



MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL
& DEFINITIVE SUBDIVISION PLAN APPROVAL

DEFINITIVE PLAN SUBMISSION
for
BAY POINTE CLUB MIXED USE
DEVELOPMENT PHASE II & III in
WAREHAM, MASSACHUSETTS

OWNER / APPLICANT:

BAY POINTE CLUB, LLC
C/O STONESTREET, CORP.
501 WAMPANOAG TRAIL, SUITE 400
EAST PROVIDENCE, RHODE ISLAND 02915
401.433.6900

LIST OF DRAWINGS

- 1) TITLE SHEET
- 2) LOCUS MAP AT 2000 SCALE
- 3) EXISTING CONDITIONS SURVEY SHEET -A
- 4) EXISTING CONDITIONS SURVEY SHEET -B
- 5) EXISTING CONDITIONS SURVEY SHEET -C
- 6) LOT LAYOUT SHEET
- 7) GRADING PLAN KEY SHEET
- 8-9) GRADING PLANS
- 10) UTILITY PLAN KEY SHEET
- 11-12) UTILITY PLANS
- 13-15) ROADWAY PLAN & PROFILES
- 16-21) CONSTRUCTION DETAIL SHEETS
- R1-R3) REGISTRY PLANS (SUPPLEMENTAL PLAN SET)

NOTE:

ALL PROPOSED LOTS WITHIN THIS SUBDIVISION SHALL BE SERVED BY PUBLIC WATER AND SEWER SERVICES.

PHASING OF PROJECT:

PHASE II - STARBOARD DRIVE CONSTRUCTION AND 43 UNITS.

PHASE III - BEACON STREET CONSTRUCTION AND 13 UNITS.

FIRE DEPARTMENT NOTE:

SECTION VI, K. FIRE ALARMS (PAGE 23 OF 26- SUBDIVISION REGULATIONS)
A FIRE ALARM CIRCUIT TO BE INSTALLED INCLUDING AT LEAST ONE
(1) FIRE ALARM BOX FOR EACH 500FT OF STREET PER THE FIRE CHIEF PER NFPA STANDARDS.

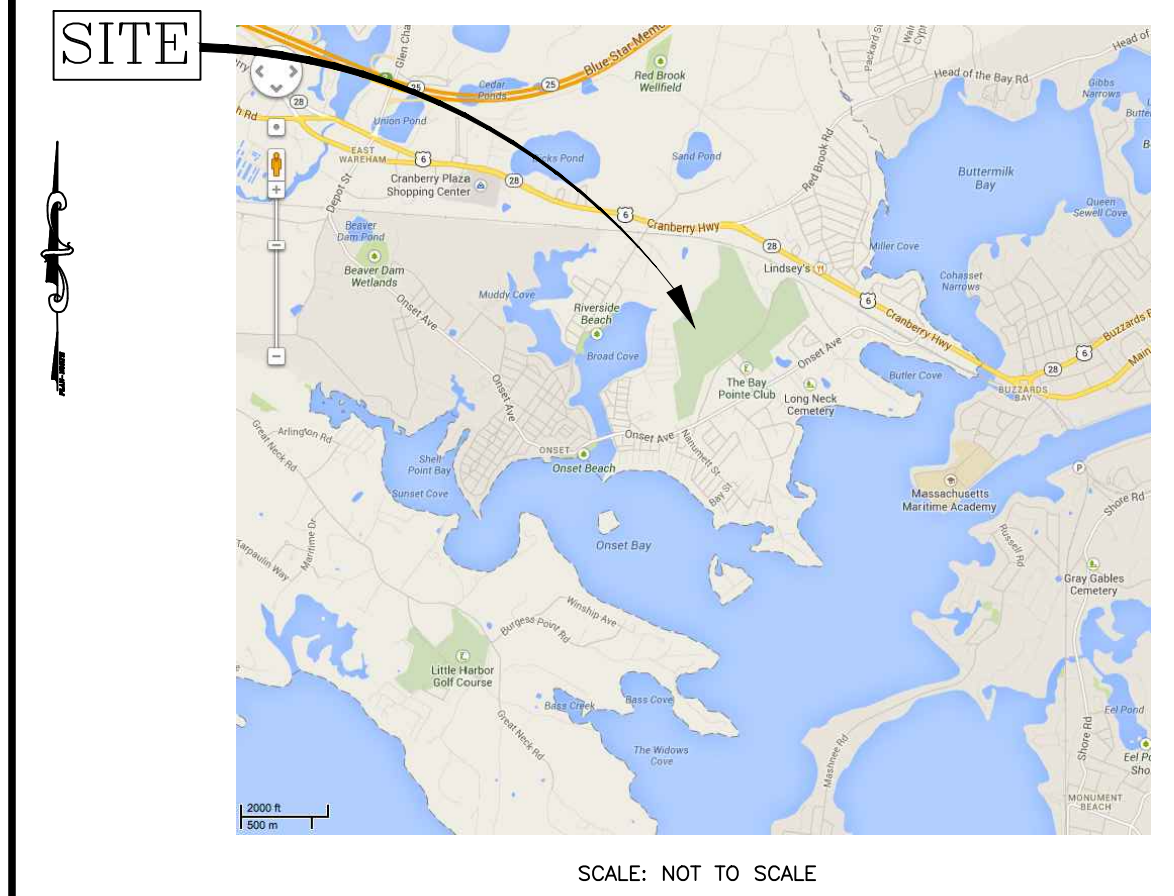
BAY POINT WAIVERS FROM THE TOWN OF WAREHAM SUBDIVISION RULES & REGULATIONS

THE FOLLOWING WAIVERS ARE REQUESTED, BASED ON A ROAD CLASSIFICATION UNDER V.C.1. AS "RESIDENTIAL STANDARD" OR "RESIDENTIAL COLLECTOR"

1. FROM SEC. VI. G., BIT. CONC. SIDEWALK ON ONE SIDE OF ROAD
2. FROM SEC. VI. H., CAPE COD BERMS ON EACH SIDE INSTEAD OF VERTICAL GRANITE OR CONCRETE CURBS
3. FROM SEC. V. C. 3. a., ROW WIDTH 40' INSTEAD OF 50'
4. FROM SEC. V. C. 4., ROAD GRADES LESS THAN MINIMUM (0.75%)
5. FROM SEC. VI. C. 6., REDUCE ROAD BASE MATERIAL THICKNESS FROM TWO 6" COURSES TO ONE 8" COURSE WHERE RECLAIMED ASPHALT IS USED

RECORDED DECISION REFERENCE:

SEE SUBDIVISION PLAN APPROVAL DECISION IN BOOK 48972, PAGE 137. WITHOUT LIMITING THE GENERALITY THEREOF, SEE MINIMUM BUILDING SEPERATION CONDITION (CONDITION 17). SEE SITE PLAN AND SPECIAL PERMIT APPROVAL DECISION IN BOOK 48972 PAGE 147.



PROJECT DATA:

PLATS: 2, 8, 9 & 10 LOT: 1004A

NUMBER OF SINGLE FAMILY BUILDINGS: 16 (16 UNITS)
NUMBER OF DUPLEX BUILDINGS: 16 (32 UNITS)
NUMBER OF 8-UNIT BUILDINGS: 1 (8 UNITS)
NUMBER OF TOTAL DWELLING UNITS: 56

(REFER TO REGISTRY PLANS FOR LOT AREAS)

RESIDENTIAL "STANDARD" STREET REQUIREMENTS:

PHASE II & III:

TOTAL LENGTH OF PROPOSED NEW ROADS

STARBOARD DRIVE	1,609 L.F.
BEACON STREET	751 L.F.
PAVEMENT WIDTH	22 FEET (STARBOARD) 22 FEET (BEACON)

WAIVERS REQUESTED

**BIT. CONC. SIDEWALK PROPOSED (ONE SIDE OF ROADS)

**NEW STREETS TO HAVE CAPE COD BERMS

**PRIVATE RIGHT OF WAY WIDTH TO BE 40 FT

**ROAD GRADES LESS THAN MINIMUM OTHERWISE REQUIRED EXCEPT WHERE DEFINED ON APPROVED PLANS

REDUCE BASE MATERIAL THICKNESS TO 8 INCHES WHERE RECLAIMED ASPHALT IS UTILIZED

ZONING CLASSIFICATION:

"CR" CONFERENCE RECREATIONAL & "MR-30" MULTIPLE RESIDENCE DISTRICT

PROPOSED BUILDING SETBACKS:

FRONT: 12FT
REAR: 10FT
SIDE: 18FT

*REFER TO THE AMENDED ZONING BY-LAWS AS REVISED OCTOBER, 2018.

DEFINITIVE PLAN APPROVAL GRANTED

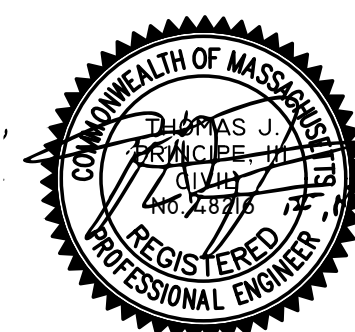
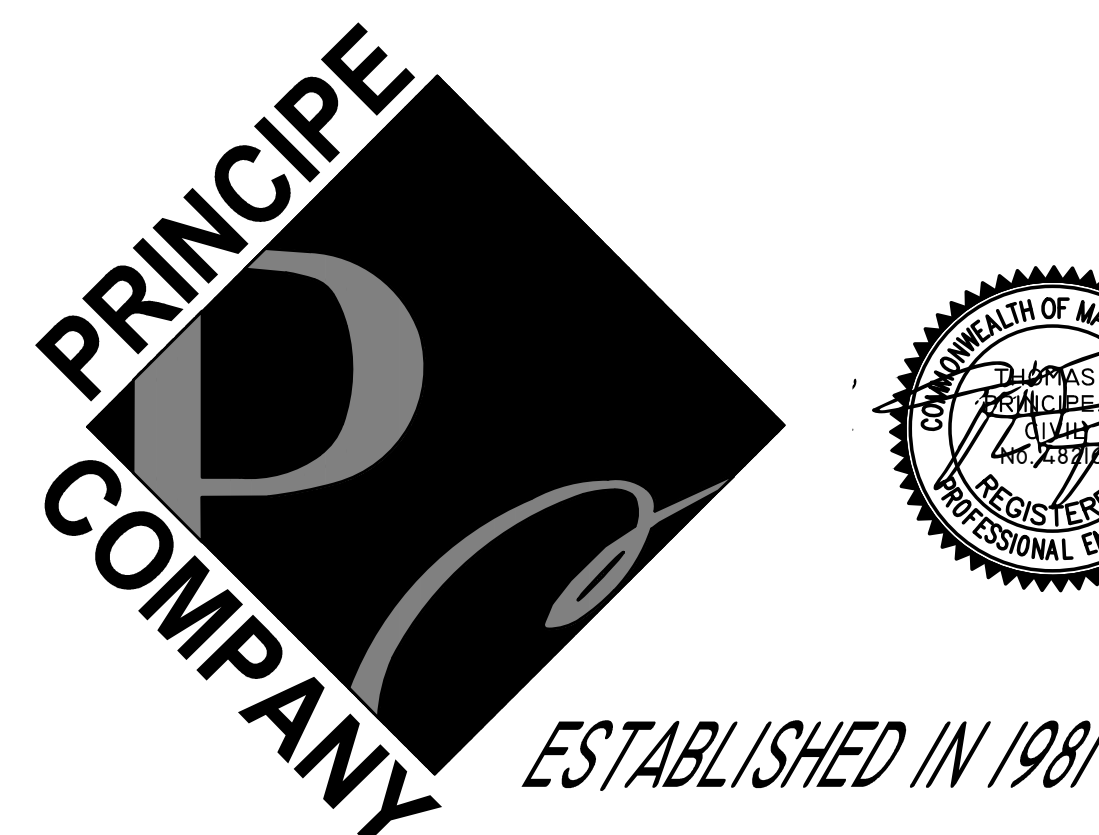
BY: WAREHAM PLANNING BOARD

DATE APPROVED: _____

DATE SIGNED: _____

I HEREBY CERTIFY THAT THERE HAS BEEN NO APPEAL TAKEN TO THIS PLANNING BOARD ACTION DURING THE 20-DAY STATUTORY APPEAL PERIOD

TOWN CLERK - WAREHAM MASSACHUSETTS



PREPARED BY:

PRINCIPE COMPANY, INC.

ENGINEERING DIVISION

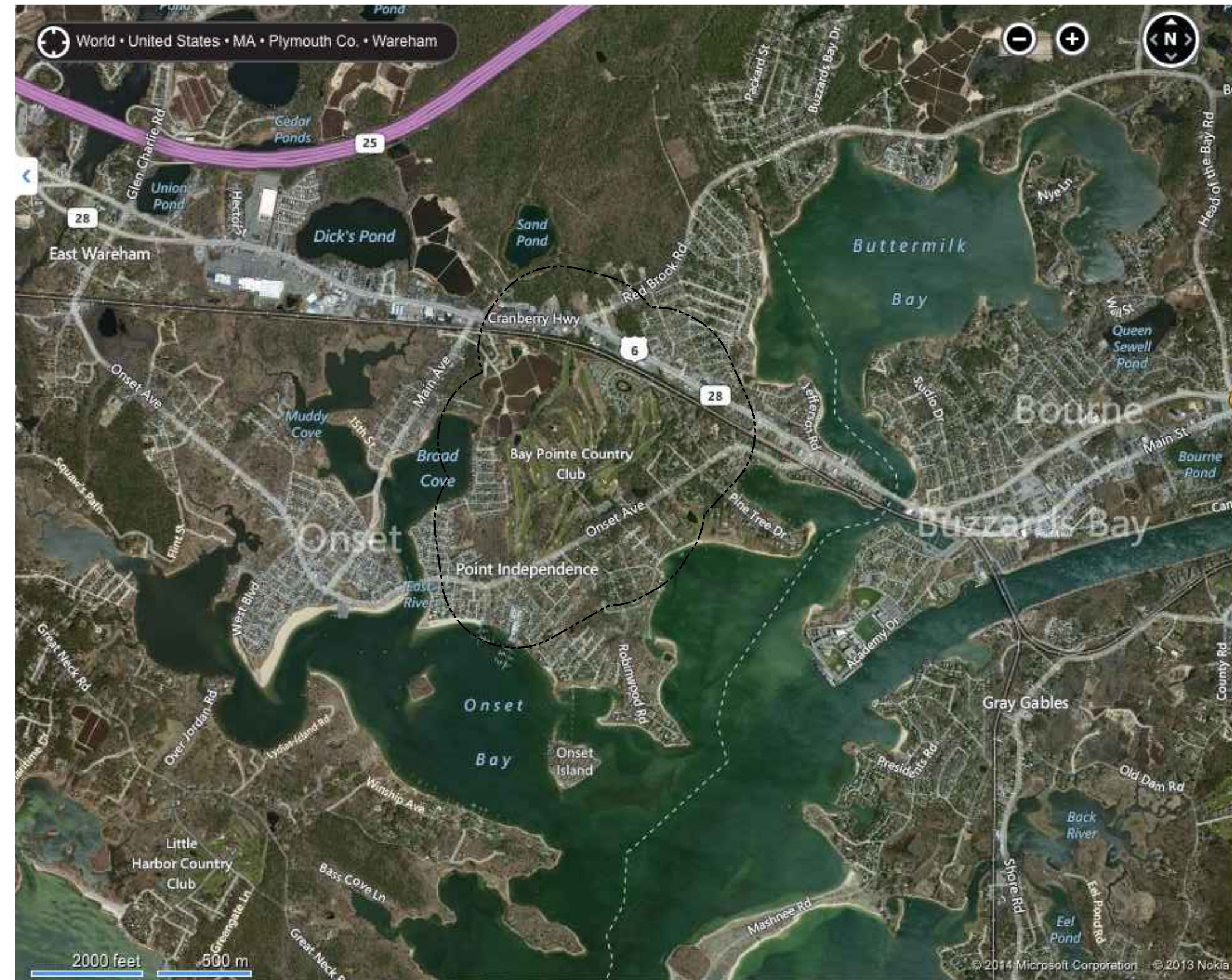
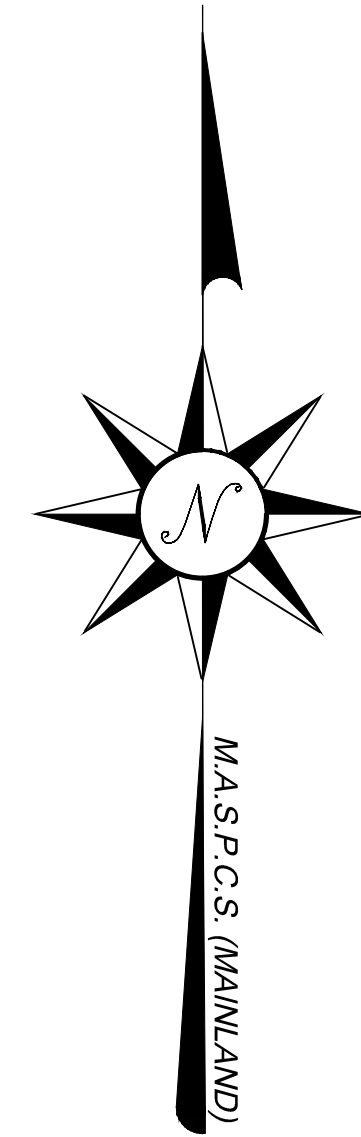
PO BOX 298
TIVERTON, RHODE ISLAND 02878
401.816.5385
PRINCIPEENGINEERING@GMAIL.COM

DATE: MAY 26, 2021
REVISED: JULY 14, 2021

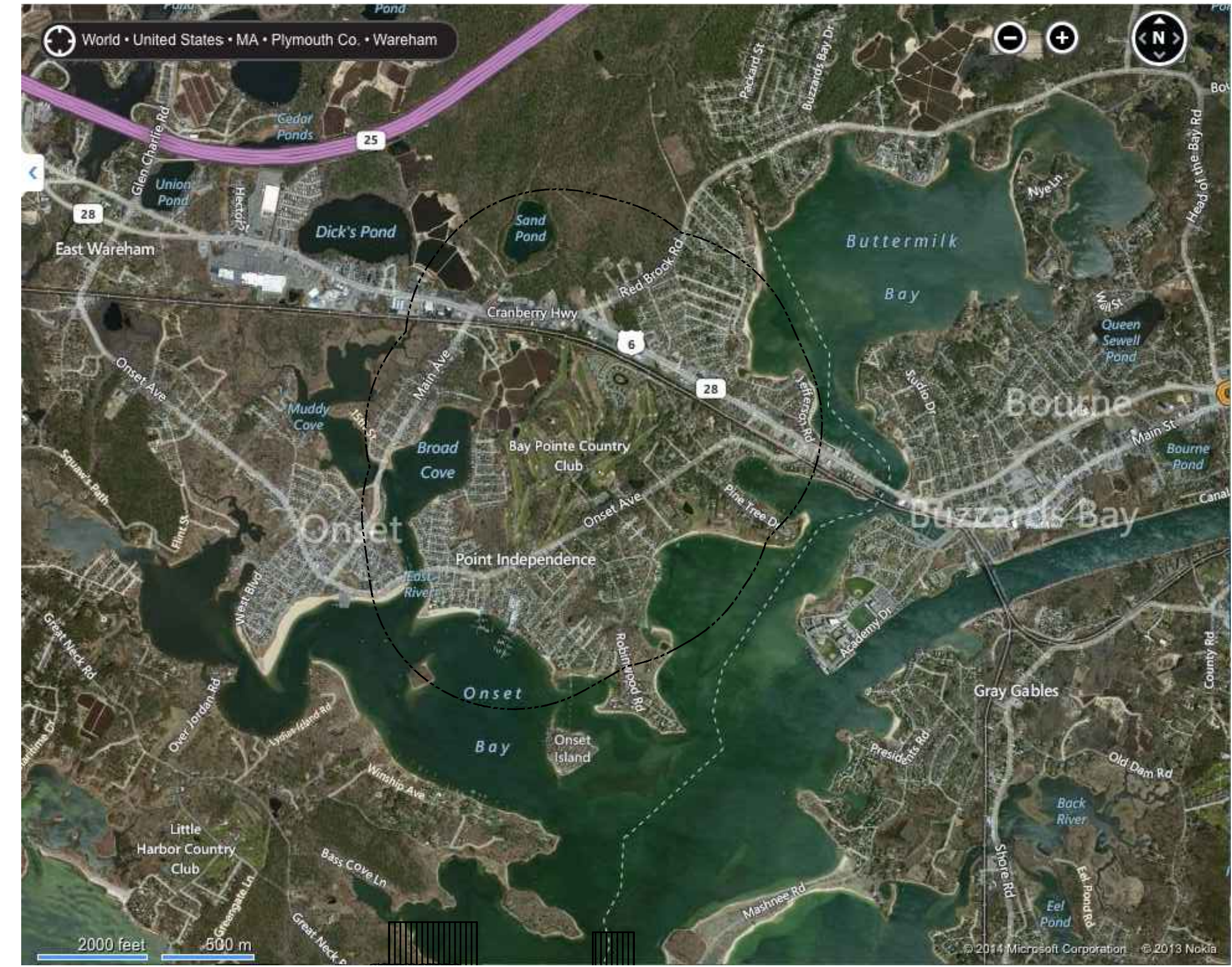
EXISTING CONDITIONS AND PROPERTY LINE SURVEY BY:
RICHARD LIPSITZ, PLS
WARTERMAN ENGINEERING COMPANY
46 SUTTON AVENUE
EAST PROVIDENCE, RHODE ISLAND 02914
PHONE: 401.438.5775
FAX: 401.438.5773

LANDSCAPE ARCHITECTURE BY: DONALD LEIGHTON, ASLA
BETA GROUP; GLA LANDSCAPE DIVISION
6 BALCKSTONE PLACE
LINCOLN, RI 02865
PHONE: 401.333.2382

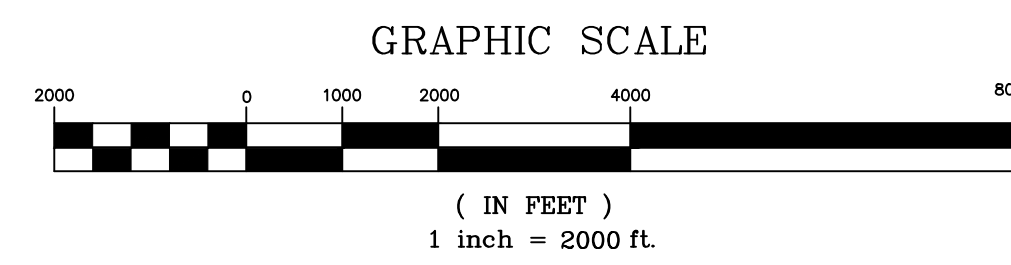
GOLF COURSE ARCHITECTURE BY: TIM GERRISH
GARDNER & GERRISH LANDSCAPE ARCHITECTS, LLC
192 WENTWORTH AVENUE
EDGEWOOD, RI 02905
PHONE: 401.263.7106



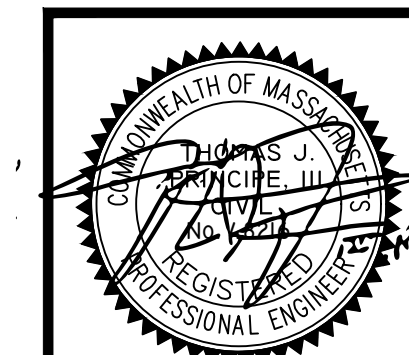
QUARTER MILE RADIUS



HALF MILE RADIUS



AERIAL OVERLAY RADIUS LOCUS

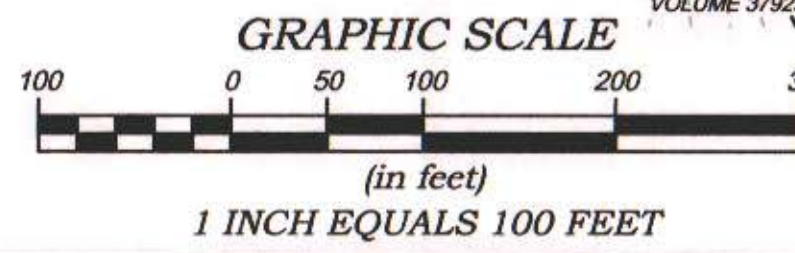
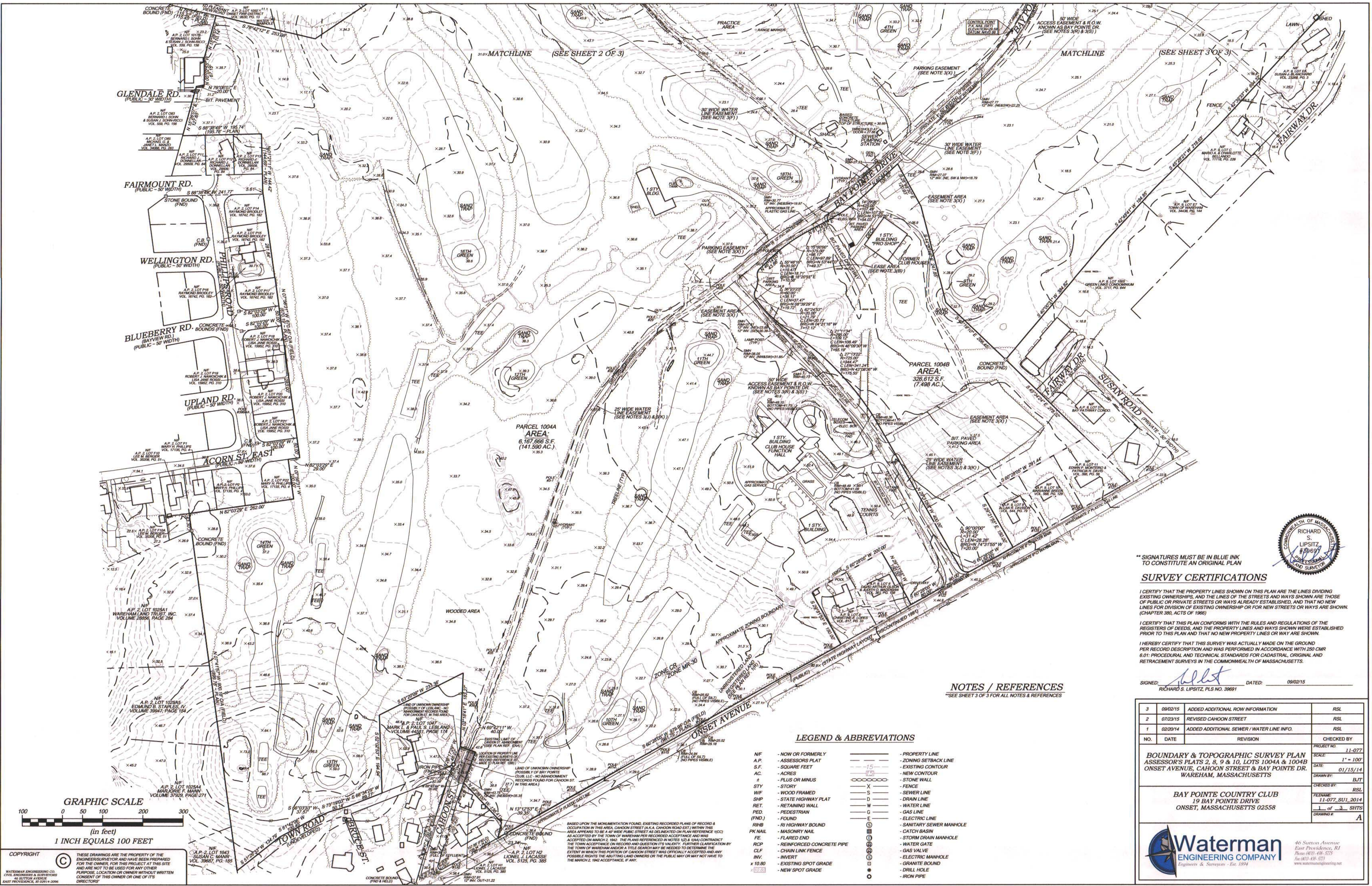


PRINCIPE COMPANY, INC.
ENGINEERING DIVISION
PO BOX 298
TIVERTON, RI 02878
401.816.5385
PRINCIPEENGINEERING@GMAIL.COM
ESTABLISHED IN 1981

REVISIONS			
No.	DATE	DRWN	CHKD
1.	7-14-21	JAR	TJP

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
DEFINITIVE PLAN SUBMISSION
for
BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III in
WAREHAM, MASSACHUSETTS

SCALE: 1"=2,000' SHEET NO: 2 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



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 THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER/DRAWN AND HAVE BEEN PREPARED FOR THE OWNER FOR THIS PROJECT AT THIS SITE AND ARE NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION OR OWNER WITHOUT WRITTEN CONSENT OF THIS OWNER OR ONE OF ITS DIRECTORS.

AP. 2 LOT 1025A1 MARJORIE F. MANN VOL. 37928, PAGE 271
 AP. 2 LOT 1025A2 EDWARD B. STAPLES, IV VOLUME 39947, PAGE 154
 AP. 2 LOT 1025A3 SUSAN C. MANN VOL. 39687, PG. 185
 AP. 2 LOT 1025A4 LIONEL J. LACASSE VOL. 3125, PG. 385

BASED UPON THE MONUMENTATION FOUND, EXISTING RECORDED PLANS OF RECORD & OCCUPATION IN THIS AREA, CAHOON STREET (A.K.A. CAHOON ROAD) WITHIN THIS AREA APPEARS TO BE A 40' WIDE PUBLIC STREET AS DELINEATED ON PLAN REFERENCE (100) AS ACCEPTED BY THE TOWN OF WARHAM PER RECORDED ACCEPTANCE AND WAS ACCEPTED ON MARCH 2, 1942. THE PLANS REFERENCED IN NOTES 102 & 104 CONTRADICT THE TOWN ACCEPTANCE ON RECORD AND QUESTION ITS VALIDITY. FURTHER CLARIFICATION BY THE TOWN OF WARHAM AND/OR A TITLE SEARCH MAY BE NEEDED TO DETERMINE THE EXTENT IN WHICH THE PORTION OF CAHOON STREET WAS OFFICIALLY ACCEPTED AND ANY POSSIBLE RIGHTS THE ABUTTING LAND OWNERS OR THE PUBLIC MAY OR MAY NOT HAVE TO THE MARCH 2, 1942 ACCEPTANCE, IF ANY.

NOTES / REFERENCES
 **SEE SHEET 3 OF 3 FOR ALL NOTES & REFERENCES

LEGEND & ABBREVIATIONS

- N/F - NOW OR FORMERLY
- A.P. - ASSESSORS PLAT
- S.F. - SQUARE FEET
- AC. - ACRES
- ± - PLUS OR MINUS
- STY. - STORY
- W/F - WOOD FRAMED
- SHP - STATE HIGHWAY PLAT
- RET. - RETAINING WALL
- PED. - PEDESTRIAN
- (FND.) - FOUND
- R/HB - RI HIGHWAY BOUND
- PK NAIL - MASONRY NAIL
- FE - FLARED END
- RCP - REINFORCED CONCRETE PIPE
- CLF - CHAIN LINK FENCE
- INV. - INVERT
- x 10.80 - EXISTING SPOT GRADE
- 10.80 - NEW SPOT GRADE
- PROPERTY LINE
- ZONING SETBACK LINE
- EXISTING CONTOUR
- NEW CONTOUR
- STONE WALL
- FENCE
- SEWER LINE
- DRAIN LINE
- WATER LINE
- GAS LINE
- ELECTRIC LINE
- SANITARY SEWER MANHOLE
- CATCH BASIN
- STORM DRAIN MANHOLE
- WATER GATE
- GAS VALVE
- ELECTRIC MANHOLE
- GRANITE BOUND
- DRILL HOLE
- IRON PIPE

SURVEY CERTIFICATIONS

I CERTIFY THAT THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF THE STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW STREETS OR WAYS ARE SHOWN. (CHAPTER 380, ACTS OF 1986)

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS, AND THE PROPERTY LINES AND WAYS SHOWN WERE ESTABLISHED PRIOR TO THIS PLAN AND THAT NO NEW PROPERTY LINES OR WAYS ARE SHOWN.

I HEREBY CERTIFY THAT THIS SURVEY WAS ACTUALLY MADE ON THE GROUND PER RECORD DESCRIPTION AND WAS PERFORMED IN ACCORDANCE WITH 260 CMR 6.01: PROCEDURAL AND TECHNICAL STANDARDS FOR CADASTRAL, ORIGINAL AND RETRACEMENT SURVEYS IN THE COMMONWEALTH OF MASSACHUSETTS.

SIGNED: *[Signature]* DATED: 09/02/15
 RICHARD S. LIPSITZ, PLS NO. 39691



NO.	DATE	REVISION	CHECKED BY
3	09/02/15	ADDED ADDITIONAL ROW INFORMATION	RSL
2	07/23/15	REVISED CAHOON STREET	RSL
1	02/20/14	ADDED ADDITIONAL SEWER / WATER LINE INFO.	RSL

PROJECT NO: 11-077
 SCALE: 1" = 100'
 DATE: 01/15/14
 DRAWN BY: BJT
 CHECKED BY: RSL
 PLAN NAME: 11-077_SUI_2014
 SHEETS: 3 of 3
 DRAWING #: A

BAY POINTE COUNTRY CLUB
 19 BAY POINTE DRIVE
 ONSET, MASSACHUSETTS 02558

Waterman ENGINEERING COMPANY
 Engineers & Surveyors - Est. 1894
 46 Sutton Avenue
 East Providence, RI
 Phone (401) 438-5775
 Fax (401) 438-1777
 www.watermanengineering.net



NOTES / REFERENCES
 **SEE SHEET 3 OF 3 FOR ALL NOTES & REFERENCES



** SIGNATURES MUST BE IN BLUE INK TO CONSTITUTE AN ORIGINAL PLAN

SURVEY CERTIFICATIONS

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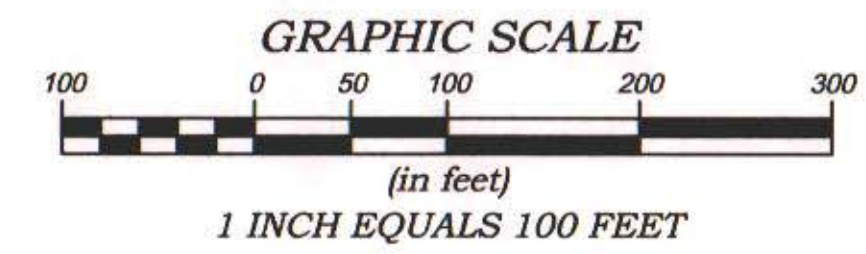
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SIGNED: *[Signature]* DATED: 09/02/15
 RICHARD S. LIPSITZ, PLS NO. 3989

LEGEND & ABBREVIATIONS

- | | | | |
|---------|----------------------------|-------|--------------------------|
| NF | - NOW OR FORMERLY | --- | - PROPERTY LINE |
| A.P. | - ASSESSORS PLAT | - - - | - ZONING SETBACK LINE |
| S.F. | - SQUARE FEET | - - - | - EXISTING CONTOUR |
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| x 10.80 | - NEW SPOT GRADE | ⊕ | - DRILL HOLE |
| | | ⊕ | - IRON PIPE |



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3	09/02/15	ADDED ADDITIONAL ROW INFORMATION	RSL
2	07/23/15	REVISED CAHOON STREET	RSL
1	02/20/14	ADDED ADDITIONAL SEWER / WATER LINE INFO.	RSL

PROJECT NO: 11-077
 SCALE: 1" = 100'
 DATE: 01/15/14
 DRAWN BY: BJT
 CHECKED BY: RSL
 FILENAME: 11-077_SU1_2014
 2 of 3 SHETS
 DRAWING # B

BOUNDARY & TOPOGRAPHIC SURVEY PLAN
 ASSESSOR'S PLATS 2, 8, 9 & 10, LOTS 1004A & 1004B
 ONSET AVENUE, CAHOON STREET & BAY POINTE DR.
 WARHAM, MASSACHUSETTS

BAY POINTE COUNTRY CLUB
 19 BAY POINTE DRIVE
 ONSET, MASSACHUSETTS 02558

Waterman ENGINEERING COMPANY
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 46 Sutton Avenue
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 Phone: (401) 438-3755
 Fax: (401) 438-3771
 www.watermanengineering.net



NOTES / REFERENCES

1. REFERENCE IS MADE TO THE FOLLOWING MAPS AND PLANS OF RECORD:
 - A.) PLAN ENTITLED "APPROVAL NOT REQUIRED PLAN LONG NECK ROAD WAREHAM, MA PREPARED FOR PAUL J. & MARYLOU PISCITELLI BY G.A.F. ENGINEERING, INC. DATE: FEB. 13, 2009 SCALE: 1" = 80'" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 55, PAGE 17.
 - B.) PLAN SET ENTITLED "ALTA / ACSM LAND TITLE SURVEY ONSET, MASSACHUSETTS SHOWING ASSESSOR'S PARCEL 2 - 100A DRAWN FOR M.G. GOLF, L.L.C. SCALE: 1" = 200' (1" = 100') OCTOBER 31, 2008 DRAWN BY STENBECK & TAYLOR, INC. REGISTERED PROFESSIONAL ENGINEERS AND LAND SURVEYORS WILLIAM JOSEPH MCGOVERN, P.L.S. WHICH WAS PROVIDED TO WATERMAN ENGINEERING CO. BY THE CLIENT.
 - C.) PLAN ENTITLED "PLAN OF LAND - PREPARED FOR ELEANOR A. LUCASSE, SYLVIA E. McCABE, ROBERT C. HAMMOND, MARJORIE F. MANN AND EDMUND B. STAPLES, III POINT INDEPENDENCE - WAREHAM, MA. SCALE: 1" = 80' DATE: JULY 24, 2003 BY CHARLES L. ROWLEY & ASSOCIATES" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 47, PAGE 365.
 - D.) PLAN ENTITLED "SITE PLAN BAY PATHWAY CONDOMINIUM SUSAN ROAD, WAREHAM, MA. SCALE: 1" = 20' OCTOBER 1, 1989 CANAL LAND SURVEYING" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 43, PAGE 165.
 - E.) PLAN ENTITLED "PLAN OF LAND PREPARED FOR BPG CORP., BP RESIDENTIAL CORP. & BAYBANK ONSET AVE. WAREHAM, MA. PLAN OF LAND SCALE: 1" = 100' DATE: DEC. 7, 1993 BY BRAMAN ENGINEERING COMPANY, LTD." WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 36, PAGES 449-450.
 - F.) PLAN ENTITLED "APPROVAL NOT REQUIRED PLAN PREPARED FOR BPG CORPORATION ONSET AVE. WAREHAM, MA. PLAN OF LAND SCALE: 1" = 50' DATE: JULY 19, 1993 BY BRAMAN ENGINEERING COMPANY, LTD." WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 36, PAGE 89.
 - G.) PLAN ENTITLED "PLAN TO ACCOMPANY GRANT OF EASEMENT BAY POINTE DRIVE & BUFFER AREA WAREHAM, MASS. EASEMENTS DATE: MAY 17, 1989 BY BRAMAN ENGINEERING COMPANY, LTD." WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 32, PAGE 606.
 - H.) PLAN ENTITLED "PLAN OF PROPOSED EASEMENTS PREPARED FOR ONSET FIRE DISTRICT CAHOON STREET WAREHAM (ONSET), MA. SCALE: 1" = 40' FEB. 10, 1989 BY CHARLES L. ROWLEY & ASSOCIATES" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 32, PAGE 206.
 - I.) PLAN ENTITLED "EASEMENT PLAN PREPARED FOR ONSET FIRE DISTRICT CAHOON ROAD WAREHAM (ONSET), MA. SCALE: 1" = 100' NOV. 23, 1988 BY CHARLES L. ROWLEY & ASSOCIATES" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 31, PAGE 1184.
 - J.) PLAN ENTITLED "PLAN OF LAND PREPARED FOR ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION CAHOON ST. WAREHAM, MASS. SCALE: 1" = 100' DATE: JUNE 20, 1984 BY BRAMAN ENGINEERING COMPANY" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 25, PAGE 407.
 - K.) PLAN ENTITLED "PLAN OF LAND IN WAREHAM, PLYMOUTH COUNTY, MASS. SCALE: 1" = 50' FEBRUARY 12, 1983 REVISED - FEBRUARY 28, 1983 LAND SURVEYS INCORPORATED PREPARED FOR FAIRWAY REALTY TRUST" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 23, PAGE 651.
 - L.) PLAN ENTITLED "PLAN OF LAND IN WAREHAM, MASS. PREPARED FOR RICHARD D. WARD SEPTEMBER 21, 1982 ARTHUR C. THOMPSON, INC." WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 23, PAGE 237.
 - M.) PLAN ENTITLED "PLAN OF LAND PREPARED FOR JOSEPH DINARELLO O-NE-SET HEIGHTS WAREHAM, MASS. DATE: SEPTEMBER 3, 1975 BY WALTER E. ROWLEY & ASSOCIATES, INC." WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 4257, PAGE 222.
 - N.) PLAN ENTITLED "ONSET FIRE DISTRICT EASEMENT FOR WATER MAIN OVER LAND OF PRO TANTO, INC. & WHITE PINES REALTY, INC. OFF ONSET AVE. WAREHAM, MASS. SCALE: 1" = 80' JUNE 5, 1974 BY WALTER E. ROWLEY & ASSOCIATES, INC." WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 18, PAGE 637.
 - O.) PLAN ENTITLED "SUBDIVISION PLAN OF LAND IN WAREHAM DELANO & KEITH, INC. GEORGE A. WORRALL, SURVEYOR MAY 1, 1974"
 - P.) PLAN ENTITLED "PLAN OF LAND PREPARED FOR ROBERT C. HAMMOND ET ALS POINT INDEPENDENCE WAREHAM, MASS. REDIVISION PLAN SCALE: 1" = 100' DECEMBER 10, 1973 BY WALTER E. ROWLEY & ASSOCIATES, INC." WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 3855, PAGE 312.
 - Q.) PLAN ENTITLED "PLAN OF LAND PREPARED FOR GREEN LINKS REALTY TRUST SUSAN ROAD WAREHAM FAIRWAYS ESTATES WAREHAM, MASS. SCALE: 1" = 80' SEPT. 13, 1971 BY WALTER E. ROWLEY & ASSOCIATES" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 3717, PAGE 644.
 - R.) PLAN ENTITLED "SUBDIVISION OF LAND IN WAREHAM WALTER E. ROWLEY & ASSOCIATES, SURVEYORS FEBRUARY 28, 1964 L.C. No. 357" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS AS PLAN NUMBER 3378.
 - S.) PLAN ENTITLED "PLAN OF LOTS SURVEYED FOR PRO TANTO, INC. TO BE KNOWN AS COUNTRY CLUB ESTATES WAREHAM, MASS. SCALE: 1" = 100' JAN. 24, 1964 BY WALTER E. ROWLEY & ASSOCIATES" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 13, PAGE 111.
 - T.) PLAN ENTITLED "PLAN OF LAND IN WAREHAM ARTHUR C. THOMPSON, SURVEYOR JULY 17, 1958"
 - U.) PLAN ENTITLED "PLAN OF O-NE-SET HIGHLANDS BELONGING TO W. ENOS PHILLIPS IN POINT INDEPENDENCE WAREHAM SCALE: 1" = 40' MARCH 15, 1955 NEWELL B. SNOW ENGR BUZZARDS BAY, MASS." WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 2586, PAGE 180.
 - V.) PLAN ENTITLED "PLAN OF ADDITIONAL LOTS POINT INDEPENDENCE - WAREHAM, MASS. SITUATED SOUTHERLY OF O-NE-SET HEIGHTS SCALE: 1" = 80' OCT. 10, 1950 BY W.E. ROWLEY, SURV." WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 8, PAGE 81.
 - W.) PLAN ENTITLED "PLAN OF LAND SITUATED IN WAREHAM, MASS. SURVEYED FOR BRADFORD HOLMES AND OLIVE H. HOLMES SCALE: 1" = 30' SEPT. 24, 1949 BY SAMUEL H. CORSE SURVEYOR" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 8, PAGE 52.
 - X.) PLAN ENTITLED "SUBDIVISION OF LOT A SHOWN ON PLAN 12030A FILED WITH CERT. OF TITLE No. 3312 REGISTRY DISTRICT OF PLYMOUTH COUNTY LAND IN WAREHAM SCALE: 150 FEET TO AN INCH JUNE 20, 1928 GEORGE P. MORSE, SURVEYOR"
 - Y.) PLAN ENTITLED "PLAN OF O-NE-SET HEIGHTS WAREHAM, MASS. OWNED BY THE STATE REALTY CORPORATION WAREHAM, MASS. 60 FEET TO AN INCH JUNE, 1924" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 3, PAGE 648.
 - Z.) PLAN ENTITLED "PLAN OF PROPOSED TAKING AND ABANDONMENT OF A PORTION OF CAHOON STREET LONG NECK, WAREHAM, MASS. SCALE: 1" = 100' JAN. 7, 1963 BY WALTER E. ROWLEY & ASSOC. WEST WAREHAM, MASS."
 - AA.) PLAN ENTITLED "PLAN OF PROPOSED ABANDONMENT OF A PORTION OF CAHOON STREET LONG NECK, WAREHAM, MASS. SCALE: 1" = 100' MAR. 16, 1964 WALTER E. ROWLEY & ASSOC. WEST WAREHAM, MASS."
 - BB.) PLAN ENTITLED "PLAN OF LAND KNOWN AS THE WAREHAM COUNTRY CLUB PREPARED FOR TOWN OF WAREHAM ONSET AVE. WAREHAM, MASS. SCALE: 1" = 100' DATE: 1/25/80 BY CHARLES L. ROWLEY & ASSOCIATES" WHICH IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN PLAN BOOK 21, PAGE 487.
 - CC.) PLAN ENTITLED "PROPOSED LAYOUT OF LONG NECK ROAD AND CAHOON ROAD EXT. IN THE TOWN OF WAREHAM, MASS. SCALE: 1" = 40' DEC. 20, 1941 REV. REV. 2, 1942 BY WALTER E. ROWLEY, SURVEYOR WAREHAM, MASS."

NOTES / REFERENCES (cont.)

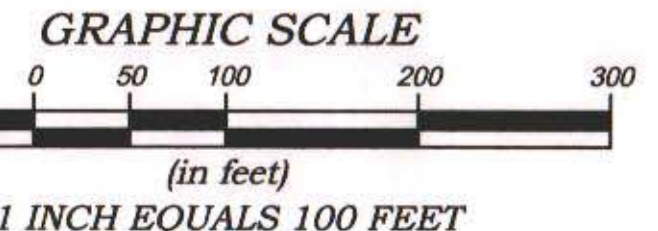
2. REFERENCE IS MADE TO THE FOLLOWING PLYMOUTH COUNTY REGISTRY OF DEEDS LAND EVIDENCE RECORDS REGARDING RECORDED TITLE TO THE PREMISES SURVEYED:
 - A.) A.P. 2, 8, 9 & 10 - LOT 1004A - BAY POINTE CLUB, LLC - VOLUME 40978, PAGE 207
 - B.) A.P. 2, 8, 9 & 10 - LOT 1004B - WAREHAM ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION - VOLUME 4254, PAGE 32
3. THESE PREMISES MAY BE SUBJECT TO / BENEFITED BY THE FOLLOWING EASEMENTS, RIGHTS OF WAY OR AGREEMENTS OF RECORD AS REFERENCED IN UNITED GENERAL TITLE INSURANCE COMPANY'S COMMITMENT FOR TITLE INSURANCE POLICY NUMBER 63675203 DATED: NOVEMBER 3, 2008 AND POLICY NUMBER 63675204 DATED: DECEMBER 1, 2008 REGARDING THE SUBJECT PROPERTY:
 - A.) NOTICE OF LEASE REGARDING LEASE BETWEEN BUZZARDS BAY GOLF, INC. AND BAY POINTE COUNTRY CLUB, INC. AS RECORDED IN VOLUME 24098, PAGE 129 (NOT PLOTTABLE)
 - B.) ASSIGNMENT OF LEASE AND RIGHTS IN AND TO THE LEASEHOLD PREMISES AS DESCRIBED IN VOLUME 22075, PAGE 246 AND VOLUME 22075, PAGE 243, AS AMENDED BY VOLUME 33358, PAGE 300.
 - C.) RIGHTS OF ONSET FIRE DISTRICT TO PROTECT AND MAINTAIN A 18" WATER MAIN FROM THE STORAGE TANK TO PLEASANT VIEW ROAD AS DESCRIBED IN VOLUME 2630, PAGE 13 (NOT PLOTTABLE)
 - D.) RIGHT OF WAY OVER "EXISTING ROADWAY FROM CAHOON ROAD TO STANDPIPE..." AND AGREEMENTS AS DESCRIBED IN VOLUME 2668, PAGE 415 (NOT PLOTTABLE)
 - E.) LICENSE TO EXCAVATE GRANTED TO WHITEHEAD BROTHERS COMPANY AS DESCRIBED IN VOLUME 3006, PAGE 290
 - F.) ORDER OF TAKING OF WATER LINE EASEMENT BY ONSET FIRE DISTRICT AS DESCRIBED IN VOLUME 4102, PAGE 692 AND DELINEATED ON PLAN REF. 1(N)
 - G.) RIGHTS, RESTRICTIONS AND AGREEMENTS AS DESCRIBED IN VOLUME 5091, PAGE 489 (NOT PLOTTABLE)
 - H.) ORDER OF TAKING BY THE TOWN OF WAREHAM AS DESCRIBED IN VOLUME 4786, PAGE 362 (NOT PLOTTABLE)
 - I.) RIGHTS, RESTRICTIONS AND AGREEMENTS AS DESCRIBED IN VOLUME 7919, PAGE 125 AS AFFECTED BY THE RATIFICATION AND ACKNOWLEDGMENT REGARDING PROTECTIVE RESTRICTIONS (NOT PLOTTABLE)
 - J.) ORDER OF TAKING OF RIGHT OF WAY AND WATER LINE EASEMENTS BY THE ONSET FIRE DISTRICT AS DESCRIBED IN VOLUME 9008, PAGE 161 AND DELINEATED ON PLAN REF. 1(I)
 - K.) GRANT OF EASEMENT GRANTED TO ONSET FIRE DISTRICT AS DESCRIBED IN VOLUME 9008, PAGE 168 AND DELINEATED ON PLAN REF. 1(I)
 - L.) UTILITY EASEMENTS GRANTED TO CAPE AND VINEYARD ELECTRIC COMPANY AS DESCRIBED IN VOLUME 1423, PAGE 470, VOLUME 1449, PAGE 386, VOLUME 1452, PAGE 342 & VOLUME 1447, PAGE 591 AND DELINEATED ON PLAN REF. 3 (B), 1(E) AND 1(X)
 - M.) ORDER OF TAKING OF RIGHT OF WAY AND WATER LINE EASEMENTS BY THE ONSET FIRE DISTRICT AS DESCRIBED IN VOLUME 9091, PAGE 14 AND DELINEATED AS EASEMENTS No. 1, No. 2 & No. 3 ON PLAN REF. 1(N)
 - N.) GRANT OF EASEMENT GRANTED TO ONSET FIRE DISTRICT AS DESCRIBED IN VOLUME 9091, PAGE 19 AND DELINEATED AS EASEMENTS No. 1, No. 2 & No. 3 ON PLAN REF. 1(N)
 - O.) GRANT OF EASEMENT GRANTED TO THE BAY POINTE CORPORATION FROM THE ONSET FIRE DISTRICT AS DESCRIBED IN VOLUME 9175, PAGE 45.
 - P.) RECOGNITION AGREEMENT AS DESCRIBED IN VOLUME 9175, PAGE 50 (NOT PLOTTABLE)
 - Q.) RECOGNITION AGREEMENT AS DESCRIBED IN VOLUME 9175, PAGE 53 (NOT PLOTTABLE)
 - R.) GRANT OF EASEMENT AGREEMENT AS DESCRIBED IN VOLUME 9243, PAGE 185 WITH SAID EASEMENTS BEING DELINEATED ON PLAN REF. 1(G)
 - S.) RIGHT OF WAY OVER "LOT 14" AS SHOWN ON PLAN REF. 1(R) AND THAT ROADWAY KNOWN AS "BAY POINTE DRIVE" AS DESCRIBED IN VOLUME 12524, PAGE 32.
 - T.) AGREEMENT BETWEEN BPG CORP., BR RESIDENTIAL CORP., THE WAREHAM ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION, THE TOWN OF WAREHAM & BAYBANK AS DESCRIBED IN VOLUME 13919, PAGE 34 (NOT PLOTTABLE)
 - U.) CONDITIONS AS SHOWN ON PLAN REF. 1(R)
 - V.) CONDITIONS AS SHOWN ON PLAN REF. 1(E)
 - W.) CONDITIONS AS SHOWN ON PLAN REF. 1(B) "NOTE: TITLE COMMITMENT REFERENCES PLAN BY STENBECK & TAYLOR, INC. DATED: MARCH, 2006. THE PLAN THAT WAS OBTAINED WAS BY STENBECK & TAYLOR, INC. DATED: OCTOBER, 2006.
 - X.) RECIPROCAL AGREEMENT AGREEMENT AS DESCRIBED IN VOLUME 12524, PAGE 35
 - Y.) EASEMENT GRANTED TO COMMONWEALTH ELECTRIC COMPANY AND NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY AS DESCRIBED IN VOLUME 8739, PAGE 115 (NOT PLOTTABLE)
4. THESE PREMISES ARE SITUATED IN A "CONFERENCE RECREATION ZONE" (CR) & A MULTIPLE RESIDENCE DISTRICT (MR-30)

DIMENSIONAL REQUIREMENTS	"CR" ZONE (NON-RESIDENTIAL)	"MR-30" ZONE (SINGLE FAMILY)
MIN. LOT AREA	= 30,000 SQ. FT.	= 30,000 SQ. FT.
MIN. FRONTAGE	= 50 FT.	= 50 FT.
MIN. S.B. FRONT YARD	= 10 FT.	= 20 FT.
MIN. S.B. REAR YARD	= 10 FT.	= 10 FT.
MIN. S.B. SIDE YARD	= 10 FT.	= 10 FT.
MAX. STRUCTURE HEIGHT	= 60 FT.	= 35 FT.
MAX. BUILDING COVERAGE	= (NO REGULATION)	= 25%

NOTE - ZONING INFORMATION IS FROM CURRENT ZONING AND MAY NOT REFLECT THE CONDITIONS AT THE TIME OF CONSTRUCTION OR ANY VARIANCES GRANTED.
5. PORTIONS OF THESE PREMISES ARE SITUATED IN A ZONE "M" (1" & 4" ZONE "X" AREAS OF 0.2% ANNUAL CHANCE FLOOD... AND ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAN) AS DESIGNATED ON THE "NATIONAL FLOOD INSURANCE PROGRAM FIRM FLOOD INSURANCE RATE MAP FOR PLYMOUTH COUNTY, MASSACHUSETTS (ALL JURISDICTIONS)", PANEL 582 OF 680 TOWN OF WAREHAM MAP NUMBER 2002C05822 MAP REVISED: JULY 17, 2012, FEDERAL EMERGENCY MANAGEMENT AGENCY."
6. ANY UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING PLANS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM ALL AVAILABLE INFORMATION. PLEASE CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION AT PHONE NO. 1-888-DIG-SAFE AND/OR ALL LOCAL UTILITY COMPANIES.)
7. THE LOCATION OF THE RAILROAD RIGHT OF WAY WAS REPRODUCED FROM EXISTING PLANS / DEEDS OF RECORD. NO RAILROAD MONUMENTATION COULD BE FOUND NOR WAS LOCATED AS PART OF THIS SURVEY.
8. REFERENCE IS MADE TO THE TAKING OF LONG NECK ROAD AS LAND OUT ORDER OF TAKING FEB. 4, 1943 WHICH IS DELINEATED ON PLAN REF. 1(B)
9. PLANIMETRICS & TOPOGRAPHY SHOWN FROM AERIAL MAPPING COMPILED BY EASTERN TOPOGRAPHICS, P.O. BOX 970 - 495 CENTER STREET, WOLFEBORO, NH 03884-0970 SUPPLEMENTED BY FIELD EDITS. AERIAL PHOTOGRAPHS EXPOSED APRIL 5, 1994 & NOVEMBER 20, 2013. GROUND CONTROL BY WATERMAN ENGINEERING CO. BUILDING LINES REPRESENT ROOF LINES AS SEEN IN AERIAL PHOTOGRAPHY.
10. THE SUBJECT PROPERTY LIES WITHIN "PRIORITY HABITAT 1306" PER THE MASSACHUSETTS NATURAL HERITAGE & ENDANGERED SPECIES PROGRAM GIS DATABASE.
11. A PORTION OF THE SUBJECT PROPERTY LIES WITHIN A D.E.P. ZONE II WELLHEAD PROTECTION AREA PER THE MASSGIS DATABASE.

LEGEND & ABBREVIATIONS

- | | | | |
|---------|----------------------------|---|--------------------------|
| NF | - NOW OR FORMERLY | - | - PROPERTY LINE |
| A.P. | - ASSESSORS PLAT | - | - ZONING SETBACK LINE |
| S.F. | - SQUARE FEET | - | - EXISTING CONTOUR |
| AC. | - ACRES | - | - NEW CONTOUR |
| ± | - PLUS OR MINUS | - | - STONE WALL |
| STY | - STORY | - | - FENCE |
| WF | - WOOD FRAMED | - | - SEWER LINE |
| SHP | - STATE HIGHWAY PLAT | - | - DRAIN LINE |
| RET. | - RETAINING WALL | - | - WATER LINE |
| PEL. | - PEDESTRIAN | - | - GAS LINE |
| (FND.) | - FOUND | - | - ELECTRIC LINE |
| RH/RB | - RI HIGHWAY BOUND | - | - SANITARY SEWER MANHOLE |
| PK/NAL | - MASONRY NAIL | - | - CATCH BASIN |
| FE. | - FLARED END | - | - STORM DRAIN MANHOLE |
| RCP | - REINFORCED CONCRETE PIPE | - | - WATER GATE |
| CLF | - CHAIN LINK FENCE | - | - GAS VALVE |
| INV. | - INVERT | - | - ELECTRIC MANHOLE |
| x 10.80 | - EXISTING SPOT GRADE | - | - GRANITE BOUND |
| 10.25 | - NEW SPOT GRADE | - | - DRILL HOLE |
| | | - | - IRON PIPE |



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 THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER/SURVEYOR AND HAVE BEEN PREPARED FOR THE OWNER, FOR THIS PROJECT AT THIS SITE AND ARE NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION OR OWNER WITHOUT WRITTEN CONSENT OF THIS OWNER OR ONE OF ITS DIRECTORS.
 WATERMAN ENGINEERING CO.
 CIVIL ENGINEERS & SURVEYORS
 46 SURTON AVENUE
 EAST PROVIDENCE, RI 02914-3096

SURVEY CERTIFICATIONS

I CERTIFY THAT THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF THE STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW STREETS OR WAYS ARE SHOWN. (CHAPTER 380, ACTS OF 1956)

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERED PROFESSIONAL ENGINEERS AND LAND SURVEYORS OF THE STATE OF MASSACHUSETTS PRIOR TO THIS PLAN AND THAT NO NEW PROPERTY LINES OR WAYS ARE SHOWN.

I HEREBY CERTIFY THAT THIS SURVEY WAS ACTUALLY MADE ON THE GROUND PER RECORD DESCRIPTION AND WAS PERFORMED IN ACCORDANCE WITH 250 CMR 6.01: PROCEDURAL AND TECHNICAL STANDARDS FOR CADASTRAL, ORIGINAL AND RETRACEMENT SURVEYS IN THE COMMONWEALTH OF MASSACHUSETTS.

SIGNED: *[Signature]* DATED: 08/02/15
 RICHARD S. LIPSITZ, PLS No. 39691

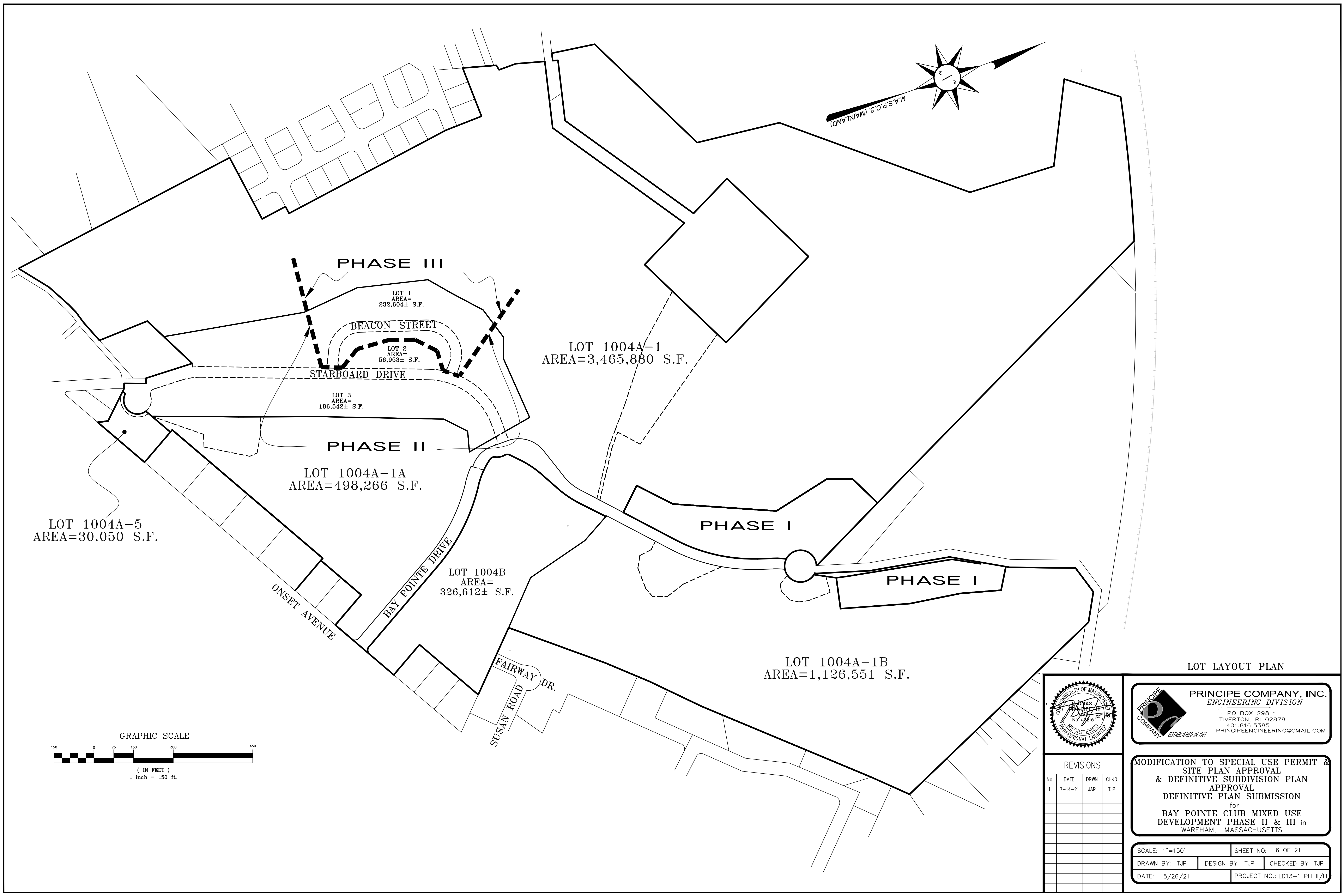
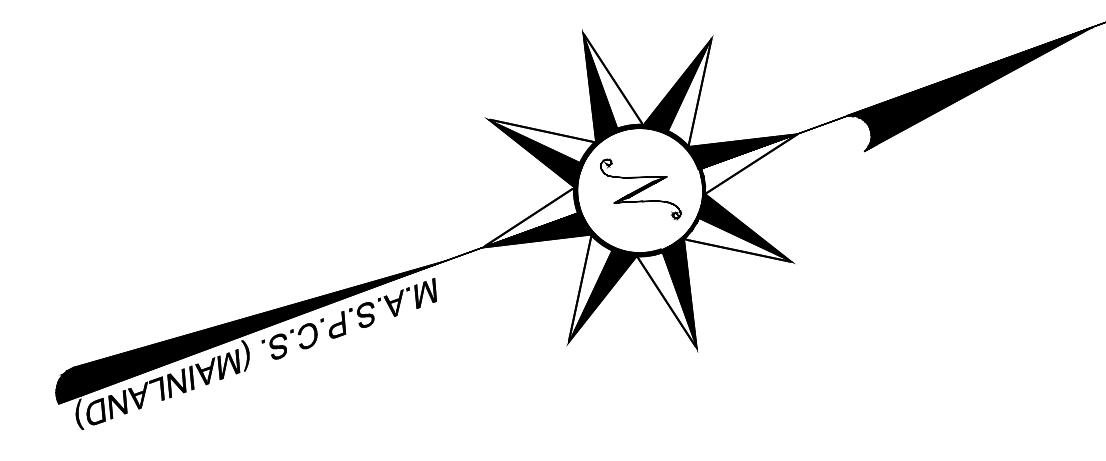


NO.	DATE	REVISION	CHECKED BY
3	08/02/15	ADDED ADDITIONAL ROW INFORMATION	RSL
2	07/23/15	REVISED CAHOON STREET	RSL
1	02/20/14	ADDED ADDITIONAL SEWER / WATER LINE INFO.	RSL

BOUNDARY & TOPOGRAPHIC SURVEY PLAN
 ASSESSOR'S PLATS 2, 8, 9 & 10, LOTS 1004A & 1004B
 ONSET AVENUE, CAHOON STREET & BAY POINTE DR.
 WAREHAM, MASSACHUSETTS

BAY POINTE COUNTRY CLUB
 19 BAY POINTE DRIVE
 ONSET, MASSACHUSETTS 02558

Waterman ENGINEERING COMPANY
 Engineers & Surveyors - Est. 1934
 46 Surton Avenue
 East Providence, RI
 Phone (401) 438-5775
 Fax (401) 438-5771
 www.watermanengineering.net



LOT 1004A-5
AREA=30.050 S.F.

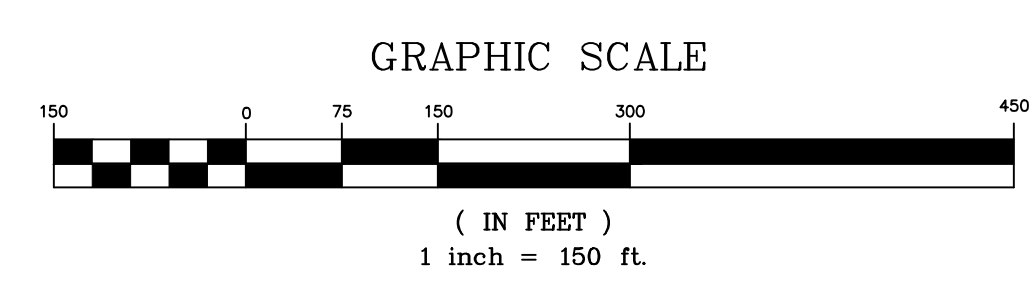
LOT 1004A-1A
AREA=498,266 S.F.

LOT 1004B
AREA=326,612± S.F.

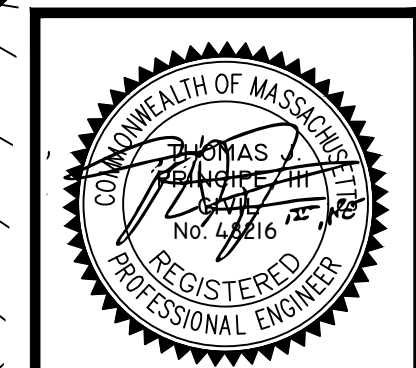
LOT 1004A-1
AREA=3,465,880 S.F.

LOT 1004A-1B
AREA=1,126,551 S.F.

LOT 1
AREA=232,604± S.F.
LOT 2
AREA=56,953± S.F.
LOT 3
AREA=186,542± S.F.



LOT LAYOUT PLAN

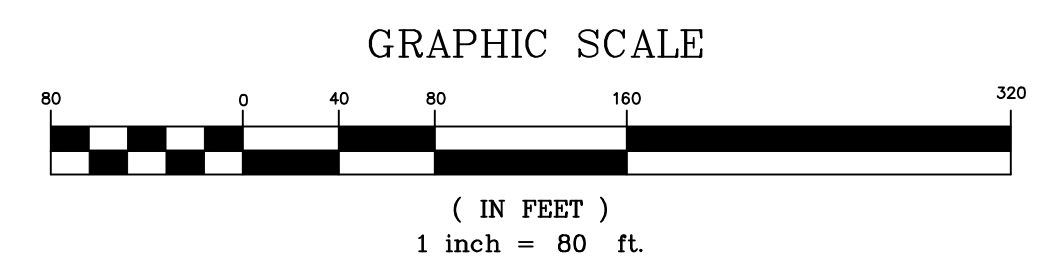
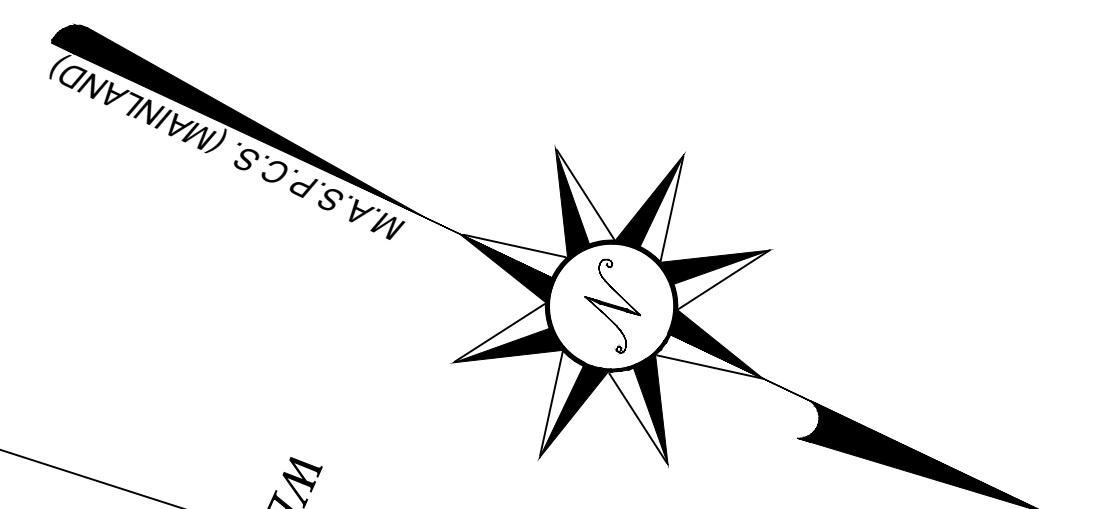


PRINCIPE COMPANY, INC.
ENGINEERING DIVISION
PO BOX 298
TIVERTON, RI 02878
401.816.5385
PRINCIPLEENGINEERING@GMAIL.COM

REVISIONS			
No.	DATE	DRWN	CHKD
1.	7-14-21	JAR	TJP

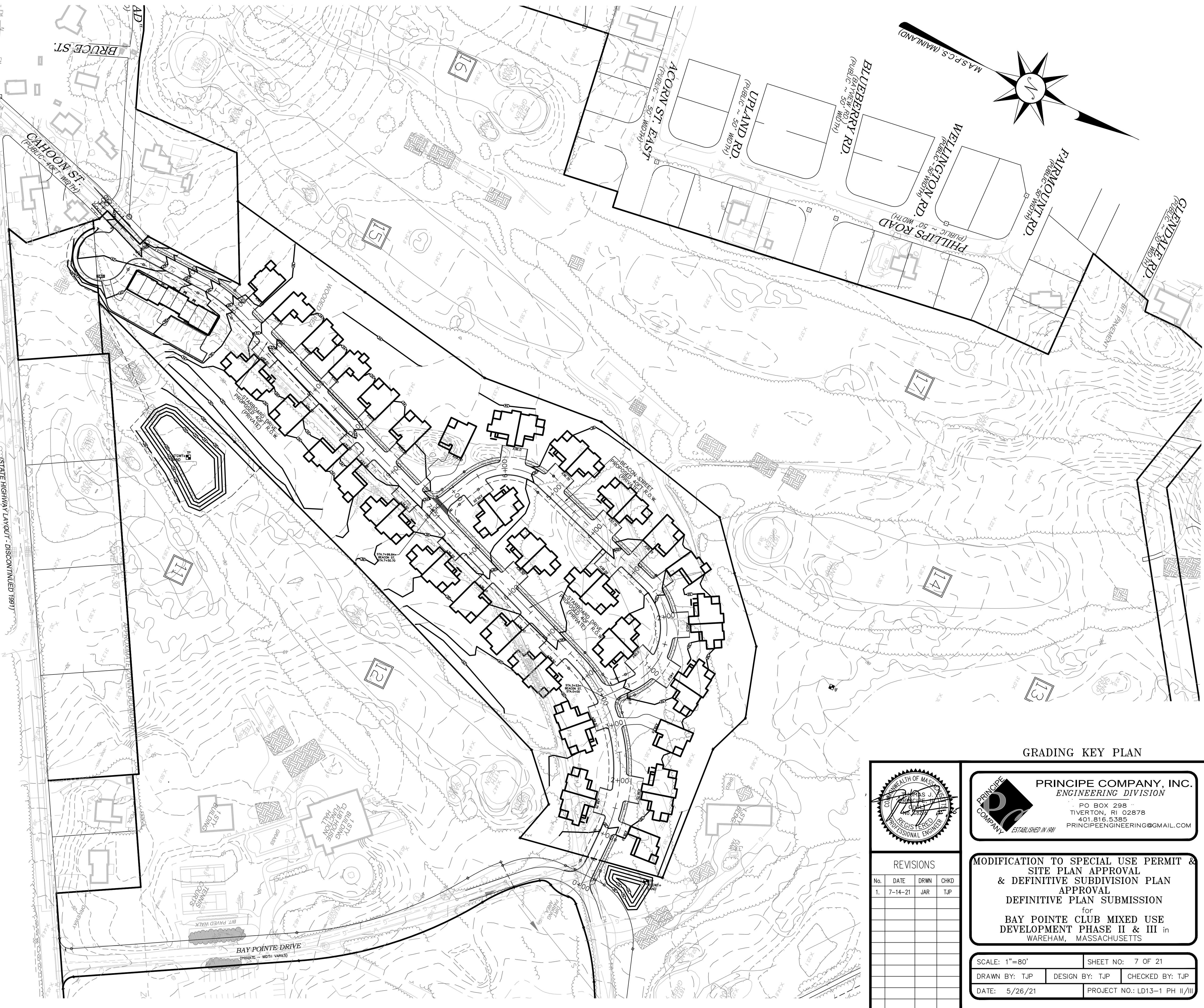
MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=150' SHEET NO: 6 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

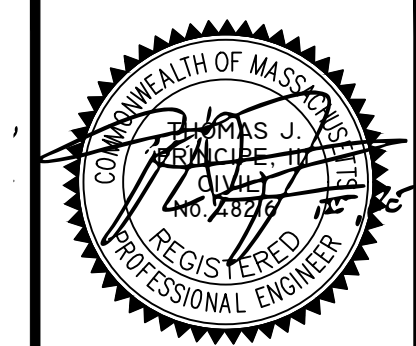


LEGEND & ABBREVIATIONS

- | | | | |
|---------|----------------------------|-----------|----------------------------------|
| NF | - NOW OR FORMERLY | — | - PROPERTY LINE |
| A.P. | - ASSESSORS PLAT | — | - ZONING SETBACK LINE |
| S.F. | - SQUARE FEET | 15 | - EXISTING CONTOUR |
| AC. | - ACRES | - x - x - | - FENCE |
| ± | - PLUS OR MINUS | - s - | - SEWER LINE |
| STY | - STORY | - d - | - DRAIN LINE |
| WF | - WOOD FRAMED | - v - v - | - WATER LINE |
| SHP | - STATE HIGHWAY PLAT | - e - e - | - GAS LINE |
| RET. | - RETAINING WALL | - | - ELECTRIC LINE |
| PED. | - PEDESTRIAN | - | - SANITARY SEWER MANHOLE |
| (FND.) | - FOUND | - | - CATCH BASIN |
| RHIB | - RI HIGHWAY BOUND | - | - STORM DRAIN MANHOLE |
| MN | - MASONRY NAIL | - | - WATER GATE |
| FE | - FLARED END | - | - GAS VALVE |
| RCP | - REINFORCED CONCRETE PIPE | - | - ELECTRIC MANHOLE |
| CLF | - CHAIN LINK FENCE | - | - GRANITE BOUND |
| INV. | - INVERT | - | - DRILL HOLE |
| x 10.80 | - EXISTING SPOT GRADE | - | - IRON RODPIPE |
| | - EXISTING STONE WALL | - | |
| | | - | - PROPOSED LOT LINE |
| | | - | - PROPOSED EASEMENT |
| | | - | - PROPOSED WATER LINE |
| | | - | - PROPOSED SEWER LINE |
| | | - | - PROPOSED SEWER FORCE MAIN LINE |
| | | - | - PROPOSED EDGE OF PAVEMENT |
| | | - | - PROPOSED ROADWAY STATIONING |
| | | - | - PROPOSED TEE BOXES |
| | | - | - PROPOSED FAIRWAYS |
| | | - | - PROPOSED CONCRETE BOUND |



GRADING KEY PLAN



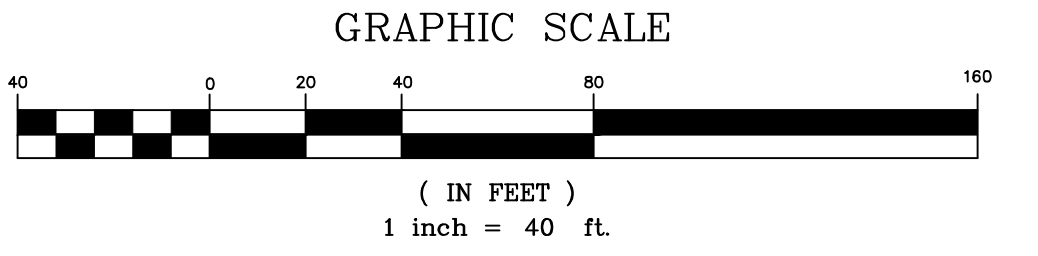
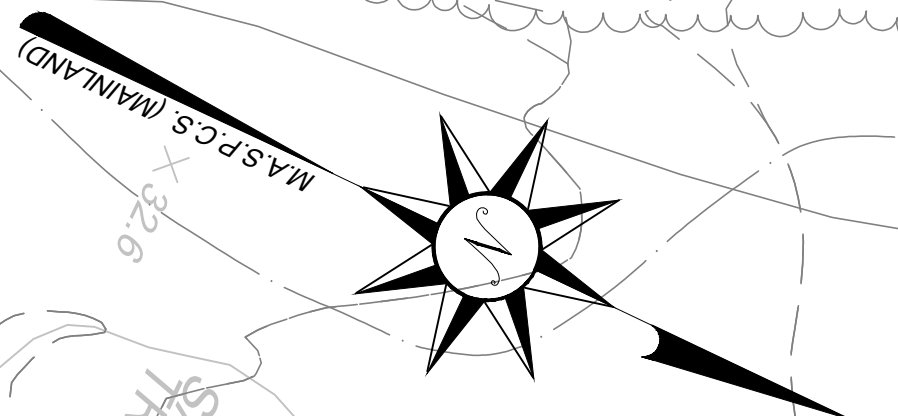
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ESTABLISHED IN 1981

REVISIONS

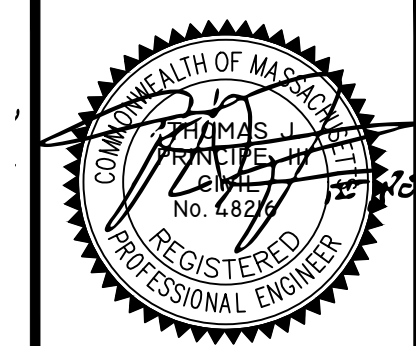
No.	DATE	DRWN	CHKD
1.	7-14-21	JAR	TJP

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=80'	SHEET NO: 7 OF 21
DRAWN BY: TJP	DESIGN BY: TJP
CHECKED BY: TJP	DATE: 5/26/21
PROJECT NO.: LD13-1 PH II/III	



GRADING PLAN - 1

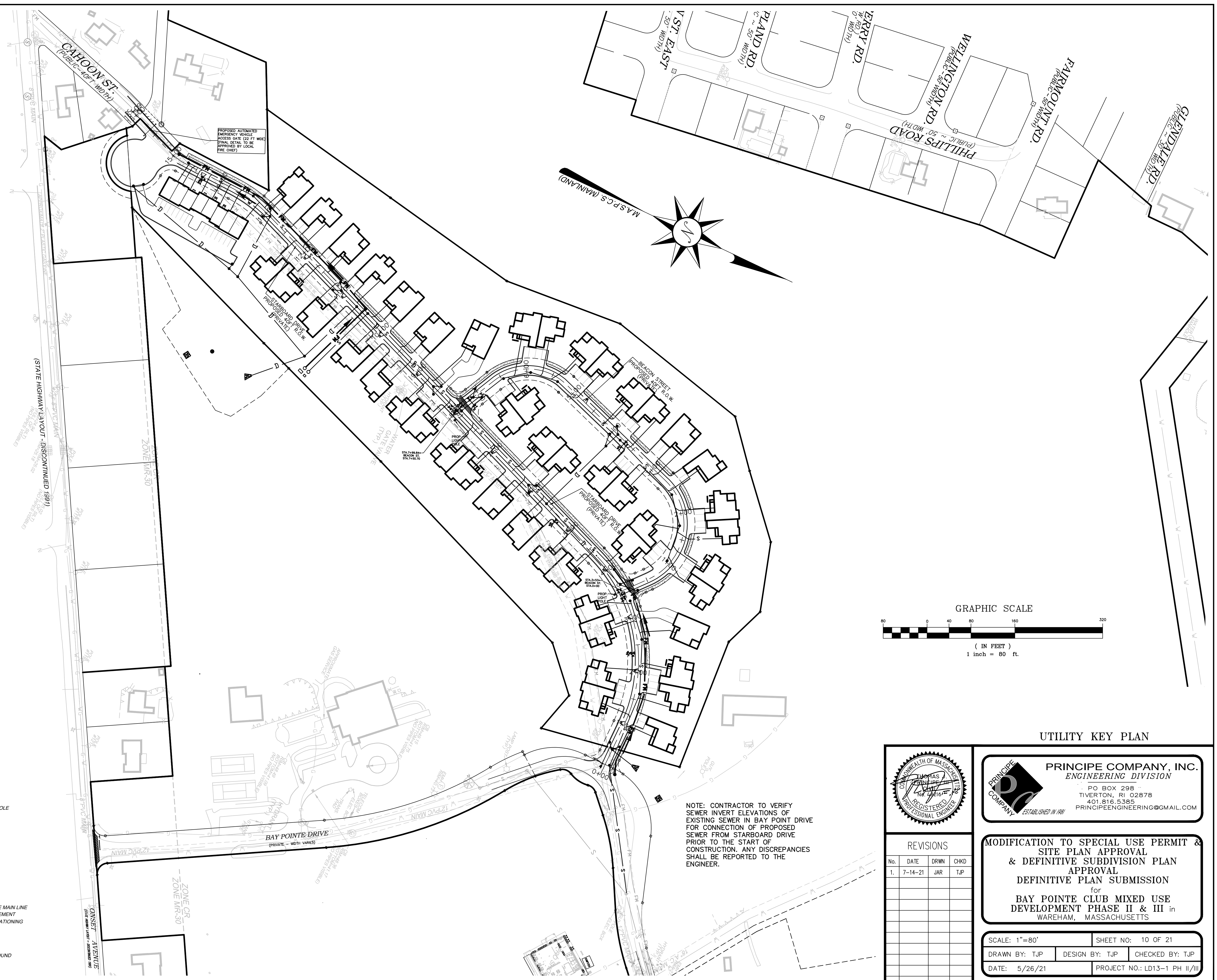


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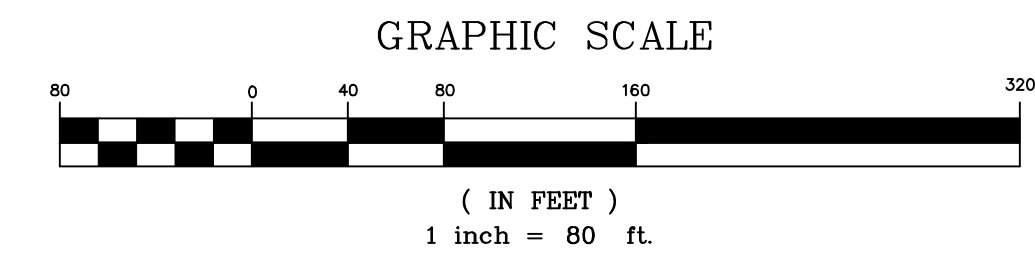
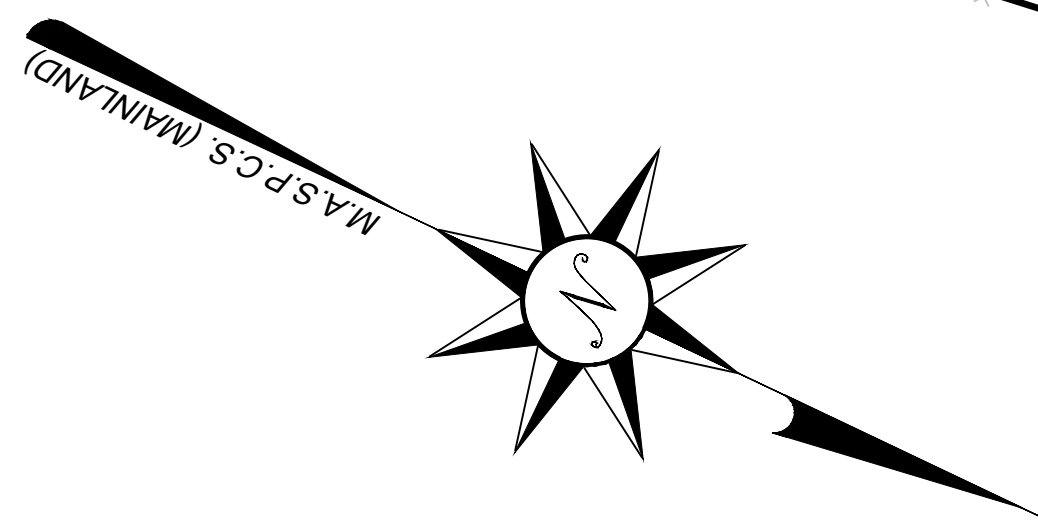
REVISIONS				
No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=40' SHEET NO.: 8 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



PROPOSED AUTOMATED EMERGENCY VEHICLE ACCESS GATE (22 FT WIDE) FINAL SIGNAL TO BE APPROVED BY LOCAL P.E. CHIEF

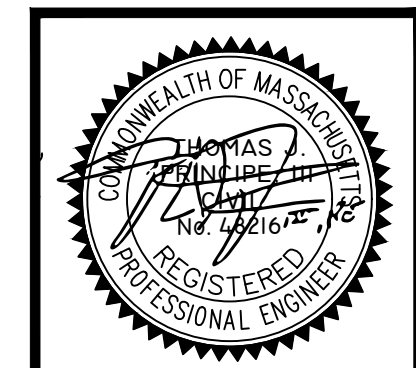


LEGEND & ABBREVIATIONS

- | | | | |
|---------|----------------------------|-------|----------------------------------|
| NIF | - NOW OR FORMERLY | --- | - PROPERTY LINE |
| A.P. | - ASSESSORS PLAT | - - - | - ZONING SETBACK LINE |
| S.F. | - SQUARE FEET | 15 | - EXISTING CONTOUR |
| AC. | - ACRES | x x | - FENCE |
| ± | - PLUS OR MINUS | s | - SEWER LINE |
| STY | - STORY | v | - DRAIN LINE |
| W/F | - WOOD FRAMED | v | - WATER LINE |
| SHP | - STATE HIGHWAY PLAT | v | - GAS LINE |
| RET. | - RETAINING WALL | + | - ELECTRIC LINE |
| PED. | - PEDESTRIAN | + | - SANITARY SEWER MANHOLE |
| (FND.) | - FOUND | + | - CATCH BASIN |
| R/HB | - RI HIGHWAY BOUND | + | - STORM DRAIN MANHOLE |
| PK NAIL | - MASONRY NAIL | + | - WATER GATE |
| FE | - FLARED END | + | - GAS VALVE |
| RCP | - REINFORCED CONCRETE PIPE | + | - ELECTRIC MANHOLE |
| CLF | - CHAIN LINK FENCE | + | - GRANITE BOUND |
| INV. | - INVERT | + | - DRILL HOLE |
| x 10.80 | - EXISTING SPOT GRADE | + | - IRON ROD PIPE |
| | - EXISTING STONE WALL | + | |
| | | --- | - PROPOSED LOT LINE |
| | | - - - | - PROPOSED EASEMENT |
| | | v | - PROPOSED WATER LINE |
| | | s | - PROPOSED SEWER LINE |
| | | pk | - PROPOSED SEWER FORCE MAIN LINE |
| | | + | - PROPOSED EDGE OF PAVEMENT |
| | | + | - PROPOSED ROADWAY STATIONING |
| | | + | - PROPOSED TEE BOXES |
| | | + | - PROPOSED FAIRWAYS |
| | | + | - PROPOSED CONCRETE BOUND |

NOTE: CONTRACTOR TO VERIFY SEWER INVERT ELEVATIONS OF EXISTING SEWER IN BAY POINT DRIVE FOR CONNECTION OF PROPOSED SEWER FROM STARBOARD DRIVE PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.

UTILITY KEY PLAN

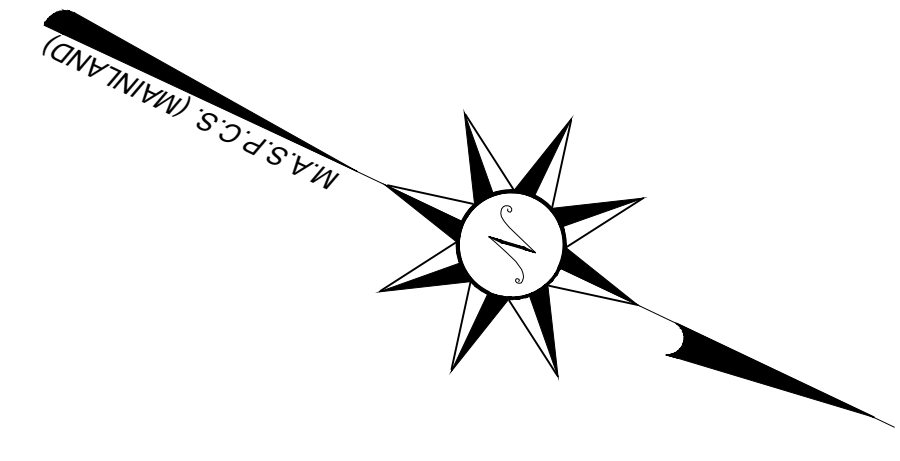
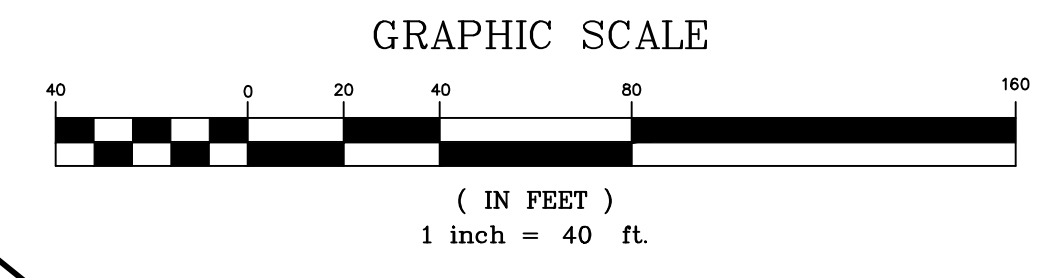
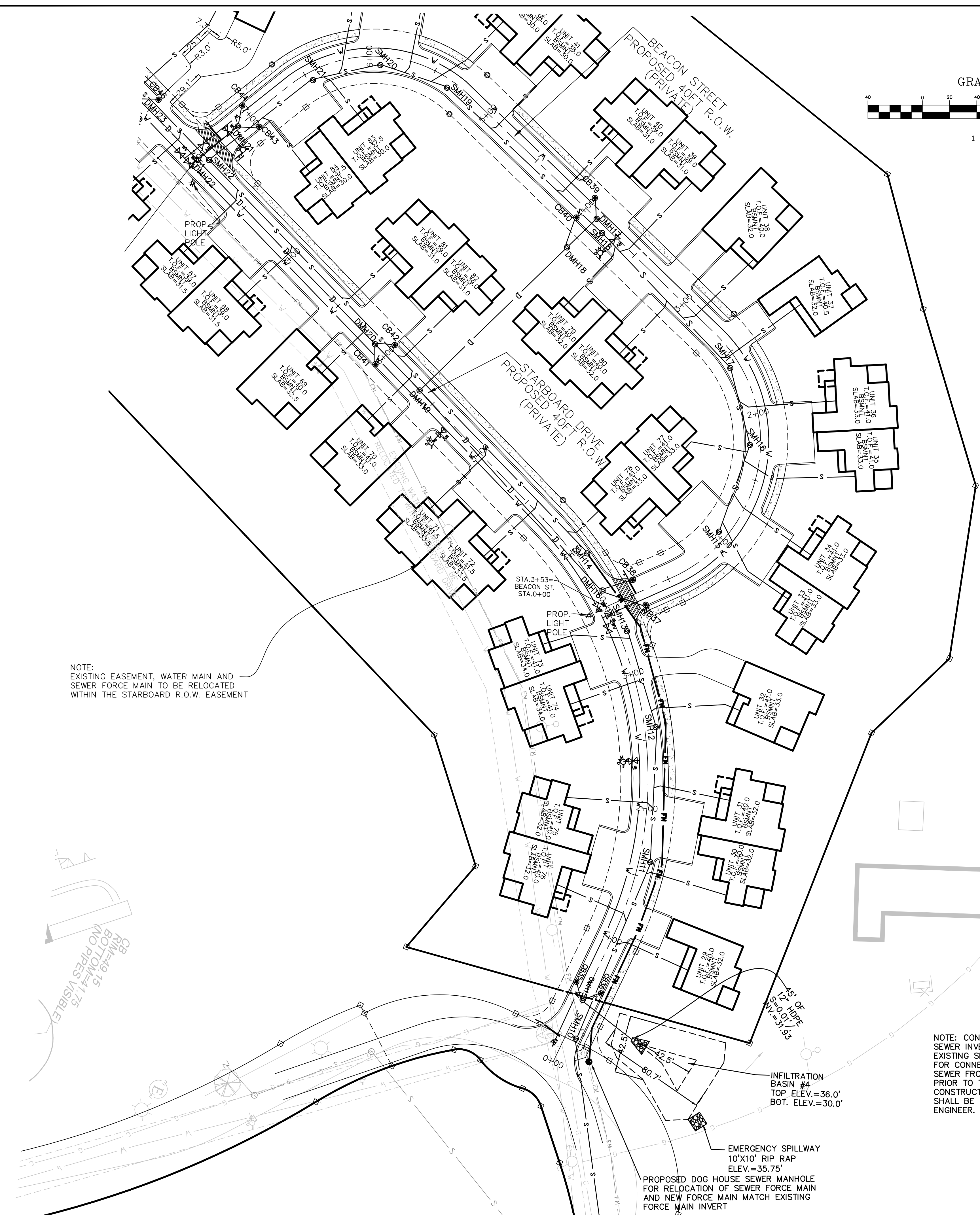


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 ESTABLISHED IN 1981

REVISIONS			
No.	DATE	DRWN	CHKD
1.	7-14-21	JAR	TJP

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
 DEFINITIVE PLAN SUBMISSION
 for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in
 WAREHAM, MASSACHUSETTS

SCALE: 1"=80' SHEET NO: 10 OF 21
 DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
 DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



NOTE:
EXISTING EASEMENT, WATER MAIN AND
SEWER FORCE MAIN TO BE RELOCATED
WITHIN THE STARBOARD R.O.W. EASEMENT

CR
RIP
BOTTOM 15'
NO PIPES VISIBLE

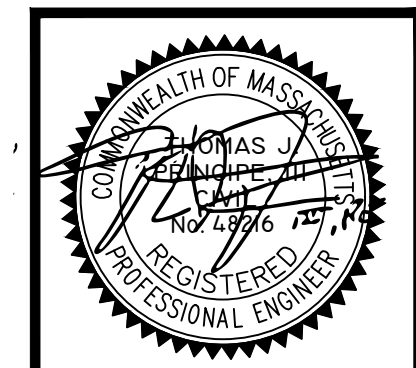
NOTE: CONTRACTOR TO VERIFY
SEWER INVERT ELEVATIONS OF
EXISTING SEWER IN BAY POINT DRIVE
FOR CONNECTION OF PROPOSED
SEWER FROM STARBOARD DRIVE
PRIOR TO THE START OF
CONSTRUCTION. ANY DISCREPANCIES
SHALL BE REPORTED TO THE
ENGINEER.

INFILTRATION
BASIN #4
TOP ELEV.=36.0'
BOT. ELEV.=30.0'

EMERGENCY SPILLWAY
10'X10' RIP RAP
ELEV.=35.75'

PROPOSED DOG HOUSE SEWER MANHOLE
FOR RELOCATION OF SEWER FORCE MAIN
AND NEW FORCE MAIN MATCH EXISTING
FORCE MAIN INVERT

UTILITY PLAN - 1

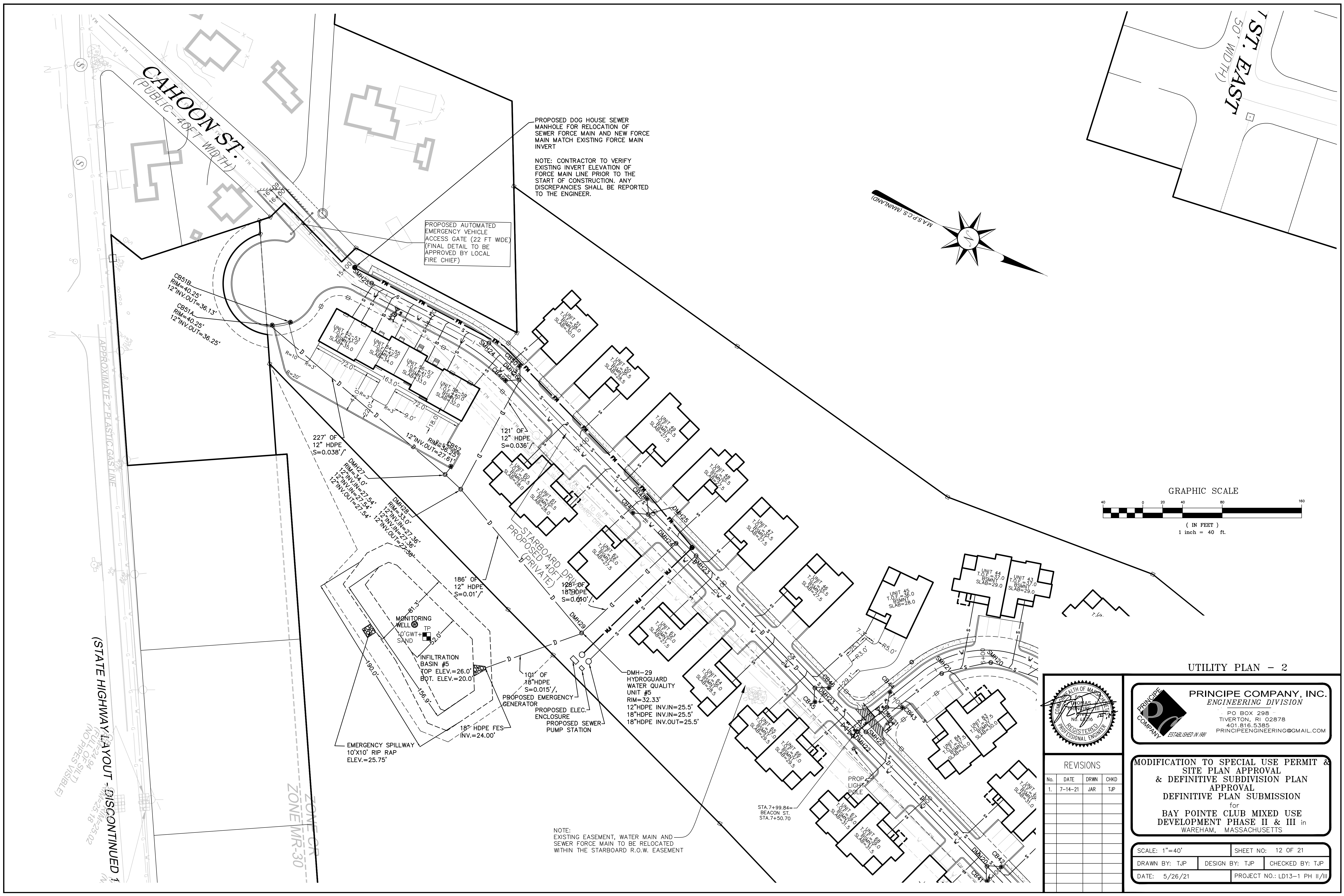


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REVISIONS				
No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	

MODIFICATION TO SPECIAL USE PERMIT &
SITE PLAN APPROVAL
& DEFINITIVE SUBDIVISION PLAN
APPROVAL
DEFINITIVE PLAN SUBMISSION
for
BAY POINT CLUB MIXED USE
DEVELOPMENT PHASE II & III in
WAREHAM, MASSACHUSETTS

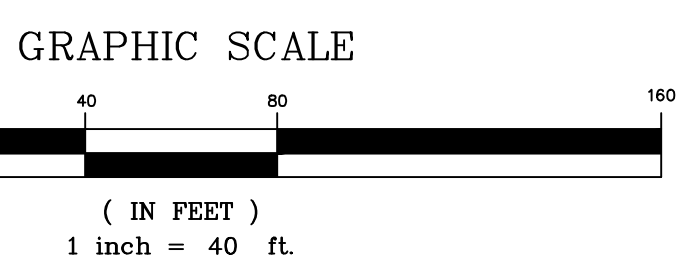
SCALE: 1"=40' SHEET NO: 11 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



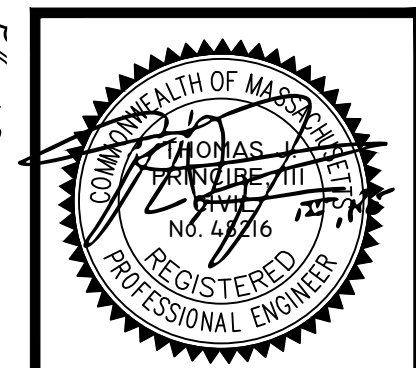
PROPOSED DOG HOUSE SEWER MANHOLE FOR RELOCATION OF SEWER FORCE MAIN AND NEW FORCE MAIN MATCH EXISTING FORCE MAIN INVERT

NOTE: CONTRACTOR TO VERIFY EXISTING INVERT ELEVATION OF FORCE MAIN LINE PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.

PROPOSED AUTOMATED EMERGENCY VEHICLE ACCESS GATE (22 FT WIDE) (FINAL DETAIL TO BE APPROVED BY LOCAL FIRE CHIEF)



UTILITY PLAN - 2



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No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	

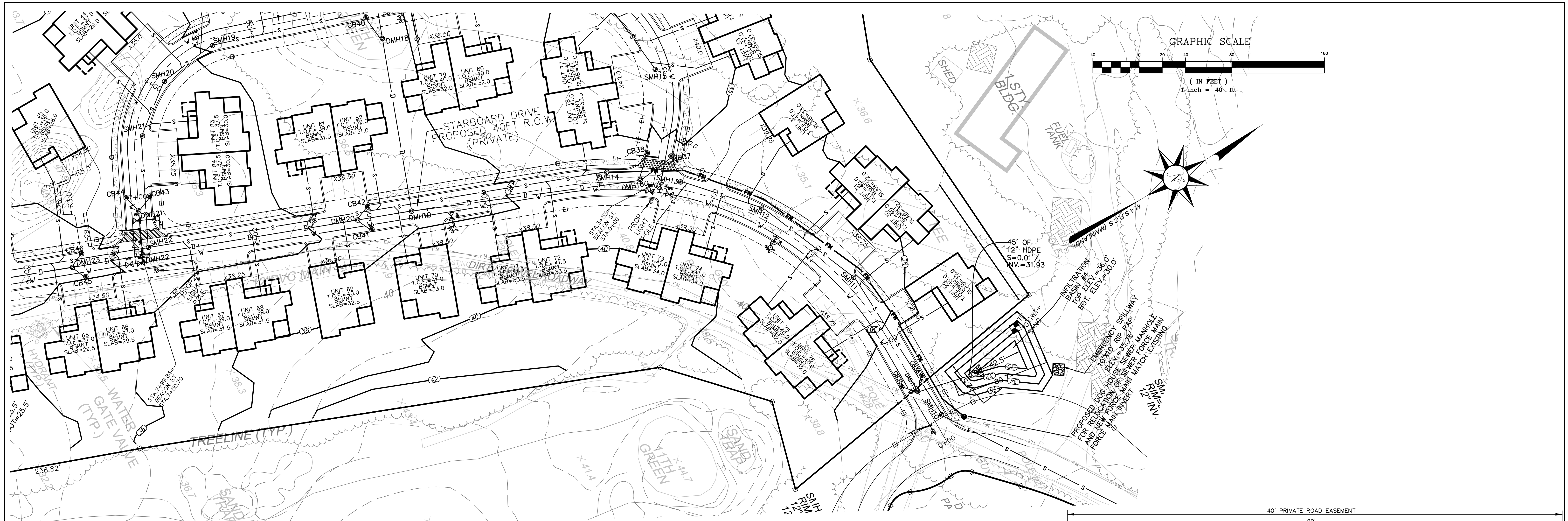
MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=40' SHEET NO: 12 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

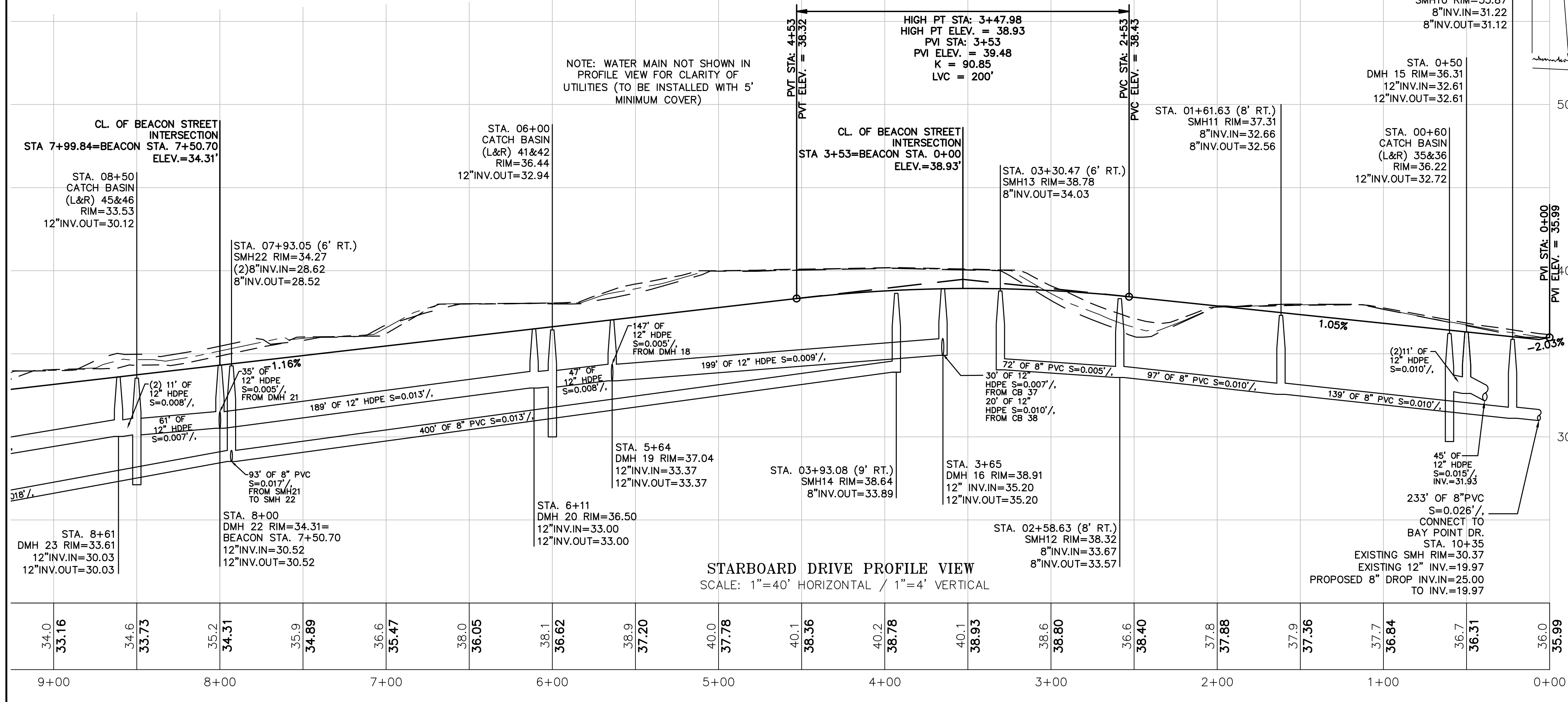
NOTE: EXISTING EASEMENT, WATER MAIN AND SEWER FORCE MAIN TO BE RELOCATED WITHIN THE STARBOARD R.O.W. EASEMENT

(STATE HIGHWAY LAYOUT DISCONTINUED 1 (NO PIPES VISIBLE))

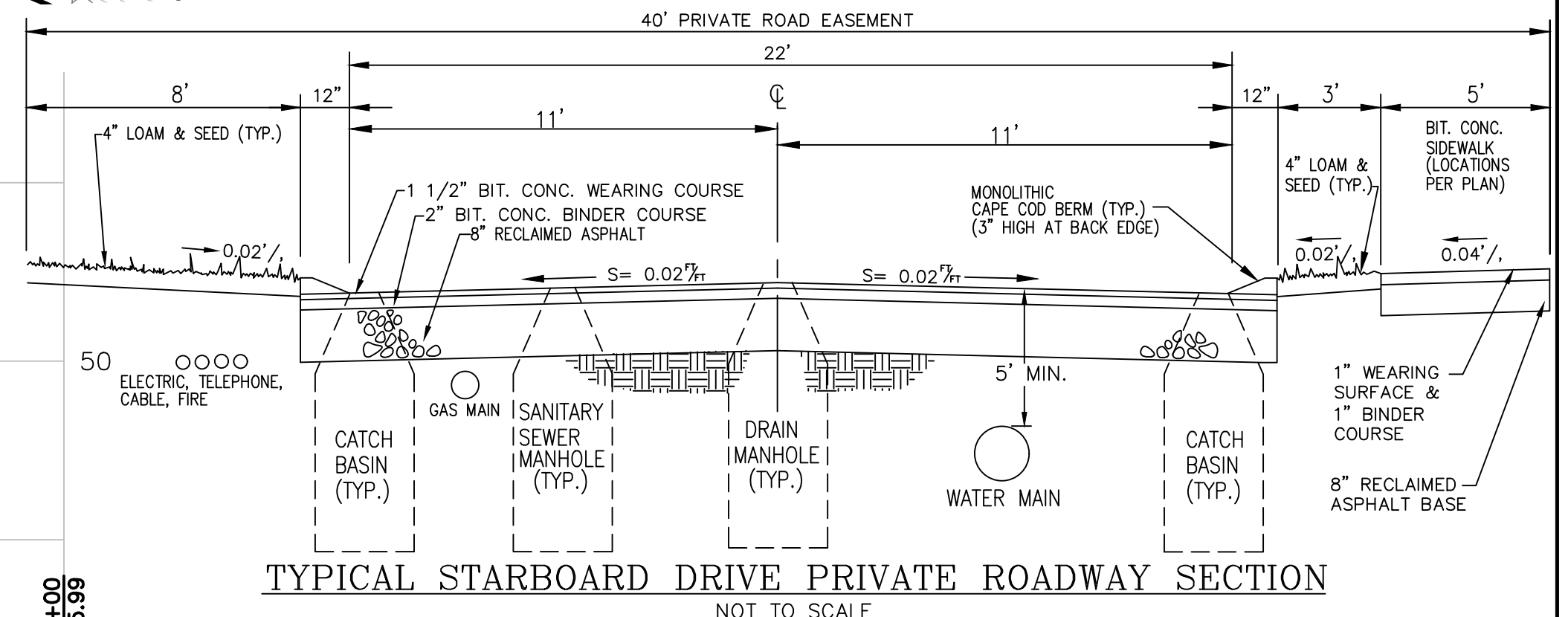
ZONE MR-30



STARBOARD DRIVE PLAN VIEW
SCALE: 1"=40'

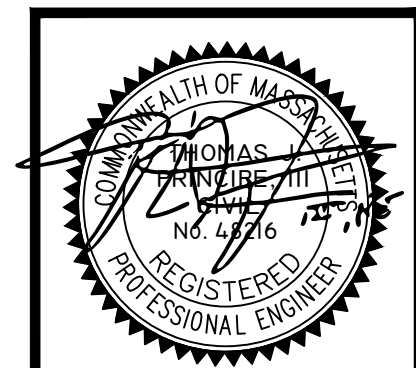


STARBOARD DRIVE PROFILE VIEW
SCALE: 1"=40' HORIZONTAL / 1"=4' VERTICAL



TYPICAL STARBOARD DRIVE PRIVATE ROADWAY SECTION
NOT TO SCALE

ROADWAY PLAN & PROFILE - 1

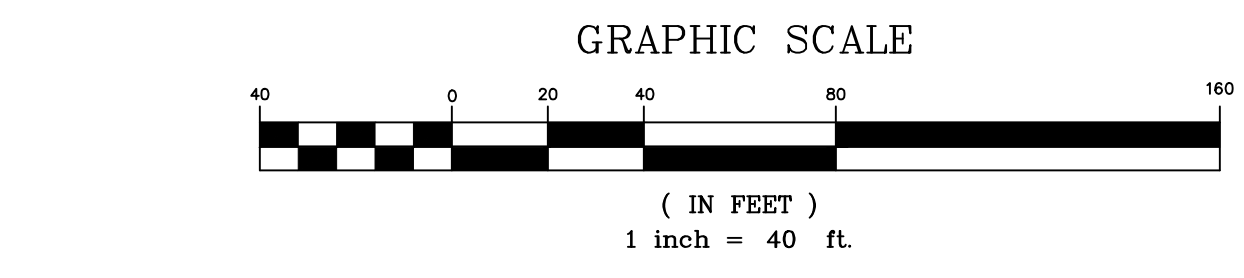
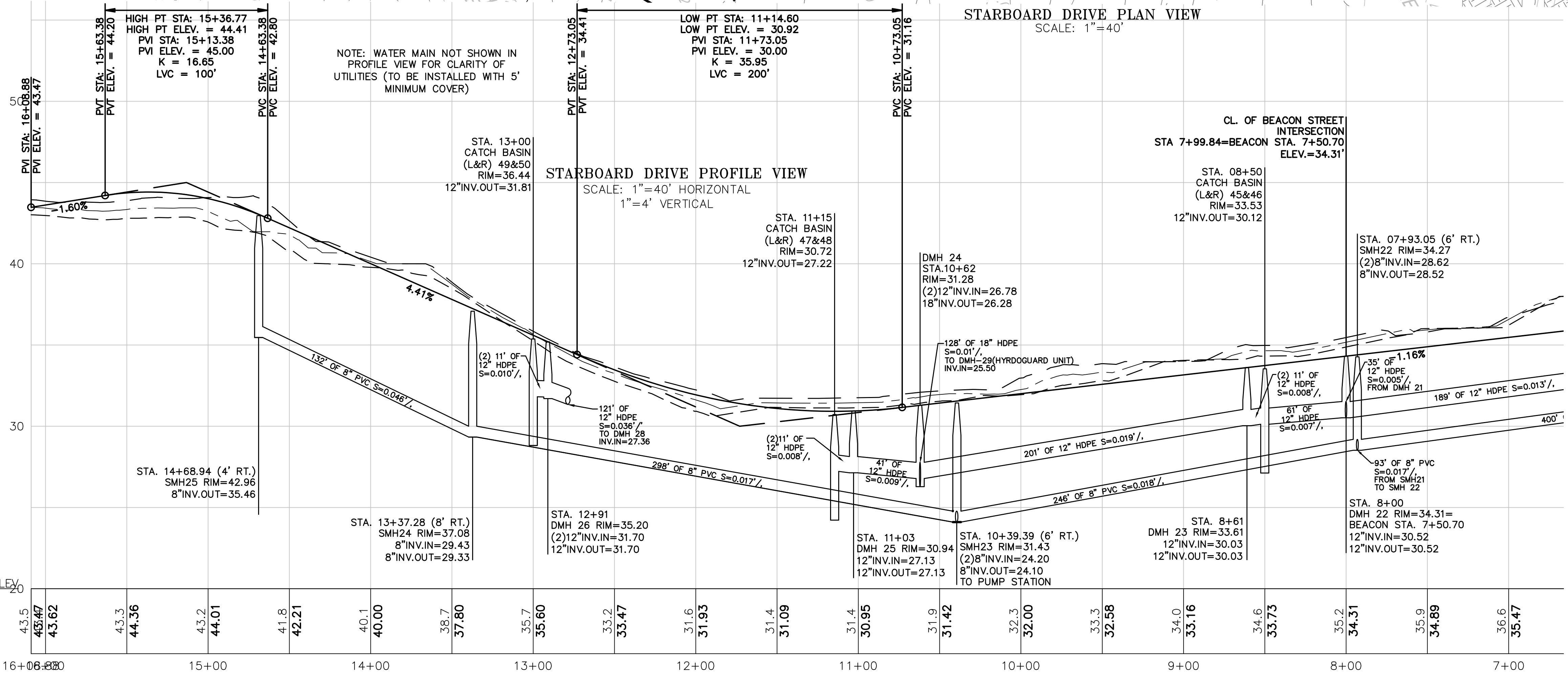
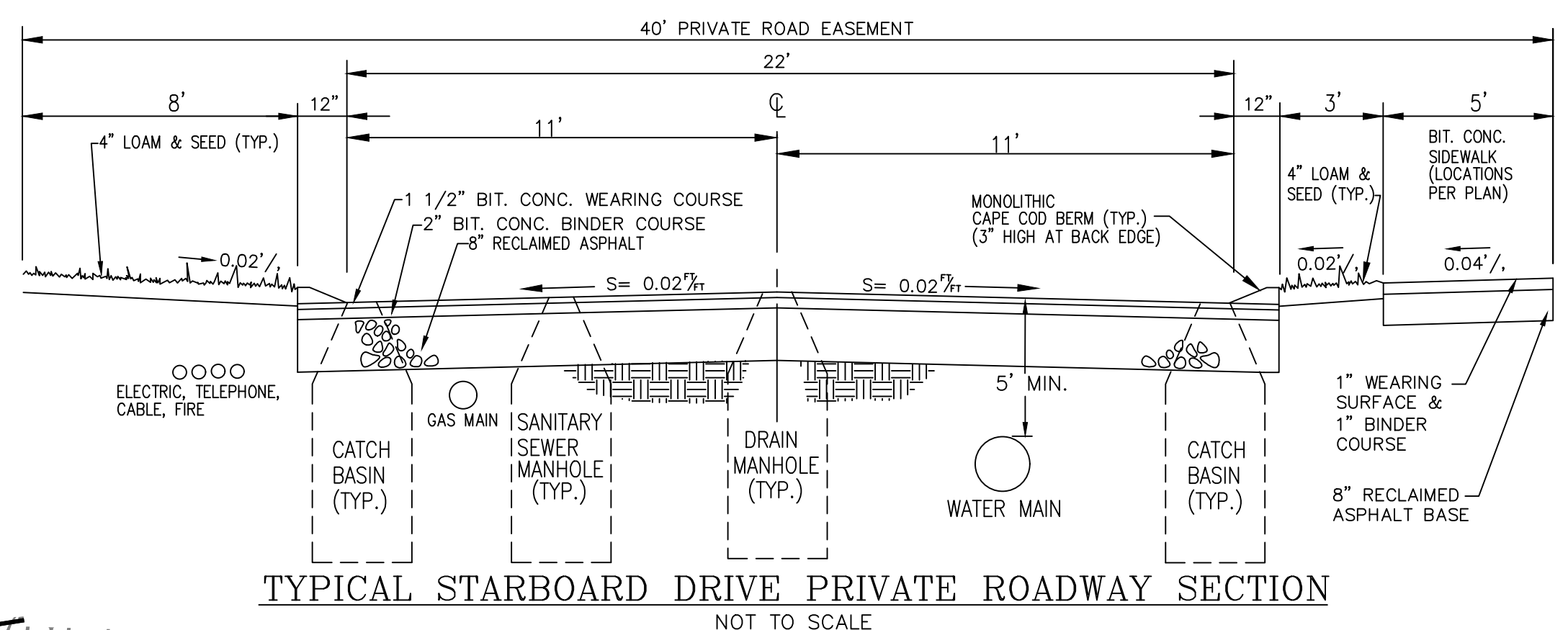
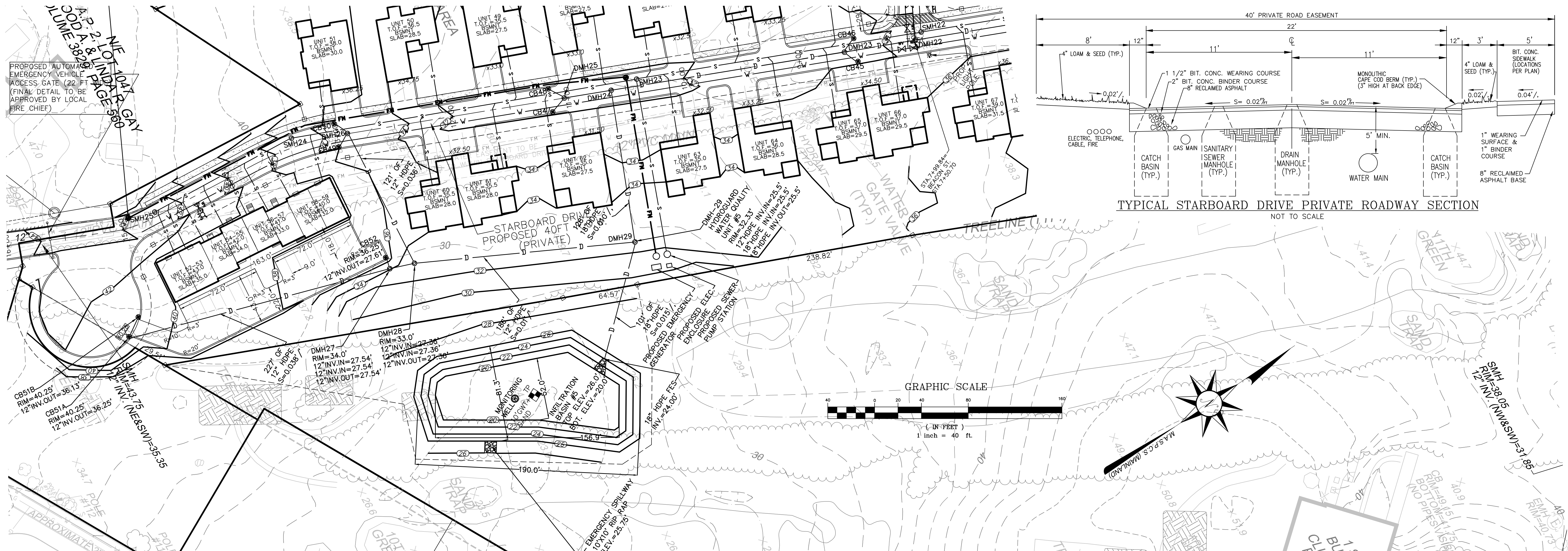


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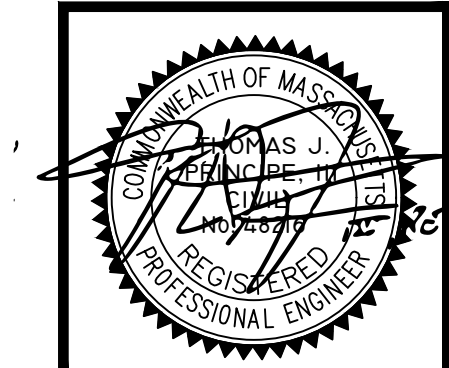
REVISIONS				
No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=40' SHEET NO: 13 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



ROADWAY PLAN & PROFILE - 2

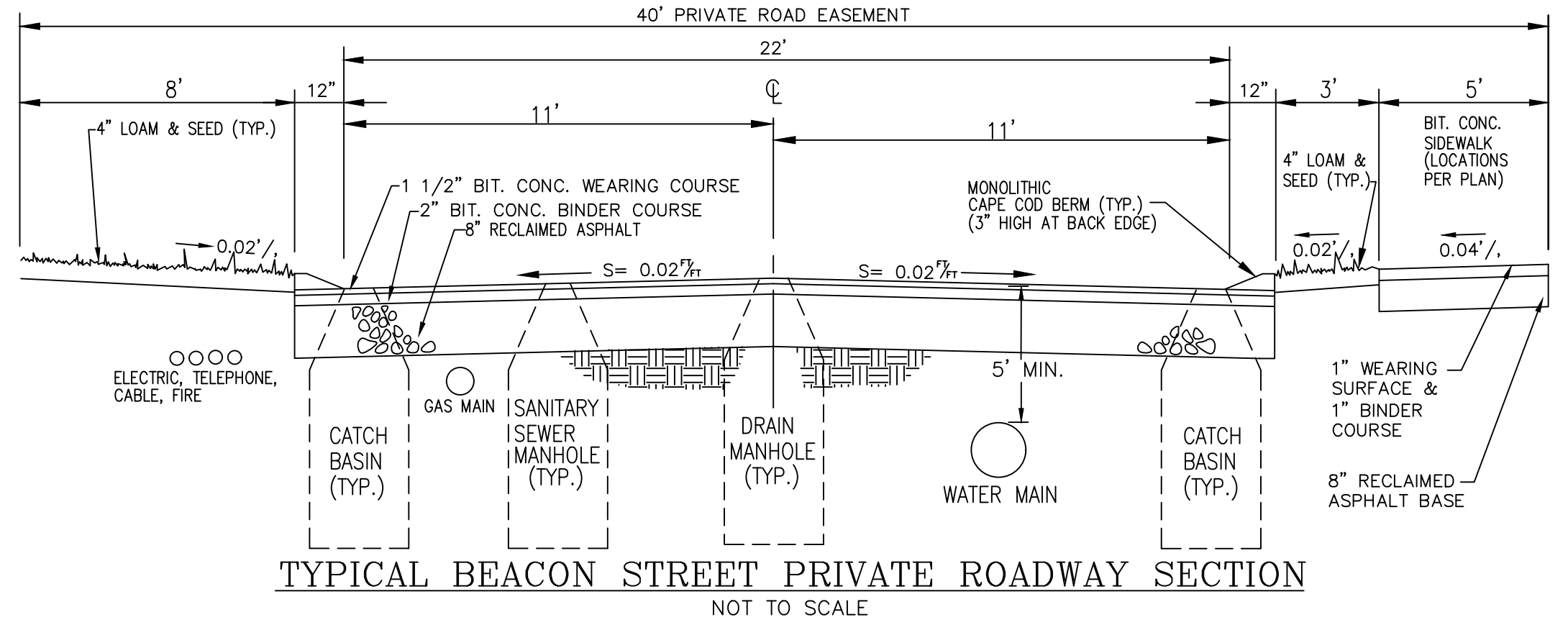
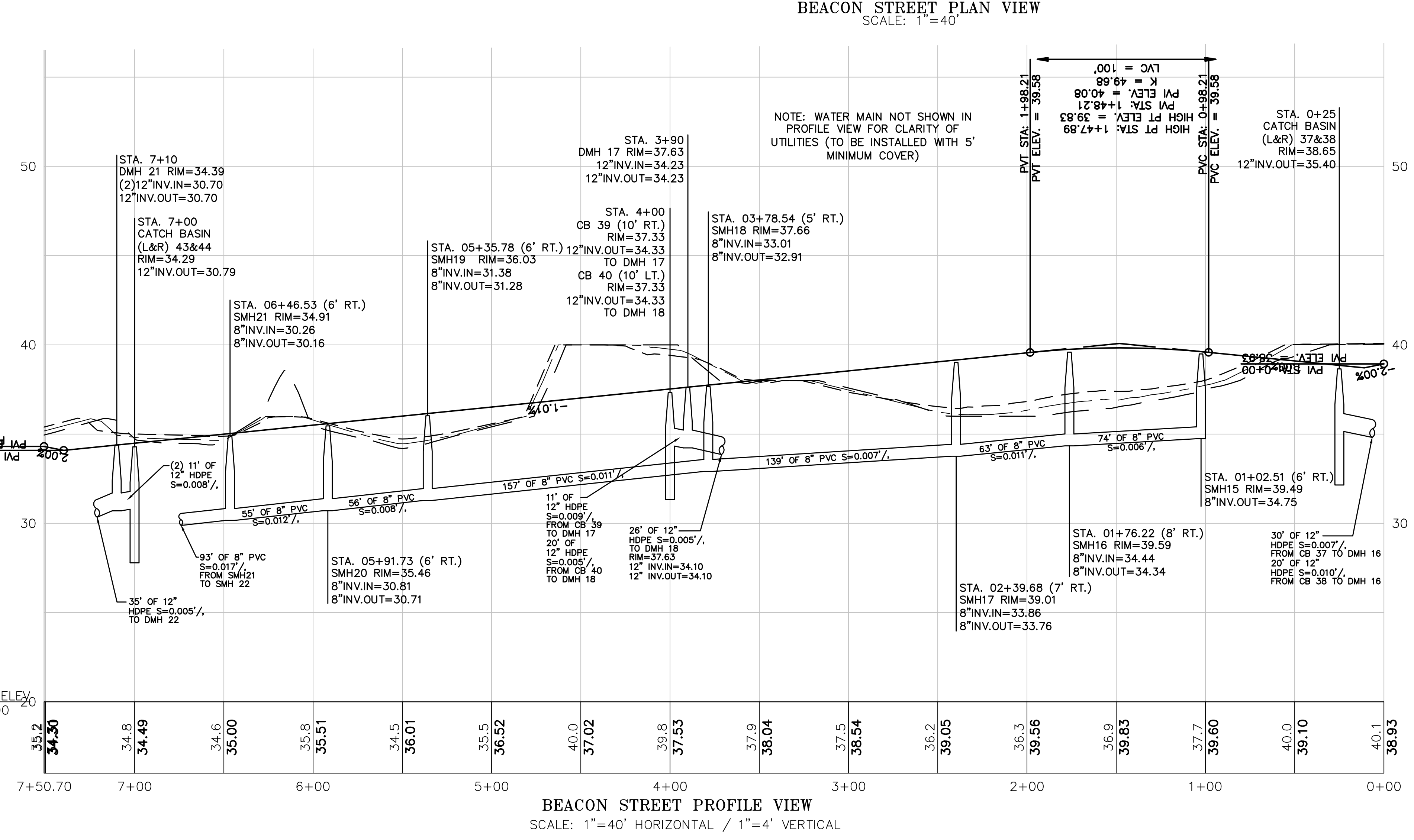
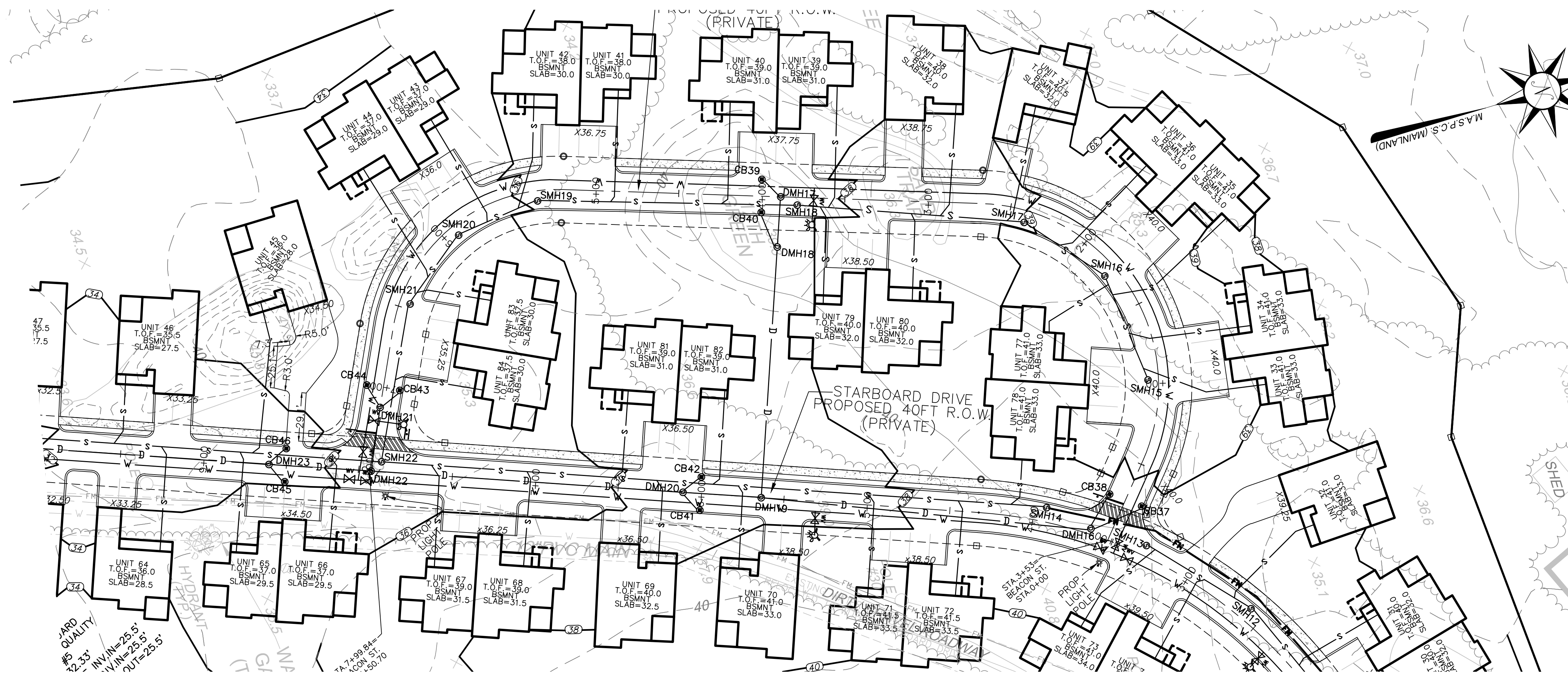


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ESTABLISHED IN 1981

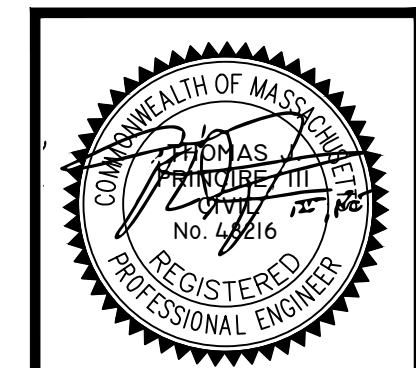
REVISIONS				
No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
DEFINITIVE PLAN SUBMISSION
for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=40' SHEET NO: 14 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



ROADWAY PLAN & PROFILE - 3

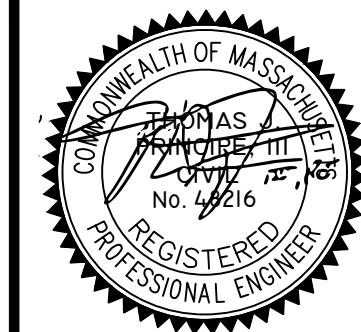


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REVISIONS				
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1.	7-14-21	JAR	TJP	

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SCALE: 1"=40' SHEET NO: 15 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



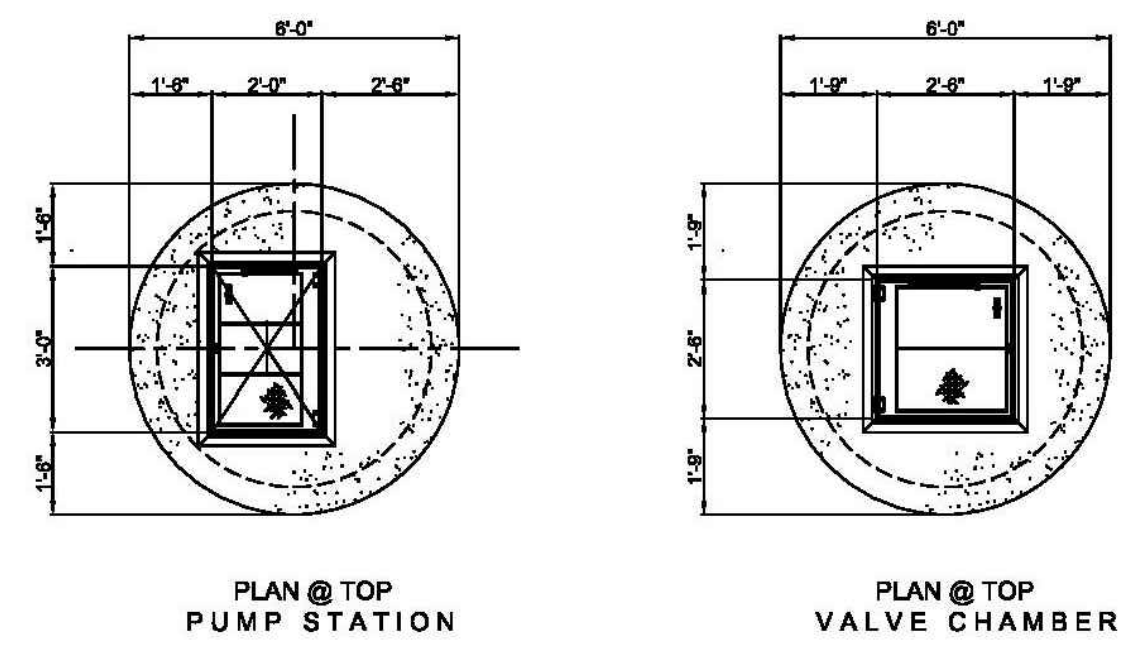
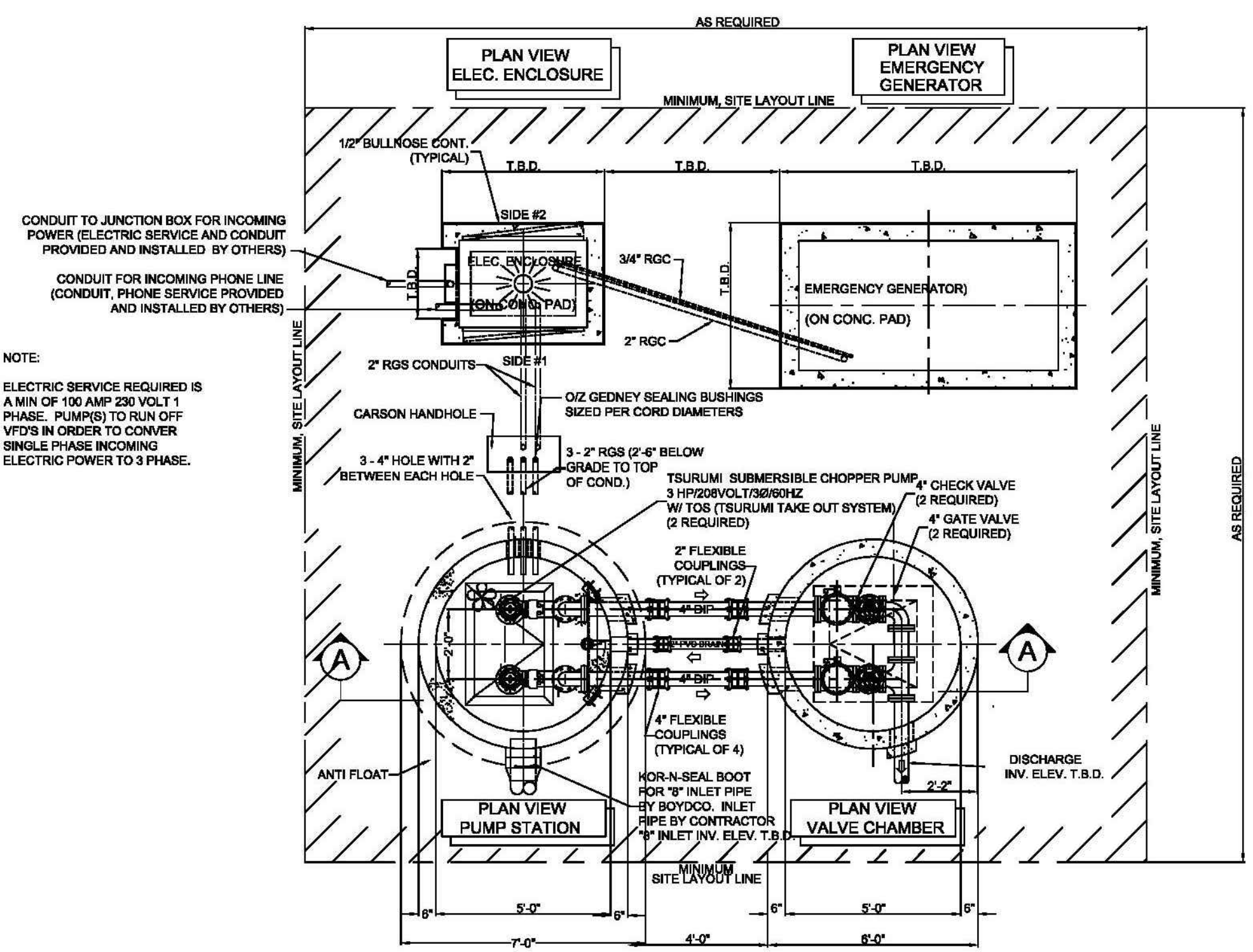
PRINCIPE COMPANY, INC.
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 ESTABLISHED IN 1971

REVISIONS			
No.	DATE	DRWN	CHKD

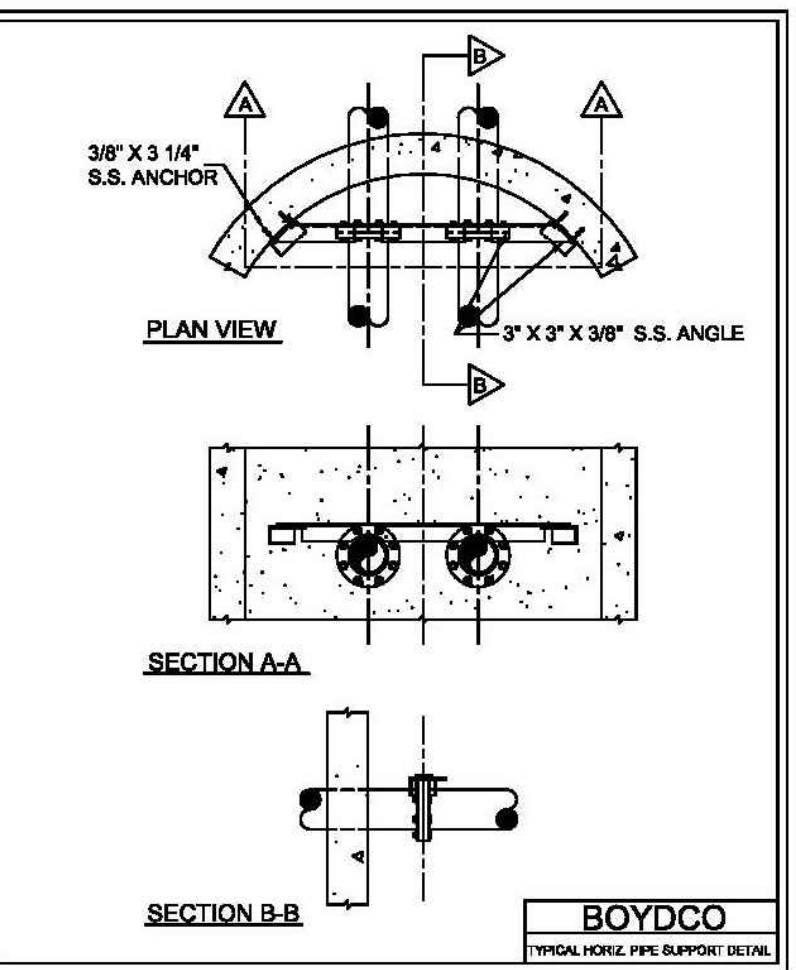
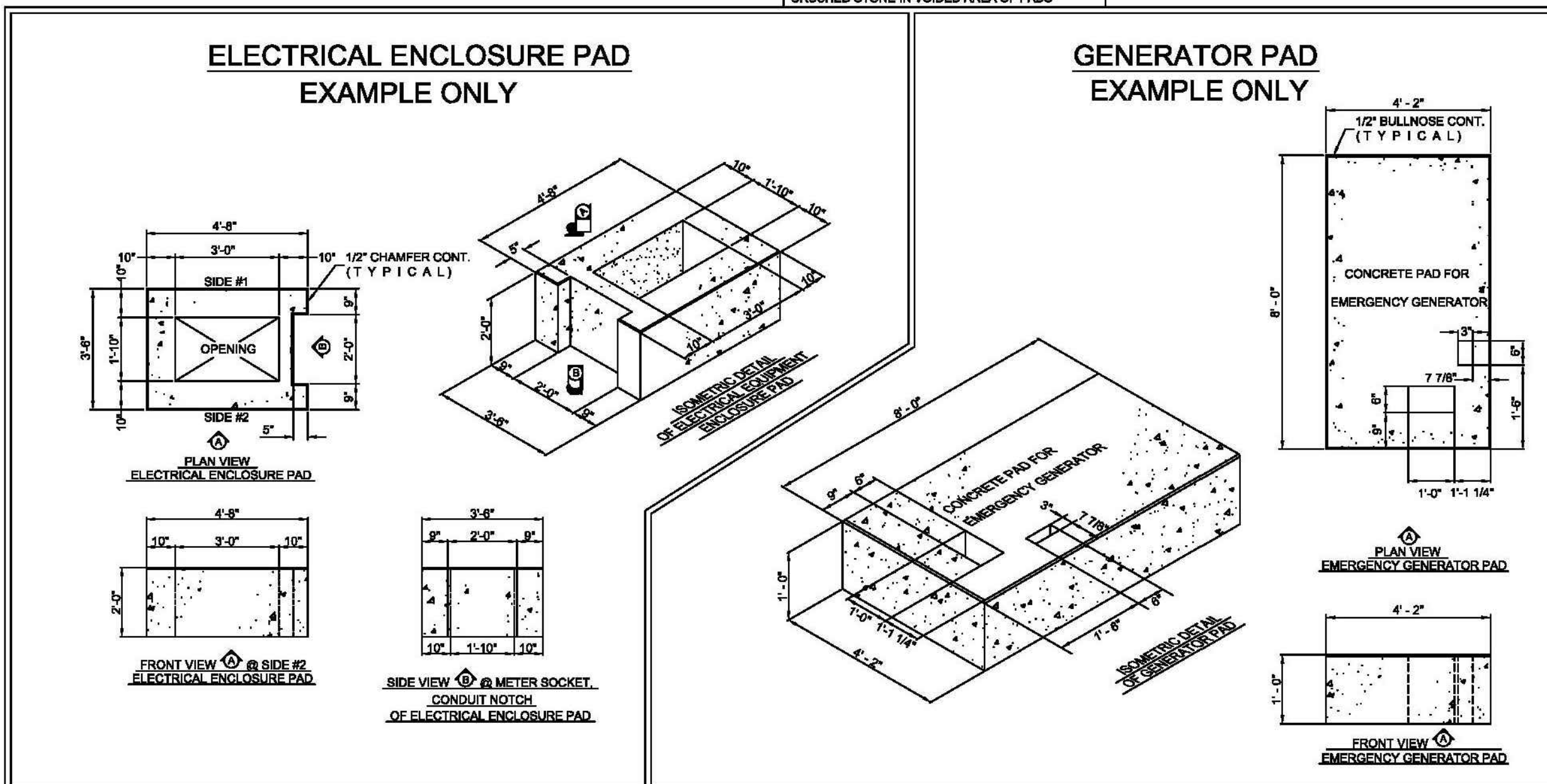
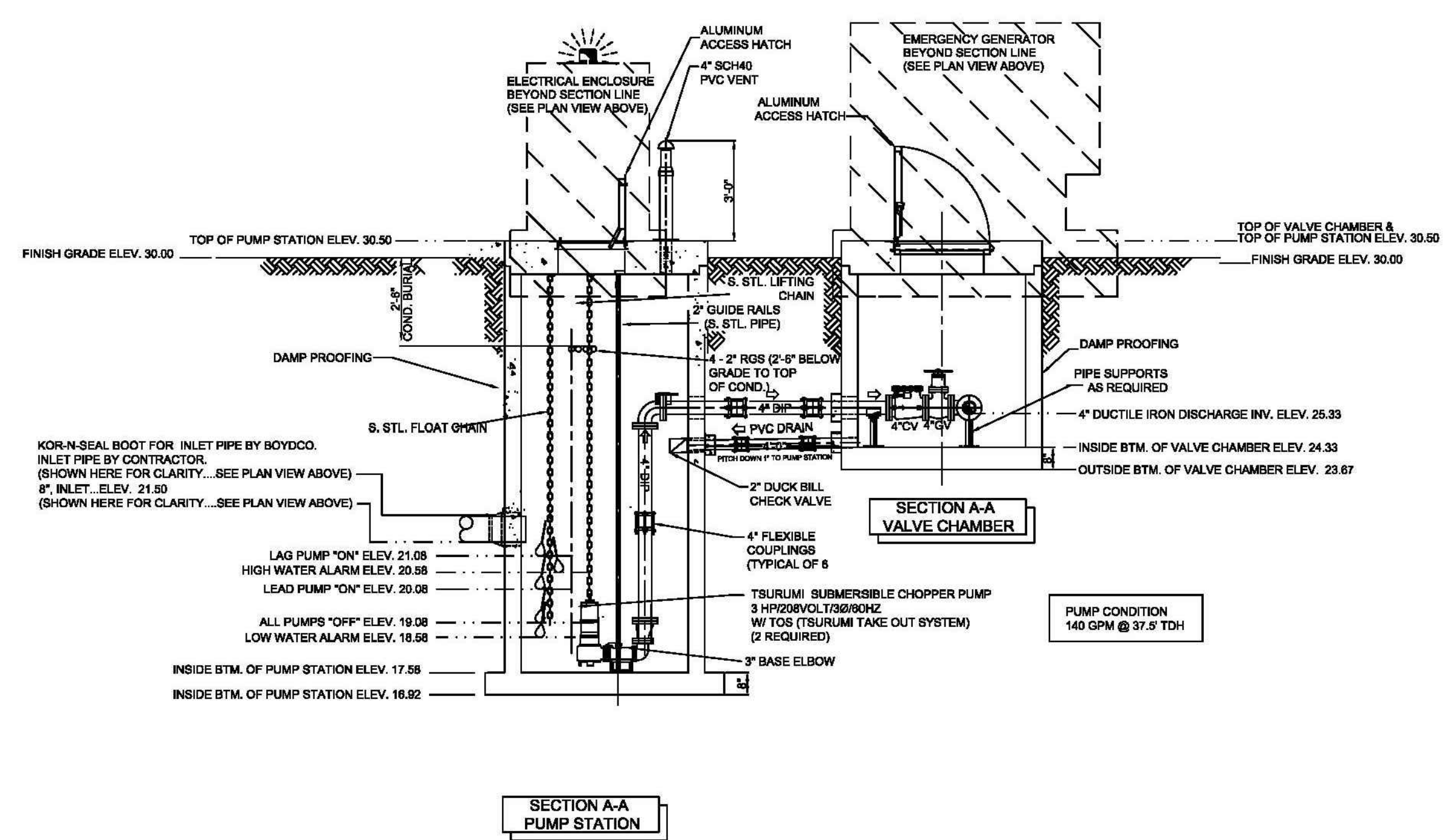
MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
 DEFINITIVE PLAN SUBMISSION
 for
BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III
 WAREHAM, MASSACHUSETTS

SCALE: AS NOTED SHEET NO: 16 OF 21
 DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
 DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

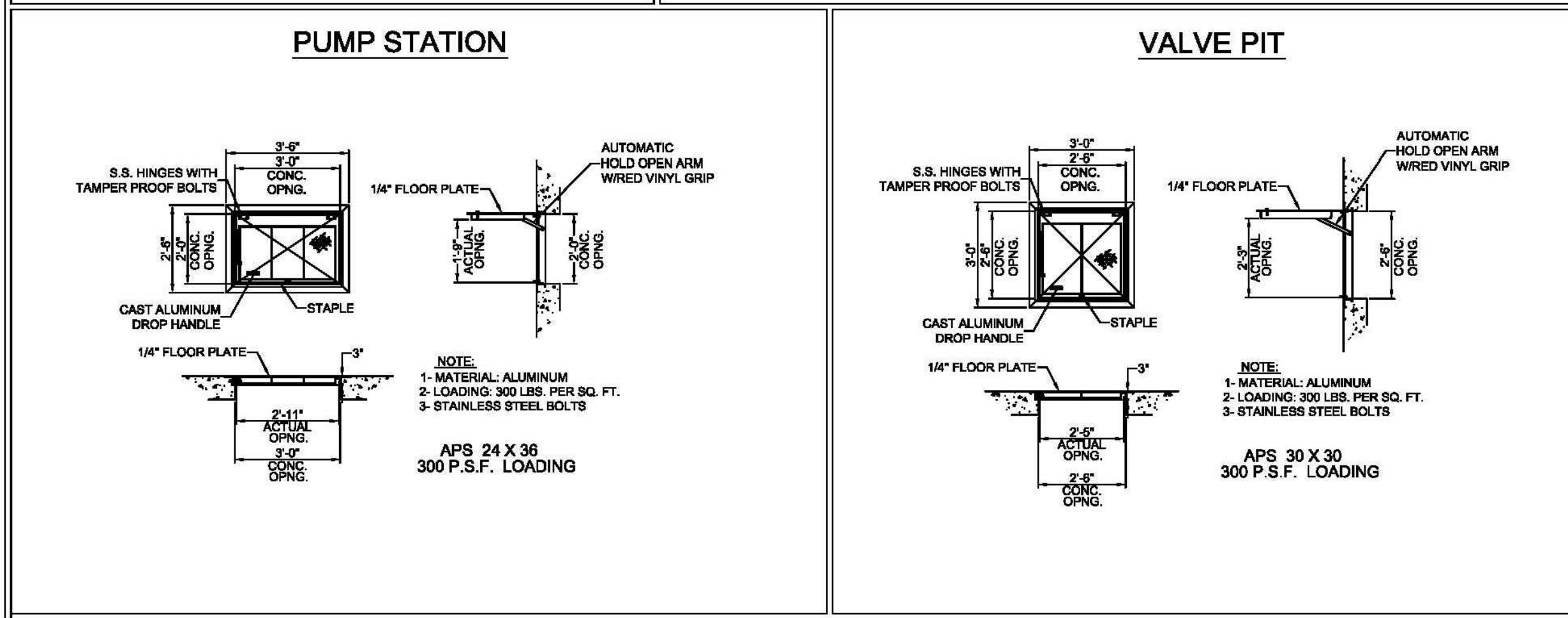
DETAIL SHEET - 1



NOTE:
 ELECTRICAL EQUIPMENT & GENERATOR PAD SIZES ARE TO BE DETERMINED BASED ON ACTUAL SIZE OF APPROVED ELECTRICAL EQUIPMENT ENCLOSURES AND GENERATOR. GENERATOR AND ELECTRICAL EQUIPMENT CONCRETE PADS ARE TO BE REINFORCED WITH #6 REBAR 12\"/>



NOTES:
 THIS IS A PRELIMINARY DRAWING. ORIENTATION OF INLETS AND DISCHARGE PIPING MAY CHANGE.
 ELECTRICAL EQUIPMENT SHOWN REQUIRED TO BE DETERMINED.
 ELECTRICAL EQUIPMENT ENCLOSURE PAD AND GENERATOR PAD SIZES ARE TO BE DETERMINED ON ACTUAL EQUIPMENT BEING PROVIDED.



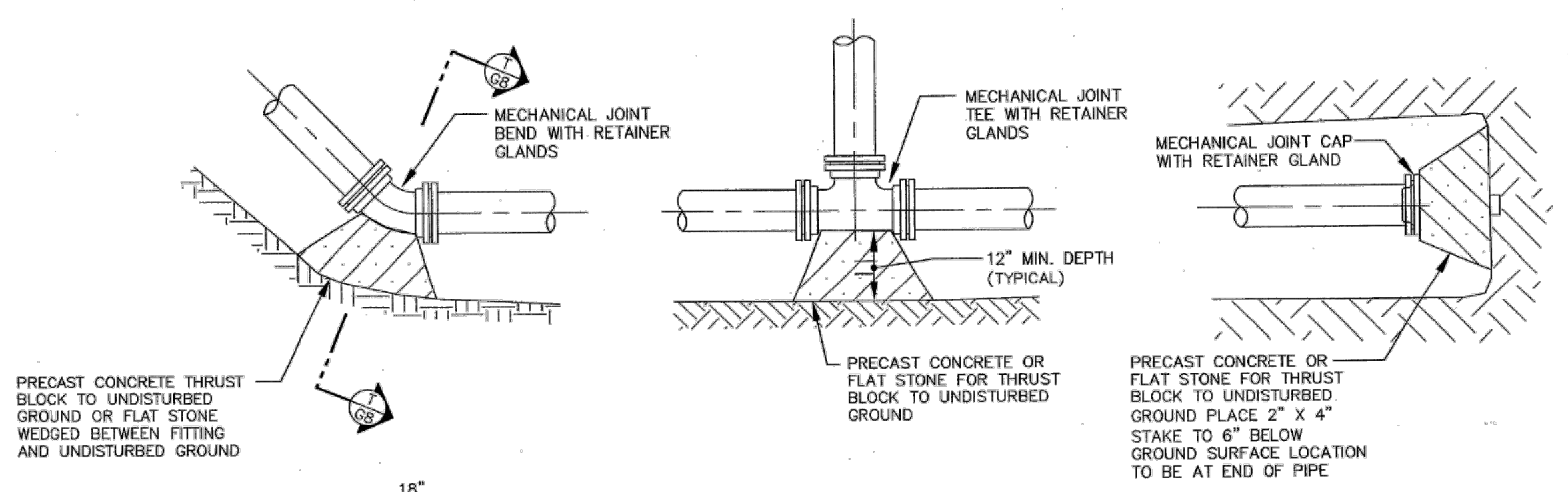
PRELIMINARY DRAWING

BOYDCO
 101 COMMERCIAL WAY
 EAST PROVIDENCE, RI 02914

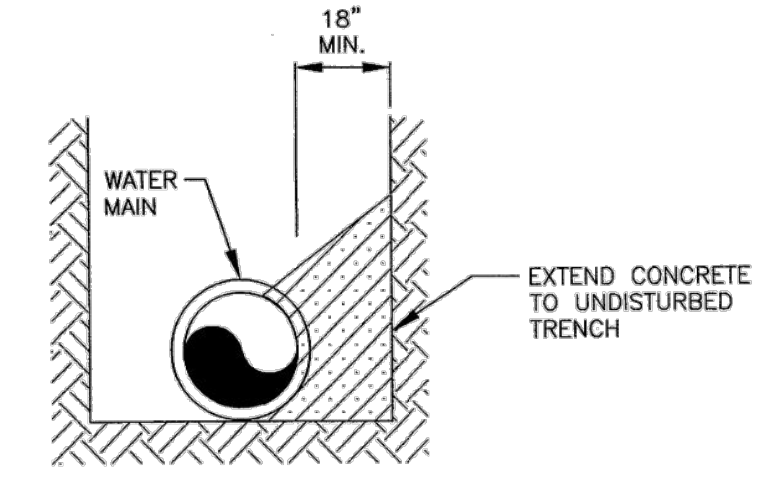
JOB TITLE: **BAY POINT PUMPING STATION**

SHEET DESCRIPTION: **PLANS, ELEVATIONS & DETAILS**

DRAWN BY: CB APPROVED BY: SCALE: NONE
 DATE: 11/27/18 DRAWING NO:



TYPICAL THRUST BLOCK DETAILS
NOT TO SCALE



1/CS NOT TO SCALE

PIPE DIAMETER	BENDS				TEE
	11.25	22.5	45	90	
6	1	1	1	2	1.5
8	1	1	2	3	2.5
12	1	2	3.5	6.5	5

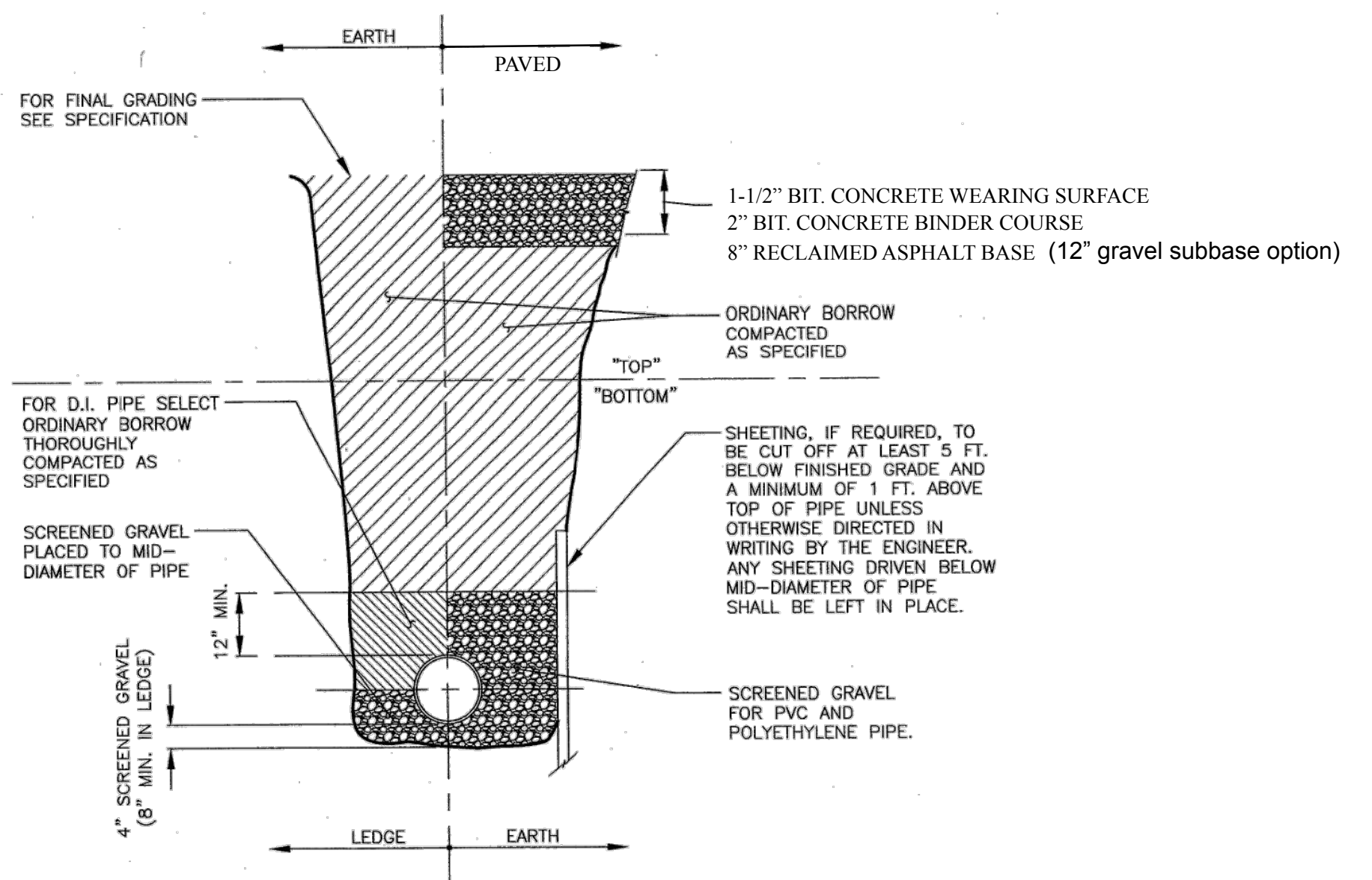
THRUST BLOCK BEARING AREA (SF)
(BASED UPON 100 PSI WATER PRESSURE AND 3000 PSF BEARING LOAD CAPACITY)

THRUST BLOCK TABLE

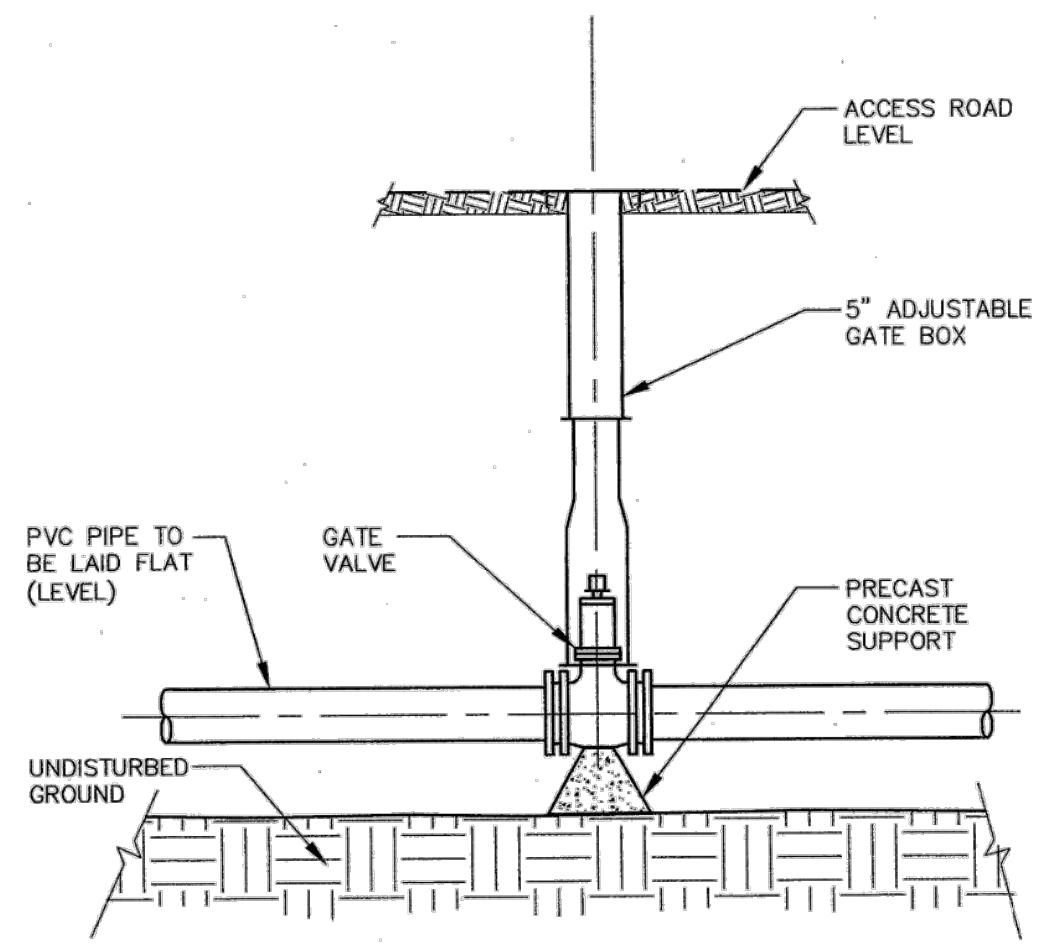
	FITTINGS	RESTRAINED LENGTH (ft)
DUCTILE IRON WATER MAIN	8" 90° BEND	31
	8" 60° BEND	18
	8" 45° BEND	13
	8" 30° BEND	8
	8" 22.5° BEND	6
	8" 11.25° BEND	3
	8" x 8" TEE	52
	10" x 8" REDUCER	45
	8" x 6" REDUCER	34
	PVC WATER MAIN	12" 90° BEND
12" 60° BEND		35
12" 45° BEND		24
12" 30° BEND		16
12" 22.5° BEND		12
12" 11.25° BEND		6
12" x 12" TEE		87
12" x 8" REDUCER		59
12" DEAD END	104	

MINIMUM ONE RESTRAINED PIPE TO PIPE JOINT

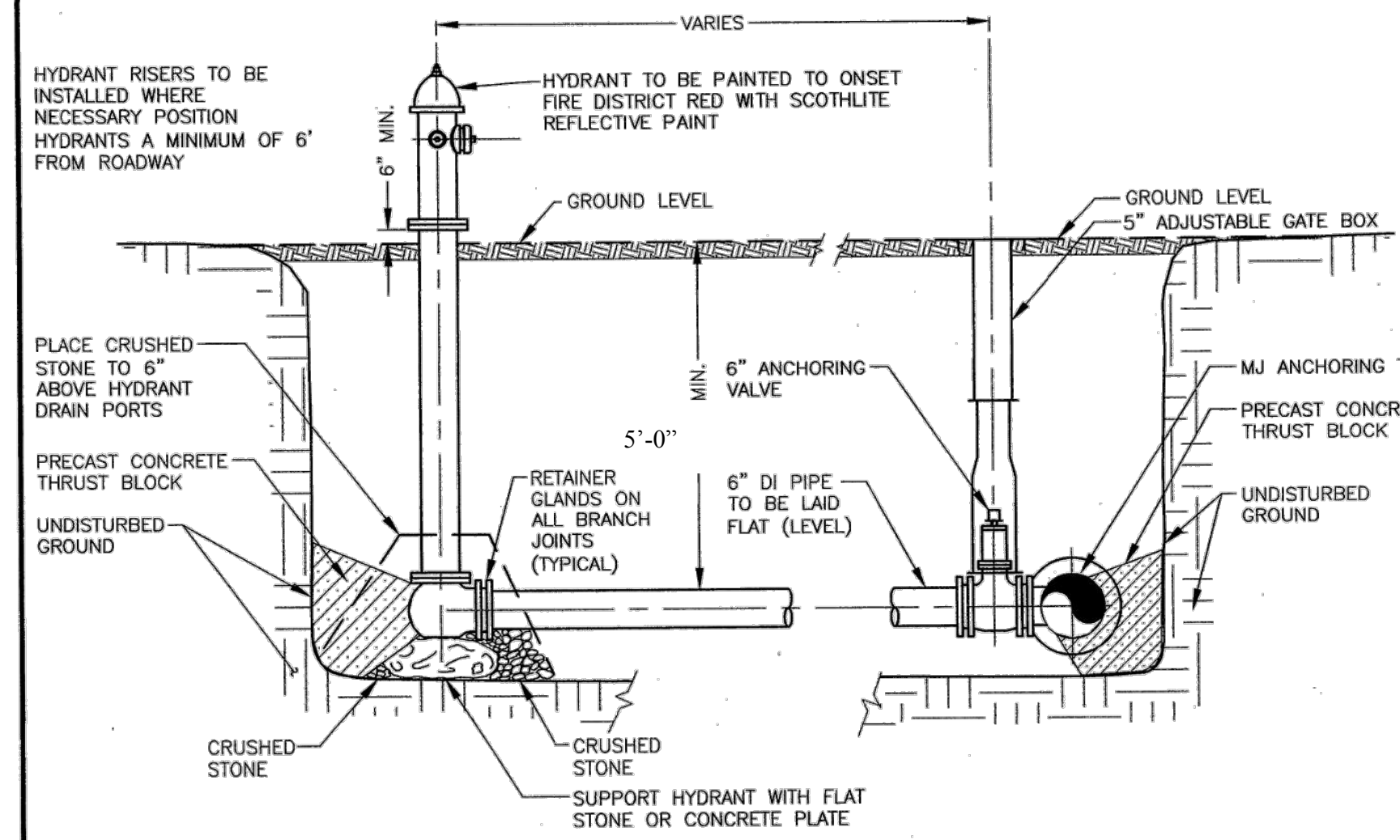
PUSH-ON-JOINT RESTRAINT TABLE



TYPICAL TRENCH
NOT TO SCALE



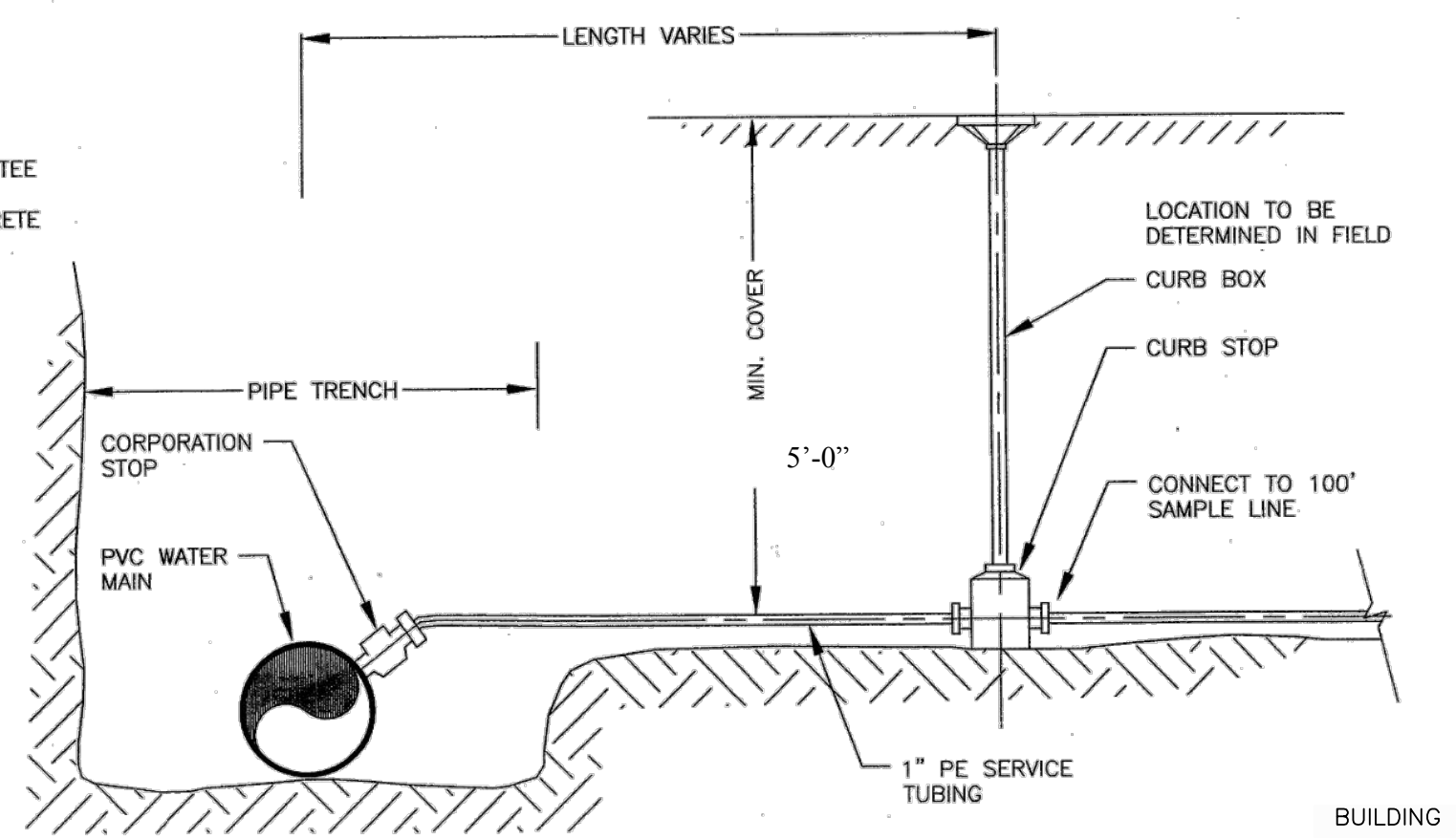
TYPICAL GATE VALVE INSTALLATION
NOT TO SCALE



TYPICAL HYDRANT ASSEMBLY INSTALLATION
NOT TO SCALE

NOTES:

- FOR HYDRANTS INSTALLED AT DEAD END OF WATER MAINS: INSTALL VALVE WITH RESTRAINED JOINTS AND ONE FULL LENGTH OF PIPE BETWEEN VALVE AND HYDRANT WITH RESTRAINED JOINTS.
- THE THRUST BLOCK MUST NOT BLOCK THE HYDRANT DRAIN.



100' SAMPLE LINE
NOT TO SCALE



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REVISIONS			
No.	DATE	DRWN	CHKD
1	7/14/21		

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
DEFINITIVE PLAN SUBMISSION
for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: AS NOTED	SHEET NO: 17 OF 21
DRAWN BY: TJP	DESIGN BY: TJP
DATE: 5/26/21	CHECKED BY: TJP
	PROJECT NO.: LD13-1 PH II/III

GENERAL NOTES:

- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH ANY APPLICABLE LOCAL, STATE AND FEDERAL LAWS GOVERNING HIS INTENDED ACTIVITIES. OSHA REGULATIONS ARE APPLICABLE OF PROJECT SITE CONSTRUCTION ACTIVITIES.
- ALL CONSTRUCTION WILL BE UNDERTAKEN IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE TOWN OF WARREN.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITIES, STRUCTURES, AND ABUTTING PROPERTIES. THE COST OF ANY REPAIR OR REPLACEMENT OF DAMAGED ITEMS SHALL BE BORNE BY THE CONTRACTOR.
- IF THE MUNICIPALITY REQUIRES A PROJECT PRE-CONSTRUCTION CONFERENCE, THE PROJECT DEVELOPER AND THE PROJECT CONTRACTOR WILL ATTEND AND WILL PROVIDE ALL REQUESTED MATERIALS PRIOR TO COMMENCING ANY WORK.
- IF CEMENT CONCRETE MIX TRUCKS ARE TO BE WASHED OUT ON SITE, THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A WASH OUT AREA WITH APPROPRIATE PROTECTION CONTROLS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING COLLECTION AND STORAGE LOCATIONS ON-SITE FOR ALL CONSTRUCTION DEBRIS AND TRASH SO THAT THIS MATERIAL DOES NOT BECOME A NEIGHBORHOOD NUISANCE.
- ALL REQUIRED SITE IMPROVEMENTS SHALL BE INSPECTED BY THE TOWN ENGINEER TO ENSURE SATISFACTORY COMPLETION. IN NO CASE SHALL THE INSTALLATION OF ANY IMPROVEMENTS BE STARTED UNTIL PRIOR NOTIFICATION IS GIVEN TO THE TOWN ENGINEER. AT LEAST A 48-HOUR NOTICE SHALL BE GIVEN TO THE TOWN ENGINEER PRIOR TO ANY SUCH START OF CONSTRUCTION. A FINAL INSPECTION OF ALL SITE IMPROVEMENTS, UTILITIES AND GRADING WILL BE MADE TO DETERMINE WHETHER THE WORK IS SATISFACTORY AND IN SUBSTANTIAL AGREEMENT WITH THE APPROVED FINAL CONSTRUCTION DRAWING AND THE TOWN SPECIFICATIONS.
- LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY LOCATIONS OF ALL EXISTING UTILITIES BOTH UNDERGROUND AND OVERHEAD. ANY DAMAGE TO EXISTING UTILITIES AS SHOWN OR NOT SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE BORNE BY THE CONTRACTOR. NO EXCAVATION SHALL BE DONE UNTIL ALL INVOLVED UTILITY COMPANIES ARE NOTIFIED 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY DIG-SAFE (1-800-344-7233) A MINIMUM OF 48 WORKING HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF ANY EXCAVATION AND/OR BLASTING WORK. THE NAME OF THE COMPANY PERFORMING THE EXCAVATION AND/OR BLASTING WORK MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY, BUT NOT LIMITED TO, THE COMMONWEALTH OF MASSACHUSETTS, THE FEDERAL GOVERNMENT, THE TOWN OF NORTH ATTLEBOROUGH AND ALL INDIVIDUAL UTILITY COMPANIES PRIOR TO COMMENCING ANY WORK.
- ALL MATERIAL FOR FILL SHALL BE CLEAN AND FREE OF MATTER WHICH COULD POLLUTE ANY DOWN STREAM WATERCOURSE.
- FILL MATERIAL SHALL BE COMPACTED IN ONE FOOT (MAXIMUM) LIFTS TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-1557 (MODIFIED PROCTOR TEST).

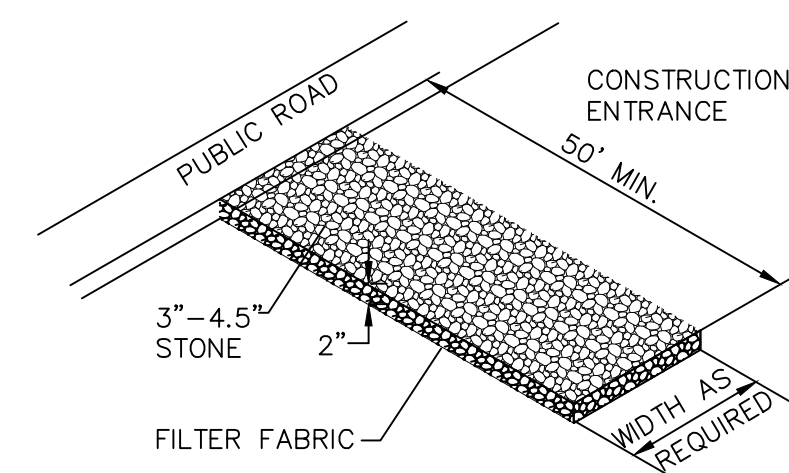
VEGETATIVE COVER AND PLANTING

- THE NORMAL ACCEPTABLE SEASONABLE SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
 - TOP SOIL FOR PERMANENT OR LONG TERM TEMPORARY SEEDING SHOULD HAVE A SANDY LOAM TEXTURE, RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS. TOP SOIL SHALL CONFORM WITH RHODE ISLAND SPECIFICATIONS M18.01.
 - THE DESIGN SEED MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEEDDED SHALL BE COMPRISED OF THE FOLLOWING:
- | TYPE | % BY WEIGHT | SEEDING DATE |
|---------------------|-------------|-------------------|
| CREEPING RED FESCUE | 70 | |
| ASTORIA BENTGRASS | 5 | APRIL 1 - JUNE 15 |
| BIRDFOOT TREFOIL | 15 | AUG. 15 - OCT. 15 |
| PERENNIAL RYE GRASS | 10 | |
- APPLICATION RATE - 100 LBS PER ACRE

SEED MIX SHALL BE INOCULATED WITHIN 24 - HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULATION FOR EACH SEED VARIETY. ALTERNATE SEED TYPES DUE TO SITE SPECIFIC CONDITIONS AND SOILS ARE ACCEPTABLE WITH THE ENGINEER'S APPROVAL.

4. IN TOPSOIL SEEDING AREAS, THE CONTRACTOR WILL LIME AND FERTILIZE AS REQUIRED TO COMPLIMENT OR UPGRADE SOIL CONDITIONS.

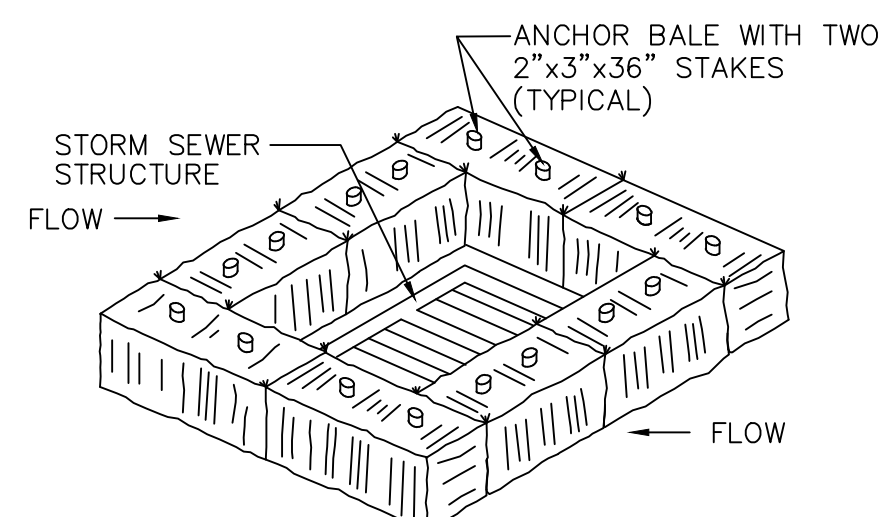
5. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY PERMANENT VEGETATIVE COVER AREAS THAT DO NOT DEVELOP OR WHICH ERODE WITHIN A ONE (1) YEAR PERIOD.



MATERIALS SIZE			
SQUARE MESH SIEVES	2" CRUSHED STONE OR GRAVEL	ASTM C-33 NO. 2	ASTM C-33 NO. 3
	% FINER	% FINER	% FINER
2-1/2 INCHES	100	90-100	100
2 INCHES	95-100	35-70	90-100
1-1/2 INCHES	30-55	0-15	35-70
1-1/4 INCHES	0-25	-	-
1 INCH	0-5	-	0-15
3/4 INCH	-	0-5	-
1/2 INCH	-	-	0-5
3/8 INCH	-	-	-

RIP-RAP STABILIZATION PAD @ CONSTRUCTION ENTRANCE
NOT TO SCALE

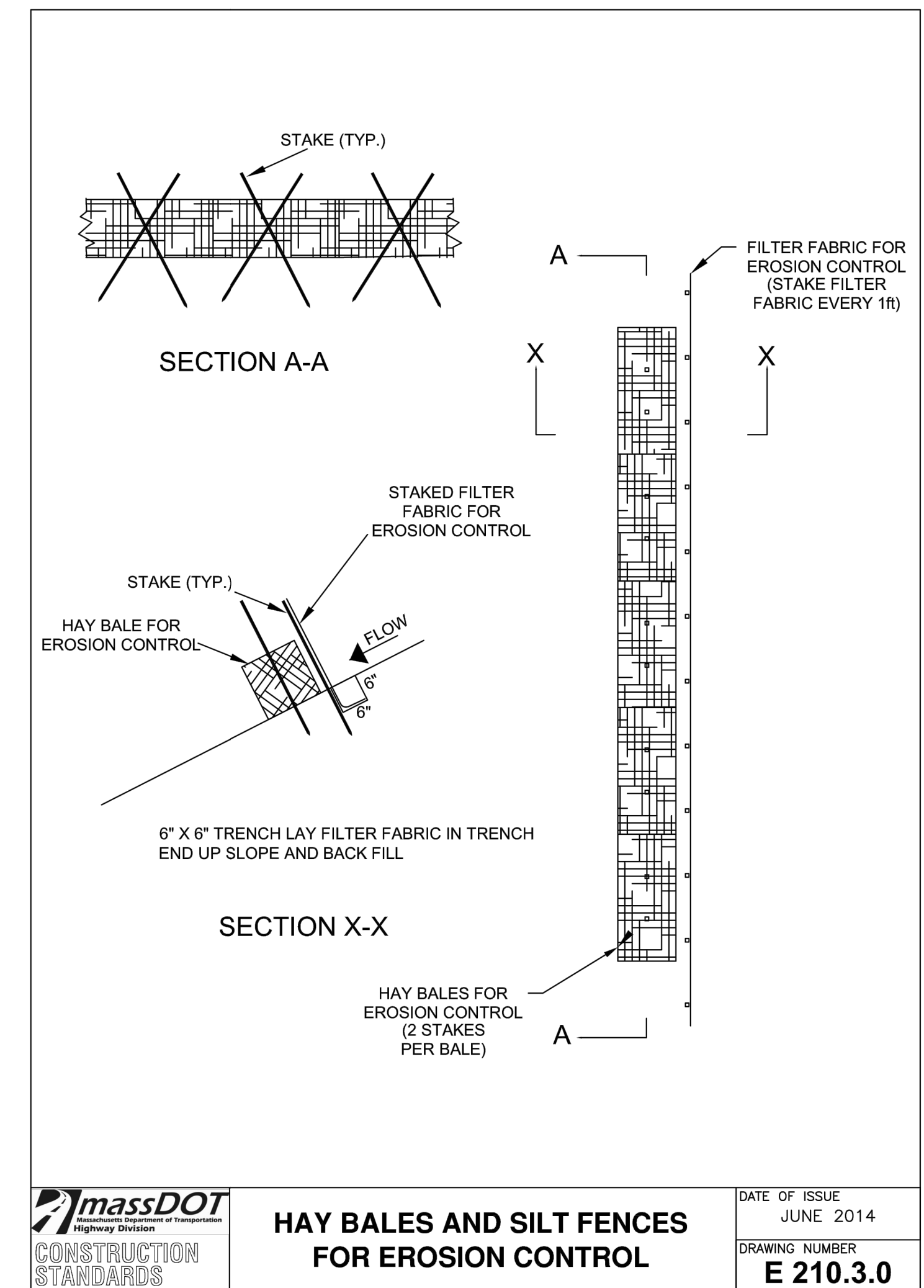
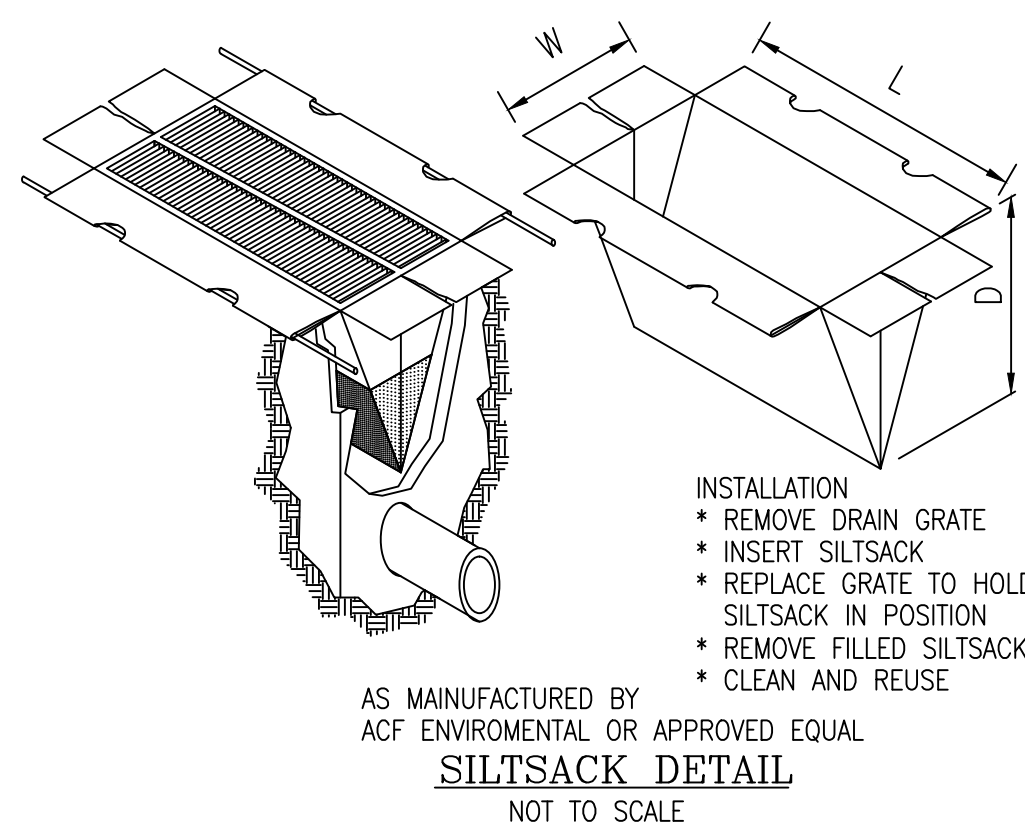
NOTE: WHERE INDICATED ON THE PLANS, CATCH BASIN GRATE SHALL INITIALLY BE SET 1'-0" HIGHER THAN DESIGN ELEVATION TO ALLOW FOR SEDIMENTATION. AFTER VEGETATIVE COVER HAS BEEN ESTABLISHED, RIM SHALL BE LOWERED TO DESIGN ELEVATION.



STRAW BALE CATCH BASIN PROTECTION
NOT TO SCALE

SILT FENCE AND/OR HAYBALES
5' MAXIMUM FROM TOE OF SLOPE

STOCKPILE DETAIL
NOT TO SCALE



massDOT CONSTRUCTION STANDARDS
HAY BALES AND SILT FENCES FOR EROSION CONTROL
DATE OF ISSUE: JUNE 2014
DRAWING NUMBER: **E 210.3.0**

EROSION CONTROL, SOIL STABILIZATION AND SEDIMENT CONTROL PLAN

- PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRUBBING, DEMOLITION OR EARTHWORK ACTIVITY, TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE PLANS ARE TO BE INSTALLED BY THE CONTRACTOR.
- CONSTRUCTION ACCESS STABILIZATION ENTRANCE PADS ARE TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE GRUBBING OR EARTHWORK ACTIVITY.
- EXISTING CATCH BASINS ARE TO BE PROTECTED WITH HAY BALES AND/OR SILT SACKS PRIOR TO THE START OF SITE GRUBBING, EARTHWORK OR UNDERGROUND UTILITY AND DRAINAGE INFRASTRUCTURE INSTALLATION TO SERVE THE DEVELOPMENT SITE.
- THE PROJECT CONSTRUCTION SEQUENCE, TO THE EXTENT PRACTICAL, SHOULD REQUIRE THE INSTALLATION OF DOWN GRADE AND OFF SITE STORM DRAINAGE SYSTEM IMPROVEMENTS BEFORE THE START OF SITE GRUBBING AND EARTHWORK ACTIVITY.
- TEMPORARY SITE SLOPE TREATMENTS FOR SOIL STABILIZATION SHALL CONSIST OF HAY, STRAW, FIBER MULCH, RIP RAP OR PROTECTIVE COVERS SUCH AS MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, AND EXCELSIOR OR EQUAL PRODUCTS). THESE AND OTHER ACCEPTABLE MEASURES SHALL BE INCORPORATED INTO THE SITE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
- CONSTRUCTION SITES ARE DYNAMIC. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND OR MOVEMENT AND MAINTENANCE OF EROSION CONTROLS, SOIL STABILIZATION AND SEDIMENT CONTROL MEASURES AS NEEDED TO MAXIMIZE THE INTENT OF THE PLAN FOR ALL SITE CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERIODIC INSPECTION, MAINTENANCE, REPAIR, AND REPLACEMENT OF EROSION CONTROLS, SOIL STABILIZATION AND SEDIMENT CONTROL DEVICES UNTIL AN ACCEPTABLE PERMANENT VEGETATIVE GROWTH IS ESTABLISHED. THE CONTRACTOR SHALL MAINTAIN A DETAIL LOG OF ALL EROSION CONTROL INSPECTIONS, COMPLAINTS RELATED TO EROSION OR SEDIMENT, AND CORRECTIVE REMEDIAL MEASURES TAKEN THROUGHOUT THE COURSE OF THE PROJECT CONSTRUCTION.
- SOIL EROSION AND SEDIMENT CONTROL IS NOT LIMITED TO DAMAGES CAUSED BY WATER BUT ALSO INCLUDES EROSION AND SEDIMENT RESULTING FROM WINDS. MEASURES, SUCH AS TEMPORARY GROUND COVERS, WATER AND CALCIUM APPLICATIONS ARE TO BE UNDERTAKEN AS NEEDED TO MINIMIZE WIND RELATED SOIL AND DUST CONTROL.
- STOCK PILES OF EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS OR WETLANDS. STOCK PILES SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%). STOCK PILES SHALL BE SURROUNDED ON THE DOWN GRADIENT OF THE EXISTING GROUND SURFACE BY HAY BALES OR SILT FENCE. THE STOCK PILES SHALL ALSO BE SEEDDED OR STABILIZED IN SOME MANNER TO PREVENT SOIL EROSION.
- THE SMALLEST POSSIBLE SITE AREAS SHALL BE DISTURBED OR EXPOSED AT ONE TIME AND DENUDE SLOPES OR WORK AREAS SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME, SUCH AS INACTIVE PERIODS OR SITE WORK SHUT DOWNS.
- TO THE EXTENT POSSIBLE, ALL DISTURBED AREAS MUST BE SEEDDED OR STABILIZED WITHIN THE CONSTRUCTION SEASON. STABILIZATION OF ONE FORM OR ANOTHER SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
- EXPOSED STEEP OR LONG SLOPES SHOULD BE TREATED WITH "CRIMPING" OR "TRACKING" TO REDUCE EROSION AND SEDIMENT AND TO TACK DOWN SEEDING OR MULCH APPLICATIONS.
- IF CONCRETE IS TO BE USED ON SITE, THE CONTRACTOR MUST ESTABLISH AND MAINTAIN SPECIFIC WASHOUT AREAS FOR THE CONCRETE TRUCKS WITH APPROPRIATE PROTECTION CONTROLS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING COLLECTION AND STORAGE LOCATIONS ON-SITE FOR ALL CONSTRUCTION DEBRIS AND TRASH SO THAT THIS MATERIAL DOES NOT BECOME A NEIGHBORHOOD NUISANCE.
- EXISTING TREES AND VEGETATION WILL BE RETAINED WHENEVER FEASIBLE.
- SITE SOIL EROSION AND SOIL STABILIZATION AND SEDIMENT CONTROLS MUST CONFORM TO ALL REQUIREMENTS OF THE APPLICABLE LOCAL COMMUNITY ORDINANCES AND STATE REGULATIONS.

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DRAWING NUMBER: **E 210.3.0**

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL

DEFINITIVE PLAN SUBMISSION

for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in
WAREHAM, MASSACHUSETTS

SCALE: AS NOTED

DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP

DATE: 5/26/21

SHEET NO: 18 OF 21

PROJECT NO.: LD13-1 PH II/III

Introduction

The Hydroguard is a state of the art hydrodynamic separator. Hydrodynamic separators remove solids, debris and lighter than water (oil, trash, floating debris) pollutants from stormwater. Hydrodynamic separators and other water quality measures are mandated by regulatory agencies (Town/City, State, Federal Government) to protect storm water quality from pollution generated by urban development (traffic, people) as part of new development permitting requirements.

As storm water treatment structures fill up with pollutants they become less and less effective in removing new pollution. Therefore it is important that storm water treatment structures be maintained on a regular basis to ensure that they are operating at optimum performance. The Hydroguard is no different in this regard and this manual has been assembled to provide the owner/operator with the necessary information to inspect and coordinate maintenance of their Hydroguard.

Hydroworks® HG Operation

The Hydroworks HG separator is unique since it treats both high and low flow rates in one device, but maintains separate flow paths for low and high flows. Accordingly, high flows do not scour out the fines that are settled in the low flow path since they are treated in a separate area of the device as shown in Figure 1.

The HG separator consists of three chambers:

1. an inner chamber that treats low or normal flows
2. a middle chamber that treats high flows
3. an outlet chamber where water is discharged to the downstream storm system

Under normal or low flows, water enters the middle chamber and is conveyed into the inner chamber by momentum. Since the inner chamber is offset to one side of the structure the water strikes the wall of the inner chamber at a tangent creating a vortex within the inner chamber. The vortex motion forces solids and floatables to the middle of the inner chamber. The water spirals down the inner chamber to the outlet of the inner chamber which is located below the inlet of the inner chamber and adjacent to the wall of the structure but above the floor of the structure. Floatables are trapped since the outlet of the inner chamber is submerged. The design maximizes the retention of settled solids since solids are forced to the center of the inner chamber by the vortex motion of water while the outlet of the inner chamber draws water from the wall of the inner chamber.

The water leaving the inner chamber continues into the middle chamber, again at a tangent to the wall of the structure. The water is then conveyed through an outlet baffle wall (high and low baffle). This enhances the collection of any floatables or solids not removed by the inner chamber. Water flowing through the baffles then enters the outlet chamber and is discharged into the downstream storm drain.

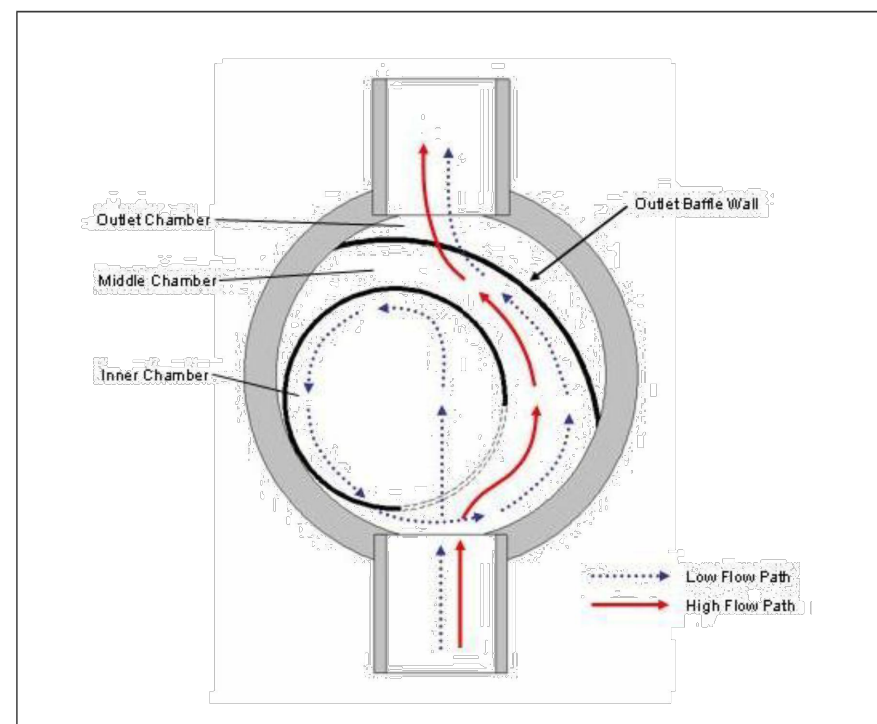


Figure 1. Hydroworks HG Operation – Plan View

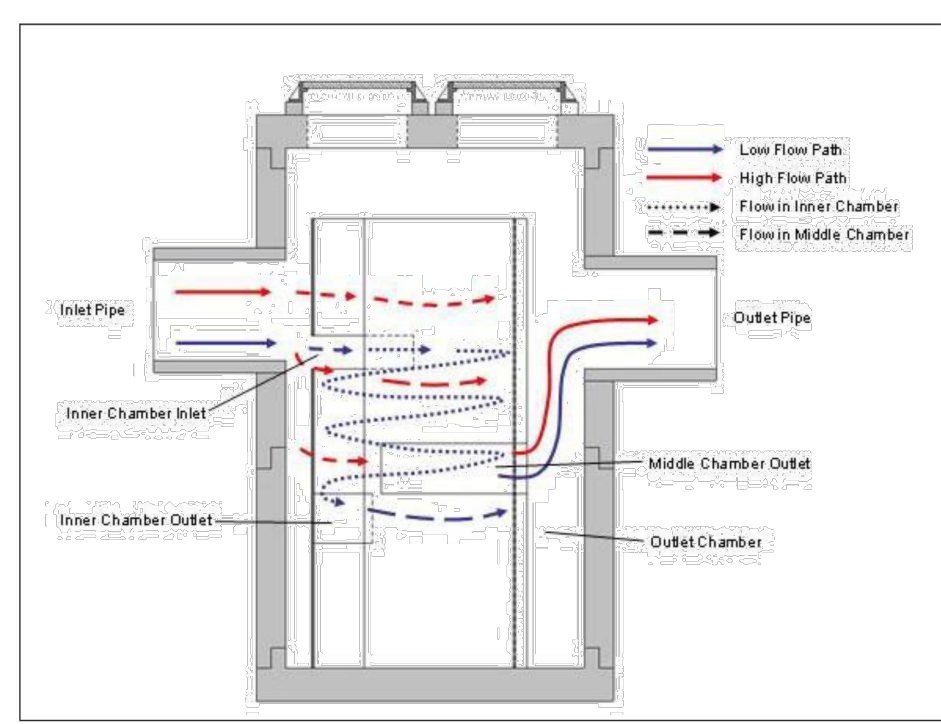


Figure 2. Hydroworks HG Operation – Profile View

During high flows, the flow rate entering the inner chamber is restricted by the size of the inlet opening to the inner chamber. This restriction of flow rate into the inner chamber prevents scour and re-suspension of solids from the inner chamber during periods of high flow. This is important since fines, which are typically considered highly polluted, are conveyed during low/normal flows.

The excess flow is conveyed directly into the middle chamber where it receives treatment for floatables and solids via the baffle system. This treatment of the higher flow rates is important since trash and heavier solids are typically conveyed during periods of higher flow rates. The Hydroworks HG separator is revolutionary since it incorporates low and high flow treatment in one device while maintaining separate low and high flow paths to prevent the scour and re-suspension of fines.

Figure 2 is a profile view of the HG separator showing the flow patterns for low and high flows.

Inspection

Procedure

Although all parts of the Hydroguard should be inspected, inspection and maintenance should focus on the inner and middle chambers since this is where the pollutants (floatable and sinking) will accumulate.

Floatables

A visual inspection can be conducted for floatables by removing the covers and looking down into the separator. Multiple covers are provided on Hydroworks HG units to access all areas of the separator (The HG 4 may have a single larger 32" (800mm) cover due to the lack of space for multiple 24" (600mm) covers). Separators with an inlet grate (HG4) or custom separator) will have a plastic funnel located under the grate or on the top cap of the concrete that must be removed through the frame prior to inspection or maintenance. If you are missing a funnel please contact Hydroworks at the numbers provided at the end of this document.

TSS/Sediment

Inspection for TSS build-up can be conducted using a Sludge Judge®, Core Pro®, AccuSludge® or equivalent sampling device that allows the measurement of the depth of TSS/sediment in the unit. These devices typically have a ball valve at the bottom of the tube that allows water and TSS to flow into the tube when lowering the tube into the unit. Once the unit touches the bottom of the device, it is quickly pulled upward such that the water and TSS in the tube forces the ball valve closed allowing the user to see a full core of water/TSS in the unit. The unit should be inspected for TSS through each of the access covers. Several readings (2 or 3) should be made at each access cover to ensure that an accurate TSS depth measurement is recorded.

Frequency

Construction Period

The HG separator should be inspected every two weeks and after every large storm (over 0.5" (12.5 mm) of rain) during the construction period.

Post-Construction Period

The Hydroworks HG separator should be inspected once per year for normal stabilized sites (grassed or paved areas). If the unit is subject to oil spills or runoff from unstabilized (storage piles, exposed soils) areas the HG separator should be inspected more frequently (4 times per year). The initial annual inspection will indicate the required future frequency of maintenance if the unit was maintained after the construction period.

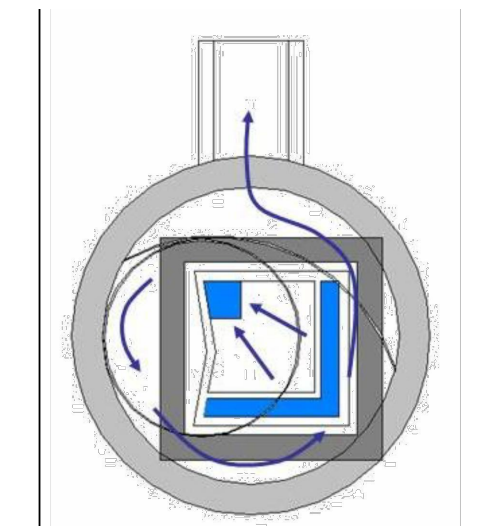


Figure 3. Hydroworks HG 4i Normal Flow Path

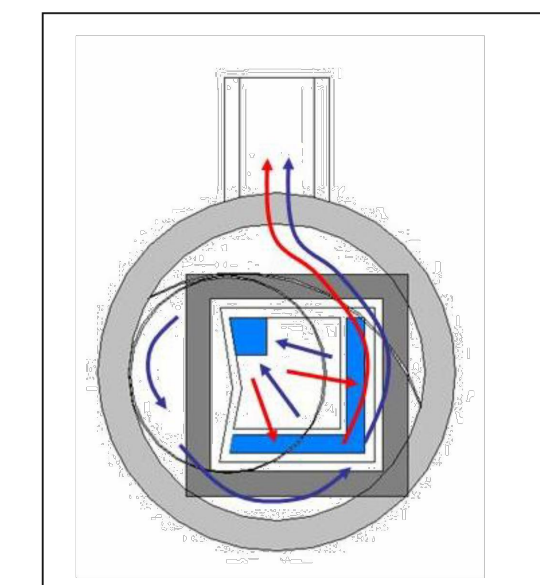


Figure 4. Hydroworks HG 4i Peak Flow Path

Post-Construction Period

The Hydroguard was independently tested by Alden Research Laboratory in 2008. A HG6 was tested for scour with initial sediment loads of 4.6 ft³ and 9.3 ft³. The results from these tests were almost identical. Therefore, the 9.3 ft³ sediment load was used as 50% of the maximum sediment depth for maintenance in the calculation of the maintenance interval for the HG6 separator based on the NJDEP maintenance interval equation.

Maintenance Interval (months) = 3.565 x (Sediment Storage) / (MFR x TSS Removal)

Maintenance Interval (HG6) = 3.565 x 9.3 / (1.81 x 0.60) = 30 months

All values (flow, sediment storage) can be scaled by the surface area making the sediment depths and maintenance intervals equal for all separators.

The separator was loaded with the sediment in the inner chamber and middle chamber with the majority of sediment (80%) located in the inner chamber. The inner chamber for area represents approximately 44% of the separator surface area. The inner chamber is 4 ft (1200 mm) in diameter in the HG6. Therefore the 50% sediment depth for the HG6 in the inner chamber would be:

9.3 ft³ x 0.80 / (3.14 x 4 ft²) x 12 in/ft = 7.1 inches (175 mm)

Accordingly the 100% sediment volume would represent 14.2" (350 mm) of sediment depth in the inner chamber.

The HG separator must be maintained if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the open water surface on the inlet side of the outlet baffle wall. It should also be maintained once the accumulated TSS/sediment depths are greater than 14" (350 mm) in the inner chamber. For typical stabilized post-construction sites (parking lots, streets) it is anticipated that maintenance will be required annually or once every two years. More frequent or less frequent maintenance will be required depending on individual site conditions (traffic, use, stabilization, storage piles, etc.). The long term maintenance frequency can be established based on the maintenance requirements during the first several years of operation if site conditions do not change.



HYDROGUARD INSPECTION SHEET

Date of Last Inspection _____

Site _____

City _____

State _____

Owner _____

GPS Coordinates _____

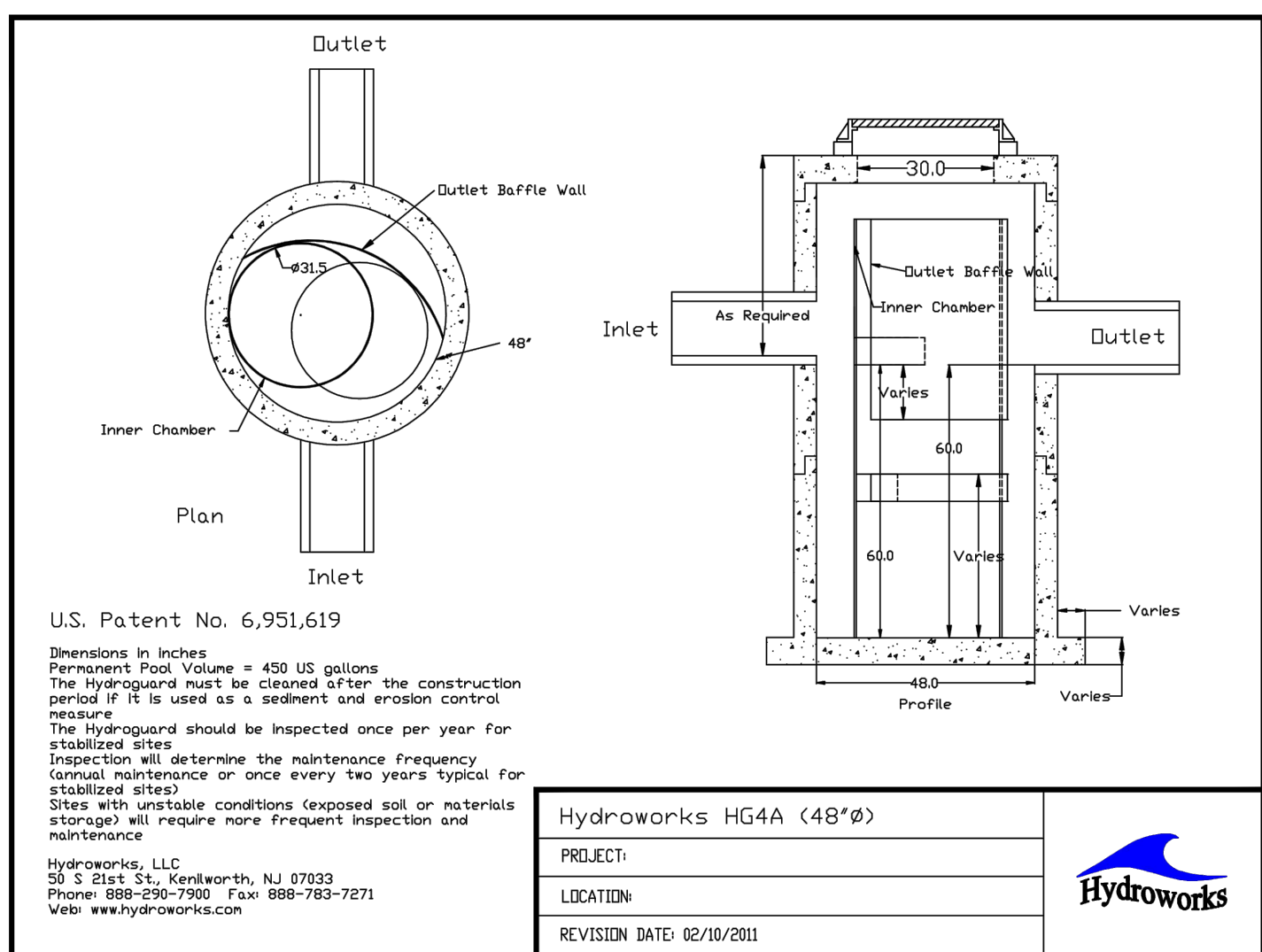
Date of last rainfall _____

Site Characteristics	Yes	No
Soil erosion evident	<input type="checkbox"/>	<input type="checkbox"/>
Exposed material storage on site	<input type="checkbox"/>	<input type="checkbox"/>
Large exposure to leaf litter (lots of trees)	<input type="checkbox"/>	<input type="checkbox"/>
High traffic (vehicle) area	<input type="checkbox"/>	<input type="checkbox"/>
Hydroguard	Yes	No
Incorrect access orientation	<input type="checkbox"/>	<input type="checkbox"/>
Obstructions in the inlet or outlet	<input type="checkbox"/>	<input type="checkbox"/>
Missing internal components	<input type="checkbox"/>	<input type="checkbox"/>
Improperly installed internal components	<input type="checkbox"/>	<input type="checkbox"/>
Improperly installed inlet or outlet pipes	<input type="checkbox"/>	<input type="checkbox"/>
Internal component damage (cracked, broken, loose pieces)	<input type="checkbox"/>	<input type="checkbox"/>
Floating debris in the separator (oil, leaves, trash)	<input type="checkbox"/>	<input type="checkbox"/>
Large debris visible in the separator	<input type="checkbox"/>	<input type="checkbox"/>
Concrete cracks/deficiencies	<input type="checkbox"/>	<input type="checkbox"/>
Exposed rebar	<input type="checkbox"/>	<input type="checkbox"/>
Water seepage (water level not at outlet pipe invert)	<input type="checkbox"/>	<input type="checkbox"/>
Water level depth below outlet pipe invert	_____	
Routine Measurements		
Floating debris depth < 0.5" (13mm)	<input type="checkbox"/>	> 0.5" (13mm) <input type="checkbox"/>
Floating debris coverage < 25% of surface area	<input type="checkbox"/>	> 25% surface area <input type="checkbox"/>
Sludge depth < 14" (350mm)	<input type="checkbox"/>	> 14" (350mm) <input type="checkbox"/>

Other Comments: _____

- * Maintenance required
- ** Repairs required
- *** Further investigation is required

Please call Hydroworks at 888-290-7500 or email us at support@hydroworks.com if you have any questions regarding the inspection checklist. Please fax a copy of the completed checklist to Hydroworks at 888-783-7271 for our records.



The HG 4i is an inlet version of the HG 4 separator. There is a catch-basin grate on top of the HG 4i. Water flows directly into the inner chamber of the HG 4i through the catch-basin grate on top of the structure. The grate is oversized to allow maintenance of the entire structure. A funnel that sits underneath the grate on the top cap of the concrete itself directs the water into the inner chamber during normal flows and the middle chamber during high flows. Figures 3 and 4 show the flow paths for the HG 4i separator.

- Reporting**
- Reports should be prepared as part of each inspection and include the following information:
1. Date of inspection
 2. GPS coordinates of Hydroworks unit
 3. Time since last rainfall
 4. Date of last inspection
 5. Installation deficiencies (missing parts, incorrect installation of parts)
 6. Structural deficiencies (concrete cracks, broken parts)
 7. Operational deficiencies (leaks, blockages)
 8. Presence of oil sheen or depth of oil layer
 9. Estimate of depth/volume of floatables (trash, leaves) captured
 10. Sediment depth measured
 11. Recommendations for any repairs and/or maintenance for the unit
 12. Estimation of time before maintenance is required if not required at time of inspection

A sample inspection checklist is provided at the end of this manual.

Maintenance

Procedure

The Hydroworks HG unit is typically maintained using a vector truck or clam shell bucket. There are numerous companies that can maintain the HG separator. Envirocalm, LLC, an affiliate company of Hydroworks offers inspection and maintenance services and can inspect and maintain the HG separator. (www.envirocalm.com)

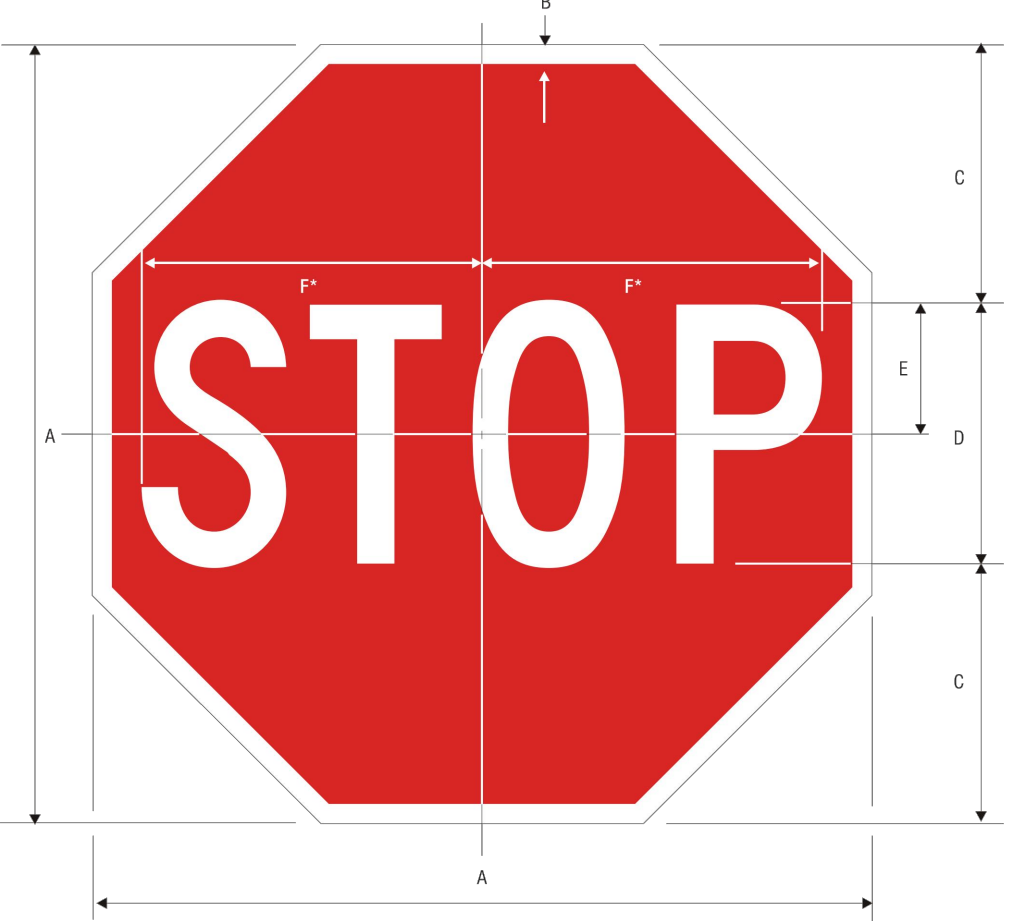
Disposal of the contents of the separator depend on local requirements. Maintenance of a Hydroworks HG unit will typically take 1 to 2 hours.

Frequency

Construction Period

A HG separator can fill with construction sediment quickly during the construction period. The Hydroguard must be maintained during the construction period when the depth of TSS/sediment reaches 30" (750 mm). It must also be maintained during the construction period if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the open water surface on the inlet side of the outlet baffle wall.

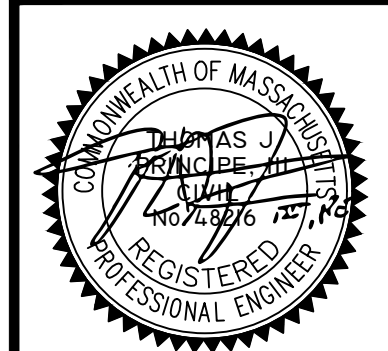
The HG separator should be maintained at the end of the construction period, prior to operation for the post-construction period.



A	B	C	D	E	F
18	375	6	6 C	3	775
24	625	8	6 C	4	10
30	775	10	10 C	5	12.5
36	875	12	12 C	6	15
48	1.25	16	16 C	8	20

COLORS: LEGEND - WHITE (RETROREFLECTIVE)
BACKGROUND - RED (RETROREFLECTIVE)

DETAIL SHEET - 4



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MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
DEFINITIVE PLAN SUBMISSION
for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

REVISIONS			
No.	DATE	DRWN	CHKD

SCALE: AS NOTED SHEET NO: 19 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

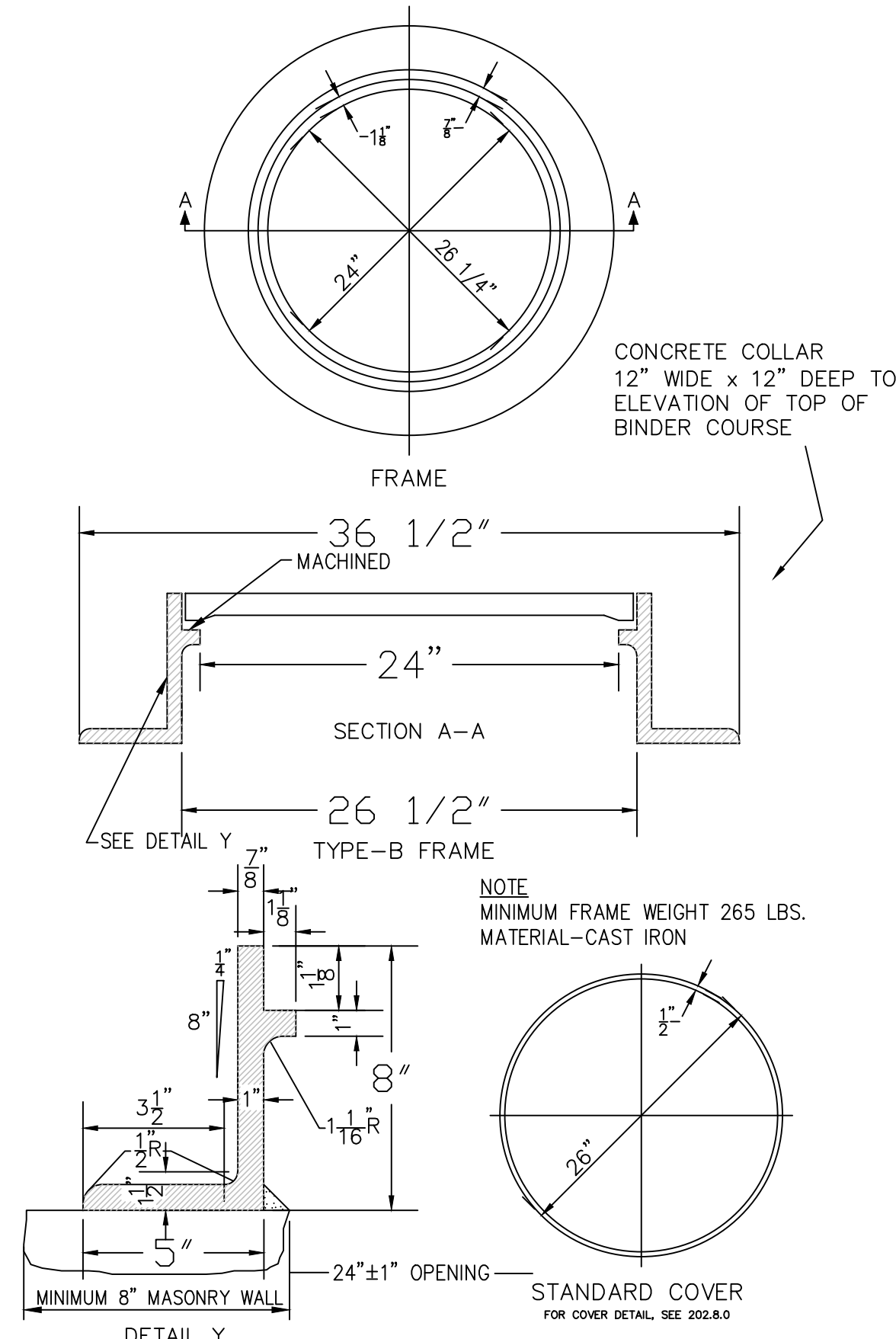
STORM DRAINAGE SYSTEM MAINTENANCE PLAN:

THE FOLLOWING LIST OF MAINTENANCE TASKS AND FREQUENCIES MUST BE ADHERED TO IN ORDER TO INSURE A SUCCESSFUL LONG TERM OPERATION OF THE STORM DRAINAGE SYSTEM.

1. DURING CONSTRUCTION ACTIVITIES ALL EROSION CONTROLS ON THE SITE SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY FOUR (24) HOURS AFTER AN EVENT WHICH GENERATES AT LEAST 0.25 INCHES OF RAIN IN A TWENTY FOUR (24) HOUR PERIOD.
2. SEDIMENTS SHALL BE REMOVED FROM ALL BASINS IMMEDIATELY AFTER SITE STABILIZATION.
3. ALL TRASH, LITTER AND OTHER DEBRIS SHALL BE REMOVED FROM ALL STORM WATER INLET AND OUTLET STRUCTURES A MINIMUM OF TWICE PER YEAR. THESE STRUCTURES SHALL ALSO BE INSPECTED TWICE PER YEAR. INSPECTIONS SHALL BE PERFORMED SEVERAL TIMES WITHIN THE FIRST SIX MONTHS OF OPERATION.
4. INSPECTIONS OF ALL CATCH BASINS SHALL OCCUR ON AN ANNUAL BASIS TO CHECK FOR DEBRIS REMOVAL (SEDIMENT AND HYDROCARBONS) AND STRUCTURAL INTEGRITY OR DAMAGE. SUCH DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY.
5. REPAIRS OR REPLACEMENT OF INLET/OUTLET STRUCTURES OR ANY ELEMENT OF THE FACILITY SHALL BE DONE WITHIN THIRTY (30) DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT SHALL BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
6. MAKE REPAIRS IMMEDIATELY USING APPROPRIATE STONE SIZES. DO NOT PLACE STONES ABOVE FINISHED GRADE.
7. ALL REMOVED SEDIMENTS AND DEBRIS SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
8. ALL OUTLET STRUCTURES AND OUTFLOW CHANNELS WILL BE INSPECTED ANNUALLY. INSPECTIONS WILL BE ACCOMPLISHED SEVERAL TIMES DURING THE FIRST SIX MONTHS OF OPERATION, ESPECIALLY AFTER RAINFALL EVENTS TO CHECK FOR CLOGGING OR, CONVERSELY, TOO RAPID OF A RELEASE.
9. REPAIRS OR REPLACEMENT OF INLET/OUTLET STRUCTURES, RIP-RAP CHANNELS, FENCES, OR OTHER ELEMENTS OF THE FACILITY WILL BE DONE WITHIN 30 DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
10. ALL SEDIMENT GENERATED DURING CONSTRUCTION AND AS A RESULT OF MAINTENANCE OF THE DRAINAGE SYSTEM MUST BE DISPOSED OF PROPERLY. SEDIMENT SHALL NOT BE DISPOSED OF IN OR NEAR STATE OR FEDERAL REGULATED WATERS.
11. ADDITIONAL BMP INSPECTION/MAINTENANCE MEASURES OUTLINED WITHIN THE PROJECT STORMWATER POLLUTION PREVENTION PLAN SHALL BE ADHERED TO.

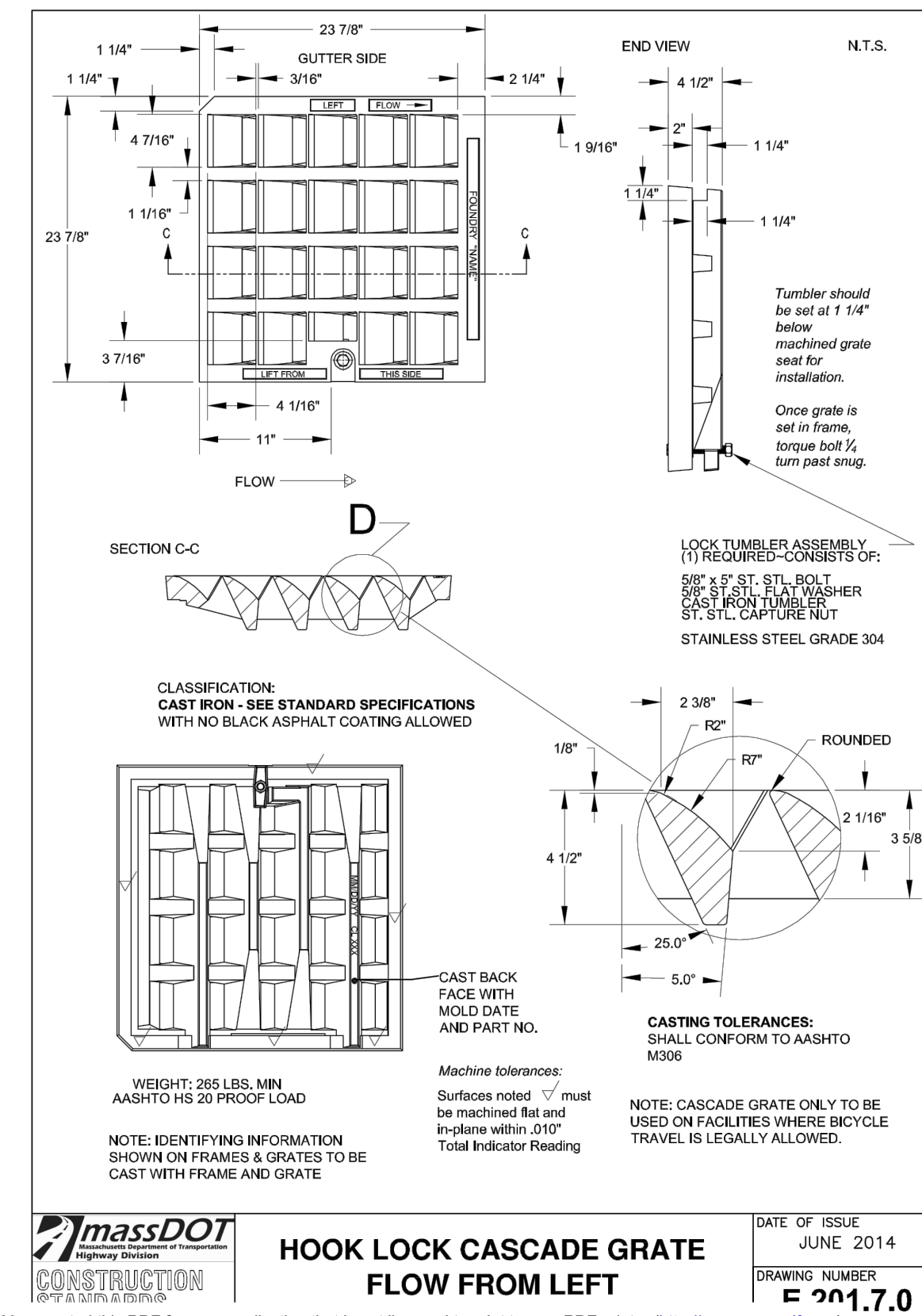
DRAINAGE AND UTILITY NOTES:

1. UTILITY LOCATION VERIFICATION IS TO INCLUDE TEST HOLES AS NEEDED.
2. WATER MAINS AND APPURTENANCES, INCLUDING SERVICE CONNECTIONS SHALL BE INSTALLED IN CONFORMITY WITH THE SPECIFICATIONS OF THE ONSET WATER DEPARTMENT AND IN ACCORDANCE WITH THE TOWN'S MASTER OR STUDY WATER PLAN.
3. THE CONTRACTOR IS REQUIRED TO SCHEDULE AND COORDINATE WATER SERVICE INSTALLATIONS, SHUT DOWNS AND DISRUPTIONS WHICH AFFECT THE SITE AND SITE ADJACENT USERS WITH THE LOCAL WATER AUTHORITY AND THE LOCAL FIRE DEPARTMENT.
4. UNDERGROUND UTILITIES, ELECTRIC, TELEPHONE, FIRE ALARM CABLE, TELEVISION AND GAS SERVICES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE APPLICABLE SITE UTILITY PROVIDER
5. METALLIC WARNING TAPE SHALL BE INSTALLED 12" ABOVE ALL STORM DRAIN AND OTHER UTILITIES.
6. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITIES, STRUCTURES AND ABUTTING PROPERTIES. THE COST OF ANY REPAIR OR REPLACEMENT OF DAMAGED ITEMS SHALL BE BORNE BY THE CONTRACTOR.



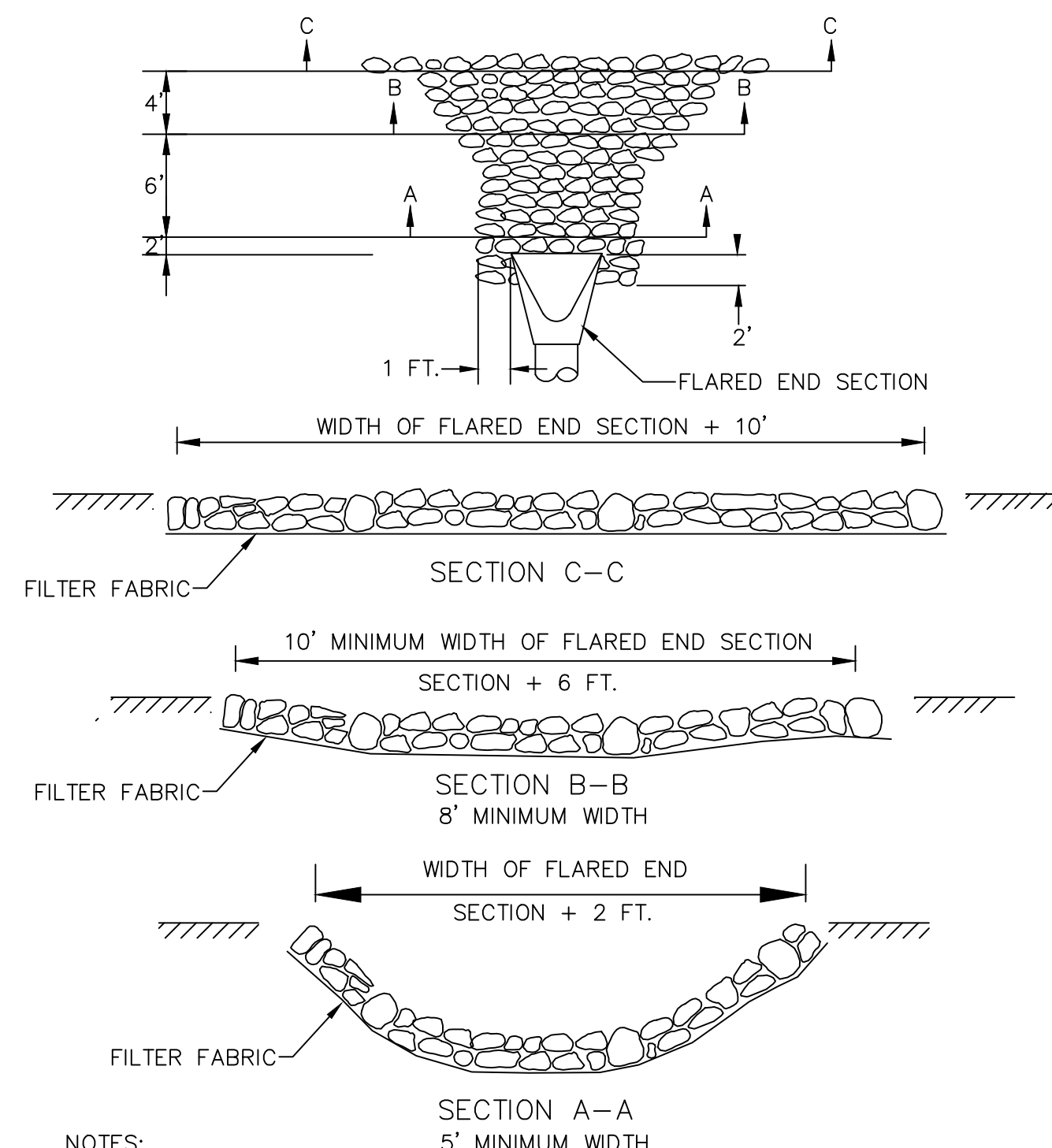
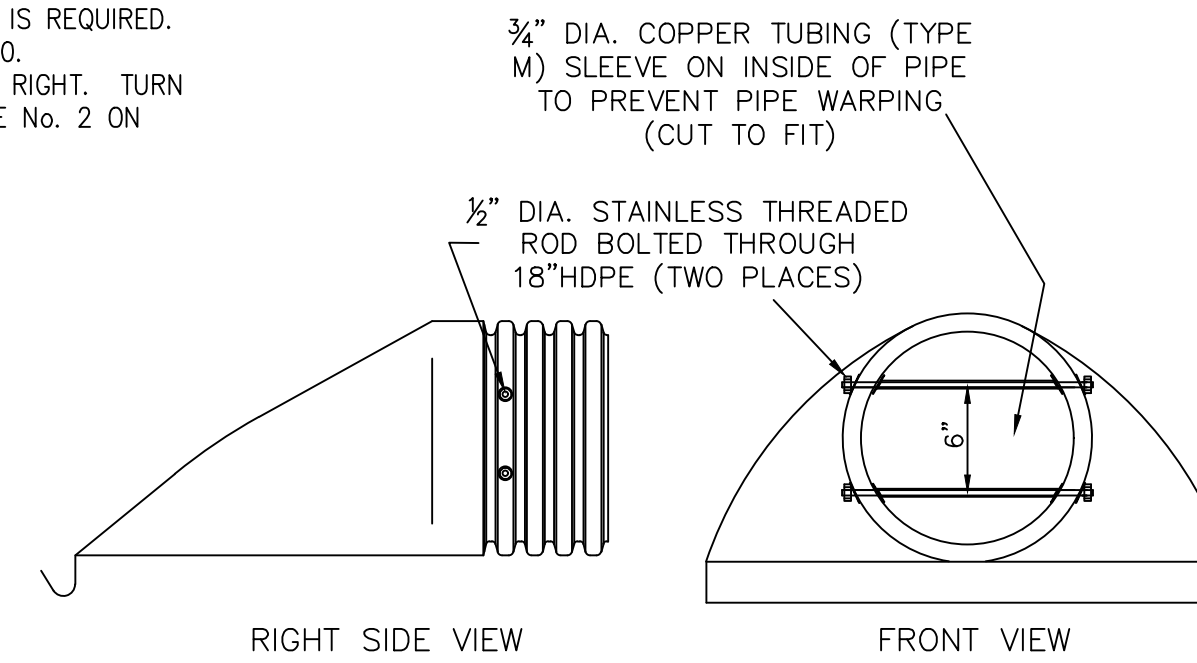
MANHOLE FRAME & COVER

NOTE: DRAIN MANHOLE COVERS SHALL HAVE THE WORD "DRAIN" CAST INTO THEM WITH THREE INCH LETTERING



- NOTES:**
1. THE MASSACHUSETTS STANDARD FRAME IS TO BE USED, DETAILS AND DIMENSIONS NOT SHOWN ABOVE ARE TO BE THE SAME AS THOSE SHOWN ON CONSTRUCTION STANDARD 201.6.0.
 2. A (3)THREE FLANGE FRAME IS TO BE USED WHEN A CURB INLET IS REQUIRED.
 3. GRATE DETAILS ARE SHOWN ON CONSTRUCTION STANDARD 201.7.0.
 4. THE GRATE AS PLACED ABOVE IS FOR WATER COMING FROM THE RIGHT. TURN THE GRATE 180° FOR A WATER FLOW FROM THE LEFT. SEE NOTE No. 2 ON CONSTRUCTION STANDARD 201.7.0.
 5. THE GRATE IS TO BE USED AT SPACING OF 8" OR 16" (AS SHOWN).

FRAME FOR MASSACHUSETTS CASCADE GRATE

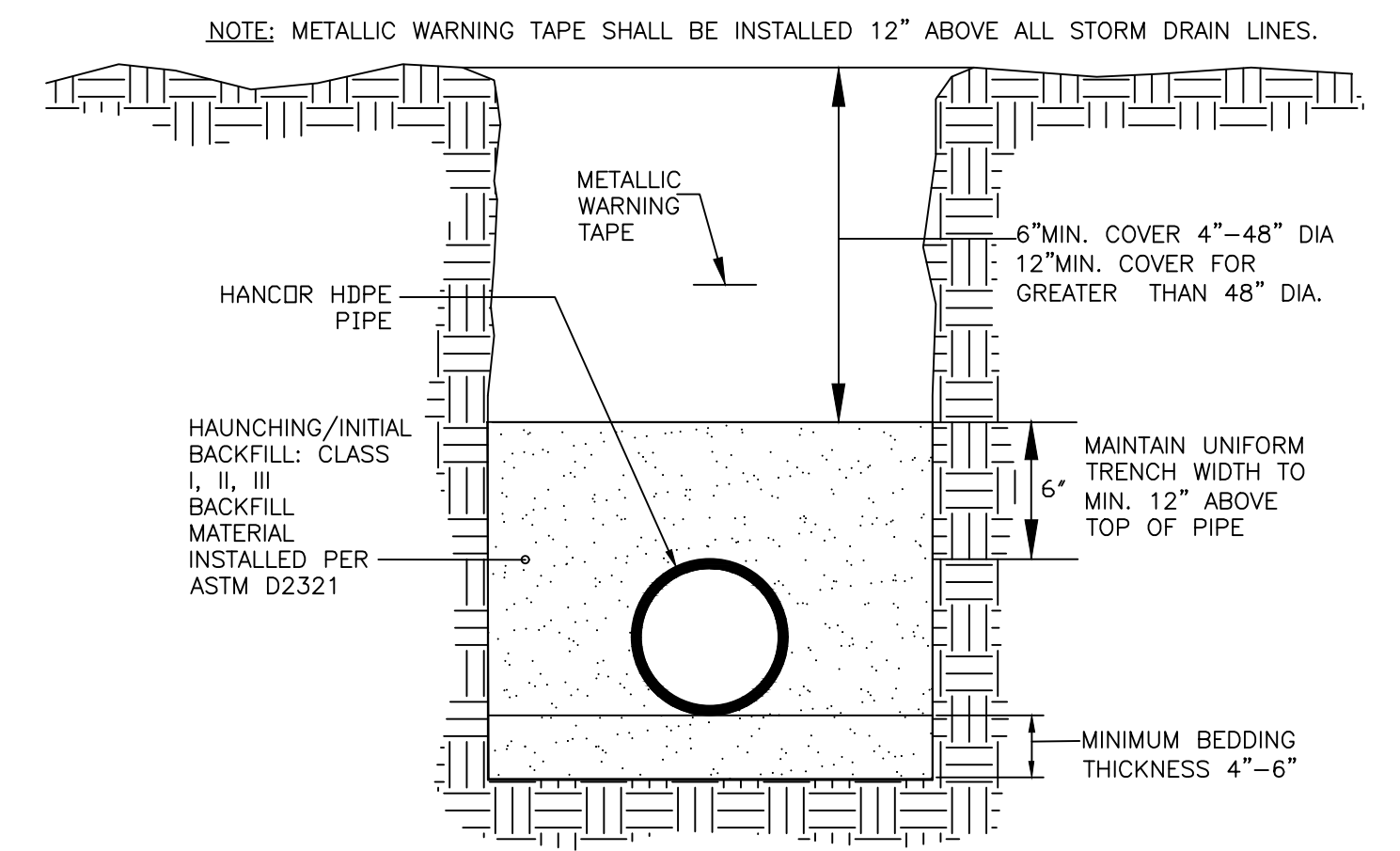


- NOTES:**
1. CLASS OF RIP-RAP AND BEDDING TO BE SPECIFIED IN CONTRACT DOCUMENTS.
 2. DIMENSIONS MAY BE MODIFIED BY ENGINEER TO MEET FIELD CONDITIONS
 3. UNLESS OTHERWISE SPECIFIED, DUMPED RIP-RAP SHALL BE USED.

RIP-RAP TABLE

	STONE / DEPTH	BEDDING SIZE / DEPTH
BASIN INLET PIPES	M02.02.4 / 12"	1" STONE / 4"
BASIN SPILLWAYS	M02.02.4 / 12"	1" STONE / 4"

M02.02.4 = 8" - 95 / 100%,
4" - 0 / 25%,
2 1/2" - 0 / 5%



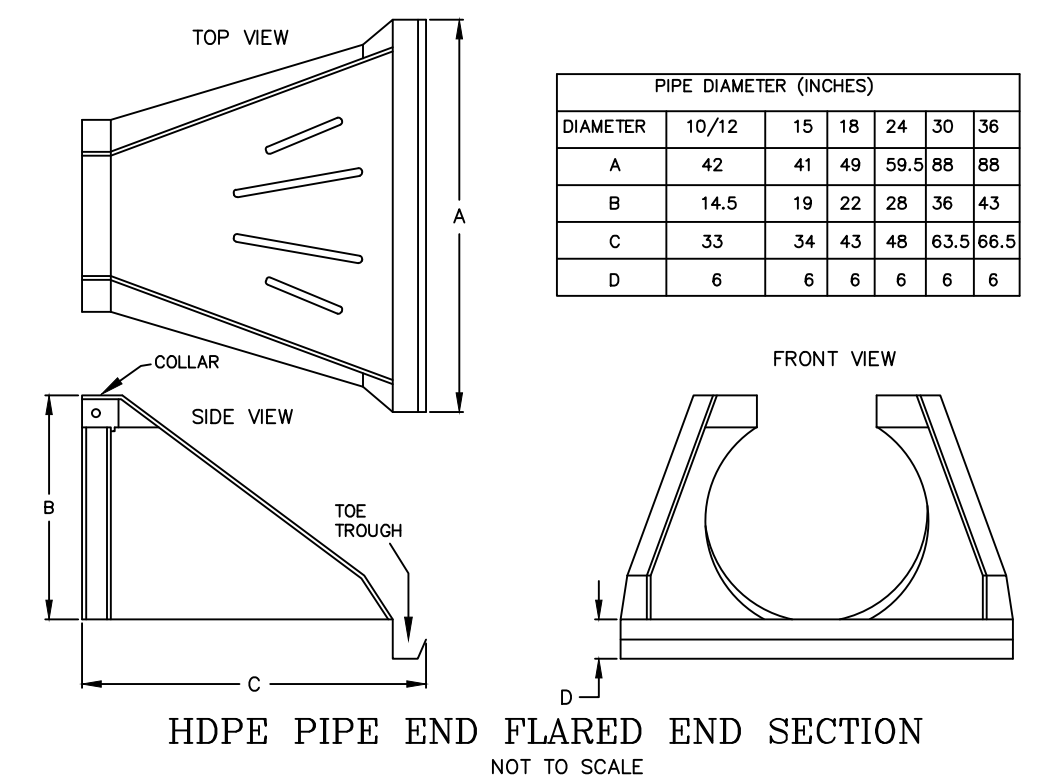
REFERENCE ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS."

HDPE TRENCH INSTALLATION DETAIL

RECOMMENDED MINIMUM TRENCH WIDTH

PIPE DIAMETER IN. (MM)	TRENCH WIDTH IN. (M)	PIPE DIAMETER IN. (MM)	TRENCH WIDTH IN. (M)
4 - 8 (100-200)	*	30 (750)	60 (1.5)
10 (250)	24 (0.6)	36 (900)	65 (1.7)
12 (300)	28 (0.7)	42 (1050)	84 (2.1)
15 (375)	35 (0.9)	48 (1200)	91 (2.3)
18 (450)	43 (1.1)	54 (1350)	97 (2.5)
24 (600)	56 (1.4)	60 (1500)	103 (2.6)

* USUALLY BASED ON SMALLEST BUCKET SIZE AVAILABLE



MAINTENANCE RESPONSIBILITY

1. THE APPLICANT IS RESPONSIBLE FOR THE MAINTENANCE OF ALL DRAINAGE STRUCTURES.

DETAIL SHEET - 5

THOMAS J. PRINCIPLE
REGISTERED PROFESSIONAL ENGINEER
No. 216

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PRINCIPLEENGINEERING@GMAIL.COM

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL

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for
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DESIGN BY: TJP

PROJECT NO.: LD13-1 PH II/III

CHECKED BY: TJP

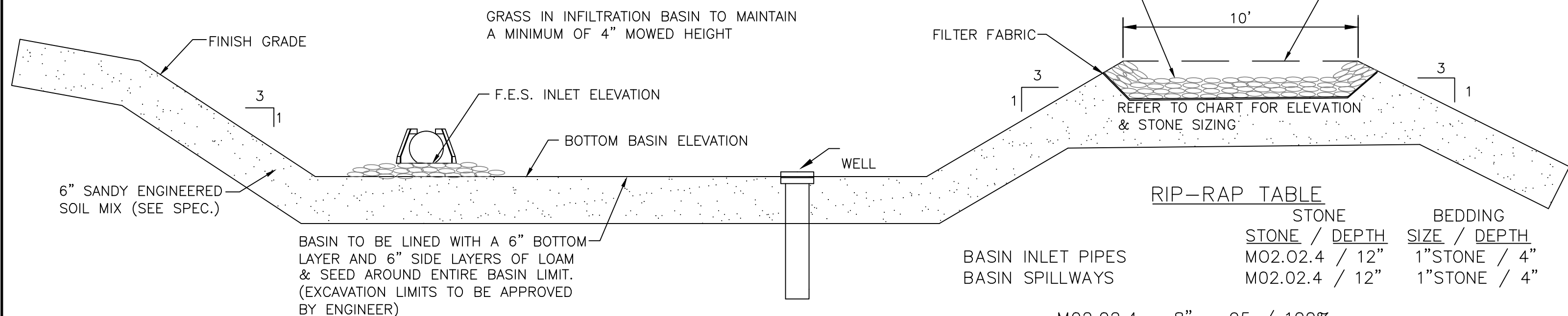
INFILTRATION BASIN NOTES:

- 1) DURING CONSTRUCTION HEAVY EQUIPMENT SHALL NOT TRAVERSE THE INFILTRATION AREA IN ORDER TO PREVENT DETRIMENTAL COMPACTION.
- 2) SHOP DRAWING SUBMITTAL AND APPROVAL BY DESIGN ENGINEER REQUIRED FOR EACH INFILTRATION BASIN PRIOR TO CONSTRUCTION.

SOIL TESTING NOTE:

DATE: FRIDAY, SEPTEMBER 12, 2014.
 CONDUCTED BY: THOMAS J. PRINCIPE, III, PE (LICENSED MASS. SOIL EVALUATOR)
 PREVIOUS SOIL EVALUATIONS AND PERCOLATION TESTING FOR THE DRAINAGE MITIGATION SYSTEMS PROPOSED CONCLUDED CONSISTENT <2MPI PERCOLATION RATES FOR THE SANDY SUBSOIL OUTWASH MATERIAL. ESTIMATED SEASONAL HIGH GROUNDWATER TABLES >10FT. ALL TESTING AREAS WERE DRY AT 12FT. EXCAVATION DEPTHS WITH NO SIGNS OF RE-DOXYMORPHIC MORPHOLOGY IN THE SOIL.

	BASIN#4	BASIN#5
TOP ELEV.	36.00'	26.00'
BOT. ELEV.	30.00'	20.00'
INLET ELEV.	31.93'	24.00'
SPILLWAY ELEV.	35.75'	25.75'



INFILTRATION BASIN CROSS SECTION DETAIL
NOT TO SCALE

Maintenance

Activity	Frequency
Preventative maintenance	Twice a year
Inspect to ensure proper functioning	After every major storm during first 3 months of operation and twice a year thereafter and when there are discharges through the high outlet orifice.
Mow the buffer area, side slopes, and basin bottom if grassed floor; rake if stone bottom; remove trash and debris; remove grass clippings and accumulated organic matter	Twice a year
Inspect and clean pretreatment devices	Every other month recommended and at least twice a year and after every major storm event.

Special Features: High failure rate without adequate pretreatment and regular maintenance.

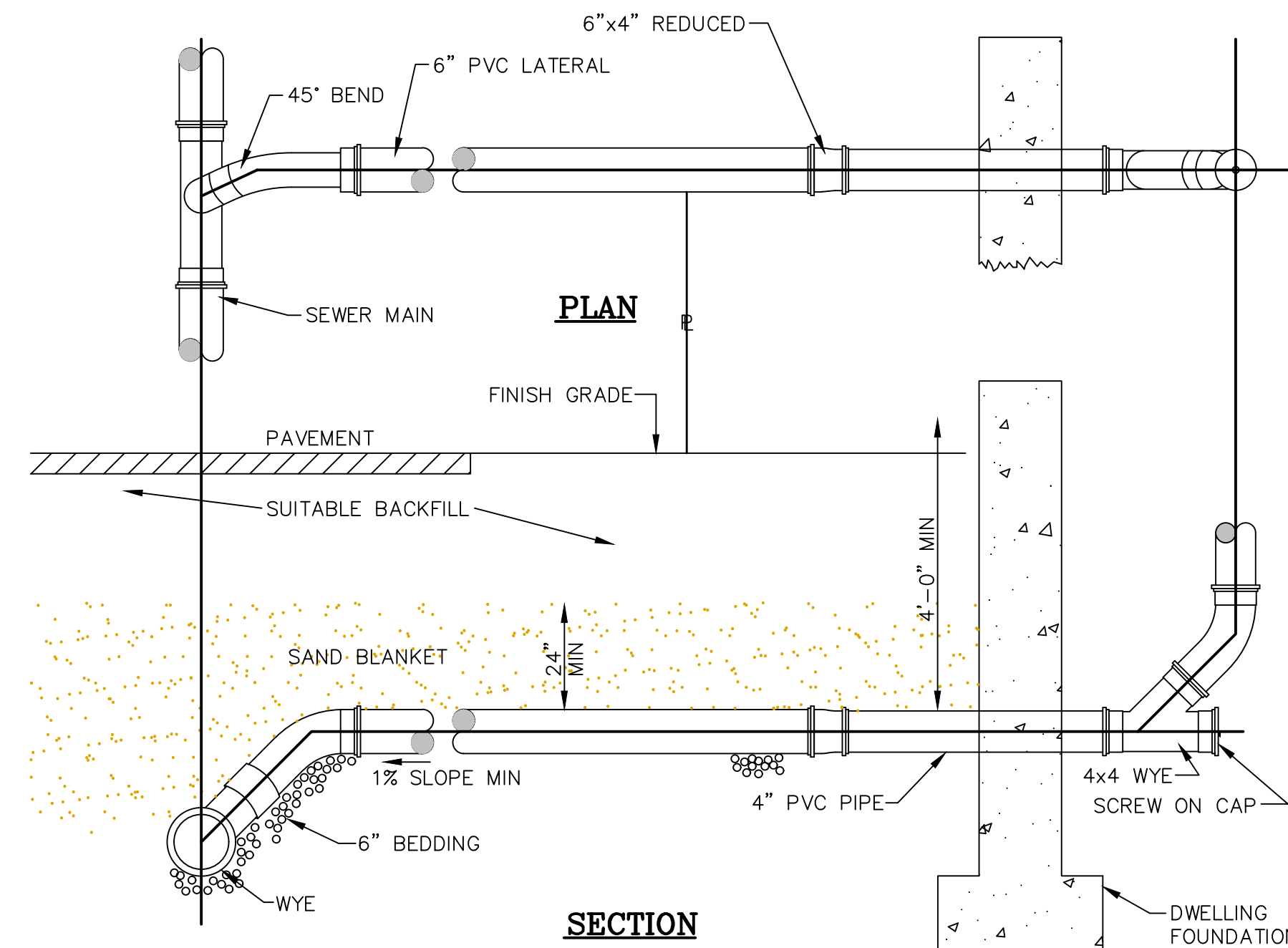
RIP-RAP TABLE

STONE SIZE / DEPTH	BEDDING SIZE / DEPTH
M02.02.4 / 12"	1" STONE / 4"
M02.02.4 / 12"	1" STONE / 4"

M02.02.4 = 8" - 95 / 100%,
 4" - 0 / 25%,
 2 1/2" - 0 / 5%

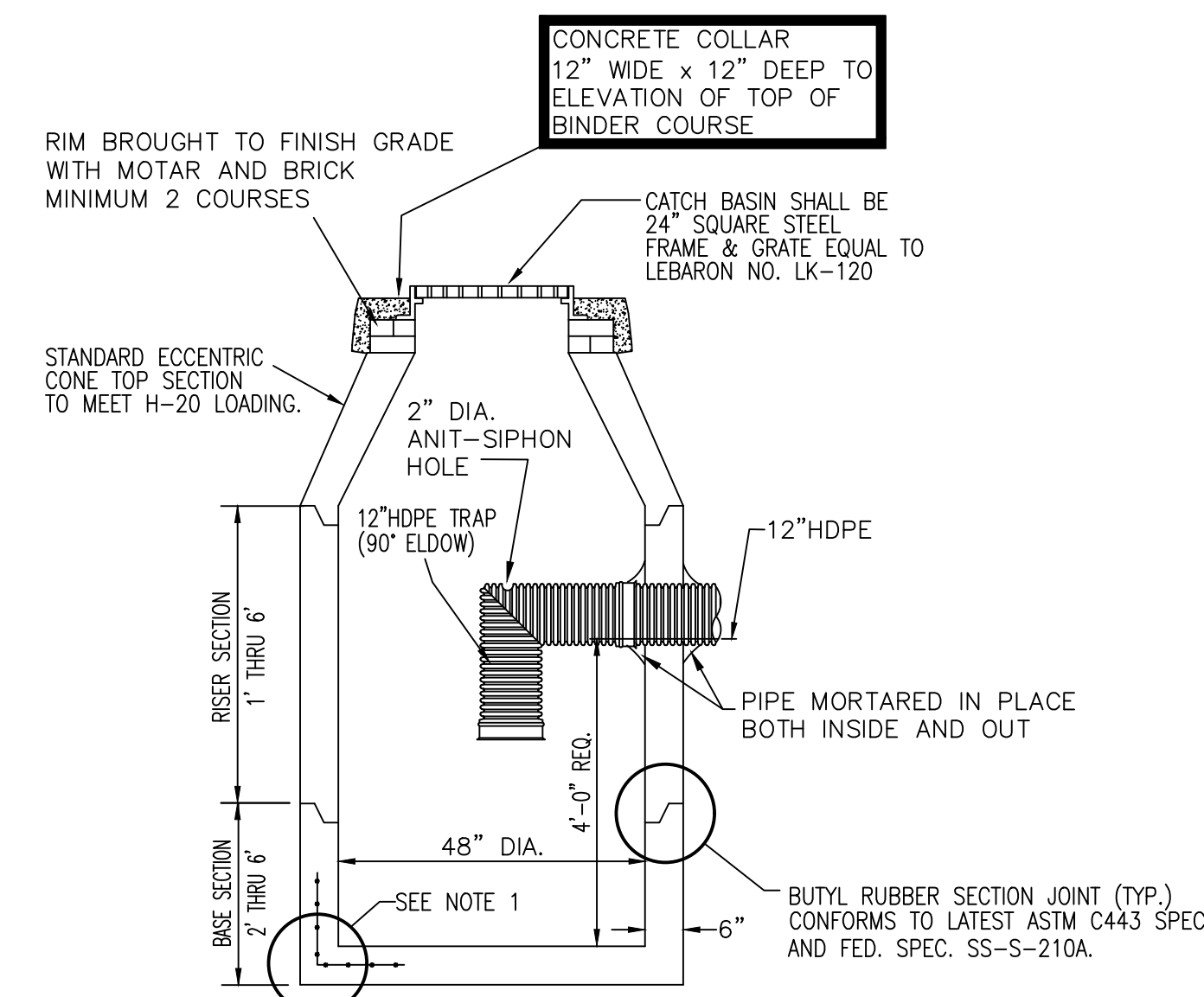
ENGINEERED SOIL MIX:

A UNIFORM MIX SHALL BE IMPORTED TO THE SITE CONSISTING OF:
 40% SAND (ASTM D 422)
 20-30% SAND LOAM TOPSOIL
 MIN. 3% ORGANIC MATERIAL
 <5% CLAY
 <500 PPM SOLUBLE SALTS
 30-40% COMPOST WITHOUT BIOSOLIDS
 pH 5.5-6.5
 FREE OF STONES & ORGANIC MATTER >2"
 FREE OF ANY SYNTHETIC MATERIAL



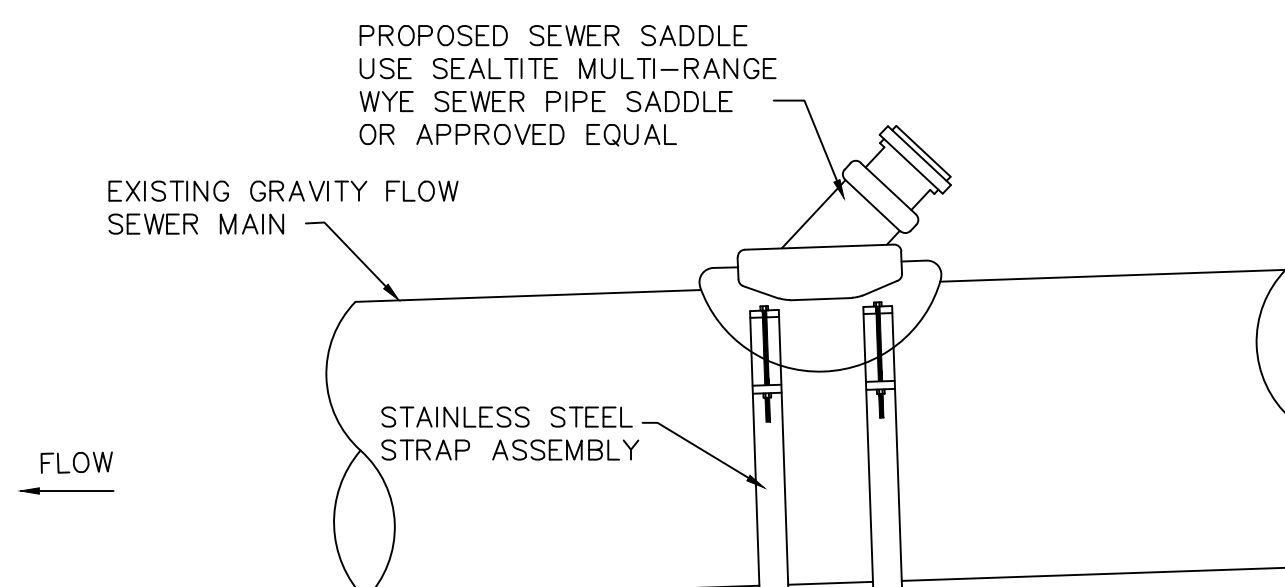
STANDARD HOUSE CONNECTION DETAIL
NOT TO SCALE

NOTE: FOR AN EXISTING SEWER MAIN THAT DOES NOT HAVE A WYE INSTALLED, THE CONTRACTOR SHALL INSTALL A PIPE SADDLE.

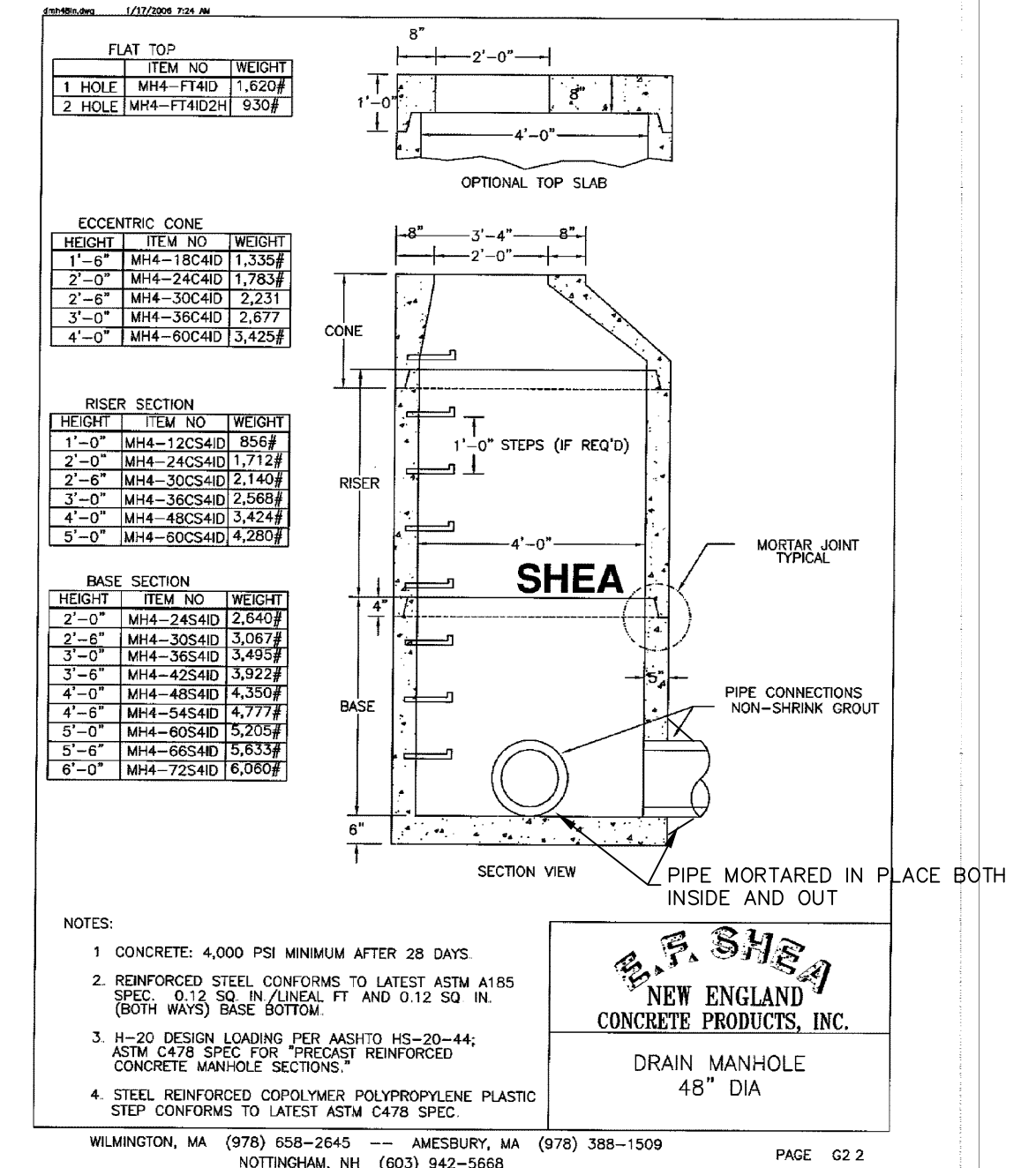


CATCH BASIN
NOT TO SCALE

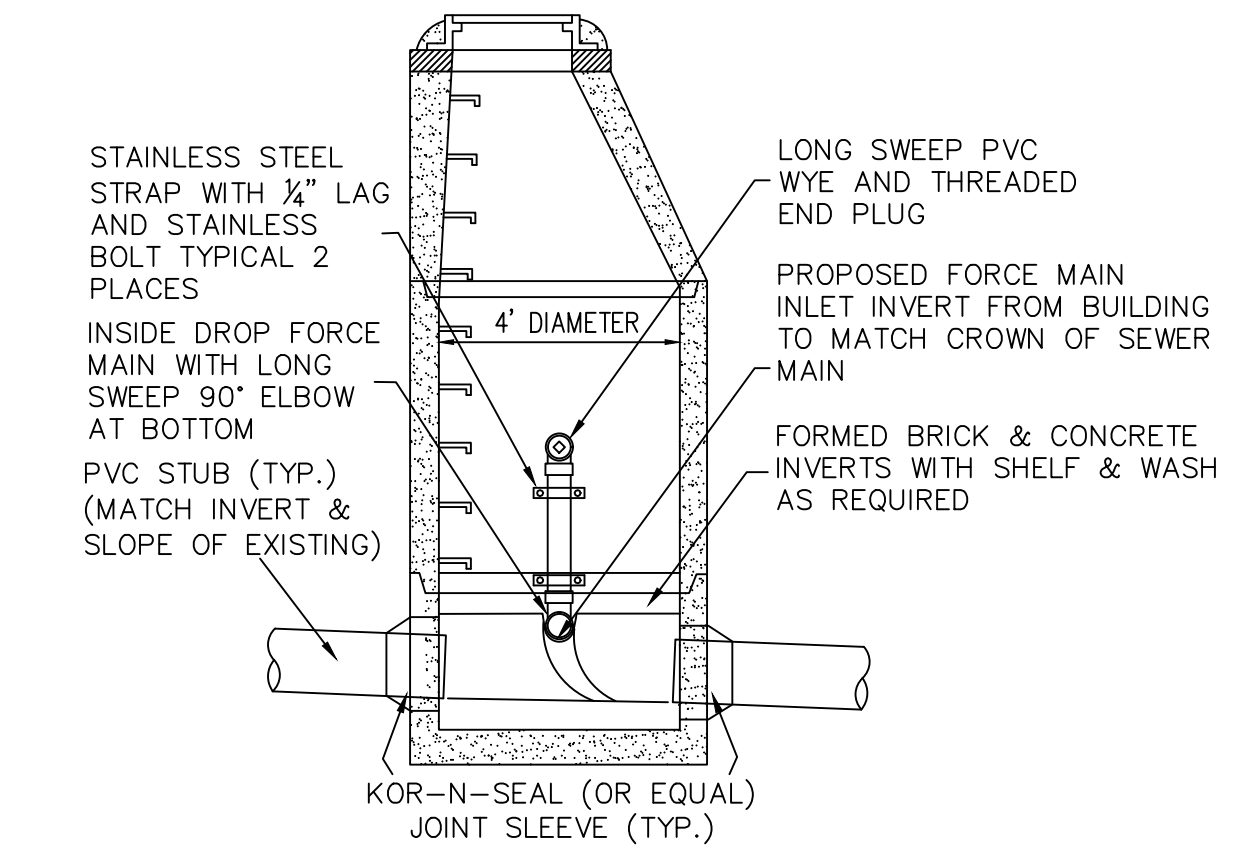
- GENERAL NOTES:
1. REINFORCED STEEL CONFORM TO LATEST ASTM A185 SPEC. 0.15 SQ. IN. LINEAR FT. AND 0.15 SQ. IN. (BOTH WAYS) BASE BOTTOM.
 2. CONCRETE COMPRESSIVE STRENGTH- 4000 PSI MINIMUM.
 3. MANHOLE DESIGN SPECIFICATIONS CONFORM TO LATEST ASTM C478 SPEC. FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."
 4. CATCH BASIN TO BE SET ON A 6" BED OF 3/4" TO 1 1/2" CRUSHED STONE



SEWER PIPE SADDLE DETAIL
NOT TO SCALE
SHOP DRAWING SUBMITTAL REQUIRED



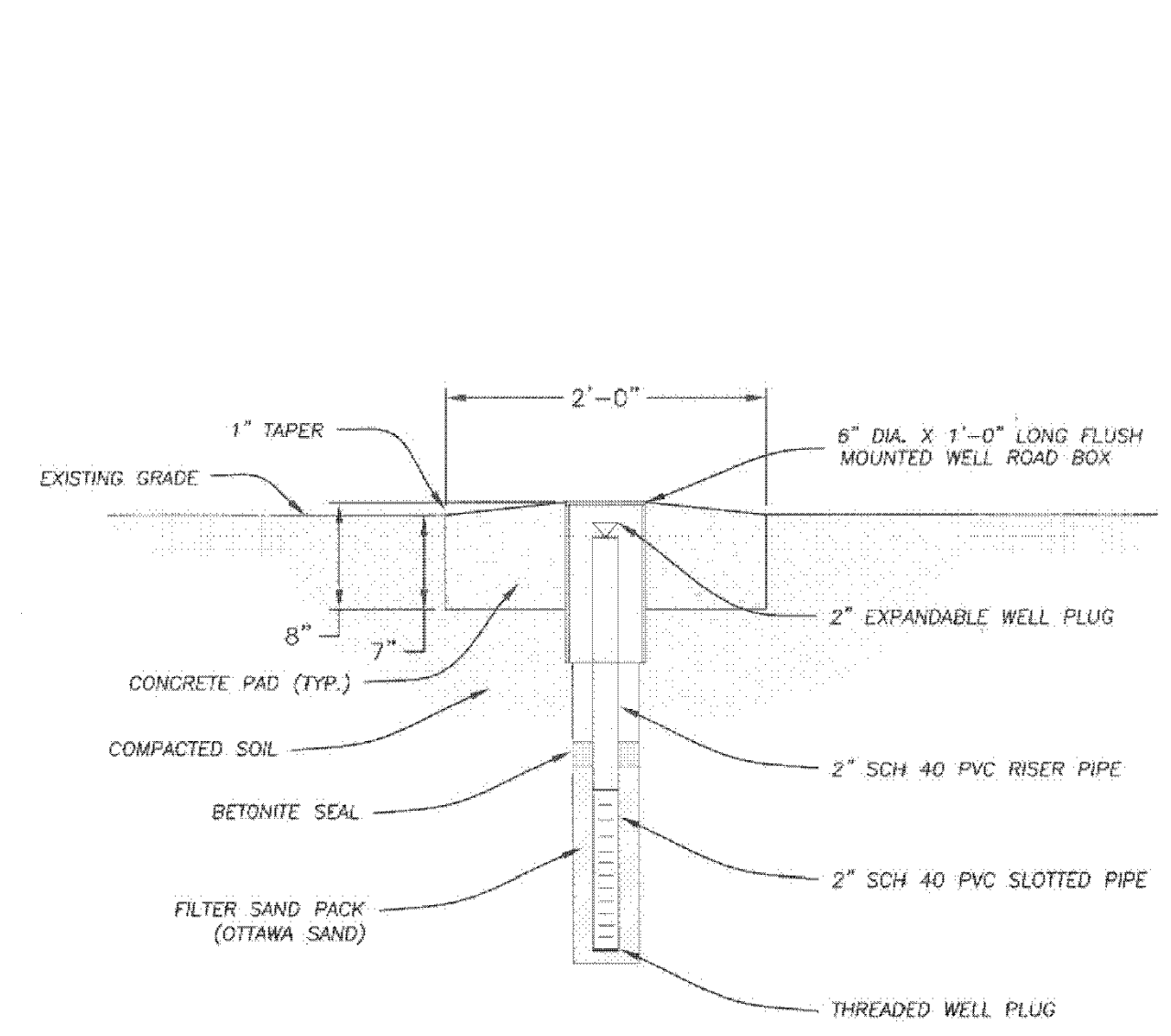
4 DIAMETER PRECAST CONCRETE MANHOLE
NOT TO SCALE
SHOP DRAWING SUBMITTAL REQUIRED



MANHOLE TO BE SET ON A 6\"/>

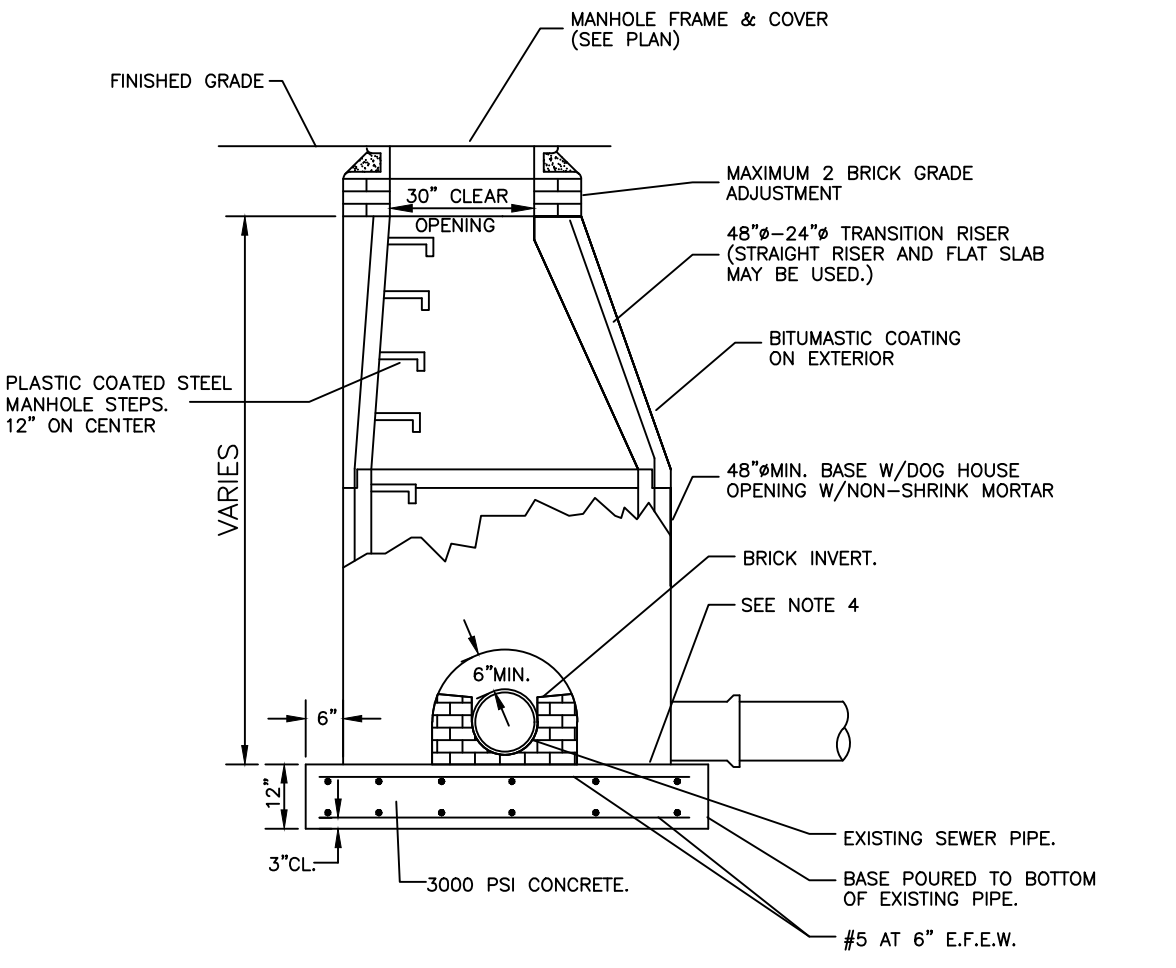
MAINTENANCE RESPONSIBILITY

1. THE APPLICANT IS RESPONSIBLE FOR THE MAINTENANCE OF ALL DRAINAGE STRUCTURES.

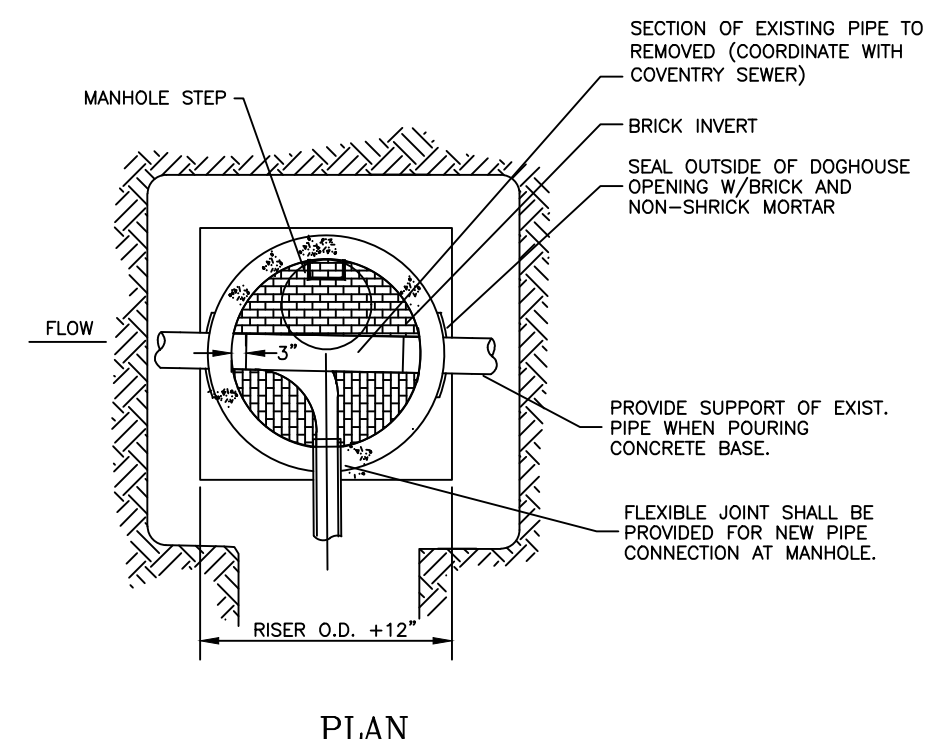


FLUSH MOUNTED MONITOR WELL DETAIL
NOT TO SCALE

NOTE: MONITOR WELL DEPTH FROM FINISH GRADE TO BE 20 FEET OR REFUSAL, WHICHEVER COMES FIRST



TYPICAL PRECAST CONCRETE SEWER MANHOLE OVER EXISTING PIPE
NOT TO SCALE



- GENERAL NOTES:
1. USE FOR SEWER MANHOLE #7 (EAST SHORE DRIVE)
 2. MANHOLE SHALL HAVE SHELVE & INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST POSSIBLE RADIUS TANGENT TO THE CENTERLINE OF THE SEWER PIPES.
 3. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN.
 4. THE JOINT BETWEEN Poured BASE AND BASE SECTION TO BE WATER TIGHT.
 5. THE SEWER MANHOLE SHALL BE VACUUM TESTED AND APPROVED BY THE COVENTRY SEWER AUTHORITY PRIOR TO SYSTEM GOING ON-LINE.

PRINCIPE COMPANY, INC.
 ENGINEERING DIVISION
 PO BOX 298
 TIVERTON, RI 02878
 401.816.5385
 PRINCIPLEENGINEERING@GMAIL.COM

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION
 for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in
 WAREHAM, MASSACHUSETTS

SCALE: AS NOTED
 DRAWN BY: TJP
 DATE: 5/26/21

SHEET NO: 21 OF 21
 DESIGN BY: TJP
 PROJECT NO.: LD13-1 PH II/III

DEFINITIVE PLAN APPROVAL GRANTED
 BY: WAREHAM PLANNING BOARD
 DATE APPROVED: _____

 DATE SIGNED: _____

FOR REGISTRY USE

I HEREBY CERTIFY THAT THERE HAS BEEN NO APPEAL TAKEN TO THIS PLANNING BOARD ACTION DURING THE 20-DAY STATUTORY APPEAL PERIOD

TOWN CLERK - WAREHAM MASSACHUSETTS

SURVEY CERTIFICATIONS

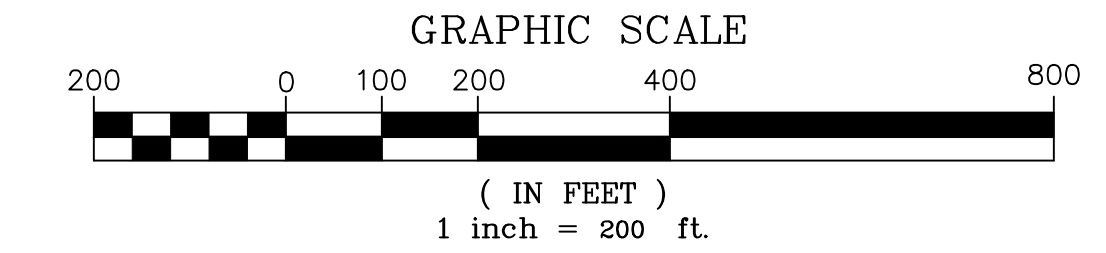
I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

SIGNED: _____ DATED: _____
 RICHARD S. LIPSITZ, PLS NO. 39691

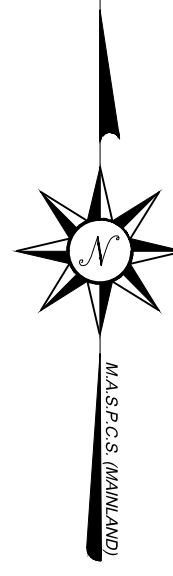
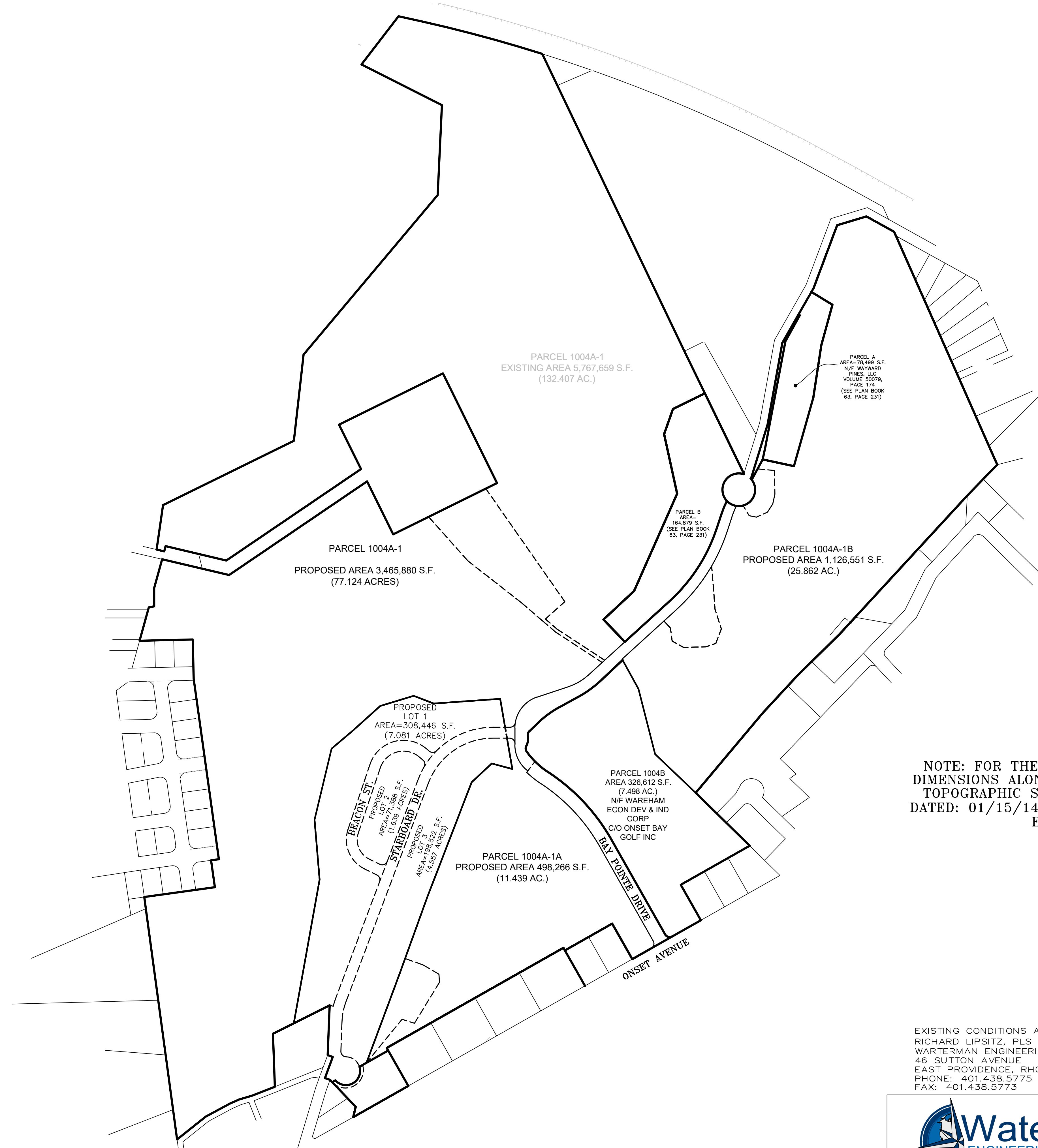
** SIGNATURES MUST BE IN BLUE INK TO CONSTITUTE AN ORIGINAL PLAN

PLANNING BOARD NOTES:

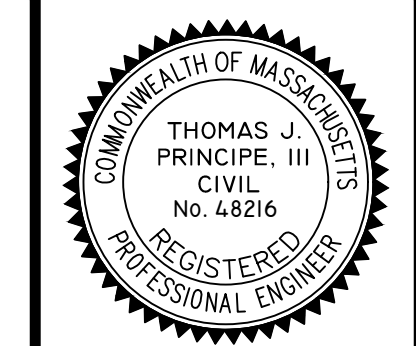
1. THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS FOR ALL LOTS AFFECTED.
2. THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH THE WAREHAM TOWN BY-LAWS IN ACCORDANCE WITH DIVISION VI, ARTICLE I AND ITS IMPLEMENTING WETLANDS PROTECTION REGULATIONS AS WELL AS MASSACHUSETTS WETLANDS PROJECTION ACT, M.G.L. Ch. 131, 40 AND ITS IMPLEMENTING REGULATIONS, 310 CMR 10.00 FOR ALL LOTS AFFECTED.
3. THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH THE ZONING BY-LAW RELATIVE TO IRREGULARLY-SHAPED LOTS, UPLAND AREA, LOT WIDTH, OPEN SPACE AND LOT COVERAGE IN ACCORDANCE WITH ARTICLE 6, 615; ARTICLE 6, 612; ARTICLE 10; ARTICLE 6, 620 FOR ALL LOTS AFFECTED.
4. THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH THE EARTH REMOVAL REGULATIONS IN ACCORDANCE WITH DIVISION IV, ARTICLE III OF THE TOWN BY-LAWS FOR ALL LOTS AFFECTED.



NOTE: FOR THE EXISTING CONDITIONS AND OVERALL DIMENSIONS ALONG THE PERIMETER, SEE BOUNDARY & TOPOGRAPHIC SURVEY PLAN SHEETS 1 THROUGH 3 DATED: 01/15/14 AND REVISED 02/2014 BY WATERMAN ENGINEERING COMPANY



REGISTRY PLAN 1 (KEY SHEET)



PRINCIPE COMPANY, INC.
 ENGINEERING DIVISION
 PO BOX 298
 TIVERTON, RI 02878
 401.816.5385
 PRINCIPEENGINEERING@GMAIL.COM

EXISTING CONDITIONS AND PROPERTY LINE SURVEY BY:
 RICHARD LIPSITZ, PLS
 WATERMAN ENGINEERING COMPANY
 46 SUTTON AVENUE
 EAST PROVIDENCE, RHODE ISLAND 02914
 PHONE: 401.438.5775
 FAX: 401.438.5773



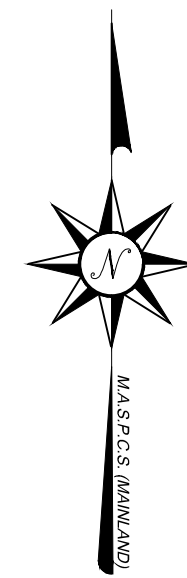
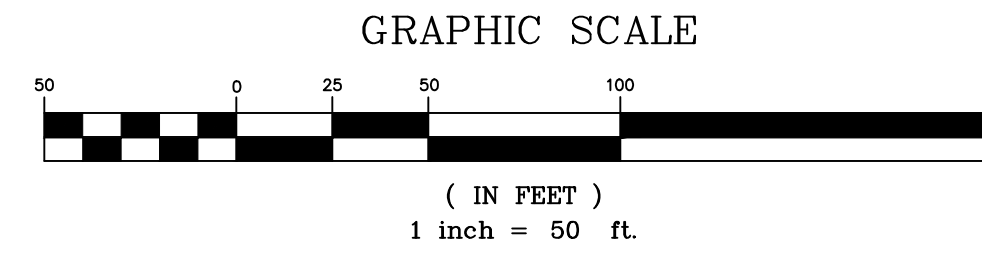
REVISIONS			
No.	DATE	DRWN	CHKD
1.	7-14-21	JAR	TJP

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=200' SHEET NO: R1 OF R3
 DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
 DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

NOTE: REGISTRY PLANS SUBJECT TO LOCAL COVENANTS

DRAINAGE EASEMENT
AREA=17,462 S.F.



PARCEL 1004A-1
PROPOSED AREA 3,359,534 S.F.
(77.124 ACRES)

PROPOSED
LOT 1
AREA=308,446 S.F.
(7.081 ACRES)

PARCEL 1004A-1
PROPOSED AREA 3,359,534 S.F.
(77.124 ACRES)

PROPOSED
LOT 2
AREA=71,388 S.F.
(1.639 ACRES)

PARCEL 1004A-1A
PROPOSED AREA 498,266 S.F.
(11.439 AC.)

PROPOSED
LOT 3
AREA=198,522 S.F.
(4.557 ACRES)

LEGEND & ABBREVIATIONS

N/F	- NOW OR FORMERLY	---	- PROPERTY LINE
A.P.	- ASSESSORS PLAT	---	- ZONING SETBACK LINE
S.F.	- SQUARE FEET	---	- EXISTING CONTOUR
AC.	- ACRES	-x-x-	- FENCE
±	- PLUS OR MINUS	-s-	- SEWER LINE
STY	- STORY	-d-	- DRAIN LINE
W/F	- WOOD FRAMED	-v-v-	- WATER LINE
SHP	- STATE HIGHWAY PLAT	-g-g-	- GAS LINE
RET	- RETAINING WALL	-e-e-	- ELECTRIC LINE
PED.	- PEDESTRIAN	⊙	- SANITARY SEWER MANHOLE
(FND.)	- FOUND	⊙	- CATCH BASIN
RIHB	- RI HIGHWAY BOUND	⊙	- STORM DRAIN MANHOLE
PK NAIL	- MASONRY NAIL	⊙	- WATER GATE
FE	- FLARED END	⊙	- GAS VALVE
RCP	- REINFORCED CONCRETE PIPE	⊙	- ELECTRIC MANHOLE
CLF	- CHAIN LINK FENCE	⊙	- GRANITE BOUND
INV.	- INVERT	⊙	- DRILL HOLE
x 10.80	- EXISTING SPOT GRADE	⊙	- IRON PIPE
---	- EXISTING STONE WALL	---	- PROPOSED SEWER FORCE MAIN LINE
---	- PROPOSED LOT LINE	---	- PROPOSED EDGE OF PAVEMENT
---	- PROPOSED EASEMENT	1+00	- PROPOSED ROADWAY STATIONING
---	- PROPOSED WATER LINE	---	- PROPOSED TEE BOXES
---	- PROPOSED SEWER LINE	---	- PROPOSED FAIRWAYS
		⊙	- PROPOSED CONCRETE BOUND
		⊙	- TO BE SET (UNLESS OTHERWISE SPECIFIED)

TO SHEET R3

FOR REGISTRY USE

SURVEY CERTIFICATIONS

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

SIGNED: RICHARD S. LIPSITZ, PLS NO. 39691 DATED: _____

** SIGNATURES MUST BE IN BLUE INK TO CONSTITUTE AN ORIGINAL PLAN

DEFINITIVE PLAN APPROVAL GRANTED

BY: WAREHAM PLANNING BOARD

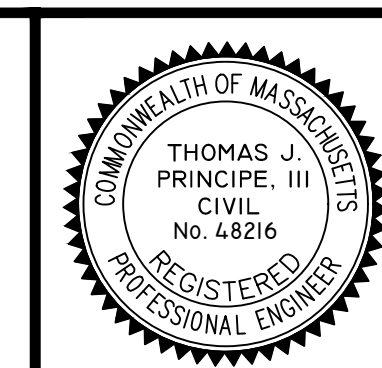
DATE APPROVED: _____

DATE SIGNED: _____

I HEREBY CERTIFY THAT THERE HAS BEEN NO APPEAL TAKEN TO THIS PLANNING BOARD ACTION DURING THE 20-DAY STATUTORY APPEAL PERIOD

TOWN CLERK - WAREHAM MASSACHUSETTS

REGISTRY PLAN 2



PRINCIPE COMPANY, INC.
ENGINEERING DIVISION
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EXISTING CONDITIONS AND PROPERTY LINE SURVEY BY:
RICHARD LIPSITZ, PLS
WARTERMAN ENGINEERING COMPANY
46 SUTTON AVENUE
EAST PROVIDENCE, RHODE ISLAND 02914
PHONE: 401.438.5775
FAX: 401.438.5773

REVISIONS

No.	DATE	DRWN	CHKD
1.	7-14-21	JAR	TJP

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=50'	SHEET NO: R2 OF R3
DRAWN BY: TJP	DESIGN BY: TJP
DATE: 5/26/21	CHECKED BY: TJP
	PROJECT NO.: LD13-1 PH II/III

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East Providence, RI
Phone: (401)-438-5775
Fax: (401)-438-5773
www.watermanengineering.net

