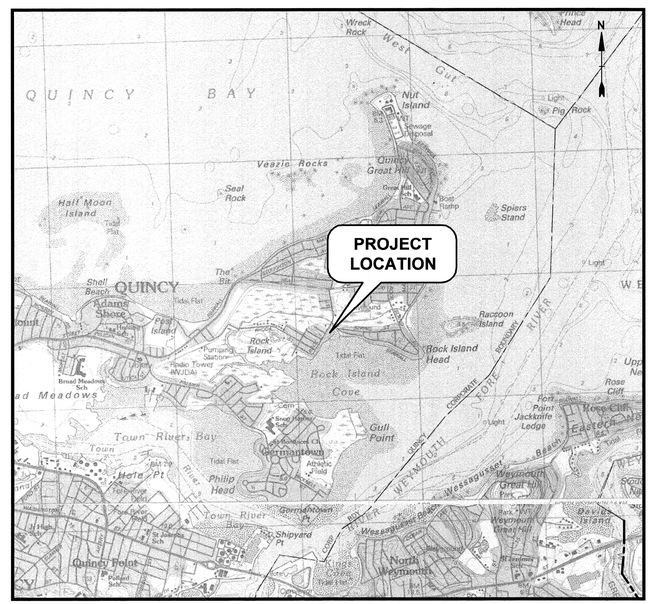
ROCKLAND STREET BRIDGE REHABILITATION

QUINCY, MASSACHUSETTS

AUGUST 2015

SHEET NO.	SHEET TITLE
G-001	COVER SHEET
G-002	EROSION CONTROL NOTES & DETAILS
C-001	EXISTING CONDITIONS PLAN
C-002	DEMOLITION AND ABUTMENTS REPAIR PLAN
C-003	PIPING AND BRIDGE PLAN
D-001	SECTIONS AND DETAILS
D-002	SECTIONS AND DETAILS
D-003	ARCHIVE DRAWING



SCALE: 1" = 2,000'

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COMPLETE SET 8 SHEETS

Aug 25, 2015-8:28pm Plotted By: DGM
Tighe & Bond, Inc. J:\Q\Q0028 City of Quincy, MA Bridge Rehabilitation\Drawings\CS_recover.dwg

PROJECT NAME AND LOCATION
ROCKLAND STREET BRIDGE REHABILITATION
ROCKLAND STREET 42°-15'-47.13"N
QUINCY, MA 02169 70°-57'-36.50"W

DESCRIPTION
THE PROJECT CONSISTS OF THE REHABILITATION OF AN EXISTING BRIDGE. GRANITE ABUTMENTS AND WING WALLS WILL BE PARTIALLY RESET AND A NEW BRIDGE DECK WILL BE INSTALLED. THE WORK IS ANTICIPATED TO START IN FALL OF 2015, AND BE COMPLETED BY FALL OF 2015.

DISTURBED AREA
THE TOTAL LIMIT OF WORK IS APPROXIMATELY 0.5 ACRES.

GENERAL NOTES:
1. THIS PLAN IS BASED ON A DRAWING TITLED "ROCKLAND STREET AND SPRING STREET, QUINCY MASSACHUSETTS" PREPARED BY CORNER POST LAND SURVEYING, INC, DATED JUNE 19, 2015.
2. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS ILLUSTRATED, AND ESTABLISH SURVEY CONTROL ADEQUATE TO RE-ESTABLISH EXISTING STRUCTURE/FEATURE POSITIONS/ELEVATIONS AND AS NECESSARY FOR NEW WORK LOCATION CONTROL.
3. LOCATION AND DEPTH OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY AND IS NOT WARRANTED TO BE CORRECT. UNDERGROUND UTILITIES ARE SHOWN BASED ON A VISUAL INSPECTION OF SURFACE OBSERVABLE FEATURES ONLY AND HAVE BEEN FIELD INSPECTED FOR CONNECTIONS WHERE POSSIBLE. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT INDICATED ON THESE PLANS. ALL EXISTING UTILITIES SHALL BE VERIFIED FOR SERVICE, SIZE, INVERT ELEVATION, LOCATIONS, ETC. PRIOR TO NEW CONNECTIONS TO OR RELOCATION OF SAME. CONTRACTOR MUST NOTIFY DIG-SAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION. NOTIFY DASILVA SURVEY AND THE ENGINEER IN WRITING OF ANY AND ALL DISCREPANCIES PRIOR TO COMMENCING ANY WORK.
4. THE CONTRACTOR SHALL NOT RELY ON SCALED DIMENSIONS AND SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A REQUIRED DIMENSION IS NOT PROVIDED ON THE PLANS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS AND FOR SITE CONDITIONS THROUGHOUT CONSTRUCTION. NEITHER THE PLANS NOR THE SEAL OF THE ENGINEER AFFIXED HEREON EXTEND TO OR INCLUDE SYSTEMS REQUIRED FOR THE SAFETY OF THE CONTRACTOR, THEIR EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND IMPLEMENTING SAFETY PROCEDURES AND SYSTEMS AS REQUIRED BY THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND ANY STATE OR LOCAL SAFETY REGULATIONS.
6. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES LEGAL OR OTHERWISE RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION OF TIGHE & BOND.
7. ALL WORK SHALL CONFORM TO THE CITY OF QUINCY DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED.
8. INSTALL EROSION CONTROL BARRIERS AS SHOWN AS FIRST ORDER OF WORK.
9. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
10. PROVIDE INLET PROTECTION AROUND ALL EXISTING CATCHBASIN INLETS WITHIN THE WORK LIMITS AND MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.
11. INSTALL STABILIZED CONSTRUCTION ENTRANCES AS NECESSARY.
12. INSPECT INLET PROTECTION AND SILT FENCES DAILY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
13. ALL DISTURBED AREAS IN THE LIMITS OF THE PROJECT NOT TO BE PAVED OR OTHERWISE TREATED, SHALL RECEIVE 6" LOAM, SEED, AND/OR MULCH.
14. PRIOR TO ANY WORK OR SOIL DISTURBANCE COMMENCING ON THE SUBJECT PROPERTY, INCLUDING MOVING OF EARTH, THE APPLICANT SHALL INSTALL ALL EROSION AND SILTATION MITIGATION AND CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL PERMITS AND APPROVALS.
15. CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO ARID CONDITIONS.
16. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
17. ALL CATCH BASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN STABILIZED.
18. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED BY SILT FENCE OR SILT SOCK. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLAND.
19. TEMPORARY FENCING SHALL BE PROVIDED AROUND STOCKPILES OVER 10 FT AND AS NECESSARY TO RESTRICT PUBLIC ACCESS TO ACTIVE LAYDOWN AND STAGING AREAS AND AREAS UNDER CONSTRUCTION.
20. CONCRETE TRUCKS WILL BE REQUIRED TO WASH OUT (IF NECESSARY) CHUTES ONLY WITHIN AREAS WHERE CONCRETE HAS BEEN PLACED. NO OTHER WASHOUT WILL BE ALLOWED.
21. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MASSACHUSETTS HIGHWAY DEPARTMENT (MHD), STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
22. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILE) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A LAND SURVEYOR OR PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF MASSACHUSETTS.
23. PUBLIC STREETS SHALL NOT BE USED FOR CONSTRUCTION LAYDOWN OR STAGING.
24. COASTAL BEACH IS DEFINED AS THE AREA BETWEEN THE LIMIT OF EXISTING REVETMENT AND THE MEAN LOW WATER (MLW) LINE.
30. REMOVE EROSION AND SEDIMENT CONTROLS OUT OF THE WAVE ENVIRONMENT ON A DAILY/NIGHTLY BASIS WHEN NOT IN USE.
31. THE CONTRACTOR SHALL NOT PERFORM WORK BEYOND THE LIMIT OF WORK AS SHOWN ON THE PLANS.
32. VEHICLES ARE PROHIBITED FROM WORKING BEYOND THE LIMIT OF WORK AS SHOWN ON THE PLANS.
33. STRUCTURAL WORK SHALL CONFORM TO MASSACHUSETTS STATE BUILDING CODE, LATEST EDITION, INCLUDING MOST RECENT ADDENDA, AND CONTRACT DOCUMENTS. IN CASE OF CONFLICT, MOST STRINGENT REQUIREMENT SHALL GOVERN.
34. CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS RELATED TO THIS PROJECT.
35. CONTRACTOR SHALL EXAMINE DRAWINGS FOR ALL TRADES FOR THE VERIFICATION OF LOCATION AND DIMENSIONS OF ALL CHASES, INSERTS, OPENINGS, SLEEVES, AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
36. PROVIDE SEALANT AT ALL CONTROL JOINTS. PROVIDE COMPRESSIBLE FILLER AND SEALANT AT ALL EXPANSION AND ISOLATION JOINTS.
37. PROVIDE PRE-MOLDED JOINT FILLER WHERE SLABS ON GRADE ABUT WALLS AND FOOTINGS.
38. FERTILIZER SHALL NOT BE USED WITHIN THE LIMITS OF WORK.
39. PRIVATELY OWNED EXISTING FEATURES LOCATED ON PRIVATE PROPERTY THAT ARE IMPACTED BY CONSTRUCTION SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION STATE PRIOR TO THE COMPLETION OF CONSTRUCTION.
40. PROVIDE GEOTEXTILE UNDER RESET REVETMENT (TYP) UNLESS NEW STONES BEAR DIRECTLY ON EXISTING STONE LAYER WITH STONES LARGER THAN 12".
41. REVETMENT STONES SHALL BE MACHINE PLACED (NOT DUMPED) IN A TIGHT INTERLOCKING MANNER WITH STONES FIRMLY SEATED AND BEARING ON OTHER STONES AT A MINIMUM OF THREE SEPARATE LOCATIONS. EXPOSED SURFACE SHALL BE GENERALLY PARALLEL WITH THE SLOPE.
42. BEDDING STONE BACKFILL SHALL BE A WELL GRADED DENSE MASS OF ANGULAR BROKEN ROCK, FULLY COMPACTED BEFORE COVERING.
43. THE ENGINEER, MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (MADEP), AND MASSACHUSETTS DIVISION OF MARINE FISHERIES (DMF) SHALL BE NOTIFIED IMMEDIATELY IN THE EVENT A BREACH OF SEWAGE PIPES OR RELATED STRUCTURES OCCURS DURING CONSTRUCTION.
44. CONTRACTOR SHALL TAKE CARE WHEN DEMOLISHING THE EXISTING STRUCTURE, DEBRIS SHALL NOT FALL INTO THE WATER DURING DEMOLITION.
45. ALL WORK SHALL BE PREFORMED IN THE DRY. THE CONTRACTOR SHALL COORDINATE WORK ACTIVITIES AROUND THE TIDES.

REINFORCEMENT:
1. DETAILING, FABRICATION, AND ERECTION OF REINFORCEMENT, UNLESS OTHERWISE NOTED, SHALL CONFORM TO ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)" AND ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315)", LATEST EDITION.
2. STEEL REINFORCEMENT, UNLESS OTHERWISE SHOWN, SHALL CONFORM TO ASTM A615 GRADE 60 MINIMUM (YIELD STRENGTH – 60,000 PSI). ALL STEEL REINFORCEMENT SHALL BE HOT-DIP GALVANIZED COATED BARS SHALL BE HANDLED AND REPAIRED WHERE NECESSARY IN ACCORDANCE WITH ASTM D3963.
3. PROVIDE AND SCHEDULE ON SHOP DRAWINGS, ALL NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN POSITION: MINIMUM REQUIREMENTS SHALL BE: HIGH CHAIRS, 4'-0" ON CENTER, #5 SUPPORT BAR FOR HIGH CHAIRS, SLAB BOLSTERS, 3'-6" ON CENTER. ALL CHAIRS SHALL BE AZTEC CASTLE CHAIRS OR APPROVED PLASTIC EQUAL.
4. THE CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT SHALL BE AS FOLLOWS, UNLESS OTHERWISE SHOWN:

(A) CAST-IN-PLACE CONCRETE.

	EXPOSED TO EARTH, WATER, OR WEATHER
(a) SLAB ON GRADE	3 INCHES
(b) COLUMN TIES	3 INCHES
(c) COLUMN MAIN REBARS	3 INCHES
(d) BEAM STIRRUPS	3 INCHES
(e) BEAM MAIN REBARS	3 INCHES
(f) SLAB/WALL #3 TO #5 INCL'S	3 INCHES
(g) SLAB/WALL #6 TO #11 INCL'S	3 INCHES
(h) WALL #11 BAR OR SMALLER	3 INCHES

(i) NOTE: MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE +1/4" FOR SECTIONS TEN (10) INCHES OR LESS, AND +1/2" FOR SECTIONS OVER TEN (10) INCHES THICK.

(B) PRECAST CONCRETE

	EXPOSED TO EARTH, WATER, OR WEATHER
(a) COLUMN TIES	3 INCHES
(c) BEAM STIRRUPS	3 INCHES
(d) BEAM MAIN REBARS	3 INCHES
(e) SLABS #11 BAR AND SMALLER	3 INCHES
(f) WALL #11 BAR AND SMALLER	3 INCHES

5. WHERE REINFORCEMENT IS NOT SHOWN ON DRAWINGS, PROVIDE REINFORCEMENT IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS OR SIMILAR TO THAT SHOWN FOR MOST NEARLY SIMILAR SITUATIONS, AS DETERMINED BY THE ENGINEER. IN NO CASE SHALL REINFORCEMENT BE LESS THAN MINIMUM REINFORCEMENT PERMITTED BY THE APPLICABLE CODES, NOR LESS THAN THE FOLLOWING:

(A) BEAM STIRRUPS-#3 @ 12" OC
(B) BEAM STIRRUP SUPPORTS-1-#5 @ EACH STIRRUP BEND
(C) FACE REINFORCEMENT IN BEAMS OR PORTIONS OF BEAMS-#4 @ 12" EF
(D) STRUCTURAL SLABS-.0028 GROSS CONCRETE AREA IN EACH DIRECTION
(E) STRUCTURAL WALLS-.0028 GROSS CONCRETE AREA IN EACH DIRECTION

6. WHERE REINFORCEMENT IS CALLED FOR IN SECTION, REINFORCEMENT IS CONSIDERED TYPICAL WHEREVER THE SECTION APPLIES.
7. REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
8. WELDED WIRE FABRIC SHALL LAP 12" OR TWO SPACES, WHICHEVER IS LARGER, AND SHALL BE WIRED TOGETHER.
9. REINFORCEMENT COUPLER SPLICES SHALL BE MECHANICAL DEVICES CAPABLE OF TRANSMITTING THE ULTIMATE TENSILE AND COMPRESSIVE STRENGTH OF THE BAR.
10. INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS PRIOR TO SCHEDULED CONCRETE PLACEMENT. NOTIFY ENGINEER OF COMPLETION AT LEAST 24 HOURS PRIOR TO SCHEDULED COMPLETION OF PLACEMENT OR REINFORCEMENT.
11. REINFORCEMENT SHALL BE SET BEFORE PLACING CONCRETE. SETTING ANY REINFORCEMENT INTO WET CONCRETE IS PROHIBITED.

BAR SIZE DESIGNATION		DEVELOPMENT LENGTH (IN.)	SPLICE LENGTH (IN.)	
ENGLISH	METRIC	Ld	CLASS B	CLASS B TOP BARS
#3	#10	15	19	25
#4	#13	19	25	33
#5	#16	24	31	40
#6	#19	29	37	48
#7	#22	42	54	70
#8	#25	48	62	81
#9	#29	54	70	91
#10	#32	61	79	103

REBAR SPLICE LENGTH SCHEDULE

REBAR SPLICE LENGTH SCHEDULE NOTES:
1. IF CLEAR SPACING BETWEEN THE REBARS IS LESS THAN THREE BAR DIAMETERS, OR IF COVER IS LESS THAN TWO BAR DIAMETERS, INCREASE THE SPLICE LENGTH BY AN ADDITIONAL 50%.
2. IF EPOXY COATED REBAR IS USED, INCREASE THE SPLICE LENGTH BY AN ADDITIONAL 50%.
3. IF LIGHTWEIGHT CONCRETE IS USED, INCREASE THE SPLICE LENGTH BY AN ADDITIONAL 30%.
4. THE MINIMUM REBAR SPLICE LENGTH SCHEDULE IS BASED ON F'c= 4,000 PSI AND Fy= 60,000 PSI. ADJUST FOR OTHER STRENGTHS USING ACI-318.
5. FOR HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW, INCREASE THE DEVELOPMENT LENGTH BY AN ADDITIONAL 30%.
6. WHEN BARS OF DIFFERENT SIZE ARE LAP SPLICED, THE SPLICE LENGTH SHALL BE THE LARGER OF EITHER THE DEVELOPMENT LENGTH OF THE LARGER BAR OR THE SPLICE LENGTH OF THE SMALLER BAR.

CONCRETE:
1. CONCRETE WORK SHALL CONFORM TO THE LATEST EDITIONS OF THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318) AND SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDING (ACI 301).
2. CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED, AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY OR THE ENGINEER.
3. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL HAVE A COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED, AND SHALL BE AIR ENTRAINED (SEE SPECS)
4. THE USE OF CONSTRUCTION JOINTS WHERE SHOWN ON THE DRAWINGS IS MANDATORY. OMISSIONS, ADDITIONS, OR CHANGES SHALL NOT BE MADE EXCEPT WITH THE SUBMISSION OF A WRITTEN REQUEST TOGETHER WITH DRAWINGS OF THE PROPOSED JOINT LOCATIONS FOR APPROVAL OF THE STRUCTURAL ENGINEER.
5. WHERE CONSTRUCTION JOINTS ARE NOT SHOWN, DRAWINGS SHOWING LOCATION OF CONSTRUCTION JOINTS AND CONCRETE PLACING SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PREPARATION OF THE REINFORCEMENT SHOP DRAWINGS.
6. CONCRETE SLABS SHALL BE CAST SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS.
7. CONCRETE SLABS AND WALLS SHALL BE CAST ALTERNATELY OR IN A CHECKERBOARD FASHION SO THAT ADJACENT SECTIONS ARE PLACED NO SOONER THAN THREE DAYS APART. AT LEAST TWO DAYS MUST ELAPSE AFTER PLACING CONCRETE IN WALLS BEFORE PLACING FLOOR SYSTEM SUPPORTED THEREON.
8. CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED.
9. EXPOSED EDGES OF CONCRETE ELEMENTS SHALL HAVE CHAMFERED CORNERS.
10. CONTRACTOR SHALL COORDINATE CONNECTION OF BUILDING GROUND SYSTEM TO SLAB ON GRADE REINFORCEMENT.

FOUNDATIONS:
1. NO CONCRETE SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
2. BOTTOM OF FOUNDATION ELEVATIONS GIVEN ON DRAWINGS ARE TO BE CONSIDERED MINIMUM DEPTHS. CONTRACTOR SHALL HAVE FURTHER EXCAVATION AS REQUIRED TO REACH GOOD BEARING.
3. ALL EXCAVATIONS FOR FOOTINGS SHALL BE FINISHED BY HAND FOR THE LAST 6".
4. ALL FINISHED EXCAVATIONS SHALL BE INSPECTED BY THE ENGINEER BEFORE ANY CONCRETE IS PLACED.
5. ALL BACKFILL UNDER OR ADJACENT TO ANY PORTION OF THE STRUCTURES SHALL BE COMPACTED IN 6" LIFTS. SEE SPECIFICATIONS.
6. REMOVE UNSUITABLE FILL AND/OR IMPROVE THE SUBGRADE PER SPECIFICATION REQUIREMENTS. BACKFILL WITH COMPACTED STRUCTURAL (GRANULAR) FILL UP TO THE UNDERSIDE OF THE BUILDING SLABS. SEE SPECIFICATIONS.

STRUCTURAL STEEL:
1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO A.I.S.C. "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION.
2. UNLESS MODIFIED BELOW OR ON THE CONTRACT DRAWINGS, THE FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL SHALL BE ACCORDING TO THE A.I.S.C. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, LATEST EDITION.
3. STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING TO ASTM A992 UNLESS NOTED OTHERWISE ON DRAWINGS. ALL STEEL SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A384 AND A385.
4. IN THE DESIGN OF THE FRAMED BEAM CONNECTIONS (BOLTED), THE FOLLOWING SHALL GOVERN, UNLESS OTHERWISE SPECIFICALLY INDICATED:

(A) FASTENER DIAMETER – 1/2" MINIMUM.
(B) FASTENER DESIGNATION – F1554 GRADE 36 WITH a563a HEX NUTS, HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.
(C) CONNECTION ANGLE THICKNESS – 1/4" MINIMUM UNLESS NOTED OTHERWISE ON DRAWINGS.
(D) MINIMUM CONNECTION PLATE THICKNESS SHALL BE 1/4".
(E) WELDED CONNECTIONS – SERIES E-70 ELECTRODES. THE MINIMUM WELD SIZE FOR ANY CONNECTION SHALL NOT BE LESS THAN 1/4".
(F) USE HARDENED WASHERS UNDER BOLT HEAD AND NUT, CONFORMING TO ASTM F436. USE NO MORE THAN 2 WASHERS.
(G) BOLT INSTALLATION IN ACCORDANCE WITH TURN-OF-NUT METHOD AS OUTLINED IN SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

5. ALL WELDING SHALL CONFORM TO A.W.S. D1.1, LATEST REVISION, "STRUCTURAL WELDING CODE"
6. HOLES, CUTS, AND OTHER MODIFICATIONS TO THE STRUCTURAL STEEL SHALL NOT BE MADE IN THE FIELD EXCEPT WITH THE SPECIFIC PERMISSION OF THE ENGINEER.
7. COUNCIL SPECIFICATIONS PREPARATION SHALL BE ACCORDING TO SSPC-SP3 FOR STEEL TO BE LEFT UNPAINTED AND SSPC-SP6 FOR STEEL TO BE FINISHED. REFER TO SPECIFICATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD REPAIR OF ANY DAMAGE TO HOT-DIP GALVANIZED COATINGS IN ACCORDANCE WITH ASTM A780.
9. THE STRUCTURAL STEEL CONTRACTOR SHALL INSPECT ALL FOUNDATIONS INCLUDING ANCHOR BOLTS FOR ACCEPTABILITY AND PROVIDE A WRITTEN REPORT TO THE RESIDENT ENGINEER TO THIS EFFECT PRIOR TO INITIATING WORK.
10. ANCHOR BOLTS, LEVELING PLATES, OR BEARING PLATES SHALL BE LOCATED AND BUILT INTO CONNECTING WORK, PRESET BY TEMPLATES OR SIMILAR METHODS. PLATES SHALL BE SET IN FULL BEDS OF NON-SHRINK GROUT.
11. STRUCTURAL STEEL DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR MOST NEARLY SIMILAR SITUATIONS AS DETERMINED BY THE STRUCTURAL ENGINEER.
12. STRUCTURAL STEEL FRAMING SHALL BE TRUE AND PLUMB BEFORE CONNECTIONS ARE FINALLY BOLTED OR WELDED.
13. TEMPORARY ERECTION BRACING AND SUPPORTS SHALL BE PROVIDED TO HOLD STRUCTURAL STEEL FRAMING SECURELY IN POSITION. SUCH TEMPORARY BRACING AND SUPPORTS SHALL NOT BE REMOVED UNTIL PERMANENT BRACING HAS BEEN INSTALLED AND FLOOR SLABS HAVE ATTAINED 75 PERCENT OF SPECIFIED CONCRETE STRENGTH.

TIDAL ELEVATIONS:
1. THE ELEVATIONS NOTED BELOW ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) BASED ON TIDAL DATA REFERRED TO MEAN LOWER LOW WATER (MLLW) FOR NUT ISLAND, QUINCY BAY, MASSACHUSETTS STATION ID 8444525 AS PROVIDED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

MEAN HIGH WATER (MHW) = 4.4'
MEAN LOW WATER (MLW) = -5.1'
MEAN HIGHER HIGH WATER (MHHW) = 4.8'
MEAN LOWER LOW WATER (MLLW) = -5.4'

SEQUENCE OF MAJOR ACTIVITIES
1. CONSTRUCT TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS
   - NEW CONSTRUCTION
   - DISPOSAL OF SEDIMENT SPOIL, STUMP, AND OTHER SOLID WASTE
   - FLOOD PLAIN EXCAVATION WORK
   - CONTROL OF DUST
   - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
2. SET UP TRAFFIC CONTROL.
3. DEMOLISH AND DISPOSE OF FIRST HALF OF EXISTING BRIDGE DECK.
4. REPAIR HALF OF NORTH AND SOUTH ABUTMENTS AND WING WALLS AND CONSTRUCT HALF OF THE BRIDGE DECK REPLACEMENT AND PARAPET WALLS..
5. COORDINATE AND REPLACE UTILITIES CROSSINGS.
6. UPON APPROVAL OF THE ENGINEER, OPEN REPAIRED PORTION OF THE BRIDGE TO TRAFFIC AND PEDESTRIANS,
7. SET UP TRAFFIC CONTROL AND DEMOLISH OTHER SIDE OF BRIDGE.
8. REPAIR SECOND HALF OF NORTH AND SOUTH ABUTMENTS AND WING WALLS.
9. CONSTRUCT SECOND HALF OF BRIDGE DECK AND PARAPET WALLS.
10. RESET EXISTING STONE REVETMENT AND RESTORE AREA.
11. CONSTRUCT NEW SIDEWALKS AND AND RAILS.
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING ON LANDSIDE OF THE SEAWALL.
13. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

NOTE: THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.

EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES
A. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES AND DISTURBED AREAS, ON THE LANDSIDE OF THE SEAWALL, WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR MORE THAN TWENTY ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
1. TEMPORARY SEEDING
2. MULCHING

B. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING, OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY NOVEMBER 15.

C. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
2. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
3. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED.
4. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

D. WINTER STABILIZATION PRACTICES:
1. ALL PROPOSED POST-DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH BY NOVEMBER 15TH, OR WHICH ARE DISTURBED AFTER NOVEMBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURE WITH ANCHOR NETTING, ELSEWHERE.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITION.
3. AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3" OF CRUSHED GRAVEL, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON, BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.

GENERAL INSPECTION AND MAINTENANCE PRACTICES FOR EROSION AND SEDIMENT CONTROLS
1. ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 1/2 INCH OR GREATER.
2. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.
3. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE OR HAYBALE BARRIERS WHEN IT HAS REACHED ONE THIRD (1/3) THE HEIGHT OF THE FENCE OR BALE.
4. ALL DIVERSION DIKES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
5. TEMPORARY SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND UNHEALTHY GROWTH.
6. ALL DRAINAGE OUTFALLS SHALL BE INSPECTED FOR SIGNS OF EROSION AND BUILD UP OF SEDIMENT QUARTERLY, AT A MINIMUM.
7. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION.
8. A REPRESENTATIVE OF THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
9. THE EROSION CONTROL PROCEDURES SHALL CONFORM TO THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" PREPARED BY THE FRANKLIN, HAMPDEN, HAMPSHIRE CONSERVATION DISTRICT.

A. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE, OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL CODES OR SPECIFICATIONS.
B. THE USE OF SAND FOR THE PURPOSE OF PEDESTRIAN SAFETY AND SAFE DRIVING CONDITION SHALL BE MINIMIZED.
C. THE OWNER SHALL CLEAN ALL CATCH BASINS, DRAIN MANHOLES, AND TIDE GATE STRUCTURES ON AN ANNUAL BASIS.

11. STREET SWEEPING:
A. CONTRACTOR SHALL PERFORM WEEKLY SWEEPING OF PAVED AREAS UTILIZED FOR TEMPORARY CONSTRUCTION ACCESS OR WORK.
B. CONTRACTOR SHALL DISPOSE OF STREET SWEEPING WASTE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES AND LAWS.

CONCRETE WASHOUT AREA:
1. THE CONCRETE CONTRACTOR SHOULD BE ENCOURAGED, WHERE POSSIBLE, TO USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY.
2. IF IT IS NECESSARY, SITE CONTRACTOR SHALL WASH OUT ONLY WITHIN AREAS WHERE CONCRETE HAS BEEN PLACED.
3. ATTEMPTS SHOULD BE MADE TO LOCATE WASHOUT AREA AT LEAST 50 YARDS AWAY FROM STORM DRAINS AND WATERWAYS WHENEVER POSSIBLE.
4. NO OTHER WASHOUT WILL BE ALLOWED.

ALLOWABLE NON-STORMWATER DISCHARGES:
1. DISCHARGES FROM FIREFIGHTING ACTIVITIES
2. FIRE HYDRANT FLUSHINGS
3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED
4. WATER USED TO CONTROL DUST
5. POTABLE WATER
6. PAVEMENT WASH WATERS – NO SPILLS OR DETERGENTS
7. LANDSCAPE IRRIGATION
8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATE
9. UNCONTAMINATED GROUND WATER OR SPRING WATER
10. FOUNDATION OR FOOTING DRAINS – NOT CONTAMINATED

WASTE DISPOSAL
A. WASTE MATERIALS
ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ON SITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.

B. HAZARDOUS WASTE
ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.

C. SANITARY WASTE
ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

LEGEND

SYMBOL	DESCRIPTION
	SEWER MANHOLE
	HYDRANT
	DRAIN MANHOLE
	CATCH BASIN
	SIGN
	UTILITY POLE
GG	GAS GATE
WG	WATER GATE
EM	ELECTRIC METER
×-0.7	SPOT ELEVATION
WHH	WATER LINE
FP	FLAG POLE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CONC	CONCRETE
SGE	SLOPED GRANITE EDGING
EOP	EDGE OF PAVEMENT
BCC	BITUMINOUS CONCRETE CURB
VCC	VERTICAL CONCRETE CURB
VGC	VERTICAL GRANITE CURB
TSW	TOP OF SEA WALL
TGW	TOP OF GRANITE BLOCK SEA WALL
TW	TOP OF WALL
B-4	BORING LOCATION W/LABEL
A-1	SEDIMENT SAMPLE LOCATION W/LABEL
	WETLAND FLAG
D	DRAIN LINE
S	SEWER LINE
G	GAS LINE
W	WATER HANDHOLE
OHW	OVERHEAD ELECTRIC LINE
-2.0	1 FOOT CONTOUR LINE
-5.0	5 FOOT CONTOUR LINE
	PROPOSED CONCRETE

A / 20 — SECTION REFERENCE LETTER / DRAWING WHERE SECTION IS SHOWN OR TAKEN

1 / 20 — DETAIL REFERENCE NUMBER / DRAWING WHERE DETAIL IS SHOWN OR TAKEN

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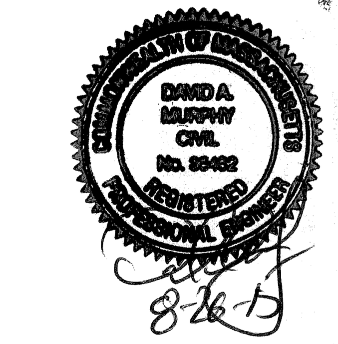

Rockland Street Bridge Rehabilitation

Quincy, Massachusetts

VERIFY SCALE
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

MARK	DATE	DESCRIPTION
0	8/26/2015	Initial Release

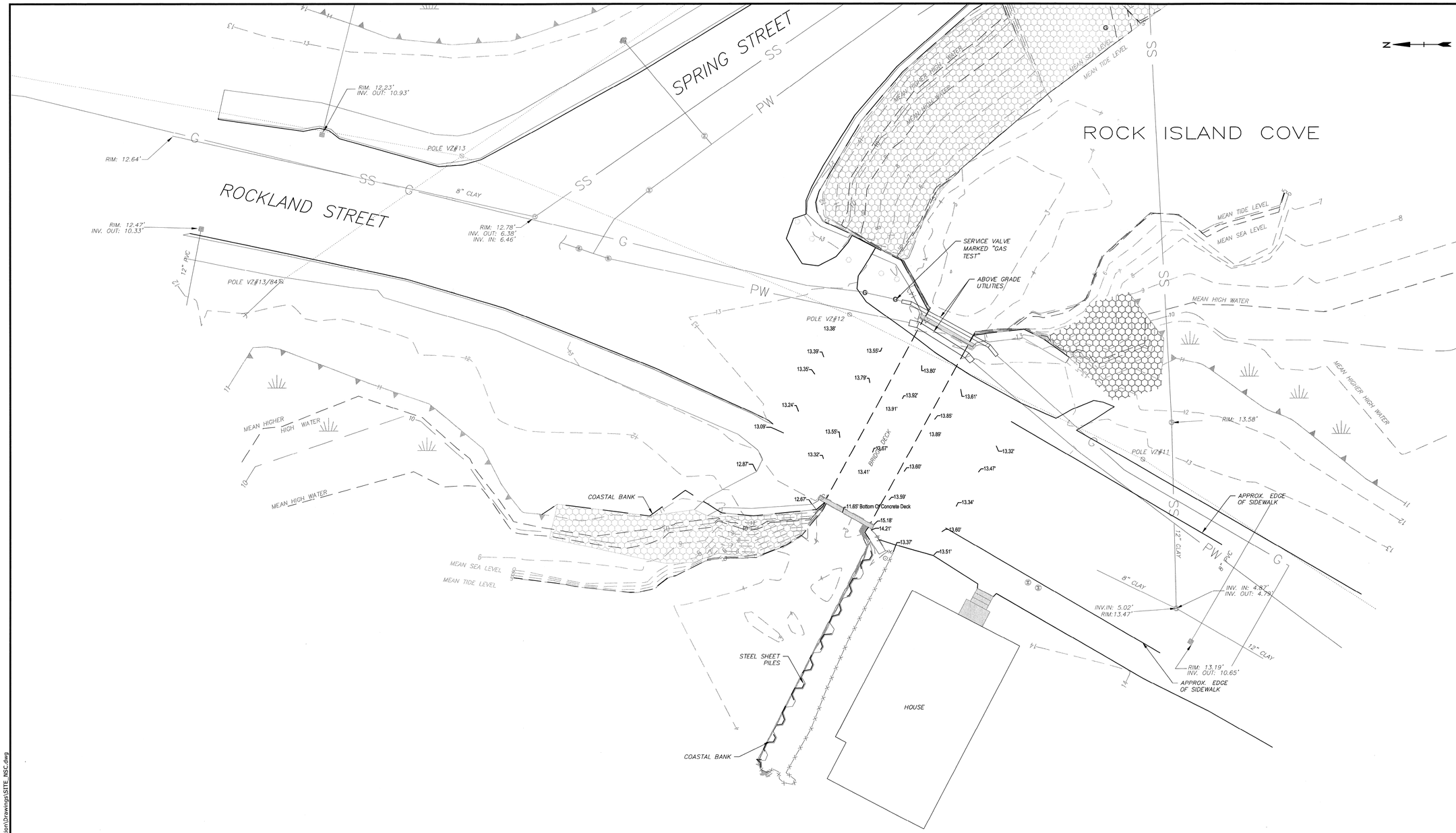
PROJECT NO: 26-0029
DATE: 2015/07/21
FILE: SITE_NSC.dwg
DRAWN BY: DGM/TMP
CHECKED: WJD
APPROVED: DAM

EROSION CONTROL NOTES & DETAILS

SCALE: NO SCALE

G-002
SHEET 2 OF 8

Last Saved: 8/26/2015
Plotted On:Aug 26, 2015-12:54pm By: dgm
Tighe & Bond, Inc. J:\Q\Q0028 City of Quincy, MA Bridge Rehabilitation\Drawings\SITE_NSC.dwg



NOTES:

1. THIS PLAN IS BASED ON A DRAWING TITLED "ROCKLAND STREET AND SPRING STREET, QUINCY MASSACHUSETTS" PREPARED BY CORNER POST LAND SURVEYING, INC, DATED JUNE 19, 2015.

SCALE IN FEET
0 10' 20'
GRAPHIC SCALE

Tighe&Bond
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COMMONWEALTH OF MASSACHUSETTS
DAVID A. MURPHY
CIVIL
No. 38422
REGISTERED PROFESSIONAL ENGINEER
8-26-15

Rockland Street Bridge Rehabilitation

Quincy, Massachusetts

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APPROVED:	DAM

EXISTING CONDITIONS PLAN

SCALE: 1"=10'

C-001
SHEET 3 OF 8

Last Saved: 8/26/2015
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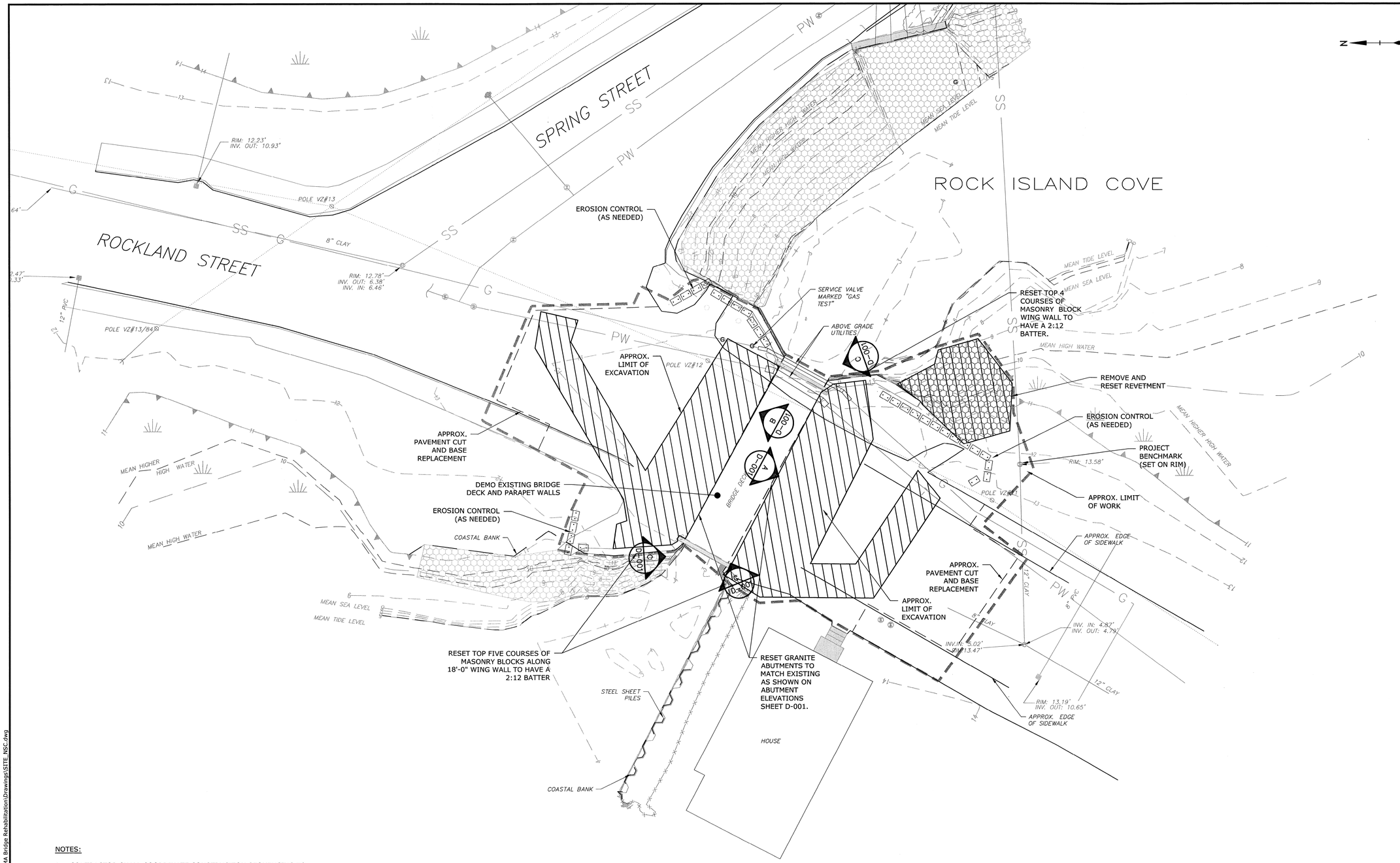

NOTES:

1. CONTRACTOR SHALL COORDINATE CONSTRUCTION SEQUENCING TO PROVIDE ONE WAY TRAFFIC FLOW OVER BRIDGE FOR THE DURATION OF THE PROJECT.
2. PROJECT IS LOCATED WITHIN THE TIDAL ZONE. PLAN WORK ACCORDINGLY.
3. CONTRACTOR TO UTILIZE SEWER MANHOLE RIM ELEVATION AS PROJECT TEMPORARY BENCHMARK.

SCALE IN FEET
0 10' 20'
GRAPHIC SCALE

Tighe&Bond
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COMMONWEALTH OF MASSACHUSETTS
DAVID A. MURPHY
CIVIL
No. 52402
REGISTERED PROFESSIONAL ENGINEER
8/26/15

Rockland Street Bridge Rehabilitation

Quincy, Massachusetts

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DEMOLITION AND ABUTMENTS REPAIR PLAN

SCALE: 1"=10'

C-002
SHEET 4 OF 8

Last Saved: 8/26/2015
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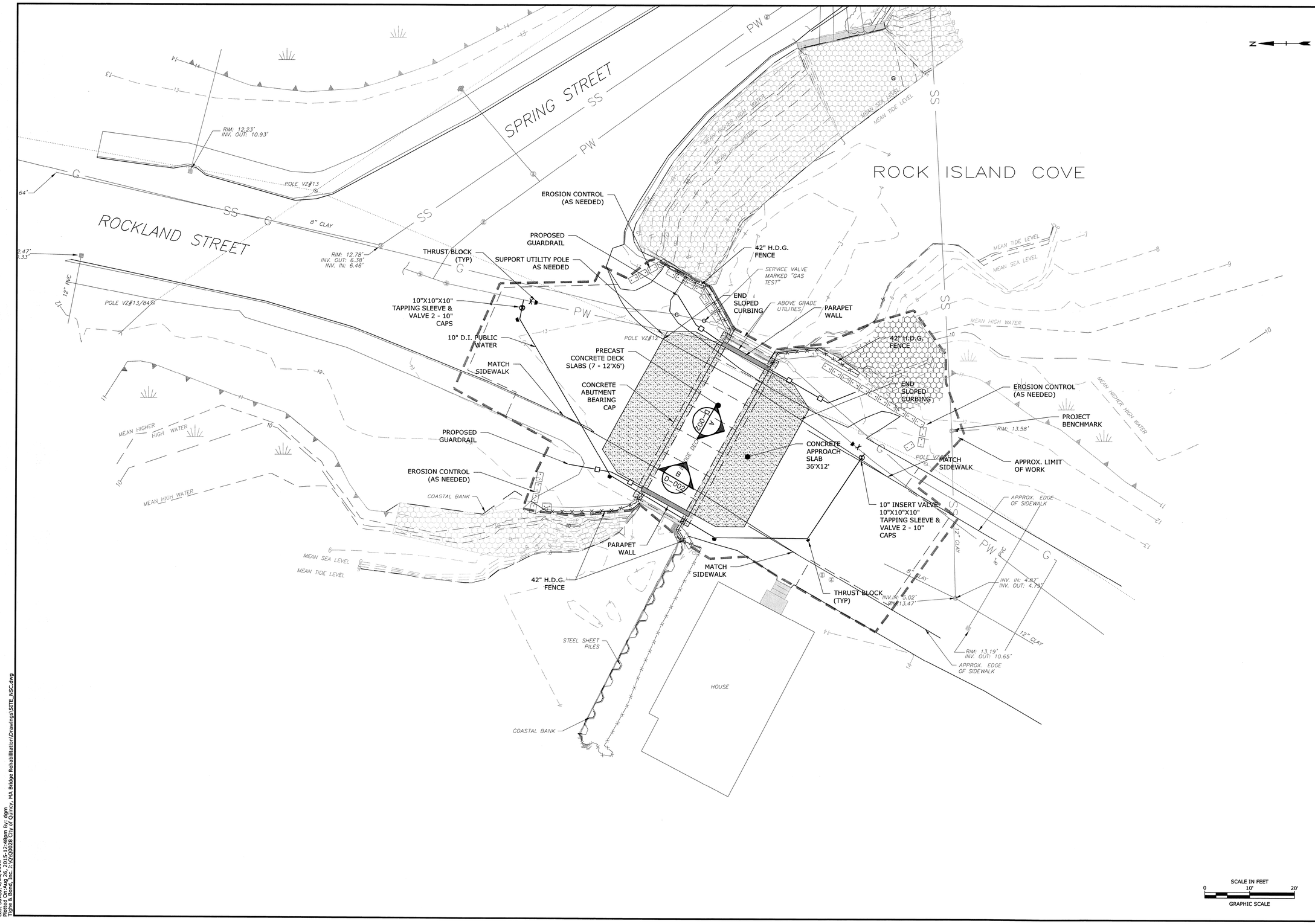

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PIPING AND BRIDGE PLAN

SCALE: 1"=10'

C-003
SHEET 5 OF 8

Last Saved: 8/26/2015
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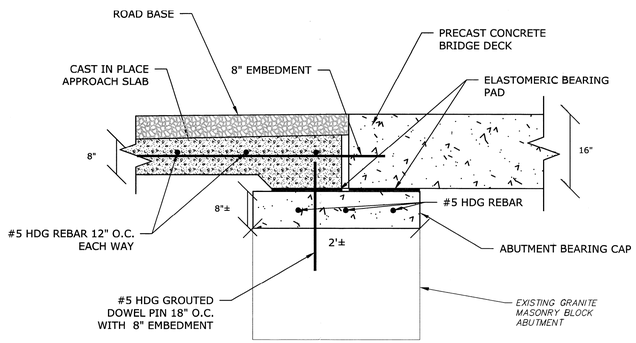
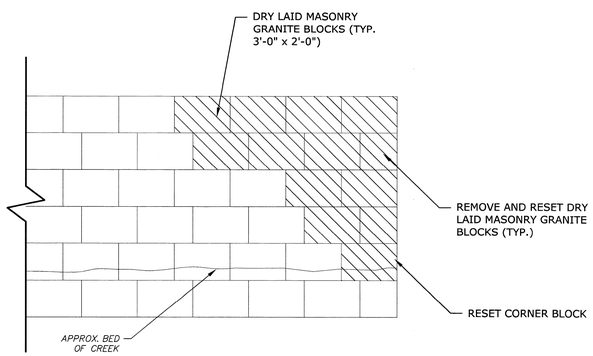


ABUTMENT BEARING CAP

NO SCALE



ROCKLAND STREET BRIDGE SECTION A–A

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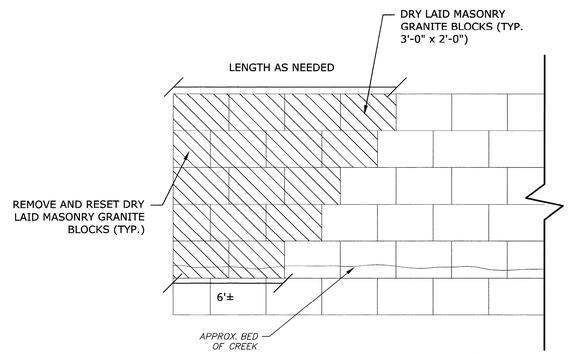
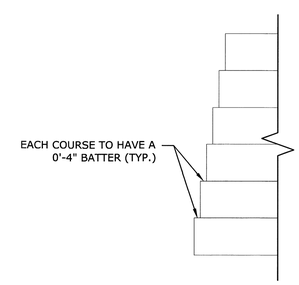


ROCKLAND STREET BRIDGE SECTION B–B

SCHEMATIC



ROCKLAND STREET BRIDGE SECTION C–C

NOT TO SCALE

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Quincy, Massachusetts

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SECTION AND DETAILS

SCALE: AS SHOWN

D-001
SHEET 6 OF 8

Last Saved: 8/26/2015
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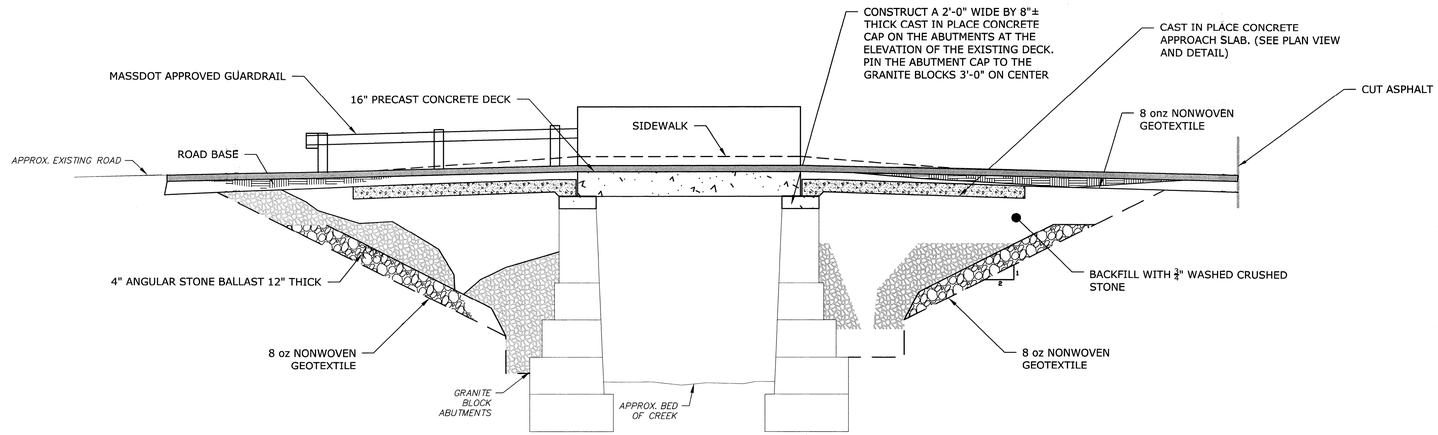

ROCKLAND STREET BRIDGE
SECTION A–A
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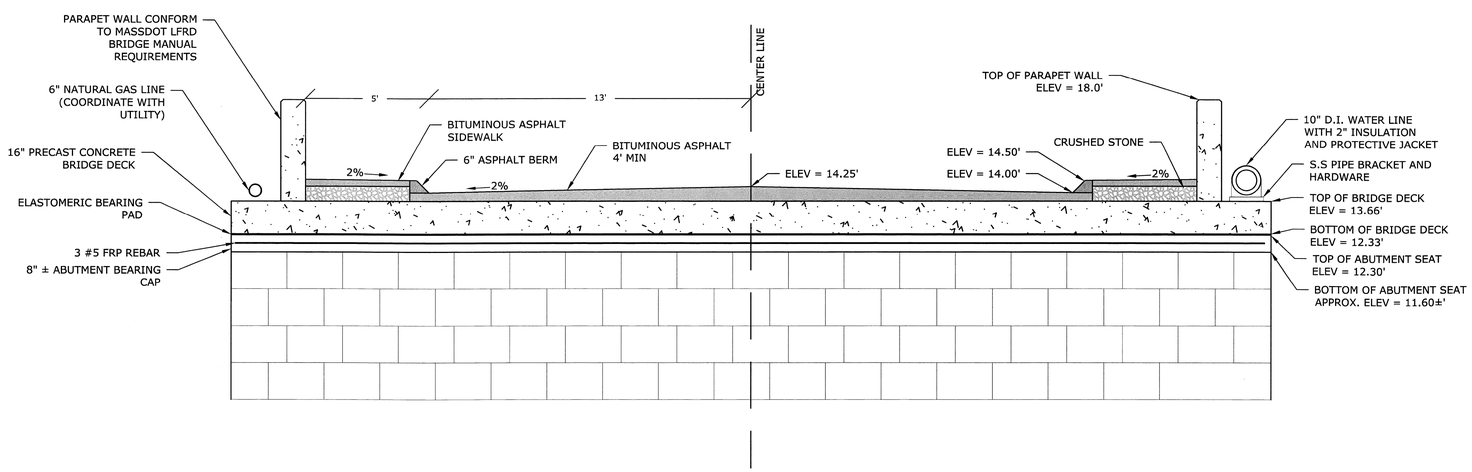

ROCKLAND STREET BRIDGE
SECTION B–B
NO SCALE

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Quincy, Massachusetts

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APPROVED:	DAM

SECTION AND DETAILS

SCALE: AS SHOWN

D-002
SHEET 7 OF 8

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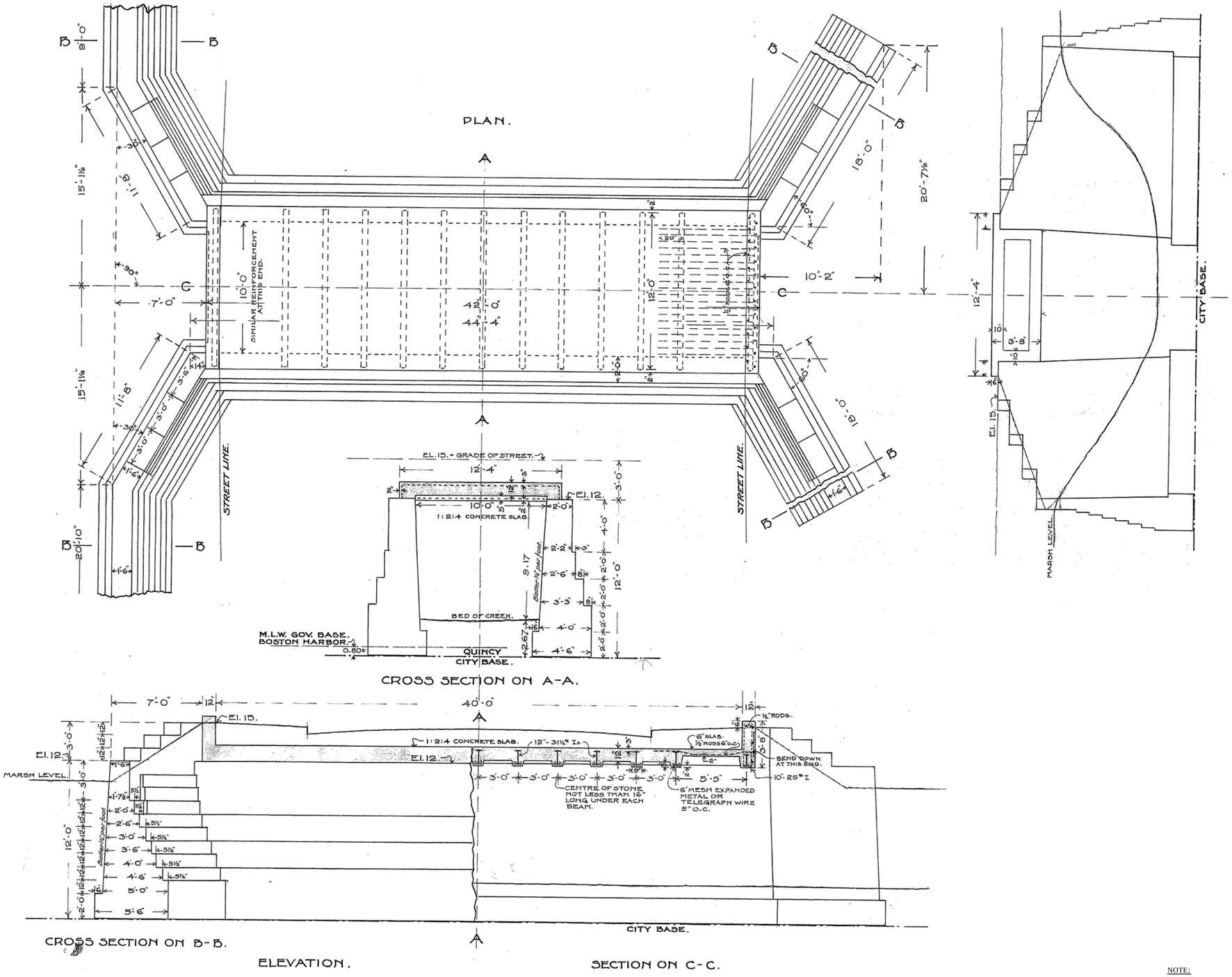

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1. DRAWINGS PROVIDED BY CITY OF QUINCY. DRAWINGS ARE ARCHIVE DRAWINGS AND NOT FIELD VERIFIED.

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ARCHIVE DRAWING

SCALE: AS SHOWN

D-003
SHEET 8 OF 8

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