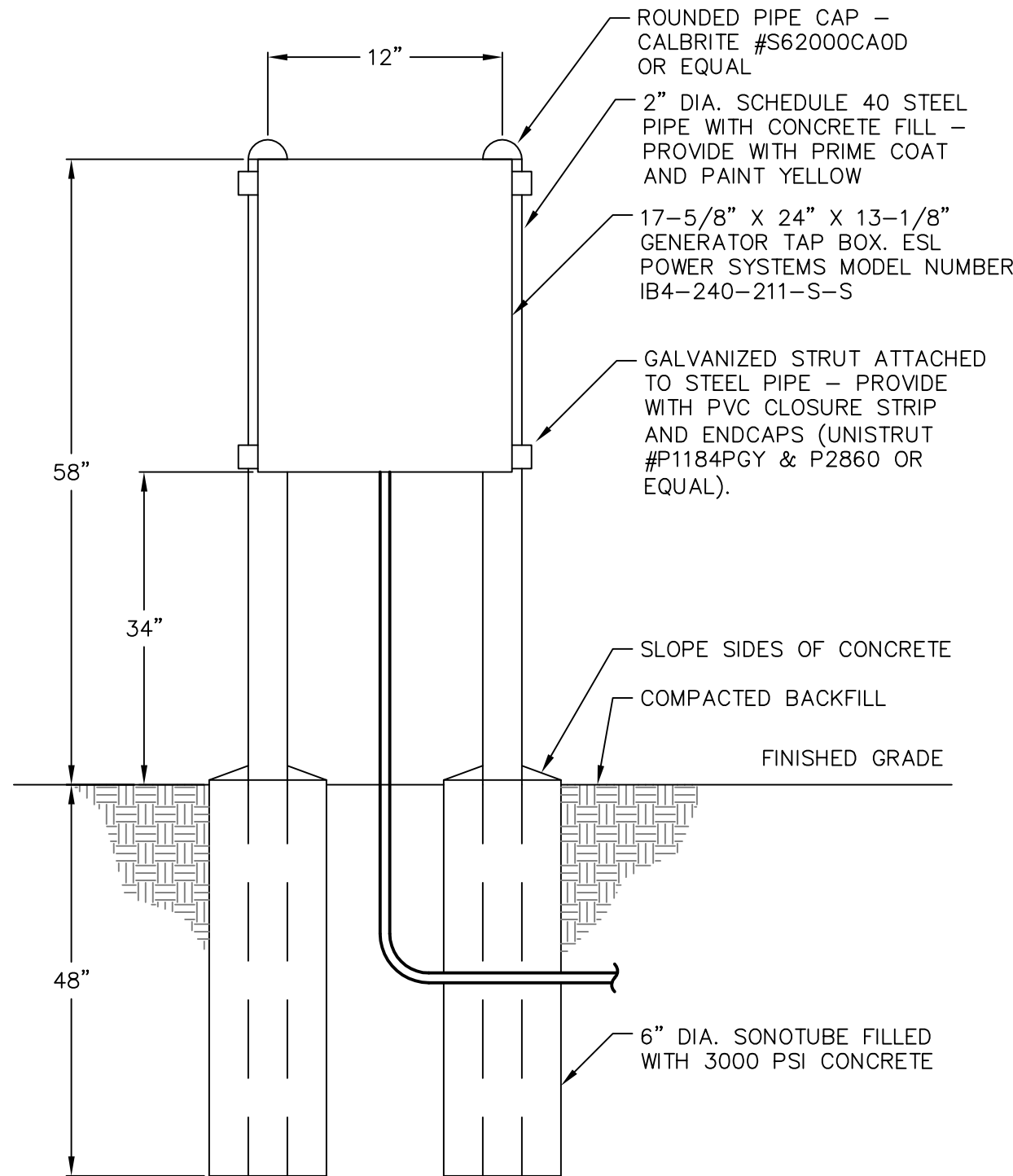
PREPARED BY:		 Consulting Engineering Services, Inc.		PREPARED FOR:		 FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANNAN AVENUE NORWALK, CONNECTICUT 06852 (203) 947-7387	
811 Middle Street Middletown, CT 06457 Tel: 860.632.1952 Fax: 860.632.1788 C33-9201626-00							
PROJ MGR:	RSM	REVIEWED BY:	SRC	CHECKED BY:	RSM	DRAWING	
DESIGNED BY:	RSM	DRAWN BY:	RWA	SCALE:	AS NOTED	E1	
DATE:	July 2023	PROJECT NO.	01.0171312.10	REVISION NO.		SHEET NO.	



NOTES:

- COORDINATE FINAL LOCATION OF ENCLOSURE ASSEMBLY WITH SITE WORK.
- PROVIDE STRUT FITTINGS INCLUDING SPRING NUTS AND CLAMPS AS REQUIRED TO ATTACH STRUT TO POST AND TO SECURE ENCLOSURE TO STRUT. PROVIDE STAINLESS STEEL HARDWARE.
- SEE "ELECTRICAL ONE-LINE POWER, COMMUNICATIONS AND GROUNDING RISER DIAGRAM" ON THIS SHEET FOR CONDUIT, WIRING AND ADDITIONAL INFORMATION.

1 UTILITY SERVICE PEDESTAL DETAIL
N.T.S.

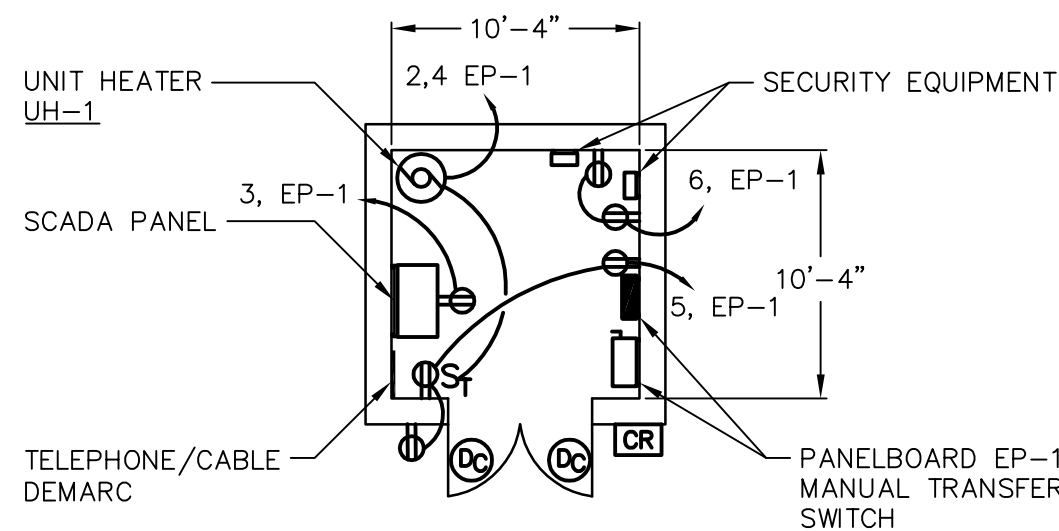


NOTES:

- COORDINATE FINAL LOCATION OF ENCLOSURE ASSEMBLY WITH SITE WORK.
- PROVIDE STRUT FITTINGS INCLUDING SPRING NUTS AND CLAMPS AS REQUIRED TO ATTACH STRUT TO POST AND TO SECURE ENCLOSURE TO STRUT. PROVIDE STAINLESS STEEL HARDWARE.
- SEE "ELECTRICAL ONE-LINE POWER, COMMUNICATIONS AND GROUNDING RISER DIAGRAM" ON THIS SHEET FOR CONDUIT, WIRING AND ADDITIONAL INFORMATION.

2 GENERATOR DOCKING STATION DETAIL
N.T.S.

GENERAL ELECTRICAL POWER NOTES
1. ALL NEW CIRCUITS SHALL BE 2#12, 1#2G, 3/4"C, TO NEW 20A-1P CIRCUIT BREAKER IN PANEL INDICATED UNLESS OTHERWISE NOTED.
2. ALL 120VAC BRANCH CIRCUITS EXCEEDING 150' LENGTH SHALL BE INCREASED TO 2#10, 1#10G, 3/4"C, UNLESS OTHERWISE NOTED.
3. ALL RECEPTACLES SHALL BE GFI TYPE.
4. ALL DEVICES SHALL BE LABELED WITH SOURCE PANEL AND CIRCUIT NUMBER.
5. REFER TO DRAWING E0 FOR SYMBOLS LIST.
6. REFER TO DRAWING E0 FOR UNIT HEATER SCHEDULE.

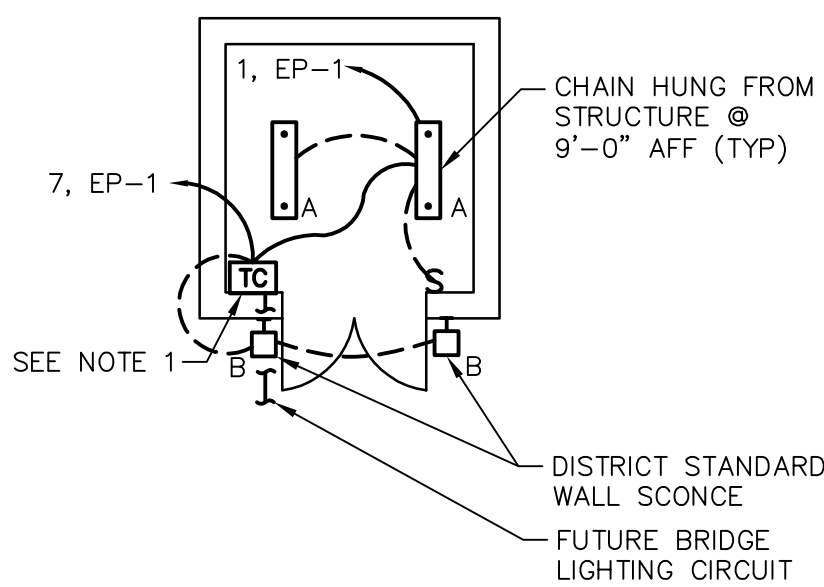


NOTE:

ALL WALL MOUNTED PANELS AND EQUIPMENT ENCLOSURES TO BE MOUNTED ON GALVANIZED STRUT

3 GATEHOUSE POWER PLAN
N.T.S.

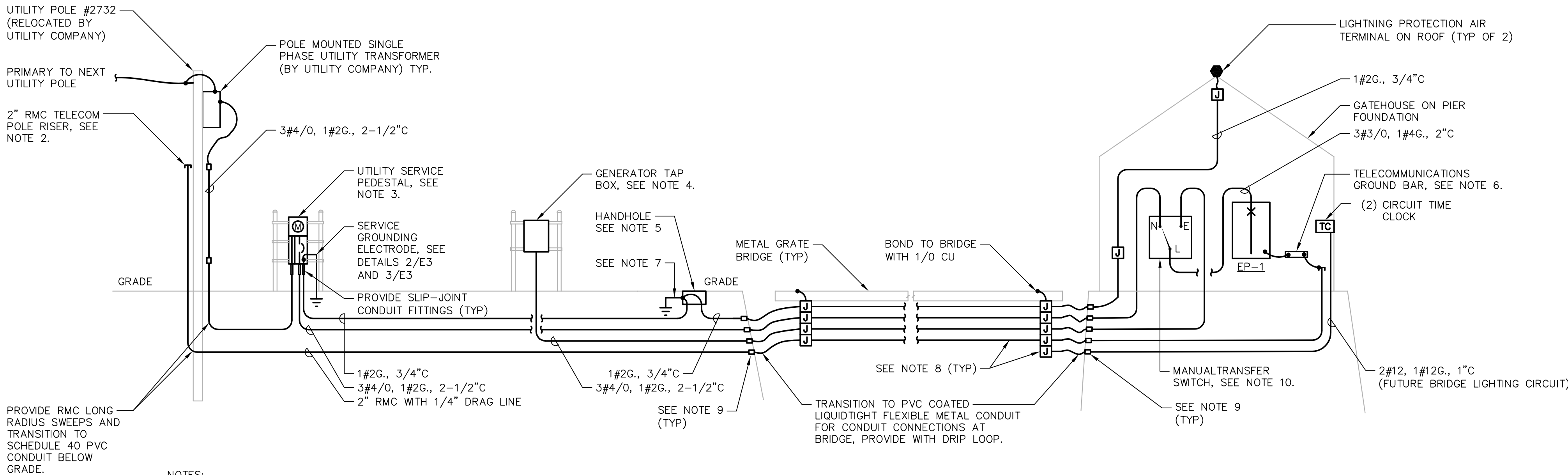
GENERAL ELECTRICAL LIGHTING NOTES
1. ALL NEW CIRCUITS SHALL BE 2#12, 1#2G, 3/4"C, TO NEW 20A-1P CIRCUIT BREAKER IN PANEL INDICATED UNLESS OTHERWISE NOTED.
2. REFER TO DRAWING E0 FOR SYMBOLS LIST AND LIGHT FIXTURE SCHEDULE.



NOTES:

- NSI INDUSTRIES (TORK) MODEL 'DZS200BP' (2) CIRCUIT DIGITAL, ASTRONOMIC TIME CLOCK WITH INDIVIDUAL CIRCUIT PROGRAMMING. COORDINATE TIME SCHEDULES, SET POINTS AND FORMATTING WITH OWNER. CIRCUIT 1 FOR WALL MOUNTED LIGHTS, CIRCUIT 2 FOR FUTURE BRIDGE LED LIGHTING.

4 GATEHOUSE LIGHTING PLAN
N.T.S.



NOTES:

- TYPICAL REQUIREMENTS SHOWN TO ILLUSTRATE ROUTING AND ELECTRICAL SERVICE AND GROUNDING REQUIREMENTS. NOT INTENDED TO SHOW ALL REQUIRED HANDHOLES, FITTINGS AND UTILITY COMPANY REQUIREMENTS. REFER TO DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- PROVIDE RMC TELECOMMUNICATIONS POLE RISER PER UTILITY COMPANY STANDARDS. CAP DURING CONSTRUCTION. PROVIDE EMPTY CONDUIT WITH 1/4" NYLON DRAG LINE.
- SELF CONTAINED METER PEDESTAL WITH LEVER BYPASS AND MAIN CIRCUIT BREAKER. REFER TO DETAIL 1 ON THIS SHEET FOR ADDITIONAL INFORMATION.
- PORTABLE GENERATOR TAP BOX. REFER TO DETAIL 2 ON THIS SHEET FOR ADDITIONAL INFORMATION.
- TYPICAL HANDHOLE SHOWN, REFER TO DRAWINGS FOR LOCATIONS, SIZES AS REQUIRED (MINIMUM 12" X 18").
- PROVIDE #2 CU BONDING JUMPER IN CONDUIT FROM GROUND BAR TO PANELBOARD GROUND BAR AND #2 CU BONDING JUMPER FROM GROUND BAR TO TELECOMMUNICATIONS CONDUIT GROUNDING BUSHING.
- LIGHTNING PROTECTION GROUND ROD. PROVIDE #2 CU BONDING JUMPER FROM GROUND ROD TO LIGHTNING PROTECTION GROUNDING LOOP AND #2 CU GROUND TO SERVICE GROUNDING ELECTRODE.
- PVC COATED RMC AND CAST IRON JUNCTION BOXES ON UNDERSIDE OF BRIDGE. STRAP CONDUIT AND JUNCTION BOXES TO UNDERSIDE OF BRIDGE RAILS.
- CAST COUPLING AND CONDUIT IN BRIDGE ABUTMENT OR PIER FOUNDATION AND CAP DURING POUR.
- MANUAL TRANSFER SWITCH, ESL POWER SYSTEMS MODEL NUMBER SSDX-C-200-C-200-C-240-211-S-C

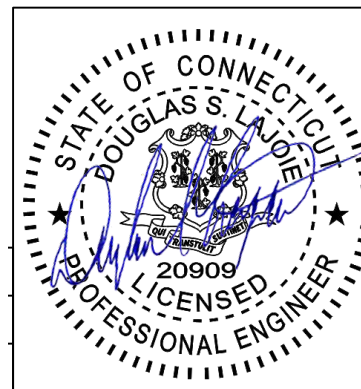
5 ELECTRICAL ONE-LINE POWER, COMMUNICATIONS AND GROUNDING RISER DIAGRAM
N.T.S.

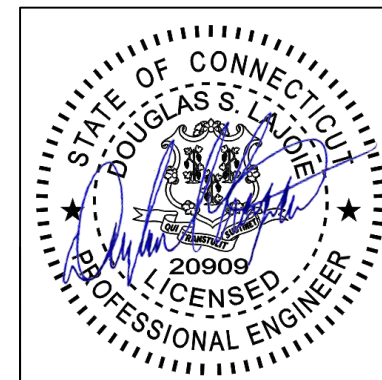
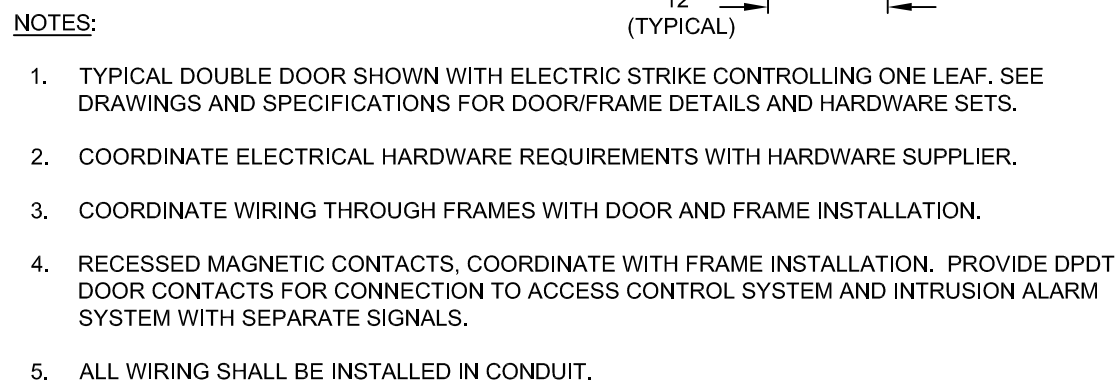
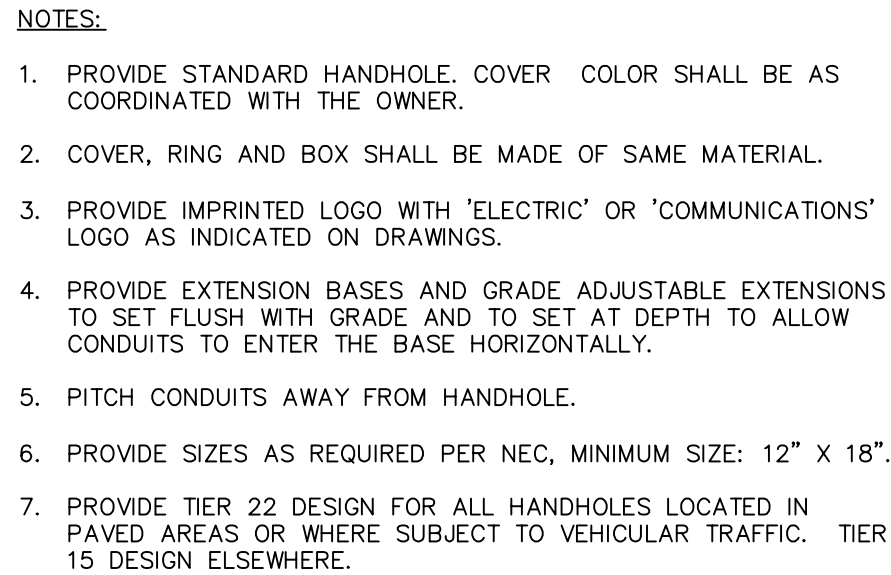
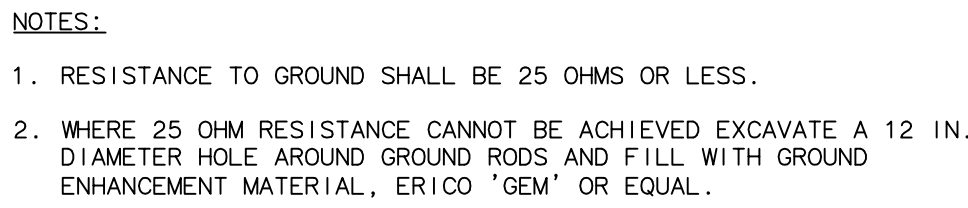
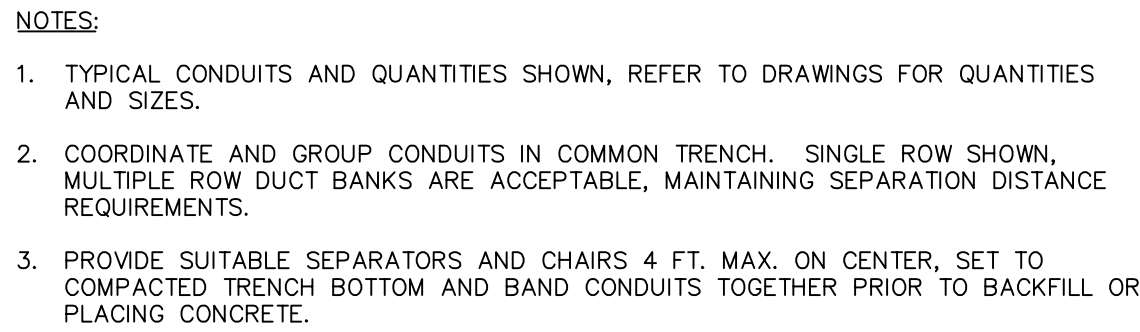
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**GRUPES RESERVOIR DAM
REHABILITATION PROJECT
NORWALK, CONNECTICUT**

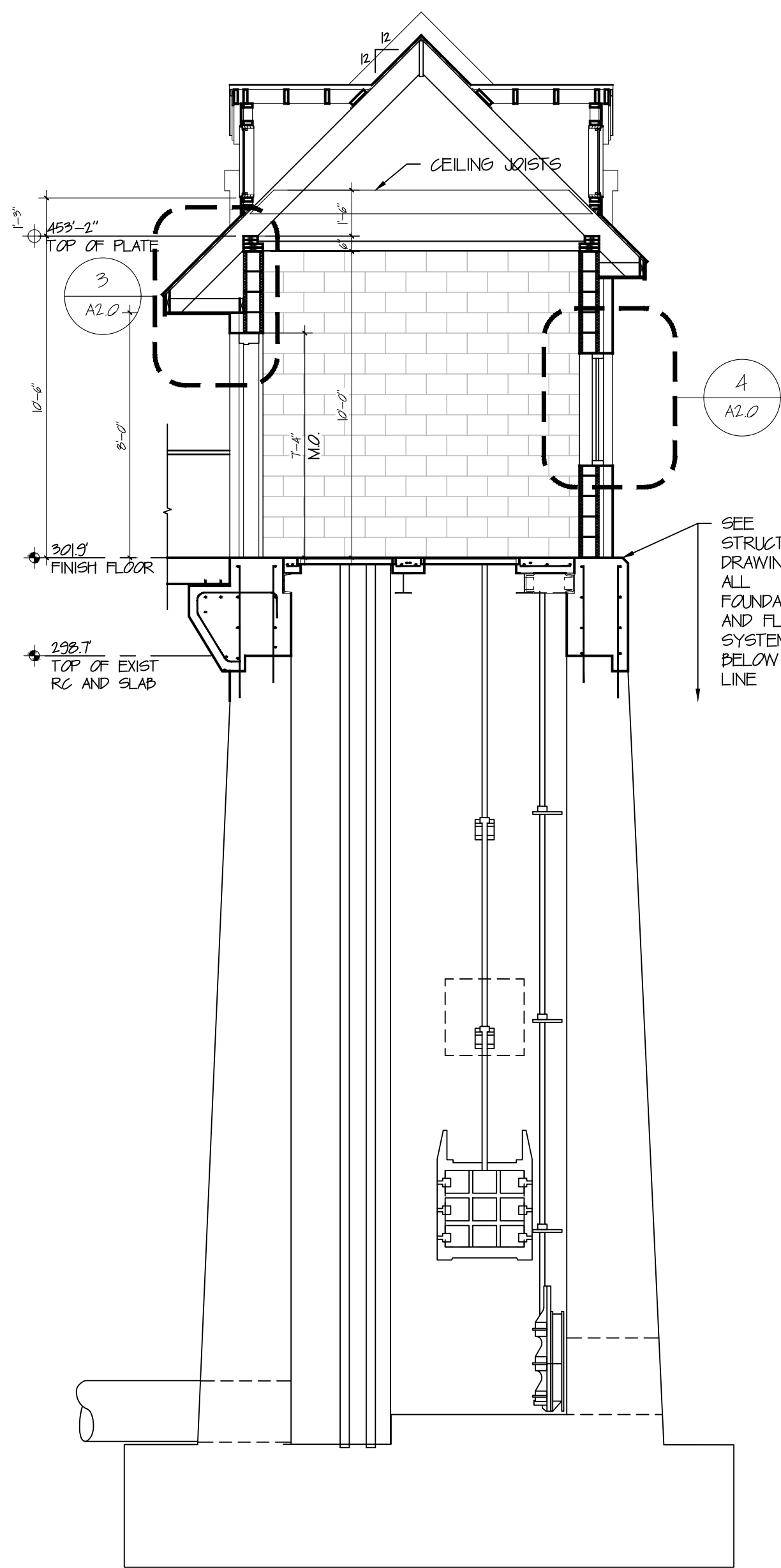
**ELECTRICAL DETAILS AND ONE LINE POWER,
COMMUNICATIONS AND RISER DIAGRAM**

PREPARED BY: <div>CES</div> Consulting Engineering Services, Inc.		811 Middle Street Middletown, CT 06457 Tel: 860.632-0652 Fax: 860.632-0108 CES 191022010	PREPARED FOR: <div>FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANNAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387</div>	
PROJ MGR: RSM	REVIEWED BY: SRC	CHECKED BY: RSM	DRAWING <div>E2</div> SHEET NO.	
DESIGNED BY: RSM	DRAWN BY: RWA	SCALE: N.T.S.		
DATE: July 2023	PROJECT NO. 01.0171312.10	REVISION NO.		

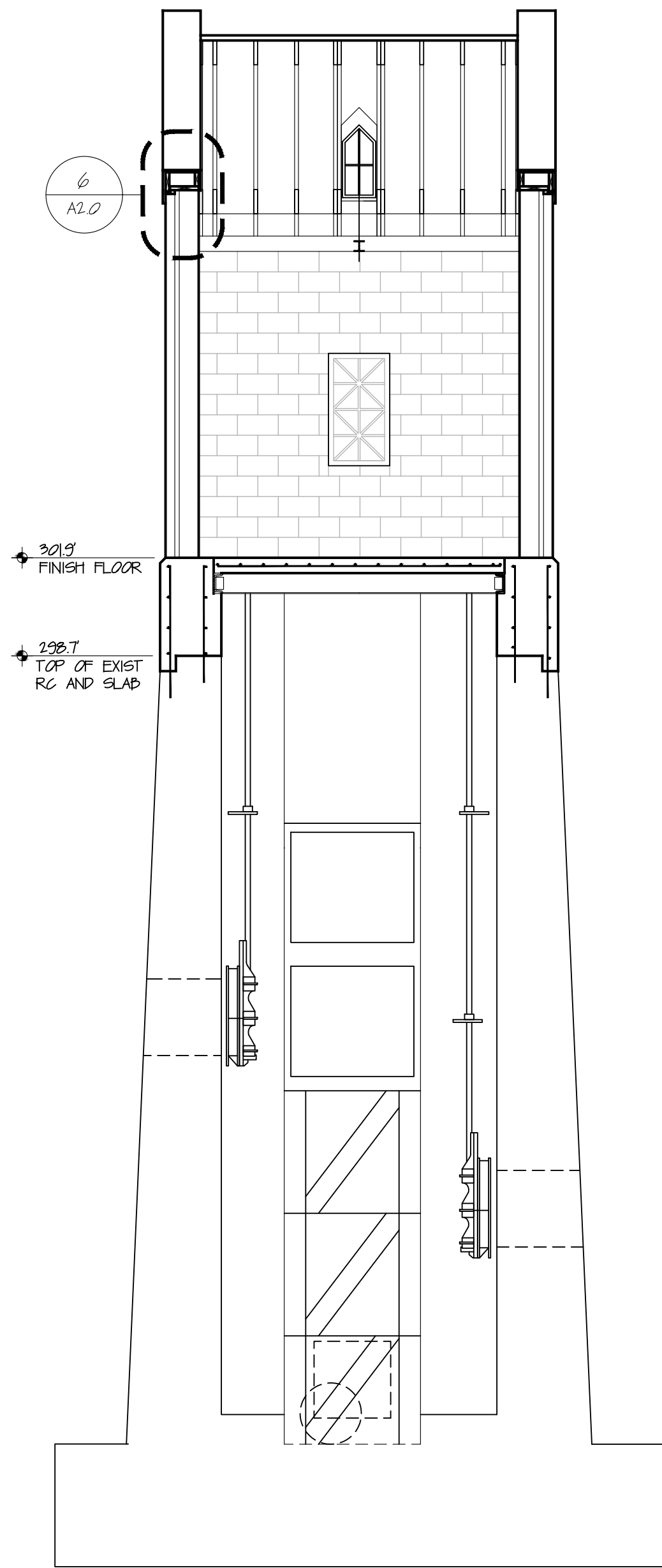




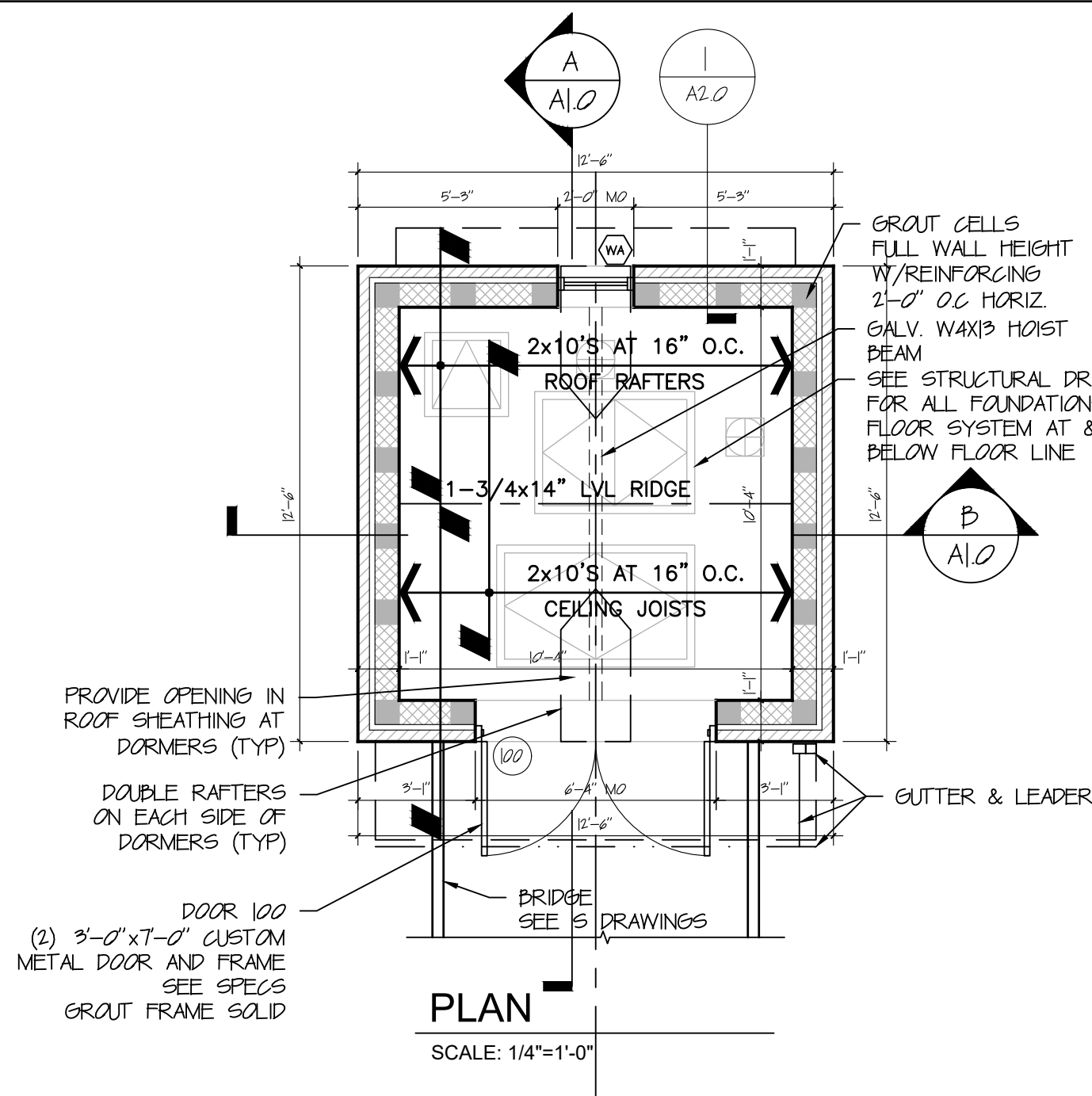
PREPARED BY:  811 Middle Street Madison, CT 06457 Tel: 860.625.1592 Fax: 860.625.0168 E-Mail: 201022010		PREPARED FOR:  FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANNON AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7365	
Contracting Engineering Services, Inc.			
PROJ. MGR: RSM DESIGNED BY: RSM DATE:	REVIEWED BY: SRC DRAWN BY: RWA PROJECT NO.	CHECKED BY: RSM SCALE: N.T.S. REVISION NO.	DRAWING E3 SHEET NO.
July 2023	01.071312.10		



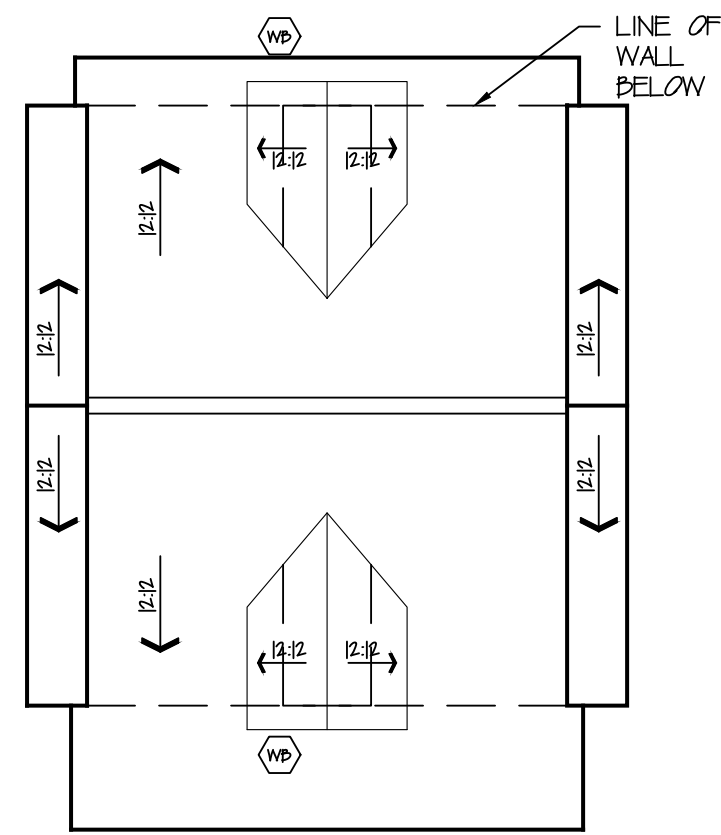
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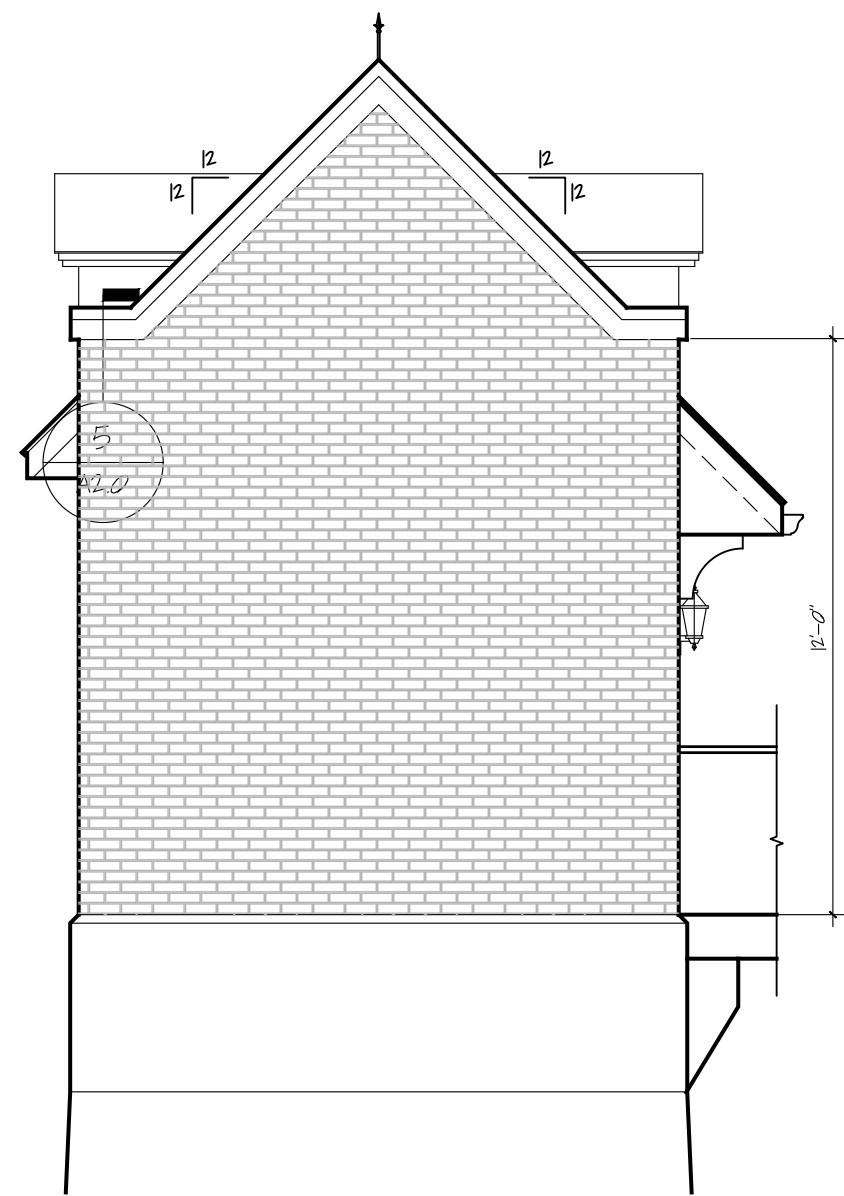
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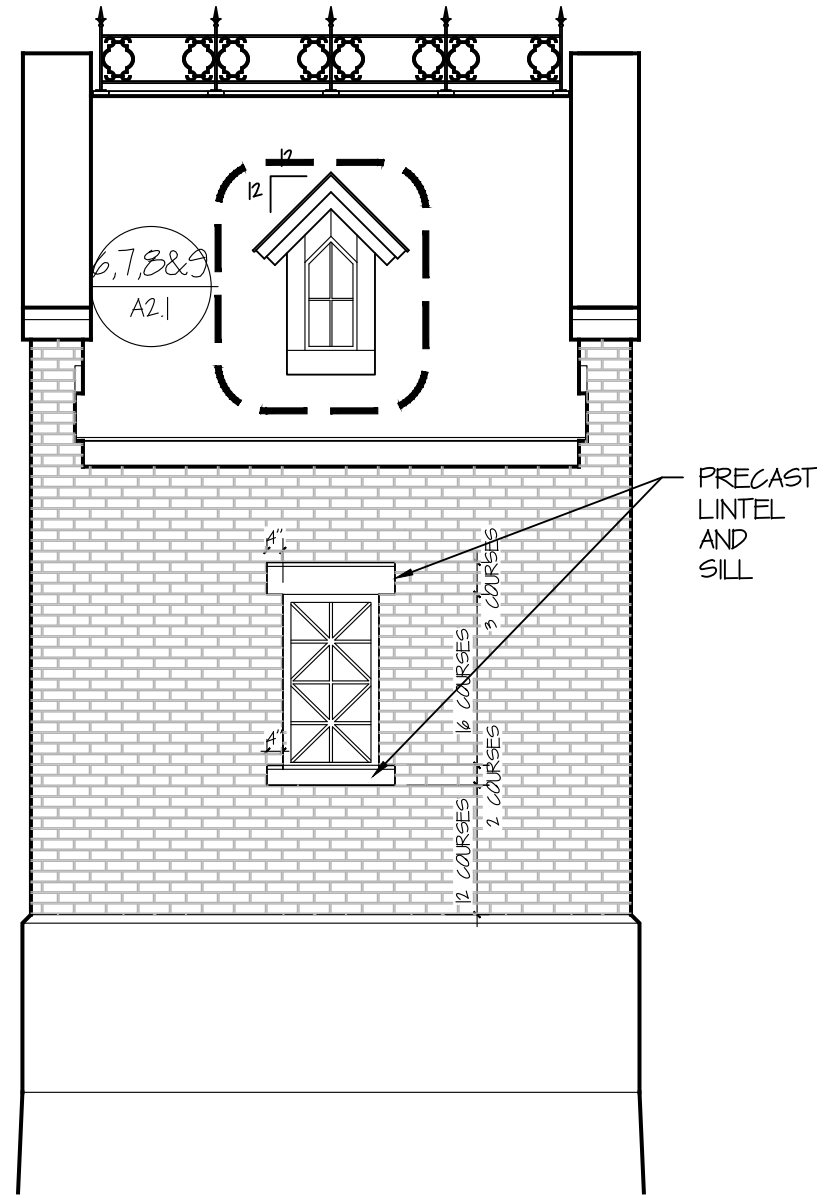
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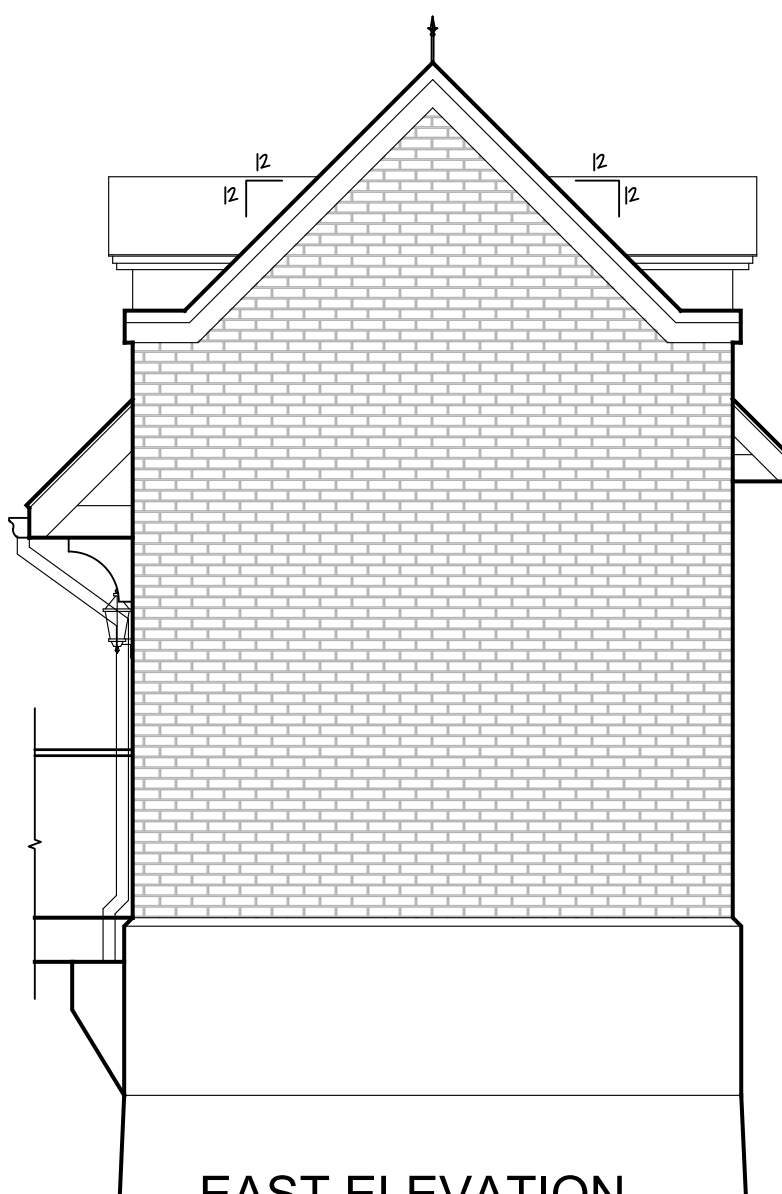
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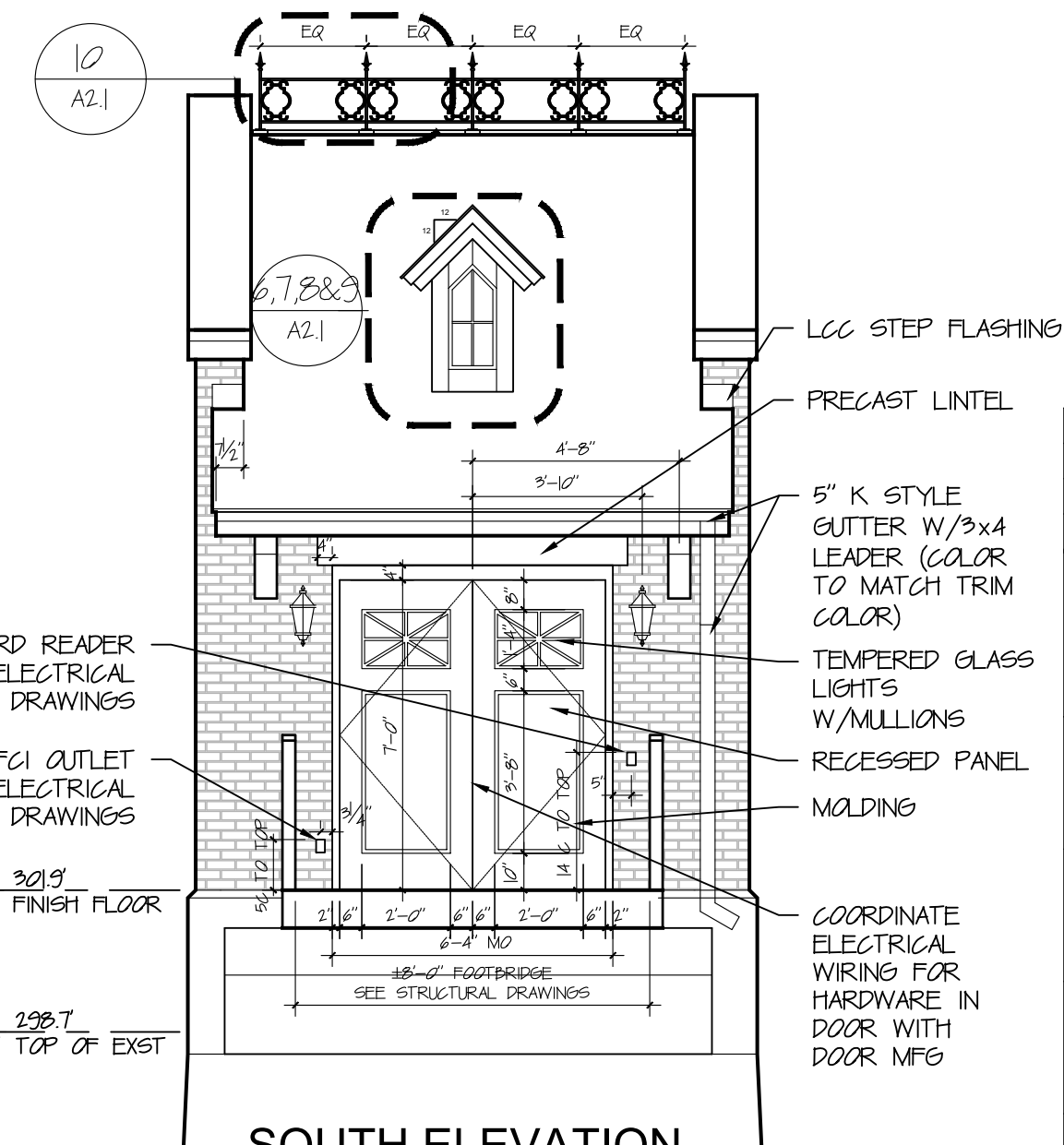
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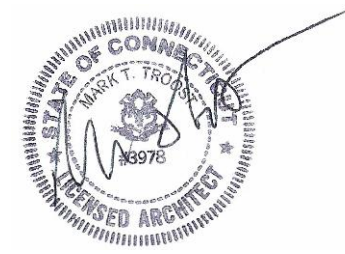
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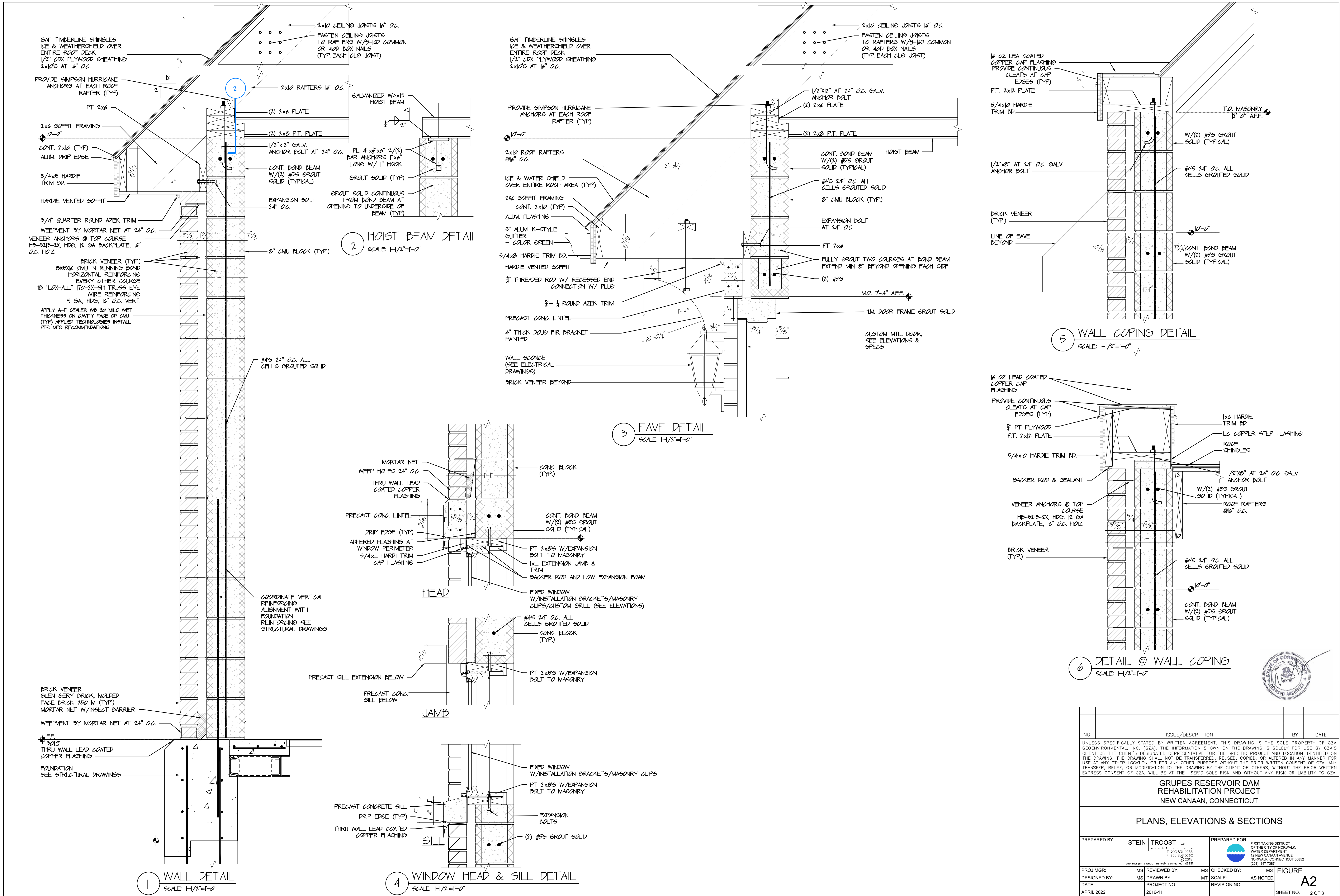
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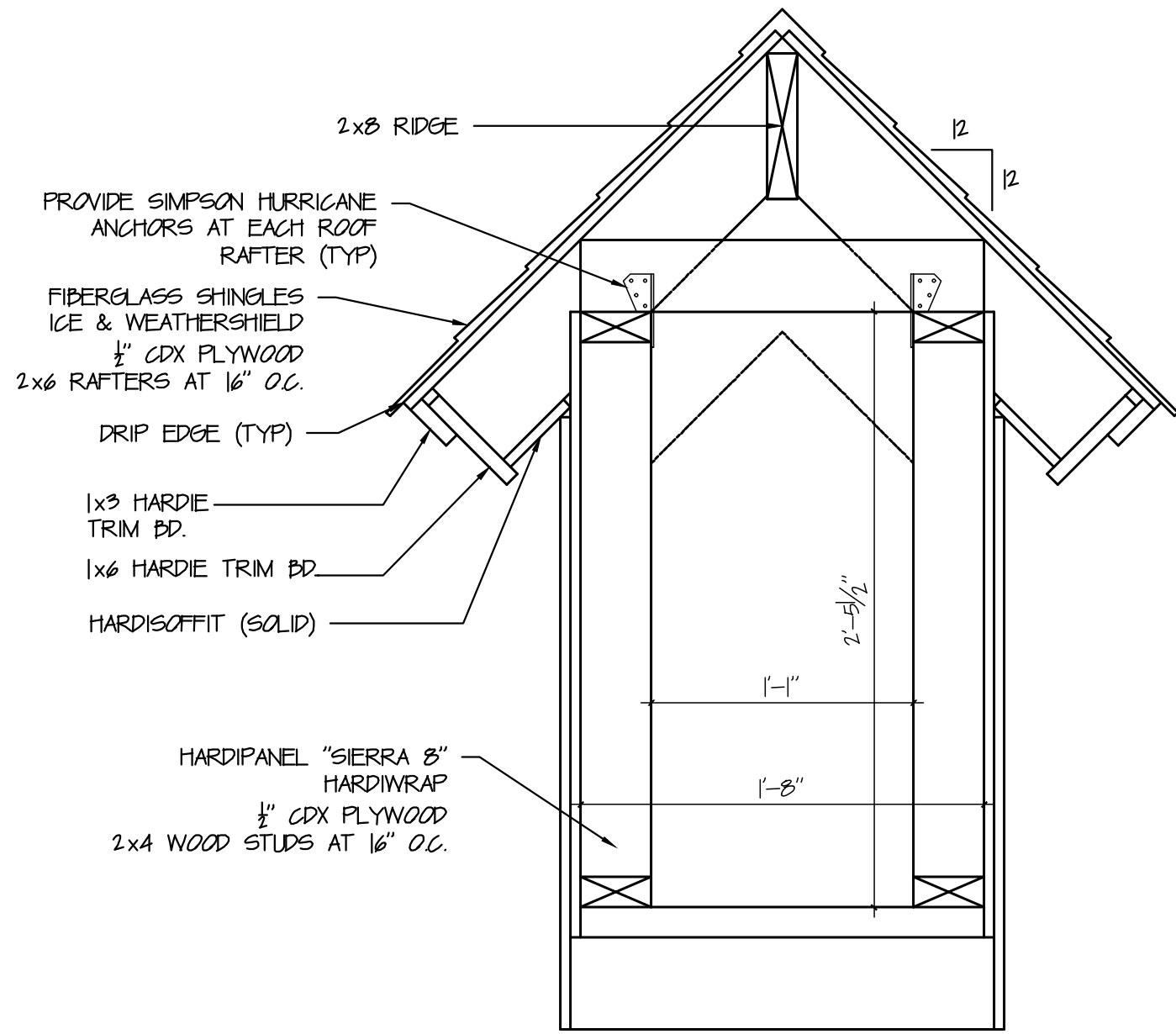


SOUTH ELEVATION
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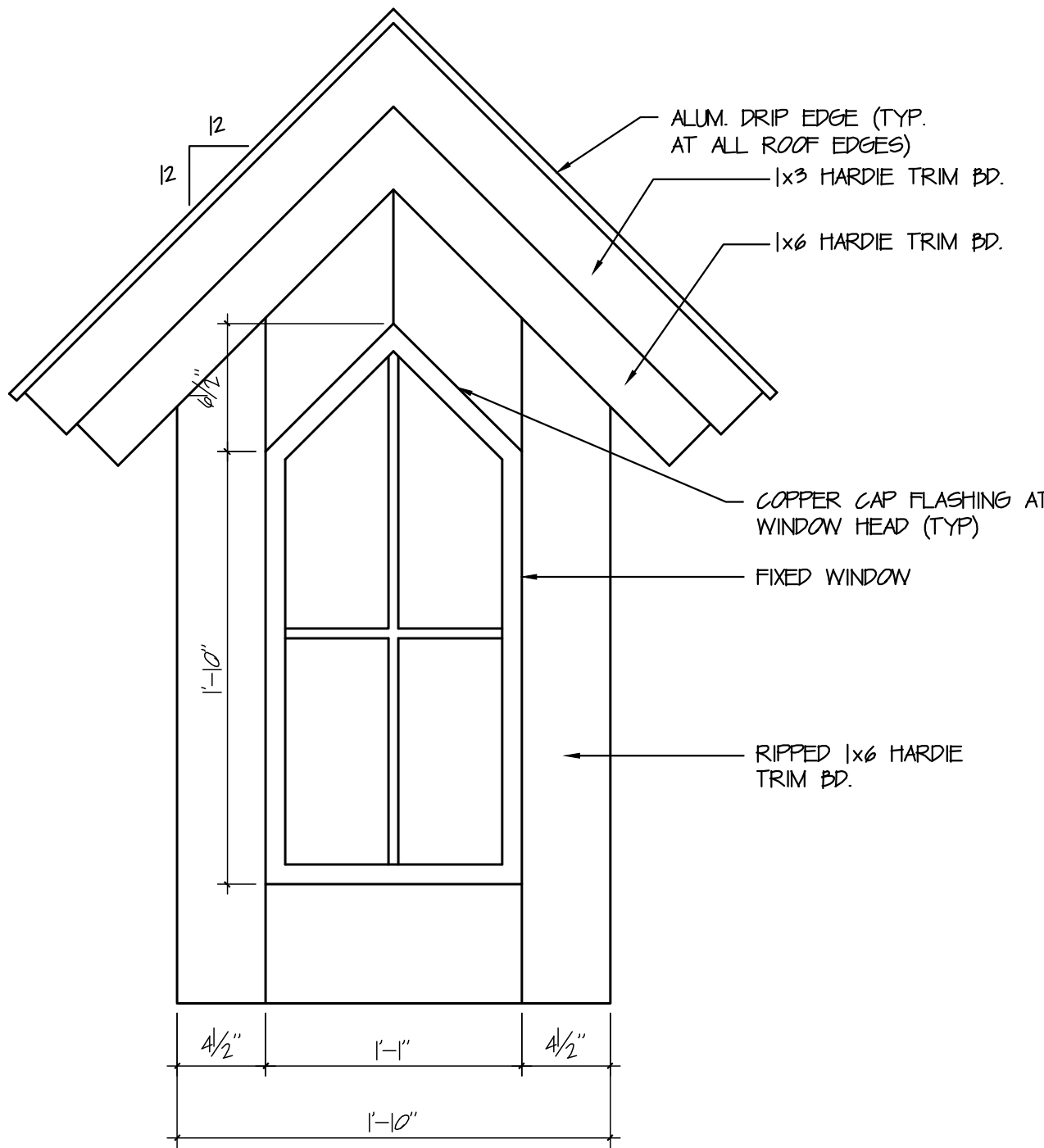


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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT					
PLANS, ELEVATIONS & SECTIONS					
PREPARED BY:		STEIN TROOST LLC		PREPARED FOR:	
		***** T 203.831.9863 F 203.836.0662 © 2016 one margin overhang norwalk.connecticut 06851		 FIRST TAXING DISTRICT OF THE CITY OF NORWALK, WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387	
PROJ MGR:	MS	REVIEWED BY:	MS	CHECKED BY:	MS
DESIGNED BY:	MS	DRAWN BY:	MT	SCALE:	AS NOTED
DATE:	PROJECT NO.		REVISION NO.		FIGURE A1
APRIL 2022	2016-11				
			SHEET NO.		1 OF 3

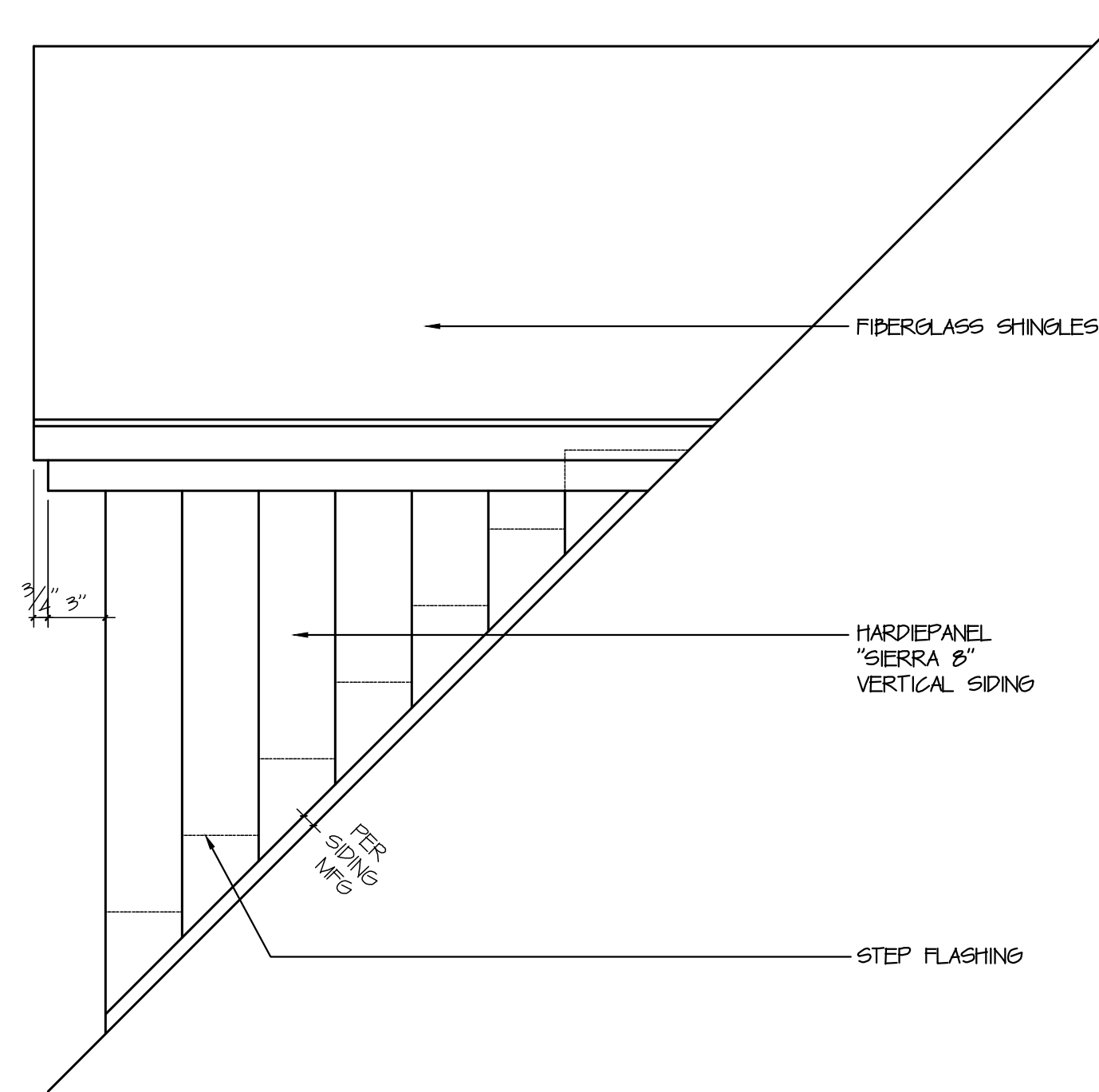




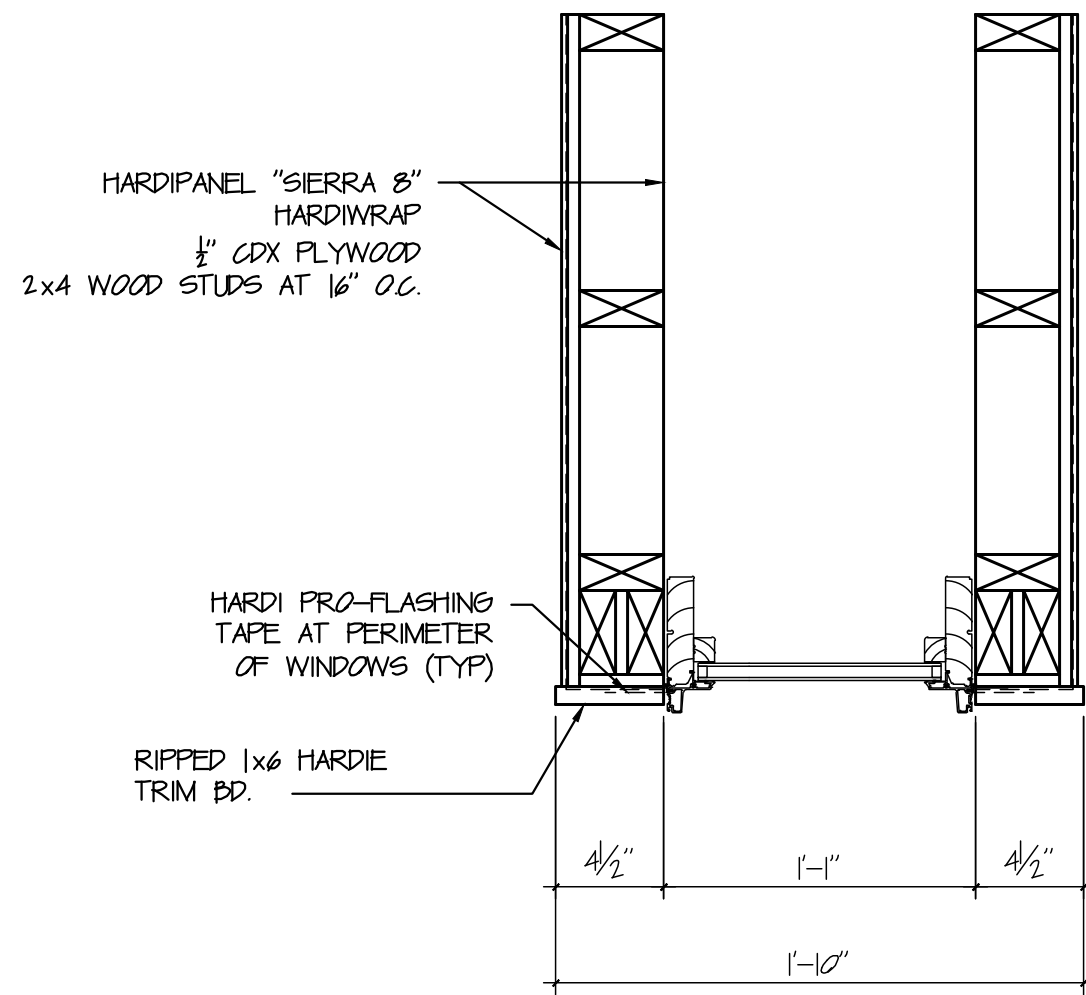
6 DORMER SECTION
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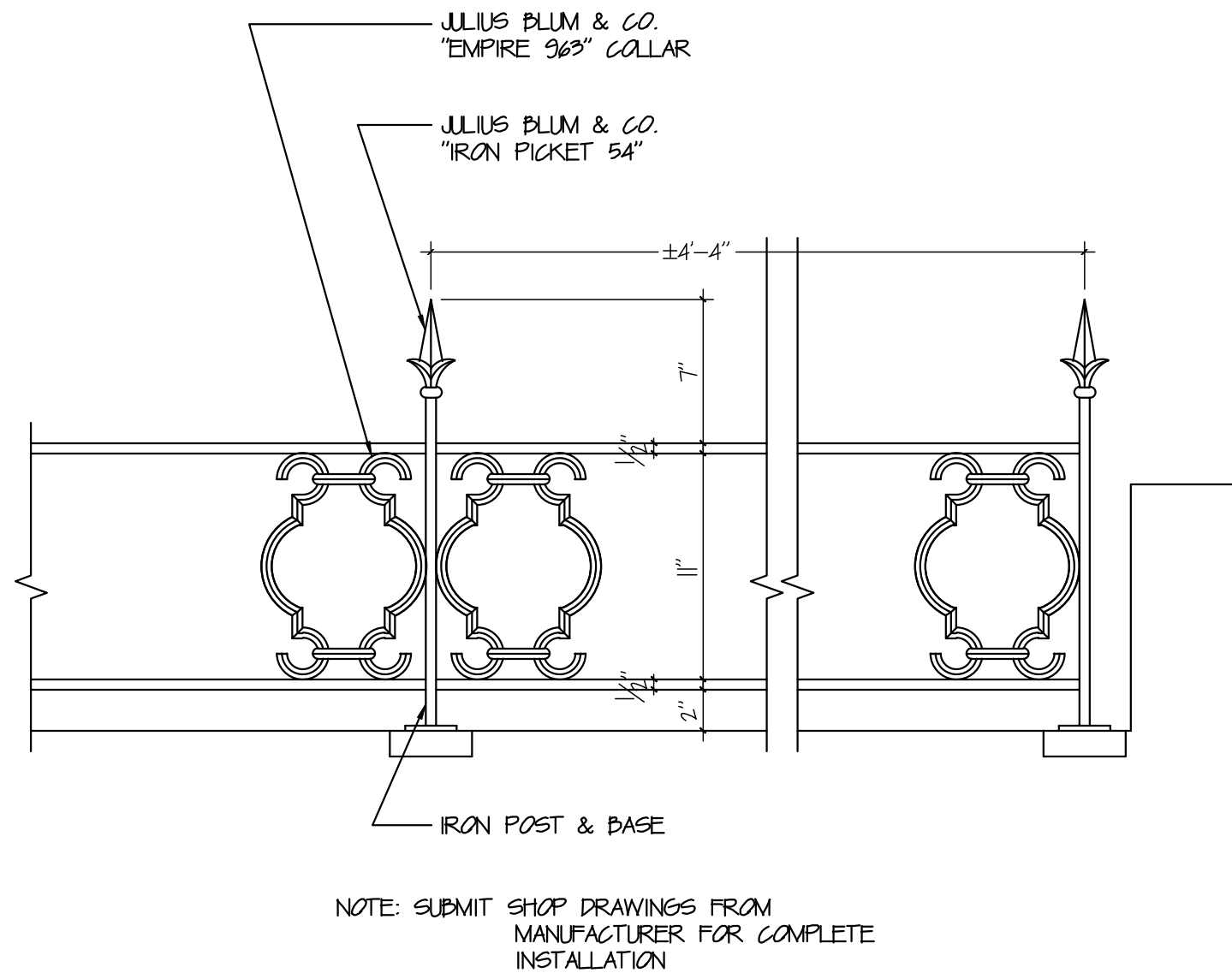
7 WINDOW DORMER ELEVATION
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8 DORMER SIDE ELEVATION
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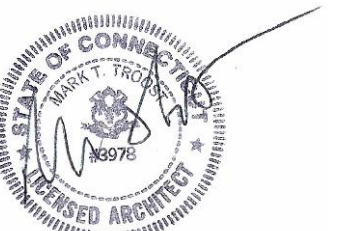


9 DORMER PLAN
SCALE: 1/2"=1'-0"



NOTE: SUBMIT SHOP DRAWINGS FROM MANUFACTURER FOR COMPLETE INSTALLATION

10 ORNAMENTAL RAIL DETAIL
SCALE: 1/2"=1'-0"



NO.	ISSUE/DESCRIPTION	BY	DATE
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GRUPES RESERVOIR DAM REHABILITATION PROJECT NEW CANAAN, CONNECTICUT			
PLANS, ELEVATIONS & SECTIONS			
PREPARED BY:	STEIN TROOST LLC P 203.828.8865 F 203.828.0662 © 2018 one margin avenue norwalk connecticut 06851	PREPARED FOR:	FIRST TAXING DISTRICT OF THE CITY OF NORWALK WATER DEPARTMENT 12 NEW CANAAN AVENUE NORWALK, CONNECTICUT 06852 (203) 847-7387
PROJ MGR:	MS	REVIEWED BY:	MS
DESIGNED BY:	MS	DRAWN BY:	MT
DATE:	APRIL 2022	PROJECT NO:	2016-11
		CHECKED BY:	MS
		SCALE:	AS NOTED
		REVISION NO.	
			FIGURE A3
			SHEET NO. 3 OF 3