

- GENERAL NOTES:**
1. BY SUBMITTING A BID, THE BIDDER WARRANTS THAT HE HAS CAREFULLY EXAMINED THE SITE AND HAS FAMILIARIZED HIMSELF WITH ALL PROVISIONS OF THE CONTRACT DOCUMENTS AND THAT WHERE THE DRAWINGS AND SPECIFICATIONS REQUIRE A GIVEN RESULT, SUCH RESULT CAN BE PRODUCED UNDER THE TERMS OF THE CONTRACT DOCUMENTS.
 2. THE CONTRACTOR SHALL PROCURE AND PAY FOR ALL NECESSARY PERMITS AND LICENSES REQUIRED TO CARRY OUT HIS WORK IN FULL ACCORDANCE WITH REQUIREMENTS OF ALL REGULATIONS AND AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS AND ALL CODES, RULES AND REGULATIONS OF HEALTH, PUBLIC OR OTHER AUTHORITY CONTROLLING OR LIMITING THE METHODS, MATERIAL TO BE USED, OR THE ACTIONS OF THOSE EMPLOYED IN WORK OF THIS KIND. ALL WORK, LABOR OR MATERIAL NECESSARY TO COMPLY WITH THESE LAWS, CODES, RULES AND REGULATIONS SHALL BE PERFORMED AND FURNISHED BY THE CONTRACTOR.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FERTILIZING AND SEEDING ALL AREAS DISTURBED BY HIS ACTIVITIES WITHIN THE LIMITS OF THE PROJECT SITE. ROAD PAVEMENT REPLACEMENT AND ALL OTHER SITE RESTORATION WORK WITHIN THE PROJECT SITE SHALL MEET THE REQUIREMENTS OF THE TOWNSHIP ENGINEER.
 4. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY EQUIPMENT AND METHODS TO KEEP EXCAVATIONS FREE OF WATER AND PROTECT WORK AND ADJACENT STRUCTURES FROM DAMAGE BY WATER DURING ALL STAGES OF HIS ACTIVITIES. NO SEPARATE PAYMENT WILL BE MADE FOR DEWATERING OPERATIONS AND ALL COSTS THEREOF SHALL BE INCLUDED IN THE PRICE BID FOR THIS PROJECT.
 5. THE CONTRACTOR SHALL FURNISH, PLACE AND MAINTAIN SHEETING, BRACING, SHORING AND OTHER SUPPORTS REQUIRED BY HIS WORK AND TO PROTECT ADJACENT STRUCTURES. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND ALL COSTS THEREOF SHALL BE INCLUDED IN THE PRICE BID FOR THIS PROJECT.

- DEMOLITION NOTES:**
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEMOLITION AND REMOVAL OF ALL EXISTING STRUCTURES, FOUNDATIONS, RAMPS, TREES, VEGETATION, FENCES, ABOVE AND BELOW GRADE UTILITIES, SIDEWALKS, DRIVEWAYS, MISCELLANEOUS DEBRIS AND ALL OTHER MATERIALS AND ITEMS LOCATED WITHIN THE PROJECT LIMITS.
 2. EXISTING IMPROVEMENTS, LOCATED WITHIN THE PROJECT SITE, INCLUDING SIDEWALKS, DRIVEWAYS, SITE AMENITIES, ETC. SHALL BE PROTECTED BY THE CONTRACTOR AND ALL EXISTING IMPROVEMENTS OR OTHER AMENITIES DISTURBED BY HIS OPERATIONS MUST BE RESTORED AND/OR REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND THE TOWNSHIP ENGINEER.
 3. ALL EXISTING STRUCTURES SHALL BE DEMOLISHED IN SUCH A MANNER SO AS TO MINIMIZE DISTURBANCE TO THE SURROUNDING PROPERTIES, NO DUST, PARTICLES OF DEBRIS OR WATER FROM THE DUST CONTROL SHALL BE PERMITTED OUTSIDE OF THE DESIGNATED WORK AREAS.
 4. AT THE END OF DEMOLITION OPERATIONS INDICATED, THE CONTRACTOR SHALL INSTALL A SILT FENCE AND HAY BALE SEDIMENT BARRIERS AROUND THE PERIMETERS OF THE DEMOLITION AREAS TO MAINTAIN ADEQUATE SILT AND SOIL EROSION CONTROL AND ADEQUATE WATER DRAINAGE AROUND DEMOLITION AREA PERIMETERS, UNTIL BACKFILLING AND REGRADING OPERATIONS ARE COMPLETED AND THE AREA IS STABILIZED.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STRIPPING THE PROPERTY TO REMOVE ALL IMPROVISED AND DELETERIOUS MATERIALS FROM THE SURFACE OF THE DEMOLITION AREA, INCLUDING ALL CONSTRUCTION DEBRIS AND VEGETATION. PRIOR TO COMMENCING ANY WORK AND REGRADING THE CONTRACTOR SHALL PERFORM EXPLORATORY TEST PITS WITHIN THE PROJECT LIMITS TO IDENTIFY ANY BURIED DEMOLITION DEBRIS, FOUNDATION ELEMENTS AND ABANDON UTILITIES. THE CONTRACTOR SHALL REMOVE ALL BURIED DEBRIS, INCLUDING BUT NOT LIMITED TO, FOUNDATIONS, BRICK, WOOD, CONCRETE, METAL AND ASPHALT FRAGMENTS FROM THE SITE TO AN APPROVED NEAR LANDFILL.
 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL DEBRIS GENERATED DURING HIS DEMOLITION AND CONSTRUCTION ACTIVITIES. ALL EXCESS DEBRIS MUST BE REMOVED TO A NEARBY APPROVED LANDFILL. NO ON-SITE BURIAL OF DEBRIS WILL BE ALLOWED.
 7. THE CONTRACTOR WILL REMOVE AND DISPOSE OF ALL EXCESS FILL, TOPSOIL FROM THE PROJECT SITE. ALL COST ASSOCIATED WITH THE REMOVAL OF ALL EXCESS MATERIAL SHALL BE INCLUDED IN THE CONTRACTORS PRICE FOR SITE DEMOLITION.

- UTILITY NOTES:**
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES PRIOR TO DEMOLITION OR CONSTRUCTION ACTIVITIES TO DETERMINE THE EXACT LOCATIONS AS NECESSARY AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. UTILITY LOCATIONS SHOWN ON THESE PLANS ARE FROM ABOVE-GROUND OBSERVATIONS AND FROM RECORD INFORMATION PROVIDED BY THE UTILITY COMPANIES. IN ADDITION, THE LOCATION AND TYPE OF THE EXISTING UTILITIES SHOWN ON THESE PLANS IS NOT GUARANTEED TO BE ACCURATE NOR ALL INCLUSIVE. THE CONTRACTOR SHALL USE THE EXISTING UTILITY LOCATIONS SHOWN AS AN AID IN DETERMINING EXACT LOCATIONS. THE CONTRACTOR MUST CONTACT THE "ONE CALL SYSTEM" AT 1-800-272-1000 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
 2. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION, SCHEDULING AND ALL COSTS REQUIRED FOR NEW SERVICE CONNECTIONS, EXTENSION OF SERVICE FROM THE BUILDING, CAP, DISCONNECT AND REMOVE THE EXCESS UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY AGENCY OR THE AUTHORITY HAVING JURISDICTION. IN ADDITION, IF THE EXISTING IMPROVEMENTS LOCATED WITHIN THE PROJECT ARE DISTURBED BY THE CONTRACTOR OR THE UTILITY COMPANIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF THE IMPROVEMENTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY ENGINEER.
 3. IF ANY UTILITY FACILITIES, INCLUDING DISTRIBUTION MAINS OR SERVICES FOR ADJACENT PROPERTIES, ARE DISRUPTED OR DAMAGED DURING THE CONSTRUCTION WORK ASSOCIATED WITH THIS PROJECT, THE CONTRACTOR IS RESPONSIBLE FOR RESTORING THE UTILITY FACILITIES BY THE END OF THE WORKING DAY AT NO ADDITIONAL EXPENSE TO THE OWNER.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION, INSTALLATION AND SUPPLY OF ANY UTILITY SERVICE REQUIRED FOR THIS PROJECT, INCLUDING TEMPORARY POWER AND TELEPHONE SERVICES. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THIS PROJECT.

LEGEND

- EXISTING CHAIN LINK FENCE AND ANY OTHER ITEM MARKED WITH THIS DESIGNATION IS TO BE REMOVED (TYP.)
- EXISTING CONCRETE SIDEWALK, ASPHALT PAVEMENT AND ANY OTHER ITEM MARKED WITH THIS DESIGNATION IS TO BE REMOVED (TYP.)
- EXISTING TREES AND ANY OTHER ITEM MARKED WITH THIS DESIGNATION IS TO BE REMOVED (TYP.)
- LIMIT OF DISTURBANCE (TYP.)

ALL EXISTING TREES, ASSOCIATED STUMPS AND ALL VEGETATION TO BE REMOVED (TYP.)

BLOCK 8005
 Lot 6
 7,201,382 S.F. ± / 165.32 Ac. ±
 1-100 Mannino Park Drive
 N/F Township Of Old Bridge

LIMIT OF TREE CLEARING (TYP.)

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET
 0 40 80

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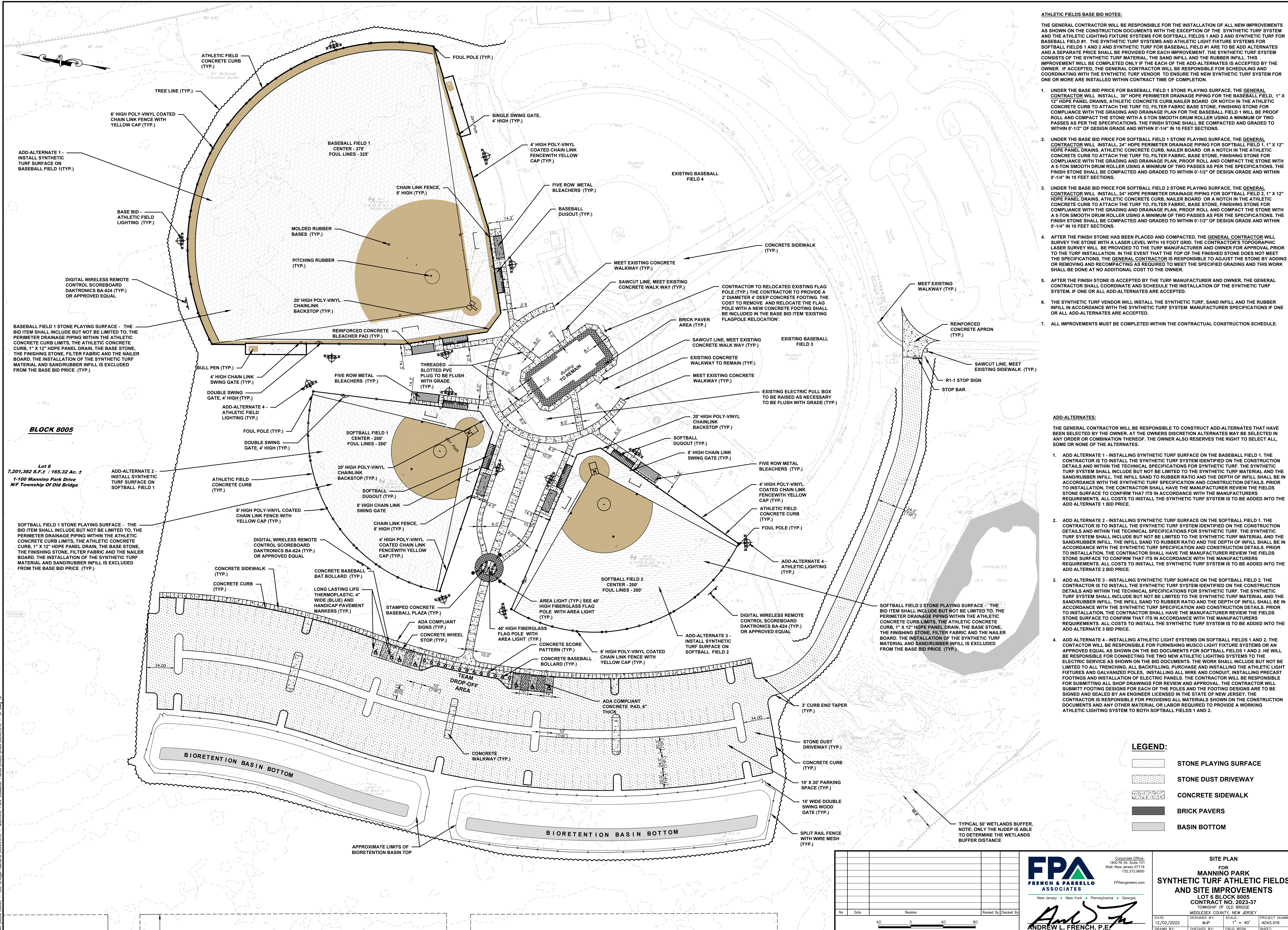
DEMOLITION PLAN
 FOR
MANNINO PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
LOT 6 BLOCK 8005
CONTRACT NO. 2023-37
 TOWNSHIP OF OLD BRIDGE
 MIDDLESEX COUNTY, NEW JERSEY

DATE: 12/02/2022
 DESIGNED BY: MJP
 DRAWN BY: MJP
 CHECKED BY: FIELD BOOK

SCALE: 1" = 40'
 PROJECT NUMBER: 4043.016
 SHEET: D-1.0

ANDREW L. FRENCH, P.E.
 PROFESSIONAL ENGINEER, N.J. LIC. No. 42894

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ATHLETIC FIELDS BASE BID NOTES:

THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR THE INSTALLATION OF ALL NEW IMPROVEMENTS AS SHOWN ON THE CONSTRUCTION DOCUMENTS WITH THE EXCEPTION OF THE SYNTHETIC TURF SYSTEM AND THE ATHLETIC LIGHTING FIXTURE SYSTEMS FOR SOFTBALL FIELDS 1 AND 2 AND SYNTHETIC TURF FOR BASEBALL FIELD #1. THE SYNTHETIC TURF SYSTEMS AND ATHLETIC LIGHT FIXTURE SYSTEMS FOR SOFTBALL FIELDS 1 AND 2 AND FOR BASEBALL FIELD #1 ARE TO BE ADD ALTERNATES AND A SEPARATE PRICE SHALL BE PROVIDED FOR EACH IMPROVEMENT. THE SYNTHETIC TURF SYSTEM CONSISTS OF THE SYNTHETIC TURF MATERIAL, THE SAND INFILL AND THE RUBBER INFILL. THIS IMPROVEMENT WILL BE COMPLETED ONLY IF EACH OF THE ADD-ALTERNATES IS ACCEPTED BY THE OWNER. IF ACCEPTED, THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR SCHEDULING AND COORDINATING WITH THE SYNTHETIC TURF VENDOR TO ENSURE THE NEW SYNTHETIC TURF SYSTEM FOR ONE OR MORE ARE INSTALLED WITHIN CONTRACT TIME OF COMPLETION.

- UNDER THE BASE BID PRICE FOR BASEBALL FIELD 1 STONE PLAYING SURFACE, THE GENERAL CONTRACTOR WILL INSTALL, 30" HDPE PERIMETER DRAINAGE PIPING FOR THE BASEBALL FIELD, 1" X 12" HDPE PANEL DRAINS, ATHLETIC CONCRETE CURB, NAILER BOARD OR NOTCH IN THE ATHLETIC CONCRETE CURB TO ATTACH THE TURF TO, FILTER FABRIC BASE STONE, FINISHING STONE FOR COMPLIANCE WITH THE GRADING AND DRAINAGE PLAN, PROOF ROLL AND COMPACT THE STONE WITH A 5-TON SMOOTH DRUM ROLLER USING A MINIMUM OF TWO PASSES AS PER THE SPECIFICATIONS. THE FINISH STONE SHALL BE COMPACTED AND GRADED TO WITHIN 0-1/4" OF DESIGN GRADE AND WITHIN 0-1/2" IN 10 FEET SECTIONS.
- UNDER THE BASE BID PRICE FOR SOFTBALL FIELD 1 STONE PLAYING SURFACE, THE GENERAL CONTRACTOR WILL INSTALL, 24" HDPE PERIMETER DRAINAGE PIPING FOR SOFTBALL FIELD 1, 1" X 12" HDPE PANEL DRAINS, ATHLETIC CONCRETE CURB, NAILER BOARD OR A NOTCH IN THE ATHLETIC CONCRETE CURB TO ATTACH THE TURF TO, FILTER FABRIC, BASE STONE, FINISHING STONE FOR COMPLIANCE WITH THE GRADING AND DRAINAGE PLAN, PROOF ROLL AND COMPACT THE STONE WITH A 5-TON SMOOTH DRUM ROLLER USING A MINIMUM OF TWO PASSES AS PER THE SPECIFICATIONS. THE FINISH STONE SHALL BE COMPACTED AND GRADED TO WITHIN 0-1/2" OF DESIGN GRADE AND WITHIN 0-1/4" IN 10 FEET SECTIONS.
- UNDER THE BASE BID PRICE FOR SOFTBALL FIELD 2 STONE PLAYING SURFACE, THE GENERAL CONTRACTOR WILL INSTALL, 24" HDPE PERIMETER DRAINAGE PIPING FOR SOFTBALL FIELD 2, 1" X 12" HDPE PANEL DRAINS, ATHLETIC CONCRETE CURB, NAILER BOARD OR A NOTCH IN THE ATHLETIC CONCRETE CURB TO ATTACH THE TURF TO, FILTER FABRIC, BASE STONE, FINISHING STONE FOR COMPLIANCE WITH THE GRADING AND DRAINAGE PLAN, PROOF ROLL AND COMPACT THE STONE WITH A 5-TON SMOOTH DRUM ROLLER USING A MINIMUM OF TWO PASSES AS PER THE SPECIFICATIONS. THE FINISH STONE SHALL BE COMPACTED AND GRADED TO WITHIN 0-1/2" OF DESIGN GRADE AND WITHIN 0-1/4" IN 10 FEET SECTIONS.
- AFTER THE FINISH STONE HAS BEEN PLACED AND COMPACTED, THE GENERAL CONTRACTOR WILL SURVEY THE STONE WITH A LASER LEVEL WITH 10 FOOT GRID, THE CONTRACTOR'S TOPOGRAPHIC LASER SURVEY WILL BE PROVIDED TO THE TURF MANUFACTURER AND OWNER FOR APPROVAL PRIOR TO THE TURF INSTALLATION. IN THE EVENT THAT THE TOP OF THE FINISHED STONE DOES NOT MEET THE SPECIFICATIONS, THE GENERAL CONTRACTOR IS RESPONSIBLE TO ADJUST THE STONE BY ADDING OR REMOVING AND RECOMPACTING AS REQUIRED TO MEET THE SPECIFIED GRADING AND THIS WORK SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- AFTER THE FINISH STONE IS ACCEPTED BY THE TURF MANUFACTURER AND OWNER, THE GENERAL CONTRACTOR SHALL COORDINATE AND SCHEDULE THE INSTALLATION OF THE SYNTHETIC TURF SYSTEM, IF ONE OR ALL ADD-ALTERNATES ARE ACCEPTED.
- THE SYNTHETIC TURF VENDOR WILL INSTALL THE SYNTHETIC TURF, SAND INFILL AND THE RUBBER INFILL IN ACCORDANCE WITH THE SYNTHETIC TURF SYSTEM MANUFACTURER SPECIFICATIONS IF ONE OR ALL ADD-ALTERNATES ARE ACCEPTED.
- ALL IMPROVEMENTS MUST BE COMPLETED WITHIN THE CONTRACTUAL CONSTRUCTION SCHEDULE.

ADD-ALTERNATES:

THE GENERAL CONTRACTOR WILL BE RESPONSIBLE TO CONSTRUCT ADD-ALTERNATES THAT HAVE BEEN SELECTED BY THE OWNER. AT THE OWNER'S DISCRETION ALTERNATES MAY BE SELECTED IN ANY ORDER OR COMBINATION THEREOF. THE OWNER ALSO RESERVES THE RIGHT TO SELECT ALL, SOME OR NONE OF THE ALTERNATES.

- ADD ALTERNATE 1 - INSTALLING SYNTHETIC TURF SURFACE ON THE BASEBALL FIELD 1. THE CONTRACTOR IS TO INSTALL THE SYNTHETIC TURF SYSTEM IDENTIFIED ON THE CONSTRUCTION DETAILS AND WITHIN THE TECHNICAL SPECIFICATIONS FOR SYNTHETIC TURF. THE SYNTHETIC TURF SYSTEM SHALL INCLUDE BUT NOT BE LIMITED TO THE SYNTHETIC TURF MATERIAL AND THE SAND/RUBBER INFILL. THE INFILL SAND TO RUBBER RATIO AND THE DEPTH OF INFILL SHALL BE IN ACCORDANCE WITH THE SYNTHETIC TURF SPECIFICATION AND CONSTRUCTION DETAILS. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL HAVE THE MANUFACTURER REVIEW THE FIELDS STONE SURFACE TO CONFIRM THAT ITS IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS. ALL COSTS TO INSTALL THE SYNTHETIC TURF SYSTEM IS TO BE ADDED INTO THE ADD ALTERNATE 1 BID PRICE.
- ADD ALTERNATE 2 - INSTALLING SYNTHETIC TURF SURFACE ON THE SOFTBALL FIELD 1. THE CONTRACTOR IS TO INSTALL THE SYNTHETIC TURF SYSTEM IDENTIFIED ON THE CONSTRUCTION DETAILS AND WITHIN THE TECHNICAL SPECIFICATIONS FOR SYNTHETIC TURF. THE SYNTHETIC TURF SYSTEM SHALL INCLUDE BUT NOT BE LIMITED TO THE SYNTHETIC TURF MATERIAL AND THE SAND/RUBBER INFILL. THE INFILL SAND TO RUBBER RATIO AND THE DEPTH OF INFILL SHALL BE IN ACCORDANCE WITH THE SYNTHETIC TURF SPECIFICATION AND CONSTRUCTION DETAILS. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL HAVE THE MANUFACTURER REVIEW THE FIELDS STONE SURFACE TO CONFIRM THAT ITS IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS. ALL COSTS TO INSTALL THE SYNTHETIC TURF SYSTEM IS TO BE ADDED INTO THE ADD ALTERNATE 2 BID PRICE.
- ADD ALTERNATE 3 - INSTALLING SYNTHETIC TURF SURFACE ON THE SOFTBALL FIELD 2. THE CONTRACTOR IS TO INSTALL THE SYNTHETIC TURF SYSTEM IDENTIFIED ON THE CONSTRUCTION DETAILS AND WITHIN THE TECHNICAL SPECIFICATIONS FOR SYNTHETIC TURF. THE SYNTHETIC TURF SYSTEM SHALL INCLUDE BUT NOT BE LIMITED TO THE SYNTHETIC TURF MATERIAL AND THE SAND/RUBBER INFILL. THE INFILL SAND TO RUBBER RATIO AND THE DEPTH OF INFILL SHALL BE IN ACCORDANCE WITH THE SYNTHETIC TURF SPECIFICATION AND CONSTRUCTION DETAILS. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL HAVE THE MANUFACTURER REVIEW THE FIELDS STONE SURFACE TO CONFIRM THAT ITS IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS. ALL COSTS TO INSTALL THE SYNTHETIC TURF SYSTEM IS TO BE ADDED INTO THE ADD ALTERNATE 3 BID PRICE.
- ADD ALTERNATE 4 - INSTALLING ATHLETIC LIGHT SYSTEMS ON SOFTBALL FIELDS 1 AND 2. THE CONTRACTOR WILL BE RESPONSIBLE FOR FURNISHING MUSCO LIGHT FIXTURE SYSTEMS OR AN APPROVED EQUAL AS SHOWN ON THE BID DOCUMENTS FOR SOFTBALL FIELDS 1 AND 2. HE WILL BE RESPONSIBLE FOR CONNECTING THE TWO NEW ATHLETIC LIGHTING SYSTEMS TO THE ELECTRIC SERVICE AS SHOWN ON THE BID DOCUMENTS. THE WORK SHALL INCLUDE BUT NOT BE LIMITED TO ALL TRENCHING, ALL BACKFILLING, PURCHASE AND INSTALLING THE ATHLETIC LIGHT FIXTURES AND GALVANIZED POLES, INSTALLING ALL WIRE AND CONDUIT, INSTALLING PRECAST FOOTINGS AND INSTALLING ALL ELECTRIC PANELS. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING ALL SHOP DRAWINGS FOR REVIEW AND APPROVAL. THE CONTRACTOR WILL SUBMIT FOOTING DESIGNS FOR EACH OF THE POLES AND THE FOOTING DESIGNS ARE TO BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE OF NEW JERSEY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL MATERIALS SHOWN ON THE CONSTRUCTION DOCUMENTS AND ANY OTHER MATERIAL OR LABOR REQUIRED TO PROVIDE A WORKING ATHLETIC LIGHTING SYSTEM TO BOTH SOFTBALL FIELDS 1 AND 2.

LEGEND:

	STONE PLAYING SURFACE
	STONE DUST DRIVEWAY
	CONCRETE SIDEWALK
	BRICK PAVERS
	BASIN BOTTOM

TYPICAL 50' WETLANDS BUFFER. NOTE: ONLY THE NUDEP IS ABLE TO DETERMINE THE WETLANDS BUFFER DISTANCE

No.	Date	Revision	Revised by	Checked by

SCALE IN FEET

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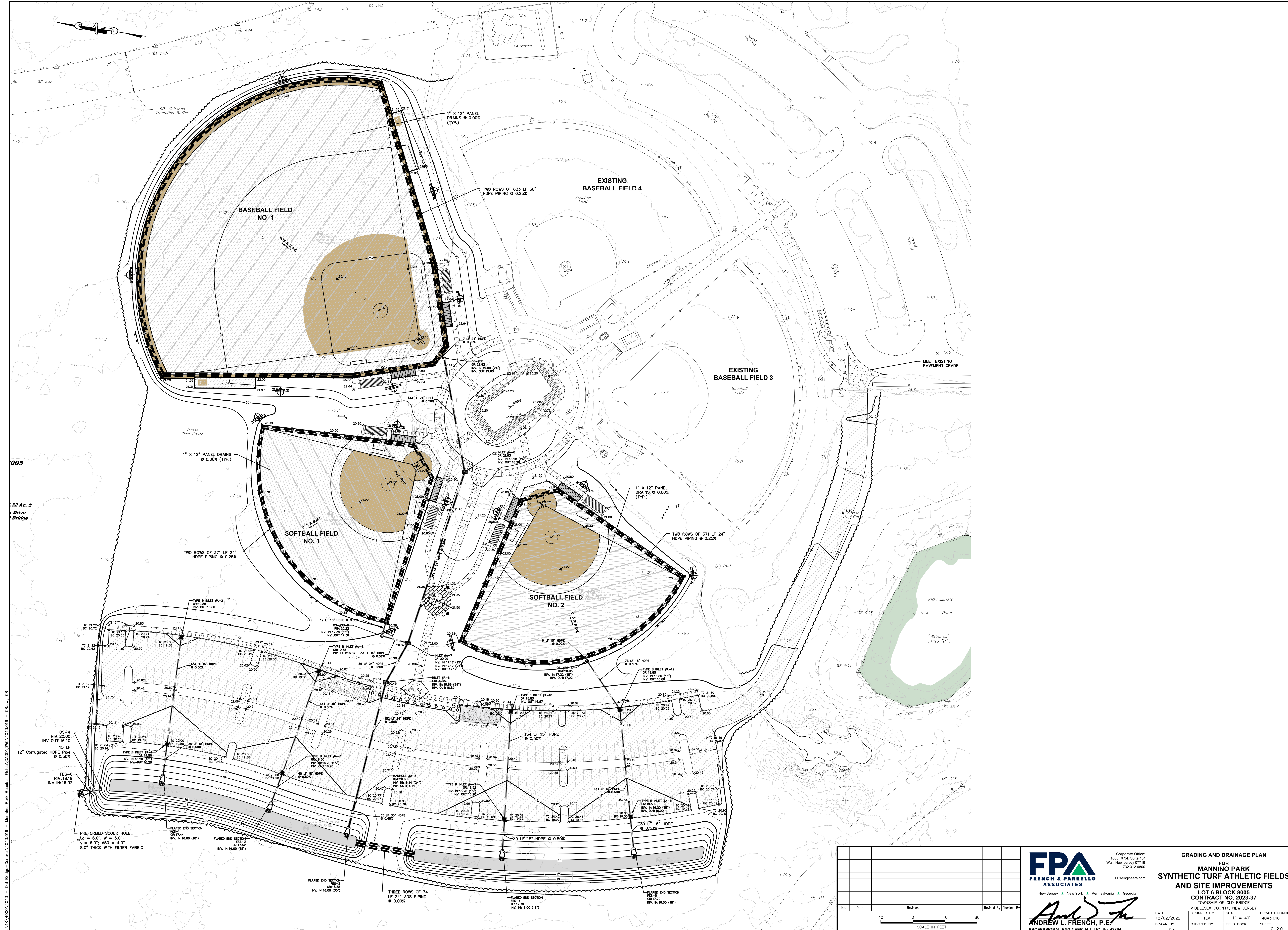
SITE PLAN FOR MANNINO PARK SYNTHETIC TURF ATHLETIC FIELDS AND SITE IMPROVEMENTS
 LOT 6 BLOCK 8005
 CONTRACT NO. 2023-37
 TOWNSHIP OF OLD BRIDGE, MIDDLESEX COUNTY, NEW JERSEY

DESIGNED BY: MJP
 DRAWN BY: MJP
 CHECKED BY: ALF
 DATE: 12/02/2022
 SCALE: 1" = 40'
 FIELD BOOK
 PROJECT NUMBER: 4043.016
 SHEET: C-1.0

BLOCK 8005

Lot 6
 7,201,382 S.F. ± / 165.32 Ac. ±
 1-100 Mannino Park Drive
 N/T Township Of Old Bridge

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005

32 Ac. ±
Drive
Bridge

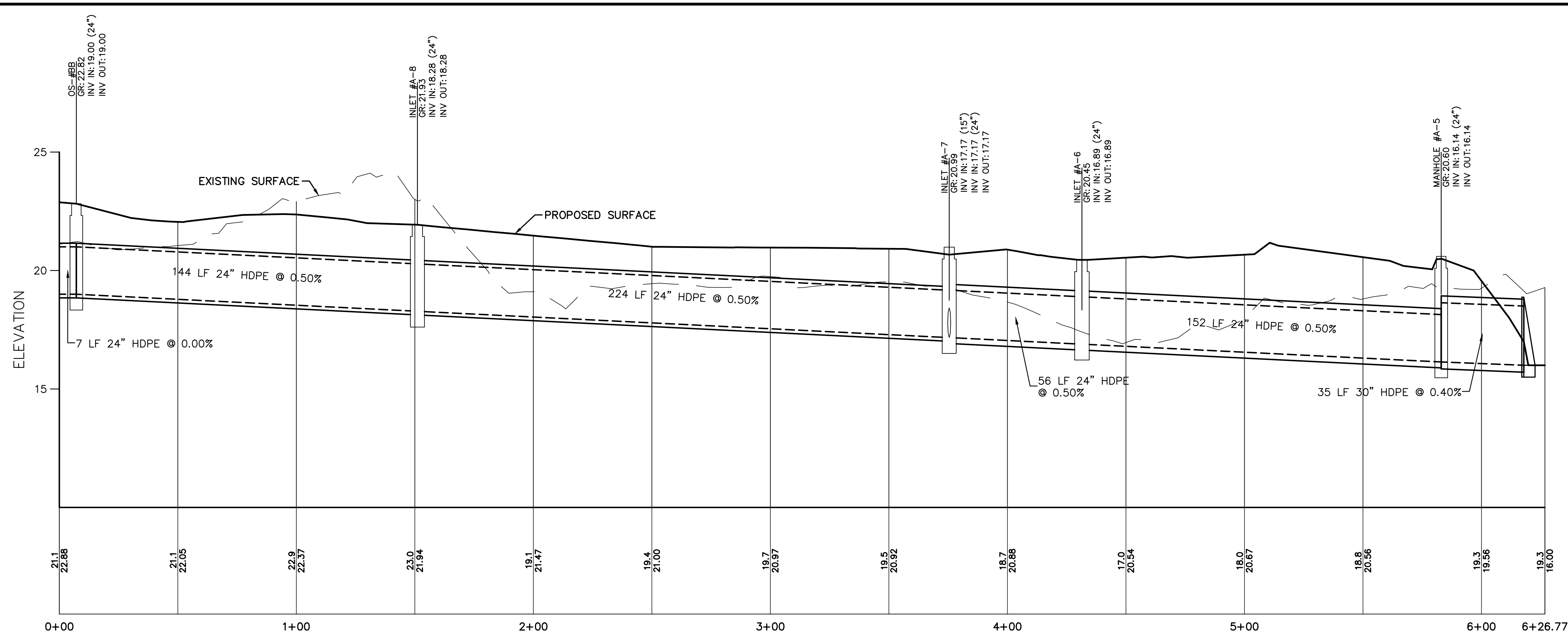
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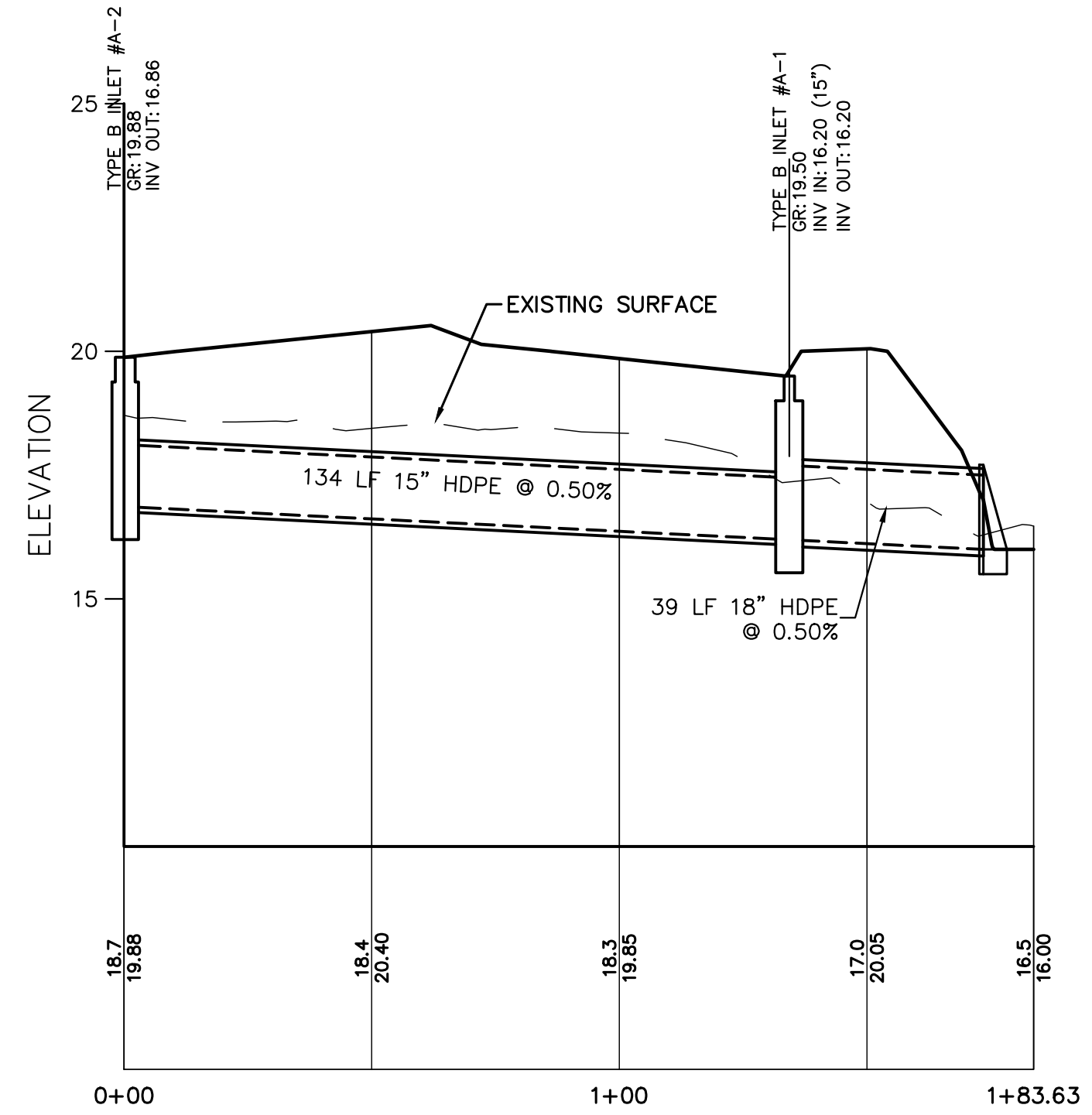
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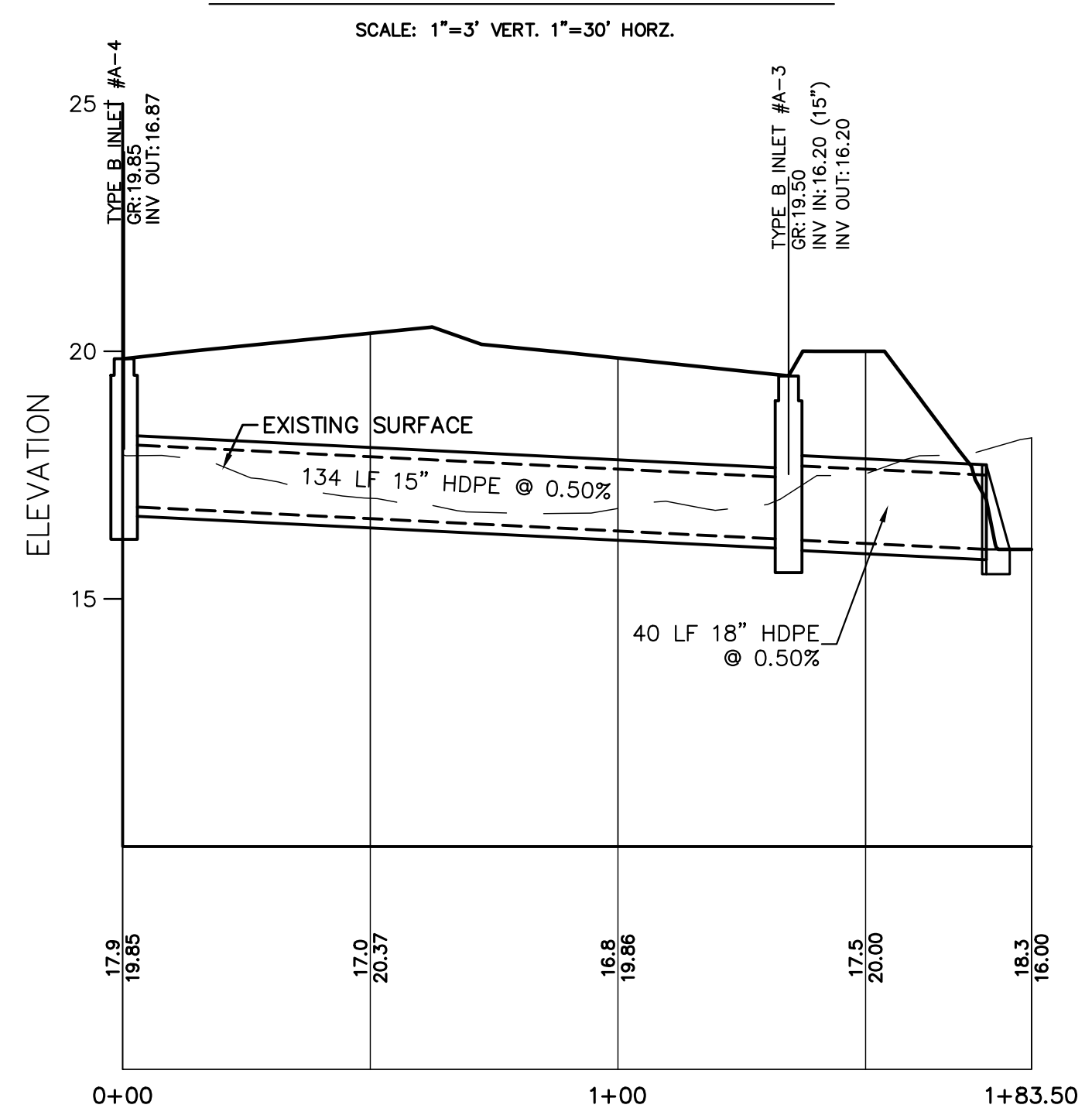
GRADING AND DRAINAGE PLAN
 FOR
MANNINO PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
 LOT 6 BLOCK 8005
 CONTRACT NO. 2023-37
 TOWNSHIP OF OLD BRIDGE
 MIDDLESEX COUNTY, NEW JERSEY
 PROJECT NUMBER: 4043.016
 SHEET: C-2.0
 DATE: 12/02/2022
 DESIGNED BY: TLV
 CHECKED BY: TLV
 SCALE: 1" = 40'
 FIELD BOOK
 PROJECT: 4043.016



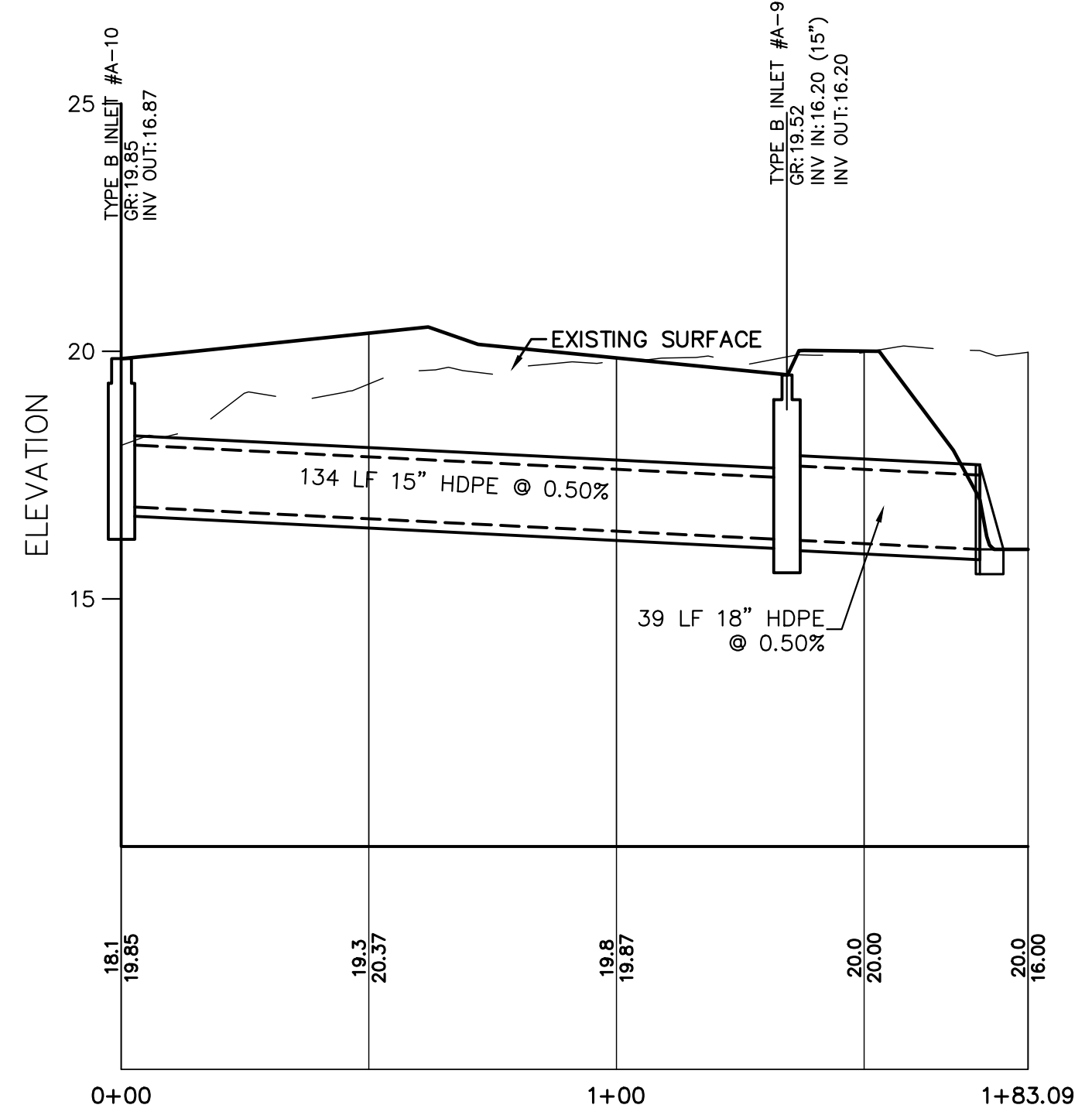
BASEBALL FIELD TO BIORETENTION BASIN
SCALE: 1"=3' VERT. 1"=30' HORIZ.



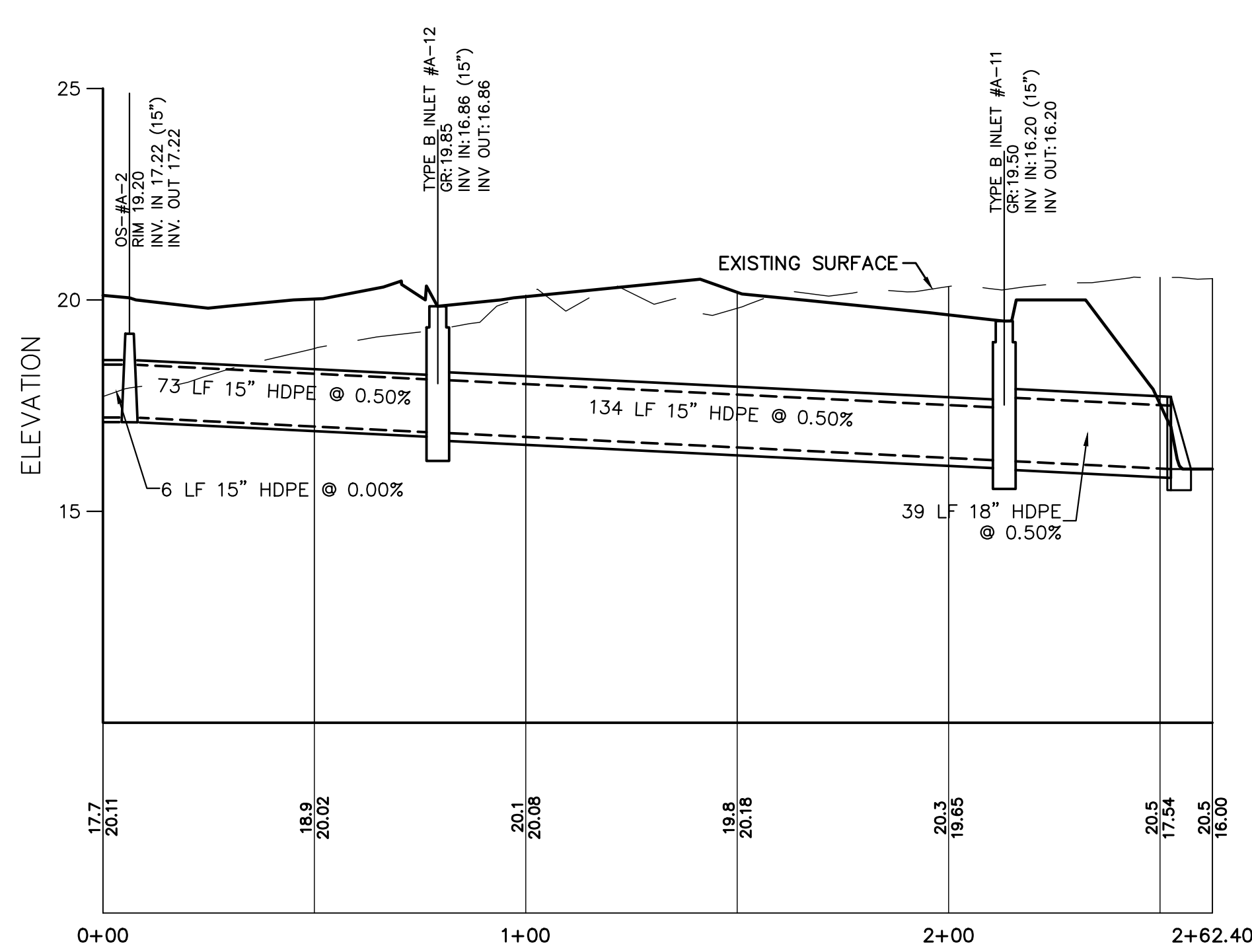
INLET #B-1 TO BIORETENTION BASIN
SCALE: 1"=3' VERT. 1"=30' HORIZ.



INLET #A-4 TO BIORETENTION BASIN
SCALE: 1"=3' VERT. 1"=30' HORIZ.



INLET #A-10 TO BIORETENTION BASIN
SCALE: 1"=3' VERT. 1"=30' HORIZ.



INLET #OS A-2 TO BIORETENTION BASIN
SCALE: 1"=3' VERT. 1"=30' HORIZ.

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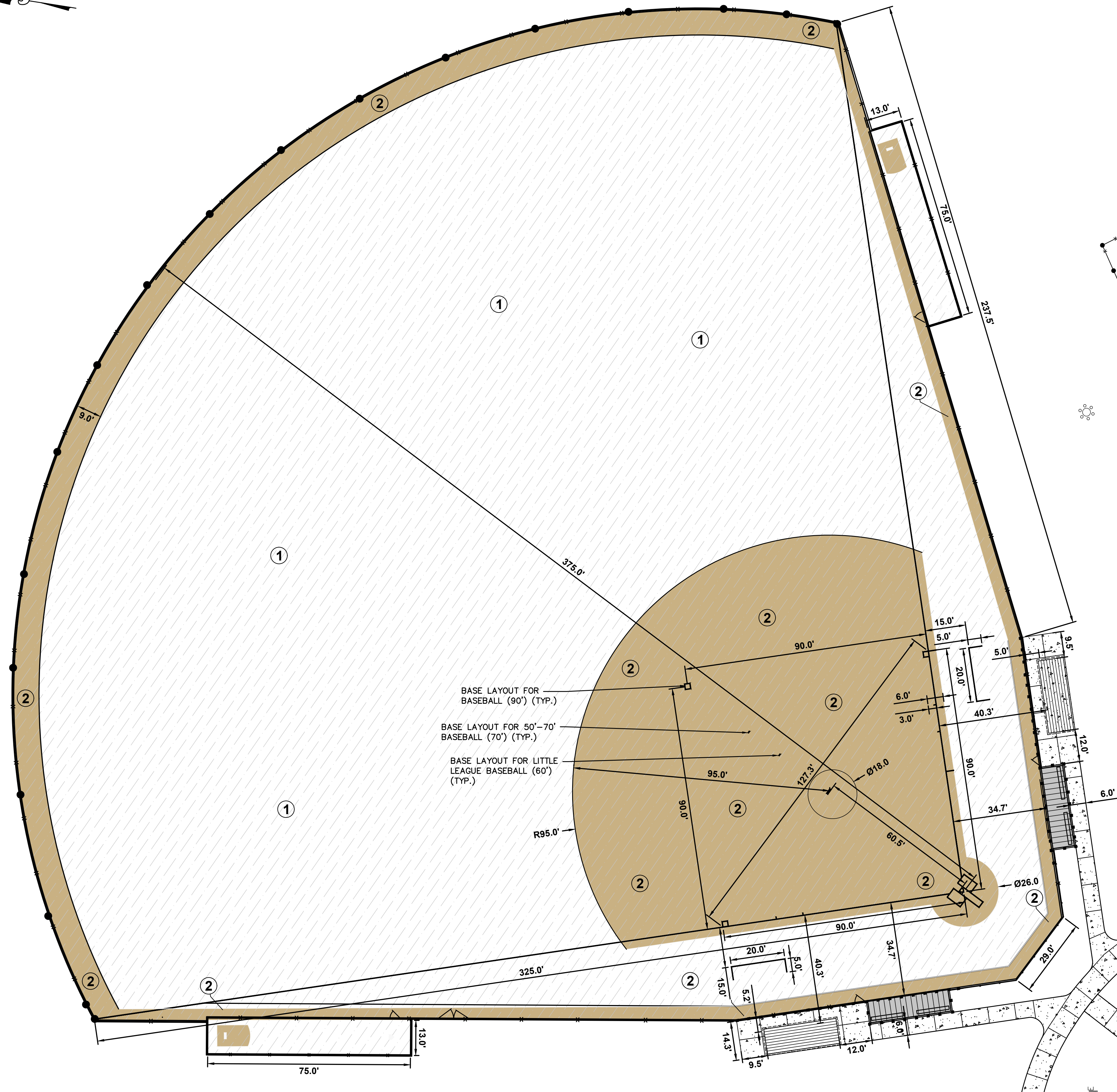
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Andrew L. French
ANDREW L. FRENCH, P.E.
PROFESSIONAL ENGINEER, N.J. LIC. No. 42894

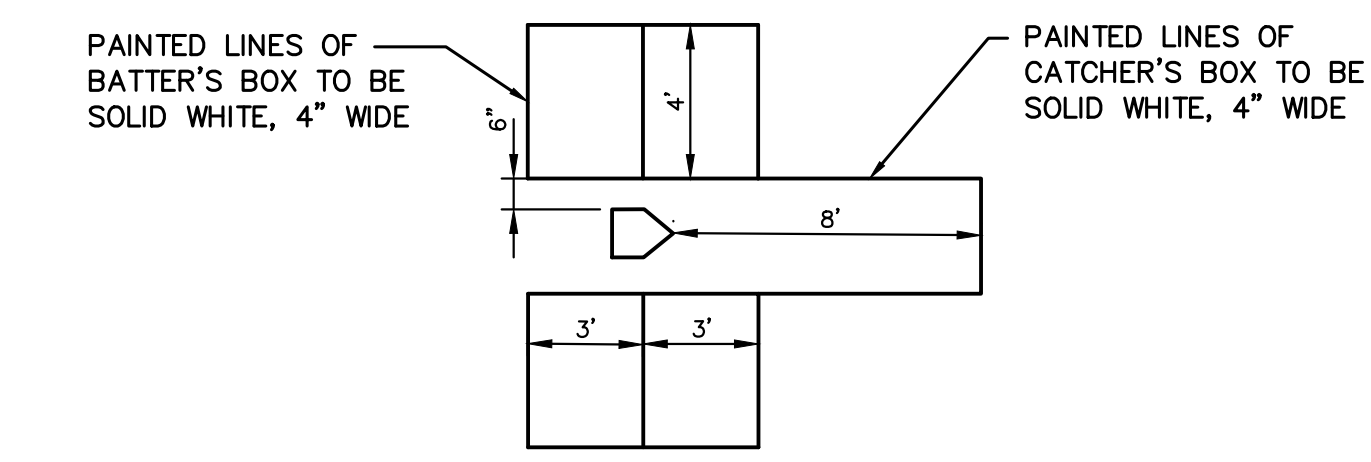
PROFILES			
FOR MANNING PARK SYNTHETIC TURF ATHLETIC FIELDS AND SITE IMPROVEMENTS			
LOT 6 BLOCK 8005 CONTRACT NO. 2023-37 TOWNSHIP OF OLD BRIDGE			
MIDDLESEX COUNTY, NEW JERSEY			
DATE: 12/02/2022	DESIGNED BY: SP	SCALE: 1"=30' HORIZ. 1"=3' VERT.	PROJECT NUMBER: 4043.016
DRAWN BY: SP	CHECKED BY: MJP	FIELD BOOK:	SHEET: C-2.1

C:\v\4043\001\4043 - Old Bridge-General\4043.016 - Manning Park Baseball Fields\CAD\DWG\4043.016 - PROF.dwg 30x42

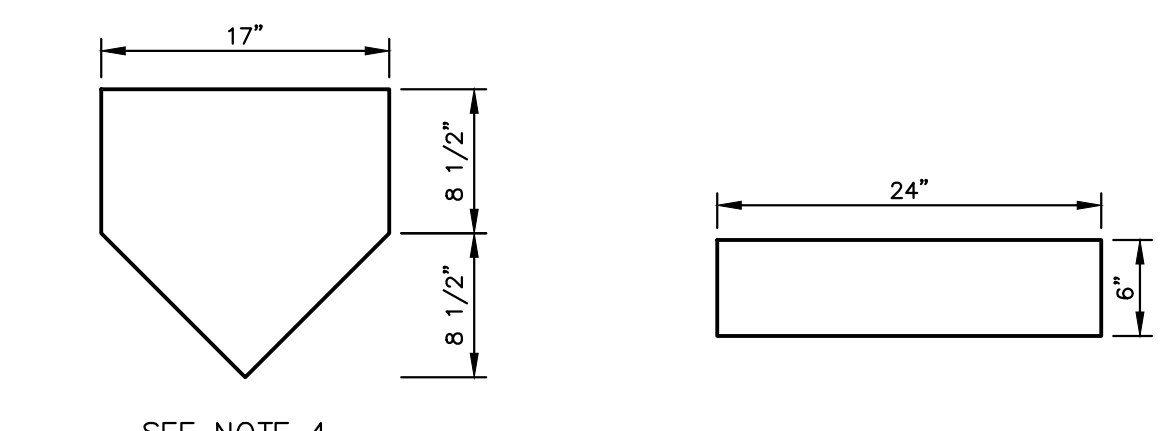
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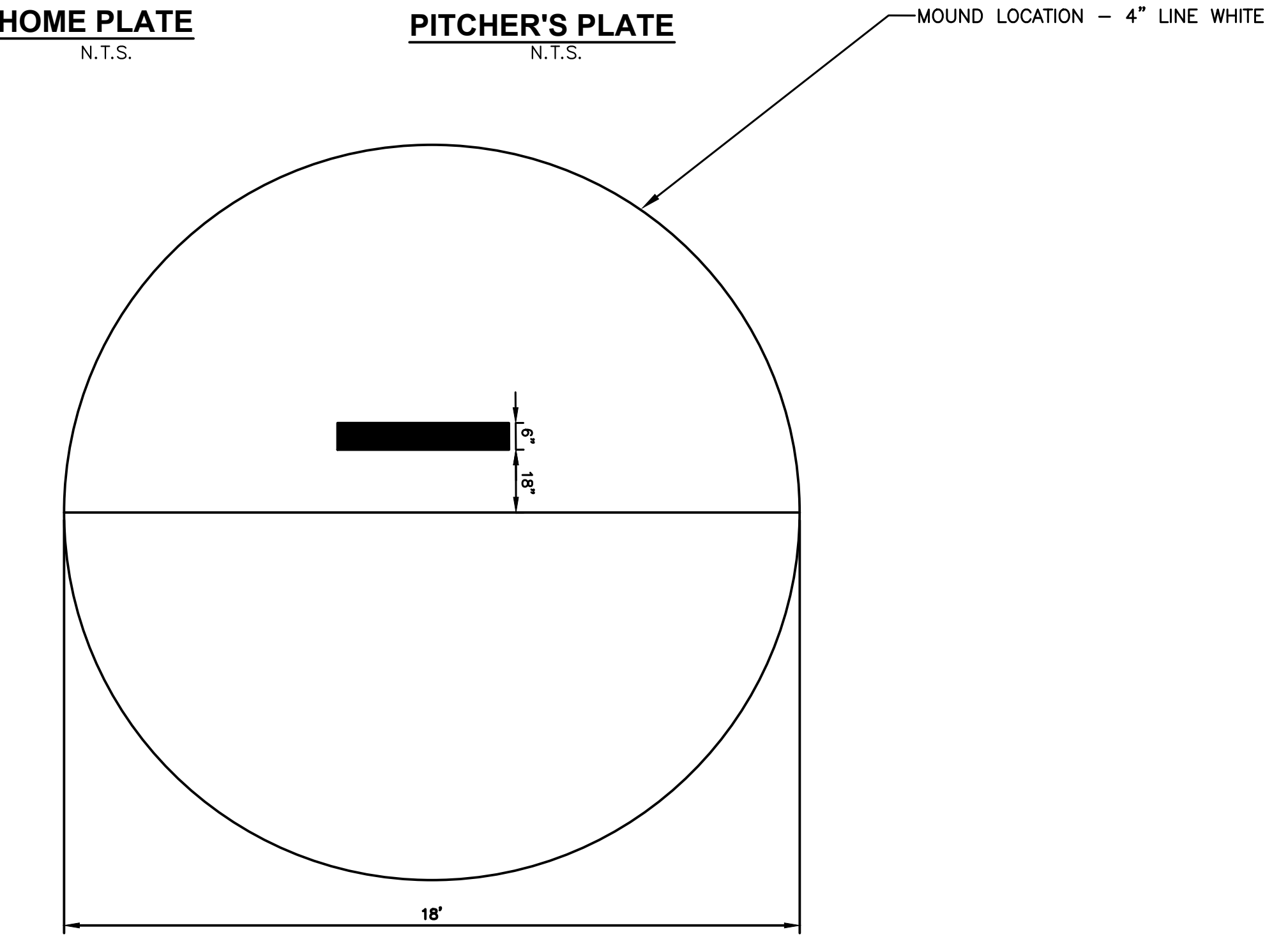
BASEBALL FIELD



CATCHER'S BOX AND BATTER'S BOXES
N.T.S.



HOME PLATE N.T.S. **PITCHER'S PLATE** N.T.S.



PITCHERS MOUND DIMENSIONS DETAIL
N.T.S.

SYNTHETIC TURF COLOR SCHEDULE	
SYM.	COLOR
①	DARK GREEN
②	BROWN

GRAPHIC NOTE:

- THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING A COLOR RENDERING OF ALL FIELDS AND SAMPLE MATERIAL TO THE OWNER FOR APPROVAL PRIOR TO ORDERING THE MATERIAL. THE OWNER MAINTAINS THE RIGHT TO CHANGE ANY GRAPHIC PRIOR TO THE CONTRACTOR ORDERING THE SYNTHETIC TURF MATERIAL FOR THE ATHLETIC FIELD CONSTRUCTION.
- ALL LINES WILL BE A MINIMUM OF 4" IN WIDTH UNLESS ILLUSTRATED ON THESE PLANS DIFFERENTLY. FOUL LINES, CATCHERS BOX, BATTERS BOX, BASE LOCATION, PITCHERS MOUND, COACHES BOX.
- CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING TURF INSERTS THAT RESEMBLE, FIRST, SECOND, THIRD, AND HOME PLATE. INSERTS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENT.
- THE CONTRACTOR IS TO PROVIDE TICK MARKERS ON THE BASEBALL FIELD TURF. THE BASEBALL FIELD WILL RECEIVE ALL MARKERS (90' BASEBALL MARKERS, 50-70' MARKERS AND 60' SOFTBALL MARKERS). MARKERS WILL BE CONFIRMED DURING THE SHOPDRAWING PROCESS.

No.	Date	Revision	Revised By	Checked By

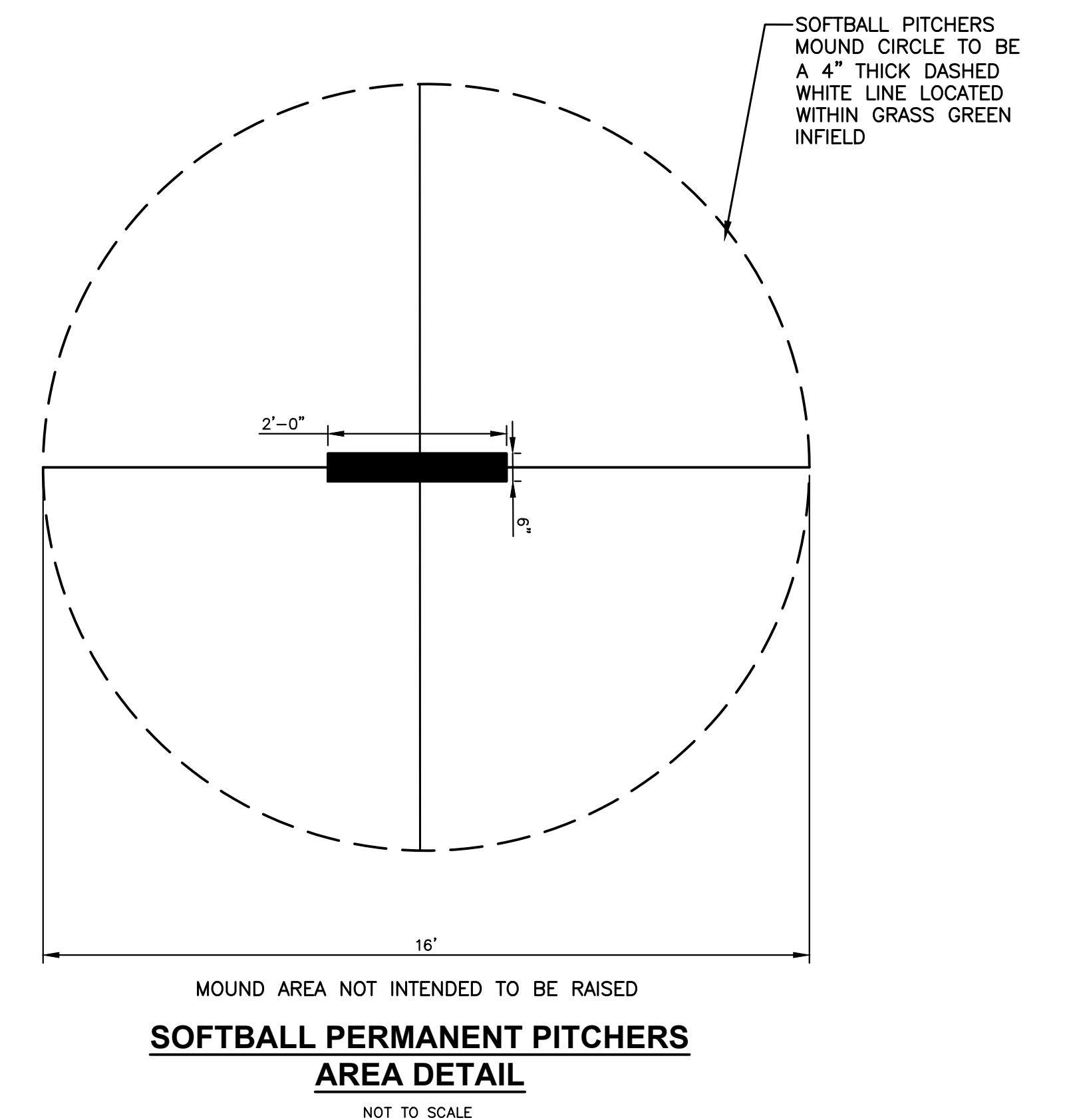
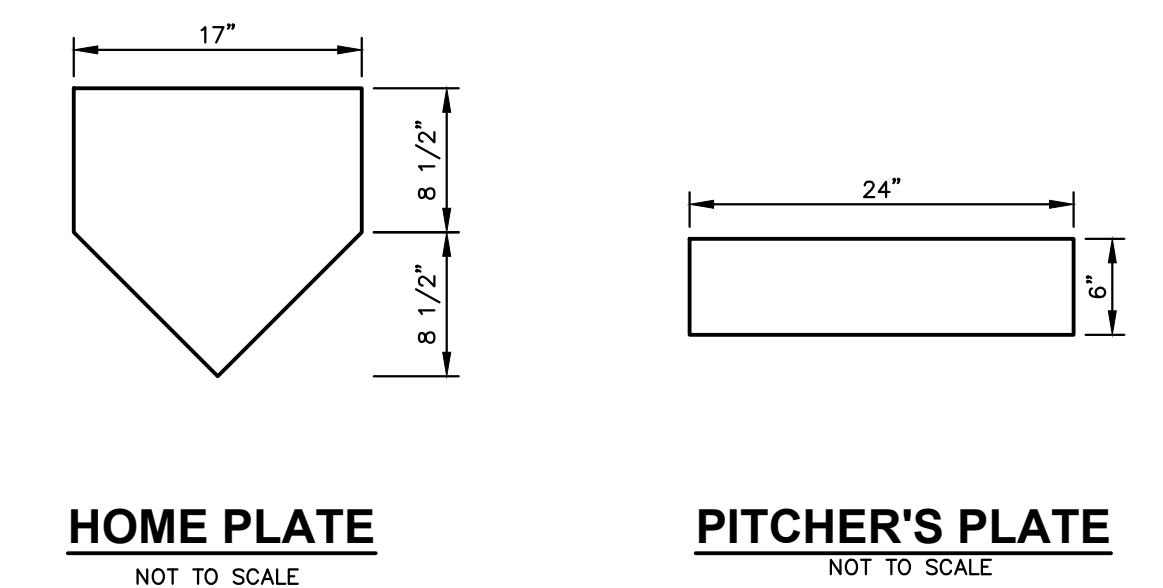
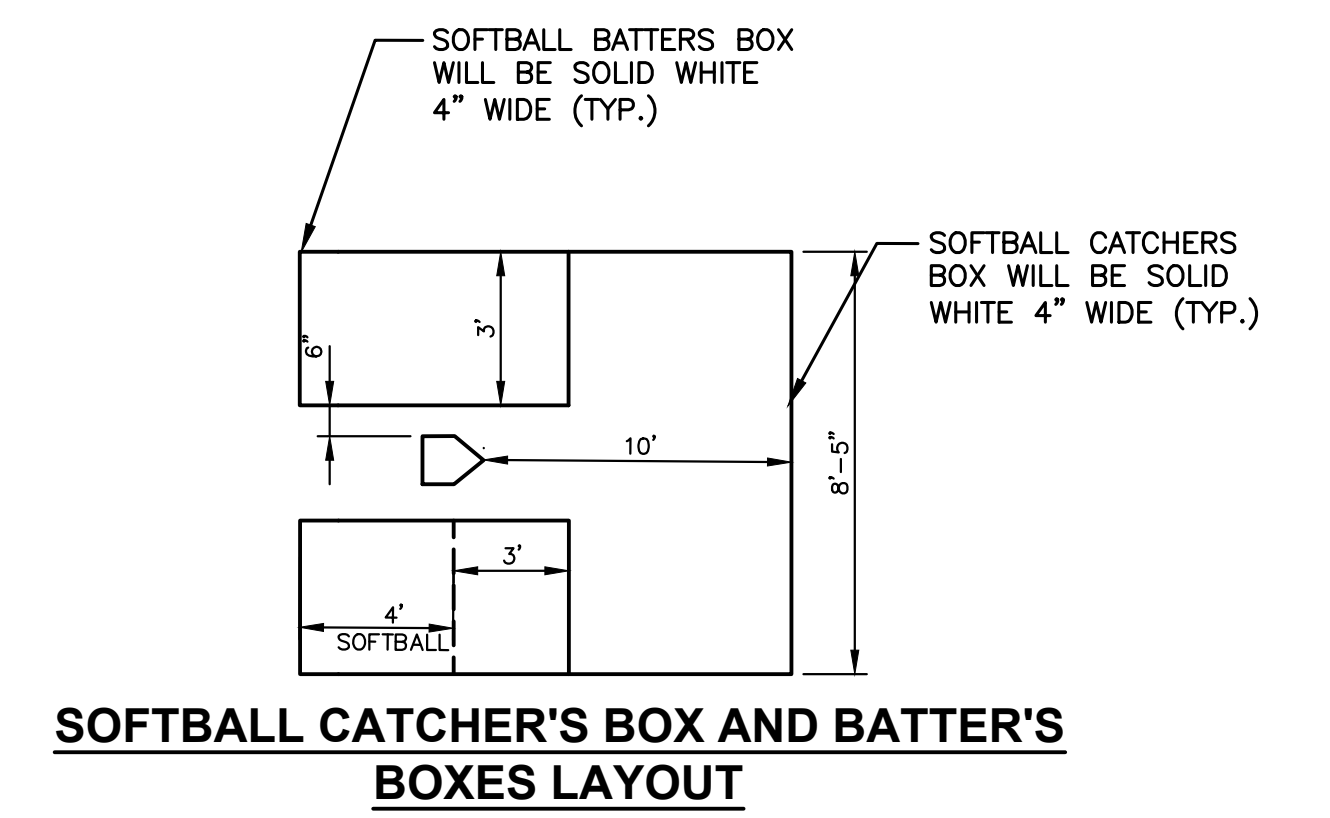
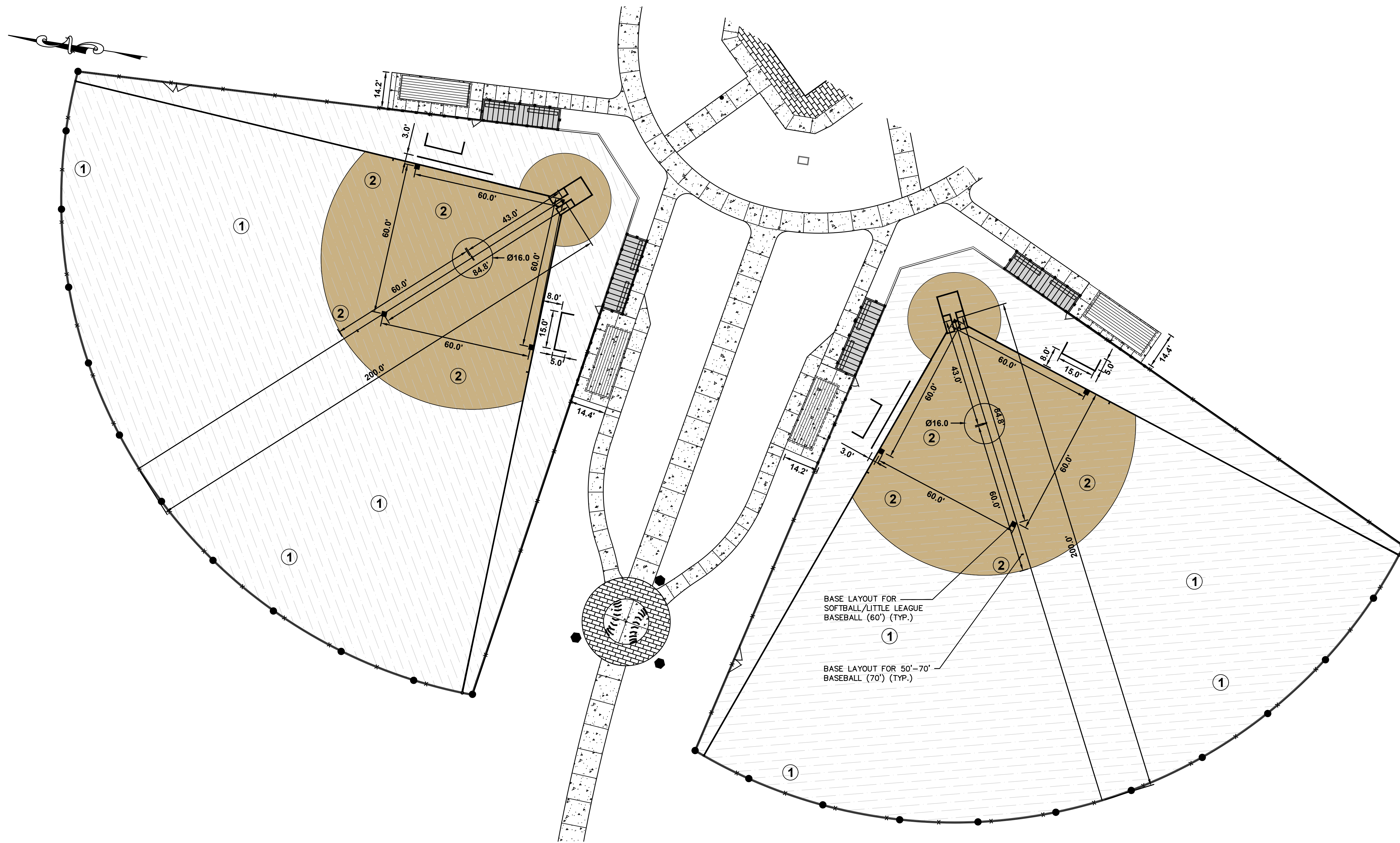


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732.312.9800
FPAengineers.com

Michael J. Piga
MICHAEL J. PIGA, LLA
LICENSED LANDSCAPE ARCHITECT, N.J. LIC. No. AS000909

DIMENSION PLAN - BASEBALL FIELD			
FOR MANNINO PARK			
SYNTHETIC TURF ATHLETIC FIELDS AND SITE IMPROVEMENTS			
LOT 6 BLOCK 8005			
CONTRACT NO. 2023-37			
TOWNSHIP OF OLD BRIDGE			
MIDDLESEX COUNTY, NEW JERSEY			
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/02/2022	MJP	1" = 20'	4043.016
DRAWN BY:	CHECKED BY:	FIELD BOOK:	SHEET:
SP			C-3.0

C:\Users\m0001\OneDrive - Old Bridge - General\4043.016 - Mannino Park Baseball Fields\CAD\DWG\4043.016 - DIM.dwg DIM



SYNTHETIC TURF COLOR SCHEDULE	
SYM.	COLOR
①	DARK GREEN
②	BROWN

GRAPHIC NOTE:

- THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING A COLOR RENDERING OF ALL FIELDS AND SAMPLE MATERIAL TO THE OWNER FOR APPROVAL PRIOR TO ORDERING THE MATERIAL. THE OWNER MAINTAINS THE RIGHT TO CHANGE ANY GRAPHIC PRIOR TO THE CONTRACTOR ORDERING THE SYNTHETIC TURF MATERIAL FOR THE ATHLETIC FIELD CONSTRUCTION.
- ALL LINES WILL BE A MINIMUM OF 4" IN WIDTH UNLESS ILLUSTRATED ON THESE PLANS DIFFERENTLY. FOUL LINES, CATCHERS BOX, BATTERS BOX, BASE LOCATION, PITCHERS MOUND, COACHES BOX.
- CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING TURF INSERTS THAT RESEMBLE, FIRST, SECOND, THIRD, AND HOME PLATE. INSERTS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENT.
- THE CONTRACTOR IS TO PROVIDE TICK MARKERS FOR ALL FIELD FOR SOFTBALL 60' BASE LOCATIONS AND 50-70 BALL BASE LOCATIONS. MARKERS WILL BE CONFIRMED DURING THE SHOP DRAWING PROCESS.

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

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Michael J. Piga
MICHAEL J. PIGA, LLA
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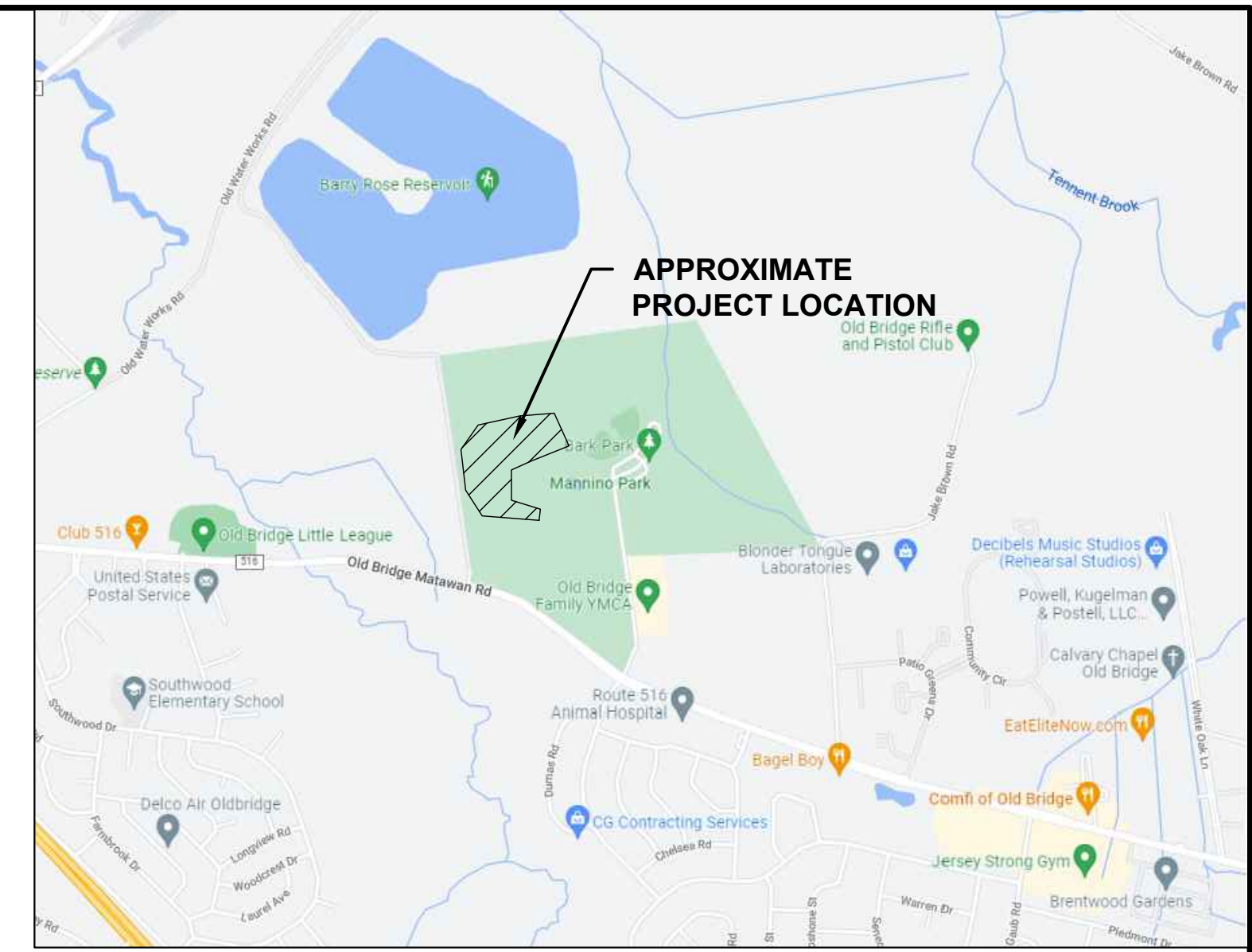
DIMENSION PLAN - SOFTBALL FIELDS
FOR
MANNING PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
LOT 6 BLOCK 8005
TOWNSHIP OF OLD BRIDGE
MIDDLESEX COUNTY, NEW JERSEY

DATE: 12/02/2022
DESIGNED BY: MJP
DRAWN BY: SP

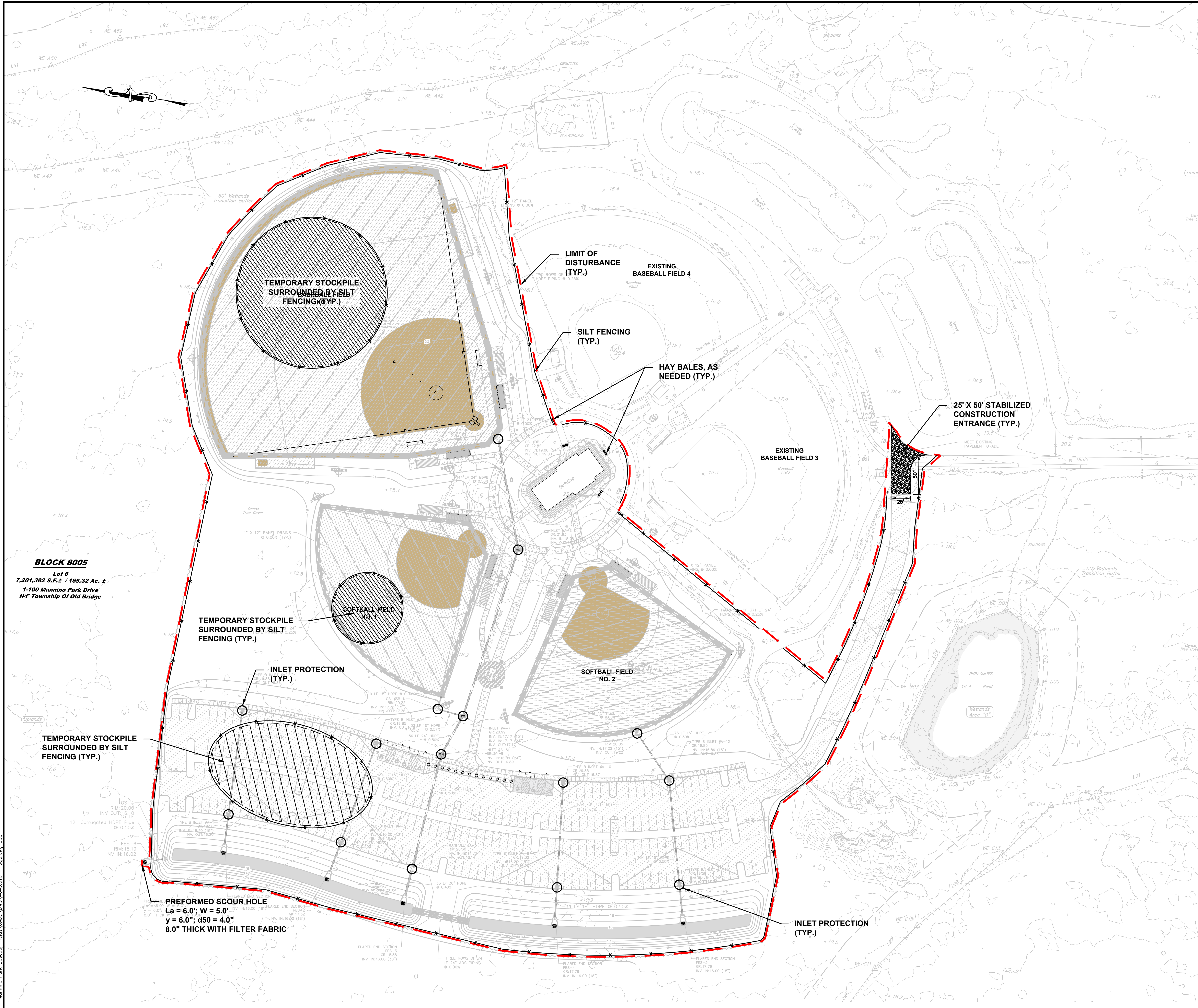
SCALE: #####
FIELD BOOK

PROJECT NUMBER: 4043.016
SHEET: C-3.1

C:\V\1000\4043 - Old Bridge-General Fields\CAD\DWG\4043.016 - DIM.dwg DIM (2)



KEY MAP
N.T.S.



BLOCK 8005
Lot 6
7,201,382 S.F. ± 165.32 Ac. ±
1-100 Mannino Park Drive
NJ Township Of Old Bridge

TOTAL LIMIT OF DISTURBANCE:
624,634 SF (14.34 AC)

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50 0 50 100
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Andrew L. French
ANDREW L. FRENCH, P.E.
PROFESSIONAL ENGINEER, N.J. LIC. NO. 42894

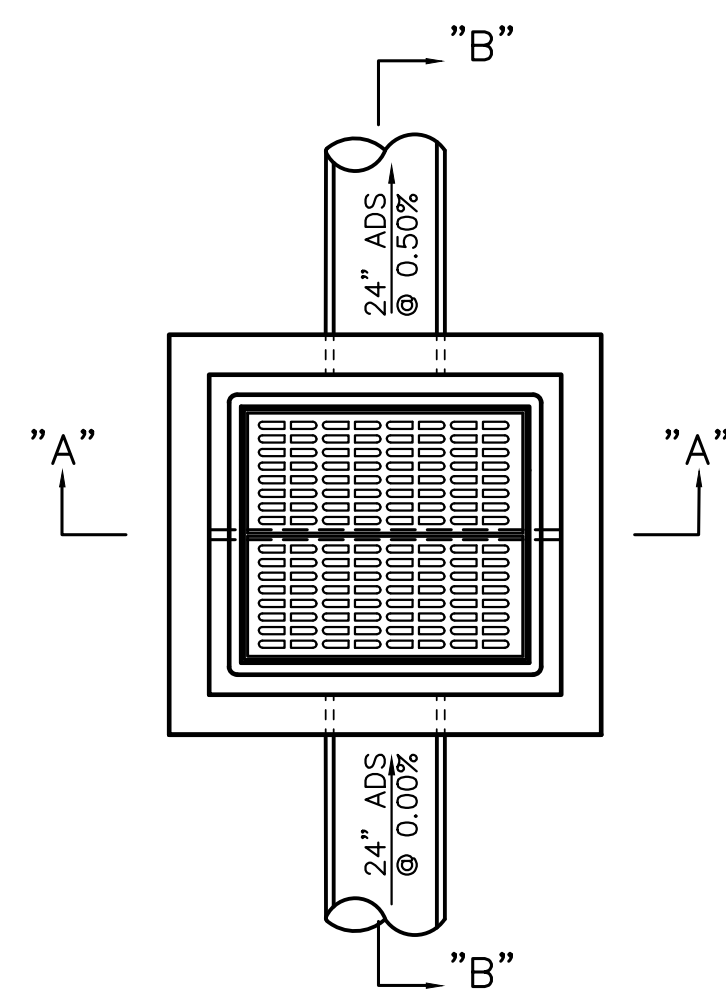
SOIL EROSION AND SEDIMENT CONTROL PLAN
FOR
MANNINO PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
LOT 6 BLOCK 8005
CONTRACT NO. 2023-37
TOWNSHIP OF OLD BRIDGE
MIDDLESEX COUNTY, NEW JERSEY

DATE: 12/02/2022
DESIGNED BY: MJP
DRAWN BY: MJP

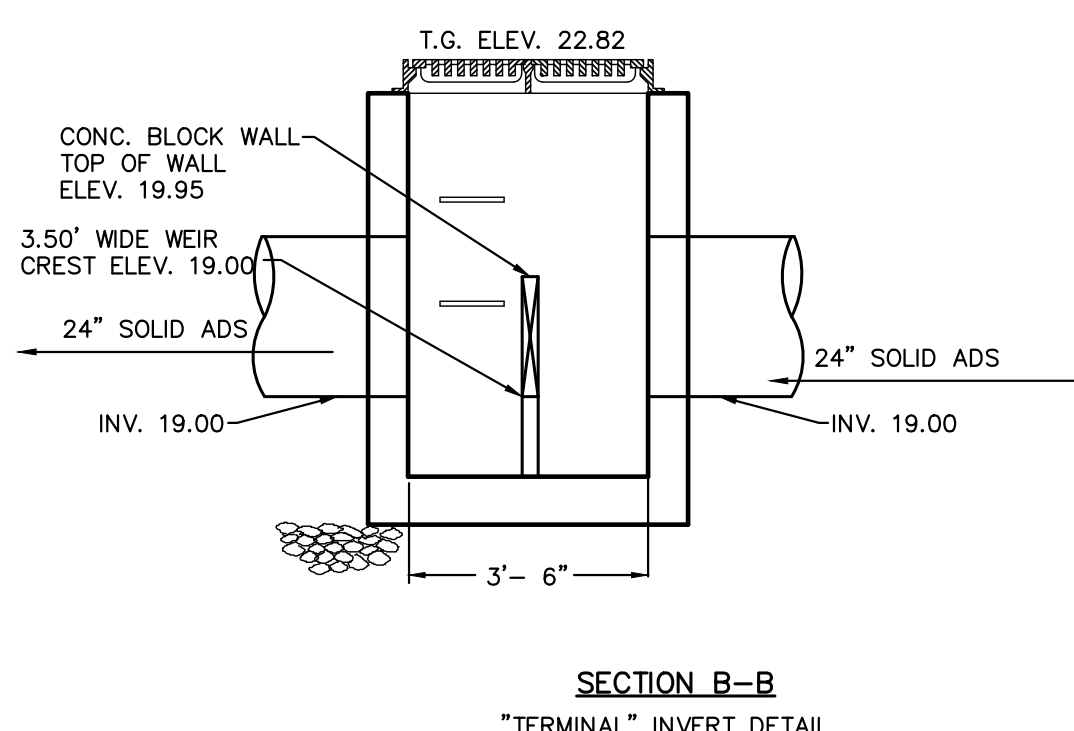
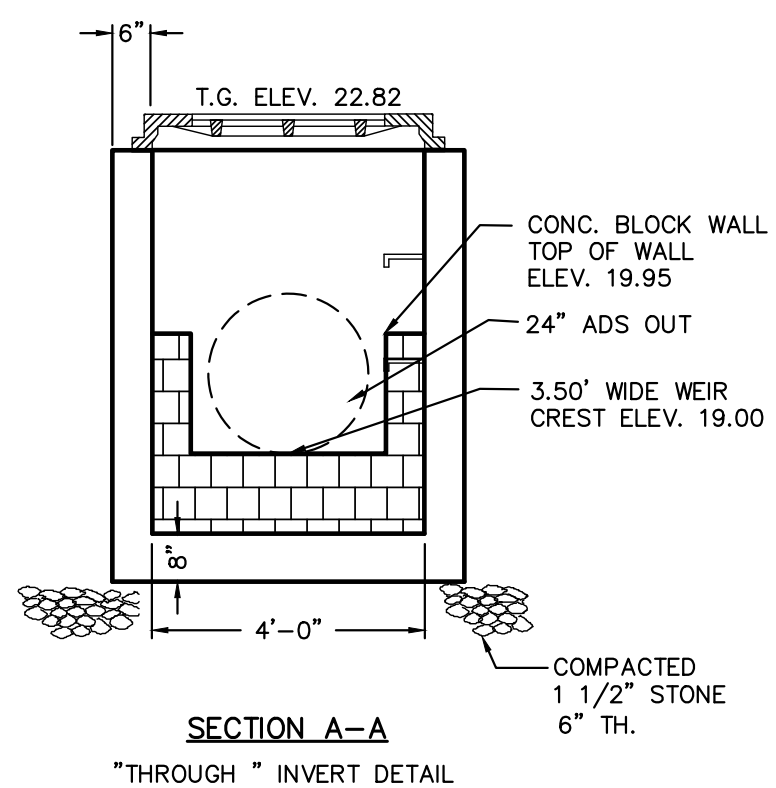
SCALE: 1" = 50'
FIELD BOOK

PROJECT NUMBER: 4043.016
SHEET: C-4.0

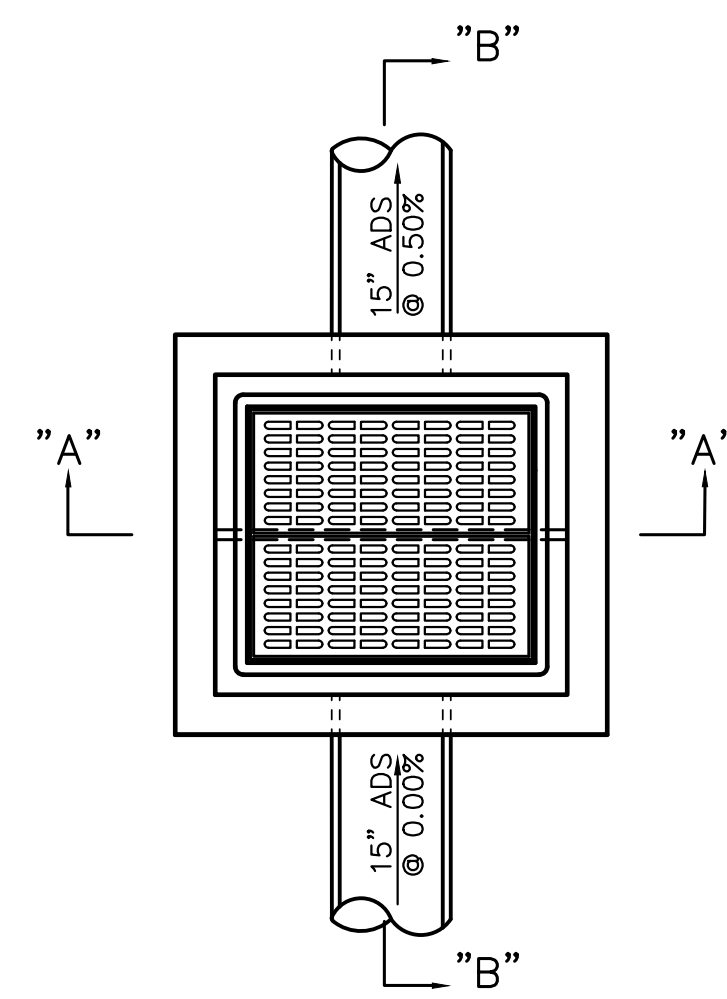
G:\MVA\0000\4043 - Old Bridge - General\Fields\CADD\DWG\4043.016 - SCS.dwg SCS
 COPYRIGHT © 2022, FRENCH & PARRELLO ASSOCIATES - THE COPYING OR REUSE OF THIS DOCUMENT, OR PORTIONS THEREOF, WITHOUT THE WRITTEN PERMISSION OF FRENCH & PARRELLO ASSOCIATES, PA IS PROHIBITED.
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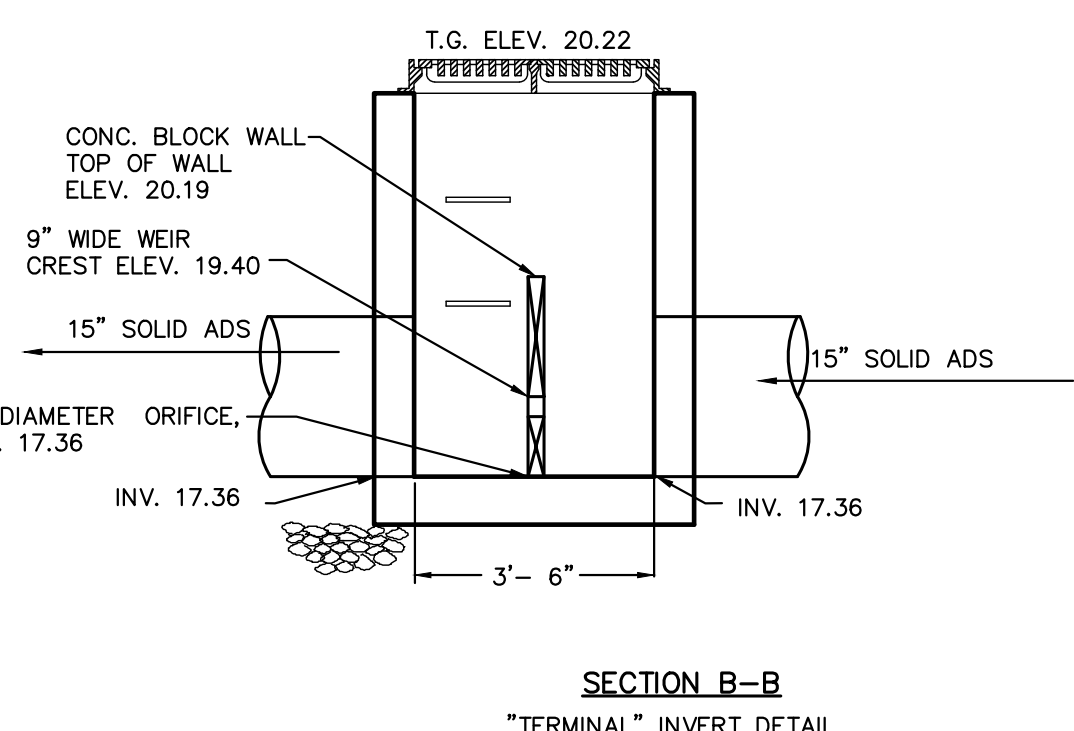
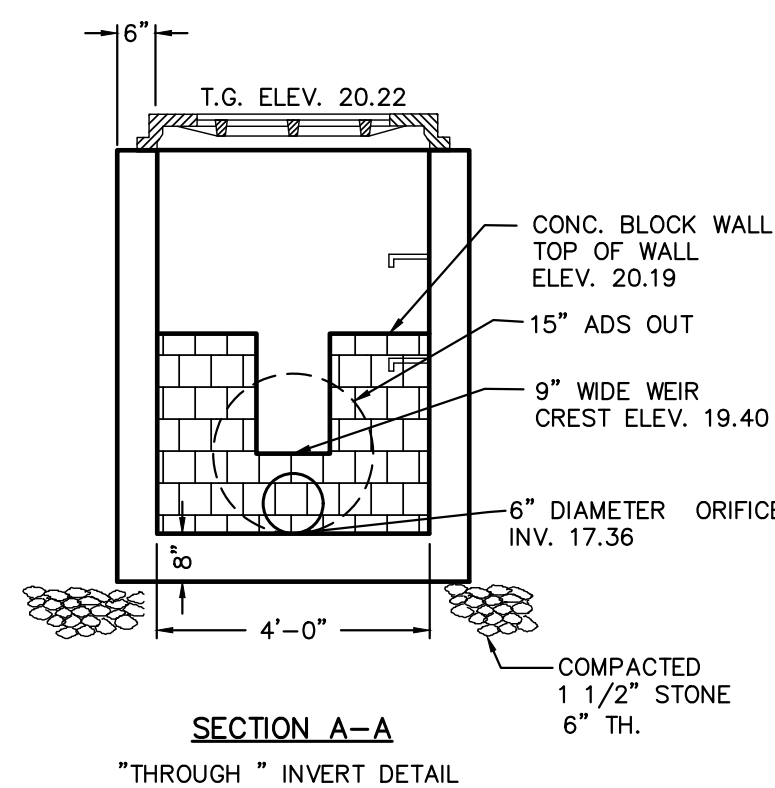
- GENERAL NOTES:**
1. FOOTING TO BE N.J.D.O.T., CLASS "C"
 2. INVERT TO BE CLASS "C"
 3. IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
 4. FRAME AND GRATE TO BE No.3425 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL. GRATE TO BE TYPE E "ECO" GRATE
 5. PROVIDE ALUMINUM LADDER RUNGS @ 12" CENTER TO CENTER
 6. WHEN ADDITIONAL DEPTH IS SCHEDULE WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12" IN DEPTH.



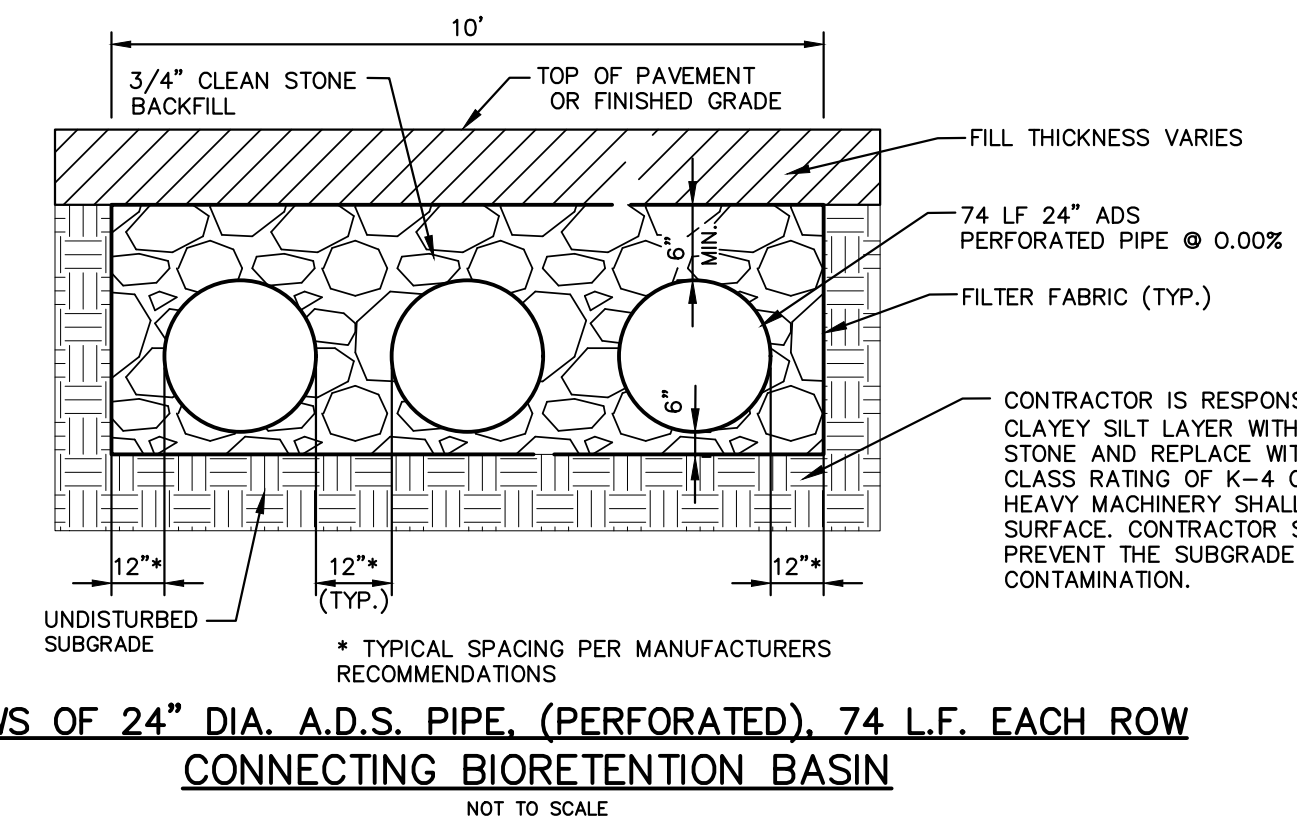
**OS-#A-1 (BASEBALL FIELD)
OUTLET STRUCTURE DETAIL**
NOT TO SCALE



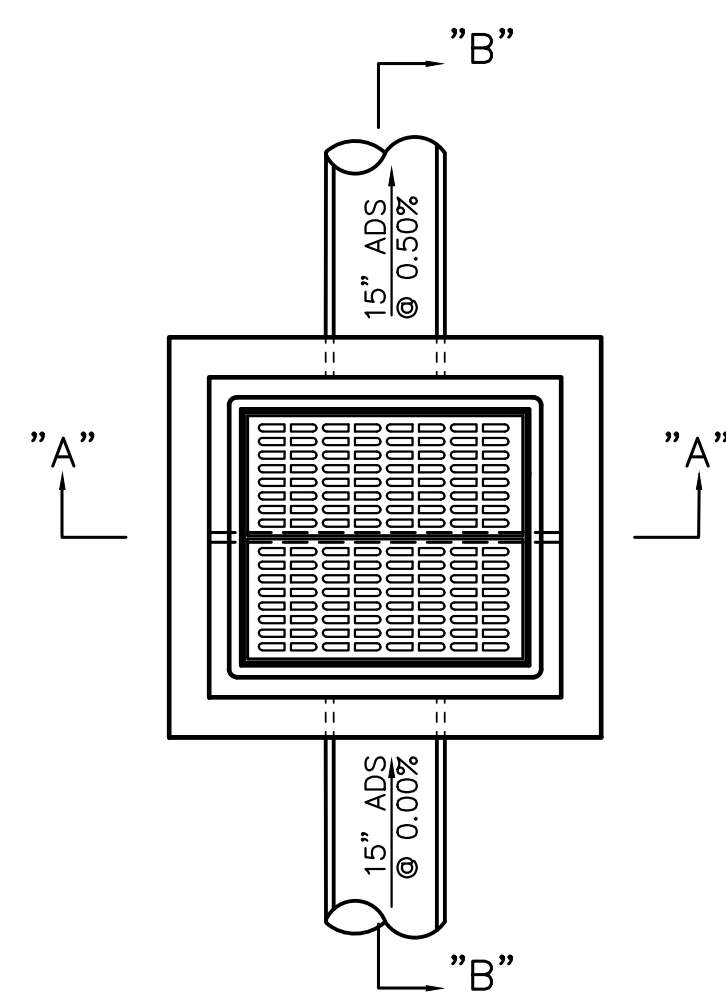
- GENERAL NOTES:**
1. FOOTING TO BE N.J.D.O.T., CLASS "C"
 2. INVERT TO BE CLASS "C"
 3. IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
 4. FRAME AND GRATE TO BE No.3425 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL. GRATE TO BE TYPE E "ECO" GRATE
 5. PROVIDE ALUMINUM LADDER RUNGS @ 12" CENTER TO CENTER
 6. WHEN ADDITIONAL DEPTH IS SCHEDULE WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12" IN DEPTH.



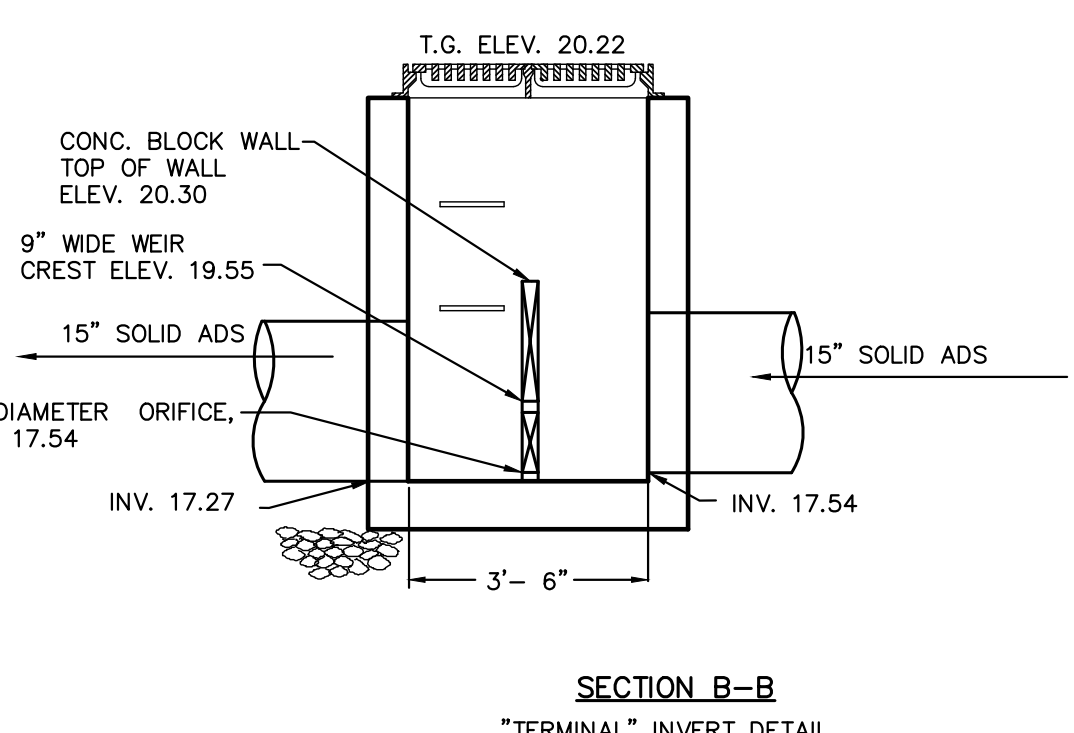
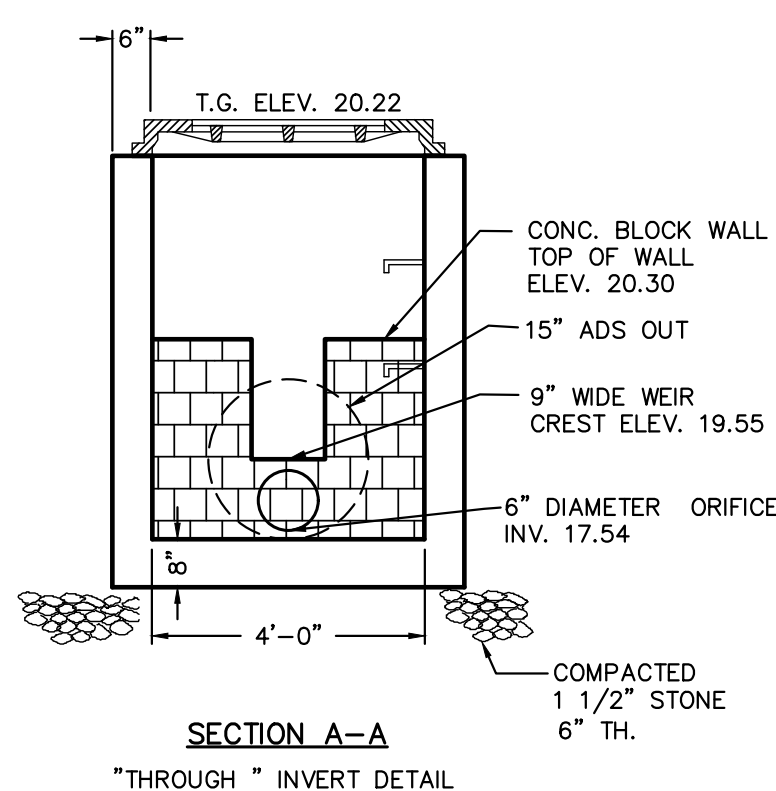
**OS-#A-3A (NORTH SOFTBALL FIELD)
OUTLET STRUCTURE DETAIL**
NOT TO SCALE



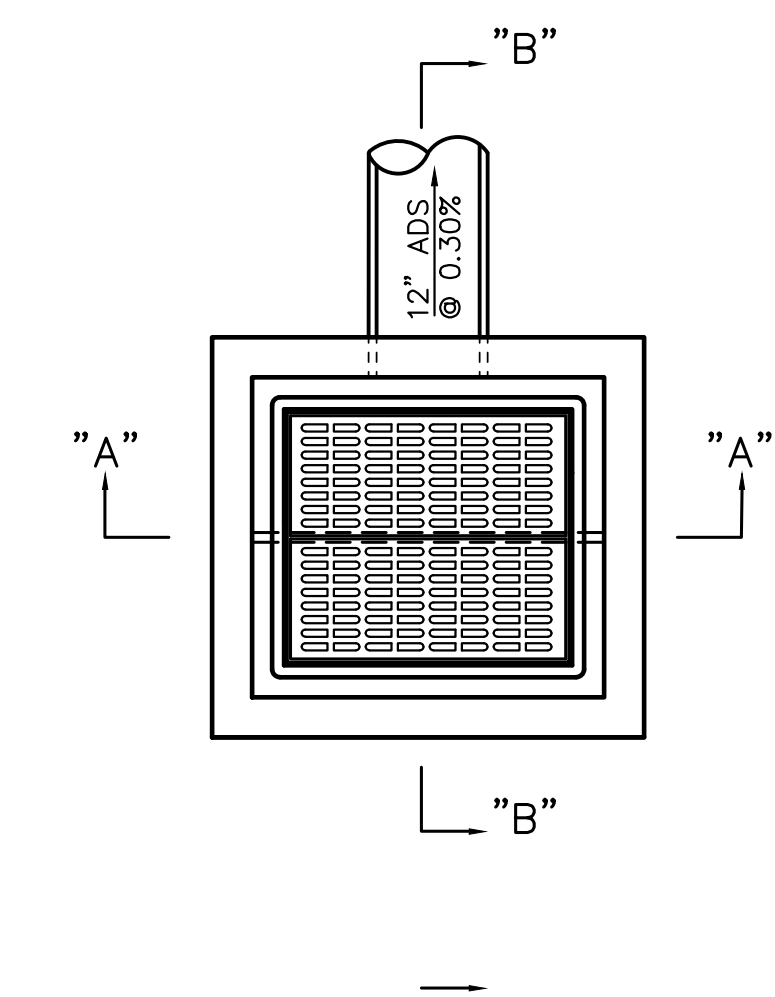
**3 ROWS OF 24" DIA. A.D.S. PIPE, (PERFORATED), 74 L.F. EACH ROW
CONNECTING BIORETENTION BASIN**
NOT TO SCALE



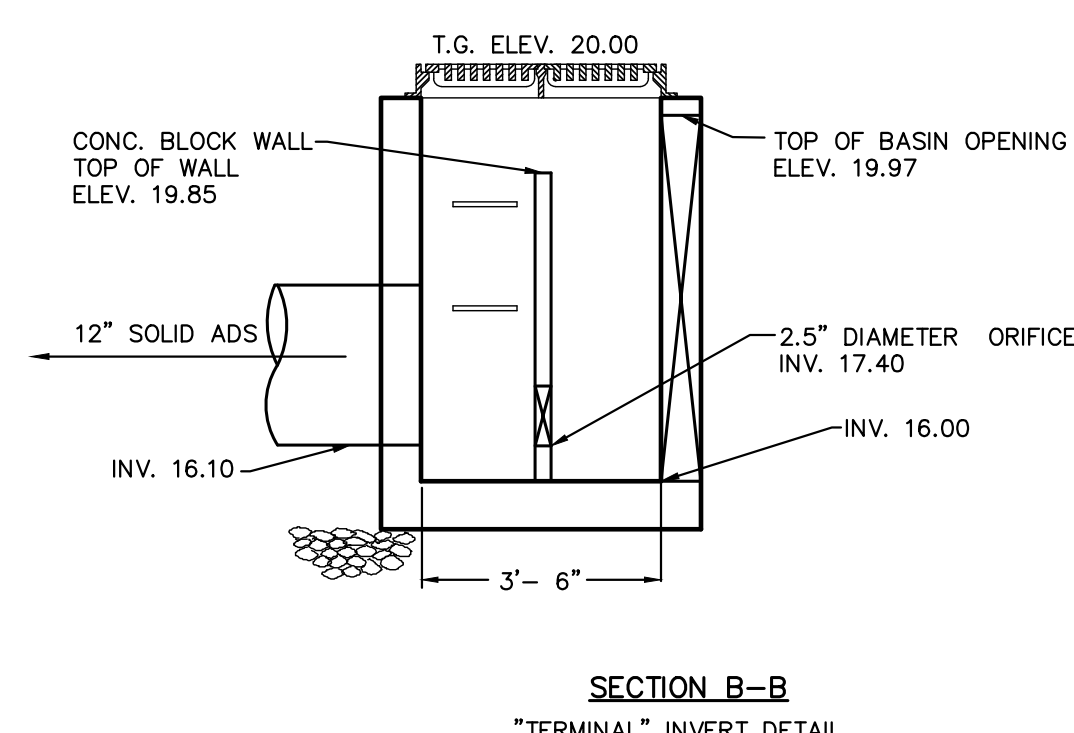
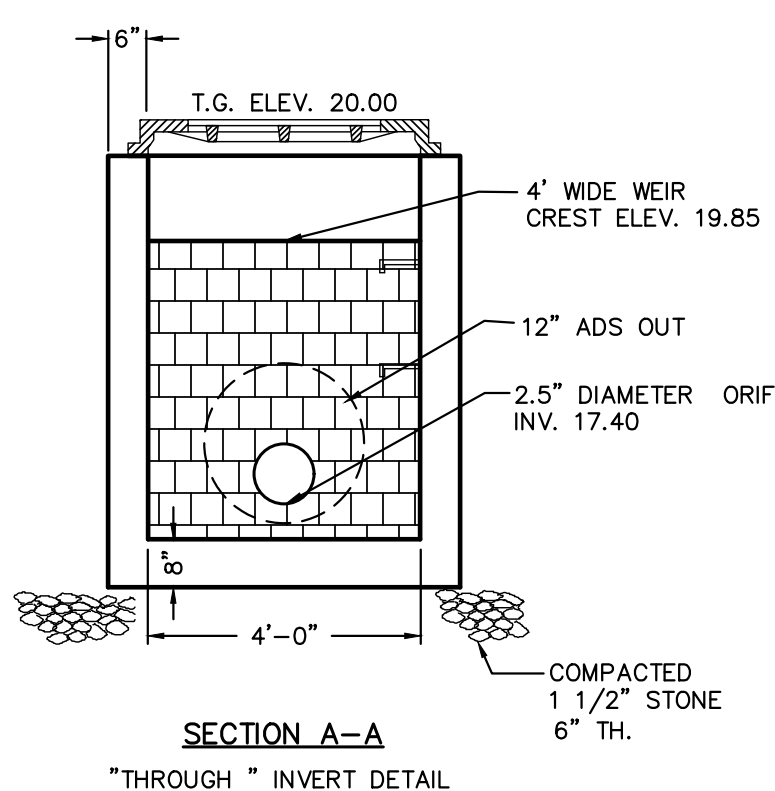
- GENERAL NOTES:**
1. FOOTING TO BE N.J.D.O.T., CLASS "C"
 2. INVERT TO BE CLASS "C"
 3. IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
 4. FRAME AND GRATE TO BE No.3425 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL. GRATE TO BE TYPE E "ECO" GRATE
 5. PROVIDE ALUMINUM LADDER RUNGS @ 12" CENTER TO CENTER
 6. WHEN ADDITIONAL DEPTH IS SCHEDULE WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12" IN DEPTH.



**OS-#E-1 (SOUTH SOFTBALL FIELD)
OUTLET STRUCTURE DETAIL**
NOT TO SCALE



- GENERAL NOTES:**
1. FOOTING TO BE N.J.D.O.T., CLASS "C"
 2. INVERT TO BE CLASS "C"
 3. IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
 4. FRAME AND GRATE TO BE No.3425 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL. GRATE TO BE TYPE E "ECO" GRATE
 5. PROVIDE ALUMINUM LADDER RUNGS @ 12" CENTER TO CENTER
 6. WHEN ADDITIONAL DEPTH IS SCHEDULE WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12" IN DEPTH.



**OS-#4 (BIORETENTION BASIN)
OUTLET STRUCTURE DETAIL**
NOT TO SCALE

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Andrew L. French
ANDREW L. FRENCH, P.E.
PROFESSIONAL ENGINEER, N.J. LIC. No. 42894

**SOIL EROSION AND SEDIMENT CONTROL NOTES
AND DETAILS B**

FOR
**MANNINO PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS**
LOT 6 BLOCK 8005
CONTRACT NO. 2023-37
TOWNSHIP OF OLD BRIDGE
MIDDLESEX COUNTY, NEW JERSEY

DATE: 12/02/2022	DESIGNED BY: MJP	SCALE: AS SHOWN	PROJECT NUMBER: 4043.016
DRAWN BY: MJP	CHECKED BY:	FIELD BOOK:	SHEET: C-4.2

G:\M\4000\4043 - Old Bridge-General\Finals\CAD\DWG\4043.016 - 1 - SCS.dwg SCS:Z (2)



BLOCK 8005
 Lot 6
 7,201,382 S.F. ± 165.32 Ac. ±
 1-100 Mannino Park Drive
 N/F Township Of Old Bridge

SOIL DE-COMPACTION AND TESTING REQUIREMENTS

A. SOIL COMPACTION TESTING REQUIREMENTS

1. SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.
3. COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS, AND ATTACHED TO THE COMPACTION REMEDIATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

B. COMPACTION TESTING METHODS

1. PROBING WIRE TEST (SEE DETAIL)
2. HAND-HELD PENETROMETER TEST (SEE DETAIL)
3. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)
4. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)
5. NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.
6. DETAILED REQUIREMENTS FOR EACH COMPACTION TESTING METHOD CAN BE FOUND IN SECTION 19 "STANDARD FOR LAND GRADING" OF THE N.J. STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION
7. SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

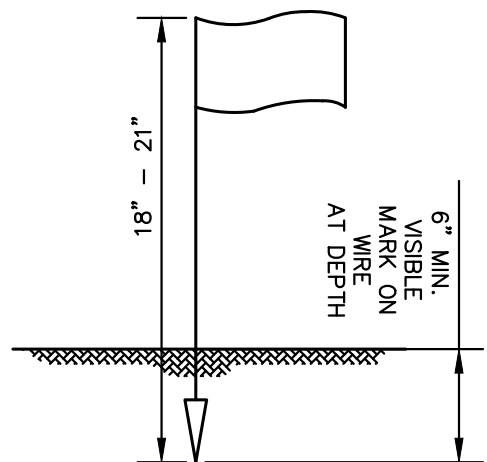
C. PROCEDURES FOR SOIL COMPACTION MITIGATION

1. PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.) IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAY BE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

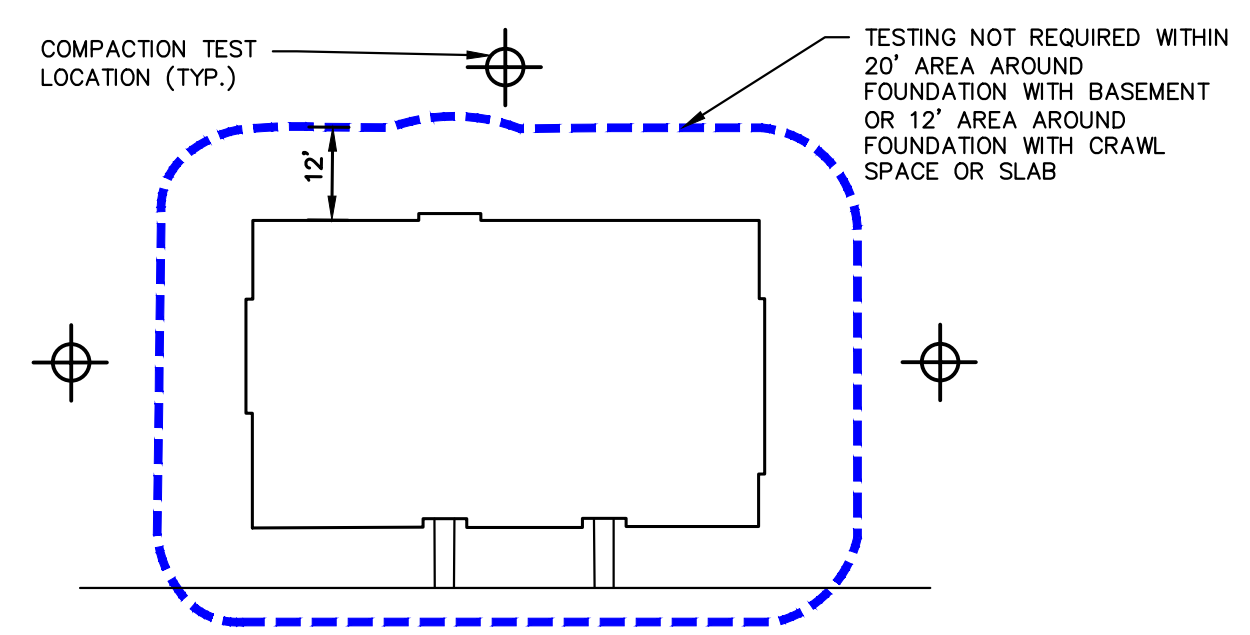
NOTES:

1. SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE WIRE.
2. WIRE MAY BE RE-INSERTED IF/WHEN AN OBSTRUCTION (ROCK, ROOT, DEBRIS) IS ENCOUNTERED.
3. RECORD DEPTH OF PENETRATION WHEN WIRE DEFORMS; MINIMUM DEPTH OF 6" TO PASS TEST. EITHER PREMEDITATE OR PERFORM THE NEXT TEST.

PROBING WIRE TEST 15.5 GA. STEEL WIRE (SURVEY FLAG)



NOT TO SCALE

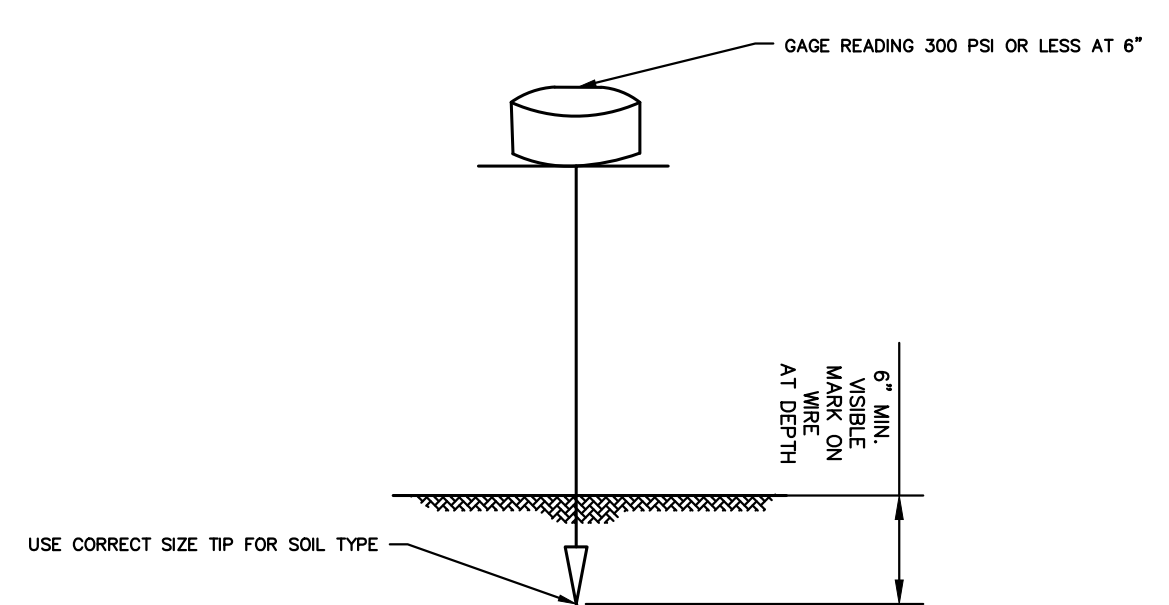


C. MULTIFAMILY HOUSING OR OTHER NON-RESIDENTIAL BUILDING/STRUCTURE

- NOTE:**
1. SOIL COMPACTION TESTING LOCATIONS IDENTIFIED ARE RECOMMENDED LOCATIONS FOR GRADED, DISTURBED AREAS WITHIN THE VICINITY OF BUILDINGS AND STRUCTURES OR ON INDIVIDUAL LOTS, FOR GRADED/DISTURBED AREAS WITHIN OPEN OR COMMON SPACES. SOIL COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE FREQUENCY LISTED IN THE LEGEND (THIS SHEET).

TYPICAL SOIL COMPACTION TESTING LOCATIONS

NOT TO SCALE

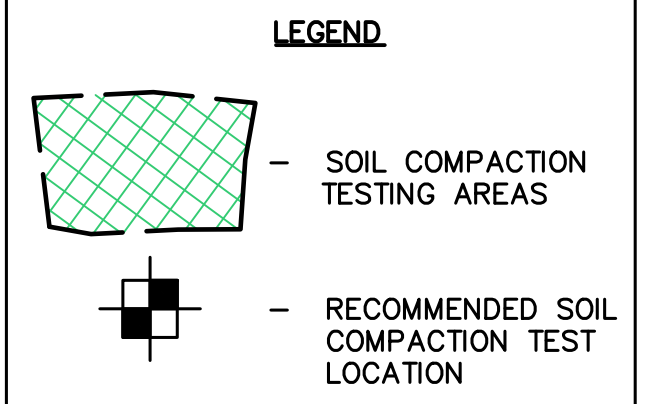


- NOTES:**
1. SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE WIRE.
 2. PENETROMETER MAY BE RE-INSERTED IF/WHEN AN OBSTRUCTION (ROCK, ROOT, DEBRIS) IS ENCOUNTERED.

HANDHELD SOIL PENETROMETER TEST

NOT TO SCALE

SOIL COMPACTION TESTING AREA
 AREA = 198,042 SF ± (4.55 AC ±)



No.	Date	Revision	Revised By	Checked By

50 0 50 100
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 FPAengineers.com

Andrew L. French
ANDREW L. FRENCH, P.E.
 PROFESSIONAL ENGINEER, N.J. LIC. NO. 42894

SOIL RESTORATION PLAN
 FOR
MANNINO PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
 LOT 6 BLOCK 8005
 CONTRACT NO. 2023-37
 TOWNSHIP OF OLD BRIDGE
 MIDDLESEX COUNTY, NEW JERSEY

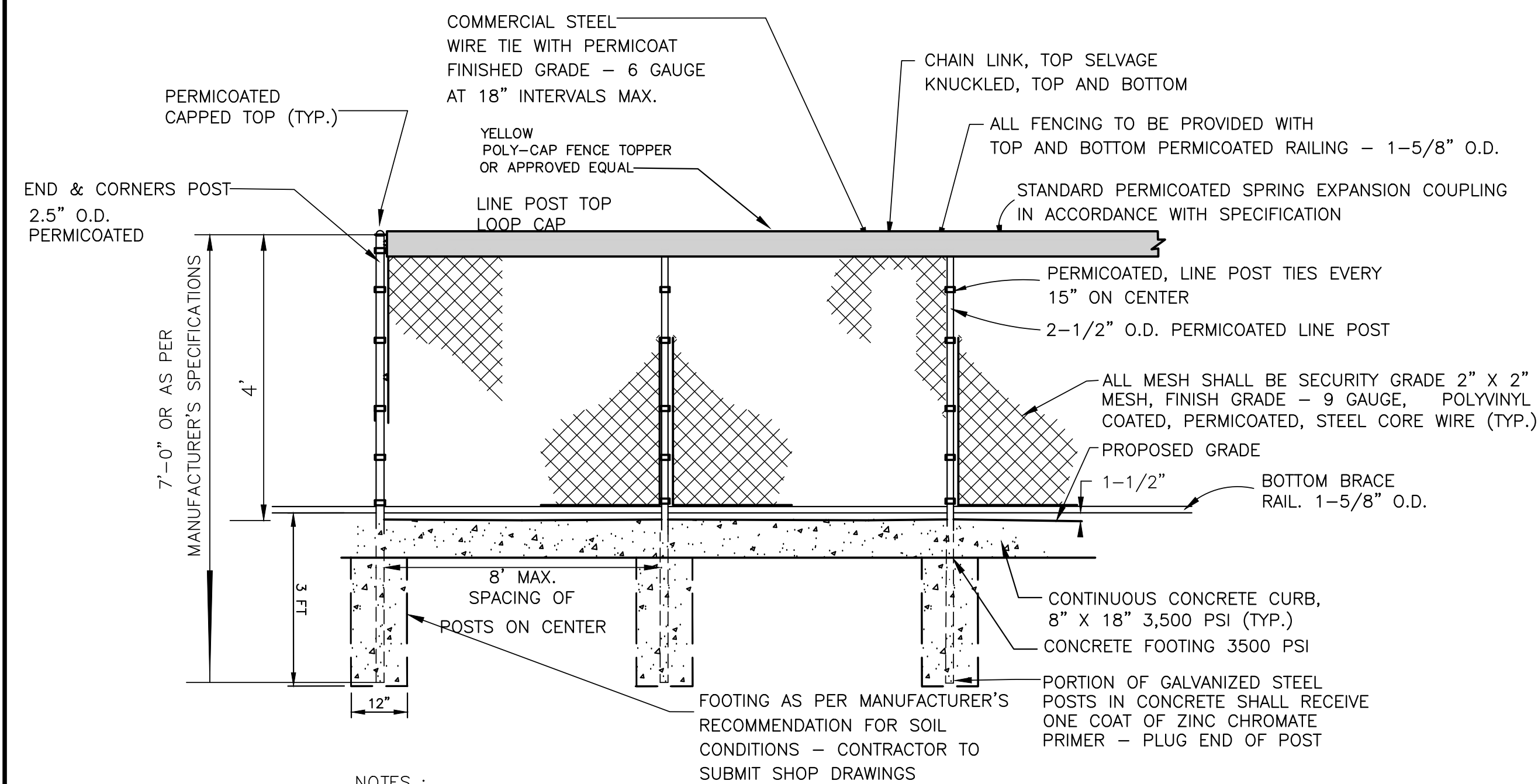
DATE: 12/02/2022
 DESIGNED BY: MJP
 DRAWN BY: MJP

SCALE: 1" = 50'
 FIELD BOOK

PROJECT NUMBER: 4043.016
 SHEET: C-4.3

G:\MVA\4000\4043 - Old Bridge-General Fields\CAD\DWG\4043.016 - SCS.dwg SOIL RES

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NOTES :

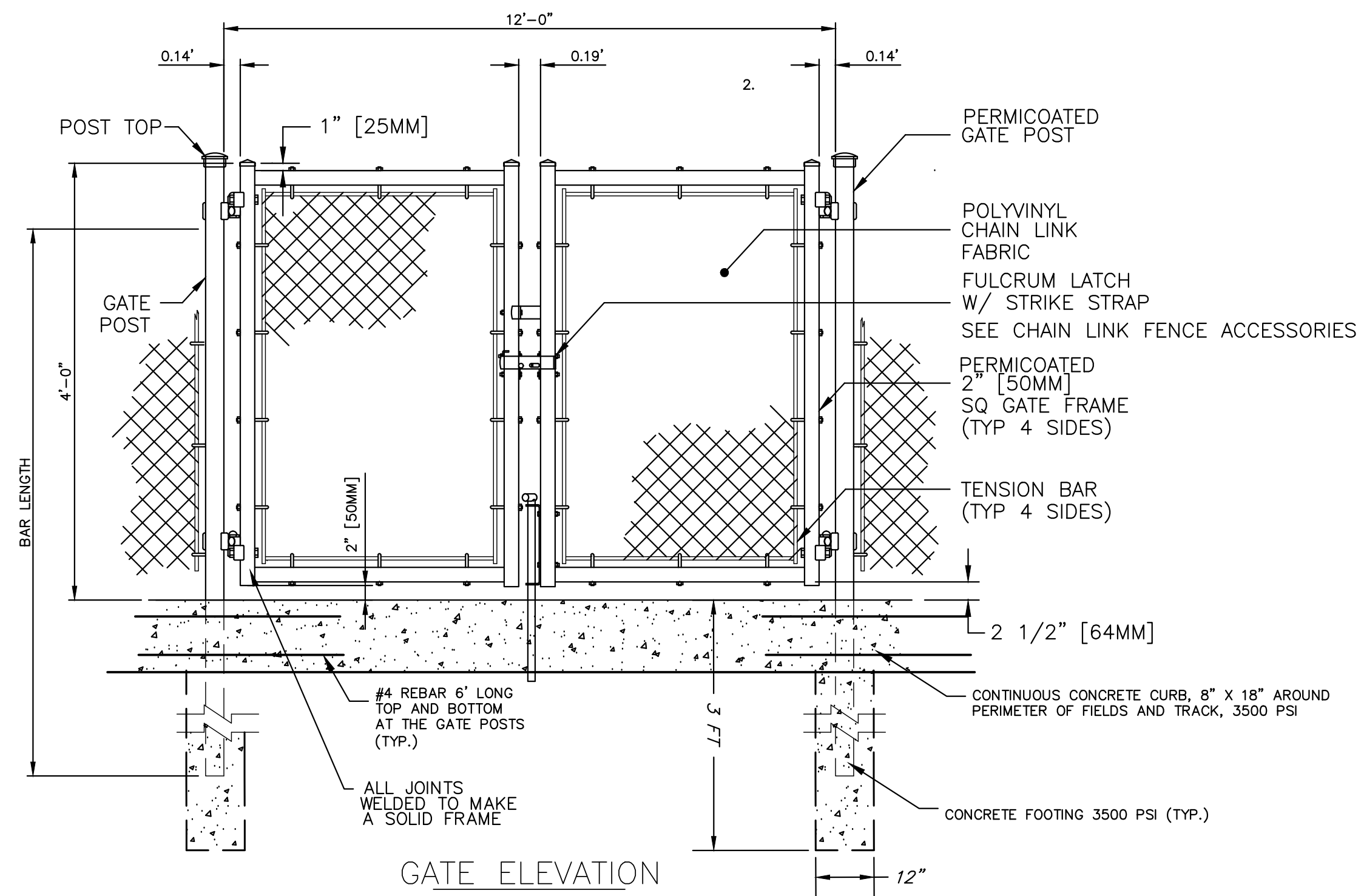
1. FENCE AND GATE SHALL BE COMMERCIAL GRADE AS MANUFACTURED BY *MASTER HALCO. OR APPROVED EQUAL.
2. ALL FENCE FABRIC, POSTS AND RAILINGS SHALL BE PERMICOATED STEEL WITH A COLOR TO BE SELECTED BY OWNER.
3. ALL FENCE TO HAVE TOP AND BOTTOM RAIL.
4. ALL METAL MEMBERS ARE TO BE PERMICOATED STEEL TO MEET ASTM A525-G90 AND THE STEEL TO MEET ASTM A-153.
5. FENCE AND GATE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, CONTRACTOR TO SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION.
6. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO OLD BRIDGE TOWNSHIP OR THE OWNER FOR THEIR REVIEW AND APPROVAL PRIOR TO PURCHASING ANY CONSTRUCTION MATERIAL.

MANUFACTURER: MASTER HALCO
PH: (800) 229-5615
WEB: FENCEONLINE.COM

PRODUCT: YELLOW POLY-CAP FENCE TOPPER - #01162 OR AN APPROVED EQUAL
MANUFACTURER: MID-AMERICA SPORTS ADVANTAGE (M.A.S.A)
PH: (800) 264-4519
WEB: WWW.SPORTSADVANTAGE.COM

4' HIGH POLY-VINYL COATED CHAIN LINK FENCE WITH YELLOW CAP DETAIL

NOT TO SCALE



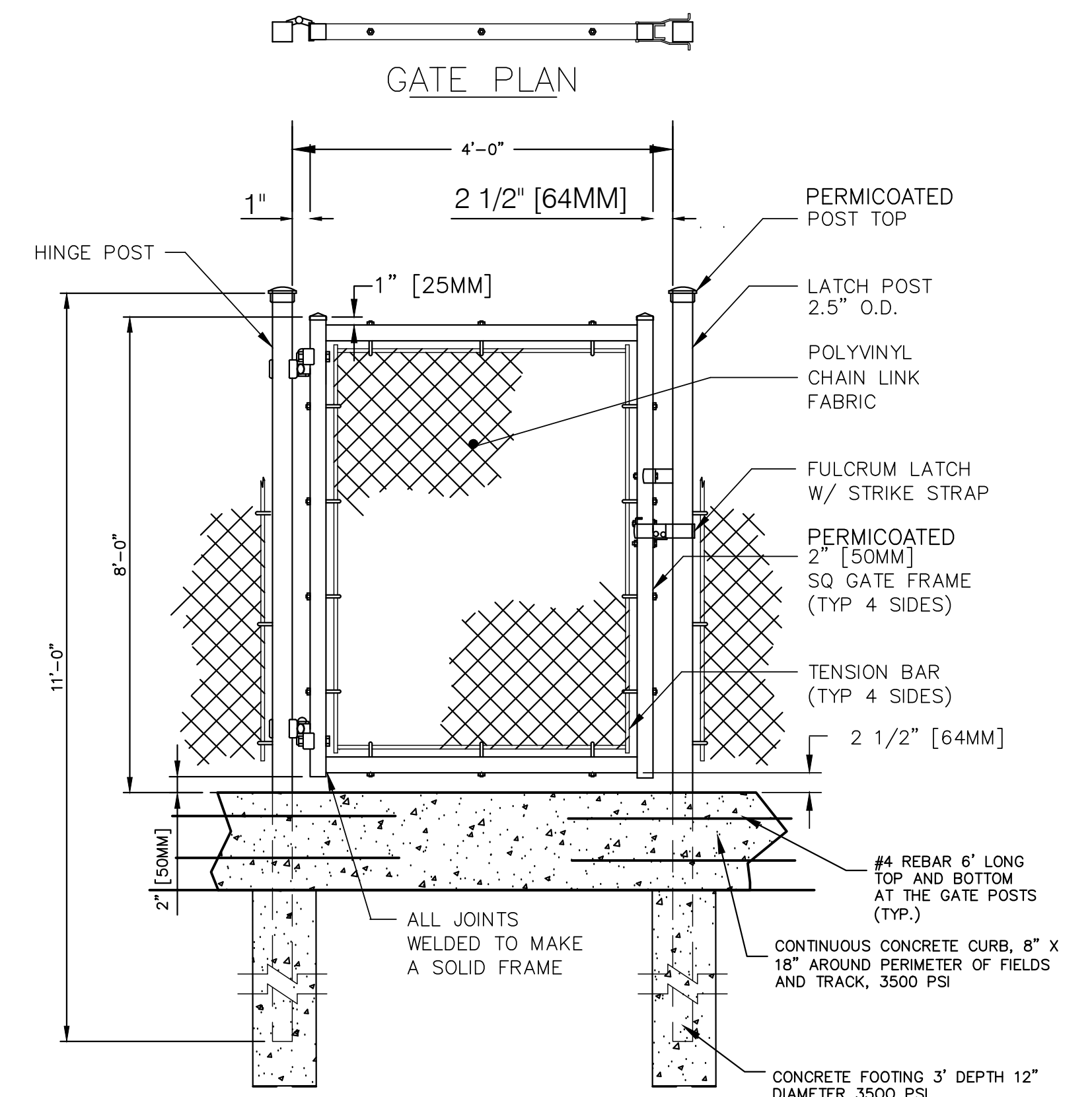
NOTE:

1. THE CONTRACTOR TO INSTALL (1) #4 X 3'-0" LONG CENTERED ON EACH SIDE OF EVERY GATE AND CORNER POST WITHIN THE CONCRETE CURB.
2. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO OLD BRIDGE TOWNSHIP OR OWNER FOR THEIR REVIEW AND APPROVAL PRIOR TO PURCHASING ANY CONSTRUCTION MATERIAL.

MANUFACTURER: MASTER HALCO
PH: (800) 229-5615
WEB: FENCEONLINE.COM

DOUBLE SWING GATE, 4' HIGH DETAIL

NOT TO SCALE



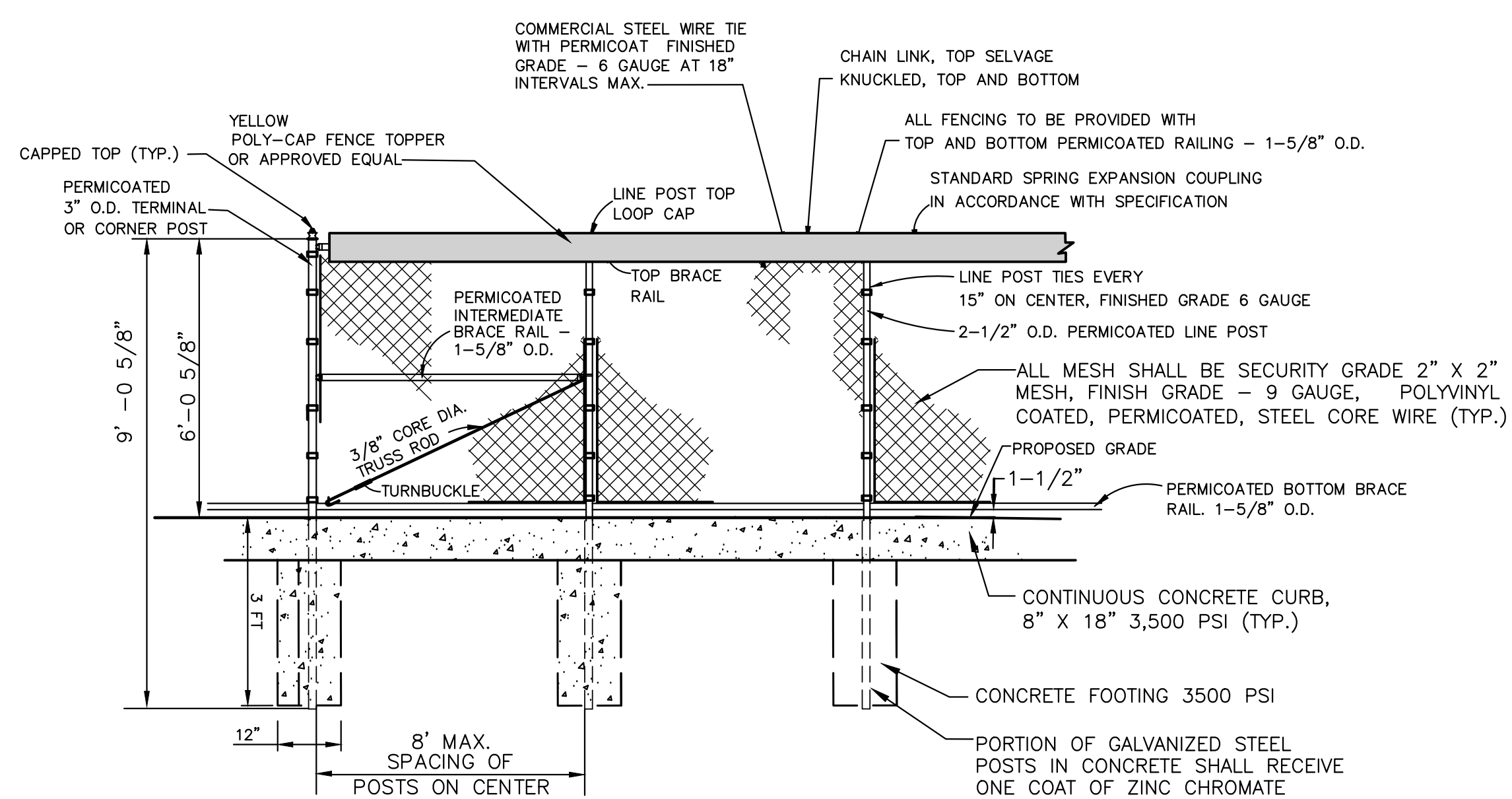
NOTE:

1. THE CONTRACTOR TO INSTALL (1) #4 X 3'-0" LONG CENTERED ON EACH SIDE OF EVERY GATE AND CORNER POST WITHIN THE CONCRETE CURB.
2. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE OWNER FOR THEIR REVIEW AND APPROVAL PRIOR TO PURCHASING ANY CONSTRUCTION MATERIAL.

MANUFACTURER: MASTER HALCO
PH: (800) 229-5615
WEB: FENCEONLINE.COM

8' HIGH CHAIN LINK SWING GATE DETAIL

NOT TO SCALE



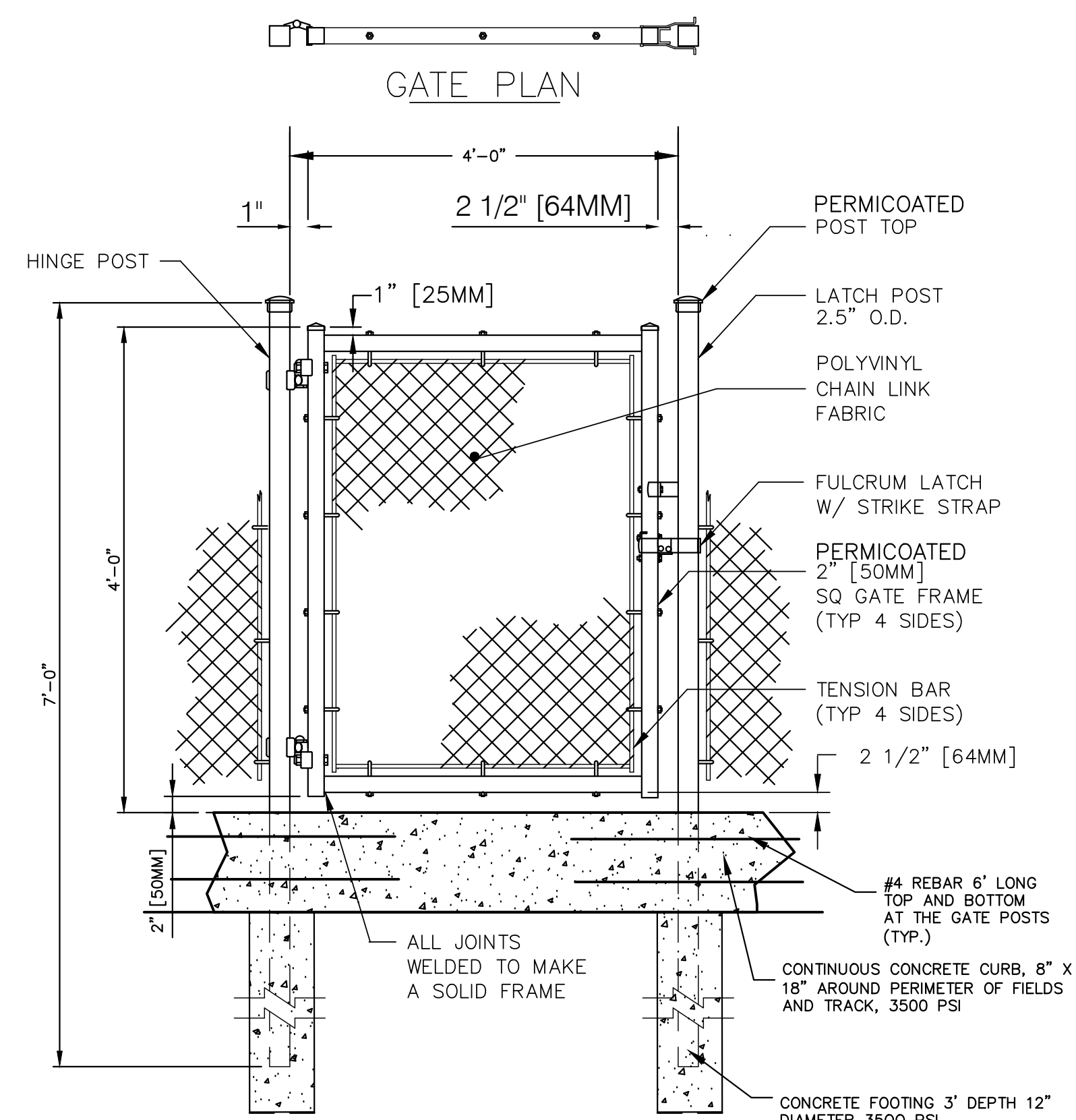
1. FENCE AND GATE SHALL BE COMMERCIAL GRADE AS MANUFACTURED BY *MASTER HALCO. OR APPROVED EQUAL.
2. ALL FENCE FABRIC, POSTS AND RAILINGS SHALL BE PERMICOATED STEEL WITH A COLOR TO BE SELECTED BY OWNER.
3. ALL FENCE TO HAVE TOP AND BOTTOM RAIL.
4. ALL METAL MEMBERS ARE TO BE PERMICOATED STEEL TO MEET ASTM A525-G90 AND THE STEEL TO MEET ASTM A-153.
5. FENCE AND GATE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, CONTRACTOR TO SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION.
6. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO OLD BRIDGE TOWNSHIP OR OWNER FOR THEIR REVIEW AND APPROVAL PRIOR TO PURCHASING ANY CONSTRUCTION MATERIAL.

MANUFACTURED BY MASTER HALCO PHONE NO.: 1-888-643-3623
WEB: WWW.FENCEONLINE.COM

PRODUCT: YELLOW POLY-CAP FENCE TOPPER - #01162 OR AN APPROVED EQUAL
MANUFACTURER: MID-AMERICA SPORTS ADVANTAGE (M.A.S.A)
PH: (800) 264-4519
WEB: WWW.SPORTSADVANTAGE.COM

6' HIGH POLY-VINYL COATED CHAIN LINK FENCE WITH YELLOW CAP DETAIL

NOT TO SCALE



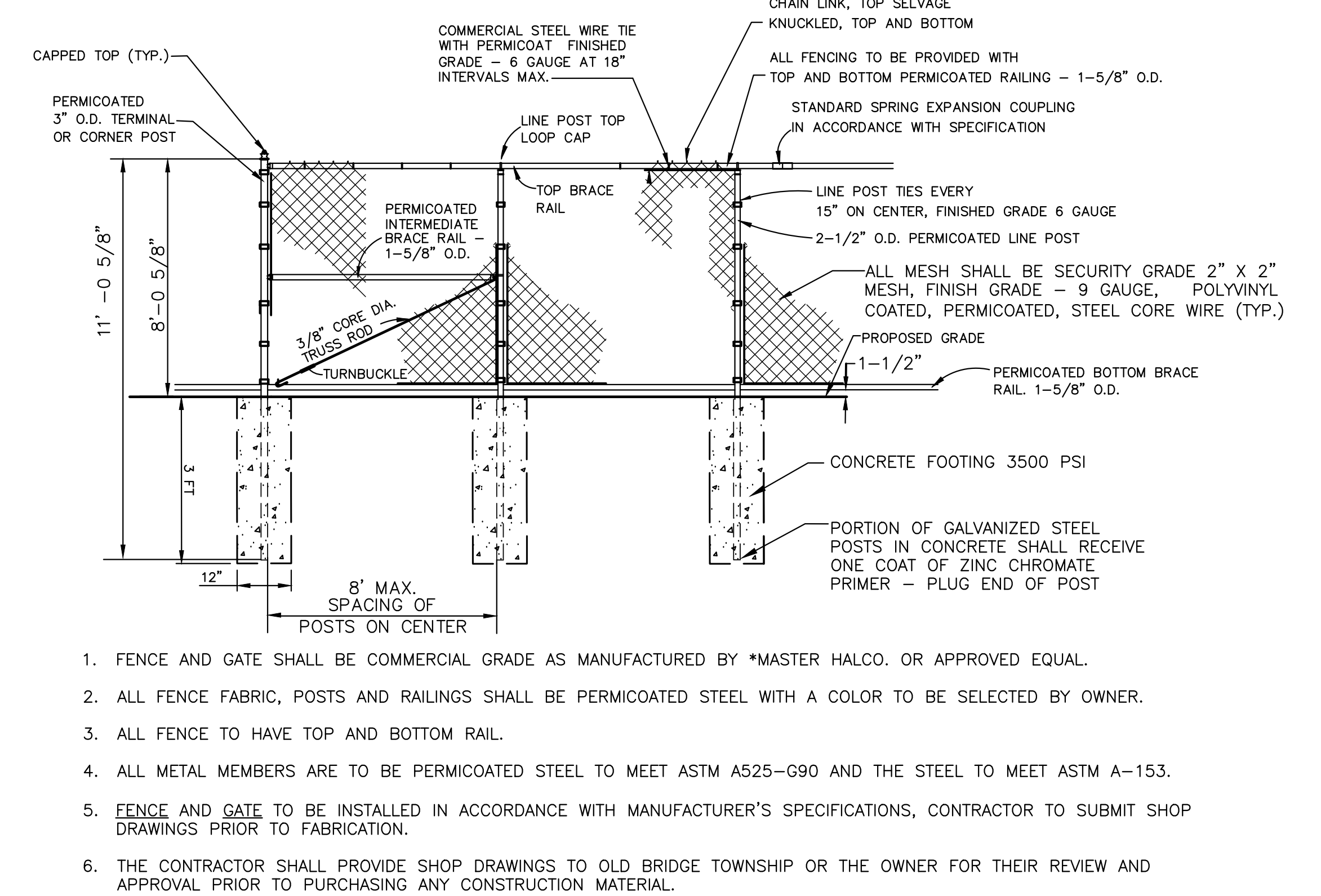
MANUFACTURER: MASTER HALCO
PH: (800) 229-5615
WEB: FENCEONLINE.COM

NOTE:

1. THE CONTRACTOR TO INSTALL (1) #4 X 3'-0" LONG CENTERED ON EACH SIDE OF EVERY GATE AND CORNER POST WITHIN THE CONCRETE CURB.
2. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE OWNER FOR THEIR REVIEW AND APPROVAL PRIOR TO PURCHASING ANY CONSTRUCTION MATERIAL.

4' HIGH CHAIN LINK SWING GATE DETAIL

NOT TO SCALE



1. FENCE AND GATE SHALL BE COMMERCIAL GRADE AS MANUFACTURED BY *MASTER HALCO. OR APPROVED EQUAL.
2. ALL FENCE FABRIC, POSTS AND RAILINGS SHALL BE PERMICOATED STEEL WITH A COLOR TO BE SELECTED BY OWNER.
3. ALL FENCE TO HAVE TOP AND BOTTOM RAIL.
4. ALL METAL MEMBERS ARE TO BE PERMICOATED STEEL TO MEET ASTM A525-G90 AND THE STEEL TO MEET ASTM A-153.
5. FENCE AND GATE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, CONTRACTOR TO SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION.
6. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO OLD BRIDGE TOWNSHIP OR THE OWNER FOR THEIR REVIEW AND APPROVAL PRIOR TO PURCHASING ANY CONSTRUCTION MATERIAL.

MANUFACTURED BY MASTER HALCO PHONE NO.: 1-888-643-3623
WEB: WWW.FENCEONLINE.COM

8' HIGH DUGOUT FENCE DETAIL

NOT TO SCALE

No.	Date	Revision	Revised By	Checked By

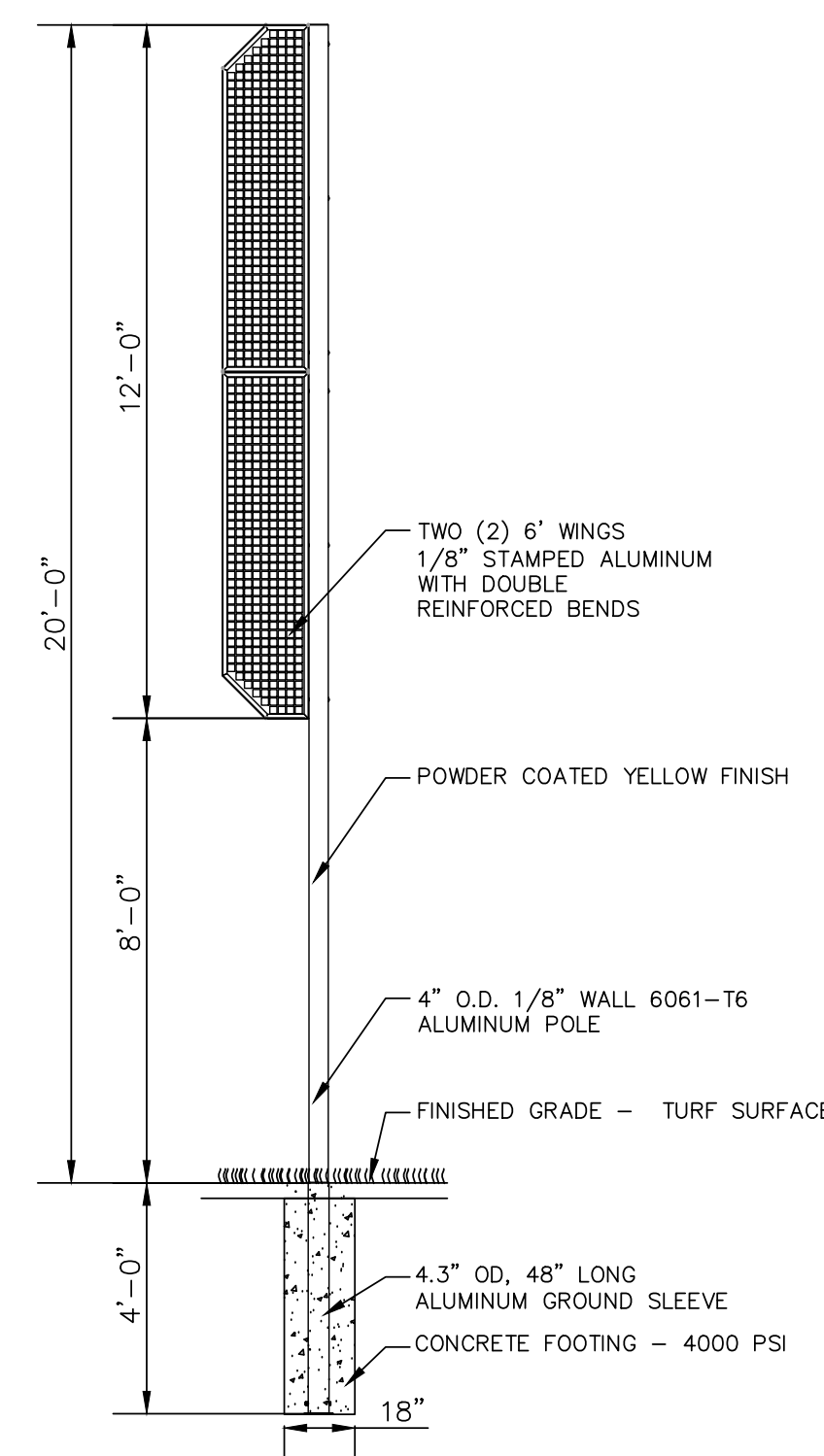
SCALE IN FEET

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Wall, New Jersey 07719
732.312.9800
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ANDREW L. FRENCH, P.E.
PROFESSIONAL ENGINEER, N.J. LIC. NO. 42894

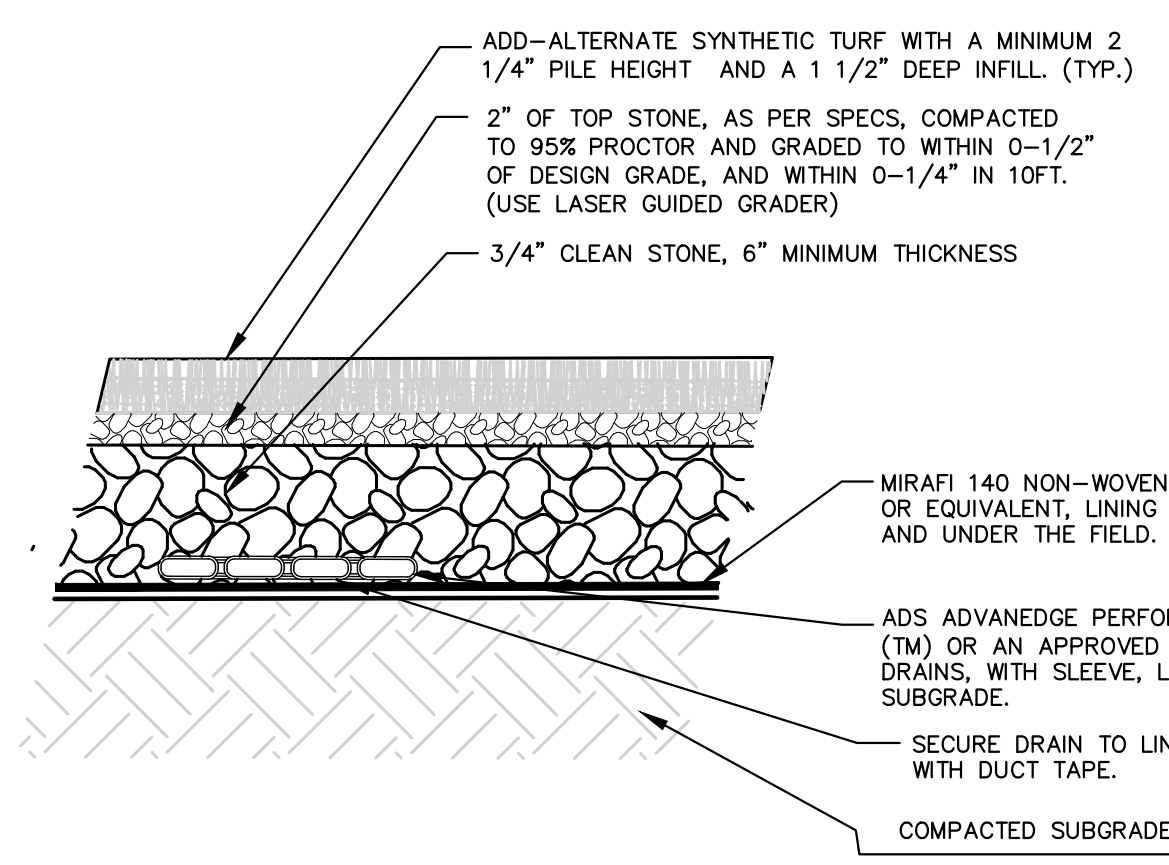
CONSTRUCTION DETAILS A FOR MANNINO PARK SYNTHETIC TURF ATHLETIC FIELDS AND SITE IMPROVEMENTS LOT 6 BLOCK 8005 CONTRACT NO. 2023-37 TOWNSHIP OF OLD BRIDGE MIDDLESEX COUNTY, NEW JERSEY			
DATE: 12/02/2022	DESIGNED BY: TLV	SCALE: AS SHOWN	PROJECT NUMBER: 4043.016
DRAWN BY: MP	CHECKED BY: ALF	FIELD BOOK:	SHEET: C-5.0



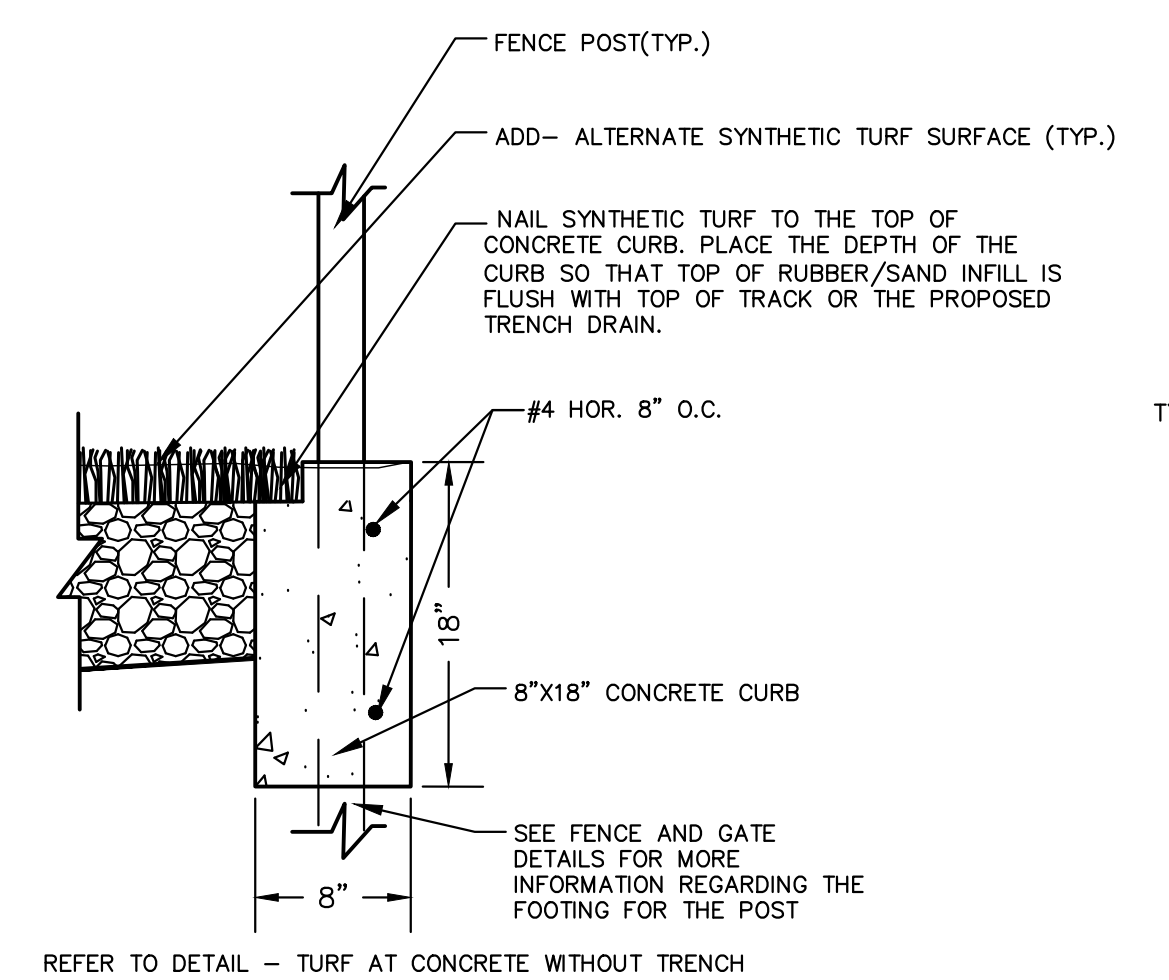
NOTE: THE CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO PURCHASE OF ANY MATERIAL.

MODEL: L6FPW420 - 20' FOUL POLE WITH WINGS
 MANUFACTURER: SPORTSFIELD SPECIALTIES
 MANUFACTURER REF. PHONE: NO. 1-888-975-3343
 WEB: WWW.SPORTSFIELDSPECIALTIES.COM

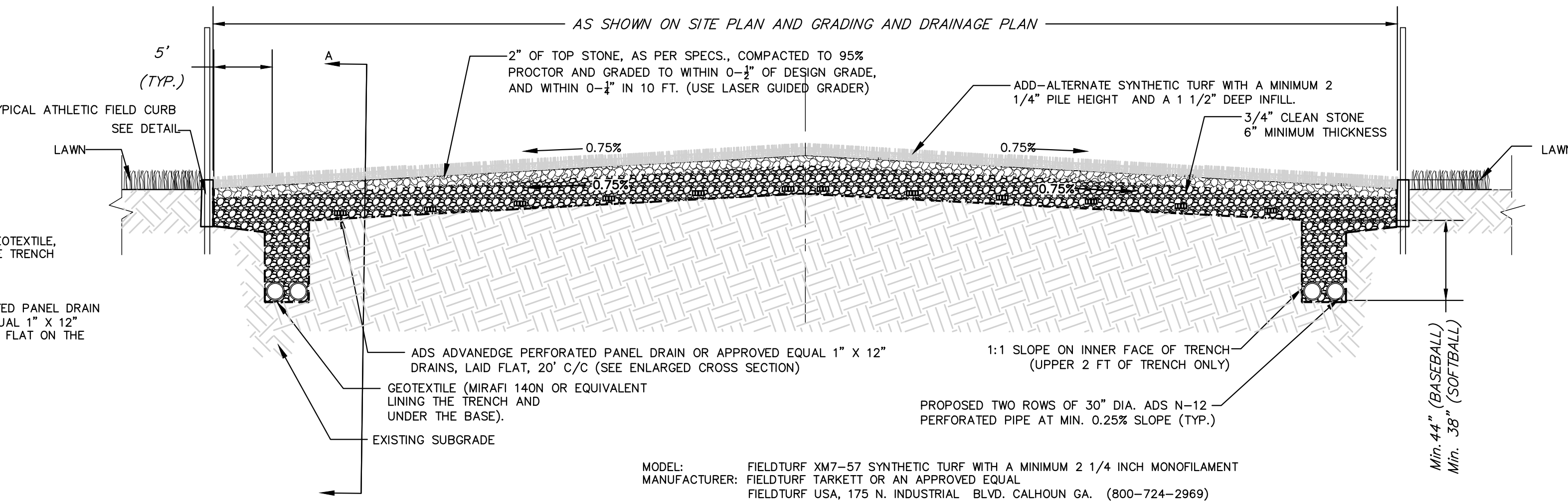
FOUL POLE DETAIL
NOT TO SCALE



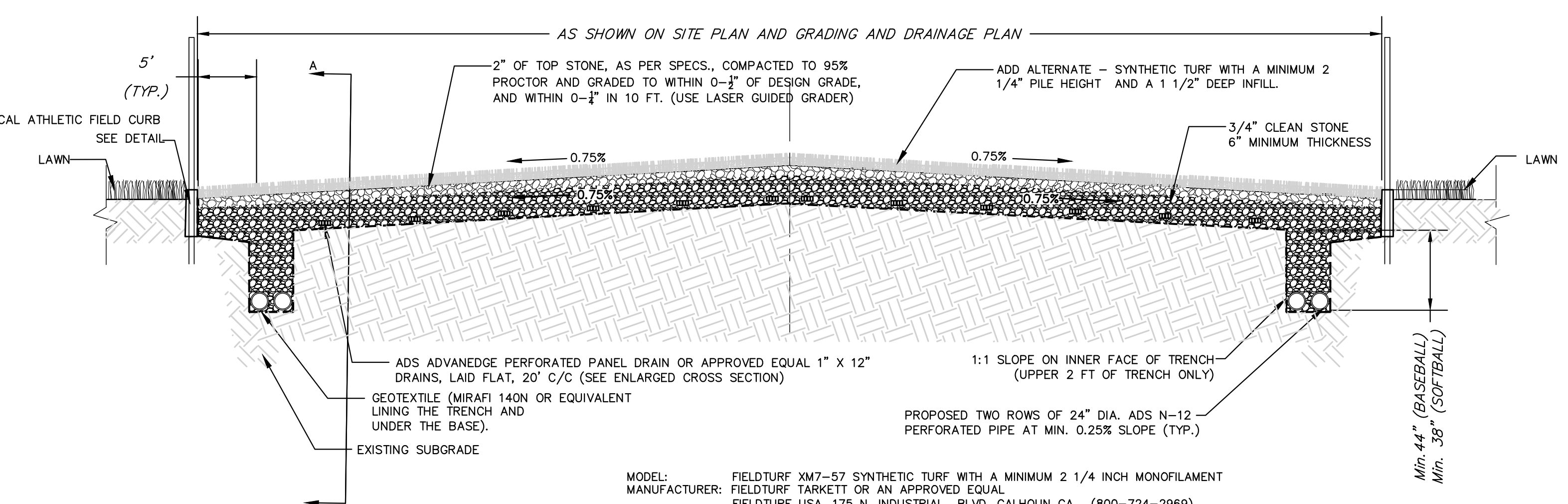
ENLARGED CROSS-SECTION A-A
NOT TO SCALE



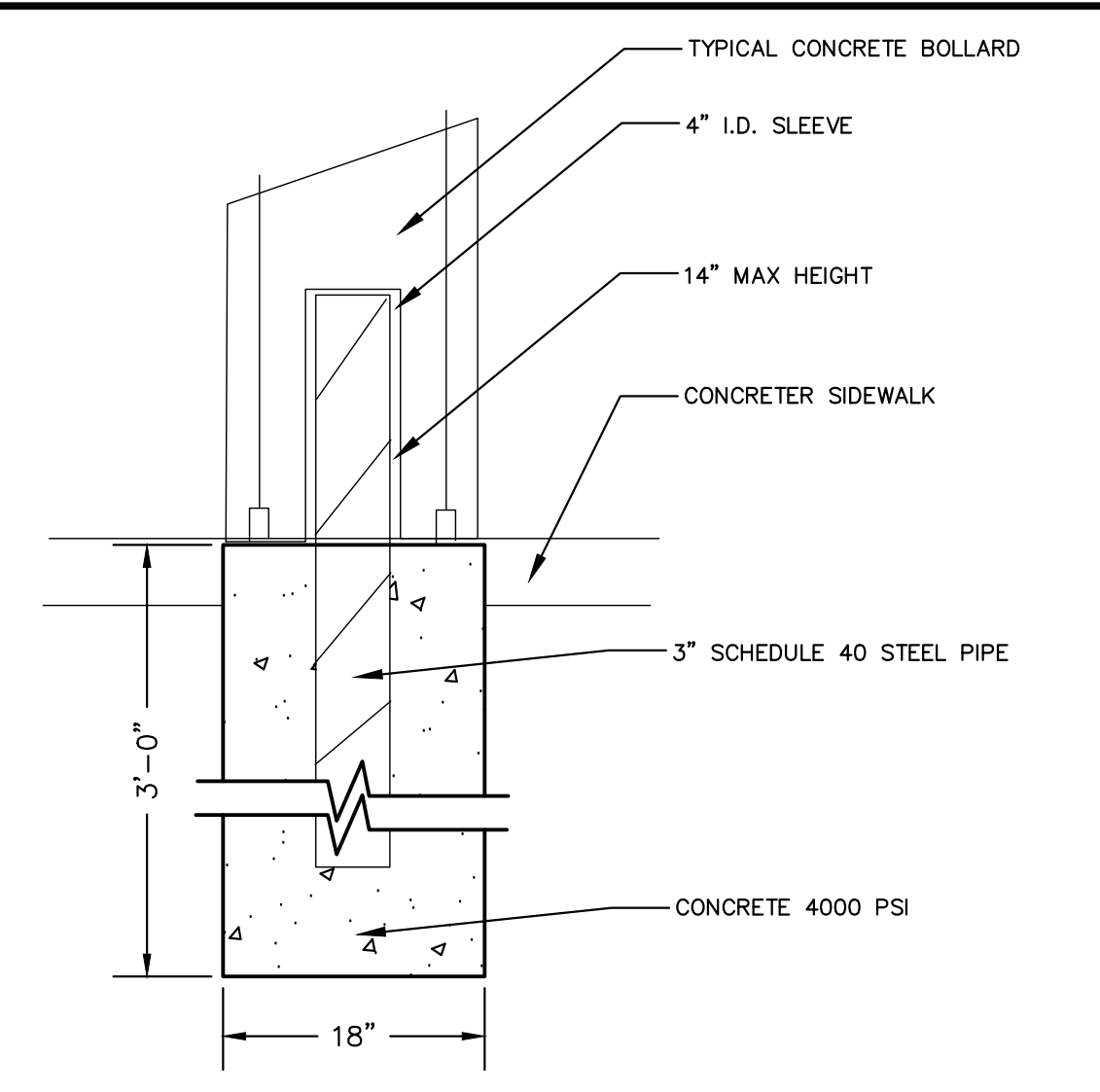
TYPICAL ATHLETIC FIELD CURB DETAIL
NOT TO SCALE



BASEBALL SYNTHETIC TURF SURFACE CROSS-SECTION
NOT TO SCALE



SOFTBALL FIELD 1 AND 2 SYNTHETIC TURF SURFACE CROSS-SECTION
NOT TO SCALE



BOLLARD NOTES:

- CONTRACTOR TO SUBMIT SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO ORDERING ANY MATERIAL.
- THE COST FOR THE MATERIAL AND LABOR TO INSTALL THE CONCRETE ORNAMENTAL CONCRETE BASEBALL AND BASEBALL BAT BOLLARD FOOTING IS TO BE INCLUDED WITHIN THIS BID ITEM.

TYPICAL BOLLARD DETAIL
NOT TO SCALE



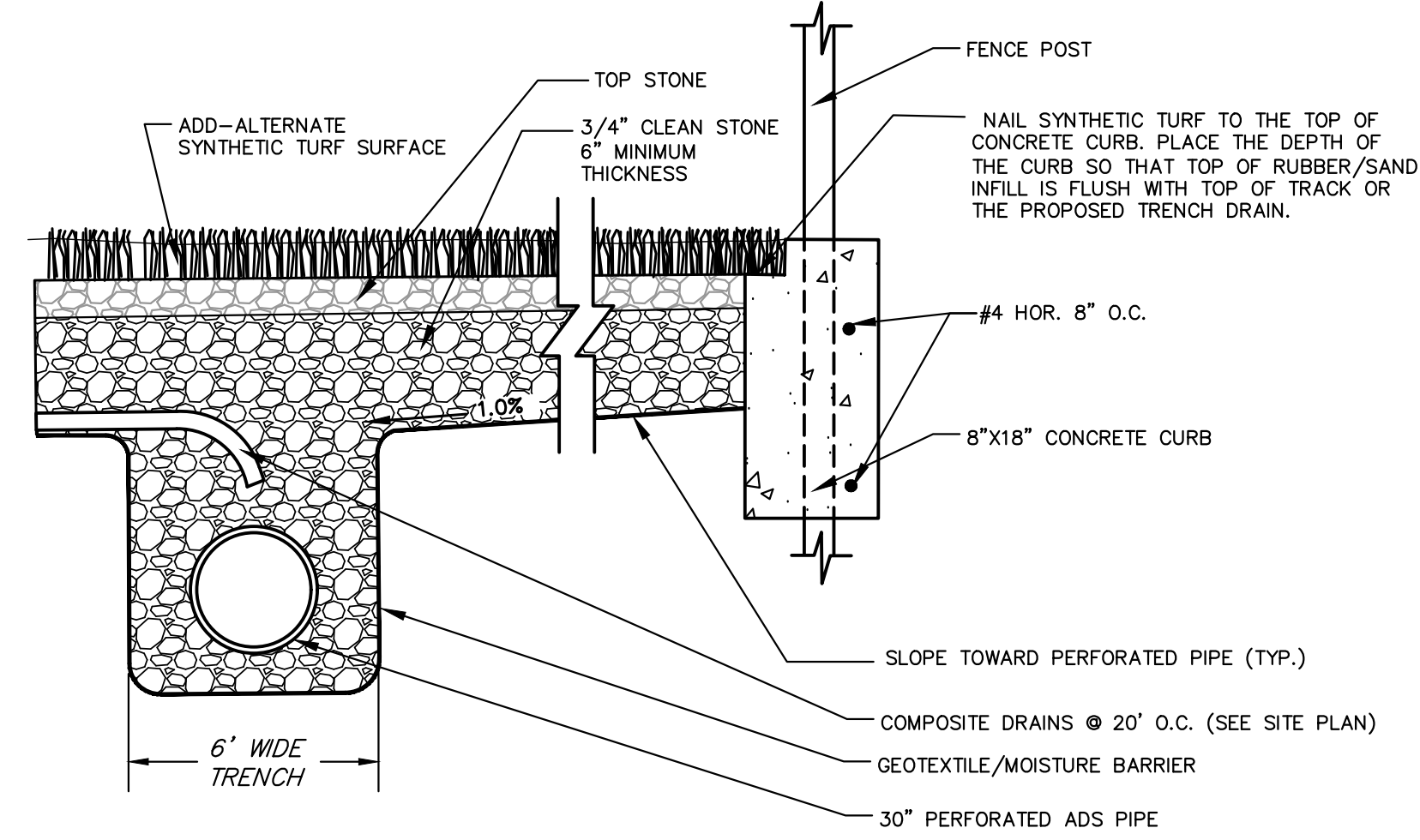
PRODUCT: BASEBALL BOLLARD OR AN APPROVED EQUAL
 PRODUCT NO.: 64480505
 MANUFACTURER REPRESENTATIVE: PARK WAREHOUSE
 PHONE: 877-393-8609
 WEB: <http://PARKWAREHOUSE.COM>

CONCRETE COLOR
 A-W-20 - White (Weatherstone), W-21 - Buff (Weatherstone), W-22 - Sand (Weatherstone), W-23 - Gray (Weatherstone), W-24 - Brick Red (Weatherstone), W-25 - Brown (Weatherstone), W-26 - Charcoal (Weatherstone), Baseball Color White & Red Striking
 OWNER TO SELECT FROM THE FULL RANGE OF COLORS LISTED ABOVE. NO ADDITIONAL COST TO THE OWNER FOR ANY COLORED SELECTED.

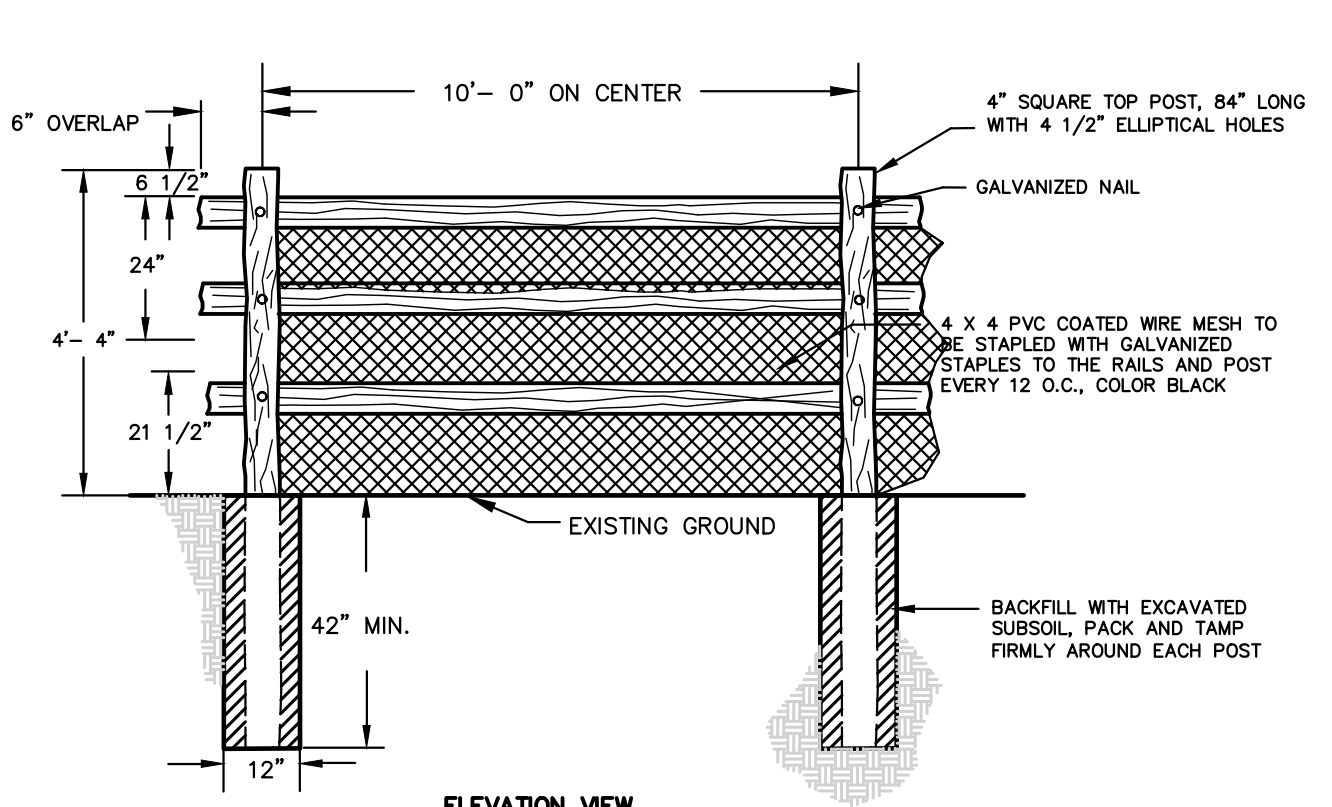
BOLLARD NOTES:

- CONTRACTOR TO SUBMIT SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO ORDERING ANY MATERIAL.
- THE COST FOR THE MATERIAL AND LABOR TO INSTALL THE CONCRETE ORNAMENTAL METAL BOLLARD FOOTING IS TO BE INCLUDED WITHIN THIS BID ITEM.

CONCRETE BASEBALL BOLLARD DETAIL
NOT TO SCALE



DETAIL - SYNTHETIC TURF FIELD SYSTEM AT CONCRETE CURB
NOT TO SCALE

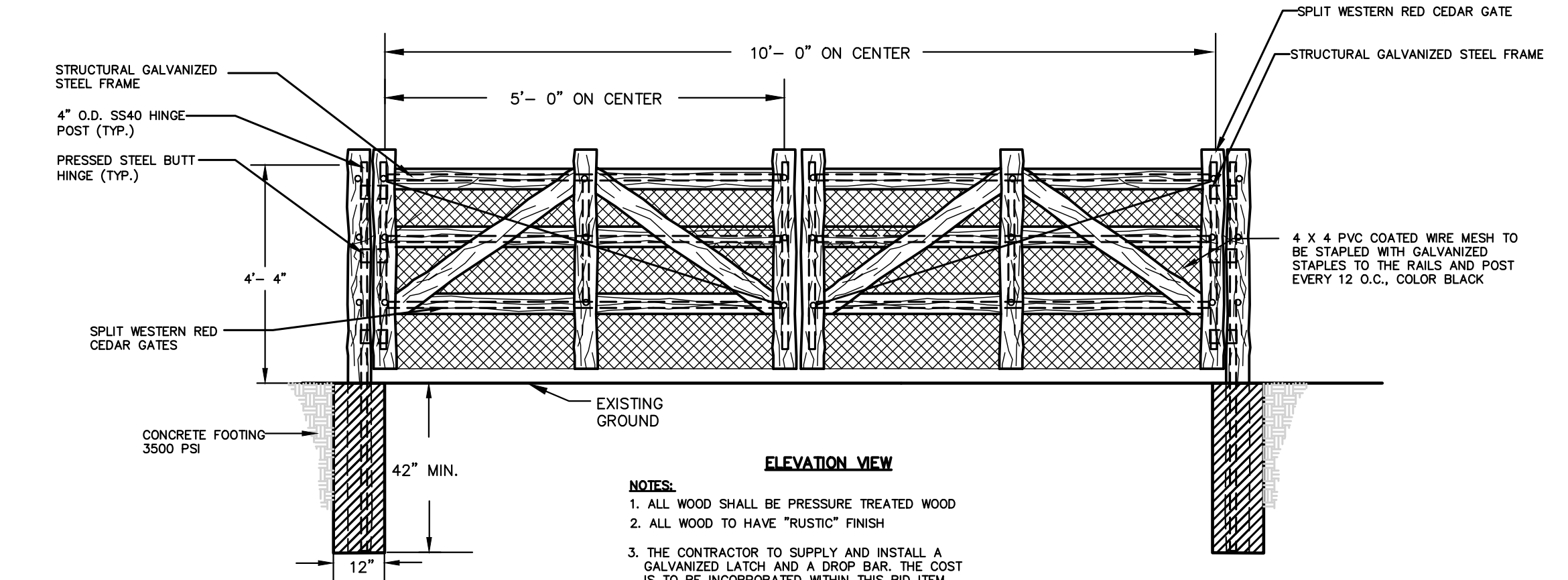


NOTES:

- ALL WOOD POST SHALL BE BLACK LOCUST
- ALL WOOD RAILS SHALL BE PRESSURE TREATED
- ALL NAILS SHALL BE HOT DIPPED GALVANIZED
- ALL WOOD TO HAVE "TRUSTIC" FINISH
- EACH END POST SHALL HAVE A 1'-0" SPACER RAIL IN EACH ELLIPTICAL HOLE, WEDGED ADJACENT TO END OF EACH 11'-0" RAIL
- EACH POST SHALL HAVE A GALVANIZED STAPLE EMBEDDED IN ITS TOP

FENCE MODEL: 3 RAILS SPLIT LOCUST POST AND RAIL SYSTEM OR APPROVED EQUAL
 MANUFACTURED BY SPLIT RAIL FENCE STORE
 PHONE NO: 1-215-997-1828
 WEB: WWW.SPLITRAILFENCE.COM

SPLIT RAIL FENCE WITH WIRE MESH DETAIL
NOT TO SCALE

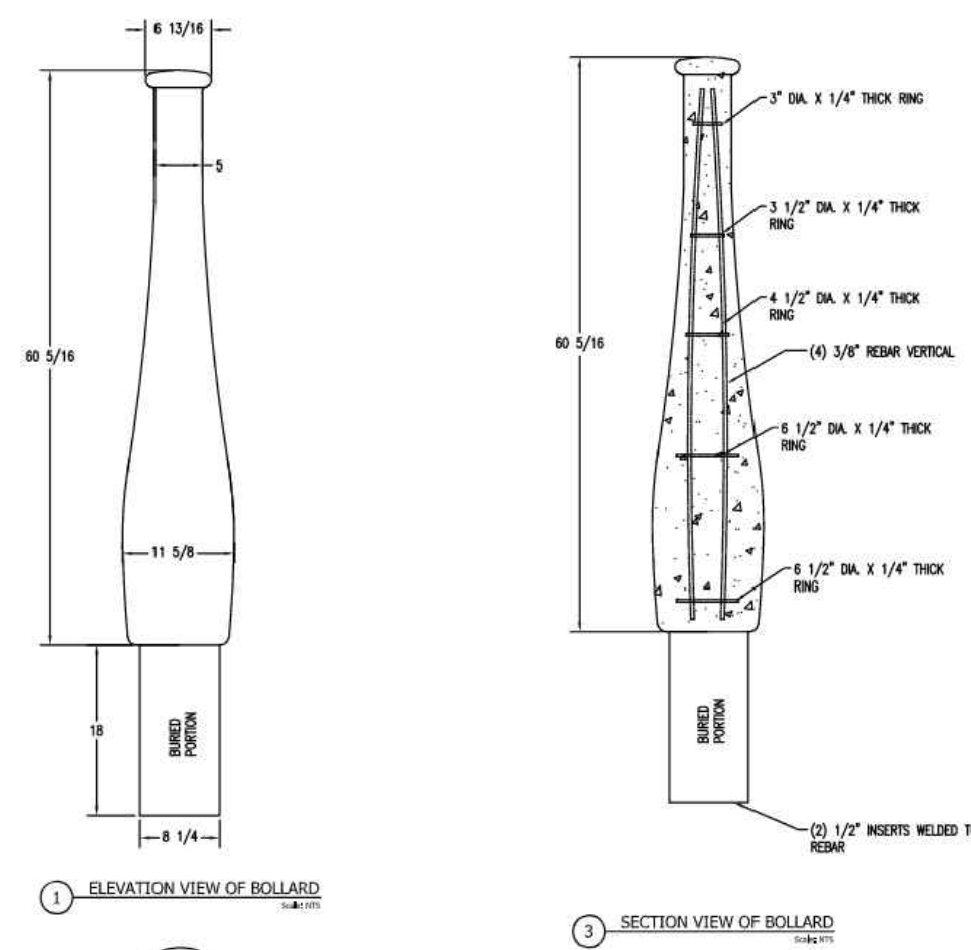


NOTES:

- ALL WOOD SHALL BE PRESSURE TREATED WOOD
- ALL WOOD TO HAVE "TRUSTIC" FINISH
- THE CONTRACTOR TO SUPPLY AND INSTALL A GALVANIZED LATCH AND A DROP BAR. THE COST IS TO BE INCORPORATED WITHIN THIS BID ITEM
- THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ALL THE (2) GATE PANELS AND ALL THE GATE HARDWARE REQUIRED TO CONSTRUCT A WORKING 10' WIDE GATE. ALL COSTS ARE TO BE INCORPORATED WITHIN THIS BID ITEM

GATE MODEL: 60" SPLIT RAIL GATE OR APPROVED EQUAL
 MANUFACTURED BY SPLIT RAIL FENCE STORE
 PHONE NO: 1-215-997-1828
 WEB: WWW.SPLITRAILFENCE.COM

10' WIDE DOUBLE SWING GATE DETAIL
NOT TO SCALE



PRODUCT: BASEBALL BAT BOLLARD OR AN APPROVED EQUAL
 PRODUCT NO.: COW-33-0308-01085
 MANUFACTURER REPRESENTATIVE: PARK WAREHOUSE
 PHONE: 877-393-8609
 WEB: <http://PARKWAREHOUSE.COM>

CONCRETE COLOR
 A-20 - White (Acid Wash), A-21 - Buff (Acid Wash), A-22 - Sand (Acid Wash), A-23 - Gray (Acid Wash), A-24 - Brick Red (Acid Wash), A-25 - Brown (Acid Wash), A-26 - Charcoal (Acid Wash)
 OWNER TO SELECT FROM THE FULL RANGE OF COLORS LISTED ABOVE. NO ADDITIONAL COST TO THE OWNER FOR ANY COLORED SELECTED.

BOLLARD NOTES:

- CONTRACTOR TO SUBMIT SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO ORDERING ANY MATERIAL.
- THE COST FOR THE MATERIAL AND LABOR TO INSTALL THE CONCRETE ORNAMENTAL METAL BOLLARD FOOTING IS TO BE INCLUDED WITHIN THIS BID ITEM.

CONCRETE BASEBALL BAT BOLLARD DETAIL
NOT TO SCALE

01_Vet_V000_V043 - Old Bridge - General_V043_016 - Manno Park Baseball Fields CAD_V043_016 - CD.dwg - CD-B

No.	Date	Revision	Revised By	Checked By

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Andrew L. French
ANDREW L. FRENCH, P.E.
 PROFESSIONAL ENGINEER, N.J. LIC. No. 42894

CONSTRUCTION DETAILS B			
FOR MANNINO PARK SYNTHETIC TURF ATHLETIC FIELDS AND SITE IMPROVEMENTS LOT 6 BLOCK 8005 CONTRACT NO. 2023-37 TOWNSHIP OF OLD BRIDGE MIDDLESEX COUNTY, NEW JERSEY			
DATE: 12/02/2022	DESIGNED BY: TLV	SCALE: AS SHOWN	PROJECT NUMBER: 4043.016
DRAWN BY: MP	CHECKED BY: ALF	FIELD BOOK	SHEET: C-5.1



HOME PLATE IS POWDER COATED FOR LONG LIFE METAL BASE AND STANCHION
 MANUFACTURER: BOLCO HOME PLATE WITH STANCHION
 BEACON ATHLETICS
 8223 FORSYTHIA ST. SUITE 120
 MIDDLETON, WI 53562
 PH: 1-800-747-5985

PERMANENT HOME PLATE
 NOT TO SCALE



SET INCLUDES REPLACEABLE PITCHING RUBBER, DOUBLE 1-1/2" GROUND ANCHOR.
 MANUFACTURER: ECONOMY DOUBLE STANCHION PITCHERS RUBBER
 BEACON ATHLETICS
 8223 FORSYTHIA ST. SUITE 120
 MIDDLETON, WI 53562
 PH: 1-800-747-5985

PERMANENT PITCHERS RUBBER
 NOT TO SCALE



15" X 15" X 3" THE SPYDER BASE - WHITE - SET OF 3
 PEBBLE-EMBOSSED, UV RESISTANT MOLDED WHITE RUBBER PRO-STYLE BASE
 HEAVY-DUTY P.U. FOAM PAD
 REINFORCED SIDE WALLS ARE BUILT FOR EXTREME USE
 DURABLE, 1" LONG RUBBER SPIKE SYSTEM PROVIDES TRACTION ON TURF FIELDS
 PATENT PENDING

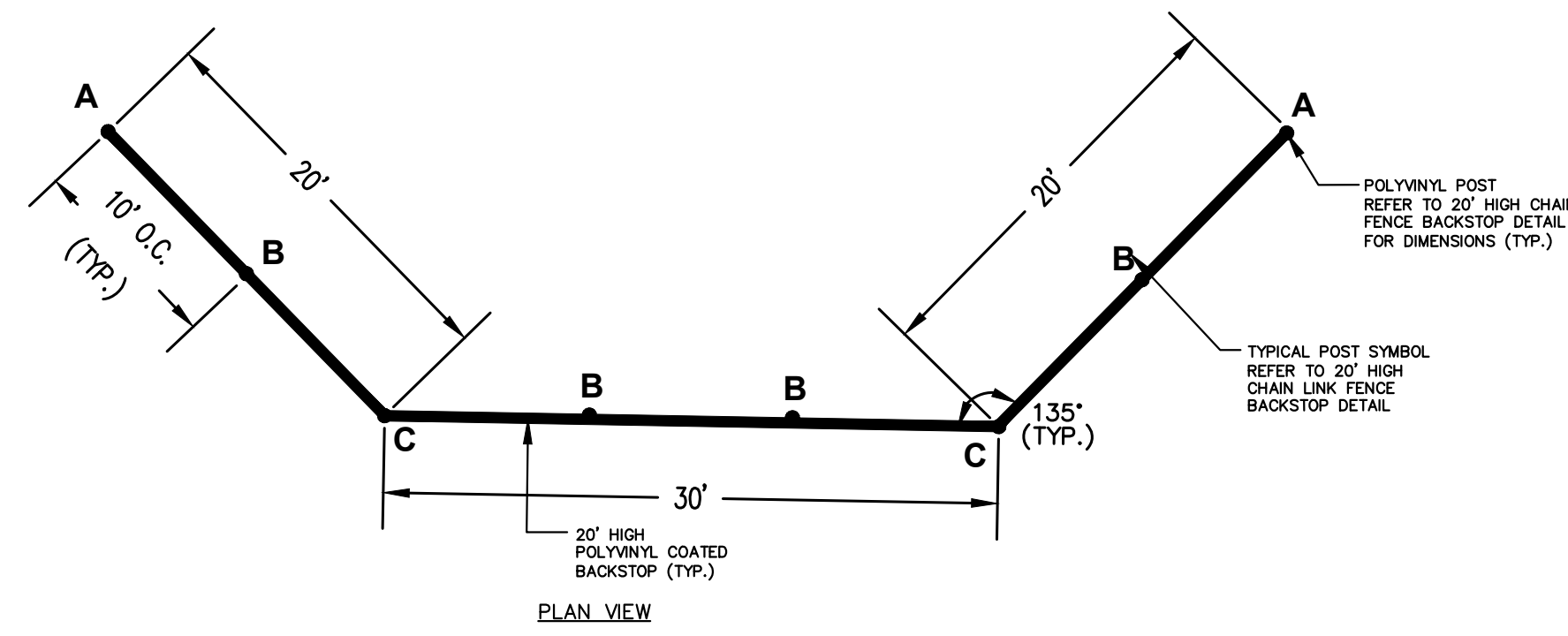
THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING SHOP DRAWINGS.
 BASE MODEL: 15" X 15" X 3" THE SPYDER BASE SET OF 3
 MANUFACTURER: CHAMPRO
 WEB: CHAMPROSPORTS.COM
 MFR. REP.: TRIPLE CROWN SPORTS
 PHONE: 732-679-2231

MOLDED RUBBER BASES SET DETAIL
 NOT TO SCALE

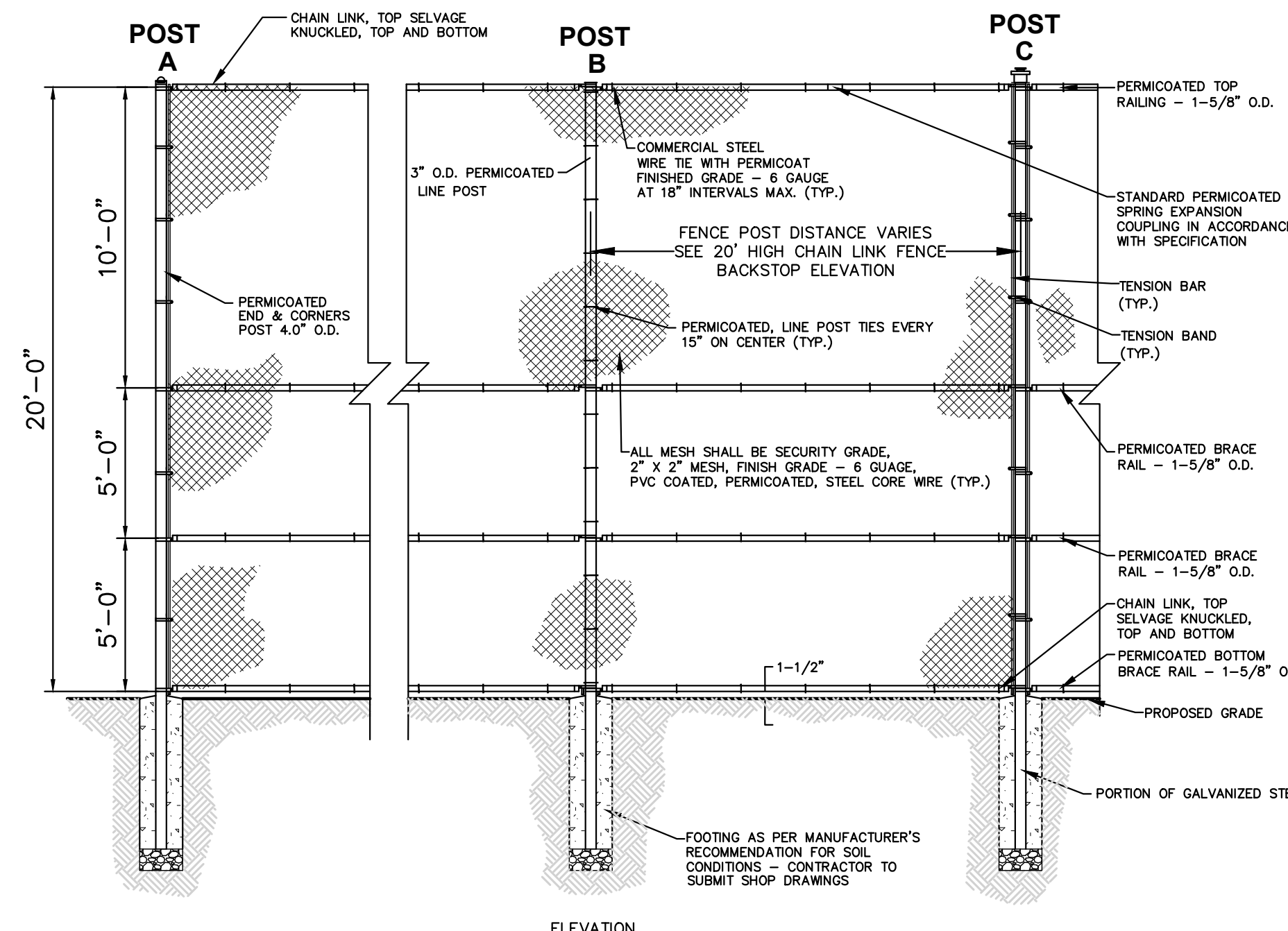


DIMENSIONS	UNCRATED WEIGHT	POWER (120 VAC)
6'-0" H x 16'-0" W x 8" D (1.83 m, 4.88 m, 203 mm)	300 lb (136 kg)	Red/Amber Digits 110 Watts, 1.0 Amp White Digits 210 Watts, 1.8 Amps

Scoreboard requires a dedicated circuit. Models with 240 VAC power
 are not included in this drawing. (See also offered alternatives in Use Only.)
DAKTRONICS BA-624 SCOREBOARD
 NOT TO SCALE

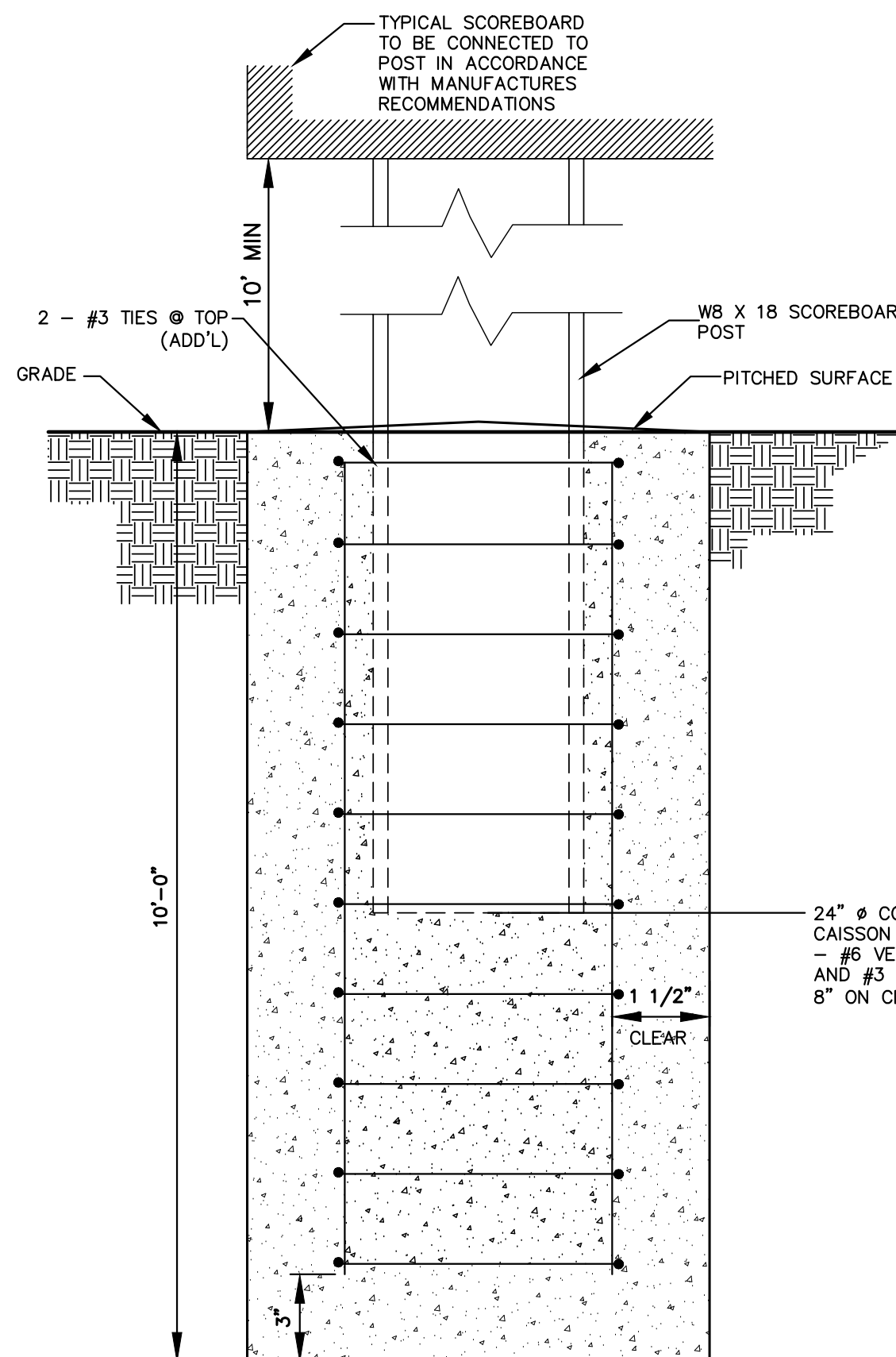


- BASEBALL BACKSTOP TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS; CONTRACTOR TO SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION TO THE OWNER PRIOR TO ORDERING MATERIALS.
- COLOR OF CHAIN LINK FENCE TO BE SELECTED BY THE OWNER.



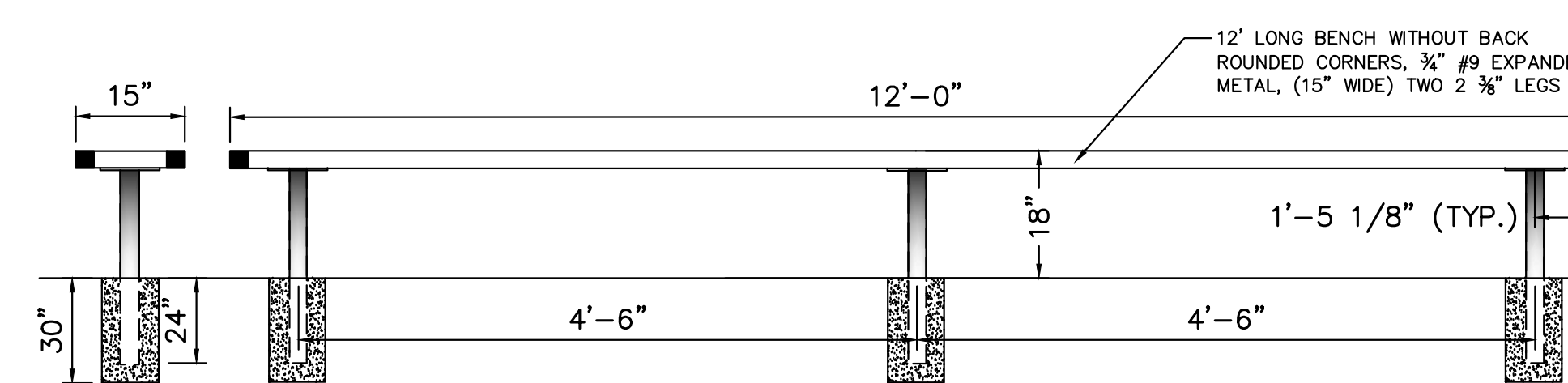
- NOTES:
- ALL FENCE FABRIC, POSTS AND RAILINGS SHALL BE PVC COATED, PERMICOATED STEEL WITH THE COLOR TO BE SELECTED BY THE OWNER.
 - ALL FENCE TO HAVE TOP AND BOTTOM RAIL.
 - ALL METAL MEMBERS ARE TO BE PVC COATED, PERMICOATED STEEL TO MEET ASTM A525-G90 AND THE STEEL TO MEET ASTM A-153.
 - BASEBALL BACKSTOPS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS; CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL BY THE OWNER PURCHASING THE MATERIALS.

20' HIGH POLY-VINYL COATED CHAIN LINK BACKSTOP DETAIL
 NOT TO SCALE



- NOTE:
- THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR THE SCOREBOARD, THE SHOP DRAWINGS SHALL INCLUDE BUT NOT BE LIMITED TO THE MOUNTING DETAIL FOR THE SCOREBOARD TO THE POSTS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATIONS, THE COLOR OF THE SCOREBOARD.
 - THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING TWO POSTS TO SUPPORT EACH SCOREBOARD.

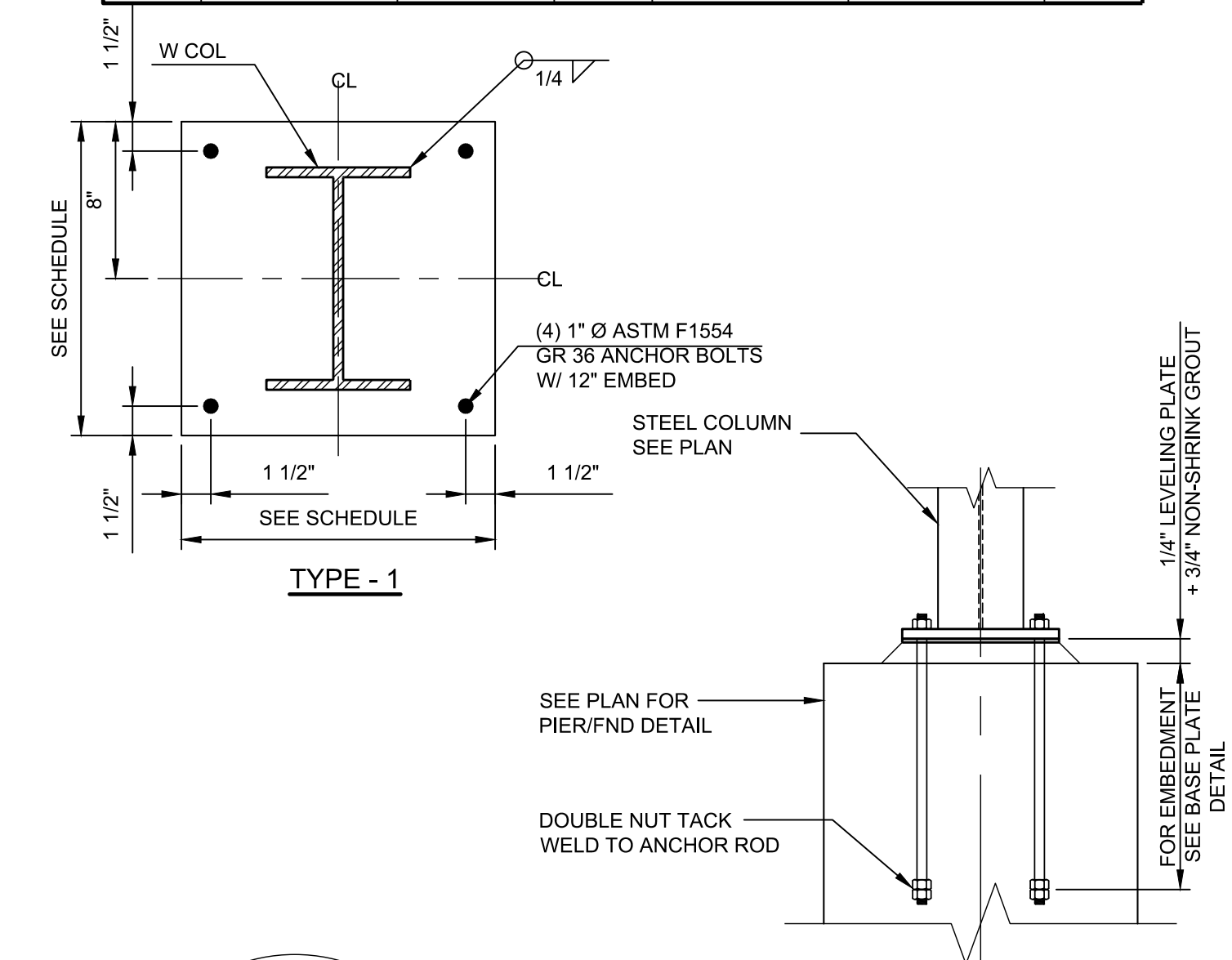
**(SOFTBALL & BASEBALL)
 DIGITAL SCOREBOARD FOOTING DETAIL**
 NOT TO SCALE



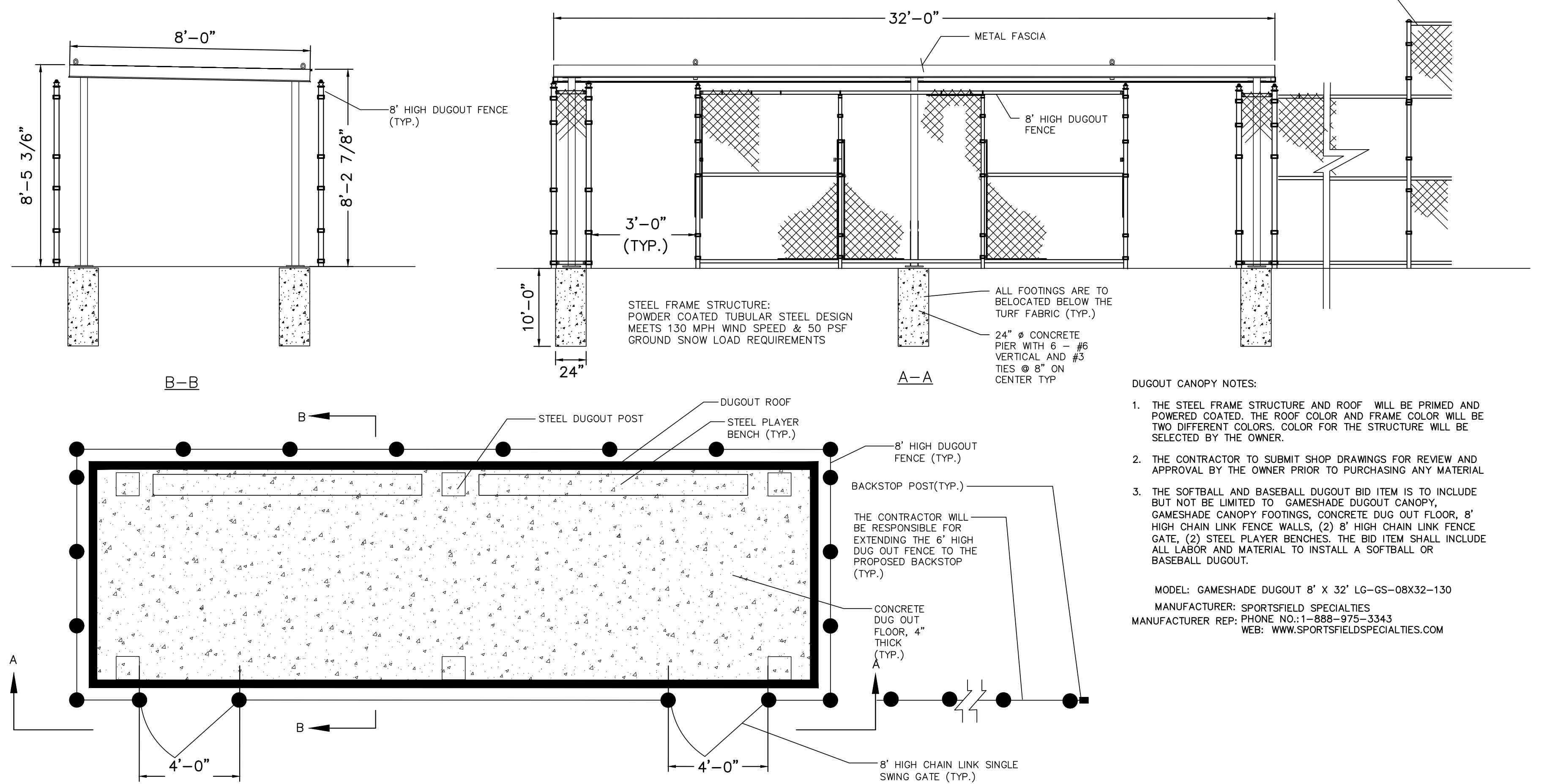
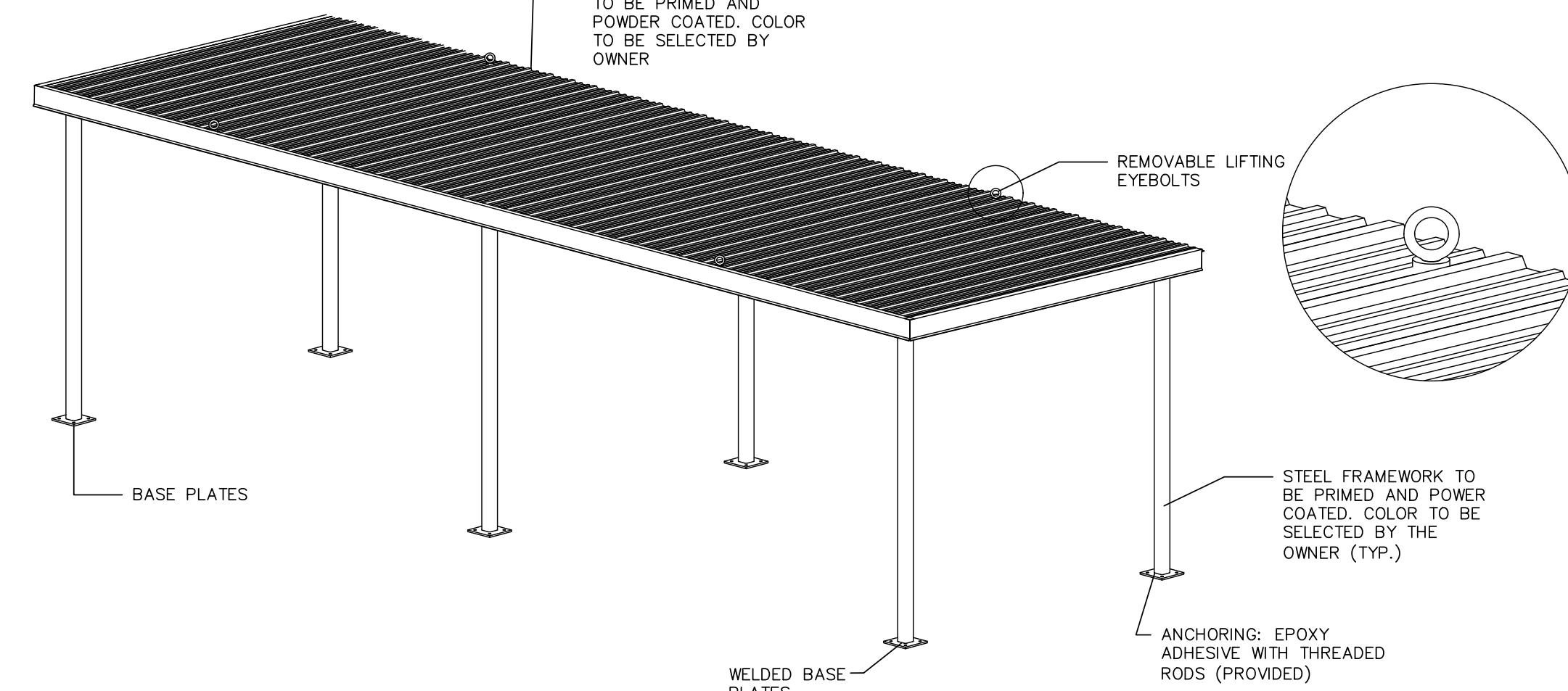
- 12" POLYVINYL EXPANDED METAL PLAYER BENCH. ALL CORNERS ARE ROUNDED, BENCH MODEL: SIG12 BENCH WITHOUT BACK, ROUNDED CORNERS, IN-GROUND PERMANENT MOUNT OR AN APPROVED EQUAL.
- THE FRAME IS INGROUND MOUNT DESIGN.
- COATED WITH A 1/8" X 1/8" THICK PLASTISOL ULTRAVIOLET STABILIZED VINYL MANUFACTURER: GT GRANDSTANDS 2810 SYDNEY ROAD PLANT CITY, FL 33566 PHONE: 813-305-1415 813-305-1419
- SEAT HEIGHT IS 18" APPROXIMATELY, TOTAL OVERALL DIMENSIONS ARE 96" X 15"
- SEATS ARE MADE FROM 3/4" EXPANDED METAL INSIDE OF A 2" X 2" X 3/8" ANGLE IRON FRAME. ALL CENTER BRACES ARE MADE FROM 1/2" X 1 1/2" FLAT STEEL.
- FRAMES ARE MADE OF 2 3/4" HEAVY GALVANIZED STEEL TUBING THAT IS GALVANIZED INSIDE AND OUT AND MEETS OR EXCEEDS THE YIELD AND TENSILE OF SCH 40 PIPE. CONSTRUCTED SO AS TO PROHIBIT RAIN WATER FROM COLLECTING AT GROUND LEVEL COATED WITH A BAKED ON POLYESTER POWDER COAT FINISH.

STEEL PLAYERS BENCH DETAIL
 NOT TO SCALE

BASE PLATE SCHEDULE						
MARK	SIZE	No OF BOLTS	BOLT Ø	BOLT GRADE	EMBEDMENT	TYPE
BP-1	24x24x1 1/2"	4	1"	F1554/GR36	12"	1



ANCHOR BOLT DETAIL
 NOT TO SCALE



BASEBALL AND SOFTBALL DUGOUT CANOPY LAYOUT AND DETAILS
 NOT TO SCALE

- DUGOUT CANOPY NOTES:
- THE STEEL FRAME STRUCTURE AND ROOF WILL BE PRIMED AND POWERED COATED, THE ROOF COLOR AND FRAME COLOR WILL BE TWO DIFFERENT COLORS, COLOR FOR THE STRUCTURE WILL BE SELECTED BY THE OWNER.
 - THE CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO PURCHASING ANY MATERIAL.
 - THE SOFTBALL AND BASEBALL DUGOUT BID ITEM IS TO INCLUDE BUT NOT BE LIMITED TO: GAMESHADE DUGOUT CANOPY, GAMESHADE CANOPY FOOTINGS, CONCRETE DUG OUT FLOOR, 8' HIGH CHAIN LINK FENCE WALLS, (2) 8' HIGH CHAIN LINK FENCE GATE, (2) STEEL PLAYER BENCHES, THE BID ITEM SHALL INCLUDE ALL LABOR AND MATERIAL TO INSTALL A SOFTBALL OR BASEBALL DUGOUT.

MODEL: GAMESHADE DUGOUT 8' X 32' LG-GS-08X32-130
 MANUFACTURER: SPORTSFIELDS SPECIALTIES
 MANUFACTURER REP: PHONE NO. 1-888-975-3343
 WEB: WWW.SPORTSFIELDSPECIALTIES.COM

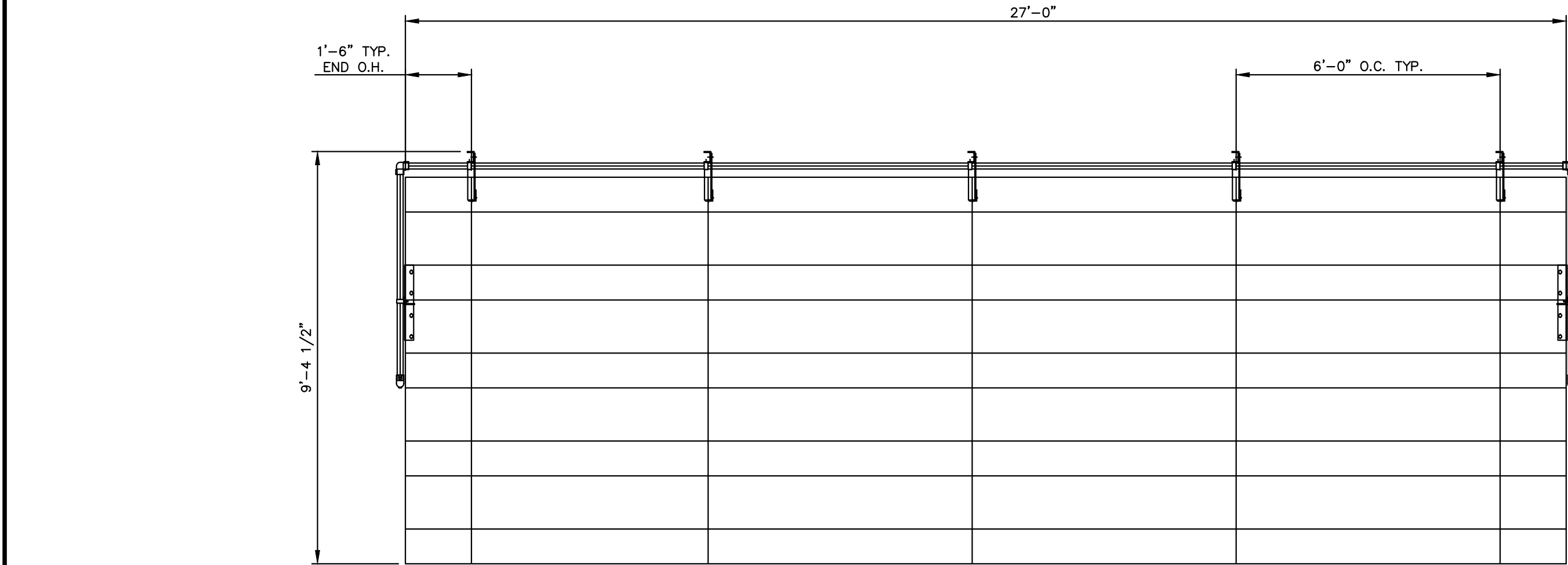
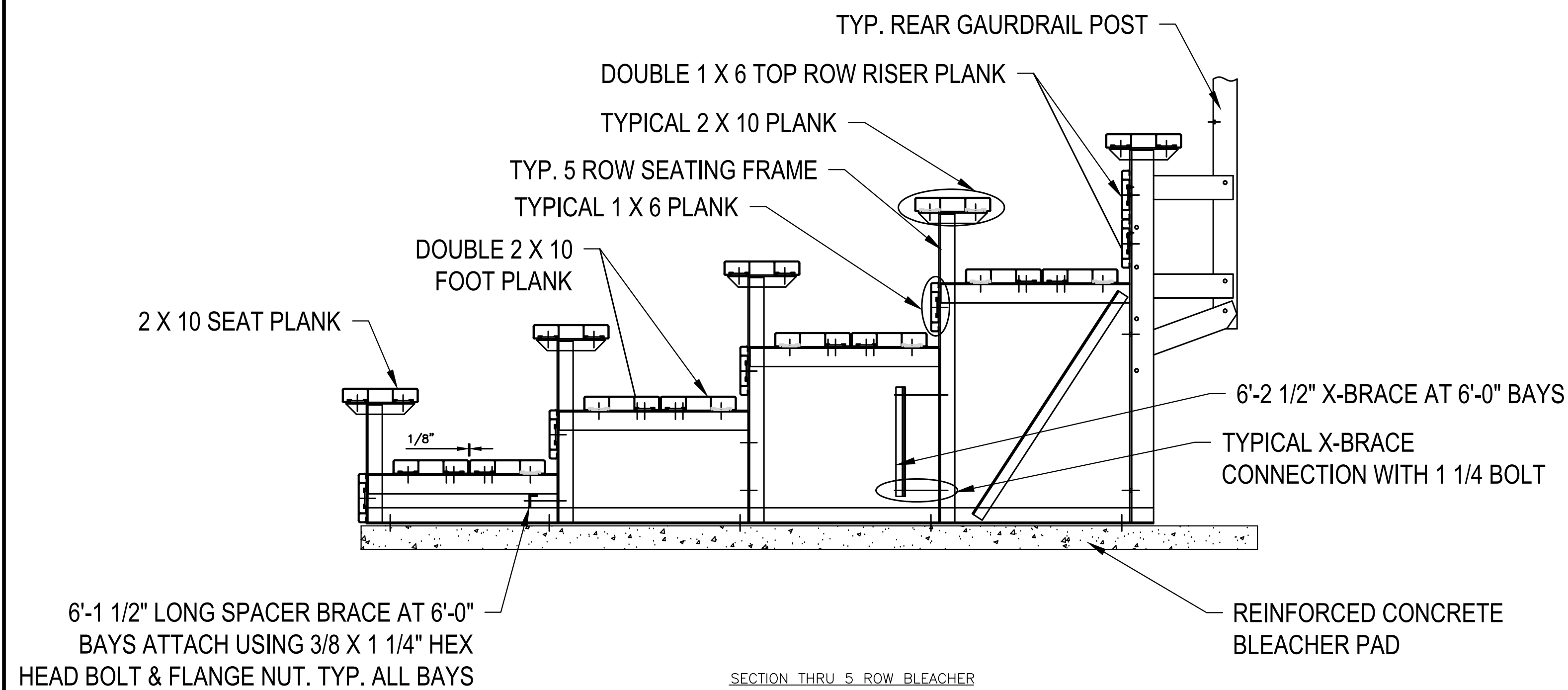
No.	Date	Revision	Revised By	Checked By

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 732.312.9800
 FPAengineers.com
ANDREW L. FRENCH, P.E.
 PROFESSIONAL ENGINEER, N.J. LIC. NO. 42894

CONSTRUCTION DETAILS C
 FOR
MANNING PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
 LOT 6 BLOCK 8005
 CONTRACT NO. 2023-37
 TOWNSHIP OF OLD BRIDGE
 MIDDLESEX COUNTY, NEW JERSEY
 DATE: 12/02/2022
 DESIGNED BY: TLV
 DRAWN BY: MP
 SCALE: AS SHOWN
 CHECKED BY: ALF
 FIELD BOOK
 PROJECT NUMBER: 4043.016
 SHEET: C-5.2

M:\0000\4043 - Old Bridge - General\Fields\CAD\DWG\4043.016 - CD.dwg CD-D
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PLAN VIEW

NOTE: CONTRACTOR TO SUBMIT SHOP DRAWINGS AND SAMPLE COLORS OF THE STANDARD POWDER COAT SYSTEM OFFERED BY THE MANUFACTURER FOR REVIEW AND APPROVAL PRIOR TO PURCHASING OF ANY MATERIAL.
 MODEL NO.: BLEACHER -NA-0527PRF_CL NON-ELEVATED 5 ROW X 27'-0" BLEACHER WITH GUARDRAIL SYSTEM

MANUFACTURER: NATIONAL RECREATION SYSTEMS, INC.
 1300-D AIRPORT NORTH OFFICE PARK
 FT. WAYNE, IN 46825
 PHONE: 888-568-9064
 WEB: WWW.BLEACHERS.COM

FIVE ROW METAL BLEACHERS DETAIL

NOT TO SCALE

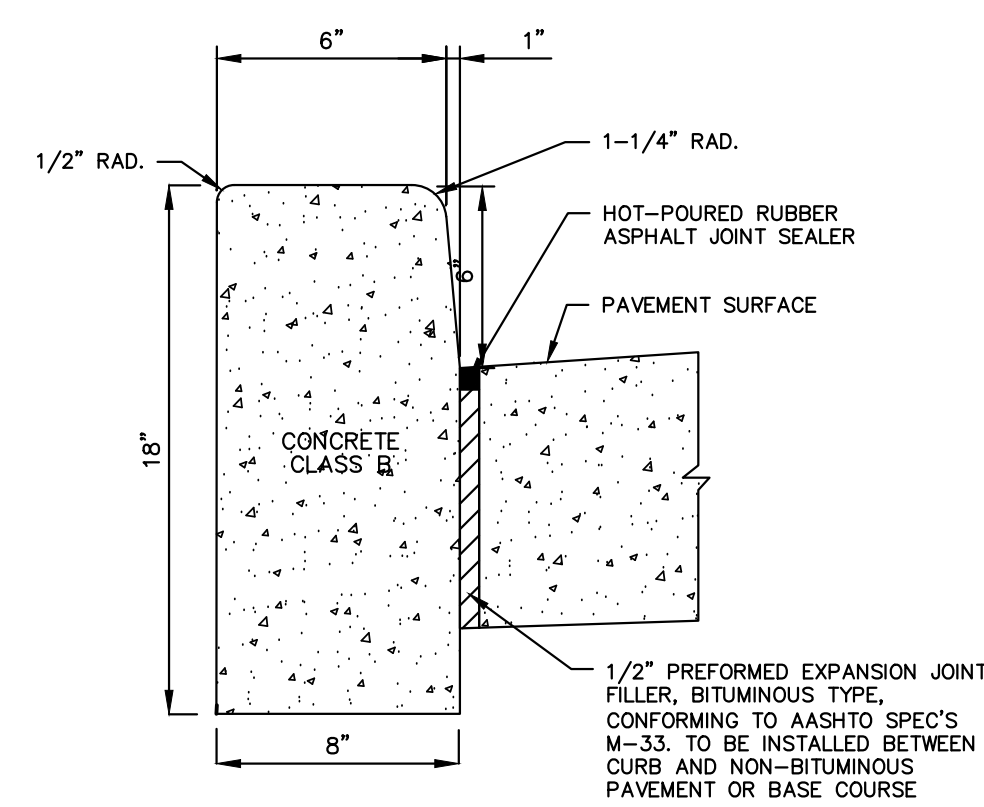
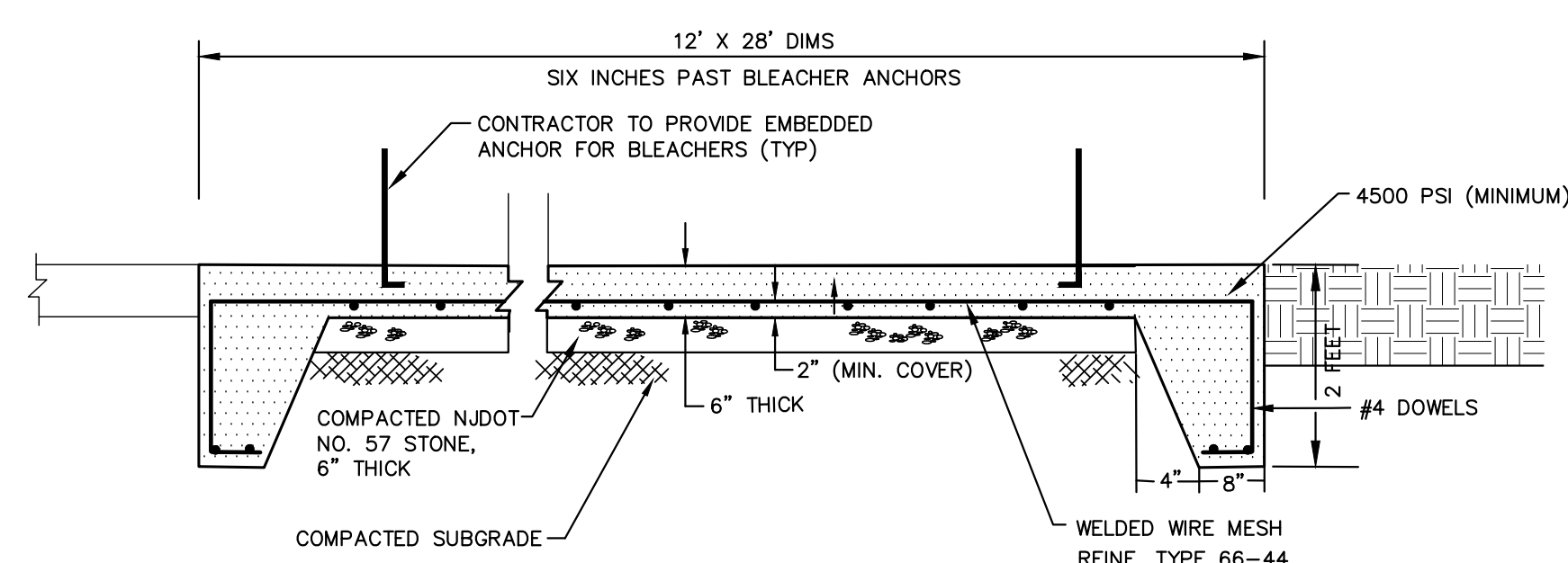
BLEACHER DESCRIPTION
 1. 5 ROWS, 27' LONG - 54 SEATING
 2. GALVANIZED STEEL FRAME
 3. POWDER COATED ALUMINUM PLANK
 4. COLOR TO BE SELECTED BY THE OWNER

NOTES:

1. CONCRETE SHALL BE 4500 PSI CONCRETE MIN. STRENGTH
2. PROVIDE PERFORMED BITUMINOUS FIBER EXPANSION JOINTS, 1/2" THK. AT 20'-0" (MAX.) INTERVALS, PROVIDE DUMMY JOINTS (FORMED) MIDWAY BETWEEN EXPANSION JOINTS.
3. THE COST TO PURCHASE CONCRETE PAD MATERIALS AS SHOWN AND TO INSTALL THE REINFORCED CONCRETE BLEACHER PAD UNDER THE BRICK PAVERS IS TO BE INCLUDED IN THE PRICE FOR THE THREE ROW METAL BLEACHERS BID ITEM.

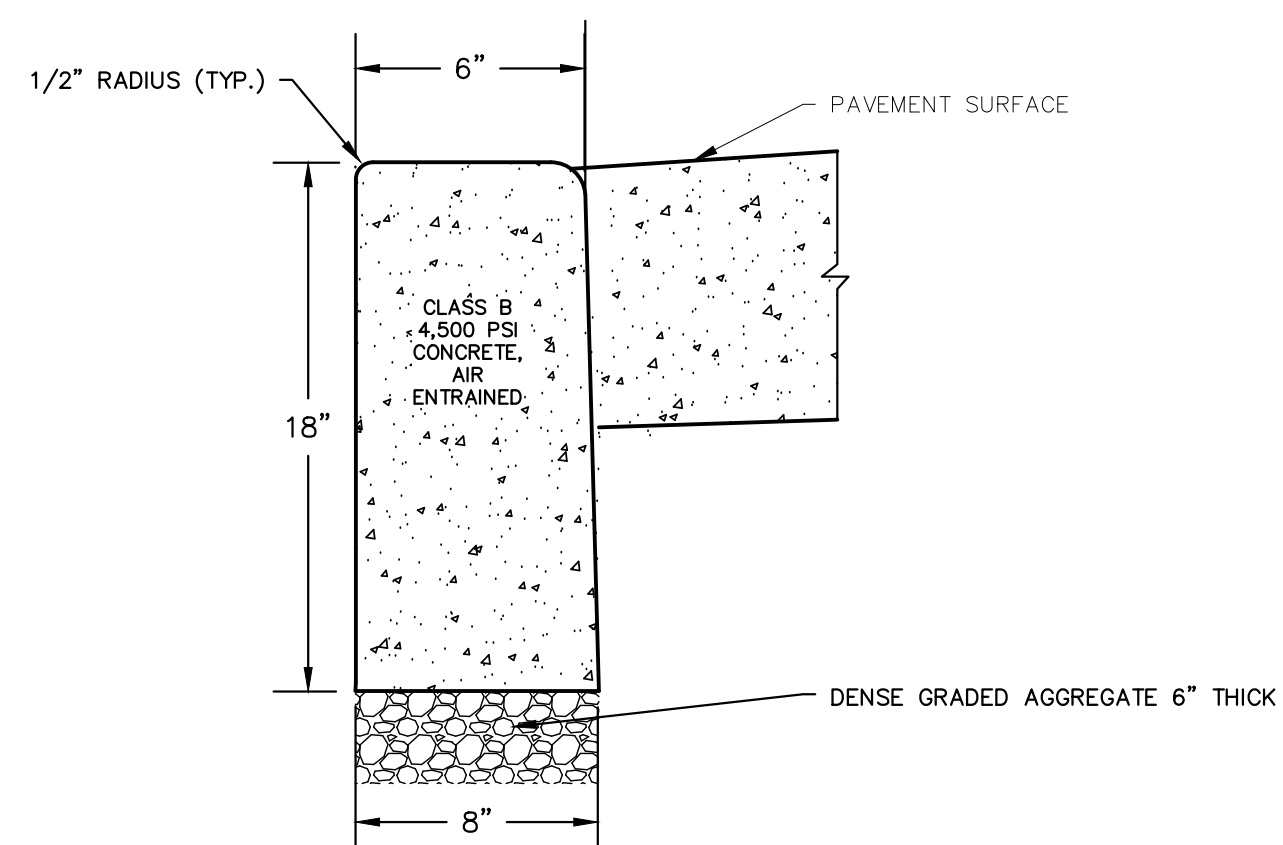
REINFORCED CONCRETE BLEACHER PAD DETAIL

NOT TO SCALE



CONCRETE CURB DETAIL

NOT TO SCALE

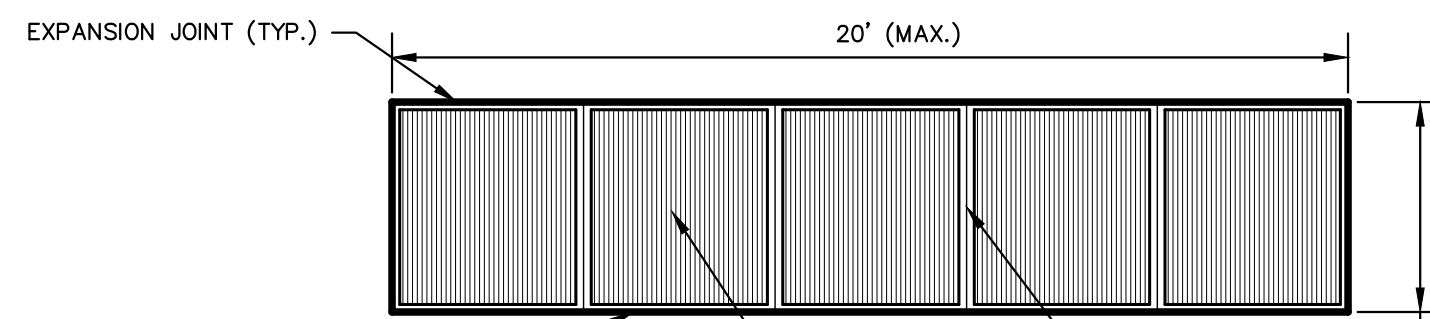


NOTES:

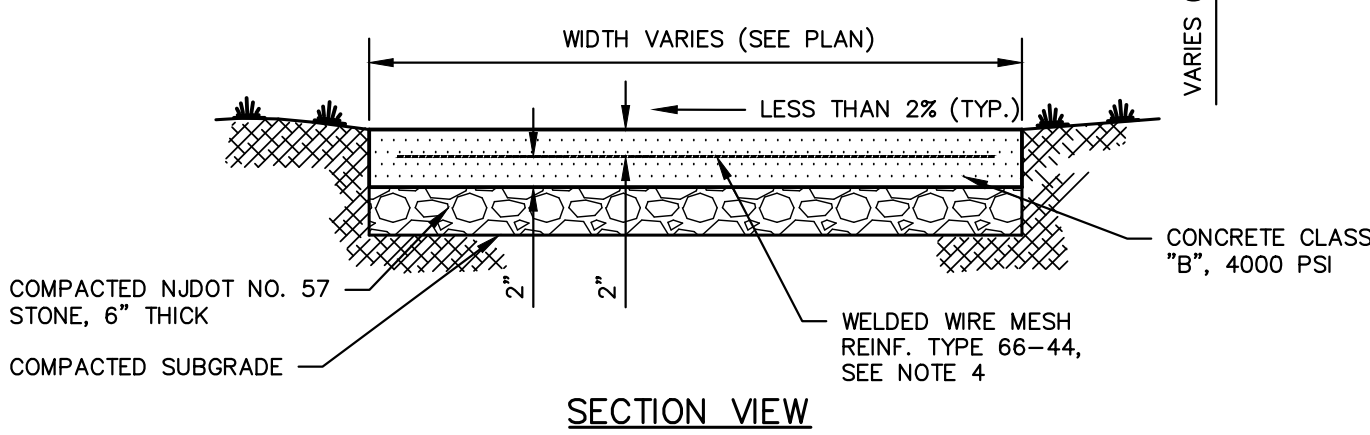
1. EXPANSION JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER COMPLYING WITH THE REQUIREMENTS OF A.A.S.T.O. SPEC. M-213, RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB.
2. EXPOSED CONCRETE CURB SHALL HAVE A FINE BRUSH FINISH.
3. WHERE CURB IS ADJACENT TO SIDEWALK AND WHERE IT ABUTS CATCH BASINS, EXPANSION JOINTS MUST BE PROVIDED.
4. FORM SHALL EXTEND FOR THE FULL DEPTH OF THE CONCRETE CURB.

DEPRESSED CONCRETE CURB DETAIL

NOT TO SCALE



PLAN VIEW OF CONCRETE SIDEWALK

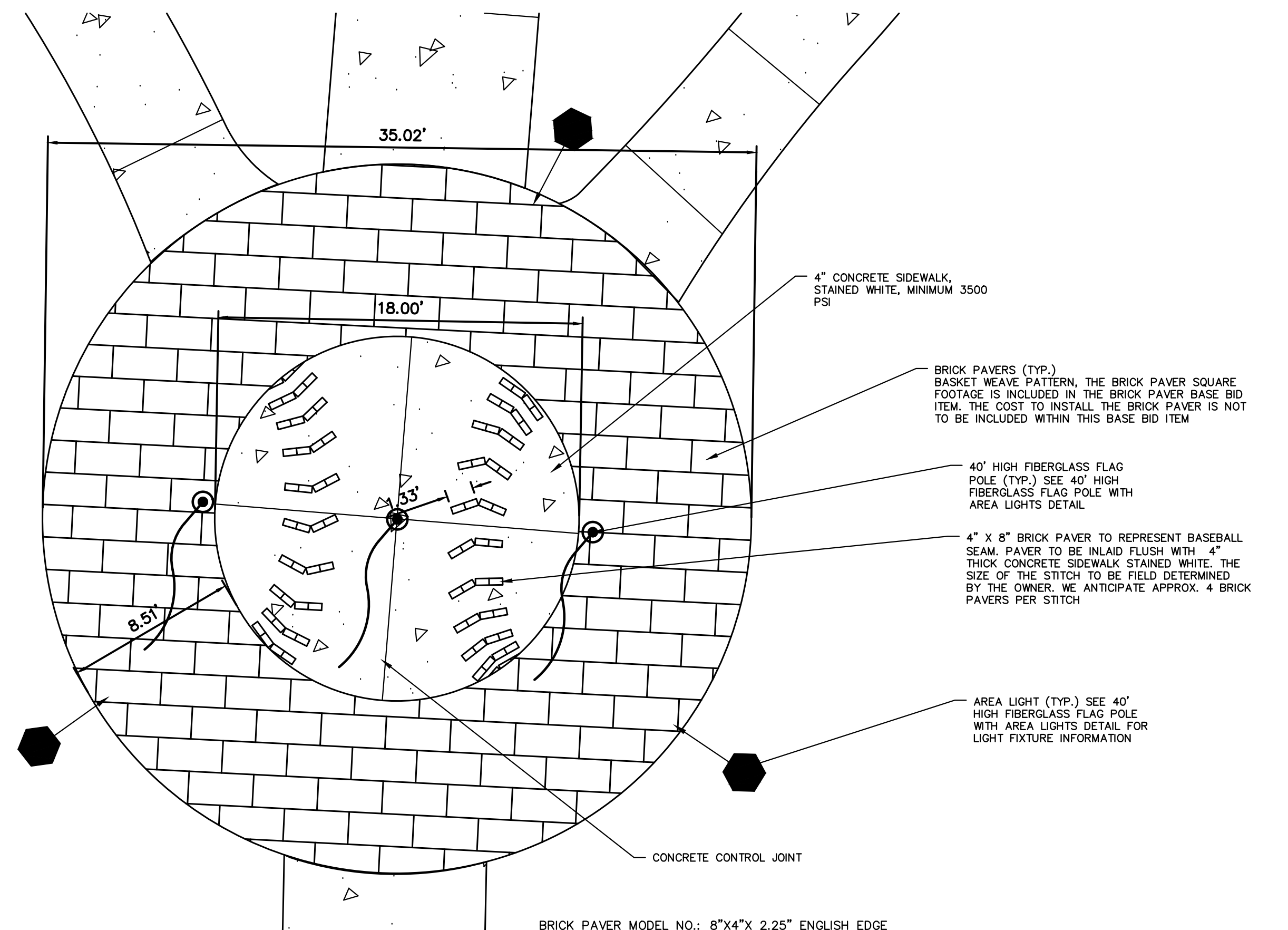


NOTES:

1. FOUR FOOT WIDE SIDEWALK AREAS MUST HAVE CONSTRUCTION JOINTS EVERY 4 FEET WITH BITUMINOUS EXPANSION JOINTS EVERY 20 FEET IN ACCORDANCE WITH SECTION 490-103.2.1 OF THE ORDINANCE.
2. BITUMINOUS JOINT FILLERS 1/2" THICK, SHALL BE PLACED AT INTERVALS NOT EXCEEDING TWENTY (20) FEET. DUMMY (FORMED) JOINTS SHALL BE CUT INTO THE CONCRETE SIDEWALK BETWEEN THE EXPANSION JOINTS AT EQUAL INTERVALS NOT EXCEEDING THE WIDTH OF THE SIDEWALK.
3. THE SIDEWALK SUBGRADE SHALL BE N.107 NO. 57 STONE, 6" THICK OR MATERIAL APPROVED BY THE TOWNSHIP ENGINEER, AND COMPACTED PRIOR TO THE PLACEMENT OF ANY SIDEWALK.
4. THE SIDEWALK SECTION SHALL BE 4" THICK WITH WELDED WIRE FABRIC AT DRIVEWAYS.

CONCRETE SIDEWALK DETAIL

NOT TO SCALE

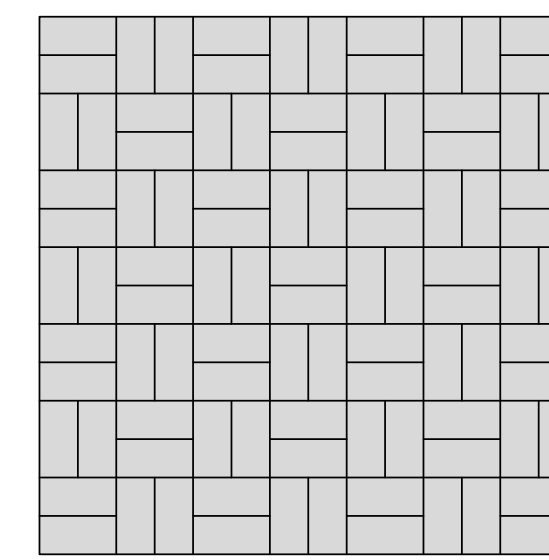


NOTE:

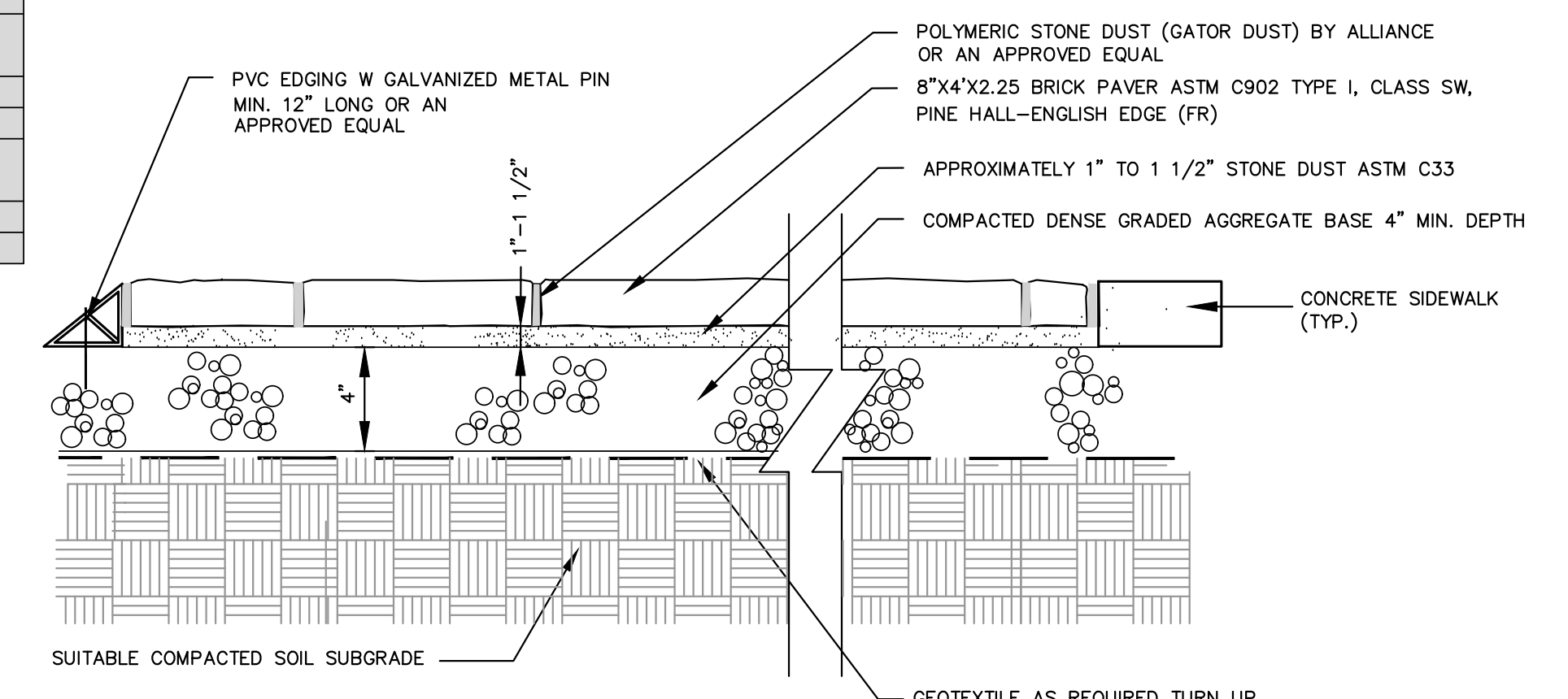
1. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE PRODUCT LISTED ABOVE FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO THE PURCHASE ON ANY MATERIALS.
2. THE COLOR OF THE PAVER IS TO BE SELECTED BY THE OWNER. THE COLOR WILL BE SELECTED FROM A FULL RANGE OF COLORS SUPPLIED BY THE MANUFACTURER.
3. THE BASEBALL ENTRY PLAZA BASE BID ITEM SHALL INCLUDE BUT NOT BE LIMITED TO THE STAMPED CONCRETE FOR THE BASEBALL, STAMP CONCRETE HIGHLIGHT COLOR, THE STAMP CONCRETE SEALANT, THE INSET AND SUPPLY OF THE BRICKS FOR THE LACES, THE STAMPED CONCRETE SIDEWALK, STONE SUB-BASE, THE EXCAVATION FOR THE SIDEWALK, THE HWF ANY THERE ITEM NEEDED TO CONSTRUCT THE BASEBALL PLAZA AREA, THE BRICK PAVERS AND THE FLAG POLES ARE EXCLUDED FROM THIS BID PRICE.

BASEBALL ENTRY PLAZA SOUTH LAYOUT

NOT TO SCALE



PATTERN INSTALLATION IS SHOWN IN THE PAVER MANUFACTURER INSTALLATION SHOP DRAWING.
BASKETWEAVE PATTERN
 NOT TO SCALE



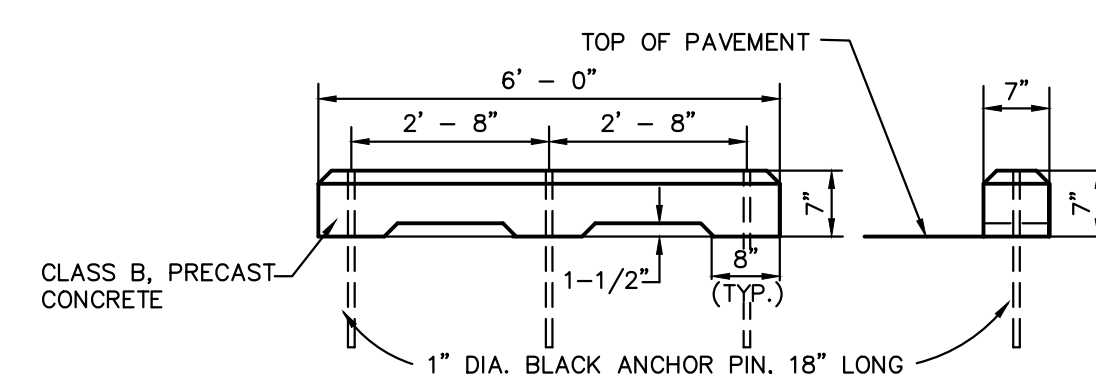
NOTES:

1. CONTRACTOR TO SUBMIT COLOR SAMPLES OF THE ACTUAL MATERIAL FOR THE OWNERS REVIEW AND APPROVAL PRIOR TO ORDERING THE BRICK PAVER MATERIAL.
2. THE CONTRACTOR TO INSTALL THE POLYMERIC STONE DUST IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS. SUBMIT SHOP DRAWING FOR APPROVAL.
3. THE CONTRACTOR IS TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO PURCHASE OF THE MATERIALS. COLOR TO BE SELECTED BY THE OWNER FROM THE FULL RANGE OF COLORS PROVIDED BY THE MANUFACTURER FOR THE MODEL OF BRICK SHOWN BELOW.
4. REFER TO REINFORCED CONCRETE PAD UNDER BRICK PAVERS FOR BRICK PAVER INSTALLATION UNDER METAL BLEACHERS. THE CONTRACTOR WILL BE RESPONSIBLE FOR INCLUDING THE REINFORCED CONCRETE PAD UNDER BRICK PAVER COST FOR MATERIALS AND INSTALLATION WITHIN THIS BID ITEM.

BRICK PAVER MODEL NO.: 8"x4"x 2.25" ENGLISH EDGE
 MFR.: PINE HALL BRICK OR APPROVED EQUAL
 2701 SHOREFAIR DRIVE
 WINSTON-SALEM NC 27105
 PHONE NO.: 336-727-7500
 WEB: PINEHALLBRICK.COM

BRICK PAVERS DETAIL

NOT TO SCALE



CONCRETE WHEEL STOP DETAIL

NOT TO SCALE

No.	Date	Revision	Revised By	Checked By

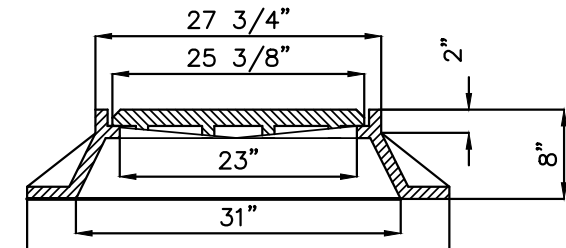
FPA
FRENCH & PARRELLO ASSOCIATES
 Corporate Office:
 1600 RE 34, Suite 101
 Wall, New Jersey 07719
 732.312.9800
 FPAengineers.com
 New Jersey • New York • Pennsylvania • Georgia

ANDREW L. FRENCH, P.E.
 PROFESSIONAL ENGINEER, N.J. LIC. NO. 42894

CONSTRUCTION DETAILS D
 FOR
MANNINO PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
LOT 6 BLOCK 8005
CONTRACT NO. 2023-37
 TOWNSHIP OF OLD BRIDGE
 MIDDLESEX COUNTY, NEW JERSEY
 DATE: 12/02/2022
 DRAWN BY: MP
 DESIGNED BY: TLV
 CHECKED BY: ALF
 SCALE: AS SHOWN
 FIELD BOOK
 PROJECT NUMBER: 4043.016
 SHEET: C-5.3

MANHOLE NOTES

- GENERAL**
- EXTERIOR SURFACES SHALL BE PAINTED WITH TWO COATS OF BITUMINOUS WATERPROOFING MATERIAL.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST O.S.H.A. STANDARDS, WHERE POSSIBLE.
 - ALL CONSTRUCTION SHALL MEET STANDARD SPECIFICATION, THE LATEST REVISION.
 - ALL STORM SEWER MANHOLES SHALL BE 4 FEET IN DIAMETER, UNLESS INDICATED ON THE PLANS AS A "MODIFIED" STORM MANHOLE WITH THE DIAMETER SPECIFIED.
- PRECAST CONCRETE MANHOLE (ASTM-478)**
- WHERE 5" AND 6" I.D. BASES ARE USED A TAPER SECTION CONNECTING BASE SECTION AND RISER SHALL BE REQUIRED AND SHALL HAVE A THICKNESS AS SHOWN. THE BASE SECTION AND RISER ALLOW FOR AT LEAST 6 FOOT MINIMUM VERTICAL CLEARANCE IN THE SCHEDULE.
 - BASES TO BE AS SHOWN IN THE SCHEDULE.
- BRICK OR CONCRETE BLOCK MANHOLES (NOT SHOWN)**
- BRICK OR CONCRETE BLOCK MANHOLES MUST BE APPROVED BY THE OWNER.
 - SHOP DRAWING MUST BE SUBMITTED FOR ALL DETAILS.
- WORK AT EXISTING MANHOLE**
- THE CONTRACTOR SHALL CUT INTO THE MANHOLE AND COMPLETE THE CONNECTION USING A SUITABLE ADAPTOR AS REQUIRED AND APPROVED BY THE AUTHORITY/ENGINEER.
 - THE CONTRACTOR SHALL NOT INTERFERE WITH ANY EXISTING SANITARY SEWER OR STORM SEWER FLOW DURING THE PERIOD OF CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTION TO KEEP DEBRIS OUT OF THE MANHOLE.

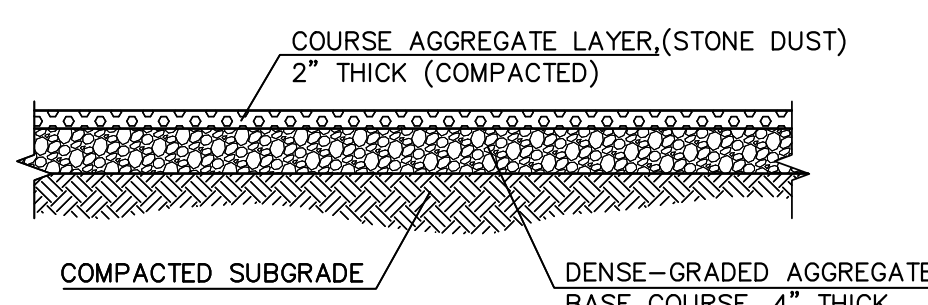


SECTION A-A

- NOTE:**
- MANHOLE FRAME AND COVER SHALL CONFORM TO CAMPBELL FOUNDRY PATTERN 12228 OR APPROVED EQUAL.
 - CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.

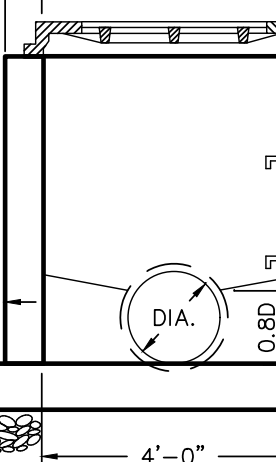
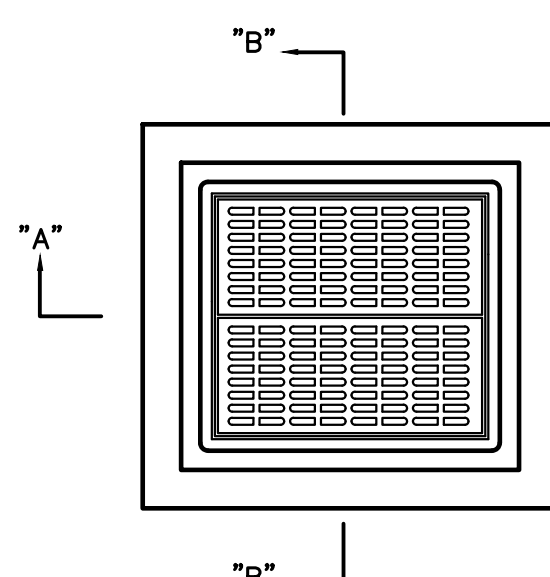
STORM SEWER STANDARD MANHOLE FRAME AND COVER

NOT TO SCALE



STONE DUST DRIVEWAY DETAIL

NOT TO SCALE



SECTION A-A

"THROUGH" INVERT DETAIL

TYPE "E" INLET

NOT TO SCALE

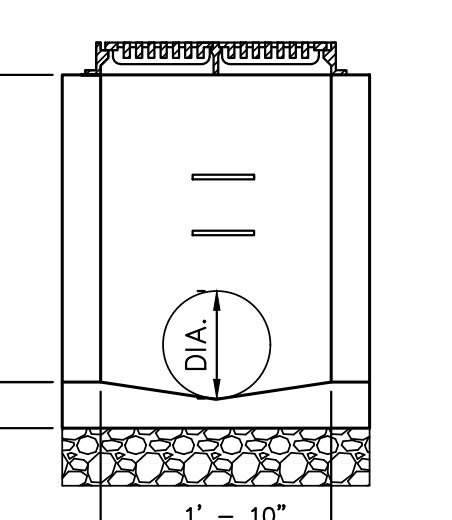
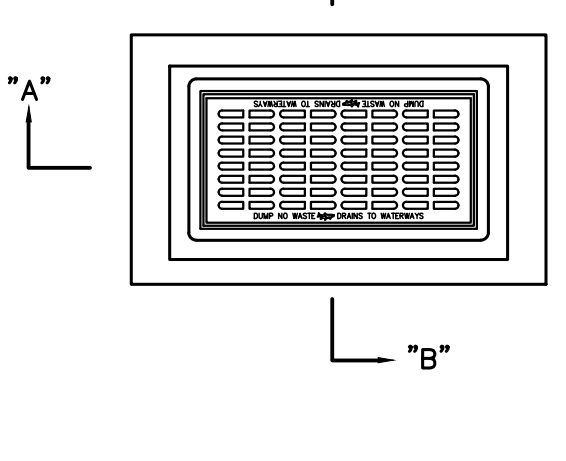


SECTION B-B

"TERMINAL" INVERT DETAIL

TYPE "A" INLET DETAIL

NOT TO SCALE

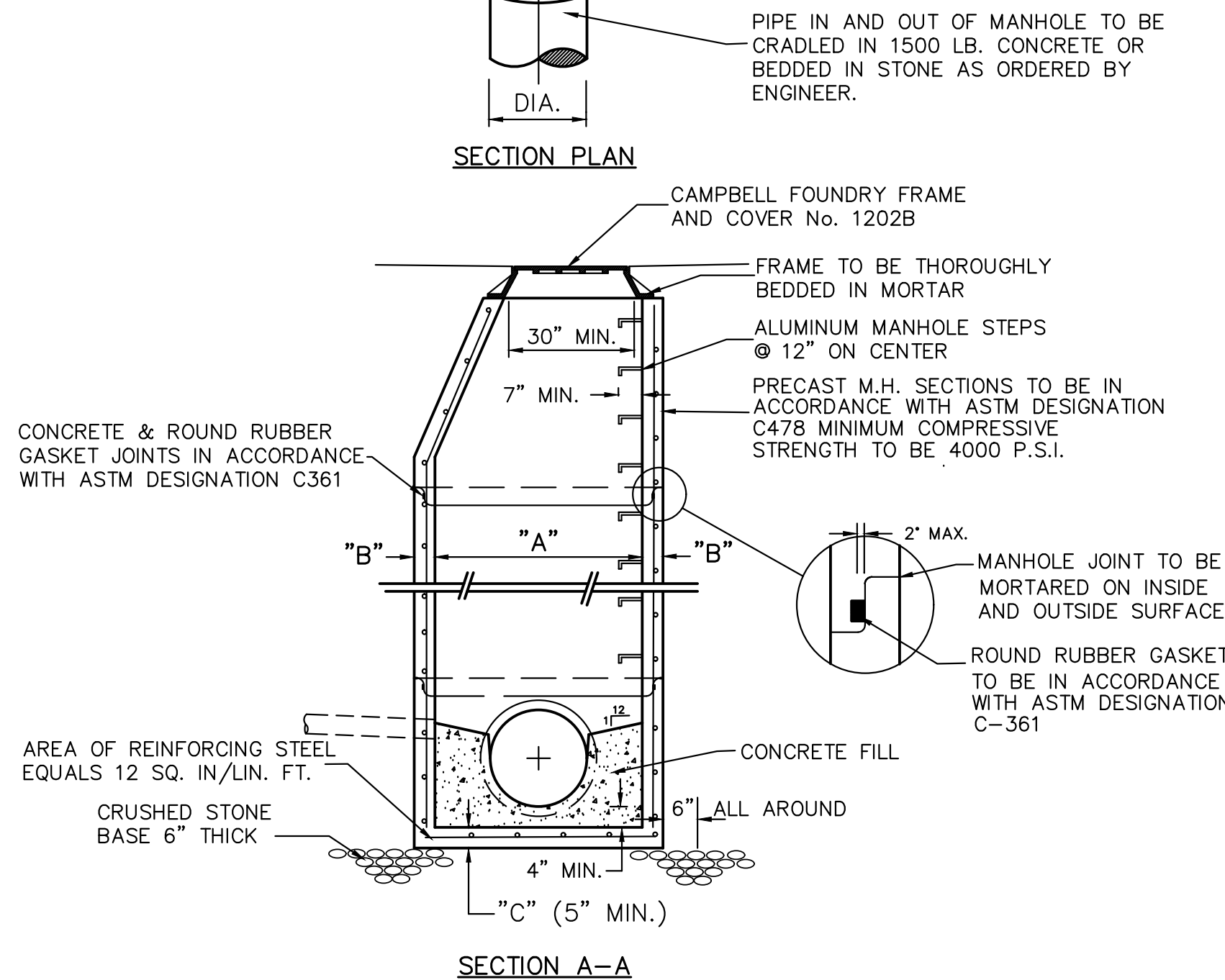
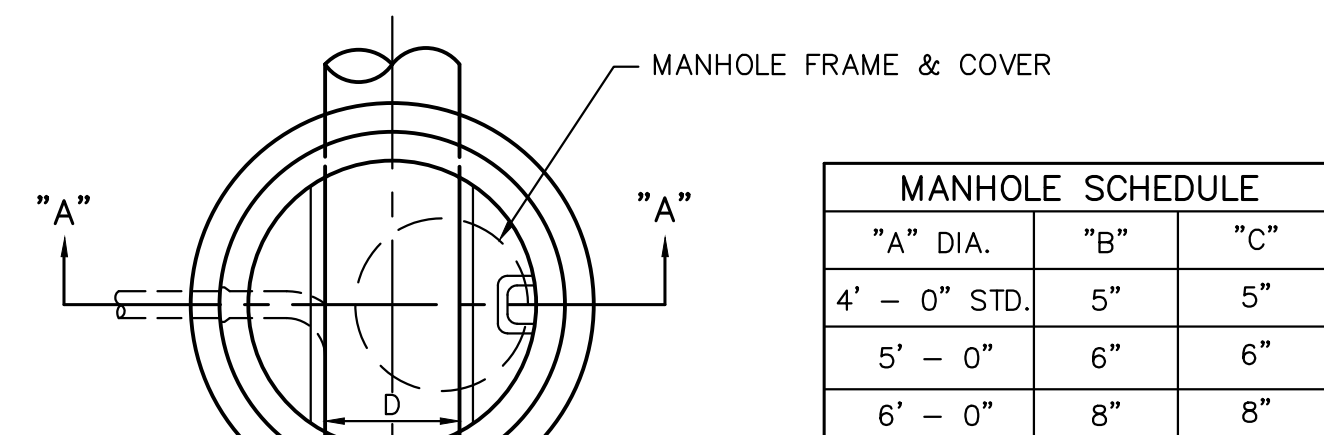


SECTION B-B

"THROUGH" INVERT DETAIL

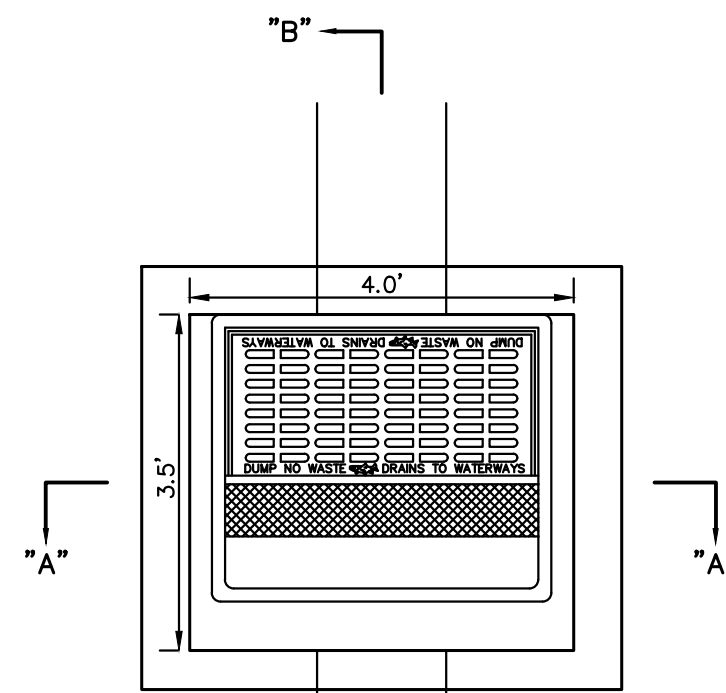
TYPE "A" INLET DETAIL

NOT TO SCALE



PRECAST STANDARD STORM MANHOLE

NOT TO SCALE



SECTION PLAN

NOT TO SCALE

TYPE "B" INLET WITH BICYCLE SAFE GRATE DETAIL

NOT TO SCALE

- NOTES:**
- FOOTING TO BE N.I.D.O.T., CLASS "C"
 - INVERT TO BE CLASS "C"
 - FRAME AND GRATE TO BE No. 2618 BICYCLE SAFE TYPE "N" "ECO" GRATE AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL.
 - IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
 - PROVIDE COPOLYMER POLYPROPYLENE PLASTIC LADDER RUNGS @ 12" CENTER TO CENTER.
 - WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT SHALL BE 12" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12" IN DEPTH.
 - PRECAST CHANNELS SHALL NOT BE USED FOR BENDS GREATER THAN 45'. POURED CONCRETE LONG RADIUS CHANNELS SHALL BE CONSTRUCTED.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO ORDERING.

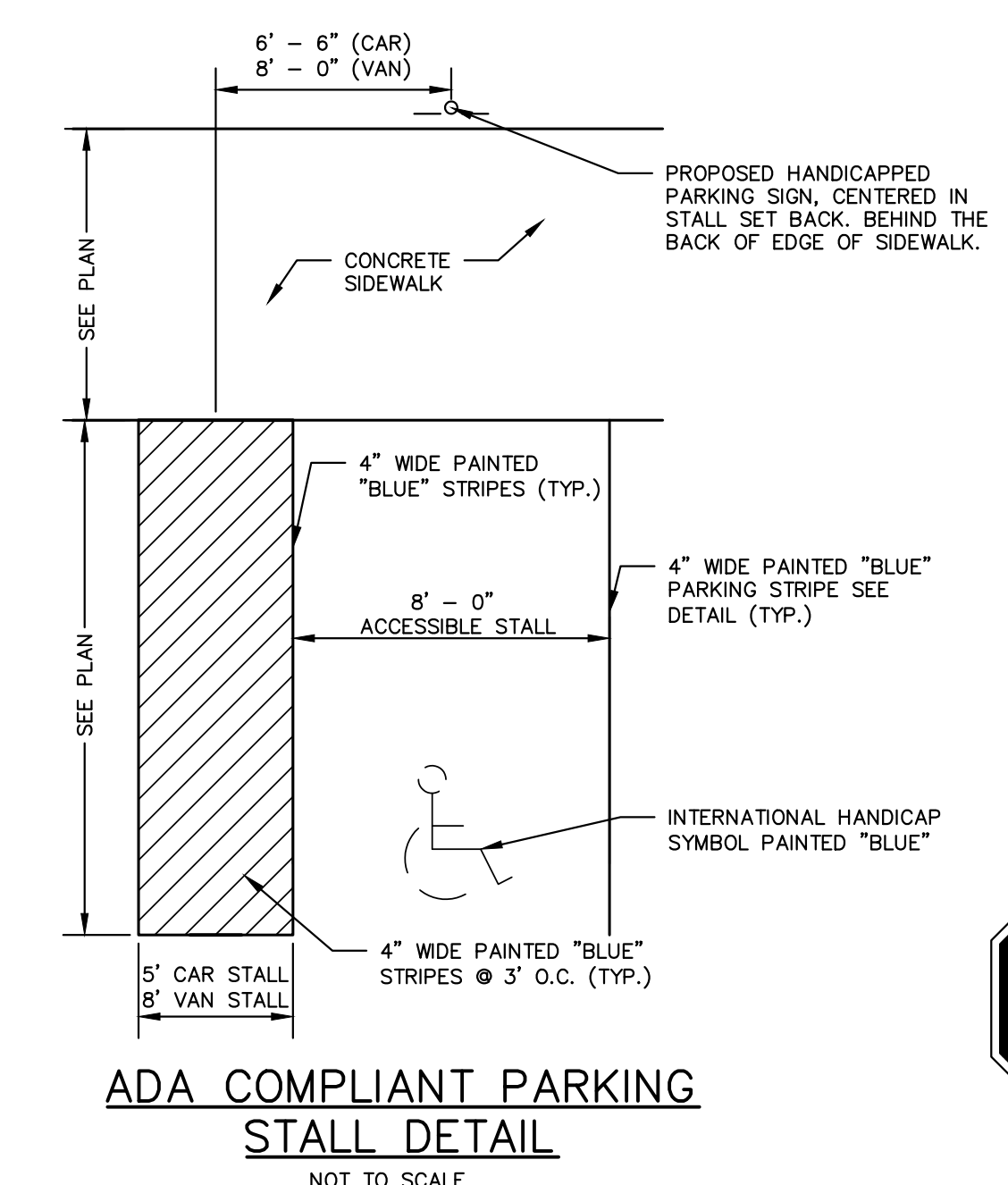
PIPE DIA.	6"	8"	14"	15"	18"	20", 21"	24"	27"	30"	33"	36"
TRENCH WIDTH	3'- 0"	3'- 8"	4'- 0"	4'- 3"	4'- 6"	4'- 10"	5'- 0"	5'- 6"	5'- 6"	5'- 6"	5'- 8"

NOTES:

- THE BEDDING SHALL BE PROVIDED IN ACCORDANCE WITH STORM PIPE BEDDING DETAIL ON THIS SHEET.
- THE CONTRACTOR SHALL PROVIDE BEDDING IN ACCORDANCE WITH THE PIPE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

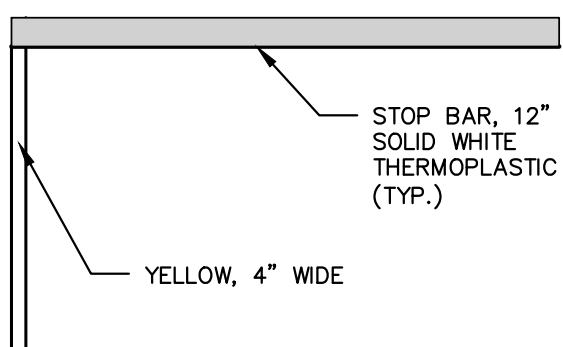
TYPICAL STORM TRENCH WIDTH DETAIL

NOT TO SCALE



ADA COMPLIANT PARKING STALL DETAIL

NOT TO SCALE



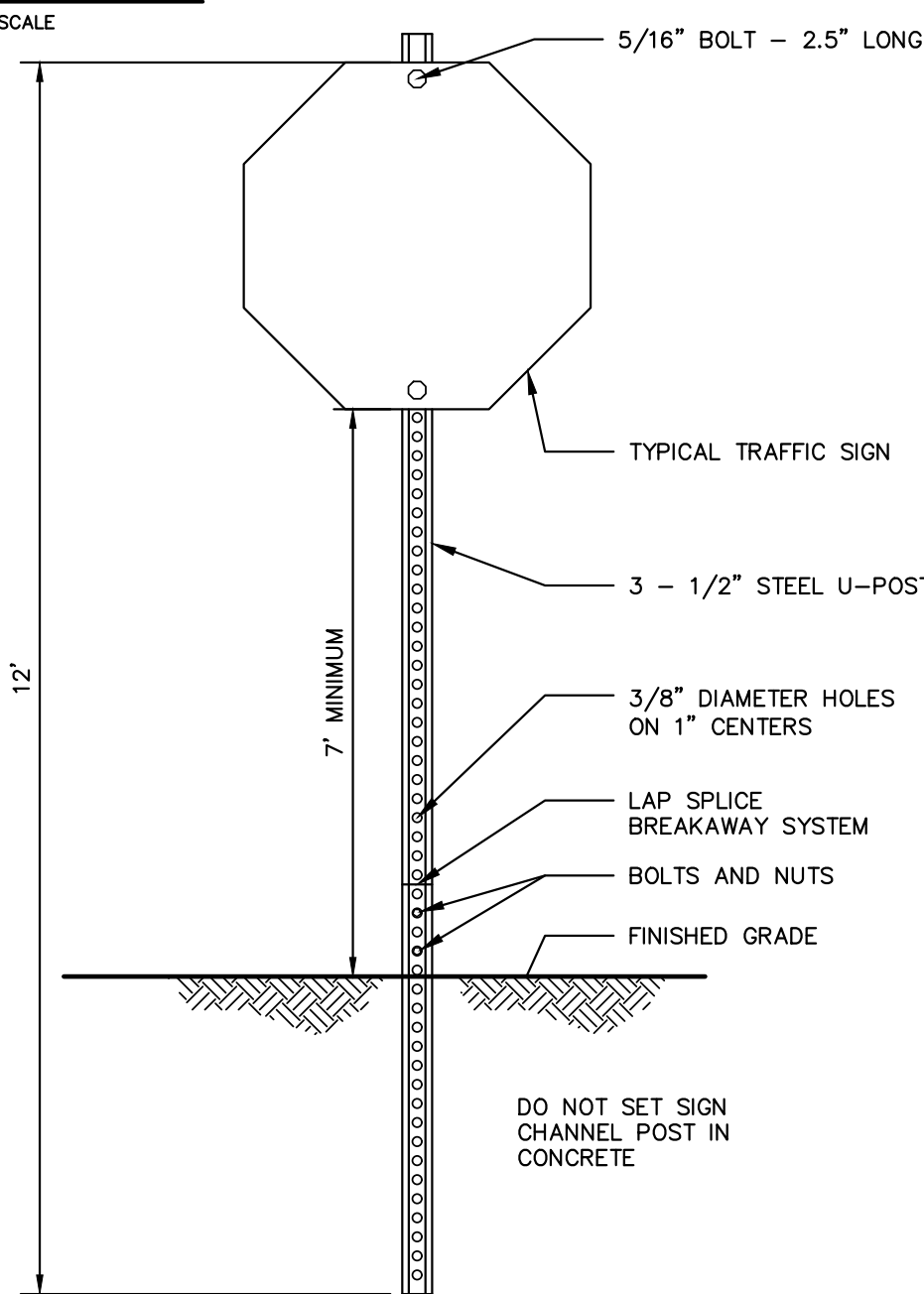
STOP BAR

NOT TO SCALE



STOP SIGN DETAIL

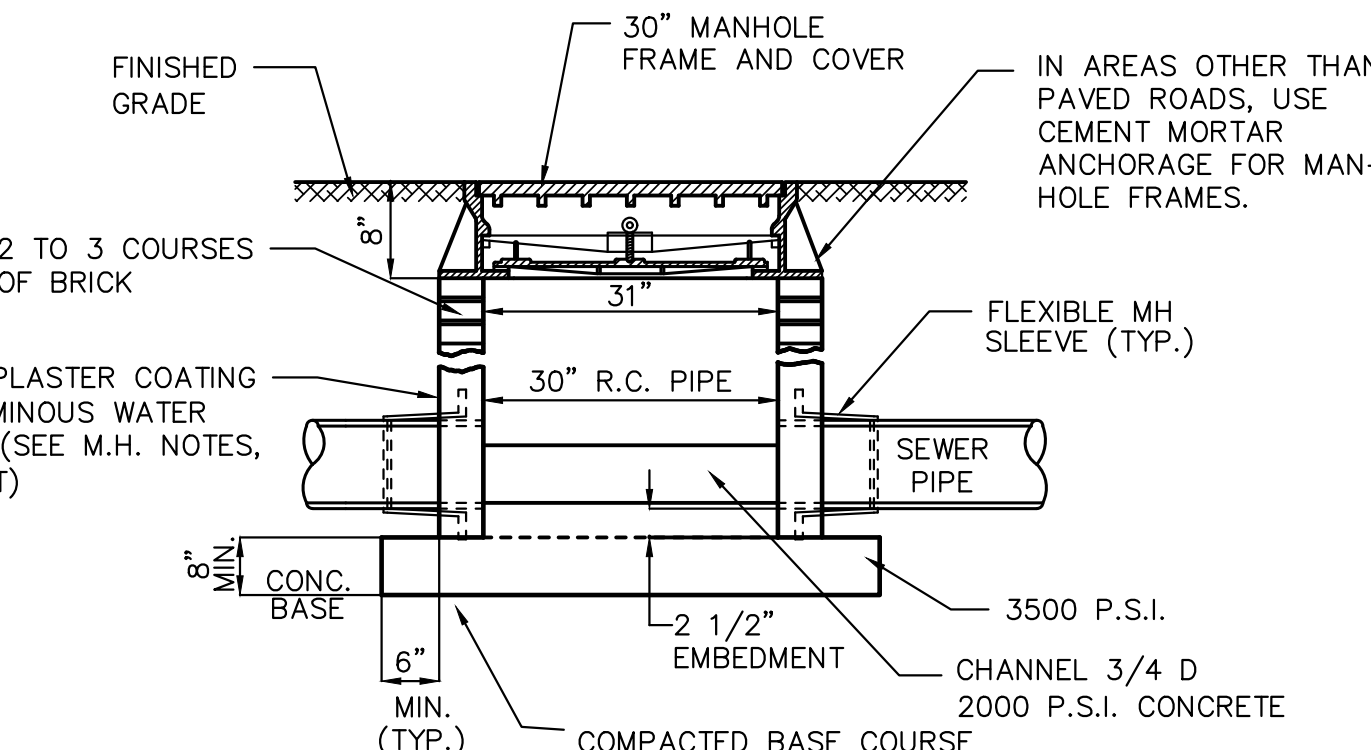
NOT TO SCALE



STOP SIGN POST DETAIL

NOT TO SCALE

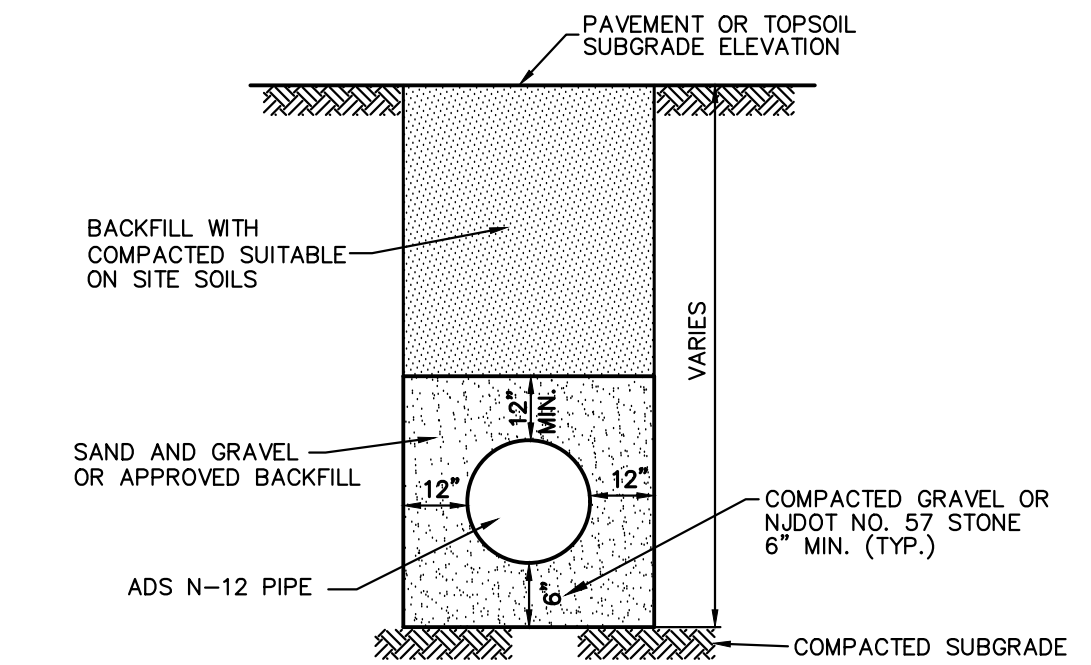
- NOTES:**
- ALL REGULATORY AND WARNING SIGNS SHALL BE HIGH INTENSITY REFLECTIVE SHEETING.
 - ALL SIGNS SHALL BE FABRICATED USING DGS SHEETING.
 - ALL SIGNS SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
 - ALL U CHANNEL POSTS ARE TO BE 3 LBS GALVANIZED FINISHED.
 - ALL SIGNS MUST BE BREAKAWAY WITH LAP SPLICE AS SHOWN ON DETAIL.
 - ALL SIGN AND STRIPING MUST BE IN ACCORDANCE WITH THE LATEST MUTCD.



SHALLOW MANHOLE

NOT TO SCALE

- NOTES:**
- SHALLOW MANHOLE (CIRCULAR) TO BE USED AT LOCATIONS WHERE DISTANCE FROM FINISHED GRADE TO PIPE INVERT IS 3'- 0" OR LESS.



TYPICAL ADS STORM PIPE BEDDING DETAIL

NOT TO SCALE

- NOTES:**
- ALL ADS STORM SEWER PIPES SHALL BE N-12, HIGH DENSITY POLYETHYLENE PIPE, AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS (1-732-222-2496) OR APPROVED EQUAL.
 - ALL ADS STORM SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THIS DETAIL AND THE PIPE MANUFACTURER'S SPECIFICATIONS.
 - CONTRACTOR IS RESPONSIBLE TO PROVIDE ADS TO RCP (OR OTHER PIPE MATERIAL) ADAPTER OR CONNECTION AS REQUIRED. THE ADAPTER OR CONNECTION SHALL BE AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS OR APPROVED EQUAL.
 - CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY OWNER AND ENGINEER.



Approved for Babe Ruth / Bambino Leagues

Ages: 10-18
Size: 12' x 10' x 10"
Weight: 345 lbs.
Surface: AstroTurf

PRODUCT: TRUEPITCH 10" FIBERGLASS PORTABLE BASEBALL PITCHING GAME MOUND 6000 OR AN APPROVED EQUAL. MANUFACTURER REPRESENTATIVE: KODIAK SPORTS. PHONE: 877-401-2299. WEB: <http://KODIAKSPORTS.COM>

The TruePitch fiberglass game mound is the most durable, all weather portable pitching mound on the market. The fiberglass construction will not warp in the sun, rain or humidity like many foam mounds.

The weight of the mound will not shift under the player and gives the pitcher the feel of a real game mound with MLB pitching slope specification.

The 600-G is approved for Little League Baseball Senior League Division games, as well as for Babe Ruth League games.

- MOUND NOTES:**
- CONTRACTOR TO SUBMIT SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO ORDERING ANY MATERIAL.
 - THE COST TO PURCHASE AND TURN OVER 3 PORTABLE MOUNDS TO BE INCLUDED WITHIN SITE PREPARATION AND EARTHWORK LUMP SUM BID ITEM.

PORTABLE MOUND DETAIL

NOT TO SCALE

FPA FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1601 RE 34, Suite 101
Wall, New Jersey 07719
732.312.9800

FFAengineers.com

New Jersey • New York • Pennsylvania • Georgia

Andrew L. French, P.E.
PROFESSIONAL ENGINEER, N.J. LIC. No. 42894

CONSTRUCTION DETAILS E

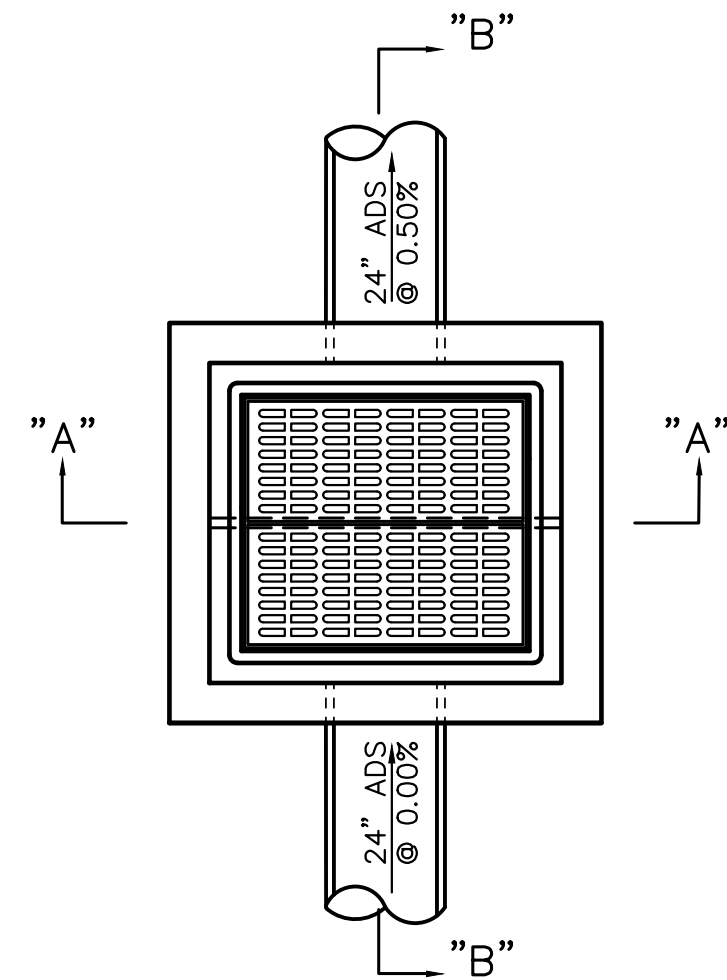
FOR
MANNING PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
LOT 6 BLOCK 8005
CONTRACT NO. 2023-37
TOWNSHIP OF OLD BRIDGE
MIDDLESEX COUNTY, NEW JERSEY

DESIGNED BY: AS SHOWN
CHECKED BY: FIELD BOOK
DATE: 12/02/2022
DRAWN BY: MP

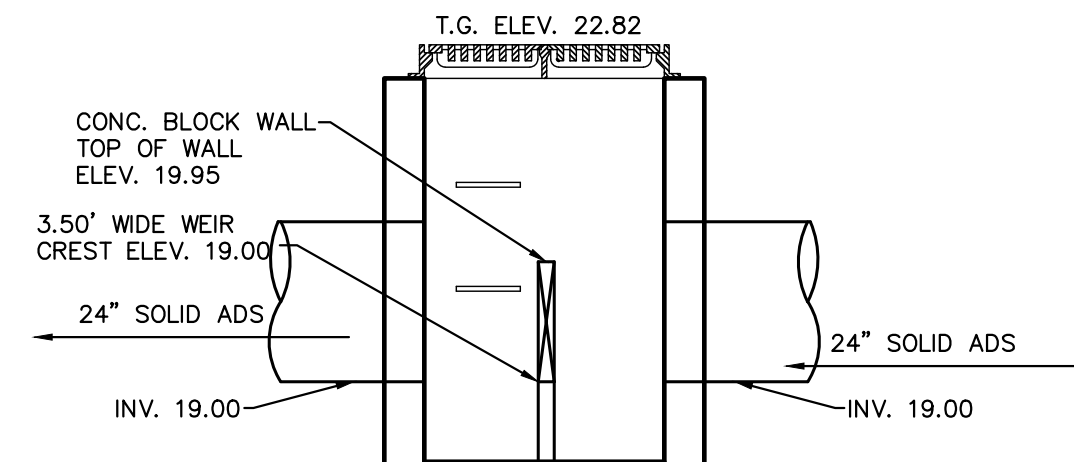
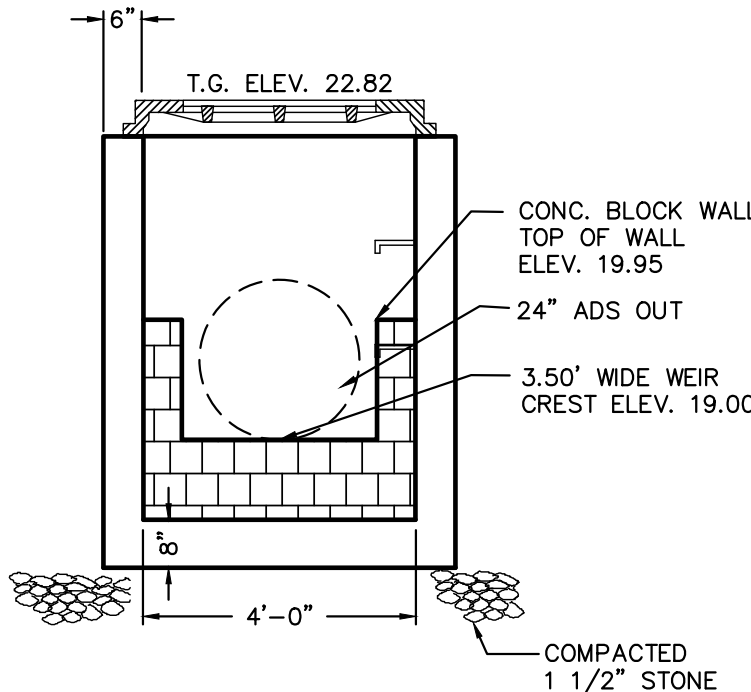
PROJECT NUMBER: 4043.016
SHEET: C-5.4

No.	Date	Revision	Revised By	Checked By

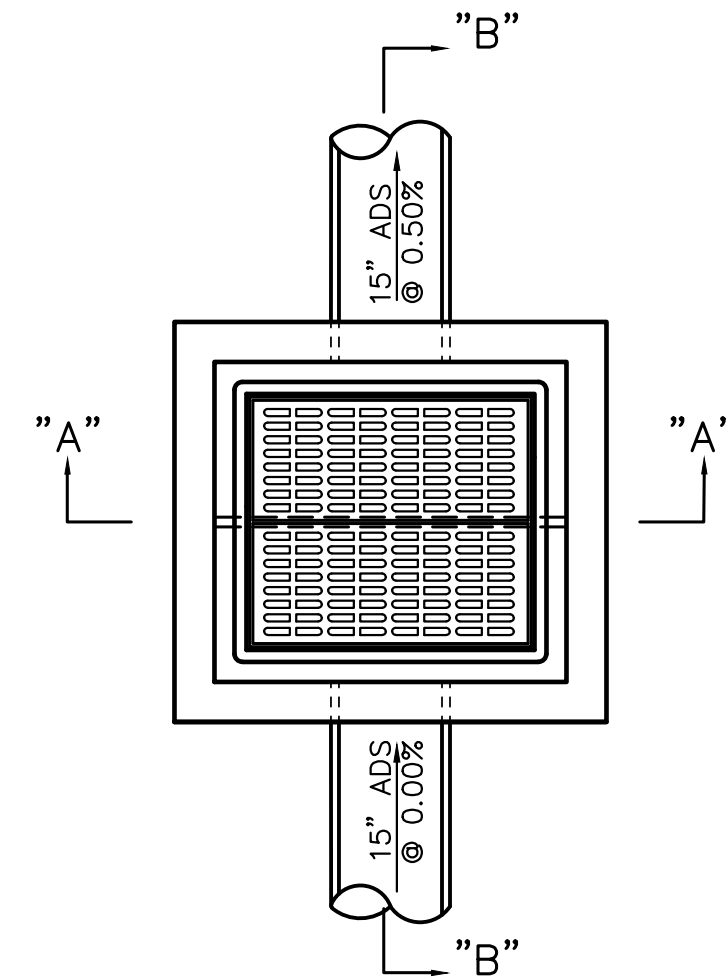
SCALE IN FEET



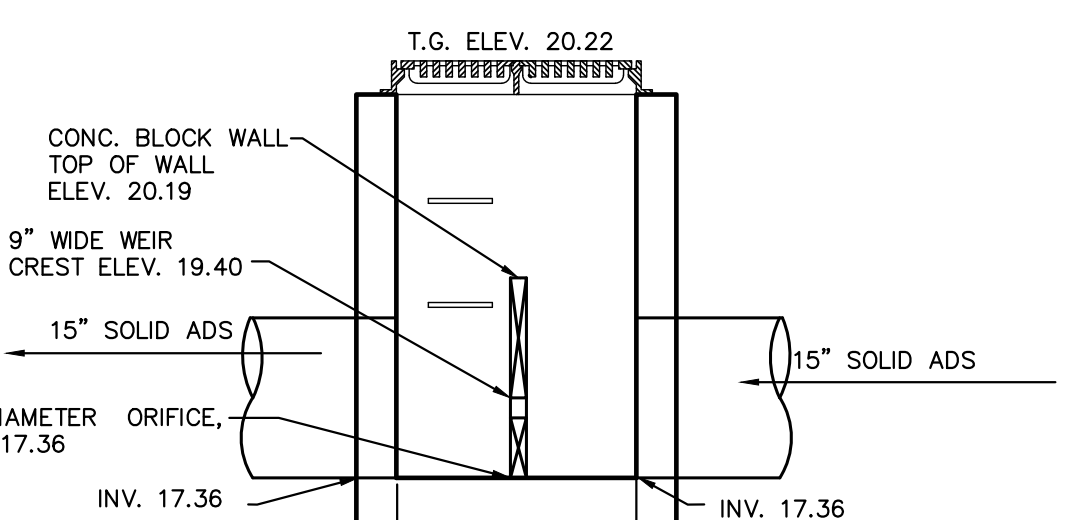
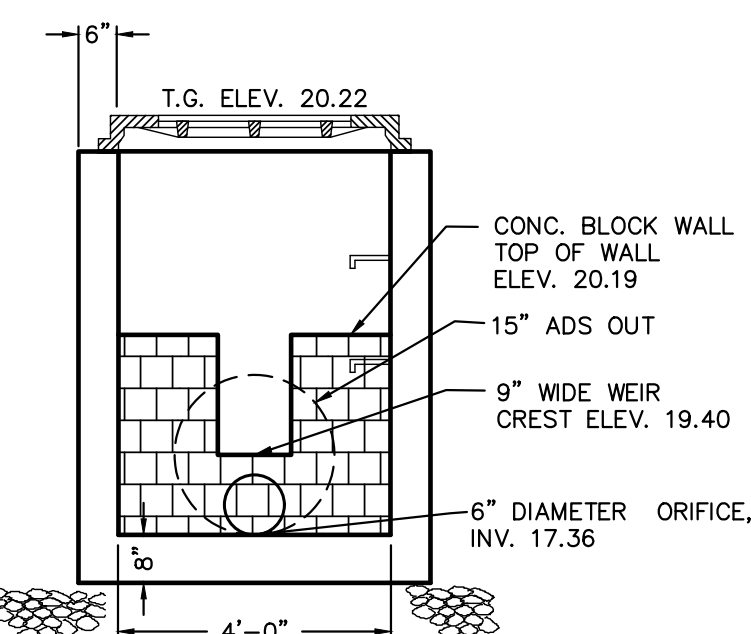
- GENERAL NOTES:**
1. FOOTING TO BE N.J.D.O.T., CLASS "C"
 2. INVERT TO BE CLASS "C"
 3. IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
 4. FRAME AND GRATE TO BE No.3425 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL. GRATE TO BE TYPE E "ECO" GRATE
 5. PROVIDE ALUMINUM LADDER RUNGS @ 12" CENTER TO CENTER
 6. WHEN ADDITIONAL DEPTH IS SCHEDULE WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12" IN DEPTH.



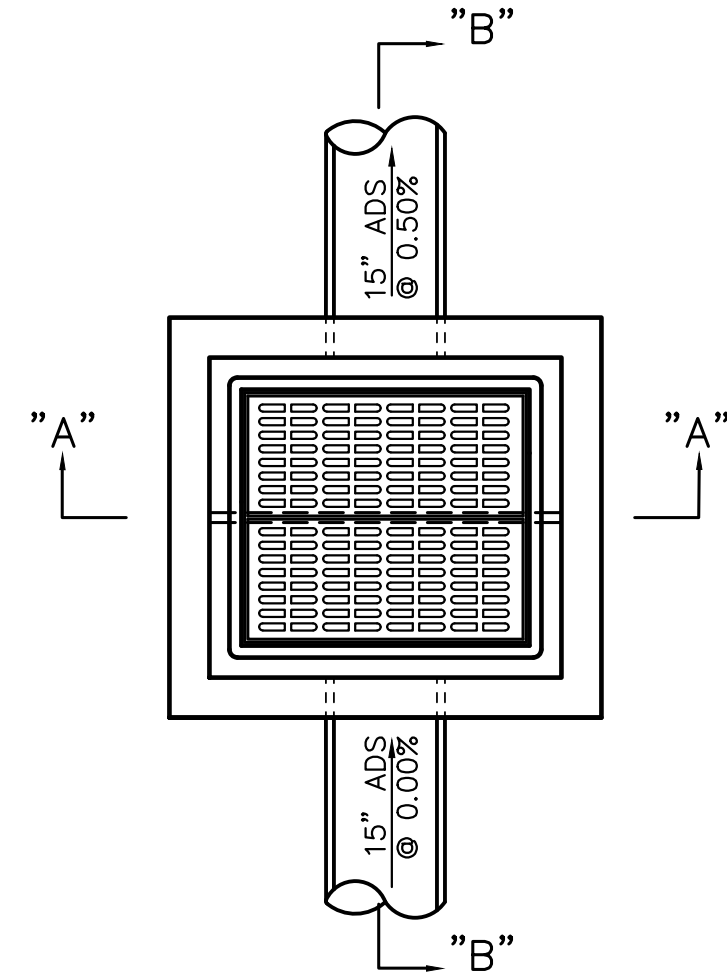
**OS-#A-1 (BASEBALL FIELD)
OUTLET STRUCTURE DETAIL**
NOT TO SCALE



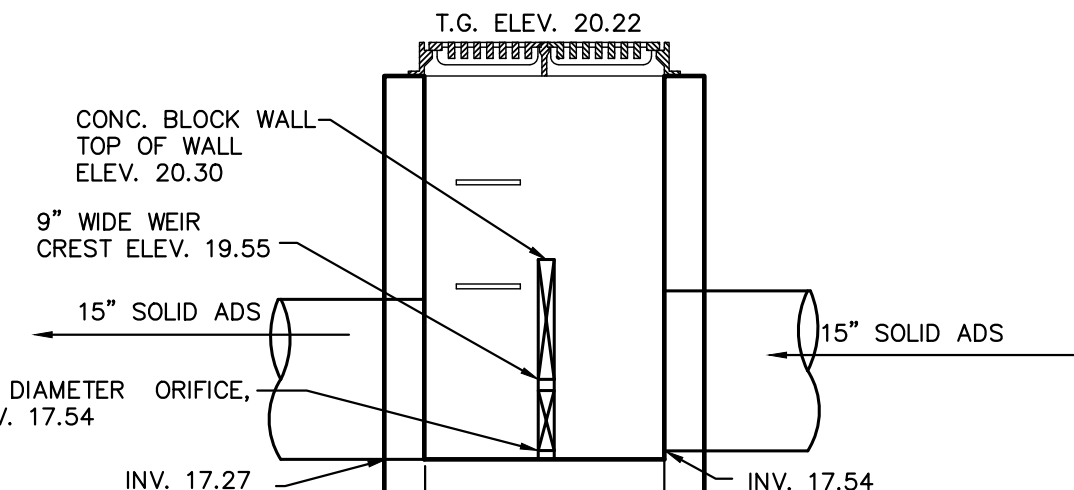
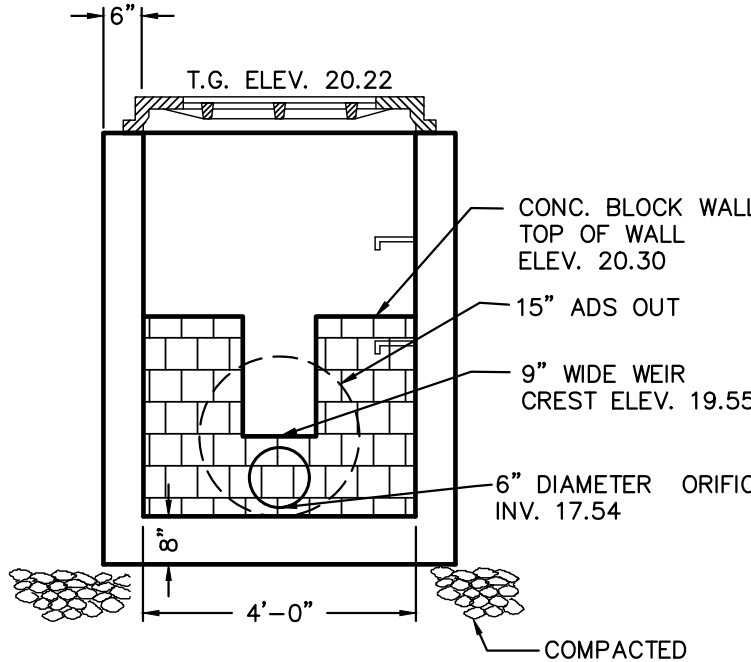
- GENERAL NOTES:**
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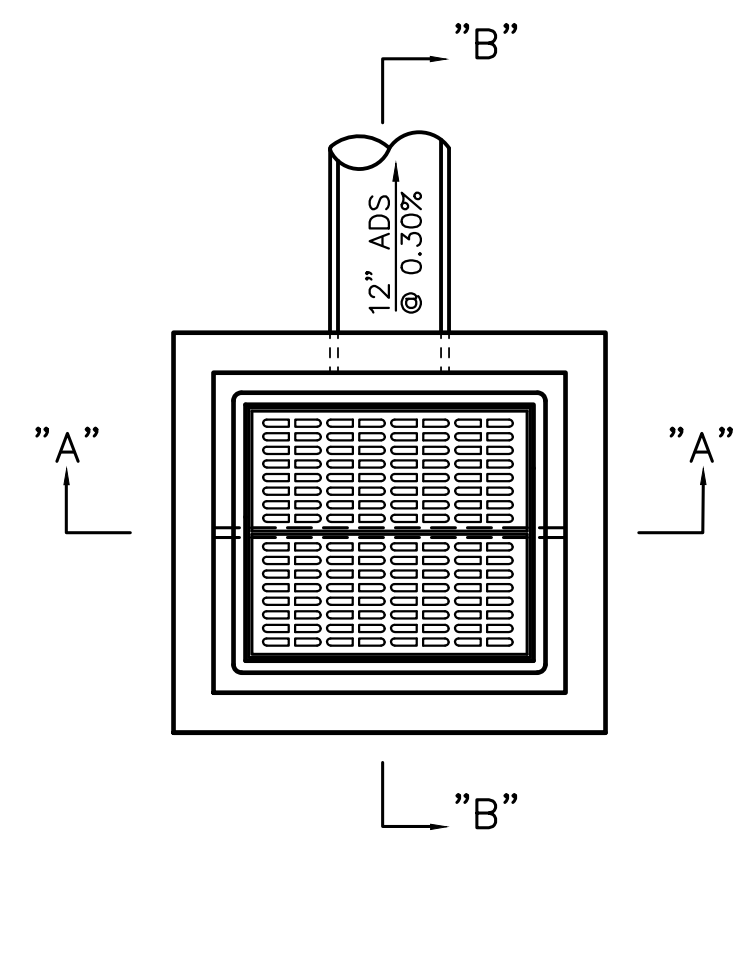
**OS-#A-3A (NORTH SOFTBALL FIELD)
OUTLET STRUCTURE DETAIL**
NOT TO SCALE



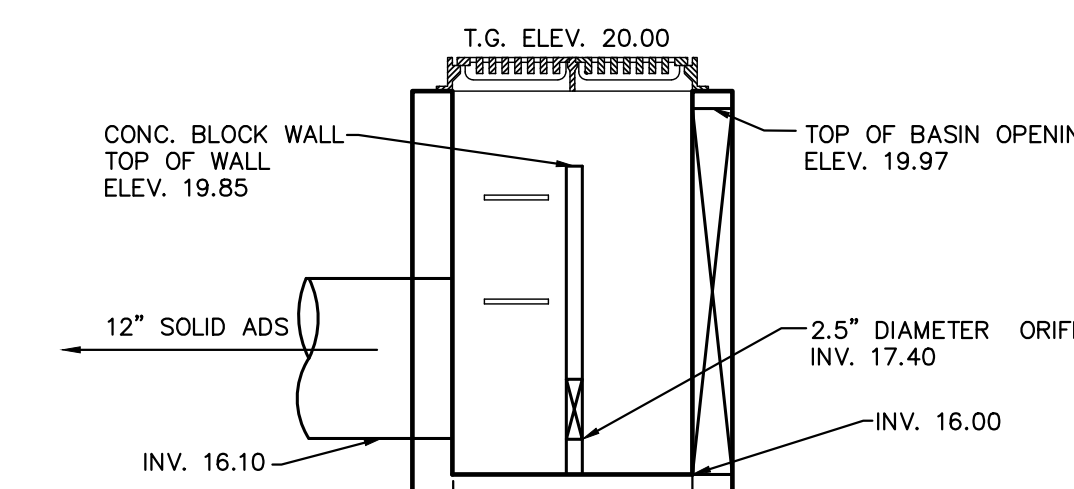
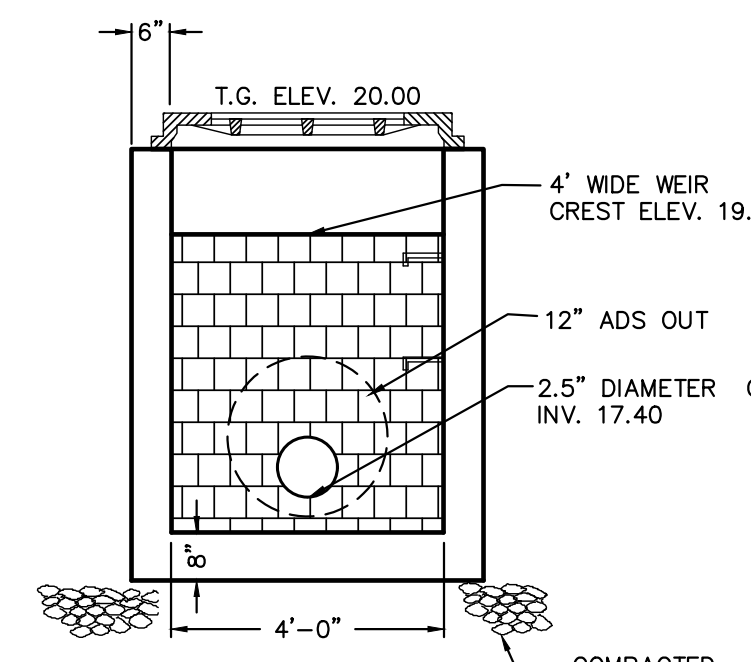
- GENERAL NOTES:**
1. FOOTING TO BE N.J.D.O.T., CLASS "C"
 2. INVERT TO BE CLASS "C"
 3. IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
 4. FRAME AND GRATE TO BE No.3425 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL. GRATE TO BE TYPE E "ECO" GRATE
 5. PROVIDE ALUMINUM LADDER RUNGS @ 12" CENTER TO CENTER
 6. WHEN ADDITIONAL DEPTH IS SCHEDULE WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12" IN DEPTH.



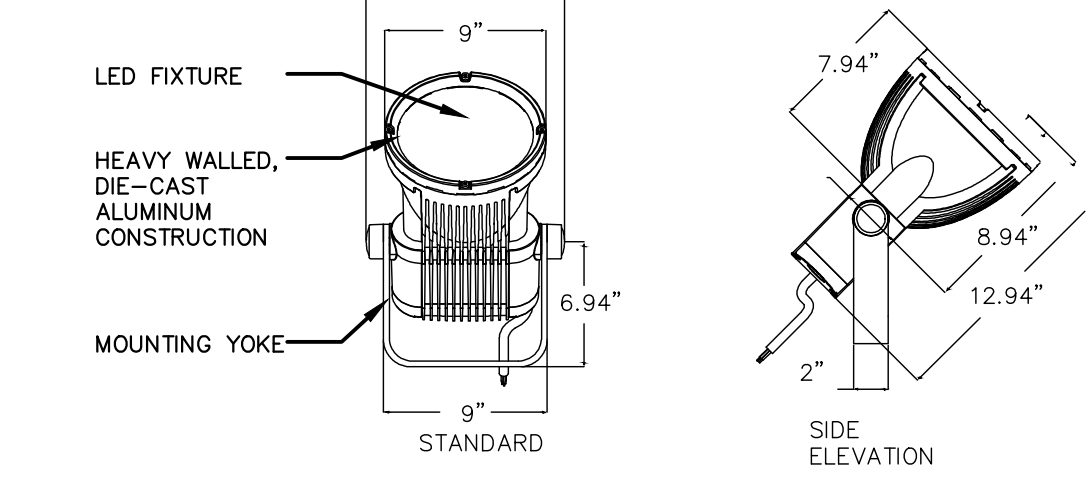
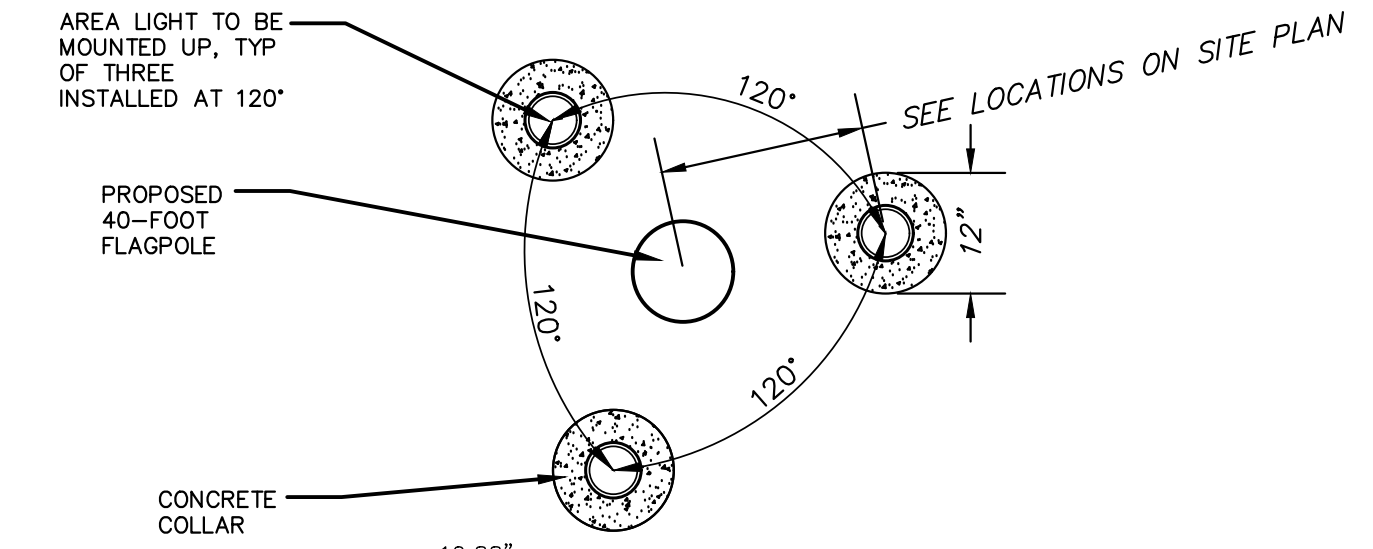
**OS-#F-1 (SOUTH SOFTBALL FIELD)
OUTLET STRUCTURE DETAIL**
NOT TO SCALE



- GENERAL NOTES:**
1. FOOTING TO BE N.J.D.O.T., CLASS "C"
 2. INVERT TO BE CLASS "C"
 3. IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
 4. FRAME AND GRATE TO BE No.3425 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL. GRATE TO BE TYPE E "ECO" GRATE
 5. PROVIDE ALUMINUM LADDER RUNGS @ 12" CENTER TO CENTER
 6. WHEN ADDITIONAL DEPTH IS SCHEDULE WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12" IN DEPTH.

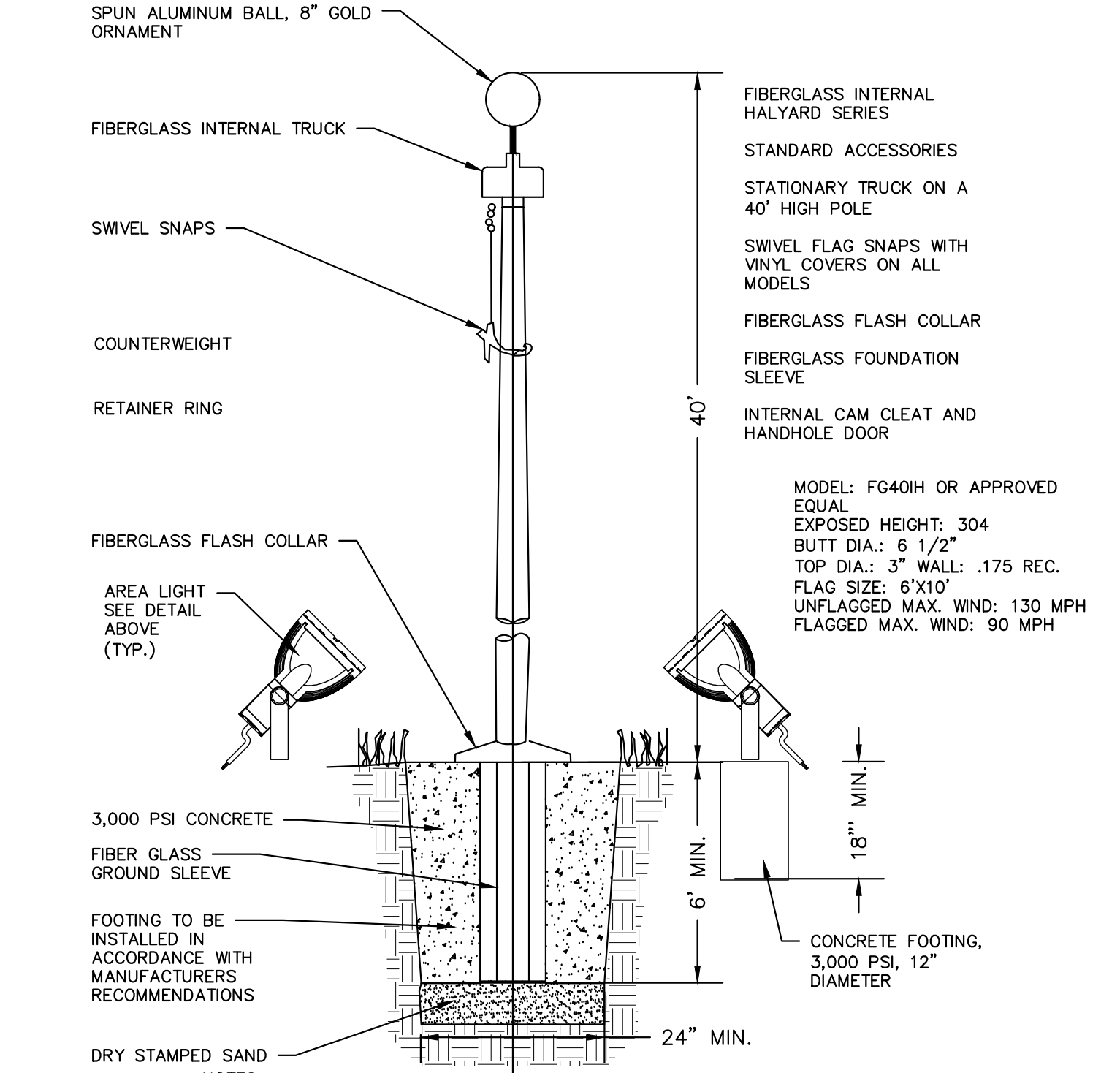


**OS-#4 (BIORETENTION BASIN)
OUTLET STRUCTURE DETAIL**
NOT TO SCALE



LIGHT MODEL NO.: VISTA 1059-XX-XX-40-BXVV-ND-XX
OR APPROVED EQUAL
MANUFACTURER: VISTA
SUPPLIER: LIBERTY LIGHTING GROUP
PHONE NO.: 973-701-0600
WEB: WWW.LONJINC.COM

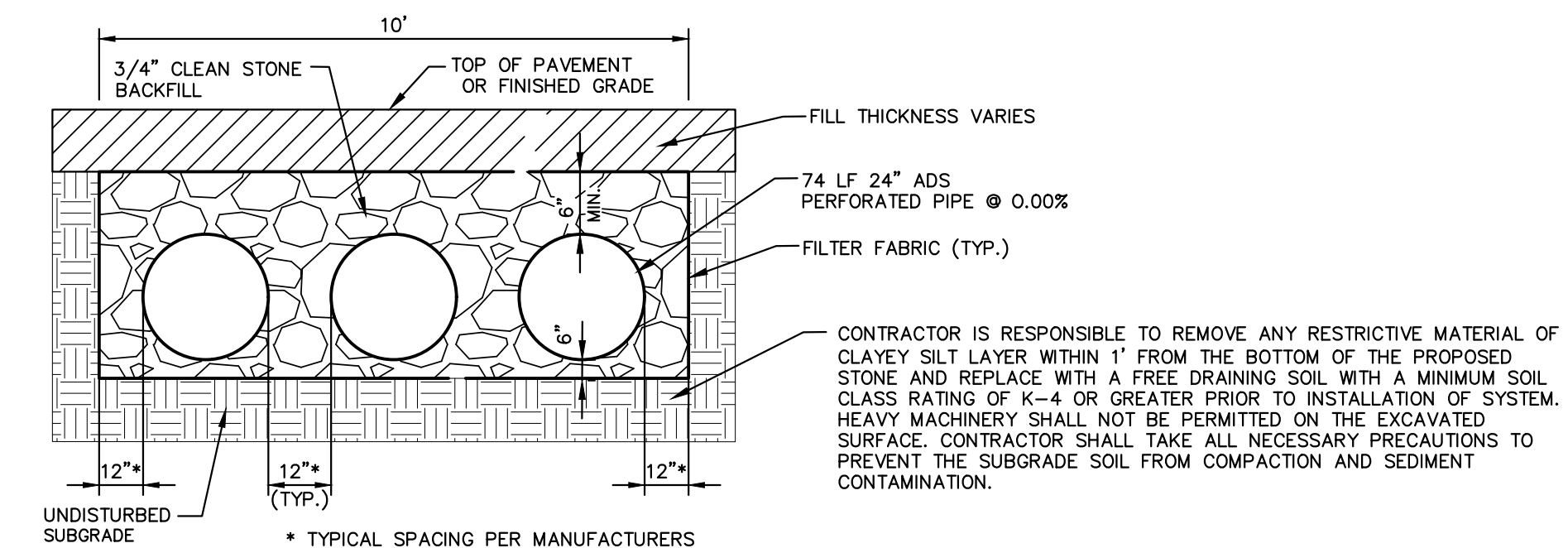
AREA LIGHT DETAIL



- NOTES:**
1. THE CONTRACTOR SHALL PROVIDE TWO (2) AMERICAN FLAGS 6' x 10' IN SIZE.
 2. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO ORDERING ANY CONSTRUCTION MATERIALS.
 3. THE CONTRACTOR SHALL INSTALL THE FIXTURES ON A TENON MOUNTED ACCESSORY CTM-200 BY VISTA OR AN APPROVED EQUAL. COLOR TO BE SELECTED BY OWNER. THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
 4. THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THE FIXTURE IN THE CONFIGURATION SHOWN ABOVE. HE WILL INSTALL THE THREE LIGHT FIXTURES, THE YOKE, THE TENON MOUNT ACCESSORY, THE CONCRETE FOOTING. SEE ELECTRICAL FOR WIRE AND CONDUIT RUN. NOTE ONLY 3 FIXTURES ARE REQUIRED AROUND THE BASEBALL PLAZA. THE COST WILL BE INCORPORATED WITHIN THE 40' HIGH FIBERGLASS FLAG POLE BID ITEM.

MODEL: FG40H OR AN APPROVED EQUAL
MFR: EDER FLAG MANUFACTURING COMPANY, INC.
ADDRESS: 1000 W. RAWSON AVE. OAK CREEK, WI 53154
PHONE: 1-800-852-2335
WEB: WWW.EDERFLAG.COM

**40' HIGH FIBERGLASS FLAGPOLE
WITH AREA LIGHTS DETAIL**
NOT TO SCALE



3 ROWS OF 24\"/>

No.	Date	Revision	Revised By	Checked By

FPA
FRENCH & PARRELLO
ASSOCIATES
New Jersey • New York • Pennsylvania • Georgia

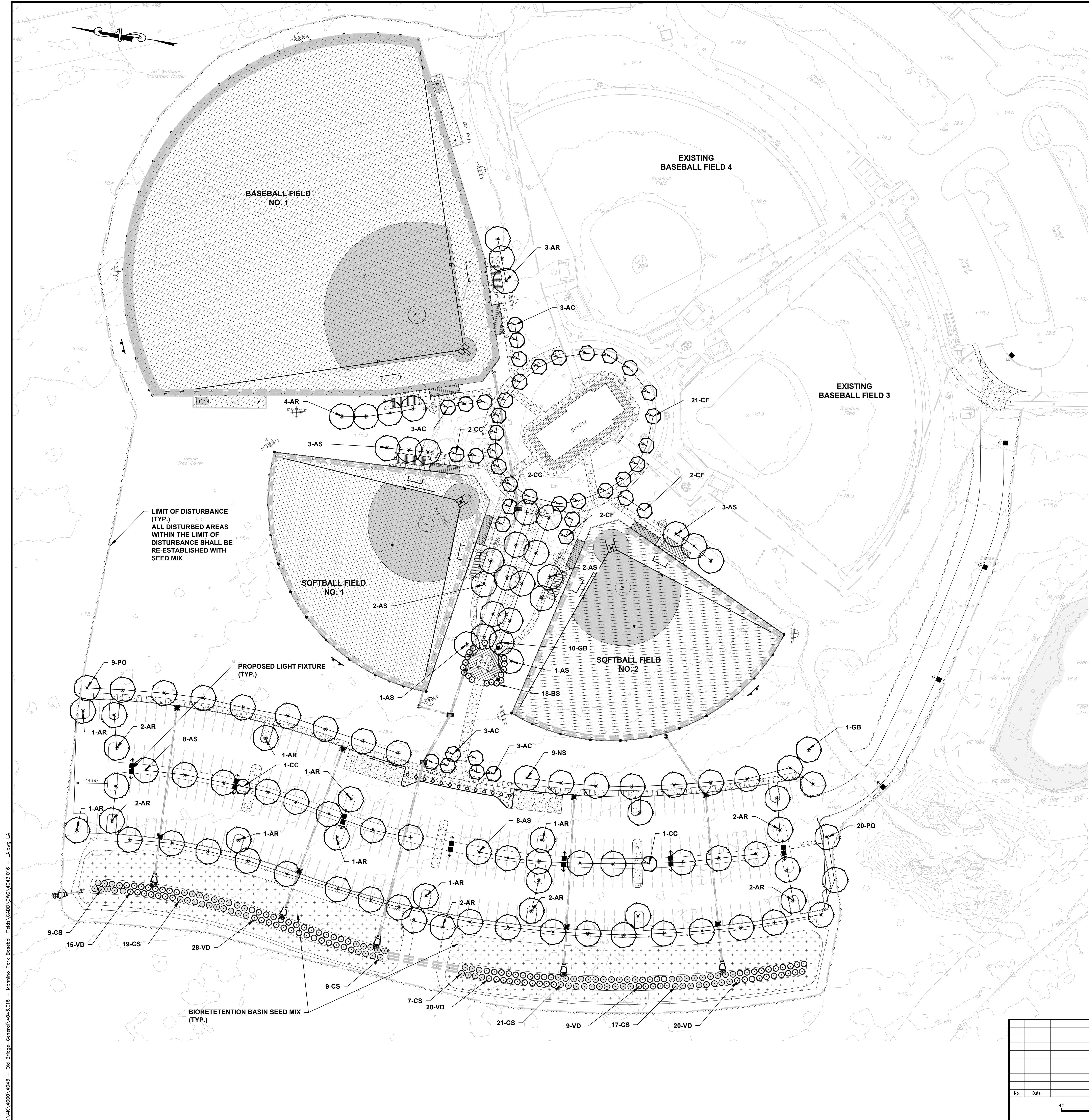
Corporate Office:
1601 Rte. 34, Suite 101
Wall, New Jersey 07719
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PROFESSIONAL ENGINEER, N.J. LIC. No. 42894

CONSTRUCTION DETAILS F
FOR
MANNINO PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
LOT 6 BLOCK 8005
CONTRACT NO. 2023-37
TOWNSHIP OF OLD BRIDGE
MIDDLESEX COUNTY, NEW JERSEY

DESIGNED BY: TLV
CHECKED BY: ALF
FIELD BOOK: AS SHOWN
PROJECT NUMBER: 4043.016
SHEET: C-5.5

01_Vet_V000A_4043 - Old Bridge - General_4043.016 - Mannino Park Baseball Fields CADDD (DWG) 4043.016 - CD.dwg CD-F
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 DUE TO INHERENT ERRORS IN REPRODUCTION METHODS, ERRORS MAY OCCUR WHEN SCALING THIS DRAWING.



LIMIT OF DISTURBANCE (TYP.)
ALL DISTURBED AREAS WITHIN THE LIMIT OF DISTURBANCE SHALL BE RE-ESTABLISHED WITH SEED MIX

PROPOSED LIGHT FIXTURE (TYP.)

BIORETENTION BASIN SEED MIX (TYP.)

PLANT LIST						
DECIDUOUS SHADE AND ORNAMENTAL TREES						
SYM	QTY	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	MATURE SIZE	REMARKS
N* AR	29	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2"-2.5" CALIPER	60'-70' HEIGHT, 25'-35' SPREAD	B & B, RED FALL COLOR, SINGLE TRUNK
N* AC	12	AMELANCHIER CANADENSIS	CANADIAN SERVICEBERRY	2"-2.5" CALIPER	20'-30' HEIGHT AND SPREAD	B & B, MULTI-TRUNK MATCHED SPECIMENS, WHITE FLOWERS
N# AS	28	ACER GINNALA	AMUR MAPLE	2"-2.5" CALIPER	50'-70' HEIGHT, 20'-30' SPREAD	B & B, ORANGE/RED/YELLOW FALL COLOR, SINGLE TRUNK
N# CC	6	CERCIS CANADENSIS	EASTERN REDBUD	2"-2.5" CALIPER	20'-30' HEIGHT AND SPREAD	B & B, MULTI-TRUNK MATCHED SPECIMENS, PINK FLOWERS, APRIL
N* CF	25	CORNUS FLORIDA	FLOWERING DOGWOOD	2"-2.5" CALIPER	20'-30' HEIGHT AND SPREAD	B & B, WHITE FLOWERS, MAY
GB	11	GINKGO BILOBA MALE	MALE GINKGO	3" CALIPER	60'-70' HEIGHT, 25'-35' SPREAD	B & B, YELLOW FALL COLOR
N# PD	38	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	2"-2.5" CALIPER	75-100' HEIGHT, 40'-50' SPREAD	B & B, ORANGE FALL COLOR, SINGLE TRUNK
SHRUBS						
# BS	18	BUXUS SEMPERVIRENS 'DEE RUNK'	'DEE RUNK' BOXWOOD	2'-3" HEIGHT	5'-6" HEIGHT AND SPREAD	B & B, EVERGREEN
N# CS	82	CORNUS SERICEA	RED TWIG DOGWOOD	2'-3" HEIGHT	5'-6" HEIGHT AND SPREAD	B & B, RED TWIGS IN WINTER
N# VD	92	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	2'-3" HEIGHT	5'-6" HEIGHT AND SPREAD	B & B, WHT FLWRS, MAY, ORANGE-RED FALL COLORS

KEY:
N = NATIVE PLANT OF NORTH AMERICA * = SPRING INSTALLATION ONLY
& = SALT SPRAY TOLERANT # = SELDOM OR RARELY DAMAGED BY DEER AS PER RUTGERS AG AGENCY (HTTP://NJAES.RUTGERS.EDU)

LEGEND:		
BIORETENTION BASIN SEED MIX		
INGREDIENTS	SEEDING RATE	RECOMMENDED PLANTING DATE
20.0% PANICUM CLANDESTINUM 20.0% PUCCINELLIA DISTANS 18.0% ELYMUS VIRGINICUS 15.0% AGROSTIS STOLONIFERA 15.0% POA PALUSTRIS 10.0% CAREX VULPINOIDEA 1.0% CAREX SCOPARIA 1.0% JUNCUS EFFUSUS	20-40 LBS. / ACRE	4/1 - 5/31 OR 8/15 - 10/15

SEED MIX SUPPLIER:
ERNST SEEDS
OR AN APPROVED EQUAL
8884 MERCER PIKE
MEADVILLE PA, 16335
TELEPHONE 800-873-3321
FAX: 814-336-5191
WEB: WWW.ERNSTSEED.COM

SEEDING SPECIFICATIONS

THE CONTRACTOR WILL BE RESPONSIBLE FOR RE-ESTABLISHING ALL AREAS DISTURBED BY CONSTRUCTION. THE SEEDING WILL BE IN ACCORDANCE WITH FREEHOLD COUNTY SOIL CONSERVATION DISTRICT STANDARDS. SPECIFIC SEED TYPES SHALL BE USED AS FOLLOWS:

- A. ALL DISTURBED AREAS SHALL BE SEEDDED AS SHOWN ON THE LANDSCAPE PLAN WITH LOFTS SUMMER STRESS MIXTURE OR APPROVED EQUAL. SEED SHALL BE APPLIED AT A RATE OF 170 LBS/ACRE BETWEEN THE PERIODS OF EITHER 4/1 TO 5/31 OR 8/15 TO 10/16.
- B. SLOPED AREAS 3:1 AND GREATER SHALL RECEIVE IN COMBINATION WITH THE ABOVE SPECIFIED GRASS MIXTURE AN EROSION CONTROL MATTING BY BONTERRA AMERICA, PINELANDS NURSERIES, COLUMBUS, NJ, MODEL # CS2 OR APPROVED EQUAL.

UNDERGROUND UTILITY NOTE:

DO NOT INSTALL PROPOSED PLANT MATERIAL DIRECTLY ON TOP OF ANY PROPOSED OR EXISTING UNDERGROUND UTILITIES. FIELD ADJUST MATERIAL AS NEEDED AS DIRECTED BY THE PROJECT PROFESSIONAL TO ACCOMMODATE ANY POTENTIAL CONFLICTS.

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET
0 40 80

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FRENCH & PARRELO
ASSOCIATES
New Jersey • New York • Pennsylvania • Georgia

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LICENSED LANDSCAPE ARCHITECT, N.J. LIC. NO. AS000909

LANDSCAPING PLAN
FOR
MANNINO PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
LOT 6 BLOCK 8005
CONTRACT NO. 2023-37
TOWNSHIP OF OLD BRIDGE
MIDDLESEX COUNTY, NEW JERSEY

DATE: 12/02/2022
DESIGNED BY: JB
DRAWN BY: JB

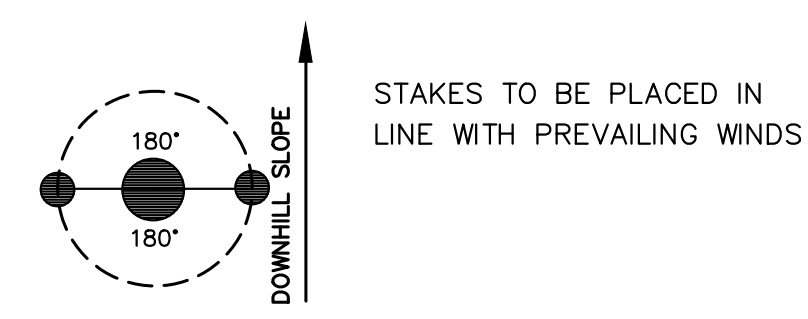
SCALE: 1"=40'
FIELD BOOK
MJP

PROJECT NUMBER: 4043.016
SHEET: L-1.0

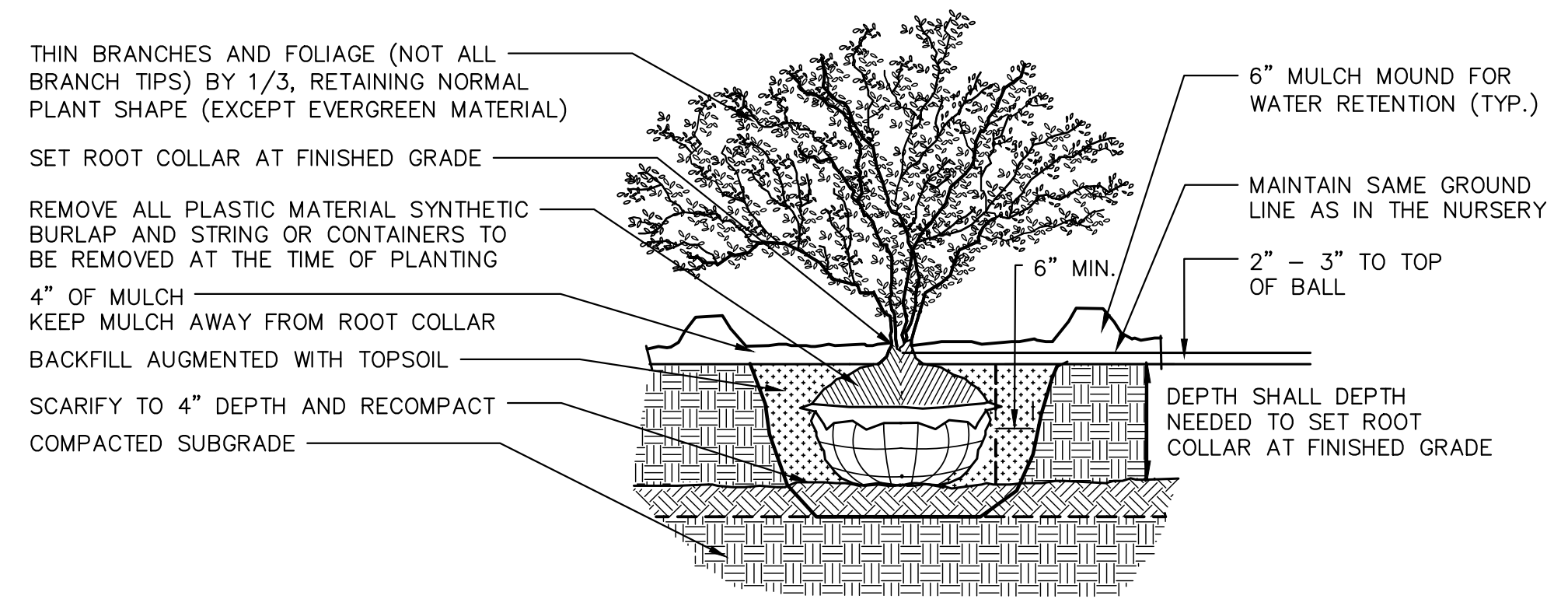
G:\MANNINO\4043 - Old Bridge - General\Fields\CADD\DWG\4043.016 - LA.dwg LA

PLANTING NOTES

- THE LANDSCAPE PLANS SHALL BE USED FOR LANDSCAPING PURPOSES ONLY. THE CONTRACTOR SHOULD EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR EXACT LOCATIONS OF UTILITIES, DRAINS, ETC., AND NOTIFY THE OWNER ABOUT ANY DISCREPANCIES BEFORE STARTING WORK.
- ALL PLANTING SHALL BE IN CONFORMANCE WITH THE AMERICAN NURSERYMEN'S ASSOCIATION STANDARDS, CURRENT EDITION. ALL PLANT MATERIALS USED SHALL BE TRUE TO NAME AND SIZE IN CONFORMITY WITH THE CURRENT EDITION OF THE AMERICAN STANDARD OF NURSERY STOCK AND SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. ALL PLANTS SHALL HAVE NORMAL, WELL-DEVELOPED BRANCHES AND VIGOROUS ROOT SYSTEMS. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, FREE FROM DEFECTS, DISFIGURING KNOTS, ABRASIONS OF THE BARK, SUN SCALD INJURIES, PLANT DISEASES, INSECT EGGS, BORERS, AND ALL OTHER FORMS OF INFECTION. ALL PLANTS SHALL BE NURSERY GROWN. ALL PLANT MATERIAL SHALL BE TAGGED AT THE NURSERY SOURCE AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT PRIOR TO PLANTING.
- THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY ANY PERSON, VEHICLE, EQUIPMENT, OR TOOLS RELATED TO THE EXECUTION OF THIS CONTRACT.
- EXCAVATION NEAR EXISTING UTILITIES TO BE CAREFULLY PERFORMED BY HAND.
- ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO EXISTING GRADE AT THE NURSERY. ALL PLANT MATERIAL SHALL BE PLANTED SO THAT THE TOP OF THE ROOTBALL IS NO HIGHER OR LOWER THAN THE EXISTING/FINISHED GRADE DEPENDENT UPON SOIL CONDITIONS.
- IN THE EVENT THAT PLANTING DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANT MATERIALS LIST, THE LANDSCAPING PLAN SHALL GOVERN. THE USE AND PLANTING OF BARE ROOT MATERIAL SHALL BE PROHIBITED.
- ANY SUBSTITUTIONS OF PLANT MATERIAL WITH REGARDS TO SIZE, SPECIES, VARIETY, ETC., SHALL BE SUBJECT TO APPROVAL BY THE OWNER.
- PLANTS SHALL ONLY BE INSTALLED WHEN THE SOIL IS FROST FREE.
- UNDER NO CIRCUMSTANCES SHOULD THE MAIN LEADER OF A DECIDUOUS OR EVERGREEN TREE BE TOPPED. DECIDUOUS TREES SHALL BE PRUNED BY REMOVAL OF 1/3 OF THE INTERIOR BRANCHING STRUCTURE WITHOUT ALTERING THE ORIGINAL BRANCHING FORM OF THE TREE.
- ALL DISTURBED AREAS, NOT BEING PLANTED, SHALL BE TOPSOILED 4" THICK, FERTILIZED, SEEDED, AND MULCHED WITH APPROVED MULCH. TOPSOIL SHALL BE NATURAL FRIABLE, FERTILE SOIL CHARACTERISTIC OF PRODUCTIVE SOIL IN THE VICINITY. IT SHALL BE FREE OF LUMPS OF CLAY, STONES, ROOTS, AND OTHER FOREIGN MATTER.
- CUT AND LOOSEN SISAL HEMP CHOKE TIE AROUND TREE TRUNK. ALL PLASTIC MATERIAL SHALL NOT BE PERMITTED. ALL WIRE BASKETS AND PLASTIC LINERS OF CONTAINER GROWN TREES AND SHRUBS MUST BE COMPLETELY REMOVED. NO CONTAINER GROWN MATERIAL WILL BE ACCEPTED IF IT IS ROOT BOUND AND NOT ROOT PRUNED. THE USE OF NYLON TWINE ON ROOT BALLS IS PROHIBITED.
- THE DEPTH OF PLANT PITS SHALL BE INCREASED BY 12" THROUGH THE ADDITION OF LOOSE AGGREGATE (3/4" TO 1 1/2" DIAMETER) WHEREVER POOR DRAINAGE OCCURS OR WHERE DIRECTED BY THE TOWNSHIP.
- GUY WIRES SHALL BE LOCATED SO THAT THEY WILL NOT PULL CROTCH APART. GUY WIRES TO SECOND BRANCH (MINIMUM ONE-THIRD HEIGHT OF TREE). USE THREE GUYS PER TREE UNLESS OTHERWISE INDICATED. ALL TREE STAKES, GUY WIRES, TREE WRAPPING AND SAUCERS SHALL BE REMOVED AFTER ONE GROWING SEASON.
- PLANTS PLANTED IN ROWS SHALL BE MATCHED SPECIMENS AND BE UNIFORM IN SIZE AND FORM.
- IN THE EVENT THAT EXISTING VEGETATION IS REMOVED BEYOND THE CLEARING LIMITS SHOWN ON THE PLANS, ADDITIONAL PLANTING MUST BE PROVIDED AS APPROVED BY THE TOWNSHIP AND AT NO COST TO THE OWNER.
- PLANTING BACKFILL MIXTURE SHALL CONSIST OF ONE PART TOPSOIL, ONE PART NATIVE SOIL AND ONE PART PEAT MOSS. NOTE THAT PLANTING MIXTURE MAY CHANGE BASED UPON SOIL CONDITIONS.
- MULCH, 4" IN DEPTH, SHALL BE TREATED SHREDDED HARDWOOD BARK NOT EXCEEDING 2" IN GREATEST DIMENSION. MULCH SHALL BE INSTALLED WITH A MAXIMUM OF ONE (1) INCH WITHIN ONE (1) FOOT ON THE TREE'S ROOT FLARE. A NON-PLASTIC WEED RETARDANT BARRIER SHALL BE USED IN ALL NON GRASSED AREAS. MULCH SHALL BE FINE GRADED FOR A PLEASING APPEARANCE. THE USE OF MARBLE OR PINE BARK CHIPS IS PROHIBITED. MULCH VOLCANOES ARE NOT PERMITTED.
- ALL PLANT MATERIAL SHALL BE GIVEN A MINIMUM OF 5 GALLONS OF WATER AT THE TIME OF INSTALLATION AND SHALL BE WATERED AT INTERVALS DURING ESTABLISHMENT TO ENSURE ADAPTATION TO THE SITE. PRIOR TO THE INSTALLATION OF THE PLANT MATERIAL, THE CONTRACTOR SHALL FILL EACH PLANTING PIT WITH WATER AND ALLOW IT TO FULLY PERCOLATE INTO THE GROUND PRIOR TO PLACEMENT OF THE PLANT. THE CONTRACTOR SHALL NOTIFY EITHER THE TOWNSHIP OR PROJECT LANDSCAPE ARCHITECT OF ANY PERCOLATION PROBLEMS PRIOR TO INSTALLATION.
- PREFERRED PLANTING TIME PERIODS ARE FROM SEPTEMBER 1 TO NOVEMBER 30 OR MARCH 20 TO MAY 31. NO PLANTING SHALL BE EXECUTED DURING ABNORMALLY HOT WEATHER NOR WHEN THE GROUND IS FROZEN.
- THE CONTRACTOR SHALL REMOVE ALL DAMAGED BRANCHES AND NURSERY TAGS AT THE TIME OF INSTALLATION.
- ALL TURF SHALL RECEIVE FERTILIZER CONSISTING OF 10-6-4 (50% ORGANIC) COMPOSITION, APPLIED AT 3 LB. PER 100 SQ. FT. SLOW RELEASE FERTILIZER TABLETS OR PACKETS OF 20-10-5 COMPOSITION SHALL BE ADDED TO ALL PLANTING PITS AT THE FOLLOWING RATIOS: 1 PER SHRUB, 2 PER DECIDUOUS OR EVERGREEN TREES UP TO 2" IN CALIPER AND 3 FOR DECIDUOUS AND EVERGREEN TREES ABOVE 2" IN CALIPER.
- EACH TREE THAT IS PLANTED MUST BE TAGGED WITH A DURABLE LABEL BEARING THE GENUS, SPECIES, VARIETY, PLANT PATENT NUMBER (IF APPLICABLE) AND CULTURAL REQUIREMENTS AND MUST BE INSPECTED PRIOR TO REMOVAL.
- ALL GROUPED SHRUBS SHALL BE MULCHED TOGETHER TO FORM ONE CONTINUOUS PLANTING BED.
- CONTRACTOR TO BE RESPONSIBLE FOR SEEDING AREAS BEING DISTURBED BY CONSTRUCTION. SEED MIXTURE TO BE IN ACCORDANCE WITH SOIL CONSERVATION DISTRICT'S STANDARDS.
- ALL TREES FOUR (4) FEET OR GREATER IN HEIGHT SHALL BE STAKED PER BOROUGH DESIGN STANDARDS.
- ALL SHRUBS SHALL BE INSTALLED A MINIMUM OF THREE (3) FEET BEHIND THE CURB.
- ALL PLANT RELOCATIONS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- ALL PLANT MATERIAL SHALL BE GUARANTEED FOR PERIOD OF TWO YEARS FROM THE TIME OF PLANTING.

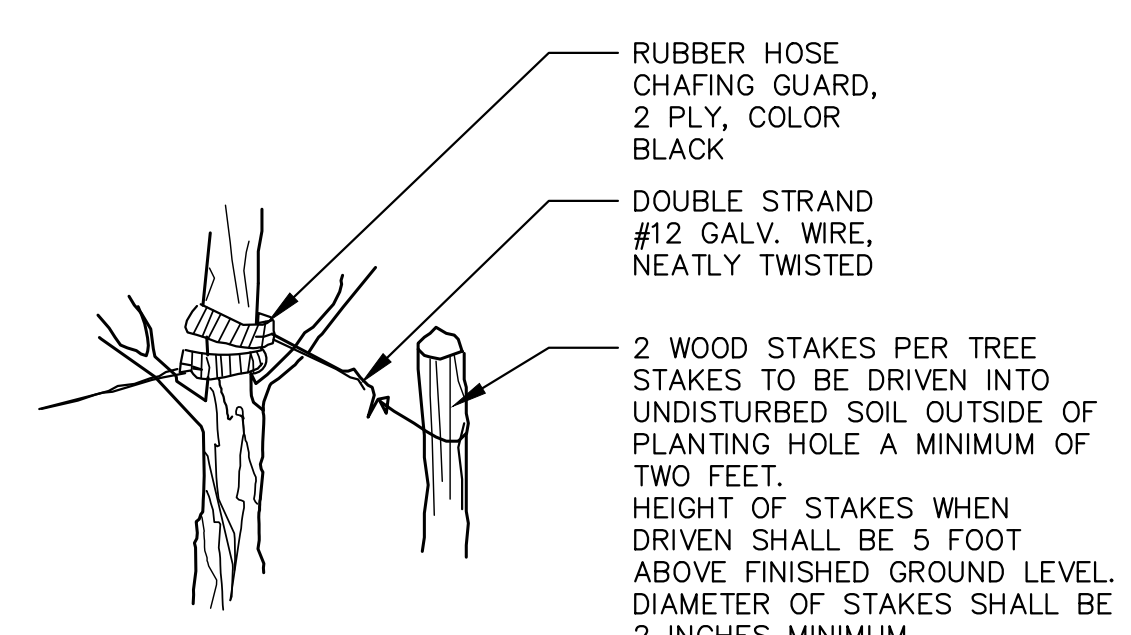


STAKING PLAN SCHEMATIC

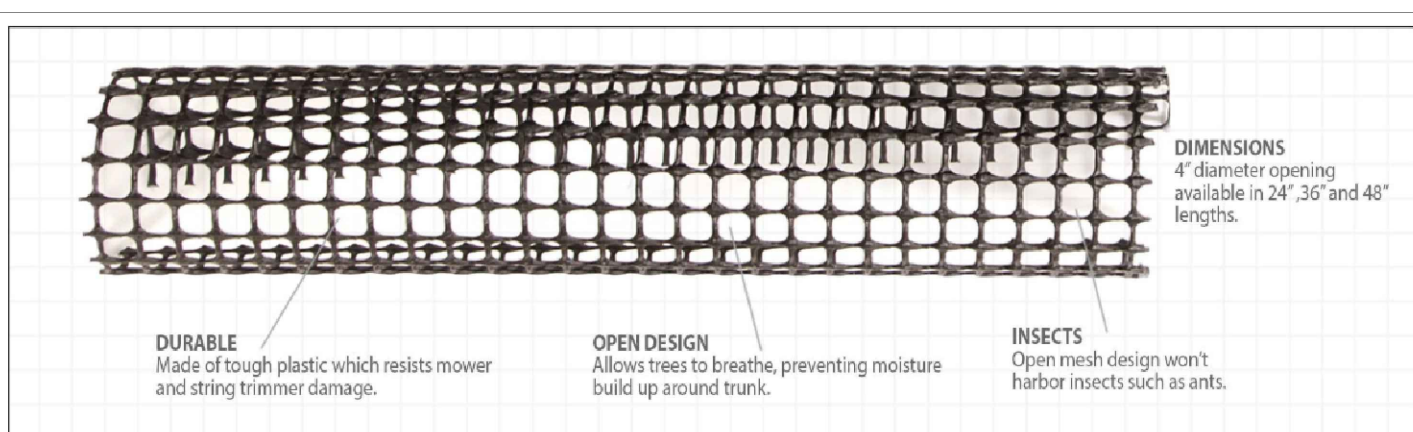


SHRUB PLANTING DETAIL
NOT TO SCALE

- NOTES:**
- CONTRACTOR TO PROVIDE A MULCHED PLANTING BED FOR SHRUBS GROUPED TOGETHER. MULCHED BEDS MAY VARY IN SHAPE AND SIZE TO CONFORM WITH SHRUB LAYOUT.
 - DO NOT PRUNE EVERGREEN SHRUBS EXCEPT TO REMOVE DEAD AND BROKEN BRANCHES



TREE STAKING DETAIL
NOT TO SCALE



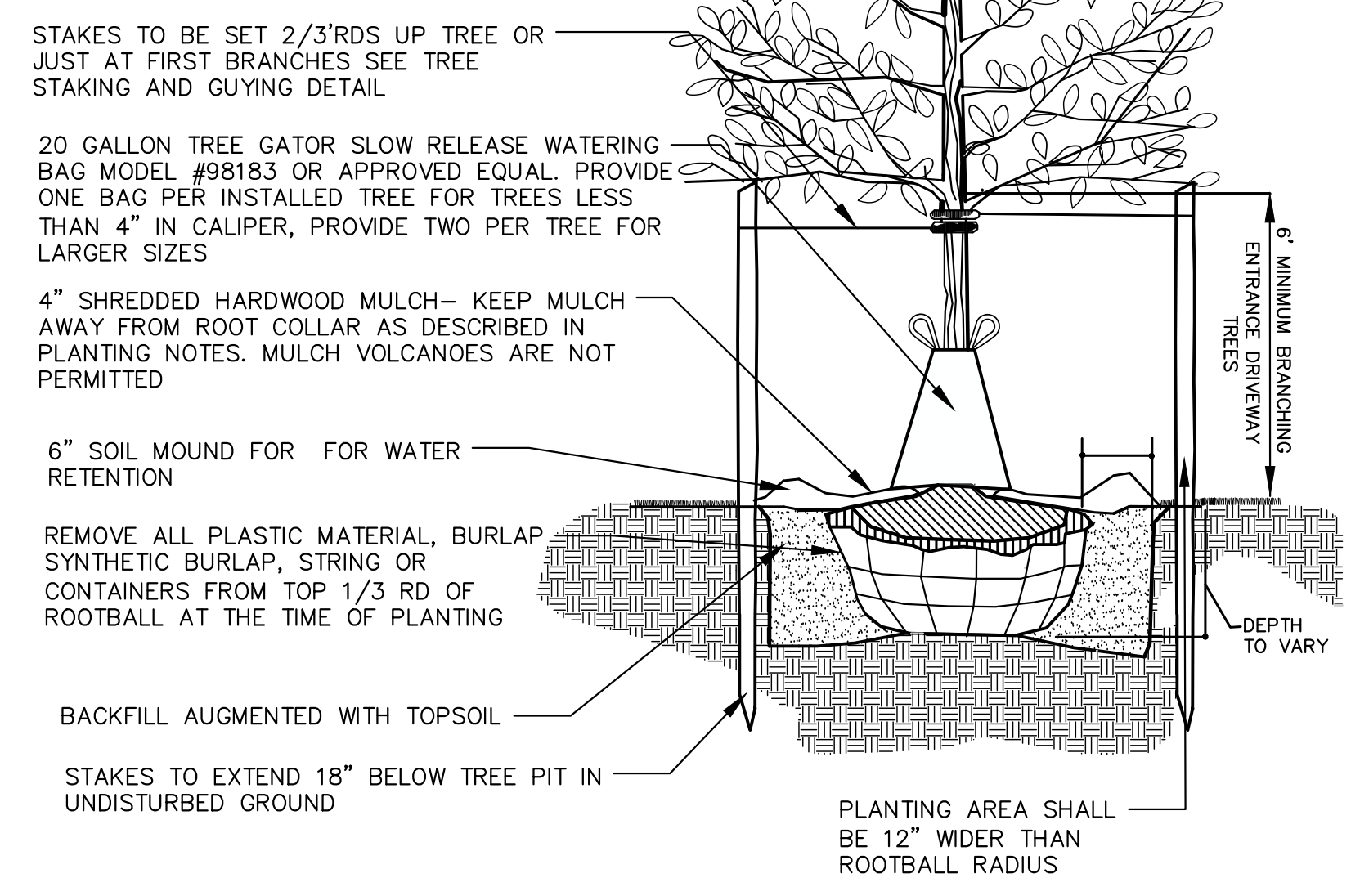
- Specs**
- Material: HDPE
 - Diameter (inches): 4
 - Length (feet): Varies
 - Bundle count: 5
- Product Features**
- Durable high-density polyethylene construction
 - Fits up to 4 inches in diameter
 - UV treated

TREE TRUNK PROTECTION DETAIL
NOT TO SCALE

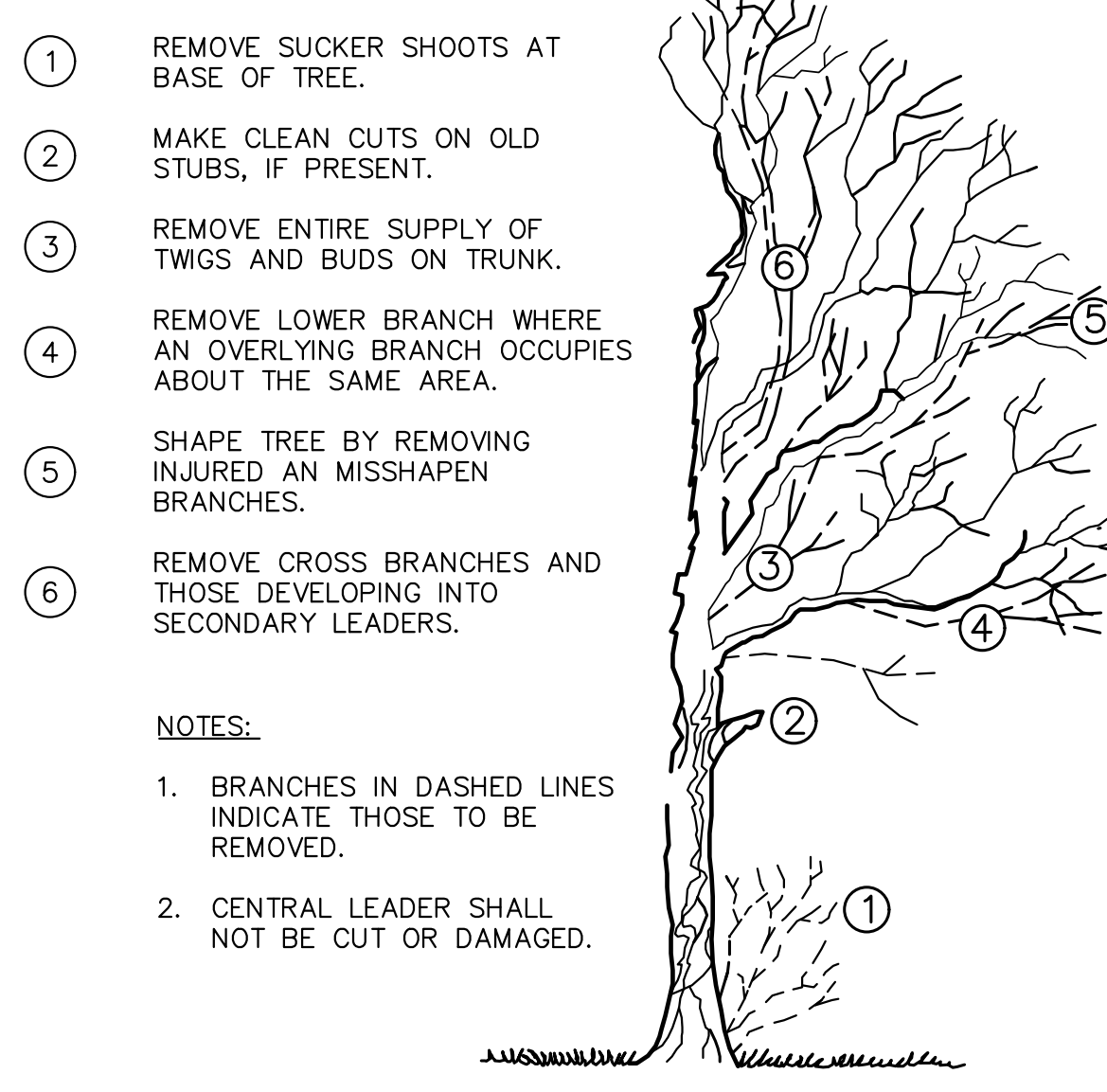
NOTE:
4' LONG, 4" DIAMETER TREE TRUNK PROTECTION MESH SHALL BE MANUFACTURED BY A.M. LEONARD (<https://www.omeo.com/leonard-rigid-plastic-mesh-tree-guards-4-inch-diameter/p/vp-bc/1>) OR APPROVED EQUAL.

NOTES:

- ALL TREES UNDER 3" IN CALIPER SHALL BE STAKED ALL TREES 3" IN CALIPER AND GREATER SHALL BE GUYED
- TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE
- SET STAKES VERTICAL AND AT SAME HEIGHT
- REMOVE ALL WIRE BASKETS PRIOR TO BACKFILLING THE PLANTING PIT.
- ALL WIRE BASKETS SHALL BE REMOVED PRIOR TO BACKFILLING THE PLANTING PIT.



DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



- NOTES:**
- BRANCHES IN DASHED LINES INDICATE THOSE TO BE REMOVED.
 - CENTRAL LEADER SHALL NOT BE CUT OR DAMAGED.

TREE PRUNING DETAIL
NOT TO SCALE

No.	Date	Revision	Revised by	Checked by

SCALE IN FEET

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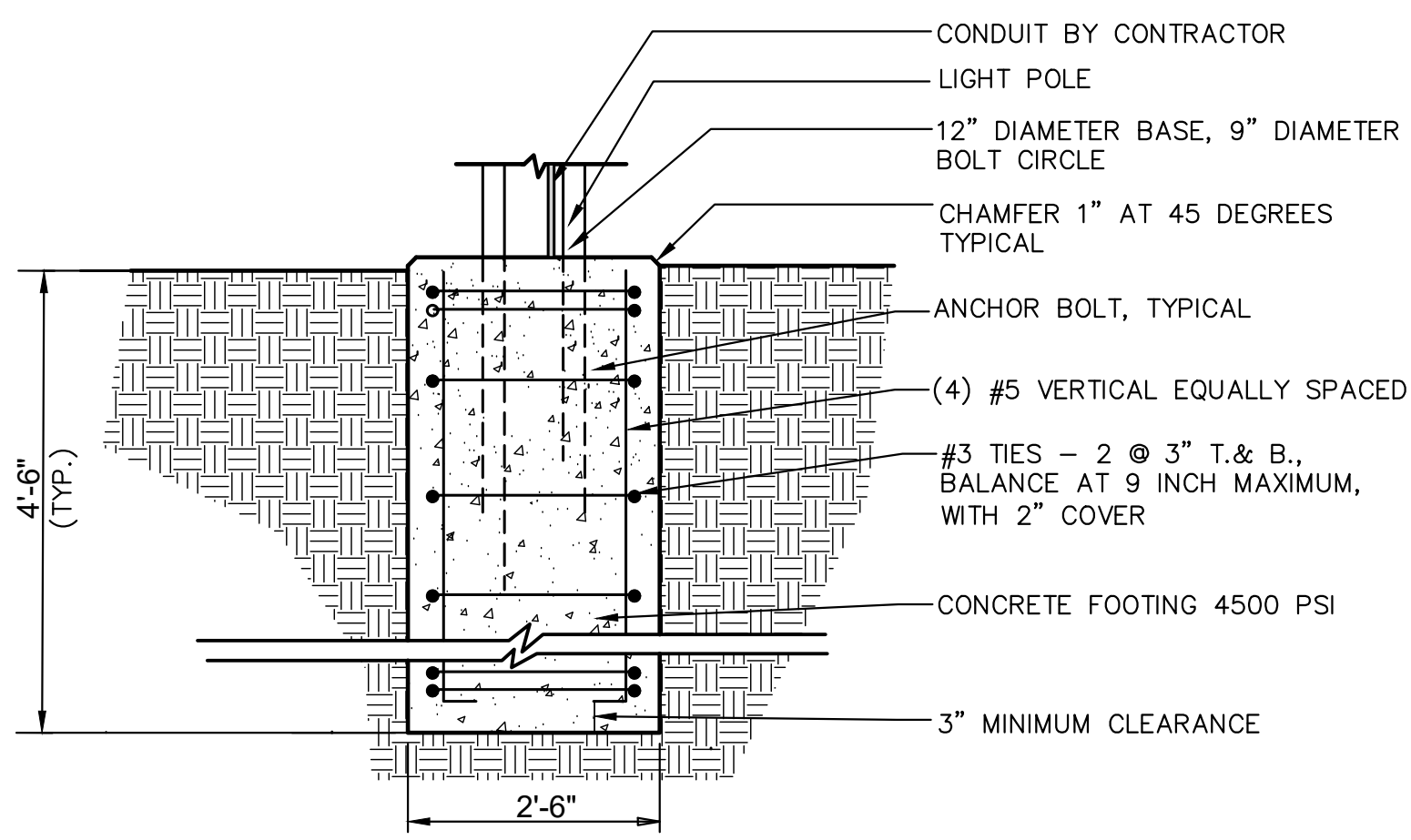
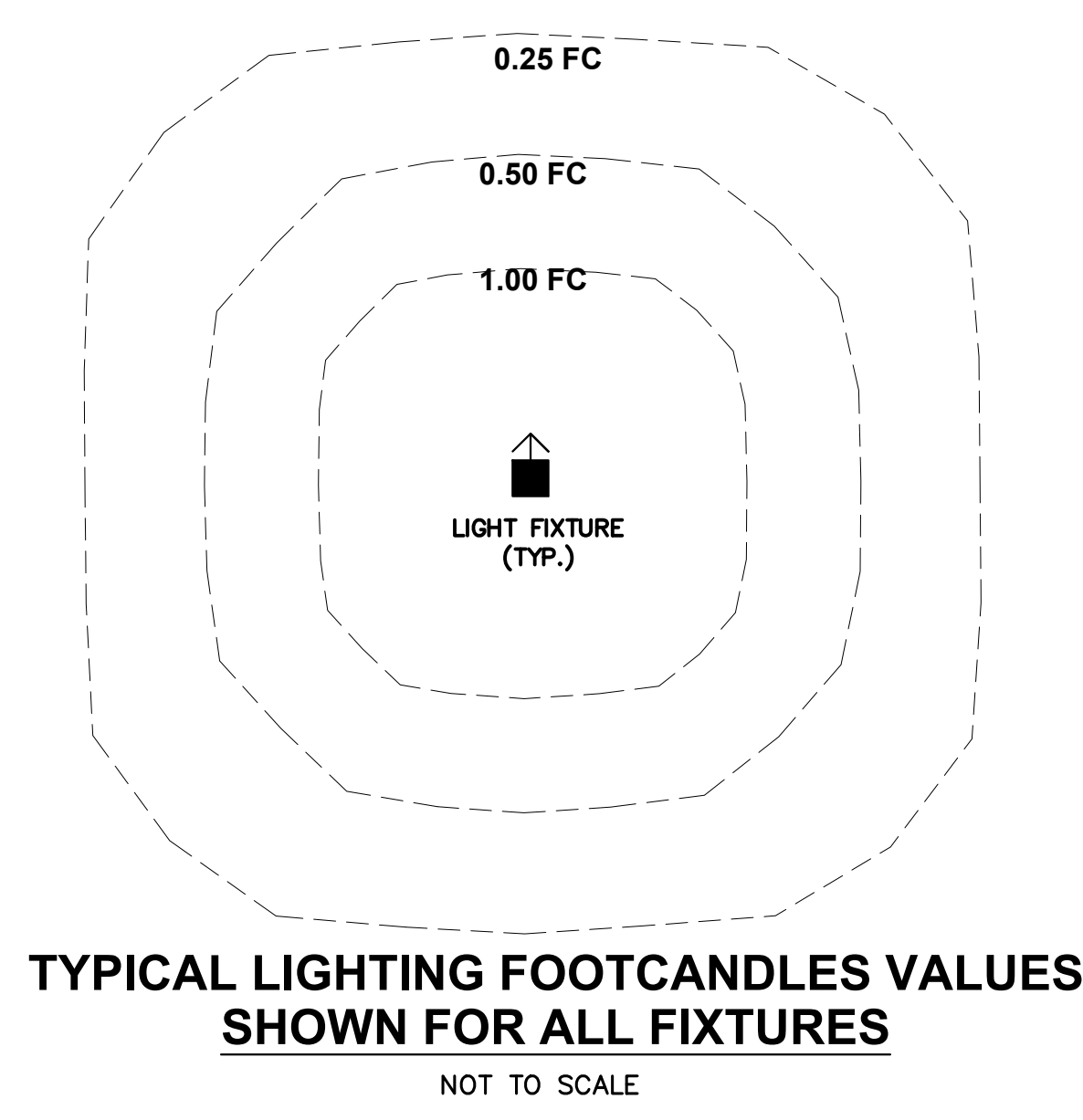
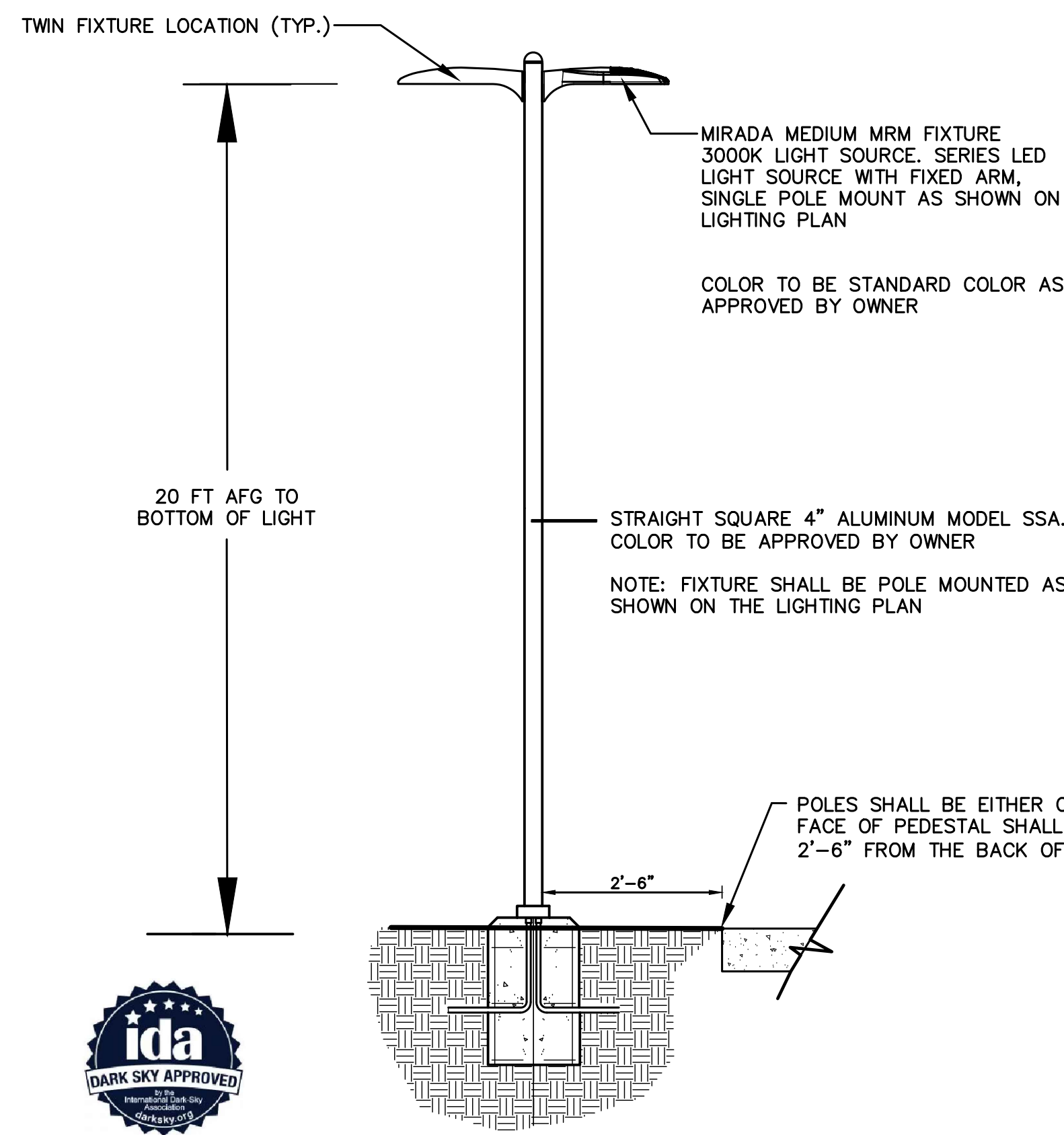
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MICHAEL J. PAPPALARDO
LICENSED LANDSCAPE ARCHITECT, N.J. LIC. No. AS000909

LANDSCAPING NOTES AND DETAILS FOR MANNINO PARK SYNTHETIC TURF ATHLETIC FIELDS AND SITE IMPROVEMENTS LOT 6 BLOCK 8005 CONTRACT NO. 2023-37 TOWNSHIP OF OLD BRIDGE MIDDLESEX COUNTY, NEW JERSEY

DATE: 12/02/2022	DESIGNED BY: JB	SCALE: AS SHOWN	PROJECT NUMBER: 4043.016
DRAWN BY: JB	CHECKED BY: MJP	FIELD BOOK	SHEET: L-1.1

G:\VA\2000\4043 - Old Bridge-General\4043.016 - Mannino Park Baseball Fields\CAD\DWG\4043.016 - L.dwg LAD



- NOTES:
- CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR OWNER'S APPROVAL PRIOR TO ORDERING ANY MATERIAL AND FOR PROPOSED FOOTINGS/PEDESTALS.
 - LIGHT FIXTURE PRODUCT INFO:

PRODUCT: MIRADA MEDIUM MRM LED SERIES, LED LUMINAIRE MODELS AS SPECIFIED IN LUMINAIRE SCHEDULE

MANUFACTURER: LSI INDUSTRIES INC., CINCINNATI, OHIO OR APPROVED EQUAL
WWW.LSICORP.COM
PHONE: 513-372-3200

3. POLE PRODUCT INFO:

PRODUCT: MIRADA MEDIUM MRM LED SERIES, LED LUMINAIRE MODELS AS SPECIFIED IN LUMINAIRE SCHEDULE

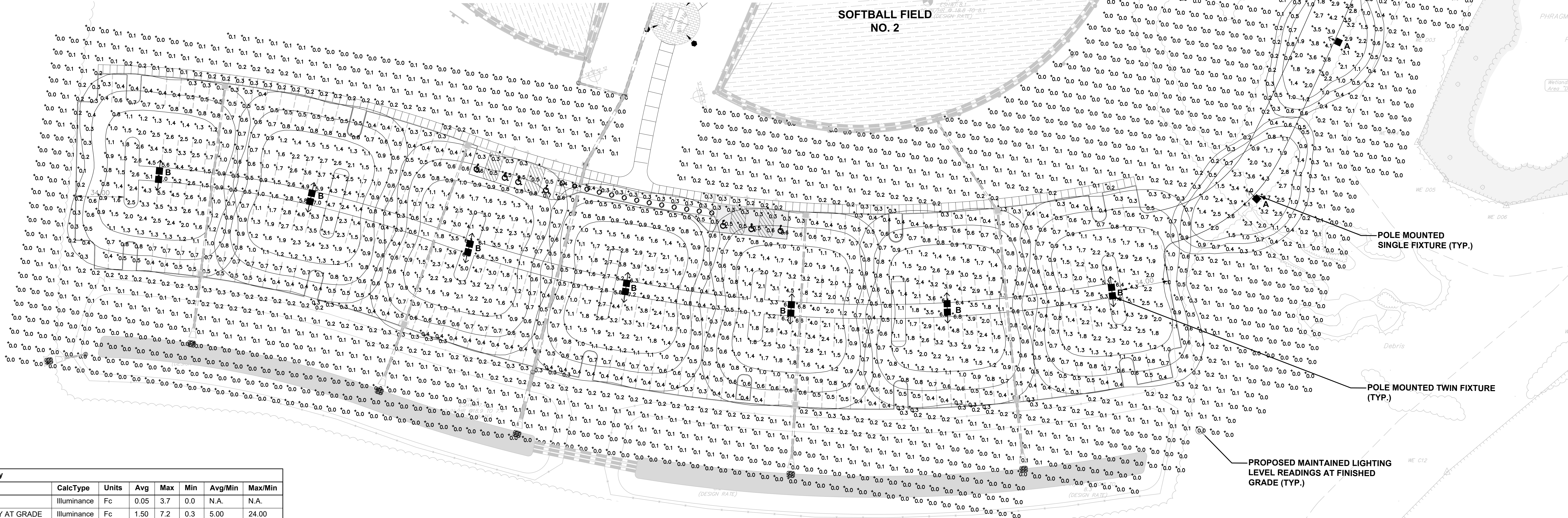
MANUFACTURER: LSI INDUSTRIES INC., CINCINNATI, OHIO OR APPROVED EQUAL
WWW.LSICORP.COM
PHONE: 513-372-3200

POLE MOUNTED FIXTURE DETAIL (SINGLE AND TWIN MOUNTED)

NOT TO SCALE

TYPICAL FOOTING DETAIL

NOT TO SCALE



Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
OFFLOT AT GRADE	Illuminance	Fc	0.05	3.7	0.0	N.A.
PARKING_ROADWAY AT GRADE	Illuminance	Fc	1.50	7.2	0.3	5.00

Luminaire Schedule						
Type	Arrangement	Symbol	Manufacturer	Light Fixture	CCT	LLF
A	Single	➡	LSI INDUSTRIES, INC.	MRM-LED-12L-SIL-2-DIM-VOLTS-30-70CRI-COLOR-R56	3000	0.880
B	TWIN	↔	LSI INDUSTRIES, INC.	MRM-LED-12L-SIL-FT-DIM-VOLTS-30-70CRI-COLOR-R56	3000	0.880

LIGHTING NOTES

- DO NOT INSTALL. PROPOSED LIGHTS ON TOP OF ANY PROPOSED OR EXISTING UNDERGROUND UTILITIES. FIELD ADJUST LIGHTS AS NEEDED AS DIRECTED BY THE PROJECT PROFESSIONAL TO ACCOMMODATE ANY POTENTIAL CONFLICTS.
- COLOR AND FINISH OF PROPOSED LIGHTS AND POLES SHALL BE SELECTED FROM STANDARD AVAILABLE COLORS AS APPROVED BY THE OWNER. THE CONTRACTOR SHALL SUBMIT COLOR SAMPLES FOR OWNER'S APPROVAL PRIOR TO ORDERING ANY MATERIAL.

No.	Date	Revision	Revised By (Checked By)

30 0 30 60
SCALE IN FEET

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ASSOCIATES

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LIGHTING PLAN

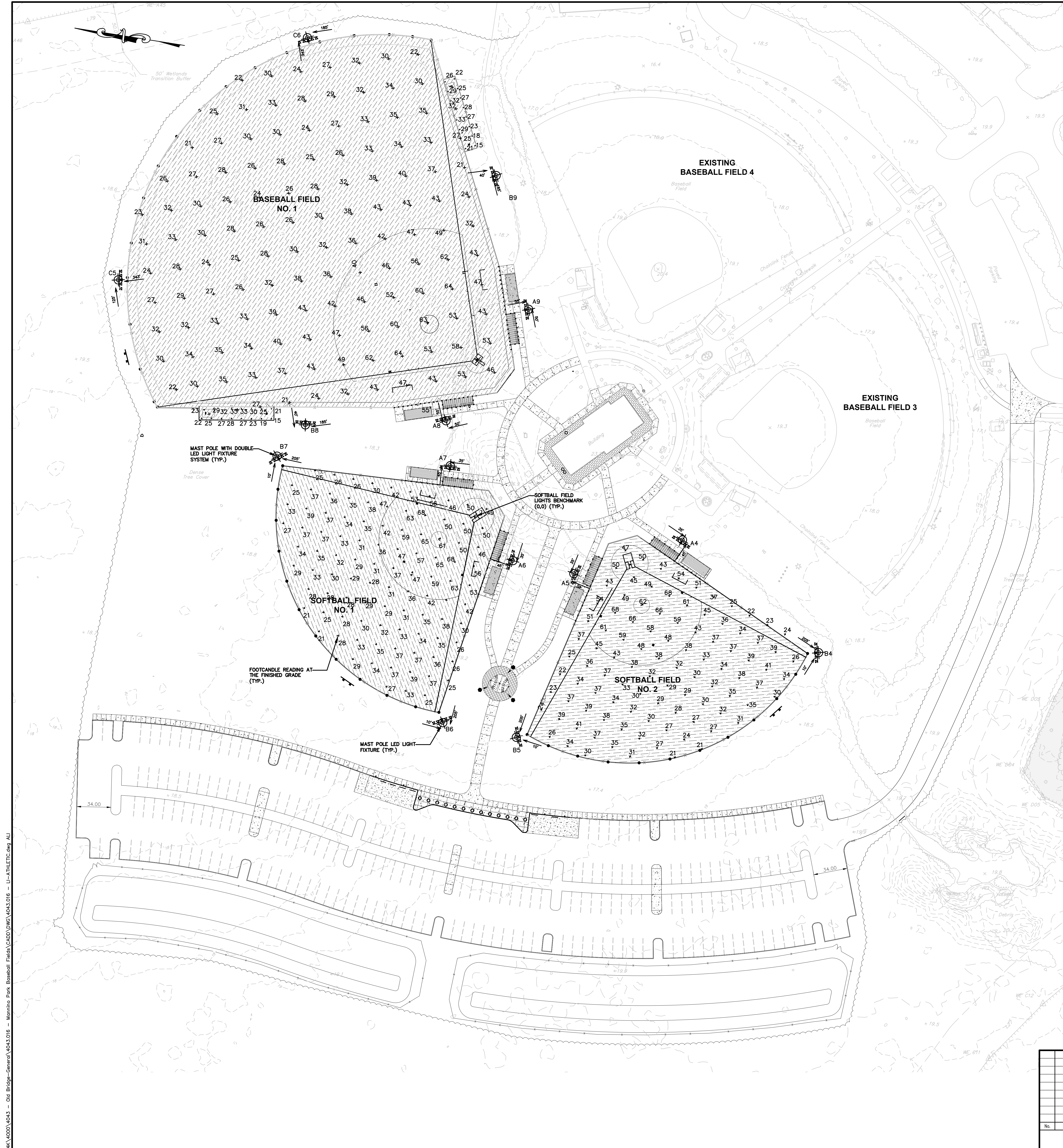
FOR
MANNING PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS

LOT 6 BLOCK 8005
CONTRACT NO. 2023-37
TOWNSHIP OF OLD BRIDGE
MIDDLESEX COUNTY, NEW JERSEY

DATE: 12/02/2022
DESIGNED BY: JB
DRAWN BY: JB

SCALE: 1" = 30'
FIELD BOOK
M.P.

PROJECT NUMBER: 4043.016
SHEET: L-2.0



GRID SUMMARY	
Name:	BASEBALL FIELD NO.1
Size:	325'/377'/325' - basepath 90'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
Guaranteed Average:	50	30
Scan Average:	52.50	31.33
Maximum:	64	49
Minimum:	40	21
Avg / Min:	1.32	1.49
Guaranteed Max / Min:	2	2.5
Max / Min:	1.60	2.35
UG (adjacent pts):	1.44	1.77
CU:	0.80	
No. of Points:	25	107

LUMINAIRE INFORMATION	
Applied Circuits:	E
No. of Luminaires:	40
Total Load:	48.28 kW

GRID SUMMARY	
Name:	Bulpen - LF
Size:	325'/377'/325' - basepath 90'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	33
Maximum:	15
Minimum:	1.75
Avg / Min:	1.42
UG (adjacent pts):	0.01
CU:	16
No. of Points:	16

LUMINAIRE INFORMATION	
Applied Circuits:	E
No. of Luminaires:	40
Total Load:	48.28 kW

GRID SUMMARY	
Name:	SOFTBALL Field NO. 5
Size:	200'/200'/200' - basepath 60'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
Guaranteed Average:	50	30
Scan Average:	54.74	32.49
Maximum:	68	47
Minimum:	37	21
Avg / Min:	1.48	1.53
Guaranteed Max / Min:	2	2.5
Max / Min:	1.83	2.19
UG (adjacent pts):	1.34	1.49
CU:	0.69	
No. of Points:	25	73

LUMINAIRE INFORMATION	
Applied Circuits:	D
No. of Luminaires:	18
Total Load:	20.2 kW

GRID SUMMARY	
Name:	Bulpen - RF
Size:	325'/377'/325' - basepath 90'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	25.89
Maximum:	33
Minimum:	15
Avg / Min:	1.76
Max / Min:	2.26
UG (adjacent pts):	1.43
CU:	0.01
No. of Points:	16

LUMINAIRE INFORMATION	
Applied Circuits:	E
No. of Luminaires:	40
Total Load:	48.28 kW

GRID SUMMARY	
Name:	SOFTBALL Field NO. 2
Size:	200'/200'/200' - basepath 60'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
Guaranteed Average:	50	30
Scan Average:	53.92	32.63
Maximum:	68	45
Minimum:	38	21
Avg / Min:	1.43	1.53
Guaranteed Max / Min:	2	2.5
Max / Min:	1.79	2.12
UG (adjacent pts):	1.39	1.61
CU:	0.69	
No. of Points:	25	73

LUMINAIRE INFORMATION	
Applied Circuits:	C
No. of Luminaires:	18
Total Load:	20.2 kW

PLEASE NOTE THAT THE FOOTCANDLE VALUES WERE TAKEN 3'-0" ABOVE FINISHED GRADE.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

043.016 - Old Bridge - General - Baseball Fields - CAD - DWG - 4043.016 - U-ATHLETIC.dwg - AU

No.	Date	Revision	Revised By	Checked By

FPA
FRENCH & PARRELLO
ASSOCIATES

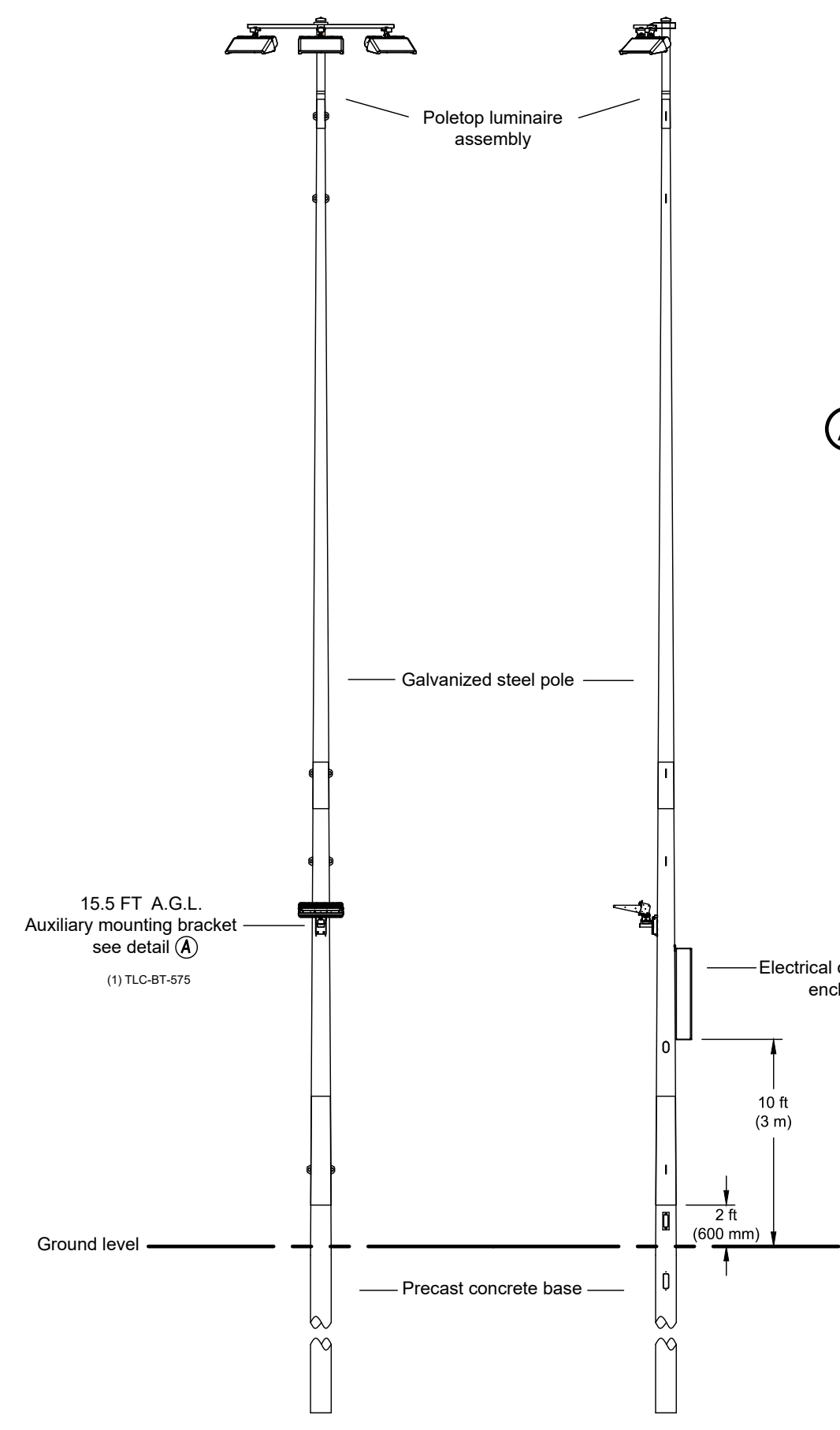
New Jersey • New York • Pennsylvania • Georgia

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Wall, New Jersey 07719
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ATHLETIC FIELD LIGHTING PLAN			
FOR MANNINO PARK SYNTHETIC TURF ATHLETIC FIELDS AND SITE IMPROVEMENTS LOT 6 BLOCK 8005 CONTRACT NO. 2023-37 TOWNSHIP OF OLD BRIDGE MIDDLESEX COUNTY, NEW JERSEY			
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/02/2022	TLV	1"=40'	4043.016
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
TLV	MJP		L-2.1

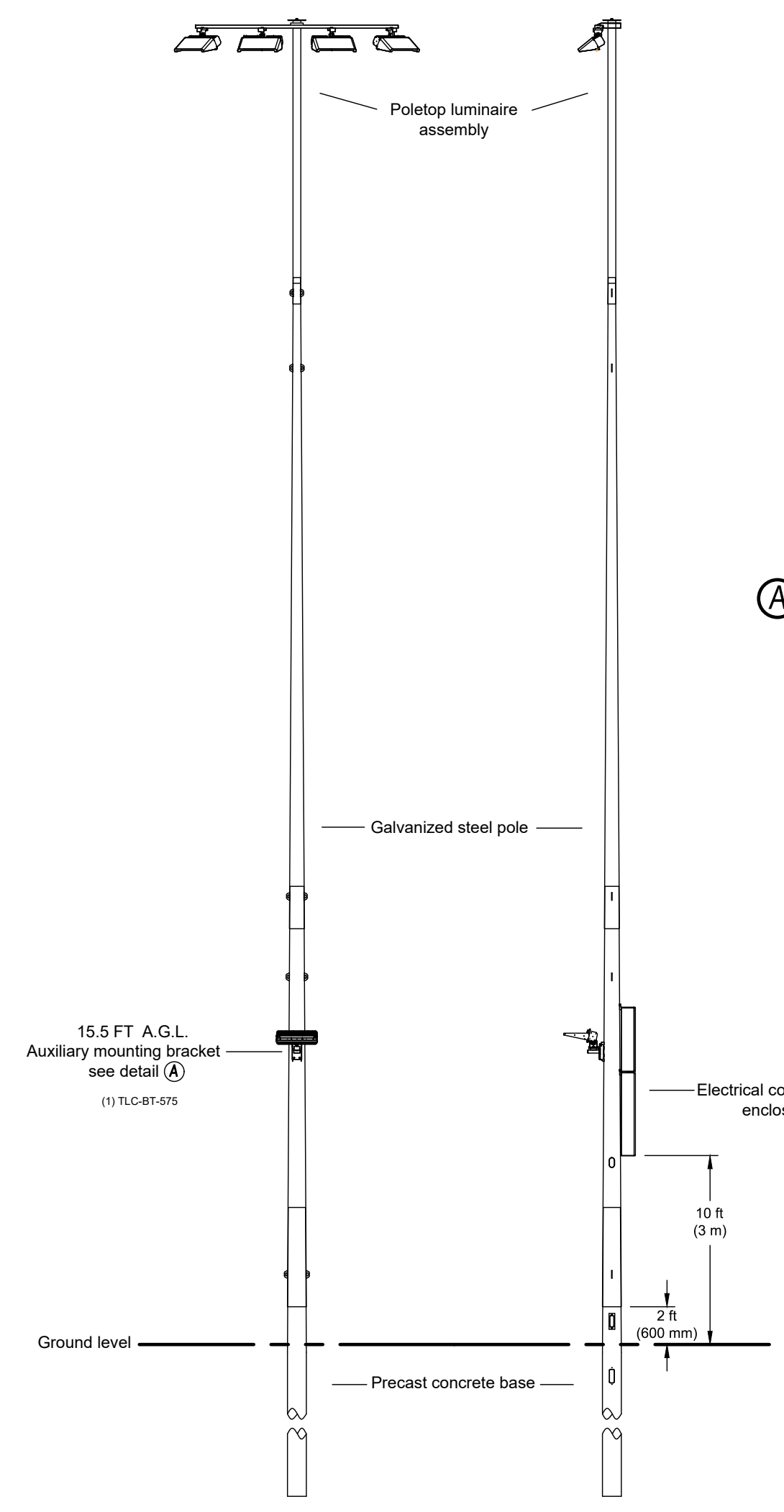


POLE(S): A4, A5, A6, A7
Musco 60FT Light-Structure System™ pole
TLC for LED™ luminaires

1. THE CONTRACTOR SHALL SUPPLY THE GROUNDING ROD AND CONNECTION TO THE SYSTEM GROUNDING LUG, CONCRETE BACKFILL, UNDERGROUND WIRING, CONDUIT AND SERVICE ENTRANCE.
2. THE CONTRACTOR TO SUBMIT A POLE FOUNDATION SHOP DRAWING SIGNED AND SEALED BY AN ENGINEER LICENSED IN NEW JERSEY.

MODEL: MUSCO LIGHT STRUCTURE TLC-LED-1500 AND TLC-LED-1200
MANUFACTURER: MUSCO LIGHTING
5146 W. HURLEY POND ROAD
FARMINGDALE, NJ 07727
PH: 732-751-9114

POLES A4, A5, A6, A7
ATHLETIC LIGHT STRUCTURE WITH
SINGLE HEAD 3 FIXTURES DETAIL
NOT TO SCALE

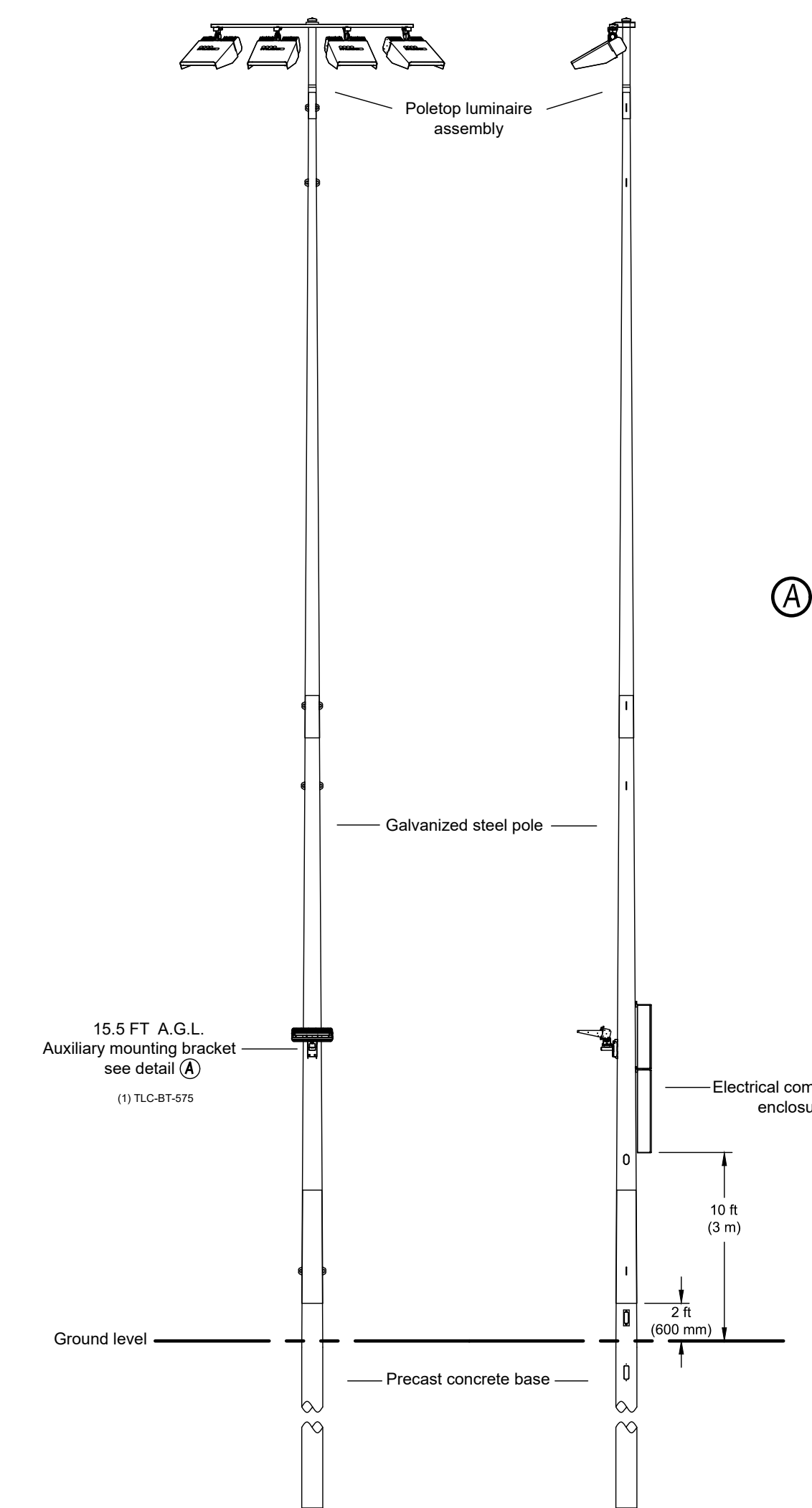


POLE(S): A8, A9
Musco 70FT Light-Structure System™ pole
TLC for LED™ luminaires

1. THE CONTRACTOR SHALL SUPPLY THE GROUNDING ROD AND CONNECTION TO THE SYSTEM GROUNDING LUG, CONCRETE BACKFILL, UNDERGROUND WIRING, CONDUIT AND SERVICE ENTRANCE.
2. THE CONTRACTOR TO SUBMIT A POLE FOUNDATION SHOP DRAWING SIGNED AND SEALED BY AN ENGINEER LICENSED IN NEW JERSEY.

MODEL: MUSCO LIGHT STRUCTURE TLC-LED-1500 AND TLC-LED-1200
MANUFACTURER: MUSCO LIGHTING
5146 W. HURLEY POND ROAD
FARMINGDALE, NJ 07727
PH: 732-751-9114

POLES A8, A9
ATHLETIC LIGHT STRUCTURE WITH
SINGLE HEAD 4 FIXTURES DETAIL
NOT TO SCALE

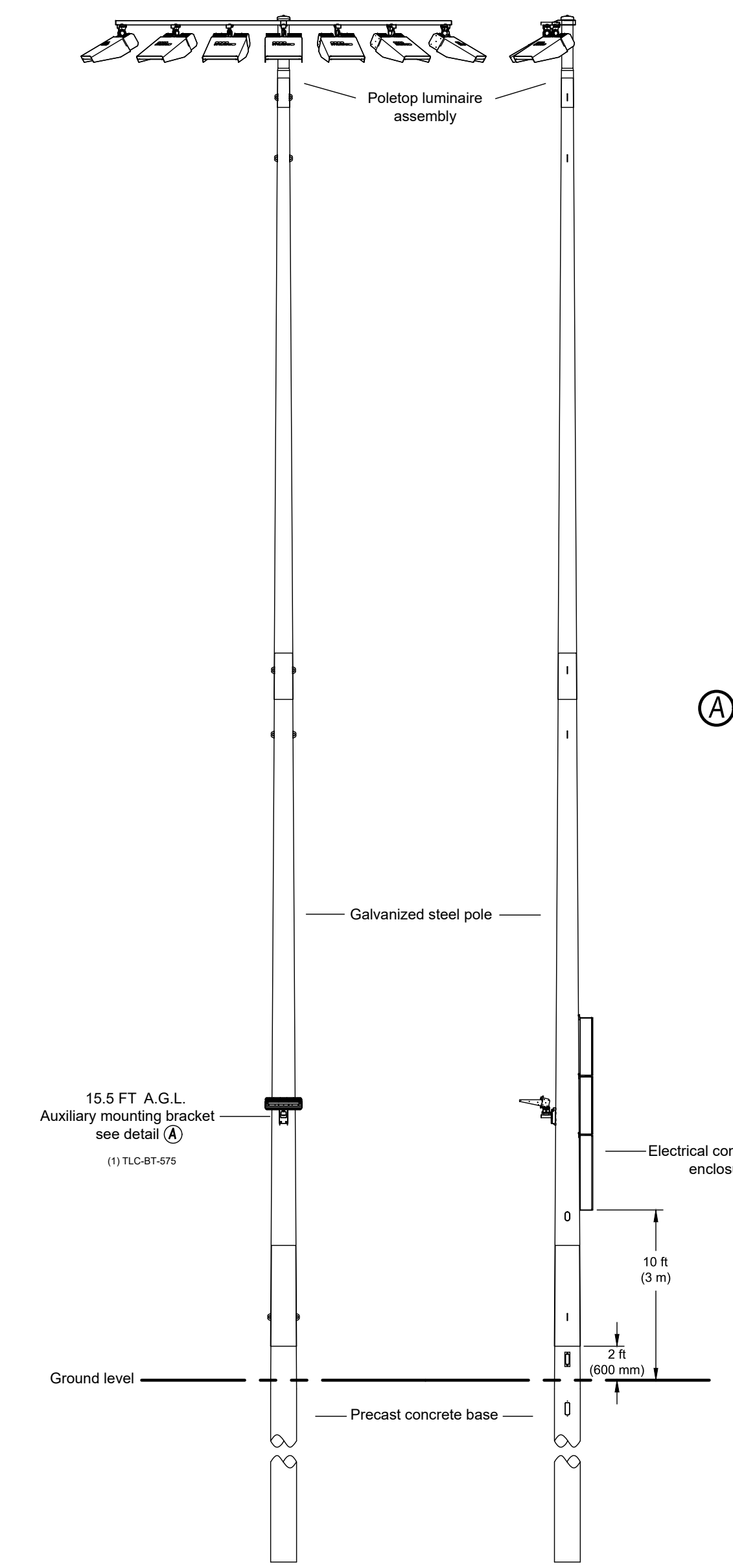


POLE(S): B4, B5, B6, B7
Musco 70FT Light-Structure System™ pole
TLC for LED™ luminaires

1. THE CONTRACTOR SHALL SUPPLY THE GROUNDING ROD AND CONNECTION TO THE SYSTEM GROUNDING LUG, CONCRETE BACKFILL, UNDERGROUND WIRING, CONDUIT AND SERVICE ENTRANCE.
2. THE CONTRACTOR TO SUBMIT A POLE FOUNDATION SHOP DRAWING SIGNED AND SEALED BY AN ENGINEER LICENSED IN NEW JERSEY.

MODEL: MUSCO LIGHT STRUCTURE TLC-LED-1500 AND TLC-LED-1200
MANUFACTURER: MUSCO LIGHTING
5146 W. HURLEY POND ROAD
FARMINGDALE, NJ 07727
PH: 732-751-9114

POLES B4, B5, B6, B7
ATHLETIC LIGHT STRUCTURE WITH
SINGLE HEAD 4 FIXTURES DETAIL
NOT TO SCALE

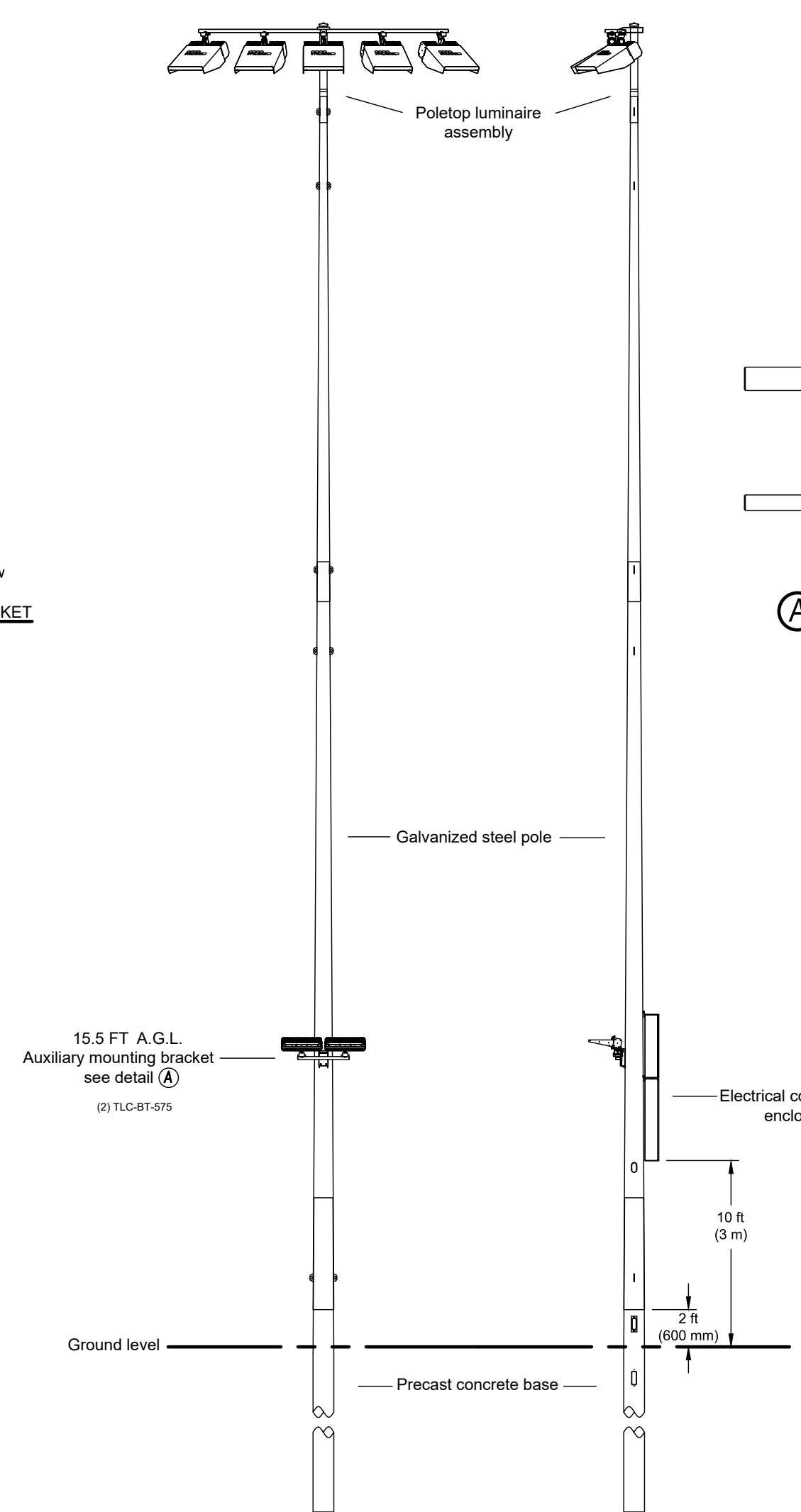


POLE(S): B8, B9
Musco 80FT Light-Structure System™ pole
TLC for LED™ luminaires

1. THE CONTRACTOR SHALL SUPPLY THE GROUNDING ROD AND CONNECTION TO THE SYSTEM GROUNDING LUG, CONCRETE BACKFILL, UNDERGROUND WIRING, CONDUIT AND SERVICE ENTRANCE.
2. THE CONTRACTOR TO SUBMIT A POLE FOUNDATION SHOP DRAWING SIGNED AND SEALED BY AN ENGINEER LICENSED IN NEW JERSEY.

MODEL: MUSCO LIGHT STRUCTURE TLC-LED-1500 AND TLC-LED-1200
MANUFACTURER: MUSCO LIGHTING
5146 W. HURLEY POND ROAD
FARMINGDALE, NJ 07727
PH: 732-751-9114

POLES B8, B9
ATHLETIC LIGHT STRUCTURE WITH
SINGLE HEAD 7 FIXTURES DETAIL
NOT TO SCALE



POLE(S): C5, C6
Musco 70FT Light-Structure System™ pole
TLC for LED™ luminaires

1. THE CONTRACTOR SHALL SUPPLY THE GROUNDING ROD AND CONNECTION TO THE SYSTEM GROUNDING LUG, CONCRETE BACKFILL, UNDERGROUND WIRING, CONDUIT AND SERVICE ENTRANCE.
2. THE CONTRACTOR TO SUBMIT A POLE FOUNDATION SHOP DRAWING SIGNED AND SEALED BY AN ENGINEER LICENSED IN NEW JERSEY.

MODEL: MUSCO LIGHT STRUCTURE TLC-LED-1500 AND TLC-LED-1200
MANUFACTURER: MUSCO LIGHTING
5146 W. HURLEY POND ROAD
FARMINGDALE, NJ 07727
PH: 732-751-9114

POLES C5, C6
ATHLETIC LIGHT STRUCTURE WITH
SINGLE HEAD 5 FIXTURES DETAIL
NOT TO SCALE

BASEBALL FIELD NO. 1

EQUIPMENT LIST FOR AREAS SHOWN										
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS		
2	A8-A9	70'	-	15.5'	TLC-BT-575	1	1	0		
				70'	TLC-LED-1200	4	4	0		
2	B8-B9	80'	-	15.5'	TLC-BT-575	1	1	0		
				80'	TLC-LED-1500	7	7	0		
2	C5-C6	70'	-	15.5'	TLC-BT-575	2	2	0		
				70'	TLC-LED-1500	5	5	0		
6	TOTALS						40	40	0	

SOFTBALL FIELD NO. 2

EQUIPMENT LIST FOR AREAS SHOWN										
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS		
2	A4-A5	60'	-	60'	TLC-LED-900	1	1	0		
				15.5'	TLC-BT-575	1	1	0		
				60'	TLC-LED-1200	2	2	0		
2	B4-B5	70'	-	15.5'	TLC-BT-575	1	1	0		
				70'	TLC-LED-1500	4	4	0		
4	TOTALS						18	18	0	

SOFTBALL FIELD NO. 5

EQUIPMENT LIST FOR AREAS SHOWN										
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS		
2	A6-A7	60'	-	60'	TLC-LED-900	1	1	0		
				15.5'	TLC-BT-575	1	1	0		
				60'	TLC-LED-1200	2	2	0		
2	B6-B7	70'	-	15.5'	TLC-BT-575	1	1	0		
				70'	TLC-LED-1500	4	4	0		
4	TOTALS						18	18	0	

THE CONTRACTOR IS RESPONSIBLE FOR AUGURING THROUGH SOIL OR DRILLING THROUGH ROCK AS REQUIRED TO INSTALL THE FOUNDATION IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS AT NO CHARGE TO THE OWNER.

No.	Date	Revision	Revised By	Checked By

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ATHLETIC FIELD LIGHTING NOTES AND DETAILS FOR MANNINO PARK SYNTHETIC TURF ATHLETIC FIELDS AND SITE IMPROVEMENTS LOT 6 BLOCK 8005 CONTRACT NO. 2023-37 TOWNSHIP OF OLD BRIDGE MIDDLESEX COUNTY, NEW JERSEY

DATE: 12/02/2022
DESIGNED BY: JB
DRAWN BY: JB

SCALE: AS SHOWN
FIELD BOOK

PROJECT NUMBER: 4043.016
SHEET: L-2.2

G:\VA\4000\4043 - Old Bridge-General\4043.016 - L-ATHLETIC-FIELD.ALD

ELECTRICAL GENERAL NOTES

- DRAWINGS ARE DIAGRAMMATIC AND DEFINE THE INTENT OF THE WORK. LOCATIONS OF EQUIPMENT, FIXTURES, DEVICES, PANELBOARDS, DUCTS, PIPING, DIFFUSERS, PARTITIONS, OPENINGS, ETC. ARE APPROXIMATE AND ARE SUBJECT TO MODIFICATIONS CAUSED BY STRUCTURAL CONDITIONS AND EQUIPMENT PROVIDED BY OTHER CONTRACTORS. SUBCONTRACTORS OR THE OWNER, COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES. DETERMINE ROUGHING LOCATIONS FROM APPROVED SHOP DRAWINGS. MINOR MODIFICATIONS OF LOCATIONS REQUIRED TO EFFECT SUCH COORDINATION SHALL BE MADE AT NO COST TO THE OWNER.
- THE DRAWINGS HAVE BEEN PRODUCED ENTIRELY ON FPA CADD SYSTEM. ANY OTHER LETTERING, LINES OR SYMBOLS, OTHER THAN PROFESSIONAL STAMPS AND SIGNATURES, HAVE BEEN MADE WITHOUT THE AUTHORIZATION OF FPA AND ARE INVALID.
- REPRODUCTION OF ANY PORTION OF THE CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
- SPECIFICATIONS MAY REQUIRE WORK, EQUIPMENT, SYSTEMS, METHODS, ETC. THAT IS NOT INDICATED ON THE DRAWINGS.
- DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLEMENTARY TO EACH OTHER. WHERE DISCREPANCIES OR CONFLICTS OCCUR, THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY METHOD IN HIS PROPOSAL UNLESS CLARIFIED BY BULLETIN OR ADDENDUM ACKNOWLEDGED PRIOR TO RECEIPT OF BIDS.
- DRAWINGS SHALL NOT BE SCALED. DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND REQUIREMENTS OF THE WORK. ALTHOUGH SIZE AND LOCATION OF EQUIPMENT IS DRAWN TO SCALE, WHENEVER POSSIBLE, CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACT DOCUMENTS AND VERIFY INFORMATION AT THE PROJECT SITE.
- THE OWNER WILL OCCUPY THE SITE AND EXISTING BUILDINGS DURING THE ENTIRE CONSTRUCTION PERIOD. COOPERATE WITH THE OWNER DURING CONSTRUCTION OPERATIONS TO AVOID ANY CONFLICTS. PERFORM THE WORK SO AS NOT TO INTERFERE WITH THE OWNER'S OPERATIONS. SCHEDULE ALL POWER OUTAGES FOR OVERTIME ON SUNDAYS AND HOLIDAYS AT NO ADDITIONAL COST TO THE OWNER.
- EXISTING PROJECT CONDITIONS INDICATED ARE BASED ON FIELD OBSERVATION, EXISTING DESIGN / CONSTRUCTION DOCUMENTS AND EXISTING RECORD DOCUMENTS AND ARE INTENDED TO INDICATE THE SCOPE OF THE WORK AFFECTED BY THIS PROJECT.
- THE TERM "OTHERS" SHALL BE UNDERSTOOD TO MEAN CONTRACTORS, SUBCONTRACTORS OR TRADESMEN ON THE PROJECT PERFORMING WORK ON THIS PROJECT UNDER SECTIONS OR DIVISIONS OTHER THAN DIVISION 16 - ELECTRICAL WORK.
- VERIFY THAT FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS INDICATED.
- PRIOR TO BIDDING VISIT THE PROJECT SITE TO DETERMINE THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. SCHEDULE SITE VISIT WITH OWNER.
- PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR THE INSTALLATION, RELOCATION AND CONNECTION OF THE ELECTRICAL WORK.
- ALL MATERIAL SHALL BE UNDERWRITERS' LABORATORIES LISTED FOR ITS APPLICATION WHERE SUCH LISTING IS APPLICABLE.
- ALL EQUIPMENT SHALL BE AS INDICATED OR AS APPROVED BY THE ENGINEER.
- SUBMIT SHOP DRAWINGS, PRODUCT DATA SHEETS AND WIRING DIAGRAMS FOR ALL ELECTRICAL CONSTRUCTION MATERIALS, DEVICES, EQUIPMENT, APPLIANCES AND SYSTEMS.
- OBTAIN ALL PERMITS REQUIRED. HAVE THE WORK INSPECTED FOR CODE COMPLIANCE AND PAY ALL FEES FOR INSPECTION AND CERTIFICATION.
- MAKE THE NECESSARY ARRANGEMENTS, AND PAY ALL COSTS, FOR TEMPORARY AND/OR PERMANENT ELECTRIC SERVICE FOR THE PROJECT.
- MAINTAIN CONTINUITY OF EXISTING CIRCUITS AFFECTED BY THIS WORK WHICH MUST REMAIN IN SERVICE.
- WHERE ELECTRICAL EQUIPMENT (I.E. PANELBOARDS, TRANSFORMERS, DISCONNECTS, ETC.) IS INDICATED TO BE MODIFIED TO ACCEPT NEW WORK SAID MODIFICATIONS SHALL BE PERFORMED BY ELECTRICAL EQUIPMENT FABRICATORS OR MANUFACTURER'S REPRESENTATIVES WHO CAN AFFECT SUCH MODIFICATIONS WITHOUT VOIDING THE UL LABEL OR MANUFACTURER'S WARRANTIES.
- WHERE EXISTING EQUIPMENT IS INDICATED TO BE "CONNECTED" OR "RECONNECTED" TO NEW WIRING, CONDUIT, ETC. THE CONTRACTOR SHALL FABRICATE AND INSTALL THE NEW SYSTEM CONNECTIONS TO MATCH THE CONNECTION POINTS AND OTHER REQUIREMENTS OF THE EXISTING EQUIPMENT, WHERE THE EXISTING EQUIPMENT MUST BE REMOVED AND REINSTALLED TO FACILITATE THE REMOVAL OF THE OLD CONNECTIONS AND/OR THE CONNECTION OF THE NEW MATERIAL, THAT WORK SHALL BE A PART OF THIS CONTRACT.
- EXACT LOCATION OF EQUIPMENT SHALL BE COORDINATED IN THE FIELD.
- GROUNDING AND BONDING SHALL MEET NEC AND EQUIPMENT / SYSTEM MANUFACTURER'S REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF DEBRIS GENERATED BY HIS WORK AND WORKERS AT THE END OF EACH WORKING DAY AND FOR GENERAL GOOD HOUSEKEEPING BY HIS WORKERS. CONTRACTOR SHALL PROVIDE REQUIRED REFUSE CONTAINERS.
- DISCONNECT AND REMOVE FROM THE PREMISES, OR STORE ON THE PREMISES IF REQUESTED BY THE OWNER, ALL SITE LIGHTING POLES AND FIXTURES REMOVED AS A RESULT OF THIS WORK. MAKE SAFE ALL WIRING AND CABLE WHICH MUST REMAIN IN SERVICE.

ELECTRICAL SPECIFICATION

- DEMOLITION
 - FURNISH ALL LABOR AND MATERIALS AS REQUIRED TO COMPLETE DEMOLITION AND REMOVAL OF ALL ITEMS AS INDICATED ON DRAWINGS OR AS OTHERWISE DIRECTED BY INCLUDING TEMPORARY PROTECTION AS INDICATED BELOW.
 - PROVIDE TEMPORARY PROTECTIONS AS REQUIRED TO PRESERVE EXISTING ITEMS INDICATED TO REMAIN AND RESTORE DAMAGED WORK TO THE CONDITION EXISTING PRIOR TO THE START OF WORK, UNLESS OTHERWISE DIRECTED.
 - ALL WORK DEMOLISHED SHALL BE REMOVED FROM THE PREMISES EXCEPT ITEMS TO BE REUSED OR RETURNED TO OWNER OR AS OTHERWISE INDICATED.
 - PATCHING AND CUTTING
 - PERFORM ALL CUTTING, FITTING AND PATCHING WORK THAT MAY BE REQUIRED BY ITS WORK AND AS SHOWN OR REASONABLY IMPLIED BY THE DRAWINGS AND NOTES.
 - PERFORM WORK IN ADVANCE OF THE WORK OF OTHERS WHENEVER POSSIBLE IN ORDER TO MINIMIZE CUTTING AND PATCHING.
 - ALL DAMAGED AREAS AND EXISTING AREAS EFFECTED BY DEMOLITION OR NEW CONSTRUCTION WORK SHOWN ON DRAWINGS SHALL BE PATCHED AS REQUIRED TO MATCH IMMEDIATE EXISTING ADJACENT AREAS IN MATERIAL, FIRE RATING, FINISH COLOR, UNLESS OTHERWISE NOTED.
 - PROVIDE SUPPORTS TO ASSURE STRUCTURAL INTEGRITY OF SURROUNDINGS, DEVICES AND METHODS TO PROTECT OTHER PORTIONS OF PROJECT FROM DAMAGE.
 - EXECUTE WORK BY METHODS TO AVOID DAMAGE TO OTHER WORK, AND WHICH WILL PROVIDE PROPER SURFACES TO RECEIVE PATCHING AND FINISHING.
 - GENERAL
 - FURNISH AND INSTALL ALL ELECTRICAL WORK AS SHOWN ON THE DRAWINGS AND THESE SPECIFICATIONS HEREIN. WORK INCLUDES THE FOLLOWING UNDERSTANDINGS:
 - CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO OUTLINE BASIC ENGINEERING AND SYSTEMS DESIGN, THEREFORE DO NOT SHOW MINOR DETAILS AND ACCESSORIES. BECAUSE A MINOR COMPONENT IS NOT SHOWN, SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FURNISHING AND INSTALLING ALL SUCH ITEMS NECESSARY TO PROVIDE COMPLETE, OPERATIVE AND PROPERLY INSTALLED SYSTEMS TO THE OWNER. UNDER THE BASIC CONTRACT, IF THERE ARE ANY DOUBTS AS TO WORK REQUIRED, THE CONTRACTOR SHALL OBTAIN A CLARIFICATION FROM THE ENGINEER IN THE BID STAGE.
 - THE CONTRACT DRAWINGS SHOW THE INTENDED LOCATION OF THE EQUIPMENT, HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MINOR ADJUSTMENTS OR RELOCATIONS NECESSARY DUE TO CHOICE OF EQUIPMENT AND COORDINATION CONFLICTS. ALL EQUIPMENT RELOCATIONS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
 - THE PROJECT DRAWINGS, THIS SPECIFICATION, AND OTHER RELATED DOCUMENTS ARE COMPLEMENTARY. ITEMS REQUIRED BY ONE SHALL DESIGNATE REQUIREMENT BY THE OTHER, WHETHER EXPLICITLY STATED OR NOT. WHERE DOCUMENTS CONFLICT, THE WORK OF THE MORE STRINGENT NATURE SHALL BE REQUIRED.
 - COOPERATION AND COORDINATION WITH UTILITIES, OWNER, AND OTHER SUBCONTRACTORS IS MANDATORY.
 - EXISTING WORK AND UTILITIES WHICH ARE DAMAGED OR DISTURBED DUE TO ANY PHASE OF OPERATIONS, SHALL BE RESTORED TO THE SATISFACTION OF FPA, THE OWNER, AND THE GOVERNING AUTHORITIES.
 - CLEARANCES FOR WORKING SPACE AND MAINTENANCE SHALL BE MAINTAINED AS REQUIRED BY CODE AND/OR MANUFACTURER'S REQUIREMENT, WHICHEVER IS MORE STRINGENT.
 - "PROVIDE" AND/OR "FURNISH AND INSTALL" MEANS PURCHASE, ARRANGE DELIVERY, UNLOAD, INSTALL, CONNECT, TEST, AND LEAVE READY FOR OPERATION.
 - THE WORK CALLED FOR ON THE DRAWINGS AND SPECIFICATIONS HEREIN SHALL BE COORDINATED WITH THE WORK OF ALL OTHER TRADES AND SHALL BE SO ARRANGED THAT THERE WILL BE NO DELAY IN THE PROPER INSTALLATION AND COMPLETION OF ANY PART OR PARTS OF EACH RESPECTIVE WORK WHEREIN IT MAY BE INTERRELATED WITH THAT OF THIS CONTRACT SO THAT GENERALLY ALL WORK CAN PROCEED IN ITS NATURAL SEQUENCE WITHOUT UNNECESSARY DELAY.
 - WHERE EXISTING POWER CIRCUITS HAVE BEEN DISTURBED, ALL COSTS FOR RE-CIRCUITING OF SAME IS TO BE INCLUDED.
 - SHOP DRAWINGS AND DATA SHEETS ARE REQUIRED FOR ASSEMBLIES AND EQUIPMENT. THEY SHALL PROVIDE ALL PERTINENT DATA AND INFORMATION NECESSARY TO EVALUATE EACH ITEM. IRRELEVANT INFORMATION ON DRAWINGS AND DATA SHEETS SHALL BE COMPLETELY MARKED OUT LEAVING ONLY DATA THAT PERTAINS TO THE ITEMS SUBMITTED FOR APPROVAL. DRAWINGS AND DATA SHEETS SHALL SHOW:
 - PRINCIPAL DIMENSIONS AND DETAILS OF CONSTRUCTION.
 - WEIGHTS OF PRINCIPAL PARTS AND TOTAL WEIGHTS WITH INFORMATION REQUIRED FOR THE DESIGN OF SUPPORTS AND FOUNDATIONS.
 - PERFORMANCE DATA.
 - UNDERWRITERS LABEL AND OTHER AUTHORITIES HAVING JURISDICTION OF EQUIPMENT REQUIRING LABELS.
 - CERTIFIED PERFORMANCE GUARANTEES.
 - OVERLOAD DEVICES SHALL BE ADJUSTED AND SET TO SUIT THE LOADS WHICH THEY CONTROL.
 - ALL CHANGES SHALL BE MADE THAT ARE NECESSARY FOR ADJUSTING, SETTING, AND BALANCING.
 - PHASE RATING AT ALL BUSES, PANELS, ETC. SHALL BE CHECKED TO SEE THAT IT CONFORMS WITH RECOGNIZED STANDARDS.
 - THE COMPLETE ELECTRICAL SYSTEM SHALL BE FREE OF GROUNDS AND SHORT CIRCUITS. IT SHALL OPERATE PROPERLY UNDER FULL LOAD CONDITIONS WITHOUT EXCESSIVE HEATING AT ANY POINT IN THE SYSTEM.
 - ANY ELECTRIC SERVICE SHUTDOWNS REQUIRED FOR THIS WORK SHALL BE REQUESTED IN WRITINGS BY THE ELECTRICAL CONTRACTOR AT LEAST 72 HOURS IN ADVANCE OF THE SHUTDOWN. THE ELECTRICAL CONTRACTOR SHALL OBTAIN APPROVAL IN WRITING FROM THE OWNER PRIOR TO SHUTDOWN.
 - CONDUITS
 - POCKETS OR TRAPS IN ALL CONDUIT RUNS WHERE MOISTURE MAY COLLECT SHALL BE AVOIDED. WHERE DIPS ARE UNAVOIDABLE, AN APPROVED DRAIN FITTING SHALL BE LOCATED AT EACH LOW POINT IN ORDER TO PROVIDE A MEANS FOR DRAINAGE.
- CONDUITS SHALL BE IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF THE NEC. EXCEPT NO 1/2" CONDUIT WILL BE PERMITTED (ALL CONDUIT SHALL BE A MINIMUM OF 3/4")
- SLEEVES PASSING THROUGH FIRE WALLS AND ALL SLEEVES PASSING THROUGH FLOORS SHALL BE SIZED TO ALLOW SUFFICIENT SPACE BETWEEN SLEEVE AND CONDUIT FOR FIREPROOFING WITH 3M FIRE BARRIER CAULKING MATERIAL. OPEN ALL SPARE SLEEVES PASSING THROUGH FIRE WALLS OR FLOORS SHALL BE THOROUGHLY PACKED WITH 3M FIRE BARRIER PUTTY 303 AND CAPPED.
- INSTALLATION SHALL BE SUCH SO AS TO SUPPORT CONDUIT WITHOUT SAGGING AND SHALL BE CLEAR OF THE WORK OF OTHER TRADES. PROVISIONS FOR EXPANSION AND CONTRACTION SHALL BE MADE.
- CONDUITS SHALL BE FREE OF MOISTURE AND HANDHOLES SHALL BE DRY.
- BOXES
 - PULL BOXES SHALL BE OF DWJWE SIZE FOR THE APPLICATION, AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NEC REQUIREMENTS.
 - HANDHOLES SHALL BE INSTALLED BETWEEN A MAXIMUM OF EVERY 3 RIGHT ANGLE BENDS OR THE EQUIVALENT. LONG CONDUITS RUNS SHALL HAVE A HANDHOLE AT LEAST EVERY 100' 0".
 - ALL OUTLET BOXES SHALL BE NEMA 3R.
- CABLES/WIRES
 - USE ONLY APPROVED TYPE LUBRICANT TO FACILITATE THE PULLING OF WIRE AND CABLE.
 - CONDUCTORS SHALL RUN CONTINUOUS FROM OUTLET TO OUTLET. SPLICES AND TAPS WILL NOT BE ALLOWED ALONG THE CONDUCTOR. CONDUCTORS SHALL TERMINATE IN TERMINAL LUGS OR CONNECTORS MADE UP OF INSULATED TERMINAL POSTS, APPROVED AND LISTED FOR THE PURPOSE.
 - ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER 75°C. TYPE THWN AND THHN. ALL SIZES SHOWN ON THE DRAWINGS ARE BASED ON THHN COPPER.
 - WHENEVER MULTIPLE SETS OF FEEDERS ARE RUN TO A DEVICE OR PIECE OF EQUIPMENT, EACH SET SHALL RUN IN ITS OWN CONDUIT. MULTIPLE SETS OF FEEDERS ARE NOT PERMITTED IN A COMMON CONDUIT. NO EXCEPTIONS.
 - ALL CONDUCTORS SHALL BE COPPER. ALUMINUM CONDUCTORS SHALL NOT BE USED.
 - ALL PHASE LEG, NEUTRAL AND GROUND CONDUCTORS SHALL BE PROPERLY COLOR CODED IN ALL PANELS, TROUGHS, CABINETS, AND BOXES IN ACCORDANCE WITH THE NEC.
 - CONDUCTORS UP TO AND INCLUDING SIZE #6 AWG. SHALL BE TYPE THWN-THHN. CONDUCTORS LARGER THAN SIZE #6 AWG. SHALL BE TYPE THHN. ALL RATED 600 VOLTS, COPPER CONDUCTORS.
 - MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG.
- GROUNDING
 - GROUNDING OF THE NON-CURRENT CARRYING METALLIC PARTS OF ALL ELECTRICAL EQUIPMENT AND ENCLOSURES INCLUDING CONDUITS, SUPPORTS, CABINETS, TRANSFORMERS, CONTROL PANELS, ETC. WHICH ARE INSTALLED OR CONNECTED UNDER THIS CONTRACT, SHALL BE PROPERLY CONNECTED TO THE GROUNDING SYSTEM, REGARDLESS OF WHETHER OR NOT THESE CONNECTIONS ARE SHOWN ON THE DRAWINGS.
 - THE GROUNDING INSTALLATION SHALL HAVE PROVISIONS FOR BOTH SYSTEM AND EQUIPMENT GROUNDS AS DEFINED BY THE NEC. THESE GROUNDING SYSTEMS ARE TO BE EFFECTIVELY INSULATED FROM EACH OTHER EXCEPT AT THE SERVICE CONNECTION.
 - GROUNDING SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF NEC AND THE NESC. LOCAL REQUIREMENTS OF THE INSPECTION AUTHORITY HAVING JURISDICTION SHALL GOVERN IN ALL MATTERS OF INTERPRETATION.
- LIGHTING FIXTURES AND WIRING DEVICES
 - FURNISH AND INSTALL ALL LIGHTING FIXTURES AS SHOWN AND SPECIFIED ON THE DRAWINGS AND SCHEDULES.
 - SCOPE SHALL BE BASED UPON FURNISHING AND INSTALLING NEW LIGHTING FIXTURES AND REMOVING AND REINSTALLING EXISTING LIGHTING FIXTURES OF TYPES AND MANUFACTURERS AS INDICATED ON FPA DRAWINGS.
 - AFTER TESTS HAVE BEEN COMPLETED, CLEAN ALL LIGHTING FIXTURES AND EQUIPMENT LEAVING EVERYTHING IN WORKING ORDER AT THE COMPLETION OF THE ELECTRICAL WORK.
 - SUBMIT CATALOG CUTS OF ALL FIXTURES.
 - COORDINATE ALL ELECTRICAL LIGHTING INSTALLATION WITH OTHER TRADES AS REQUIRED.
 - ALL LIGHTING FIXTURES SHALL BE UL LISTED AND SHALL HAVE MANUFACTURER'S NAME ON EACH FIXTURE.
 - CONTROL AND LIGHTING CIRCUITS SHALL BE CHECKED FOR PROPER FUNCTION AND FAIL-SAFE OPERATION.
- TELEPHONE AND IT
 - PROVIDE TELEDATA OUTLETS AND CAT5 WIRING TO CONCESSION STAND WHERE SHOWN ON THE PLANS AND ALL NECESSARY CONDUIT RUNS AS DESIGNATED.
 - ALL WIRING DEVICES SHALL BE INSTALLED WITH AN "IN-USE" LOCKING CAST ALUMINUM COVER AS MANUFACTURED BY HUBBELL #WP26E OR APPROVED EQUAL.
- WIRING DEVICES
 - DUPLEX CONVENIENCE RECEPTACLES SHALL BE HEAVY DUTY, 20 DWJWE, 125 VOLT PARALLEL SLOT, GROUND FAULT INTERRUPTING TYPE, EQUAL TO HUBBELL #GF-BFHP20 OR APPROVED EQUAL.
 - ALL RECEPTACLES SHALL BE INSTALLED WITH AN "IN-USE" LOCKING CAST ALUMINUM COVER AS MANUFACTURED BY HUBBELL #WP26E OR APPROVED EQUAL.
- SAFETY SWITCHES
 - FURNISH AND INSTALL ALL DISCONNECT SWITCHES INDICATED ON THE DRAWINGS, UNLESS OTHERWISE NOTED.
 - ALL SAFETY SWITCHES SHALL BE QUICK MAKE, QUICK BREAK TYPE.
 - ALL SAFETY SWITCHES AND ENCLOSURES SHALL BE UL LISTED AND SHALL BE NEMA 3R.
 - ALL SAFETY SWITCHES SHALL BE HORSEPOWER RATED AND HAVE PROVISIONS FOR LOCKOUT.
 - ALL SAFETY SWITCHES SHALL BE AS MANUFACTURED BY SQUARE 'D', SIEMENS, CUTLER-HAMMER OR APPROVED EQUAL.
- PANEL BOARDS
 - FURNISH AND INSTALL CIRCUIT BREAKER TYPE PANEL BOARDS AS INDICATED IN THE PANEL BOARD SCHEDULES WITH BREAKERS OF FRAME AND TRIP RATINGS AS SHOWN ON THE SCHEDULES. WHERE PANEL BOARDS ARE SURFACE MOUNTED, INCLUDE SKIRT AND CAP TO MAKE CONTINUOUS FROM FLOOR TO CEILING.
 - CIRCUIT BREAKERS SHALL BE QUICK-MAKE, THERMAL-MAGNETIC, TRIP INDICATING AND HAVE COMMON TRIP ON ALL MULTIPLE BREAKERS. TRIP INDICATION SHALL BE CLEARLY SHOWN BY THE BREAKER HANDLE TAKING POSITION BETWEEN "ON" AND "OFF" WHEN THE BREAKER IS TRIPPED AND BY INDICATION. THE INDICATION SHALL CONSIST OF A HIGHLY VISIBLE RED TRIPPED CIRCUIT INDICATOR. CONNECTION TO THE BUS SHALL BE BOLT-ON TYPE.
 - BUS BAR CONNECTIONS TO THE BRANCH CIRCUIT SHALL BE "PHASE SEQUENCE" TYPE. THREE(3) PHASE, FOUR(4) WIRE BUSSING SHALL BE SUCH THAT ANY THREE(3) ADJACENT SINGLE POLE BREAKERS ARE INDIVIDUALLY CONNECTED TO EACH OF THE THREE(3) DIFFERENT PHASES IN SUCH A MANNER THAT TWO(2) OR THREE(3) POLE BREAKERS CAN BE INSTALLED AT ANY LOCATION, ALL CURRENT CARRYING PARTS OF THE BUS ASSEMBLY SHALL BE COPPER. MAINS RATINGS SHALL BE AS SHOWN IN THE PANEL BOARD SCHEDULE OR ON THE PLANS.
 - THE PANELBOARD BUS ASSEMBLY SHALL BE ENCLOSED IN A STEEL CABINET. THE SIZE OF THE WIRING DUCTS AND GAUGE OF STEEL SHALL BE IN ACCORDANCE WITH NEMA STANDARDS AND UL STANDARD FOR PANEL BOARDS. THE BOX SHALL BE FABRICATED FROM GALVANIZED STEEL OR EQUIVALENT RUST RESISTANT STEEL. FRONTS SHALL INCLUDE DOORS AND HAVE FLUSH, CYLINDER TUMBLER-TYPE LOCKS WITH CATCHES AND SPRING LOADED STAINLESS STEEL DOOR PULLS. THE FLUSH LOCK SHALL NOT BE REMOVABLE WITH DOORS IN THE LOCKED POSITION. A CIRCUIT DIRECTORY FRAME AND CARD WITH A CLEAR PLASTIC COVERING SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. THE DIRECTORY CARD SHALL BE TYPE WRITTEN TO IDENTIFY ALL EQUIPMENT TO AS-BUILT CONDITIONS AT COMPLETION OF JOB. PANEL DIRECTORIES SHALL INCLUDE MONTH AND YEAR IN LOWER RIGHT CORNER TO INDICATE WHEN MODIFICATIONS WERE MADE. FRONTS SHALL BE OF COBALT STEEL.
 - PANEL BOARDS SHALL HAVE A SHORT CIRCUIT CURRENT RATING EQUAL TO OR GREATER THAN THE INTEGRATED EQUIPMENT RATING AND SHALL BE FULLY RATED.
 - ALL TERMINATIONS SHALL BE RATED FOR 75 °C.
 - PANEL BOARDS SHALL BE LISTED BY UNDERWRITERS' LABORATORIES AND BEAR THE UL LABEL. PANEL BOARDS SHALL BE SQUARE D BOLT ON TYPE OR APPROVED EQUAL.
 - PANELBOARDS, METER SOCKET ENCLOSURES, CONTROLS PANELS, ETC. THAT ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT SERVICING OR MAINTENANCE WHILE ENERGIZED SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.
- LOW-VOLTAGE TRANSFORMERS
 - MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING (OR APPROVED EQUAL):
 - EATON ELECTRICAL INC.; CUTLER-HAMMER PRODUCTS.
 - GENERAL ELECTRIC COMPANY.
 - SIEMENS ENERGY & AUTOMATION, INC.
 - SQUARE D; SCHNEIDER ELECTRIC.
 - GENERAL TRANSFORMER REQUIREMENTS
 - DESCRIPTION: FACTOR-ASSEMBLED AND TESTED, AIR-COOLED UNITS FOR 60-HZ SERVICE.
 - CORES: GRAIN-ORIENTED, NON-AGING SILICON STEEL.
 - COILS: CONTINUOUS WINDINGS WITHOUT SPLICES EXCEPT FOR TAPS.
 - COIL MATERIAL: COPPER.
 - COMPLY WITH NEMA ST 20, AND LIST AND LABEL AS COMPLYING WITH UL 1561.
 - CORES: ONE LEG PER PHASE.
 - ENCLOSURE: NEMA 3R.
 - CORE AND COIL SHALL BE ENCAPSULATED WITHIN RESIN COMPOUND, SEALING OUT MOISTURE AND AIR.
 - TRANSFORMER ENCLOSURE GRAY FINISH. COMPLY WITH NEMA 250.
 - TAPS FOR TRANSFORMERS 25 KVA AND LARGER: TWO 2.5 PERCENT TAPS ABOVE AND TWO 2.5 PERCENT TAPS BELOW NORMAL FULL CAPACITY.
 - INSULATION CLASS: 220 DEG C. UL-COMPONENT-RECOGNIZED INSULATION SYSTEM WITH A MAXIMUM OF 150 DEG C RISE ABOVE 40 DEG C AMBIENT TEMPERATURE.
 - NAMEPLATES: ENGRAVED, LAMINATED-PLASTIC OR METAL NAMEPLATE.
 - CONSTRUCT CONCRETE BASES AND ANCHOR PAD MOUNTED TRANSFORMERS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - ADJUST TRANSFORMER TAPS TO PROVIDE OPTIMUM VOLTAGE CONDITIONS AT SECONDARY TERMINALS. OPTIMUM IS DEFINED AS NOT EXCEEDING NAMEPLATE VOLTAGE PLUS 10 PERCENT AND NOT BEING LOWER THAN NAMEPLATE VOLTAGE MINUS 3 PERCENT AT MAXIMUM LOAD CONDITIONS. SUBMIT RECORDING AND TAP SETTINGS AS TEST RESULTS.
 - EXISTING UTILITIES
 - THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THIS SET OF PLANS HAS BEEN DETERMINED FROM FIELD MEASUREMENTS AND / OR PLANS PROVIDED TO FRENCH & PARRELO ASSOCIATES. NO GUARANTEE IS MADE NOR SHOULD BE ASSUMED AS TO THE COMPLETENESS OR ACCURACY OF THE HORIZONTAL OR VERTICAL LOCATIONS. ALL PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS OF THE INFORMATION SHOWN PRIOR TO CONSTRUCTION ACTIVITIES.

POWER DEVICE LEGEND	
SYMBOLS	DESCRIPTION
	SURFACE MOUNTED PANELBOARD, POWER AND LIGHTING
	LIGHTING FIXTURE TAG.
	HOME RUN TO PANELBOARD.
	COMMUNICATIONS HANDHOLE - SIZE PER NEC
	HANDHOLE - SIZE PER NEC
	PULL BOX - SIZE PER NEC
	LIGHTING FIXTURE TAG. REFER TO CIVIL SITE PLANS, AND MUSCO DRAWINGS AND DETAILS FOR FIXTURE SPECIFICATIONS.
	SCOREBOARD STEP DOWN TRANSFORMER IN NEMA 3R ENCLOSURE, 277-120/240V AS MANUFACTURED BY SQUARE D, MODEL #1586F OR EQUIV. MOUNT ON SCOREBOARD.

ABBREVIATIONS		
A	DJWE	GND, G
AFF	ABOVE FINISHED FLOOR	IC
AFG	ABOVE FINISHED GRADE	IG
C	CONDUIT(S)	LC
CB	CIRCUIT BREAKER	MC
CH	COUNTER HEIGHT	MOD
CO	CONDUIT ONLY	NIC
CT	CURRENT TRANSFORMER	NL
CU	COPPER	NTS
EC	ELECTRICAL CONTRACTOR	RSS
EG	EQUIPMENT GROUND	SPD
EM	EMERGENCY	TSS
EMT	ELECTRICAL METALLIC TUBING	TVS
ETR	EXISTING TO REMAIN	UON
EWC	ELECTRIC WATER COOLER	V
FA	FIRE ALARM	W
FBO	FURNISHED BY OTHERS	WP
GFI	GROUND FAULT INTERRUPTER	
		GROUND INTERRUPTING CAPACITY
		ISOLATED GROUND LIGHTING CONTACTOR
		MOTOR OPERATED DDJWE
		NOT IN CONTRACT
		NIGHT LIGHT
		NOT TO SCALE
		RIGID GALVANIZED STEEL SURGE PROTECTIVE DEVICE
		TRANSIENT VOLTAGE SURGE SUPPRESSOR
		TIME CLOCK
		UNLESS OTHERWISE NOTED
		VOLTS
		WALL MOUNTED
		WEATHERPROOF

SYMBOL LIST NOTES

- SYMBOLS ARE INDICATED FOR GENERAL REFERENCE ONLY. THE PRESENCE OF A SYMBOL DOES NOT INDICATE ITS USE ON THIS PROJECT. REFER TO PLAN DRAWINGS FOR SPECIFIC SYMBOLS USED.

APPLICABLE CODES:

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST CODES AND SUBCODES AS ADOPTED BY THE STATE OF NEW JERSEY:

- NEW JERSEY UNIFORM CONSTRUCTION CODE (NUCC)
- 2018 INTERNATIONAL BUILDING CODE - NJ EDITION
- 2017 NATIONAL ELECTRICAL CODE
- 2016 NFPA 13
- 2016 ENERGY CODE - ASHRAE STANDARD 90.1
- REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION.

No.	Date	Revision	Revised By	Checked By

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FRENCH & PARRELO ASSOCIATES

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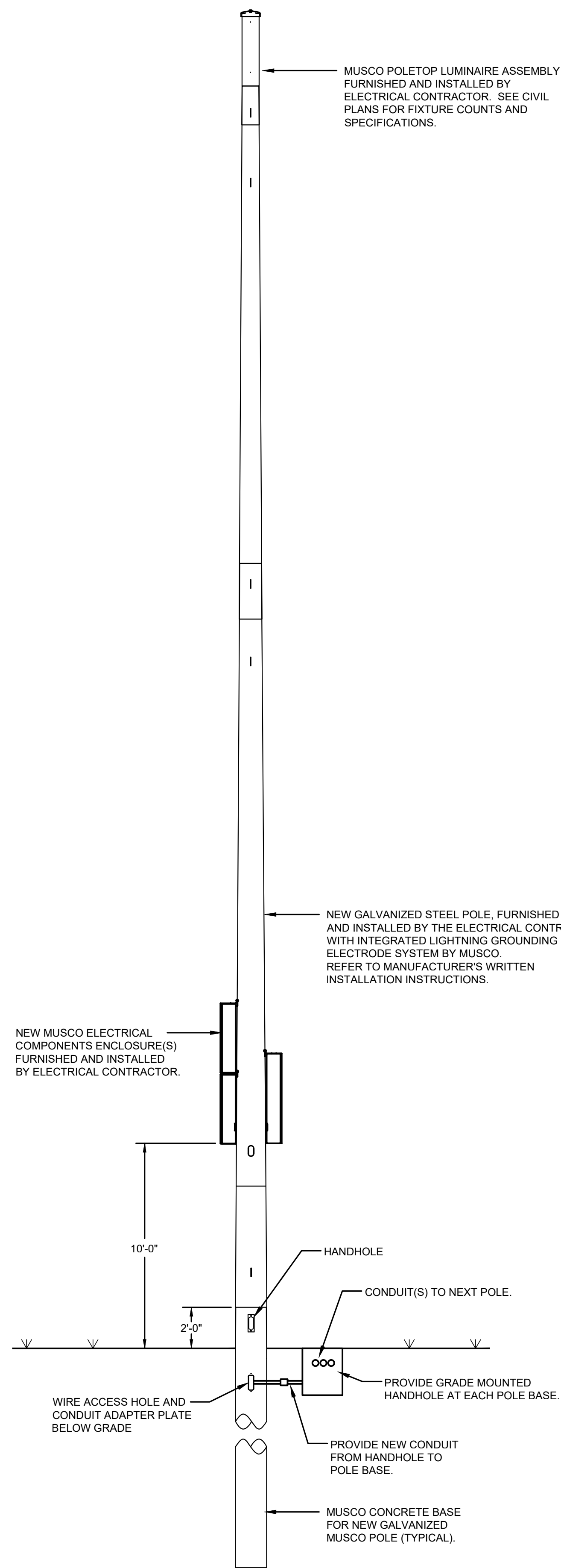
GENERAL ELECTRICAL INFORMATION

FOR
MANNING PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS

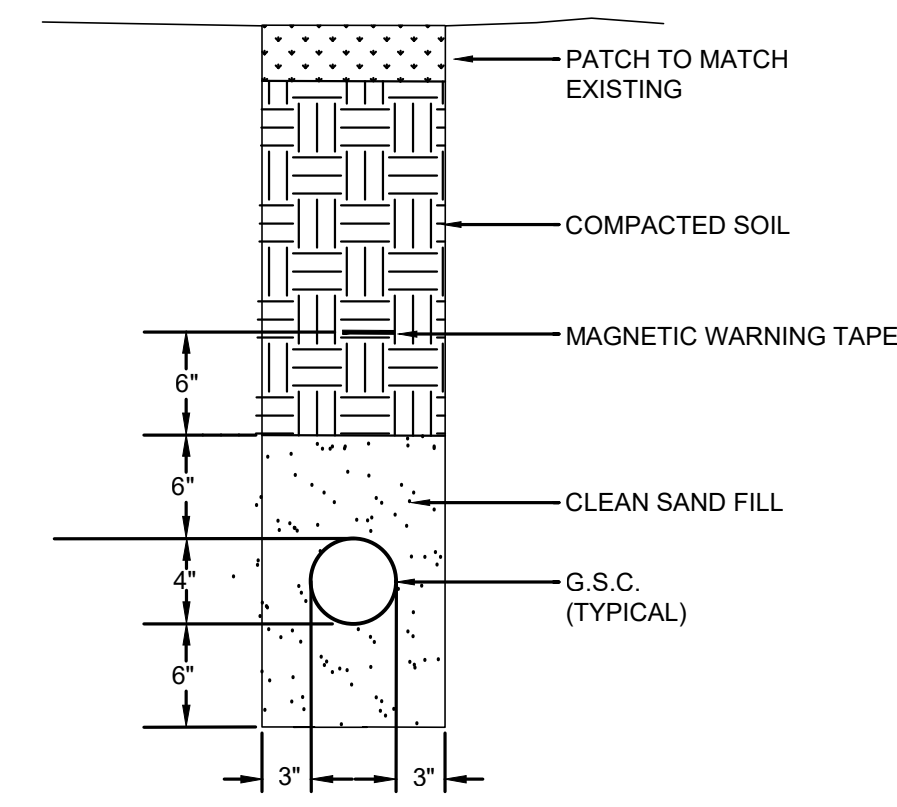
LOT 6 BLOCK 8005
TOWNSHIP OF OLD BRIDGE
MIDDLESEX COUNTY, NEW JERSEY

DATE: 11/11/2022
DESIGNED BY: AS SHOWN
DRAWN BY: CHECKED BY: FIELD BOOK SHEET: E-1.0

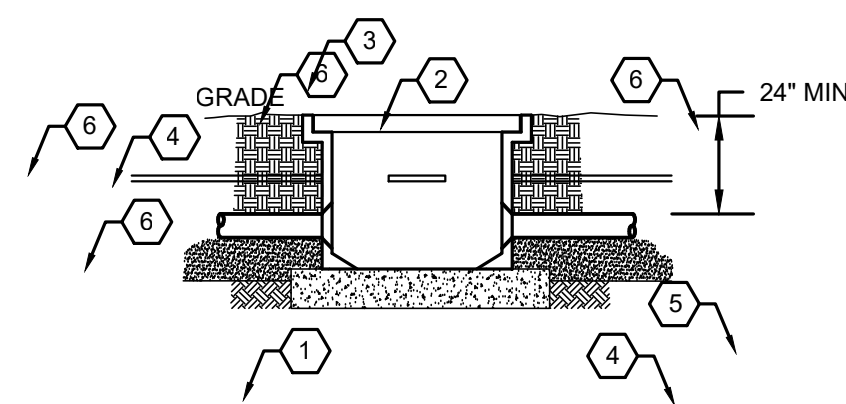
PROJECT NUMBER: 4043.016



TYPICAL MUSCO POLE DETAIL
NOT TO SCALE



DIRECT BURIAL CONDUIT DETAIL
NOT TO SCALE

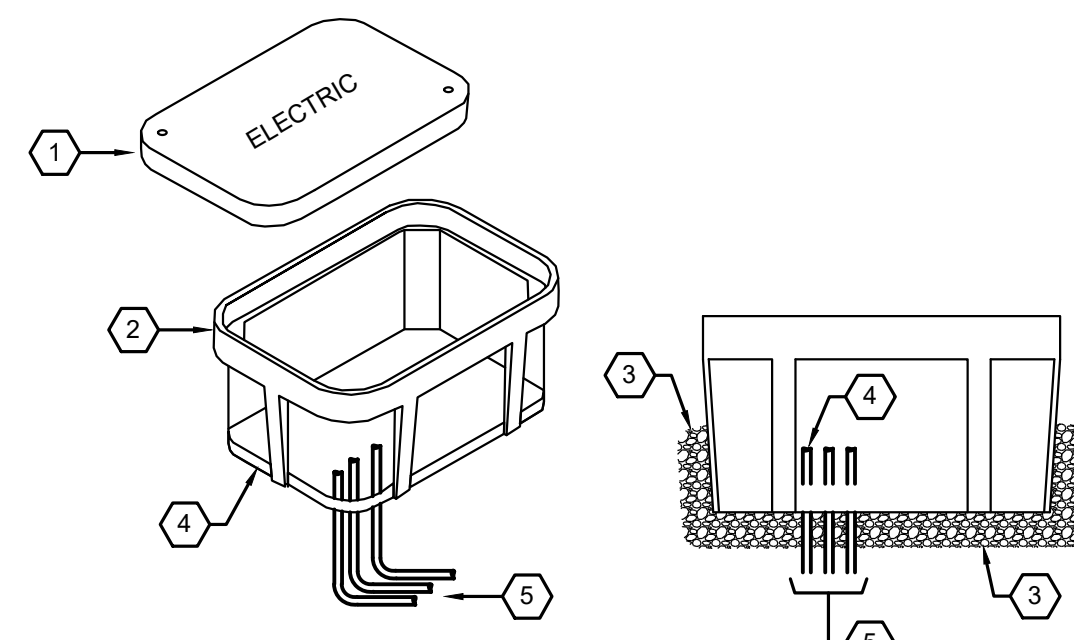


KEY NOTES

- 1 MIN. 6" DEEP GRAVEL BASE TO EXTEND 12" ALL AROUND JUNCTION BOX.
- 2 OPEN BOTTOM TYPE BOX.
- 3 COVER WITH "ELECTRIC" LOGO AND PENTA-HEAD BOLTS
- 4 MAIN ELECTRICAL CONDUIT RUN, DIRECT BURIED WITH SAND EMBEDMENT (2 x 2" PVC SCH-40 WITH BELL-END, 1-ACTIVE + 1-SPARE.
- 5 6" SAND EMBEDMENT FOR ALL CONDUITS (TYPICAL)
- 6 MAGNETIC WARNING TAPE, 12" ABOVE CONDUIT.

SITE WORK PULL BOX DETAIL

NOT TO SCALE

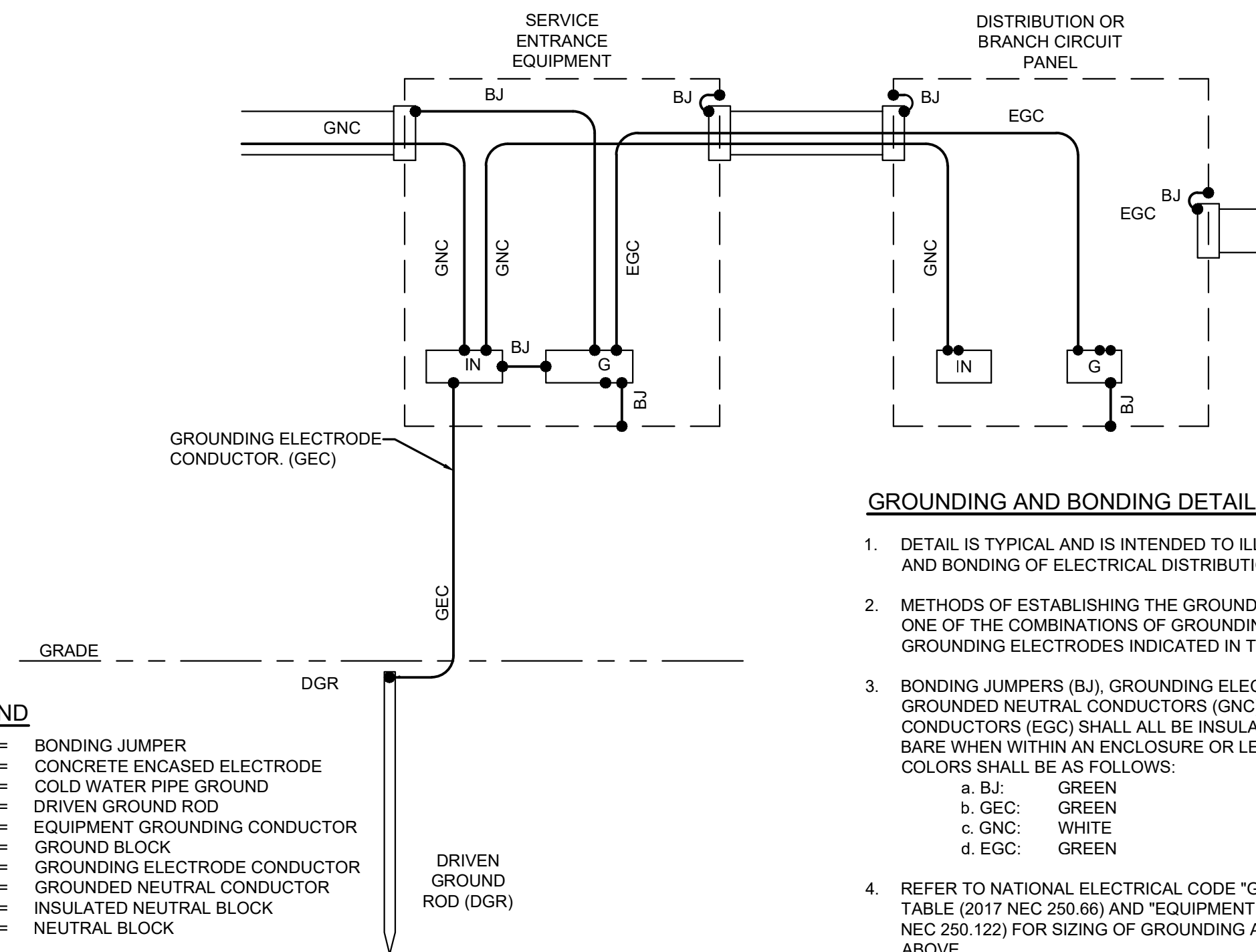


TYPICAL HANDHOLE DETAIL

NOT TO SCALE

HANDHOLE DETAIL KEY NOTES

- 1 RECESSED QUARTZITE PULLBOX, SIZED PER NEC, WITH GASKETED BOLT-ON COVER. COVER TO BE LABELED "ELECTRIC" OR "COMMUNICATIONS". WHERE INSTALLED IN PAVED AREAS, BOX SHALL BE VEHICULAR RATED.
- 2 TOP OF PULLBOX TO BE FLUSH WITH GRADE OR PAVED SURFACE.
- 3 MINIMUM 4" OF GRAVEL ON SIDES AND BOTTOM OF PULLBOX.
- 4 PROVIDE CLOSED BOTTOM PULLBOX WITH DRAIN.
- 5 CONDUITS TO BE STUBBED UP INTO BOX. PROVIDE CAP FOR SPARE CONDUITS. REFER TO THE SITE PLANS, ONE-LINE DIAGRAM, AND PANEL SCHEDULES FOR QTY AND SIZE OF CONDUITS. ALL CONDUITS SHALL BE SEALED SO THAT WATER DOES NOT TRAVEL THROUGH CONDUITS.



LEGEND

- BJ = BONDING JUMPER
- CEE = CONCRETE ENCASED ELECTRODE
- CPWG = COLD WATER PIPE GROUND
- DGR = DRIVEN GROUND ROD
- EGC = EQUIPMENT GROUNDING CONDUCTOR
- G = GROUND BLOCK
- GEC = GROUNDING ELECTRODE CONDUCTOR
- GNC = GROUNDED NEUTRAL CONDUCTOR
- IN = INSULATED NEUTRAL BLOCK
- N = NEUTRAL BLOCK

GROUNDING AND BONDING DETAIL NOTES:

1. DETAIL IS TYPICAL AND IS INTENDED TO ILLUSTRATE METHODS OF GROUNDING AND BONDING OF ELECTRICAL DISTRIBUTION SYSTEM COMPONENTS.
2. METHODS OF ESTABLISHING THE GROUNDING ELECTRODE SHALL BE BY MEANS OF ONE OF THE COMBINATIONS OF GROUNDING ELECTRODE CONDUCTORS AND GROUNDING ELECTRODES INDICATED IN THE DETAIL.
3. BONDING JUMPERS (BJ), GROUNDING ELECTRODE CONDUCTORS (GEC), GROUNDED NEUTRAL CONDUCTORS (GNC), AND EQUIPMENT GROUNDING CONDUCTORS (EGC) SHALL ALL BE INSULATED. BONDING JUMPERS (BJ) MAY BE BARE WHEN WITHIN AN ENCLOSURE OR LESS THAN 6'-0" IN LENGTH. INSULATION COLORS SHALL BE AS FOLLOWS:
 - a. BJ: GREEN
 - b. GEC: GREEN
 - c. GNC: WHITE
 - d. EGC: GREEN
4. REFER TO NATIONAL ELECTRICAL CODE "GROUNDING ELECTRODE CONDUCTORS" TABLE (2017 NEC 250.68) AND "EQUIPMENT GROUNDING CONDUCTORS" TABLE (2017 NEC 250.122) FOR SIZING OF GROUNDING AND BONDING CONDUCTORS INDICATED ABOVE.
5. BONDING JUMPER IS NOT REQUIRED FOR RECEPTACLES IF U.L. LISTED AUTO-GROUND WIRING DEVICES ARE USED.
6. BONDING JUMPER IS NOT REQUIRED IF U.L. LISTED AND APPROVED BONDING LOCKNUTS OR BUSHINGS AND NONMETALLIC RACEWAYS AND/OR BOXES ARE USED.

TYPICAL GROUNDING AND BONDING DETAIL
NOT TO SCALE

G:\M\1000\4043 - Old Bridge-General Fields\CAD\DWG\4043.016 - E.L.O.dwg, E.T.

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

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ELECTRICAL & LIGHTING DETAILS
FOR
MANNINO PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
LOT 6 BLOCK 8005
TOWNSHIP OF OLD BRIDGE
MIDDLESEX COUNTY, NEW JERSEY

DATE: 11/11/2022	DESIGNED BY:	SCALE: AS SHOWN	PROJECT NUMBER: 4043.016
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET: E-1.1

LEGEND	
---	EXISTING FEEDER & EQUIPMENT
---	NEW FEEDER & EQUIPMENT
////	EXISTING FEEDER / EQUIPMENT TO BE DEMOLISHED
EX	EXISTING EQUIPMENT
N	NEW EQUIPMENT

SHEET KEY NOTES

- EXISTING ELECTRICAL PAD MOUNTED TRANSFORMER, CT / METER & MAIN 600A FUSED SWITCH LOCATED IN THE EXISTING PARKING LOT AREA.
- EXISTING *MDP* 600A 480/277V 3PH 4W.
- (3) EXISTING 480V 3W LIGHTING DISTRIBUTION PANELS. SEE PANEL SCHEDULES FOR FURTHER INFORMATION.
- (3) EXISTING MUSCO SPORT LIGHTING CONTROL CABINETS & CONTACTORS. COORDINATE WITH MR. DAN SHALLOO AT MUSCO (732) 539-4329.
- EXISTING STEP DOWN 15KVA TRANSFORMER 480V-120/208V
- EXISTING "L-P-A" 30CKT 125A MCB 120/208V 3PH 4W PANEL. SEE PANEL SCHEDULES FOR FURTHER INFORMATION.
- (2) EXISTING EMPTY 3" UNDERGROUND CONDUITS FOR NEW BRANCH LIGHTING CIRCUITS ROUTING FROM EXISTING TROUGH TO EXISTING PULL BOXES LOCATED INFIELD. SEE KEY NOTE #2 ON SITE PLAN.
- EXISTING WIRE TROUGH FOR ALL NEW & EXISTING BALL FIELD LIGHTING & SCORE BOARD CIRCUITS.
- NOT USED.
- NEW CONDUITS / WIRING TO EXISTING MUSCO LIGHTING CONTROL CABINET CONTACTORS. REFER TO PANELS SCHEDULE FOR QUANTITIES.
- NEW CONDUITS / WIRING TO NEW MUSCO FIELD & PARKING LOT LIGHTING. REFER TO PANELS SCHEDULE FOR QUANTITIES.
- EXISTING CONDUITS / WIRING TO EXISTING MUSCO CONTROLLER & EXISTING MUSCO FIELD LIGHTING POLES. (NOT IN SCOPE)
- EXISTING PANEL "PP-CP" 225A MLO 480/277V 3PH 4W.
- EXISTING CONCESSION STAND / KITCHEN ELECTRICAL DISTRIBUTION. (NOT IN SCOPE)
- RE-USE EXISTING 30A-3P BREAKERS.
- NEW CIRCUIT TO BE INSTALLED IN EXISTING PANEL. PROVIDE NEW CIRCUIT BREAKERS TO MATCH THE EXISTING PANEL RATING INCLUDING AIC.

MENINO BALL PARK											
RATING: 480/277V, 3 PH, 4W, 600A											
CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A			C		
						A	B	C	A	B	C
1	EXISTING SEWER ELECTOR PUMP	3				0.0	0.0	0.0			
3	SPARE	3									
7	SPARE	3									
13	EXISTING PANEL PP-1C	3	23.4	150	4#10 & 1#10EG IN 2" C	24.2	24.2	24.2	4#6 & 1#10EG IN 1-1/4" C	60	0.0
15	EXISTING PANEL PP-1A	3	0.0	200	4#10 & 1#10EG IN 2" C	16.7	16.7	16.7	4#10 & 1#10EG IN 2" C	200	0.0
23	SPACE	3				0.0	0.0	0.0			
27	SPACE	3									
31	SPACE	3									
35	SPACE	3									
37	SPACE	3									
39	SPACE	3									
41	SPACE	3									
TOTAL (PHASE):						40.9	41.7	40.9			
NEW TOTAL CONNECTED LOAD:						123.4	123.4	123.4	148.0 AMPS		

PANEL TYPE: NEMA 1
MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 600A
INTERLUPTING RATING: EXISTING KA SYM.
FED FROM: JCPAL UTILITY CD

- NOTES**
- SINGLE SECTION 30 CIRCUIT PANELBOARD.
 - ALL BUSING TO BE COPPER WITH BOLT ON BREAKERS ONLY.
 - CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
 - ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
 - SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

MENINO BALL PARK											
RATING: 480V 3PH 3W											
CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A			C		
						A	B	C	A	B	C
1	EXISTING POLE A1	3									
3	EXISTING POLE B1	3									
7	EXISTING POLE C1	3									
11	EXISTING POLE A2	3									
13	EXISTING POLE B2	3									
15	EXISTING POLE C2	3									
17	EXISTING POLE A3	3									
19	EXISTING POLE B3	3									
21	EXISTING POLE C3	3									
23	SPACE	3									
25	SPACE	3									
27	SPACE	3									
29	SPACE	3									
31	SPACE	3									
33	SPACE	3									
35	SPACE	3									
37	SPACE	3									
39	SPACE	3									
41	SPACE	3									
TOTAL (PHASE):											

PANEL TYPE: NEMA 1
MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 200A
INTERLUPTING RATING: EXISTING KA SYM.
FED FROM: MDP-1

- NOTES**
- SINGLE SECTION 42 CIRCUIT PANELBOARD.
 - ALL BUSING TO BE COPPER WITH BOLT ON BREAKERS ONLY.
 - CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
 - ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
 - SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

MENINO BALL PARK											
RATING: 480V 3PH 3W											
CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A			C		
						A	B	C	A	B	C
1	CONTRACTOR C13 NEW POLE A4	3	1.8	30	4#10 & 1#10EG IN 3/4" C	3.6	3.6	3.6	4#10 & 1#10EG IN 3/4" C	30	1.8
3	EXISTING POLE B3 & C5	3				3.0	3.0	3.0	4#10 & 1#10EG IN 3/4" C	30	3.0
7	CONTRACTOR C14 NEW POLE A5	3	1.8	30	4#10 & 1#10EG IN 3/4" C	2.2	2.2	2.2	4#10 & 1#10EG IN 3/4" C	30	0.4
9	CONTRACTOR C15 NEW POLE B4	3	3.0	30	4#10 & 1#10EG IN 3/4" C	3.0	3.0	3.0			
11	CONTRACTOR C16 NEW POLE B5	3	3.0	30	4#10 & 1#10EG IN 3/4" C	3.0	3.0	3.0			
13	CONTRACTOR C17 NEW POLE A6	3	1.8	30	4#10 & 1#10EG IN 3/4" C	1.8	1.8	1.8			
15	SPACE	3				0.0	0.0	0.0			
17	SPACE	3									
19	SPACE	3									
21	SPACE	3									
23	SPACE	3									
25	SPACE	3									
27	SPACE	3									
29	SPACE	3									
31	SPACE	3									
33	SPACE	3									
35	SPACE	3									
37	SPACE	3									
39	SPACE	3									
41	SPACE	3									
TOTAL (PHASE):						16.7	16.7	16.7			
NEW TOTAL CONNECTED LOAD:						50.0	50.0	50.0	60.2 AMPS		

PANEL TYPE: NEMA 1
MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 200A
INTERLUPTING RATING: EXISTING KA SYM.
FED FROM: MDP-1

- NOTES**
- SINGLE SECTION 42 CIRCUIT PANELBOARD.
 - ALL BUSING TO BE COPPER WITH BOLT ON BREAKERS ONLY.
 - CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
 - ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
 - SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

MENINO BALL PARK											
RATING: 480V 3PH 3W											
CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A			C		
						A	B	C	A	B	C
1	EXISTING MUSCO POLE B1	3				3.9	3.9	3.9	4#6 & 1#10EG IN 1" C	30	3.9
3	CONTRACTOR C21 NEW POLE A8	3	2.5	30	4#10 & 1#10EG IN 3/4" C	0.4	0.4	0.4	4#6 & 1#10EG IN 1" C	30	3.9
5	CONTRACTOR C22 NEW POLE A9	3	2.5	30	4#10 & 1#10EG IN 3/4" C	3.2	3.2	3.2	4#6 & 1#10EG IN 3/4" C	30	0.7
7	CONTRACTOR C23 NEW POLE B8	3	4.9	30	4#8 & 1#10EG IN 3/4" C	4.9	4.9	4.9			
9	CONTRACTOR C24 NEW POLE B9	3	4.9	30	4#8 & 1#10EG IN 3/4" C	4.9	4.9	4.9			
11	SPACE	3									
13	SPACE	3									
15	SPACE	3									
17	SPACE	3									
19	SPACE	3									
21	SPACE	3									
23	SPACE	3									
25	SPACE	3									
27	SPACE	3									
29	SPACE	3									
31	SPACE	3									
33	SPACE	3									
35	SPACE	3									
37	SPACE	3									
39	SPACE	3									
41	SPACE	3									
TOTAL (PHASE):						23.4	23.4	23.4			
NEW TOTAL CONNECTED LOAD:						70.2	70.2	70.2	84.6 AMPS		

PANEL TYPE: NEMA 1
MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 100A
INTERLUPTING RATING: 65KA SYM
FED FROM: MDP-1

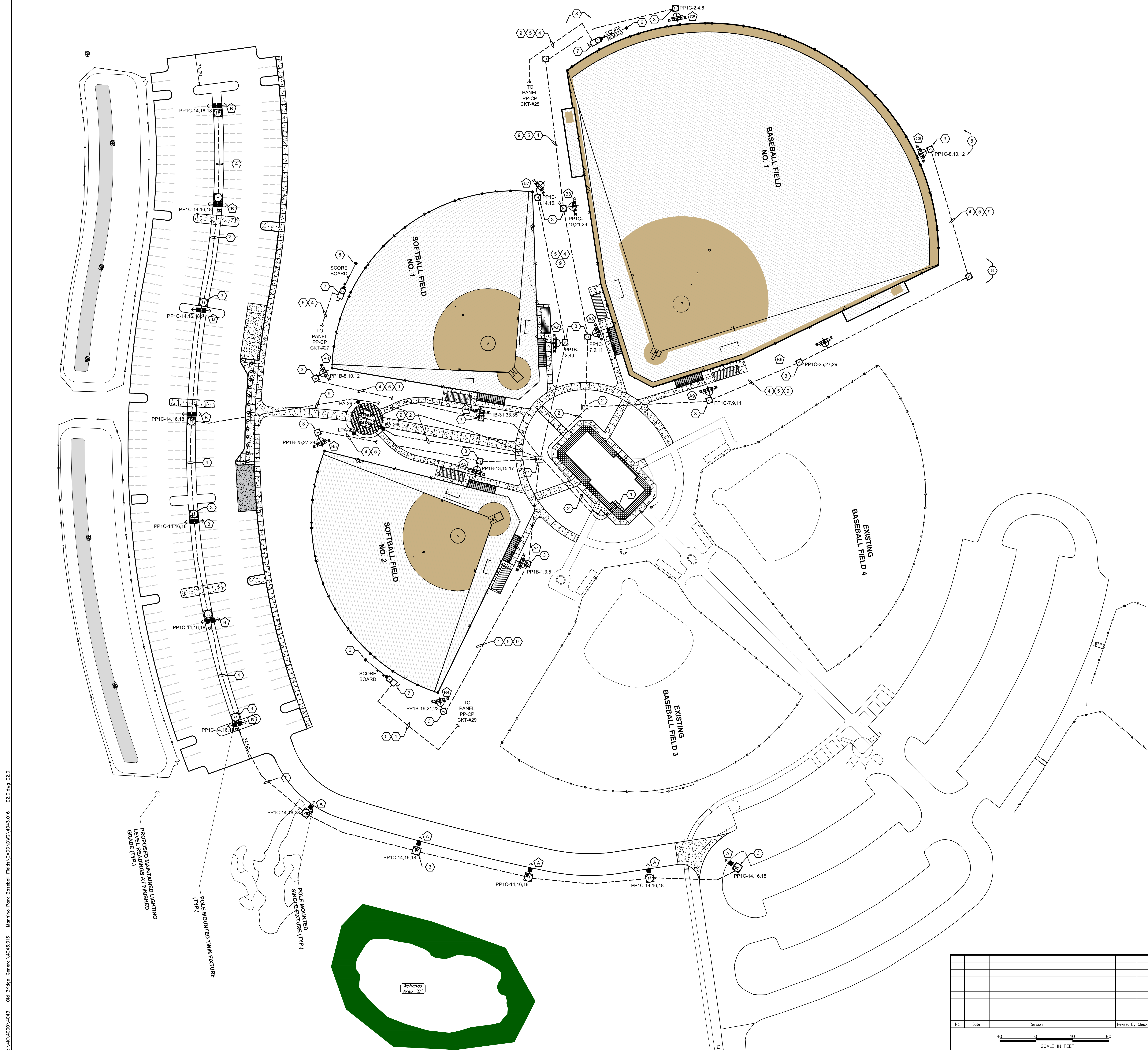
- NOTES**
- SINGLE SECTION 42 CIRCUIT PANELBOARD.
 - ALL BUSING TO BE COPPER WITH BOLT ON BREAKERS ONLY.
 - CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
 - ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
 - SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

MENINO BALL PARK											
RATING: 208/120V, 3 PH, 4W, 225A											
CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A			C		
						A	B	C	A	B	C
1	EXISTING MUSCO CONTROLS #1	1	0.0			0.0	0.0	0.0			
3	EXISTING MUSCO CONTROLS #3	1	0.0			0.0	0.0	0.0			
5	EX- SCORE BOARD FIELD #2	1	0.0			0.0	0.0	0.0			
7	EX- SCORE BOARD FIELD #4	1	0.0			0.0	0.0	0.0			
9	EX- DUSOUT RECEPTACLE	1	0.0			0.0	0.0	0.0			
11	EXISTING LOAD	2	0.0			0.0	0.0	0.0			
13	EXISTING LOAD	2	0.0			0.0	0.0	0.0			
15	EXISTING LOAD	2	0.0			0.0	0.0	0.0			
17	EXISTING LOAD	2	0.0			0.0	0.0	0.0			
19	EXISTING LOAD	2	0.0			0.0	0.0	0.0			
21	EXISTING LOAD	2	0.0			0.0	0.0	0.0			
23	EXISTING LOAD	2	0.0			0.0	0.0	0.0			
25	EXISTING MUSCO CONTROLS #2	1	0.8	20	2#12 & 1#12EG IN 3/4" C	0.8	0.8	0.8			
27	SPACE	1									
29	SPACE	1									
TOTAL (PHASE):						0.0	0.8	0.0			
NEW TOTAL CONNECTED LOAD:						0.8	0.8	0.8	2.2 AMPS		

PANEL TYPE: NEMA 1
MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 150A
INTERLUPTING RATING: 65KA SYM
FED FROM: MDP-1 VIA 15KVA XFMR

- NOTES**
- SINGLE SECTION 42 CIRCUIT PANELBOARD.
 - ALL BUSING TO BE COPPER WITH BOLT ON BREAKERS ONLY.
 - CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
 - ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
 - SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

MENINO BALL PARK											
RATING: 480/277V, 3 PH, 4W, 225A											
CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A			C		
						A	B	C	A	B	C
1	EXISTING WATER HEATER	3				0.0	0.0	0.0			
3	EXISTING UNIT HEATER	3				0.0	0.0	0.0			
5	EXISTING ELECTRIC HEATER	2				0.0	0.0	0.0			
7	EXISTING KEF-1	3				0.0	0.0	0.0			
9	SCORE BOARD FIELD #1	1	0.8	20	2#10 & 1#10EG IN 3/4" C	0.8	0.8	0.8	</		



SHEET NOTES

- REFER TO CIVIL SITE PLANS FOR SITE ADDITIONAL INFORMATION.
- CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES WITH THE CIVIL SITE PLANS PRIOR TO COMMENCING HIS WORK AND CONTACT "CALL BEFORE YOU DIG". CALL NEW JERSEY ONE CALL AT 811 OR 800-272-1000.
- REFER TO DETAIL SHEETS, PANEL SCHEDULES, AND SINGLE LINE DIAGRAM FOR ALL CONDUIT AND FEEDER SIZES AND ADDITIONAL INFORMATION.
- REFER TO CIVIL SITE PLANS FOR ALL MUSCO LIGHTING SPECIFICATIONS. FIXTURES ARE SHOWN ON THIS PLAN FOR BRANCH CIRCUIT WIRING ONLY.
- MUSCO SPORTS LIGHTING EQUIPMENT AND CONTROLLERS. THE CONTRACTOR SHALL COORDINATE INSTALLATION WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND THE LIGHTING VENDOR.

KEY NOTES

- EXISTING 600A 480V/277V, 3 PHASE ATHLETIC FIELD ELECTRIC SERVICE LOCATION. (1) 600A 480/277V 3PH 4W "MDP", (3) 480V 3W LIGHTING PANELS "PP1A", "PP1B", "PP1C", (1) 120/208V PANEL "LPA", (1) 480/277V 4W "PP-CP" & (3) EXISTING MUSCO CONTROL PANELS W/ CONTRACTORS. REFER TO SINGLE LINE DIAGRAM, PANEL SCHEDULES AND MUSCO SPECIFICATIONS FOR FURTHER INFORMATION.
- CONTRACTOR SHALL UTILIZE THE (2) EXISTING PULL BOXES. EACH PULL BOX W/ (2) EXISTING 3" CONDUITS ROUTED UNDERGROUND TO THE EXISTING ELECTRICAL TROUGH LOCATED IN THE UTILITY ROOM FOR ALL NEW & EXISTING LIGHTING CIRCUITRY. SEE SINGLE LINE DIAGRAM. COORDINATE ANY CHANGES IN GRADING ELEVATIONS WITH SITE CONTRACTORS AND ADJUST PULL BOXES ACCORDINGLY.
- GRADE MOUNTED HANDHOLE AT OR NEAR EACH POLE BASE. REFER TO DETAILS AND PANEL SCHEDULES. SIZE PER NEC. (TYPICAL AT EACH POLE).
- UNDERGROUND BRANCH CIRCUIT WIRING AND CONDUITS TO MUSCO POLES & SCORE BOARDS. REFER TO PANEL SCHEDULES FOR BRANCH CIRCUITS, CONDUITS AND WIRE SIZES. ALL UNDERGROUND CONDUIT ROUTING SHALL COMPLY WITH NEC ARTICLE 300.5. TYPICAL FOR ALL.
- ABSOLUTELY NO CONDUIT OR WIRING SHALL BE ROUTED THROUGH THE FIELDS. TYPICAL FOR ALL.
- NEW BALL FIELD SCOREBOARD. COORDINATE EXACT LOCATION ON SITE.
- NEW BALL FIELD SCOREBOARD DISCONNECT & STEP DOWN TRANSFORMER BOTH IN A NEMA 3R ENCLOSURES. PROVIDE A 277-120/240V SQUARE D MANUFACTURED MODEL #1.5S8F TRANSFORMER OR EQUAL. MOUNT ON SCOREBOARD.
- ALL ELECTRICAL WORK / TRENCHING WILL NEED TO BE CONTAINED WITHIN NEW TREE LINE. REFER TO SITE / CIVIL PLANS.
- CONTRACTOR SHALL PROVIDE (1) SPARE 1.5" CAPPED CONDUIT FOR ALL UNDERGROUND CONDUIT RUNS TYPICAL FOR ALL.
- PROVIDE NEW FLAG LIGHT U.G. CIRCUITRY TO PANEL LP-A CKT #25 CONTROLLED VIA PHOTO CELL (LOCATE ON SITE). MODEL # VISTA - 1059-XX-XX-40-BXMM ND-XX (SEE DWG S-5.5 FOR DETAIL) (2) #10, (1) #10EG IN 3/4".

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 DUE TO INHERENT ERRORS IN REPRODUCTION METHODS, ERRORS MAY OCCUR WHEN SCALING THIS DRAWING.

PROPOSED MAINTAINED LIGHTING
 LEVEL REMAINS AT FINISHED
 GRADE (TYP)
 POLE MOUNTED TWIN FIXTURE
 (TYP)
 POLE MOUNTED
 SINGLE FIXTURE (TYP)

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET
 0 40 80

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ELECTRICAL SITE PLAN
FOR
MANNING PARK
SYNTHETIC TURF ATHLETIC FIELDS
AND SITE IMPROVEMENTS
LOT 6 BLOCK 8005
 TOWNSHIP OF OLD BRIDGE
 MIDDLESEX COUNTY, NEW JERSEY

DATE: 11/11/2022
 DESIGNED BY: A.G.
 DRAWN BY: A.G.
 CHECKED BY: A.G.

SCALE: 1" = 40'
 FIELD BOOK
 PROJECT NUMBER: 4043.016
 SHEET: E-2.0