



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building

500 Dedham Avenue

Needham, MA 02492

Application and Report

Property Location: St Sebastian's School - Football / Lacrosse field **Date:** 6/5/2024

Owner: St Sebastian's School

Address: 1191 Greendale Ave Needham, MA 02492

Telephone: 781-247-0163

Applicant: St Sebastian's School

Address: 1191 Greendale Ave Needham, MA 02492

Telephone: 781-247-0163

Designer/Installer: Scoreboard Enterprises Inc

Address: 274 Fruit St Mansfield, MA 02048

Telephone: 508-339-8113

Type of Application
☒ Sign
☐ Minor Project
☐ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

Replacement of approx 22 year old football / lacrosse scoreboard. New scoreboard includes
the name of the school, "St Sebastian's School" with the school logo, "S" w arrows.

Please email completed application to elitchman@needhamma.gov



Non-Structural 4' Peak x 25' Wide Arch Truss with School Logo. Non-Illuminated

Truss (DA-1001-25) with Screen & Routed Aluminum - 48" x 300" (Line 16)
 Truss & Routed Alum painted Black 70-3845769-A-8800
 Logo 38"h
 - Print color as provided

TOP ID: Aluminum Non-Backlit Panel - 30" x 300" x 8.125" (Line 19)
 Painted Black 70-3845769-A-8800
 "S" in St. 17"h
 Fonts Used: Provided as is
 - Print color as provided

30" tall x 25' Wide Panel with School Name. Non-Illuminated

Scoreboard Type
 FB-2021/MS-2012 Black 70-3845769-A-8800
 2" Stripe White 7725-10

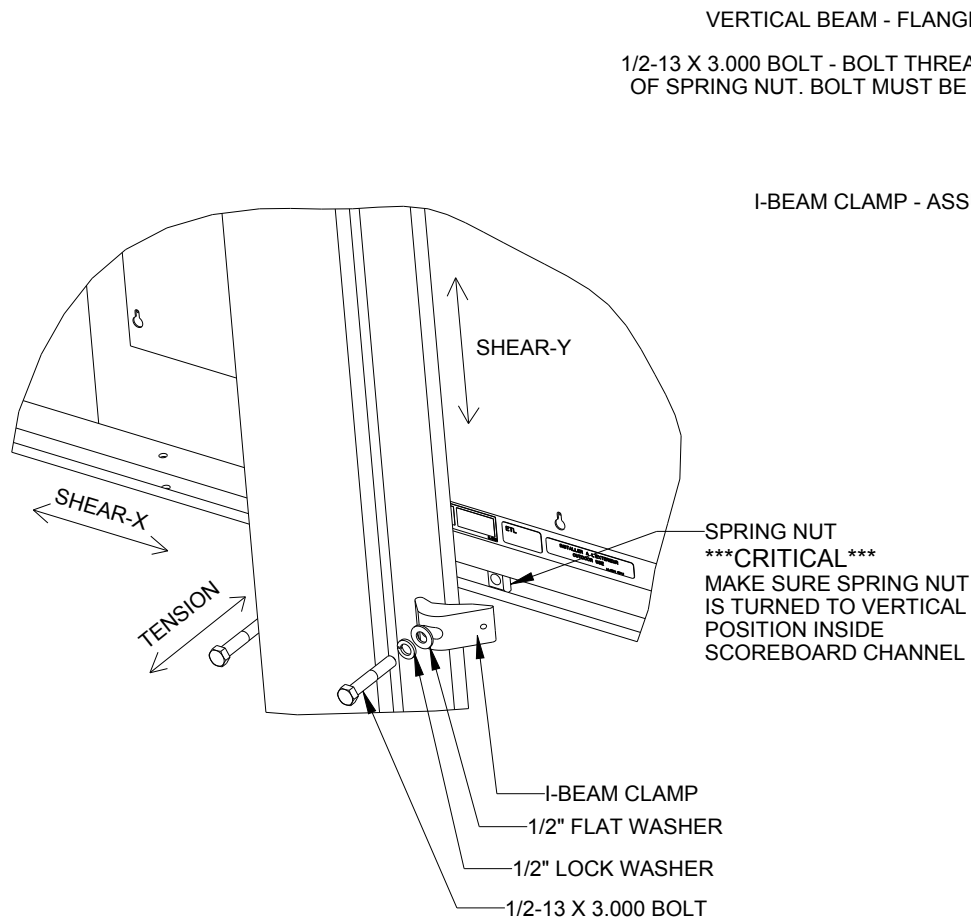
Direct to Board (Line 29)
(MS 2012) - 40.75" x 93.5"
 Background Black
 Logo 37.1"h
 Fonts Used: Provided as is
 - Print color as provided

BTM: Aluminum Non-Backlit Panel - 30" x 300" x 8.125" (Line 19)
 Painted Black 70-3845769-A-8800
 ** BLANK NO COPY **

@1

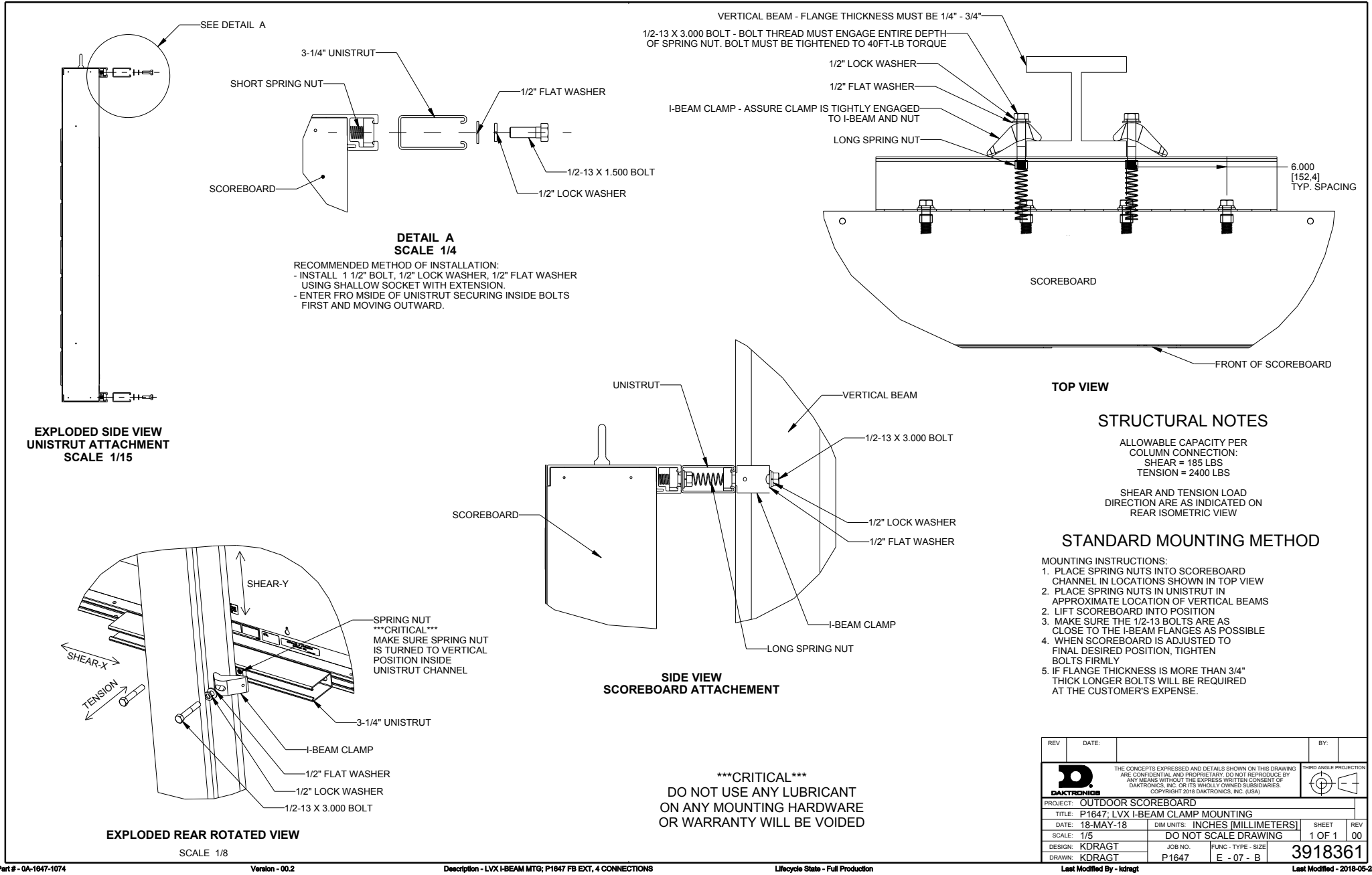
Bottom 30" tall x 25' Wide Blank Panel. Non-Illuminated

Graphic Panel(s) Approval (scoreboard for visual only)

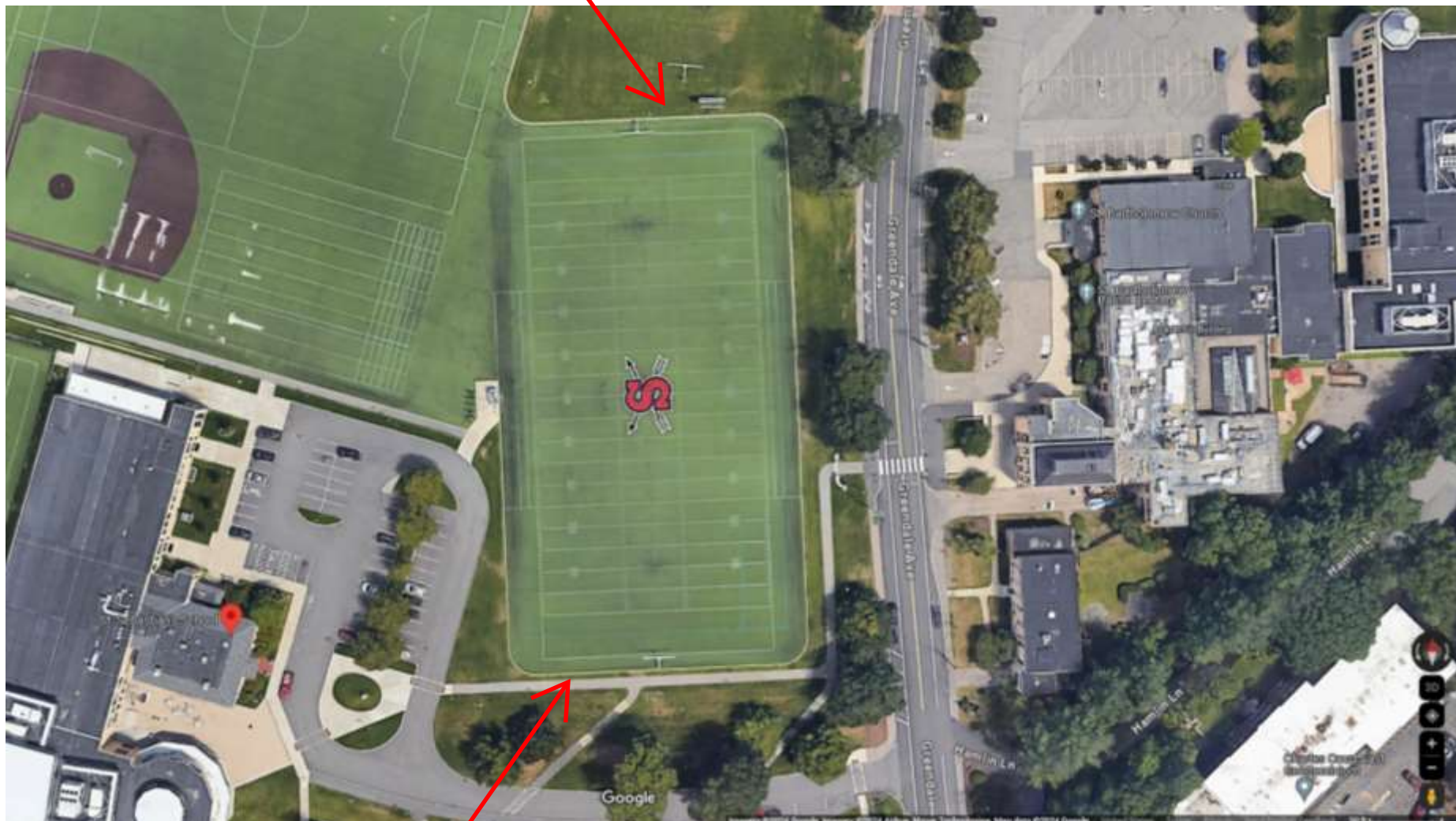


05	22 DEC 15	PER EC-22871; ADDED LUBRICANT NOTE	PJS 18704	
04	06 JAN 14	ADDED ALLOWABLE TENSION AND SHEAR CAPACITY DETAILS	JAVA	
03	23 OCT 13	PER EC-12382; CHANGED BOLT TORQUE FROM 30 FT-LB TO 40 FT-LB	NJM	
02	07 MAR 12	ADDED STANDARD MOUNTING METHODS NOTES	KDD	
01	21 FEB 12	CHANGED ROCKER TO I-BEAM	KDD	
REV	DATE:		BY:	

 DAKTRONICS		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESS WRITTEN CONSENT OF DAKTRONICS, INC. OR ITS WHOLLY OWNED SUBSIDIARIES. COPYRIGHT 2016 DAKTRONICS, INC. (USA)			
PROJECT: OUTDOOR SCOREBOARD					
TITLE: P1647; I-BEAM CLAMP MOUNTING					
DATE: 22-DEC-15		DIM UNITS: INCHES [MILLIMETERS]		SHEET	REV
SCALE: 1/8		DO NOT SCALE DRAWING		1 OF 1	05
DESIGN: MCARSRU		JOB NO.	FUNC - TYPE - SIZE	1052565	
DRAWN: MCARSRU		P1647	E - 07 - A		



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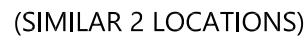
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1. All design, fabrication, installation and construction shall conform to the following specifications, unless specifically noted otherwise on the drawing:
 - The Massachusetts State Building Code, 9th Edition
 - American Concrete Institute Building Code Requirements for Reinforced Concrete (318-14).
 - American Institute of Steel Construction, Inc Manual of Steel Construction (13th Edition).
 - American Welding Society AWS/D1.1 Structural Welding Code - Steel
2. All steel components shall be as listed below, unless noted otherwise:
 - All rolled shapes, plates and bars shall be ASTM A36, or equal.
 - Steel I-beam shall be ASTM A992, Grade 50, ASTM A572, Grade 50, or equal.
 - All pipe shall meet the requirements of ASTM A53, Type S or X, Grade B, or equal.
 - All structural tubing shall be ASTM A500, Grade B, or equal.
 - All bolted connections shall be made with ASTM A325 Bolts and shall be installed as per AISC Specifications
 - All exposed materials shall be properly protected from weathering and/or corrosion.
3. All field welds shall be made by a welder certified in the specified position.
 - All welds shall be made with E70XX electrode, or equal.
 - All welds shall be made in a sequence that will balance the applied heat of welding while the welding progresses.
 - All plug (slot) welds shall be filled completely as per AWS requirements.
4. All concrete shall have a minimum compressive strength at 28 days of 3000 psi.
 - Signage may be installed on the structure after a minimum curing time of 7 days, provided the curing process has been properly maintained
5. All reinforcement steel shall have a minimum yield strength of 60,000 psi and shall conform to ASTM A615. All reinforcement steel shall be placed in accordance with ACI 318-14.
 - All reinforcement steel shall be provided with a minimum concrete cover of 3" when concrete is cast against earth.
 - Reinforcement steel shall not be "back" welded at crossing points.
6. The structure has been designed to withstand a 130 mph (3-sec gust) design wind speed with a maximum design pressure of 53.1 psf according to ASCE 7-10. (Exposure C - Risk Cat. II)
 - Seismic design was performed as per ASCE 7-10 assuming Sds=0.264, I=1.0, and Site Class D.
7. The foundation has been designed assuming the following average soil conditions:
 - Allowable Vertical Bearing Pressure of 1500 psf (This value is used for spread footings)
 - If soil conditions other than those assumed are encountered (including soft soils, unstable or collapsing soils, expansive soils, organic materials, groundwater, adjacent utilities, or any other condition of potential concern) cease excavation immediately and contact Cornerstone so that the foundation design can be re-evaluated.
 - If the structure is to be located in the proximity of a building or any other structure, Cornerstone shall be contacted prior to installation to evaluate any potential impact on the adjacent footings.
 - If the structure is located on the side or top of a slope in excess of 3:1, the installer shall contact Cornerstone for re-evaluation. The foundation shall not be placed in or near a fill slope without Cornerstone's approval.
 - All concrete shall be placed in direct contact with undisturbed soil. There shall be no backfilled soil placed in or around the foundation without written approval from Cornerstone.
8. Cornerstone is in no way responsible for the safety of the work site during installation. The installer shall take appropriate measures to make sure that the installation of the foundation and the erection of the structure is performed using methods in compliance with applicable OSHA regulations.
 - If existing and proposed conditions are not as detailed in this design drawing the installer shall stop work and notify Cornerstone immediately.
 - Cornerstone will not be performing on-site inspections or verification of conditions. It is the responsibility of the installer, the structure owner, and the property owner to identify the on-site conditions and to contact Cornerstone with any discrepancies or concerns. It is the owner's responsibility to locate and mark all underground utilities.
10. Any deviation from these plans or non-compliance with the general notes without written approval from Cornerstone will render the entire design to be void

THE PORTION OF THE COLUMNS THAT ARE BELOW GRADE SHALL EITHER BE GALVANIZED OR SHALL BE PAINTED WITH A BITUMINOUS OR OTHER TYPE OF WATERPROOF COATING TO RESIST CORROSION.



THE HSS3X3 REAR BRACING SHALL SPAN BETWEEN THE TWO I-BEAM COLUMNS AND BOLT OR WELD TO THE REAR FLANGES AS SHOWN. THIS DESIGN ASSUMES THAT THE FRONT FLANGE OF THE I-BEAMS ARE Laterally Braced by the ATTACHMENT OF THE DISPLAYS. IF LATERAL RESTRAINT IS NOT PROVIDED BY THIS ATTACHMENT, A SECOND HSS3X3 BRACE SHALL BE SIMILARLY BOLTED OR WELDED TO THE FRONT FLANGE OF THE I-BEAM COLUMNS.

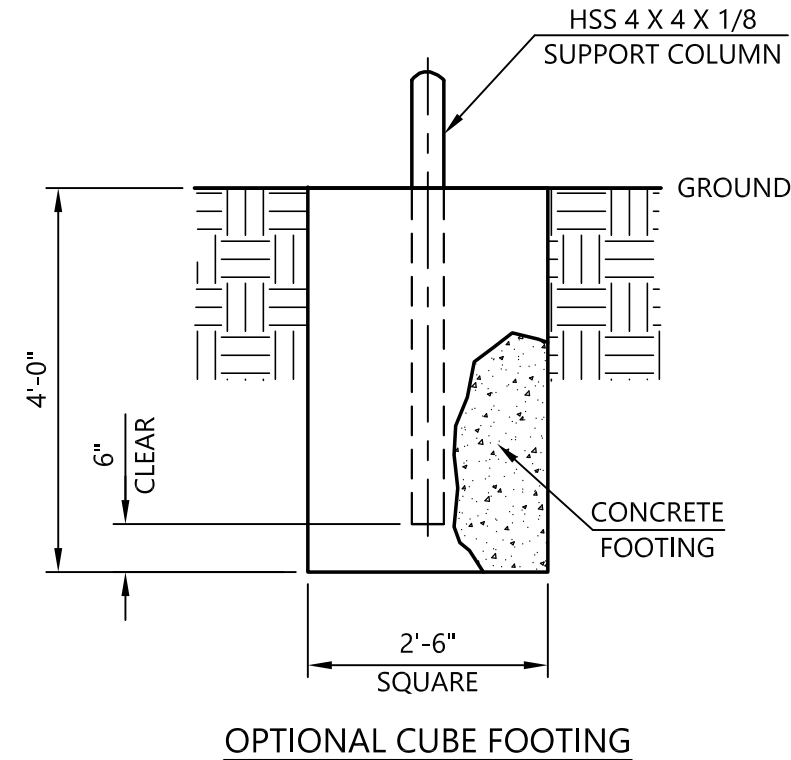
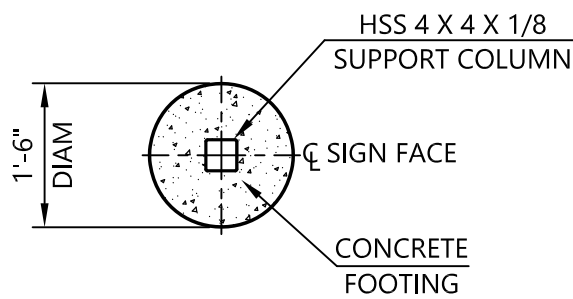
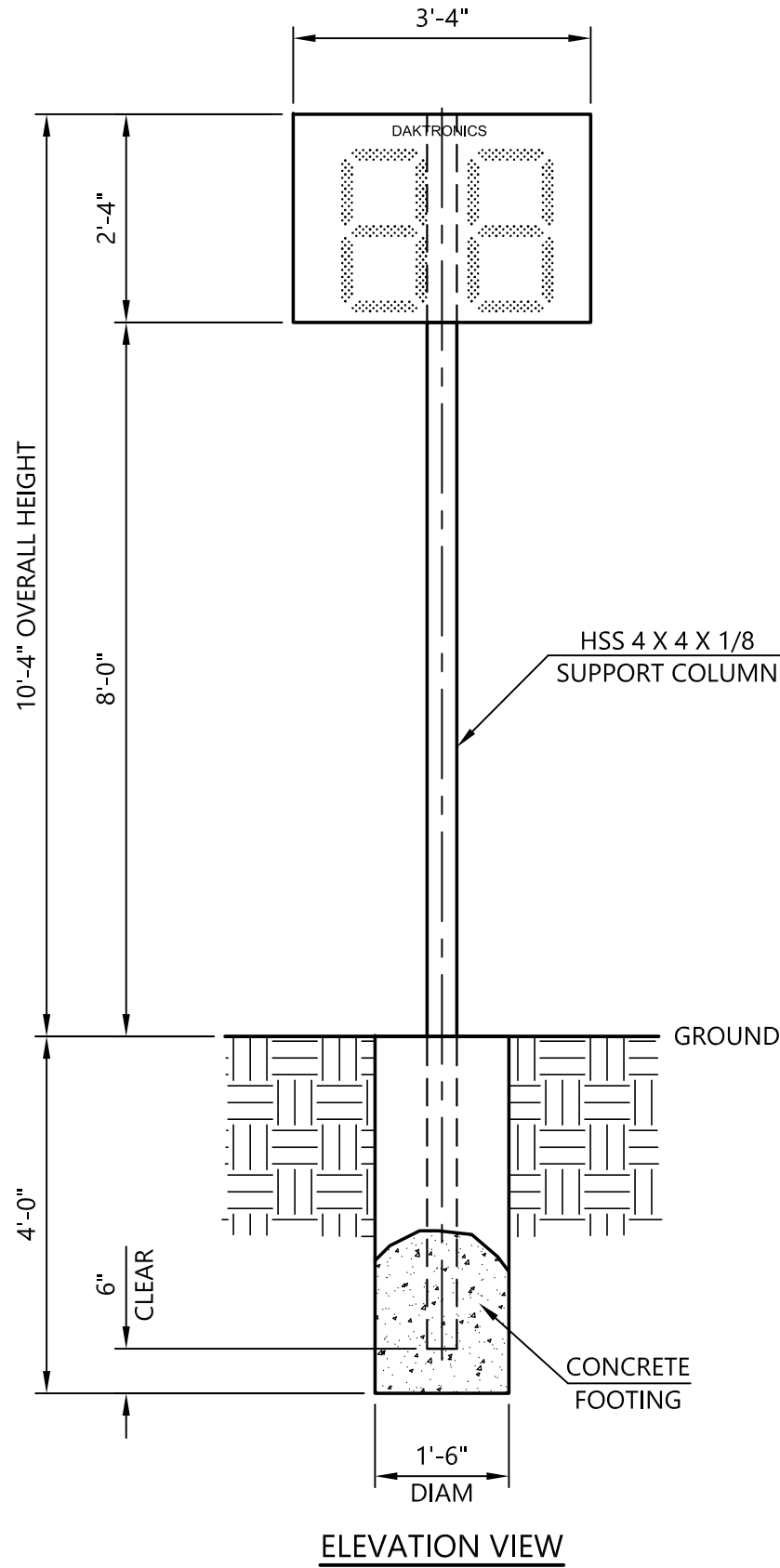


CORNERSTONE ENGINEERING, INC. IS RESPONSIBLE FOR COLUMN AND FOOTING DESIGN ONLY. SCOREBOARD COMPONENTS AND ATTACHMENT ARE THE RESPONSIBILITY OF THE SIGN MANUFACTURER.

MA P.E. # 41140

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- All steel components shall be as listed below, unless noted otherwise:
 - All rolled shapes, plates and bars shall be ASTM A36, or equal.
 - All pipe shall meet the requirements of ASTM A53, Type S or E, Gr B, or ASTM A500, Gr B.
 - All structural tubing shall be ASTM A500, Grade B, or equal.
 - All bolted connections shall be made with ASTM A307 Bolts and shall be installed as per AISC Specifications
 - All exposed materials shall be properly protected from weathering and/or corrosion.
- All field welds shall be made by a welder certified in the specified position.
 - All welds shall be made with E70XX electrode, or equal.
 - All welds shall be made in a sequence that will balance the applied heat of welding while the welding progresses.
- All concrete shall have a minimum compressive strength at 28 days of 2500 psi.
 - Signage may be installed on the structure after a minimum curing time of 3 days, provided the curing process has been properly maintained in accordance with ACI 318-14.
- No steel reinforcement is required in cube or auger style footings where the support column is embedded directly to the bottom of the footing.
- The structure has been designed to withstand a 130 mph (3-sec gust) design wind speed with a maximum design pressure of 47.8 psf according to ASCE 7-10. (Exposure C - Risk Cat. II)
 - Seismic design was considered as per ASCE 7-10 assuming Sds=0.264, Ip=1.0, and Site Class D.
- The foundation has been designed assuming the following average soil conditions:
 - Allowable Lateral Bearing Pressure of 150 psf/ft (This value is used for cube and auger footings.) The soil allowable is multiplied by two for isolated footing as per IBC 1806.3.4.
 - 150 psf/ft corresponds to sand, silty sand, clayey sand, silty gravel, clayey gravel or equal.
 - If soil conditions other than those assumed are encountered (including soft soils, unstable or collapsing soils, expansive soils, organic materials, groundwater, adjacent utilities, or any other condition of potential concern) cease excavation immediately and contact Cornerstone so that the foundation design can be re-evaluated.
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- Any deviation from these plans or non-compliance with the general notes without written approval from Cornerstone will render the entire design to be void.



NOTICE:
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RESPONSIBLE FOR COLUMN AND FOOTING
DESIGN ONLY. SCOREBOARD COMPONENTS
AND ATTACHMENT ARE THE RESPONSIBILITY
OF THE SIGN MANUFACTURER.



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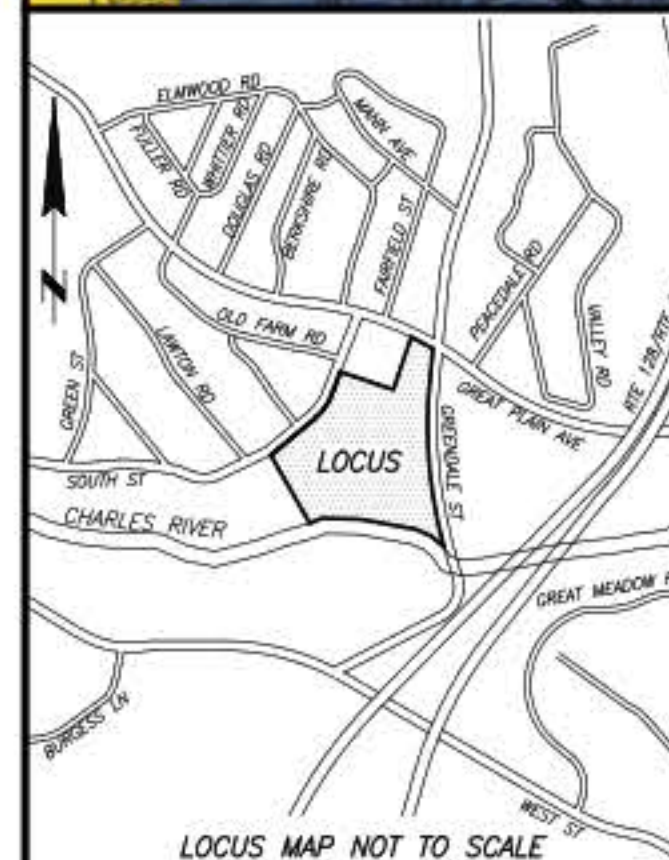
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I CERTIFY THAT THIS PLAN IS BASED ON AN
ACTUAL FIELD SURVEY.

TIMOTHY R. AGURKIS, PLS (MA# 52782)
TAGURKIS@FELDMANGEO.COM
7/24/2023
DATE

DRAWING NAME:

AS-BUILT PLAN
ST. SEBASTIAN'S SCHOOL
1191 GREENDALE AVENUE
NEEDHAM, MASS.

DATE: MARCH 13, 2023

REVISIONS:

7/20/23

ADDED WETLAND FLAGS #R1-R14

FILENAME: 2300105-ASB.dwg

RESEARCH:

PROJ MGR: CO

CALC: CAD: BAK/MLM

FIELD CHK: CRD FILE: 2300105-ASB

40 0 20 40 80

SCALE: 1"=40'

SHEET NO. 1 OF 1

LEGEND

1. BENCH MARK INFORMATION:

BENCH MARKS USED:

BENCHMARK 4 (BM 4) - FRONT BOLT HYDRANT AS SHOWN ON A PLAN PREPARED BY "TOOMEY-MUNSON & ASSOCIATES, INC." TITLED "EXISTING CONDITIONS PLAN FOR ST. SEBASTIAN'S SCHOOL" DATED APRIL 10, 2007. ELEVATION = 243.29

TEMPORARY BENCH MARKS SET:

TBM-12: RIGHT FRONT HYDRANT BONNET BOLT ON THE WESTERLY SIDE OF GREENDALE AVENUE AT MAIN ENTRANCE TO ST. SEBASTIAN'S SCHOOL. ELEVATION = 228.77

TBM-13: RIGHT OUTER CORNER OF THE TOP CONCRETE STEP AT THE HENRY T. LANE RINK. ELEVATION = 225.19

2. ELEVATIONS REFERS TO THE TOWN OF NEEDHAM DATUM.

3. CONTOUR INTERVAL EQUALS ONE (1) FOOT.

4. TOPOGRAPHY AND SITE DETAIL SHOWN HEREON ARE FROM FIELD SURVEYS PERFORMED ON AUGUST 27, 2009, MARCH 5, 2014, JUNE 25, 2015, FEBRUARY 21, 2019, FEBRUARY 22, 2019, FEBRUARY 27, 2023 AND MARCH 13, 2023.

6. BY GRAPHIC PLOTTING ONLY, THE PARCEL SHOWN HEREON LIES WITHIN A ZONE "X" (UNSHADED) - AN AREA OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD, WITH A PORTION OF THE PARCEL WITHIN THE ZONE "X" (SHADED) - AN AREA OF 2% ANNUAL CHANCE FLOOD AND ZONE "A" (DENSE HATCH) - AN AREA OF 1% ANNUAL CHANCE FLOOD, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR NORFOLK COUNTY, MASSACHUSETTS, MAP NUMBER 250210039E, CITY OF NEEDHAM COMMUNITY NUMBER 250237, PANEL NUMBER 0039E, HAVING AN EFFECTIVE DATE OF JULY 17, 2012.

7. UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND THE LATEST PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. WE CANNOT ASSUME RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES THAT ARE OMITTED OR INACCURATELY SHOWN ON SAID RECORD PLAN. SINCE SUB-SURFACE UTILITIES CANNOT BE VISIBLY VERIFIED BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUB-SURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL, TOLL FREE, THE DIG SAFE CALL CENTER AT 1-888-344-7233 SEVENTY TWO HOURS PRIOR TO EXCAVATION.

8. WATER LINES LOCATIONS SHOWN HEREON WERE TAKEN FROM AS-BUILT MARK-UPS PROVIDED BY CONTRACTOR.

9. THE WETLAND BUFFER AND RIVER FRONT RESOURCE LINES SHOWN HEREON ARE BASED ON A DELINEATION REVIEW AND SUBSEQUENT ADJUSTMENTS MADE BY ECOTEC, INC. ENVIRONMENTAL CONSULTANTS ON NOVEMBER 25, 2015. FLAGS #R1 THROUGH #R14, MAINT. WERE DELINEATED ON JULY 11, 2023. BUFFER LINES UPDATED TO REFLECT RECENT DELINEATION.

10. DRAINAGE STRUCTURES WITHIN THE BALL FIELD ARE SHOWN PER DESIGN PLANS PROVIDED BY ROBERT OLSON + ASSOCIATES.

LEGEND

- ⊙ SEWER MANHOLE
- ⊕ DRAIN MANHOLE
- ⊖ ELECTRIC MANHOLE
- ⊙ TELEPHONE MANHOLE
- ⊙ CABLE TV MANHOLE
- ⊙ MANHOLE
- ⊙ HYDRANT
- ⊙ GAS VALVE
- ⊙ WATER VALVE
- ⊙ WATER SHUT OFF
- ⊙ GAS SHUT OFF
- ⊙ CATCH BASIN
- ⊙ TRAFFIC CONTROL BOX
- ⊙ WALK LIGHT
- ⊙ LIGHT POLE
- ⊙ ELECTRIC HANDHOLE
- ⊙ SECURITY CAMERA
- ⊙ BOLLARD
- ⊙ SIGN
- ⊙ AD AREA DRAIN
- ⊙ CO CLEAN OUT
- ⊙ HR HAND RAIL
- ⊙ TOS TOP OF SILT
- ⊙ TOW TOP OF WATER
- ⊙ TBM TEMPORARY BENCH MARK
- REC RECORD
- CALC CALCULATED
- VGC VERTICAL GRANITE CURB
- BIT BITUMENOUS
- CONC CONCRETE
- CRW CONCRETE RETAINING WALL
- SRW STONE RETAINING WALL
- TC TOP OF CURB
- BC BOTTOM OF CURB
- TW TOP OF WALL
- BW BOTTOM OF WALL
- IN INVERT ELEVATION
- TH TOP OF TROUGH
- TR CENTERLINE OF TROUGH
- VPV TOP OF VERTICAL PIPE
- INACC INACCESSIBLE
- SQ FT SQUARE FEET
- R= RADIUS OR RIM ELEVATION
- L= LENGTH
- FGC FLUSH GRANITE CURB
- GUARD RAIL
- X-X METAL FENCE
- - - HAND RAIL
- - - SEWER
- - - DRAIN
- - - WATER
- - - GAS
- - - ELECTRIC
- - - TELEPHONE
- - - CABLE TELEVISION
- - - UNDER DRAIN
- - - ABANDONED GAS
- - - PIPE SIZE AND MATERIAL
- - - RCP REINFORCED CONCRETE PIPE
- - - CI CAST IRON
- - - PVC POLY VINYL CHLORIDE
- - - VC VITRIFIED CLAY PIPE
- - - T-C TELEPHONE, CABLE

TOTAL LOT AREA
=981,364 SQ.FT.
22.529 ACRES

WEST-1
AREA = 874,377 SQ.FT.
20.073 ACRES
(INCLUDES 65,453± SQ. FT. OF RIVER)

Now or Formerly
ST. SEBASTIAN'S COUNTRY DAY SCHOOL, INC.
BOOK 0048, PAGE 59
PARCEL ID 199/200.0-0018-0000.0

Proposed Location of new structure and scoreboard display.

Proposed location of Timer on single pole structure.

- REFERENCES**
- NORFOLK COUNTY REGISTRY OF DEEDS
PLAN BOOK 109, NO. 407
 - PLAN BOOK 112, NO. 720
 - MASSACHUSETTS LAND COURT
LCC 34882A
 - MASSACHUSETTS HIGHWAY DEPARTMENT
LAYOUT NO. 2832
 - LAYOUT NO. 2858
 - LAYOUT NO. 2883
 - LAYOUT NO. 4062
 - LAYOUT NO. 4124
 - LAYOUT NO. 4548

1197± (HISTORIC CENTERLINE)
AS SHOWN ON PLAN NO. 293 OF 1987
APPROXIMATE TOWN LINE

100' WETLAND BUFFER, 200' RIVERFRONT RESOURCE AREA AND LIMIT
OF FLOOD PLAIN AREA ELEVATION 201.6 (TOWN BASE) WERE
COMPILED FROM PLAN NO. 435 OF 2008 RECORDED AT NORFOLK
REGISTRY OF DEEDS BY TOOMEY-MUNSON & ASSOCIATES, INC.



STATE HIGHWAY LAYOUT NO. 4062