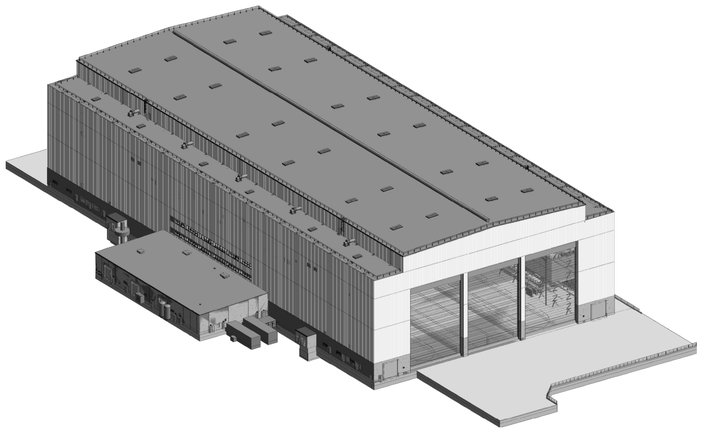
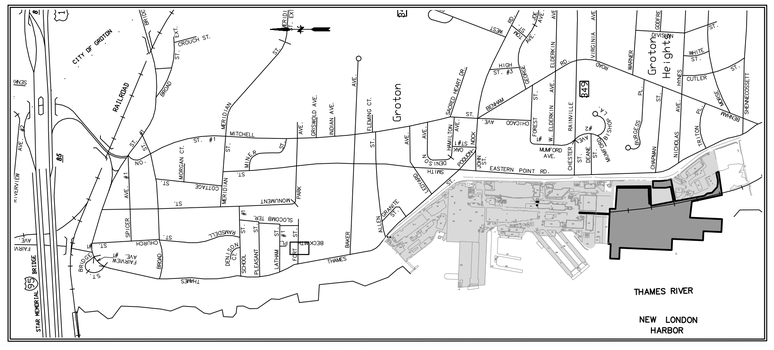
GENERAL DYNAMICS
Electric Boat

SHEET INDEX

SHEET No.	SHEET TITLE
SY-C-000	COVER SHEET
SY-C-001	GENERAL CIVIL NOTES
SY-C-010 TO 012	PROPERTY BOUNDARY SURVEY
SY-C-100	SITE LAYOUT KEY PLAN
SY-C-101 TO 104	TOPOGRAPHIC SURVEY
SY-C-110	WETLANDS PLAN
SY-C-111 TO 114	SITE PREPARATION PLAN
SY-C-121 TO 124	EROSION AND SEDIMENT CONTROL PLAN
SY-C-130	SITE SECURITY FENCE PLAN
SY-C-131 TO 134	SITE LAYOUT PLAN
SY-C-141	CONSTRUCTION ROAD PROFILE
1 SY-C-142 TO 143	VEHICLE MANEUVERING PLANS
SY-C-151 TO 154	SITE GRADING PLAN
SY-C-161 TO 164	SITE DRAINAGE PLAN
SY-C-171 TO 175	SITE UTILITY PLAN
SY-C-182	SITE LANDSCAPE PLAN
1 SY-C-186	CROSS SECTIONS
SY-C-200	PUMP STATION PLAN AND SECTION
SY-C-300	RECEIVING STATION GENERAL NOTES
SY-C-310	RECEIVING STATION MEDIUM VOLTAGE ONE-LINE
SY-C-311	RECEIVING STATION LAYOUT PLAN
SY-C-500	GENERAL NOTES
SY-C-501 TO 502	EROSION & SEDIMENT CONTROL DETAILS
SY-C-503 TO 510	SITE DETAILS
SY-C-511	RAILROAD DETAILS
SY-C-512 TO 515	STORM DRAINAGE DETAILS
SY-C-516 TO 518	WATER DETAILS
SY-C-519 TO 520	SANITARY SEWER DETAILS
SY-C-521 TO 522	UTILITY DETAILS
SY-A-101P TO 107P	FLOOR PLANS
SY-A-201P TO 202P	ELEVATIONS
SY-ES-100P	SITE LIGHTING PLAN
SY-E-113P	FIRST FLOOR LIGHTING PLAN
SY-E-115P	UTILITY BUILDING LIGHTING PLAN
SY-E-LTG-P	SITE LIGHTING PHOTOMETRICS
SY-E-602P	LUMINAIRE SCHEDULE

South Yard Assembly Building
75 Eastern Point Road
Groton, Connecticut





KEY MAP
SCALE: 1"=1000'

ISSUED FOR PERMIT ONLY
NOT FOR CONSTRUCTION

JACOBS
100 Great Meadow Road, Suite 707
Wethersfield, CT 06109

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
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STATE OF CONNECTICUT — KRISTEN E. SOLOMON — No. 22072 — LICENSED PROFESSIONAL ENGINEER — 12/31/2019

CITY OF GROTON: APPROVED PLAN
The plans upon which this stamp is affixed are approved. All work must conform to the representations made herein and other applicable documents or conditions. It is the applicant's responsibility to secure other permits as may be required. Any modifications to these plans required in order to secure other permits or address field conditions during construction must first be approved by the City Planner or Planning and Zoning Commission, as may be applicable, and prior to commencing with said improvements.

Chairman _____ Date _____

File Path: J:\DWG\P\97\97570\S30\Civil\Plan\1997570S30-COV-01.dwg, Layout: SY-C-000, Plotted: Friday, April 05, 2019, User: kgoodrow Plotter: AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 CTB File: FO.STB

LEGEND – PROPOSED

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED STORM DRAINAGE LINE
- PROPOSED ROOF DRAIN
- PROPOSED UNDERDRAIN
- PROPOSED SANITARY SEWER LINE
- PROPOSED FORCE MAIN
- PROPOSED TELE/DATA LINE
- PROPOSED WATER MAIN
- PROPOSED GAS MAIN
- PROPOSED ELECTRICAL SERVICE
- PROPOSED AIR LINE
- PROPOSED OVERHEAD WIRES
- PROPOSED HYDRANT AND GATE VALVE
- PROPOSED CONCRETE CULVERT END
- PROPOSED TYPE "C–L"/HEAVY–DUTY CATCH BASIN
- PROPOSED TYPE "C"/HEAVY–DUTY CATCH BASIN
- PROPOSED DECK INLET
- PROPOSED STORM MANHOLE
- PROPOSED SANITARY MANHOLE
- PROPOSED SIGN
- PROPOSED BITUMINOUS CONCRETE CURB
- PROPOSED MODULAR BLOCK RETAINING WALL
- PROPOSED CONCRETE
- PROPOSED BITUMINOUS CONCRETE PAVEMENT
- PROPOSED GRAVEL
- PROPOSED DECK RAIL
- PROPOSED CHAIN LINK FENCE
- PROPOSED CHAIN LINK PERIMETER SECURITY FENCE
- PROPOSED SILT FENCE
- PROPOSED EROSION CONTROL SOCK
- PROPOSED CATCH BASIN INSERT

LEGEND – EXISTING

- APPROXIMATE PROPERTY LINE
- COASTAL JURISDICTION LINE
- APPROXIMATE WATERS EDGE
- WETLANDS
- CURB
- TREELINE
- EXISTING CONTOUR
- INDEX CONTOUR
- STORM DRAINAGE PIPE
- SANITARY SEWER PIPE
- UNDERGROUND GAS
- WATER MAIN
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE
- UNKNOWN UTILITY
- STEAM LINE
- CHAIN LINK FENCE
- STOCKADE FENCE
- STONE WALL
- GUIDE RAIL
- WATER VALVE
- FIRE HYDRANT
- SANITARY MANHOLE
- STORM MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- BOLLARD/POST/DOLPHIN
- GAS GATE
- UTILITY POLE
- GUY WIRE
- CATCH BASIN
- FLAT TOP CATCHBASIN
- SIGN
- LIGHTPOLE
- MONITOR WELL
- DECIDUOUS TREE
- PINE TREE

DEFINITIONS

BFE=BASE FLOOD ELEVATIONS. THE COMPUTED ELEVATION TO WHICH FLOODWATER IS ANTICIPATED TO RISE DURING THE BASE FLOOD. BFE'S ARE SHOWN ON FLOOD INSURANCE RATE MAPS (FIRMS) AND ON FLOOD PROFILES. THE BFE IS THE REGULATORY REQUIREMENT FOR THE ELEVATION OR FLOOD PROOFING STRUCTURES.

AE ZONE=AREAS THAT HAVE A 1% PROBABILITY OF FLOODING EVERY YEAR (ALSO KNOWN AS THE 100–YEAR FLOOD), AND WHERE PREDICTED FLOOD WATER ELEVATIONS ABOVE MEAN SEA LEVEL HAVE BEEN ESTABLISHED. PROPERTIES IN ZONE AE ARE CONSIDERED TO BE AT HIGH RISK OF FLOODING UNDER THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP). CONSTRUCTION IN THESE AREAS MUST MEET LOCAL FLOODPLAIN ZONING ORDINANCE REQUIREMENTS.

VE ZONE= ALSO KNOWN AS THE COASTAL HIGH HAZARD AREAS, AREAS SUBJECT TO HIGH VELOCITY WATER INCLUDING WAVES. THEY ARE DEFINED BY THE 1% PROBABILITY OF FLOODING EVERY YEAR (ALSO KNOWN AS THE 100–YEAR FLOOD) AND WAVE EFFECTS 3 FEET OR GREATER.

ZONE X=SHADED ZONE X ARE AREAS THAT HAVE A 0.2% PROBABILITY OF FLOODING EVERY YEAR (ALSO KNOWN AS THE 500–YEAR FLOOD). PROPERTIES IN SHADED ZONE X ARE CONSIDERED TO BE AT A MODERATE RISK OF FLOODING UNDER THE NATIONAL FLOOD INSURANCE PROGRAM. LOCAL FLOOD PLAIN ZONING ORDINANCES DO NOT APPLY TO ZONE X.

CJL=COASTAL JURISDICTION LINE. THE AREA OF THE SHORE SUBJECT TO CONNECTICUT'S PERMIT AUTHORITY. THE CJL IS BASED ON A SPECIFICALLY DETERMINED ELEVATION AS THE REGULATORY LIMIT INSTEAD OF FIELD EVIDENCE OF THE WATER SURFACE ELEVATION. CJL ELEVATIONS ARE PROVIDED BY CT DEEP FOR EACH COASTAL MUNICIPALITY AND THE THREE MAJOR TIDAL RIVERS ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE CJL FOR GROTON IS AT ELEVATION 2.1 FEET ON NAVD88, OR 4.73 ON EBFD.

EBFD=ELECTRIC BOAT FACILITY DATUM. A DATUM CREATED BY EB FOR THE GROTON FACILITY. SEE THE DATUM CONVERSION TABLE ON DESIGN DRAWINGS FOR THE CONVERSION TO OTHER DATUMS.

EBFD MLW= MEAN LOW WATER BASED ON ELECTRIC BOAT FACILITY DATUM.

MHHW=MEAN HIGHER HIGH WATER. THE AVERAGE OF THE HIGHER HIGH WATER HEIGHT OF EACH TIDAL DAY OBSERVED OVER THE NATIONAL TIDAL DATUM EPOCH.

MHW=MEAN HIGH WATER. THE AVERAGE OF ALL THE HIGH WATER HEIGHTS OBSERVED OVER THE NATIONAL TIDAL DATUM EPOCH.

MLW=MEAN LOW WATER. THE AVERAGE OF ALL THE LOW WATER HEIGHTS OBSERVED OVER THE NATIONAL TIDAL DATUM EPOCH.

MLLW=MEAN LOWER LOW WATER. THE AVERAGE OF THE LOWER LOW WATER HEIGHT OF EACH TIDAL DAY OBSERVED OVER THE NATIONAL TIDAL DATUM EPOCH.

MSL=MEAN SEA LEVEL. THE ARITHMETIC MEAN OF HOURLY HEIGHTS OBSERVED OVER THE NATIONAL TIDAL DATUM EPOCH.

MTL=MEAN TIDE LEVEL. THE ARITHMETIC MEAN OF MEAN HIGH WATER AND MEAN LOW WATER.

NATIONAL TIDAL DATUM EPOCH=THE SPECIFIC 19–YEAR PERIOD ADOPTED BY THE NATIONAL OCEAN SERVICE AS THE OFFICIAL TIME SEGMENT OVER WHICH TIDE OBSERVATIONS ARE TAKEN AND REDUCED TO OBTAIN MEAN VALUES (E.G., MEAN LOWER LOW WATER, ETC.) FOR TIDAL DATUMS. IT IS NECESSARY FOR STANDARDIZATION BECAUSE OF PERIODIC AND APPARENT SECULAR TRENDS IN SEA LEVEL. THE PRESENT NTDE IS 1983 THROUGH 2001.

NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29)=A FIXED REFERENCE ADOPTED AS A STANDARD GEODETIC DATUM FOR ELEVATIONS DETERMINED BY LEVELING. A SYNONYM FOR SEA–LEVEL DATUM OF 1929. THE GEODETIC DATUM IS FIXED AND DOES NOT TAKE INTO ACCOUNT THE CHANGING STANDS OF SEA LEVEL. BECAUSE THERE ARE MANY VARIABLES AFFECTING SEA LEVEL, AND BECAUSE THE GEODETIC DATUM REPRESENTS A BEST FIT OVER ABROAD AREA, THE RELATIONSHIP BETWEEN THE GEODETIC DATUM AND LOCAL MEAN SEA LEVEL IS NOT CONSISTENT FROM ONE LOCATION TO ANOTHER IN EITHER TIME OR SPACE. FOR THIS REASON, THE NATIONAL VERTICAL DATUM SHOULD NOT BE CONFUSED WITH MEAN SEA LEVEL. NGVD 29 IS NO LONGER SUPPORTED BY NGS.

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)=A FIXED REFERENCE FOR ELEVATIONS DETERMINED BY GEODETIC LEVELING. THE DATUM WAS DERIVED FROM A GENERAL ADJUSTMENT OF THE FIRST–ORDER TERRESTRIAL LEVELING NETS OF THE UNITED STATES, CANADA, AND MEXICO. IN THE ADJUSTMENT, ONLY THE HEIGHT OF THE PRIMARY TIDAL BENCH MARK, REFERENCED TO THE INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD 85) LOCAL MEAN SEA LEVEL HEIGHT VALUE, AT FATHER POINT, RIMOUSKI, QUEBEC, CANADA WAS HELD FIXED, THUS PROVIDING MINIMUM CONSTRAINT. NAVD 88 AND IGLD 85 ARE IDENTICAL. NAVD 88 SHOULD NOT BE USED AS MEAN SEA LEVEL.

SYAB FFE=SOUTH YARD ASSEMBLY BUILDING FINISHED FLOOR ELEVATION

TIDAL STATION DATUM=A FIXED BASE ELEVATION AT A TIDE STATION TO WHICH ALL WATER LEVEL MEASUREMENTS ARE REFERRED. THE DATUM IS UNIQUE TO EACH STATION AND IS ESTABLISHED AT A LOWER ELEVATION THAN THE WATER IS EVER EXPECTED TO REACH. IT IS REFERENCED TO THE PRIMARY BENCH MARK AT THE STATION AND IS HELD CONSTANT REGARDLESS OF CHANGES TO THE WATER LEVEL GAUGE OR TIDE STAFF. THE NEAREST TIDAL STATION FOR THE EB FACILITY IS TIDAL STATION 8461490 LOCATED IN NEW LONDON, CONNECTICUT.

UPLAND REVIEW AREA=AN AREA THAT EXTENDS 200 FEET FROM ALL WETLANDS AND WATERCOURSES AND MEANS A NON–WETLAND OR NON–WATERCOURSE AREA IN WHICH CERTAIN ACTIVITIES WOULD BE REGULATED BECAUSE IT BEST COVEYS THE REGULATORY SCHEME UNDER THE WETLAND STATUES WHEREIN A WETLAND AGENCY REVIEWS REGULATION ACTIVITIES CASE–BY–CASE AND APPROVES OR DISAPPROVES THEM ON THEIR MERITS.

IT ZONE=INDUSTRIAL/TECHNOLOGY ZONE

TC ZONE=TECHNOLOGY CAMPUS ZONE

R–5.1 ZONE=RESIDENTIAL 5.1 ZONE

AST=ABOVE GROUND STORAGE TANK

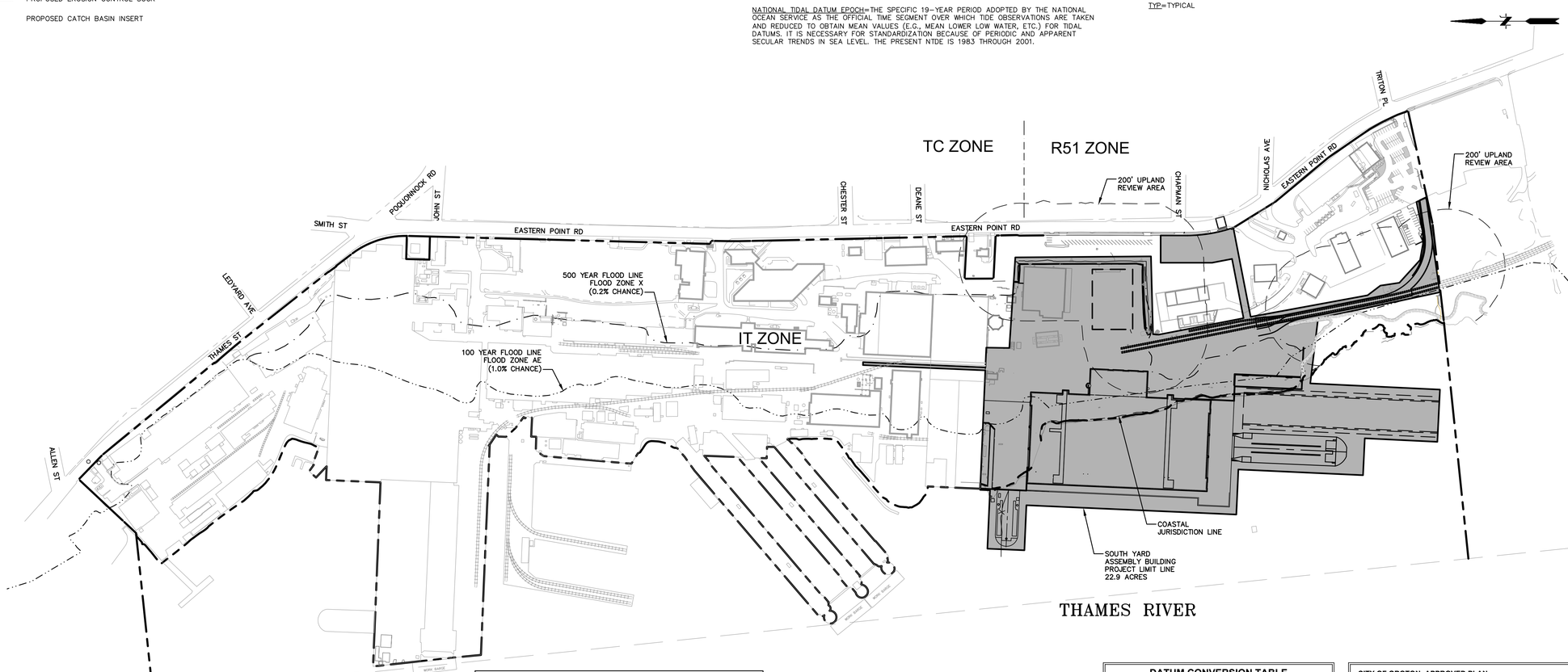
UST=UNDERGROUND STORAGE TANK

IWWC=INLAND WETLAND AND WATERCOURSES COMMISSION

PZC=PLANNING AND ZONING COMMISSION

SF=SQUARE FOOT

TYP=TYPICAL



ZONING REQUIREMENTS

ZONE: INDUSTRIAL / TECHNOLOGY

CATEGORY	EXISTING	REQUIRED	PROVIDED
LOT AREA (SF)	3,520,985±	40,000	3,520,985±
LOT WIDTH (FT)	4,578±	100	4,578±
LOT DEPTH[1] (FT)	578±	200	578±
FRONT YARD (FT)	30	30	30
SIDE YARD (FT)	200±	15	127±
REAR YARD (FT)	N/A	30	N/A
BUFFER STRIP (FT)	35±	25	30±
HEIGHT (FT)	N/A	75	145'±
LOT COVERAGE MAX. (%)	20%±	70%	20%±

1. LOT DEPTH WAS MEASURED FROM THE SOUTHEAST CORNER OF THE SYAB TO EASTERN POINT ROAD RIGHT OF WAY.

1

PARKING SUMMARY

PROPOSED USE:	EXISTING	REQUIRED	PROVIDED
WAREHOUSE, MANUFACTURING, AND LABORATORIES	4,028±	2,193	4,028±
ADA SPACES (INCLUDING VAN)	50	37	50
STANDARD SPACES	3,978±	2,156	3,978±

CITY PARKING REQUIREMENTS FOR MANUFACTURING AND INDUSTRIAL ESTABLISHMENTS: 1 SPACE PER THREE EMPLOYEES (6,578 TOTAL EMPLOYEES)

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	
				1.50
SYAB FFE	15.13	13.46	12.50	
				1.50
AE BFE	13.63	11.96	11.00	
				10.08
MHW	3.55	1.88	0.92	14.15
NAVD 88	2.63	0.96	0.00	0.92
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

200 0 200

GRAPHIC SCALE: 1"=200'

JACOBS
100 Great Meadow Road, Suite 707
Wethersfield, CT 06109

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www.fando.com

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STATE OF CONNECTICUT · KRISTEN E. SCOLLON · No. 22072 · LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

DISCLAIMER

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NO.	DATE	COMMENTS	BY	APVD
1	04-09-2019	CITY PLANNING		

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
PROJECT PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-001

SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-STP-01.dwg

PLOT DATE/TIME: 4/5/2019 2:14 PM

PROPERTY SURVEY
PROPERTY OF
ELECTRIC BOAT CORPORATION

EASTERN POINT ROAD AND THAMES STREET
GROTON, CONNECTICUT

DATE: NOVEMBER 18, 2016
REVISED: FEBRUARY 27, 2017

NOTES

1. THIS PLAN AND THE SURVEY IT IS BASED ON HAVE BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300B-1 THROUGH 20-300B-20, "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. THE TYPE OF SURVEY IS A PROPERTY SURVEY, THE BOUNDARY DETERMINATION CATEGORY IS A RESURVEY OF MAP REFERENCE A. THE HORIZONTAL ACCURACY CONFORMS TO CLASS A-2.

2. REFERENCE IS MADE TO THE FOLLOWING TOWN OF GROTON, CONNECTICUT LAND EVIDENCE RECORDS:

   A. SEE VOLUME 616 AT PAGE 888 FOR A QUIT CLAIM DEED DECEMBER 11, 1995 AND RECORDED DECEMBER 12, 1995 (FIRST TRACT).

   B. SEE VOLUME 656 AT PAGE 568 FOR AN EXECUTOR DEED DATED JANUARY 12 1998 AND RECORDED JANUARY 16, 1998 (11-25 EASTERN POINT ROAD PARCEL).

   C. SEE VOLUME 400 AT PAGE 402 FOR A DEED DATED MARCH 7, 1985 AND RECORDED MARCH 8, 1985 (P&W RAILROAD PARCEL).

   D. SEE VOLUME 364 AT PAGE 708 FOR A RIPARIAN/LITTORAL LINE AGREEMENT DATED SEPTEMBER 8, 1982 AND RECORDED SEPTEMBER 10, 1982 (SOUTHERLY LIMIT).

   E. SEE VOLUME 313 AT PAGE 187 FOR A RIPARIAN/LITTORAL LINE AGREEMENT DATED OCTOBER 20, 1977 AND RECORDED OCTOBER 25, 1977 (NORTHERLY LIMIT).

   F. SEE VOLUME 786 AT VOLUME 653 FOR A QUIT CLAIM DEED DATED SEPTEMBER 6, 2002 AND RECORDED OCTOBER 7, 2002 (4,667 S.F. TAKE BY CITY OF GROTON - EASTERN POINT ROAD).

   G. SEE VOLUME 786 AT VOLUME 655 FOR A QUIT CLAIM DEED DATED SEPTEMBER 6, 2002 AND RECORDED OCTOBER 7, 2002 (170 S.F. TAKE BY CITY OF GROTON - EASTERN POINT ROAD).

3. THE PROPERTY SHOWN HEREON MAY BE SUBJECT TO OR BENEFIT BY THE FOLLOWING EASEMENTS, RIGHTS OF WAY AND/OR AGREEMENTS:

   A. SEE VOLUME 300 AT PAGE 534 FOR EASEMENTS TO DRAIN INTO EXISTING DRAINAGE FACILITIES IN FAVOR OF STATE OF CONNECTICUT (WEST SIDE EASTERN POINT ROAD) -(SHEET 3 OF 3)

   B. SEE VOLUME 313 AT PAGE 187 REGARDING DRAINAGE RIGHTS (VICINITY OF SOUTHWESTERLY LINE OF PROPERTY ABUTTING ON THE NORTH) -(SHEET 1 OF 3)

   C. SEE VOLUME 400 AT PAGE 406 AND VOLUME 344 AT PAGE 1 FOR AGREEMENTS REGARDING THE STORAGE OF RAIL CARS (PARCEL OBTAINED FROM P&W RAILROAD) -(SHEET 3 OF 3)

   D. SEE VOLUME 400 AT PAGE 311 REGARDING RIGHTS TO DISCHARGE WATER THROUGH THE DRAINAGE PIPES ON THE ELECTRIC BOAT PROPERTY LOCATED ON THE WESTERLY SIDE OF THAMES STREET-(SHEET 2 OF 3)

   E. SEE VOLUME 427 AT PAGE 579 REGARDING 20' WIDE SANITARY SEWER EASEMENTS ALONG THE SOUTHERLY LINE OF THE SUBJECT PROPERTY AND EXTENDING INTO THE THAMES RIVER-(SHEET 3 OF 3)

   F. SEE VOLUME 851 AT PAGE 857 FOR A PRIVATE PROPERTY EASEMENT IN FAVOR OF THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY IN THE VICINITY OF POLES 80, 81, 84 AND 86 (EASTERN POINT ROAD OPPOSITE CHAPMAN STREET AND NICHOLAS AVENUE)-(SHEET 3 OF 3)

   G. SEE VOLUME 786 AT PAGE 653 FOR A DRAINAGE RIGHT OF WAY IN FAVOR OF CITY OF GROTON (EASTERN POINT ROAD)-(SHEET 3 OF 3)

   H. SEE VOLUME 786 AT PAGE 655 FOR A SIDEWALK EASEMENT IN FAVOR OF CITY OF GROTON (EASTERN POINT ROAD)-(SHEET 3 OF 3)

   I. SEE VOLUME 869 AT PAGE 538 FOR A DECLARATION OF ENVIRONMENTAL LAND USE RESTRICTION AND GRANT OF EASEMENT IN FAVOR OF STATE OF CONNECTICUT (ENTIRE PARCEL).

   J. SEE VOLUME 1009 AT PAGE 664 FOR A NOTICE OF SPECIAL PERMIT REGARDING APPROVAL OF FILL AND EXCAVATION AS PART OF AN ENVIRONMENTAL REMEDIATION PLAN AND ASSOCIATED SITE RESTORATION.

   K. SEE VOLUME 1075 AT PAGE 842 REGARDING A RETAINING WALL AND FENCE EASEMENT IN FAVOR OF CITY OF GROTON (SOUTHWEST SIDE OF THAMES STREET) -(SHEET 2 OF 3)

   L. SEE VOLUME 1024 AT PAGE 68 FOR A NOTICE THAT A FENCE MUST BE MAINTAINED IN THE PORTION OF THE PROPERTY REFERRED TO AS T-48/T-49 (SEE EXHIBIT A OF INSTRUMENT)-(SHEET 2 OF 3). THERE IS NO EVIDENCE OF T-48/T-49 OR FENCE AS OF DATE OF SURVEY.

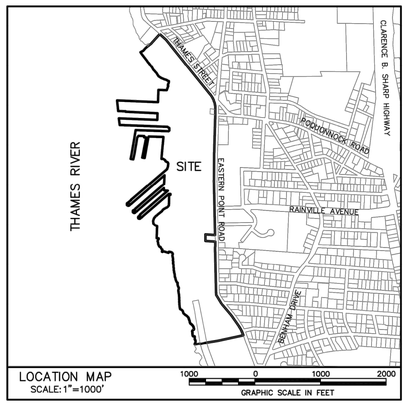
4. THE SUBJECT PROPERTY IS LOCATED ENTIRELY WITHIN THE CITY OF GROTON GI ZONE DISTRICT.

5. "NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP NEW LONDON COUNTY, CONNECTICUT ALL JURISDICTIONS PANELS 502 AND 504 OF 554, GROTON, CITY OF, COMMUNITY NUMBER 090126 MAP NUMBERS 09011C0502J AND 09011C0504J, EFFECTIVE DATE AUGUST 5, 2013 FEDERAL EMERGENCY MANAGEMENT AGENCY" INDICATES THAT PORTIONS OF THE SUBJECT PROPERTY ARE LOCATED WITHIN FLOOD HAZARD X, X(0.2%), AE EL11 AND VE EL14.

6. THE SUBJECT PROPERTY IS SHOWN ON THE TOWN OF GROTON TAX ASSESSOR MAP TILES 14 AND 15 AS P.I.N. 168806482153 AND 168810379073.

7. THE BASIS FOR BEARINGS AND COORDINATE IS CONNECTICUT COORDINATE SYSTEM NAD83 (GNSS). THE ELEVATIONS FOR MEAN HIGH WATER LINE (MHW), COASTAL JURISDICTION LINE (CJL) AND FLOOD HAZARD BOUNDARIES ARE REFERENCED TO NAVD88 (GNSS).

8. THIS PLAN REPRESENTS THE LOCATION OF THE BOUNDS DETERMINED BY FIELD SURVEY NOVEMBER 11-17, 2016. SITE IMPROVEMENTS WERE TAKEN FROM AERIAL MAPPING PREPARED IN SEPTEMBER 2016. RECORD TITLE AND ADJOINER INFORMATION WAS OBTAINED FROM TAX ASSESSOR AND LAND EVIDENCE RECORDS ON NOVEMBER 11, 2016.



LOCATION MAP
SCALE:1"=1000'

REFERENCE MAPS

A. EXHIBIT 'C' ALTA/ACSM LAND TITLE SURVEY MAP OF LAND OF ELECTRIC BOAT CORPORATION DEPICTING ENVIRONMENTAL LAND USE RESTRICTION AREA THAMES STREET & EASTERN POINT ROAD GROTON, CONNECTICUT SCALE: AS SHOWN DATE: JANUARY 21, 2002 REVISED THROUGH AUGUST 6, 2003 SHEETS 1-5 OF 5.

   IT IS THE SURVEYOR'S PROFESSIONAL OPINION THE SEVERAL DRILL HOLES ALONG THE WESTERLY SIDE OF EASTERN POINT ROAD WERE APPARENTLY ESTABLISHED SUBSEQUENT TO THE INITIAL SURVEY AND DO NOT FALL ON STREET LINE AS SHOWN ON THIS MAP AS INTENDED.

B. RIGHT OF WAY MAP CITY OF GROTON MAP SHOWING LAND ACQUIRED FROM ELECTRIC BOAT CORP. BY CITY OF GROTON WIDENING OF S.R. 349 (EASTERN POINT ROAD) SCALE" 1:250 TOWN NO. 58 PROJECT NO. 58-285 SERIAL NO. 001 SHEET 4 OF 6 DATE 2/15/02.

C. RIGHT OF WAY MAP CITY OF GROTON MAP SHOWING LAND ACQUIRED FROM ELECTRIC BOAT CORP. BY CITY OF GROTON WIDENING OF S.R. 349 (EASTERN POINT ROAD) SCALE" 1:250 TOWN NO. 58 PROJECT NO. 58-285 SERIAL NO. 001 SHEET 5 OF 6 DATE 2/15/02.

D. SEWER EASEMENTS TO BE ACQUIRED BY THE TOWN OF GROTON EASTERN POINT ROAD & THAMES RIVER GROTON, CONNECTICUT 1"=100' SEPTEMBER 1985 DEPARTMENT OF PUBLIC WORKS TOWN OF GROTON.

E. TOWN OF GROTON MAP SHOWING EASEMENT ACQUIRED FROM GENERAL DYNAMICS CORPORATION BY THE STATE OF CONNECTICUT S.R. 649 (EASTERN POINT ROAD) SCALE" 1"=20' DECEMBER 1974.

F. PLAN SHOWING PROPERTY OF AMERADA HESS CORPORATION AND EASEMENT TO BE GRANTED TO AMERADA HESS CORPORATION BY THE PROVIDENCE AND WORCESTER RAILROAD COMPANY EASTERN POINT ROAD GROTON, CONNECTICUT SCALE:1"=100' DATE: NOVEMBER 12,1987 DICESARE-BENTLEY ENGINEERS, INC. GROTON, CONNECTICUT.

G. BOUNDARY PLAN PROPERTY OF AMERADA HESS CORPORATION & GENERAL DYNAMICS CORP. EASTERN POINT ROAD GROTON, CONNECTICUT SCALE: 1"=100' DATE AUGUST 1982 REVISED THROUGH 10-12-1984 DICESARE-BENTLEY ENGINEERS, INC. GROTON, CONNECTICUT.

H. PLAN SHOWING PROPERTY LINE AND RIPARIAN LINE BETWEEN GENERAL DYNAMICS CORP. AND SALVATORE R. & ANTHONY J. GIORDANO THAMES STREET GROTON, CONNECTICUT SCALE: 1"=20' OCTOBER, 1970 DICESARE-BENTLEY-WELLING ENGRS. GROTON-NORWICH, CONNECTICUT.

I. MODIFICATION OF EXISTING SITE PLAN PROPERTY OF THE YOUNG WOMEN'S CHRISTIAN ASSOC. 476 THAMES STREET GROTON, CONNECTICUT SCALE: 1"=20' DATE:1980 REVISED THROUGH 7/2/84 DICESARE-BENTLEY ENGINEERS, INC. GROTON, CONNECTICUT.

J. RIGHT OF WAY MAP CITY OF GROTON MAP SHOWING EASEMENT ACQUIRED FROM AMERADA HESS CORP. BY CITY OF GROTON WIDENING OF S.R. 349 (EASTERN POINT ROAD) SCALE" 1:250 TOWN NO. 58 PROJECT NO. 58-285 SERIAL NO. 002 SHEET 1 OF 1 DATE 2/15/02.

DiCESARE-BENTLEY ENGINEERS, INC.
100 FORT HILL ROAD, GROTON, CONNECTICUT 06340
(860) 448-0400

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED ON SHEET 2.

MICHAEL J. SCANLON LICENSE # 14662 *DATE*

DB DWG. NO: 16-036.02

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Wethersfield, CT 06109

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DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
PROPERTY SURVEY OF ELECTRIC BOAT CORPORATION

Date: 13 FEB 2019
Drawing No.: SY-C-010
SHEET: OF

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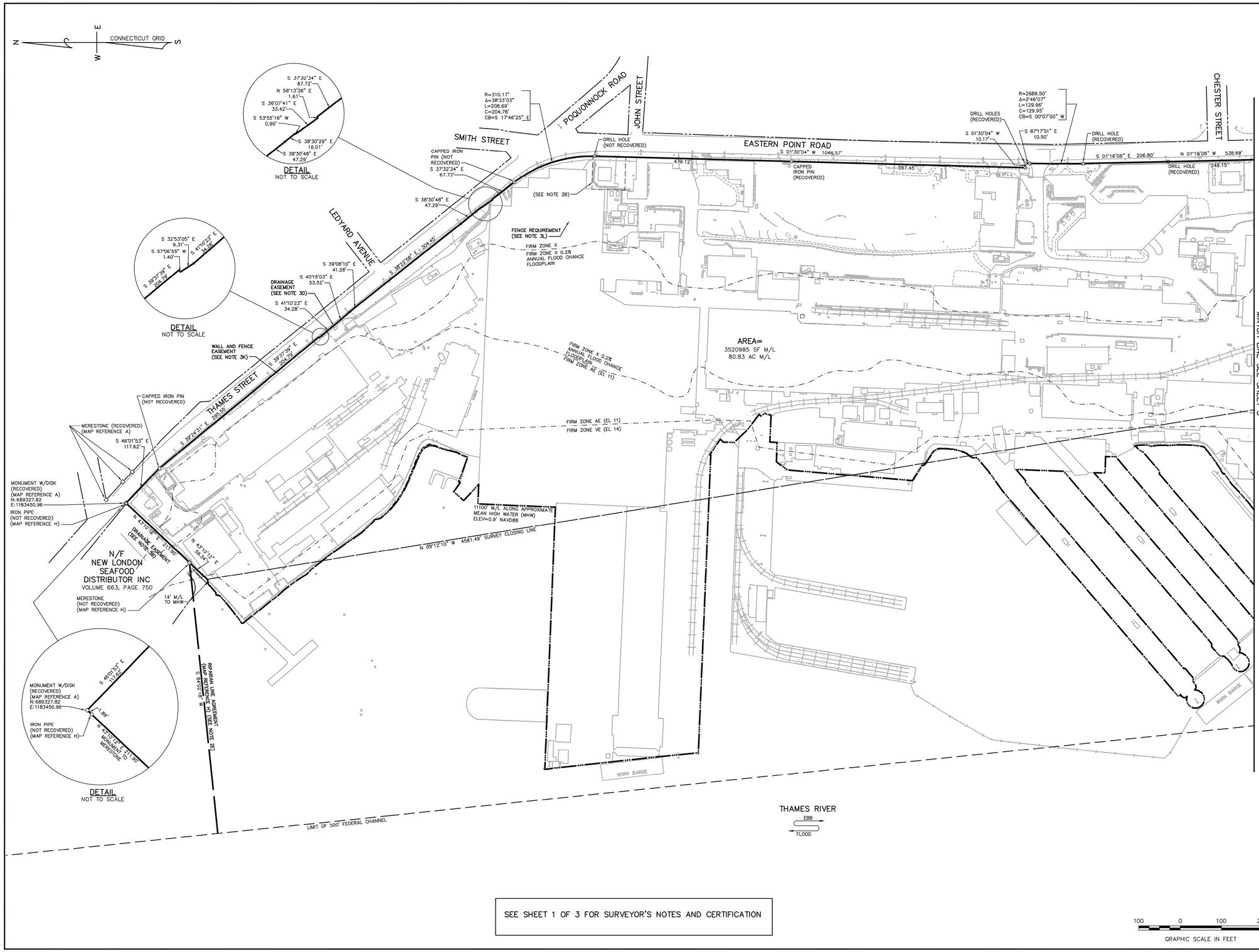
PLOT DATE/TIME: 2/6/2019 7:02 PM



NO	DATE	REVISIONS	BY	APVD
1	02/27/17	REVISED FEDERAL CHANNEL LOCATION	SEP	

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ENGINEERS / SURVEYORS / PLANNERS
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PH(860)448-0400 FX(860)448-0899
WWW.DBENGINEERS.COM

TITLE:
PROPERTY SURVEY
PROPERTY OF ELECTRIC BOAT CORPORATION
EASTERN POINT ROAD AND
THAMES STREET
GROTON, CONNECTICUT

DATE: NOVEMBER 18, 2016
SCALE: 1"=100'
DRAWN BY: SEP
CHECKED BY: MJS
JOB NO: 16-036
SHEET NO:
2 OF 3
DWG NO: 16D6613

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NO.	DATE	BY	APVD

ISSUE DATE: 13 FEB 2019
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DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
PROPERTY SURVEY OF ELECTRIC BOAT CORPORATION

Date: 13 FEB 2019
Drawing No.:
SY-C-011
SHEET: OF:

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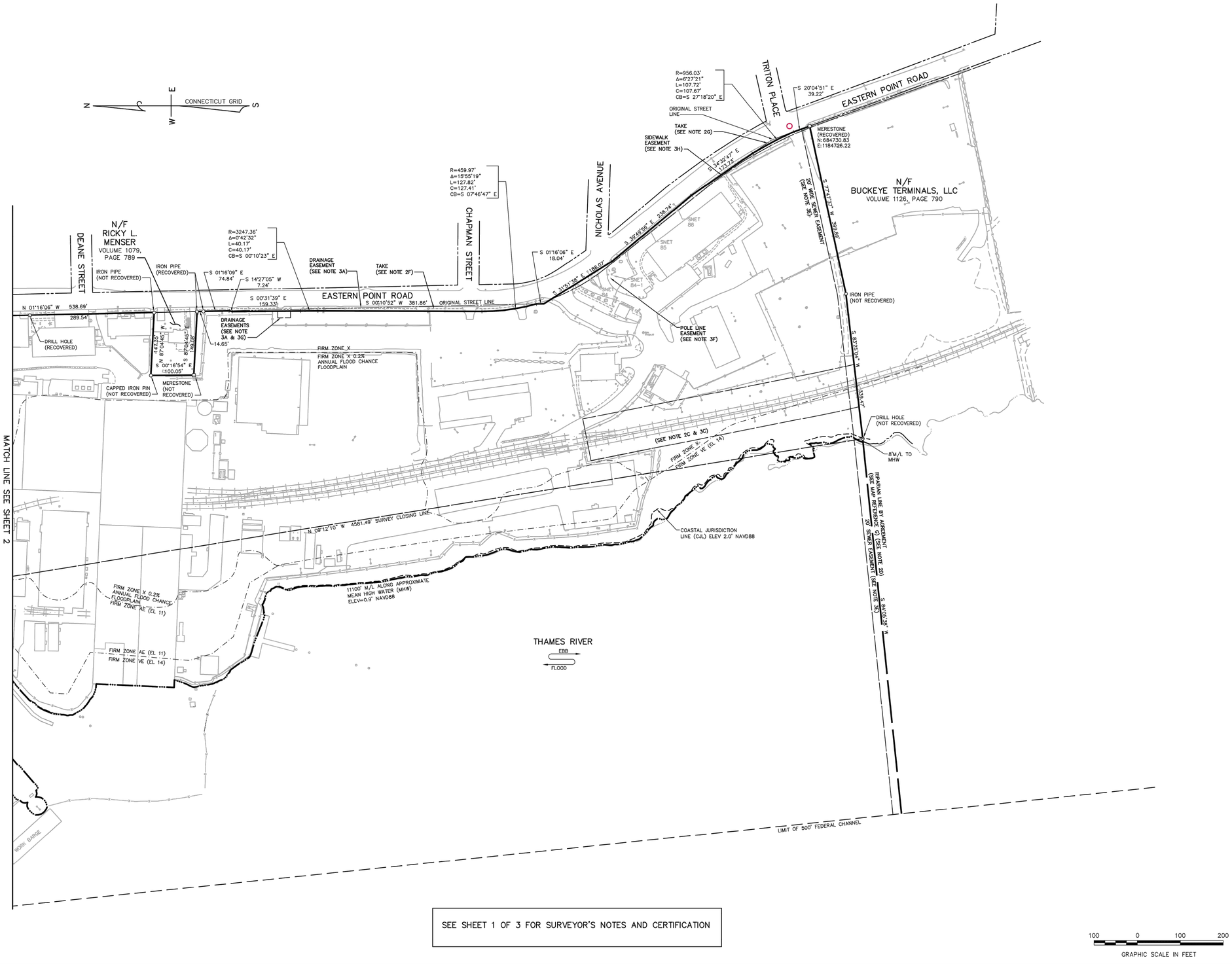

NO	DATE	DESCRIPTION	BY
1	02/27/17	REVISED FEDERAL CHANNEL LOCATION	SEP

REVISIONS

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WWW.DBENGINEERS.COM

TITLE:
PROPERTY SURVEY
PROPERTY OF ELECTRIC BOAT CORPORATION
EASTERN POINT ROAD AND
THAMES STREET
GROTON, CONNECTICUT

DATE: NOVEMBER XX, 2016
SCALE: 1"=100'
DRAWN BY: SEP
CHECKED BY: MJS
JOB NO: 16-036
SHEET NO:
3 OF 3
DWG NO: 16J036.04

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DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
PROPERTY SURVEY OF ELECTRIC BOAT CORPORATION

Date: 13 FEB 2019
Drawing No.:
SY-C-012
SHEET: OF

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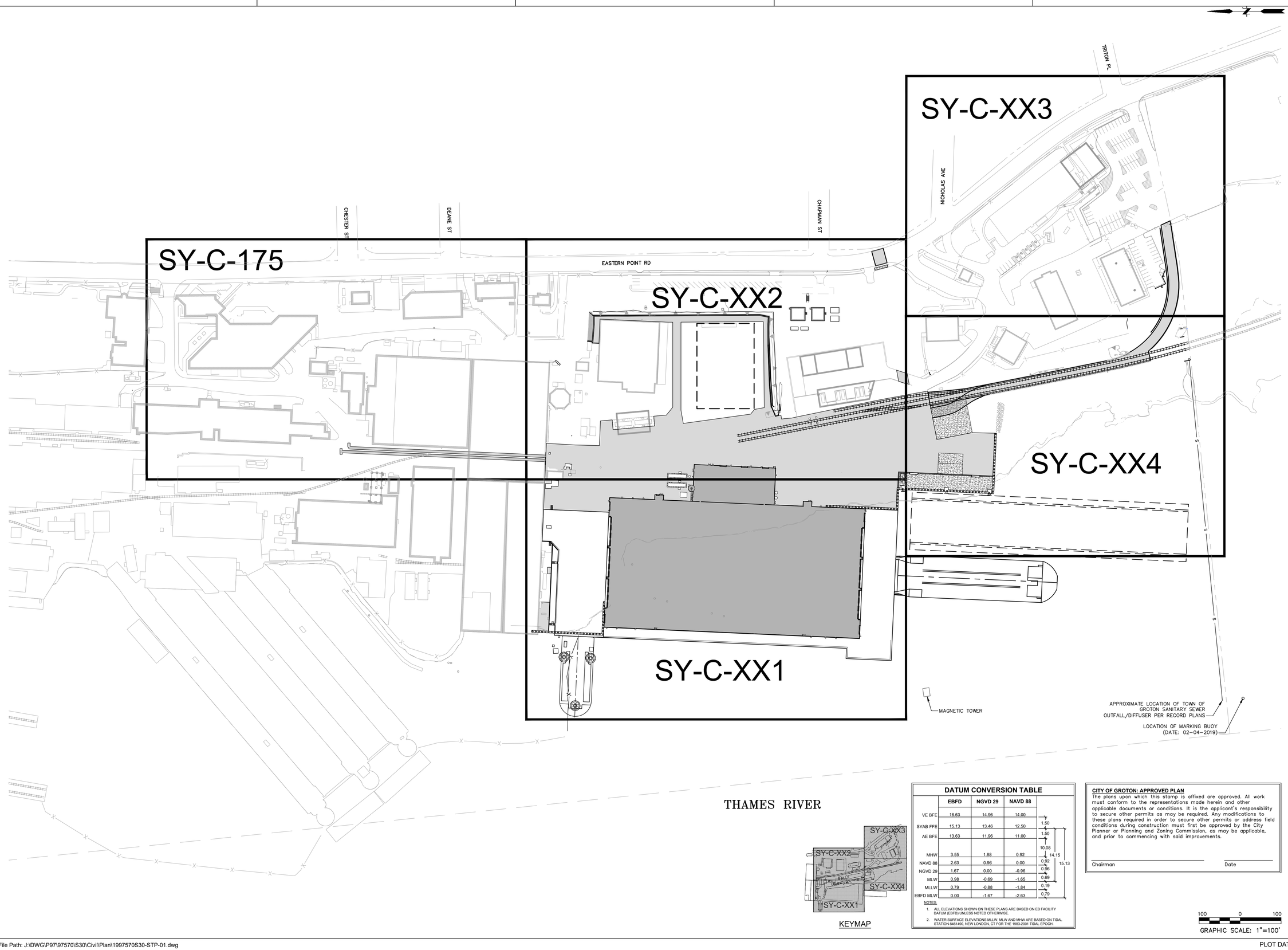

KEYMAP

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
SYAB FFE	15.13	13.46	12.50
AE BFE	13.63	11.96	11.00
MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50
1.50
10.08
14.15
15.13
0.92
0.96
0.69
0.19
0.79

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

CITY OF GROTON: APPROVED PLAN

The plans upon which this stamp is affixed are approved. All work must conform to the representations made herein and other applicable documents or conditions. It is the applicant's responsibility to secure other permits as may be required. Any modifications to these plans required in order to secure other permits or address field conditions during construction must first be approved by the City Planner or Planning and Zoning Commission, as may be applicable, and prior to commencing with said improvements.

Chairman _____ Date _____

100 0 100
GRAPHIC SCALE: 1"=100'

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STATE OF CONNECTICUT
KRISTEN E. SOLOMON
No. 22072
LICENSED PROFESSIONAL ENGINEER

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DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE LAYOUT KEY PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-100

SHEET: OF

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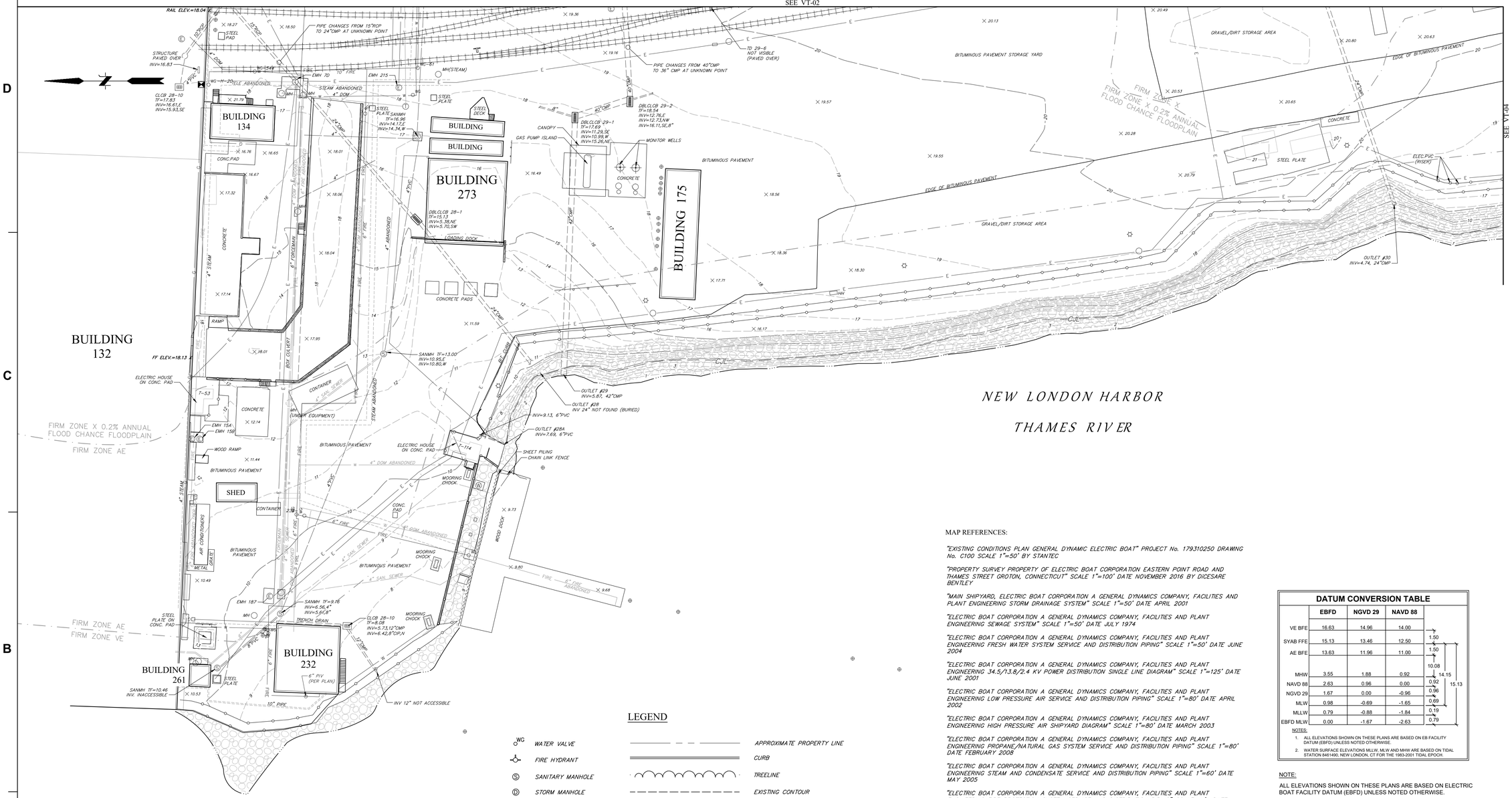
File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-STP-01.dwg

PLOT DATE/TIME: 4/5/2019 2:14 PM



MAP REFERENCES:

"EXISTING CONDITIONS PLAN GENERAL DYNAMIC ELECTRIC BOAT" PROJECT No. 179310250 DRAWING No. C100 SCALE 1"=50' BY STANTEC

"PROPERTY SURVEY PROPERTY OF ELECTRIC BOAT CORPORATION EASTERN POINT ROAD AND THAMES STREET GROTON, CONNECTICUT" SCALE 1"=100' DATE NOVEMBER 2016 BY DICESARE BENTLEY

"MAIN SHIPYARD, ELECTRIC BOAT CORPORATION A GENERAL DYNAMICS COMPANY, FACILITIES AND PLANT ENGINEERING STORM DRAINAGE SYSTEM" SCALE 1"=50' DATE APRIL 2001

"ELECTRIC BOAT CORPORATION A GENERAL DYNAMICS COMPANY, FACILITIES AND PLANT ENGINEERING SEWAGE SYSTEM" SCALE 1"=50' DATE JULY 1974

"ELECTRIC BOAT CORPORATION A GENERAL DYNAMICS COMPANY, FACILITIES AND PLANT ENGINEERING FRESH WATER SYSTEM SERVICE AND DISTRIBUTION PIPING" SCALE 1"=50' DATE JUNE 2004

"ELECTRIC BOAT CORPORATION A GENERAL DYNAMICS COMPANY, FACILITIES AND PLANT ENGINEERING 34.5/13.8/2.4 KV POWER DISTRIBUTION SINGLE LINE DIAGRAM" SCALE 1"=125' DATE JUNE 2001

"ELECTRIC BOAT CORPORATION A GENERAL DYNAMICS COMPANY, FACILITIES AND PLANT ENGINEERING LOW PRESSURE AIR SERVICE AND DISTRIBUTION PIPING" SCALE 1"=80' DATE APRIL 2002

"ELECTRIC BOAT CORPORATION A GENERAL DYNAMICS COMPANY, FACILITIES AND PLANT ENGINEERING HIGH PRESSURE AIR SHIPYARD DIAGRAM" SCALE 1"=80' DATE MARCH 2003

"ELECTRIC BOAT CORPORATION A GENERAL DYNAMICS COMPANY, FACILITIES AND PLANT ENGINEERING PROPANE/NATURAL GAS SYSTEM SERVICE AND DISTRIBUTION PIPING" SCALE 1"=80' DATE FEBRUARY 2008

"ELECTRIC BOAT CORPORATION A GENERAL DYNAMICS COMPANY, FACILITIES AND PLANT ENGINEERING STEAM AND CONDENSATE SERVICE AND DISTRIBUTION PIPING" SCALE 1"=60' DATE MAY 2005

"ELECTRIC BOAT CORPORATION A GENERAL DYNAMICS COMPANY, FACILITIES AND PLANT ENGINEERING FIRE PROTECTION SYSTEM SERVICE AND DISTRIBUTION PIPING" SCALE N/A DATE FEBRUARY 2002

SURVEY NOTES:

THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS PREPARED AND ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

THE TYPE OF SURVEY PERFORMED IS A TOPOGRAPHIC SURVEY, AND IS INTENDED TO DEPICT THE CONFIGURATION OF THE GROUND AND THE LOCATION OF NATURAL AND ARTIFICIAL OBJECTS THEREON.

NO BOUNDARY DETERMINATION WAS MADE OR IS IMPLIED AS A RESULT OF THIS SURVEY.

THE TOPOGRAPHIC SURVEY CONFORMS TO A CLASS T-2 TOPOGRAPHIC ACCURACY.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS MAP SHOULD NOT BE CONSIDERED AN ORIGINAL SIGNED AND SEALED SURVEY UNLESS IT BEARS THE EMBOSSED SEAL OR THE DIGITALLY ENCRYPTED ELECTRONIC SIGNATURE & SEAL OF THE LAND SURVEYOR BELOW.

MICHAEL L EARLEY PE LS — LICENSE # 70224

UNDERGROUND UTILITY NOTE:

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LEGEND

WATER VALVE	APPROXIMATE PROPERTY LINE
FIRE HYDRANT	CURB
SANITARY MANHOLE	TREELINE
STORM MANHOLE	EXISTING CONTOUR
ELECTRIC MANHOLE	INDEX CONTOUR
TELEPHONE MANHOLE	STORM DRAINAGE PIPE
BOLLARD/POST/DOLPHIN	SANITARY SEWER PIPE
GAS GATE	UNDERGROUND GAS
UTILITY POLE	WATER MAIN
GUY WIRE	UNDERGROUND ELECTRIC
CATCH BASIN	UNDERGROUND TELEPHONE
FLAT TOP CATCHBASIN	UNKNOWN UTILITY
SIGN	STEAM LINE
LIGHTPOLE	CHAIN LINK FENCE
MONITOR WELL	STOCKADE FENCE
DECIDUOUS TREE	STONE WALL
PINE TREE	GUIDE RAIL

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
SYAB FFE	15.13	13.46	12.50
AE BFE	13.63	11.96	11.00
MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50, 1.50, 10.08, 14.15, 15.13, 0.92, 0.96, 0.69, 0.19, 0.79

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

NOTE:
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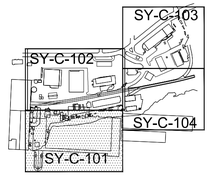

KEYMAP

30 0 30
GRAPHIC SCALE: 1"=30'

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JACOBS ENGINEERING GROUP INC.
ADDRESS

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MANCHESTER, CONNECTICUT 06040
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SURVEYED BY: PAUL CHARETTE
DRAWN BY: KAREN SILKOWSKI
CHECKED BY: MICHAEL EARLEY
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: 1997570.S30.

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
TOPOGRAPHIC SURVEY

Date: 13 FEB 2019

Drawing No.:
SY-C-101

SHEET: — OF XXX

ISSUED FOR PERMIT

LEGEND

- WATER VALVE
- FIRE HYDRANT
- SANITARY MANHOLE
- STORM MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- BOLLARD/POST
- GAS GATE
- UTILITY POLE
- GUY WIRE
- CATCH BASIN
- FLAT TOP CATCHBASIN
- SIGN
- LIGHTPOLE
- MONITOR WELL
- DECIDUOUS TREE
- PINE TREE
- APPROXIMATE PROPERTY LINE
- CURB
- TREELINE
- EXISTING CONTOUR
- INDEX CONTOUR
- STORM DRAINAGE PIPE
- SANITARY SEWER PIPE
- UNDERGROUND GAS
- WATER MAIN
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE
- UNKNOWN UTILITY
- STEAM LINE
- CHAIN LINK FENCE
- STOCKADE FENCE
- STONE WALL
- GUIDE RAIL

UNDERGROUND UTILITY NOTE:

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DATUM CONVERSION TABLE

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EBFD MLW	0.00	-1.67	-2.63

1.50, 1.50, 10.08 = 14.15; 0.92, 0.96, 0.69, 0.19, 0.79 = 15.13

NOTES:
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2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

NOTE:

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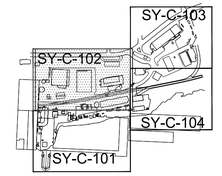
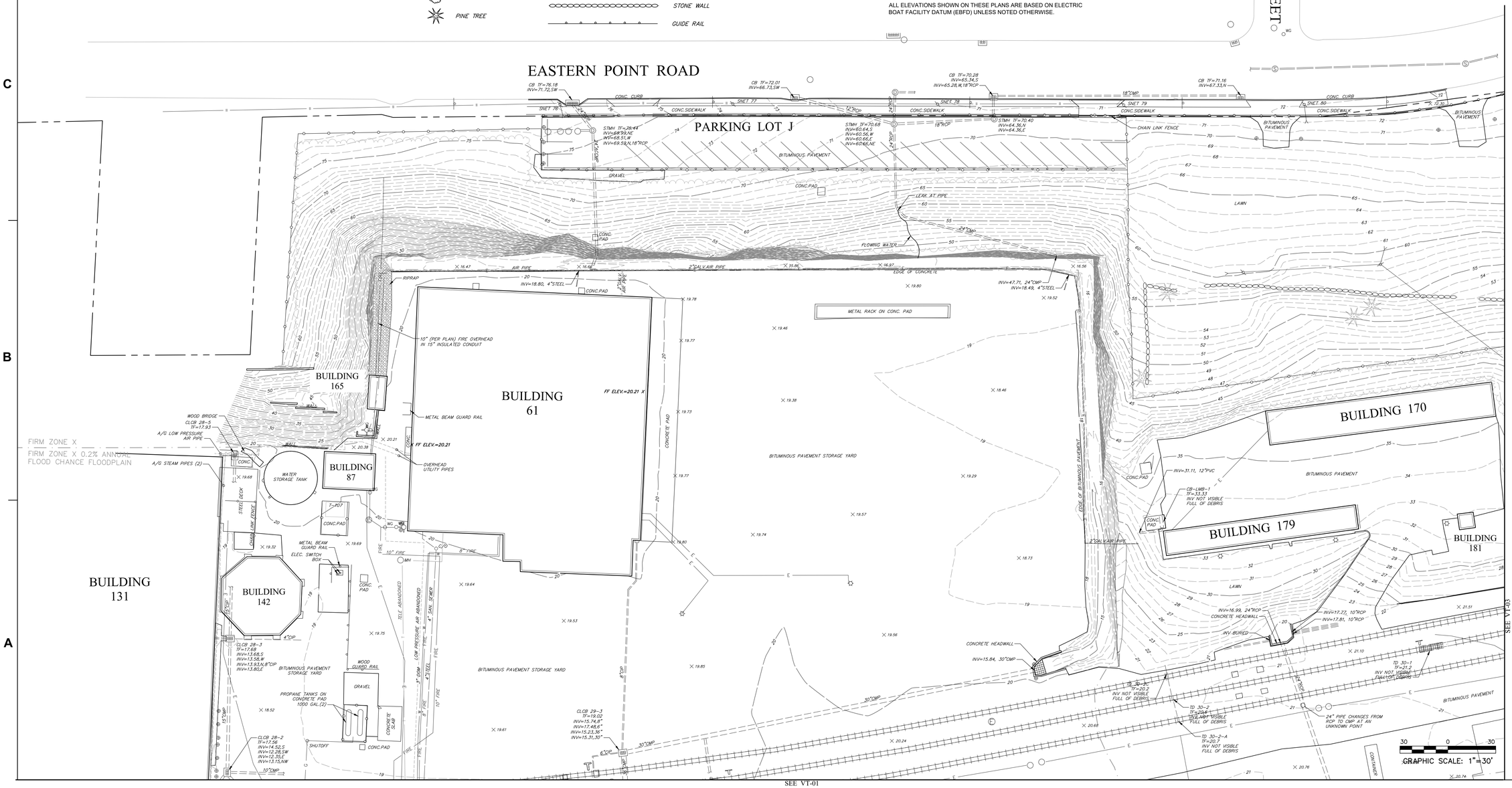


KEYMAP



JACOBS

JACOBS ENGINEERING GROUP INC.
ADDRESS

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NO.	DATE	BY	APVD

GENERAL DYNAMICS

GD

Electric Boat

South Yard Assembly Building (SYAB)

TOPOGRAPHIC SURVEY

Date: 13 FEB 2019

Drawing No.:

SY-C-102

SHEET: – OF XXX

SURVEYED BY: PAUL CHARETTE
DRAWN BY: KAREN SILKOWSKI
CHECKED BY: MICHAEL EARLEY
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: 1997570.S30.

ISSUE DATE: 13 FEB 2019
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LEGEND

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FIRE HYDRANT	CURB
S SANITARY MANHOLE	TREELINE
D STORM MANHOLE	EXISTING CONTOUR
E ELECTRIC MANHOLE	00 INDEX CONTOUR
T TELEPHONE MANHOLE	STORM DRAINAGE PIPE
BOLLARD/POST	SANITARY SEWER PIPE
GG GAS GATE	G UNDERGROUND GAS
UTILITY POLE	W WATER MAIN
GUY WIRE	E UNDERGROUND ELECTRIC
CATCH BASIN	T UNDERGROUND TELEPHONE
FLAT TOP CATCHBASIN	UNKNOWN UTILITY
SIGN	STEAM STEAM LINE
LIGHTPOLE	CHAIN LINK FENCE
MONITOR WELL	STOCKADE FENCE
DECIDUOUS TREE	STONE WALL
PINE TREE	GUIDE RAIL

UNDERGROUND UTILITY NOTE:

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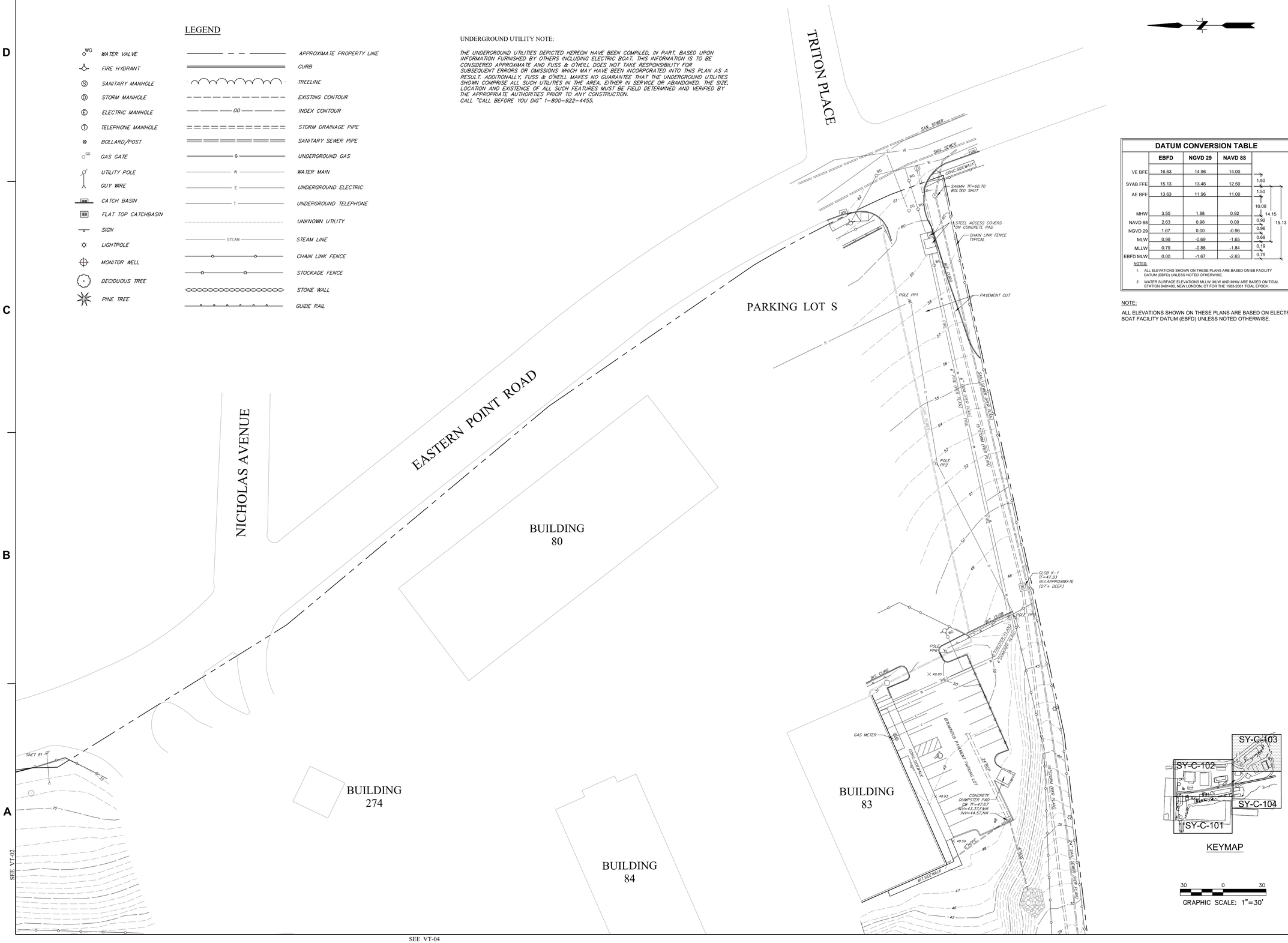
CALL "CALL BEFORE YOU DIG" 1-800-922-4455.



DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
SYAB FFE	15.13	13.46	12.50
AE BFE	13.63	11.96	11.00
MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50 · 1.50 · 10.08 = 14.15 · 0.92 · 0.96 · 0.69 · 0.19 · 0.79 = 15.13

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

NOTE:

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KEYMAP

30 0 30
GRAPHIC SCALE: 1"=30'

JACOBS
JACOBS ENGINEERING GROUP INC.
ADDRESS

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fuss-o.com

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NO.	DATE	BY	APV'D

SURVEYED BY: PAUL CHARETTE
DRAWN BY: KAREN SILKOWSKI
CHECKED BY: MICHAEL EARLEY
SUBMITTED BY: JOHN OSOSKIE
ISSUE DATE: 13 FEB 2019
DRAWING CODE: TBD
BORDER SIZE: ARCH D 24x36
FILE NAME: 1997570.S30.

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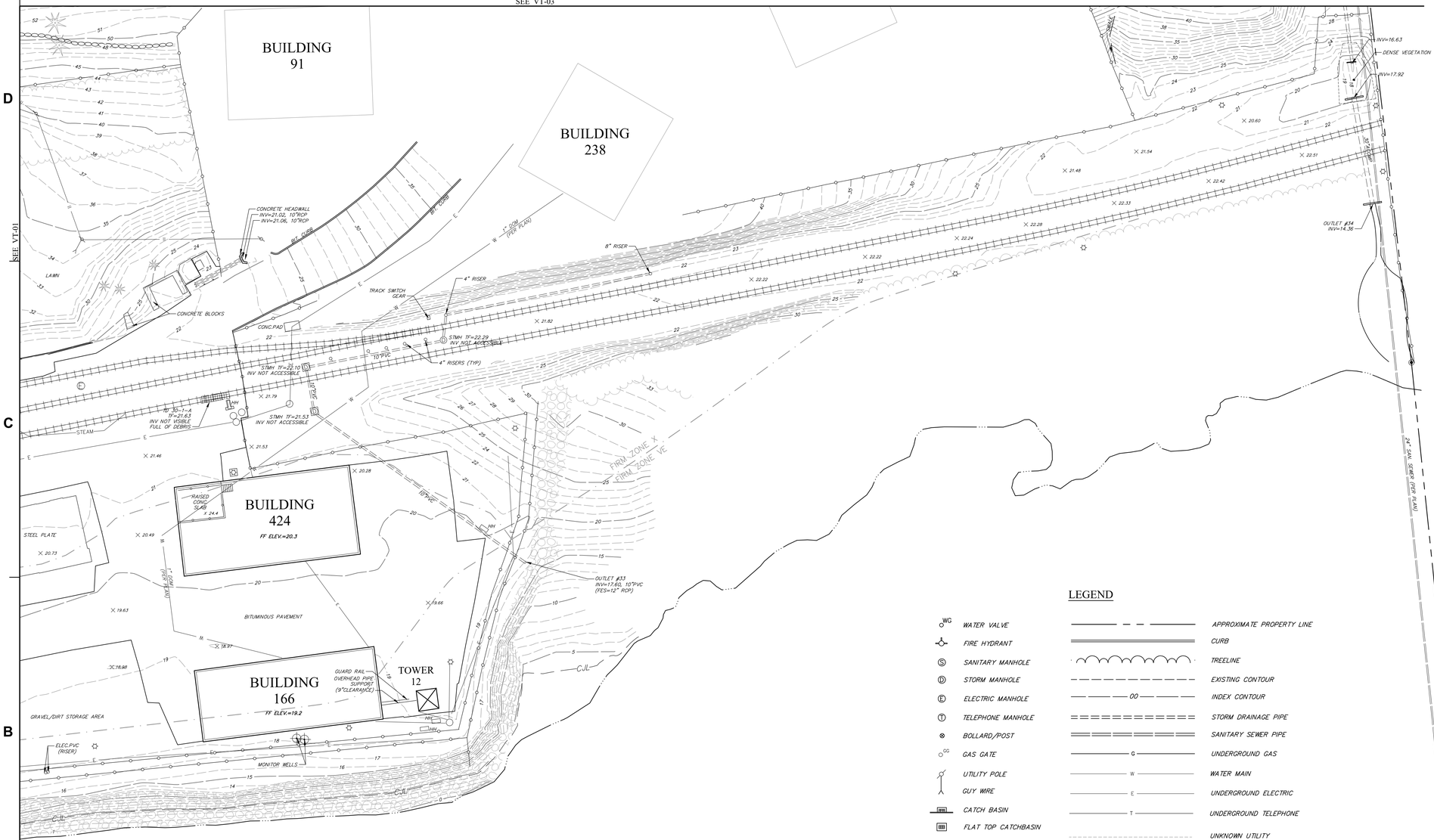
GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

TOPOGRAPHIC SURVEY

Date: 13 FEB 2019

Drawing No.:
SY-C-103

SHEET: – OF XXX



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MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50
1.50
10.08
14.15
15.13
0.92
0.96
0.69
0.19
0.79

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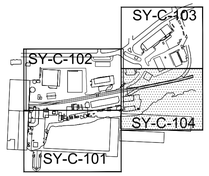
LEGEND

- WATER VALVE
- FIRE HYDRANT
- SANITARY MANHOLE
- STORM MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- BOLLARD/POST
- GAS GATE
- UTILITY POLE
- GUY WIRE
- CATCH BASIN
- FLAT TOP CATCHBASIN
- SIGN
- LIGHTPOLE
- MONITOR WELL
- DECIDUOUS TREE
- PINE TREE

- APPROXIMATE PROPERTY LINE
- CURB
- TREELINE
- EXISTING CONTOUR
- INDEX CONTOUR
- STORM DRAINAGE PIPE
- SANITARY SEWER PIPE
- UNDERGROUND GAS
- WATER MAIN
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE
- UNKNOWN UTILITY
- STEAM LINE
- CHAIN LINK FENCE
- STOCKADE FENCE
- STONE WALL
- GUIDE RAIL



KEYMAP

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GRAPHIC SCALE: 1"=30'

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NO.	DATE	BY	APVD

ISSUE DATE: 13 FEB 2019
DRAWING CODE: TBD
BORDER SIZE: ARCH D 24x36

SURVEYED BY: PAUL CHARETTE
DRAWN BY: KAREN SILKOWSKI
CHECKED BY: MICHAEL EARLEY
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: 1997570.S30.

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

TOPOGRAPHIC SURVEY

Date: 13 FEB 2019
Drawing No.: SY-C-104
SHEET: – OF XXX

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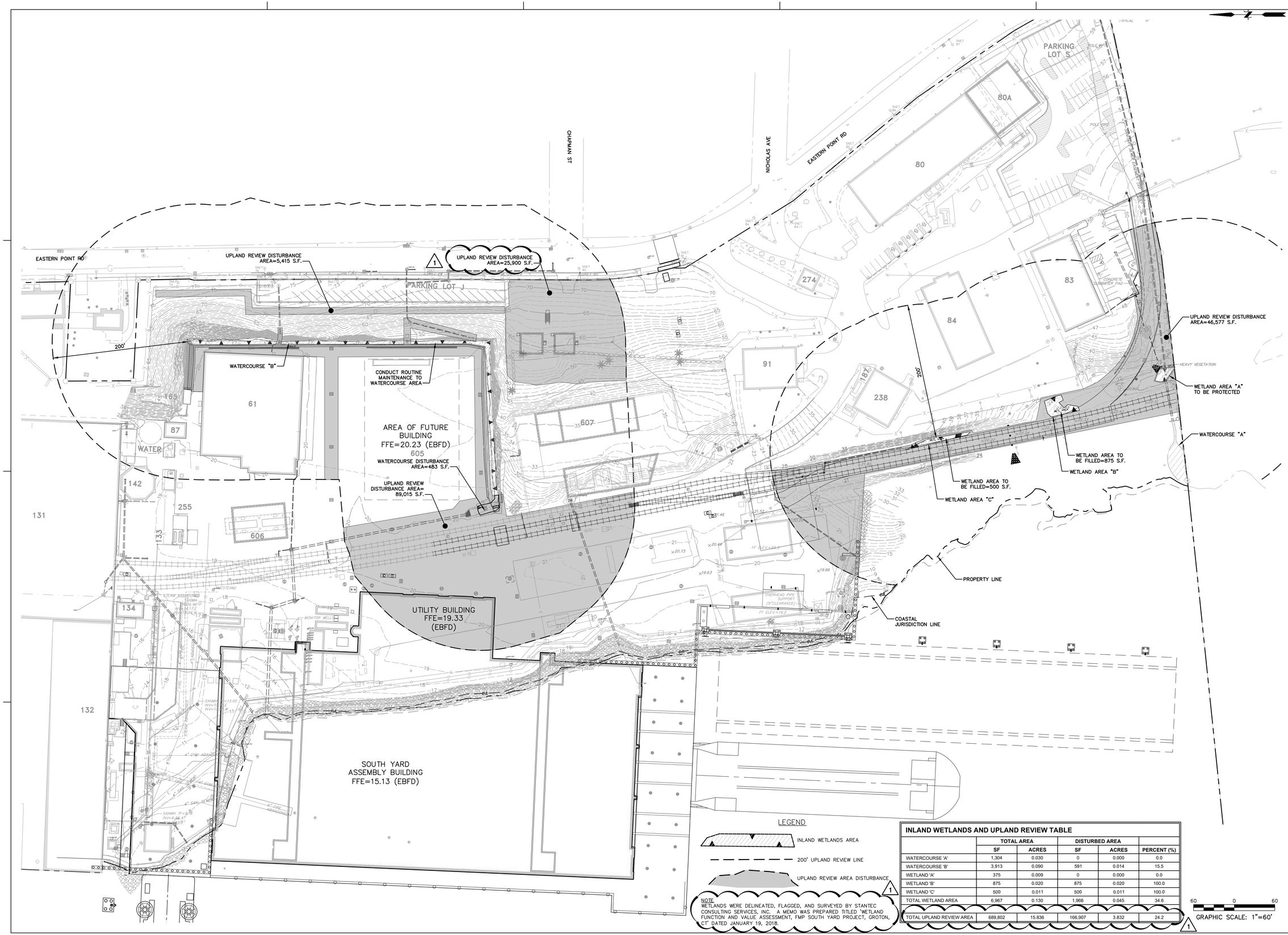

INLAND WETLANDS AND UPLAND REVIEW TABLE

	TOTAL AREA		DISTURBED AREA		
	SF	ACRES	SF	ACRES	PERCENT (%)
WATERCOURSE 'A'	1,304	0.030	0	0.000	0.0
WATERCOURSE 'B'	3,913	0.090	591	0.014	15.5
WETLAND 'A'	375	0.009	0	0.000	0.0
WETLAND 'B'	875	0.020	875	0.020	100.0
WETLAND 'C'	500	0.011	500	0.011	100.0
TOTAL WETLAND AREA	6,967	0.130	1,966	0.045	34.6
TOTAL UPLAND REVIEW AREA	689,802	15.836	166,907	3.832	24.2

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STATE OF CONNECTICUT · KRISTEN E. SOUKUP · No. 22072 · LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE	BY	APVD
1	04-09-2019	CITY PLANNING COMMENTS	

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24X36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

WETLANDS PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-110

SHEET: OF

ISSUED FOR PERMIT

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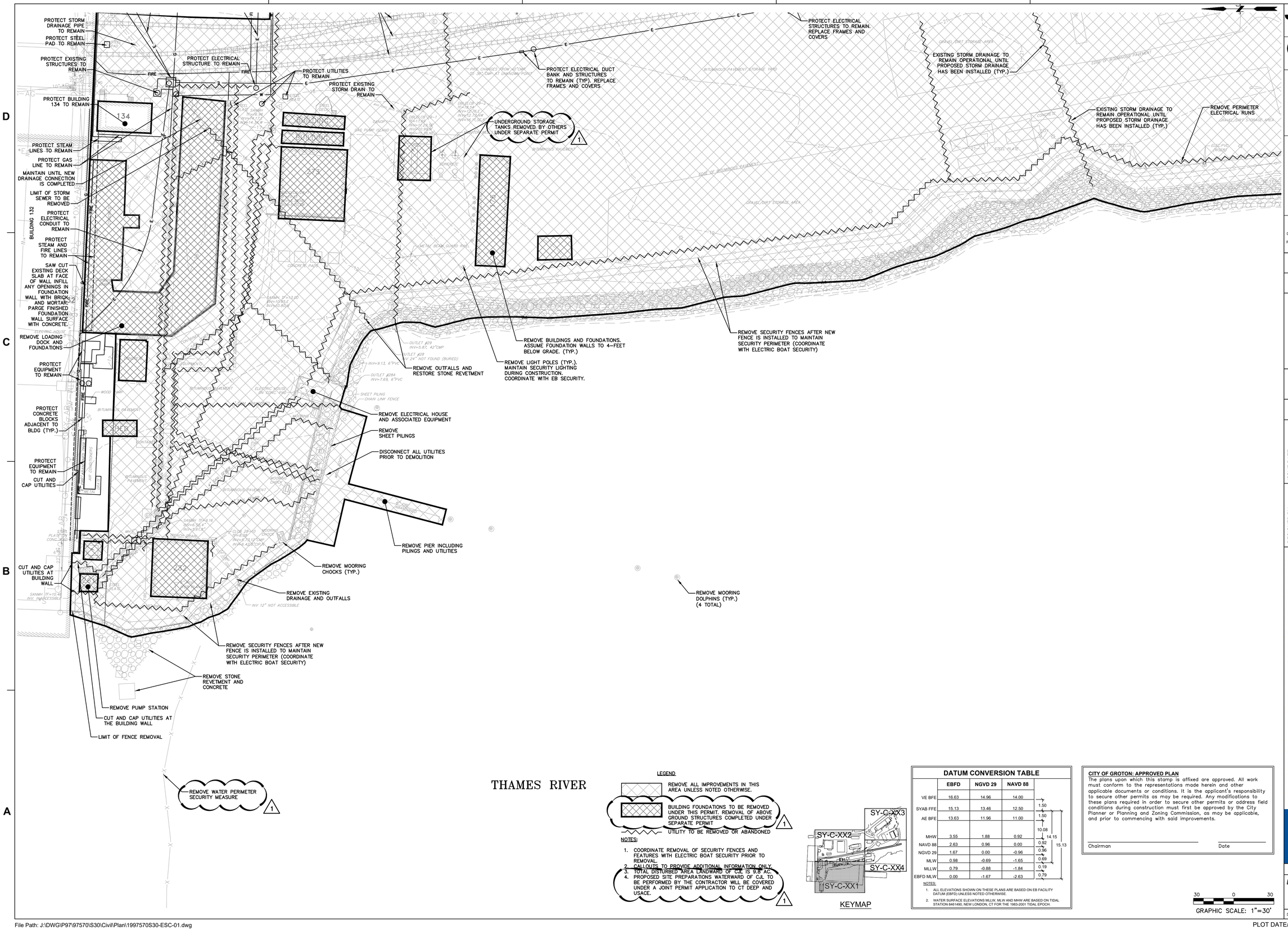
PLOT DATE/TIME: 4/5/2019 1:55 PM



LEGEND

REMOVE ALL IMPROVEMENTS IN THIS AREA UNLESS NOTED OTHERWISE.

BUILDING FOUNDATIONS TO BE REMOVED UNDER THIS PERMIT. REMOVAL OF ABOVE GROUND STRUCTURES COMPLETED UNDER SEPARATE PERMIT

1

UTILITY TO BE REMOVED OR ABANDONED

NOTES:

1. COORDINATE REMOVAL OF SECURITY FENCES AND FEATURES WITH ELECTRIC BOAT SECURITY PRIOR TO REMOVAL.
2. CALLOUTS TO PROVIDE ADDITIONAL INFORMATION ONLY.
3. TOTAL DISTURBED AREA LANDWARD OF C.J.L IS 9.5 AC.
4. PROPOSED SITE PREPARATIONS WATERWARD OF C.J.L TO BE PERFORMED BY THE CONTRACTOR WILL BE COVERED UNDER A JOINT PERMIT APPLICATION TO CT DEEP AND USACE.

1

KEYMAP

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
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MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50
1.50
10.08
14.15
15.13
0.92
0.96
0.69
0.19
0.79

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CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

30 0 30

GRAPHIC SCALE: 1"=30'

JACOBS
100 Great Meadow Road, Suite 707
Wethersfield, CT 06109

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fando.com

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STATE OF CONNECTICUT — KRISTEN E. SOLOMON — No. 22072 — LICENSED PROFESSIONAL ENGINEER

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NO.	DATE		BY	APVD
1	04-09-2019	CITY PLANNING COMMENTS		

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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REUSE OF DOCUMENTS:

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE PREPARATION PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-111

SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-ESC-01.dwg

PLOT DATE/TIME: 4/5/2019 12:11 PM

EASTERN POINT ROAD

PARKING LOT J

AREA TO BE CLEARED FOR LANDSCAPING

CONCRETE PAD TO REMAIN

REMOVE AND REPLACE STORM SEWER AND BRACING

CAP EXISTING DRAIN

PROTECT EXISTING UTILITIES TO REMAIN

RIPRAP TO REMAIN

PROTECT EXISTING VEGETATION TO REMAIN

REMOVE AND REPLACE STORM SEWER

RELOCATE EXISTING PIPING RACK TO MOUNT TO NEW WALL

METAL RACK ON CONC. PAD

PROTECT UTILITIES AND CONNECTIONS IN ROADWAY

EXISTING CURB CUT TO REMAIN

EXISTING CURB CUT TO REMAIN

REMOVE AND RESTORE SECTI OF FENCE

REMC SECTI

PROTECT SECTION OF WALL TO REMAIN

REMOVE AND RESTORE SECTION OF WALL

RELOCATE OVERHEAD POWER LINE AND POLES. COORDINATE WITH ELECTRIC BOAT. (TYP.)

CLEAN OUT WATER COURSE TO RESTORE PROPER FLOW CAPACITY

PROTECT EXISTING UTILITIES TO REMAIN

STORAGE BINS TO BE RELOCATED DURING CENTRAL WASTE FACILITY PROJECT

PROTECT EXISTING UTILITY STRUCTURE

APPROXIMATE LIMIT OF TRACK TO BE REMOVED AND REPLACED

REMOVE AND REPLACE RAILROAD TRACKS

REMOVE EXISTING LIGHT TOWER AND E MAINTAIN ELECTRICAL SERVICE DU CONSTRUCTION FOR TEMPORARY MO SECURITY LIGHTING DURING CONSTRUC

PROTECT AND MAINTAIN JACKING PADS TO REMAIN (TYP OF 4)

PROTECT ELECTRICAL STRUCTURES TO REMAIN. REPLACE FRAMES AND COVERS

EXISTING STORM DRAINAGE TO REMAIN OPERATIONAL UNTIL PROPOSED STORM DRAINAGE HAS BEEN INSTALLED (TYP.)

PROTECT ELECTRICAL CONDUITS TO REMAIN

PROTECT LIGHT POLES TO REMAIN

REMOVE HEADWALL AND STORM SEWERS. MAINTAIN OR PROVIDE BYPASS UNTIL NEW HEADWALL AND STORM SEWER IS CONSTRUCTED

PROTECT EXISTING UTILITY STRUCTURE

APPROXIMATE LIMITS OF TRACKS TO BE REMOVED AND REPLACED

TIE IN POINT FOR NEW SANITARY SEWER LINE CONNECTION. MAINTAIN EXISTING CONNECTION UNTIL NEW CONNECTION IS COMPLETE

RECENTLY INSTALLED PUMP STATION AND ASSOCIATE PIPING TO REMAIN UNTIL NEW PUMP STATION AND SEWERS ARE CONSTRUCTED

PROTECT ELECTRICAL LINE TO REMAIN (TYP.)

PROTECT ELECTRIC LINE TO REMAIN

PROTECT STORM DRAINAGE PIPE TO REMAIN

PROTECT STEEL PAD TO REMAIN

PROTECT EXISTING STRUCTURES TO REMAIN

PROTECT ELECTRICAL STRUCTURE TO REMAIN

PROTECT UTILITIES TO REMAIN

PROTECT EXISTING STORM DRAIN TO REMAIN

PROTECT BUILDING 134 TO REMAIN

REMOVE TRACKS

PROTECT ELECTRICAL DUCT BANK AND STRUCTURES TO REMAIN (TYP). REPLACE FRAMES AND COVERS

UNDERGROUND STORAGE TANKS REMOVED BY OTHERS UNDER SEPARATE PERMIT

PROTECT STEAM LINES TO REMAIN

PROTECT GAS LINE TO REMAIN

MAINTAIN UNTIL NEW RAINAGE CONNECTION IS COMPLETED

LIMIT OF STORM SEWER TO BE REMOVED

PROTECT ELECTRICAL CONDUIT TO REMAIN

PROTECT STEAM AND FIRE LINES TO REMAIN

BUILDING 132

61 · 87 · 142 · 165 · 131 · 255 · 606 · 605 · 607 · 133 · 134 · 135

WATER STORAGE TANK WATER

BUILDING 135

BUILDING 134

LEGEND

REMOVE ALL IMPROVEMENTS IN THIS AREA UNLESS NOTED OTHERWISE.

BUILDING FOUNDATIONS TO BE REMOVED UNDER THIS PERMIT. REMOVAL OF ABOVE GROUND STRUCTURES COMPLETED UNDER SEPARATE PERMIT

UTILITY TO BE REMOVED OR ABANDONED

NOTES:

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3. TOTAL DISTURBED AREA LANDWARD OF CJL IS 9.8 AC.
4. PROPOSED SITE PREPARATIONS WATERWARD OF CJL TO BE PERFORMED BY THE CONTRACTOR WILL BE COVERED UNDER A JOINT PERMIT APPLICATION TO CT DEEP AND USACE.

KEYMAP

SY-C-XX1 · SY-C-XX2 · SY-C-XX3 · SY-C-XX4

DATUM CONVERSION TABLE

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VE BFE	16.63	14.96	14.00	1.50
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NAVD 88	2.63	0.96	0.00	0.96
NGVD 29	1.67	0.00	-0.96	0.69
MLW	0.98	-0.69	-1.65	0.19
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EBFD MLW	0.00	-1.67	-2.63	

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Chairman _____ Date _____

30 0 30

GRAPHIC SCALE: 1"=30'

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STATE OF CONNECTICUT · KRISTEN E. SCOTT · No. 22072 · LICENSED PROFESSIONAL ENGINEER

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ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24X36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE PREPARATION PLAN

Date: 13 FEB 2019

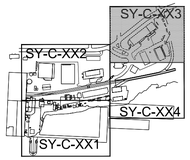
Drawing No.:
SY-C-112

SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-ESC-01.dwg

PLOT DATE/TIME: 4/5/2019 12:11 PM



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MLW	0.98	-0.69	-1.65	0.19
MLLW	0.79	-0.88	-1.84	0.79
EBFD MLW	0.00	-1.67	-2.63	

14.15 | 15.13

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Chairman _____ Date _____

30 0 30
GRAPHIC SCALE: 1"=30'

LEGEND
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EASTERN POINT ROAD
NICHOLAS AVENUE
PARKING LOT S
80A
80
83
84
91
274
187
238
PROTECT UTILITIES AND CONNECTIONS IN ROADWAY
EXISTING CURB CUT TO REMAIN
REMOVE AND RESTORE SECTION OF FENCE
REMOVE AND RESTORE SECTION OF FENCE
PROTECT SECTION OF WALL TO REMAIN
REMOVE AND RESTORE SECTION OF WALL
BEGIN FENCE REMOVAL
RELOCATE UTILITY POLE/LIGHT
RELOCATE SECURITY GATE
REMOVE BITUMINOUS CURB
APPROXIMATE TEXT PIT LOCATION
PROTECT EXISTING WATER AND FIRE SERVICES. VERIFY LOCATION WITH FIELD TEST PIT AT START OF WORK
REMOVE AND RELOCATE PERIMETER SECURITY FENCE
PROTECT PERIMETER SECURITY FENCE
PROTECT LIGHT POLE
PROTECT LIGHT POLE
PROTECT STORM TO REMAIN
PROTECT SANITARY SEWER
REMOVE SETTLING BASIN WHEN NEW DRAINAGE SYSTEM IS CONNECTED
RELOCATE LIGHT POLE
PROTECT WETLAND AREA AND STORMWATER STRUCTURES
END FENCE REMOVAL
WETLAND AREA TO BE UNDERDRAINED AND FILLED (875 SF)
PROTECT EXISTING FENCE TO REMAIN
LIMITS OF TRACKS TO BE

JACOBS
100 Great Meadow Road, Suite 707
Wethersfield, CT 06109

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fando.com

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STATE OF CONNECTICUT
KRISTEN E. SCOLLON
No. 22072
LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

DISCLAIMER
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NO.	DATE		BY	APVD
1	04-09-2019	CITY PLANNING COMMENTS		

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36
DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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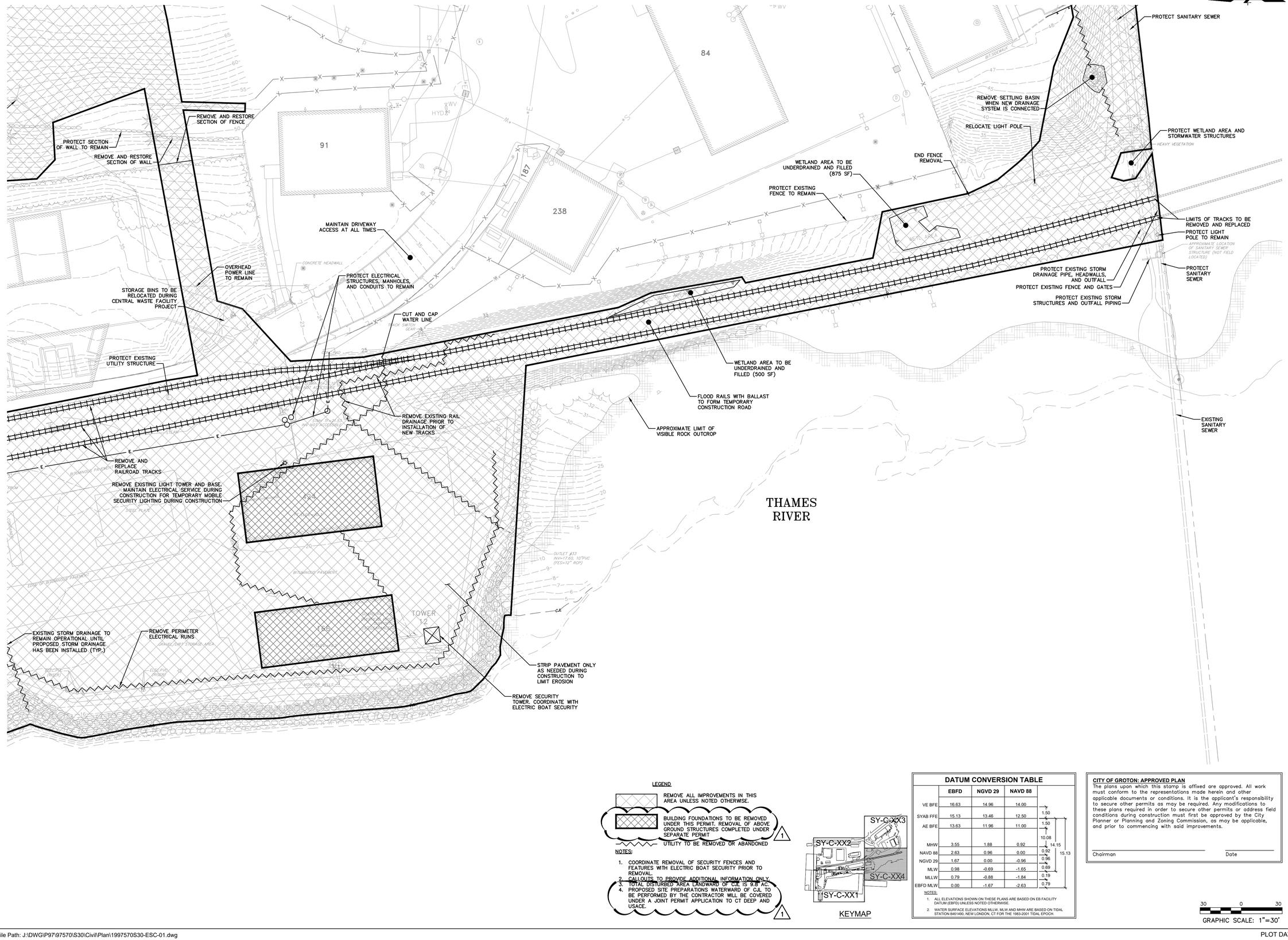
GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE PREPARATION PLAN

Date: 13 FEB 2019
Drawing No.:
SY-C-113
SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-ESC-01.dwg
PLOT DATE/TIME: 4/5/2019 12:11 PM



LEGEND

REMOVE ALL IMPROVEMENTS IN THIS AREA UNLESS NOTED OTHERWISE.

BUILDING FOUNDATIONS TO BE REMOVED UNDER THIS PERMIT. REMOVAL OF ABOVE GROUND STRUCTURES COMPLETED UNDER SEPARATE PERMIT

UTILITY TO BE REMOVED OR ABANDONED

NOTES:

1. COORDINATE REMOVAL OF SECURITY FENCES AND FEATURES WITH ELECTRIC BOAT SECURITY PRIOR TO REMOVAL.
2. CALLOUTS TO PROVIDE ADDITIONAL INFORMATION ONLY.
3. TOTAL DISTURBED AREA LANDWARD OF CJL IS 9.8 AC.
4. PROPOSED SITE PREPARATIONS WATERWARD OF CJL TO BE PERFORMED BY THE CONTRACTOR WILL BE COVERED UNDER A JOINT PERMIT APPLICATION TO CT DEEP AND USACE.

KEYMAP

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	1.50
SYAB FFE	15.13	13.46	12.50	1.50
AE BFE	13.63	11.96	11.00	10.08
MHW	3.55	1.88	0.92	14.15
NAVD 88	2.63	0.96	0.00	0.92
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

CITY OF GROTON: APPROVED PLAN

The plans upon which this stamp is affixed are approved. All work must conform to the representations made herein and other applicable documents or conditions. It is the applicant's responsibility to secure other permits as may be required. Any modifications to these plans required in order to secure other permits or address field conditions during construction must first be approved by the City Planner or Planning and Zoning Commission, as may be applicable, and prior to commencing with said improvements.

Chairman _____ Date _____

30 0 30

GRAPHIC SCALE: 1"=30'

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REGISTRATION NUMBER:

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NO.	DATE	CITY PLANNING COMMENTS	BY	APVD
1	04-09-2019			

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)

SITE PREPARATION PLAN

Date: 13 FEB 2019

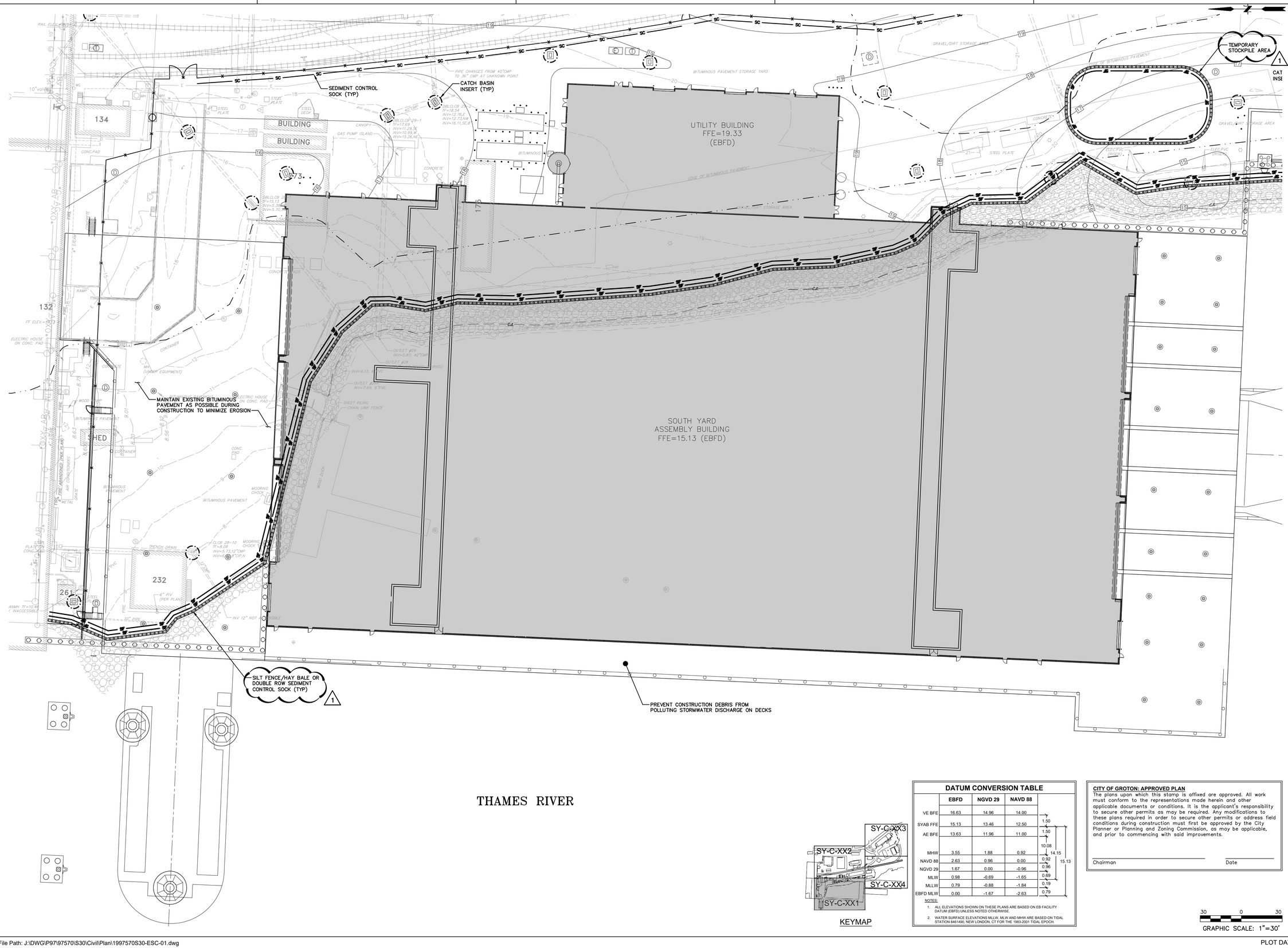
Drawing No.:
SY-C-114

SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-ESC-01.dwg

PLOT DATE/TIME: 4/5/2019 12:11 PM



KEYMAP

DATUM CONVERSION TABLE			
	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
SYAB FFE	15.13	13.46	12.50
AE BFE	13.63	11.96	11.00
MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50
1.50
10.08
14.15
0.92
15.13
0.96
0.69
0.19
0.79

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

GRAPHIC SCALE: 1"=30'

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Wethersfield, CT 06109

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STATE OF CONNECTICUT
KRISTEN E. SOSOLIK
No. 22072
LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE		BY	APVD
1	04-09-2019	CITY PLANNING COMMENTS		

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:
ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24X36

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

EROSION AND SEDIMENT CONTROL PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-121

SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-ESC-01.dwg

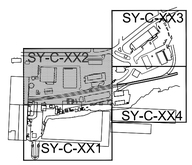
PLOT DATE/TIME: 4/5/2019 12:11 PM

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	
				1.50
SYAB FFE	15.13	13.46	12.50	
				1.50
AE BFE	13.63	11.96	11.00	
				10.08
MHW	3.55	1.88	0.92	14.15
				0.92
NAVD 88	2.63	0.96	0.00	15.13
				0.96
NGVD 29	1.67	0.00	-0.96	
				0.69
MLW	0.98	-0.69	-1.65	
				0.19
MLLW	0.79	-0.88	-1.84	
				0.79
EBFD MLW	0.00	-1.67	-2.63	

NOTES:

1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.



KEYMAP

CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

30 0 30

GRAPHIC SCALE: 1"=30'

CONSTRUCTION ENTRANCE

PARKING LOT J

EROSION CONTROL MAT (TYP.)

SILT FENCE (TYP)

AREA OF FUTURE BUILDING FFE=20.23 (EBFD)

605

607

STONE CHECK DAM (TYP.)

SEDIMENT CONTROL SOCK (TYP)

CATCH BASIN INSERT (TYP)

TEMPORARY STOCKPILE AREA

UTILITY BUILDING FFE=19.33 (EBFD)

BUILDING

BUILDING

WATER

61

87

142

131

606

255

133

134

165

170

173

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REGISTRATION NUMBER:

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NO.	DATE	CITY PLANNING COMMENTS	BY	APVD
1	04-09-2019			

ISSUE DATE: 13 FEB 2019

DESIGNED BY: KEITH GOODROW

DRAWN BY: KEITH GOODROW

CHECKED BY: JOE DEVINE

BORDER SIZE: ARCH D 24x36

SUBMITTED BY: JOHN OSOSKIE

FILE NAME:

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GENERAL DYNAMICS

Electric Boat

South Yard Assembly Building (SYAB)

EROSION AND SEDIMENT CONTROL PLAN

Date: 13 FEB 2019

Drawing No.:

SY-C-122

SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-ESC-01.dwg

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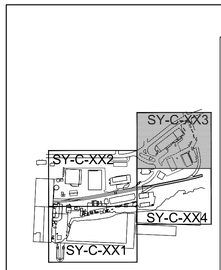

KEYMAP

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	1.50
SYAB FFE	15.13	13.46	12.50	1.50
AE BFE	13.63	11.96	11.00	10.08
MHW	3.55	1.88	0.92	14.15
NAVD 88	2.63	0.96	0.00	0.92
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

NOTES:

1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

30 0 30

GRAPHIC SCALE: 1"=30'

EASTERN POINT ROAD

NICHOLAS AVENUE

PARKING LOT S

80A

80

83

84

91

274

238

187

EROSION CONTROL MAT (TYP.)

CATCH BASIN INSERT (TYP)

STORMWATER BARRIER/DIVERSION

SILT FENCE/HAY BALE (TYP)

EROSION CONTROL MAT

PROTECT WETLANDS AREA

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REGISTRATION NUMBER:

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NO.	DATE		BY	APVD
2	04-09-2019	CITY PLANNING COMMENTS		
1	03-19-2019	CITY WETLAND COMMENTS		

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24X36

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

EROSION AND SEDIMENT CONTROL PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-123

SHEET: OF

ISSUED FOR PERMIT

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PLOT DATE/TIME: 4/5/2019 12:11 PM

EROSION CONTROL MAT (TYP.)

SEDIMENT CONTROL SOCK (TYP)

CONSTRUCTION ENTRANCE

TEMPORARY STOCKPILE AREA

CATCH BASIN INSERT (TYP)

EROSION CONTROL MAT IF NEEDED

LIMT OF ZONE X FLOOD ZONE (0.2% CHANCE)

SILT FENCE/HAY BALE OR DOUBLE ROW SEDIMENT CONTROL SOCK (TYP)

LIMIT OF ZONE AE FLOOD ZONE ELEVATION 13.63' (EBFD)
LIMIT OF ZONE VE FLOOD ZONE ELEVATION 16.63' (EBFD)

AREA FOR TEMPORARY SEDIMENT TRAP AS NEEDED

STORMWATER BARRIER/DIVERSION

SILT FENCE/HAY BALE (TYP)

EROSION CONTROL MAT

PROTECT WETLANDS AREA

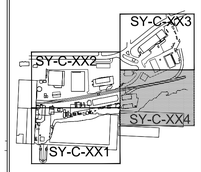
WETLAND AREA TO BE UNDERDRAINED AND BACKFILLED

WETLAND AREA TO BE UNDERDRAINED AND BACKFILLED

LIMIT OF ZONE AE FLOOD ZONE ELEVATION 13.63' (EBFD)
LIMIT OF ZONE VE FLOOD ZONE ELEVATION 16.63' (EBFD)

THAMES RIVER

KEYMAP



DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
SYAB FFE	15.13	13.46	12.50
AE BFE	13.63	11.96	11.00
MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50
1.50
10.08
14.15
15.13
0.92
0.96
0.69
0.19
0.79

NOTES:
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2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

GRAPHIC SCALE: 1"=30'

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-ESC-01.dwg

PLOT DATE/TIME: 4/5/2019 12:11 PM

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STATE OF CONNECTICUT — KRISTEN E. SOLOMON — No. 22072 — LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE		BY
1	04-09-2019	CITY PLANNING COMMENTS	APVD

ISSUE DATE: 13 FEB 2019

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:
BORDER SIZE: ARCH D 24X36

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GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)

EROSION AND SEDIMENT CONTROL PLAN

Date: 13 FEB 2019

Drawing No.:

SY-C-124

SHEET: OF

ISSUED FOR PERMIT

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	1.50
SYAB FFE	15.13	13.46	12.50	1.50
AE BFE	13.63	11.96	11.00	10.08
MHW	3.55	1.88	0.92	14.15
NAVD 88	2.63	0.96	0.00	0.92
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

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Chairman _____ Date _____

EASTERN POINT ROAD
NICHOLAS AVENUE
CHAPMAN STREET
PARKING LOT J
PARKING LOT S
VEHICULAR SECURITY BOLLARDS
EXISTING SECURITY FENCE TO REMAIN
EXISTING PERIMETER FENCE AND GATE (INSTALLED BY OTHERS UNDER SEPARATE CONTRACT)
TEMPORARY TRUCK ACCESS GATE DURING CONSTRUCTION
CONNECT PROPOSED SECURITY FENCE TO EXISTING
PROPOSED SECURITY FENCE
STEEL ACCESS COVERS ON CONCRETE PAD
HEAVY VEGETATION
AREA OF FUTURE BUILDING
605
606
607
WATER
UTILITY BUILDING
SOUTH DECK
NORTH DECK
SOUTH YARD ASSEMBLY BUILDING
WEST DECK
SECURITY FENCE AFTER CONSTRUCTION IS COMPLETE
TRUCK ACCESS GATE
TEMPORARY SECURITY FENCE DURING CONSTRUCTION
MAINTAIN TWO-WAY TRAFFIC
TWO-WAY TURNSTILE
BUILDING 132 TEMPORARY EGRESS ROUTE
SECURITY GRILL ON OUTFALL PIPE
END SECURITY FENCE
GRAPHIC SCALE: 1"=60'

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100 Great Meadow Road, Suite 707
Wethersfield, CT 06109

FUSS & O'NEILL
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MANCHESTER, CONNECTICUT 06040
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STATE OF CONNECTICUT · KRISTEN E. SCOTT · No. 22072 · LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE	BY	APVD
1	04-09-2019	CITY PLANNING COMMENTS	

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

SITE SECURITY FENCE PLAN

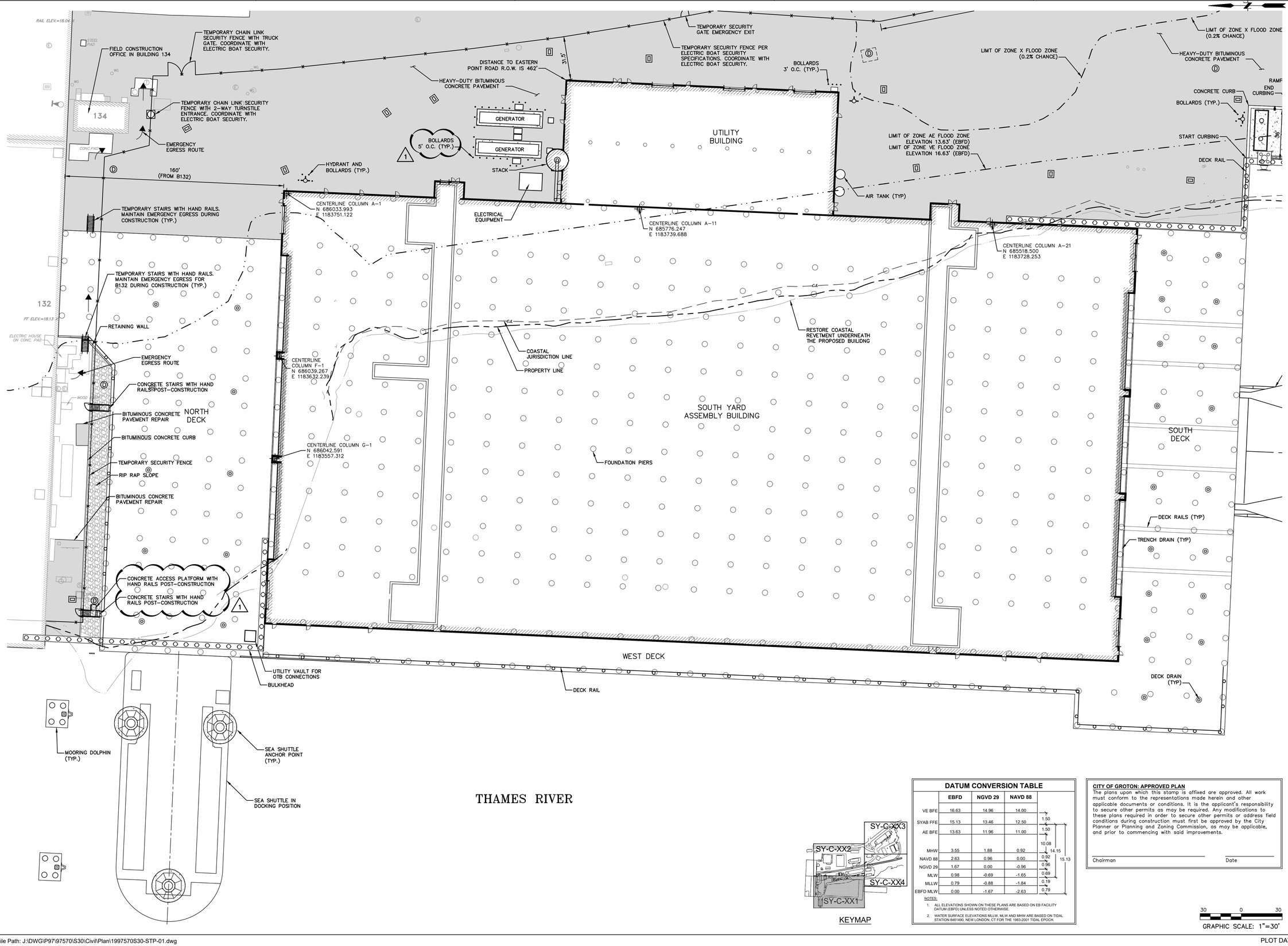
Date: 13 FEB 2019

Drawing No.:
SY-C-130

SHEET: OF

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-STP-01.dwg

PLOT DATE/TIME: 4/5/2019 2:14 PM



DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
SYAB FFE	15.13	13.46	12.50
AE BFE	13.63	11.96	11.00
MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50 / 1.50 / 10.08 / 14.15 / 15.13 / 0.92 / 0.96 / 0.69 / 0.19 / 0.79

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

KEYMAP

CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

30 0 30

GRAPHIC SCALE: 1"=30'

JACOBS
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Wethersfield, CT 06109

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STATE OF CONNECTICUT
KRISTEN E. SOSOLIK
No. 22072
LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

DISCLAIMER

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NO.	DATE	CITY PLANNING COMMENTS	BY	APVD
1	04-09-2019			

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)

SITE LAYOUT PLAN

Date: 13 FEB 2019

Drawing No.:

SY-C-131

SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-STP-01.dwg

PLOT DATE/TIME: 4/5/2019 2:14 PM

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	1.50
SYAB FFE	15.13	13.46	12.50	1.50
AE BFE	13.63	11.96	11.00	10.08
MHW	3.55	1.88	0.92	14.15
NAVD 88	2.63	0.96	0.00	0.92
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

NOTES:

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KEYMAP

SY-C-XX3 · SY-C-XX2 · SY-C-XX1 · SY-C-XX4

CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

30 0 30

GRAPHIC SCALE: 1"=30'

EXISTING CONCRETE PAD TO BE PROTECTED AND RE-USED
PROPOSED CONCRETE ANCHOR BLOCK
ABOVE GRADE STORM PIPING AND DROP PIPE
EXISTING DRAINAGE CHANNEL
PROTECT EXISTING CONDUITS/UTILITIES MOUNTED IN DRAINAGE CHANNEL
ABOVE GRADE STORM PIPING AND DROP PIPE
PROPOSED CONCRETE ANCHOR BLOCK
REINFORCED CONCRETE WALL
STANDARD-DUTY BITUMINOUS CONCRETE PAVEMENT
EXISTING RIPRAP TO REMAIN
LMIT OF ZONE X FLOOD LINE (0.2% CHANCE)
EXISTING DRAINAGE CHANNEL
STANDARD-DUTY BITUMINOUS CONCRETE PAVEMENT
REINFORCED CONCRETE WALL
REINFORCED CONCRETE HEAD WALL
LIMIT OF HEAVY-DUTY BITUMINOUS CONCRETE PAVEMENT
INLET GRILL AT BOX CULVERT
LIMIT OF RAILROAD TRACKS TO BE REPLACED. VERIFY LIMIT WITH GDEB.
TEMPORARY SECURITY GATE EMERGENCY EXIT
TEMPORARY SECURITY FENCE PER ELECTRIC BOAT SECURITY SPECIFICATIONS. COORDINATE WITH ELECTRIC BOAT SECURITY.
DISTANCE TO EASTERN POINT ROAD R.O.W. IS 462'
HEAVY-DUTY BITUMINOUS CONCRETE PAVEMENT
BOLLARDS 3' O.C. (TYP.)
TEMPORARY CHAIN LINK SECURITY FENCE WITH TRUCK GATE. COORDINATE WITH ELECTRIC BOAT SECURITY.
FIELD CONSTRUCTION OFFICE IN BUILDING 134
TEMPORARY CHAIN LINK SECURITY FENCE WITH 2-WAY TURNSTILE ENTRANCE. COORDINATE WITH ELECTRIC BOAT SECURITY.
EMERGENCY EGRESS ROUTE
160' (FROM B132)
TEMPORARY STAIRS WITH HAND RAILS. MAINTAIN EMERGENCY EGRESS DURING CONSTRUCTION (TYP.)
HYDRANT AND BOLLARDS (TYP.)
FUELING STATION AND CANOPY INSTALLED BY OTHERS PRIOR TO START OF WORK. PROTECT ALL ASSOCIATED SYSTEMS.
CENTERLINE COLUMN A-1 N 686033.993 E 1183751.122
ELECTRICAL EQUIPMENT
CENTERLINE COLUMN A-11 N 685776.247 E 1183739.688
CENTERLINE COLUMN A-21 N 685518.500 E 1183728.253
AIR TANK (TYP)
LIMIT OF ZONE AE FLOOD ZONE ELEVATION 13.63' (EBFD)
LIMIT OF ZONE VE FLOOD ZONE ELEVATION 16.63' (EBFD)
LIMT OF ZONE X FLOOD ZONE (0.2% CHANCE)
HEAVY-DUTY BITUMINOUS CONCRETE PAVEMENT
CONCRETE CURB
BOLLARDS (TYP.)
START CURBING
DECK RAIL
REPLACED RAILROAD TRACKS
TEMPORARY BARRICADE WITH GUARD SHACK WHILE SPECIAL CARGO IS PRESENT
LIMIT OF RAILROAD TRACKS TO BE REPLACED
EXISTING CONCRETE RAILCAR JACKING PADS TO BE MAINTAINED (TYP. OF 4)
NEW RAILROAD CROSSOVER
TRUCK ACC COORD ELECTRIC BOAT
36' 17' 8' 28' 150'
PARKING LOT J
30' FRONT YARD SETBACK LINE
30' SETBACK LINE
NEW UTILITY POLE WITH RISERS (TYP. OF 2)
25' LANDSCAPE BUFFER. SEE LANDSCAPING PLAN.
EXISTING CONCRETE DRIVEWAY APRON
EXISTING FENCE AND GATES
EXISTING CONCRETE DRIVEWAY APRON TO REMAIN
EXISTING FENCE AND GATES
RESET EXISTING SIGN
STATE ROAD PE PAVEMENT REPA
REPLACE CONC CURBING
REPLACE CON SIDEWALK
RESTORE SECURITY FENCE
RELOCATE COORDINA UTILITY C
EXISTING BITUMINOUS PAVEMENT TO BE REMOVED AND LANDSCAPED
GRAVEL DRIVEWAY
SINGLE GATE
DOUBLE GATE
CHAIN LINK FENCE
38 KV SWITCHGEAR BLDG (SEE RECEIVING STATION LAYOUT PLAN)
13.8 KV RECEIVING STATION
10 MVA TRANSFORMER
10 MVA TRANSFORMER
CAPACITOR BANK
CAPACITOR BANK
RELOCATED UTILITY POLE
CONNECT FENCE TO
REPAIR FENCE
UTILITY CORRIDOR
607
CENTRAL WASTE FACILITY CONSTRUCTED BY OTHERS PRIOR TO START OF WORK
605
AREA OF FUTURE BUILDING
606
UTILITY BUILDING
GENERATOR
GENERATOR
STACK
BOLLARDS 5' O.C. (TYP.)
BITUMINOUS PAVEMENT STORAGE YARD
METAL RACK ON CONC. PAD
WATER STORAGE TANK WATER
87
61
165
142
131
255 GRAVEL
133
134
WOOD BRIDGE
METAL BEAM GUARD RAIL
STEEL DECK
CHAIN LINK FENCE
CONCRETE SLAB
CONC.PAD
STEEL PAD
RAIL ELEV.=18.04'
FF ELEV.=20.21
SNET
CONC.SIDEWALK
CONC. CURB
CHAIN LINK FENCE
BITUMINOUS PAVEMENT

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REGISTRATION NUMBER:

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NO.	DATE	CITY PLANNING COMMENTS	BY	APVD
1	04-09-2019			

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:
ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24X36

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GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
SITE LAYOUT PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-132

SHEET: OF

ISSUED FOR PERMIT

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PLOT DATE/TIME: 4/5/2019 2:14 PM

KEYMAP

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	1.50
SYAB FFE	15.13	13.46	12.50	1.50
AE BFE	13.63	11.96	11.00	10.08
MHW	3.55	1.88	0.92	14.15
NAVD 88	2.63	0.96	0.00	0.92
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

NOTES:

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CITY OF GROTON: APPROVED PLAN

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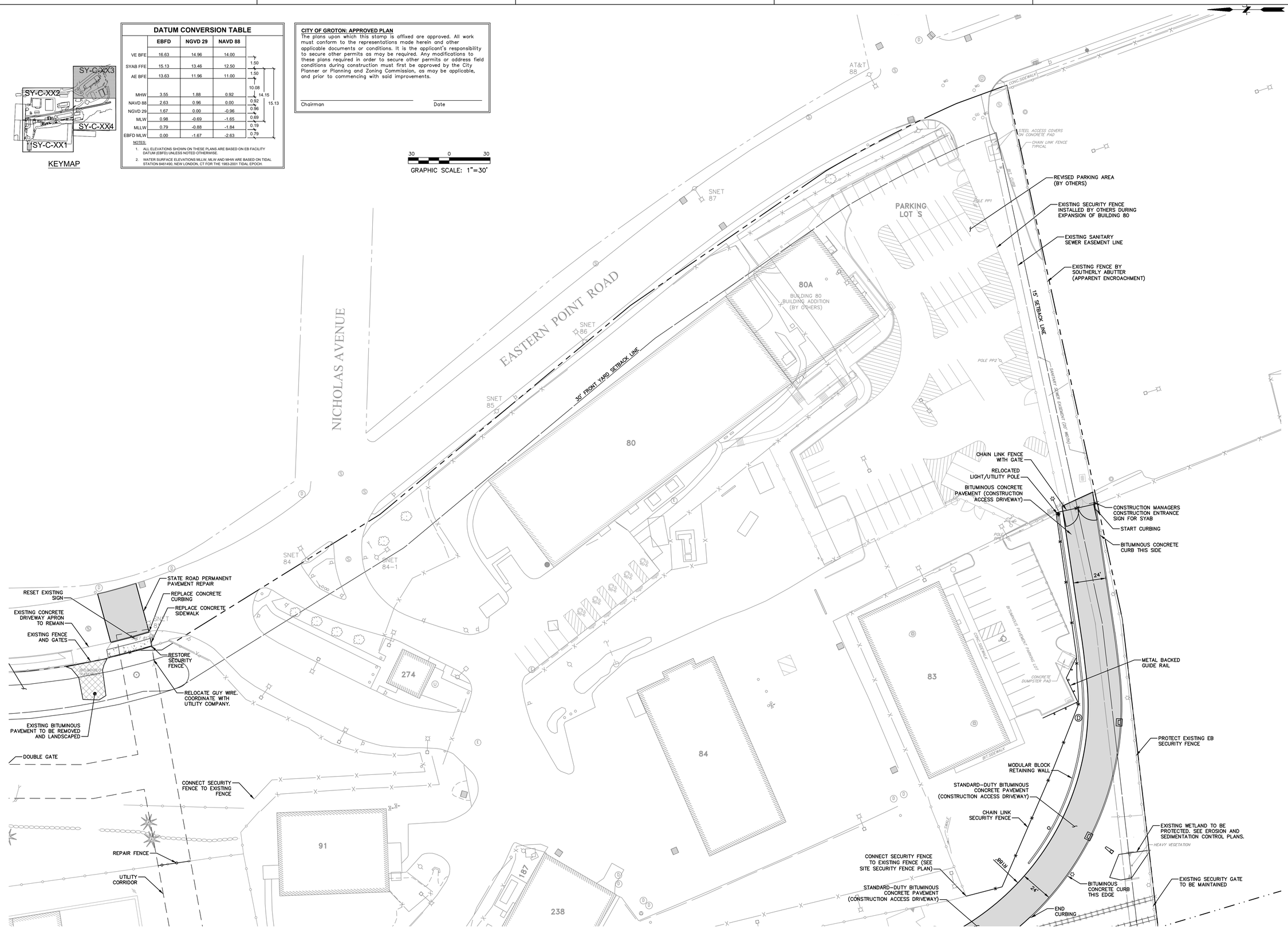
Chairman _____ Date _____

30 0 30

GRAPHIC SCALE: 1"=30'



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ISSUE DATE: 13 FEB 2019
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SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE LAYOUT PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-133

SHEET: OF

ISSUED FOR PERMIT

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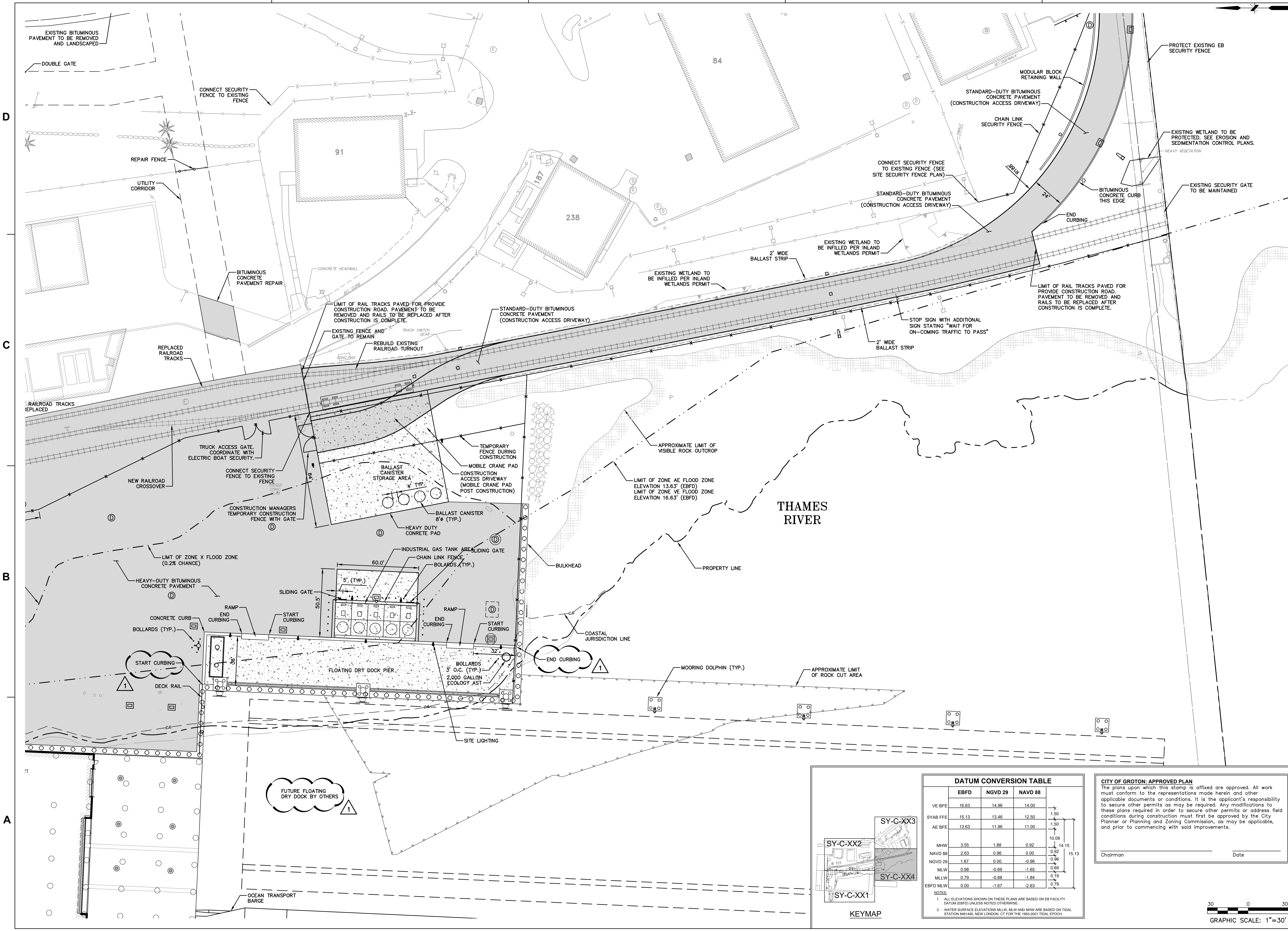

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MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50, 1.50, 10.08, 14.15, 15.13, 0.92, 0.96, 0.69, 0.19, 0.79

NOTES:

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Chairman Date

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NO.	DATE		BY	APVD
1	04-09-2019	CITY PLANNING COMMENTS		

DESIGNED BY: KEITH GOODROW
ISSUE DATE: 13 FEB 2019
DRAWN BY: KEITH GOODROW
DRAWING CODE.:
CHECKED BY: JOE DEVINE
BORDER SIZE: ARCH D 24x36
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

GENERAL DYNAMICS Electric Boat
South Yard Assembly Building (SYAB)
SITE LAYOUT PLAN

Date: 13 FEB 2019

Drawing No.: SY-C-134

SHEET.: OF

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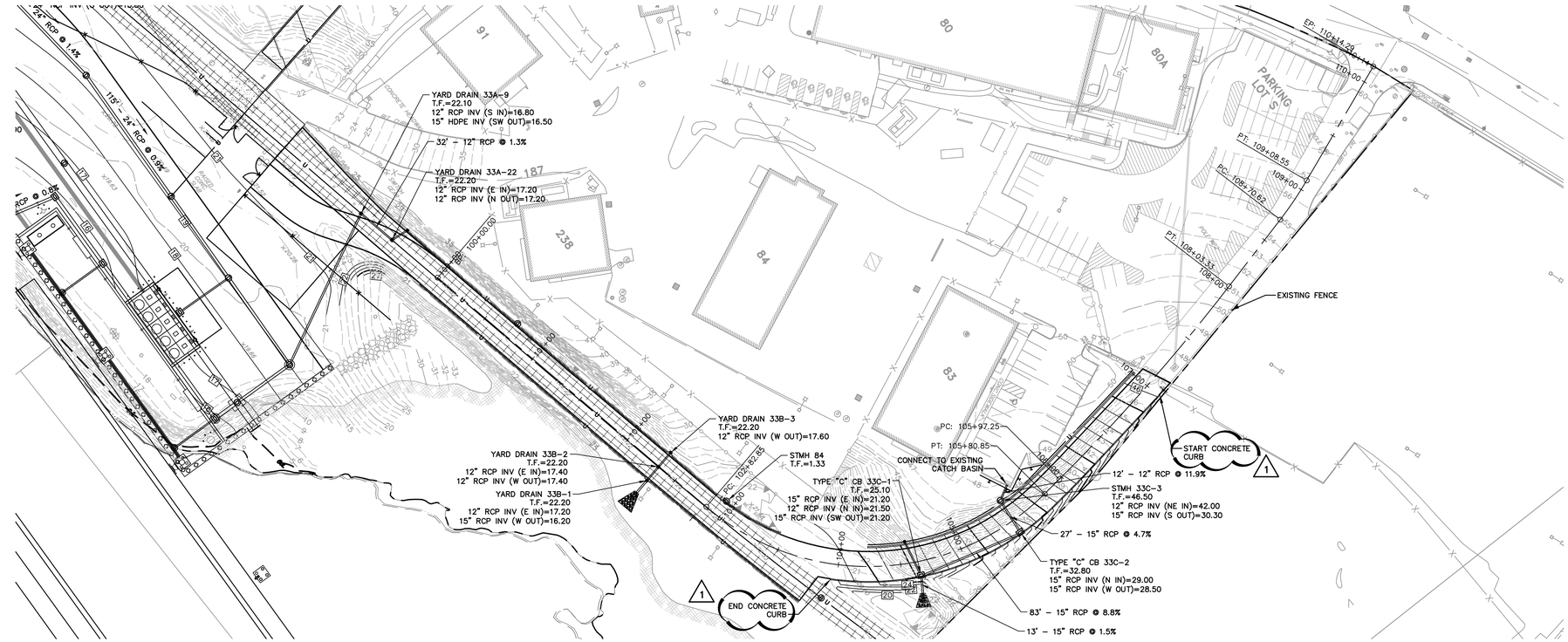
PLOT DATE/TIME: 4/5/2019 2:14 PM



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NAVD 88	2.63	0.96	0.00
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MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50
1.50
10.08
14.15
0.92
0.96
15.13
0.69
0.19
0.79

NOTES:
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CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

NOTE:
ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON THE ELECTRIC BOAT FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.

KEYMAP

GRAPHIC SCALE: 1"=50'

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Wethersfield, CT 06109

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GD GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
CONSTRUCTION ROAD PROFILE

Date: 13 FEB 2019

Drawing No.:
SY-C-141

SHEET: OF

ISSUED FOR PERMIT

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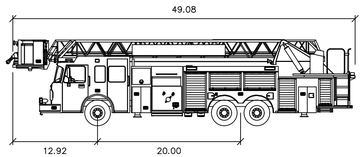
PLOT DATE/TIME: 2/4/2019 2:03 PM



FIRE TRUCK
NOT TO SCALE

EASTERN POINT ROAD
CHAPMAN STREET
NICHOLAS AVENUE
EASTERN POINT ROAD
PARKING LOT J
PARKING LOT S
80A
80
274
84
83
91
607
187
238
165
87
WATER
61
142
255
133
606
AREA OF FUTURE BUILDING
605
134
UTILITY BUILDING
NORTH DECK
SOUTH DECK
SOUTH YARD ASSEMBLY BUILDING
WEST DECK

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
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NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50
1.50
10.08
14.15
0.92
0.96
15.13
0.69
0.19
0.79

NOTES:
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Chairman _____ Date _____

60 0 60
GRAPHIC SCALE: 1"=60'

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NO.	DATE	BY	APVD

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: 1997570S30-AUT-01
ISSUE DATE: 13 FEB 2019
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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
VEHICLE MANEUVERING PLAN - FIRE TRUCK

Date: 13 FEB 2019
Drawing No.:
SY-C-142
SHEET: OF

ISSUED FOR PERMIT

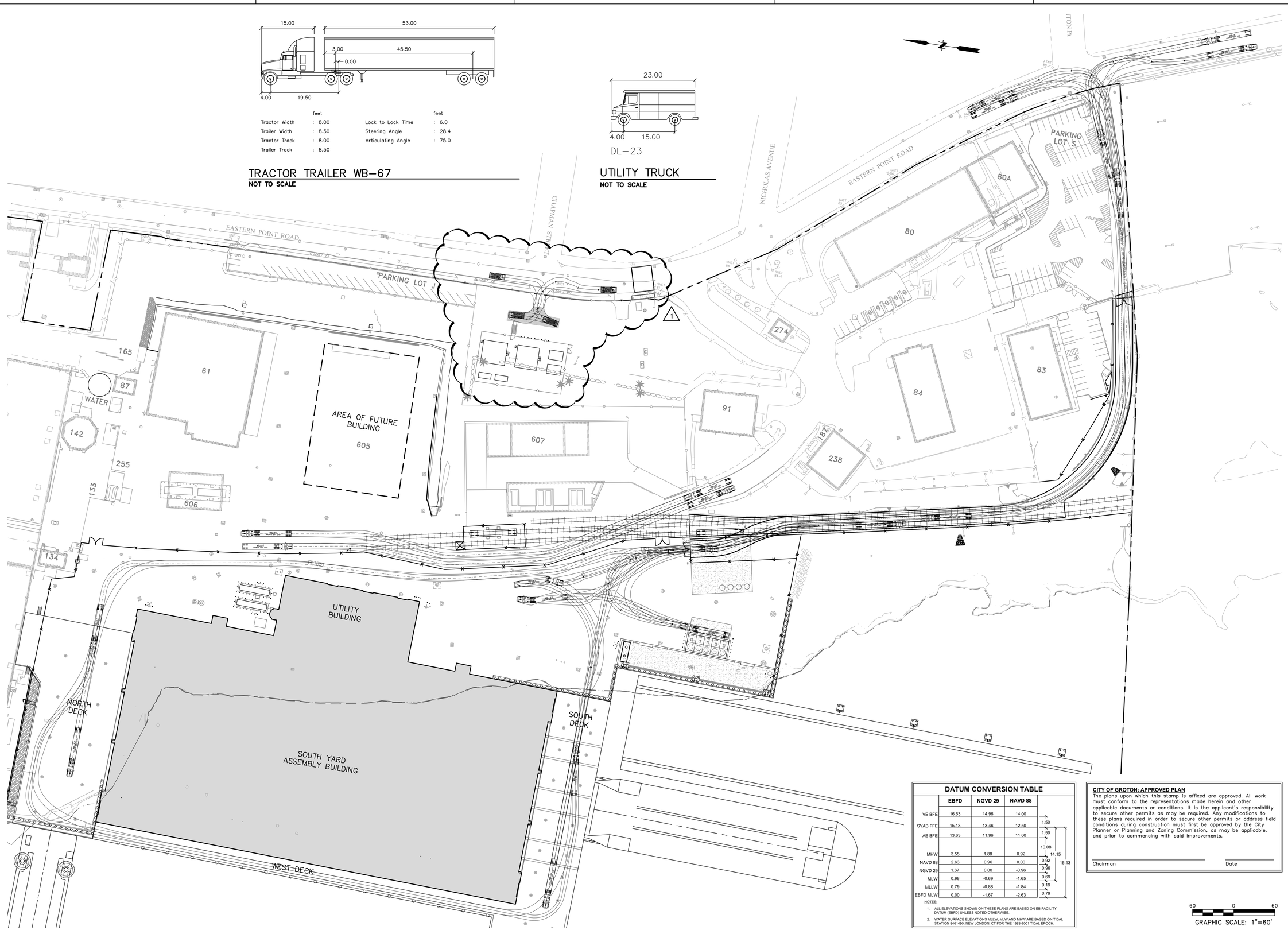
File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-AUT-01.dwg
PLOT DATE/TIME: 4/5/2019 9:53 AM

	feet		feet
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

TRACTOR TRAILER WB-67
NOT TO SCALE

DL-23

UTILITY TRUCK
NOT TO SCALE



DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
SYAB FFE	15.13	13.46	12.50
AE BFE	13.63	11.96	11.00
MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

1.50
1.50
10.08
14.15
0.92
15.13
0.96
0.69
0.19
0.79

CITY OF GROTON: APPROVED PLAN
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Chairman _____ Date _____

60 0 60
GRAPHIC SCALE: 1"=60'

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100 Great Meadow Road, Suite 707
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STATE OF CONNECTICUT · KRISTEN E. SOSOLIK · No. 22072 · LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE		BY
1	04-09-2019	CITY PLANNING COMMENTS	APVD

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DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: 1997570S30-UTL-01

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
VEHICLE MANEUVERING PLAN - WB67 & UTILITY TRUCK

Date: 13 FEB 2019

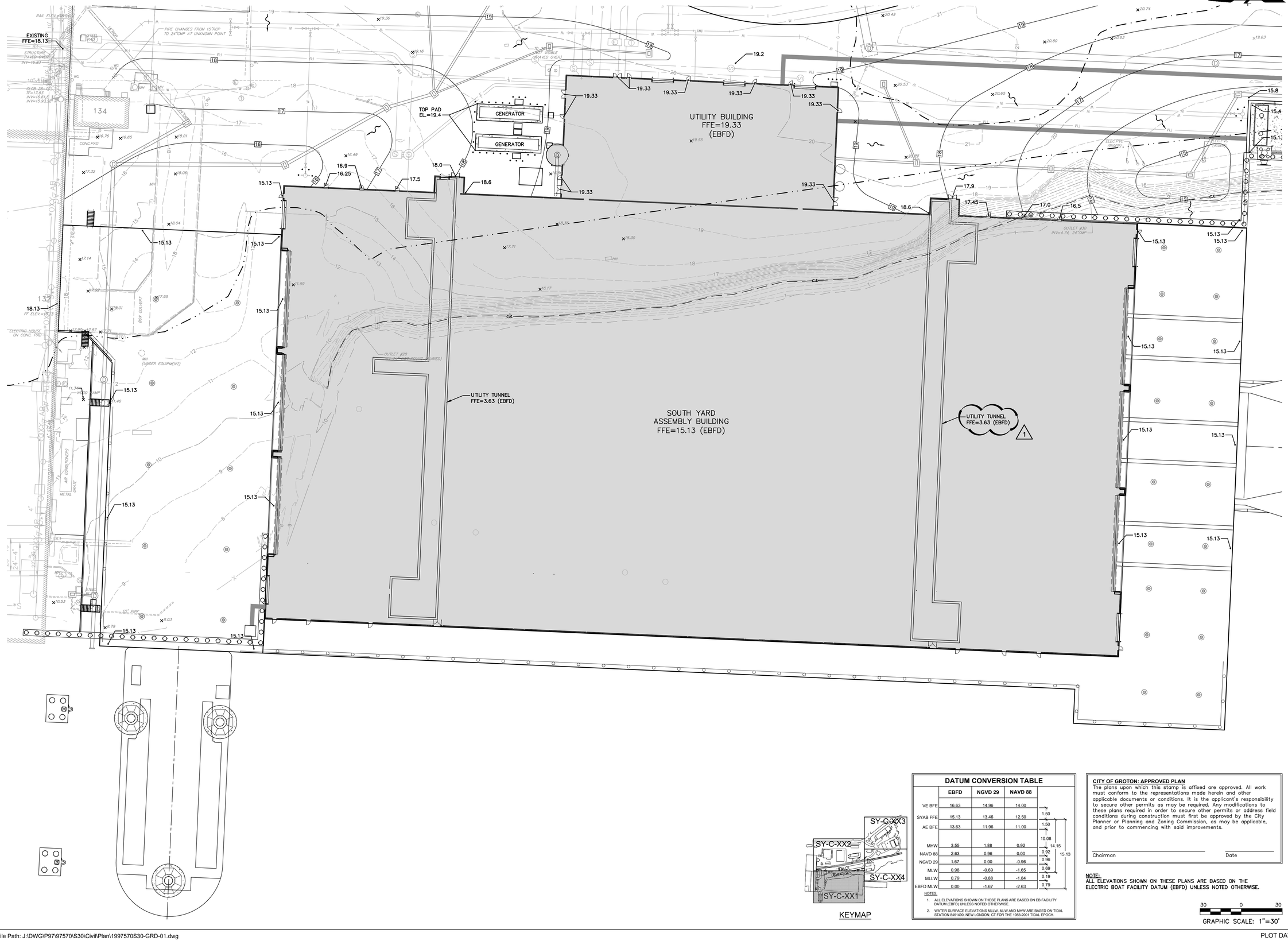
Drawing No.:
SY-C-143

SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-AUT-01.dwg

PLOT DATE/TIME: 4/5/2019 9:53 AM



KEYMAP

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
SYAB FFE	15.13	13.46	12.50
AE BFE	13.63	11.96	11.00
MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50, 1.50, 10.08, 14.15, 15.13, 0.92, 0.96, 0.69, 0.19, 0.79

NOTES:
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CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

NOTE:
ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON THE ELECTRIC BOAT FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.

GRAPHIC SCALE: 1"=30' (30 0 30)

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CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

SITE GRADING PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-151

SHEET: OF

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-GRD-01.dwg

PLOT DATE/TIME: 4/4/2019 9:38 PM

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	1.50
SYAB FFE	15.13	13.46	12.50	1.50
AE BFE	13.63	11.96	11.00	10.08
MHW	3.55	1.88	0.92	14.15
NAVD 88	2.63	0.96	0.00	0.92
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

NOTES:
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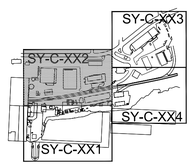

KEYMAP

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Chairman _____ Date _____

NOTE:
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30 0 30
GRAPHIC SCALE: 1"=30'

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ISSUE DATE: 13 FEB 2019
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GD GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE GRADING PLAN

Date: 13 FEB 2019
Drawing No.: SY-C-152
SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-GRD-01.dwg

PLOT DATE/TIME: 4/4/2019 9:38 PM

KEYMAP

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	
				1.50
SYAB FFE	15.13	13.46	12.50	
				1.50
AE BFE	13.63	11.96	11.00	
				10.08
MHW	3.55	1.88	0.92	14.15
				0.92
NAVD 88	2.63	0.96	0.00	15.13
				0.96
NGVD 29	1.67	0.00	-0.96	
				0.69
MLW	0.98	-0.69	-1.65	
				0.19
MLLW	0.79	-0.88	-1.84	
				0.79
EBFD MLW	0.00	-1.67	-2.63	

NOTES:

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CITY OF GROTON: APPROVED PLAN

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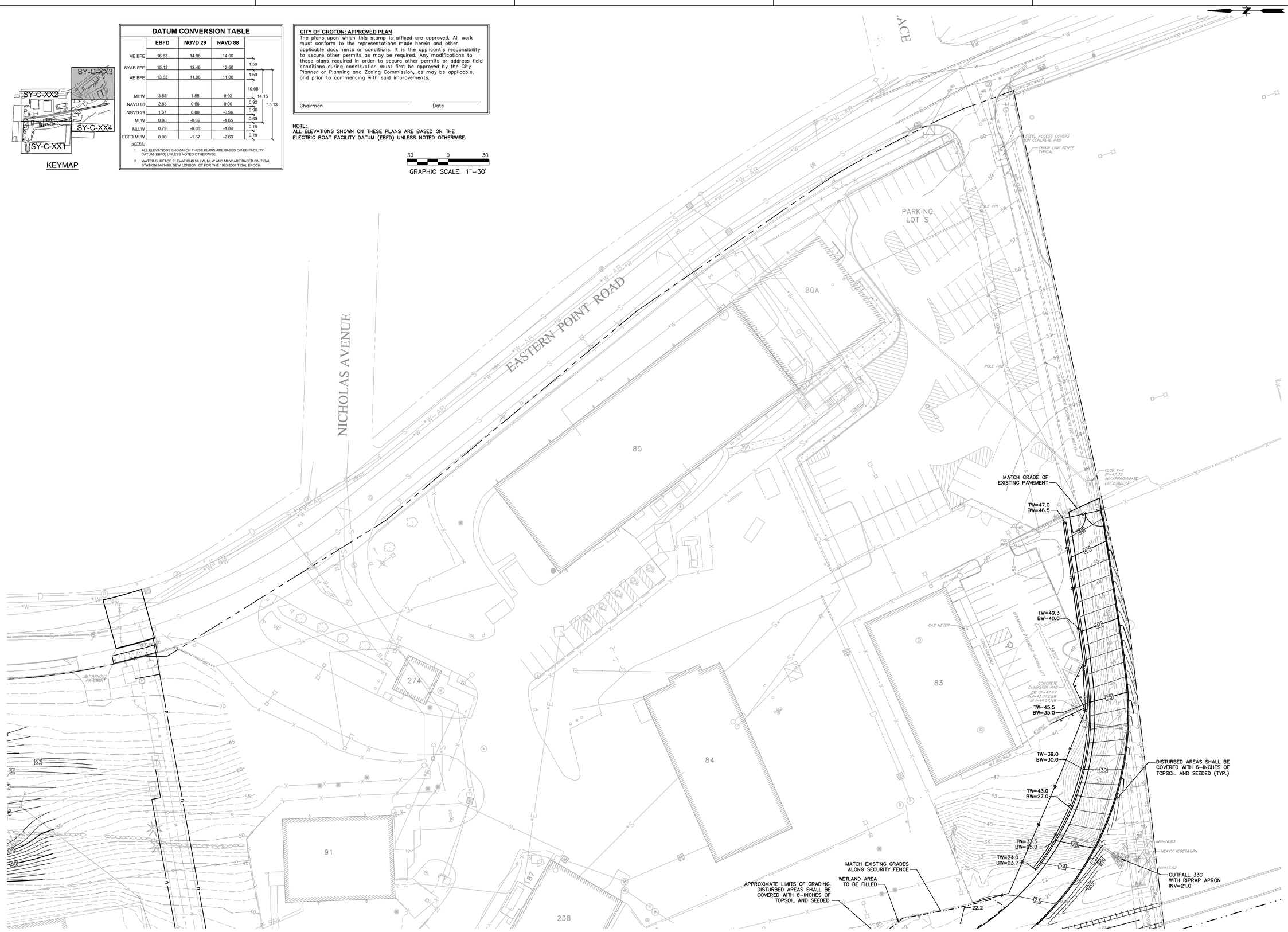
Chairman _____ Date _____

NOTE:
ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON THE ELECTRIC BOAT FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.

30 0 30

GRAPHIC SCALE: 1"=30'



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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE GRADING PLAN

Date: 13 FEB 2019
Drawing No.:
SY-C-153
SHEET: OF

ISSUED FOR PERMIT

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PLOT DATE/TIME: 4/4/2019 9:38 PM

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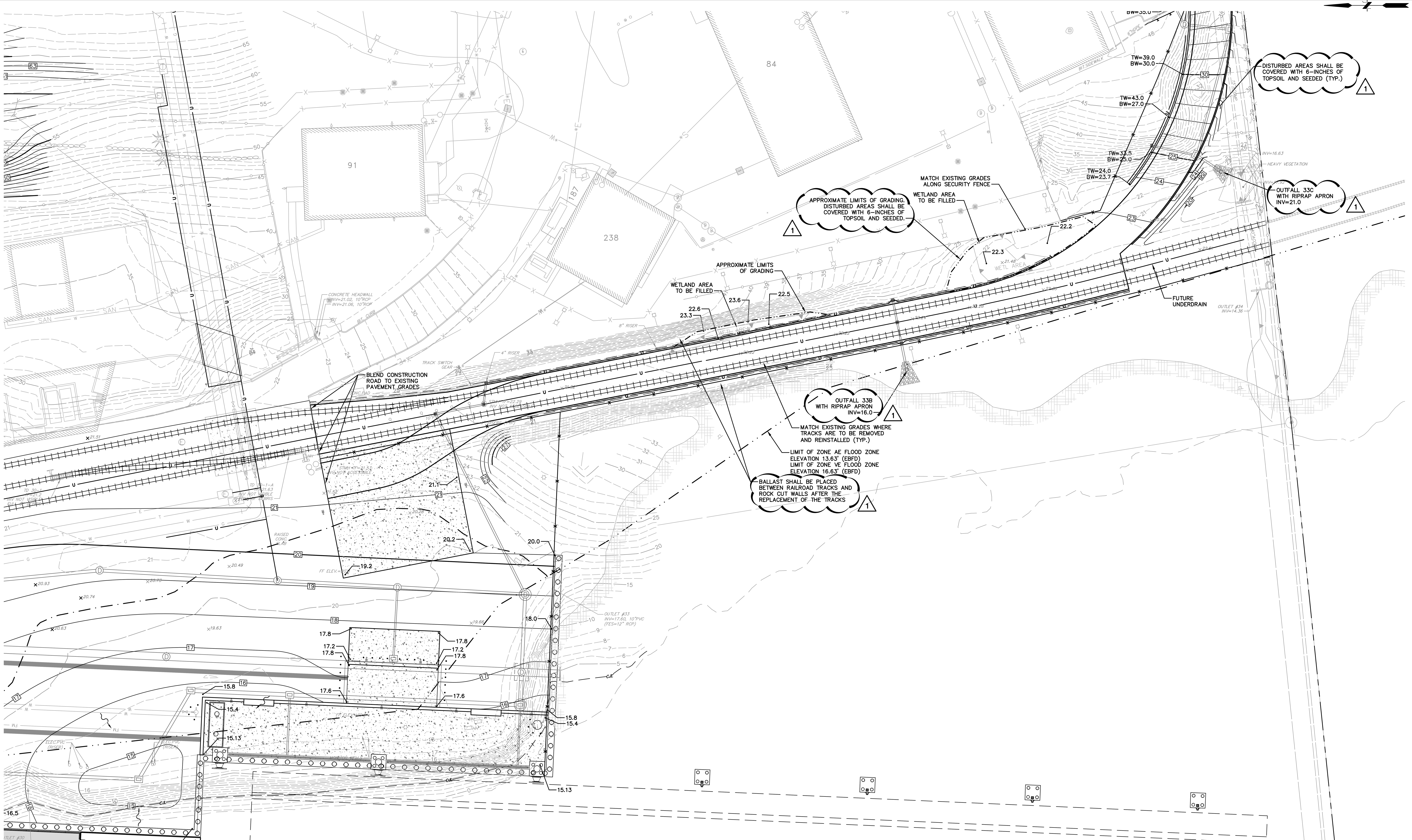

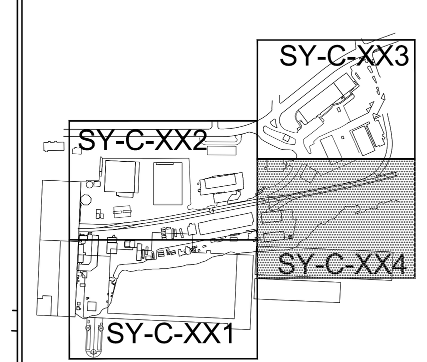

KEYMAP

DATUM CONVERSION TABLE	EBFD	NGVD 29	NAVD 88
VE BFE	16.63	14.96	14.00
SYAB FFE	15.13	13.46	12.50
AE BFE	13.63	11.96	11.00
MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

(Dimensions: 1.50, 1.50, 10.08, 14.15, 15.13, 0.92, 0.96, 0.69, 0.19, 0.79)

NOTES:

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Chairman Date

NOTE:
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30 0 30
GRAPHIC SCALE: 1"=30'

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1	04-09-2019	CITY PLANNING COMMENTS		

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:
ISSUE DATE: 13 FEB 2019
DRAWING CODE.:
BORDER SIZE: ARCH D 24x36

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GD GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE GRADING PLAN

Date: 13 FEB 2019
Drawing No.:
SY-C-154
SHEET.: OF

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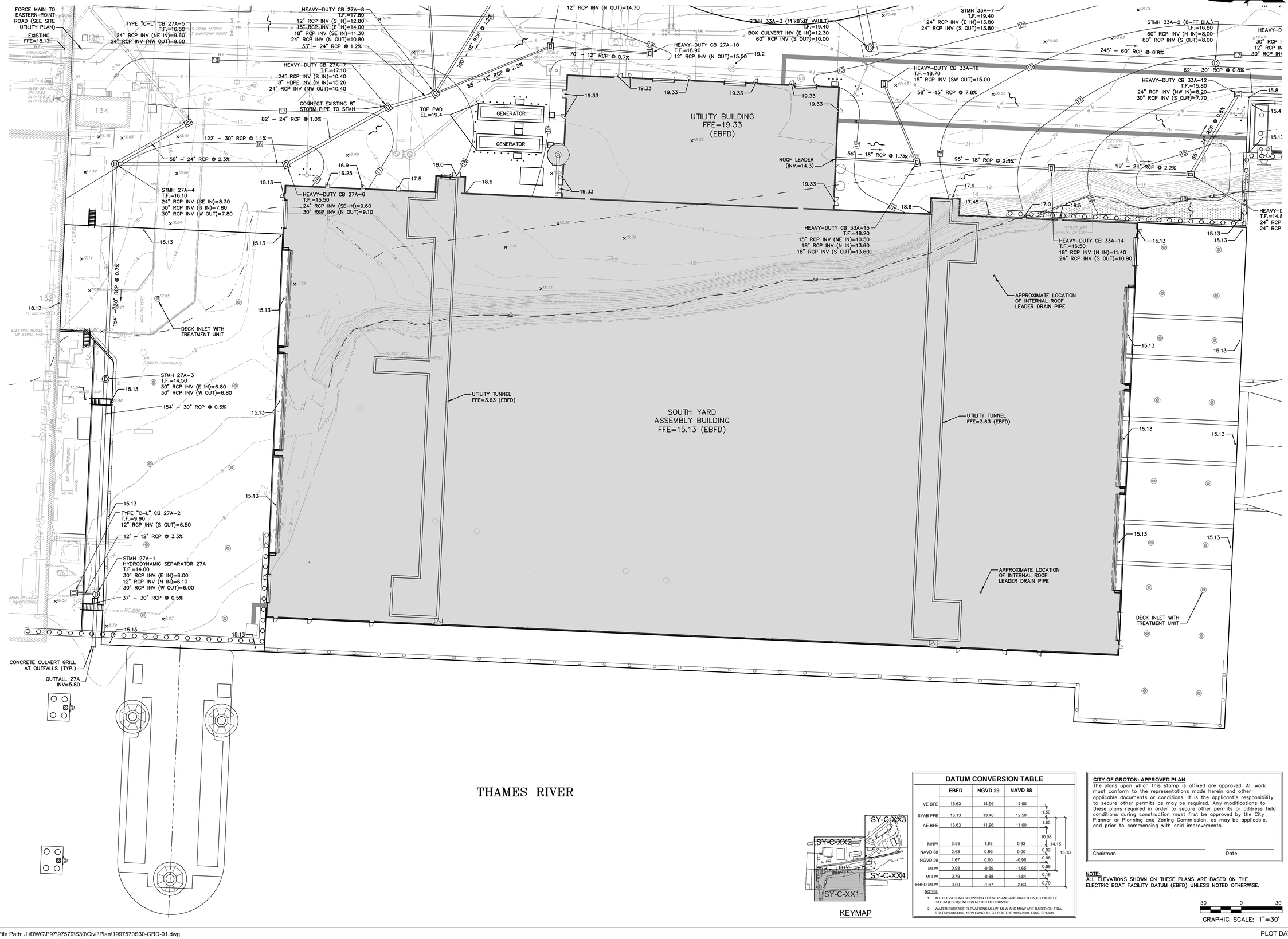

DATUM CONVERSION TABLE

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NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50 / 1.50 / 10.08 / 14.15 / 15.13 / 0.92 / 0.96 / 0.69 / 0.19 / 0.79

NOTES:
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KEYMAP

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GRAPHIC SCALE: 1"=30' (30 0 30)

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CHECKED BY: JOE DEVINE
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GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
SITE DRAINAGE PLAN

Date: 13 FEB 2019

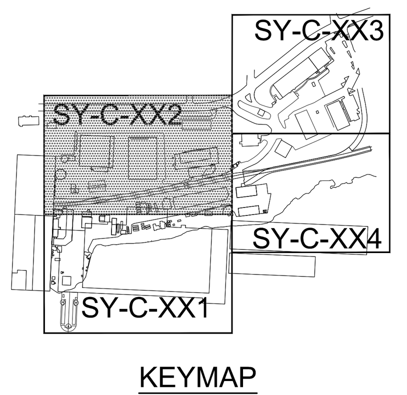
Drawing No.:
SY-C-161

SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-GRD-01.dwg

PLOT DATE/TIME: 4/4/2019 9:38 PM



KEYMAP

DATUM CONVERSION TABLE

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MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

Differences: 1.50, 1.50, 10.08, 0.92, 0.96, 0.69, 0.19, 0.79; 14.15; 15.13

NOTES:

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Chairman　　　　Date

NOTE:
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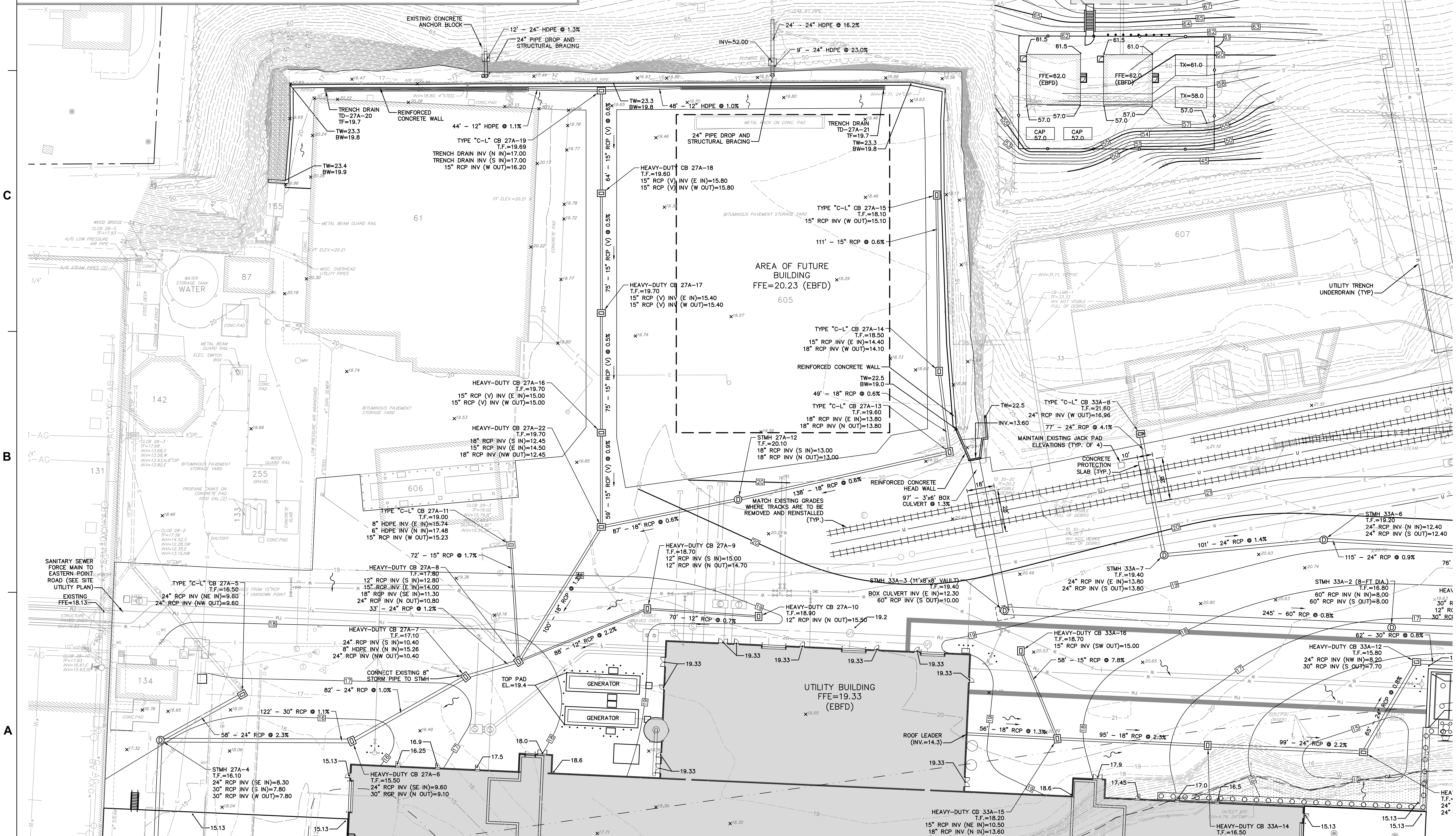
30　0　30
GRAPHIC SCALE: 1"=30'



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GD GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

SITE DRAINAGE PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-162

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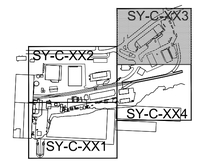

KEYMAP

DATUM CONVERSION TABLE

	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	1.50
SYAB FFE	15.13	13.46	12.50	1.50
AE BFE	13.63	11.96	11.00	10.08
MHW	3.55	1.88	0.92	14.15
NAVD 88	2.63	0.96	0.00	0.92
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

CITY OF GROTON: APPROVED PLAN
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Chairman _____ Date _____

NOTE:
ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON THE ELECTRIC BOAT FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.

30 0 30
GRAPHIC SCALE: 1"=30'

JACOBS
100 Great Meadow Road, Suite 707
Wethersfield, CT 06109

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STATE OF CONNECTICUT · KRISTEN E. SOSOWSKI · No. 22072 · LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE		BY
1	04-09-2019	CITY PLANNING COMMENTS	APVD

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE DRAINAGE PLAN

Date: 13 FEB 2019
Drawing No.:
SY-C-163
SHEET: OF

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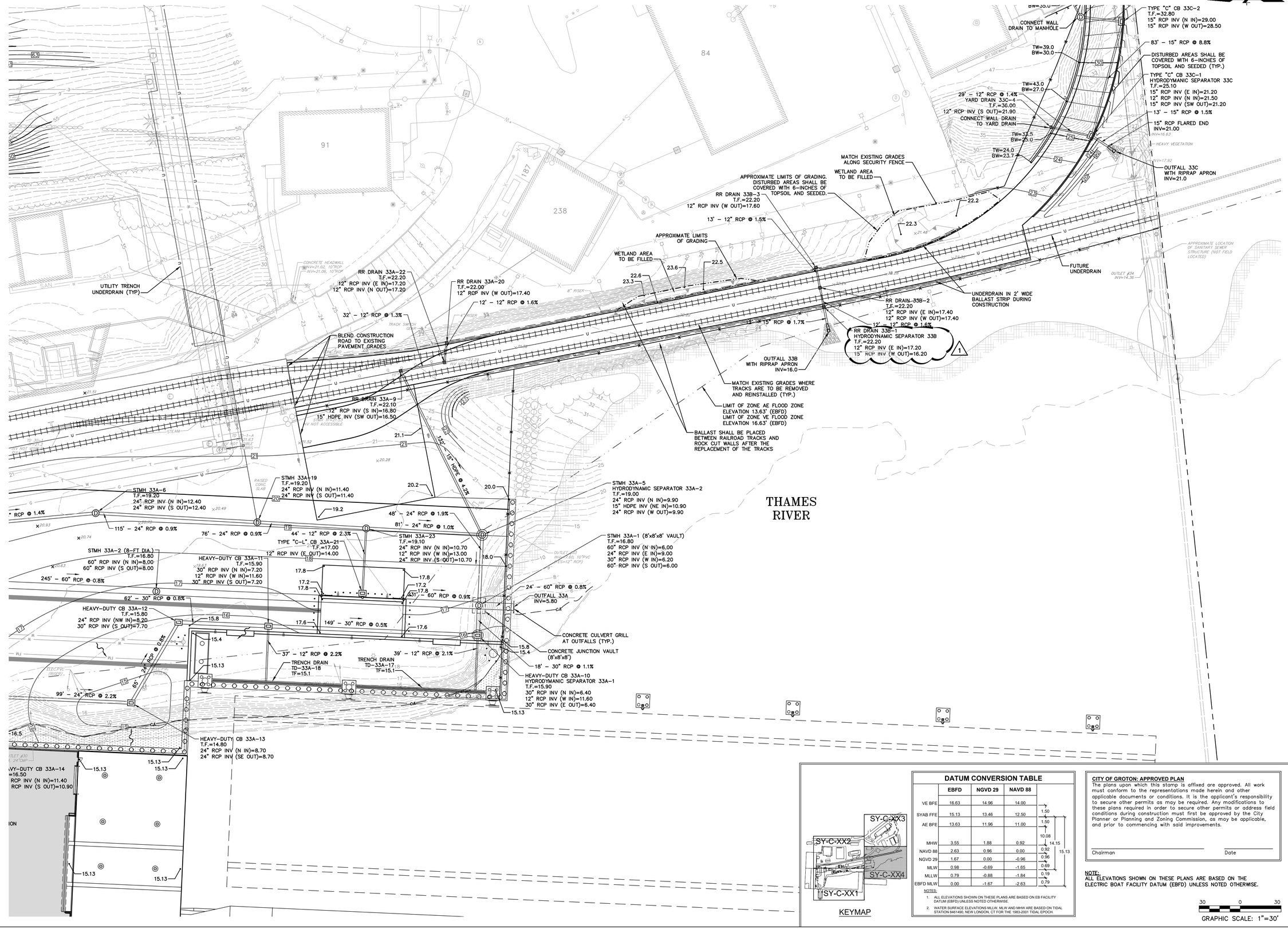

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NGVD 29	1.67	0.00	-0.96
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MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

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1.50
1.50
10.08
14.15
0.92
0.96
0.69
0.19
0.79
15.13

KEYMAP

CITY OF GROTON: APPROVED PLAN
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NOTE:
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GRAPHIC SCALE: 1"=30'

JACOBS
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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE DRAINAGE PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-164

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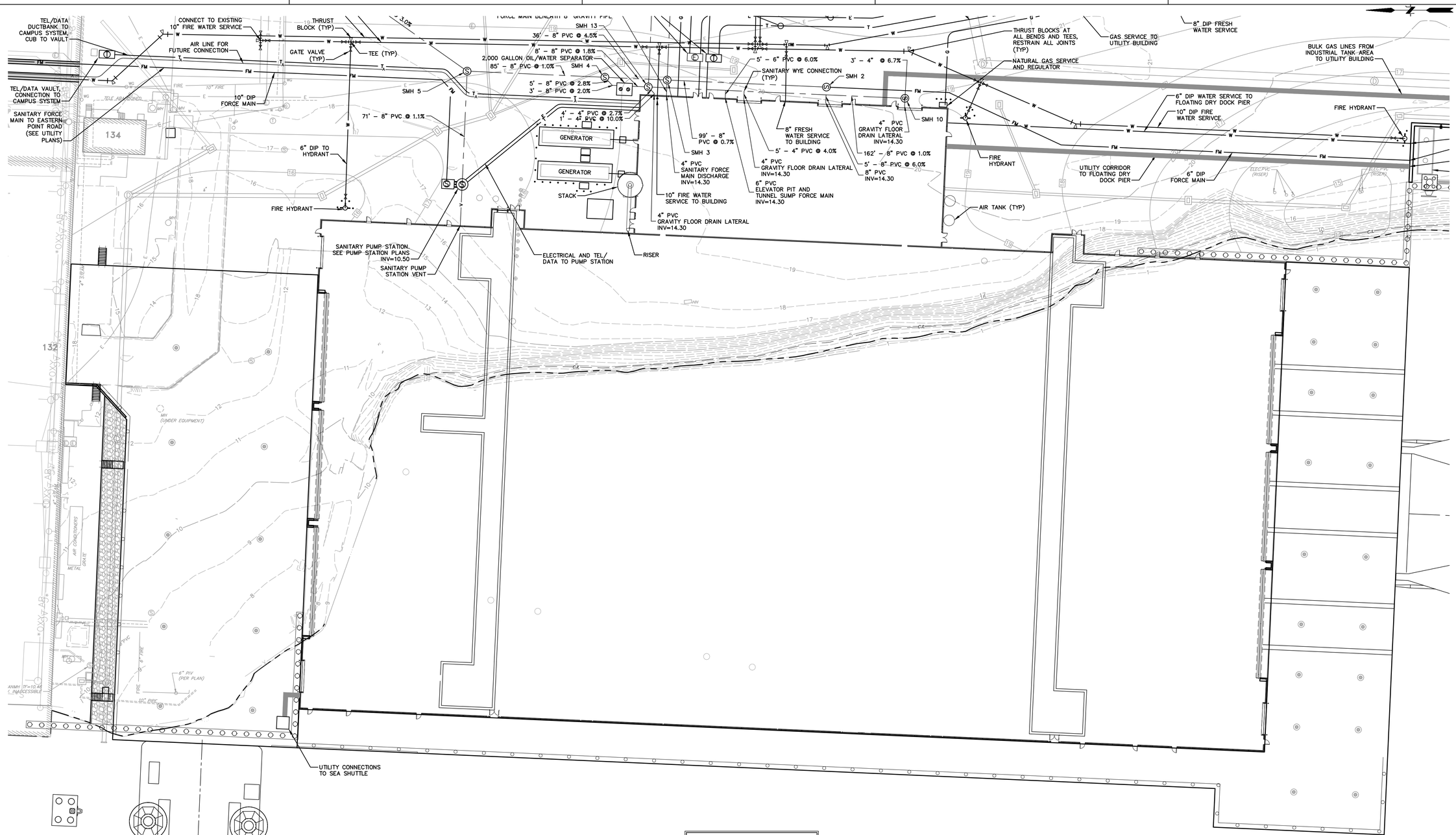
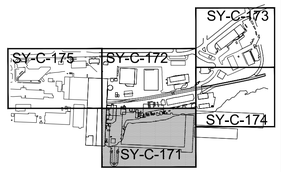


STRUCTURE TABLE

STRUCTURE NAME	STRUCTURE DETAILS
SMH 2 SEWER MANHOLE	T.F. = 19.15 4" PVC INV (S IN)=14.00 8" PVC INV (N IN)=14.00
SMH 3 SEWER MANHOLE	T.F. = 17.85 8" PVC INV (S IN)=13.30 4" PVC INV (W IN)=14.10 6" PVC INV (E IN)=13.30 8" PVC INV (N IN)=13.30
SMH 4 SEWER MANHOLE	T.F. = 18.85 8" PVC INV (S IN)=11.65 8" PVC INV (SW IN)=11.65 8" PVC INV (N IN)=11.65
SMH 5 SEWER MANHOLE	T.F. = 18.20 8" PVC INV (S IN)=10.80 8" PVC INV (NE IN)=10.80 8" PVC INV (W IN)=10.80
SMH 10 SEWER MANHOLE	T.F. = 19.10 4" INV (W IN)=14.10 8" PVC INV (N IN)=14.00
SMH 13 SEWER MANHOLE	T.F. = 19.20 8" PVC INV (S IN)=12.40 4" PVC INV (SW IN)=14.10 6" PVC INV (E IN)=12.40 8" PVC INV (N IN)=12.40



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1.50
1.50
10.08
14.15
0.92
0.96
0.69
0.19
0.79
15.13

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GRAPHIC SCALE: 1"=30' (30 0 30)

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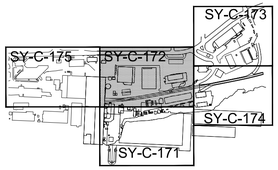
GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE UTILITY PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-171

SHEET: OF

ISSUED FOR PERMIT



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SMH 10 SEWER MANHOLE	T.F. = 19.10 4" INV (W IN)=14.10 8" PVC INV (N IN)=14.00
SMH 13 SEWER MANHOLE	T.F. = 19.20 8" PVC INV (S IN)=12.40 4" PVC INV (SW IN)=14.10 6" PVC INV (E IN)=12.40 8" PVC INV (N IN)=12.40

BENDS AND TEES, RESTRAIN ALL JOINTS (TYP)
PROVIDE RISER AT UTILITY POLE (TYP)
UTILITY POLE BY GROTON UTILITIES (TYP)
ELECTRICAL CONDUIT TO RECEIVING STATION
PARKING LOT J
RECEIVING STATION (SEE RECEIVING STATION LAYOUT PLAN)
TEL/DATA DUCT BANK TO RECEIVING STATION
SWITCHGEAR BUILDINGS ON CONCRETE PEIRS
CAPACITORS AND TRANSISTORS ON CONCRETE PADS
RELOCATE LIGHT POLE AND OVERHEAD WIRES
GAS METER PAD
TEL/DATA CONDUIT FOR FUTURE SERVICE
FRESH WATER METER PIT
UTILITY VAULT (ELECTRIC AN TEL/DATA)
8" FRESH WATER SERVICE TO UTILITY BUILDING
GAS SERVICE TO UTILITY BUILDING
ELECTRIC CONDUIT DUCT ENCASED IN REINFORCED CONCRETE TO UTILITY BUILDING
TEL/DATA COUNDUIT DUCT ENCASED IN REINFORCED CONCRETE TO UTILITY BUILDING
RISER FOR VENT ON GAS CASING PIPE
CLEAN AND INSPECT EXISTING LATERAL, REPAIR AS NEEDED
SANITARY LATERAL FROM EXISTING BUILDING CONNECT 4" STEEL TO 6" PVC FIELD VERIFY INV=15.00
CLEANOUT
FRESH WATER AND FIRE STUBS; PROVIDE BLOWOFF VALVE, CAP AND THRUST BLOCK
UTILITY STUBS FOR FUTURE BUILDING (TYP)
SANITARY WASTE
87' – 6" PVC @ 1.0%
FLOOR DRAIN WASTE TO OIL/WATER SEPARATOR
90' – 6" PVC @ 1.1%
8" FIRE WATER SERVICE
6" FRESH WATER SERVICE
WATER OFFSET UNDER BOX CULVERT
REPLACE ELECTRIC MANHOLE COVERS WITH HEAVY DUTY COVERS
UTILITY CROSSING: CROSS PROPOSED DUCTBANKS BENEATH EXISTING ELECTRICAL DUCTBANK
UTILITY VAULTS (ELECTRICAL AND TEL/DATA)
8' – 4" PVC @ 2.5%
UTILITY CROSSING: ROUTE 4" SANITARY FORCE MAIN BENEATH 8" GRAVITY PIPE
135' – 6" PVC @ 3.0%
10" DIP FIRE WATER SERVICE
8" DIP FRESH WATER SERVICE
THRUST BLOCK (TYP)
TEL/DATA DUCTBANK TO CAMPUS SYSTEM, CUB TO VAULT
CONNECT TO EXISTING 10" FIRE WATER SERVICE
AIR LINE FOR FUTURE CONNECTION
GATE VALVE (TYP)
TEE (TYP)
10" DIP FORCE MAIN
TEL/DATA VAULT, CONNECTION TO CAMPUS SYSTEM
SANITARY FORCE MAIN TO EASTERN POINT ROAD (SEE UTILITY PLANS)
SMH 13
36' – 8" PVC @ 4.5%
8' – 8" PVC @ 1.8%
2,000 GALLON OIL/WATER SEPARATOR
85' – 8" PVC @ 1.0%
SMH 4
5' – 8" PVC @ 2.8%
3' – 8" PVC @ 2.0%
SMH 5
71' – 8" PVC @ 1.1%
4' – 4" PVC @ 2.7%
1' – 4" PVC @ 10.0%
GENERATOR
GENERATOR
STACK
6" DIP TO HYDRANT
FIRE HYDRANT
SANITARY PUMP STATION, SEE PUMP STATION PLANS INV=10.50
SANITARY PUMP STATION VENT
ELECTRICAL AND TEL/ DATA TO PUMP STATION
RISER
4" PVC GRAVITY FLOOR DRAIN LATERAL INV=14.30
10" FIRE WATER SERVICE TO BUILDING
99' – 8" PVC @ 0.7%
SMH 3
4" PVC SANITARY FORCE MAIN DISCHARGE INV=14.30
6" PVC ELEVATOR PIT AND TUNNEL SUMP FORCE MAIN INV=14.30
5' – 6" PVC @ 6.0%
SANITARY WYE CONNECTION (TYP)
SMH 2
3' – 4" @ 6.7%
5' – 4" PVC @ 4.0%
8" FRESH WATER SERVICE TO BUILDING
4" PVC GRAVITY FLOOR DRAIN LATERAL INV=14.30
162' – 8" PVC @ 1.0%
5' – 8" PVC @ 6.0%
8" PVC INV=14.30
SMH 10
THRUST BLOCKS AT ALL BENDS AND TEES, RESTRAIN ALL JOINTS (TYP)
NATURAL GAS SERVICE AND REGULATOR
GAS SERVICE TO UTILITY BUILDING
8" DIP FRESH WATER SERVICE
ELECTRICAL AND TEL/DATA CONDUITS ENCASED IN REINFORCED CONCRETE
BULK GAS LINES FROM INDUSTRIAL TANK AREA TO UTILITY BUILDING
6" DIP WATER SERVICE TO FLOATING DRY DOCK PIER
10" DIP FIRE WATER SERVICE
FIRE HYDRANT
FIRE HYDRANT
UTILITY CORRIDOR TO FLOATING DRY DOCK PIER
6" DIP FORCE MAIN
AIR TANK (TYP)
A/G LOW PRESSURE AIR PIPE
A/G STEAM PIPES (2)
MISC. OVERHEAD UTILITY PIPES
PROPANE TANKS ON CONCRETE PAD 1000 GAL.(2)
ABANDONED
SHUTOFF
STEAM
ELECTRIC (RISER)
FIRE (RISER)

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KRISTEN E. SCOTT
LICENSED PROFESSIONAL ENGINEER
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Kristen E. Scott

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE UTILITY PLAN

Date: 13 FEB 2019
Drawing No.:
SY-C-172
SHEET: OF

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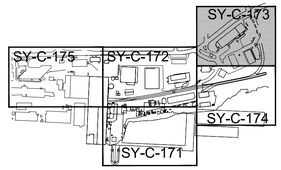

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Chairman _____ Date _____

30 0 30

GRAPHIC SCALE: 1"=30'

NICHOLAS AVENUE

EASTERN POINT ROAD

PARKING LOT S

80A

80

83

84

91

274

238

187

RELOCATE LIGHT POLE AND OVERHEAD WIRES

RELOCATE LIGHT POLE

INSTALL ELECTRICAL CONDUIT BETWEEN LIGHT POLES AND REPAIR WIRING

THRUST BLOCK AT ALL BENDS AND TEES, RESTRAIN ALL JOINTS (TYP)

PROVIDE RISER AT UTILITY POLE (TYP)

GAS METER PAD

TEL/DATA CONDUIT FOR FUTURE SERVICE

FRESH WATER METER PIT

TEL/DATA DUCT BANK TO RECEIVING STATION

UTILITY VAULT (ELECTRIC AND TEL/DATA)

8" FRESH WATER SERVICE TO UTILITY BUILDING

GAS SERVICE TO UTILITY BUILDING

STEEL ACCESS COVERS ON CONCRETE PAD

CHAIN LINK FENCE TYPICAL

CONCRETE DUMPSTER PAD

HEAVY VEGETATION

SANITARY SEWER EASEMENT (50' WIDTH)

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SUBMITTED BY: JOHN OSOSKIE
FILE NAME: 1997570S30_UTL_01

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ISSUED FOR PERMIT

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

SITE UTILITY PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-173

SHEET: OF

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-UTL-01.dwg

PLOT DATE/TIME: 2/6/2019 11:14 AM

TEL/DATA DUCT BANK TO RECEIVING STATION

UTILITY VAULT (ELECTRIC AND TEL/DATA)

8" FRESH WATER SERVICE TO UTILITY BUILDING

GAS SERVICE TO UTILITY BUILDING

RELOCATE LIGHT POLE AND OVERHEAD WIRES

ELECTRIC CONDUIT DUCT ENCASED IN REINFORCED CONCRETE TO UTILITY BUILDING

TEL/DATA COUNDUIT DUCT ENCASED IN REINFORCED CONCRETE TO UTILITY BUILDING

PIPE CROSSING: IF EXISTING SANITARY AND FRESH WATER PIPING IS IN CONFLICT DROP EXISTING SANITARY AND FRESH WATER BELOW PROPOSED UTILITY CORRIDOR

RISER FOR VENT ON GAS CASING PIPE

PROTECTION SLAB

RISER FOR VENT GAS CASING PIPE NEAR SLAB

INSTALL UTILITIES UNDER RAILROAD THROUGH RAILROAD CASING PIPE

INSTALL ISOLATION VALVES ON BOTH SIDES OF RAILROAD CROSSING (TYP)

ELECTRICAL AND TEL/DATA CONDUIT DUCTS ENCASED IN REINFORCED CONCRETE

UTILITY VAULT (ELECTRIC AND TEL/DATA)

THRUST BLOCK AT ALL BENDS AND TEES, RESTRAIN ALL JOINTS (TYP)

BULK GAS LINES FROM INDUSTRIAL TANK AREA TO UTILITY BUILDING

FIRE HYDRANT

FRESH WATER LIN

FORCE MAIN DISCHARGE FROM FLOATING DRY DOCK PIER

UTILITY CONNECTIONS TO FLOATING DRY DOCK PIER

UTILITY VAULT

2,000 GAL. ECOLOGY TANK

RELOCATE LIGHT POLE

INSTALL ELECTRICAL CONDUIT BETWEEN LIGHT POLES AND REPAIR WIRING

HEAVY VEGETATION

APPROXIMATE LOCATION OF SANITARY SEWER STRUCTURE (NOT FIELD LOCATED)

METER #4898

METER #3968

84

91

187

238

SHUTOFF

MAIN

DATUM CONVERSION TABLE				
	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	
SYAB FFE	15.13	13.46	12.50	1.50
AE BFE	13.63	11.96	11.00	1.50
				10.08
MHW	3.55	1.88	0.92	14.15
NAVD 88	2.63	0.96	0.00	0.92
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

SY-C-173
SY-C-175
SY-C-172
SY-C-174
SY-C-171

CITY OF GROTON: APPROVED PLAN

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Chairman _____ Date _____

GRAPHIC SCALE: 1"=30'

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Wethersfield, CT 06109

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STATE OF CONNECTICUT · KRISTEN E. SCOTT · No. 22072 · LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

DISCLAIMER

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NO.	DATE		BY	APVD

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24X36

SUBMITTED BY: JOHN OSOSKIE
FILE NAME: 1997570S30_UTL_01

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REUSE OF DOCUMENTS:

GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
SITE UTILITY PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-174

SHEET: OF

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PLOT DATE/TIME: 2/6/2019 11:14 AM

FORCE MAIN DISCHARGE TO 8'ø SANITARY MANHOLE INSTALLED BY OTHERS UNDER SEPARATE CONTRACT. INSPECT AND TEST SYSTEM PRIOR TO PUTTING INTO SERVICE. (COORDINATE WITH UTILITY COMPANY)

NEW 6" DIP FORCE MAIN FROM B153 AND NEW 10" DIP FORCE MAIN FROM SYAB TO BE INSTALLED BY OTHERS UNDER SEPARATE PROJECT.

CONNECT 10" DIP FORCE MAIN FROM SYAB TO 10" DIP FORCE MAIN STUB INSTALLED BY OTHERS UNDER SEPARATE PROJECT

THRUST BLOCK AT BEND

CAP END OF AIR LINE. PROVIDE LOCATOR PIN.

CONNECT TO EXISTING 6" WATER MAIN

8" WATER SERVICE

AIR LINE FOR FUTURE CONNECTION

10" DIP FORCE MAIN FROM SYAB (UNDER SYAB PROJECT)

SAWCUT EXISTING BITUMINOUS PAVEMENT AND CONCRETE SLABS FOR FORCE MAIN/WATER SERVICE CONSTRUCTION. RESTORE SURFACES UPON COMPLETION OF WORK.

NEW 6" DUCTILE IRON PIPE (DIP) FORCE MAIN FROM B153 INSTALLED BY OTHERS UNDER SEPARATE PROJECT.

EXISTING PUMP STATION PS 153

6" METER #3822

6" METER #3266

ABANDONED 11/13

ABANDONED 11/2013

COUPLING

48" T.O.P.

MAIN SHUTOFF

3"-3" T.O.P.

4" ABANDONED

MAIN SHUTOFF IN SUB BASEMENT WALL

VALVES REPLACED 2/2016

VALVE ADDED 2/2016

SPLASHOUT

REPLACED 2/15

REPLACED 12/15

3" VALVE IN PIT

1/2" DRAIN

1 1/2" HOSE GATE

RISER VALVE

4" C.I.

4'-3" T.O.P.

10" T.O.P.

3"x3"x2" TEE TURNED UP

TMH #101 TF=12.37

TMH TF=14.83

STEAM VAULT

SNET 68

SNET 70

SNET S71

SNET 72

SNET 73

SNET 86

SNET 87

DATUM CONVERSION TABLE

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VE BFE	16.63	14.96	14.00	
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NAVD 88	2.63	0.96	0.00	0.92
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MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

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SY-C-173
SY-C-175
SY-C-172
SY-C-174
SY-C-171

CITY OF GROTON: APPROVED PLAN
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Chairman Date

NOTE: THIS PLAN IS A COMPILATION OF AVAILABLE RECORD MAPPING AND OTHER UTILITY INFORMATION, AND IS NOT THE RESULT OF AN ACTUAL FIELD SURVEY. ALL LOCATIONS AND UTILITIES SHOWN ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED DURING CONSTRUCTION.

30 0 30
GRAPHIC SCALE: 1"=30'

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STATE OF CONNECTICUT
KRISTEN E. SCOTT
No. 22072
LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE	BY	APVD

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DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: 1997570S30_UTL_01
ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

REUSE OF DOCUMENTS:

GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
SITE UTILITY PLAN

Date: 13 FEB 2019
Drawing No.:
SY-C-175
SHEET: OF

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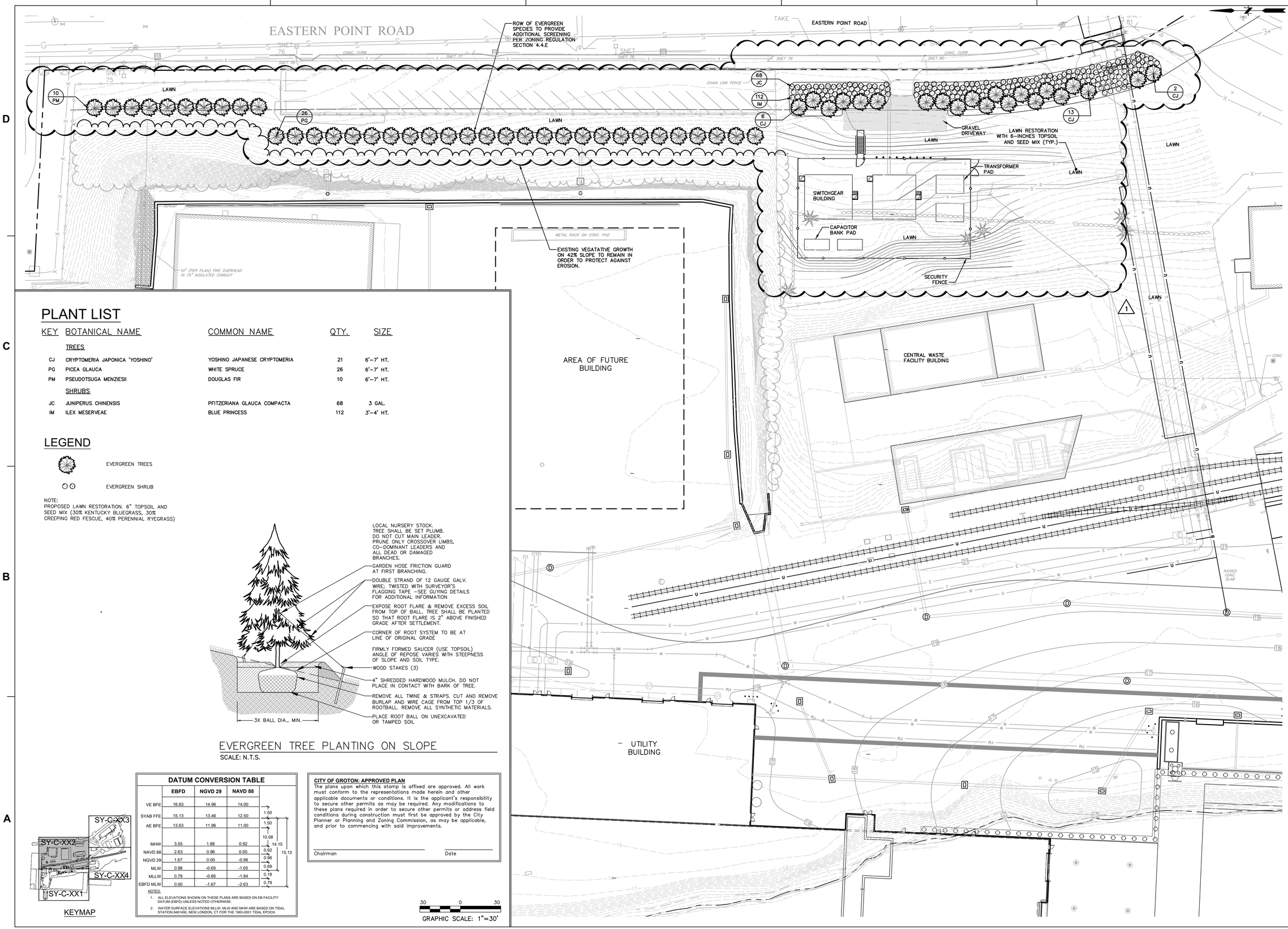

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
	TREES			
CJ	CRYPTOMERIA JAPONICA 'YOSHINO'	YOSHINO JAPANESE CRYPTOMERIA	21	6'-7' HT.
PG	PICEA GLAUCA	WHITE SPRUCE	26	6'-7' HT.
PM	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	10	6'-7' HT.
	SHRUBS			
JC	JUNIPERUS CHINENSIS	PFITZERIANA GLAUCA COMPACTA	68	3 GAL.
IM	ILEX MESERVEAE	BLUE PRINCESS	112	3'-4' HT.

LEGEND

EVERGREEN TREES

EVERGREEN SHRUB

NOTE:
PROPOSED LAWN RESTORATION. 6" TOPSOIL AND SEED MIX (30% KENTUCKY BLUEGRASS, 30% CREEPING RED FESCUE, 40% PERENNIAL RYEGRASS)

EVERGREEN TREE PLANTING ON SLOPE
SCALE: N.T.S.

DATUM CONVERSION TABLE

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VE BFE	16.63	14.96	14.00	
SYAB FFE	15.13	13.46	12.50	1.50
AE BFE	13.63	11.96	11.00	1.50
				10.08
MHW	3.55	1.88	0.92	14.15
NAVD 88	2.63	0.96	0.00	0.92 / 15.13
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

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Chairman _____ Date _____

KEYMAP

30 0 30
GRAPHIC SCALE: 1"=30'

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1	04-09-2019	CITY PLANNING COMMENTS	APVD

ISSUE DATE: 13 FEB 2019
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BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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REUSE OF DOCUMENTS:

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE LANDSCAPING PLAN

Date: 13 FEB 2019
Drawing No.:
SY-C-182
SHEET: OF

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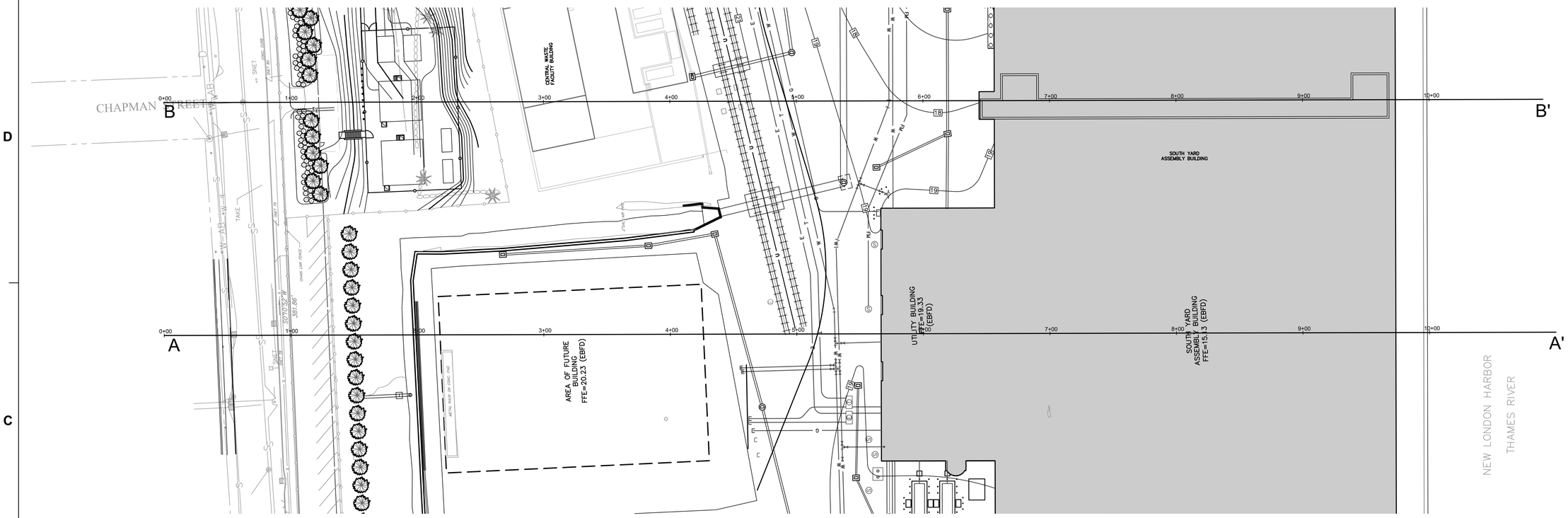

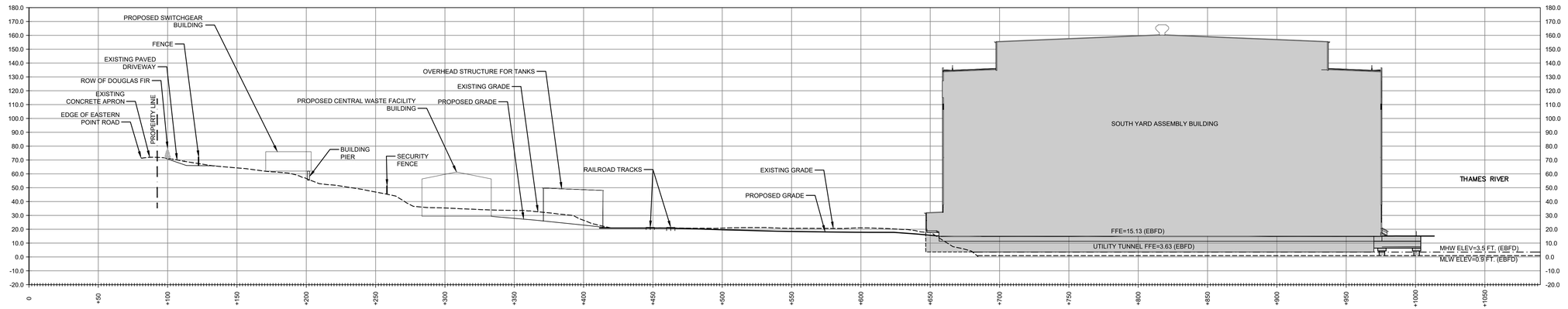

B - B'

SCALE: 1"=40' HORIZ.
1"=40' VERT.

NOTE:
ELEVATION DATUM IS ELECTRIC BOAT FACILITY DATUM (EBFD)

DATUM CONVERSION TABLE

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VE BFE	16.63	14.96	14.00
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MHW	3.55	1.88	0.92
NAVD 88	2.63	0.96	0.00
NGVD 29	1.67	0.00	-0.96
MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50
1.50
10.08
14.15
15.13
0.92
0.96
0.69
0.19
0.79

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Chairman _____ Date _____

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40 0 40
GRAPHIC SCALE: 1"=40'

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NO.	DATE	BY	APVD

ISSUE DATE: 13 FEB 2019
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BORDER SIZE: ARCH D 24x36
DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
CROSS SECTION B-B'

Date: 13 FEB 2019

Drawing No.:
SY-C-186

SHEET: OF

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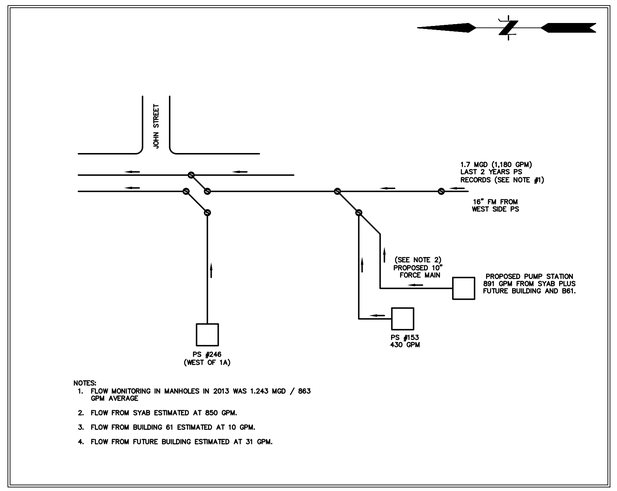
PLOT DATE/TIME: 4/5/2019 2:27 PM



NOTES:
1. FLOW MONITORING IN MANHOLES IN 2013 WAS 1.243 MGD / 863 GPM AVERAGE
2. FLOW FROM SYAB ESTIMATED AT 850 GPM.
3. FLOW FROM BUILDING 61 ESTIMATED AT 10 GPM.
4. FLOW FROM FUTURE BUILDING ESTIMATED AT 31 GPM.

PUMP STATION SCHEMATIC
(NOT TO SCALE)

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MLW	0.98	-0.69	-1.65
MLLW	0.79	-0.88	-1.84
EBFD MLW	0.00	-1.67	-2.63

1.50
1.50
10.08
14.15
15.13
0.92
0.96
0.69
0.19
0.79

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NOTE:
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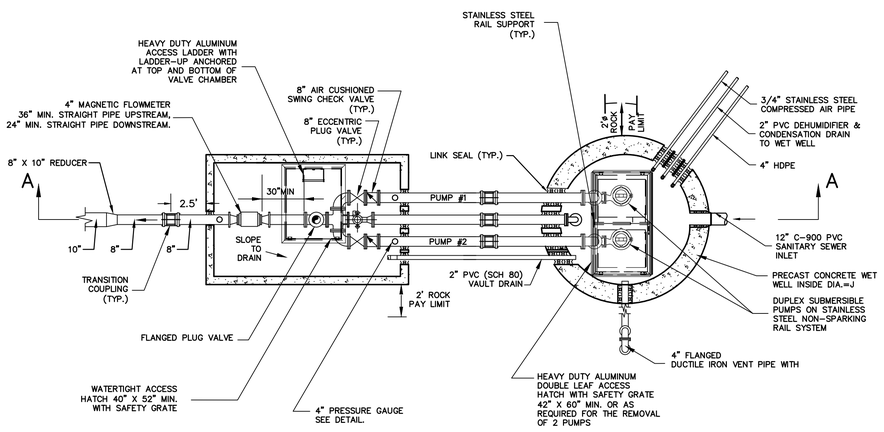
LETTER DESIGNATED ELEVATIONS AND DIMENSIONS

PUMP STATION	APPROX. TOP OF CONCRETE A	VALVE CHAMBER INSIDE DIM. (INCHES) B	℄ FM ELEV. C	HIGH LEVEL ALARM D	LAG ON ELEV. E	LEAD ON ELEV. F	PUMPS OFF ELEV. G	LOW LEVEL ALARM H	WET WELL BOTTOM ELEV. I	WET WELL DIA. ID (INCHES) J	GRAVITY INVERT ELEV. K	PUMP DISCHARGE SIZE (INCHES)	FORCE MAIN SIZE & TYPE (INCHES)
SYAB / BLDG 261	TBD	132"x96"	TBD	TBD	TBD	TBD	-15.0±	TBD	-17.0±	96	TBD	6	10" C900

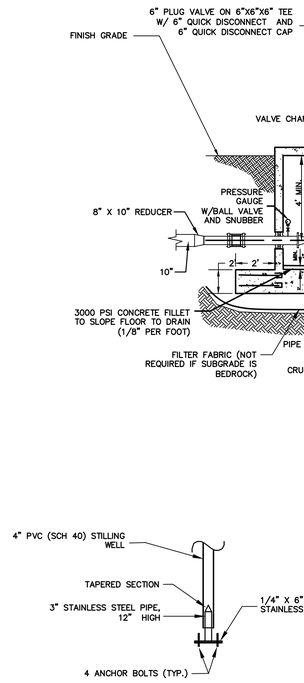
SEWAGE PUMP AND MOTOR CRITERIA

PUMP STATION	TYPE OF PUMP	NUMBER OF PUMPS	APPROXIMATE MOTOR HP	RATING POINT GPM @ TDH (FT.)	MIN. EFFICIENCY AT RATING POINT	MIN. SHUTOFF HEAD	MAX. RPM	DRIVE
CONTRACT 4	SUBMERSIBLE, NON-CLOG	2	125	TBD	TBD	TBD	1,750	TBD

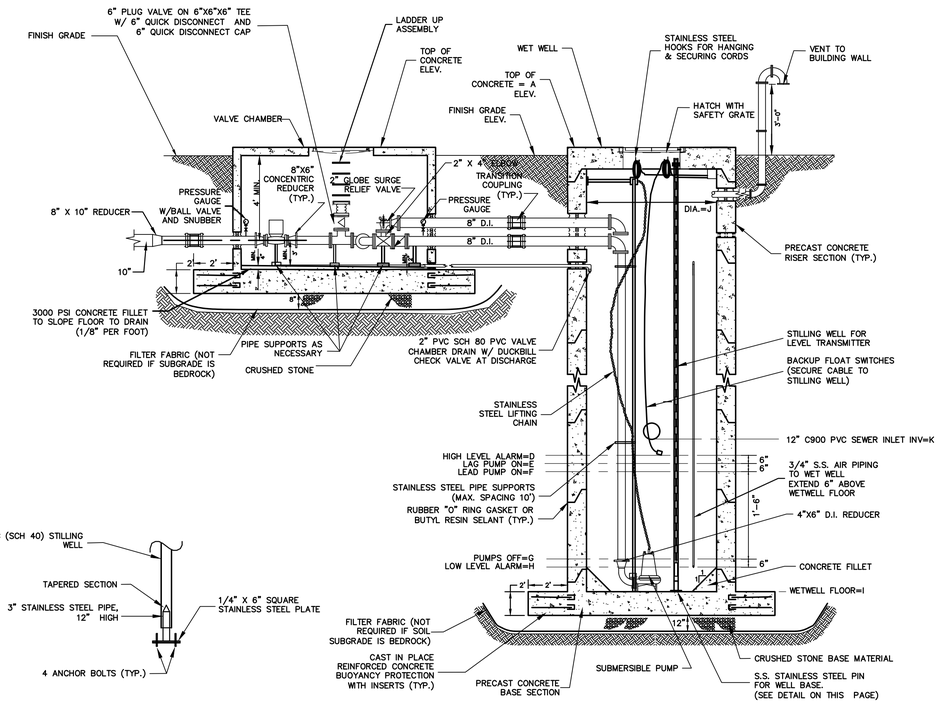
NOTES:
1. DIRECT VALVE CHAMBER ACCESS DOOR CHANNEL FRAME DRAIN TO VALVE CHAMBER DRAIN PIPE. DIRECT WET WELL ACCESS DOOR CHANNEL FRAME DRAIN TO WET WELL.
2. THE ABOVE REFERENCED LETTER DESIGNATED ELEVATIONS ARE BASED UPON THE ELEVATIONS OF THE GRAVITY SEWER INLET AND FORCE MAIN DISCHARGE SHOWN ON THE SITE PLANS. IF THE ELEVATIONS SHOWN ON THE SITE PLANS OF THE EXISTING GRAVITY SEWERS AND FORCE MAINS DIFFER FROM THE ELEVATIONS THE CONTRACTOR VERIFIED IN THE FIELD, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND THE ABOVE REFERENCED ELEVATIONS SHALL BE CHANGED IF NECESSARY.



PUMP STATION PLAN
N.T.S.



STAINLESS STEEL PIN DETAIL
N.T.S.



PUMP STATION CROSS-SECTION A-A
N.T.S.

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SUBMITTED BY: JOHN OSOSKIE
FILE NAME: 1997570S30_UTL_PUMP STAION
DRAWING CODE:
BORDER SIZE: ARCH D 24X36

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Electric Boat
South Yard Assembly Building (SYAB)
PUMP STATION PLAN AND SECTION

Date: 13 FEB 2019
Drawing No.:
SY-C-200
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File Path: J:\DWG\P97\97570\S30\Temp\Pump Station\1997570_S30_Pump-Station.dwg

PLOT DATE/TIME: 12/19/2018 2:12 PM

ELECTRIC BOAT
SOUTH YARD ASSEMBLY BUILDING
BASED ON
"2018 CT BUILDING CODE"
"2018 CT FIRE SAFETY CODE"
WITH CT AMENDMENTS
EFFECTIVE DATE OF ADOPTION 10/1/2018

2018 CT FIRE SAFETY CODE – PART 3 – NEW CONSTRUCTION, RENOVATIONS, ON CHANGE OF USE AND NEW BUILDINGS
- •2015 INTERNATIONAL FIRE CODE
  - •• AS AMENDED BY STATE OF CT

2018 CT FIRE SAFETY CODE – PART II – REFERENCED PUBLICATIONS
- •NFPA 70 – NATIONAL ELECTRICAL CODE – 2017 EDITION AS AMENDED BY THE BUILDING CODE

2018 CT BUILDING CODE
- •2015 INTERNATIONAL BUILDING CODE – AS AMENDED BY STATE OF CT
- •2015 INTERNATIONAL RESIDENTIAL CODE – AS AMENDED BY STATE OF CT
- •2015 INTERNATIONAL EXISTING BUILDINGS CODE – AS AMENDED BY STATE OF CT
- •2015 INTERNATIONAL MECHANICAL CODE – AS AMENDED BY STATE OF CT
- •2017 INTERNATIONAL ELECTRICAL CODE – AS AMENDED BY STATE OF CT
- •2009 INTERNATIONAL CODE COUNCIL/ANSI 117.1 – ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

2017 NATIONAL ELECTRICAL SAFETY CODE

JACOBS
100 Great Meadow Road, Suite 707
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STATE OF CONNECTICUT
KRISTEN E. SOLOMON
No. 22072
LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE	BY	APVD

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
GD
Electric Boat
South Yard Assembly Building (SYAB)
RECEIVING STATION GENERAL NOTES

Date: 13 FEB 2019

Drawing No.:
SY-C-300

SHEET: OF

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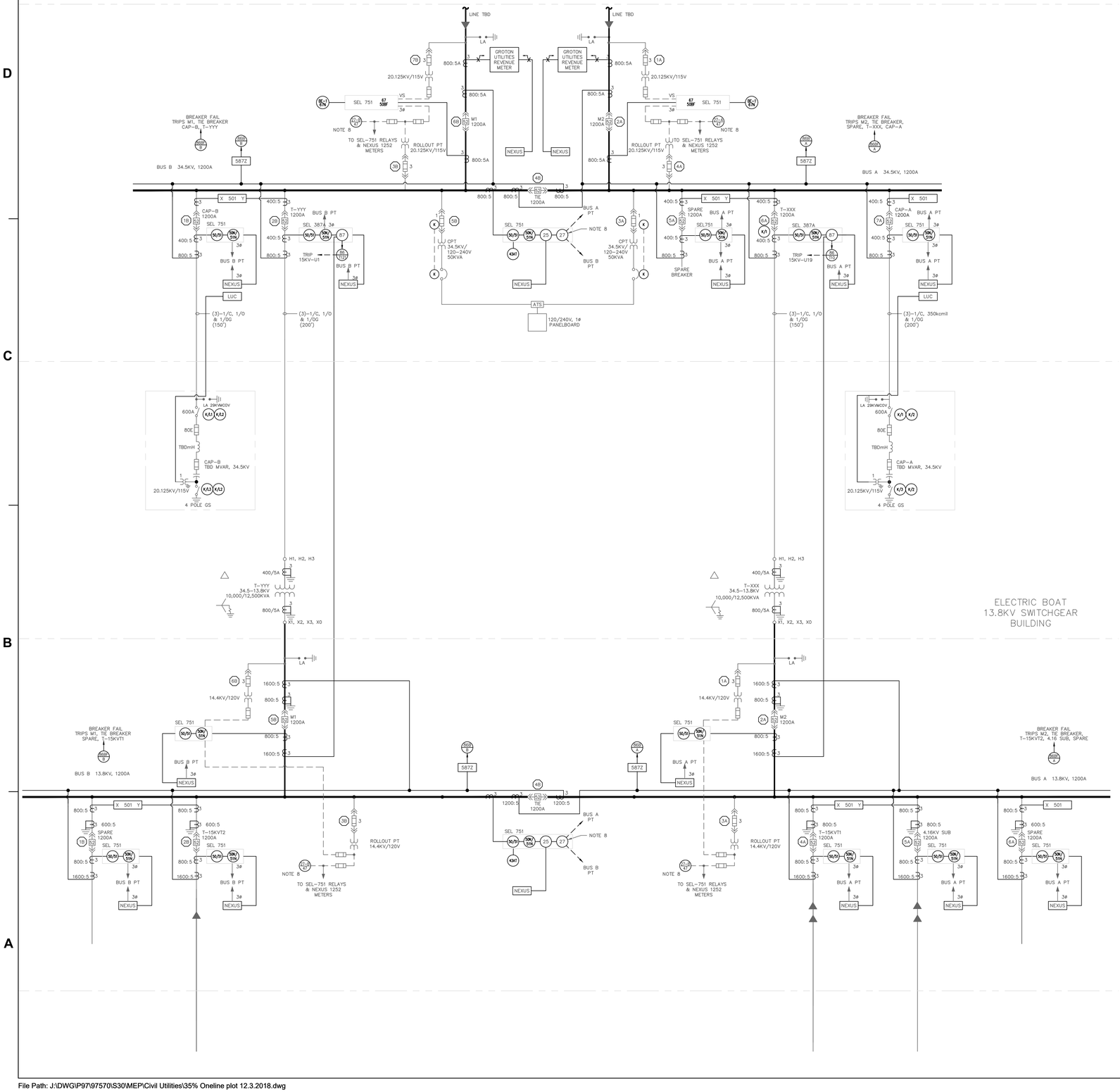
PLOT DATE/TIME: 12/18/2018 1:45 PM



RELAYING DEVICES LEGEND

25	SYNCHRONIZING CHECK DEVICE
27	UNDERVOLTAGE RELAY
43 A/M	TRANSFER DEVICE
50/51	INSTANTANEOUS OVERCURRENT/ TIME DELAY RELAY
50N/ 51N	INSTANTANEOUS OVERCURRENT / TIME DELAY RELAY (NEUTRAL)
51	TIME OVERCURRENT RELAY
62	TIME DELAY STOPPING OR OPENING RELAY
67	AC DIRECTIONAL OVERCURRENT RELAY
67N	AC DIRECTIONAL OVERCURRENT RELAY (NEUTRAL)
86	LOCKOUT RELAY
87	DIFFERENTIAL RELAY

POWER ONE-LINE LEGEND

Δ / Y	POWER TRANSFORMER – DELTA CONNECTED PRIMARY GROUNDED WYE CONNECTED SECONDARY
(2) CPT	VOLTAGE TRANSFORMER "PT" DENOTES VOLTAGE TRANSFORMER "CPT" DENOTES CONTROL POWER TRANSFORMER "(2)" DENOTES QUANTITY
CT 3	CURRENT TRANSFORMERS, "3" DENOTES QUANTITY
GF	GROUND FAULT SENSOR & RELAY
AS	AMP METER SWITCH
AM	AMP METER
VS	VOLT METER SWITCH
VM	VOLT METER
WHM	WATTHOUR METER
KWH	KILOWATT HOUR DEMAND METER
LSIG **AF **AT	MOLDED CASE CIRCUIT BREAKER "AF" – INDICATES AMPERE FRAME SIZE "AT" – INDICATES AMPERE TRIP SETTINGS "L" – INDICATES LONG TIME DELAY "S" – INDICATES SHORT TIME DELAY "I" – INDICATES INSTANTANEOUS PICKUP "G" – INDICATES GROUND FAULT PICKUP
400AS 300AF	SWITCH AND FUSE "400AS" – INDICATES SWITCH AMPERE SIZE "300AF" – INDICATES FUSE AMPERE SIZE
	SYSTEM GROUND OR EQUIPMENT GROUND
LA	LIGHTNING/SURGE ARRESTER
N E L ATS	TRANSFER SWITCH "ATS" DENOTES AUTOMATIC TRANSFER SWITCH "MTS" DENOTES MANUAL TRANSFER SWITCH
M P D	MONITORING AND PROTECTIVE DEVICE
125E	FUSE, "125" DENOTES SIZE AND TYPE
T3	DRY TYPE TRANSFORMER, "T3" DENOTES TYPE. REFER TO "DRY TYPE TRANSFORMER SCHEDULE" FOR DESCRIPTIONS.
PANEL	PANELBOARD
M	METER (MICRO PROCESSOR BASED)
PT	PT WITH OPEN DELTA CONFIGURATION
ST	SHUNT TRIP DEVICE
	MEDIUM VOLTAGE DRAWOUT TYPE CIRCUIT BREAKER
ATS	AUTOMATIC TRANSFER SWITCH
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
K	KIRK KEY INTERLOCK
	CONTROL LOGIC WIRING
	POTENTIAL TRANSFORMER WIRING
	CASE TEST SWITCH CURRENT SHORTING TYPE
NEXUS	NEXUS POWER MONITORING SYSTEM
SEL287	VOLTAGE DIFFERENTIAL & CONTROL RELAY
SEL351	DIFFERENTIAL OVERCURRENT & RECLOSING RELAY
SEL387A	CURRENT DIFFERENTIAL & OVERCUTTENT RELAY
SEL501	DUAL UNIVERSAL OVERCURRENT RELAY
SEL551	OVERCURRENT/RECLOSING RELAY
SEL5872	HIGH IMPEDENCE DIFFERENTIAL RELAY
	CAPACITOR BANK
	DRAWOUT FUSES

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BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE

SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

GENERAL DYNAMICS
GD
Electric Boat
South Yard Assembly Building (SYAB)
RECEIVING STATION MEDIUM VOLTAGE ONELINE

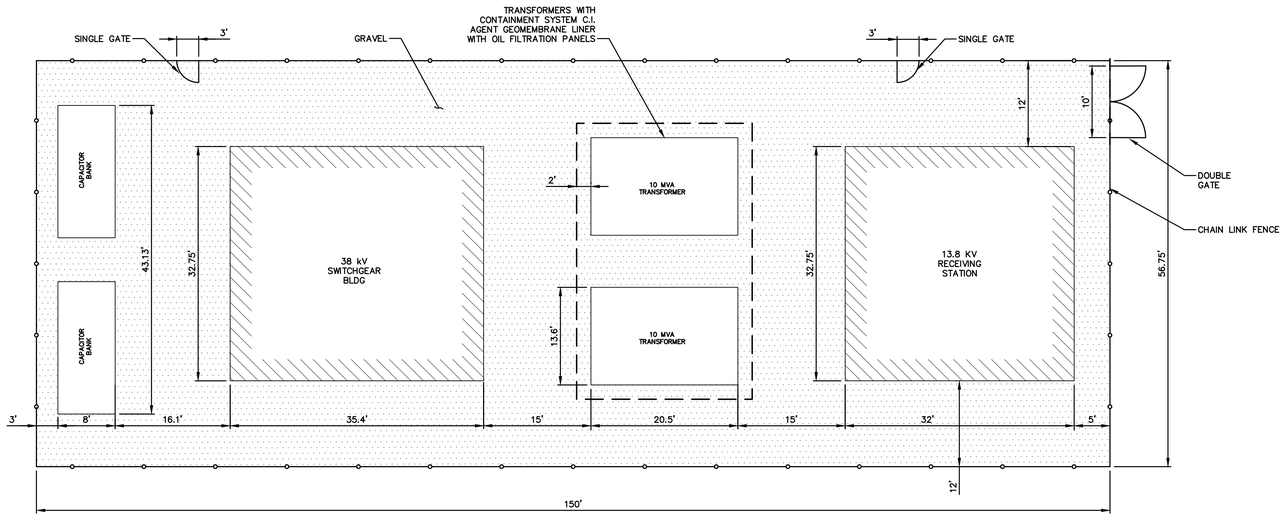
Date: 13 FEB 2019

Drawing No.:
SY-C-310

SHEET: OF

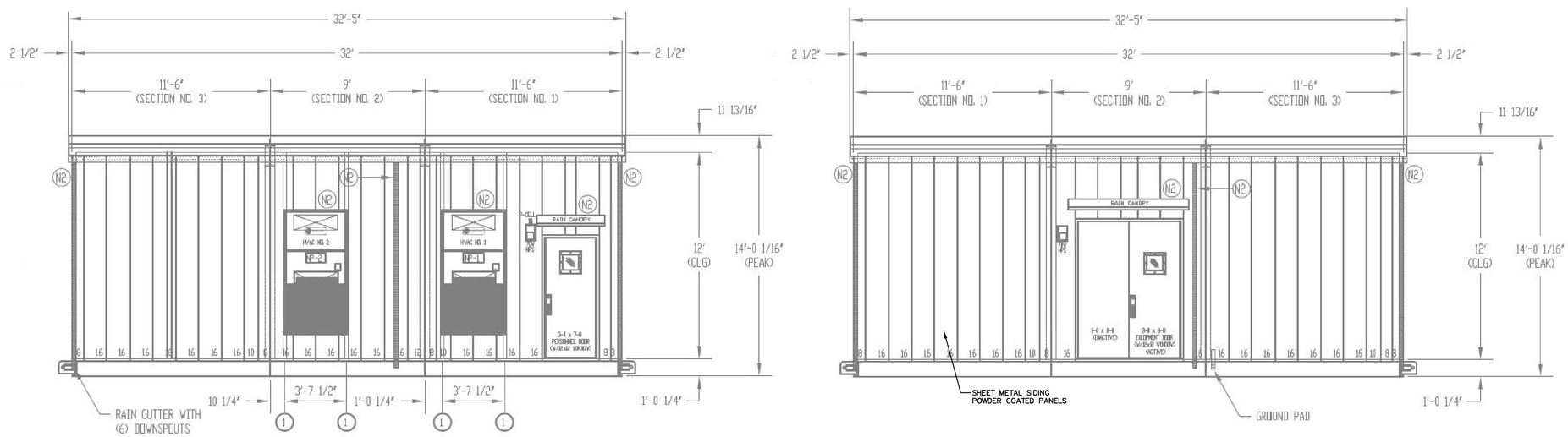
File Path: J:\DWG\P97\97570\S30\MEP\Civil Utilities\35% Oneline plot 12.3.2018.dwg

PLOT DATE/TIME: 2/8/2019 11:14 AM



RECEIVING STATION LAYOUT

1"=10'



REPRESENTATIVE ELEVATIONS

NOT TO SCALE

JACOBS
JACOBS ENGINEERING GROUP INC.
100 Great Meadow Road, Suite 707
Wethersfield, CT 06109

FUSS & O'NEILL
UK ENGINEERING SERVICES
ENVIRONMENTAL CONSULTANTS
CIVIL ENGINEERS
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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
RECEIVING STATION LAYOUT PLAN

Date: 13 FEB 2019

Drawing No.:
SY-C-311

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PLOT DATE/TIME: 2/10/2019 6:33 PM

CIVIL GENERAL NOTES

GENERAL

1. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SHOWN ON THE DRAWINGS TO SCALE OR TO THEIR ACTUAL DIMENSION OR LOCATION. COORDINATE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
2. DO NOT RELY SOLELY ON ELECTRONIC VERSIONS OF DRAWINGS, SPECIFICATIONS, AND DATA FILES THAT ARE PROVIDED BY THE ENGINEER. FIELD VERIFY LOCATION OF PROJECT FEATURES.
3. PERFORM NECESSARY CONSTRUCTION NOTIFICATIONS, APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK AS REQUIRED BY THE CONTRACT DOCUMENTS.
4. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDINGS AND ADJACENT SITE ELEMENTS INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
5. BASE PLAN: THE PROPERTY LINES SHOWN WERE DETERMINED BY AN ACTUAL FIELD SURVEY CONDUCTED BY DICESARE–BENTLEY ENGINEERS, INC. ON NOVEMBER 11–17, 2016, AND FROM PLANS OF RECORD. THE TOPOGRAPHY AND PHYSICAL FEATURES ARE BASED ON AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND BY FUSS & O'NEILL, INC.
6. TOPOGRAPHIC ELEVATIONS ARE BASED ON EB FACILITY DATUM (EBFD).
7. ANY CHANGES TO THE HORIZONTAL AND VERTICAL DIMENSIONS/LOCATIONS/ELEVATIONS OF ALL STRUCTURES, CHANGE IN THE EXTENT OF IMPROVEMENTS, INCLUDING THE DEPTH AND QUANTITY OF EXCAVATION/ROCK REMOVAL, CONSTRUCTION DURATION OR SEQUENCE OF CONSTRUCTION, SHALL BE BROUGHT TO THE ATTENTION OF THE CITY PLANNER PRIOR TO COMMENCING WITH WORK AND MAY BE SUBJECT TO APPROVAL BY CITY PLANNER OR PLANNING ZONING COMMISSION PRIOR TO WORK CONTINUATION.
8. AN AS–BUILT SURVEY SHALL BE PROVIDED DEPICTING THE LOCATION OF THE FOUNDATION AFTER INSTALLATION AND PRIOR TO ERECTION OF VERTICAL STRUCTURES. A PHASED APPROACH TO THIS AS–BUILT PROVISION MAY BE PROVIDED.
9. GEOTECHNICAL DATA INCLUDING TEST PIT AND BORING LOCATIONS AND ELEVATIONS WERE OBTAINED FROM GEI CONSULTANTS, INC.
10. WETLANDS WERE DELINEATED BY FUSS & O'NEILL, INC. ON JUNE 14, 2018.

WORK RESTRICTIONS

1. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, FIRE HYDRANTS, AND UTILITIES WITHOUT APPROPRIATE PERMITS.
2. WORK IS RESTRICTED TO THE HOURS OF TO THE HOURS 7:00 AM TO 5:00 PM ON MONDAY THROUGH FRIDAY.

REGULATORY REQUIREMENTS

1. WITHIN LOCAL RIGHTS–OF–WAY, PERFORM THE WORK IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS.
2. WITHIN STATE RIGHTS–OF–WAY, PERFORM THE WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS AND ISSUED REVISIONS/SUPPLEMENTS.
3. PROVIDE TRAFFIC SIGNAGE AND PAVEMENT MARKINGS IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. PERFORM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
5. DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
6. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE CONNECTICUT DEP STORMWATER AND DEWATERING WASTEWATER FROM CONSTRUCTION ACTIVITIES GENERAL PERMIT PROCESS. GENERAL DYNAMICS HAS SUBMITTED INFORMATION TO THE DEEP TO SATISFY THIS GENERAL PERMIT. THE CONTRACTOR MUST HAVE A COPY OF THIS GENERAL PERMIT ON SITE AT ALL TIMES.

EROSION AND SEDIMENT CONTROL

1. INSTALL EROSION CONTROL MEASURES PRIOR TO STARTING ANY WORK ON THE SITE. REFER TO THE EROSION AND SEDIMENT CONTROL DRAWINGS.
2. IMPLEMENT ALL NECESSARY MEASURES REQUIRED TO CONTROL STORMWATER RUNOFF, DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE. PERFORM CORRECTIVE ACTION AS NEEDED FOR EROSION CLEANUP AND REPAIRS TO OFF SITE AREAS, IF ANY, AT NO COST TO OWNER.
3. INSPECT AND MAINTAIN EROSION CONTROL MEASURES PER THE SCHEDULE IN THE EROSION AND SEDIMENT CONTROL DRAWINGS. DISPOSE OF SEDIMENT IN AN UPLAND AREA. DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
4. PERFORM CONSTRUCTION SEQUENCING IN SUCH A MANNER TO CONTROL EROSION AND TO MINIMIZE THE TIME THAT EARTH MATERIALS ARE EXPOSED BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROL MEASURES. CLEAN SEDIMENT AND DEBRIS FROM TEMPORARY MEASURES AND FROM PERMANENT STORM DRAIN AND SANITARY SEWER SYSTEMS.

DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS, UNLESS OTHERWISE NOTED.
2. THE DEMOLITION PLAN IS PROVIDED FOR INFORMATION ONLY AND MAY NOT INDICATE ALL ITEMS REQUIRED TO BE DEMOLISHED. PERFORM A PRE–BID SITE INSPECTION. COORDINATE DEMOLITION OF UNIDENTIFIED UTILITIES OR STRUCTURES WITH OWNER. DEMOLISH STRUCTURES, SITE IMPROVEMENTS, UTILITIES, ETC. AS REQUIRED TO CONSTRUCT PROPOSED TO CONSTRUCT PROPOSED FACILITY AND UTILITY SERVICES.

CONSTRUCTION LAYOUT

1. PROVIDE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED SITE IMPROVEMENTS. FIELD VERIFY EXISTING PAVEMENT AND GROUND ELEVATIONS AT THE INTERFACE WITH PROPOSED PAVEMENTS AND DRAINAGE STRUCTURES BEFORE START OF CONSTRUCTION.
2. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, FIELD VERIFY PROPOSED UTILITY ROUTES AND IDENTIFY ANY INTERFERENCES OR OBSTRUCTIONS WITH EXISTING UTILITIES OR PUBLIC RIGHTS–OF–WAY.
3. IMMEDIATELY INFORM THE ENGINEER IN WRITING IF EXISTING UTILITY CONDITIONS CONFLICT OR DIFFER FROM THAT INDICATED AND IF THE WORK CANNOT BE COMPLETED AS INDICATED.
4. DIMENSIONS ARE FROM FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS NOTED OTHERWISE.
5. BOUNDS OR MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.

EARTHWORK

1. NOTIFY UTILITY LOCATOR SERVICE AT LEAST 72 HOURS BEFORE STARTING EXCAVATION. CT: "CALL BEFORE YOU DIG" AT 1–800–922–4455.
2. STOP WORK IN THE VICINITY OF SUSPECTED CONTAMINATED SOIL, GROUNDWATER OR OTHER MEDIA. IMMEDIATELY NOTIFY THE OWNER SO THAT APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN. RESUME WORK IN THE IMMEDIATE VICINITY ONLY UPON DIRECTION BY THE OWNER.
3. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, PERFORM EARTHWORK OPERATIONS TO SUBGRADE ELEVATIONS. SEE DRAWINGS BY OTHERS FOR WORK ABOVE SUBGRADE.

BLASTING

A BLASTING PLAN SHALL BE SUBMITTED TO CITY OF GROTON FOR APPROVAL PRIOR TO CONSTRUCTION. THE FOLLOWING WILL BE REQUIRED:

1. THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH APPLICABLE REQUIREMENTS IN NFPA 495, "EXPLOSIVE MATERIALS CODE," AND PREPARE A BLASTING PLAN REPORTING THE FOLLOWING:
   A. TYPES OF EXPLOSIVE AND SIZES OF CHARGE TO BE USED IN EACH AREA OF ROCK REMOVAL, TYPES OF BLASTING MATS, SEQUENCE OF BLASTING OPERATIONS, AND PROCEDURES THAT WILL PREVENT DAMAGE TO SITE IMPROVEMENTS AND STRUCTURES ON PROJECT SITE AND ADJACENT PROPERTIES.
   B. SEISMOGRAPHIC MONITORING DURING BLASTING OPERATIONS.
2. AN INDEPENDENT TESTING AGENCY, ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, EXPERIENCED IN SEISMIC SURVEYS AND BLASTING PROCEDURES SHALL PERFORM THE FOLLOWING SERVICES:
   A. REPORT TYPES OF EXPLOSIVE AND SIZES OF CHARGE TO BE USED IN EACH OF ROCK REMOVAL, TYPES OF BLASTING MATS, SEQUENCE OF BLASTING OPERATIONS, AND PROCEDURES THAT WILL PREVENT DAMAGE TO SITE IMPROVEMENTS AND STRUCTURES ON PROJECT SITE AND ADJACENT PROPERTIES.
   B. SEISMIC MONITORING DURING BLASTING OPERATIONS.
3. GEOTECHNICAL TESTING AGENCY QUALIFICATIONS SHALL BE ACCORDING TO ASTM E 329 AND ASTM D 37470 FOR TESTING INDICATED.
4. A PRE–EXCAVATION CONFERENCE SHALL BE CONDUCTED AT THE SITE.

1

UTILITIES

1. TERMINATE EXISTING UTILITIES IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. COORDINATE UTILITY SERVICE DISCONNECTS WITH UTILITY REPRESENTATIVES.
2. THE TYPE, SIZE AND LOCATION OF DEPICTED UNDERGROUND UTILITIES ARE APPROXIMATE REPRESENTATIONS OF INFORMATION OBTAINED FROM FIELD LOCATIONS OF VISIBLE FEATURES, EXISTING MAPS AND PLANS OF RECORD, UTILITY MAPPING, AND OTHER SOURCES OF INFORMATION OBTAINED BY THE ENGINEER. ASSUME NO GUARANTEE AS TO THE COMPLETENESS, SERVICEABILITY, EXISTENCE, OR ACCURACY OF UNDERGROUND FACILITIES. FIELD VERIFY THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES.
3. PAY ALL FEES AND COSTS ASSOCIATED WITH UTILITY MODIFICATIONS AND CONNECTIONS, REGARDLESS OF THE ENTITY THAT PERFORMS THE WORK.
4. COORDINATE THE WORK AND WORK SCHEDULE WITH UTILITY COMPANIES. PROVIDE ADEQUATE NOTICE TO UTILITIES TO PREVENT DELAYS IN CONSTRUCTION.
5. INTERIOR DIAMETERS OF STORM DRAIN AND SANITARY SEWER STRUCTURES SHALL BE DETERMINED BY THE PRECAST MANUFACTURER, BASED ON THE INDICATED PIPE SYSTEM LAYOUT AND LOCAL MUNICIPAL STANDARDS.

   MINIMUM INTERIOR DIAMETERS:
   0 TO 20 FEET DEEP; 4 FEET.
   20 FEET OR GREATER; 5 FEET.

5. RIM ELEVATIONS FOR MANHOLES, VALVE COVERS, GATE AND PULL BOXES, AND OTHER STRUCTURES ARE APPROXIMATE. SET OR RESET RIM ELEVATIONS AS FOLLOWS:

   IN PAVEMENTS AND CONCRETE SURFACES: FLUSH
   IN SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
   IN LANDSCAPE, SEEDED, AND OTHER EARTH SURFACE AREAS:
   1 INCH ABOVE SURROUNDING AREA; TAPER EARTH TO RIM ELEVATION.

6. INSTALL PROPOSED PRIVATE UTILITY SERVICES ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY THE AUTHORITY HAVING JURISDICTION (WATER, SEWER, GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). COORDINATE FINAL DESIGN LOADS AND LOCATIONS WITH OWNER AND ARCHITECT.

PAVEMENT

1. AT A MINIMUM, CONSTRUCT ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).

SITE RESTORATION

1. PROVIDE 6 INCHES OF TOPSOIL AND SEED TO AREAS DISTURBED DURING CONSTRUCTION AND NOT DESIGNATED TO BE RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) UNLESS OTHERWISE NOTED.
2. REPAIR DAMAGES RESULTING FROM CONSTRUCTION LOADS, AT NO ADDITIONAL COST TO OWNER.
3. RESTORE AREAS DISTURBED BY CONSTRUCTION OPERATIONS TO THEIR ORIGINAL CONDITION OR BETTER, AT NO ADDITIONAL COST TO OWNER.

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Wethersfield, CT 06109

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MANCHESTER, CONNECTICUT 06040
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STATE OF CONNECTICUT · KRISTINE E. SOSOSKIE · No. 22072 · LICENSED PROFESSIONAL ENGINEER

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NO.	DATE	BY	APVD
1	04-09-2019	CITY PLANNING COMMENTS	

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GD Electric Boat
South Yard Assembly Building (SYAB)

CIVIL GENERAL NOTES

Date: 13 FEB 2019

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SY-C-500

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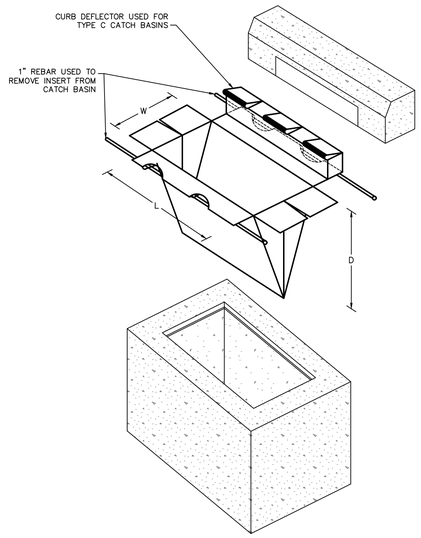
PLOT DATE/TIME: 4/4/2019 6:59 PM



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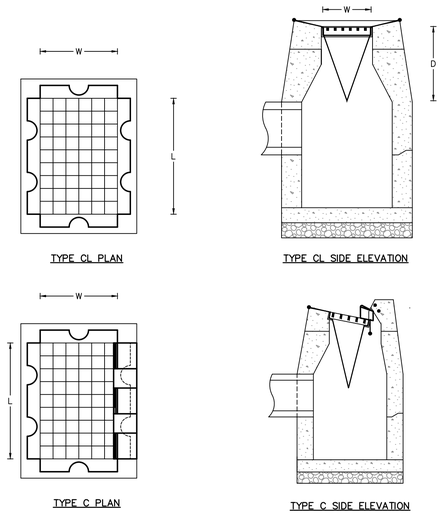
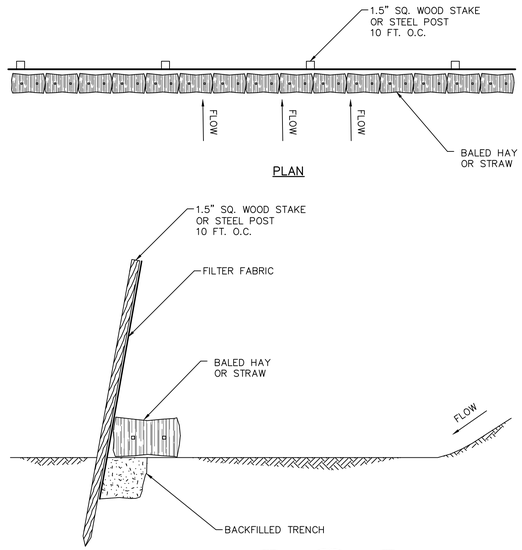




EROSION & SEDIMENT CONTROL NOTES

1. CONSTRUCTION STANDARDS – CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MOST RECENT EDITION OF THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (CT DEP BULLETIN 34). ALL MEASURES SHALL BE MAINTAINED AND UPGRADED TO ACHIEVE PROPER SEDIMENT CONTROL DURING CONSTRUCTION.

2. PLAN IMPLEMENTATION – IMPLEMENT THIS EROSION AND SEDIMENT CONTROL PLAN. THIS IMPLEMENTATION INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES UNTIL PERMANENT STABILIZATION IS ACHIEVED, INFORMING ALL SUBCONTRACTORS OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER MUNICIPAL AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY. THE OWNER SHALL BE RESPONSIBLE FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN TO THE NEW OWNER IF THE TITLE OF THE LAND IS TRANSFERRED PRIOR TO ACHIEVING PERMANENT STABILIZATION.

3. INSTALLATION SCHEDULE – INSTALL THE CONSTRUCTION ENTRANCE BEFORE CONSTRUCTION TRAFFIC INTO AND OUT OF THE PROJECT AREA BEGINS. INSTALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO STUMP REMOVAL AND CONSTRUCTION. INSTALL ADDITIONAL CONTROL MEASURES DURING THE CONSTRUCTION PERIOD, IF DEEMED NECESSARY BY THE OWNER, HIS AGENTS OR AGENTS OF THE MUNICIPALITY.

4. FUGITIVE DUST – CONTROL FUGITIVE DUST USING WATER SPRAYS OR CALCIUM CHLORIDE ON SOIL SURFACES, SWEEPING PAVED AREAS, TEMPORARY WINDBREAKS OR NON–ASPHALTIC SOIL TACKIFIERS.

5. HAY BALE LIFE SPAN – INSTALL HAY BALES WHERE PROTECTION AND EFFECTIVENESS IS REQUIRED FOR LESS THAN 90 DAYS. OTHERWISE, INSTALL SILT FENCE.

6. CATCH BASINS – PROTECT CATCH BASINS WITH PROPER CONTROLS THROUGHOUT THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.

7. STOCKPILES – ENCIRCLE STOCKPILES OF ERODIBLE SOIL WITH A SILT FENCE BARRIER BACKED BY HAY BALES. THE SIDE SLOPES OF ERODIBLE STOCKPILED MATERIAL SHALL BE NO STEEPER THAN 2:1. STOCKPILES THAT ARE NOT TO BE USED WITHIN 30 DAYS SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE FORMED. 2

8. TOE OF SLOPE – ESTABLISH AN EROSION CONTROL BARRIER (SILT FENCE OR HAY BALE BARRIER) APPROXIMATELY 5 TO 10 FEET FROM THE PROPOSED TOE OF THE CUT OR FILL AREA PRIOR TO BEGINNING EARTHWORK.

9. SEDIMENT REMOVAL – SEDIMENT REACHING ½ THE HEIGHT OF THE EROSION CONTROL BARRIER SHALL BE REMOVED. REMOVE AND DISPOSE OF SEDIMENT IN A MANNER CONSISTENT WITH THE INTENT OF THE PLAN.

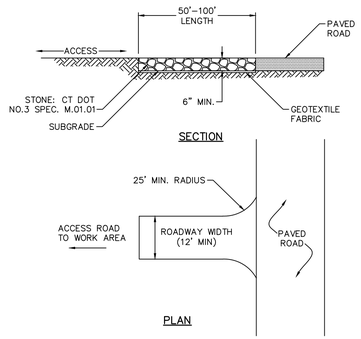
10. SOIL STABILIZATION SCHEDULE – APPLY PERMANENT SOIL STABILIZATION MEASURES TO ALL GRADED AREAS WITHIN 7 DAYS OF ESTABLISHING FINAL GRADE. APPLY TEMPORARY SOIL STABILIZATION MEASURES IF FINAL GRADING IS TO BE DELAYED MORE THAN 30 DAYS.

11. TEMPORARY SEEDING – TEMPORARILY SEED ERODIBLE SOILS THAT WILL BE EXPOSED GREATER THAN 1 BUT LESS THAN 12 MONTHS WITHIN THE FIRST 7 DAYS OF SUSPENDING GRADING OPERATIONS. APPLY LIME AT A RATE OF 90 LBS/1000 SQ. FT. APPLY 10–10–10 FERTILIZER AT A RATE OF 7 ½ LBS/1000 SQ. FT. APPLY PERENNIAL RYE GRASS AT A RATE OF 2 LBS/1000 SQ. FT. TO A DEPTH OF ½ INCH. OPTIMUM SEEDING DATES ARE MARCH 15 TO JULY 1 AND AUGUST 1 TO OCTOBER 15. MULCH FOR SEED APPLIED WITHIN THE OPTIMUM SEEDING DATES SHALL BE APPLIED EVENLY SUCH THAT IT PROVIDES 80%–95% SOIL COVERAGE. MULCH FOR SEED APPLIED OUTSIDE OF THE OPTIMUM SEEDING DATES SHALL BE APPLIED EVENLY SUCH THAT IT PROVIDES 95%–100% COVERAGE.

12. PERMANENT SEEDING – SEED PERMANENT LAWN AREAS IN ACCORDANCE WITH THE SPECIFICATIONS.

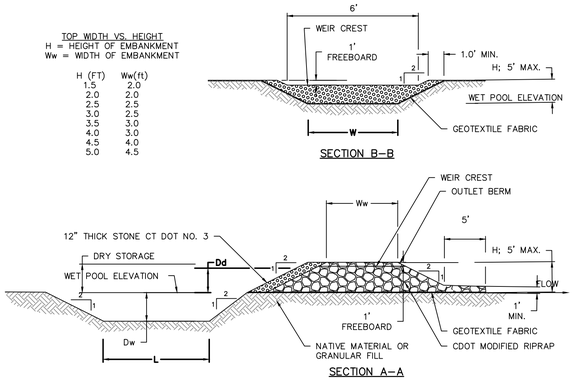
13. INSPECTION – THE OWNER SHALL SECURE THE SERVICES OF A SOIL SCIENTIST OR PROFESSIONAL ENGINEER TO VERIFY IN THE FIELD THAT THE CONTROLS REQUIRED BY THIS PLAN ARE PROPERLY INSTALLED AND MAINTAINED. THESE INSPECTIONS SHALL BE NOT LESS FREQUENTLY THAN WEEKLY AND WITHIN 24 HOURS OF THE END OF A STORM HAVING A RAINFALL AMOUNT OF 0.5 INCH OR GREATER. FOLLOWING THESE INSPECTIONS, A WRITTEN REPORT SHALL BE PREPARED, INFORMING THE OWNER OR HIS AGENT NOT LESS FREQUENTLY THAN WEEKLY AND THE MUNICIPALITY NOT LESS FREQUENTLY THAN MONTHLY OF OBSERVATIONS, MAINTENANCE, AND CORRECTIVE ACTIVITIES UNDERTAKEN.
OWNER: GENERAL DYNAMICS ELECTRIC BOAT (GDEB)
AGENT REPRESENTATIVE: STEVE O'CONNOR, AECOM, PHONE: 617–713–7408

14. HYDRODYNAMIC SEPARATORS – DURING CONSTRUCTION, GRATE TOP HDS UNITS SHALL BE EQUIPPED WITH INLET PROTECTION. ALL HDS UNITS SHALL BE INSPECTED PER CRITERIA STATED IN NOTE #13 ABOVE AND INCLUDED IN THE WRITTEN REPORT. THE UNITS SHOULD BE CLEANED WHEN THE SEDIMENT LEVEL HAS REACHED 75% OF THE CAPACITY OF THE ISOLATED SUMP AND/OR WHEN TRASH HAS ACCUMULATED ON THE SCREEN. 2



CONSTRUCTION ENTRANCE

SCALE: N.T.S.



NOTE:
EXCAVATE AND DISPOSE OF ACCUMULATED SEDIMENT IN TRAP WHEN ACCUMULATED SEDIMENT LEVELS REACH 1/2 THE HEIGHT OF Dw.

TEMPORARY SEDIMENT TRAP

SCALE: N.T.S.

SEDIMENT TRAP NOTES

1. CONTRIBUTING AREA: 5 ACRES OR LESS.
2. DURATION OF USE: LESS THAN 2 YEARS
3. REQUIRED TOTAL STORAGE VOLUME: 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA, HALF OF WHICH SHALL BE IN THE WET STORAGE AREA, HALF SHALL BE IN THE DRY STORAGE AREA.
4. LENGTH TO WIDTH RATIO: 2:1 SHALL BE PROVIDED, IF POSSIBLE.
5. WET STORAGE VOLUME CALCULATION: SEE SEDIMENT AND EROSION CONTROL PLANS FOR DIMENSIONS

WSV = 0.85 X AB X D WHERE,

WSV = WET STORAGE VOLUME IN CUBIC FEET

AB = SURFACE AREA IN SQUARE FEET OF THE FLOODED AREA AT THE ELEVATION OF THE BASE OF THE RIPRAP OUTLET BERM (WET POOL ELEVATION, SEE SECTIONS)

D = MAXIMUM DEPTH IN FEET, MEASURED FROM THE LOW POINT IN THE TRAP TO THE BASE OF THE RIPRAP OUTLET BERM (WET POOL ELEVATION)

DRY STORAGE VOLUME: SEE SEDIMENT AND EROSION CONTROL PLANS FOR DIMENSIONS

DSV = ((AB + AT)/2) X D WHERE;

DSV = DRY STORAGE VOLUME IN CUBIC FEET

AB = SURFACE AREA IN SQUARE FEET OF THE FLOODED AREA AT THE ELEVATION OF THE BASE OF THE RIPRAP OUTLET BERM (WET POOL ELEVATION, SEE SECTIONS)

AT = SURFACE AREA IN SQUARE FEET OF THE FLOODED AREA AT THE ELEVATION OF THE WEIR OF THE RIPRAP OUTLET BERM

D = DEPTH IN FEET, MEASURED FROM THE BASE OF THE RIPRAP OUTLET BERM TO THE ELEVATION OF THE WEIR OF THE RIPRAP OUTLET BERM

NO.	DATE		BY	APVD
2	04-09-2019	CITY PLANNING COMMENTS		
1	03-19-2019	CITY WETLAND COMMENTS		

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DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

DRAWING CODE:

BORDER SIZE: ARCH D 24X36

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

EROSION AND SEDIMENT CONTROL DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-501

SHEET: OF

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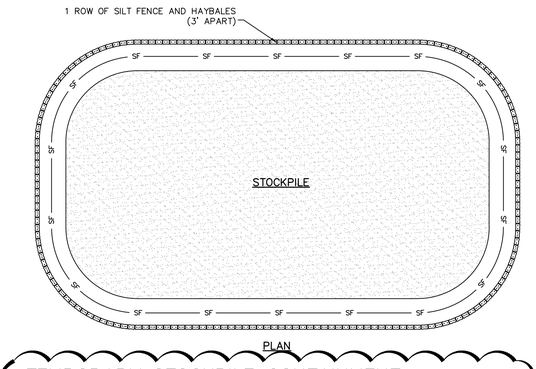
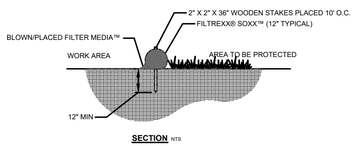


PLAN

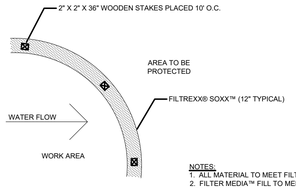
TEMPORARY STOCKPILE CONTAINMENT

SCALE: N.T.S.

2



SECTION NTS



PLAN NTS

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

SEDIMENT CONTROL SOCK

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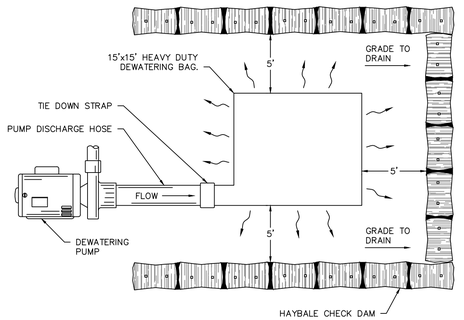

DEWATERING BAG

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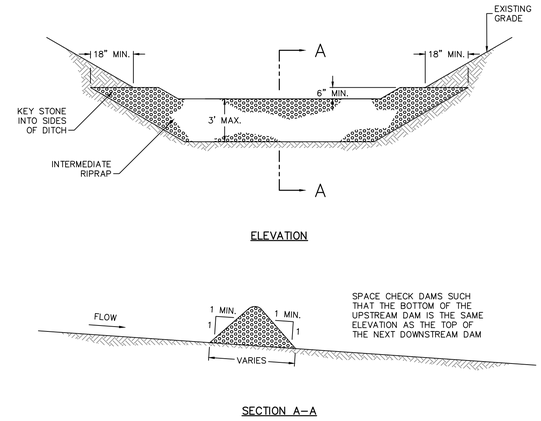

STONE CHECK DAM

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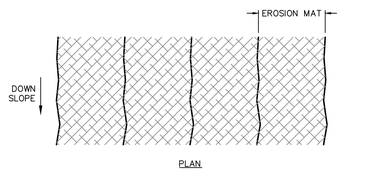
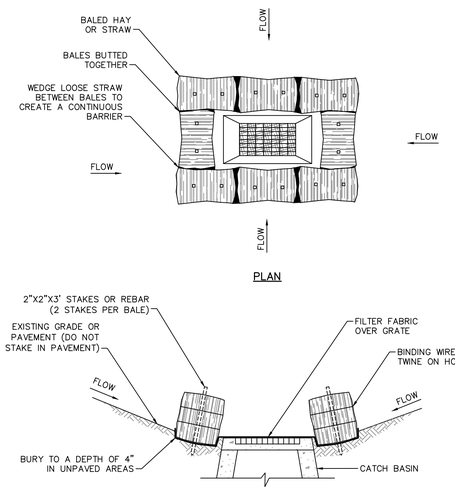
2



EROSION CONTROL MAT

SCALE: N.T.S.

2



LOW POINT HAY BALE BARRIER

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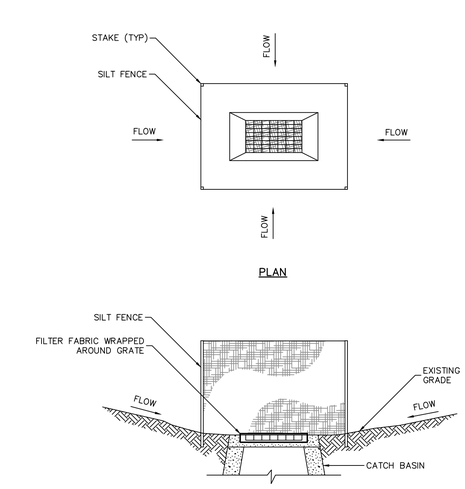

LOW POINT SILT FENCE BARRIER

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ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

EROSION AND SEDIMENT CONTROL DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-502

SHEET: OF

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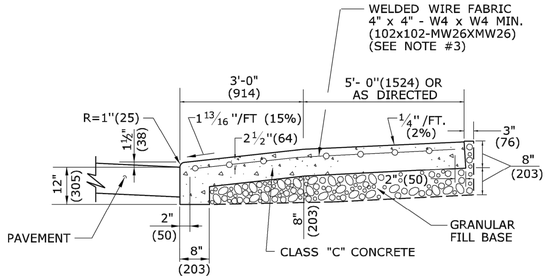
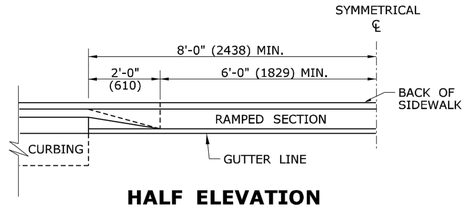


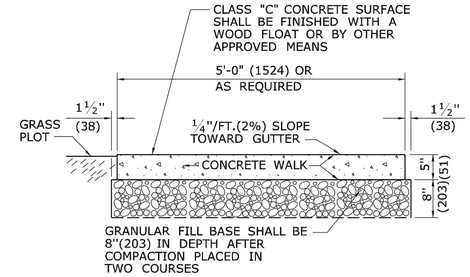
SECTION C



HALF ELEVATION

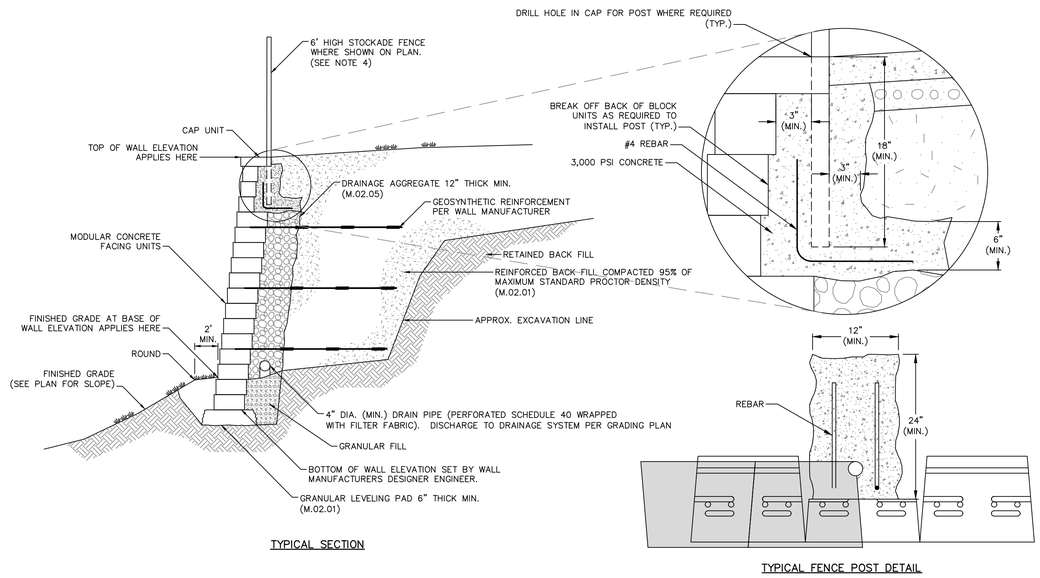
GENERAL NOTES:

1. DRIVEWAY ENTRANCE SHALL BE A MINIMUM OF 12' (3658) WIDE, EXCLUDING CURBING WHEN PRESENT.
2. SIDEWALK RAMPS SHALL BE A MINIMUM OF 36" (914) TO 40" (1016) MAXIMUM, WITH A MAXIMUM SLOPE OF 12:1. THERE SHALL BE NO LIP AT THE DRIVEWAY SIDEWALK INTERFACE.
3. WELDED WIRE FABRIC MATS WITH REINFORCING AT CLOSER SPACING MAY BE USED.



SECTION D

5' (1524) WIDE CONCRETE SIDEWALK WITH GRASS PLOT



TYPICAL SECTION

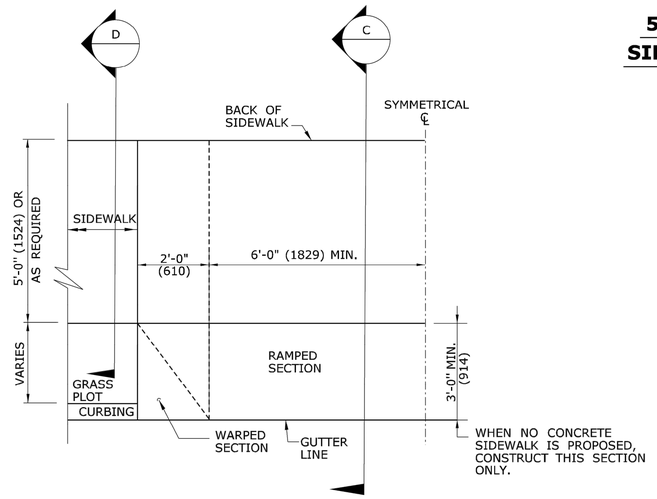
TYPICAL FENCE POST DETAIL

NOTES

1. DETAILS AND NOTES HEREON ARE GENERIC AND ARE INTENDED TO GIVE A GENERAL DESCRIPTION OF THE WALL. THEY ARE NOT FOR CONSTRUCTION.
2. DETAILED WALL CONSTRUCTION PLANS, STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT, SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
3. APPROVED WALL MANUFACTURERS INCLUDE VERSA-LOK, KEYSTONE, MESA OR EQUAL.
4. DEPTH OF GUIDE RAIL POST OR FENCE POST SHALL BE DETERMINED BY THE WALL DESIGNER WHEN IN PROXIMITY TO BACK OF WALL.

MODULAR CONCRETE BLOCK RETAINING WALL

SCALE: N.T.S.



HALF PLAN OF CONCRETE DRIVEWAY RAMP WHERE CURB IS SEPARATED FROM SIDEWALK BY GRASS PLOT

CT DOT DRIVEWAY RAMP

SCALE: N.T.S.

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No. 22072
LICENSED
PROFESSIONAL ENGINEER

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ISSUE DATE: 13 FEB 2019
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DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-503

SHEET: OF

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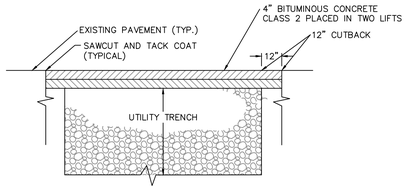
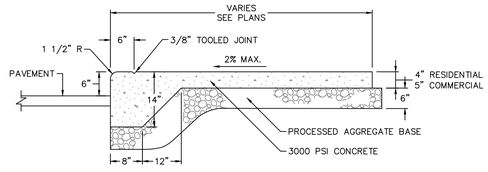


BITUMINOUS PAVEMENT REPAIR AT TRENCH

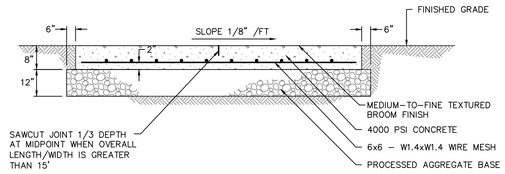
SCALE: N.T.S.



NOTE: ALL WALKS AND STAIRS TO BE SEALED.

MONOLITHIC CONCRETE CURB AND WALK

SCALE: N.T.S.



HEAVY DUTY CONCRETE PAD

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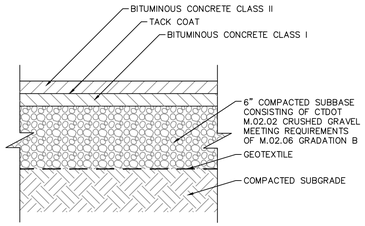
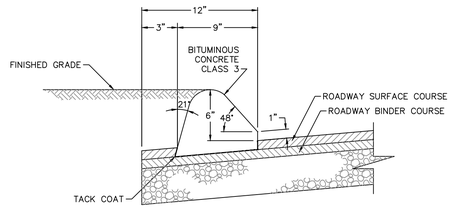


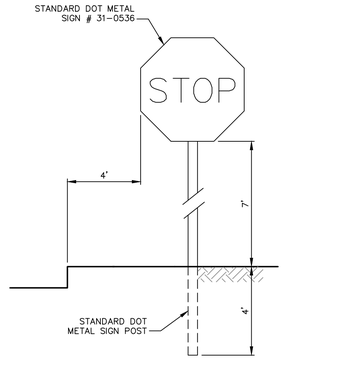
BITUMINOUS CONCRETE PAVEMENT (STD. DUTY)

SCALE: N.T.S.



BITUMINOUS CONCRETE CURB

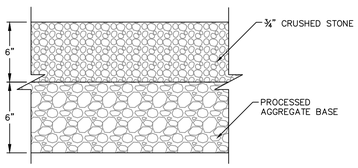
SCALE: N.T.S.



NOTE:
TYPICAL SIGN DETAIL, SEE PLANS FOR SIGN TYPES AND LOCATIONS

SIGN

SCALE: N.T.S.



GRAVEL DRIVEWAY

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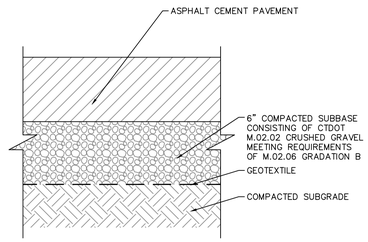
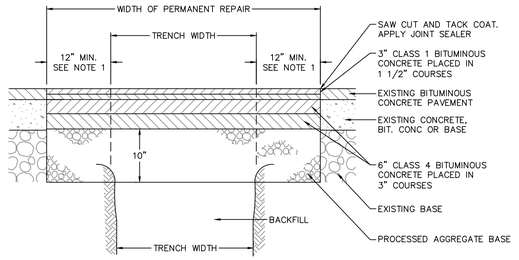


BITUMINOUS CONCRETE PAVEMENT (HEAVY DUTY)

SCALE: N.T.S.

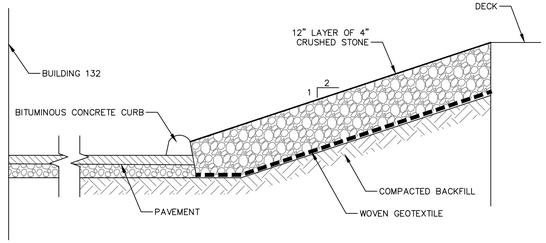


NOTES

1. 12" MIN. OR TO TRANSVERSE JOINT IF JOINT IS VISIBLE WITHIN 6'-6" OF SAWCUT
2. APPLY TACK COAT TO ALL BITUMINOUS CONCRETE SURFACES THAT HAVE BEEN IN PLACE LONGER THAN FIVE CALENDAR DAYS

STATE ROAD PERMANENT PAVEMENT REPAIR

SCALE: N.T.S.



SLOPE PROTECTION

SCALE: N.T.S.

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REGISTRATION NUMBER:

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NO.	DATE	BY	APVD

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

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GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
SITE DETAILS

Date: 13 FEB 2019

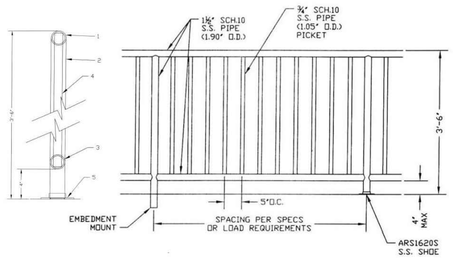
Drawing No.:
SY-C-504

SHEET: OF

ISSUED FOR PERMIT

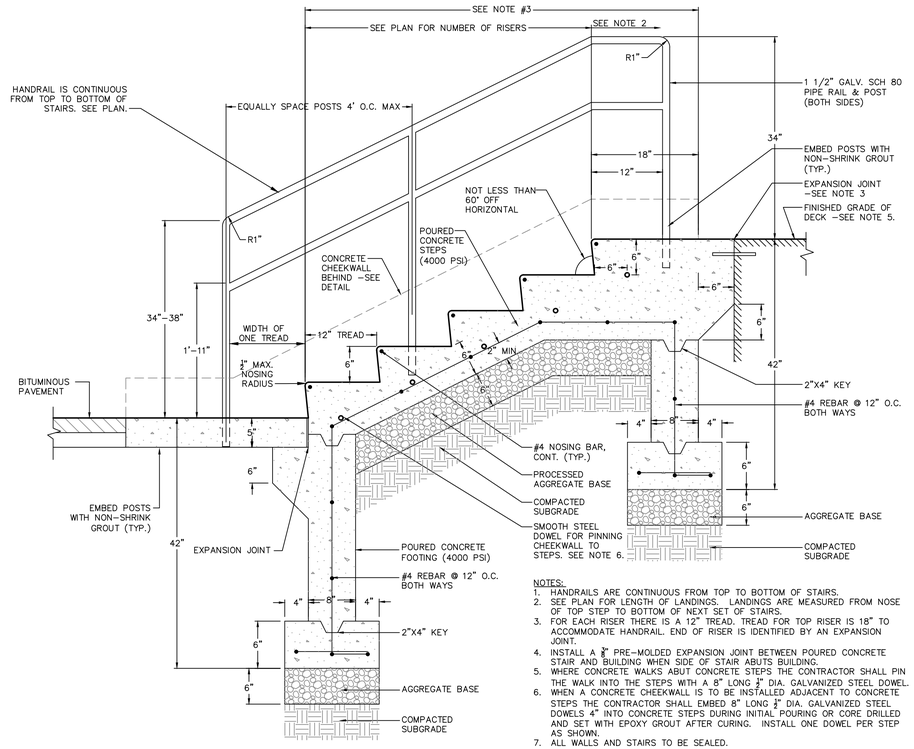
ARS 1½" SCH.10 S.S. PIPE PICKET RAIL

ITEM NO.	PART NO.	DESCRIPTION	MATERIAL
1		1½" SCH.10 S.S. PIPE TOP RAIL	S.S. 304
2		1½" SCH.10 S.S. PIPE POST	S.S. 304
3		1½" SCH.10 S.S. PIPE BOTTOM RAIL	S.S. 304
4		¾" SCH.10 S.S. PIPE PICKET	S.S. 304
5	ARS1620S	S.S. FLOOR FLANGE	S.S. 304



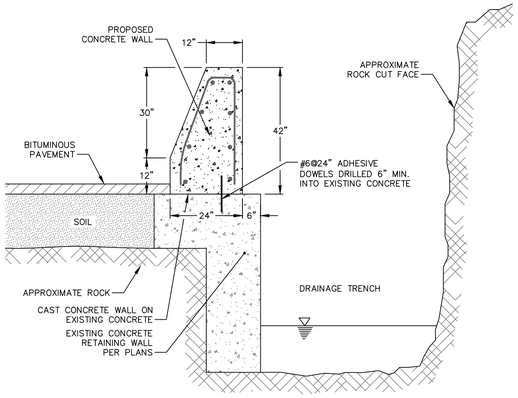
AMERICAN RAILING SYSTEMS, INC. 1813 MCCLELLAND AVE., ERIE, PA 16510 PHONE: (814) 899-7677 WEBSITE:WWW.AMERICANRAILING.COM FAX: (814) 899-0743 EMAIL: ARS@AMERICANRAILING.COM	CUSTOMER:	
STYLE: 1½" SCH.10 S.S. PRESSED PICKET RAILING	JOB NAME:	
	DATE:	
FINISHES AVAIL: MILL, #4 & #6 POLISH	DRN. BY:	JOB #

DECK RAIL
SCALE: N.T.S.

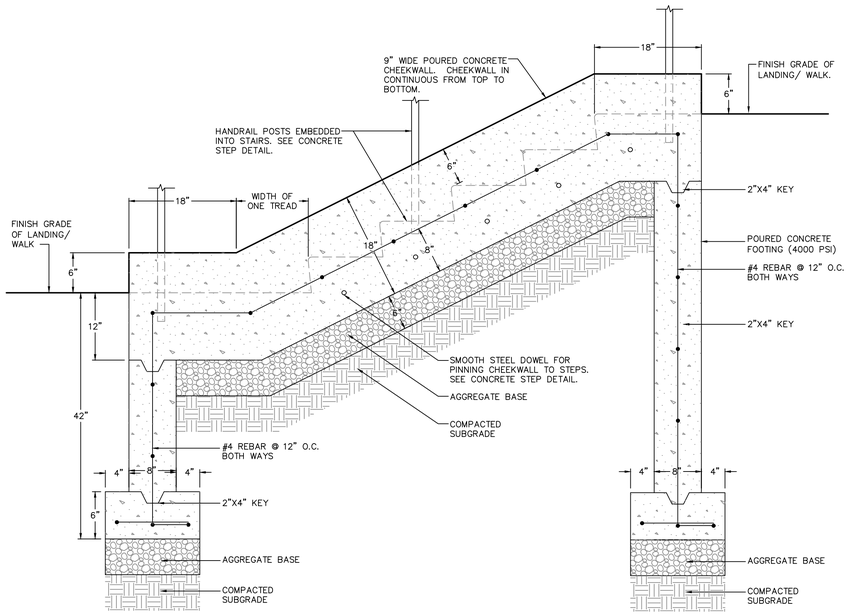


NOTES:
1. HANDRAILS ARE CONTINUOUS FROM TOP TO BOTTOM OF STAIRS.
2. SEE PLAN FOR LENGTH OF LANDINGS. LANDINGS ARE MEASURED FROM NOSE OF TOP STEP TO BOTTOM OF NEXT SET OF STAIRS.
3. FOR EACH RISER THERE IS A 12" TREAD. TREAD FOR TOP RISER IS 18" TO ACCOMMODATE HANDRAIL. END OF RISER IS IDENTIFIED BY AN EXPANSION JOINT.
4. INSTALL A ½" PRE-MOLDED EXPANSION JOINT BETWEEN POURED CONCRETE STAIR AND BUILDING WHEN SIDE OF STAIR ABUTS BUILDING.
5. WHERE CONCRETE WALKS ABUT CONCRETE STEPS THE CONTRACTOR SHALL PIN THE WALK INTO THE STEPS WITH A 8" LONG ½" DIA. GALVANIZED STEEL DOWEL.
6. WHEN A CONCRETE CHEEKWALL IS TO BE INSTALLED ADJACENT TO CONCRETE STEPS THE CONTRACTOR SHALL EMBED 8" LONG ½" DIA. GALVANIZED STEEL DOWELS 4" INTO CONCRETE STEPS DURING INITIAL POURING OR CORE DRILLED AND SET WITH EPOXY GROUT AFTER CURING. INSTALL ONE DOWEL PER STEP AS SHOWN.
7. ALL WALLS AND STAIRS TO BE SEALED.

CONCRETE STEPS (12" TREAD) WITH HANDRAIL
SCALE: N.T.S.



CONCRETE WALL
SCALE: N.T.S.



CONCRETE CHEEKWALL
SCALE: N.T.S.

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DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
SITE DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-505

SHEET: OF

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DATUM CONVERSION TABLE				
	EBFD	NGVD 29	NAVD 88	
VE BFE	16.63	14.96	14.00	
SYAB FFE	15.13	13.46	12.50	1.50
AE BFE	13.63	11.96	11.00	1.50
MHW	3.55	1.88	0.92	10.08
NAVD 88	2.63	0.96	0.00	14.15 / 0.92
NGVD 29	1.67	0.00	-0.96	0.96
MLW	0.98	-0.69	-1.65	0.69
MLLW	0.79	-0.88	-1.84	0.19
EBFD MLW	0.00	-1.67	-2.63	0.79

15.13

NOTES:
1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON EB FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.
2. WATER SURFACE ELEVATIONS MLLW, MLW AND MHW ARE BASED ON TIDAL STATION 8461490, NEW LONDON, CT FOR THE 1983-2001 TIDAL EPOCH.

NOTE:
ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON THE ELECTRIC BOAT FACILITY DATUM (EBFD) UNLESS NOTED OTHERWISE.

GENERAL NOTES:
1. DETERMINE EXACT LOCATION OF ALL EXISTING UNDERGROUNDS BEFORE BEGINNING EXCAVATION.
2. TURNING RADIUS OF TRUCK IS ~50' COMBINED TRACTOR AND TRAILER (LENGTH: 68' MAX.) WITH AN INSIDE TURN RADIUS OF 50', A 90 DEGREE TURN REQUIRES A MINIMUM ROAD WIDTH OF 25' AND A 180 DEGREE TURN REQUIRES A MINIMUM ROAD WIDTH OF 31'.
3. PROTECT SYSTEM WITH PIPE POSTS IF SUBJECT TO VEHICULAR TRAFFIC (SEE FOUNDATION DETAIL D).
4. SEE FOUNDATION DRAWING FOR SECTION DETAILS.
5. FOUNDATIONS HAVE BEEN DESIGNED FOR A MINIMUM ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. IF THIS CANNOT BE ACHIEVED, AIR PRODUCTS MUST BE NOTIFIED IMMEDIATELY. CUSTOMER SHALL MAKE AIR PRODUCTS AWARE OF SPECIFIC SITE CONDITIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: SOIL BEARING CAPACITY UNDER 2000 PSF, HIGH WATER TABLE, PREVIOUSLY EXCAVATED AREAS, OR HIGHLY ORGANIC SOILS.
6. THE CUSTOMER MUST PERFORM A SOIL ANALYSIS BEFORE CONSTRUCTION.
7. OXYGEN SYSTEMS TO BE SITED PER NFPA 55 LATEST EDITION OR LOCAL CODES, WHICH IS MORE STRINGENT.

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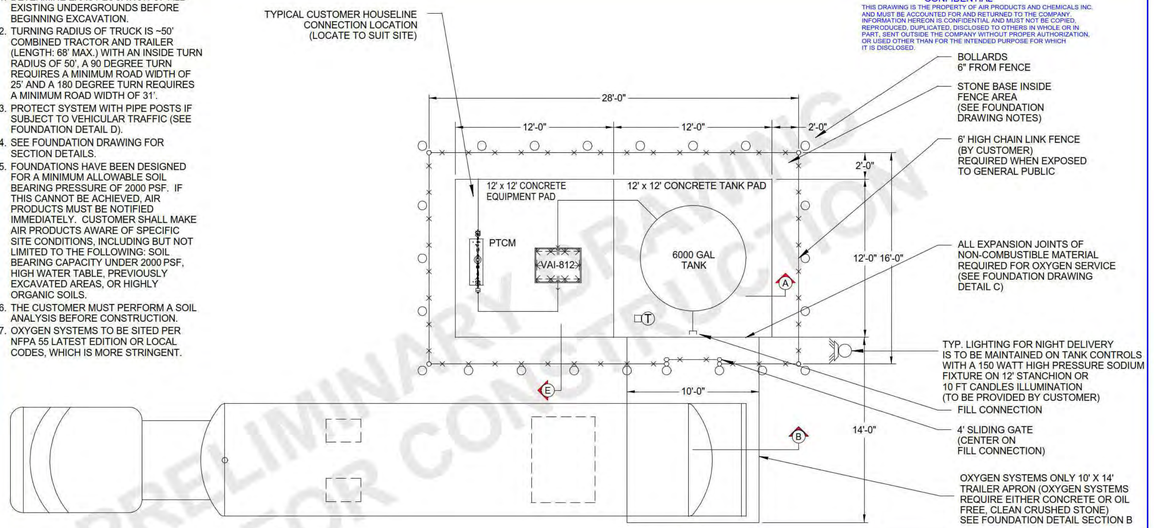


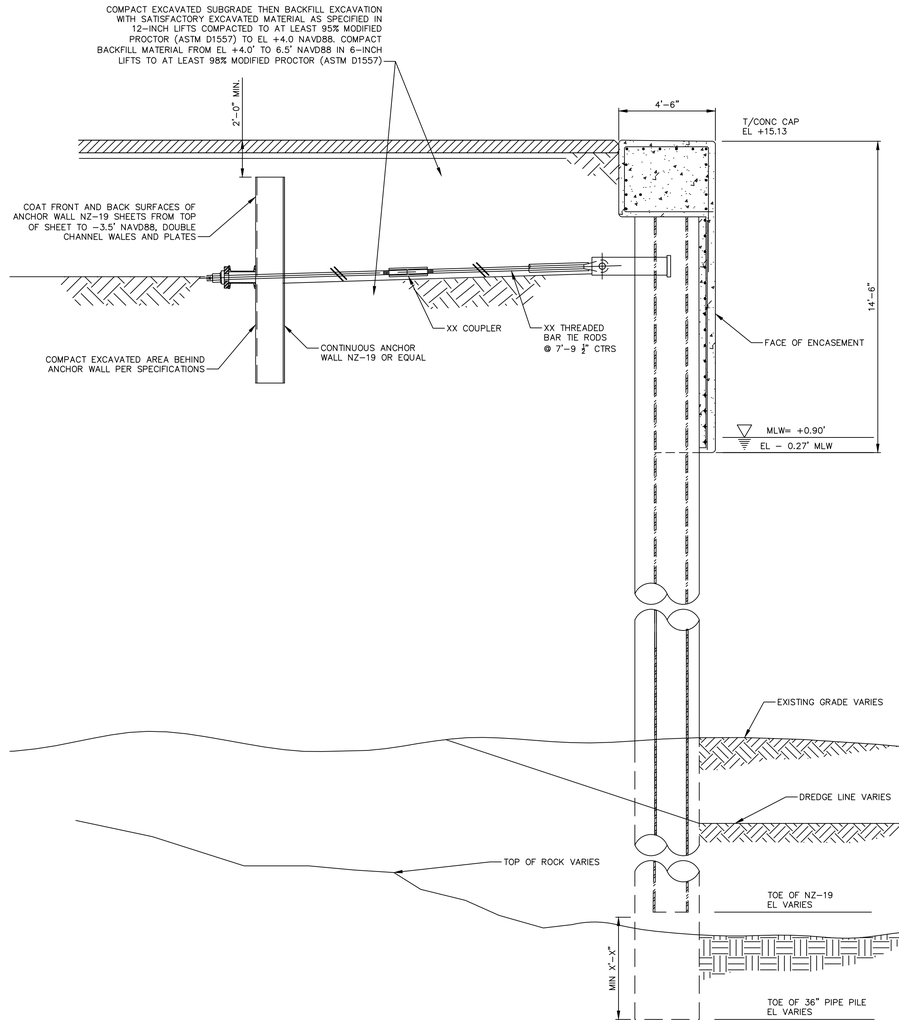
Ⓣ TANK MAINS POWER/CELLULAR OR SOLAR OPTIONAL - TELEMETRY STUB-UP POWER SUPPLY: 120 VAC, 20 AMP DEDICATED WITH LOCKABLE DISCONNECT PULL 30' EXCESS WIRE COILED (TO BE PROVIDED BY CUSTOMER)

REV.	REVISION DESCRIPTION	DATE	BY	OPS.	SFTY.	DGN.	ENG.
1	Reviewed for consistency	01 Oct 15	JLB				

DRAWN: JLB | DATE: 01 Oct 15 | TITLE: STANDARD SYSTEM LAYOUT S6000G-1V812-1P
OPERATIONS | SAFETY | DESIGN | ENGINEER | APPD.
AIR PRODUCTS
REF. NO.
DWG NO. B REV 1
FILE NAME | SCALE: NONE | SHEET: 1 OF 1

STANDARD INDUSTRIAL GAS TANK LAYOUT
SCALE: N.T.S.

1



BULKHEAD
SCALE: N.T.S.

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ISSUE DATE: 13 FEB 2019
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BORDER SIZE: ARCH D 24x36
DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SITE DETAILS

Date: 13 FEB 2019
Drawing No.:
SY-C-506
SHEET: OF

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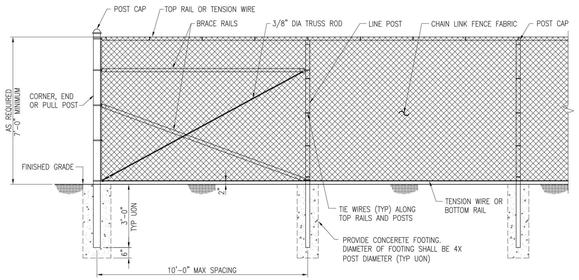
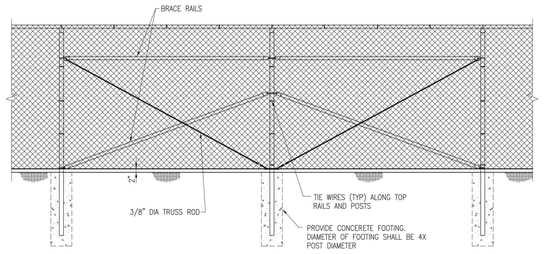
PRELIMINARY NOT FOR CONSTRUCTION



TYPICAL FENCE AND CORNER PANEL ELEVATION

SCALE: 1" = 1'-0"

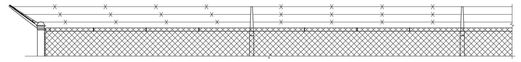


TYPICAL FENCE AND BRACED PANEL ELEVATION

SCALE: 1" = 1'-0"

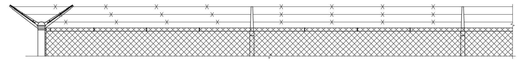
NOTE (1): A BOTTOM RAIL CAN BE ADDED FOR SECURITY, IT SHALL BE INSTALLED APPROX 3" ABOVE GRADE (A MINIMUM OF 2" AND A MAXIMUM OF 4"). HARDWARE SHALL BE WELDED OR SHOT NAILED TO POSTS AND RAILS IN ORDER TO SECURE IN PLACE. ATTACH FABRIC TO NEW BOTTOM RAIL TO ELIMINATE POSSIBILITY OF PEELING UP FABRIC.

NOTE (2): SOME LOCATIONS MAY REQUIRE 8' OF FABRIC.



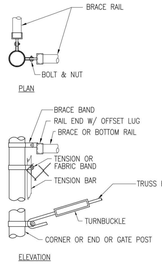
TYPICAL 3 STRAND BARBED WIRE AND SINGLE EXTENSION ARM CONFIGURATION

SCALE: 1" = 1'-0"



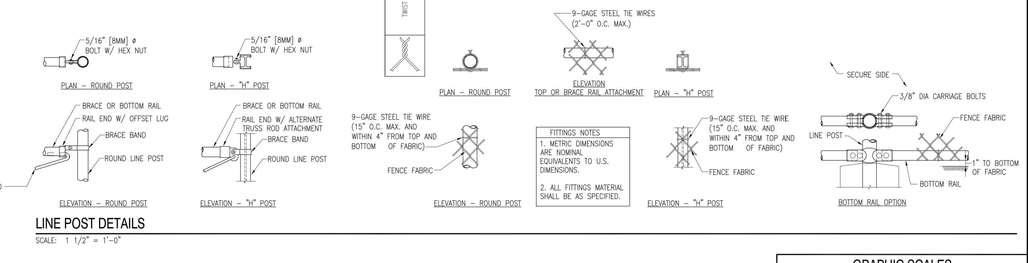
TYPICAL 6 STRAND BARBED WIRE AND DOUBLE EXTENSION ARM CONFIGURATION

SCALE: 1" = 1'-0"



CORNER OR END POSTS

SCALE: 1 1/2" = 1'-0"



LINE POST DETAILS

SCALE: 1 1/2" = 1'-0"

T & B SELVAGE

TWIST

GRAPHIC SCALES

1" = 1'-0" (0, 6", 1', 2')

1 1/2" = 1'-0" (0, 4", 8", 1'-4")

UFC-700

GRAPHIC REVISION: 24 AUGUST 2007

UNIFIED FACILITIES CRITERIA 4-022-03 SECURITY ENGINEERING: FENCES, GATES AND GUARD FACILITIES
DEFINITIVE DRAWINGS FOR SECURITY FENCING, GATES AND CABLING

CHAIN LINK FENCE AND DETAILS

FILE NAME: J:\DGD\FENCE DRAWINGS\S30GD-UFC-700.dwg LAYOUT NAME: 5-700 PLOTTED: Monday, April 29, 2013 - 1:53pm

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DRAWING CODE:

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DESIGNED BY: KEITH GOODROW

DRAWN BY: KEITH GOODROW

CHECKED BY: JOE DEVINE

SUBMITTED BY: JOHN OSOSKIE

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GD Electric Boat

South Yard Assembly Building (SYAB)

SITE DETAILS

Date: 13 FEB 2019

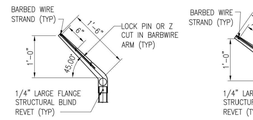
Drawing No.:

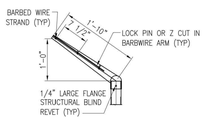
SY-C-507

SHEET: OF

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-DET-01.dwg

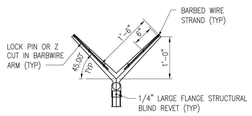
PLOT DATE/TIME: 4/4/2019 6:59 PM





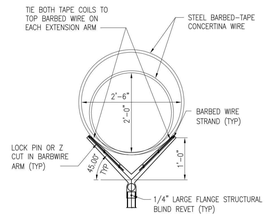
SINGLE EXTENSION ARM DETAILS

SCALE: 1" = 1'-0"



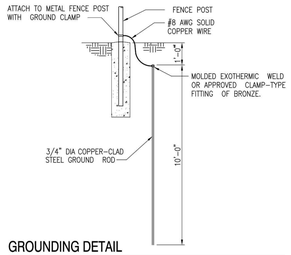
DOUBLE EXTENSION ARM DETAILS

SCALE: 1" = 1'-0"



CONCERTNA WIRE MOUNTING

SCALE: 1" = 1'-0"



GROUNDING DETAIL

NO SCALE

CHAIN LINK FENCING NOTES

1. FABRIC: THE STANDARD FENCE FABRIC SHALL BE VINYL, ZINC OR ALUMINUM-COATED STEEL WIRE CHAIN LINK WITH MESH OPENINGS NOT LARGER THAN TWO INCHES PER SIDE AND A TWISTED AND BARBED SELVAGE AT TOP AND BOTTOM IN ACCORDANCE WITH THE SPECIFICATIONS. UTILIZE 6-GAUGE FOR BASE PERIMETER OR HEIGHTENED SECURITY ZONE'S AND 9-GAUGE FOR BASE INTERIOR OR WHEN JOINING AN EXISTING FENCE WHICH IS ALREADY 9-GAUGE.
2. FABRIC TIES: ONLY 12-GAUGE STEEL TIES SHALL BE USED. COATING OR PLATING WILL BE ELECTROLYTICALLY COMPATIBLE WITH THE FENCE FABRIC TO INHIBIT CORROSION.
3. REINFORCEMENT: TENSION WIRES SHALL BE INSTALLED AND INTERWOVEN (OR AFFIXED WITH FABRIC TIES) ALONG THE TOP & BOTTOM OF THE FENCE FOR STABILIZATION OF THE FENCE FABRIC.
4. FENCE HEIGHT: CHAIN LINK FABRIC SHALL BE 7' HIGH WITH AN ADDITIONAL 1' IN HEIGHT COMPOSED OF 3 STRANDS OF BARBED WIRE AS REQUIRED. THE TOTAL FENCE HEIGHT SHALL BE 8'.
5. GROUND CLEARANCE: BOTTOM OF THE FENCE FABRIC SHALL BE WITHIN TWO INCHES OF FIRM SOIL.
6. TOP GUARDS: A TOP GUARD IS AN OVERHANG OF BARBED WIRED ALONG THE TOP OF A FENCE, FACING OUTWARD (AWAY FROM PROTECTED SITE) AND UPWARD AT APPROX. 45 ANGLE. TOP GUARD SUPPORTING ARMS WILL BE PERMANENTLY AFFIXED TO THE TOP OF FENCE POSTS TO INCREASE THE OVERALL HEIGHT OF THE FENCE AT LEAST 1 FOOT. THREE STRANDS OF 12-GAUGE BARBED WIRE, EQUALLY SPACED, SHALL BE INSTALLED ON THE SUPPORTING ARMS.
7. FENCE POSTS: SHALL BE ASTM F1043 OR F1083 ROUND PIPE OR SQUARE TUBE AND SHALL BE GALVANIZED IN ACCORDANCE WITH THE SPECIFICATIONS. FENCE POST SPACING AND SIZE (DIAMETER) SHALL BE DETERMINED IN ACCORDANCE WITH CHAIN LINK FENCE MANUFACTURERS' INSTITUTE (WLG 2445). SPACING SHALL NOT EXCEED 10'-0" OC. SIZE (DIAMETER) SHALL NOT BE LESS THAN THAT SPECIFIED.

UNIFIED FACILITIES CRITERIA 4-022-03 SECURITY ENGINEERING: FENCES, GATES AND GUARD FACILITIES
DEFINITIVE DRAWINGS FOR SECURITY FENCING, GATES AND CABLING

BARBED WIRE ARRANGEMENT DETAILS

GRAPHIC SCALES

1" = 1'-0" 0 6" 1' 2'

UFC-701

DRAWING REVISION: 24 AUGUST 2007

FILE NAME: J:\DGN\STAGE Drawings\S20000-UFC-701.dwg LAYOUT NAME: F-## PLOTTED: Monday, April 29, 2013 - 1:05pm

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Electric Boat
South Yard Assembly Building (SYAB)
SITE DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-508

SHEET: OF

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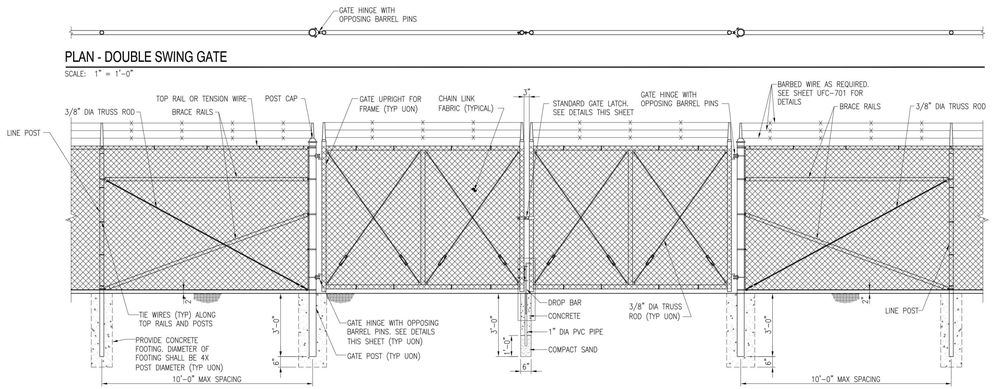


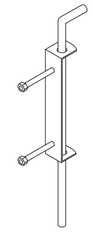
PLAN - DOUBLE SWING GATE

SCALE: 1" = 1'-0"

TYPICAL DOUBLE SWING GATE ELELVATION

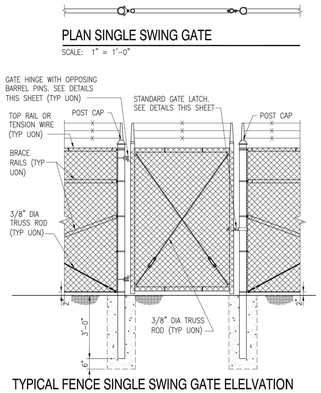
SCALE: 1/2" = 1'-0"

NOTE: PROVIDE ONE DROP BAR FOR EACH LEAF (TYP). ASSOCIATED GALV SLEEVES TO BE INSTALLED FLUSH WILL GRADE AT FULLY OPEN AND CLOSED POSITIONS. CONTRACTOR SHALL PROVIDE 6" LAYER OF #10 STONE BELOW BOTTOM OF SLEEVE TO ALLOW FOR DRAINAGE.



DETAIL: DROP BAR

NOT TO SCALE



PLAN SINGLE SWING GATE

SCALE: 1" = 1'-0"

TYPICAL FENCE SINGLE SWING GATE ELELVATION

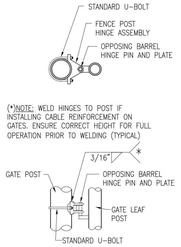
SCALE: 1/2" = 1'-0"

SINGLE OR DOUBLE LEAF GATES		
NOM HEIGHT (H)	UPRIGHT HT (U)	FRAME HT (F)
NOM HT INCLUDING BARBED WIRE	ACTUAL DIM	ACTUAL DIM
8'-0" [2438MM]	7'-10" [2388MM]	6'-8 1/2" [2045MM]

SINGLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQUARE & ROUND SIZES	POST TO UPRIGHT
3'-0" [914MM] THROUGH 6'-0" [1829MM]	2.5"[63.5MM]SQ x 3/16"TH OR 2.875" [73MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
6'-0" [1829MM] THROUGH 12'-0" [3657MM]	4" [102MM] SQ x 3/16"TH OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
12'-0" [3657MM] THROUGH 19'-0" [5790MM]	6" [153MM] SQ x 3/16"TH OR 6.625" [168MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
19'-0" [5790MM] THROUGH 23'-0" [7010MM]	8" [203MM] SQ x 1/4"TH OR 8.625" [219MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]

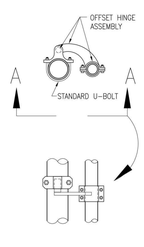
GATE POSTS & FOUNDATIONS: GATE POST SIZE AND ASSOCIATED FOOTING DIAMETER TO BE DETERMINED BY MANUFACTURER, BASED ON LEAF WEIGHT & DIMENSION, BUT NOT LESS THAN DIAMETER SHOWN ON THESE DRAWINGS. MINIMUM FOOTING DIAMETERS (TO BE FILLED W/4000 PSI CONC): 40" ø FOR 8" POST; 36" ø FOR 6" POST; 24" ø FOR 4" POST; OTHER SIZES TO BE DESIGNED BY MFR OR KTR. NO FOOTING WIDTH SHALL BE LESS THAN 4(X) THE POST WIDTH.

NOTE: IF GATE HINGES ARE NOT OPPOSING (AS SHOWN ABOVE) OR LEAF IS NOT LOCKED MECHANICALLY TO THE HINGES, WELD AN ANGLE, PLATE, OR BLOCK ABOVE HINGE TO RESTRICT LEAF FROM BEING REMOVED OR LIFTED OFF. RESTRICTION SHALL NOT HINDER OPERATION OF GATE.



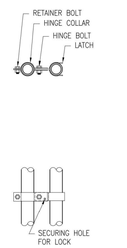
GATE HINGE DETAIL

SCALE: 1 1/2" = 1'-0"



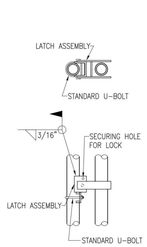
OFFSET HINGE DETAIL

SCALE: 1 1/2" = 1'-0"



GATE LATCH DETAIL

SCALE: 1 1/2" = 1'-0"



FULCRUM LATCH DETAIL

SCALE: 1 1/2" = 1'-0"

GRAPHIC SCALES

1/2" = 1'-0" (0, 1', 2', 4')

1 1/2" = 1'-0" (0, 4", 8", 1'-4")

UFC-702

DRAWING REVISION: 24 AUGUST 2007

UNIFIED FACILITIES CRITERIA 4-022-03 SECURITY ENGINEERING: FENCES, GATES AND GUARD FACILITIES
DEFINITIVE DRAWINGS FOR SECURITY FENCING, GATES AND CABLING

CHAIN LINK SWING GATE AND DETAILS

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STATE OF CONNECTICUT — KRISTEN E. SOLOMON — No. 22072 — LICENSED PROFESSIONAL ENGINEER

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BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW

DRAWN BY: KEITH GOODROW

CHECKED BY: JOE DEVINE

SUBMITTED BY: JOHN OSOSKIE

FILE NAME:

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Electric Boat
South Yard Assembly Building (SYAB)

SITE DETAILS

Date: 13 FEB 2019

Drawing No.:

SY-C-509

SHEET: OF

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-DET-01.dwg

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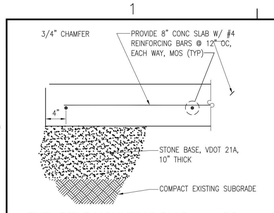


TURNSTILE MOUNTING SLAB

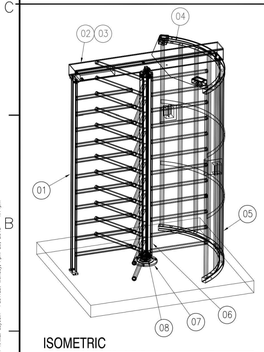
SCALE: 1–1/2" = 1'–0" (C2) UFC–705 | UFC–705

1 1/2" = 1'–0" 0 4" 8" 1'–4"

TURNSTILE NOTES:

1. TURNSTILE SHALL BE COMPOSED OF CARBON STEEL. ALL MATERIALS SHALL BE HOT–DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.
2. TURNSTILE SHALL HAVE BI–DIRECTIONAL CONTROLS: IN THE CASE OF A POWER FAILURE, OUTBOUND TRAFFIC SHALL BE SET TO "FAIL SAFE"; THE INBOUND TRAFFIC WILL HAVE A "FAIL LOCK" MECHANISM (UNLESS OTHERWISE DIRECTED BY THE ACTIVITY VIA THE CONTRACTING OFFICER).
3. PROVIDE CARD READER MOUNTING PLATES FOR BOTH SIDES (INBOUND & OUTBOUND) OF TURNSTILE. CARD READER WILL BE INSTALLED BY THE ACTIVITY AT A LATER DATE.
4. BRACE BARRIER POST AT TOP TO ADJACENT VERTICAL SURFACE.
5. ALLOW 5 INCH CLEARANCE ABOVE TOP OF TURNSTILE TO REMOVE LIFT–OFF TYPE TOP COVER.
6. CONCRETE MOUNTING SLAB MUST BE LEVEL WITHIN 1/4". SEE DETAIL C2 THIS SHEET FOR CONC MOUNTING PAD.
7. CONTRACTOR SHALL PROVIDE AN ELECTRICAL 3–ROTOR FULL HEIGHT TURNSTILE AS MANUFACTURED BY TOMSED, MODEL THT–100ECP(3), OR APPROVED EQUAL.
8. TURNSTILE SHALL HAVE FINISH TO MATCH ADJACENT FENCEWORK: POWDER COATED BLACK FOR ORNAMENTAL FENCE AND GALVANIZED FOR CHAIN–LINK.
9. INSTALL 3 STRANDS BARBED WIRE OR CONCERTINA WIRE OVER TOP CHANNEL OF TURNSTILE (BETWEEN ADJACENT FENCE POSTS) TO HINDER SCALING UNIT.

TURNSTILE SKETCHES:



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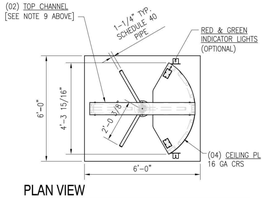

PLAN VIEW

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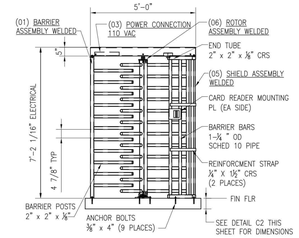
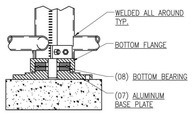


ELEVATION VIEW

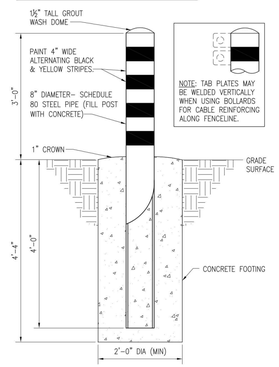
NOT TO SCALE



BOTTOM BEARING DETAIL

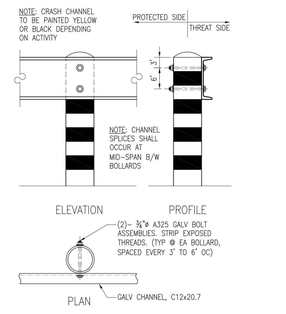
NOT TO SCALE

NOTE: STEEL PIPE FOR BOLLARDS SHALL CONFORM TO ASTM A53, TYPE E OR S, GALVANIZED.



CONC FILLED BOLLARD ~ FOOTING

SCALE: 1" = 1'–0" (B3) VARIOUS | UFC–705



CHANNEL FOR BOLLARDS

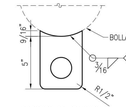
SCALE: 1" = 1'–0" (A3) CIVIL DWGS | UFC–705

GRAPHIC SCALES

1" = 1'–0" 0 6" 1' 2'

1 1/2" = 1'–0" 0 4" 8" 1'–4"

3" = 1'–0" 0 3" 6" 9"

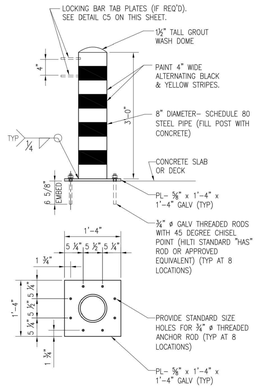


VARIATION AT BOLLARDS

TAB PLATE DETAIL

SCALE: 3" = 1'–0" (C5) UFC–705 | UFC–705

NOTE: CONTRACTOR SHALL HAVE PLATED BOLLARD CONNECTION ANALYZED AND STAMPED BY A REGISTERED ENGINEER FOR IT BE USED FOR ATFP PURPOSES.



CONC FILLED BOLLARD ~ PLATE

SCALE: 1" = 1'–0" (A4) CIVIL DWGS | UFC–705

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DEFINITIVE DRAWINGS FOR SECURITY FENCING, GATES AND CABLING

TYPICAL TURNSTILE AND BOLLARD DETAILS

UFC-705

DRAWING REVISIONS: 24 AUGUST 2007

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DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
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Drawing No.:
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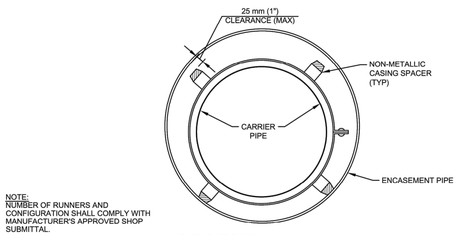
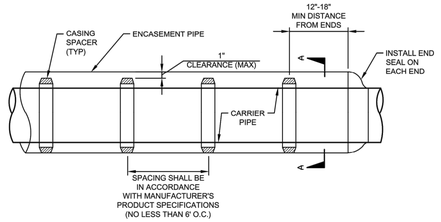


NOTE:
NUMBER OF RUNNERS AND CONFIGURATION SHALL COMPLY WITH MANUFACTURER'S APPROVED SHOP SUBMITTAL.

SECTION A-A

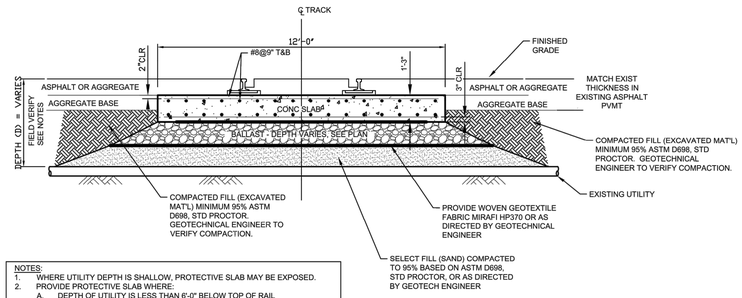


SECTION

NOTES:

1. ALL UTILITY RAIL CROSSINGS TO COMPLY WITH AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA) STANDARDS. REFER TO VOLUME 1, CHAPTER 1, PART 5, SECTIONS 5.1 AND 5.3 FOR ADDITIONAL INFORMATION.
2. CASING PIPE TO BE ASTM A53 GRADE B WITH A MINIMUM SPECIFIED MINIMUM YIELD STRENGTH OF 35,000 PSI, MINIMUM WALL THICKNESS 1/4-INCH (0.25").
3. UTILITIES TO BE INSTALLED SUCH THAT MINIMUM DEPTH FROM BASE OF RAIL TO TOP OF CASING PIPE IS 4-1/2 FEET (4.5') PER AREMA. THE PROPOSED 132-LB AREMA RAIL SECTION HAS A HEIGHT OF 7-1/8 INCHES. THE TOP OF CASING PIPE SHOULD BE INSTALLED A MINIMUM OF 5'-1⅞" BELOW TOP OF RAIL ELEVATION.
4. FOR CASING OF EXISTING UTILITIES, USE SPLIT STEEL CASEMENT PIPING CONSISTING OF TWO SEMICIRCULAR SECTIONS CONTINUOUSLY WELDED WITH NO TRACEABLE VOIDS. USE OF HEAVY WALLED, BOLTED SPLIT CASING PIPING, SUCH AS IRONHEAD FLANGED MAINTENANCE PIPE, CAPABLE OF MEETING COOPER E-80 LOADING IS ACCEPTABLE BASED ON APPROVED SUBMITTAL.
5. CASING PIPE MUST BE BITUMINOUS COATED INSIDE AND OUT AND SEALED AT BOTH ENDS WITH A FLEXIBLE RUBBER TYPE END SEAL MANUFACTURED FOR THIS APPLICATION. FOR NEW UTILITY CROSSINGS, USE PULL-ON TYPE END SEALS. FOR EXISTING UTILITY CROSSINGS, USE WRAP-AROUND TYPE END SEALS. BEVEL ENDS OF CASING PIPE TO REMOVE ALL SHARP EDGES PRIOR TO INSTALLATION.
6. FOR FLAMMABLE GAS PIPING, EACH END OF CASING PIPE SHALL BE VENTED USING MINIMUM 2-INCH DIAMETER GALVANIZED STEEL PIPING. VENT PIPE SHALL BE INSTALLED NEAR THE ENDS OF THE CASING PIPE AND BE THREADED INTO COLLARS WHICH ARE WELDED TO THE STEEL CASING PIPE. VENTS SHALL PROJECT THROUGH THE GROUND SURFACE NOT LESS THAN 4 FEET ABOVE GROUND SURFACE. TOPS SHALL BE FITTED WITH TURNDOWN ELBOWS AND HAVE A AN INSECT SCREEN FASTENED TO THE END. WHERE ENDS OF CASING PIPES ARE NOT BEYOND LIMITS OF TRAFFIC EXPOSURE, ROUTE VENT PIPING BELOW GRADE TO PROTECTED LOCATION PRIOR TO PROJECTING ABOVE GRADE. VENT PIPE LOCATIONS ARE TO BE CONSIDERED CLASS 1, DIV. 2 HAZARDOUS LOCATIONS, AS CLASSIFIED BY NFPA. THESE LOCATIONS SHALL BE IDENTIFIED AND MARKED ACCORDINGLY, AS REQUIRED BY CODE.
7. ACCESSIBLE EMERGENCY SHUTOFF VALVES SHALL BE INSTALLED ON BOTH SIDES OF CASING PIPE FOR ALL PRESSURIZED UTILITIES AND MARKED FOR IDENTIFICATION.
8. SUBMIT MATERIALS FOR APPROVAL INCLUDING CASING PIPES, CASING SPACERS, END SEALS, ETC.

G TYPICAL RAILROAD CASING PIPE INSTALLATION
NTS

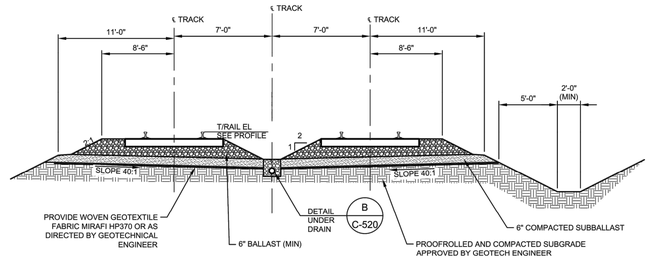


NOTES:
1. WHERE UTILITY DEPTH IS SHALLOW, PROTECTIVE SLAB MAY BE EXPOSED.
2. PROVIDE PROTECTIVE SLAB WHERE:
   A. DEPTH OF UTILITY IS LESS THAN 6'-0" BELOW TOP OF RAIL FOR PRESSURE PIPING
   B. DEPTH OF UTILITY IS LESS THAN 5'-0" BELOW TOP OF RAIL FOR GRAVITY PIPING (EXCEPT STORM DRAIN)
   C. DEPTH OF GRAVITY STORM DRAIN IS LESS THAN 3'-4" BELOW TOP OF RAIL OR LESS THAN 2FT BELOW BOTTOM OF TIE.
3. WHERE UTILITY DEPTH IS LESS THAN 2'-6" BELOW TOP OF RAIL, PROVIDE A STEEL CASING PIPE AND ENCASE IN CONCRETE PER DETAIL "L", THIS DWG.

TYPICAL SECTION
UTILITY RAILROAD CROSSING
INTO PROTECTIVE CONCRETE SLAB
D NTS

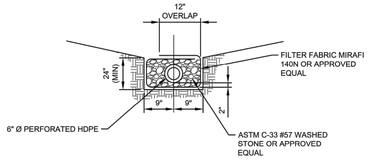
TYPICAL PLAN
UTILITY RAILROAD CROSSING
INTO PROTECTIVE CONCRETE SLAB
E NTS

TYPICAL SECTION
UTILITY RAILROAD CROSSING INCORPORATED
INTO PROTECTIVE CONCRETE SLAB
F NTS



NOTE:
SEE PLAN FOR LOCATION

A RAILROAD DOUBLE TRACK SECTION - UNDERDRAIN
NTS



B UNDER DRAIN DETAIL
NTS

C TYPICAL RAILROAD INSTALLATION
CROSS - SECTION IN ASPHALT PAVEMENT
NTS

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Wethersfield, CT 06109

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STATE OF CONNECTICUT
KRISTEN E. SOLOMON
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PROFESSIONAL ENGINEER

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
RAILROAD DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-511

SHEET: OF

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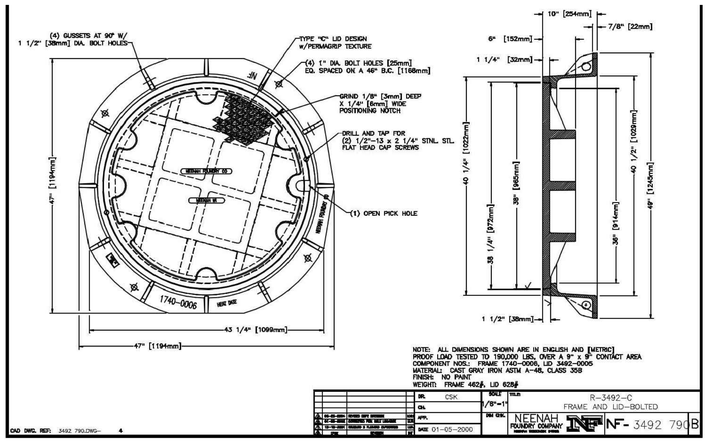
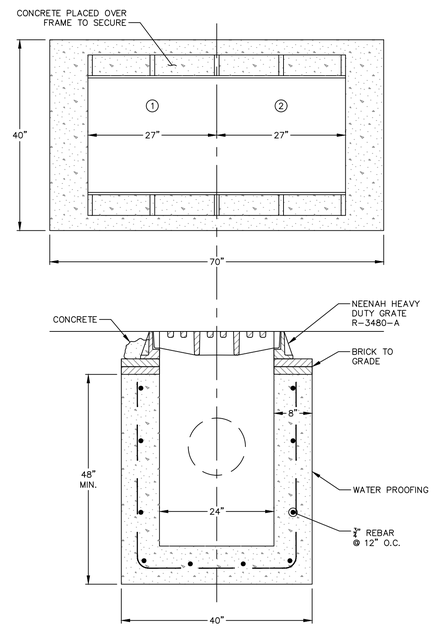


NOTE: ALL COVERS TO BE REVIEWED AND APPROVED BY EB SECURITY.

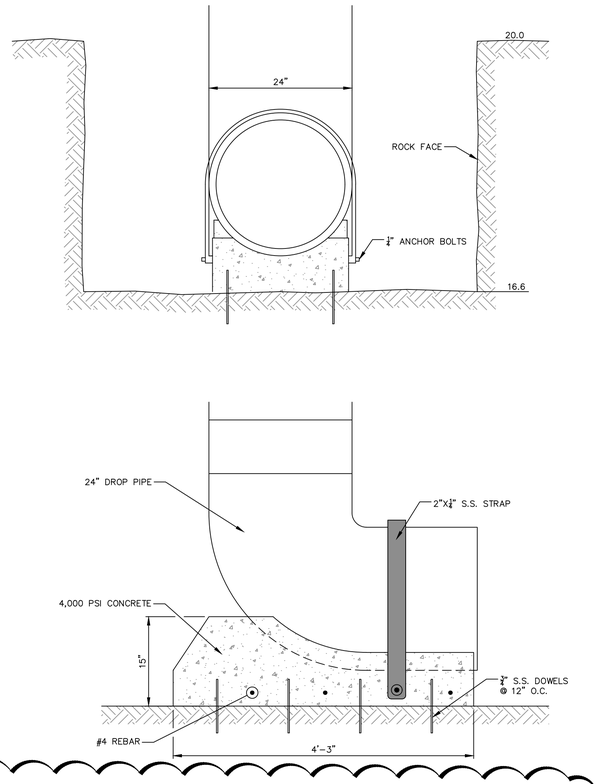
HEAVY DUTY MANHOLE COVER

SCALE: N.T.S.



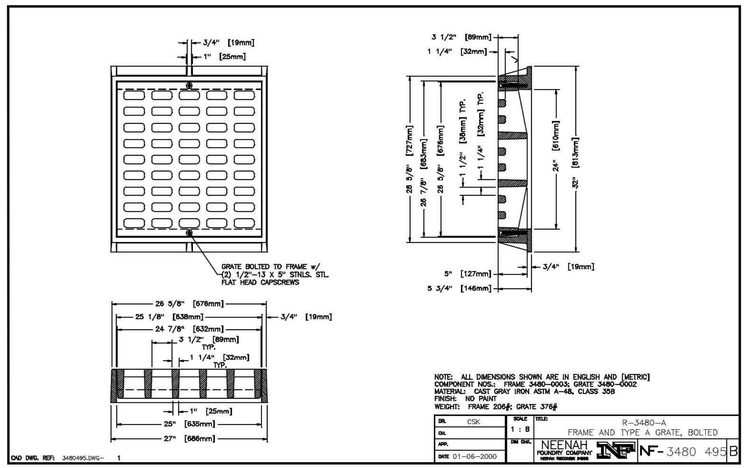
HEAVY-DUTY CATCH BASIN

SCALE: N.T.S.



DROP PIPE THRUST BLOCK

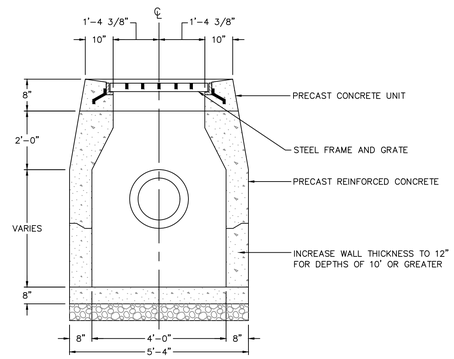
SCALE: N.T.S.



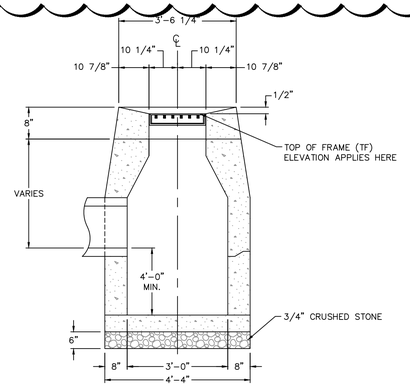
NOTE: ALL GRATES TO BE REVIEWED AND APPROVED BY EB SECURITY.

HEAVY DUTY INLET GRATE

SCALE: N.T.S.



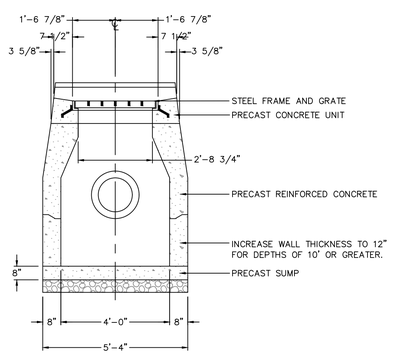
FRONT ELEVATION



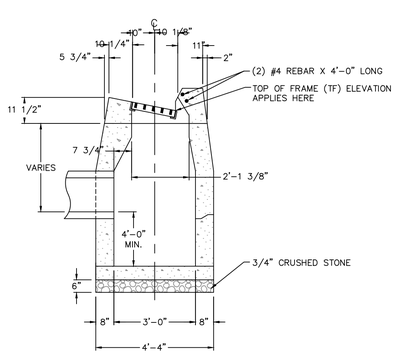
SIDE ELEVATION

TYPE "C-L" CATCH BASIN

SCALE: N.T.S.



FRONT ELEVATION



SIDE ELEVATION

TYPE "C" CATCH BASIN

SCALE: N.T.S.

JACOBS
100 Great Meadow Road, Suite 707
Wethersfield, CT 06109
FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fando.com

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STATE OF CONNECTICUT KRISTEN E. SOLOMON REGISTERED PROFESSIONAL ENGINEER No. 22072 LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE		BY	APVD
1	04-09-2019	CITY PLANNING COMMENTS		

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36
DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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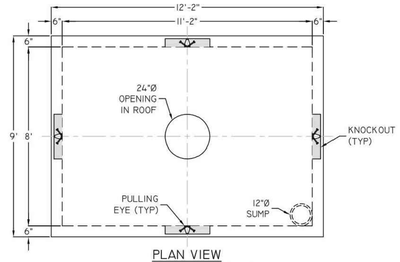
GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
STORM DRAINAGE DETAILS

Date: 13 FEB 2019
Drawing No.: SY-C-512
SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-DET-01.dwg

PLOT DATE/TIME: 4/4/2019 6:59 PM

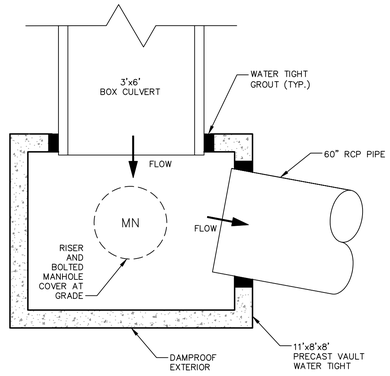


DESIGN NOTES:

1. CONCRETE - 5,000 PSI, 28 DAYS
2. REINFORCING STEEL CONFORMS TO LATEST ASTM A615 AND A82 OR A185 SPECS.
3. H-20 DESIGN LOADING PER AASHTO HS-20-44
4. BUTYL RUBBER JOINT SEALANT CONFORMS TO LATEST ASTM C990-91 SPEC., FED SPEC. SS-S-210 (210A), AND AASHTO M-198B.
5. CONTRACTOR TO VERIFY SIZE, LOCATION AND QUANTITY OF ALL KNOCKOUTS PRIOR TO PRODUCTION.

WEIGHT:
TOP = 22,824 LBS
BASE = 22,824 LBS

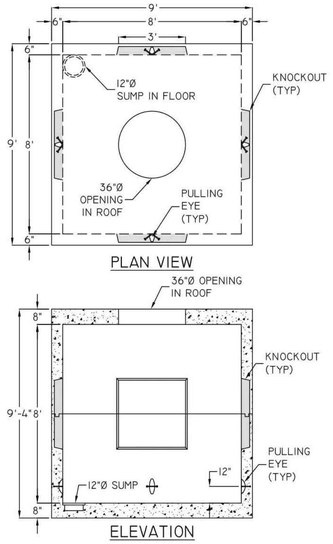
ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ARROW CONCRETE PRODUCTS SHALL RENDER IT INVALID AND UNUSABLE.



NOTE:
1. INSTALL VAULT ON 12" CRUSHED STONE BASE.
2. CLEAN ALL PIPING AT END OF PROJECT. REMOVE ALL SEDIMENT. DO NOT FLUSH SEDIMENT DOWNSTREAM.

STMH 33A-3 (11'X8'X8' VAULT)

SCALE: N.T.S.



DESIGN NOTES:

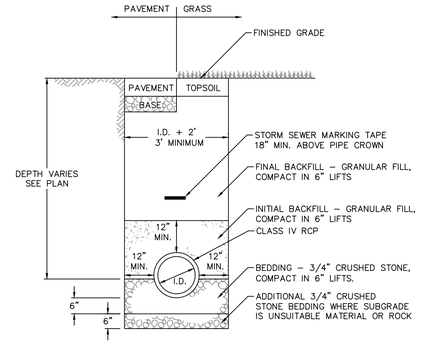
1. CONCRETE - 5,000 PSI, 28 DAYS
2. REINFORCING STEEL CONFORMS TO LATEST ASTM A615 AND A82 OR A185 SPECS.
3. H-20 DESIGN LOADING PER AASHTO HS-20-44
4. BUTYL RUBBER JOINT SEALANT CONFORMS TO LATEST ASTM C990-91 SPEC., FED SPEC. SS-S-210 (210A), AND AASHTO M-198B.
5. EXTERIOR COATED WITH BITUMASTIC.
6. CONTRACTOR TO ADVISE SIZE AND LOCATION OF KNOCKOUTS

WEIGHT:
TOP = 18,115 LBS
BASE = 18,115 LBS

ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ARROW CONCRETE PRODUCTS SHALL RENDER IT INVALID AND UNUSABLE.

STMH 33A-1 CONCRETE JUNCTION VAULT (8'X8'X8')

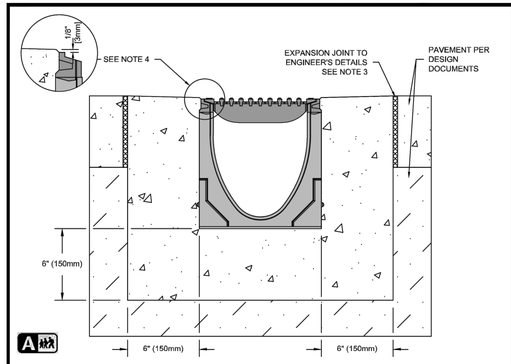
SCALE: N.T.S.



NOTE: PROVIDE CLASS V RCP WHERE SHOWN ON PLANS.

STORM SEWER TRENCH

SCALE: N.T.S.



NOTES:
1. IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS. *ENGINEERING ADVICE MAY BE REQUIRED.*
2. MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
3. EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND. *ENGINEERING ADVICE MAY BE REQUIRED.*
4. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" [3mm] ABOVE THE TOP OF THE CHANNEL EDGE.
5. CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS. ENGINEERING ADVICE MAY BE REQUIRED TO DETERMINE PROPER LOAD CLASS.
6. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.

SPECIFICATION CLAUSE

S200K POWERDRAIN - LOAD CLASS A

GENERAL
THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE S200K CHANNEL SYSTEM WITH DUCTILE IRON EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

MATERIALS
CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN DUCTILE IRON EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:

COMPRESSIVE STRENGTH:	14,000 PSI
FLEXURAL STRENGTH:	4,000 PSI
TENSILE STRENGTH:	1,500 PSI
WATER ABSORPTION:	0.07%
FROST PROOF	YES
DILUTE ACID AND ALKALI RESISTANT	YES
B117 SALT SPRAY TEST COMPLIANT	YES

THE SYSTEM SHALL BE 8" (200mm) NOMINAL INTERNAL WIDTH WITH A 10.2" (260mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "V" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

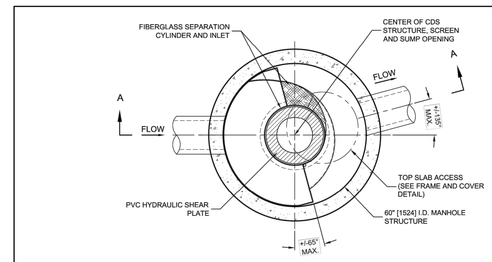
CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING 'POWERLOK' BOLTLESS LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

SK2-A-ECP	S200K - POWERDRAIN - LOAD CLASS: A Exposed Concrete Pavement	**ACO Polymer Products, Inc.**
DATE: 08/25/15	INSTALLATION DRAWING - ACO DRAIN	825 W. Beechcraft St Casa Grande, AZ 85122 Tel: 520-421-9988 Fax: 520-421-9899
		9470 Pinecone Dr. Mentor, OH 44060 Tel: 440-639-7230 Fax: 440-639-7235
		4211 Pleasant Rd, Fort Mill, SC 29708 Tel: 440-639-7230 Fax: 803-802-1063

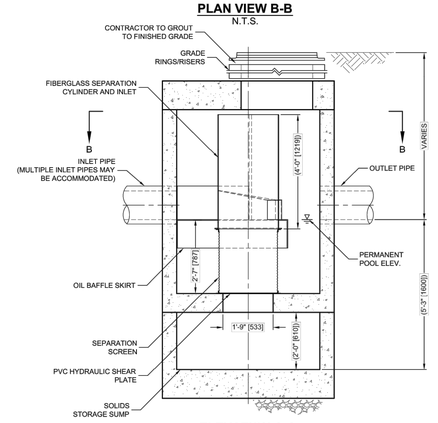
Arizona Tel: 888-490-9552 e-mail: sales@acousa.com Ohio Tel: 800-543-4764 www.acousa.com South Carolina Tel: 800-543-4764

TRENCH DRAIN

SCALE: N.T.S.



PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.

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C:\STORMWATER\COMMON\P322 CDS\AUG STANDARD DRAWINGS\INLINE CDS\CDS-C\DWG\CDS2020-5-C-DTL.DWG 9/13/2014 5:55 PM

HYDRODYNAMIC SEPARATOR

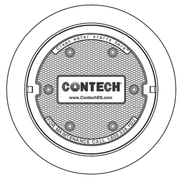
SCALE: N.T.S.

CDS2020-5-C DESIGN NOTES

CDS2020-5-C RATED TREATMENT CAPACITY IS 1.1 CFS. [31.2 L/s], OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY IS 14.0 CFS [396 L/s]. IF THE SITE CONDITIONS EXCEED 14.0 CFS [396 L/s], AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

THE STANDARD CDS2020-5-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES
SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION)
SEDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (CFS OR L/s)			*
PEAK FLOW RATE (CFS OR L/s)			*
RETURN PERIOD OF PEAK FLOW (YRS)			*
SCREEN APERTURE (2400 OR 4700)			*
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*
RIM ELEVATION			*
ANTI-FLOTATION BALLAST	WIDTH		HEIGHT
	*		*
NOTES/SPECIAL REQUIREMENTS:			
* PER ENGINEER OF RECORD			

NOTE: PROVIDE HEAVY DUTY FRAME AND COVER.

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET H520 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CDS2020-5-C
INLINE CDS
STANDARD DETAIL

OPERATIONS & MAINTENANCE
1. CDS UNITS SHALL BE INSPECTED TWCE PER YEAR (FALL AND SPRING) AT A MINIMUM. INSPECTIONS MAY BE MORE FREQUENT WHERE EXCESSIVE TRASH AND SEDIMENT ARE EXPECTED.
2. THE UNITS SHOULD BE CLEANED WHEN THE SEDIMENT LEVEL HAS REACHED 75% OF THE CAPACITY OF THE ISOLATED SUMP AND/OR WHEN TRASH HAS ACCUMULATED ON THE SCREEN.
3. CLEANING SHOULD BE DONE DURING DRY WEATHER. THE USE OF A VAC TRUCK IS THE MOST EFFECTIVE AND CONVENIENT METHOD OF REMOVING SEDIMENT AND OTHER POLLUTANTS.
4. DISPOSE OF SEDIMENT AND POLLUTANTS IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.

2

JACOBS®
100 Great Meadow Road, Suite 707
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NO.	DATE		BY	APVD
2	04-09-2019	CITY PLANNING COMMENTS		
1	03-19-2019	CITY WETLAND COMMENTS		

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36
DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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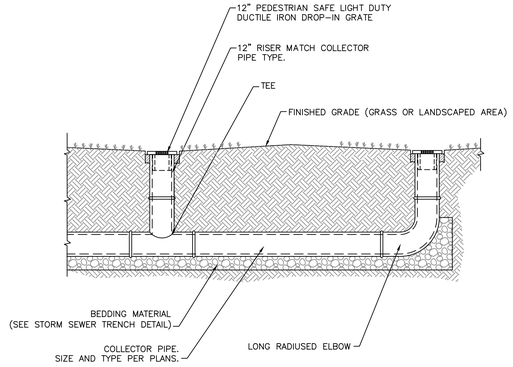
GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
STORM DRAINAGE DETAILS

Date: 13 FEB 2019
Drawing No.:
SY-C-513
SHEET: OF

ISSUED FOR PERMIT

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-DET-01.dwg

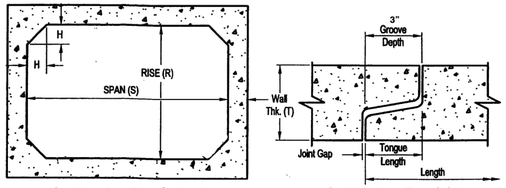
PLOT DATE/TIME: 4/4/2019 6:59 PM



YARD DRAIN (LIGHT DUTY)

SCALE: N.T.S.

Reinforced Concrete Boxes



Section thru Box Culvert — Section thru Box Joint

Standard UCP Box Culvert Weights

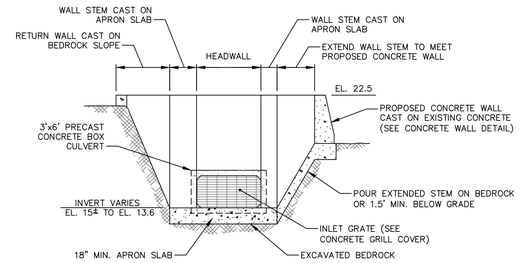
Span (S) / Rise (R)	3	4	5	6	7	8	9	10	11	12
3	1500	1800	2000	2200	2390	2590	2780	3810	4060	5330
4		2000	2200	2390	2600	2800	2990	4060	4300	5700
5			2400	2600	2800	3000	3190	4300	4550	5930
6				2800	2990	3200	3390	4550	4790	6300
7					3190	3400	3590	4790	5040	6520
8						3600	3790	5040	5290	6900
9							3990	5290	5530	7110
10								5530	5780	7500
11									6025	7700
12										8100
Wall (T)	8	8	8	8	8	8	8	10	10	12
Haunch (H)	9	9	9	9	9	9	9	9	9	9

Box Dimensions will vary depending upon Equipment availability
Numbers in table are weights per foot.

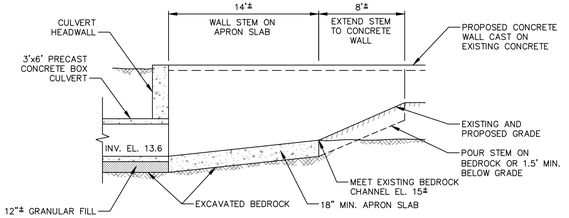
NOTES:
1. Produced to current ASTM Specification and/or project specifications.
2. This drawing is not intended to show reinforcement design - either as to placement or steel area. Actual project specification or current ASTM specification will apply.
3. Contact a United Concrete representative for further details not listed on this drawing.
4. Custom sizes available upon request.

BOX CULVERT

SCALE: N.T.S.



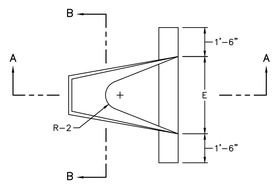
INLET ELEVATION



LONGITUDINAL SECTION

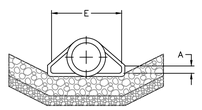
HEADWALL

SCALE: N.T.S.

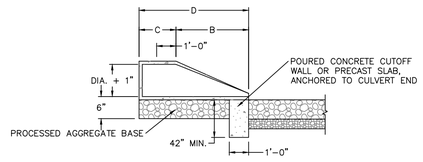


PLAN

DIMENSIONS						
DIA.	A	B	C	D	E	F
12"	4"	2'-0"	6'-0 3/8"	6'-0 3/8"	2'-0"	1'-7 15/16"
15"	6"	2'-3"	3'-10"	6'-1"	2'-6"	2'-0 5/16"
18"	9"	2'-3"	3'-10"	6'-1"	3'-0"	2'-5"
24"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	2'-9 3/16"
30"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3'-1"
36"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3'-11 13/16"
42"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	4'-5 7/8"
48"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	4'-8 1/2"



END VIEW

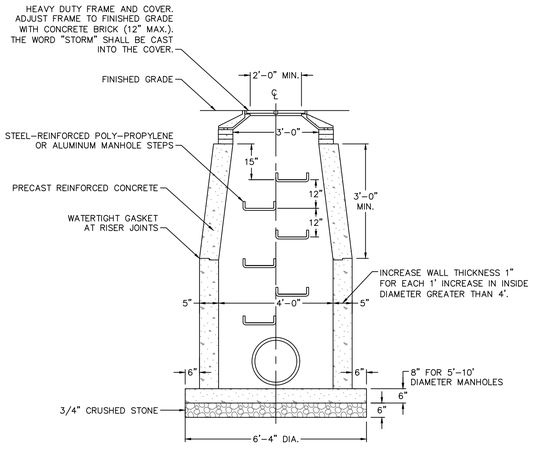


SECTION A–A

SECTION B–B

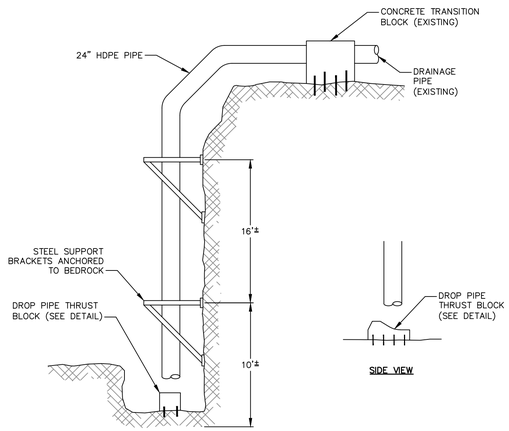
CONCRETE CULVERT END

SCALE: N.T.S.



STORM MANHOLE

SCALE: N.T.S.



SIDE VIEW

DROP PIPE

SCALE: N.T.S.

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STATE OF CONNECTICUT — KRISTEN E. SOLOMON — No. 22072 — LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE	BY	APVD

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
STORM DRAINAGE DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-514

SHEET: OF

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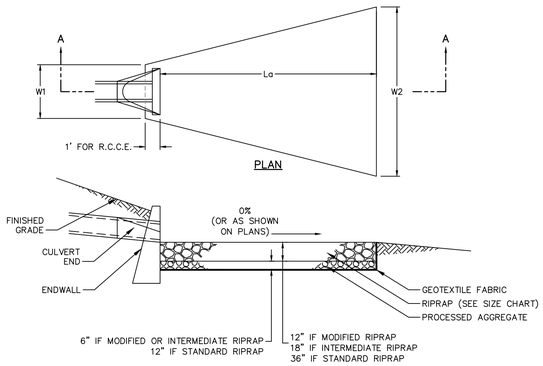
File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-DET-01.dwg

PLOT DATE/TIME: 4/4/2019 6:59 PM

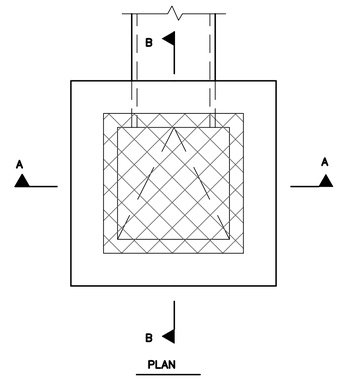


SECTION A–A

OUTLET	La	W1	W2	RIPRAP TYPE
33B	15	4	14	MODIFIED
33C	11	4	12	MODIFIED

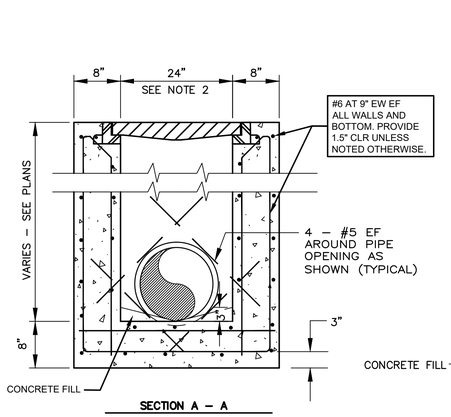
NOTE:
CALCULATION FOR APRON ARE BASED ON THE 2000 CONNDOT DRAINAGE MANUAL (REVISED DECEMBER 2003).

TYPE 'A' RIPRAP APRON
SCALE: N.T.S.

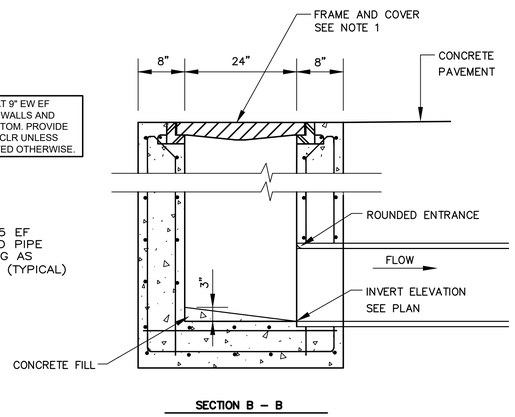


NOTES

1. AIRCRAFT RATED, NEENAH R4990-HA, TYPE "D" SOLID COVER, TYPE "X" FRAME OR APPROVED EQUAL.
2. WHERE PIPE SIZE IS GREATER THAN 18-INCHES OD, INCREASE STRUCTURE AND COVER WIDTHS TO PROVIDE A MINIMUM OF 3-INCHES CLEAR FROM OUTSIDE OF PIPE TO INSIDE STRUCTURE WALLS.
3. PRECAST STRUCTURE MAY BE SUBMITTED IN LIEU OF CAST-IN-PLACE. APPROVAL BY ENGINEER IS REQUIRED.



SECTION A – A



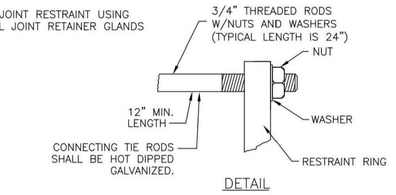
SECTION B – B

RAILROAD SUBDRAIN STRUCTURE DETAIL
SCALE: N.T.S.

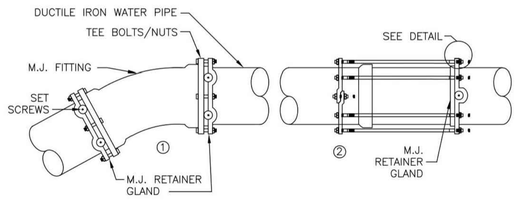
JOINT METHOD NOTES:

① MECHANICAL JOINT RETAINER GLANDS

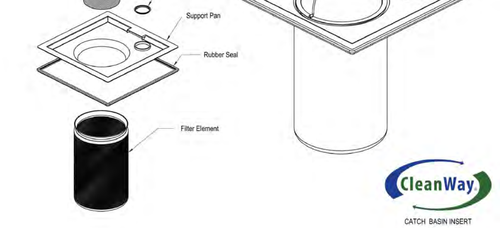
② PUSH–ON JOINT RESTRAINT USING MECHANICAL JOINT RETAINER GLANDS

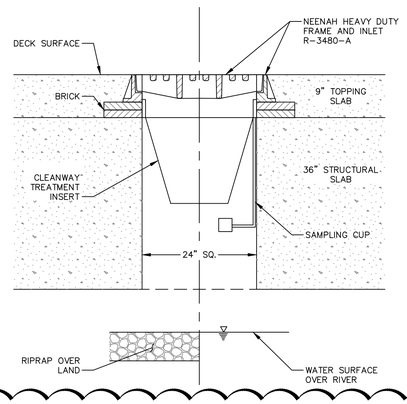


DETAIL

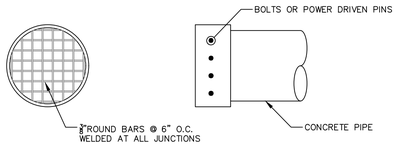


MECHANICAL JOINT RESTRAINT
SCALE: N.T.S.

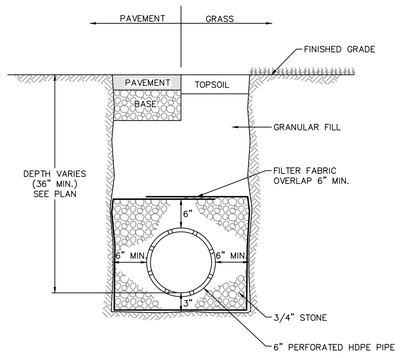




DECK DRAIN
SCALE: N.T.S.

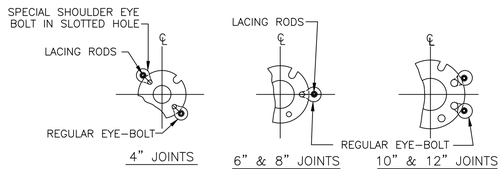


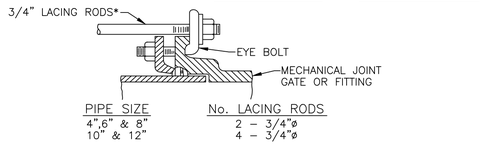
CONCRETE CULVERT GRILL
SCALE: N.T.S.



UNDERDRAIN
SCALE: N.T.S.

THRUST RESTRAINT – LACING METHOD





PIPE SIZE	No. LACING RODS
4",6" & 8"	2 – 3/4"ø
10" & 12"	4 – 3/4"ø

* STANDARD LENGTHS ARE 6' & 10'. COUPLINGS MAY BE USED FOR LONGER LENGTHS.

NOTES:

1. NUMBER OF LACING RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I. IN MAIN.
2. EYE–BOLTS AND LACING RODS ARE TO BE FABRICATED FROM A–36 STEEL.
3. STEEL LACING RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 36,000 P.S.I.
4. EYE–BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 7,000 LBS. EACH.
5. 3/4" LACING RODS AND EYEBOLTS ARE UNSUITABLE FOR PIPELINES 16 INCHES IN DIAMETER AND LARGER. RESTRAINT FOR 16 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE–BY–CASE BASIS AND APPROVED BY THE METROPOLITAN DISTRICT.

MECHANICAL JOINT LACING DETAIL
SCALE: N.T.S.

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NO.	DATE	BY	APVD
1	04-09-2019	CITY PLANNING COMMENTS	

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24X36
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
STORM DRAINAGE DETAILS

Date: 13 FEB 2019
Drawing No.: SY-C-515
SHEET: OF

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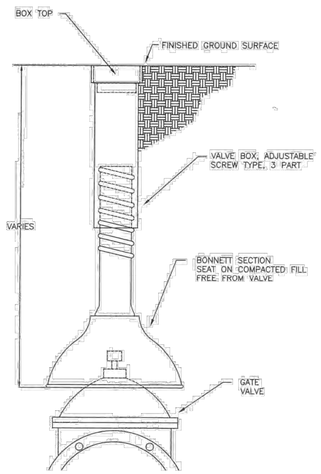
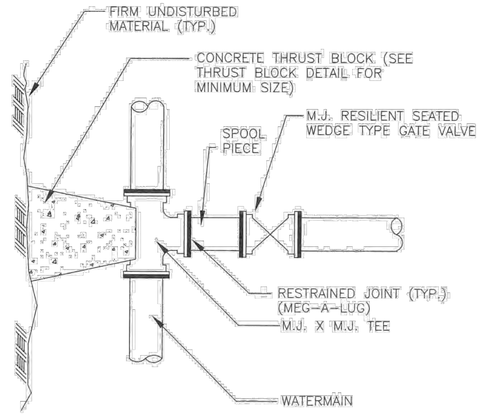


GATE BOX DETAIL

NOT TO SCALE

APPROVED	DATE	STANDARDS	BY D.L.C.	CHECKED
			REVISED	CHECKED
		TYPICAL GATE BOX	DATE 1/8/01	
		GROTON UTILITIES	1	



GATE VALVE CONNECTION DETAIL

NOT TO SCALE

APPROVED	DATE	STANDARDS	BY D.L.C.	CHECKED
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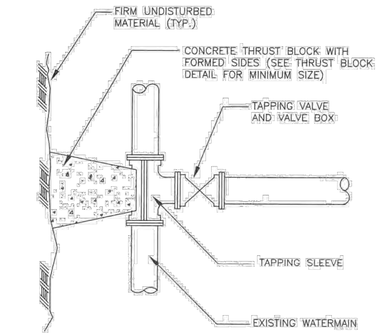
		TYPICAL GATE VALVE CONNECTION	DATE 1/8/01	
		GROTON UTILITIES	2	



NOTE: CONTRACTOR TO VERIFY OUTSIDE DIAMETER OF EXISTING MAIN.

TAPPING SLEEVE & VALVE DETAIL

NOT TO SCALE

APPROVED	DATE	STANDARDS	BY D.L.C.	CHECKED
			REVISED	CHECKED
		TAPPING SLEEVE AND VALVE	DATE 1/8/01	
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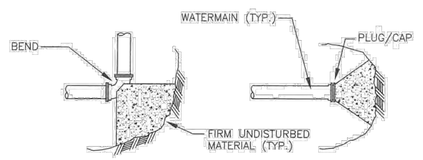
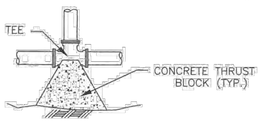


(TYP.) BEND—PLAN VIEW PLUG/CAP—PLAN VIEW



TEE—PLAN VIEW

TABLE OF BEARING AREAS (S.F.)			
SIZE OF MAIN (IN.)	BEND (90)	BENDS (45 & UNDER)	TEES, CAPS OR PLUGS
8 & UNDER	6	3	4
10 & 12	12	6	9

NOTES:
1. CONCRETE FOR THRUST BLOCKS SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
2. THRUST BLOCK BEARING AREAS TOO BE IN ACCORDANCE WITH TABLE, UNLESS DETERMINED OTHERWISE BY THE ENGINEER BECAUSE OF SOIL CONDITIONS.
3. THRUST BLOCK SIDES SHALL BE FORMED WITH PLYWOOD.

THRUST BLOCK DETAILS

NOT TO SCALE

APPROVED	DATE	STANDARDS	BY D.E.I.	CHECKED
			REVISED	CHECKED
		CONCRETE BACKING FOR WATER PIPE	DATE 2/4/74	
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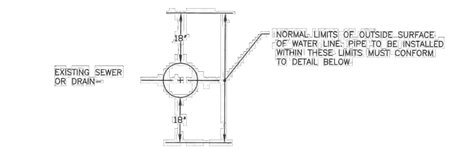
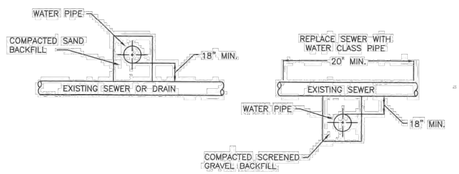
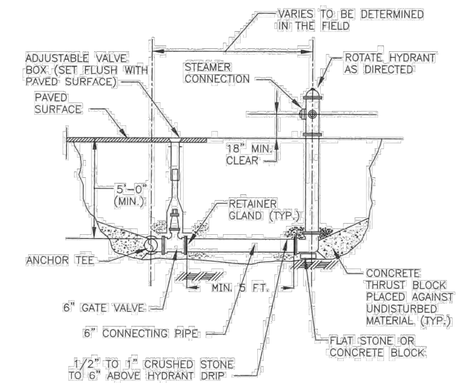




TYPICAL SEWER AND DRAIN CROSSING

NOT TO SCALE

APPROVED	DATE	STANDARDS	BY D.E.I.	CHECKED
			REVISED	CHECKED
		TYPICAL SEWER AND DRAIN CROSSING DETAIL	DATE 12/18/75	
		GROTON UTILITIES	5	



NOTE: DEPTH OF HYDRANT BURY TO SUIT INSTALLED DEPTH OF COVER OVER WATERMAIN.

HYDRANT ASSEMBLY DETAIL

NOT TO SCALE

APPROVED	DATE (HYDRANT.DWG)	STANDARDS	BY D.L.C.	CHECKED
			REVISED	CHECKED
		TYPICAL HYDRANT AND VALVE DETAIL	DATE 1/8/01	
		GROTON UTILITIES	6	

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NO.	DATE		BY	APVD

ISSUE DATE: 13 FEB 2019
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BORDER SIZE: ARCH D 24x36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
WATER DETAILS

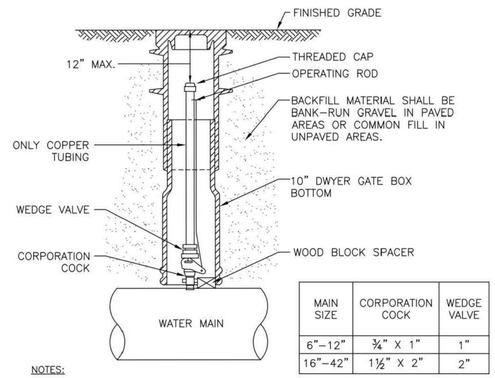
Date: 13 FEB 2019

Drawing No.:
SY-C-516

SHEET: OF

File Path: J:\DWG\P97\97570\S30\Civil\Plan\1997570S30-DET-01.dwg

PLOT DATE/TIME: 4/4/2019 6:59 PM



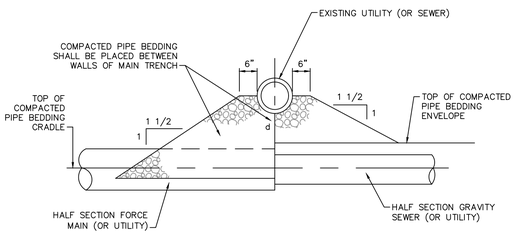
MAIN SIZE	CORPORATION COCK	WEDGE VALVE
6"–12"	¾" X 1"	1"
16"–42"	1½" X 2"	2"

NOTES:

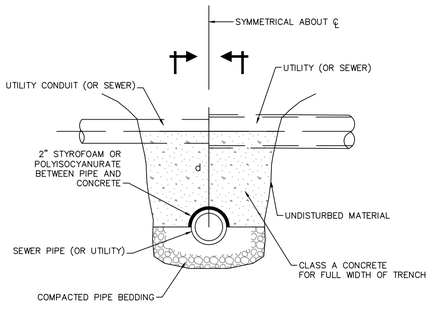
1. CANNOT BE USED FOR FUTURE SERVICE.
2. CHLORINATION INLET/BLOWOFF MAY BE CONVERTED TO AN AIR VALVE OR USED AS A STERILIZATION SAMPLING POINT.
3. A CHLORINATION/SAMPLING ASSEMBLY SHALL BE REMOVED ONCE WATER MAIN PASSES SAMPLING. CORPORATION SHALL EITHER BE CONVERTED TO AIR VALVE OR ABANDONED PRIOR TO FINAL PAVEMENT RESTORATION.
4. WHEN USED FOR INSPECTION ONLY, THEN THE CORPORATION COCK SHALL BE 3/4" X 1" WITH A 1" WEDGE VALVE.

AIR RELEASE VALVE

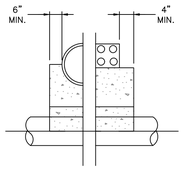
SCALE: N.T.S.



TYPE A (d > 12")



TYPE B (d < 12")



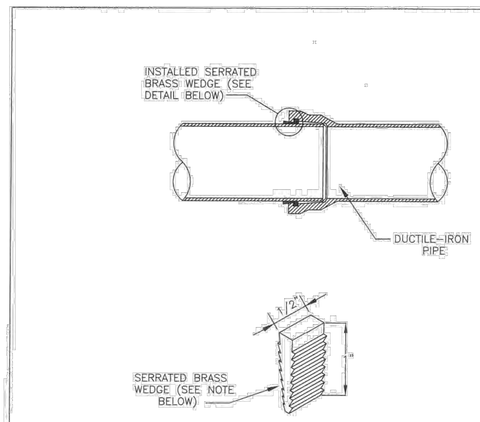
HALF SECTION

UTILITY SUPPORT NOTES

1. d=DISTANCE FROM TOP OF SEWER PIPE TO THE BOTTOM OF THE UTILITY PIPE
2. SUPPORTS TO BE LOCATED AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER

TYPICAL SUPPORT FOR UTILITES

SCALE: N.T.S.



NOTE:
BRASS WEDGES ARE TO BE INSTALLED ON ALL DUCTILE-IRON, PUSH-ON PIPING, INCLUDING HYDRANT BRANCHES, ETC, TO PROVIDE FOR ELECTRICAL THAWING. FOR 2" THROUGH 12" PIPE, TWO WEDGES SHALL BE USED PER JOINT; FOR LARGER DIAMETER PIPE FOUR WEDGES SHALL BE USED PER JOINT. EACH WEDGE IS DRIVEN INTO THE OPENING BETWEEN THE PLAIN END AND THE BELL UNTIL SNUG. WHEN FOUR WEDGES ARE USED, THEY ARE INSTALLED SIDE BY SIDE, IN PAIRS.

SERRATED BRASS WEDGE DETAIL

NOT TO SCALE

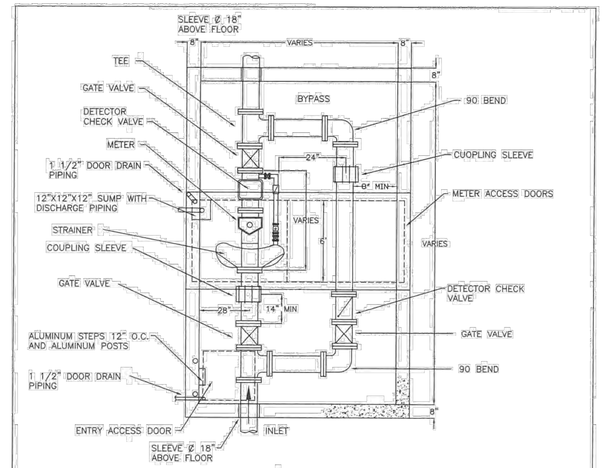
APPROVED	DATE

STANDARDS

TYPICAL SERRATED BRASS WEDGES TO PROVIDE ELECTRICAL THAWING OF WATER PIPING

GROTON UTILITIES

BY D.L.C.	CHECKED D.E.I.
REVISED	CHECKED
DATE: 3/30/81	
7	



INSIDE HEIGHT 6'04" 3000LB CONCRETE
1/2" DIA. RODS 12" O.C. BOTH WAYS, DOUBLE AT EDGES.
4" CONCRETE FLOOR, SLOPE TO SUMP.
SUMP LOCATION, DISCHARGE PIPING, TO BE DETERMINED BY FIELD CONDITIONS
USE FLANGE FITTINGS INSIDE METER PIT.
SUPPORT METER AND VALVES ON CONCRETE FOUNDATIONS, VALVES OPEN LEFT.
(2) – 2 1/2" ANODIZED ALUMINUM, CONCRETE-FILLED POSTS, 36" HIGH AND 22" APART, EMBEDDED 6" IN CONCRETE

SERVICE SIZE	METER SIZE	METER LENGTH	METER PIT WIDTH	METER PIT LENGTH	BYPASS SIZE
3"	3"	19"	7'–0"	12'–0"	3"
4"	4"X1 1/2"	33"	7'–0"	12'–0"	4"
6"	6"X2"	45"	8'–0"	14'–0"	6"
8"	8"X2"	53"	8'–0"	16'–0"	8"
10"	10"X2"	68"	8'–0"	18'–0"	10"
12"	10"X2"	68"	8'–0"	19'–0"	12"

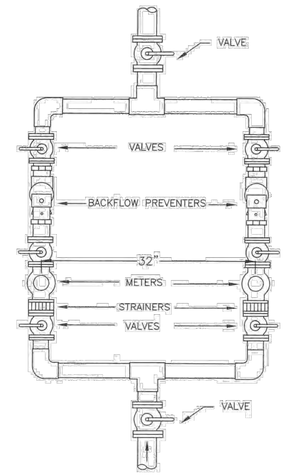
APPROVED	DATE

STANDARDS

WATER METER PIT 3", 4", 6", 8", 10", 12"

GROTON UTILITIES

BY R.A.R.	CHECKED
REVISED	CHECKED
DATE 4/5/94	
10	



1. ALL PIPING AND FLANGED FITTINGS TO BE SUPPLIED BY CUSTOMER
2. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER FOR SIZES 3/4" THRU 6" WITH BY-PASS PIPING.
3. CENTER OF PIPE TO FLOOR 42"
4. CENTER OF PIPE TO WALL 18"

APPROVED	DATE
R.A.R.	5/21/99

STANDARDS

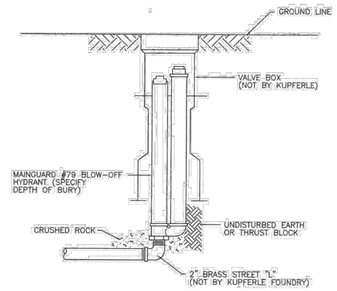
TYPICAL BACKFLOW PREVENTER INSTALLATION 3/4" THRU 6" WITH BY-PASS PIPING

NOT TO SCALE

GROTON UTILITIES

BY MSW	CHECKED
REVISED 5/6/99	CHECKED
DATE: 8/21/87	
13	

ECLIPSE NO. 79 (MAINGUARD) BLOW-OFF HYDRANT



Blow-Off Hydrants shall be non-freezing, self draining type. Set underground in a 5 1/4" valve box, these hydrants will be furnished with a 2" FIP inlet, a non-turning operating rod, and shall open to the left. All of these working parts shall be of bronze-to-bronze design, and be servicable from above grade with no digging. The outlet shall be a 2" FIP coupling with plug, as manufactured by Kupferle Foundry Co., St. Louis, MO, or approved equal.

(Specify overall length 6" shorter than normal depth of bury.)

APPROVED	DATE

STANDARDS

2" MANUAL AIR RELEASE

GROTON UTILITIES

BY D.L.C.	CHECKED
REVISED	CHECKED
DATE 1/9/01	
15	

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MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fando.com

STATE OF CONNECTICUT · KRISTEN E. SOLOMON · No. 22072 · LICENSED PROFESSIONAL ENGINEER

REGISTRATION NUMBER:

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NO.	DATE	BY	APVD

ISSUE DATE: 13 FEB 2019
DRAWING CODE:
BORDER SIZE: ARCH D 24x36
DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
WATER DETAILS

Date: 13 FEB 2019
Drawing No.: SY-C-517
SHEET: OF

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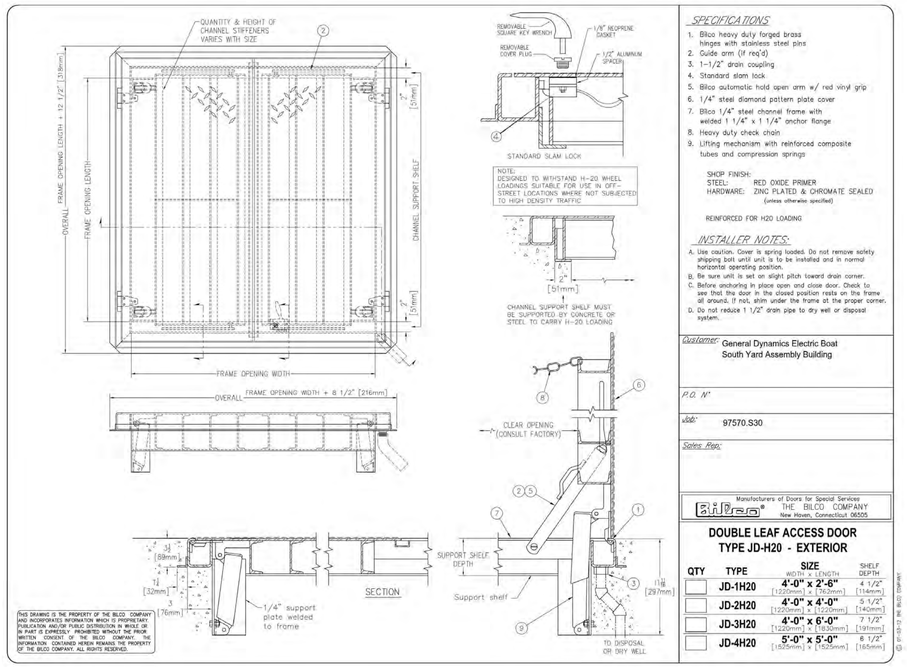

SPECIFICATIONS

1. Bilco heavy duty forged brass hinges with stainless steel pins
2. Guide arm (if req'd)
3. 1-1/2" drain coupling
4. Standard slam lock
5. Bilco automatic hold open arm w/ red vinyl grip
6. 1/4" steel diamond pattern plate cover
7. Bilco 1/4" steel channel frame with welded 1 1/4" x 1 1/4" anchor flange
8. Heavy duty check chain
9. Lifting mechanism with reinforced composite tubes and compression springs

SHOP FINISH:
STEEL: RED OXIDE PRIMER
HARDWARE: ZINC PLATED & CHROMATE SEALED (unless otherwise specified)

REINFORCED FOR H20 LOADING

INSTALLER NOTES:

A. Use caution. Cover is spring loaded. Do not remove safety shipping bolt until unit is to be installed and in normal horizontal operating position.
B. Be sure unit is set on slight pitch toward drain corner.
C. Before anchoring in place open and close door. Check to see that the door in the closed position rests on the frame all around. If not, shim under the frame at the proper corner.
D. Do not reduce 1 1/2" drain pipe to dry well or disposal system..

Customer: General Dynamics Electric Boat
South Yard Assembly Building

P.O. N°

Job: 97570.S30

Sales Rep:

Manufacturers of Doors for Special Services
BILCO® THE BILCO COMPANY New Haven, Connecticut 06505

DOUBLE LEAF ACCESS DOOR
TYPE JD-H20 - EXTERIOR

QTY	TYPE	SIZE WIDTH x LENGTH	SHELF DEPTH
	JD-1H20	4'-0" x 2'-6" [1220mm] x [762mm]	4 1/2" [114mm]
	JD-2H20	4'-0" x 4'-0" [1220mm] x [1220mm]	5 1/2" [140mm]
	JD-3H20	4'-0" x 6'-0" [1220mm] x [1830mm]	7 1/2" [191mm]
	JD-4H20	5'-0" x 5'-0" [1525mm] x [1525mm]	6 1/2" [165mm]

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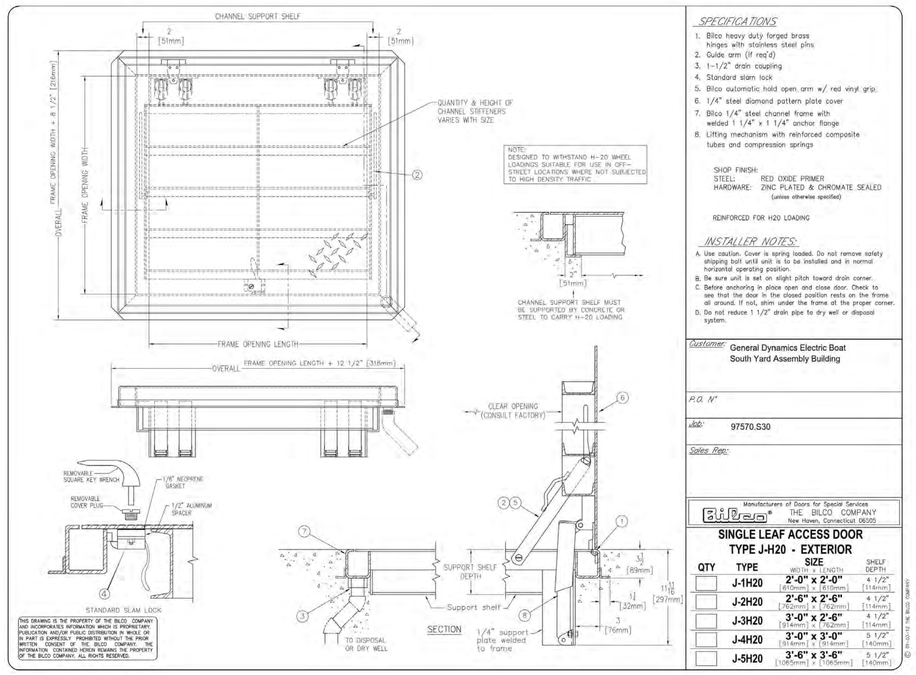
WATER METER PIT METER ACCESS DOORS

SCALE: N.T.S.



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South Yard Assembly Building

P.O. N°

Job: 97570.S30

Sales Rep:

Manufacturers of Doors for Special Services
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SINGLE LEAF ACCESS DOOR
TYPE J-H20 - EXTERIOR

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	J-2H20	2'-6" x 2'-6" [762mm] x [762mm]	4 1/2" [114mm]
	J-3H20	3'-0" x 2'-6" [914mm] x [762mm]	4 1/2" [114mm]
	J-4H20	3'-0" x 3'-0" [914mm] x [914mm]	5 1/2" [140mm]
	J-5H20	3'-6" x 3'-6" [1067mm] x [1067mm]	5 1/2" [140mm]

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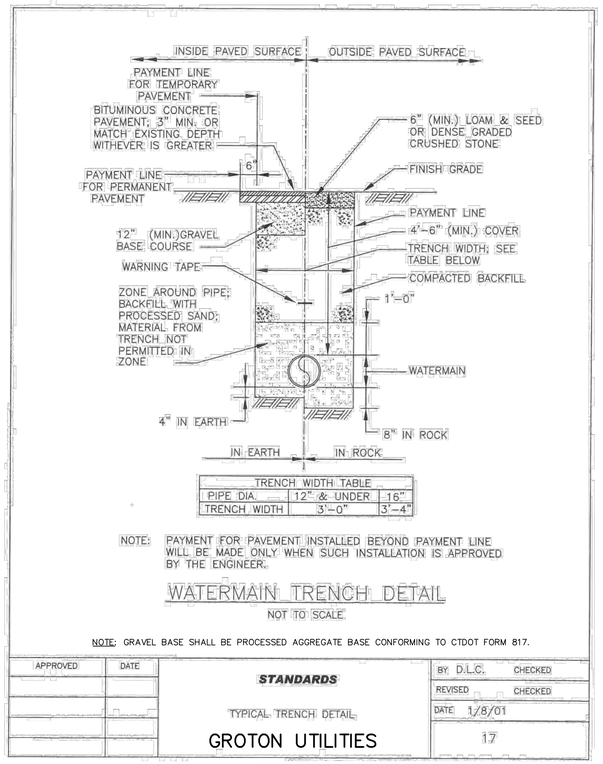
WATER METER PIT ENTRY ACCESS DOOR

SCALE: N.T.S.



TRENCH WIDTH TABLE		
PIPE DIA.	12" & UNDER	16"
TRENCH WIDTH	3'-0"	3'-4"

NOTE: PAYMENT FOR PAVEMENT INSTALLED BEYOND PAYMENT LINE WILL BE MADE ONLY WHEN SUCH INSTALLATION IS APPROVED BY THE ENGINEER.

WATERMAIN TRENCH DETAIL

NOT TO SCALE

NOTE: GRAVEL BASE SHALL BE PROCESSED AGGREGATE BASE CONFORMING TO CTDOT FORM 817.

APPROVED	DATE		
		STANDARDS	BY D.L.C. CHECKED
			REVISED CHECKED
		TYPICAL TRENCH DETAIL	DATE 1/8/01
		GROTON UTILITIES	17

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FILE NAME:

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE

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GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
WATER DETAILS

Date: 13 FEB 2019

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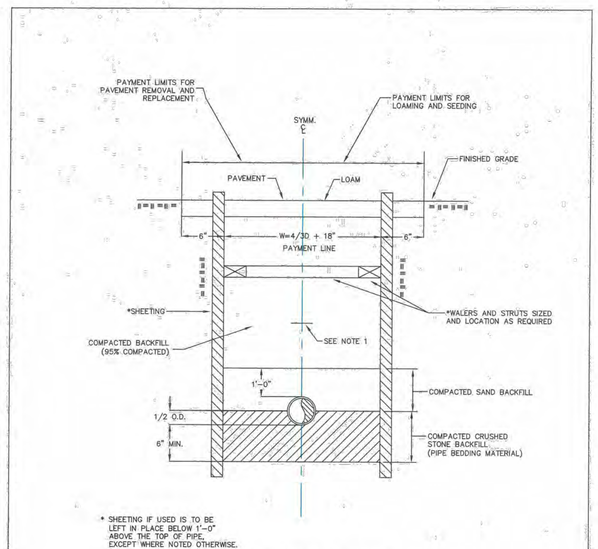
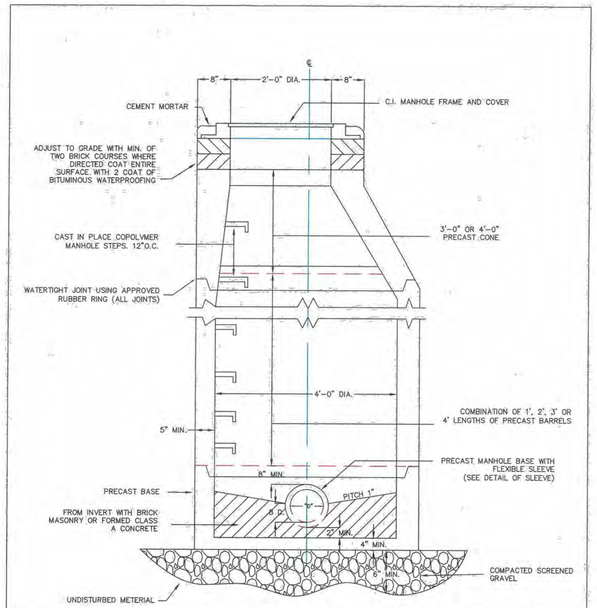


TYPICAL SEWER TRENCH DETAIL

NOT TO SCALE

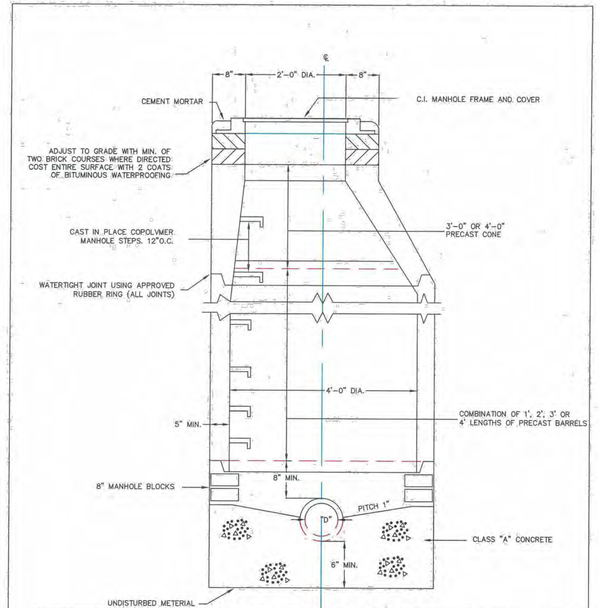
NOTE: 1. CONTRACTOR TO INSTALL AN UNDERGROUND FACILITY WARNING TAPE IN TRENCH WITH 24" MIN. SEPARATION ABOVE UTILITY. FACILITY WARNING TAPE TO BE FURNISHED BY TH CITY OF GROTON.

APPROVED	DATE	STANDARDS	BY JLD CHECKED
			REVISED CHECKED
			DATE
		TYPICAL TRENCH DETAIL	1
		GROTON UTILITIES	



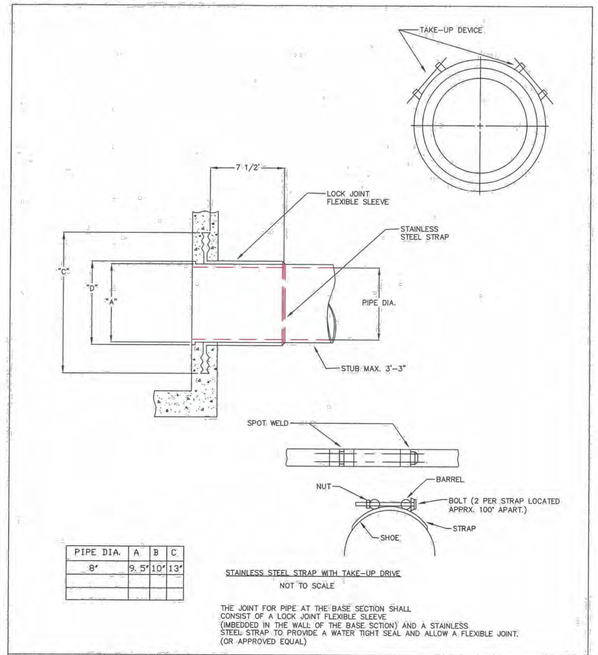
TYPICAL PRECAST MANHOLE
NOT TO SCALE

APPROVED	DATE	STANDARDS	BY JLD CHECKED
			REVISED CHECKED
			DATE
		TYPICAL PRECAST MANHOLE	2
		GROTON UTILITIES	



TYPICAL PRECAST MANHOLE
NOT TO SCALE

APPROVED	DATE	STANDARDS	BY JLD CHECKED
			REVISED CHECKED
			DATE
		TYPICAL PRECAST MANHOLE INSTALLATION on EXISTING SEWER LINES	3
		GROTON UTILITIES	

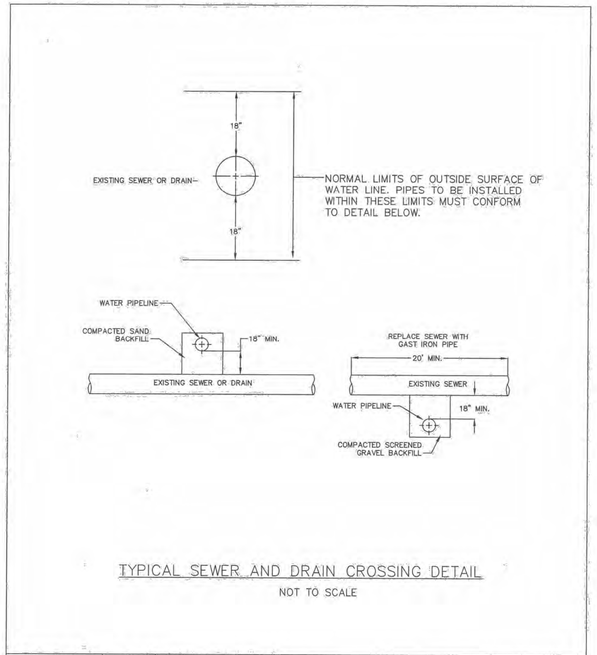


PIPE DIA.	A	B	C
8"	9.5"	10"	13"

STAINLESS STEEL STRAP WITH TAKE-UP DRIVE
NOT TO SCALE

THE JOINT FOR PIPE AT THE BASE SECTION SHALL CONSIST OF A LOCK JOINT FLEXIBLE SLEEVE (IMBEDDED IN THE WALL OF THE BASE SCTION) AND A STAINLESS STEEL STRAP TO PROVIDE A WATER TIGHT SEAL AND ALLOW A FLEXIBLE JOINT. (OR APPROVED EQUAL)

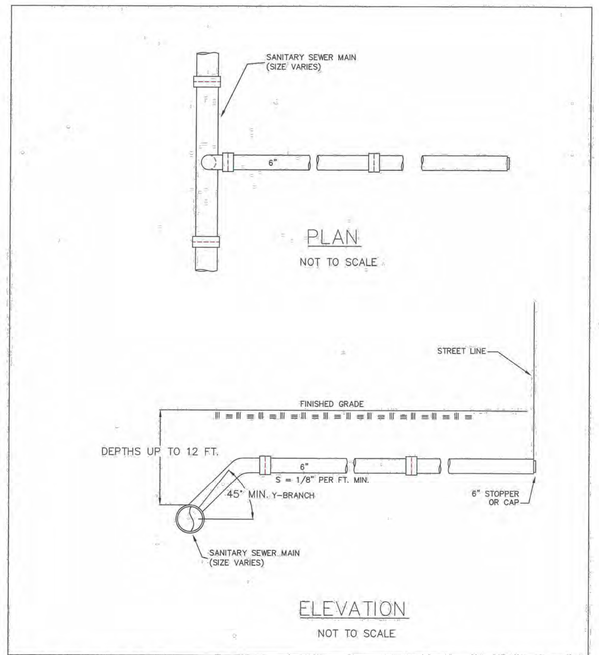
APPROVED	DATE	STANDARDS	BY JLD CHECKED
			REVISED CHECKED
			DATE
		STAINLESS STEEL STRAP WITH TAKE-UP DRIVE	4
		GROTON UTILITIES	



TYPICAL SEWER AND DRAIN CROSSING DETAIL

NOT TO SCALE

APPROVED	DATE	STANDARDS	BY JLD CHECKED
			REVISED CHECKED
			DATE
		TYPICAL SEWER AND DRAIN CROSSING DETAIL	5
		GROTON UTILITIES	



APPROVED	DATE	STANDARDS	BY JLD CHECKED
			REVISED CHECKED
			DATE
		TYPICAL HOUSE CONNECTION DETAIL	6
		GROTON UTILITIES	

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DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SANITARY SEWER DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-519

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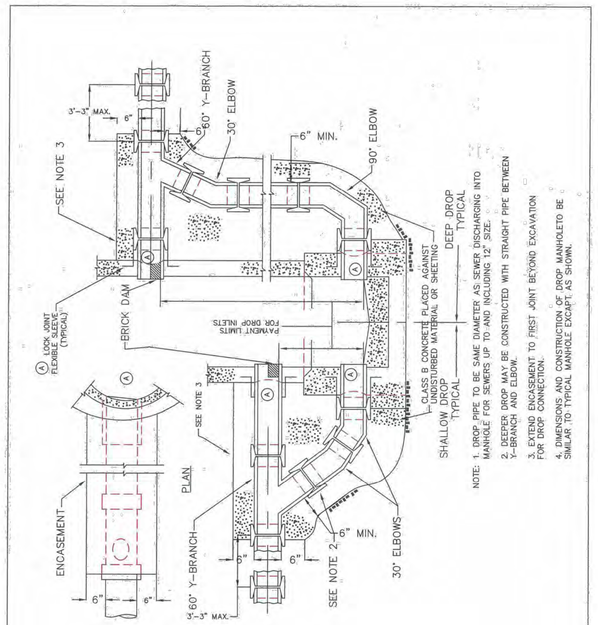
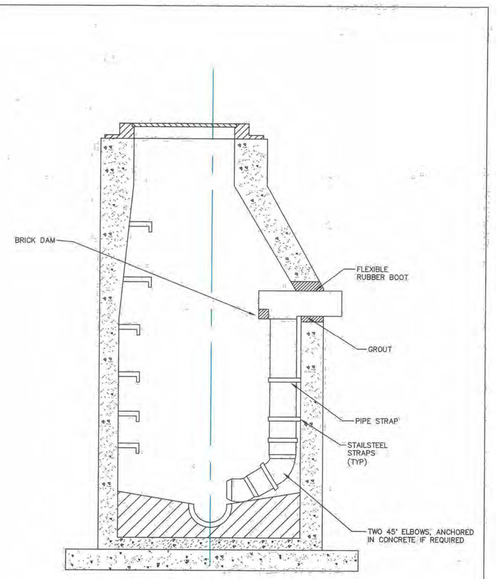
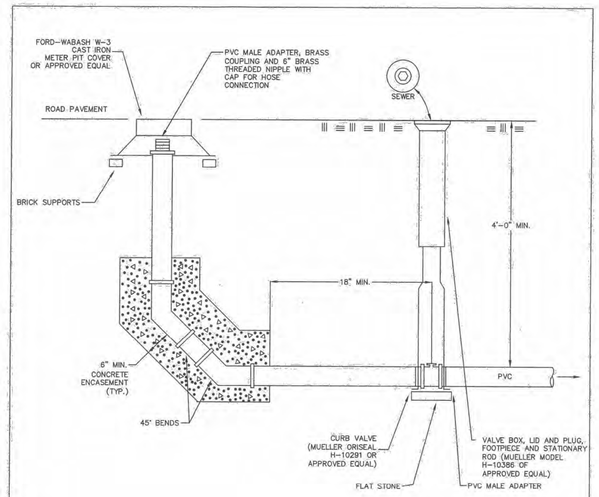


APPROVED	DATE	STANDARDS	BY JLD CHECKED
		TYPICAL DROP INLETS	REVISED CHECKED
			DATE
		GROTON UTILITIES	9



NOTE: MIN. MANHOLE WIDTH OF 5 FEET FOR INSIDE DROP.

APPROVED	DATE	STANDARDS	BY JLD CHECKED
		INSIDE DROP MANHOLE	REVISED CHECKED
			DATE
		GROTON UTILITIES	10

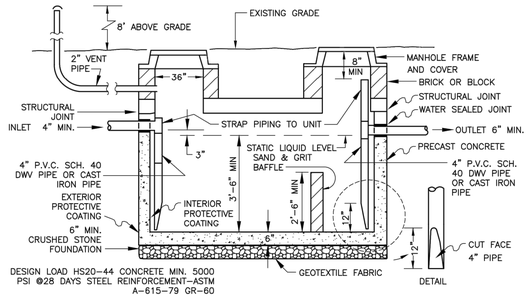


TYPICAL CLEANOUT AND FLUSHING STATION

NOT TO SCALE

NOTE: 1. PRESSURE PIPE TO BE SOLVENT-WELD PVC AND CONFORM TO ASTM D2241, SCHEDULE 40
2. SIZE OF FORCE SEWER MAIN TO BE DETERMINED BY ENGINEER

APPROVED	DATE	STANDARDS	BY JLD CHECKED
		TYPICAL CLEANOUT AND FLUSHING STATION	REVISED CHECKED
			DATE
		GROTON UTILITIES	12

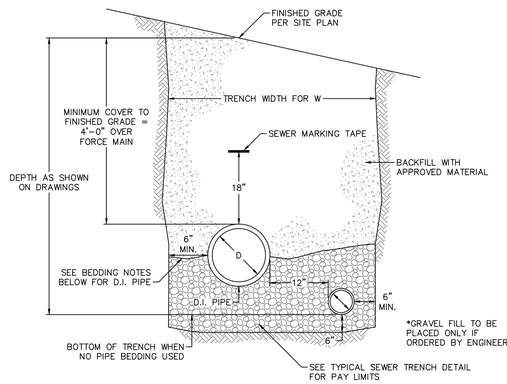


OIL WATER SEPARATOR TANK SPECIFICATIONS

1. TANK SHALL HAVE A MINIMUM CAPACITY SUFFICIENT TO PRE-TREAT THE MAXIMUM DAILY FLOW PROPOSED AND NO LESS THAN 1000 GALLONS. TANK SHALL BE CONSTRUCTED OF PRECAST CONCRETE.
2. INTERIOR OF THE TANK AND EXTENSION TO GRADE MANHOLES SHALL BE COATED WITH AN EPOXY PETROLEUM RESISTANT SEALANT. EXTERIOR OF THE TANK AND EXTENSION GRADE MANHOLES SHALL BE COATED WITH A WATERPROOF FOUNDATION SEALANT. THIS INCLUDES THE TANK EXTERIORS TOP AND BOTTOM.
3. STRUCTURAL SEAM OF THE TANK SHALL BE FILLED IN WITH NON-SHRINKING CEMENT OR WATER PLUG AND COATED WITH A WATERPROOF SEALANT.
4. VOIDS BETWEEN INLET AND OUTLET PIPING OF THE TANK SHALL BE GROUTED WITH NON-SHRINKING CEMENT AND COATED WITH A WATERPROOF SEALANT.
5. THE TANK SHALL HAVE EXTENSIONS TO GRADE ABOVE THE INLET AND OUTLET PIPING. THE EXTENSION SHALL HAVE FRAMES MANHOLE COVERS. THE MANHOLES, EXTENSIONS AND ACCESSES TO THE TANK SHALL BE AT LEAST 24 INCHES IN DIAMETER.
6. THE OUTLET PIPING SHALL UTILIZE A TEE-PIPE ON THE INTERIOR OF THE TANK. THE TEE-PIPE SHALL BE EQUIPPED WITH A STAND PIPE RISER EXTENDING UP THE EXTENSION TO GRADE BUT NO CLOSER THAN EIGHT (8) INCHES FROM THE MANHOLE COVER. THE TEE-PIPE SHALL EXTEND SIX (6) TO TWELVE (12) INCHES FROM THE BOTTOM OF THE TANK.
7. THE INLET EXTENSION TO GRADE SHALL BE PROVIDED WITH A VENT LINE WHICH EXTENDS EIGHT (8) FEET ABOVE FINISHED GRADE AND PROPERLY SECURED TO THE BUILDING. THE SIZE OF THE VENT SHALL BE HALF THE SIZE OF THE OUTLET DISCHARGE LINE.
8. THE HORIZONTAL STRUCTURAL SEAM OF THE TANK SHALL BE LOCATED ABOVE THE STATIC LIQUID LEVEL OF THE TANK.
9. THE INCOMING PIPE SHALL NOT INCLUDE ANY SOURCES OF DOMESTIC WASTEWATER OR STORMWATER.
10. THE OUTLET PIPE SHALL BE CONNECTED TO THE SANITARY SEWER.
11. THE OUTLET PIPE SHALL BE AT LEAST THE SIZE OF THE INLET PIPE OR GREATER AND AT A MINIMUM SHOULD BE 4.0 INCHES IN DIAMETER.
12. IF HEAVY PIPING, SUCH AS CAST IRON IS USED, ALL PIPING MUST BE STRUCTURALLY SECURED.
13. THE CONCRETE COVERS PROVIDED BY THE OIL SEPARATOR MANUFACTURES MUST BE REMOVED AND DISCARDED.

OIL/WATER SEPARATOR

SCALE: N.T.S.



FORCE MAIN BEDDING NOTES

D.I. PIPE:
NORMALLY NO PIPE BEDDING USED WHERE TRENCH IN ROCK, WHERE WET OR WHERE ORDERED BY THE ENGINEER. PIPE BEDDING SHALL BE USED TO SPRING LINE OF PIPE.

PVC PIPE:
SEE TYPICAL SEWER TRENCH DETAIL.

FORCE MAIN & LOW PRESSURE SEWER TRENCH

SCALE: N.T.S.

JACOBS
100 Great Meadow Road, Suite 707
Wethersfield, CT 06109

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
SANITARY SEWER DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-520

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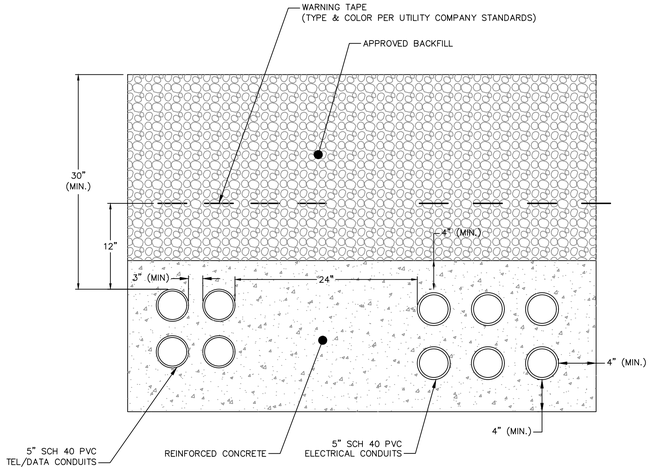
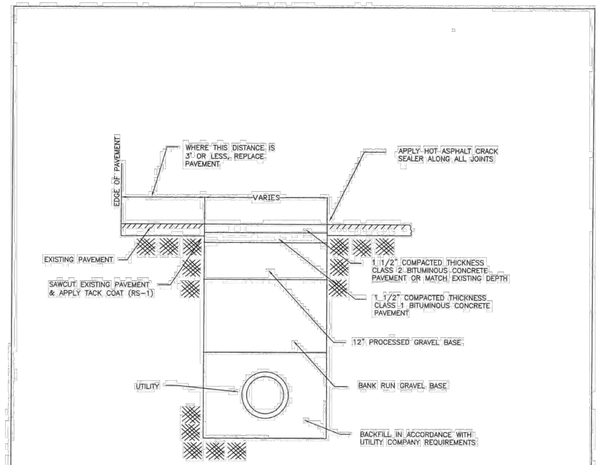


NOTES:
1. INSTALL CONDUITS IN ACCORDANCE WITH LOCAL UTILITY COMPANY REGULATIONS.
2. PRIMARY ELECTRICAL CONDUITS ENCASED IN REINFORCED CONCRETE PER UTILITY COMPANY AND ELECTRIC BOAT SPECIFICATIONS.

TYPICAL CONDUIT DUCT BANK

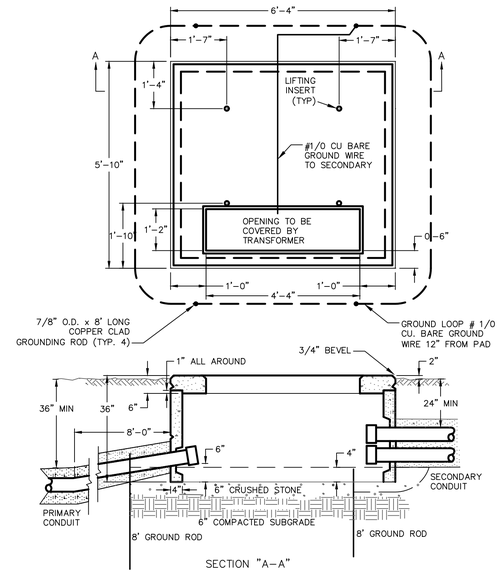
SCALE: N.T.S.



UTILITY TRENCH PATCH

NOT TO SCALE

APPROVED	DATE	STANDARDS	BY D.L.C. CHECKED
			REVISED CHECKED
		TYPICAL PAVEMENT REPLACEMENT	DATE: 1/8/01
		GROTON UTILITIES	18

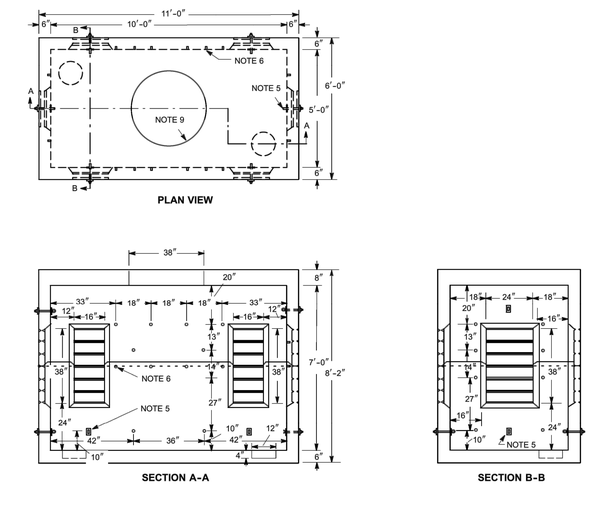


TRANSFORMER PAD

SCALE: N.T.S.

NO.	DATE	BY	APVD
1	2/20/19	DLC	

MANHOLE - PRECAST REINFORCED CONCRETE
5'-0" x 10'-0" x 7'-0" INSIDE



UTILITY VAULT

SCALE: N.T.S.

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STATE OF CONNECTICUT · KRISTEN E. SOUCIE · No. 22072 · LICENSED PROFESSIONAL ENGINEER

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ISSUE DATE: 13 FEB 2019
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BORDER SIZE: ARCH D 24X36

DESIGNED BY: KEITH GOODROW
DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
FILE NAME:

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)
UTILITY DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-521

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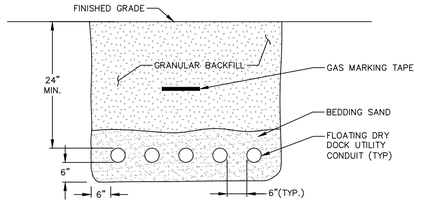
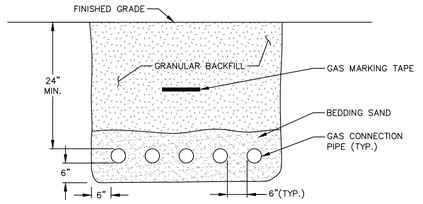


NOTES:

1. INSTALL GAS CONNECTIONS PER LOCAL AND STATE CODE REQUIREMENTS.

FLOATING DRY DOCK PIER UTILITY TRENCH

SCALE: N.T.S.

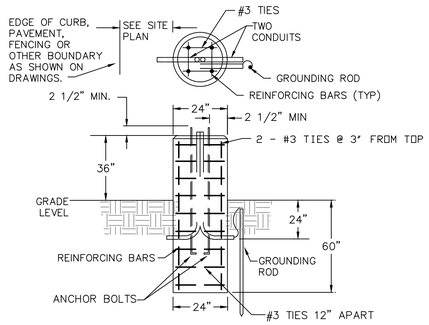


NOTES:

1. INSTALL GAS CONNECTIONS PER LOCAL AND STATE CODE REQUIREMENTS.

INDUSTRIAL GAS TANK AREA BULK GAS UTILITY TRENCH

SCALE: N.T.S.



NOTES:

1) NUMBER, PATTERN AND SIZE OF ANCHOR BOLTS TO BE SPECIFIED BY LIGHTING POLE MANUFACTURER.

2) 3,000 PSI CONCRETE CURED FOR 7 DAYS PRIOR TO BACKFILL.

3) SONITUBES SHALL BE CUT AND REMOVED DOWN TO SUBGRADE.

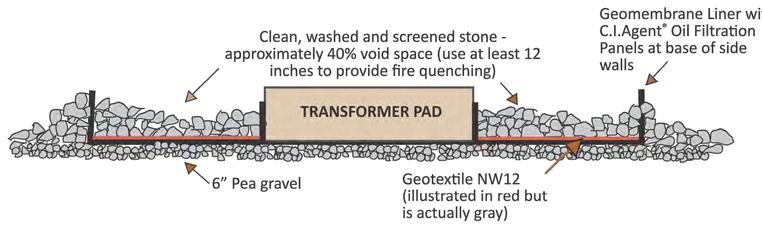
4) NO. 6 REINFORCING BARS, ASTM A 615, GRADE 60 WITH MINIMUM 2" COVER.

5) EACH LIGHTING POLE SHALL BE GROUNDED WITH 8' LONG 3/4" DIAMETER COPPER GROUNDING ROD AND #6 AWG BAR COPPER CONDUCTOR. TOP OF GROUNDING ROD SHALL BE 6" BELOW GRADE.

LIGHT POLE BASE DETAIL

SCALE: N.T.S.

CONTAINMENT SYSTEM:
C. I. AGENT GEOMEMBRANE LINER WITH OIL FILTRATION PANELS



CONTAINMENT SYSTEM

SCALE: N.T.S.

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DRAWN BY: KEITH GOODROW
CHECKED BY: JOE DEVINE
SUBMITTED BY: JOHN OSOSKIE
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GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)
UTILITY DETAILS

Date: 13 FEB 2019

Drawing No.:
SY-C-522

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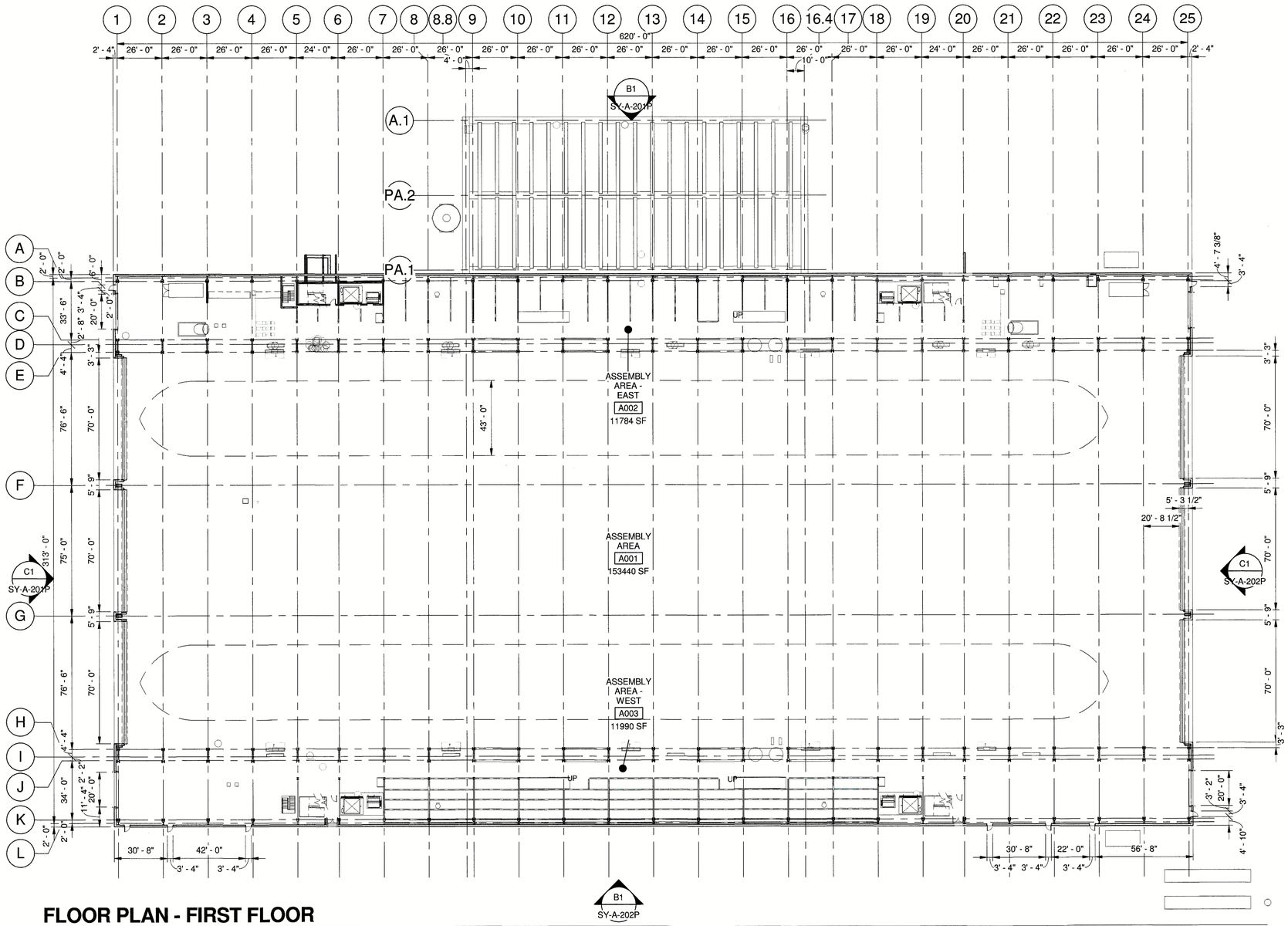
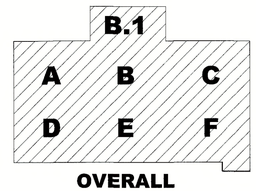


FLOOR PLAN - FIRST FLOOR

1/32" = 1'-0"



OVERALL

SCALE: 1/32"=1'-0"

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CHECKED BY: HECTOR MARTINEZ
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: FDZE500SY-A-101P

ISSUE DATE: 19 FEB 2019
DRAWING CODE: TBD
BORDER SIZE: ARCH D 24x36
REVISION

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

FLOOR PLAN - FIRST FLOOR

Date: 19 DEC 2018
Drawing No.: SY-A-101P
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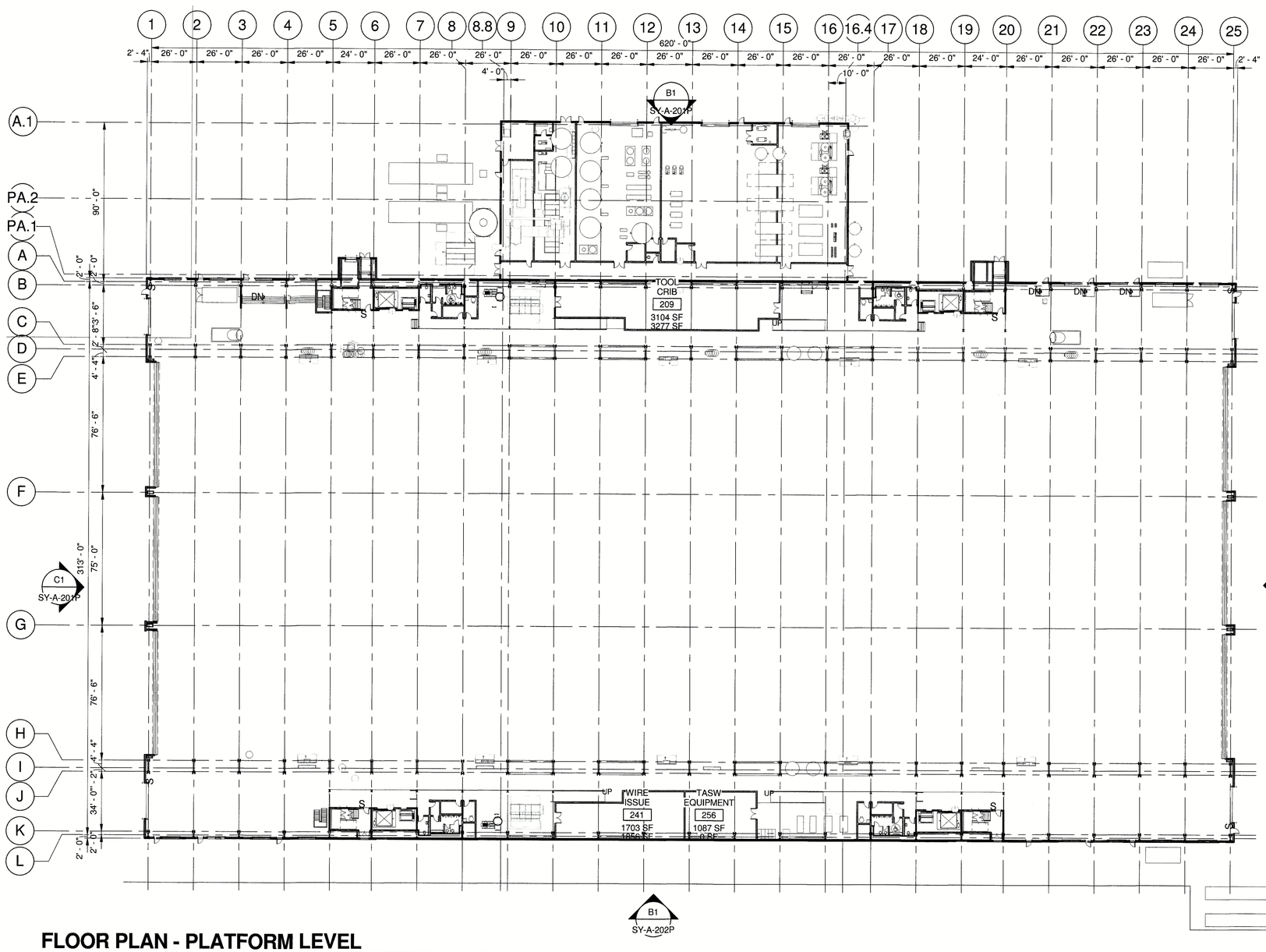
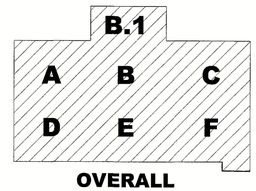


FLOOR PLAN - PLATFORM LEVEL

1/32" = 1'-0"



32 24 16 8 0 32 64 N

SCALE: 1/32"=1'-0"

PLOT DATE/TIME: 2/1/2019 10:47:59 AM

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FILE NAME: FD2E2500SY-A-102P

ISSUE DATE: 19 FEB 2019
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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

FLOOR PLAN - PLATFORM LEVEL

Date: 19 DEC 2018

Drawing No.:
SY-A-102P

SHEET: OF XXX

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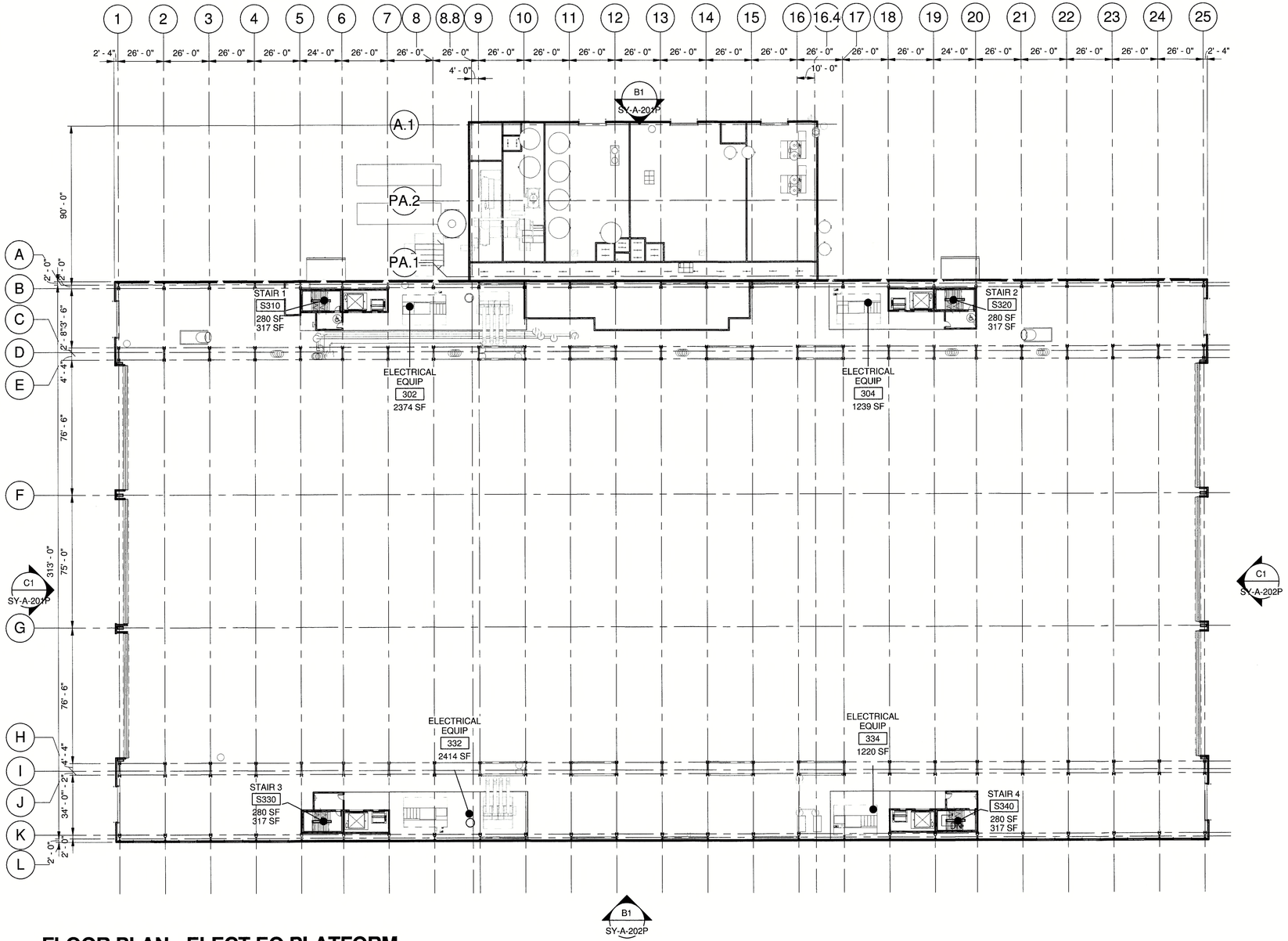
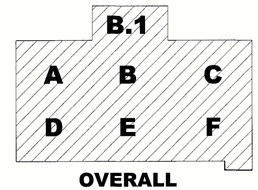


FLOOR PLAN - ELECT EQ PLATFORM

1/32" = 1'-0"



SCALE: 1/32"=1'-0"

PLOT DATE/TIME: 2/1/2019 10:48:09 AM

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FILE NAME: FDZE260WSY-A-103P

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Electric Boat
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FLOOR PLAN - ELECTRICAL EQUIPMENT PLATFORM

Date: 19 DEC 2018

Drawing No.:
SY-A-103P

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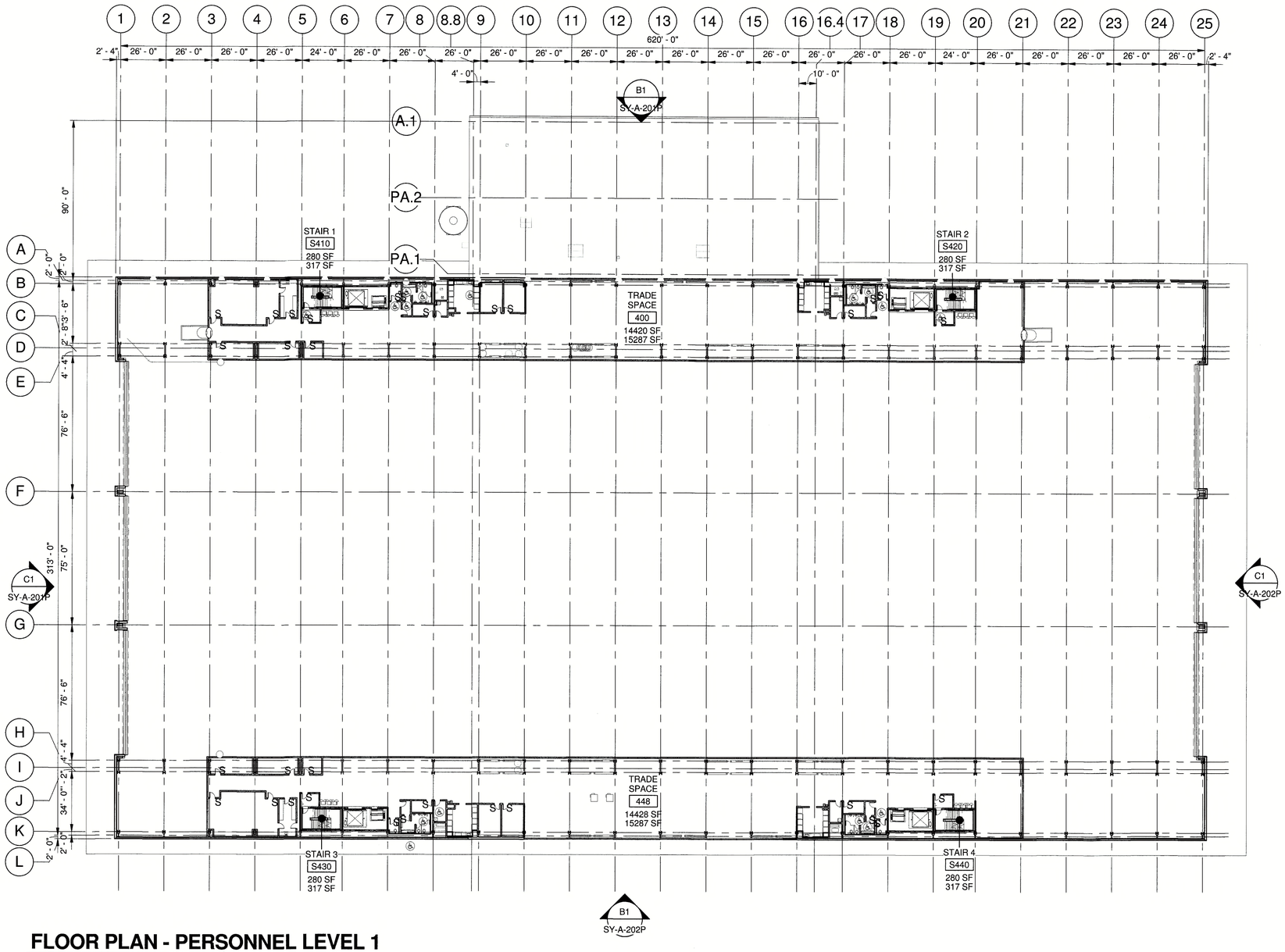
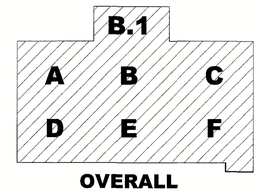


FLOOR PLAN - PERSONNEL LEVEL 1

1/32" = 1'-0"



OVERALL

32 24 16 8 0 32 64

SCALE: 1/32"=1'-0"

N

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SUBMITTED BY: JOHN OSOSKIE
FILE NAME: FDZE2500SY-A-104P

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GENERAL DYNAMICS
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South Yard Assembly Building (SYAB)

FLOOR PLAN - PERSONNEL LEVEL 1

Date: 19 DEC 2018

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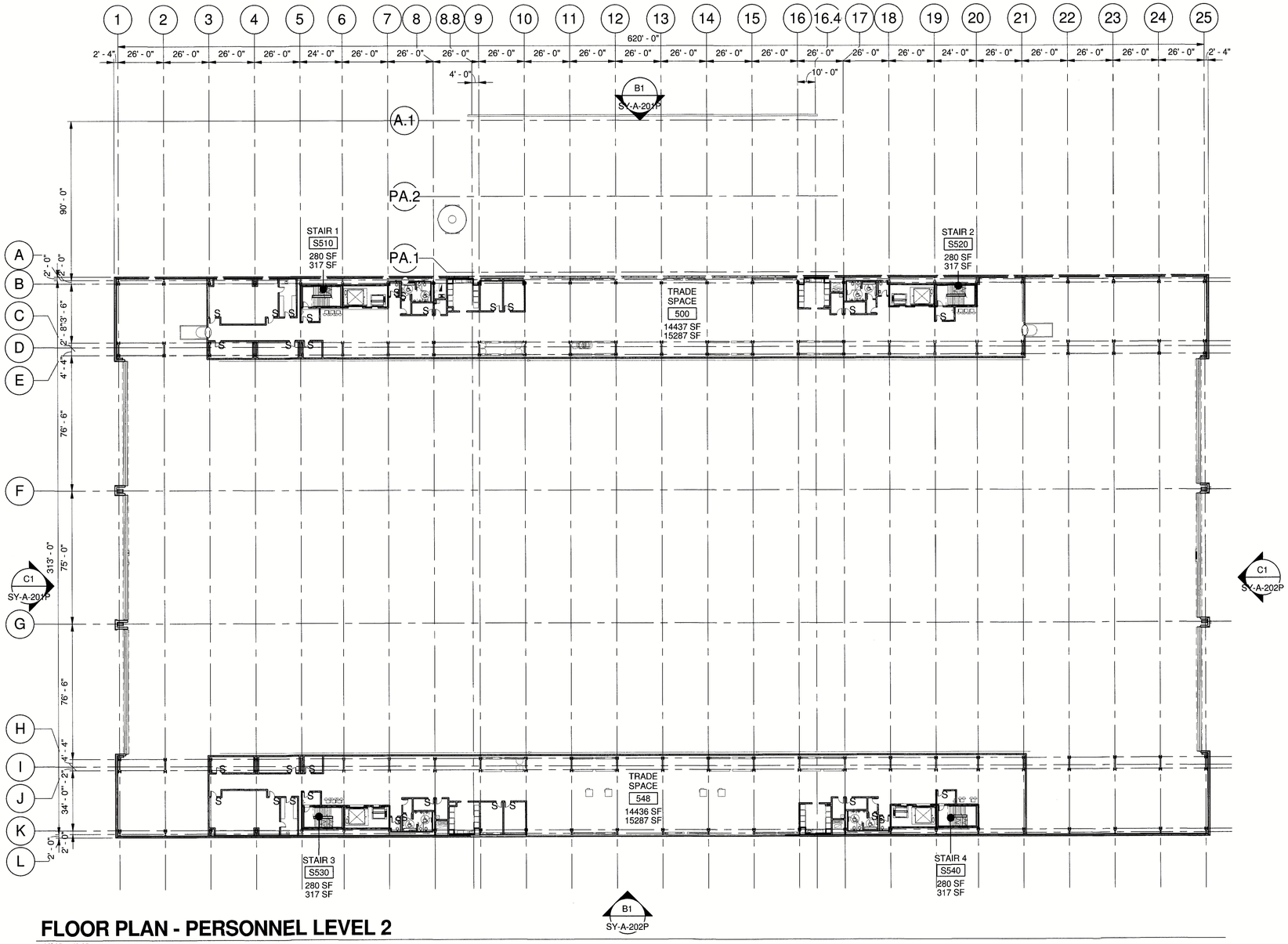

FLOOR PLAN - PERSONNEL LEVEL 2

1/32" = 1'-0"

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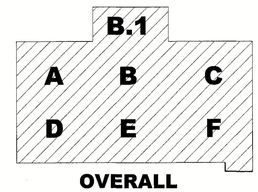

32 24 16 8 32 64 N

SCALE: 1/32"=1'-0"

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DRAWN BY: CARLOS BRIGHT
CHECKED BY: HECTOR MARTINEZ
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: F:\ZE2500SY\A-105P

REVISION

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

FLOOR PLAN - PERSONNEL LEVEL 2

Date: 19 DEC 2018

Drawing No.:
SY-A-105P

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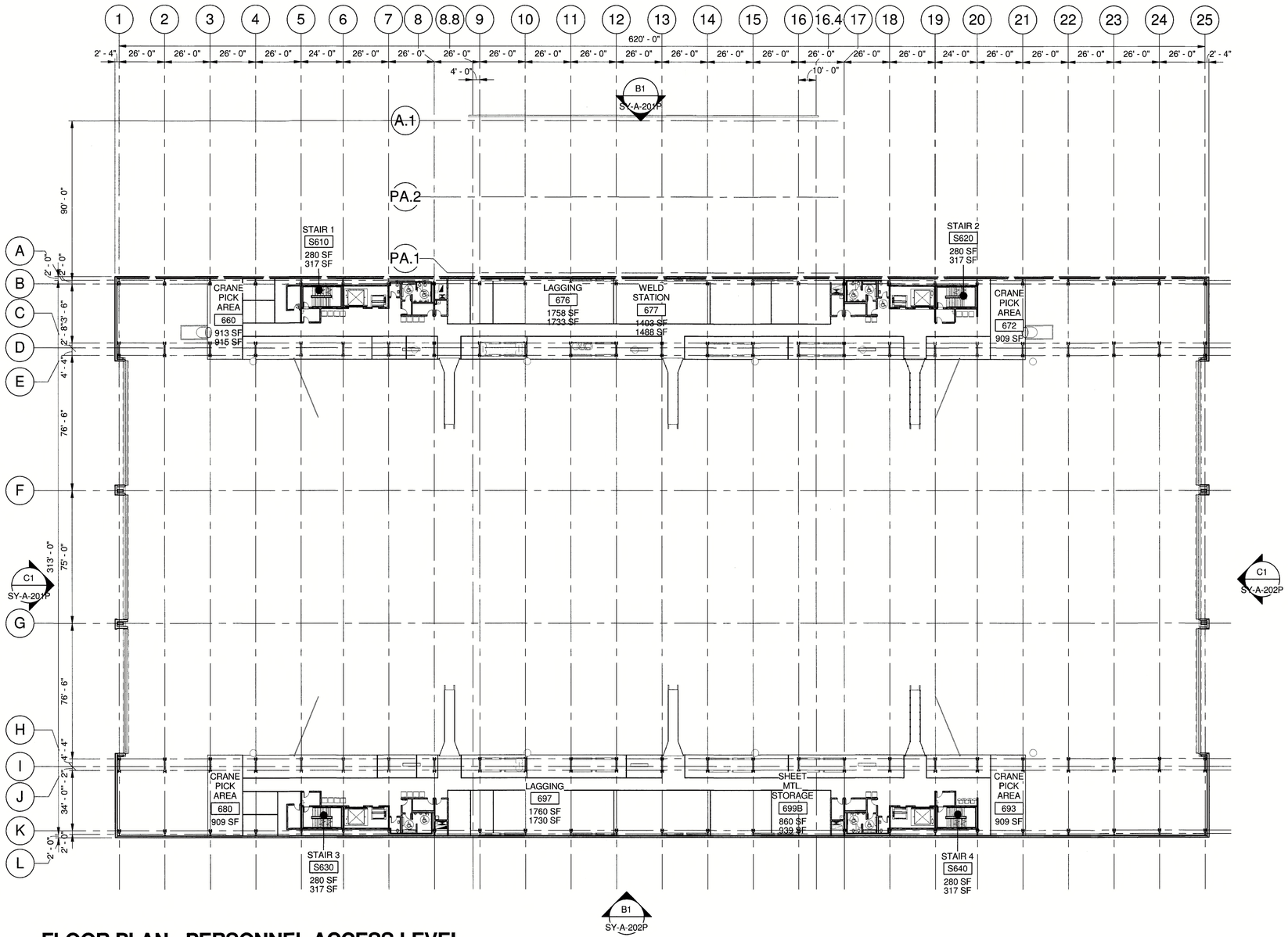
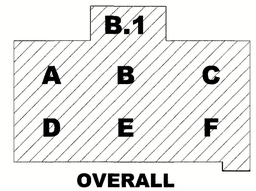


FLOOR PLAN - PERSONNEL ACCESS LEVEL

1/32" = 1'-0"



SCALE: 1/32"=1'-0"

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DRAWN BY: CARLOS BRIGHT
CHECKED BY: HECTOR MARTINEZ
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: FDZE2500SY-A-106P

GENERAL DYNAMICS
GD Electric Boat
South Yard Assembly Building (SYAB)

FLOOR PLAN - PERSONNEL ACCESS LEVEL

Date: 19 DEC 2018

Drawing No.:
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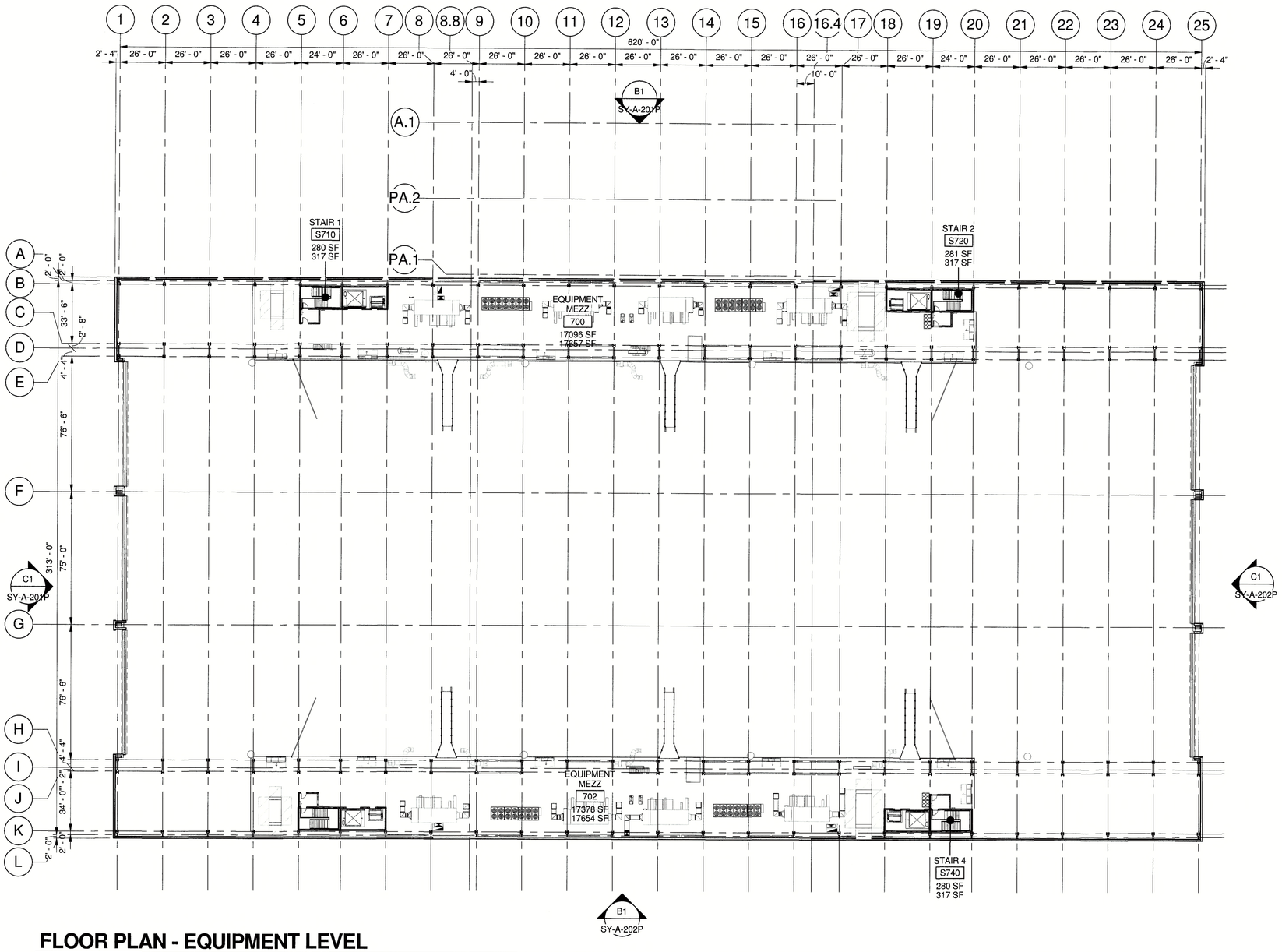
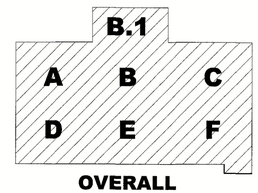


FLOOR PLAN - EQUIPMENT LEVEL

1/32" = 1'-0"



32 24 16 8 0 32 64 N

SCALE: 1/32"=1'-0"

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STATE OF CONNECTICUT
SCOTT R. HEALITKA
No. 13588
LICENSED ARCHITECT
2-12-19

REGISTRATION NUMBER:

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NO.	DATE		BY	APVD
A	02/12/19	ISSUE FOR PERMITTING		

ISSUE DATE: 19 FEB 2019
DRAWING CODE: TBD
BORDER SIZE: ARCH D 24x36
REVISION

DESIGNED BY: ROBERT ZIERMANN
DRAWN BY: CARLOS BRIGHT
CHECKED BY: HECTOR MARTINEZ
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: FD2E2500SY-A-107P

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

FLOOR PLAN - EQUIPMENT LEVEL

Date: 19 DEC 2018

Drawing No.:
SY-A-107P

SHEET: OF XXX

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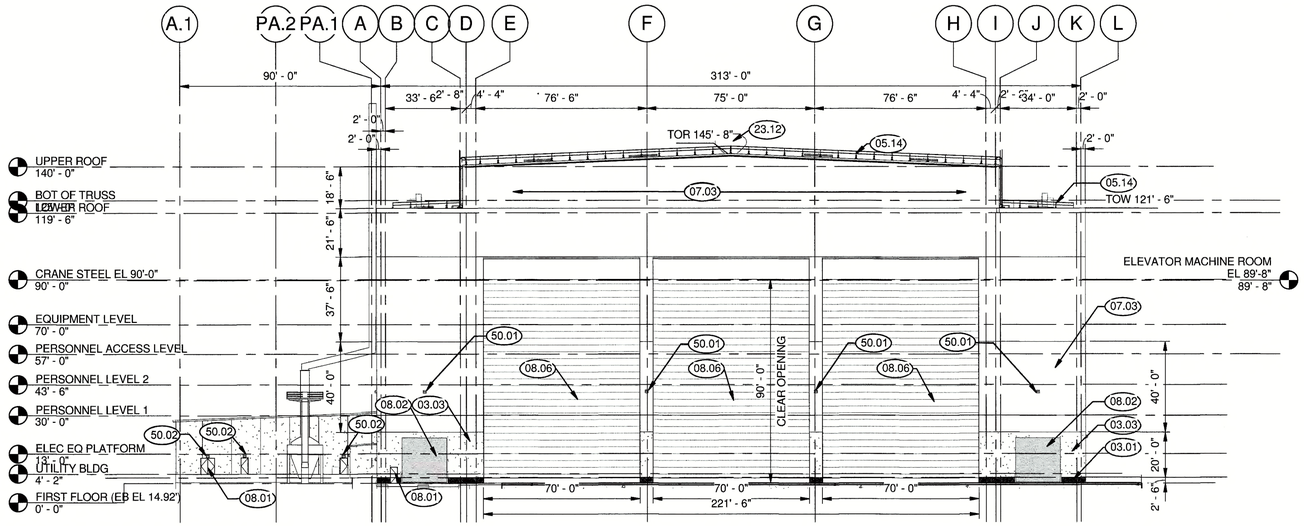
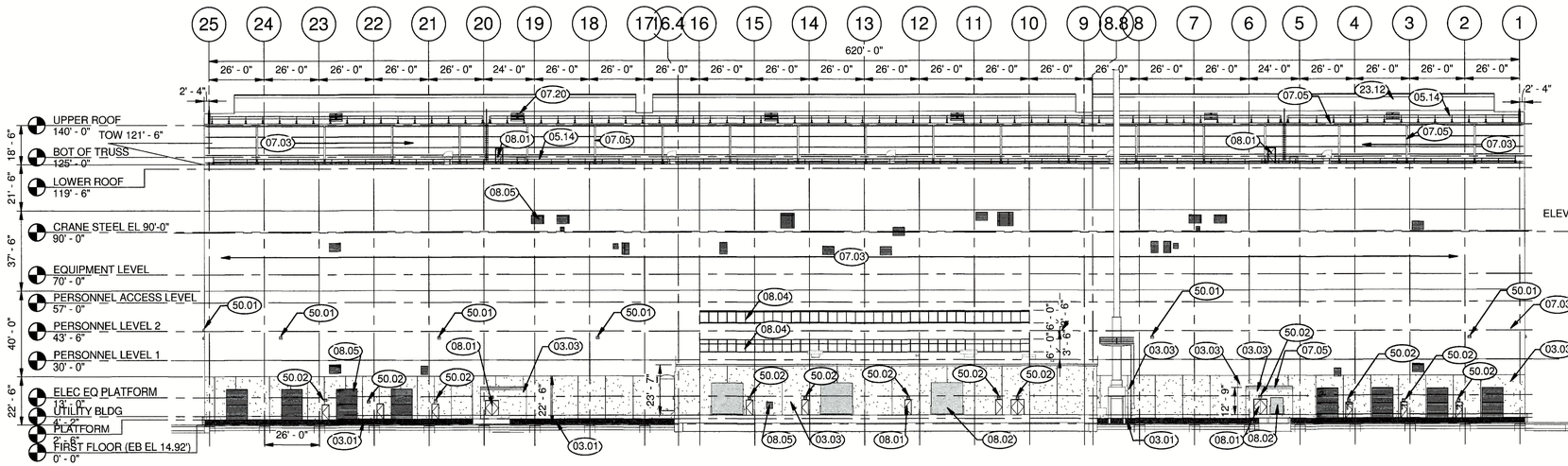


NORTH ELEVATION

1/32" = 1'-0"



EAST ELEVATION

1/32" = 1'-0"

SCALE: 1/32"=1'-0"

GENERAL NOTES:

A. REFER TO ENLARGED ELEVATIONS FOR MORE INFORMATION .
B. STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING ITEMS SHOWN ARE FOR INFORMATION ONLY. REFER TO OTHER TRADES FOR WORK.
C. REFER TO DOOR SCHEDULE FOR DOOR TYPE, FRAME TYPE, ELEVATIONS, AND DETAILS.

KEYNOTE LEGEND

NOTE #	TEXT
03.01	CAST IN PLACE CONCRETE WALL - SEE STRUCTURAL DRAWINGS
03.03	INSULATED PRECAST CONCRETE WALL PANEL - 4" CONC.+3" POLYISOCYANURATE INSULATION + 3" INTERIOR FACE CONCRETE. EXTERIOR FINISH: LIGHT TO MEDIUM SANDBLAST. INTERIOR FINISH: SMOOTH FACE
05.14	42" GALV. GUARDRAIL SYSTEM, REFER TO ROOF PLAN FOR LOCATION
07.03	3" THK. INSULATED METAL WALL PANELS - VERTCIAL APPLICATION (R-23). PRE-FINISHED FLOROPOLYMER SYSTEM FOR COASTAL ENVIRONMENTS
07.05	PREFINISHED ALUM GUTTER AND DOWNSPOUT. PROVIDE SPLASH BLOCK ON LOWER ROOF
07.20	SMOKE AND HEAT VENTS
08.01	PERSONNEL DOOR, PAINTED REFER OT FINISH SCHEDULE.
08.02	OVERHEAD COILING DOOR, PAINTED REFER TO FINISH SCHDULE
08.04	5" ALUMINUM FRAMED THERMAL BREAK STOREFRONT WINDOW SYSTEM WITH IMPACT RESISTANT INSULATED GLASS UNIT
08.05	6" DEEP PRE-FINISHED ALUM LOUVER - MIAMI-DADE APPROVED
08.06	VERTICAL LIFTING FABRIC INDUSTRAIL DOOR WITH TRANSLUCENT FABRIC
23.12	MOFFIT VENT MV 72 RIDGE VENT
50.01	LIGHT FIXTURE TYPE LF1. REFER TO SY-E-602-P.
50.02	LIGHT FIXTURE TYPE LW1. REFER TO SY-E-602-P.

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ISSUE DATE: 19 FEB 2019
DRAWING CODE:: TBD
BORDER SIZE: ARCH D 24x36

DESIGNED BY: ROBERT ZIERMANN
DRAWN BY: CARLOS BRIGHT
CHECKED BY: HECTOR MARTINEZ
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: FDJZE2500SY-A-201P

REVISION

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

EXTERIOR ELEVATIONS

Date: 19 DEC 2018

Drawing No.:
SY-A-201P

SHEET: OF XXX

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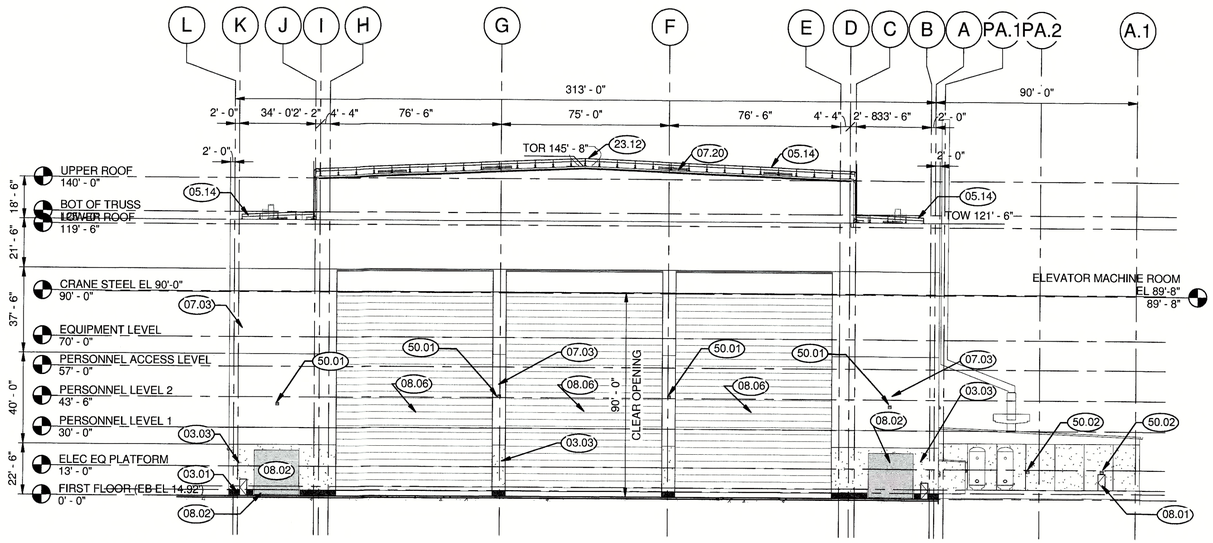
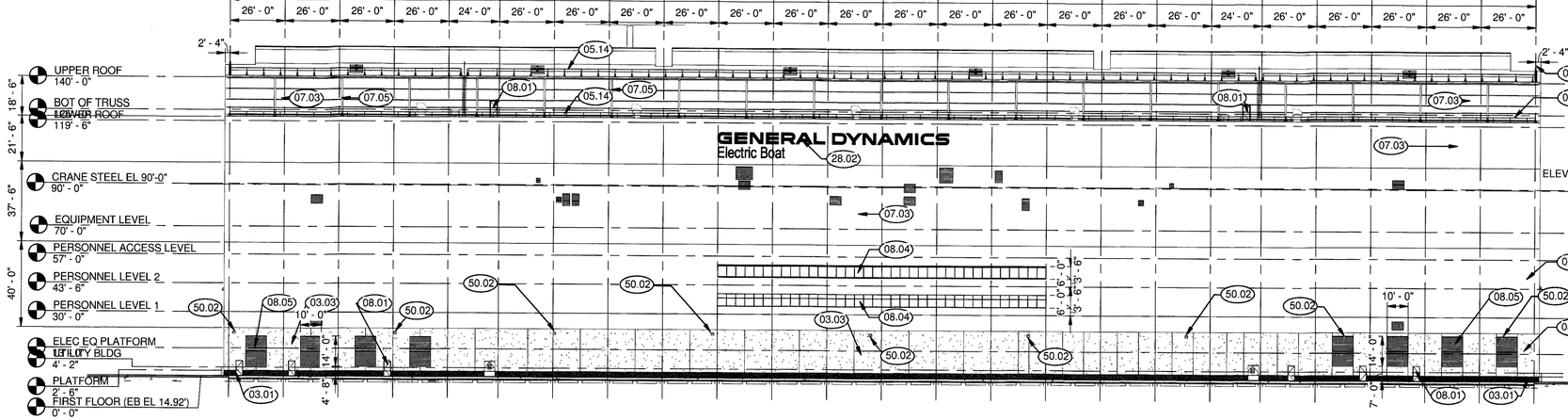


SOUTH ELEVATION

1/32" = 1'-0"



WEST ELEVATION

1/32" = 1'-0"

GENERAL NOTES:

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07.05	PREFINISHED ALUM GUTTER AND DOWNSPOUT. PROVIDE SPLASH BLOCK ON LOWER ROOF
07.20	SMOKE AND HEAT VENTS
08.01	PERSONNEL DOOR, PAINTED REFER OT FINISH SCHEDULE.
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08.06	VERTICAL LIFTING FABRIC INDUSTRAIL DOOR WITH TRANSLUCENT FABRIC
23.12	MOFFIT VENT MV 72 RIDGE VENT
28.02	SIGNAGE - CAST ALUMINUM LETTERS WITH SUPPORT FRAMING BY OWNER AND SIGNAGE VENDER
50.01	LIGHT FIXTURE TYPE LF1. REFER TO SY-E-602-P.
50.02	LIGHT FIXTURE TYPE LW1. REFER TO SY-E-602-P.

SCALE: 1/32"=1'-0"

PLOT DATE/TIME: 2/1/2019 10:49:14 AM

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ISSUE DATE: 19 FEB 2019
DRAWING CODE.: TBD
BORDER SIZE: ARCH D 24x36

DESIGNED BY: ROBERT ZIERMANN
DRAWN BY: CARLOS BRIGHT
CHECKED BY: HECTOR MARTINEZ
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: FD2E2500SY-A-202P

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

EXTERIOR ELEVATIONS

Date: 19 DEC 2018

Drawing No.:

SY-A-202P

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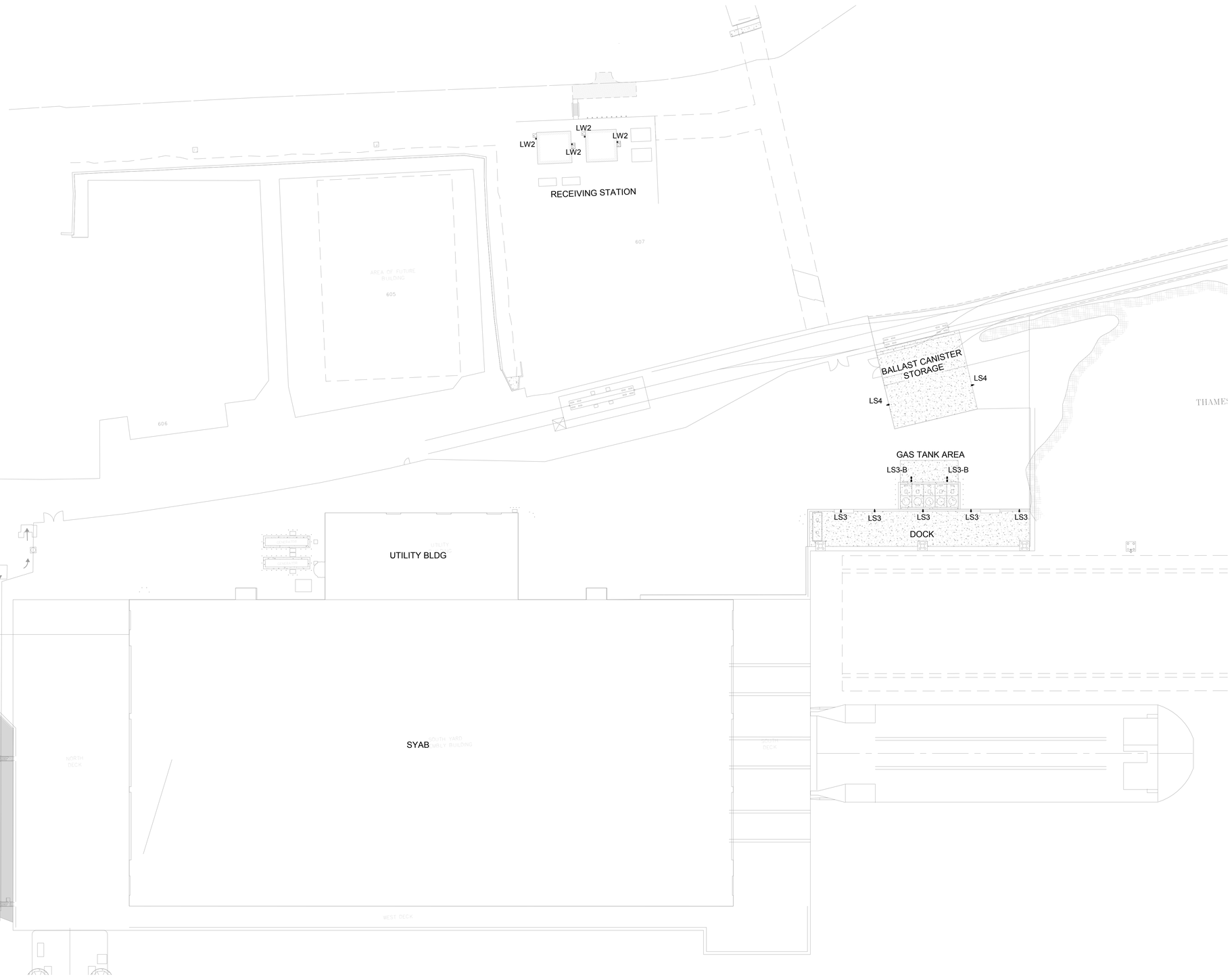

1 - **SITE LIGHTING PLAN**
1" = 50'-0"

SCALE: 1"=50'-0"

PLOT DATE/TIME: 4/5/2019 3:31:37 PM

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			BY APVD

DESIGNED BY: JOHN JONES
DRAWN BY: ULYSSES LEDEZMA
CHECKED BY: ROYCE HAMMETT
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: FD2E2500SY-ES-100-P

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

SITE LIGHTING PLAN

Date: 19 DEC 2018

Drawing No.:
SY-ES-100-P

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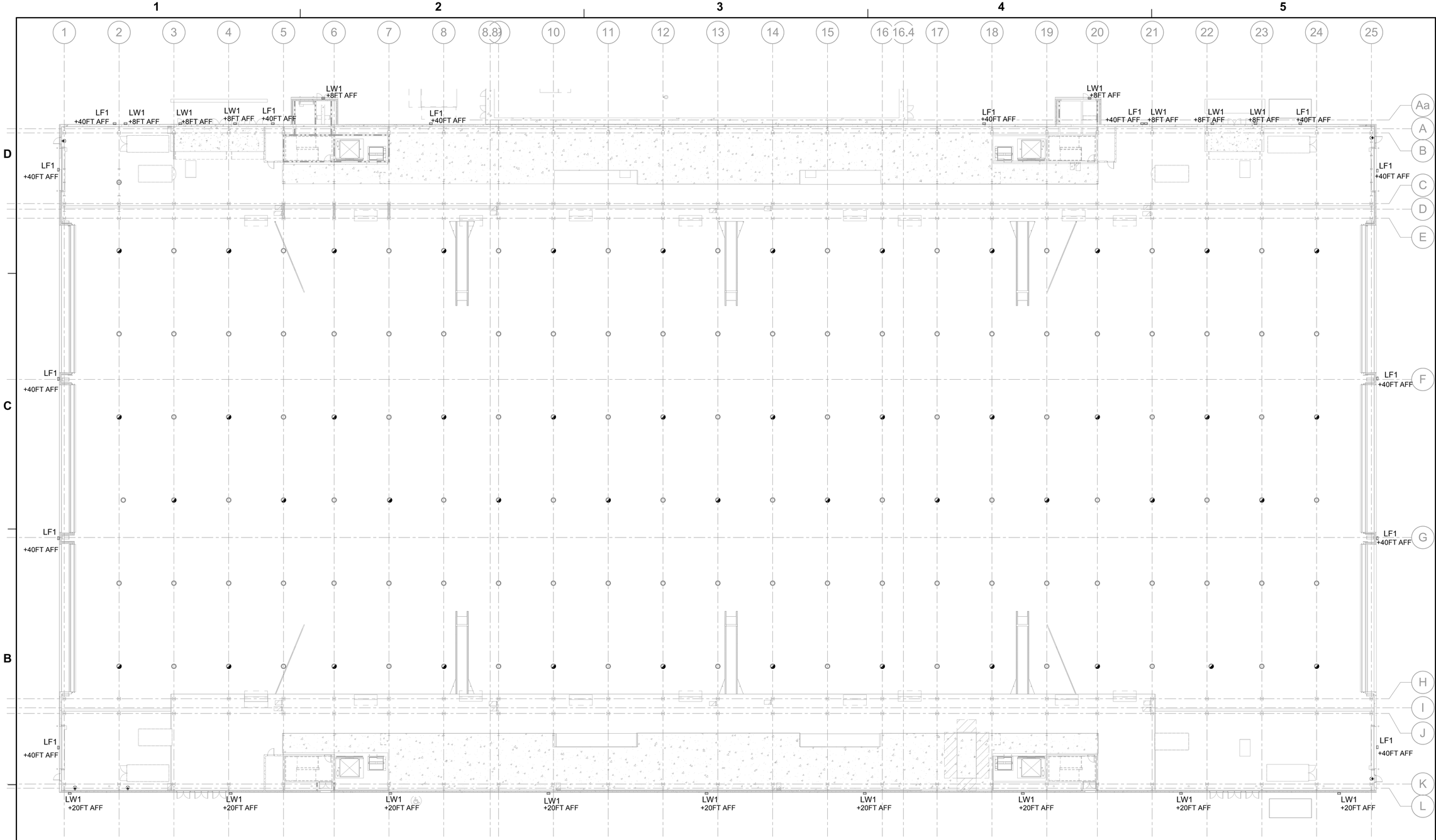
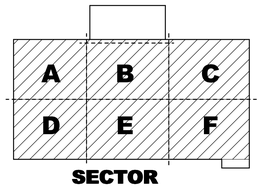


1 FIRST FLOOR LIGHTING PLAN OVERALL

SCALE 3/64" = 1'-0"



SECTOR

KEY PLAN

32 16 0 32 N

SCALE: 3/64"=1'-0"

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

FIRST FLOOR LIGHTING PLAN OVERALL

Date: 19 DEC 2018

Drawing No.:

SY-E-113-P

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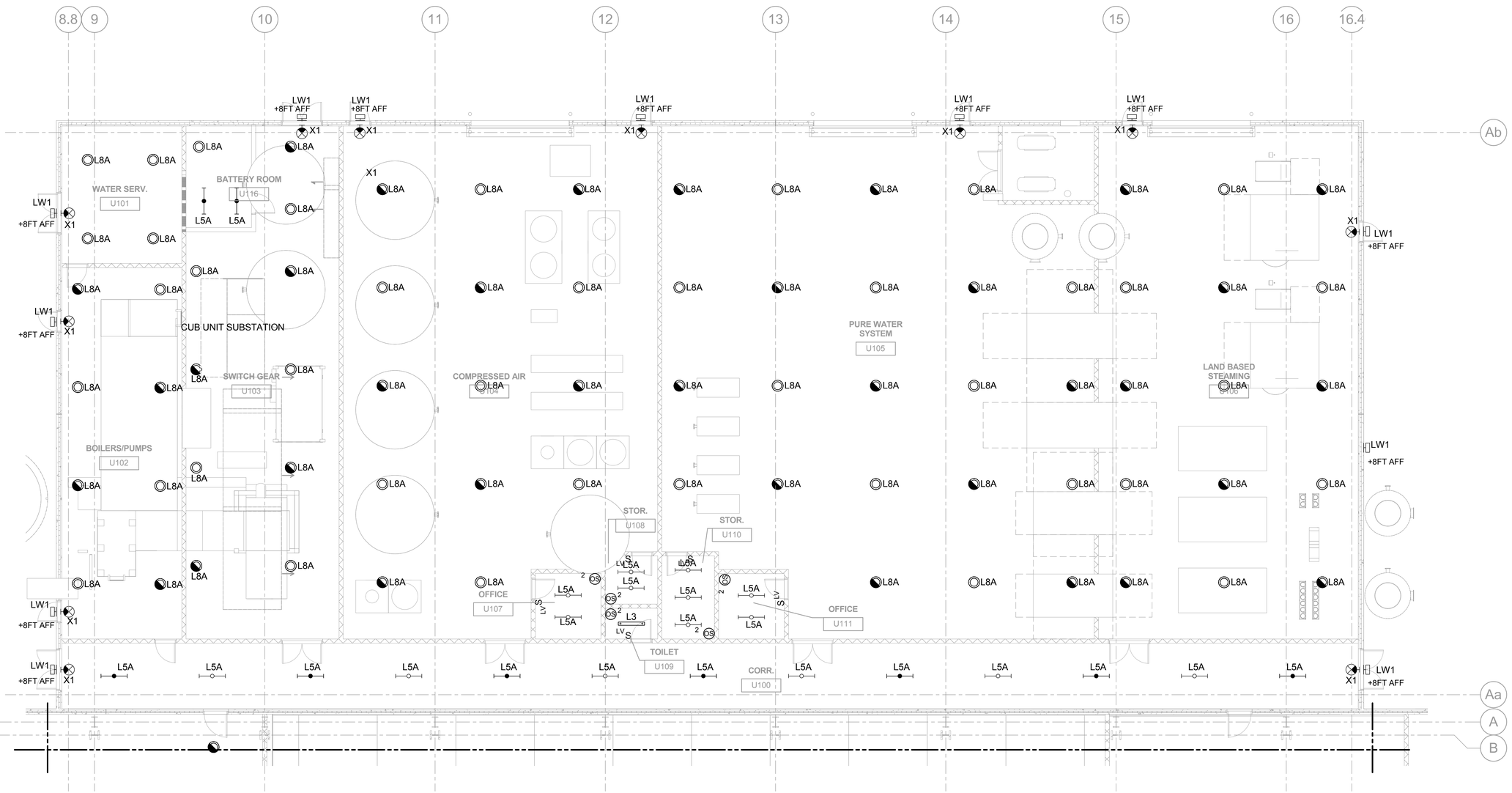
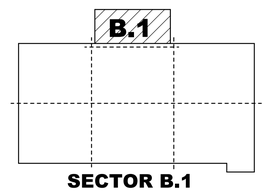


1 UTILITY BUILDING LIGHTING PLAN SECTOR B.1

SCALE 1/8" = 1'-0"



SECTOR B.1
KEY PLAN

1 6 4 2 0 8 16

SCALE: 1/8"=1'-0"

N

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DESIGNED BY: JOHN JONES
DRAWN BY: ULYSSES LEDEZMA
CHECKED BY: ROYCE HAMMETT
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: FDZE2500SY-E-115-P

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

UTILITY BUILDING LIGHTING PLAN SECTOR B.1

Date: 19 DEC 2018

Drawing No.:
SY-E-115-P

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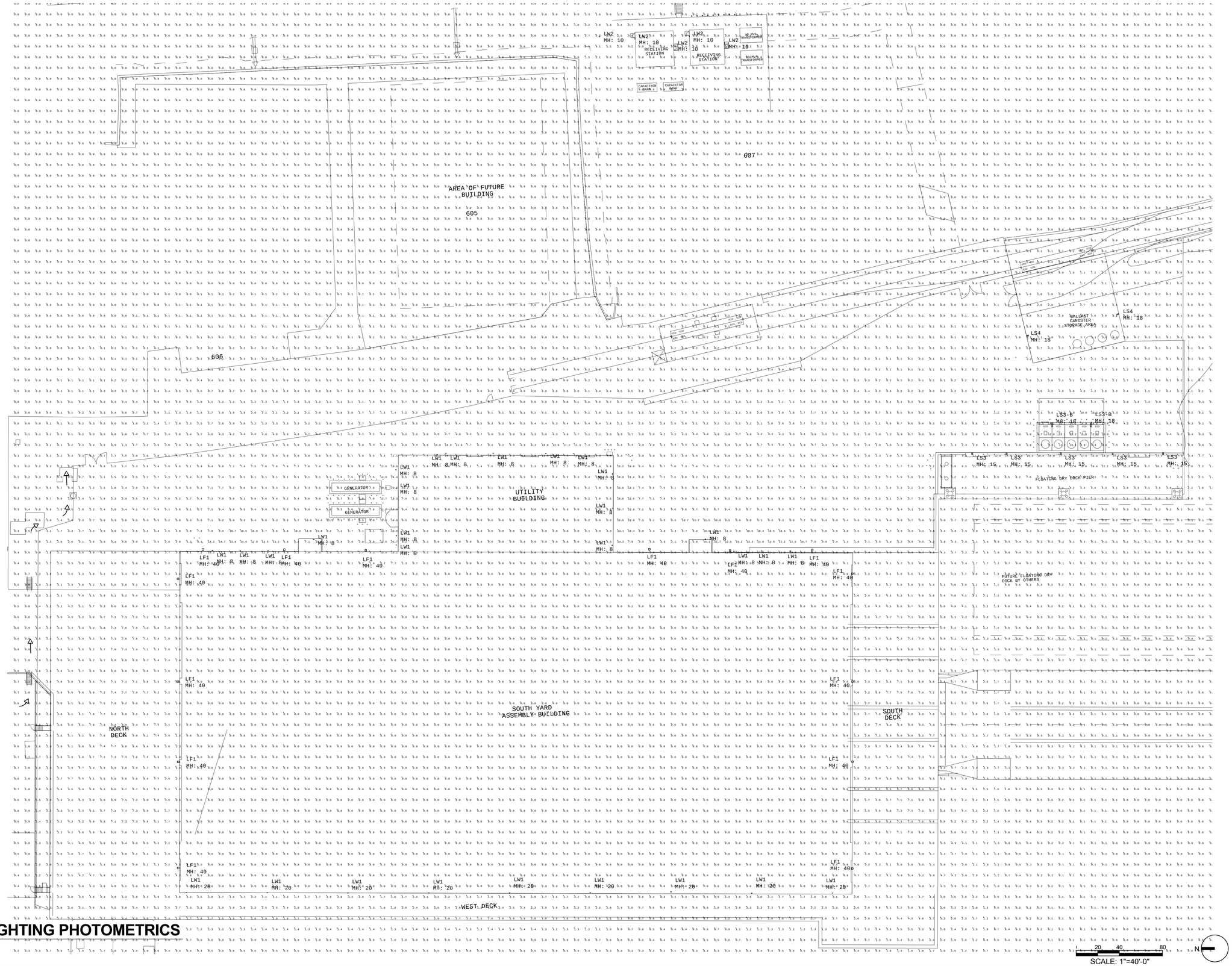

SITE LIGHTING PHOTOMETRICS

1" = 40'-0"

SCALE: 1"=40'-0"

PLOT DATE/TIME: 4/5/2019 3:31:36 PM

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DESIGNED BY: JOHN JONES
DRAWN BY: ULYSSES LEDEZMA
CHECKED BY: ROYCE HAMMETT
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: FDZE250XSY-E-LTG-P

REVISION

GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

SITE LIGHTING PHOTOMETRICS

Date: 19 DEC 2018

Drawing No.:

SY-E-LTG-P

SHEET: OF XXX

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LUMINAIRE SCHEDULE

TYPE	MANUFACTURER (BASIS OF DESIGN)	MODEL SERIES	DESCRIPTION	MOUNTING	DELIVERED LUMENS	VOLTAGE	VOLT-AMPERE	REMARKS
							15 VA	
L1	PHILIPS DAYBRITE	CFI TROFFER	2FT X 4FT RECESSED TROFFER.	RECESSED	3269	277 V	30 VA	
L1E	PHILIPS DAYBRITE	CFI TROFFER	2FT X 4FT RECESSED TROFFER.	RECESSED	3269	277 V	30 VA	
L3	LITECONTROL	MOD 3 INDIRECT/DIRECT	LED INDIRECT/DIRECT PENDANT.	SUSPENDED	4200	277 V	35 VA	
L4	PHILIPS DAYBRITE	CFI STAIRWELL	4FT STAIRWELL LED WALL MOUNT, WHITE ACRYLIC LENS, 0-10V DIMMING DRIVER, INTEGRAL OCCUPANCY SENSOR.	WALL	4200	277 V	45 VA	
L5A	PHILIPS DAYBRITE	CFI FLUXSTREAM	4FT INDUSTRIAL.	SUSPENDED	5826	277 V	45 VA	
L5B	PHILIPS DAYBRITE	CFI FLUXSTREAM	4FT INDUSTRIAL.	SUSPENDED	7302	277 V	58 VA	
L6	PHILIPS DAYBRITE	VAPORLUME	4FT SEALED INDUSTRIAL, WET LOCATION RATED, NON-CORROSIVE.	SURFACE	5129	277 V	46 VA	
L7	HOLOPHANE	PHUZION L	LED HIGHBAY	SUSPENDED	73,137	277 V	589 VA	
L8A	HOLOPHANE	PHUZION - MEDIUM	LED HIGHBAY	SUSPENDED	11,592	277 V	93 VA	
L8B	HOLOPHANE	PHUZION - NARROW	LED HIGHBAY	SUSPENDED	22,466	277 V	179 VA	
LF1	PHILIPS	POWERFORM PFF-276L	LED FLOOD, AIRPORT APRON FLOOD DISTRIBUTION WITH WIDE 87 DEGREE HORIZANTAL AND NARROW 16 DEGREE VERTICAL BEAM, 70 CRI, THERMALLY ISOLATED DRIVER HOUSING, 1 AMP DRIVE CURRENT, 0-10V DIMMING LEADS IN ADDITION TO OUTPUT TUNING, IP65 RATED LUMINIARE ASSEMBLY, INTEGRAL TRANSIENT SURGE PROTECTION, L70 RATED GREATER THAN 100,000 HOURS.	WALL	76119	277 V	941 VA	PROVIDE GLARE SHIELD GS50-BK. INITIAL LUMENS INCLUDES DERATED LUMENS FOR GLARE SHIELD. 20 DEGREE TILT.
LS3	PHILIPS	GARDCO P26	FULL CUTOFF SITE LIGHT, SINGLE MOUNT, 0-10V DIMMING DRIVER, TYPE 3 DISTRIBUTION, IP65 LISTED AND CORROSION RESISTANT FINISH FOR MARINE ENVIRONMENTS.	POLE	8509	277 V	60 VA	MOUNT ON 15FT POLE ON DOCK.
LS3-B	PHILIPS	GARDCO P26	FULL CUTOFF SITE LIGHT, TWIN MOUNT (2) AT 180 DEGREES, 0-10V DIMMING DRIVER, TYPE 3 DISTRIBUTION, IP65 LISTED AND CORROSION RESISTANT FINISH FOR MARINE ENVIRONMENTS.	POLE	8509	277 V	60 VA	MOUNT ON 18FT POLE AT GAS TANK AREA.
LS4	PHILIPS	GARDCO P26	FULL CUTOFF SITE LIGHT, SINGLE MOUNT, 0-10V DIMMING DRIVER, TYPE 4 DISTRIBUTION, IP65 LISTED AND CORROSION RESISTANT FINISH FOR MARINE ENVIRONMENTS.	POLE	8509	277 V	60 VA	MOUNT ON 18FT POLE AT BALLAST CANISTER STORAGE AREA.
LW1	HOLOPHANE	HLWPC2	FULL CUTOFF WALL PAK, EXTERIOR BUILDING MOUNT, TYPE 3 MEDIUM DISTRIBUTION.	WALL	10100	277 V	115 VA	
LW2	HOLOPHANE	HLWPC2	FULL CUTOFF WALL PAK, EXTERIOR BUILDING MOUNT, TYPE 3 MEDIUM DISTRIBUTION.	WALL	5115	277 V	47 VA	
X1	PHILIPS	SC	CAST ALUMINUM LED EXIT SIGN, SINGLE FACE, DAMP LOCATION LISTED, AC ONLY, RED LETTER COLOR.	UNIVERSAL	-	277 V	4 VA	
X2	PHILIPS	SC	CAST ALUMINUM LED EXIT SIGN, DOUBLE FACE, DAMP LOCATION LISTED, AC ONLY, RED LETTER COLOR.	UNIVERSAL	-	277 V	4 VA	

CALCULATION SUMMARY

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
SITE	Illuminance	Fc	1.47	26.2	0.0	N.A.	N.A.
BALLAST CANISTER STORAGE AREA	Illuminance	Fc	4.21	9.3	2.5	1.68	3.72
DOCK	Illuminance	Fc	6.81	10.8	3.6	1.89	3.00
EAST YARD	Illuminance	Fc	8.32	26.2	2.2	3.78	11.91
GAS TANK AREA	Illuminance	Fc	9.02	13.8	5.8	1.56	2.38
NORTH DECK	Illuminance	Fc	5.01	9.3	0.8	6.26	11.63
SOUTH DECK	Illuminance	Fc	5.75	9.5	0.9	6.39	10.56
WEST WALKWAY	Illuminance	Fc	1.97	2.7	1.5	1.31	1.80
RECEIVING STATION	Illuminance	Fc	0.72	8.5	0.0	N.A.	N.A.

01 - NTS **TYPE LW1, LW2**

02 - NTS **TYPE LF1**

03 - NTS **TYPE LS3, LS3-B, LS4**

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STATE OF CONNECTICUT
PATRICIA A. DANIELL
#18050
LICENSED
PROFESSIONAL ENGINEER

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NO.	DATE		BY	APVD
B	04/05/19	RECEIVING STATION	PAD	AKW
A	02/12/19	ISSUE FOR PERMITTING	PAD	AKW

ISSUE DATE: 19 FEB 2019
DRAWING CODE: TBD
BORDER SIZE: ARCH D 24x36

DESIGNED BY: JOHN JONES
DRAWN BY: ULYSSES LEDEZMA
CHECKED BY: ROYCE HAMMETT
SUBMITTED BY: JOHN OSOSKIE
FILE NAME: FDZE2500SY-E-602-P

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GENERAL DYNAMICS
Electric Boat
South Yard Assembly Building (SYAB)

LUMINAIRE SCHEDULE

Date: 19 DEC 2018

Drawing No.:
SY-E-602-P

SHEET: OF XXX

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PLOT DATE/TIME: 4/5/2019 3:31:35 PM