

ADDENDUM NUMBER 01 TO THE BID DOCUMENTS

To all general contract bidders of record on the Bid Proposal:

**BID DOCUMENT: #17/18 – MB2
Athletic Facilities Improvement #K11
College of Marin – Kentfield Campus**

Addendum Date: August 21, 2017

- A. This addendum shall be considered part of the bid documents for the above mentioned project as though it had been issued at the same time and shall be incorporated integrally therewith. Where provisions of the following supplementary data differ from those of the original bid documents, this Addendum shall govern and take precedence.
- B. Bidders are hereby notified that they shall make any necessary adjustments in their estimates as a result of this Addendum. It will be construed that each bidder's proposal is submitted with full knowledge of all modifications and supplemental data specified herein.

The bid documents are modified and clarified, as follows:

Documents:

- Item #1:** Project Manual Cover Page: Change Proposal Due Date from August 24, 2017 to August 28, 2017.
- Item #2:** Document 00 10 00 Notice To Bidders, Section 7: Change Proposal Due Date from August 24, 2017 to August 28, 2017.
- Item #3:** Document 00 11 00 Instruction To Bidders, Section 26: Add m. Project Stabilization Agreement Exhibit A.
- Item #4:** Document 00 41 13 Bid Form and Proposal: Replace entirely.
Add Allowance #2 Construction Schedule Acceleration \$40,000.
Change Bid Alternate #1 to Add Volleyball Seating and Entry Furnishing.
Delete Bid Alternate #2.
Delete Bid Alternate #3.
- Item #5:** Document 00 45 90 Post Bid Interview, Section IV:
Add D. Have you read and understood the requirements of the Project Stabilization Agreement between the Marin Community College District and Marin County Building and Construction Trades Council and Local Unions?
Add E. Will you sign and provide to the District a signed Exhibit A from the Project Stabilization Agreement?

- Item #6:** Document 00 51 00 Notice Of Award: Add m. Project Stabilization Agreement Exhibit A.
- Item #7:** Document 00 73 13 Special Conditions: Replace entirely.
Add subsection 12 Project Temporary Fence.
Add subsection 13 Coordination with Other Contractors.
Add site map of temporary fence for reference.
- Item #8:** Document Measure B Project Stabilization Agreement: Added entirely.
- Item #9:** Document 00 22 00 Alternates and Unit Pricing: Replace entirely.
Change Bid Alternate #1 to Add Volleyball Seating and Entry Furnishing.
Delete Bid Alternate #2.
Delete Bid Alternate #3.
- Item #10:** Geotechnical Investigation Report Athletic Fields Synthetic Turf Project College of Marin Kentfield, CA dated June 29, 2017: Added entirely.

**SPECIFICATIONS:
Civil/Landscape**

- Item #1:** Document 01 70 00 Conformance Surveying,
Add: Section 3.05, Futsal Conformance Surveying Requirements, was added to specifications section 01 70 00.
- Item #2:** Document 05 72 010 Ornamental Metal Fencing & Gates,
Delete: Entire Ornamental Metal Fencing and Gate section has been removed from project documents.
- Item #3:** Document 12 93 00 Site Furnishings,
Add: In section 2.01, Site Furnishings, the sentence was added to item R., "(Covers for sand pits are not needed – College to provide)".
- Item #4:** Document 12 93 00 Site Furnishings,
Delete: Soccer Media Press Box (Alt) was deleted from section 1.01, A. Scope of Work.
- Item #5:** Document 12 93 00 Site Furnishings,
Change: Wording for Scoreboard furnishing, section 2.01, M., has been changed to add the words "with wireless controller". Scoreboard for soccer shall have a wireless controller.

- Item #6:** Document 31 20 00 Earthwork,
Add: Site excavation note was added to section 3.03, A. that reads “Site should be over-excavated to the planned subgrade elevation at the base of the drainage layer. These soils should be removed from the site or stockpiled for reuse if approved by the owner in consultation with the Geotechnical Engineer.”
- Item #7:** Document 31 20 00 Earthwork,
Add: Compaction note added to section 3.04, C., 2., b. that reads “The top 6-inches of the subgrade should be scarified, moisture-conditioned and recompacted to achieve a firm bearing surface.”
- Item #8:** Document 31 20 00 Earthwork,
Add: Compaction note added to section 3.04, C., 3., b. that reads “The top 6-inches of the subgrade should be scarified, moisture-conditioned and recompacted to achieve a firm bearing surface.”
- Item #9:** Document 31 23 00 Excavation, Backfilling, and Compaction,
Change: Wording in section 3.04, B., 2. has been modified to add recommendation from Geotech on utility trench compaction. Sentence was modified to read “Trenches should be filled by placing a granular layer (shading) shall be placed beneath and on both sides of the pipe and 6” to 12” above pipe and compacted to the depth shown in the Drawings”.
- Item #10:** Document 32 18 14 Synthetic Turf Base,
Add: Mirafi 140 N product for synthetic turf subdrain trench, was added to section 2.04, C.
- Item #11:** Document 32 18 14 Synthetic Turf Base,
Add: Within Section 3.01, Subgrade Preparation, item E was added that deals with how the subgrade for the futsal field shall be prepared before installation of synthetic turf material.
- Item #12:** Document 33 40 00 Storm Drainage,
Add: Drywell manufacturer information and product has been added to section 2.02, K.
- Item #13:** Document 33 40 00 Storm Drainage,
Add: Product information for Trench Drain End Cap has been added to trench drain information for tennis, section 2.02, I., 2.
- Item #14:** Document 33 40 00 Storm Drainage,
Add: Product information for Sand/Oil interceptor has been added to specification section 2.01, M.
- Item #15:** Document 33 40 00 Storm Drainage,

Add: Section 3.01, Preparation, and associated note has been added to storm drainage specification section: Contractor to flush out storm drain pipes at point of connections.

**DRAWINGS:
Civil/Landscape**

- Item #1:** Sheet C0.0 – Cover Page,
Add: Contact information and stamp for Structural engineer has been added to cover
- Item #2:** Sheet C0.0 – Cover Page,
Delete: All reference sheets for Baseball and Entry/Plaza has been removed from sheet index
- Item #3:** Sheet C0.0 – Cover Page,
Add: Bid Alternate sheets (L10.1 & L10.2) and Structural sheet S0.1, Soccer Field Scoreboard, has been added to the sheet Index
- Item #4:** Sheet C0.0 – Cover Page,
Add: Bid Alternate section has been added, with a list of bid alternates for this project.
- Item #5:** Sheet C0.0 – Cover Page,
Delete: Scope of work items for Baseball field and Entry/Plaza work has been removed.
- Item #6:** Sheet C0.0 – Cover Page,
Change: All reference for Baseball and Entry/Plaza work has been removed from Key and Site Maps.
- Item #7:** Sheet L1.1 – Existing Conditions Plan – Soccer/Lacrosse & Tennis Courts
Add: Additional Survey information has been added throughout site.
- Item #8:** Sheet L1.2 – Existing Conditions Plan – Volleyball/Futsal/P.E. Courtyard
Add: Additional Survey information has been added throughout site.
- Item #9:** Sheet L2.0 – Erosion and Sediment Control Plan
Add: Stabilized Construction Entry Detail and location has been added to the plan.

- Item #10:** Sheet L2.0 – Erosion and Sediment Control Plan
Change: Size and location of staging area has been changed. Location of concrete washout facility has been changed.
- Item #11:** Sheet L2.0 – Erosion and Sediment Control Plan
Change: Limit of work and sediment retention fiber barrier have been extended north along the northeastern part of the project.
- Item #12:** Sheet L2.0 – Erosion and Sediment Control Plan
Add: Additional locations for filter roll fabric to be attached to drains, has been added to drains at volleyball courts and at two locations within the soccer field.
- Item #13:** Sheet L2.0 – Erosion and Sediment Control Plan
Delete: Baseball/Entry limit of work outline on plan and in legend has been removed.
- Item #14:** Sheet L3.1 – Demolition Plan - Soccer/Lacrosse & Tennis Courts
Add: Demolish and remove Callout #8, has been added to demolition legend and plan.
- Item #15:** Sheet L3.1 – Demolition Plan - Soccer/Lacrosse & Tennis Courts
Add: Additional callouts for remain and protect item “C”, “G” and “N” have been added to plans.
- Item #16:** Sheet L3.1 – Demolition Plan - Soccer/Lacrosse & Tennis Courts
Change: Clear and Grub verbiage on demolition legend has been updated to read “Clear and Grub existing vegetated area. Organic material to be removed from new synthetic turf and track surfacing areas”.
- Item #17:** Sheet L3.1 – Demolition Plan - Soccer/Lacrosse & Tennis Courts
Change: “Existing Soil/Subgrade to be removed” hatch along existing planter next to portable buildings has been modified to decrease area to be removed.
- Item #18:** Sheet L3.1 – Demolition Plan - Soccer/Lacrosse & Tennis Courts
Change: Scope of work limit and demolition items in southwest corner of project has been modified due to the removal of the two southernmost tennis courts from project. Changes included adjustments to clear and grub hatch limits, hardscape next to existing track being changed from being demolished to now remain and be protected, trees now being protected instead of removed, and adjustments to limit of work.

- Item #19:** Sheet L3.1 – Demolition Plan - Soccer/Lacrosse & Tennis Courts
Change: Number of existing scoreboard beams has been changed to two beams, as only two will be on site once construction begins.
- Item #20:** Sheet L3.2 – Demolition Plan - Volleyball/Futsal/P.E. Courtyard
Change: Demolition of all-weather track material at P.E. Courtyard has been modified. This area will be existing soil and new hatch for removal of existing exposed soil/subgrade as been added to this area.
- Item #21:** Sheet L3.2 – Demolition Plan - Volleyball/Futsal/P.E. Courtyard
Change: Limits of demolition along western edge of scope of work has been modified. Limits of demolition are now right against the edge of proposed volleyball work.
- Item #22:** Sheet L3.2 – Demolition Plan - Volleyball/Futsal/P.E. Courtyard
Add: Callout #7 has been added to demolition legend and plan. Callout reads “Electrical box to be demolished and removed. Electrical items with box to remain. Refer to electrical drawings for additional information.
- Item #23:** Sheet L3.2 – Demolition Plan - Volleyball/Futsal/P.E. Courtyard
Add: Note for futsal subgrade preparation has been added to the plan.
- Item #24:** Sheet L3.2 – Demolition Plan - Volleyball/Futsal/P.E. Courtyard
Add: additional Callout “E” has been added to existing electrical line that is coming into northwest limit of work.
- Item #25:** Sheet L3.2 – Demolition Plan - Volleyball/Futsal/P.E. Courtyard
Delete: All-weather track demolition hatch and callouts “L”, “O”, “P”, has been deleted from plan.
- Item #26:** Sheet L4.1 – Grading Plan - Soccer/Lacrosse & Tennis Courts
Delete: Southernmost two tennis courts and grades have been removed from project.
- Item #27:** Sheet L4.1 – Grading Plan - Soccer/Lacrosse & Tennis Courts
Add: Grades at new fencing location at southwestern edge of project (where last two tennis courts use to be) have been added.
- Item #28:** Sheet L4.1 – Grading Plan - Soccer/Lacrosse & Tennis Courts

Add: Flow line of Cobble Swale (FL) and Existing Elevation ((FS)) symbol/callouts added to grading legend.

Item #29:

Sheet L4.1 – Grading Plan - Soccer/Lacrosse & Tennis Courts

Add: Note for depth of top of rock at soccer field has been added to the plan.

Item #30:

Sheet L4.1 – Grading Plan - Soccer/Lacrosse & Tennis Courts

Change: Limit of grading and location of last spot elevation along northeastern perimeter fencing has been modified.

Item #31:

Sheet L4.1 – Grading Plan - Soccer/Lacrosse & Tennis Courts

Change: Limit of work has been modified for the fencing at the southwest end of the project and at northeast end of project.

Item #32:

Sheet L4.1 – Grading Plan - Soccer/Lacrosse & Tennis Courts

Change: Biofiltration location, size, and grades have been modified.

Item #33:

Sheet L4.2 – Grading Plan - Volleyball/Futsal/P.E. Courtyard

Add: Bid Alternates heading and verbiage added to grading legend.

Item #34:

Sheet L4.2 – Grading Plan - Volleyball/Futsal/P.E. Courtyard

Add: Bid Alternate note and outline added to plan.

Item #35:

Sheet L4.2 – Grading Plan - Volleyball/Futsal/P.E. Courtyard

Change: Grades for volleyball facility and limits of grading has been modified. Grades for volleyball seating area have been removed.

Item #36:

Sheet L4.2 – Grading Plan - Volleyball/Futsal/P.E. Courtyard

Delete: Grading Enlargement has been removed from plan.

Item #37:

Sheet L5.1 – Drainage Plan - Soccer/Lacrosse & Tennis Courts

Change: Length of Trench drain at tennis courts has been modified due to the removal of two southernmost tennis courts.

Item #38:

Sheet L5.1 – Drainage Plan - Soccer/Lacrosse & Tennis Courts

Change: Linear foot number for flat panel drainage has been modified.

- Item #39:** Sheet L5.1 – Drainage Plan - Soccer/Lacrosse & Tennis Courts
Change: Note for storm drainage connection to trench drain at tennis courts has been modified. Note now reads “trench drain end cap outlet to discharge into cobble gutter”
- Item #40:** Sheet L5.1 – Drainage Plan - Soccer/Lacrosse & Tennis Courts
Change: Drainage and connection point for new biofiltration location has been modified.
- Item #41:** Sheet L5.1 – Drainage Plan - Soccer/Lacrosse & Tennis Courts
Add: Additional callouts for note “B” have been added to plan.
- Item #42:** Sheet L5.1 – Drainage Plan - Soccer/Lacrosse & Tennis Courts
Add: Cobble swale added to biofiltration area.
- Item #43:** Sheet L5.1 – Drainage Plan - Soccer/Lacrosse & Tennis Courts
Add: Note #8 added to sheet legend notes. Note tells the contractor to flush out storm drain pipes at point of connections.
- Item #44:** Sheet L5.2 – Drainage Plan - Volleyball/Futsal/P.E. Courtyard
Add: Sand/Oil Interceptor added to legend and plan.
- Item #45:** Sheet L5. 2 – Drainage Plan - Volleyball/Futsal/P.E. Courtyard
Add: Note #8 added to sheet legend notes. Note tells the contractor to flush out storm drain pipes at point of connections.
- Item #46:** Sheet L5.2 – Drainage Plan - Volleyball/Futsal/P.E. Courtyard
Change: Symbol and location of shower drain has been modified.
- Item #47:** Sheet L5.2 – Drainage Plan - Volleyball/Futsal/P.E. Courtyard
Change: Detail Callout for trench drain catch basin has been changed to L, Sheet D1.0.
- Item #48:** Sheet L5.2 – Drainage Plan - Volleyball/Futsal/P.E. Courtyard
Change: Size of storm drainage pipe within volleyball courts has been changed from 6” to 4”.
- Item #49:** Sheet L5.2 – Drainage Plan - Volleyball/Futsal/P.E. Courtyard

Change: drain line, sanitary line, and drywell has been modified in location and length for volleyball shower.

Item #50: Sheet L5.2 – Drainage Plan - Volleyball/Futsal/P.E. Courtyard

Change: Slope of new trench drain at Futsal has been change for read “(internally sloped)”.

Item #51: Sheet L6.1– Layout Plan - Soccer/Lacrosse & Tennis Courts

Add: Additional spots added along eastern tennis fence line (two additional gates) and at tennis court netting post.

Item #52: Sheet L6.1– Layout Plan - Soccer/Lacrosse & Tennis Courts

Change: Location of biofiltration and corresponding elements have been modified due to remove of the two southernmost tennis courts.

Item #53: Sheet L6.1– Layout Plan - Soccer/Lacrosse & Tennis Courts

Change: Fencing location/Layout at southwestern edge of project has been modified. Corresponding layout points have been updated per new location.

Item #54: Sheet L6.1– Layout Plan - Soccer/Lacrosse & Tennis Courts

Change: End location of fencing along the northeast end of project has been modified. Note for this location and how to end fencing at ends at this location has been modified as well.

Item #55: Sheet L6.2– Layout Plan - Volleyball/Futsal/P.E. Courtyard

Delete: Layout points for seating area and seatwalls have been removed from plan.

Item #56: Sheet L6.2– Layout Plan - Volleyball/Futsal/P.E. Courtyard

Add: New layout points for location of header board at back of raised grass mound have been added.

Item #57: Sheet L6.2– Layout Plan - Volleyball/Futsal/P.E. Courtyard

Add: Bid Alternate note and outline added to plan and legend.

Item #58: Sheet L6.2– Layout Plan - Volleyball/Futsal/P.E. Courtyard

Add: Layout point for Sand/Oil interceptor has been added.

- Item #59:** Sheet L6.2– Layout Plan - Volleyball/Futsal/P.E. Courtyard
Add: Added “Inside Edge of Curb” coordinate points along the northern perimeter fencing at volley to show locations of steps in curbing.
- Item #60:** Sheet L6.2– Layout Plan - Volleyball/Futsal/P.E. Courtyard
Change: Location of drywell and drainage structures for shower have been modified.
- Item #61:** Sheet L7.1– Material Plan - Soccer/Lacrosse & Tennis Courts
Change: Location of fencing and biofiltration system has change due to the deletion of two southernmost tennis courts.
- Item #62:** Sheet L7.1– Material Plan - Soccer/Lacrosse & Tennis Courts
Change: Fencing between Tennis courts and Futsal has been changed from 8’ tall ornamental fencing to 8’ tall chain link fencing.
- Item #63:** Sheet L7.1– Material Plan - Soccer/Lacrosse & Tennis Courts
Change: Fencing around existing transformer has been changed from 10’ tall chain link fencing to 8’ tall chain link fencing.
- Item #64:** Sheet L7.1– Material Plan - Soccer/Lacrosse & Tennis Courts
Change: Location of end of 8’ tall perimeter fencing at northeast edge of project has been shift north. Note for how to end fencing at this location has also been changed.
- Item #65:** Sheet L7.1– Material Plan - Soccer/Lacrosse & Tennis Courts
Change: Location of and end of gravel path has been modified due to the deletion of the two southern most tennis courts.
- Item #66:** Sheet L7.1– Material Plan - Soccer/Lacrosse & Tennis Courts
Change: Location of pull up bars and information sign has been changed. New location is just south of new tennis courts, at the end of existing paving.
- Item #67:** Sheet L7.1– Material Plan - Soccer/Lacrosse & Tennis Courts
Change: Limits of existing paving to receive new slurry coat as increased as additional paving south of new tennis courts is no longer being removed.
- Item #68:** Sheet L7. 1– Material Plan - Soccer/Lacrosse & Tennis Courts

Change: Callout #6 in legend has been changed from 8' tall, 20' wide ornamental gate to a 8'tall, 20' wide chain link gate.

Item #69:Sheet L7.1– Material Plan - Soccer/Lacrosse & Tennis Courts

Add: New asphalt has been added outside the southeast corner of new tennis courts.

Item #70:Sheet L7.1– Material Plan - Soccer/Lacrosse & Tennis Courts

Add: Additional asphalt paving and header board has been added plan. New asphalt is located adjacent to 8' x 20' wide double swing gate at western perimeter fencing and along inside of fencing between futsal and tennis.

Item #71:Sheet L7.1– Material Plan - Soccer/Lacrosse & Tennis Courts

Delete: All ornamental gates and fencing have been remove from sheet and project.

Item #72:Sheet L7.2– Material Plan - Volleyball/Futsal/P.E. Courtyard

Change: All 8' high Ornamental fencing at volleyball has been changed to 8' tall chain link fencing.

Item #73:Sheet L7.2– Material Plan - Volleyball/Futsal/P.E. Courtyard

Change: 12" wide edgeband starting at southeast corner of futsal and ending at Western egde of futsal has been change to Curb – Type 1.

Item #74:Sheet L7.2– Material Plan - Volleyball/Futsal/P.E. Courtyard

Change: Callout #4 in legend has been changed from 8' tall, 12' wide ornamental gate to a 8'tall, 12' wide chain link gate.

Item #75:Sheet L7.2– Material Plan - Volleyball/Futsal/P.E. Courtyard

Change: Length of 8' fencing with windscreen at southern perimeter volleyball fencing as been modified. Length of 8' tall fence with windscreen will be from southwester corner of volleyball facility and extend to start of western perimeter fencing of futsal. Remainder of fencing, southern futsal fence, shall be 8' tall chain link fencing without windscreen.

Item #76:Sheet L7.2– Material Plan - Volleyball/Futsal/P.E. Courtyard

Add: Bid Alternate note and outline added to plan and legend.

Item #77:Sheet L7.2– Material Plan - Volleyball/Futsal/P.E. Courtyard

Add: Sand/Oil Interceptor has been added to plan and legend.

Item #78:

Sheet L7.2– Material Plan - Volleyball/Futsal/P.E. Courtyard

Add: Header board and asphalt paving has been added outside of 8' tall, 10' wide double swing gate at volleyball and outside of 8' tall, 4' wide gate at Futsal.

Item #79:

Sheet L7.2– Material Plan - Volleyball/Futsal/P.E. Courtyard

Add: Pedestrian Asphalt Paving hatch has been added to sheet legend.

Item #80:

Sheet L7.2– Material Plan - Volleyball/Futsal/P.E. Courtyard

Delete: All ornamental gates and fencing have been remove from sheet and project.

Item #81:

Sheet L8.1– Irrigation Plan - Soccer/Lacrosse & Tennis Courts

Delete: One of two quick couple valves, and associated mainline, within the tennis courts, has been removed due to the deletion of the two southernmost tennis courts.

Item #82:

Sheet L8.1– Irrigation Plan - Soccer/Lacrosse & Tennis Courts

Add: Tree bubblers and strip spray symbols and product information has been added to legend.

Item #83:

Sheet L8.2 – Irrigation Plan - Volleyball/Futsal/P.E. Courtyard

Change: Irrigation within the planting areas for the volleyball facilities has been modified due to the seating area being changed to a bid alternate.

Item #84:

Sheet L8.2 – Irrigation Plan - Volleyball/Futsal/P.E. Courtyard

Add: Additional irrigation spray heads have been added to the legend.

Item #85:

Sheet L8.2 – Irrigation Plan - Volleyball/Futsal/P.E. Courtyard

Add: Bid Alternate note and outline added to plan and legend.

Item #86:

Sheet L9.0 – Planting Plan - Volleyball/Futsal/Biofiltration Area

Change: Planting at the back of the mound and within planting squares has been modified due to volleyball Seating bid alternate. Plant counts and locations of plants has been changed on the plans and legend as well.

Item #87:

Sheet L9.0 – Planting Plan - Volleyball/Futsal/Biofiltration Area

Change: Planting at biofiltration area has been modified due to location change. Plant counts and locations of plants has been changed on the plans and legend as well.

Item #88:

Sheet L9.0 – Planting Plan - Volleyball/Futsal/Biofiltration Area

Add: Plant, Lagerstroemia indica ‘Tuscarora’, has been added to the legend and plans.

Item #89:

Sheet L9.0 – Planting Plan - Volleyball/Futsal/Biofiltration Area

Add: Bid Alternate note and outline added to plan and legend.

Item #90:

Sheet L9.0 – Planting Plan - Volleyball/Futsal/Biofiltration Area

Delete: Plant, Washingtonia Filifera, has been deleted from the legend and plans.

Item #91:

Sheet L10.1 – Bid Alternate – Grading, Layout, Material

Add: Sheet L10.1, Bid Alternate – Grading, Layout, Material, has been added to the construction documents.

Item #92:

Sheet L10.2 – Bid Alternate – Irrigation and Planting

Add: Sheet L10.2, Bid Alternate – Irrigation and Planting, has been added to the construction documents.

Item #93:

Sheet D1.0 – Construction Details

Add: Flat panel drain – Volleyball (Detail P) and Flat panel drain connection (Detail H) have been added to the plan

Item #94:

Sheet D1.0 – Construction Details

Add: Note added to Detail D (Cleanout in Synthetic Turf) to cut out and glue turf onto cleanout box.

Item #95:

Sheet D1.0 – Construction Details

Change: Callout for Header board on Detail R (Futsal Edge/Field Trench Drain) has been modified to point to header board location on detail.

Item #96:

Sheet D1.0 – Construction Details

Change: On detail N (Flat Panel Connection) the word “Soccer” has been added to detail name.

- Item #97:** Sheet D1.0 – Construction Details
Change: Detail Q (Electrical Combox) has been modified to show a concrete collar around combox.
- Item #98:** Sheet D1.1 – Construction Details
Add: Notes to punch out drain holes and wrap drywell with filter fabric has been added to Detail I (Drywell – Outdoor Shower) and Detail (Drinking Fountain).
- Item #99:** Sheet D1.1 – Construction Details
Add: Detail M (Sand/Oil Interceptor) has been added to the plan.
- Item #100:** Sheet D1.1 – Construction Details
Change: Detail A (Biofiltration Area) has been replace with Biofiltration Area with Outflow Structure Detail.
- Item #101:** Sheet D1.1 – Construction Details
Change: Detail B (Biofiltration Area - Section) has been modified. Filter fabric has been removed from detail and detail has been edited to show tennis fence edge and cobble energy dissipater.
- Item #102:** Sheet D1.1 – Construction Details
Change: Detail C (Cobble Energy Dissipater) has been replace with Cobble Gutter at Tennis Trench Drain Outfall Detail.
- Item #103:** Sheet D2.0 – Construction Details
Change: On Detail P (Synthetic Turf) the turf height table has been edited so that baseball field and batting cage information has been removed.
- Item #104:** Sheet D2.1 – Construction Details
Change: Details A (Concrete Seatwall with Wood Seat and Plinths Elevation), B (Concrete Seatwall with Wood Seat), C (Concrete Seating - Section), D (Hand Rail), E (Guard Rail), F (Guard/Handrail Post Mount), I (Concrete Plinth – Section), and N (Concrete Seating – Plan) have all been modified to be bid alternate details (added Phase “Bid Alt” to all titles).
- Item #105:** Sheet D2.1 – Construction Details
Delete: On Detail C (Concrete Seating - Section), depth of stair nose has been change to 1”.

- Item #106:** Sheet D2.1 – Construction Details
Change: On Detail G (Asphalt Paving - Track), asphalt paving thickness has been changed to 3-1/2”.
- Item #107:** Sheet D2.1 – Construction Details
Change: On Detail J (Beach Volleyball Sand Section), depth of sand from concrete edge and depth of drop within sand section, has been modified.
- Item #108:** Sheet D2.1 – Construction Details
Change: On Detail J (Beach Volleyball Sand Section), note on compaction of subgrade has been modified to read “Scarified and compacted subgrade, refer to specifications”.
- Item #109:** Sheet D2.1 – Construction Details
Add: On Detail J (Beach Volleyball Sand Section), slope of sand section, callout for flat panel drain, note on how to connect flat panel to storm drain line, have all been added to the detail.
- Item #110:** Sheet D2.1 – Construction Details
Delete: On Detail A (Concrete Seatwall with Wood Seat and Plinths Elevation) medallions have been removed from detail.
- Item #111:** Sheet D3.0 – Construction Details
Add: On Detail B (Fence/Gate Post Footing Schedule), footing information for 8’ tall chain link fence, 42” x 12’ double swing gate, 8’ x 10’ double swing gate, and 8’ x 12’ double swing gate has been added to detail.
- Item #112:** Sheet D3.0 – Construction Details
Add: Detail H (8’ x 12’ Double Wide Swing Gate) has been add to the plan.
- Item #113:** Sheet D3.0 – Construction Details
Change: The sentence “and on tennis court side for tennis court fencing” as been added to note #1 on Detail A (General Fence & Gate Notes).
- Item #114:** Sheet D3.0 – Construction Details
Delete: Mid rail for Detail G (10’ Tall Chain Link Fencing) has been removed.
- Item #115:** Sheet D3.1 – Construction Details
Delete: Ornamental fencing and gate details A, B, C, D, E, and G have been removed from sheet.

Item #116: Sheet D4.0 – Construction Details

Add: A note calling out sand pit covers will be provided by owner has been added to detail C (Sand Pit with Sand Catchers).

DRAWINGS:
Electrical**Item #01:** Sheet E1.0 – Electrical Site Plan – Demolition

Add: Added locations of (E) 8 combo boxes along with its existing signal and power conduits.

Item #02: Sheet E1.0 – Electrical Site Plan – Demolition

Delete: Removed reference to (E) scoreboard from Package 1 scope

Item #03: Sheet E1.0 – Electrical Site Plan – Demolition

Delete: Removed reference to (E) panel “LF” from Package 1 scope.

Item #04: Sheet E1.0 – Electrical Site Plan – Demolition

Change: Appended to the end of Demo Note 2: “See new plan (E2.2) for new requirement.”

Item #05: Sheet E1.0 – Electrical Site Plan – Demolition

Change: Demolition Note 3: “(E) Electrical combo boxes to remain.”
Applied respective demo note to the 4 (E) combo boxes that are outside of the track.

Item #06: Sheet E1.0 – Electrical Site Plan – Demolition

Add: Added Demolition Note 4, in reference to the (E) 8 combo boxes:
“(E) Electrical combo boxes to be replaced with new. See civil DWGs for requirement. (E) Electrical conduits and cables to remain. The contractor shall include in their bid to remove (E) receptacle, protect and reinstall. Provide all materials (cables, logs, etc.) to reinstall (E) receptacle. (E) Receptacles in (N) combo boxes.”
Applied respective demo note to the 4 (E) combo boxes that are outside of the track.

Item #07: Sheet E1.0 – Electrical Site Plan – Demolition

Add: Added an existing stubbed electrical underground conduit that leads to the

existing scoreboard and referenced it to Sheet Note #1.

Item #08:Sheet E1.0 – Electrical Site Plan – Demolition

Add: Added Sheet Note #1: The contractor to include in their bid to field verify existing scoreboard power conduit exact condition and location from (E) pressbox to (E) scoreboard. Submit a report letting the design team know if the conduit is in good condition and the contractor has no problem pulling cables in the existing conduit. Provide (E) conduit size.”

Item #09:Sheet E1.1 – Electrical New Site Plan

Delete: Removed Conduit Schedule

Item #10:Sheet E1.1 – Electrical New Site Plan

Delete: Removed Sheet Notes

Item #11:Sheet E1.1 – Electrical New Site Plan

Delete: Removed Alternative #1 pathway to get data from (E) Network / Data Vault

Item #12:Sheet E1.1 – Electrical New Site Plan

Delete: Removed Alternative #2 pathway to get data from (E) network room.

Item #13:Sheet E1.1 – Electrical New Site Plan

Delete: Removed conduit trenching along with its respective in-grade signal box from (E) FATC.

Item #14:Sheet E2.2 – Electrical Floor Plan - Parking/Entry/Volleyball/Futsal

Change: Moved one GFCI receptacle to be inside the volleyball courts fence

Item #15:Sheet E2.2 – Electrical Floor Plan - Parking/Entry/Volleyball/Futsal

Change: Moved (2) GFCI receptacles and its connecting conduit to be closer to the drinking fountain.

Item #16:Sheet E2.2 – Electrical Floor Plan - Parking/Entry/Volleyball/Futsal

Change: Revised and clarified conduit schedule:
Labeled unreferenced conduits schedules to be “Not Used”
Clarified power conduit destinations

Item #17:Sheet E2.2 – Electrical Floor Plan - Parking/Entry/Volleyball/Futsal

Add: Added Sheet Note 1 and referenced it in DWG: “Contractor to locate and intercept existing conduits with new conduit to new in-grade pull-box as shown. Match existing conduit sizes.”

Item #18:**Sheet E2.2 – Electrical Floor Plan - Parking/Entry/Volleyball/Futsal**

Add: Added Sheet Note 2 and referenced it in DWG: “Existing conduits to existing pull-box to remain.”

Item #19:**Sheet E2.2 – Electrical Floor Plan - Parking/Entry/Volleyball/Futsal**

Delete: Removed a DWG reference for continuation of power and signal conduit. Reference of 1/E2.1 (baseball field) is not in Package 1 scope.

Item #20:**Sheet E2.2 – Electrical Floor Plan - Parking/Entry/Volleyball/Futsal**

Change: Revised power conduit tags that continues onto 1/E2.3.

Item #21:**Sheet E2.2 – Electrical Floor Plan - Parking/Entry/Volleyball/Futsal**

Delete: Removed one GFCI receptacle. Total of 2 GFCI receptacles for Volleyball Courts

Item #22:**Sheet E2.3 – Electrical Floor Plan - Soccer/Lacrosse and Tennis Courts**

Delete: Removed conduit pathway from power and signal box leading towards the power and signal boxes near the storage building. Storage building not part of Package 1 scope

Item #23:**Sheet E2.3 – Electrical Floor Plan - Soccer/Lacrosse and Tennis Courts**

Delete: Removed conduit pathway from signal box that continued onto 1/E1/1.

Item #24:**Sheet E2.3 – Electrical Floor Plan - Soccer/Lacrosse and Tennis Courts**

Change: Revised and clarified the entire conduit schedule. Adjusted power and signal conduit callouts accordingly. Removed references to Baseball Field (1/E2.1) from Package 1 scope

Item #23:**Sheet E2.3 – Electrical Floor Plan - Soccer/Lacrosse and Tennis Courts**

Delete: Removed a row of GFCI receptacles at the tennis courts. Total of 4 GFCI receptacles removed.

Item #24:**Sheet E2.3 – Electrical Floor Plan - Soccer/Lacrosse and Tennis Courts**

Add: Added a GFCI receptacle in at the tennis courts to serve as the power for the “Finish Line Timing System”.

Item #25:**Sheet E4.1 – Electrical Single Line Diagram**

Change: Adjusted Conduit Schedule:
 Changed the unreferenced schedules to be "Not Used"
 Changed the feeder for Conduit Schedule 1 to be #300 KCMIL + (1) #2 CU GND
 Changed Conduit Schedule 5 to be 2"C – (2) #3 + (1) #8 CU GND
 Changed Conduit Schedule 6 to be 2"C – (2) #1 + (1) #6 CU GND
 Added Conduit Schedule 7 for the Finish Line Timing System ▪ (N) 2"C – (2) #1/0 + (1) #6 CU GND

Item #26:Sheet E4.1 – Electrical Single Line Diagram

Add: Added a 20A/1P breaker to the 150A Panel at the Tennis & Soccer Field to power a GFCI receptacle for the Finish Line Timing System.

Item #27:Sheet E4.1 – Electrical Single Line Diagram

Change: Tagged the conduit for the tennis courts receptacles to be Conduit Schedule 6

Item #28:Sheet E4.1 – Electrical Single Line Diagram

Delete: Removed one GFCI receptacle from the Volleyball Courts

Item #29:Sheet E4.1 – Electrical Single Line Diagram

Delete: Removed a row of GFCI receptacles from the Tennis Courts. 4GFCI receptacles removed

Item #30:Sheet E4.1 – Electrical Single Line Diagram

Change: Total of 5 GFCI receptacles removed and one GFCI receptacle added

DRAWINGS:
Structural

Item #01:Sheet S0.1 – Soccer Field Scoreboard

Add: Sheet S0.1, Soccer Field Scoreboard, has been added to construction documents.

Submitted Questions:

Question #1:

The written specs call out heavy regal by builders fence. The specs are actually for xtra heavy regal. On sheet D3.1/A,B,C & G all show aristo pinch point style. Please confirm which style is to be used.

Answer #1: All ornamental fencing and gates have been removed from project.

End of Addendum #01

The changes described in each Bid Alternate shall only become incorporated into the Work if the District elects to proceed with one or more or any combination of the Bid Alternates and amends the District-Contractor Agreement accordingly. The selection of Bid Alternates may occur prior to the Contract Date, or may, by the Agreement, be deferred for possible selection at a subsequent date.

Acceptance or Rejection: Acceptance or rejection of each Bid Alternate is at the discretion of the District. None, any or all Bid Alternates may be accepted or rejected in any sequence by the District.

Modifications to the work shall require furnishing and installing the selected Bid Alternate materials and labor to the satisfaction of the District’s Representative at no additional cost to the District other than described in the applicable Bid Alternate.

Extent of Bid Alternate: Bidders shall determine the full extent of work affected by each Bid Alternate and shall make full and proper allowance for such extent.

Each Bid Alternate price must include all labor, materials, equipment, facilities, transportation and services to complete all work related to the Bid Alternate.

No increase in Contract days or extension of Contract completion schedule shall be made for Work required by Bid Alternate improvements.

Bid Alternates:

Alternate #1: Add Volleyball Seating and Entry Furnishings

Materials and labor to install concrete spectator seating, concrete seat walls with plinths, and to revise planting and irrigation layouts per sheets L10.0 and L10.1.

_____ Dollars, \$_____

- 2. The undersigned has reviewed the Work outlined in the Contract Documents and fully understands the scope of Work required in this Proposal, understands the construction and project management function(s) is described in the Contract Documents, and that each Bidder who is awarded a contract shall be in fact a prime contractor, not a subcontractor, to the District, and agrees that its Proposal, if accepted by the District, will be the basis for the Bidder to enter into a contract with the District in accordance with the intent of the Contract Documents.
- 3. The undersigned has notified the District in writing of any discrepancies or omissions or of any doubt, questions, or ambiguities about the meaning of any of the Contract Documents, and has contacted the Construction Manager before bid date to verify the issuance of any clarifying Addenda.
- 4. The undersigned agrees to commence work under this Contract on the date established in the Contract Documents and to complete all work within the time specified in the Contract Documents.

- 5. The liquidated damages clause of the General Conditions and Agreement is hereby acknowledged.
- 6. It is understood that the District reserves the right to reject this bid and that the bid shall remain open to acceptance and is irrevocable for a period of ninety (90) days.
- 7. The following documents are attached hereto:
 - Bid Bond on the District's form or other security
 - Designated Subcontractors List
 - Site-Visit Certification
 - Non-Collusion Declaration

8. Receipt and acceptance of the following addenda is hereby acknowledged:

No.____, Dated _____	No.____, Dated _____
No.____, Dated _____	No.____, Dated _____
No.____, Dated _____	No.____, Dated _____

- 9. Bidder acknowledges that the license required for performance of the Work is a _____ license.
- 10. The undersigned hereby certifies that Bidder is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the Work.
- 11. Bidder specifically acknowledges and understands that if it is awarded the Contract, that it shall perform the Work of the Project while complying with all requirements of the Department of Industrial Relations [and with all requirements of the Project Labor Agreement].
- 12. Bidder specifically acknowledges and understands that if it is awarded the Contract, that it and its subcontractors shall participate in and comply with the owner-controlled or wrap-up insurance program (OCIP).
- 13. The Bidder represents that it is competent, knowledgeable, and has special skills with respect to the nature, extent, and inherent conditions of the Work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the Work that may create, during the Work, unusual or peculiar unsafe conditions hazardous to persons and property.
- 14. Bidder expressly acknowledges that it is aware of such peculiar risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the Work with respect to such hazards.
- 15. Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms "claim" and "knowingly" are defined in the California False

Claims Act, Cal. Gov. Code, §12650 et seq.), the District will be entitled to civil remedies set forth in the California False Claim Act. It may also be considered fraud and the Contractor may be subject to criminal prosecution.

- 16. The undersigned Bidder certifies that it is, at the time of bidding, and shall be throughout the period of the contract, licensed by the State of California to do the type of work required under the terms of the Contract Documents and registered as a public works contractor with the Department of Industrial Relations. Bidder further certifies that it is regularly engaged in the general class and type of work called for in the Contract Documents.

Furthermore, Bidder hereby certifies to the District that all representations, certifications, and statements made by Bidder, as set forth in this bid form, are true and correct and are made under penalty of perjury.

Dated this _____ day of _____ 2017.

Name of Bidder _____

Type of Organization _____

Signed by _____

Title of Signer _____

Address of Bidder _____

Taxpayer's Identification No. of Bidder _____

Telephone Number _____

Fax Number _____

E-mail _____ Web page _____

Contractor's License No(s): No.: _____ Class: _____ Expiration Date: _____

No.: _____ Class: _____ Expiration Date: _____

No.: _____ Class: _____ Expiration Date: _____

Public Works Contractor Registration No.: _____

If Bidder is a corporation, affix corporate seal.

Name of Corporation: _____

President: _____

Secretary: _____

Treasurer: _____

Manager: _____

END OF DOCUMENT

DOCUMENT 00 73 13

SPECIAL CONDITIONS**1. Mitigation Measures**

Contractor shall comply with all applicable mitigation measures, if any, adopted by any public agency with respect to this Project pursuant to the California Environmental Quality Act. (Public Resources Code section 21000 et seq.)

2. Modernization Projects

2.1. Access. Access to the school buildings and entry to buildings, classrooms, restrooms, mechanical rooms, electrical rooms, or other rooms, for construction purposes, must be coordinated with District and onsite District personnel before Work is to start. Unless agreed to otherwise in writing, only a school custodian will be allowed to unlock and lock doors in existing building(s). The custodian will be available only while school is in session. If a custodian is required to arrive before 7:00 a.m. or leave after 3:30 p.m. to accommodate Contractor's Work, the overtime wages for the custodian will be paid by the Contractor, unless at the discretion of the District, other arrangements are made in advance.

2.2. Master Key. Upon request, the District may, at its own discretion, provide a master key to the school site for the convenience of the Contractor. The Contractor agrees to pay all expenses to re-key the entire school site and all other affected District buildings if the master key is lost or stolen or if any unauthorized party obtains a copy of the key or access to the school.

2.3. Maintaining Services. The Contractor is advised that Work is to be performed in spaces regularly scheduled for instruction. Interruption and/or periods of shutdown of public access, electrical service, water service, lighting, or other utilities shall be only as arranged in advance with the District. Contractor shall provide temporary services to all facilities interrupted by Contractor's Work.

2.4. Maintaining Utilities. The Contractor shall maintain in operation during duration of Contract, drainage lines, storm drains, sewers, water, gas, electrical, steam, and other utility service lines within working area.

2.5. Confidentiality. Contractor shall maintain the confidentiality of all information, documents, programs, procedures and all other items that Contractor encounters while performing the Work. This requirement shall be ongoing and shall survive the expiration or termination of this Contract and specifically includes, without limitation, all student, parent, and employee disciplinary information and health information.

2.6. Work During Instructional Time. By submitting its bid, Contractor affirms that Work may be performed during ongoing instruction in existing facilities. If so, Contractor agrees to cooperate to the best of its ability to minimize any disruption to the school up to, and including, rescheduling specific work activities, at no additional cost to District.

2.7. No Work During Student Testing. Contractor shall, at no additional cost to the District and at the District's request, coordinate its Work to not disturb District

students including, without limitation, not performing any Work when students at the Site are taking State-required tests.

3. Substitution for Specified Items

3.1. Whenever in the Specifications any materials, process, or article is indicated or specified by grade, patent, or proprietary name, or by name of manufacturer, that Specification shall be deemed to be followed by the words "or equal." Contractor may, unless otherwise stated, offer any material, process, or article that shall be substantially equal or better in every respect to that so indicated or specified.

3.1.1. If the material, process, or article offered by Contractor is not, in the opinion of the District, substantially equal or better in every respect to that specified, then Contractor shall furnish the material, process, or article specified in the Specifications without any additional compensation or change order.

3.1.2. This provision shall not be applicable with respect to any material, product, thing or service for which District made findings and gave notice in accordance with Public Contract Code section 3400(c); therefore, Contractor shall not be entitled to request a substitution with respect to those materials, products or services.

3.2. A request for a substitution shall be submitted as follows:

3.2.1. Contractor shall notify the District in writing of any request for a substitution at least Seven (7) days prior to bid opening as indicated in the Instructions to Bidders.

3.3. Within Ten (10) days after the date of the Notice of Award, Contractor shall provide data substantiating a request for substitution of "an equal" item, including but not limited to the following:

3.3.1. All variations of the proposed substitute from the material specified including, but not limited to, principles of operation, materials, or construction finish, thickness or gauge of materials, dimensions, weight, and tolerances;

3.3.2. Available maintenance, repair or replacement services;

3.3.3. Increases or decreases in operating, maintenance, repair, replacement, and spare parts costs;

3.3.4. Whether or not acceptance of the substitute will require other changes in the Work (or in work performed by the District or others under Contract with the District); and

3.3.5. The time impact on any part of the Work resulting directly or indirectly from acceptance of the proposed substitute.

3.4. No substitutions shall be made until approved, in writing, by the District. The burden of proof as to equality of any material, process, or article shall rest with Contractor. The Contractor warrants that if substitutes are approved:

3.4.1. The proposed substitute is equal or superior in all respects to that specified, and that such proposed substitute is suitable and fit for the intended purpose and will perform adequately the function and achieve the results called for by the general design and the Contract Documents;

3.4.2. The Contractor provides the same warranties and guarantees for the substitute that would be provided for that specified;

3.4.3. The Contractor shall be fully responsible for the installation of the substitute and any changes in the Work required, either directly or indirectly, because of the acceptance of such substitute, with no increase in Contract Price or Contract Time. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the Contract Price or Contract Time;

3.4.4. The Contractor shall be responsible for any re-design costs occasioned by District's acceptance and/or approval of any substitute; and

3.4.5. The Contractor shall, in the event that a substitute is less costly than that specified, credit the District with one hundred percent (100%) of the net difference between the substitute and the originally specified material. In this event, the Contractor agrees to execute a deductive Change Order to reflect that credit.

3.5. In the event Contractor furnishes a material, process, or article more expensive than that specified, the difference in the cost of that material, process, or article so furnished shall be borne by Contractor.

3.6. In no event shall the District be liable for any increase in Contract Price or Contract Time due to any claimed delay in the evaluation of any proposed substitute or in the acceptance or rejection of any proposed substitute.

3.7. Contractor shall be responsible for any costs the District incurs for professional services and/or DSA fees or delay to the Project Schedule, if applicable, while DSA reviews changes for the convenience of Contractor and/or to accommodate Contractor's means and methods. District may deduct those costs from any amounts owing to the Contractor for the review of the request for substitution, even if the request for substitution is not approved. District, at its sole discretion, shall deduct from the payments due to and/or invoice Contractor for all the professional services and/or DSA fees or delay to the Project Schedule, if applicable, while DSA reviews changes for the convenience of Contractor and/or to accommodate Contractor's means and methods arising herein.

4. Weather Days

Delays due to Adverse Weather conditions will only be permitted in compliance with the provisions in the General Conditions and only if the number of days of Adverse Weather exceeds the following parameters and Contractor can verify that the excess days of Adverse Weather caused delays:

January	11	July	0
February	10	August	0
March	10	September	1
April	6	October	4
May	3	November	7
June	1	December	10

5. Owner-Controlled or Wrap-Up Insurance Program

Contractor and all Subcontractors under the Contractor shall participate in and comply with the owner-controlled or wrap-up insurance program (OCIP). In addition, Contractor shall procure and maintain, at its own expense, until completion and final acceptance of the Work at least the following insurance from insurance companies with an A.M. Best rating of no less than **A: VII**, except for those coverages provided by the OCIP as described in the OCIP Manual:

Commercial General Liability	Personal Injury Liability, Broad Form Property Damage including completed operations, and Explosion, Collapse and Underground Hazards	\$2,000,000
Automobile Liability – Any Auto	Bodily Injury and Property Damage	\$1,000,000
Workers Compensation		Statutory limits pursuant to State law
Employers’ Liability		\$1,000,000

6. Permits, Certificates, Licenses, Fees, Approval

6.1. Payment of Fees for Permits, Certificates, Licenses, and Registrations.

As required in the General Conditions, the Contractor shall secure and pay for all permits, licenses, registrations, and certificates necessary for the prosecution of the Work with the exception of the following:

- 6.1.1. WATER CONNECTION FEES**
- 6.1.2. SANITARY SEWER CONNECTION FEES**
- 6.1.3. STORM DRAIN CONNECTION FEES**

With respect to the above listed items, Contractor shall be responsible for securing such items; however, District will be responsible for payment of these charges or fees. Contractor shall notify the District of the amount due with respect to such items and to whom the amount is payable. Contractor shall provide the District with an invoice and receipt with respect to such charges or fees.

7. As-Builts and Record Drawings

7.1. When called for by Division 1, Contractor shall submit As-Built Drawings pursuant to the Contract Documents consisting of one set of As-Built Drawings in 30" x 42" color reprographic; plus one set of As-Built Drawings in pdf format provided on disc or thumb drive.

7.2. Contractor shall submit Record Drawings pursuant to the Contract Documents consisting of one set of computer-aided design and drafting ("CADD") files, plus one set of Record Drawings on 30" x 42" color reprographic, plus one set of Record Drawings in pdf format provided on disc or thumb drive.

8. Construction Manager

The District will use a Construction Manager on the Project that is the subject of this Contract. Gilbane Building Company is the Construction Manager for this Project.

9. Program Manager

Gilbane Building Company is the Program Manager designated for the Project that is the subject of this Contract.

10. Preliminary Schedule of Values

The preliminary schedule of values shall include, at a minimum, the following information and the following structure:

Replace provision in the General Conditions with the following provisions:

- 10.1.1.2.3.** The preliminary schedule of values shall not provide for values any greater than the following percentages of the Contract value:
 - 10.1.1.2.3.1.** Mobilization and layout combined to equal not more than **1%**;
 - 10.1.1.2.3.2.** Submittals, samples and shop drawings combined to equal not more than **5%**;
 - 10.1.1.2.3.3.** Bonds and insurance combined to equal not more than **1%**.

11. Construction Work Hours

Construction activities on campus shall be restricted to between the hours of 7:00 A.M. and 7:00 P.M. on weekdays and Saturdays. Work on Sunday and holidays upon request and acceptance from the District.

12. Project Temporary Fence

The District owns and will retain the ownership of the project temporary fence around the project site. The fencing has three (3) gates and there are two (2) locks on each gate. The project temporary fence surrounds the baseball field, soccer field, tennis courts, future volleyball courts and common areas as indicated on the following picture.

It is the responsibility of the Contractor to provide temporary fencing and windscreen at the PE courtyard during the course of the Work.

The awarded Contractor shall be responsible for maintaining the project temporary fence from the time that the Contractor mobilizes onto the site, until the date that the Contractor demobilizes from the site to ensure protection of the site, the Work and general public. The awarded Contractor will be allowed to daisy chain their lock onto a minimum of three (3) gates and ensure that all parties to the series of locks are able to access the jobsite.

Should the Contractor deem that additional materials are needed to protect the project site, stabilize the temporary fencing material and/or expand the work area, it is the responsibility of the Contractor to provide the materials and labor for the duration of the Contractor's responsibility. It is the responsibility of the Contractor to provide notification and receive approval from the District that such modification(s) to the temporary fence is/are needed.

It is the responsibility of the Contractor to document the existing condition of the project temporary fence and bring to the attention of the District of any damage or issues with the temporary fence prior to taking responsibility of the fencing.

Contractor shall provide access to existing facilities for persons using other buildings and portions of the Site, the public, and for deliveries and other services and activities. Contractor shall adjust, modify and change temporary fencing daily or more, if needed as determined by the District.

13. Coordination with Other Contractors

Contractor shall coordinate the Work in and around the campus with other Contractor's. The following are projects concurrently on-site:

Demolition of storage facilities North/West of the baseball field.

Fire lane improvements North of the PE buildings.

Demolition of ancillary building on the football field.

END OF DOCUMENT



Corte Madera Creek

Tamalpais Creek

Tamalpais Creek

Google

3

2

1

Temporary Fence

Gates

PROJECT STABILIZATION AGREEMENT

for the

MARIN COMMUNITY COLLEGE DISTRICT

PREAMBLE

This Agreement is made and entered into on this date 4/26/2017, by and between the Marin Community College District ("District") together with contractors and/or subcontractors, including construction building material delivery truckers, trucking companies and trucking brokers, who shall become signatory to this Agreement by signing the "Agreement To Be Bound" (Exhibit A), ("Contractor(s)"), the Marin County Building and Construction Trades Council and the Local Unions signatory hereto, all in their behalf and in behalf of the various Local Unions involved, ("Union(s)").

Recitals

WHEREAS, the large, complex, multi-craft, and long-term Projects described in this Agreement have been designated by the District as ones in which a Project Stabilization Agreement Requirement applies; and

WHEREAS, the Contractors will be engaged in construction of the Project; and

WHEREAS, a skilled labor pool represented by Building Trades Unions will be required to complete the work involved; and

WHEREAS, the Building Trades Unions agree to cooperate in every way possible with employees of the Contractors; and

WHEREAS, the parties to this Agreement mutually agree that safety, quality, productivity and labor harmony are primary goals; and

WHEREAS, the District desires to provide an increased awareness of construction training and employment opportunities for students of and residents within the District through apprentice and pre-apprentice programs; and

WHEREAS, the parties recognize the need for safe, efficient and speedy construction in order to reduce unnecessary delays and result in timely completion of the Project; and

WHEREAS, the parties desire to mutually establish and stabilize wages, hours and working conditions for the employees employed on the Project by the Contractors, and further to encourage close cooperation to achieve a satisfactory, continuous and harmonious relationship between the parties to this Agreement;

NOW THEREFORE, the parties, in consideration of the mutual promises and covenants herein contained, mutually agree as follows:

ARTICLE 1

PURPOSE

- 1.1 The purposes of this Agreement are to promote efficient construction operations on the Project, to insure an adequate supply of skilled craftspeople and to provide for peaceful, efficient and binding procedure for settling labor disputes. In so doing, the parties to this Agreement establish the foundation to promote the public interest, to provide a safe work place, to assure high quality construction, to ensure an uninterrupted construction project, and to secure optimum productivity, on-schedule performance and District satisfaction.
- 1.2 It is the intent of the parties to set out uniform and fair working conditions for the efficient completion of the Project, maintain harmonious labor/management relations and eliminate strikes, lockouts and other delays.
- 1.3 The parties agree that one of the primary purposes of this Agreement is to avoid the tensions that might arise on the Project if union and nonunion workers of different employers were to work side by side on the Project thereby leading to labor disputes that could delay completion of the Project.

ARTICLE 2

SCOPE OF AGREEMENT

- 2.1 This Agreement shall apply to those complex, long term, multi-craft construction Projects designated by the District and identified in Exhibit B ("Project(s)") which is attached to this Agreement and incorporated herein by reference. Additional Projects may be added to the Scope of this Agreement by mutual agreement of the parties.
- 2.2 This Agreement shall apply only to construction/craft employees working on this Project represented by the Unions signatory hereto, and shall not apply to Contractors' supervisors, technical or non-manual employees including, but not limited to, executives, engineers, office and clerical employees, drafters, supervisors, timekeepers, messengers, guards, other employees above the classification of general foreman or inspectors, material testers, and/or x-ray technicians, except to the extent that such inspectors, material testers, and/or x-ray technicians are customarily covered by the Local Collective Bargaining Agreement and as to which classification a prevailing wage determination has been published.

- 2.3 There shall be no limitation or restriction upon the choice of materials or upon the full use and installation of equipment, machinery, package units, factory pre-cast, prefabricated or preassembled materials, tools or other labor-saving devices. The lawful fabrication provisions of the appropriate national or local agreements shall be applicable. Thus, this Agreement also covers any off-site work, including fabrication, that is traditionally performed by any of the Unions that is directly or indirectly part of the Project, provided such work is covered by a provision of a local agreement or a local addendum to a national agreement of the applicable Union(s).
- 2.4 After installation by the Contractor(s) and upon the issuance of Substantial Completion, Final Completion or Formal Acceptance of a portion of the project or a building system by the District, it is understood the District reserves the right to perform start-up, operation, repair, maintenance or revision of equipment or systems with persons of the District's choice. If required, the service representative may make a final check and may direct workmen on site to make any necessary repairs to protect the terms of a manufacturer's guarantee or warranty prior to start-up of a piece of equipment.
- 2.5 It is recognized by the parties to this Agreement that the signatory Coordinator and Contractor(s) are acting only on behalf of said Coordinator and Contractor(s), and said Coordinator and Contractor(s) have no authority, either expressed, implied, actual, apparent or ostensible, to speak for or bind the District.
- 2.6 It is expressly agreed and understood by the parties hereto that the District shall retain the right at all times to perform and/or subcontract all portions of the construction and related work on Project sites not covered by this Agreement.
- 2.7 The working conditions and hours of employment herein provided have been negotiated between the parties signatory to this Agreement.
- 2.8 It is expressly agreed and understood by the parties hereto that the District shall have the right to purchase material and equipment from any source and the craftsmen will handle and install such material and equipment.
- 2.9 Without limiting the foregoing, items specifically excluded from the scope of this Agreement include the following:
- 2.9.1 The operation of equipment and machinery owned or controlled by the District and not directly related to the construction project;
- 2.9.2 All employees of any Contractor, design team or any other consultant of the District not performing construction craft labor within the scope of this Agreement;

- 2.93 Any work performed on or near or leading to or on to the site of work covered by this Agreement and undertaken by state, county, city or other governmental bodies, or their contractor, or by public utilities or their contractors, and/or by the District or its contractors (for work which is not part of the scope of this Agreement);
 - 2.94 Off-site maintenance of leased equipment and on-site supervision of such work;
 - 2.95 Non-construction support services contracted by the District or any Contractor in connection with this Project; and
 - 2.96 All work by employees of the District.
- 2.10 The local trade council shall assist the owner in soliciting interested parties in bidding on the project(s) and in encouraging and soliciting subcontractors in bidding to interested general contractors.

ARTICLE 3

SUBCONTRACTS

- 3.1 Each Contractor(s), which includes all subcontractors of any tier performing work on the Project, agrees that neither it nor any of its subcontractors will subcontract any work to be done on the Project except to a person, firm, or corporation who is or becomes party to this Agreement by signing the Agreement to be Bound attached to this Agreement as Exhibit "A". All Contractor(s) working on the Project shall, as a condition to working on the Project, become signatory to and perform all work under the terms of this Agreement.
- 3.2 A Contractor includes any person, firm or corporation, including construction building material delivery truckers, trucking companies and trucking brokers, who agrees under contract with another Contractor of any tier, to perform on the Project any part or portion of the construction work covered by the prime contract, including the operating of construction equipment, performance of labor and/or installation of materials.
- 3.3 The furnishing of supplies, equipment or materials which are stockpiled for later use shall in no case be considered subcontracting; however, the delivery of ready-mix, asphalt, aggregate, sand or other fill material which are directly incorporated into the construction process as well as the off-hauling of debris (other than that contained in debris boxes) and excess fill and/or mud shall be covered by the terms and conditions of this Agreement.

3.4 Each Contractor(s) with a contract directly with the District has the primary obligation for performance of all conditions of this Agreement, including the performance of all of that Contractor(s)' subcontractors. This obligation cannot be relieved, evaded or diminished by subcontracting. Should a Contractor(s) elect to subcontract, that Contractor(s) shall continue to have such primary obligation.

3.5 Each Contractor(s), which includes all subcontractors of any tier performing work on the Project, shall give written notice to the Union(s) of any subcontract involving the performance of work covered by this Agreement within either five (5) days of entering such subcontract or before the subcontractor commences work on the Project, whichever occurs first. Such notice shall specify the name and address of the subcontractor. Written notice at a Pre-Job Conference shall be deemed written notice under this provision for those subcontractors listed at the Pre-Job only.

3.6 Signatory Contractors:

3.6.1 (A) With regard to any Contractor that is independently signed to any Schedule A Master Labor Agreement ("MLA"), this Agreement shall in no way supersede or prevent the enforcement of any subcontracting clause contained in such MLA, except as specifically set forth in subsection (B) of this Article. Any such subcontracting clause in an MLA shall remain and be fully enforceable between each craft union and its signatory contractors, and no provision of this Agreement shall be interpreted and/or applied in any manner that would give this Agreement precedence of subcontracting obligations and restrictions that exist between craft unions and their respective signatory contractors under a MLA, except as specifically set forth in subsection (B) of this Article.

(B) If a craft union ("aggrieved union") believes that an assignment of work on this Project has been made improperly by a Contractor or subcontractor, even if that assignment was as a result of another craft union's successful enforcement of the subcontracting clause in its MLA, as permitted by subsection (A) of this Article, the aggrieved union may submit a claim under the jurisdictional resolution procedure contained in Article 6 of this Agreement, and the decision rendered as part of that process shall be enforceable to require the Contractor or subcontractor that made the work assignment to assign that work prospectively to the aggrieved union. An award made to a craft union under the subcontracting clause of its MLA, as permitted pursuant to subsection (A) of this Article, shall be valid and fully enforceable by that craft union unless it conflicts with a jurisdictional award made pursuant to this Agreement. If the award made under the MLA conflicts with the jurisdictional award, the former shall be null and void ab initio.

ARTICLE 4

RELATIONSHIP BETWEEN PARTIES

- 4.1 This Agreement shall only be binding on the signatory parties hereto, and shall not apply to parents, affiliates, subsidiaries, or other divisions of the Coordinator and signatory Contractor(s) unless signed by such parent, affiliate, subsidiary, or other division of such company.
- 4.2 Each Contractor(s) shall alone be liable and responsible for its own individual acts and conduct and for any breach or alleged breach of this Agreement. Any alleged breach of this Agreement by a Contractor(s) or any dispute between the signatory Union(s) and the Contractor(s) respecting compliance with the terms of this Agreement, shall not affect the rights, liabilities, obligations and duties between the signatory Union(s) and each other Contractor(s) party to this Agreement.
- 4.3 It is mutually agreed by the parties that any liability by a signatory Union(s) to this Agreement shall be several and not joint. Any alleged breach of this Agreement by a signatory Union(s) shall not affect the rights, liabilities, obligations and duties between the signatory Contractors and the other Unions party to this Agreement.

ARTICLE 5

NO STRIKES - NO LOCKOUTS

- 5.1 During the life of this Agreement, the Union(s) and its members, agents, representatives and employees shall not incite, encourage, condone or participate in any strike, walkout, slowdown, sit-down, stay-in, boycott, wobble, sympathy strike, picketing or other work stoppage or handbilling of any nature whatsoever, for any cause whatsoever, or any other type of interference of any kind, coercive or otherwise, and it is expressly agreed that any such action is a violation of this Agreement.
- 5.1.1 Withholding of employees for failure of a Contractor(s) to make trust fund contributions as required in accordance with Article 16 and/or for failure to meet its weekly payroll is not a violation of this Article 5; however, the Union shall give the affected Contractor and the Coordinator written notice seventy-two (72) hours prior to the withholding of employees.

Should a Contractor performing work on this Project be delinquent in the payment of Trust Fund contributions required under this Agreement with respect to employees represented by the Union, the Union may request, that the Contractor issue joint checks payable to the Contractor and the appropriate employee benefit Trust Fund(s) until such delinquencies are

satisfied. Any Trust Fund claiming that a Contractor is delinquent in its fringe benefit contributions to the funds, will provide written notice of the alleged delinquency to the affected Contractor, with copies to the Contractor, the Coordinator and/or the District. The notice will indicate the amount of delinquency asserted and the period that the delinquency covers. It is agreed, however, with respect to contractors delinquent in trust or benefit contribution payments, that nothing in this Agreement shall affect normal contract remedies available under the local collective bargaining agreements. If the Contractor is delinquent in the payment of Trust Fund(s) contributions for covered work performed on this project, the Contractor agrees that the affected Trust Fund(s) may place the District on notice of such delinquencies and the Contractor further agrees that the District may issue joint checks to the Contractor and the Trust Fund(s) until the delinquency is satisfied.

5.1.2 Expiration of Local and Other Applicable Agreements. It is specifically agreed that there shall be no strike, sympathy strike, picketing, lockout, slowdown, withholding of work, refusal to work, walk-off, sick-out, sit-down, stand-in, wobble, boycott or other work stoppage of any kind as a result of the expiration of any local, regional or other applicable labor agreement having application at the Project and/or failure of the parties to that agreement to reach a new contract. If a Master Agreement between a Contractor and the Union expires before the Contractor completes the performance of a construction contract and the Union or Contractor gives notice of demands for a new or modified Master Agreement, the Union agrees that it will not strike or withhold labor from the Contractor on said contract for work covered under this Agreement and the Union and the Contractor agree that the expired collective bargaining agreement shall continue in full force and effect for work covered under this Agreement until a new or modified Master Agreement is reached between the Union and Contractor. If the Union and employers agree to an interim agreement that will apply until a new Master Agreement is reached, then, at the Contractor's option, the Contractor may work under the terms of the interim agreement until a new or modified Master Agreement is reached between the Union and Contractor. If the new or modified Master Agreement reached between the Union and Contractor provides that any terms of compensation of the Master Agreement shall be retroactive, the Contractor agrees to comply with any retroactive terms of the new or modified Master Agreement to its effective date which is applicable to employees employed on a project within seven (7) days after notification by the Union.

52 In consideration of the foregoing, the Contractor(s) shall not incite, encourage or participate in any lockout or cause to be locked out any employee covered under the provisions of this Agreement. The term "lockout" does not refer to the

discharge, termination or layoff of employees by the Contractor(s) for any reasons in the exercise of its rights as set forth in any provision of this Agreement, nor does "lockout" include the District's or Contractors' decision to terminate or suspend work on the site or any portion thereof for any reason.

- 53 Any employee or employees inciting, encouraging or participating in any strike, slowdown, picketing, sympathy strike or other activity in violation of this Agreement is subject to immediate discharge and the procedure of Article 11, if invoked.
- 54 Upon written facsimile or electronic mail notice of a violation to the Local and International Union(s) offices, the Union(s) and its officers shall take immediate action and will use its (their) best efforts to prevent, end or avert any such aforementioned activity or the threat thereof by any of its officers, members, representatives or employees, either individually or collectively, including but not limited to, publicly disavowing any such action and ordering all such officers, representatives, employees or members who participate in such unauthorized activity to cease and desist from same immediately and to return to work and comply with its orders. The Contractor(s) shall have the right, in the event of a work stoppage by the Union(s) to replace the employees represented by the Union(s) in violation of this Agreement until the Union(s) effects the return to work of such employees. Nothing in this Agreement shall be construed to limit or restrict the right of any of the parties to this Agreement to pursue fully any and all remedies available under law in the event of a violation of this Article 5.
- 55 Any party to this Agreement may institute the following binding arbitration procedure when such a breach is alleged. In the event a party institutes this procedure, arbitration shall be mandatory.
- 5.5.1 The party invoking this procedure shall immediately notify **Robert Hirsch** who the parties agree shall be the permanent Arbitrator under this procedure. **William Riker** shall serve as the alternate in the event that the permanent Arbitrator is unavailable at any time. Notice to the Arbitrator shall be by the most expeditious means available, with notice by facsimile, electronic mail or similar means to the party alleged to be in violation and the involved Union General President.
- 5.5.2 Upon receipt of said notice the Arbitrator named above or the alternate shall designate a place for, schedule and hold a hearing within twenty-four (24) hours.
- 5.5.3 The Arbitrator shall notify the parties by facsimile, electronic mail or similar means of the place and time chosen for the session. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an award by the Arbitrator.

- 5.5.4 The sole issue at the hearing shall be whether or not a violation of this Article has in fact occurred, and the Arbitrator shall have no authority to consider any matter in justification, explanation or mitigation of such violation or to award damages, which issue is reserved for court or other arbitration proceedings, if any. The award shall be issued in writing within three (3) hours after the close of the hearing and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the award. The Arbitrator shall order cessation of the violation of this Article and other appropriate relief, and such award shall be served on all parties by hand or registered mail upon issuance.
- 5.5.5 The award shall be final, binding and non-reviewable as to the merits. A judgment of any court of competent jurisdiction shall be entered upon the award, which may be enforced by any such court, upon the filing of this Agreement and all other relevant documents referred to hereinabove in the following manner. Facsimile, electronic mail or similar notice of the filing of such enforcement proceedings shall be given to the other party. In the proceeding to obtain a temporary order enforcing the Arbitrator's award as issued under Section 5.5.4 of the Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Arbitrator's award shall be served on all parties by hand or by delivery to their last known address or by registered mail.
- 5.5.6 Any rights created by statute or law governing arbitration or injunction proceedings inconsistent with the above procedure, or which interfere with compliance therewith, are hereby waived by the parties to whom they accrued.
- 5.5.7 The costs of the arbitration, including the fee and expenses of the Arbitrator, shall be borne equally by the affected Union(s) and the affected Contractor(s).
- 5.5.8 The procedures contained in Section 5.4 shall be applicable only to alleged violations of this Article. Discharge or discipline of employees for violation of this Article shall be subject to the grievance and arbitration procedures of Article 11.

ARTICLE 6

WORK ASSIGNMENTS AND JURISDICTIONAL DISPUTES

- 6.1 Notwithstanding any provision in this Agreement to the contrary, the following language is specifically agreed to for the resolution of any Jurisdictional Disputes which may arise during the construction which is specifically covered by this Agreement. This agreement regarding resolution of jurisdictional disputes shall apply only to such disputes arising on this Project.
- 6.2 The contractor shall assign work on the basis of traditional craft jurisdictional lines. It is agreed that the craft assignment of work to a respective craft shall be the determining factor for proper wage payment as required under Article 16 of this Agreement.
- 6.3 There will be no strikes, no work stoppages, no picketing, sympathy strikes, slow downs or other interferences with the work because of jurisdictional disputes between signatory Unions. Individuals violating this section shall be subject to immediate discharge.
- 6.4 When conflicting claims for work on the Project are submitted to an Employer, the dispute shall be resolved pursuant to agreed upon Jurisdictional Dispute Procedures, as adopted by the National Building & Construction Trades Department, or by the Mechanical Allied Crafts (MAC) Jurisdictional Dispute Resolution Procedure, or by the Northern California Basic Crafts Construction Alliance (NCBCA) Jurisdictional Dispute Resolution Procedure. It is understood by the parties that these Procedures might be amended from time to time. In the event a jurisdictional dispute arises between two or more Unions affiliated with the National Building & Construction Trades Department, such dispute shall be resolved by the procedures set forth in the Plan for the Settlement of Jurisdiction Disputes in the Construction Industry. In the event a jurisdictional dispute arises between two or more Unions affiliated with the MAC, such dispute may be resolved under the MAC Procedure. In the event a jurisdictional dispute arises between two or more Unions affiliated with the NCBCA, such dispute shall be resolved under the NCBCA Procedure.

6.4.1 If a dispute arising under this Article involves the Northern California Carpenters Regional Council or any of its subordinate bodies, an Arbitrator shall be chosen by the procedures specified in Article V, Section 5, of the Plan from a list composed of John Kagel, Thomas Angelo, Robert Hirsch, and Thomas Pagan, and the Arbitrator's hearing on the dispute shall be held at the offices of the California State Building and Construction Trades Council in Sacramento, California, within 14 days of the selection of the Arbitrator. All other procedures shall be as specified in the Plan.

6.5. Notwithstanding any procedure agreed to by the General Presidents of the affected unions, in the event a jurisdictional dispute arises between two or more Unions that are not stipulated to the same jurisdictional dispute resolution procedure, the dispute shall be handled in accordance with and resolved as specifically set forth in Section 6.6.

6.6 In the event a jurisdictional dispute arises, either party may refer the jurisdictional dispute to the General Presidents of the affected unions, and if the General Presidents cannot resolve the dispute within five (5) business days of the dispute being referred to them for resolution, the dispute shall be resolved as follows:

The dispute shall be submitted to expedited arbitration before an Arbitrator serving on the Panel of Permanent Arbitrators.

The Panel of Permanent Arbitrators shall be composed of: **John Kagel, Robert Hirsch, Thomas Angelo, William Riker, and Barry Winograd.** The Arbitrator shall be selected by alternately striking the names of Arbitrators from the list of five (5) permanent Arbitrators. Such striking shall take place within three (3) days. The remaining Arbitrator shall serve as the Arbitrator who shall hear the dispute on an expedited basis and resolve the dispute. If a party does not make itself available for striking within three (3) days, the other party can select the Arbitrator. The Arbitrator shall render his decision within three (3) days of the hearing.

In rendering his decision, the Arbitrator shall determine:

1. First, whether a previous agreement of record that was unabrogated as of January 1, 2007, or applicable agreement, including a disclaimer agreement, between the National or International Unions or Locals to the dispute, that was in effect at the time the dispute arose, governs;
2. If the Arbitrator cannot resolve the matter based on No. 1 then if the Arbitrator finds that a previous decision of record governs the case, the Arbitrator shall apply the decision of record in rendering his decision except under the following circumstances. After notice to the other parties to the dispute, prior to the hearing, that it intends to challenge the decision of record, if a trade challenging the decision of record is able to demonstrate that the recognized and established prevailing practice in the locality of the work has been contrary to the applicable decision of record, the Arbitrator shall rely on such prevailing practice rather than the decision of record. If the craft relying on the decision of record demonstrates that it has performed the work in dispute in the locality of the job as a prevailing practice, then the Arbitrator shall apply the decision of record in rendering his decision. If the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages or by the use of vertical agreements, the

Arbitrator shall rely on the decision of record rather than the prevailing practice in the locality;

3. If no decision of record is applicable, the Arbitrator shall then consider the established trade practice in the industry and prevailing practice in the locality; and

4. Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the wellbeing of the industry, the interests of the consumer or the past practices of the employer shall not be ignored.

5. The Arbitrator shall set forth the basis for his decision and shall explain his findings regarding the applicability of the above criteria. If lower-ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the job in dispute.

6. Unabrogated agreements of record are applicable only to the parties signatory to such agreements. Decisions of record are applicable to all trades.

7. The Arbitrator is not authorized to award back pay or any other damages for a mis-assignment of work. Nor may any party to this Plan bring an independent action for back pay or any other damages, based upon a decision of an Arbitrator.

8. Each party to the arbitration shall bear its own expense for the arbitration and agrees that the fees and expenses of the Arbitrator shall be borne by the losing party or parties.

6.7. If the claims of the challenging trade are upheld in the decision of the Arbitrator, and work onsite is being performed on the eighth calendar day after the issuance of that decision, the assigned trade shall cede the work in question to the challenging trade and withdraw its members from said work, and the affected Employer shall employ members of the challenging trade on said work. This shall be termed the effective date of the decision. If the eighth calendar day after the issuance of said decision falls on a weekend or on a holiday, the effective date shall be the next working day. Holidays shall include and be limited to New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the day after Thanksgiving Day, and Christmas Day.

6.8 The Arbitrator shall have no authority to undertake any action to enforce his decision after a hearing beyond informing the affected parties of his decision. Rather, it shall be the responsibility of the prevailing party to seek appropriate enforcement of a decision. The prevailing party in any enforcement proceeding

shall be entitled to recover its reasonable costs and attorney fees from the non-prevailing party. In the event the Arbitrator is made a party to, or is otherwise required to participate in any such enforcement proceedings for whatever reason, the non-prevailing party shall bear all reasonable costs, attorney fees, and any other expenses incurred by the Arbitrator in those proceedings.

ARTICLE 7

COORDINATOR

- 7.1 **Michael J. Vlaming**, as the Coordinator, is responsible for the administration and application of this Agreement.
- 7.2 The Coordinator shall endeavor to facilitate harmonious relations between the Contractors and Unions signatory hereto and will conduct the monthly joint Labor/Management meeting referred to in Article 8 below. The Coordinator shall not be responsible for the acts of the Contractors or Unions signatory hereto, and will not be a party to any arbitration or litigation arising out of this Agreement.

ARTICLE 8

JOINT LABOR/MANAGEMENT MEETINGS

- 8.1 The parties to this Agreement will form a Joint Labor-Management Committee consisting of equal numbers of representatives selected by the Council and the Coordinator, to be chaired jointly by a representative of each. The Committee may form sub-committees to consider and advise the full Committee with regard to any issues affecting this Agreement and the Project. A joint Labor/Management meeting will be held on a regular basis between the Coordinator, the Contractors and the signatory Unions. The purpose of these meetings is to promote harmonious labor/management relations, ensure adequate communications and advance the proficiency and efficiency of the employees and the Contractors on the Project. These regular meetings will also include discussion of the scheduling and productivity on work performed on the Project.
- 8.2 A Pre-Job Conference will be held prior to the commencement of work to establish the scope of work in each Contractor's contract. When a contract has been let to a Contractor(s) covered hereby, a Pre-Job Conference and/or Mark-Up Meeting shall be required and shall be held at the offices of Carpenters Union, Local No. 35,647 Lindero Street, San Rafael, California. The parties may mutually agree to waive

the requirement to hold a Pre-Job Conference and/or Mark-Up Meeting for any particular contract.

- 83 The Contractor performing the work shall have the responsibility for making work assignments in accordance with Section 6.2 of this Agreement. The work assignments shall be made in writing. Any craft objecting to the Contractor's proposed assignment of work shall have seven (7) working days from the date of the mark-up meeting to submit written objections to the Contractor before the Contractor makes the work assignments final.
- 84 The Coordinator will schedule and attend all Pre-Job and Mark-Up Meetings and participate in discussions as they pertain to the terms and conditions of this Agreement.

ARTICLE 9

MANAGEMENT RIGHTS

- 9.1 The Contractor(s) retains full and exclusive authority for the management of their work forces for all work performed under this Agreement. This authority includes, but is not limited to the right to:
- 9.1.1 Plan, direct and control the operation of all the work.
 - 9.1.2 Decide the number and types of employees required to perform the work safely and efficiently. The lawful manning provisions of the applicable Master Collective Bargaining Agreement shall be recognized.
 - 9.1.3 Hire, promote and layoff employees as deemed appropriate to meet work requirements and/or skills required.
 - 9.1.4 Require all employees to observe the Contractors' Project Rules, Security and Safety Regulations, consistent with the provisions of this Agreement. These Project Rules and Regulations shall be reviewed and mutually agreed upon at the Pre-Job meeting and supplied to all employees and/or posted on the jobsite.
 - 9.1.5 Discharge, suspend or discipline employees under the applicable craft agreement.
 - 9.1.6 Assign and schedule work at its sole discretion and determine when overtime will be worked consistent with the applicable local collective bargaining agreement.

9.1.7 Utilize any work methods, procedures or techniques and select and use any type or kind of materials, apparatus or equipment regardless of source, manufacturer or designator.

9.2 The foregoing listing of management rights shall not be deemed to exclude other functions not specifically set forth herein. The Contractors, therefore, retain all legal rights not specifically enumerated in this Agreement or in a Local Collective Bargaining Agreement.

ARTICLE 10

WORK RULES

- 101 The selection of craft foremen and general foremen shall be entirely the responsibility of the Contractor(s), and consistent with the applicable Local Collective Bargaining Agreement, it being understood that in the selection of such foremen, the Contractor(s) will give first consideration to the qualified individuals available in the local area. Foremen and general foremen shall take orders from the designated Contractor(s) representatives.
- 102 There shall be no limit on production by employees nor restrictions on the full use of tools or equipment. Craftpersons using tools shall perform any of the work of the trade and shall work under the supervision of the craft foremen.
- 103 Security procedures for control of tools, equipment and materials are solely the responsibility of Contractor(s).
- 104 Slowdowns, standby crews and featherbedding practices will not be tolerated.
- 105 It is understood by the Contractor(s) and agreed to by the Union(s), that the employees of the Contractor(s) will perform the work requested by the Contractor(s) without having any concern or interference with any other work performed by any employees of the District or others who are not covered by this Agreement including, but not limited to, maintenance and operations.
- 106 Contractors shall provide rest periods in accordance with the California Labor Code. Any dispute regarding rest and meal periods this section shall be resolved exclusively under the provisions of Article 11 of this Agreement.
- 107 All foremen will remain with their crews and supervise such crews in the performance of their duties.

- 108 There shall be no interference with vendor or supplier deliveries of equipment, apparatus, machinery and construction materials to the jobsite since such deliveries shall not fall under this Agreement. Unloading of the above will be performed by signatory Contractors' employees.
- 109 The Contractor(s) and the Unions recognize the necessity for promoting efficiency and agree that no rules, customs or practices shall be permitted that cause overmanning, limit production or increase the time required to do the work, and no limitation shall be placed upon the amount of work which an employee shall perform, nor shall there be any restrictions against the use of any kind of machinery, tools or labor-saving devices.

ARTICLE 11

GRIEVANCE PROCEDURE

- 11.1 All disputes concerning the interpretation and/or application of this Agreement which do not fall within the Article 5 No-Strike/No-Lockout procedure shall be governed by the following grievance and arbitration procedures.
- 11.2 A grievance shall be considered null and void if not brought to the attention of the Contractor(s) within ten (10) working days after the grievance is alleged to have occurred or within ten (10) working days after the Union's first knowledge of the grievance. Similarly, a grievance shall be considered null and void if not brought to the attention of the Union(s) within ten (10) working days after the grievance is alleged to have occurred or within ten (10) working days after the Contractors(s)' first knowledge of the grievance.
- 11.3 Grievances shall be settled according to the following Steps:
- Step 1: The steward or business representative and the grievant shall attempt to resolve the grievance with the craft supervisor.
- Step 2: In the event the matter remains unresolved in Step 1 above, within five (5) working days, the grievance shall be reduced to writing and may then be referred by the Union to the Contractor(s) for discussion and resolution. The Union will also notify its International Union representative, which shall advise the parties if it intends to participate in Step 2.
- Step 3: In the event the matter remains unresolved in Step 2, either Party may request, within five (5) working days, that the dispute be submitted to arbitration. The time limits set out in this procedure may, upon mutual agreement, be extended. Any request for

arbitration, request for extension of time limits, and agreement to extend such time limits shall be in writing.

Step 4: The Parties agree that the Arbitrator who will hear the grievance shall be selected from among the following: **Thomas Angelo, Barry Winograd, William Riker, Robert Hirsch and William Engler**. If the parties cannot agree on which Arbitrator to hear the case, then the parties shall alternately strike names until one of the Arbitrators remains, who shall then hear the dispute. The party bringing the grievance shall strike the first name. The arbitration procedure contained herein, once invoked, shall be mandatory. Should a Party to the procedure fail or refuse to participate in the hearing, if the Arbitrator determines that proper notice of the hearing has been given, said hearing shall proceed in to a default award. The Arbitrator's award shall be final and binding on all Parties to the arbitration. The costs of the arbitration, including the arbitrator's fee and expenses, shall be borne equally by the affected Union(s) and the affected Contractor(s). The Arbitrator's decision shall be confined to the question(s) posed by the grievance and the Arbitrator shall not have authority to modify amend, alter, add to, or subtract from, any provisions of this Agreement.

11.4 The Contractor(s), as well as the Union, may bring forth grievances under this Article.

11.5 Where an issue is addressed in this Agreement and the local collective bargaining agreement, this Agreement shall prevail. Where an issue is addressed in the local collective bargaining agreement and not in this Agreement, the local collective bargaining agreement shall control.

11.6 Grievances between a Union and a Union-signatory contractor involving interpretation or application of the applicable local collective bargaining agreement shall be governed by the grievance procedures contained in such local collective bargaining agreement.

ARTICLE 12

UNION RECOGNITION AND REPRESENTATION

12.1 The Contractor(s) recognizes the Unions signatory hereto as the sole and exclusive collective bargaining representatives for all craft employees on the Project.

12.2 No employee covered by this Agreement can be required to join any Union as a condition of being first employed on the Project; provided, however, that an employee who is a member of the referring Union at the time of referral shall

maintain that membership while employed on a Project subject to this Agreement. All employees shall comply with the Union Security provision of the applicable craft local collective bargaining agreement for the period during which they are performing Project construction work on the property of the District, except as modified by this Agreement. The Contractor(s) agree to deduct initiation fees, Union dues or representation fees from the pay of any employee who executes a voluntary authorization for such deductions and to remit the dues and fees to the applicable Union or Council.

- 12.3 Authorized representatives of the Unions shall have access to the site at all times when work is being, has been or will be performed. Such representatives shall comply with the reasonable visitor safety and security rules established for the Project. Access for Union representatives will not be unduly restricted.
- 12.4 A Steward shall be a working journeyman appointed in writing by the authorized union representative of the Local Union(s) who shall, in addition to work as a journeyman, be permitted to perform during working hours such Union(s) duties as cannot be performed at other times which consists of those duties assigned by the Business Manager or Business Agent. The Union(s) agrees that such duties shall be performed as expeditiously as possible and the Contractor(s) agrees to allow the Steward a reasonable amount of time for the performance of such duties. The Steward shall not leave the work area without notifying the appropriate supervisor.
- 12.5 The Steward will be paid at the journeyman wage for the job classification in which the Steward is employed.
- 12.6 The treatment of stewards shall be in accordance with the applicable craft agreement.

ARTICLE 13

REFERRAL PROCESS

- 13.1 The Union(s) shall be the sole source of all craft labor employed on the Project. However, in the event that a Contractor(s) has its own core workforce, the Contractor may request by name, and the Union shall honor, referral of persons who have applied to the local union for Project work and who demonstrate the following qualifications (“Core Employees”):
 - (1) possess any license and/or certifications required by state or federal law for the Project work to be performed;
 - (2) have worked a total of at least one thousand (1000) hours in the construction craft during the prior two (2) years;

(3) were on the Contractor's active payroll for at least sixty (60) calendar days prior to the contract award; and

(4) have the ability to perform safely the basic functions of the applicable trade.

- 13.2 The Union will refer to such Contractor one journeyman employee from the hiring hall out-of-work list for the affected trade or craft, and will then refer one of such Contractor's Core Employees as a journeyman and shall repeat the process, one and one, until such Contractor's crew requirements are met or until such Contractor has hired four (4) Core Employees, whichever occurs first. Thereafter, all additional employees in the affected trade or craft shall be hired exclusively from the hiring hall out-of-work list(s). For the duration of the Contractor's work the ratio shall be maintained and when the Contractor's workforce is reduced, employees shall be reduced in the same ratio of core employees to hiring hall referrals as was applied in the initial hiring. Contractors signatory to a Local, Regional, and/or National collective bargaining agreements with Union(s) signatory hereto shall be bound to use the hiring hall provisions contained in the Master Collective Bargaining Agreement of the affected Union(s), and nothing in the referral provisions of this Agreement shall be construed to supersede the local hiring hall provisions of the Master Agreement(s) as they relate to such contractors.
- 13.3 All contractors shall be bound by and utilize the registration facilities and referral systems established or authorized by the signatory Unions.
- 13.4 In the event that referral facilities maintained by the Union(s) are unable, despite good faith efforts, to fill the requisition of a Contractor for employees within a forty-eight (48) hour period after such request is made by the Contractor, Saturdays, Sundays and Holidays excluded, the Contractor shall be free to obtain work persons from any source ("Alternative Employees"). Upon hiring employees from an alternative source pursuant to this section, the Contractor shall immediately notify the appropriate Local Union of the name and address of the alternative source employee hired, which employee shall be bound by the provisions of this Article.
- 13.5 Unions will exert their utmost efforts to recruit sufficient numbers of skilled craft persons to fulfill the requirements of the Contractor. The parties to this Agreement support the development of increased numbers of skilled construction workers from the residents within the District to meet the needs of the Project and the requirements of the industry generally.
- 13.6 Helmets to Hardhats. The Parties recognize the Council's participation in the "Helmets-to-Hardhats" Program and the District's desire to facilitate the entry into the Building and Construction Trades of veterans who are interested in careers in the building and construction industry. The Unions agree to utilize services for the Center for Military Recruitment, Assessment and Veteran's Employment ("Center") and the orientation, assessment of construction aptitude, referral to

apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs of such veterans. The Unions agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on the Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience. The experience and practical knowledge of veterans will be reviewed and tested by the applicable Joint Apprenticeship Training Committee. Applicants will be placed at the appropriate stage of apprenticeship or at the journey level as the case may be. Final decision will be the responsibility of the applicable Joint Apprenticeship Training Committee.

- 13.7 The Unions and Contractors recognize the District's desire to provide an increased awareness of construction training and employment opportunities for students of and residents within the District. The Unions and Contractors shall support the development of instructional/educational partnerships and/or programs at District sites and/or within the District, including a focus on green/sustainable construction practices and technology.

ARTICLE 14

NON-DISCRIMINATION

- 14.1 The Unions and Contractors shall not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, age, religion, Vietnam veteran or Vietnam Era status, disability as identified in the Americans with Disabilities Act or any other basis recognized by law. The parties to this agreement understand and agree that nothing in this agreement shall supersede or take precedence over any board policy or requirement including, but not limited to, the construction contract and general conditions for the project.

ARTICLE 15

APPRENTICES

- 15.1 The parties recognize the need to maintain continuing support of programs designed to develop adequate numbers of competent workers in the construction industry, and the obligation to capitalize on the availability of the local workforce within the community served by the College of Marin, and to recruit and encourage the participation of College of Marin students and graduates and residents of the County of Marin in the construction industry. To these ends, the parties will support the construction training courses, programs, pre-apprenticeship and joint

apprenticeship programs in which they participate and which are certified by the State of California, and will facilitate and encourage College of Marin students and graduates and residents of Marin County to commence and progress in such apprenticeship programs. The parties acknowledge and agree that North Bay Trades Introduction Program is the approved pre-apprentice program for this project work.

- 152 Each contractor or subcontractor performing work covered by this Agreement shall employ on its regular workforce at least one (1) eligible College of Marin student or graduate who is enrolled and participating in an approved construction training course, program, pre-apprenticeship and/or Joint Apprenticeship Program serving the local residence area as soon as such contractor or subcontractor has the minimum number of employees as is established by the Department of Apprenticeship Standards regulations for the employment of apprentices. Such Apprenticeship Program must have been approved by the State of California, Division of Apprenticeship Standards and shall have graduated at least an average of ten (10) apprentices annually for at least the past five (5) years. This requirement applies to any craft for which the State of California, Division of Apprenticeship Standards, has approved an Apprenticeship Program. A properly indentured apprentice must be employed under the regulations of the craft or trade at which he or she is indentured and shall be employed only for work of the craft or trade in which he or she is registered. If an apprentice is not available for referral to a Contractor when such Contractor is required to employ an apprentice pursuant to this subsection, the Contractor shall maintain an open request for such referral as long as its obligations to employ the apprentice exists. The requirement of this subsection does not relieve the Contractor and signatory Unions of the obligations contained in the remainder of this Article.
- 153 The Unions agree to cooperate with the Contractor in furnishing apprentices as requested up to the maximum percentage permitted by the Schedule A or applicable Joint Apprenticeship Committee. The apprentice ratio for each craft shall be in compliance, at a minimum, with the applicable provision(s) of the Labor Code relating to utilization of apprentices. To encourage the training and utilization of apprentices, the College District shall encourage all contractors to employ apprentices when work is available for which they are qualified.
- 154 In recognition of the College of Marin's desire to have District-trained students employed on its Project(s), a subcommittee of the Labor Management Committee established pursuant to Article 8 shall be established, jointly chaired by a designee of the District and a designee of the Council, to work with representatives of each signatory craft's apprenticeship committee and of the College of Marin to establish appropriate criteria and procedures for recognition by the Joint Apprenticeship Committees of the education and work experience possessed by students and/or graduates of the College of Marin toward qualifying for advanced levels in the apprenticeship programs under the direction of such Joint Apprenticeship Committees. Further, the sub-committee shall work to expand

construction training courses, programs, pre-apprenticeship, and Joint Apprenticeship programs for College of Marin-related individuals and for residents of Marin County, and to develop procedures providing preference for graduates of such programs into the Joint Apprenticeship programs of the signatory Unions.

- 15.5 The signatory Unions recognize the importance to the College of Marin Board of Trustees of providing College of Marin students and graduates with the opportunity to participate both in the Signatory Union's Apprenticeship Programs and the opportunity to work on the Project(s) under this Agreement, and will cooperate fully in encouraging the establishment of such recognition by the Joint Apprenticeship Committees in which they participate. The subcommittee shall meet as necessary, at the call of the Joint Chairs, to expeditiously facilitate the goals detailed above as soon as this Agreement becomes effective.
- 15.6 The College District Representative or designee shall prepare quarterly reports on apprentice utilization and the training and employment of College of Marin students and graduates, and local residents for the Board of Trustees' review. The subcommittee may review such reports and make any recommendation for improvement, if necessary, including increasing the availability of skilled Trades, and the employment of local residents, at-risk or disadvantaged individuals or other individuals who should be assisted with appropriate training for qualification for entry into apprenticeship programs.

ARTICLE 16

WAGE SCALES and FRINGE BENEFITS

- 16.1 All employees covered by this Agreement shall be classified and paid in accordance with the classification and wage scales contained in the appropriate local collective bargaining agreements which have been negotiated by the historically recognized bargaining parties and in compliance with the applicable general prevailing wage determination made by the Director of Industrial Relations pursuant to the California Labor Code.
- 16.2 During the period of construction on this Project, the Contractors agree to recognize and put into effect such increases in wages and recognized fringe benefits as shall be negotiated between the various Unions and the historically recognized local bargaining parties on the effective date as set forth in the applicable local collective bargaining agreement. The Unions shall notify the Contractors in writing of the specific increases in wages and recognized fringe benefits and the date on which they become effective.
- 16.3 The Contractors hereby adopt and agree to be bound by the written terms of the legally established local trust agreements specifying the detailed basis on which

payments are to be made into, and benefits paid out of, such appropriately qualified employee fringe benefit funds established by such appropriate local agreements. The Contractors authorize the parties to such local trust agreements to appoint Trustees and successor Trustees to administer the trust funds, and hereby ratify and accept the Trustees so appointed as if made by the Contractors.

- 16.4 Wages due shall be paid to all employees weekly, not later than on Friday, and not more than three (3) days' wages may be withheld and shall be paid before the end of the work shift. Payment shall be made by check with detachable stub.
- 16.5 When an employee is discharged, the employee shall be paid wages due immediately. If an employee voluntarily terminates, wages due shall be paid in accordance with California State Law.
- 16.6 Wage rates, fringe benefits or working conditions negotiated in local collective bargaining agreements which are construed to apply exclusively or predominantly to the construction work covered by this Agreement will not be recognized or applied on work covered by this Agreement.

ARTICLE 17

HOURS OF WORK, OVERTIME and SHIFTS

- 17.1 The hours of work, establishment of overtime and the establishment of shifts and shift pay shall be governed by the applicable local collective bargaining agreement for each craft. It is understood that the District may, at its discretion, establish a uniform starting time and/or ending time that will be specified in the bid announcement for each contract. Nothing herein shall be construed as guaranteeing any employee eight (8) hours per day or forty (40) hours per week.
- 17.2 To the extent permitted by the applicable provisions of the California Labor Code, and the Master Agreement, the Contractor(s), with one week notice to the Union(s), may establish a four (4) day per week, ten (10) hour per day work shift. The regular work week shall be from Monday through Thursday.

ARTICLE 18

HOLIDAYS

- 18.1 Holidays will be in compliance with the applicable General Prevailing Wage Determination made by the Director of Industrial Relations pursuant to the California Labor Code.

ARTICLE 19

REPORTING PAY

19.1 Any employee reporting for work and for whom no work is provided, except when given notification not to report to work, shall receive two (2) hours pay at the regular straight time hourly rate. Any employee who starts work shall receive four (4) hours pay at the regular straight time hourly rate. Any employee who works beyond four (4) hours shall be paid in accordance with the applicable local collective bargaining agreement.

19.1.1 Whenever minimum reporting pay is provided for employees, they will be required to remain at the project site available for work for such time as they receive pay, unless released sooner by the principal supervisor of the Contractor(s) or its designated representative.

19.1.2 The provisions of this Section are not applicable where the employee voluntarily quits or is out by reason of a strike, in which case the employee shall be paid for the actual time worked.

19.2 It will not be a violation of this Agreement when the District or Contractor(s) consider it necessary to shut down because of an emergency situation that could endanger life or property. In such cases, employees will be compensated only for the actual time worked. In the case of a situation described above whereby the District or Contractor(s) request employees to wait in a designated area available for work, the employees will be compensated for the waiting time.

ARTICLE 20

TRAVEL, SUBSISTENCE and ZONE PAY

20.1 Travel, subsistence and zone pay will be in compliance with the applicable General Prevailing Wage Determination made by the Director of Industrial Relations pursuant to the California Labor Code, or if higher, the pay provided in the Local Collective Bargaining Agreement.

ARTICLE 21

HEALTH AND SAFETY

21.1 The employees covered by the terms of this Agreement shall at all times, while in the employ of the Contractor(s), be bound by the safety rules and regulations as

established by the District and Contractor(s) and in accordance with OSHA/Cal-OSHA. These rules and regulations will be published and posted at conspicuous places throughout the Project.

- 21.2 In accordance with the requirements of OSHA/Cal-OSHA, it shall be the exclusive responsibility of each Contractor(s) on the Project to assure safe working conditions for its employees and compliance by them with any safety rules contained herein or established by the contractor(s).
- 21.3 Contractor(s) and Union(s) agree to abide by the substance abuse policies contained in the applicable craft local collective bargaining agreement(s). The Contractor(s) and Union(s) understand that the District facilities are smoke free sites.

ARTICLE 22

SECURITY OF MATERIAL, EQUIPMENT and TOOLS

- 22.1 Security procedures for the control of tools, equipment and materials shall be solely the responsibility of the Contractor(s).
- 22.2 All employees will comply with the reasonable security procedures established and published by the Contractor(s) and the District.
- 22.3 Theft and/or loss of the District's tools and equipment is a major concern on the Project. The District's Security Regulations will be strictly enforced.
- 22.4 Violations or failure to comply with the District's Security Regulations while on the Project jobsite may result in termination and/or exclusion from the Project jobsite.

ARTICLE 23

CALL-INS

- 23.1 Call-ins will be governed by the applicable craft local collective bargaining agreement.

ARTICLE 24

MISCELLANEOUS PROVISIONS

- 24.1 Counterparts. This Agreement may be executed in counterparts, such that original signatures may appear on separate pages, and when bound together all necessary

signatures shall constitute an original. Facsimile signature pages transmitted to other parties to this Agreement shall be deemed equivalent to original signatures.

- 24.2 Warranty of Authority. Each of the persons signing this Agreement represents and warrants that such person has been duly authorized to sign this Agreement on behalf of the party indicated, and each of the parties by signing this Agreement warrants and represents that such party is legally authorized and entitled to enter into this Agreement.
- 24.3 Ratification by Governing Board. This Agreement shall not be binding on the District until it is ratified by the Governing Board.

ARTICLE 25

ENTIRE AGREEMENT

- 25.1 This Agreement represents the complete understanding of the parties. The provisions of this Agreement shall in every instance exclusively apply to and control work performed on the site of the Project and take precedence over provisions of local, area, regional or national labor agreements. Nothing contained in the working rules, by-laws, constitution and other similar documents of the Unions or other Collective Bargaining Agreements, shall in any way affect, modify or add to this Agreement unless otherwise specifically indicated in this Agreement. Practices not part of the terms and conditions of this Agreement shall not be recognized.
- 25.2 The Unions agree that this Agreement covers all matters affecting wages, hours and other terms and conditions of employment, and that during the terms of this Agreement, neither the Contractor(s), nor the Union(s) will be required to negotiate on any further matters affecting these or any other subject not specifically set forth in this Agreement except by mutual agreement of the Unions involved and the District.
- 25.3 The Agreement is not intended to replace, interfere with, abrogate, diminish or modify existing local or national collective bargaining agreements in effect during the duration of the Project, insofar as a legally binding agreement exists between the Contractor(s)/Employer(s) and the affected Union(s), except to the extent that the provisions of this Agreement are inconsistent with said collective bargaining agreements, in which event, the provisions of this Agreement shall prevail.

ARTICLE 26

GENERAL SAVINGS CLAUSE

26.1 It is not the intention of either the Contractor(s) or the Union(s) parties to violate any laws governing the subject matter of this Agreement. If any Article or provision of this Agreement shall be declared invalid, inoperative, or unenforceable by any competent authority of the executive, legislative, judicial or administrative branch of the federal, state or local government, the parties shall suspend the operation of each such article or provision during the period of invalidity. Such suspension shall not affect the operation of any provision covered in this Agreement to which the law or regulation is not applicable. Further, the Contractor(s) and Union(s) agree that if and when any or all provisions of this Agreement are finally held or determined to be illegal or void by Court of competent jurisdiction, the parties will promptly enter into negotiations concerning the substance affected by such decision for the purpose of achieving conformity with the requirements of an applicable law and the intent of the parties hereto.

ARTICLE 27

DURATION OF AGREEMENT

27.1 This Agreement shall become effective on the day the District Board ratifies this Agreement and shall continue in full force and effect until Notice of Completion is issued on Projects identified in Exhibit B. The parties may mutually agree in writing to amend, extend or terminate this Agreement at any time.

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///
///

EXHIBIT A

PROJECT STABILIZATION AGREEMENT

for the

MARIN COMMUNITY COLLEGE DISTRICT

CONTRACTOR AGREEMENT TO BE BOUND

The undersigned, as a Contractor or Subcontractor (CONTRACTOR) on the _____ Project, (hereinafter PROJECT), for and in consideration of the award to it of a contract to perform work on said PROJECT, and in further consideration of the mutual promises made in the "Project Stabilization for the Marin Community College District" (hereinafter AGREEMENT), a copy of which was received and is acknowledged, hereby:

- (1) Accepts and agrees to be bound by the terms and conditions of the AGREEMENT, together with any and all amendments and supplements now existing or which are later made thereto:
- (2) The CONTRACTOR agrees to be bound by the legally established local trust agreements as set forth in Article 16 of this AGREEMENT.
- (3) The CONTRACTOR authorizes the parties to such local trust agreements to appoint trustees and successor trustees to administer the trust funds and hereby ratifies and accepts the trustees so appointed as if made by the CONTRACTOR;
- (4) Certifies that it has no commitments or agreements which would preclude its full and complete compliance with the terms and conditions of said AGREEMENT.
- (5) Agrees to secure from any CONTRACTOR(S) (as defined in said AGREEMENT) which is or becomes a Subcontractor (of any tier) to it, a duly executed Agreement to be Bound in form identical to this document.

Dated: _____

(Name of Contractor)

(Name of Prime Contractor or Higher Level Subcontractor)

(Authorized Officer & Title)

(Address)

(Phone) (Fax)

EXHIBIT B

To the

PROJECT STABILIZATION AGREEMENT

For the

MARIN COMMUNITY COLLEGE DISTRICT

PROJECT LIST

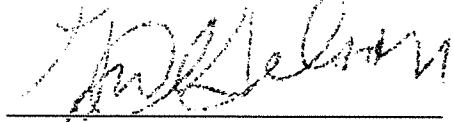
This Project Stabilization Agreement shall apply to the following construction projects:

1. This Agreement shall be limited to construction work on the Measure B Program with Projects with design and construction budgets in excessive of \$2,000,000, and is not intended to, and shall not govern any construction work performed at the District at any time prior to the effective date, or after the expiration or termination of the Agreement.
2. The Agreement is not intended to, and shall not affect or govern the Jonas Center Project & Bid, regardless of the amount of the design and construction budget for such projects.
3. The Agreement is not intended to, and shall not affect or govern the award of public works contracts by the District which are governed by the California Uniform Public Construction Cost Accounting Act procedures.
4. The Agreement is not intended to, and shall not affect or govern the award of public works contracts by the District which are outside the approved scope of the Measure B Program.
5. The Agreement is not intended to, and shall not affect the operation or maintenance of the District.

6. Any work performed on, near, or leading to the Project and undertaken by state, county, city or other governmental bodies, or their contractors; or by public utilities or their contractors, or off-site work undertaken by the Primary Employer or its contractors for work which is not part of the Project or which is not required as a condition of approval for the Project.
7. All off-site maintenance of leased equipment and on-site supervision of such maintenance work.
8. Any warranty, repair or maintenance work performed by employees of an Original Equipment Manufacturer (“OEM”) or other vendor on the OEM's or vendor's equipment if required by the warranty agreement between the OEM or vendor and the Primary Employer in order to maintain the warranty or guarantee on such equipment and provided that the warranty agreement is the OEM's or vendor's standard warranty agreement for such equipment and is consistent with industry practice.
9. All non-construction support services contracted by the Contractor in connection with this Project.

SIGNATURES

Marin Community College District



Greg Nelson,
Vice President of College Operations

Marin County Building
& Construction Trades Council

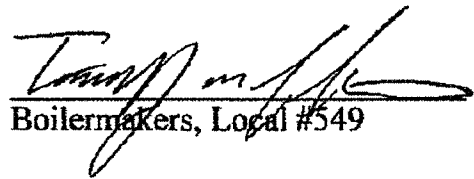


James B. Scott,
Secretary-Treasurer

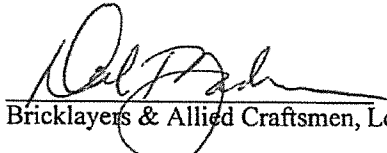
Signatory Unions:



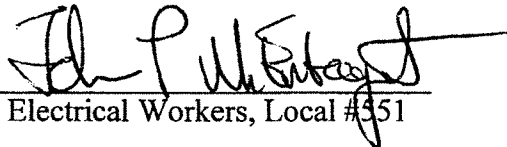
Heat & Frost Insulators and Asbestos
Workers, Local #16



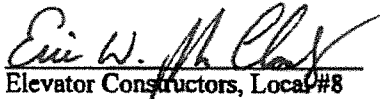
Boilermakers, Local #549




Bricklayers & Allied Craftsmen, Local #3



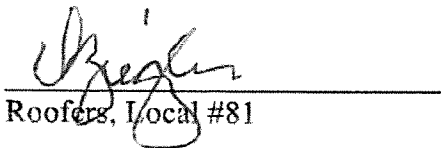
Electrical Workers, Local #551



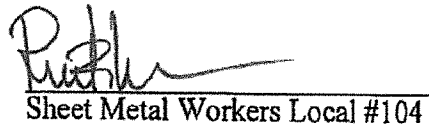
Elevator Constructors, Local #8



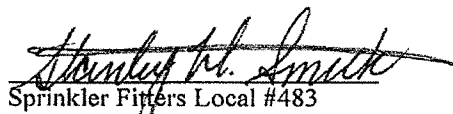
Operating Engineers, Local #3



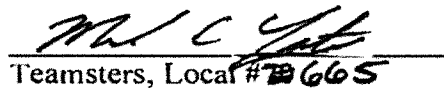
Roofers, Local #81



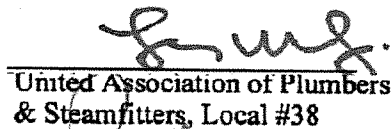
Sheet Metal Workers Local #104



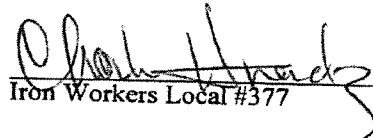
Sprinkler Fitters Local #483



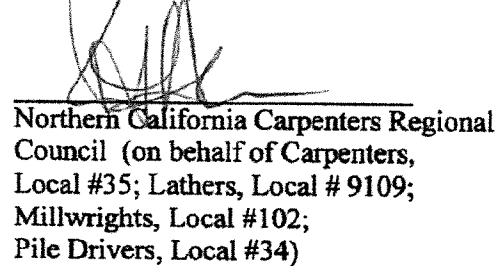
Teamsters, Local #665



United Association of Plumbers
& Steamfitters, Local #38



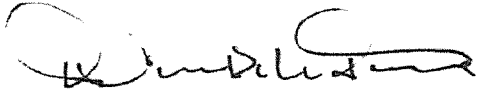
Iron Workers Local #377




Northern California Carpenters Regional
Council (on behalf of Carpenters,
Local #35; Lathers, Local # 9109;
Millwrights, Local #102;
Pile Drivers, Local #34)


N/A
Construction & General Teamsters
Union, Local #614


SIGNATURES


Northern California District Council of
Laborers


LIUNA, Laborers Local #261

Painters & Allied Trades, District Council
36 (on behalf of Sign Display, Local #510)


District Council No.16, Northern
California & Northern Nevada
International Union of Painters &
Allied Trades


District Council of Plasters &
Cement Masons of Northern
California

**MEMORANDUM OF UNDERSTANDING
MARIN COMMUNITY COLLEGE DISTRICT
PROJECT STABILIZATION AGREEMENT**

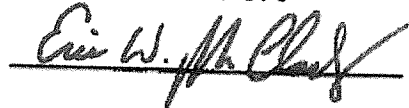
Notwithstanding any provision to the contrary in the Marin Project Stabilization Agreement ("Project Stabilization Agreement"), this memorandum will confirm that work covered by the Project Stabilization Agreement within the craft jurisdiction of the Elevator Constructors will be performed under the terms of the National Agreement of the International Union of Elevator Constructors, except that Articles 5, 6 and 11 of the Project Stabilization Agreement will apply to such work.

MARIN COMMUNITY COLLEGE
DISTRICT



Greg Nelson, Vice President of
College Operations

INTERNATIONAL UNION OF
ELEVATOR CONSTRUCTORS
LOCAL UNION NO. 8




Date _____

Date 7/25/17

**MEMORANDUM OF UNDERSTANDING
MARIN COMMUNITY COLLEGE DISTRICT
PROJECT STABILIZATION AGREEMENT**

Notwithstanding any provision to the contrary in the Marin Project Stabilization Agreement ("Project Stabilization Agreement"), this memorandum will confirm that work covered by the Project Stabilization Agreement within the craft jurisdiction of the Elevator Constructors will be performed under the terms of the National Agreement of the International Union of Elevator Constructors, except that Articles 5, 6 and 11 of the Project Stabilization Agreement will apply to such work.

MARIN COMMUNITY COLLEGE
DISTRICT



Greg Nelson, Vice President of
College Operations

INTERNATIONAL UNION OF
ELEVATOR CONSTRUCTORS
LOCAL UNION NO. 8

Date 4/26/2017

Date _____

**MEMORANDUM OF UNDERSTANDING
MARIN COMMUNITY COLLEGE DISTRICT
PROJECT STABILIZATION AGREEMENT**

The parties to this Agreement agree to establish a committee to develop a Construction Career Pathway Partnership (“Partnership”) to identify educational and employment opportunities for District students in the construction industry. The committee shall include representatives of the District, Unions and Contractors signatory to this Agreement. Further, as part of this Partnership, the parties agree to mutually support and participate in a one day “Construction Awareness Day” event on each Project identified in Exhibit B at a time in which there is active construction on the Project with the purpose of increasing the awareness for students and residents of the District regarding potential careers in the construction industry. Craft workers will be compensated for the time necessary to sufficiently clean the work site to accommodate each one day event. Those craft workers involved in the skill demonstrations during each one day event will participate on a voluntary basis.

MARIN COMMUNITY COLLEGE
DISTRICT



Greg Nelson, Vice-President of
College Operations

Date 4/26/2017

MARIN COUNTY BUILDING AND
CONSTRUCTION TRADES COUNCIL

Date _____

Letter of Understanding re: Prefabrication

Mazzola Jr.

Mr. Larry ~~Mazolla~~, Business Manager
United Association, Local 38

Re: College of Marin Project Labor Agreement
Article 2, Section 2.3, Choice of Materials, and
Article 9, Management Rights: Prefabrication

Dear Mr. ~~Mazolla~~: *Mazzola*

This letter will confirm the discussions we had during the negotiation of the captioned Project Labor Agreement and the clarifications we made concerning the application of Articles 2, Section 2.3 and Article 9, of the Agreement. Consistent with the provisions of those Article, the on-site fabrication and installation of pipe and pipe formations between manufactured components which are customarily the work of UA members will continue to be recognized as such.

As you know from the discussions in negotiations, if fabrication work recognized by this letter as customarily the work of U.A. members is to be done off-site, this work will be performed in Bay Area shops or at off-site assembly yards employing workers whose terms and conditions of employment equal or exceed those established in the area under the prevailing wage laws for employees represented by the United Association, unless such work is performed otherwise pursuant to the provisions of this letter.

The United Association recognizes that the timely completion of this Project is vital to the College District and the Community it is intended to serve. Therefore, if the nature of the work, the Project schedule, or contracting circumstances make it necessary to obtain fabrication outside the region or under conditions different than those described above, the United Association agrees to cooperate in accommodating the reasonable needs of the Project. The Project Contractor and the Union agree to discuss such circumstances affecting off-site fabrication contracting purchases where an accommodation is sought and any reasons making it necessary to depart from the conditions set forth above. The United Association will not unreasonably withhold its consent to such accommodations and Local 38 agrees to install on-site any components fabricated pursuant to the terms of this letter without limitation. The parties will make every effort to keep an open channel of communication to insure that both parties are fully informed of the facts affecting the substance of this letter.

If you agree that this letter accurately sets forth the substance of our understanding and provides the basis for resolving any questions concerning the interpretation and application of Article 2, Section 2.3 and Article 9, of the Project Labor Agreement, please indicate your acceptance in the space provided below.

Very truly yours,

Greg Nelson, Vice President of College Operations
Mann Community College District

Agreed and accepted this 14th day of July 2017
United Association Local 38

By: *[Signature]*
Larry ~~Mazolla~~, Business Manager
Mazzola Jr.

Letter of Understanding re: Prefabrication

Mr. Larry Mazolla, Business Manager
United Association, Local 38

Re: College of Marin Project Labor Agreement
Article 2, Section 2.3, Choice of Materials, and
Article 9, Management Rights: Prefabrication

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Very truly yours,

Greg Nelson, Vice President of College Operations
Marin Community College District

Agreed and accepted this _____ day of _____ 2008.
United Association Local 38

By: _____
Larry Mazolla, Business Manager

Letter of Understanding re: Prefabrication

Mr. Rick Werner, Business Manager
Sheet Metal Workers Union, Local 104

Re: College of Marin Project Labor Agreement
Article 2, Section 2.3, Choice of Materials, and
Article 9, Management Rights: Prefabrication

Dear Mr. Werner:

This letter will confirm the discussions we had during the negotiation of the captioned Project Labor Agreement and the clarifications we made concerning the application of Articles 2, Section 2.3 and Article 9, of the Agreement.

This letter clarifies the application of the Project Labor Agreement to fabrication of sheet metal manufactured components which are customarily the work of employees represented by the Sheet Metal Workers.

The Project Labor Agreement shall be deemed to apply to all work done for the Project that is traditionally performed by the Sheet Metal Workers as fabrication, including without limitation, all fabrication work that is covered by the current "Master Agreement" of Sheet Metal Workers' Local Union No. 104. All fabrication work over which the owner or contractor has the right of control, and which is traditionally claimed as on-site fabrication, shall be performed on-site. For the convenience of the owner or contractor, such fabrication work may be performed off-site, provided that such work is performed in accordance with the union standards established by the current Master Agreement.

This letter shall be made a part of the Project Labor Agreement and shall be provided to all contractors and subcontractors who are required to sign a letter of assent to the PLA. Violations of this letter shall be enforceable through the grievance procedure set forth in the Project Labor Agreement.

If you agree that this letter accurately sets forth the substance of our understanding and provides the basis for resolving any questions concerning the interpretation and application of Article 2, Section 2.3 and Article 9, of the Project Labor Agreement, please indicate your acceptance in the space provided below.

Very truly yours,

Greg Nelson, Vice President of College Operations

Agreed and accepted this _____ day of _____ 2016.
Sheet Metal Workers Local Union #104

By: _____
Rick Werner, Business Manager

DOCUMENT 01 22 00

ALTERNATES AND UNIT PRICING

PART 1 – ALTERNATES

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions;
- B. Special Conditions;
- C. Bid Form and Proposal;
- D. Instruction to Bidders.

1.02 DESCRIPTION

The items of work indicated below propose modifications to, substitutions for, additions to and/or deletions from the various parts of the Work specified in other Sections of the Specifications. The acceptance or rejection of any of the alternates is strictly at the option of the District subject to District's acceptance of Contractor's stated prices contained in this Proposal.

1.03 GENERAL

Where an item is omitted, or scope of Work is decreased, all Work pertaining to the item whether specifically stated or not, shall be omitted and where an item is added or modified or where scope of Work is increased, all Work pertaining to that required to render same ready for use on the Project in accordance with intention of Drawings and Specifications shall be included in an agreed upon price amount.

1.04 BASE BID

The Base Bid includes all work required to construct the Project completely and in accordance with the Contract Documents.

1.05 ALTERNATES

Alternate #1: Add Volleyball Seating and Entry Furnishings

Materials and labor to install concrete spectator seating, concrete seat walls with plinths, and to revise planting and irrigation layouts per sheets L10.0 and L10.1.

The above Alternate descriptions are general in nature and for reference purposes only. The Contract Documents, including, without limitation, the Drawings and Specifications, must be referred to for the complete scope of Work.

PART 2 - UNIT PRICING

2.01 GENERAL

Contractor shall completely state all required figures based on Unit Prices listed below. Where scope of Work is decreased, all Work pertaining to the item, whether specifically stated or not, shall be omitted and where scope of Work is increased, all work pertaining to that item required to render same ready for use on the Project in accordance with intention of Drawings and Specifications shall be included in an agreed upon price amount.

2.02 UNIT PRICES

Furnish unit prices for each of the named items on a square foot, lineal foot, or per each basis, as applies. Unit prices shall include all labor, materials, services, profit, overhead, insurance, bonds, taxes, and all other incidental costs of Contractor, subcontractors, and supplier(s).

- 1. None.**

END OF DOCUMENT

Geotechnical Investigation Report

Athletic Fields Synthetic Turf Project College of Marin Kentfield, California



SUBMITTED TO:

Marin Community College District
Attn.: Mr. Billy Pate
835 College Avenue
Kentfield, CA 94904
BPate@marin.edu

June 29, 2017

FOR REFERENCE ONLY

A3GEO

June 29, 2017
A3GEO Project No. 1106-9A

Marin Community College District
Attn.: Mr. Billy Pate
835 College Avenue
Kentfield, CA 94904

RE: Geotechnical Investigation
Athletic Fields Synthetic Turf Project
College of Marin, Kentfield Campus

Dear Mr. Pate,

This report presents the results of our geotechnical investigation for the Athletic Fields Synthetic Turf Project at the College of Marin in Kentfield, California. We obtained information regarding the proposed project primarily through discussions with the project Landscape Architect, Verde Design (Verde). A3GEO's services for this investigation were performed under our Master Agreement with Marin Community College District dated April 19, 2017.

1.00 INTRODUCTION

1.01 Project Description

As shown on the Vicinity Map, Figure 1, and on the Aerial Photograph, Figure 2, the project site is located at the southern end of campus between the Physical Education (PE) Complex and Corte Madera Creek, a tributary creek flowing into San Francisco Bay. The portion of Corte Madera Creek near the project site is influenced by tidal fluctuations.

The Athletic Fields Synthetic Turf Project includes the replacement of the natural grass existing baseball field and football field with a synthetic turf system. We understand from discussions with Verde, that the artificial turf will be underlain by a drainage system which will discharge into the site storm drain system. The fields will be designed by Verde; the turf and drainage system will be designed by the synthetic turf manufacturer. In addition to the fields, we understand that two areas adjacent to the track will be paved with asphalt concrete (AC) paving; a Long-Jump/High-Jump enclosure (at the north end of the football field) and new tennis courts (immediately west of the track area). We understand that AC-paved areas will only be subjected to infrequent, light vehicle loadings. Both of these paved areas are shown on Figure 3, Site Plan.

The track around the football field was replaced in 2011. Verde was the designer and A3GEO provided geotechnical services, which included lime/cement treatment of weak subgrade materials.

1.02 Purpose and Scope

The purpose of our investigation was to evaluate geotechnical conditions at the proposed site and develop geotechnical conclusions and recommendations for the design and construction of the turf fields and AC-paved areas. Our scope of services included reviewing existing information, drilling exploratory borings, performing geotechnical laboratory tests, developing conclusions and recommendations pertaining to the geotechnical aspects of the project, and preparing this report which includes geotechnical conclusions and recommendations regarding:

- Subsurface conditions (including soil and groundwater);
- Site preparation, grading, and earthwork;
- Subgrade preparation;
- Suitability of onsite soils for use as fill;
- AC paving for the Long-Jump/High-Jump Enclosure and Tennis Courts;
- Surface and subsurface drainage; and
- Utility trench backfill.

Our proposed approach focused on collecting site-specific data necessary to develop the geotechnical engineering recommendations for installing synthetic turf at the baseball field and the football field. Please note that our scope of services did *not* include: 1) a geologic or seismic hazard evaluation, or 2) an environmental assessment of the site for the presence of toxic material in the soil, groundwater, or air.

2.00 METHODS OF INVESTIGATION

2.01 Review of Existing Information

We reviewed the following geotechnical reports and plans previously prepared for the site:

- “Report, Soil Engineering Services, Athletic Field, College of Marin, Kentfield California” by Harding Miller Lawson & Associates (HMLA) dated March 15, 1968.
- “Plans: College of Marin, Football Field and Track”, by Wertheim and Van der Ploeg, dated June 25, 1968.
- “Plans: College of Marin, Outdoor Physical Education Facilities”, by Wertheim and Van der Ploeg, dated April 26, 1973.
- “Marshland Area Drainage Study, Marin Community College District Department of Planning” by Koretsky King Associates (Koretsky), dated November, 1974.
- “Plans: College of Marin, Athletic Complex Renovation”, by Abey / Arnold Associates, dated January 24, 2001.
- “Geologic Hazards Evaluation and Geotechnical Study, Diamond Physical Education Complex Renovation, College of Marin, Kentfield, California” by Fugro West, Inc. (Fugro) dated February 2007.
- “Geotechnical Investigation Report, PE Track Renovation Project, College of Marin, Kentfield Campus” by A3GEO, Inc., dated June 27, 2011.

2.02 Borings B-1 through B-5

On April 28, and May 1, 2017, we advanced 5 borings (B-1 through B-5) at the approximate locations shown on the attached Site Plan (Figure 3). Borings B-1, B-2 and B-3 were advanced within the baseball field; B-4 and B-5 were advanced in the football field. The purpose of our investigation was to explore near-surface conditions relevant to the design of the proposed improvements; our borings extended to depths between 8.5 and 10 feet.

Gregg Drilling, Inc. of Martinez, California advanced the test borings using a track-mounted rig (Rhino D-24) equipped with a direct-push drive head. An A3GEO Engineer logged the borings, directed the drilling, and obtained samples at frequent intervals. Soil samples were obtained using a 3-inch O.D. California Modified sampler with liners. The samplers were advanced by direct push methods. During and after drilling, the boreholes were checked for free groundwater and the depth to groundwater was measured, when observed. Following the field operations, the borings were backfilled with lean cement grout.

Logs of Borings B-1 through B-5 are attached together with the Key to Exploratory Boring Logs in Appendix A. Soils were classified in general accordance with ASTM D 2488, which is based on the Unified Soil Classification System (USCS). The USCS is described on the Key to Exploratory Boring Logs.

The attached logs and related information are intended to depict our interpretation of subsurface conditions only at the approximate locations shown on the Site Plan (Figure 3) on the particular date designated on the logs; the passage of time may result in changes in the subsurface conditions. The boring locations indicated on the attached materials were determined by measuring from fences and other site features and should be considered approximate.

2.03 Geotechnical Laboratory Tests

Samples were reviewed in our laboratory to check field classifications and to select samples for laboratory analyses. The following geotechnical laboratory tests were performed to evaluate the physical properties of the subsurface materials:

- Percent minus #200 sieve per ASTM D1140-17;
- Hydraulic Conductivity per ASTM D5084-16a.

The results of the tests are presented on the boring logs at the corresponding sample depths and in Appendix B, Laboratory Testing.

3.00 SITE CONDITIONS

3.01 Surface Conditions and Development History

As shown on the site Aerial Photograph (Figure 2), the baseball and football fields are relatively flat and currently covered with natural grass sod. According to the 2007 Fugro report, the entire site was initially developed prior to 1900 by filling in an existing marsh. The baseball field is visible on 1958 aerial photographs and was renovated in 1973 to improve drainage by installing shallow subdrains (Wertheim and Van der Ploeg, 1973 plans). The baseball field was renovated again in 2001 (Abey / Arnold, 2001 plans) and additional subdrains were installed.

The football field and original track were constructed in 1970 by placing surcharge fill over portions of the field and track area to pre-consolidate the compressible marsh deposits. A small tributary to Corte Madera Creek was also re-routed and filled in to allow for the field and track construction. According to 1968 Wertheim and Van der Ploeg plans, the football field is also underlain with shallow subdrains.

3.02 Subsurface Conditions

In general, the previous borings located near the baseball and football field areas indicate up to about 7 feet of artificial fill consisting of soft clays, loose sands and loose gravels overlying soft, compressible marsh deposits. The 1974 Koretsky report indicates that groundwater in the area may rise to as high as 1.5 feet below the elevation of the football field (based on Creek and tide data).

For this investigation, A3GEO advanced 3 borings in the baseball field area (B-1, B-2 and B-3) to depths between 9.0 and 9.5 feet and advanced 2 borings in the football field (B-4 and B-5) to depths between 8.5 and 10.0 feet. In general, the fill extends from the ground surface to between 6.5-feet below the surface to the bottom of the borings. The artificial fill and marsh deposits are described in more detail below; the two-letter soil classifications (in parentheses) are based on the Unified Soil Classification System (USCS). The logs of our borings are presented in Appendix A, Boring Logs.

Artificial Fill – The fill materials were observed to be weak and variable, but generally consisted of loose to medium dense sandy clay with gravel (SC). The fines are moderately to highly plastic and the clay content is high. Laboratory tests indicate between 32 and 47 percent fines.

Marsh Deposits – The marsh deposits consisted of greenish gray, very soft to soft, wet, fat CLAY (CH) with a high organic content.

Groundwater was measured in Boring B-2 at a depth of 4.5 feet below the ground surface (elevation +5.3 MSL) just after drilling. Groundwater was not encountered in any other borings at the time of drilling; however, the borings were grouted closed immediately upon completion. The borings may not have been left open for a sufficient period of time to establish equilibrium groundwater conditions. Groundwater water was estimated at approximately 2.5 feet below existing grade (through pore-pressure dissipation testing) during cone penetrometer testing (CPT) performed by A3GEO for an adjacent project (a new M&O Building). The M&O Project site is directly north of the Baseball field and the investigation is currently underway. Fluctuations in the groundwater level likely occur due to daily tidal fluctuations in the adjacent Corte Madera Creek, from seasonal variations in rainfall and other factors. Based on the site geology and site development history, we believe that it would be reasonable to assume the groundwater level may be at about 2-feet below grade throughout much of the year and may at times be at or near the ground surface.

4.00 GEOTECHNICAL CONSIDERATIONS

Based on the results of our subsurface investigation and geotechnical laboratory testing, we conclude that the envisioned project is feasible from a geotechnical engineering standpoint. We have assumed that site grades will remain at essentially the same elevation and that no new loads will be added to the existing fields. If this is not the case, we should be notified immediately to provide supplemental recommendations. New loads will compress the soft soils encountered below the site and cause the site to settle. Geotechnical considerations for the design and construction of the project include the following.

4.01 Weak Compressible Subgrade

The fill materials encountered in our borings include soils that were weak and wet and contained varying amounts of organic matter. In their current condition, these soils are not capable of creating a stable subgrade suitable for the construction of the turf fields or the AC paved areas.

The existing athletic fields were developed by placing fill within a former marsh area. The available information indicates that at least two episodes of filling were involved (i.e. before and after 1968). There are no records that document that the fill that underlie the fields was placed and compacted under engineering controls and the data from our borings generally suggest that it was not.

To mitigate the weak, variable subgrade conditions and to bridge over especially unstable areas, we are recommending placement of a structural stabilization geotextile between the unimproved subgrade soil and the artificial turf drainage rock layer. Recommendations for the geotextile stabilization system are presented in Section 5.02.1.

As an alternative to using a structural stabilization geotextile as described above, it is also acceptable from a geotechnical perspective to stabilize the subgrade using a chemical subgrade improvement consisting of lime and cement. The chemical treatment layer would be constructed below and in addition to the planned drainage layer. If this alternative is selected, A3GEO would need to perform additional laboratory testing in order to confirm an appropriate mix design. Recommendations for the lime/cement treatment alternative are presented in Section 5.02.2.

In the two areas where new AC paving is planned, either of the above subgrade improvement alternatives will be effective in providing a stable base course for the AC wearing course. Recommendations for new AC paving are presented in the Section 5.03.

We anticipate that the geotextile alternative would require less inspection time for A3GEO during construction.

4.02 Poor Drainage / High Groundwater

The near-surface soils were found to be primarily sandy, clayey soils with relatively high fines contents (between 33% and 47%) and low hydraulic conductivity (10^{-6} cm/sec – 10^{-8} cm/sec). Groundwater at the site is expected at times to be at or near the ground surface. Based on the results of our investigation, we conclude that the synthetic turf system requires an underdrain system that will laterally transport the water off site. A summary of our laboratory testing is presented in the table below and the results are included in Appendix B, Laboratory Testing Results.

Summary of Laboratory Test Data

Boring ID	Sample Depth (ft)	Fines Content	Laboratory Hydraulic Conductivity (ASTM D 5084) (cm/sec)	USCS Soil Classification
B-1	1.0-1.5	47.4%	2.0×10^{-8}	SC
B-3	1.0-1.5	32.8%	4.0×10^{-8}	SC
B-5	2.0-3.0	36.5%	1.0×10^{-6}	SC

4.03 Existing Subdrains

Near-surface, below-grade drainage systems are currently installed in both the baseball and football fields. Based on our review of existing information, the baseball field drains were originally installed in 1973 and were placed in the eastern portion of the field (east of the infield diamond). Existing plans show that perforated 3-inch and 4-inch diameter drain-pipes were installed about 13-inches deep and about 17-feet on center parallel-spaced, generally running west to east. The perforated drains are shown to be collected at mid-field and along the eastern edge of the field then directed to the site storm drain system. In 2001, additional 4-inch diameter perforated subdrains were installed in the infield diamond and in left field. The configuration of the 2001 subdrains were similar to the 1973 drains.

Based on our review of existing information, the football field subdrain system was initially installed in 1968. The 4-inch diameter perforated drain pipes appear to be installed at 20-foot on-center parallel-spaced and varied in depth from about 10-inches to 14-inches. The perforated drains are collected at the east and west extents of the football field.

Based on the age of the drainage systems, the uncertainty of the as-built conditions, and the serviceability (lack of clean-outs), we recommend the removal of the existing subdrains at both the baseball and football fields during construction of the new synthetic turf fields. If the Contractor elects to attempt to reuse the existing systems or leave them in place, the exact locations of the drains and collectors in the baseball and football fields should be located and mapped to determine how they will conflict with the new construction. A3GEO should also be notified so that we can provide supplemental recommendations, if needed. It is the Contractor's and Project Landscape Architect's responsibility to evaluate the conditions, performance and serviceability of the existing drain systems if reuse is being considered. Evaluation of the existing drains was beyond the scope of our investigation.

4.04 Construction Considerations

During our investigation, groundwater was measured at about 5.3 feet below the existing ground surface shortly after drilling was complete. We caution that this may not represent a stabilized groundwater level and that water levels at the site likely vary as a result of tidal fluctuations, rainfall and other factors. There is anecdotal evidence of water being observed in relatively shallow excavations in areas that are close to the site, and the presence of clayey soils within the fill layer suggest that localized ponding and/or perched groundwater conditions could be encountered during construction. The control of groundwater during construction, including any dewatering needed to accomplish the work, is the responsibility of the contractor.

The materials encountered in our borings include soils that were wet of optimum (i.e. relative to optimum moisture per ASTM D1557) and soils that were weak. The contractor should anticipate, depending upon the selected subgrade alternative, that: 1) the onsite materials may need to be moisture conditioned (e.g. by air drying) or treated (e.g. with cement and/or lime) in order to achieve recommended/specified levels of compaction; 2) the existing fill materials present at design subgrade depth are likely to be highly variable, and may include soils that are weak and will require remediation in order to produce a stable subgrade; and 3) the materials excavated to construct the design turf section and any necessary subgrade remediation (if this option is selected) will likely include soils not suitable for re-use as non-expansive engineered fill.

Although it is possible for construction to proceed during or immediately following the wet winter months, a number of geotechnical problems may occur which may increase costs and cause project delays. If excavations are left open during winter rains, the subgrade soils will become saturated and softer. If excavations fill with water during construction, or if saturated materials are encountered at the bottom of the excavation, the excavations may need to be dewatered and remedial work may be needed to provide an appropriate subgrade for non-expansive fill materials. In general, we note that it has also been our experience that increased clean-up costs may be incurred, and greater safety hazards may exist, if the work proceeds during the wet winter months.

5.00 RECOMMENDATIONS

5.01 Clearing and Site Preparation

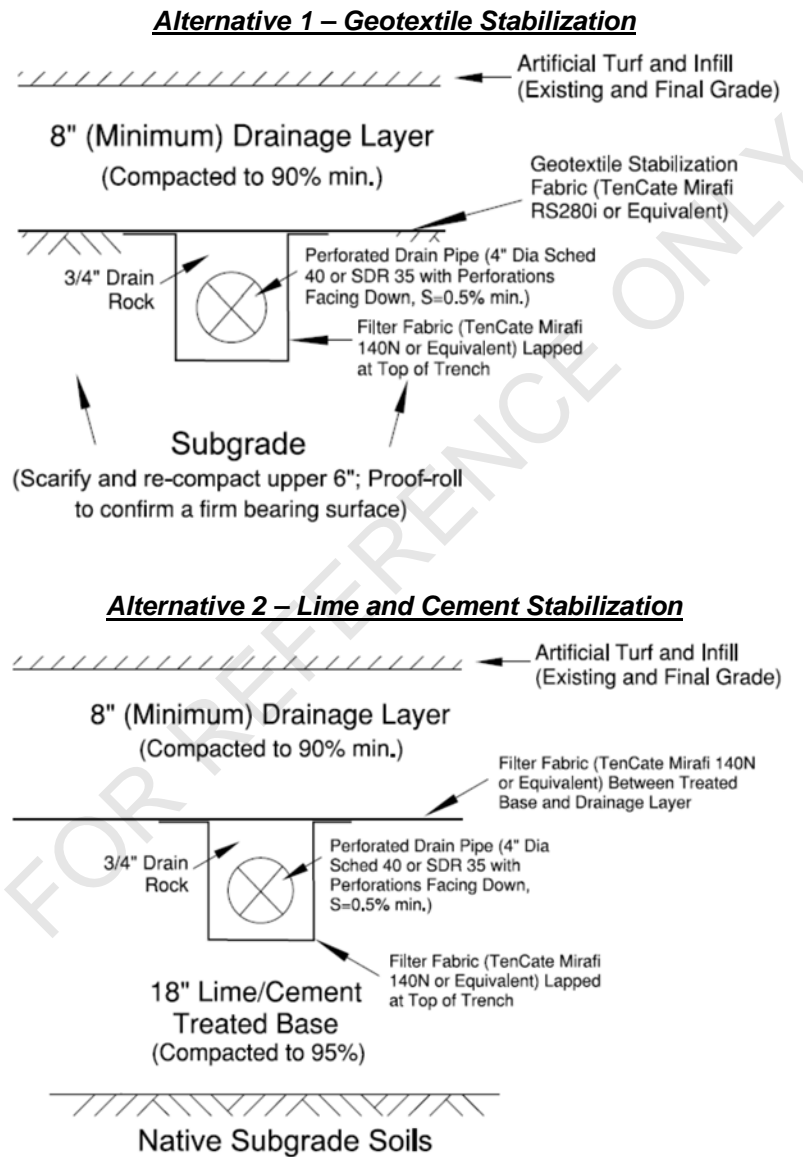
Prior to the start of work, the contractor should locate and mark all active subsurface utilities in the general vicinity of the athletic field sites. The contractor should protect all utilities that are to remain in and surrounding the fields during onsite excavation and construction activities. The site should then be cleared of the existing sod, debris and abandoned utilities (including subdrains). These materials should be removed from the site.

After clearing, the site should then be over-excavated to the planned subgrade elevation at the base of the drainage layer. These soils should be removed from the site or stockpiled for reuse if approved by the owner in consultation with our firm. Voids left by excavated subdrains and other utilities should be backfilled in accordance with Subgrade Preparation section below.

5.02 Field Subgrade and Drainage

We are providing two alternatives to stabilize the subgrade. Alternative 1 includes placement of an approved stabilization geotextile between the existing fill and drainage layer. Alternative 2 includes treating the existing on-site soils (below the drainage layer) with lime and cement to stabilize the soft subgrade.

The two subgrade stabilization alternatives are illustrated below:



The drainage system should be designed (i.e., drain layer thickness, gradation, slope, pipe sizing, drain spacing, pipe depth, etc.) by the Project Landscape Architect or Turf Manufacturer and should consider the relatively shallow groundwater table, impervious near-surface soils, and the estimated maximum rainfall runoff in the design. The designers should also consider including a perimeter drain at the edges of the fields.

5.02.1 Stabilization Geotextile (Alternative 1)

As discussed above, the soft and varying subgrades can be mitigated by utilizing a stabilization geotextile at the base of the artificial turf rock drainage layer. We recommend the use of a proprietary system such as TenCate Mirafi RS280i or an equivalent product that will: 1) prohibit clay fines in the subgrade from migrating into the rock drainage layer, 2) allow surface water to infiltrate through to installed subdrains and 3) in conjunction with the rock drainage layer, provide a structural base to mitigate soft subgrade soils.

A3GEO should review any submittals relative to the proposed geotextile material and the geotextile should be installed in strict adherence to manufacturer recommendations.

5.02.2 Lime / Cement Treatment (Alternative 2)

If the lime / cement treatment option is selected, we recommend that the installation be performed by a qualified specialty contractor with demonstrated experience in the use of lime and/or cement-treated soils. The lime and/or cement treatment work should be performed in general accordance with Caltrans Standard Specification, Section 24. The amount of lime and/or cement to be added to the soil should be sufficient to provide a laboratory R-value of at least 40 and a Plasticity Index (PI) of 15 or less.

The specified lime / cement content will be based on laboratory test results; however, for planning purposes we anticipate that the required mix will consist of 2.5% lime and 2.5% Portland cement (by dry weight). Considering the variation between the different onsite materials, there could be sufficient differences in the onsite soil to warrant revisions to the amount of lime and/or cement as the work is progressing. Therefore, periodic laboratory testing should also be performed during construction if conditions differ from anticipated.

Lime / cement soil mixing should be performed using a rotary pulverizer that is specially designed for soil mixing. The depth of mixing depends on the pulverizing equipment, but typically mixing depths up to 18 inches can be obtained in one lift. The initial mix is performed immediately after the lime is spread onto the soil. After the initial mix, the soil should be allowed to cure for at least 24 hours. After curing, dry cement is spread, mixed and pulverized into the lime-treated soil. Moisture conditioning should be performed as needed. After mixing the second time, the lime and cement treated soil should be compacted to at least 90 percent relative compaction (ASTM D-1557).

5.03 Asphalt Concrete Paving

Based on our field observations and laboratory testing, the subgrade soils in the planned paving areas include highly variable clayey soils and, as such, we have estimated a subgrade R-value of 5 for these areas. Recommendations for the synthetic turf subgrade stabilization presented in Section 5.02 above are also appropriate for AC paving subgrade preparation. In the case of AC paving subgrade, however, the Class II Permeable material should be replaced with Caltrans Class II Aggregate Base (AB) and all materials should be compacted to 95% minimum relative compaction. The subdrain piping may be omitted in the AC paved areas. If either of the presented subgrade improvement options are utilized, an effective subgrade R-value of 20 may be applied to design the AC wearing surface. Based on Caltrans Pavement Design Manual (Chapter 630) calculations, a pavement design section of 3-inches of AC over 7-inches of Class II AB corresponds to a subgrade R-value of 20 and Traffic Index of 4.

5.04 Material for Fill

All proposed fill materials should be approved by our firm prior to their use. The different types of fill material are described below:

Non-Expansive Fill – Non-expansive fill should conform to the following requirements: 1) have a Plasticity Index (PI) no greater than 15, 2) have a liquid limit (LL) no greater than 40, 3) have an organic content of less than 3 percent by volume, and 4) have no rocks or lumps larger than 6 inches in greatest dimension. Non-expansive fill should be used to raise grades where necessary and to backfill voids left from overexcavation and/or removal of existing subdrains and/or abandoned utilities.

Permeable Drain Rock – Permeable drain rock should conform to Caltrans Standard Specification for Class 2 Permeable Material (§68-2.02). Class 2 Permeable Material should be used as the drainage layer between the fill and turf.

Aggregate Base (AB) – AB should conform to Caltrans Standard Specification for Class 2 Aggregate Base (§26-1.02). Class 2 Aggregate Base should be used to construct the pavement section in the AC paved areas (High-Jump/Long-Jump and Tennis Courts).

¾-inch Drain Rock –Open-graded, free-draining aggregate consisting of clean ¾-inch gravel or crushed rock. ¾-inch drain rock should be used to backfill subdrain trenches.

Some of the materials cleared or excavated from the site may be suitable for re-use non-expansive fill, from a geotechnical standpoint, if they can be processed to meet the above requirements. Material that cannot be mixed or processed to meet specification requirements should be disposed of offsite or stockpiled for other uses at the discretion of the owner. If the re-use of on-site materials is to be considered, it must first be approved by the owner in consultation with our firm.

5.05 Fill / Drainage Layer and AB Placement and Subgrade Preparation

Proposed drainage layer material and fill should be spread in lifts not exceeding 8 inches in uncompacted thickness, moisture conditioned, as necessary, and compacted to 90% (minimum) percent relative compaction based on the ASTM D-1557 test method (latest version). AB in paved areas should be compacted to at least 95% relative compaction. A3GEO should test the compaction of the drain rock to confirm 90% to 95% relative compaction.

If Alternative 1 (stabilization geotextile) is utilized, the top 6-inches of the subgrade exposed at the design elevation (below the drainage layer) should be scarified, moisture-conditioned and recompacted to achieve a firm bearing surface. A3GEO should observe subgrade prior to placement of the geotextile fabric.

It is possible that fill and/or subgrade soils may be excessively wet or dry depending on the moisture content at the time of construction. If the fill soils are too wet, they may be dried by aeration or by mixing with drier materials.

5.06 Utility Trench Backfill

Utility trenches should be backfilled with fill placed in lifts not exceeding 8 inches in uncompacted thickness. Trenches should be filled by placing a granular layer (shading) beneath and around the pipe, and then 6 to 12 inches of shading should be carefully placed and tamped above the pipe. The remaining portion of the trench should be backfilled with onsite or import soil. The backfill (above shading layers) should be placed and compacted to a minimum relative degree of compaction of 90 percent based on ASTM D-1557. The compaction requirements given above should be considered minimum recommended requirements.

5.07 Additional Geotechnical Services

5.07.1 Plan Review

We recommend our firm be provided the opportunity for a general review of the geotechnical aspects of the final plans and specifications for this project in order to ensure that the geotechnical recommendations were properly interpreted and implemented. If our firm is not accorded the privilege of making the recommended review, we can assume no responsibility for misinterpretation of our recommendations.

5.07.2 Construction-Phase Services

The analyses and recommendations submitted in this report are based in part upon the data obtained from the five soil borings. The nature and extent of variations across the site may not become evident until construction. If variations then become apparent, it will be necessary to re-examine the recommendations of this report.

A3GEO should review all submittals from the contractors that are geotechnical in nature, before geotechnical materials are delivered or equipment is mobilized to the site.

We recommend our firm be retained to provide geotechnical engineering services during the construction of the proposed project. This is to observe compliance with the design concepts, specifications, and recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction. During construction, A3GEO should observe the following:

- Soil conditions exposed by site excavations,
- Subgrade preparation,
- Stabilization fabric installation or lime / cement treatment,
- Fill, drainage layer, and AB placement and compaction, and
- Drainage installation.

We request that the client or the client's representative (the contractor) contact our firm at least two working days prior to the commencement of any geotechnical related operation.

6.00 LIMITATIONS

This report has been prepared for the exclusive use of you and your consultants in accordance with generally accepted geotechnical engineering practices for specific application to the construction of the Athletic Fields Synthetic Turf project at the College of Marin, Kentfield Campus. No other warranty, either expressed or implied, is made. In the event the nature, design, or location of the improvements differs significantly from what has been noted above, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and the conclusions of this report are modified or verified in writing.

The findings of this report are valid as of the present date. However, the passing of time will likely change the conditions of the existing property due to natural processes or the works of man. In addition, due to legislation or the broadening of knowledge, changes in applicable or appropriate standards may occur. Accordingly, the findings of this report may be invalidated, wholly or partly, by changes beyond our control. Therefore, this report should not be relied upon after three years without being reviewed by this office.

If you have any questions concerning this report, please feel free to call us.

Very truly yours,

Dona K Mann

Dona Mann, PE, GE
Principal Engineer
Cell: (415) 425-0247



M. Jeroen van den Berg

M. Jeroen van den Berg, PE
Senior Engineer
Cell: (415) 717-6534



Copies: Addressee (1 via email)
Verde Design, Landscape Architect, (1 via email)

FIGURES

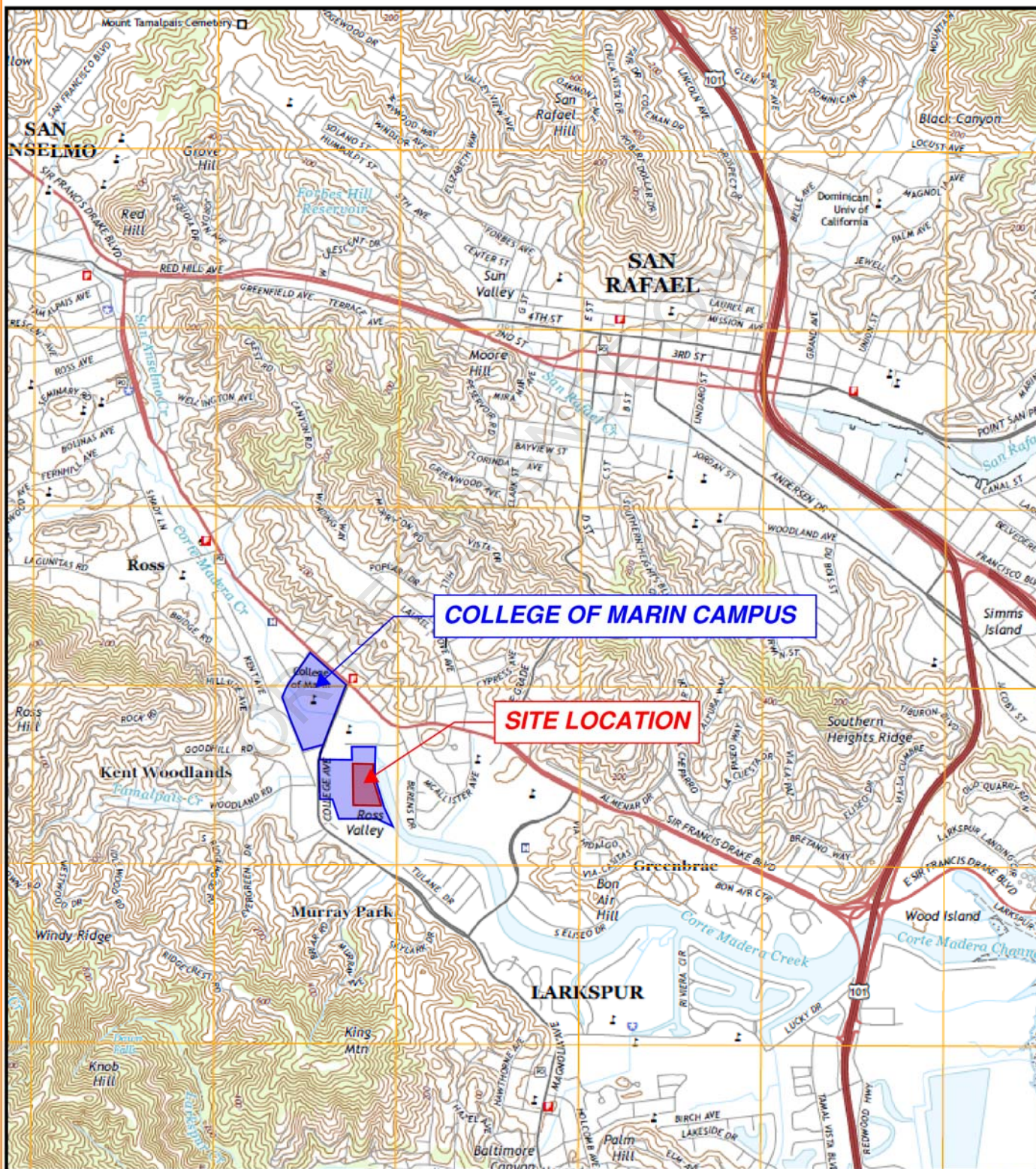


FIGURE 1

VICINITY MAP



SOURCE: Google Earth (Imagery date 8/13/2016)

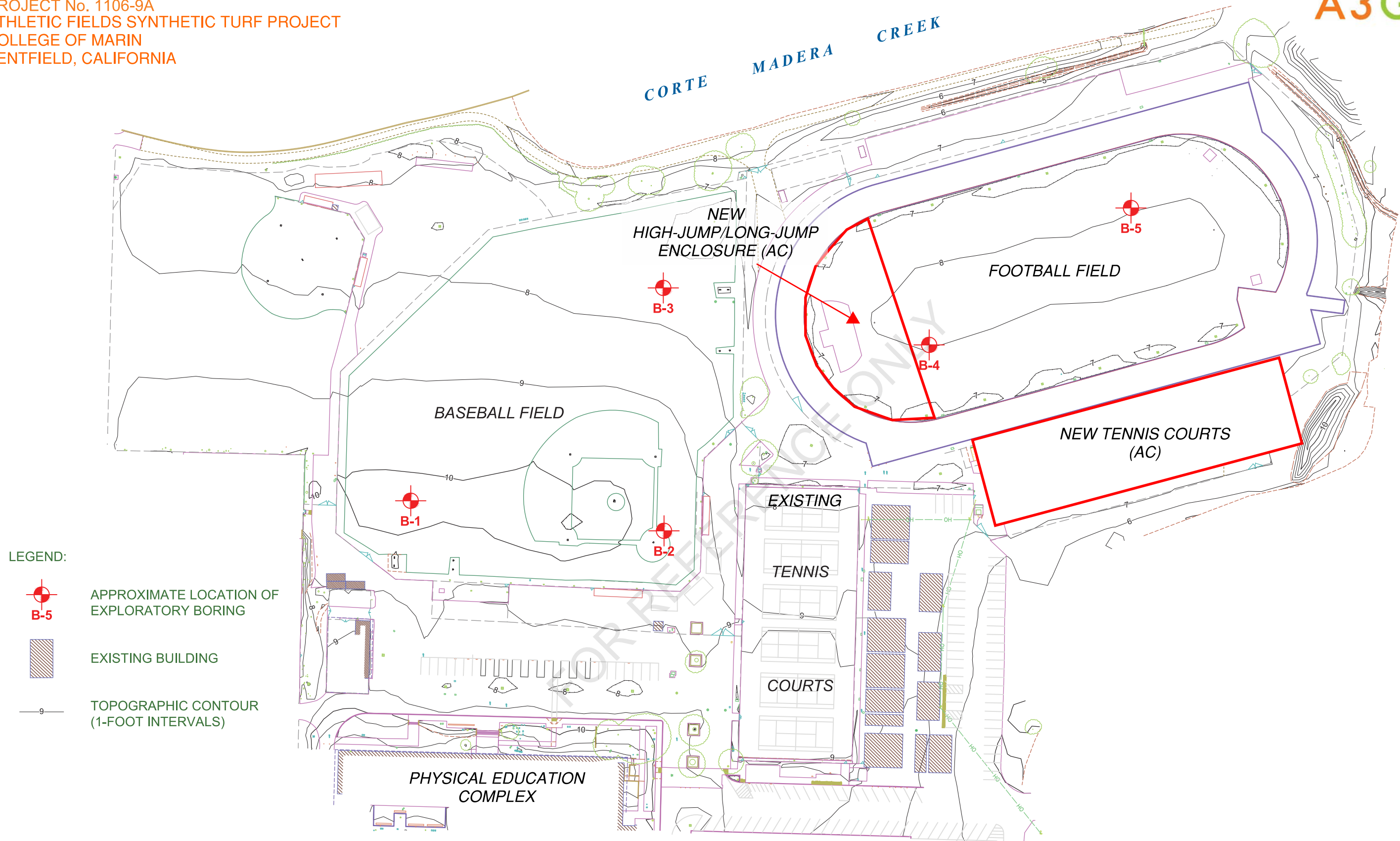
APPROXIMATE SCALE

0 ¼ mile

0 1,000 feet

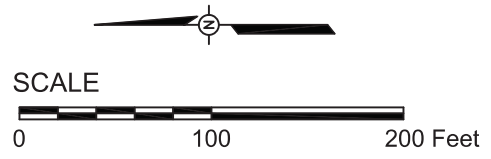


FIGURE 2
AERIAL PHOTOGRAPH



LEGEND:

- APPROXIMATE LOCATION OF EXPLORATORY BORING
- EXISTING BUILDING
- TOPOGRAPHIC CONTOUR (1-FOOT INTERVALS)



SOURCE: CSW Stuber-Stroeh Engineering Group, Topographic Map (dated 5/16/17)

FIGURE 3
SITE PLAN

APPENDIX A

Boring Logs

FOR REFERENCE ONLY

UNIFIED SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYM	TYPICAL NAMES
COARSE GRAINED SOILS: more than 50% retained on No. 200 sieve	COARSE GRAINED SOILS: 50% or more of coarse fraction on No. 4 sieve	CLEAN GRAVELS	GW	Well graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH SAND	GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		CLEAN SANDS	GM	Silty gravels and gravel-sand-silt mixtures
		SANDS WITH FINES	GC	Clayey gravels and gravel-sand-clay mixtures
	SANDS: more than 50% passing on No. 4 sieve	CLEAN SANDS	SW	Well graded sands and gravelly sand, little or no fines
		SANDS WITH FINES	SP	Poorly graded sands and gravelly sand, little or no fines
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures
		SANDS WITH FINES	SC	Clayey sands, sand-clay mixtures
		SANDS WITH FINES	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
FINE GRAINED SOILS: 50% or more passing No. 200 sieve	SILTS AND CLAY: Liquid Limit 50% or less	SANDS WITH FINES	CL	Inorganic clays or low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		SANDS WITH FINES	OL	Organic silts and organic silty clays of low plasticity
		SANDS WITH FINES	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic clays
	SILTS AND CLAY: Liquid Limit 50% or greater	SANDS WITH FINES	CH	Inorganic clays of high plasticity, fat clays
		SANDS WITH FINES	OH	Organic clays of medium to high plasticity
		SANDS WITH FINES	PT	Peat, muck, and other highly organic soils
HIGHLY ORGANIC SOILS				

BOUNDARY CLASSIFICATION AND GRAIN SIZES

SILT OR CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		
U.S. Standard No. 200 Sieve Sizes	No. 40 0.075 mm	No. 10 0.425 mm	No. 4 2 mm	No. 4 3/16"	3/4"	3"	12"

SYMBOLS

Modified California (MC) Sampler (3" O.D.)	Thin-walled tube using Pitcher Barrel	Disturbed Sample
Standard Penetration Test: SPT (2" O.D.)	Shelby Tube, pushed or used Osterberg Sampler	<u>Water Levels</u> At time of drilling At end of drilling After drilling

ABBREVIATIONS

NOTES

Item	Meaning	NOTES
LL	Liquid Limit (%) (ASTM D 4318)	1. Stratification lines represent the approximate boundaries between material types and the transitions may be gradual.
PI	Plasticity Index (%) (ASTM D 4318)	
-200	Passing No. 200 (%) (ASTM D 1140)	
TXCU	Laboratory consolidated undrained triaxial test of undrained shear strength (psf) (D 4767)	2. Modified California (MC) blow counts were adjusted by multiplying field blow counts by a factor of 0.63.
TXUU	Laboratory unconsolidated, undrained triaxial test of undrained shear strength (psf) (ASTM D 2850)	
psf/tsf	pounds per square foot / tons per square foot	3. Recorded blow counts have not been adjusted for hammer energy.
psi	pounds per square inch	
OD	Outside Diameter	
ID	Inside Diameter	





A3GEO, Inc.
 1331 7th Street; Unit E
 Berkeley, CA 94710
 Telephone: 510-705-1664

BORING NUMBER B-1

CLIENT College of Marin
PROJECT NUMBER 1106-9A
DATE STARTED 4/28/17 **COMPLETED** 4/28/17
DRILLING CONTRACTOR Gregg Drilling and Testing, Inc.
DRILLING METHOD Direct Push
LOGGED BY JV **CHECKED BY** JV
NOTES Location: 37.95188, -122.54730

PROJECT NAME Kentfield Athletic Fields
PROJECT LOCATION Kentfield, CA
GROUND ELEVATION 10.1 ft **HOLE SIZE** 3"
GROUND WATER LEVELS:
AT TIME OF DRILLING ---
AT END OF DRILLING ---
AFTER DRILLING ---

GEOTECH BH COLUMN TERM NOTE LEFT ALIGNED - A3GEO DATA TEMPLATE.GDT - 6/22/17 11:55 - A:\A3GEO PROJECTS\1106 - COM\1106-9A KENTFIELD SYNTHETIC TURF FIELDS\BORELOGS\1101-9A-BORELOGS.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	ADJUSTED BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	% RECOVERED	OTHER LAB TESTS / NOTES
0.0		[SOD / TOPSOIL]							
		WELL-GRADED SAND (SW) - brown, loose, moist [FILL]							
		CLAYEY SAND (SC) - reddish brown / greyish brown, medium dense, some gravel, moist [FILL]	MC			109	20		-200 = 47% Gravel = 9% Sand = 44% Average Hydraulic Conductivity: 2.E-08cm/sec
2.5			MC						
		-larger gravels	MC						
5.0		-increasing clay & organics	MC						
			MC						
7.5		-wet	MC						
			GB						

Bottom of borehole at 8.5 feet.

1. Stratification lines represent the approximate boundaries between material types. Transitions may be gradual.
2. Groundwater was not encountered during drilling.
3. Hole was backfilled with neat cement grout immediately after drilling on 4/28/17.
4. Elevation from Sandis Campus Aerial.



A3GEO, Inc.
 1331 7th Street; Unit E
 Berkeley, CA 94710
 Telephone: 510-705-1664

BORING NUMBER B-2

CLIENT College of Marin
PROJECT NUMBER 1106-9A
DATE STARTED 4/28/17 **COMPLETED** 4/28/17
DRILLING CONTRACTOR Gregg Drilling and Testing, Inc.
DRILLING METHOD Direct Push
LOGGED BY JV **CHECKED BY** JV
NOTES Location: 37.95109, -122.54742

PROJECT NAME Kentfield Athletic Fields
PROJECT LOCATION Kentfield, CA
GROUND ELEVATION 9.8 ft **HOLE SIZE** 3"
GROUND WATER LEVELS:
 ▽ **AT TIME OF DRILLING** 4.50 ft / Elev 5.30 ft
AT END OF DRILLING ---
AFTER DRILLING ---

GEOTECH BH COLUMN TERM NOTE LEFT ALIGNED - A3GEO DATA TEMPLATE.GDT - 6/22/17 11:55 - A:\A3GEO PROJECTS\1106 - COM\1106-9A KENTFIELD SYNTHETIC TURF FIELDS\BORELOGS\1101-9A-BORELOGS.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	ADJUSTED BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	% RECOVERED	OTHER LAB TESTS / NOTES
0.0		CLAYEY SAND (SC) - reddish brown, medium dense, moist [FILL]							
		POORLY-GRADED SAND (SP) - brown, loose, moist [FILL]							
2.5		CLAYEY SAND (SC) - olive brown / black, loose, some gravel, moist [FILL]	MC						
			MC						
5.0	▽	-organic material	MC						
			MC						
7.5		-construction debris	MC						
			MC						
10.0			MC						

- Bottom of borehole at 10.0 feet.
1. Stratification lines represent the approximate boundaries between material types. Transitions may be gradual.
 2. Groundwater encountered at 4.5' during drilling.
 3. Hole was backfilled with neat cement grout immediately after drilling on 4/28/17.
 4. Elevation from Sandis Campus Aerial.



A3GEO, Inc.
 1331 7th Street; Unit E
 Berkeley, CA 94710
 Telephone: 510-705-1664

BORING NUMBER B-3

CLIENT <u>College of Marin</u>	PROJECT NAME <u>Kentfield Athletic Fields</u>
PROJECT NUMBER <u>1106-9A</u>	PROJECT LOCATION <u>Kentfield, CA</u>
DATE STARTED <u>4/28/17</u> COMPLETED <u>4/28/17</u>	GROUND ELEVATION <u>7.5 ft</u> HOLE SIZE <u>3"</u>
DRILLING CONTRACTOR <u>Gregg Drilling and Testing, Inc.</u>	GROUND WATER LEVELS:
DRILLING METHOD <u>Direct Push</u>	AT TIME OF DRILLING <u>---</u>
LOGGED BY <u>JV</u> CHECKED BY <u>JV</u>	AT END OF DRILLING <u>---</u>
NOTES <u>Location: 37.95188, -122.54656</u>	AFTER DRILLING <u>--</u>

GEOTECH BH COLUMN TERM NOTE LEFT ALIGNED - A3GEO DATA TEMPLATE.GDT - 6/22/17 11:55 - A:\A3GEO PROJECTS\1106 - COM\1106-9A KENTFIELD SYNTHETIC TURF FIELDS\BORELOGS\1101-9A-BORELOGS.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	ADJUSTED BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	% RECOVERED	OTHER LAB TESTS / NOTES
0.0		[SOD / TOPSOIL]							
		WELL-GRADED SAND (SW) - brown, loose, moist, trace clay [FILL]							
2.5		CLAYEY SAND WITH GRAVEL (SC) - black, loose to medium dense, moist [FILL]	MC			124	12		-200 = 33% Gravel = 20% Sand = 47% Average Hydraulic Conductivity: 4.E-08cm/sec
			MC						
5.0			MC						
			MC						
7.5		FAT CLAY WITH SILT (CL) - dark grey, soft, moist [MARSH DEPOSITS]	MC						

- Bottom of borehole at 8.5 feet.
1. Stratification lines represent the approximate boundaries between material types. Transitions may be gradual.
 2. Groundwater was not encountered during drilling.
 3. Hole was backfilled with neat cement grout immediately after drilling on 4/28/17.
 4. Elevation from Sandis Campus Aerial.



A3GEO, Inc.
 1331 7th Street; Unit E
 Berkeley, CA 94710
 Telephone: 510-705-1664

BORING NUMBER B-4

CLIENT College of Marin
PROJECT NUMBER 1106-9A
DATE STARTED 5/1/17 **COMPLETED** 5/1/17
DRILLING CONTRACTOR Gregg Drilling and Testing, Inc.
DRILLING METHOD Direct Push
LOGGED BY JV **CHECKED BY** JV
NOTES Location: 37.95043, -122.54675

PROJECT NAME Kentfield Athletic Fields
PROJECT LOCATION Kentfield, CA
GROUND ELEVATION 8.1 ft **HOLE SIZE** 3"
GROUND WATER LEVELS:
AT TIME OF DRILLING ---
AT END OF DRILLING ---
AFTER DRILLING ---

GEOTECH BH COLUMN TERM NOTE LEFT ALIGNED - A3GEO DATA TEMPLATE.GDT - 6/22/17 11:55 - A:\A3GEO PROJECTS\1106 - COM\1106-9A KENTFIELD SYNTHETIC TURF FIELDS\BORELOGS\1101-9A-BORELOGS.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	ADJUSTED BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	% RECOVERED	OTHER LAB TESTS / NOTES
0.0		[SOD / TOPSOIL]							
2.5		POORLY-GRADED SAND (SP) - greyish brown, loose, moist, with gravel [FILL] -larger gravel, CL present, dense	MC						
5.0		CLAYEY SAND (CL) - reddish brown, loose, moist, with gravel [FILL] -color getting darker	MC						
7.5		FAT CLAY (CH) - olive / black, soft, moist / wet, with organics [MARSH DEPOSITS]	MC						

- Bottom of borehole at 9.0 feet.
1. Stratification lines represent the approximate boundaries between material types. Transitions may be gradual.
 2. Groundwater was not encountered during drilling.
 3. Hole was backfilled with neat cement grout immediately after drilling on 5/1/17.
 4. Elevation from Sandis Campus Aerial.



A3GEO, Inc.
 1331 7th Street; Unit E
 Berkeley, CA 94710
 Telephone: 510-705-1664

BORING NUMBER B-5

CLIENT College of Marin **PROJECT NAME** Kentfield Athletic Fields
PROJECT NUMBER 1106-9A **PROJECT LOCATION** Kentfield, CA
DATE STARTED 5/1/17 **COMPLETED** 5/1/17 **GROUND ELEVATION** 7.8 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Gregg Drilling and Testing, Inc. **GROUND WATER LEVELS:**
DRILLING METHOD Hollow Stem Auger **AT TIME OF DRILLING** ---
LOGGED BY JV **CHECKED BY** JV **AT END OF DRILLING** ---
NOTES Location: 37.94983, -122.54621 **AFTER DRILLING** ---

GEOTECH BH COLUMN TERM NOTE LEFT ALIGNED - A3GEO DATA TEMPLATE.GDT - 6/22/17 11:55 - A:\A3GEO PROJECTS\1106 - COM\1106-9A KENTFIELD SYNTHETIC TURF FIELDS\BORELOGS\1101-9A-BORELOGS.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	ADJUSTED BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	% RECOVERED	OTHER LAB TESTS / NOTES
0.0		[SOD / TOPSOIL]							
		POORLY-GRADED SAND (SP) - brown, loose, moist, with gravel [FILL]	MC						
2.5		CLAYEY SAND (SC) - greyish brown, loose, moist, with gravel [FILL]	MC			110	14		
5.0		CLAYEY SAND (SC) - black, medium dense, moist, with gravel [FILL]	MC						
7.5		CLAYEY SAND (SC) - light brown / greenish grey, medium dense, moist, gravel [FILL]	MC						

Bottom of borehole at 9.5 feet.

1. Stratification lines represent the approximate boundaries between material types. Transitions may be gradual.
2. Groundwater was not encountered during drilling.
3. Hole was backfilled with neat cement grout immediately after drilling on 5/1/17.
4. Elevation from Sandis Campus Aerial.

APPENDIX B

Laboratory Test Data

FOR REFERENCE ONLY

ATHLETIC FIELDS SYNTHETIC TURF PROJECT
COLLEGE OF MARIN
KENTFIELD, CALIFORNIA



#200 Sieve Wash Analysis

ASTM D 1140

Job No.: 748-030 **Project No.:** 1106-9A **Run By:** MD
Client: A3GEO **Date:** 5/24/2017 **Checked By:** DC
Project: College of Marin Athletic Fields

	B-1	B-3	B-5	
Boring:	B-1	B-3	B-5	
Sample:	1.0-1.5	1.0-1.5	2.5-3.0	
Depth, ft.:	Dark Grayish Brown Clayey SAND	Dark Gray Clayey SAND w/ Gravel	Greenish Gray Clayey SAND	
Soil Type:				
Wt of Dish & Dry Soil, gm	563.3	760.2	584.6	
Weight of Dish, gm	310.4	312.9	318.1	
Weight of Dry Soil, gm	252.9	447.3	266.5	
Wt. Ret. on #4 Sieve, gm	23.3	88.2	26.2	
Wt. Ret. on #200 Sieve, gm	133.1	300.7	169.1	
% Gravel	9.2	19.7	9.8	
% Sand	43.4	47.5	53.6	
% Silt & Clay	47.4	32.8	36.5	

Remarks: As an added benefit to our clients, the gravel fraction may be included in this report. Whether or not it is included is dependent upon both the technician's time available and if there is a significant enough amount of gravel. The gravel is always included in the percent retained on the #200 sieve but may not be weighed separately to determine the percentage, especially if there is only a trace amount, (5% or less).



Hydraulic Conductivity ASTM D 5084

Method C: Falling Head Rising Tailwater

Job No: 748-030 **Boring:** B-1 **Date:** 05/24/17
Client: A3GEO **Sample:** **By:** MD/PJ
Project: 1106-9A **Depth, ft.:** 1.0-1.5 **Remolded:**

Visual Classification: Dark Grayish Brown Clayey SAND

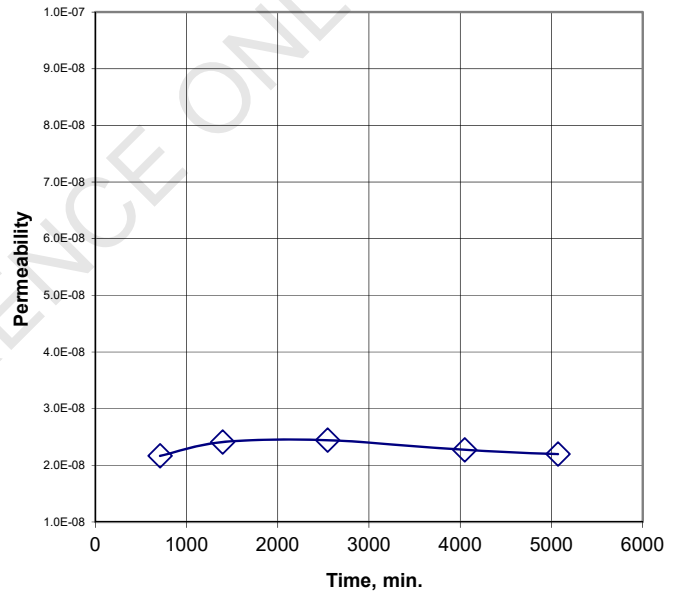
Max Sample Pressures, psi:

B: = >0.95 ("B" is an indication of saturation)

Cell:	Bottom	Top	Avg. Sigma3
53.5	49.5	47.5	5

Max Hydraulic Gradient: = 36

Date	Minutes	Head, (in)	K,cm/sec
5/18/2017	0.00	68.98	Start of Test
5/19/2017	710.00	67.78	2.2E-08
5/19/2017	1397.00	66.38	2.4E-08
5/20/2017	2546.00	64.38	2.4E-08
5/21/2017	4049.00	62.08	2.3E-08
5/22/2017	5071.00	60.78	2.2E-08



Average Hydraulic Conductivity: 2.E-08 cm/sec

Sample Data:	Initial (As-Received)	Final (At-Test)
Height, in	1.94	1.90
Diameter, in	2.42	2.42
Area, in ²	4.58	4.60
Volume in ³	8.88	8.75
Total Volume, cc	145.5	143.4
Volume Solids, cc	93.8	93.8
Volume Voids, cc	51.7	49.6
Void Ratio	0.6	0.5
Total Porosity, %	35.5	34.6
Air-Filled Porosity (θ _a),%	1.5	0.8
Water-Filled Porosity (θ _w),%	34.0	33.8
Saturation, %	95.7	97.7
Specific Gravity	2.70 Assumed	2.70
Wet Weight, gm	302.7	301.7
Dry Weight, gm	253.2	253.2
Tare, gm	0.00	0.00
Moisture, %	19.5	19.1
Wet Bulk Density, pcf	129.8	131.3
Dry Bulk Density, pcf	108.6	110.2
Wet Bulk Dens.pb, (g/cm ³)	2.08	2.10
Dry Bulk Dens.pb, (g/cm ³)	1.74	1.77

Remarks: The sample had some gravel. Gravel can impede the flow especially with small diameter samples. It has been found that sands or gravels with over 30% fines will behave as a soil. These two factors have likely impacted the test results.



Hydraulic Conductivity ASTM D 5084

Method C: Falling Head Rising Tailwater

Job No: 748-030 **Boring:** B-3 **Date:** 05/24/17
Client: A3GEO **Sample:** **By:** MD/PJ
Project: 1106-9A **Depth, ft.:** 1.0-1.5 **Remolded:**
Visual Classification: Dark Gray Clayey SAND w/ Gravel

Max Sample Pressures, psi:				B: = >0.95 ("B" is an indication of saturation)
Cell:	Bottom	Top	Avg. Sigma3	Max Hydraulic Gradient: = 23
43.5	39.5	37.5	5	<p style="text-align: center;">Time, min.</p>
Date	Minutes	Head, (in)	K, cm/sec	
5/18/2017	0.00	68.98	Start of Test	
5/19/2017	710.00	67.58	4.0E-08	
5/19/2017	1002.00	66.98	4.1E-08	
5/19/2017	1391.00	66.20	4.1E-08	
5/20/2017	2544.00	64.13	4.0E-08	
5/21/2017	4046.00	61.43	4.0E-08	
5/22/2017	5068.00	59.83	3.9E-08	

Average Hydraulic Conductivity: 4.E-08 cm/sec		
Sample Data:	Initial (As-Received)	Final (At-Test)
Height, in	3.00	2.99
Diameter, in	2.42	2.41
Area, in ²	4.59	4.56
Volume in ³	13.79	13.64
Total Volume, cc	226.0	223.6
Volume Solids, cc	165.9	165.9
Volume Voids, cc	60.1	57.7
Void Ratio	0.4	0.3
Total Porosity, %	26.6	25.8
Air-Filled Porosity (θ _a), %	3.4	0.3
Water-Filled Porosity (θ _w), %	23.2	25.5
Saturation, %	87.1	98.8
Specific Gravity	2.70 Assumed	2.70
Wet Weight, gm	500.4	505.0
Dry Weight, gm	448.0	448.0
Tare, gm	0.00	0.00
Moisture, %	11.7	12.7
Wet Bulk Density, pcf	138.1	140.9
Dry Bulk Density, pcf	123.7	125.0
Wet Bulk Dens.pb, (g/cm ³)	2.21	2.26
Dry Bulk Dens.pb, (g/cm ³)	1.98	2.00

Remarks: The gravel can have a profound impact on the permeability with small diameter samples. Sand and gravel mixtures with over 30% fines will behave like a soil. These two factors have likely affected the test results.



Hydraulic Conductivity

ASTM D 5084

Method C: Falling Head Rising Tailwater

Job No: 748-030 **Boring:** B-5 **Date:** 05/24/17
Client: A3GEO **Sample:** **By:** MD/PJ
Project: 1106-9A **Depth, ft.:** 2.5-3 **Remolded:**

Visual Classification: Greenish Gray Clayey SAND

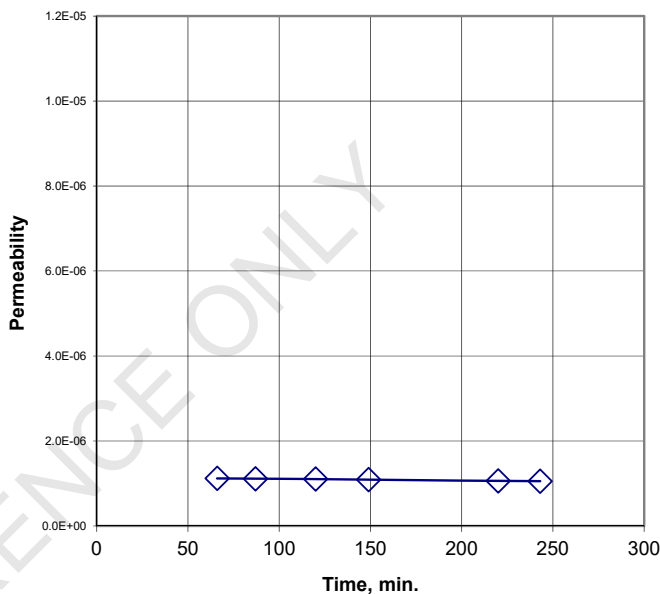
Max Sample Pressures, psi:

B: = >0.95 ("B" is an indication of saturation)

Cell:	Bottom	Top	Avg. Sigma3
53.5	49	48	5

Max Hydraulic Gradient: = 18

Date	Minutes	Head, (cm)	K, cm/sec
5/18/2017	0.00	91.33	Start of Test
5/18/2017	66.00	85.93	1.1E-06
5/18/2017	87.00	84.33	1.1E-06
5/18/2017	120.00	81.83	1.1E-06
5/18/2017	149.00	79.83	1.1E-06
5/18/2017	220.00	75.23	1.1E-06
5/18/2017	243.00	73.83	1.1E-06



Average Hydraulic Conductivity: 1.E-06 cm/sec

Sample Data:	Initial (As-Received)	Final (At-Test)
Height, in	2.00	1.96
Diameter, in	2.42	2.40
Area, in ²	4.60	4.51
Volume in ³	9.20	8.83
Total Volume, cc	150.7	144.7
Volume Solids, cc	98.8	98.8
Volume Voids, cc	51.9	45.9
Void Ratio	0.5	0.5
Total Porosity, %	34.5	31.7
Air-Filled Porosity (θ _a), %	9.0	1.1
Water-Filled Porosity (θ _w), %	25.4	30.6
Saturation, %	73.8	96.4
Specific Gravity	2.70 Assumed	2.70
Wet Weight, gm	305.1	311.0
Dry Weight, gm	266.8	266.8
Tare, gm	0.00	0.00
Moisture, %	14.4	16.6
Wet Bulk Density, pcf	126.3	134.1
Dry Bulk Density, pcf	110.4	115.0
Wet Bulk Dens.pb, (g/cm ³)	2.02	2.15
Dry Bulk Dens.pb, (g/cm ³)	1.77	1.84

Remarks:

SECTION 01 07 00

CONFORMANCE SURVEYING

PART 1 GENERAL

1.01 SUMMARY

- A. Conformance Surveying work shall be completed by a Licensed Surveyor and be based on established site bench marks, monuments, lines, and levels necessary for the work covered by this Contract.
- B. Scope of work:
Providing conformance surveying required for proper completion of the work may include, but may not be limited to:
 - 1. Synthetic turf construction, including subgrade and base preparation.
 - 2. Running track construction, including track paving, track surfacing, and all track edges / curbing.
 - 3. Tennis court construction, including all curbing / edgebands.
- C. Related sections can include, but may not be limited to the following:
 - 1. Section 31 20 00 – Earthwork
 - 2. Section 32 11 00 – Base Courses
 - 3. Section 32 12 16 – Asphaltic Concrete Paving
 - 4. Section 32 18 30 – Tennis Court Surfacing
 - 5. Section 32 18 13 – Synthetic Turf
 - 6. Section 32 18 24 – Track Surfacing
 - 7. Section 32 90 00 – Landscaping

1.02 SUBMITTALS

- A. Contractor will be required to submit three (3) hard copies and one (1) electronic copy (in AutoCAD or scaled PDF image) of all conformance surveys for the project. The Contractor shall ensure that all survey data is completed with the supervision of a licensed surveyor. The Owner Representative shall provide a written response within two (2) working days of receipt of said drawings and identify any areas out of tolerance.

1.03 QUALITY CONTROL AND REWORK

- A. Any portion of the survey that does not conform to the grading tolerance requirements identified in this specification section will be corrected by the Contractor. Areas out of conformance will be resurveyed at the Contractor's sole expense (following the identical procedure stated above) by the Surveyor, and these revised points shall be added to the original digital file for resubmittal, review and acceptance by the Owner Representative.
- B. All delays and costs incurred due to grades out of conformance are the sole responsibility of the Contractor. At any point during construction following acceptance of any portion of the survey by the Owner, the Owner reserves the right to recheck the surface grades (at no cost to the Contractor) to verify it is still in conformance. It is the Contractor's responsibility to protect the grading and compaction tolerances of the surveyed surface after conformance surveying operations are complete and accepted, and prior to installation of any subsequent materials. Any work identified by the survey that is outside of the acceptable tolerances shall be corrected by the Contractor at its sole expense.

PART 2 PRODUCTS - Not Applicable

PART 3 EXECUTION

3.01 LAYING OUT THE WORK

- A. Contractor shall employ a Registered Civil Engineer or Licensed Land Surveyor (hereafter referred to as Surveyor) to perform any conformance surveying work required by the Contractor.
- B. Prior to beginning work, Contractor shall secure the electronic grading plan from the Owner for use by the Surveyor. The surveyor shall provide all conformance survey drawings. The drawings shall provide both the design elevations and the as-constructed spot elevations. These elevations shall be for comparison to those on the contract documents for the same location. Contractor shall also show the difference in these two numbers. In addition, unique reference numbers shall be assigned to each point for reference purposes. For spacing requirements, refer to specific type of improvement identified in this specification section.
- C. Accuracy of all surveys provided in this section shall be to 0.01 feet.
- D. The surveyor shall provide all conformance survey drawings and all 25' grid or other grid conformance grades based on the grading plans designed grades.

3.02 SYNTHETIC TURF SUBGRADE AND BASE CONFORMANCE SURVEYING

- A. Contractor shall verify that subgrade has been prepared according to specifications with regard to compaction, grade tolerances and is free of debris, non-compactable material, topsoil, or organics prior to beginning work.
- B. Prior to acceptance of the subgrade, a conformance survey will be prepared by the Contractor and a digital file submitted to the Owner Representative. The Contractor will be responsible to provide a certified conformance survey prepared by a Licensed Surveyor. The survey shall be based on a 25 foot grid showing the field crown, the center of the subgrade elevation of the subdrain trench edges, perimeter of the field at edge finish grade and curb finish surface. The plan shall show the comparison of the design grades versus the as-constructed grades.
- C. Top of subgrade elevations shall be verified using laser-operation survey instruments. Grades at each point must be within 1/2 -inch plus or minus from the elevations shown on the plans. In addition, no two adjacent points within the grid shall cumulatively deviate more than 3/4-inch (0.06 feet) from the respective points' design grades.
- D. The top of permeable rock base elevations shall not vary from the specified grades more than one-quarter of one inch (1/4", or 0.02 ft.) at any location when measured in any direction.
- E. Prior to acceptance of the permeable rock base, a conformance survey will be prepared by the Contractor. The Contractor will be responsible to provide a certified, digital, conformance survey prepared by a Licensed Surveyor. The survey shall be based on a 25 foot grid showing the field crown, perimeter of the field and adjacent curb edge. The plan shall show the comparison of the design grades versus the as-constructed grades. Any portion of the survey that does not conform to the requirements identified above will be corrected by the Contractor. Areas out of conformance will be resurveyed (following the identical procedure stated above) by the Surveyor, and these revised points shall be added to the original digital file for review and acceptance by the Owner's Representative. All delays and costs incurred due to grades out of conformance are the sole responsibility of the Contractor. It is the Contractor's responsibility to protect the grading and compaction tolerances of the base after conformance survey is complete and prior to installation of the synthetic turf.

- F. Finish surface planarity shall be verified, and if necessary adjusted, by the Contractor using string line method. A mason's line held taught between two workman separated by a distance of approximately 40 feet, shall be placed directly on the finished surface, parallel to the direction of greatest slope. A third workman shall check for separations between the mason's line and the finished surface that are equal to or greater than the specified tolerances. Areas of separation shall be outlined with marking paint and the depth of separation indicated. No deviation on the string shall be greater than one-half inch (0.04 feet).
- G. Entire finished surface shall be "walked" with mason's line in increments of approximately 3 feet.

3.03 TRACK SURFACE TOLERANCES AND CONFORMANCE SURVEYING REQUIREMENTS

- A. PRE-TRACK PAVING AND SURFACING: Prior to the pouring of all track edges, Contractor shall be responsible for verifying the proper horizontal and vertical controls of all concrete formwork. This quality control process does not need to be completed by a licensed surveyor. However, the Contractor shall employ a licensed surveyor to determine finish surface grades of all track edging upon completion of initial concrete curing process. A digital file of the curb elevations shall be provided on a minimum 20-foot spacing, including points at all beginning, mid-, and end points of the concrete edgebands. Once the curbing is deemed to be within the tolerances required by the contract documents (no point along the curbing shall be greater than 1/4 inch (0.02 feet) outside the design grades and no spot shall deviate more than 1/2" (0.04 ft.) from any other adjacent point within the 20-foot spaced curb survey), then the Contractor can pave the track surfacing area with asphaltic paving. Upon completion of the asphalt paving, Contractor shall complete a flood test to inspect for birdbaths and low points. Additionally, the pavement finish surface planarity shall be verified, and if necessary adjusted, by the Contractor using string line method. A mason's line held taught between two workman, shall be placed directly on the finished surface, from the new edgeband across to the inside track trench drain edgeband. A third workman shall check for separations between the mason's line and the finished surface that are equal to or greater than the specified tolerances. Areas of separation shall be outlined with marking paint and the depth of separation indicated. No deviation on the string shall be greater than one-quarter inch (0.02 feet).
- B. POST-TRACK SURFACING: Once the track surfacing is complete, the finished track surface shall also undergo a flood test to inspect for birdbaths and low points that may not be identified by the conformance survey.

3.04 TENNIS COURT CONFORMANCE SURVEYING REQUIREMENTS

- A. Prior to the pouring of all tennis court perimeter curbing, Contractor shall be responsible for verifying the proper horizontal and vertical controls of all concrete formwork. This quality control process does not need to be completed by a licensed surveyor. However, the Contractor shall employ a licensed surveyor to determine finish surface grades of all edgebands / curbing upon completion of initial concrete curing process. A digital file of the curb elevations shall be provided on a minimum 20-foot spacing, including points at all corners. Once the curbing is deemed to be within the tolerances required by the contract documents (no point along the curbing shall be greater than 1/4 inch (0.02 feet) outside the design grades and no spot shall deviate more than 1/2" (0.04 ft.) from any other adjacent point within the 20-foot spaced curb survey), then the Contractor shall pave the tennis court area with asphaltic paving. Upon completion of the asphalt paving, Contractor shall survey the tennis court area utilizing all previous conformance survey data. The paving conformance survey shall be completed on a 20-foot longitudinal grid, with grades shot from baseline fence to baseline fence. Grades must be measured so that no point within the 20-foot grid deviates more than 1/4" from any other point within the 20-foot grid.

- B. The tennis courts shall also undergo a flood test to inspect for birdbaths and low points that may not be identified by the conformance survey. A bird bath is a puddle of water that has not evaporated after one hour in 70 degrees F or warmer temperature. If the bird bath has a water depth greater than 1/16" (which shall be checked by using a nickel), as determined by the nickel being fully submerged in the birdbath, then corrective measures shall be taken by the Contractor prior to installation of the acrylic court surface.

3.05 FUTSAL CONFORMANCE SURVEYING REQUIREMENTS

- A. Contractor shall verify planarity of the subgrade surface using "string line" method. String line shall be held between two workmen along each edge of the court measuring cross width, with the string parallel to the direction of the cross slope. Surface planarity of the existing asphalt subgrade shall not deviate more than 1/8", or by more than 1/8" when measured under a 10' straight edge in any direction at any point in the field's subgrade. Areas out of tolerance shall be marked by the Contractor with appropriate marking paint, and then high areas are to be ground down, and low areas shall be filled with a impervious filler materials that will properly adhere to the existing acrylic surface on the existing pavement. Contractor to submit product for filling low areas as a product submittal for review and acceptance by the District and Engineer.

END OF SECTION

SECTION 12 93 00

SITE FURNISHINGS

PART 1 GENERAL

1.01 SUMMARY

Furnish all labor, materials, miscellaneous hardware, foundations, miscellaneous appurtenances, facilities, transportation and services required for installation of all site furnishings and related work as shown on the Drawings and/or specified herein.

A. Scope of work:

The general extent of work contained in this section is shown on the drawings and can include, but may not be limited to, installation of the following:

1. Soccer goals
2. Soccer corner flags
3. Lacrosse Net barrier system
4. Drinking fountain
5. Outdoor showers
6. Scoreboard
7. Tennis court post
8. Tennis court Nets
9. Tennis court center strap
10. Tennis court center strap anchor
11. Beach volleyball post and netting
12. Beach volleyball Pole Pads
13. 90 Degree Volleyball Curb and Padding
14. Boundary lines at Volleyball Courts
15. Windscreen
16. Sand pit forms and sand catchers
17. Take off boards
18. Truncated Domes

B. Related sections can include, but may not be limited to:

1. Section 32 12 16 - Asphaltic Concrete Pavement
2. Section 32 13 13 - Portland Cement Concrete
3. Section 32 18 00 - Miscellaneous Paving and Surfacing

1.02 REFERENCES AND REGULATORY REQUIREMENTS

- A. State of California Department of Transportation Standard Specifications, current edition.

1.03 SUBMITTALS

- A. Conform to front end Sections, Submittals and applicable Division One and Division Two specifications, General Conditions and/or Special Provisions.
- B. Product Data: Submit catalog cut sheets of all materials and equipment proposed to be furnished and/or installed under this portion of the work. Include the manufacturer and distributor name, sub-contractor as applicable. Insure that the cut sheets clearly describe the specific product by catalog number and that additional non-specified products that may appear on the same cut sheet are crossed out where applicable.
- C. Samples: Submit samples of colors and finishes for all applicable products and furnishings for selection by Owner's Representative.

- D. Shop Drawings: Submit complete shop drawings for all materials or furnishings requiring field or shop fabrication.

1.04 QUALITY ASSURANCE

- A. Review: All equipment shall be reviewed for conformance with the intent of the Contract Documents and accepted by the contractor prior to installation. All site furnishings shall be in a new, "first-class" condition, per the discretion of the Owner's Representative, prior to Final Acceptance.

1.05 DELIVERY, STORAGE AND HANDLING

- A. The contractor is responsible for coordination of the delivery, acceptance, handling and storage of all site furnishings.
- B. Store and handle site furnishings as acceptable to the Owner's Representative and so that work or access of others is not impeded.
- C. The contractor shall protect all site furnishings from theft or damage at all times until such items have been accepted by the Owner.

PART 2 PRODUCTS

2.01 SITE FURNISHINGS

	Description	Manufacturer	Model #	Finish/Color	Distributor/Contact
A.	Soccer Goal & Wheel Kit (2 Goals and Kit)	SportsField Specialties	SG4950 / SG4955	Powder Coated/ White	Sportsfield Specialties, Inc. (888) 975-3343
B.	Soccer Nets (1 Per Goal)	Sportsfield Specialties		White	Sportsfield Specialties, Inc. (888) 975-3343
C.	Soccer Corner Flags – 2 sets	Sportsfield Specialties	SG6B1104	Yellow base w/ red flag – set of 4	Sportsfield Specialties, Inc. (888) 975-3343
D.	Tennis Court Nets (1 Per Court)	Douglas Industries	30036T	N/A	Douglas Industries Ph: 800-553-8907
E.	Tennis Court Post (Per Plans)	Douglas Industries	63034SS	Black	Douglas Industries Ph: 800-553-8907
F.	Tennis Court Center Strap (1 Per Court)	Douglas Industries	30603	N/A	Douglas Industries Ph: 800-553-8907
G.	Tennis Court Center Strap Anchor (1 Per Court)	Douglas Industries	63428	N/A	Douglas Industries Ph: 800-553-8907
H.	Beach Volleyball Pole & Net System (1 Per Court)	Sports Imports	SV15, HDNR-B3.5 SVA SVN-28 NA2	Black Powder Coat Poles	(800) 556-3198 4000 Parkway Lane Hilliard, OH 43026
I.	Beach Volleyball Pole Pads (1 Set Per Court)	Sports Imports	SVP Level II	Black pads w/ custom text lettering and logo	(800) 556-3198 4000 Parkway Lane Hilliard, OH 43026
J.	90 Degree Volleyball Curb Padding	Volleyball USA	Curb Pad 90 degree	TBD	(800) 494-3933 14615 NE 91st St. Building B Redmond, WA 98052
K.	Boundary Lines (one at each court)	Volleyball USA	4" Premium Boundary Lines	Black	(800) 494-3933 14615 NE 91st St. Building B Redmond, WA 98052
L.	Outdoor Shower (2 Station)	Volleyball USA	Multi Head and Foot Shower	N/A	(800) 494-3933 14615 NE 91st St. Building B Redmond, WA 98052

M.	Scoreboard with Wireless Controller– Soccer	Daktronics	SO-2008-A-PV-F with TNMC team name message center - wireless controller per owner's discretion	Black board, with white letter and Gold accent	Daktronics (800) 325-8766
N.	Drinking Fountain – Pedestal (Front access)	Most Dependable Fountains	10145SM	TBD	MDF: 800-552-6331
O.	Drinking Fountain – Wall Mount	Elkay	VRCTL8WSK	N/A	Elkay Headquarters 2222 Camden Court Oak Brook, IL 60523 Phone: 630-574-8484
P.	Lacrosse Safety Netting with ground sleeves	Sportsfield Specialties	BSS210	Black	Sportsfield Specialties, Inc. (888) 975-3343
Q.	Windscreen at Volleyball	Big Signs	Windscreen	Black with custom letters and logos	BigSigns.com (800) 790-7611
R.	Long Jump/Triple Jump Sand Pit Sand Catchers (Covers for sand pit are not needed – College to provide)	Sportsfield Specialties	SP6010	N/A	Sportsfield Specialties, Inc. (888) 975-3343
S.	Long Jump/Triple Jump Take-off Boards w/Track Surfacing	Sportsfield Specialties	TFLT0012SS	N/A	Sportsfield Specialties, Inc. (888) 975-3343
T.	Truncated Domes	East Jordan	#700540	Yellow	East Jordan Foundary 301 Spring Street, East Jordan, MI 49727 (800)874-4100
U.	Anti-skate Devices	Skate Stoppers	#FA 902.5	6061-T6 Aluminum Clear anodized	Skate Stoppers 1547 N. Cuyamaca St. El Cajon, CA 92020 619-447-6374
V.	Medallions	Pineapple Grove Designs	N/A	TBD	Pineapple Grove Designs (800) 771-4595
W.					
X.					

PART 3 EXECUTION

3.01 SEQUENCING AND SCHEDULING

- A. Coordinate construction timing of installation of site furnishings in conformance with all other pertinent work.
- B. Concrete footings shall conform to requirements of Section 32 13 13 Portland Cement Concrete unless noted otherwise.

3.02 INSTALLATION

- A. Concrete Footings: Install as shown in Drawings unless noted otherwise.
- B. Equipment: Conform to layout shown on Drawings. Erect in strict conformance with Details, accepted Shop Drawings, and manufacturer's instructions.
- C. All bolts shall be cut back to within three threads of the nut. Relevant to benches, bleachers, and other materials with exposed bolts.

3.03 FIELD QUALITY CONTROL

- A. All site furnishings shall be inspected and accepted upon delivery by the Contractor. Final acceptance of site furnishings and locations of site furnishings shall be per the discretion of the Owner's Representative.

END OF SECTION

SECTION 31 20 00

EARTHWORK

PART 1 GENERAL

1.01 SUMMARY

- A. Furnish all labor, materials, equipment, facilities, transportation and services to complete all earthwork and related work shown on the Drawings and/or specified herein.
- B. Scope of work:
The general extent of the earthwork is shown on the Drawings and can include, but is not necessarily limited to the following:
 - 1. Topsoil stripping, stockpiling, and replacement into planting areas
 - 2. Rough grading
 - 3. Filling and backfilling to attain required grades
 - 4. Excavating for paving, footings and foundations
 - 5. Adherence to requirements, recommendations and/or Best Management Practices (BMPs) for storm water management as may be outlined in the Project Storm Water Pollution Prevention Plan (SWPPP), or as required by governing agencies
- C. Related sections can include, but may not be limited to:
 - 1. Section 02 41 00 - Site Clearing and Demolition
 - 2. Section 31 13 00 - Tree Protection
 - 3. Section 32 11 00 - Base Courses
 - 4. Section 32 90 00 – Landscaping

1.02 REFERENCES AND REGULATORY REQUIREMENTS

- A. 2016 California Building Code (CBC)
- B. American Society for Testing and Materials (ASTM):
 - 1. D 1557-07 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
- C. California Occupational Safety and Health Standards (OSHA):
 - 1. Article 6 - Excavations and Shoring.
- D. State of California Department of Transportation Standard Specifications, Current Edition

1.03 SUBMITTALS

- A. Conform to requirements of front end Sections, Submittals and/or applicable Division One and Division Two specifications, General Conditions and Special Provisions.
- B. Project Record Drawings:
 - 1. Conform to applicable Division One and Division Two specifications, General Conditions and Special Provisions.
 - 2. Accurately record locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities by horizontal dimensions, elevations, inverts, and slope gradients.
- C. Import Topsoil
 - 1. It is the contractor's responsibility to determine if import topsoil is required on the project.
 - 2. As applicable, contractor shall submit four (4) samples (1 quart-sized "zip-lock" plastic bag min. each) of proposed import topsoil(s) with their current accompanying fertility and

structure analyses, prepared by a recognized soil and plant laboratory, for review and acceptance by the Owner's representative prior to use.

1.04 QUALITY ASSURANCE

- A. Geotechnical Investigation:
 - 1. A geotechnical investigation report may have been prepared for use on this project. The recommendations contained therein have been incorporated into the Contract Documents.
 - 2. The Owner may designate and pay for the services of a Geotechnical Engineer to make recommendations based on the soil conditions encountered the results of field and laboratory tests, and observations of the activities performed under this Section.
 - 3. Compaction densities specified for structural fills under footings, slabs, or pavements shall be determined in accordance the geotechnical engineer's written recommendations.
- B. Certification:
 - 1. The contractor shall certify source and type of backfill and topsoil proposed to be incorporated into the work, at the request of the Owner's Representative.
 - 2. The contractor shall certify elevations of excavations, footings, subgrades and finish grades with the use of a Licensed Surveyor, at contractor's expense, at the request of the Owner's Representative.
- C. Control of Work: Conform to Section 5 of the Standard Specifications.
- D. Control of Materials: Conform to Section 6 of the Standard Specifications.

1.05 PROTECTION

- A. Protect all existing structures, fences, roads, sidewalks, paving, curbs, and other items as necessary from earthwork activity.
- B. Protect above or below grade utilities which are to remain.
- C. Protect trees to remain in accordance with Section 31 13 00 - Tree Protection (as applicable).
- D. Repair damage to any existing site features which are to remain. Repair and restoration shall be equal to quality and appearance of prior condition and to the satisfaction of the Owner's representative.

1.06 PROJECT / SITE CONDITIONS

- A. Underground Utilities: Unknown buried utility lines may exist. If encountered, notify Owner's representative immediately for direction and re-direct work to avoid delay.
 - 1. Cooperate and coordinate with Owner's representative and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility Owner.
 - 2. Do not interrupt existing utilities serving occupied facilities without proper notification to, and written direction from, Owner's representative.
- B. Wet Conditions: No grading operations shall be conducted when excessively wet conditions exist as determined by the Owner's representative.
- C. Contractor shall provide de-watering equipment as required to continue scheduled operations and provide optimum working conditions at no additional cost to Owner.
- D. Dry Conditions: Contractor shall apply sufficient water to materials during construction to properly compact materials and control dust. Contractor shall provide dust control in conformance with Section 10 of Standard Specifications and shall provide water to subgrades as necessary to

achieve compaction goals.

1.07 GRADE STAKES AND LINES

- A. All grading and subgrading shall be controlled by contractor-installed intermediate grade stakes and lines necessary to obtain the finished grade elevations shown or implied in the Drawings. Subgrade and finish grade surfaces shall conform to the control planes established by these grade stakes and lines.
- B. Protect and maintain all existing bench marks, monuments and other reference points. If disturbed or destroyed, they shall be replaced at the Contractor's expense.
- C. Contractor shall set temporary bench marks as necessary to properly complete construction operations.

1.08 SURVEYING

- A. Contractor shall be responsible for hiring a licensed professional surveyor to perform all surveying, layout and staking. Contractor shall be responsible for informing Owner's representative (minimum two (2) working days notice) when staking and layout is scheduled so that a review of completed chalk lines and staking can take place.

1.09 TOLERANCES

- A. Refer to related specification sections for grading tolerances of specified improvements.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Select material for structural backfill shall be in accordance with applicable portions of Section 19 - Earthwork, of the Standard Specifications, unless modified by this section or by recommendations and requirements of the Project Geotechnical Report.
- B. Topsoil: Excavated material from top 6 inches (maximum) of existing grade (unpaved areas) and/or acceptable import material graded free of roots and rocks larger than two inches, subsoil, debris, weeds, large mats of grass, and other deleterious material.
- C. Subsoil: Excavated material below top 6 inches of existing grade, graded free of clay clods larger than 6 inches, rocks larger than 3 inches, and debris.

PART 3 EXECUTION

3.01 PREPARATION

- A. Identify all required lines, levels, contours, datum, control points and property lines required to properly establish limits of work.
- B. Verify elevations of critical existing grades as noted on Drawings and as directed by Owner's representative. Notify Owner's representative of discrepancies prior to start of work and re-direct work to avoid delay.
- C. Identify all known below grade utilities. Stake and flag locations.
- D. Identify and flag surface grades and utilities.
- E. Contact Underground Service Alert (USA) (800-642-2444) and local utility companies to verify

locations of existing utilities a minimum of two (2) working days prior to excavation.

- F. Refer to Geotechnical report for soil/subgrade preparation for synthetic turf base.

3.02 PROTECTION

- A. Maintain and protect existing utilities remaining which pass through work area.
- B. Perform excavation work near utilities by hand. Provide necessary protection as the work progresses.
- C. Provide and maintain protection for walks, curbs, drains, trees, corners of structures, etc., as necessary to prevent damage.
- D. Barricade and/or cover open excavations occurring as part of this work and post with warning lights to the satisfaction of the Owner's representative. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
- E. Keep adjacent properties, streets and drives clean of any dirt, dust, or stains caused by earthwork operations.
- F. Upon discovery of unknown utility or concealed conditions, notify the Owner's representative immediately and re-direct work to avoid delay.
- G. Control dust on and near the work, and on and near off-site borrow areas.
 - 1. Thoroughly moisten surfaces as required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of any other activities that may occur on the site.
 - 2. Non-compliance with proper dust control measures shall be grounds for issuance of "stop work" orders by the Owner's representative until such time as satisfactory measures can be implemented.

3.03 TOPSOIL EXCAVATION

- A. Site should be over-excavated to the planned subgrade elevation at the base of the drainage layer. These soils should be removed from the site or stockpiled for reuse if approved by the owner in consultation with the Geotechnical Engineer.
- B. Excavate topsoil from all areas scheduled for paving or rough grading and stockpile material in neat wind-row(s) in location(s) that have been previously established which will cause least interference to construction operations, and which is/are acceptable to the Owner's representative.
- C. Do not excavate topsoil that has become wetted to, or beyond, the saturation point that would be required for optimum compaction.
- D. Stockpile topsoil in wind-row(s) of a height not to exceed 8 feet, protect from erosion, and cover as necessary to prevent formation of dust.
- E. Topsoil excavation shall occur for the entire area or per field. No topsoil excavation shall occur for partial field areas without approval.
- F. Topsoil staging areas shall be clearly defined and protected from other grading and utility operations.

3.04 ROUGH GRADING

- A. Grade site subsoil to establish proper subgrade elevations and site contouring as described or

implied in the Drawings:

- B. Contouring:
 - 1. Construct landforms depicted in the Drawings to the satisfaction of the Owner's representative.
 - 2. "Round-off" all tops of slopes.
 - 3. "Feather" all toes of slopes.

- C. Compaction: Compact subgrade for the specific areas as follows unless otherwise noted:
 - 1. **Areas to be planted:** Maximum eight inch (8") loose lifts to be between 85% and 90% relative compaction.
 - 2. **Areas to be paved:** Shall be as follows:
 - a. Maximum eight inch (8") loose lifts to at least 90% relative density.
 - b. The top 6-inches of the subgrade should be scarified, moisture-conditioned and recompacted to achieve a firm bearing surface.
 - c. Additional lifts should not be placed if the previous lift did not meet the required density, relative compaction, moisture content or if the soil conditions are not stable.
 - d. All fill soils shall be compacted to no less than 90% relative compaction at moisture content of 2 to 4 percent for pavement area.
 - e. Compacted subgrade should be non-yielding under construction traffic, including a loaded ten-wheel truck such as a water or dump truck, in all pavement areas. Removal and subsequent replacement of some material (i.e. areas of excessively wet materials, unstable subgrade, or pumping soils) may be required to obtain the minimum 95 percent compaction to the recommended depth of 12 inches.
 - f. Subgrade preparation for pavement areas shall extend laterally for at least two feet beyond the edge of pavement.
 - 3. **Areas to receive synthetic turf:** Shall be as follows:
 - a. Maximum eight inch (8") loose lifts to be compacted to at least 90% relative density. The top 12" shall be compacted to at least 95 percent relative compaction.
 - b. The top 6-inches of the subgrade should be scarified, moisture-conditioned and recompacted to achieve a firm bearing surface.
 - c. Additional lifts should not be placed if the previous lift did not meet the required density, relative compaction, moisture content or if the soil conditions are not stable.
 - d. All fill soils shall be compacted to no less than 90% relative compaction at moisture content of 2 to 4 percent for pavement area.
 - e. Compacted subgrade should be non-yielding under construction traffic, including a loaded ten-wheel truck such as a water or dump truck, in all pavement areas and synthetic turf subgrade areas. Removal and subsequent replacement of some material (i.e. areas of excessively wet materials, unstable subgrade, or pumping soils) may be required to obtain the minimum 95 percent compaction to the recommended depth of 12 inches.
 - f. All above information will be superseded by recommendation made within Geotechnical report.

- D. Remove all excess subsoil material from site and dispose of in a legal manner. Refer to "Material Storage" below.

- E. Entire project or individual field area shall be rough graded at one time. No earthwork operation shall occur for partial field areas without receiving direction from the Owner or prior written approval from the Owner.

3.05 EXCAVATION

- A. Remove and dispose of all miscellaneous materials encountered when establishing required grade

elevations:

1. Miscellaneous materials can include but are not limited to: pavements and other obstructions, underground structures, utilities, abandoned irrigation materials, and other materials encountered per the discretion of the Owner's representative.
- B. Stability of Excavations:
1. Comply with any applicable recommendations contained within the Project Geotechnical Report and requirements of agencies having jurisdiction.
 2. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
- C. De-watering: Provide and maintain, at all times during construction, ample means and devices with which to promptly remove and properly dispose of water from any source entering structural excavation, pipe trenches, or other excavations. All costs incurred from de-watering activities shall be paid for by the contractor.
- D. Excavation for Structures:
1. Conform to elevations and dimensions shown in the drawings within a tolerance of plus-or-minus one tenth (0.10') of a foot, and extending a sufficient distance from footings and foundations to permit placing and removal of concrete form-work, installation of services, and quality review.
- E. Excavation for Pavements:
1. Cut surface under pavements to comply with cross-sections, elevations, and grades as shown in the Drawings.
- G. Excavation for Synthetic Turf:
1. Refer to Geotechnical report for excavation at synthetic turf fields.
- G. Material Storage: Stockpile satisfactory excavated materials where appropriate, until required for use.

Stockpile topsoil and subgrade soil in separate piles.

Place, grade and shape stockpiles for proper drainage.

1. Locate and retain stockpiles away from edge of excavations.
2. Dispose of excess soil material in a legal fashion after it has become evident that the material is no longer needed on the project and is of no value to the Owner.

3.06 TOPSOIL PLACEMENT

- A. Thoroughly cross-rip all subgrade soil to a depth of twelve (12) inches prior to placing the specified thickness of topsoil back into all applicable planting areas. Secure review and acceptance of ripping depth prior to placement of topsoil. Refer to Section 32 90 00 – Landscaping for this process.
- B. Topsoil placement requirements for planting areas shall be as follows:
1. All planting areas: Shall contain or receive a minimum of six (6) inches of clean, acceptable topsoil.
 2. Topsoil shall not be placed until all earthwork and utility operations are complete.
 3. Topsoil shall be installed at one time for entire project or entire field area. No partial placements shall occur.
- C. Compact topsoil to 84% to 89% relative density.
- D. Maintain all slopes and gradients established during subgrade operations and shape landforms to satisfaction of the Owner's representative.

- E. Refer to Section 32 90 00 - Landscaping for finish grading information and finish grades at edge of planting areas and hardscape.

3.07 TOLERANCES

- A. Shall conform to Conform to Section 26 of the Standard Specifications, unless more stringent requirements in these Contract Documents are provided, in which place the more stringent tolerances shall govern. Refer to specification front end sections for additional project requirements.

3.08 FIELD QUALITY CONTROL

- A. The Owner Representative shall review and accept work at the following stages:
 - 1. Topsoil removal and stockpile.
 - 2. Grading plan for project. Plan shall provide strategy for grading sequence for entire site at one time or by field. Limits and sequence shall be reviewed and coordinated.
 - 3. Cross ripping of subgrade shall be reviewed and observed.

END OF SECTION

SECTION 31 23 00

EXCAVATION, BACKFILLING, AND COMPACTING

PART 1 GENERAL

1.01 SUMMARY

- A. Furnish all labor, materials, equipment, facilities, transportation, and services to complete all excavation, trenching, backfilling, compaction, and related work as shown on the Drawings and/or specified herein.
- B. Scope of work:
The general extent of all trenching, backfilling, and compaction is shown on the Drawings and may include, but is not necessarily limited to, the following:
 - 1. Sanitary Sewer Line Installation
 - 2. Storm Drainage System Installation
 - 3. Potable Water Line Installation
 - 4. Irrigation System Installation
 - 5. Electrical Conduit Installation
 - 6. Paving Installation
 - 7. Synthetic Turf Installation
- C. Related sections can include, but may not be limited to:
 - 1. Section 31 13 00 - Tree Protection
 - 2. Section 31 20 00 - Earthwork
 - 3. Section 32 12 16 - Asphalt Concrete Paving
 - 4. Section 32 13 13 - Portland Cement Concrete
 - 5. Section 32 80 00 - Irrigation
 - 6. Section 32 90 00 - Landscaping
 - 7. Section 33 11 00 - Domestic Water Systems
 - 8. Section 33 40 00 - Storm Drainage

1.02 REFERENCES AND REGULATORY REQUIREMENTS

- A. State of California Department of Transportation Standard Specifications, Current Edition.

1.03 SUBMITTALS

- A. Project Record Drawings:
 - 1. Conform to requirements of applicable Division One and Division Two specifications, General Conditions and Special Provisions.
 - 2. Accurately record locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities by horizontal dimensions, elevations, inverts and slope gradients as practical.

1.04 QUALITY ASSURANCE

- A. Control of Work: Comply with Section 5 of the Standard Specifications.
- B. Control of Materials: Comply with Section 6 of the Standard Specifications.
- C. Trench Safety: Comply with applicable portions of Sections 5 and 7 of the Standard Specifications and requirements of other agencies having jurisdiction (OSHA etc.).

1.05 PROJECT/SITE CONDITIONS

- A. Wet Conditions: No trenching shall occur when excessively wet conditions exist in the opinion of the Owner's Representative.
- B. Dry Conditions: Contractor shall provide dust control in conformance with Section 10 of Standard Specifications and shall provide water to work as necessary to achieve compaction goals.

1.06 SEQUENCING AND SCHEDULING

- A. Refer to all other Contract Documents, determine the extent and character of related work, and properly coordinate work specified herein with that described elsewhere to produce a complete, operational installation.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Provide materials as described below free of debris, roots, wood, scrap material, vegetative matter, refuse, soft unsound particles, or other deleterious and objectionable materials.
- B. Select Backfill: Select backfill material shall be sand conforming to Section 19-3.02E(2) of the Standard Specifications.
- C. Native Backfill: Native backfill shall be acceptable soil material excavated from the project site. This material will be considered unclassified and no testing other than for compaction will be required. Additional material required for backfill shall be acceptable to the Owner's Representative.
- D. Permeable Material: Permeable material shall be Caltrans Class II permeable rock material.
- E. Aggregate Base: Refer to Section 32 11 00 – Base Courses.

PART 3 EXECUTION

3.01 PREPARATION

- A. General:
 - 1. Prior to trenching, the contractor shall pothole existing utilities at locations indicated or implied on the plans, where new piping or utilities will cross existing utilities of uncertain depth to determine the elevation of the utility in question and ensure that the new line will clear the potential obstruction.
 - 2. The Contractor shall mark out all construction areas in white, non-permanent paint and contact Underground Service Alert (U.S.A.) (800-642-2444) to locate all known utilities a minimum 48 working hours prior to any excavation.
 - 3. Should an existing crossing utility present an obstruction, the proposed line shall be adjusted as acceptable to the Owner's Representative to clear the existing utility.

3.02 TRENCH EXCAVATION

- A. General:
 - 1. Excavation shall include removal of all water and materials that interfere with construction. Remove any water which may be encountered in the trench by pumping or other methods prior to pipe laying, bedding and backfill operations. Trenches shall be sufficiently dry to permit proper jointing and compaction.
 - 2. It shall be the contractor's responsibility to direct vehicular and pedestrian traffic safely through or around the work area at all times.
 - 3. The contractor shall relocate, replace, reconstruct or repair, to an "as-was" or better condition, all surface or subsurface improvements which are in the line of construction or which may be damaged, removed, disrupted or otherwise disturbed by the construction activities. Except as

specified in other Sections or shown in the Drawings, this provision applies to all surface improvements of whatever nature such as walls, fences, above-grade utilities, landscaping, paving, structures, or other physical features whether shown in the Drawings or not and to all subsurface improvements such as utilities which may be indicated in the Drawings or marked in the field. The contractor shall connect such utilities to existing systems and leave all in a workable and operating condition. The cost of this work shall be considered as included in other items of work and no additional compensation will be allowed.

4. The maximum allowable trench width at the top of pipe shall be 18 inches greater than the pipe diameter.
5. New utility trenches extending deeper than 2 feet below finish grade should be located a minimum of five feet away from foundations.

B. Existing Paving Areas:

1. Existing asphalt concrete paving over new trenches shall be sawcut, removed, and legally disposed. Existing asphalt concrete paving shall be neatly sawcut one foot (1') greater on each side than the trench width. If a longitudinal pavement joint or edge of pavement is located within three feet of the limit of excavation, all intervening pavement shall be removed and replaced after completion of backfilling. If concrete curb and/or gutter are to be replaced, the adjacent existing asphalt concrete paving shall be sawcut two feet (2') from the edge of concrete curb and/or gutter.
2. Existing Portland cement concrete paving over new trenches shall be sawcut to a minimum depth of 1-1/2 inches in straight lines either parallel to the curb or at 90 degree angles to the alignment of the sidewalk prior to being broken out. No section to be replaced shall be smaller than 30 inches in either length or width. If the sawcut would fall within 30 inches of a construction joint, expansion joint, or edge, or within 12 inches of a score mark, the concrete shall be removed to the joint, edge, or mark.

C. Walkway Areas:

Backfill for trenches or other excavations within walkway areas should be compacted in six inch (6") maximum layers, unless otherwise noted, with hand-held tampers to assure adequate subgrade support.

D. Compacted Fill Areas:

Where trenches must be excavated in compacted fill, these trenches shall be backfilled with the fill materials excavated and re-compacted in the layers and to the density specified for the particular area.

E. Open Trench:

1. No trench shall be left in an open un-protected condition at the end of the day. At the end of the day any open trench shall be protected in a manner acceptable to the Owner's Representative.
2. Provisions for trench crossings and access shall be made at all street crossings, driveways, water gate valves, and fire hydrants unless otherwise acceptable to the Owner's Representative.

F. Excavated Material:

1. All excavated material not required for backfill or of value to the Owner shall be removed and legally disposed of by the contractor at no additional cost.
2. Material excavated in streets and roadways shall be laid alongside the trench no closer than two feet from the trench edge and kept trimmed to minimize inconvenience to public traffic.
3. Provisions shall be made whereby all storm and waste water can flow uninterrupted in gutters or drainage channels to drainage structures.
4. Excavated material shall not be stored on existing landscaping or paving without provisions being made to protect the surface below from being stained or otherwise adversely affected.

G. Shoring

1. Should excavations extend more than 4 feet below existing ground surface, shoring will be required.
2. Excavations can be sloped back to an inclination of 1.5 horizontal to 1 vertical as an option for

shoring in these conditions.

3. Utility trenches shall be excavated according to accepted engineering practices following OSHA.

3.03 PIPE BEDDING

A. Stabilization of Trench Bottom:

When the trench bottom is unstable due to wet or spongy foundation, trench bottom shall be de-watered as necessary. The Owner's Representative shall determine the suitability of the trench bottom and the amount of sand, gravel, or crushed rock needed to stabilize the soft foundation.

3.04 TRENCH BACKFILL AND COMPACTION

A. General:

1. Construct backfill in two operations (initial and final).
2. Do not backfill where the foundation material in trench is already saturated, except as acceptable to the Owner's Representative. Provide a minimum cover as may be specified.
3. Where settling greater than the tolerance allowed for grading occurs in trenches and pits due to un-stable subgrade material, excavate to the depth necessary to rectify the problem, then backfill and compact the excavation as specified herein and restore the surface to the required elevation.
4. For utilities under roads, streets, concrete slabs or other areas to be paved and synthetic turf subgrade areas, place final backfill in 6-inch maximum loose lifts. Compact all backfill surrounding ducts, conduits, pipes and other structures, including the top 12-inches of subgrade to 95 percent of ASTM D1557 maximum density. Backfill to permit the rolling and compacting of the completed excavation with the adjoining material providing the specified density necessary to enable rock placement of paving of the area immediately after backfilling has been completed.

B. Initial Backfill:

1. Prior to trench backfill, the condition of the trench and laying of pipe shall be acceptable to the Owner's Representative.
2. Select backfill material shall be used as initial backfill for all utilities except irrigation piping, unless otherwise noted. After the pipe has been properly laid and accepted by the Owner's Representative. Trenches should be filled by placing a granular layer (shading) shall be placed beneath and on both sides of the pipe and 6" to 12" above pipe and compacted to the depth shown in the Drawings.
3. Compaction: The initial backfill material shall be hand tamped in layers not exceeding four inches (4") in uncompacted depth and shall be brought up uniformly on both sides of the pipe to avoid bending or distortional stress. After handtamping, the relative compaction of the initial backfill material shall be at least 95% relative compaction.

C. Final Backfill:

1. Native backfill material shall be used for final backfill, unless otherwise noted.
2. Compaction: Final backfill compaction shall be by mechanical means with backfill material placed in layers not exceeding six inches (6") in loose depth. Each layer shall be thoroughly compacted before succeeding layers are placed. The use of machine tampers, except manually held types, shall not be permitted. Final backfill shall be compacted to a relative compaction of 95% for paving areas and synthetic turf subgrade areas. In planting areas, provide acceptable topsoil to required depth compacted to 85% to 89% maximum relative compaction.

D. Jetting: No jetting shall be allowed.

3.05 TRENCH SURFACING

A. General:

1. In unimproved areas, the trench surface shall be restored to its original condition. No mounds of earth shall be left along the trench.

2. All backfill shall be flush with adjoining grade in a firm, unyielding position with no visible settling for a period of one year after Final Acceptance.
- B. Paved Areas:
1. Temporary surfacing acceptable to the Owner's Representative shall be laid within one day after backfilling (except where the contractor elects to place permanent surfacing within this time period) until permanent paving is installed.

END OF SECTION

SECTION 32 18 14

SYNTHETIC TURF BASE

PART 1 GENERAL

1.01 SUMMARY

- A. Furnish all labor, materials, equipment, facilities, transportation and services to complete all base improvements and related work as shown on the Drawings and/or specified herein.
- B. Scope of work: The general extent of the synthetic turf base is shown on the Drawings and generally includes, but is necessarily limited to, the following:
 - 1. A vertical draining, porous rock aggregate base consisting of a uniform single rock material.
 - 2. A manufactured porous drainage composite. (Owner installed)
 - 3. A manufactured porous shock pad. (Owner installed)
- C. Related sections can include, but may not be limited to:
 - 1. Section 31 20 00 - Earthwork
 - 2. Section 31 23 00 - Excavation, Backfilling and Compaction
 - 3. Section 32 13 13 - Portland Cement Concrete
 - 4. Section 32 18 13 – Synthetic Turf Playing Field
 - 5. Section 33 40 00 – Storm Drainage

1.02 REFERENCES AND REGULATORY REQUIREMENTS

- A. California Building Code (CBC):
 - 1. Chapter 33 – Site Work, Demolition, and Construction.
- B. American Society for Testing and Materials (ASTM):
 - 1. D 1557-07 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
 - 2. ASTM D2434 - 68(2006) Standard Test Method for Permeability of Granular Soils (Constant Head)
 - 3. ASTM C88 - 05 Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
- C. California Occupational Safety and Health Standards (OSHA):
 - 1. Article 6 - Excavations and Shoring.
- D. State of California Department of Transportation Standard Specifications, Current Edition

1.03 SUBMITTALS

- A. Conform to requirements of applicable Division One and Division Two specifications, General Conditions and Special Provisions.
 - 1. Submit product data on pipe accessories, filter fabric, and porous drainage composite as applicable.
 - 2. Submit manufacturer's installation instructions.
 - 3. Certification: Submit certification signed by Contractor and drainage system Installer that installed materials conform to specified requirements and system was successfully checked and tested prior to covering with drainage sand or gravel aggregate.
 - 4. Submit two one quart samples of each rock material to the Architect, and one five gallon sample of each rock material to the Owner's testing agent.
- B. Project Record Drawings:

1. Conform to applicable Division One and Division Two specifications, General Conditions and Special Provisions.
2. Accurately record locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities by horizontal dimensions, elevations, inverts, and slope gradients.

1.04 QUALITY ASSURANCE

- A. Control of Work: Conform to Section 5 of the Standard Specifications.
- B. Control of Materials: Conform to Section 6 of the Standard Specifications.

1.05 PROTECTION OF PROJECT SITE

- A. Make provisions for, and take the necessary precautions to protect existing and new work from damage during entire life of project.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store all products to be installed as part of the field base neatly and orderly, stacked and blocked to prevent damage. Cracked, warped, uneven, or otherwise damaged material shall be removed from the site.

1.07 PROJECT CONDITIONS

- A. Contractor shall be responsible for stabilizing all top of subgrade elevations for the synthetic turf areas prior to receiving the rock aggregate base and for executing any fine grading as may be necessary or incidental to placement of the synthetic turf.
- B. The rock base shall not be contaminated with other soil. Contaminated rock material will be rejected. In addition, if at any time the rock material is tested at the site and is not in compliance with the specifications, Contractor shall remove all material not in compliance with the project specifications at its sole expense and replace it with material that conforms to the Contract Documents.
- C. Contractor to prevent surface water and subsurface or groundwater from flowing into excavations and flooding project site and surrounding area. Contractor must not allow water to accumulate in excavations. Contractor shall remove water to prevent softening of sub grades.

1.08 MATERIAL TESTING

- A. Testing of proposed base rock will be performed in the following steps:
 1. For Porous Rock Bases:
 - a. *Pre-construction Testing:* Contractor shall submit a five-gallon separate composite (the Owner's Testing Agent may elect to pull the sample directly at the quarry, and may also want the test samples or varying quantity based on the testing labs' needs) of each porous base rock material. The Owner's testing agent will evaluate these materials using ASTM C136 and ASTM D75 testing protocol as a guideline. This representative sample will be used for comparison with all subsequent samples submitted for acceptance during construction.
 - b. *Testing During Construction:* The Owner's Testing Agent shall obtain a five-gallon composite sample (project geotechnical engineer may elect to pull the sample directly at the quarry, and may also want the test samples or varying quantity based on the testing labs' needs) of all base rock materials at the rock source representing each 500 tons per site of base rock and each 250 tons per site of top rock for comparison with the accepted material (if a single rock is used, it will be tested each 500 tons). Material shall not be delivered to the project site until tests show it complies with the accepted material.

- B. Payment for initial material testing is the responsibility of the Owner. Any test, which must be repeated on materials that have failed to meet specifications or are as a result of shortages, will be borne by the Contractor.
- C. The testing reports shall be submitted to the Owner for approval ten (10) calendar days prior to scheduled placement on the synthetic turf subgrade.
- D. The Contractor shall include the following items:
 1. Identification of proposed source and supplier.
 2. Current lab mechanical analysis of the proposed rock using ASTM standards for sieve analysis.
 3. Sample sizes as determined by the Owner.
 4. Certification that the supplier can deliver the total quantity of material needed to complete the project in a timely manner.
- E. All crushed rock must come from one supplier only. During construction, samples may be taken in the field and analyzed periodically by the Contractor or Owner to assure strict compliance with the specifications. The rock shall be sampled at the source. Material delivered to the site not meeting specifications shall be rejected by the Owner. All material rejected by the Owner shall be removed from the site at the Contractor's expense.
- F. The following tests shall be performed by the Owner's Testing Agent prior to acceptance of either any rock identified in this specification section. All submitted rock for a porous rock base is required to pass the following qualifications:

Restrictions:

To ensure structural stability: $D_{60}/D_{10} > 5$ and $1 < \frac{D_{30}^2}{D_{10} * D_{60}} < 3$
 Fragmentation must be 100%.

D"x" is the size of the sieve (in millimeters) that lets pass "x" percent of the rock. For example, D₆₀ is the size of the sieve that lets 60% of the rock pass. For calculation purposes, these sizes may be obtained by interpolation on a semi-log graph of the sieve analysis.

To ensure proper drainage: Porosity of both rocks > 25% (when rock is saturated and compacted to 92% Modified Proctor)
 Permeability of rock base > 30 in/hr (Tested thru ASTM D2434 with rock saturated and compacted to 92% Modified Proctor)

Depending on the type of rock present in the crushed rock mix, other mechanical characteristics might be necessary for approval.

- G. Rock shall also comply with the following material requirements:
 1. Soft rock materials (i.e. sandrock, limerock and shale materials) are not suitable. Rock supplier shall certify that all supplied rock will be void of this type of rock. The rock should meet the following stability requirements:

Test Method	Criteria
LA Abrasion (Calif. Test 211)	Not to exceed 35
Durability Index (Calif. Test 229)	Not less than 40
Sulfate Soundness (ASTM C-88)	Not to exceed 12% loss for coarse aggregate, 10% for fine aggregate (based on a sulfate solution)

- H. In addition, if rock stability to water and vehicles is in question, the Owner has the option to perform additional testing to ensure material shall adhere to requirements of Caltrans Section 68.
- I. All crushed rock shall come from one supplier only. During construction, samples will be taken and analyzed periodically by the Owner to assure strict compliance with the specifications. The Owner may sample and test the rock material either at the source or at the project site upon delivery from incoming transfer trucks. Material delivered to the site not meeting specifications will be rejected by the Owner. All materials rejected by the Owner shall be removed from the site at the Contractor's expense. It is the Contractor's responsibility to ensure that all permeable rock for the synthetic turf base meet the above requirements throughout the installation process, including transfer and delivery to the site, placement, spreading, compaction, and installation of synthetic turf material. Proper investigation into rock sources may be required by the Contractor to ensure that the rock that was bid will meet the project specifications.
- J. Prior to trucking of material to project sites, **all crushed rock shall be washed so it is clean of any impurities and/or fines created during rock crushing operations.**

1.09 PROJECT RECORD DOCUMENTS

- A. Accurately record location of pipe runs, connections, cleanouts and invert elevations.

1.10 OWNER'S TESTING AGENT

- A. To be determined.
- B. The Owner reserves the right to change testing laboratories if the need arises.

1.11 WARRANTY

- A. All engineering base materials and workmanship shall be guaranteed for a period of one year beginning at Notice of Substantial Completion.

PART 2 MATERIALS

2.01 ENGINEERED PERMEABLE ROCK BASE

- A. The synthetic turf permeable rock base shall consist of a single uniform rock material, as described below.
- B. For the section of permeable rock outside the subdrain trench within the field areas, the Contractor shall use the following rock type:
 - 1. One uniform permeable rock base material beneath the synthetic turf that shall be a virgin (i.e. un-recycled) crushed rock. It must meet the gradation criteria for the California Department of Transportation 3/4" Permeable Class II (Section 68):

Mesh size	% Passing
1"	100
3/4"	90-100
3/8"	40-100
#4	25-40
#8	18-33
#30	5-15
#50	0-7
#200	0-3

The above rock shall be virgin (i.e. un-recycled rock). The above rock gradation ranges are general recipes for the Contractor to use in order to meet the product performance requirements of the built rock base. The Contractor is responsible for ensuring whatever type of rock and blend they submit and install will meet all the stated requirements in item 1.08 in this section.

2.02 SUBDRAIN TRENCH DRAIN ROCK

- A. Shall be ¾” x ½” crushed virgin (i.e. un-recycled) rock, and shall meet the following general gradation requirements:

Sieve Size	%PASSING
1”	100
¾”	90-100
½”	10-40
⅜”	0-15
#4	0-5

- B. The rock profile will extend from the bottom of the trench to the top of both sides of the subdrain trench, and to the top of rock elevation. **The permeable base rock shall not be installed over the subdrain trench drain rock.** For planarity purposes, a clean uniform ⅜” minus crushed rock material may be installed over the subdrain trench profile (max thickness one inch for this rock layer)

2.03 MANUFACTURED POROUS CLOSED CELL COMPOSITE BASE AND SHOCK PAD MATERIAL (or Alternate Product) (Owner installed)

- A. Shall be Brock PowerBaseYSR - 1.0 inch thickness (no known equal). Contact is Brock USA Northern California Sales Manager, David Brown phone no. (530) 575-8976. (For Futsal Field)
- B. Shock Pad: Shall be Brock SP14 – approximately 14 mm uniform thickness (no known equal). Contact is Brock USA Northern California Sales Manager, David Brown phone no. (530) 575-8976. (For Soccer and P.E. areas, baseball field is not part of this contract)

2.04 GEOTEXTILE FILTER FABRIC:

- A. Provide geotextile filter fabric in the areas designated on the Drawings. Geotextile filter fabric conform to the following minimum specifications:

Property	Test Method	Typical Values
Grab Strength	ASTM D 4632	80 lb.
Puncture Strength	ASTM D 4833	25 lb.
Burst Strength	ASTM D 3786	130 lb.
Trapezoid Tear	ASTM D 4533	25 lb.
Permeability	ASTM D 4491	0.1 cm/sec
Apparent Opening Size	ASTM D 4751	#50 Sieve size
Permittivity	ASTM D 4491	

- B. Geotextile Filter Fabric Mirafi RS280i or approved equal on top of subgrade.
- C. Geotextile Filter Fabric Mirafi 140 N or approved equal for subdrain trenches.

2.05 SYNTHETIC TURF EDGE CONNECTIONS

- A. Synthetic turf edge connections made directly to concrete shall be done with Nordot 34N glue. It is manufactured by Synthetic Industries, Inc. Refer to details for additional information.
- B. Synthetic turf edge connections may also be done with header boards and expanding nailing connections between the header and concrete edge band. Refer to details for additional information.

2.07 DRAINAGE ELEMENTS

- A. Refer to Storm Drainage Specification Section for all in-field drainage elements.

PART 3 EXECUTION

3.01 SUBGRADE PREPARATION

- A. Contractor shall verify that subgrade has been prepared according to specification section 31 20 00 with regard to compaction, grade tolerances and is free of debris, non-compactable material, topsoil, or organics prior to beginning work.
- B. Top of subgrade elevations shall be verified using laser-operation survey instruments. Refer to Conformance Surveying specifications for requirements.
- C. Once the subgrade conformance has been accepted and compaction has been properly achieved, the geotextile filter fabric shall be installed over the compacted and prepared subgrade, as shown on the plans, without disturbing grades.
- D. Geotextile fabric shall be installed with 6" overlap and stapled 6' on-center along seams. Staples to be 6" staples.
- E. At futsal, Contractor shall verify planarity of the subgrade surface using "string line" method. String line shall be held between two workmen along each edge of the court measuring cross width, with the string parallel to the direction of the cross slope. Surface planarity of the existing asphalt subgrade shall not deviate more than 1/8", or by more than 1/8" when measured under a 10' straight edge in any direction at any point in the field's subgrade. Areas out of tolerance shall be marked by the Contractor with appropriate marking paint, and then high areas are to be ground down, and low areas shall be filled with a impervious filler materials that will properly adhere to the existing acrylic surface on the existing pavement. Contractor to submit product for filling low areas as a product submittal for review and acceptance by the District and Engineer.

3.02 INSTALLATION OF THE SUBDRAIN TRENCH AND IN-FIELD DRAINAGE (as applicable)

- A. Contractor to install drain rock and piping in strict compliance with the manufacturer's written instructions and as indicated in the Drawings. Contractor to exercise caution and the appropriate sequencing of work, so as not to damage any drainage piping during the base rock installation.
- B. Contractor to protect all drain trenches to ensure that pipe is not damaged in any way by construction operations and that the rock is not contaminated with any native soils, unintended construction material, or deleterious materials during subsequent construction operations.

3.03 PLACING THE POROUS ROCK BASE

- A. The crushed rock must be laid without damaging the soil subgrade (and the in-field drainage system as applicable). It is very important to not create any depressions with heavy equipment. The specified rock or aggregate supplied must conform to the recommended specifications. **The finished crushed rock or aggregate base supplied must be stable, unyielding, and permeable.**

- B. The crushed rock shall be carefully and evenly spread over the subgrade and up both sides of the subdrain trenches to the depth shown on the plans.
- C. Excess water shall not be applied during installation of rock base and rough grading due to the potential of softening the subgrade and altering the grading.
- D. Crushed rock shall be smoothed and compacted uniformly to design grades by alternating raking, water settling, and rolling operations. **Contractor shall be advised not to overwork the rock material, thus modifying its gradation characteristics. Minimal rolling is advisable to achieve design grades and compaction. Only static (absolutely no vibratory rolling of the permeable rock is allowed) rolling is allowed, and max 3-5 ton rollers should be used on the permeable rock base.**
- E. If the required compacted depth of the base course exceeds 6", the base rock course shall be constructed in 2 or more layers or lifts of approximate equal thickness. Each layer must achieve a uniform 90% relative compaction. No compaction of greater than 93% relative compaction should be achieved.
- F. Top of porous rock elevations shall be verified using laser-operation survey instruments. Refer to Conformance Surveying specifications for requirements.
- G. The final grade shall be ideally compacted to a uniform 90 - 92% relative compaction. **Contractor shall be advised not to overwork the rock material, thus modifying its gradation characteristics. Minimal moving of the rock upon placement of the material on the subgrade and rolling is advisable to achieve design grades and compaction. Compaction shall not be above 93%.**
- H. Top of rock elevations shall be verified using laser-operation survey instruments. Refer to Conformance Surveying specifications for requirements.
- I. Contractor shall manually screed the top rock surface to ensure tolerances are met. Finish surface planarity shall be verified, and if necessary adjusted, by the Contractor using string line method. A mason's line held taught between two workman separated by a distance of approximately 40 feet, shall be placed directly on the finished surface, parallel to the direction of greatest slope. A third workman shall check for separations between the mason's line and the finished surface that are equal to or greater than the specified tolerances. Areas of separation shall be outlined with marking paint and the depth of separation indicated.
- J. Entire finished surface shall be "walked" with mason's line in increments of approximately 3 feet.
- K. Areas outlined with marking paint shall be filled with top rock to the depth indicated and raked by hand. Filled areas shall be compacted to provide a non-yielding, smooth, flat surface.
- L. Final finished surface planarity shall be approved by the Owner and the Synthetic Turf Installer.
- M. Once the top of the permeable rock base is installed and compacted, the Contractor shall notify the Owner Testing Agent that it is ready for the field permeability test. The Agent shall be given two working days notice and have 2 days to complete the in field test, which will consist of a minimum of four controlled field permeability tests per synthetic turf field. Tests shall be by a single ring infiltrometer or equivalent test method. If the test does not achieve a minimum of 20 inches per hour, the Contractor shall provide within 48 hours a written repair procedure to correct the permeability deficiency. All repair work, including any associated delays, shall be the Contractor's sole responsibility. Any fine tuning of the field base due to the testing operations is the responsibility of the Contractor.

3.04 MANUFACTURED POROUS CLOSED CELL COMPOSITE BASE AND SHOCK PAD MATERIAL (Owner installed)

- A. Upon successful completion of installing the base, the porous drainage composite or shock pad shall be installed per the Contract Drawings and in strict compliance with the manufacturer installation instructions. Contractor to exercise extreme care in order to avoid disturbing the crushed rock base.
- B. Contractor to take measures to ensure that the product is not exposed to the outdoor elements longer than the manufacturer's recommendations. Any product that exceeds this time duration shall be removed from the project site immediately and not used on the project.
- C. All sections of the material shall be interlocked and/or connected to adjacent pieces of the drainage material in strict conformance with the manufacturer's written recommendations.

END OF SECTION

SECTION 33 40 00

STORM DRAINAGE

PART 1 GENERAL

1.01 SUMMARY

- A. Furnish all labor, materials, equipment, facilities, transportation and services to complete all storm drainage system improvements and related work as shown on the Drawings and/or specified herein.
- B. Scope of work: The general extent of the drainage work is shown on the Drawings and includes, but is necessarily limited to, the following:
 - 1. Storm drainage system installation
- C. Related sections can include, but may not be limited to:
 - 1. Section 12 93 00 - Site Furnishings
 - 2. Section 31 20 00 - Earthwork
 - 3. Section 31 23 00 - Excavation, Backfilling and Compaction
 - 4. Section 32 11 00 - Base Courses
 - 5. Section 32 12 16 - Asphalt Concrete Paving
 - 6. Section 32 13 13 - Portland Cement Concrete

1.02 REGULATORY REQUIREMENTS AND REFERENCES

- A. State of California Department of Transportation Standard Specifications, Current Edition.
- B. California Building Code, Current Edition.

1.03 SUBMITTALS

- A. Submit cut-sheets or samples of all products to be used in conformance with Submittals and/or applicable Division One and Division Two specifications, General Conditions and Special Provisions.
- B. Record Drawings:
 - 1. Conform to Section 01 78 39 - Project Record Drawings or applicable sections.
 - 2. Accurately record location of new piping, drain structures, and connections to existing systems using horizontal dimensions, elevations, inverts and slope gradients as applicable.

1.04 QUALITY ASSURANCE

- A. Control of Work: Conform to Section 5 of the Standard Specifications.
- B. Control of Materials: Conform to Section 6 of the Standard Specifications.

1.05 PROTECTION OF PROJECT SITE

- A. Make provisions for, and take the necessary precautions to protect existing and new work from damage during entire life of project.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store pipe neatly and orderly, stacked and blocked to prevent damage. Cracked, checked, spalled or otherwise damaged pipe shall be removed from site.
- B. Use of chain slings shall not be permitted.

- C. All piping, fittings and related materials shall be carefully handled at all times.
- D. All pipelines, fittings and drainage structures shall be kept clean and closed during construction.

1.07 PROJECT/SITE CONDITIONS

- A. Work of this section shall not be executed when site conditions are detrimental to quality of work as determined by the Owner's Representative.

1.08 SEQUENCING AND SCHEDULING

- A. Coordinate work of this section with all other work contained in the Contract Documents.

PART 2 PRODUCTS

2.01 PIPE AND FITTINGS

- A. All pipe and fittings shall be clearly and permanently marked to identify manufacturer, type, class, or schedule and NSF approval as applicable.
- B. Corrugated High Density Polyethylene (CHDPE) Pipe (Perforated and Solid - Dual Wall)
 - 1. High-density polyethylene perforated corrugated pipe with an integrally formed smooth waterway. Nominal sizes shall have a full circular cross-section, with an outer corrugated pipe wall and an essentially smooth inner wall (waterway). Corrugations may be either annular or spiral. All sizes shall conform to the AASHTO classification "Type S". Pipe manufacturer for this specification shall comply with the requirements for test methods, dimensions, and markings found in AASHTO Designations M252 and M294. Pipe and fittings shall be made from virgin PE compounds which conform with the requirements of cell class 324420C as defined and described in ASTM D 3350.
 - a. The minimum parallel plate stiffness values when tested in accordance with ASTM D2412 shall be as follows:

Diameter	Pipe Stiffness
4 inch (100 mm)	50 psi (340 kPa)
6 inch (150 mm)	50 psi (340 kPa)
8 inch (200 mm)	50 psi (340 kPa)
10 inch (250 mm)	50 psi (340 kPa)
12 inch (300 mm)	50 psi (340 kPa)
15 inch (375 mm)	42 psi (290 kPa)
 - 2. The fittings shall not reduce or impair the overall integrity or function of the pipeline. Common corrugated fittings include in-line joint fittings, such as couplers and reducers, and branch or complimentary assembly fittings such as "tees", "wyes", and end caps. These fittings may be installed by various methods, such as snap-on, screw-on, bell and spigot, and wrap around. Couplings shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joints. Only fittings supplied or recommended by the pipe manufacturer shall be used. Where designated on the plans and as required by the manufacturer, a neoprene or rubber gasket shall be supplied. Installation of the pipe specified above shall be in accordance with ASTM Recommended Practice D2321 as covered elsewhere in these specifications.
 - 3. Corrugated Polyethylene Pipe shall be N-12 drainage pipe as manufactured by Advanced Drainage Systems, Inc. or approved equal.
- C. Flat Panel Pipe: Shall be 12-inch Advanedge as available from ADS, Ph: (510) 913-2211. Contact name is Jim Winslow. All fittings, adaptors, and couplers shall be Advanedge components.

2.02 DRAINAGE STRUCTURES (as applicable)

- A. Manholes: Provide frame, cover, grade rings, and all related materials as required by the construction drawings for a four foot diameter manhole. Materials available through Hansen Concrete Products. Ph: (408) 262-1091, Fax (408) 262-0936, or approved equal.
- B. Junction Boxes / Catch Basins:
1. 12-inch shall be CB12 supplied by Central Precast – US Concrete (with ADA lockable round grate), or acceptable equivalent product. Ph: (925) 462-6804.
 2. 18-inch basins shall be CB18 as supplied by Central Precast – US Concrete (with lockable round grate), or acceptable equivalent product. Ph: (925) 462-6804. Note that this grate is not ADA compliant and shall not be used in pedestrian hardscape areas.
 3. 24-inch basins shall be CB24 as supplied by Central Precast – US Concrete (with ADA lockable round grate), or acceptable equivalent product. Ph: (925) 462-6804..
 4. 36-inch basins shall be U43 drain box as supplied by Christy Concrete (H2O loading with ADA lockable grate), or acceptable equivalent product. Christy: ph (800) 486-7070.
 5. Grates in paved areas shall have grates that conform to ADA Regulations.
 6. All catch basins to have locking mechanism or screw down grate to frame.
 7. Provide two grade rings at each catch basin.
 8. Junction Boxes are essentially catch basin structures, but with solid cast iron covers.
- C. Extensions: Provide box extensions, junction boxes and grade rings compatible with structures as necessary to finish at the proper elevation and to facilitate future elevation adjustments as noted below.
- D. Clean Outs: Shall be as shown or noted in the Drawings.
- E. French Drain: Shall be as shown or noted in the Drawings.
- F. Drop Inlet: shall be 12" Drain (model #1260) as supplied by NDS (or approved equal). Ph: (800) 726-1998.
- I. Trench Drain:
1. Futsal: Shall be ACO 4000 pre-sloped drain as supplied by ACO Polymer Products, Inc (or acceptable equivalent product). Contact name is Tom Blyndo (209) 572-1511. Contractor to provide appropriate end connections and catch basin with in-line trash bucket and outlet connections. Grate shall be a steel slotted grate . All grates shall comply with ADA requirements.
 2. Tennis: Shall be ACO K200 KlassikDrain neutral channel with End Outlet – K2-10 end cap as supplied by ACO Polymer Products, Inc (or acceptable equivalent product). Contact name is Tom Blyndo (209) 572-1511. Contractor to provide appropriate end connections and catch basin with in-line trash bucket and outlet connections. Use 494Q ADA grate with quick lock locking device. All grates shall comply with ADA requirements
- J. Drinking fountain drain: Zurn 415 flood drain model Z415SH. 8"x8" square drain with cast iron body and bronze grate.
- K. Dry Well: NDS Flow-Well FWAS24 and NDS Flow-Well Bottom FWBP24, or acceptable equivalent products. Ph: (916) 386-2233.
- L. Outdoor shower drain: Zurn 415 flood drain model Z415SH. 8"x8" square drain with cast iron body and bronze grate.
- M. Sand-Oil Interceptor: Shall be Model no. JP320EE-SO. Available at: Jensen Precast, 5400 Raley Blvd., Sacramento, CA 95838, Phone: (916) 991-8800, Toll-Free: (800) 843-9569, Fax: (916) 991-8810

2.03 MISCELLANEOUS MATERIALS (as applicable)

- A. Permeable rock beneath synthetic turf area: Refer to Specification Section 32 18 14.
- B. Drainage Rock: Shall be ¾" inch crushed drain rock or acceptable equal as shown in the drawings, materials available through Stevens Creek Quarry, Cupertino, or TMT Enterprises, San Jose.
- C. Pea Gravel: Shall conform to the following gradation requirements:

U.S. Standard Sieve Mesh	Allowable Range % Retained on Sieve
1/2 inch (12.5 mm)	95% passing
1/4 inch (6.3 mm)	20 – 45% passing
10 mesh (2.0 mm)	No more than 10% passing
18 mesh (1.0 mm)	No more than 5% passing

Material available through Harbor Sand & Gravel, Redwood City, or TMT Enterprises, San Jose.

- D. Sand for all perforated drain pipe applications: Shall be a washed sand that meets USGA Greens Specifications (see below for sieve range) with the following characteristics:
 1. 100% passing a #4 screen and no more than 4% passing a #200 screen.
 2. A total silt and clay % of no more than 5%.
 3. Shall be crushed or naturally angled sand – no rounded silica sand.
 4. Pre-approved product and Supplier- G-8 Sand - Brown Sand Co-Tim 209-234-1500 or TMT Enterprises – Matt Moore 408-432-9040. Other acceptable sources are available.

Classification	Sieve Number	Particle Size (mm)	Allowable Range (% Retained on Sieves by weight)
Fine Gravel	10	>2.00	0% to 10%
V. Coarse Sand	18	1.00 – 2.00	
Coarse Sand	35	0.5 – 1.0	82% to 100%
Medium Sand	60	0.25 – 0.5	
Fine Sand	140	0.1 – 0.25	
V. Fine Sand	270	0.05 – 0.1	0% to 8%
Silt & Clay	--	<0.05	

Note: 50% to 75% of particles to be within diameter of 0.25 to 0.75 mm.

- F. Filter Fabric for French Drain: Shall be Mirafi 140N or acceptable equal.
- G. Filter Fabric Fasteners: Metal clip type staple.
- H. Mortar: Shall conform to all applicable sections of the Standard Specifications. Mixture shall be a 1:2 Portland Cement to sand mixture with a minimum of water.
- I. Reinforcing bars: Refer to Section 32 13 13.
- J. Minor concrete: Refer to Section 32 13 13.
- K. Structural Adhesives for Manholes, Catch Basins, and Junction Boxes: Shall be Ramnek or equivalent product. Available thru multiple suppliers.

PART 3 EXECUTION

3.01 PREPARATION

- A. Contractor shall flush and clean all existing storm drain lines that will serve as points of connection for the project improvements. All debris inside the lines is to be removed by the storm drain lines at the appropriate downstream (or upstream, if necessary) drainage structure. No debris is allowed to be pushed downstream into subsequent piping or further into the storm drain system.

3.02 PIPE LAYING

- A. General: Pipe shall be installed per manufacturers' instructions and in conformance with the Contracts Documents.
- B. CHDPE Pipe:
 - 1. Pipe shall be installed with a minimum cover under the H-20 live load = 12 inches to the top of subgrade elevation.
 - 2. Minimum compaction for pipe subject to H-20 live load is 90% per Section 19, Standard Specifications.
 - 3. CHDPE pipe shall be laid and jointed in accordance with generally accepted practice and the following provisions to provide the required work.
- C. Flat Panel Piping:
 - 1. Install per the layout indicated on the Drawings and in strict compliance with Manufacturer's written recommended installation instructions. Contractor shall exercise caution to not crush or damage the piping during installation of the permeable rock base.

3.03 DRAINAGE STRUCTURES (AS APPLICABLE)

- A. General: Set rim or cover elevations to specified grades utilizing a minimum of two grade rings (or extensions) at top of drainage structure to facilitate potential elevation adjustments in the future.
- B. Catch Basins / Junction Boxes: Install as shown in the Drawings and as follows:
 - 1. Excavate as required.
 - 2. Set on firm, unyielding base. Set on compacted select backfill material if directed by Owner's Representative.
 - 3. Prefabricated units not having a bottom shall be set on a poured-in-place concrete slab with smooth trowel finish. Mortar and properly seal unit to slab, making a water tight connection.
 - 4. Install pipe inlets and outlets to specified elevations. Grout and/or seal all joints to a watertight condition with material per manufacturer's recommendation.
- C. Manholes: Install per manufacturer's recommendations and as shown in the Drawings.
- D. Cleanouts: Install as shown in the Drawings.
- E. Trench Drains: Install as shown in the Drawings and in accordance with the manufacturer's written recommendations.
- F. Drywells, Drinking Fountain Drains, Atrium Drains and Drop Inlets: Install as shown in the Drawings and in accordance with the manufacturer's written recommendations.

3.04 FIELD QUALITY CONTROL

- A. The Owner's Representative shall review and accept work at the following stages:
 - 1. Excavated trench with bedding in place prior to any pipe being laid.

2. Pipe laid prior to backfilling. Any pipe covered prior to review and acceptance shall be uncovered and re-backfilled at contractor's expense.
3. Drainage device location and pipe connection.
4. New drainage system shall be flood tested and clean of debris.

END OF SECTION

APPLICABLE CODES

1. 2016 CBC CHAPTER 35, PROVIDE ALL THE APPLICABLE/ADOPTED STANDARDS. WHERE A PARTICULAR STANDARD IS REFERENCED IN THE CODE BUT DOES NOT APPEAR AS AN ADOPTED STANDARD IT MAY STILL BE USED. APPLY ONLY THE PORTION OF THE STANDARD THAT IS APPLICABLE TO THE CODE SECTION WHERE THE STANDARD IS REFERENCED, NOT THE ENTIRE STANDARD.

- 2016 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
- 2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
- (2015 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2015 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
- (2014 NATIONAL ELECTRICAL CODE AND 2015 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R.
- (2015 UNIFORM MECHANICAL CODE AND 2015 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
- (2015 UNIFORM PLUMBING CODE AND 2015 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R.
- 2013 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
- (2012 INTERNATIONAL FIRE CODE AND 2015 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA EXISTING BUILDING CODE, PART 10, TITLE 24 C.C.R.
- (2015 INTERNATIONAL EXISTING BUILDING CODE AND 2015 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA "GREEN" BUILDING REQUIREMENTS OR CAL GREEN, PART 11, TITLE 24 C.C.R.
- 2016 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
- 2013 TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

- LIST OF FEDERAL CODES AND STANDARDS (IF APPLICABLE)
- AMERICANS WITH DISABILITIES ACT (ADA), TITLE II OR TITLE III
 - FOR TITLE II: UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS) 28 CFR 35.151(c)
 - OR ADA STANDARDS FOR ACCESSIBLE DESIGN (APPENDIX A OF 28 CFR PART 36)
 - FOR TITLE III: ADA STANDARDS FOR ACCESSIBLE DESIGN (APPENDIX A OF 28 CFR PART 36) 28 CFR 36.406
 - 2010 AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN

NOTE: TITLE II APPLIES TO PROJECTS FUNDED AND/OR USED BY STATE AND LOCAL GOVERNMENT SERVICES. TITLE III COVERS PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES. DEPENDING ON THE USE AND FUNDING, BOTH TITLE MAY APPLY TO THE PROJECT.

- NFPA 13 AUTOMATIC SPRINKLER SYSTEMS 2013 EDITION
- NFPA 14 STANDPIPE SYSTEMS 2013 EDITION
- NFPA 17 DRY CHEMICAL EXTINGUISHING SYSTEMS 2017 EDITION
- NFPA 17A WET CHEMICAL EXTINGUISHING SYSTEMS 2017 EDITION
- NFPA 20 STATIONARY FIRE PUMPS 2016 EDITION
- NFPA 24 PRIVATE FIRE SERVICE MAINS 2016 EDITION
- NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CALIFORNIA AMENDED) 2016 EDITION
- (NOTE SEE UL STANDARD 1971 FOR "VISUAL DEVICES")
- NFPA 253 CRITICAL RADIATION FIGHTING SYSTEMS 2015 EDITION
- NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS 2015 EDITION
- ASME 17.1 ELEVATOR STANDARD 2016 EDITION

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS - 2016 CALIFORNIA BUILDING CODE (FOR SFM) REFERENCED STANDARDS CHAPTER 35

ADA STANDARD FOR ACCESSIBLE DESIGN (APPENDIX A OF 28 CFR PART 36)

2. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.
3. ALL EXISTING FIRE EXTINGUISHING SYSTEMS ARE IN COMPLIANCE WITH UL 300, CBC 904.1.1, CFC 904.1.1.

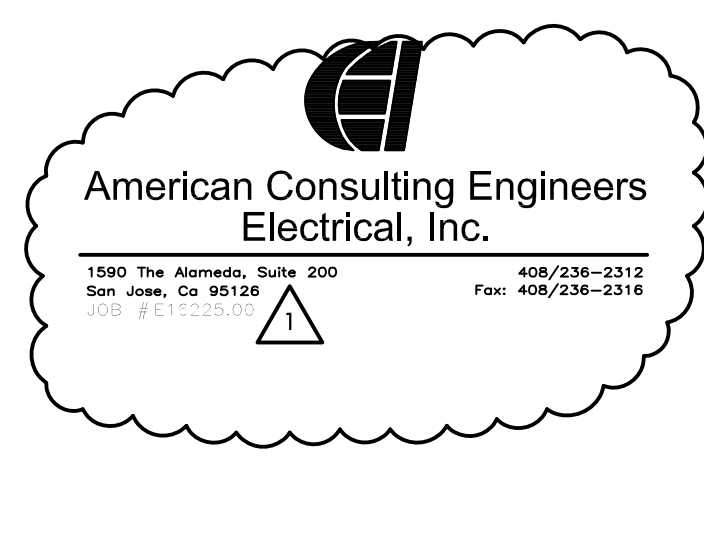
GENERAL NOTES

1. PRIOR TO BIDDING, THE GENERAL CONTRACTOR SHALL VISIT & INSPECT THE SITE & FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AFFECTING THE NEW WORK. THE GENERAL CONTRACTOR SHALL NOT DISPUTE, COMPLAIN OR ASSERT THAT THERE IS ANY MISUNDERSTANDING IN REGARDS TO LOCATION, EXTENT, NATURE OR AMOUNT OF WORK TO BE PERFORMED UNDER THIS CONTRACT DUE TO THE CONTRACTOR'S FAILURE TO INSPECT THE SITE. CONTRACTOR SHALL NOTIFY THE DISTRICT OF ANY CONDITIONS, REQUIREING WORK, WHICH ARE NOT COVERED IN THE CONTRACT DOCUMENTS.
2. NO CONSTRUCTION SHALL COMMENCE WITHOUT THE OFFICIAL NOTICE TO PROCEED FROM THE DISTRICT.
3. THE GENERAL CONTRACTOR & SUBCONTRACTORS ARE RESPONSIBLE FOR LOCATING & VERIFYING ALL EXISTING UNDERGROUND UTILITIES IN ALL AREAS OF NEW WORK PRIOR TO COMMENCEMENT OF EXCAVATION. EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ROUTING LOCATIONS AS BEST DETERMINED FROM EXISTING DRAWINGS AND THE DISTRICT, BUT SHOULD NOT BE CONSTRUED TO REPRESENT ALL OF THE EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL POT HOLE ALL EXISTING UTILITIES THAT MAY BE AFFECTED BY NEW FACILITIES IN THIS CONTRACT. VERIFY ACTUAL LOCATION AND DEPTH OF UTILITIES, AND REPORT POTENTIAL CONFLICTS TO THE DISTRICT PRIOR TO EXCAVATING FOR NEW FACILITIES.
4. CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT ALL EXISTING UTILITIES, WHETHER SHOWN OR NOT, IN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO EXISTING UTILITIES CAUSED BY ITS OPERATIONS.
5. THE CONTRACTOR SHALL PROTECT ALL EXISTING ITEMS WITHIN SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR ALL DAMAGED AREAS TO THEIR ORIGINAL CONDITION OR BETTER AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE DISTRICT.
6. DIMENSIONS AND LOCATIONS OF EXISTING FACILITIES ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY CONTRACTOR. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DISTRICT.
7. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA FIRE CODE AND ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES, AS WELL AS ADAPTED STANDARDS.
8. ALL NOTES ARE FOR GENERAL REFERENCE IN CONJUNCTION WITH, AND AS A SUPPLEMENT TO, THE WRITTEN SPECIFICATIONS AND DETAILS ASSOCIATED WITH THE CONTRACT DOCUMENTS.
9. THIS DRAWING SET SHALL BE USED IN CONJUNCTION WITH THE CSI FORMAT SPECIFICATIONS PUBLISHED IN BOOK FORM. COMBINED, THEY ARE HEREIN REFERRED TO AS THE "CONTRACT DOCUMENTS".
10. DIMENSIONS ON WORKING DRAWINGS TAKE PRECEDENCE OVER MEASURED ELEMENTS. CONTRACTOR SHALL NOT SCALE DRAWINGS.
11. ALL TYPICAL DETAILS SHALL APPLY UNLESS NOTED OTHERWISE.
12. CONTRACTOR SHALL PROVIDE ADEQUATE DUST CONTROL AND KEEP MUD AND DEBRIS OFF THE PUBLIC RIGHT-OF-WAY AT ALL TIMES.
13. ALL TRENCHES AND EXCAVATIONS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE APPLICABLE SECTIONS OF CALIFORNIA AND FEDERAL O.S.H.A. REQUIREMENTS AND OTHER APPLICABLE SAFETY ORDINANCES. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TRENCH SHORING DESIGN AND INSTALLATION.
14. ANY ALTERATIONS OF EXISTING FACILITIES TO ACCOMMODATE THE INSTALLATION OF NEW WORK SHALL BE REVIEWED BY THE DISTRICT PRIOR TO COMMENCING WORK.
15. CONTRACTOR SHALL COORDINATE ALL WORK TO AVOID DISTURBING STUDENTS OR TEACHERS DURING SCHOOL HOURS. ANY DISRUPTION OF THE UTILITIES MUST BE COORDINATED AND APPROVED BY THE DISTRICT AND INSPECTOR OF RECORD PRIOR TO COMMENCING WORK.
16. ALL TEMPORARY WORK SHALL BE CONSIDERED A PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.
17. THE PLANS AND SPECIFICATIONS DO NOT UNDERTAKE TO SHOW OR LIST EVERY ITEM TO BE PROVIDED, BUT RATHER TO DEFINE THE REQUIREMENTS FOR A FULL AND WORKING SYSTEM FROM THE STANDPOINT OF THE END USER. FOR THIS REASON, WHEN AN ITEM NOT SHOWN OR LISTED IS CLEARLY NECESSARY FOR PROPER CONTROL/OPERATION OF EQUIPMENT WHICH IS SHOWN OR LISTED, THE CONTRACTOR SHALL PROVIDE AN ITEM WHICH WILL ALLOW THE SYSTEM TO FUNCTION PROPERLY AT NO INCREASE IN PRICE.
18. ALL CONTRACTORS SHALL REMOVE TRASH AND DEBRIS STEMMING FROM THEIR WORK ON A DAILY BASIS. PROJECT SITE SHALL BE MAINTAINED IN A CLEAN AND ORDERLY CONDITION.
19. THE DETAILS REFLECT THE DESIGN INTENT FOR TYPICAL CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND SHALL INCLUDE, IN HIS SCOPE, THE COST FOR COMPLETE FINISHED INSTALLATIONS, INCLUDING ANOMALIES, OF ALL TRADES.
20. NO WORK SHALL COMMENCE WITH UNAPPROVED MATERIALS. ANY WORK DONE WITH UNAPPROVED MATERIALS AND EQUIPMENT IS AT THE CONTRACTOR'S RISK AND IS SUBJECT TO REJECTION AND REPLACEMENT. SEE SPECIFICATIONS FOR SUBMITTAL AND SUBSTITUTION REQUIREMENTS.
21. CONSTRUCTION MATERIALS STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED SO AS TO PREVENT DAMAGE OR DETERIORATION UNTIL USED. FAILURE IN THIS REGARD MAY BE CAUSE FOR REJECTION OF MATERIAL AND/OR WORK.
22. ALL EQUIPMENT SHALL BE FABRICATED FROM FIELD VERIFIED DIMENSIONS AND APPROVED SHOP DRAWINGS. COORDINATE MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT.
23. CONTRACTOR SHALL PERFORM THEIR CONSTRUCTION AND OPERATIONS IN A MANNER WHICH WILL NOT ALLOW HARMFUL POLLUTANTS TO ENTER THE STORM DRAIN SYSTEM. TO ENSURE COMPLIANCE, THE CONTRACTOR SHALL IMPLEMENT THE APPROPRIATE BEST MANAGEMENT PRACTICE (BMP) AS OUTLINED IN THE BROCHURES ENTITLED "BEST MANAGEMENT PRACTICE FOR THE CONSTRUCTION INDUSTRY" ISSUED BY THE CALIFORNIA STORM WATER QUALITY ASSOCIATION, NONPOINT SOURCE POLLUTION CONTROL PROGRAM, TO SUIT THE CONSTRUCTION SITE AND JOB CONDITION. THE CONTRACTOR SHALL PRESENT HIS PROPOSED BMP AT THE PRECONSTRUCTION MEETING FOR DISCUSSION AND APPROVAL.
24. CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION FENCING PER CONTRACT DOCUMENTS TO SERVE LIMIT OF WORK AREAS. FENCING MAY BE ADJUSTED DURING CONSTRUCTION BASED ON CONSTRUCTION SEQUENCE OR THE DISTRICT'S DIRECTION.
25. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT IN THE STREET RIGHT-OF-WAY SHALL NOT BE PERMITTED.

CONSTRUCTION DRAWINGS FOR COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS

835 COLLEGE AVE.
KENTFIELD, CA 94904
VERDE DESIGN, INC. PROJECT NO. 1702200

PREPARED BY



SCOPE OF WORK

SOCCER/LACROSSE
SCOPE OF WORK TO INCLUDE, BUT NOT LIMITED TO, THE REPLACEMENT OF EXISTING NATURAL TURF FIELD WITH A NEW SYNTHETIC TURF FIELD AND INSTALLATION OF AN ALL-WEATHER SYNTHETIC TRACK SURFACE D-ZONE WITH NEW LONG JUMP/TRIPLE JUMP EVENTS (2). WORK TO ALSO INCLUDE IMPROVEMENTS TO EXISTING DRAINAGE, ELECTRICAL, AND IRRIGATION SYSTEM, AND REPLACEMENT OF EXISTING SCOREBOARD. EXISTING DISCUS AND SHOT PUT EVENTS TO REMAIN.

TENNIS COURTS
SCOPE OF WORK TO INCLUDE, BUT NOT LIMITED TO, REMOVAL OF EXISTING FIELD HOUSE AND GRAVEL STORAGE AREA AND INSTALLATION OF FOUR (4) NEW TENNIS COURTS AND TENNIS COURT FACILITY, PERIMETER FENCING, GRAVEL PATHWAY, DRINKING FOUNTAIN, SITE FURNISHINGS, AND A NEW DRAINAGE SYSTEM.

BEACH VOLLEYBALL/FUTSAL FIELD
SCOPE OF WORK TO INCLUDE, BUT NOT LIMITED TO, REMOVAL OF EXISTING TENNIS COURTS AND INSTALLATION OF NEW BEACH VOLLEYBALL FACILITY AND SYNTHETIC TURF FUTSAL FIELD. WORK TO INCLUDE PERIMETER FENCING, NEW UTILITY SYSTEMS, PLANTING, AND SITE FURNISHINGS.

BID ALTERNATES

BID ALTERNATE #1 - VOLLEYBALL SEATING AND ENTRY FURNISHINGS
SCOPE OF WORK TO INCLUDE, BUT NOT LIMITED TO, INSTALLATION OF CONCRETE SPECTATOR SEATING AREA, CONCRETE SEATWALLS WITH PLINTHS, AND PLANTING. WORK SHALL ALSO INCLUDED ADJUSTMENTS TO IRRIGATION DESIGN.

CONTACT INFORMATION

ORGANIZATION	NAME	PHONE
DISTRICT COLLEGE OF MARIN	GREG NELSON	(415) 884-3100
CIVIL ENGINEER / LANDSCAPE ARCHITECT VERDE DESIGN INC.	DEVIN CONWAY WES DOWNING	(408) 850-3420 (707) 800-4204
ELECTRICAL ENGINEER ACEE	SAMMY FERNANDEZ	(408) 236-2312
STRUCTURAL ENGINEER MKM & ASSOCIATES	ERIC KREAGER NICK STUART	(707) 578-8185 (707) 578-8185

SHEET INDEX

SHEET NO. SHEET DESCRIPTION

LANDSCAPE/CIVIL

SHEET NO.	SHEET DESCRIPTION
-	COVER SHEET
L1.1	EXISTING CONDITIONS PLAN - SOCCER/LACROSSE AND TENNIS COURTS
L1.2	EXISTING CONDITIONS PLAN - BEACH VOLLEYBALL, FUTSAL, P.E. COURTYARDS AND ENTRY AND PLAZA
L2.0	EROSION AND SEDIMENT CONTROL PLAN - OVERALL CAMPUS PLAN
L3.1	DEMOLITION PLAN - SOCCER/LACROSSE AND TENNIS COURTS
L3.2	DEMOLITION PLAN - BEACH VOLLEYBALL, FUTSAL AND P.E. COURTYARDS
L4.1	GRADING PLAN - SOCCER/LACROSSE AND TENNIS COURTS
L4.2	GRADING PLAN - BEACH VOLLEYBALL, FUTSAL AND P.E. COURTYARDS
L5.1	DRAINAGE AND UTILITY PLAN - SOCCER/LACROSSE AND TENNIS COURTS
L5.2	DRAINAGE AND UTILITY PLAN - BEACH VOLLEYBALL, FUTSAL AND P.E. COURTYARDS
L6.1	LAYOUT PLAN - SOCCER/LACROSSE AND TENNIS COURTS
L6.2	LAYOUT PLAN - BEACH VOLLEYBALL, FUTSAL AND P.E. COURTYARDS
L7.1	MATERIAL PLAN - SOCCER/LACROSSE AND TENNIS COURTS
L7.2	MATERIAL PLAN - BEACH VOLLEYBALL, FUTSAL AND P.E. COURTYARDS
L8.1	IRRIGATION PLAN - SOCCER/LACROSSE AND TENNIS COURTS
L8.2	IRRIGATION PLAN - BEACH VOLLEYBALL, AND FUTSAL
L9.0	PLANTING PLAN - BEACH VOLLEYBALL, FUTSAL AND BIO-FILTRATION AREA
L10.1	BID ALTERNATES: GRADING, LAYOUT AND MATERIAL PLANS
L10.2	BID ALTERNATES: PLANTING AND IRRIGATION PLANS

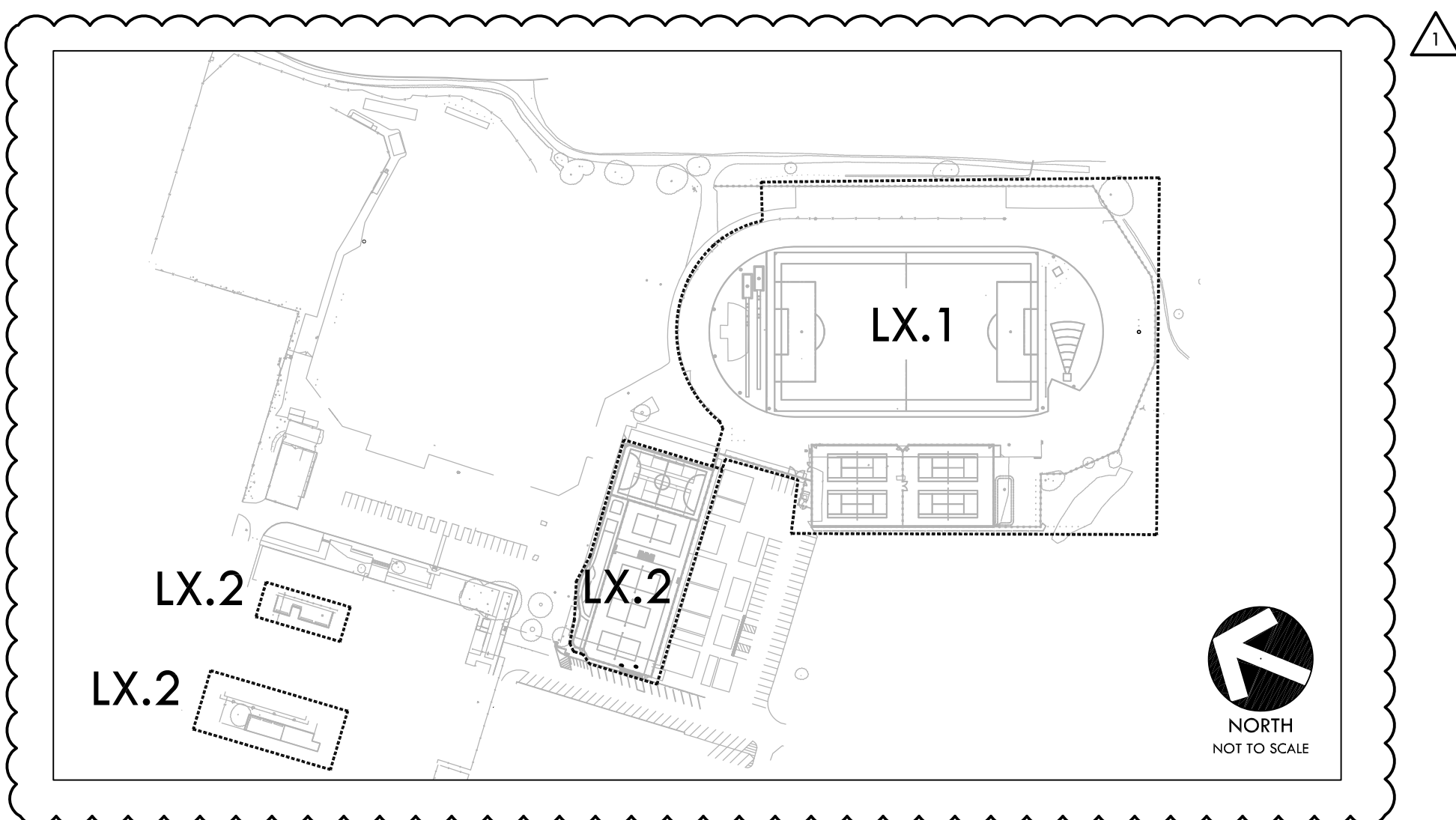
ELECTRICAL

D1.0	DRAINAGE AND UTILITY DETAILS
D1.1	DRAINAGE AND UTILITY DETAILS
D2.0	CONSTRUCTION DETAILS
D2.1	CONSTRUCTION DETAILS
D3.0	CONSTRUCTION DETAILS
D3.1	CONSTRUCTION DETAILS
D4.0	CONSTRUCTION DETAILS
D5.1	CONSTRUCTION DETAILS
D6.0	IRRIGATION DETAILS
E0.1	GENERAL NOTES, SYMBOL LIST, ABBREVIATIONS, AND FIXTURE SCHEDULE
E1.0	GENERAL SITE PLAN - DEMOLITION
E1.1	ELECTRICAL NEW SITE PLAN
E2.2	ELECTRICAL FLOOR PLAN - PARKING/ENTRY, VOLLEYBALL/ PE COURTYARDS
E2.3	ELECTRICAL FLOOR PLAN - SOCCER/LACROSS AND TENNIS COURTS
E4.1	ELECTRICAL SINGLE LINE DIAGRAM
E5.1	ELECTRICAL DETAILS
E5.2	ELECTRICAL DETAILS

STRUCTURAL

S0.1	SOCCER FIELD SCOREBOARD
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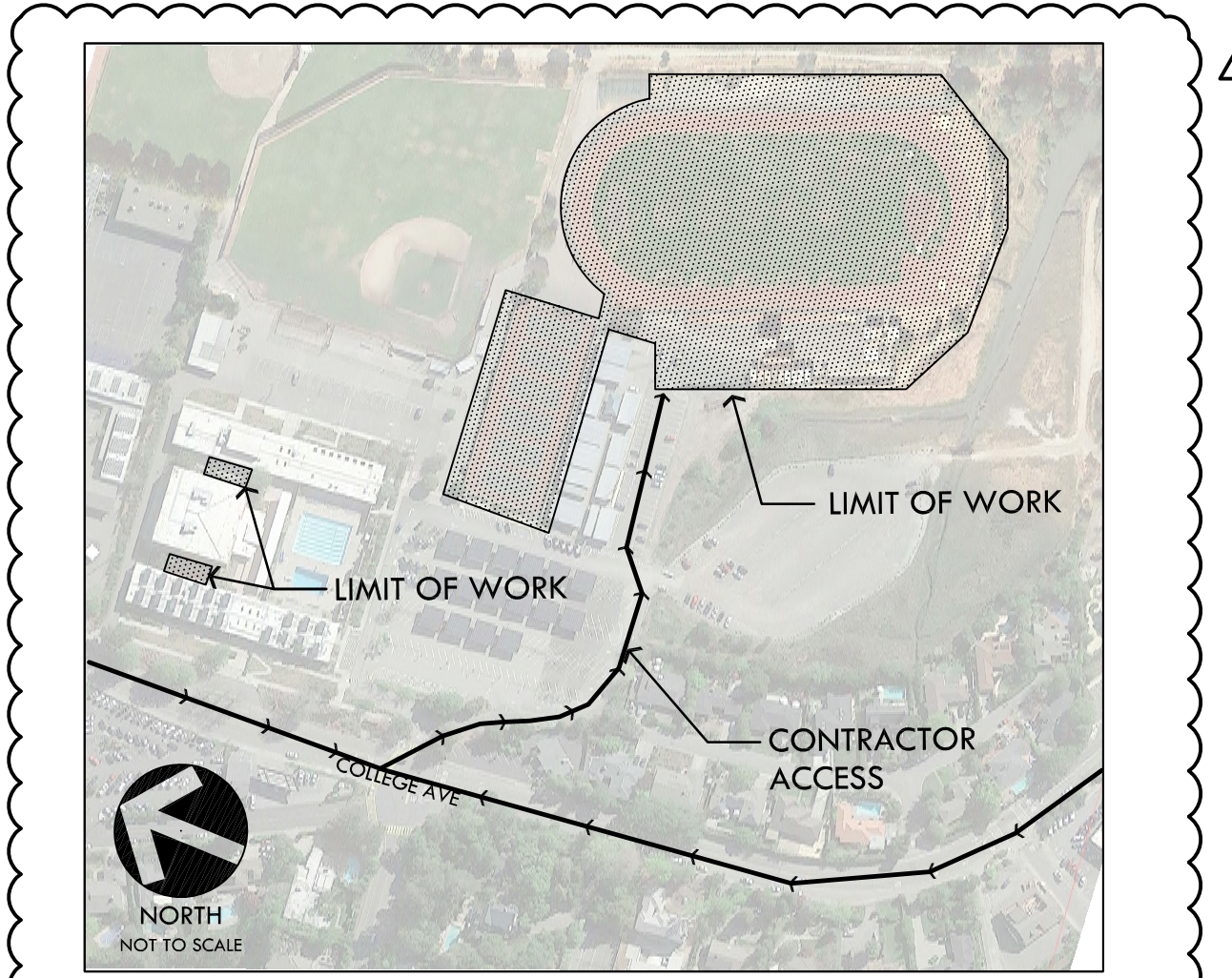
KEY MAP



PROJECT MAPS



VICINITY MAP



SITE MAP

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COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS

100% SUBMITTAL 06/30/17



STAMP
 CONSULTANT

SHEET TITLE
**EXISTING CONDITIONS
 SOCCER/LACROSSE
 AND TENNIS COURTS**

PROJECT NAME
**COLLEGE OF MARIN
 ATHLETIC FACILITIES
 IMPROVEMENTS**

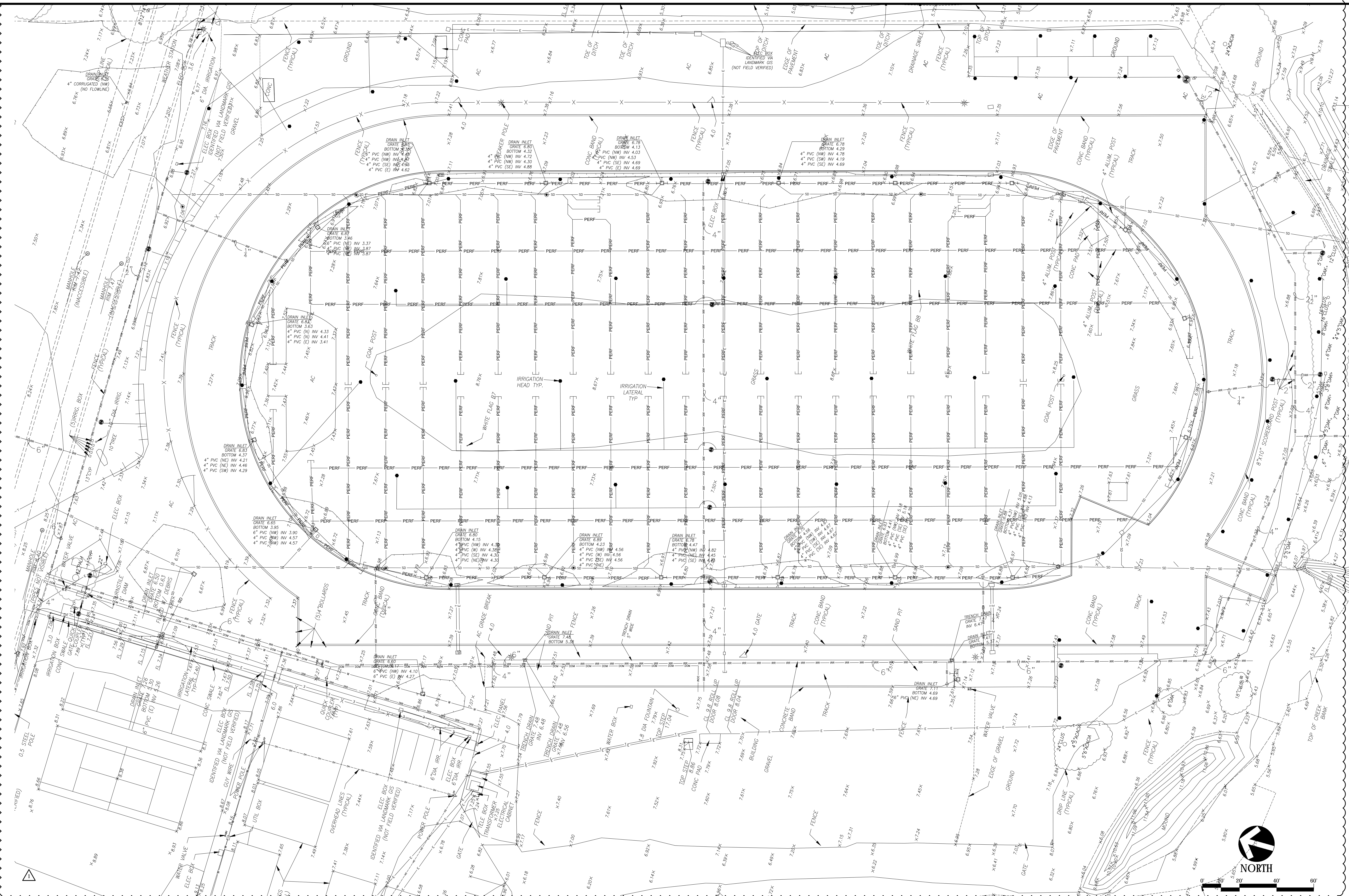
PROJECT ADDRESS
**835 COLLEGE AVE.
 KENTFIELD, CA
 94904**

SUBMITAL	DATE
80% CD SUBMITAL	06/16/17
100% SUBMITAL	06/30/17

NO.	REVISIONS	DATE
1	ADDENDUM #1	08/17/17

DRAWN BY: BH
 CHECKED BY: DC
 DATE ISSUED: 06/30/17
 SCALE: 1" = 20'-0"

PROJ. NO.: 1702200
 SHEET NO.: L1.1



- NOTES**
- DISTANCES SHOWN ARE IN FEET AND DECIMALS THEREOF.
 - HORIZONTAL AND VERTICAL DATUM IS BASED ON THE CAMPUS AERIAL DONE BY SANDIS.
 - TOPOGRAPHY SHOWN WAS PERFORMED BY FIELD SURVEY IN APRIL OF 2017.
 - A PORTION OF THE DRAIN INLETS SHOWN HEREON LABELED "NO FLOWLINE" CONSIST OF A WYE INSIDE THE BOX THAT IS INACCESSIBLE TO MEASURE AN INVERT ELEVATION.
 - UNDERGROUND UTILITY INFORMATION SHOWN IS A COMPILATION OF LANDMARK GIS DATA, RECORD DRAWINGS AND LOCATED SURFACE UTILITIES. EXACT LIMITS, ROUTES & LOCATION MAY VARY. CONTRACTOR SHOULD VERIFY ALL UTILITIES IN FIELD PRIOR TO CONSTRUCTION.
 - SOME AREAS WERE INACCESSIBLE DUE TO DENSE VEGETATION AND NOTED HEREON.
 - UTILITY BOXES AND PORTIONS OF PIPE MATERIAL MARKED "NOT FIELD VERIFIED" ARE EITHER BURIED, REMOVED, OR INDISTINGUISHABLE DUE TO DIRT, DEBRIS, MUD OR INACCESSIBLE GRATES OR LIDS. LOCATION SHOWN PER LANDMARK (SEE NOTE 6).

- ABBREVIATIONS**
- | | | | |
|------|----------------------------|------|-------------------------|
| AC | ASPHALTIC CONCRETE | GV | GAS VALVE |
| BFP | BACKFLOW PREVENTOR | HYD | HYDRANT |
| BLDG | BUILDING | IRR | IRRIGATION |
| CL | CENTER LINE | OH | OVERHEAD |
| CLUS | TREE CLUSTER | PRV | PRESSURE REDUCING VALVE |
| CO | CLEAN OUT | SD | STORM DRAIN |
| CONC | CONCRETE | SDCO | STORM DRAIN CLEANOUT |
| DEP | DEPRESSED | SDMH | STORM DRAIN MANHOLE |
| DIA | DIAMETER | SS | SANITARY SEWER |
| E | ELECTRIC | SSCO | SANITARY SEWER CLEANOUT |
| EB | EDGE OF BOX | SSMH | SANITARY SEWER MANHOLE |
| ELEC | ELECTRICAL | STL | STEEL |
| EP | EDGE OF PAVEMENT | TC | TOP OF CURB |
| EOC | EDGE OF CONCRETE | TEL | TELEPHONE |
| FDC | FIRE DEPARTMENT CONNECTION | TOE | TOE OF BANK |
| FH | FIRE HYDRANT | TOP | TOP OF BANK |
| FL | FLOW LINE | TYP | TYPICAL |
| G | GAS | TW | TOP OF WALL |
| GB | GRADE BREAK | W | WATER |
| GS | GROUND SHOT | WV | WATER VALVE |

- LEGEND**
- | | | | |
|--|-----------------------------|--|------------------------------|
| | ABANDONED UTILITY | | RETAINING WALL |
| | BUILDING | | SANITARY SEWER |
| | CONTOUR MAJOR (5' INTERVAL) | | STORM DRAIN PER LANDMARK GIS |
| | CONTOUR MINOR (1' INTERVAL) | | STORM DRAIN PER FIELD SURVEY |
| | DRIP LINE | | SWALE / FLOWLINE |
| | EDGE OF BRUSH | | TOE OF BANK |
| | ELECTRIC | | TOP OF BANK |
| | FIRE LINE | | UNKNOWN UTILITY |
| | GAS | | WATER LINE |
| | GRADE BREAK LINE | | PERFORATED STORM DRAIN LINE |
| | LIGHT CONDUIT | | DOMESTIC WATER LINE |
| | OVER HEAD LINE | | IRRIGATION LATERAL LINE |
| | | | IRRIGATION HEAD |

SHEET INFO AND REFERENCE

- THIS TOPOGRAPHIC SURVEY WAS PROVIDED BY GSW/STZ ENGINEERING GROUP, INC. (TELEPHONE: 415) 883-8850 (ADDRESS: 45 LYBURN COURT, NOVATO, CA 94949).
- ADDITIONAL INFORMATION (SHOWN SCREENED) IS FROM RECORD DRAWINGS PROVIDED BY THE OWNER AND SITE INVESTIGATIONS BY VERDE DESIGN.
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STAMP

CONSULTANT

SHEET TITLE

EXISTING CONDITIONS - VOLLEYBALL/FUTSAL/P.E. COURTYARDS

PROJECT NAME

COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS

PROJECT ADDRESS

**835 COLLEGE AVE.
 KENTFIELD, CA
 94904**

SUBMITTAL

DATE

80% CD SUBMITTAL 06/16/17

100% SUBMITTAL 06/30/17

NO. REVISIONS DATE

1 ADDENDUM #1 08/17/17

DRAWN BY

BH

CHECKED BY

DC

DATE ISSUED

06/30/17

SCALE

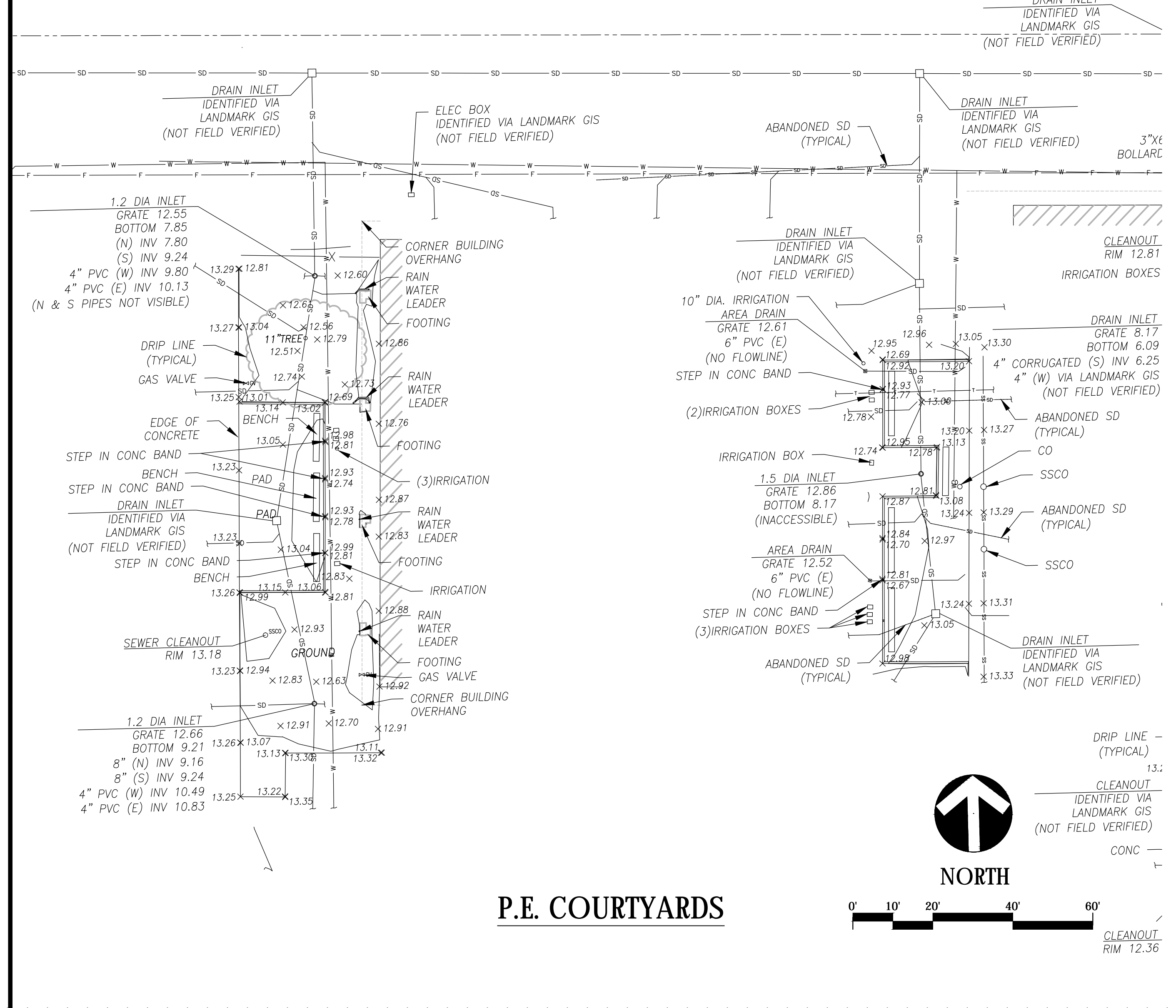
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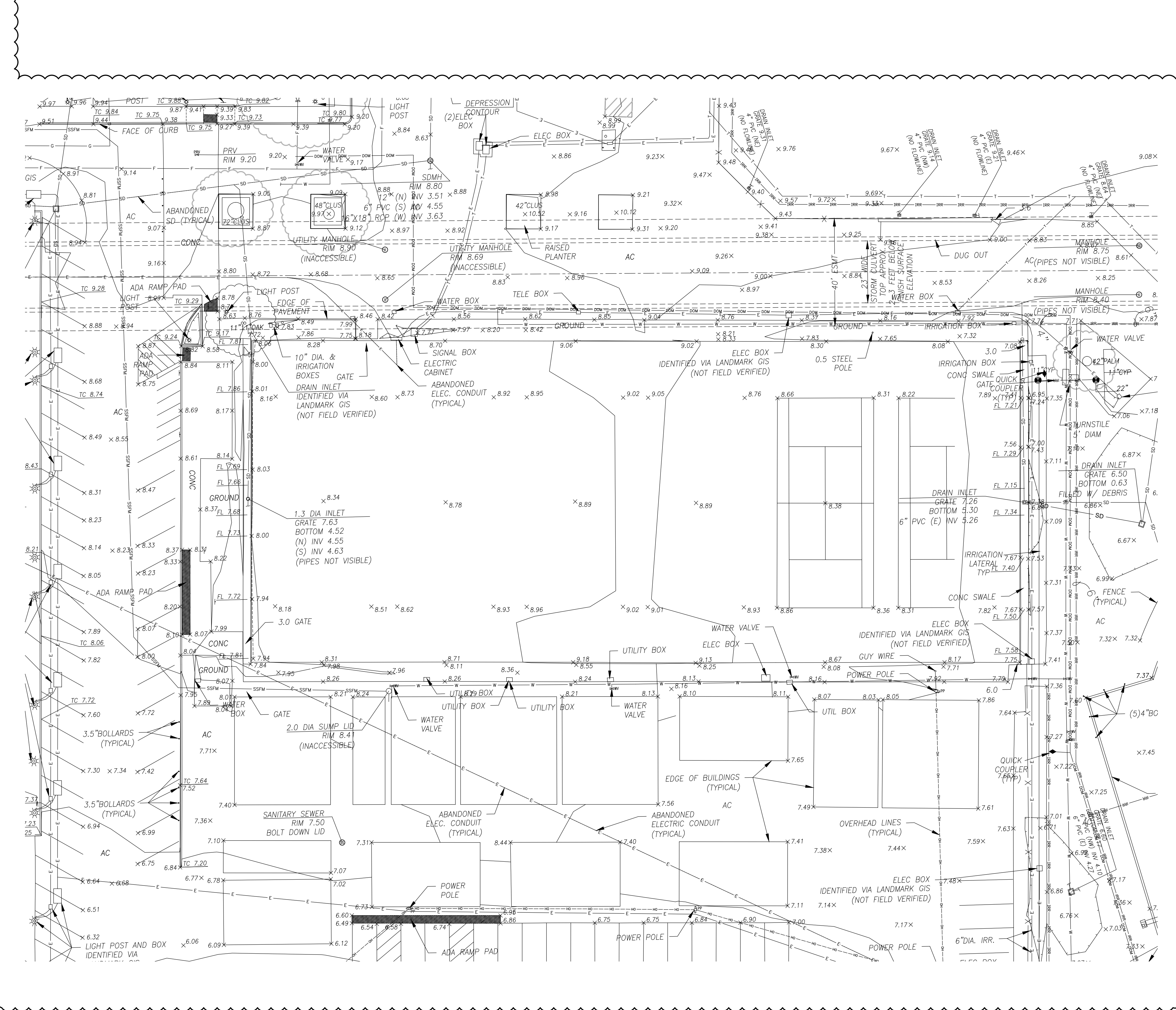
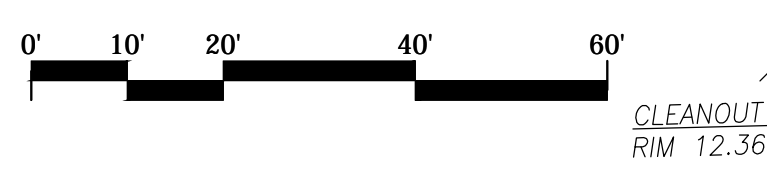
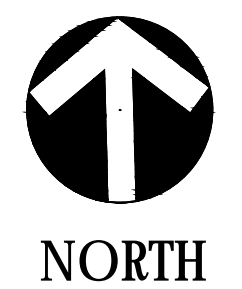
1702200

SHEET NO.

L1.2



P.E. COURTYARDS



- NOTES**
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ABBREVIATIONS

AC	ASPHALTIC CONCRETE	GV	GAS VALVE
BFP	BACK FLOW PREVENTOR	HYD	HYDRANT
BLDG	BUILDING	IRR	IRRIGATION
CL	CENTER LINE	OH	OVERHANG
CLUS	TREE CLUSTER	PRV	PRESSURE REDUCING VALVE
CONC	CONCRETE	SDCO	STORM DRAIN CLEANOUT
DEP	DEPRESSED	SDMH	STORM DRAIN MANHOLE
DIA	DIAMETER	SS	SANITARY SEWER
E	ELECTRIC	SSCO	SANITARY SEWER CLEANOUT
EB	EDGE OF BOX	SSMH	SANITARY SEWER MANHOLE
ELEC	ELECTRICAL	STL	STEEL
EP	EDGE OF PAVEMENT	TC	TOP OF CURB
EOC	EDGE OF CONCRETE	TELE	TELEPHONE
FDC	FIRE DEPARTMENT CONNECTION	TOE	TOE OF BANK
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FL	FLOW LINE	TYP	TYPICAL
G	GAS	TW	TOP OF WALL
GB	GRADE BREAK	W	WATER
GS	GROUND SHOT	WV	WATER VALVE

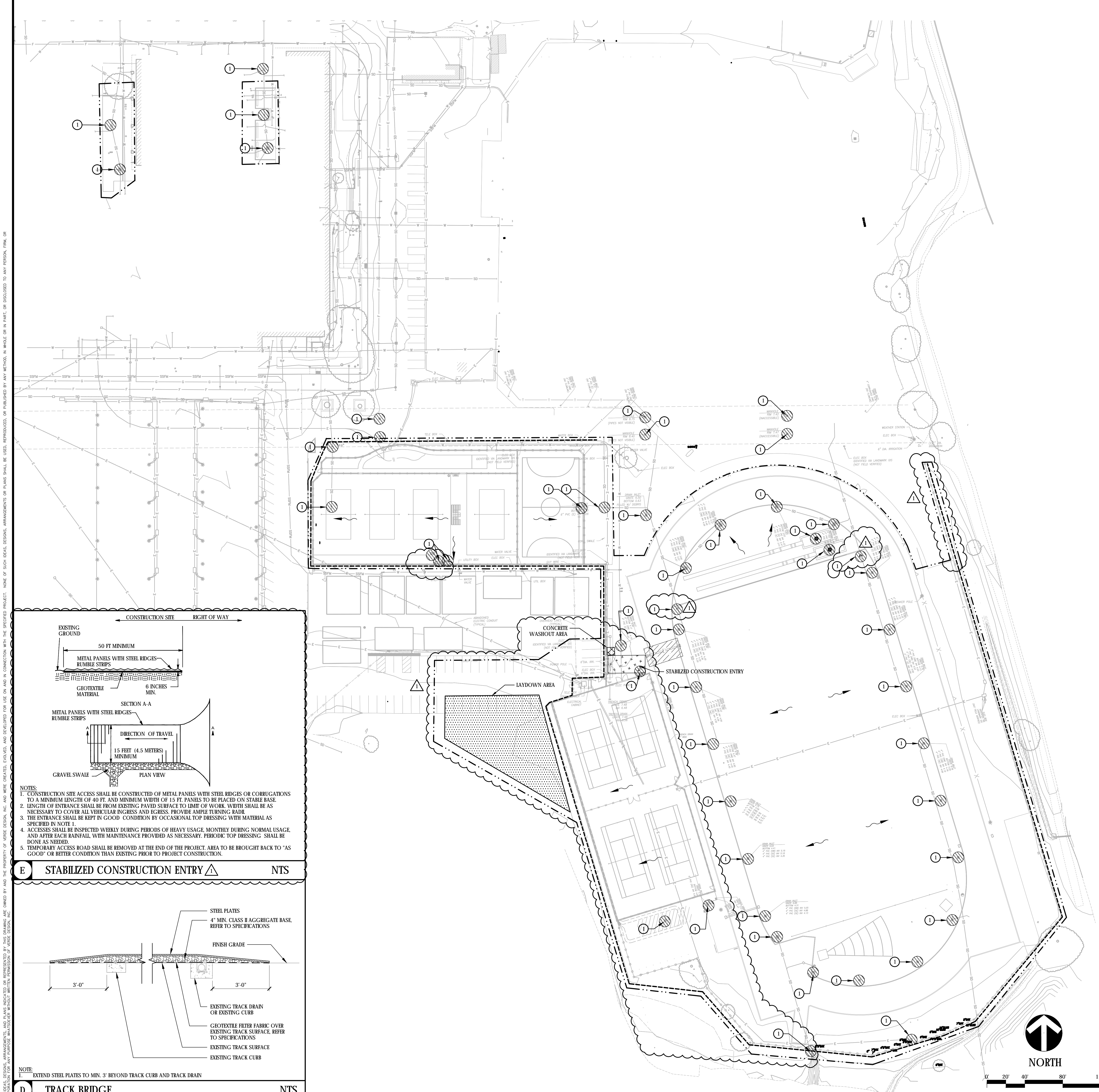
LEGEND

	ABANDONED UTILITY		RETAINING WALL
	BUILDING		SANITARY SEWER FORCE MAIN
	CONTOUR MAJOR (5' INTERVAL)		STORM DRAIN PER LANDMARK GIS
	CONTOUR MINOR (1' INTERVAL)		STORM DRAIN PER FIELD SURVEY
	DRIP LINE		SWALE / FLOWLINE
	EDGE OF BRUSH		TOE OF BANK
	ELECTRIC		TOP OF BANK
	FENCE		UNKNOWN UTILITY
	FIRE LINE		WATER LINE
	GAS		DOMESTIC WATER LINE
	GRADE BREAK LINE		IRRIGATION MAIN LINE
	LIGHT CONDUIT		
	OVER HEAD LINE		

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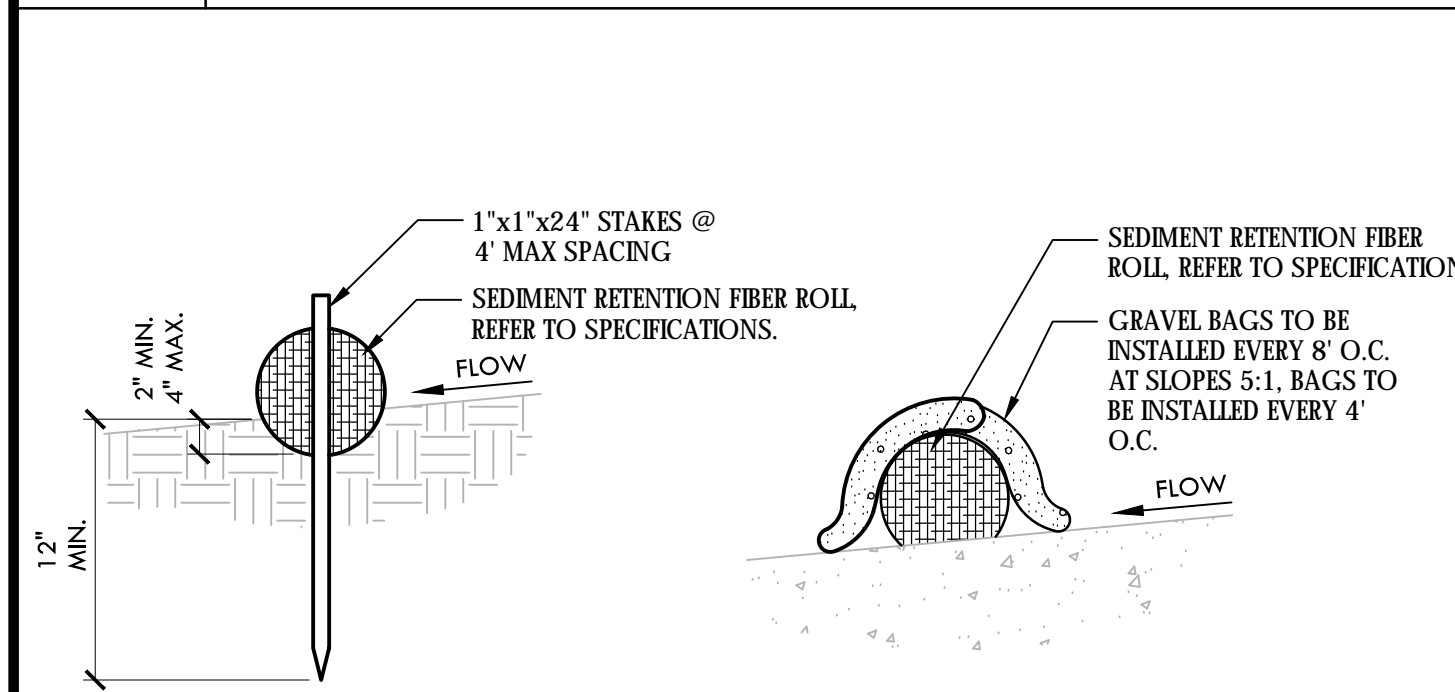


EROSION AND SEDIMENT CONTROL NOTES

1. EROSION AND SEDIMENT CONTROL SHALL BE CONSTRUCTED DURING FIRST WEEK OF CONSTRUCTION.
2. EROSION AND SEDIMENT CONTROL SHALL REMAIN THROUGHOUT CONSTRUCTION AND BE REMOVED AND DISPOSED OF DURING MAINTENANCE PERIOD.
3. EROSION AND SEDIMENT CONTROL MAY BE ADJUSTED THROUGH CONSTRUCTION WITH APPROVAL OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
4. CONTRACTOR SHALL SWEEP STREETS AND PARKING AREAS AFFECTED BY CONSTRUCTION WITH STREET SWEEPER AS REQUIRED TO KEEP PAVING CLEAN OF CONSTRUCTION DEBRIS.

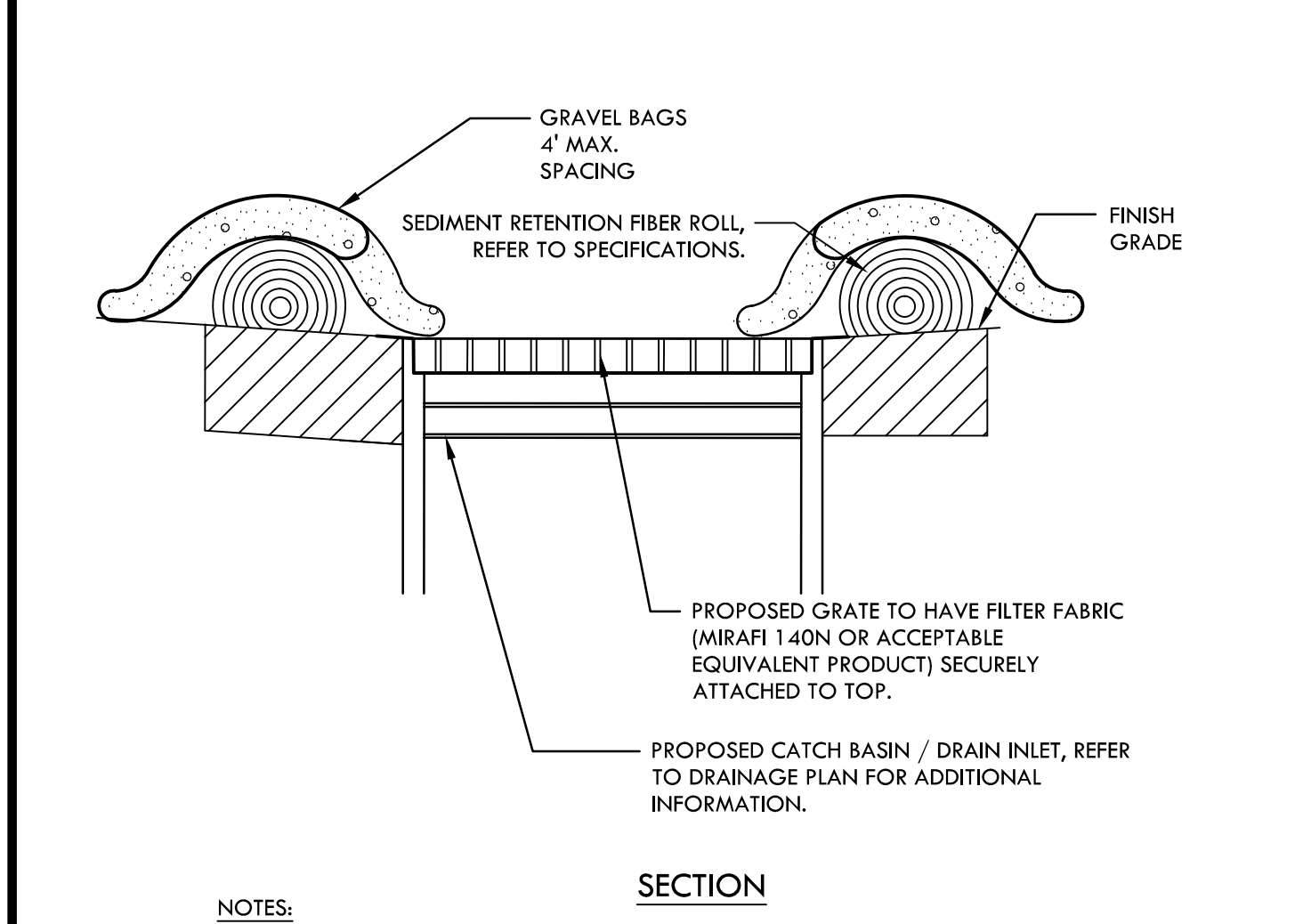
EROSION AND SEDIMENT CONTROL LEGEND

SYM	DESCRIPTION	DTL REF
(1) (hatched circle)	FILTER FABRIC TO BE SECURELY ATTACHED TO DRAINAGE STRUCTURE TOP AND PERIMETER WADDLE	(B)
(---)	LIMIT OF WORK/TEMPORARY CONSTRUCTION FENCE	
(---)	SEDIMENT RETENTION FIBER BARRIER	(A)
(---)	CONSTRUCTION WASHOUT AREA - PROVIDE A WASHOUT BIN FOR CONSTRUCTION WASHOUT AND REMOVE AT END OF CONSTRUCTION.	(C)
(---)	CONSTRUCTION STAGING AREA	
(---)	STABILIZED CONSTRUCTION ENTRY	(E)
(---)	TRACK BRIDGE	(D)
(---)	DIRECTION OF SURFACE FLOW	

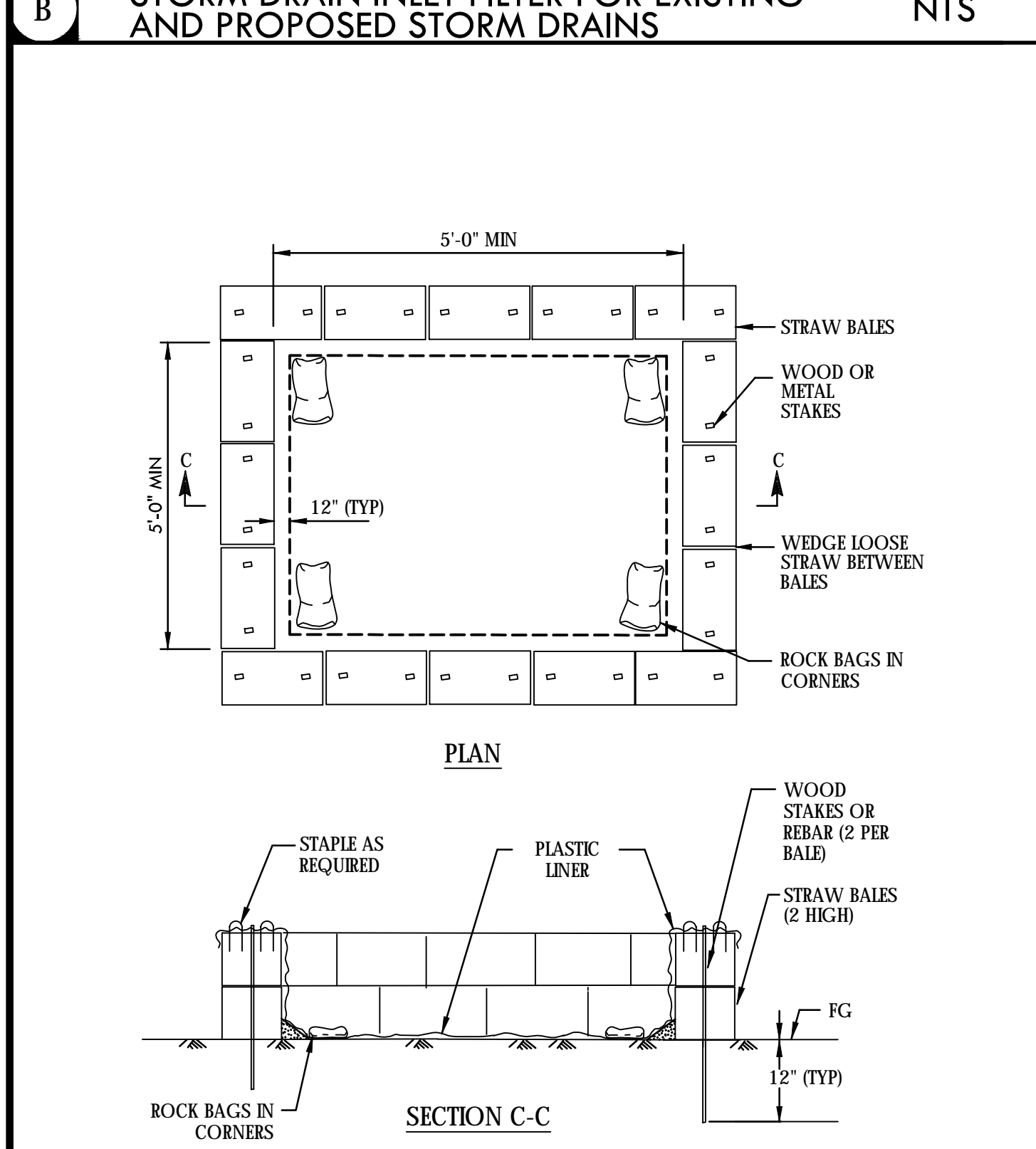


- NOTES:
1. INSTALL SEDIMENT RETENTION FIBER ROLLS (FIBER ROLLS / WATTLES) AS LOCATED ON PLANS AND AS REQUIRED PER THE STATE GENERAL PERMIT FOR STORMWATER DISCHARGE.
 2. FIBER ROLLS SHALL BE CONSTRUCTED LONG ENOUGH TO EXTEND ACROSS FLOW PATH OF POTENTIAL RUN-OFF AND RUN-ON.
 3. PREPARE GRADES REMOVING SURFACE DEVIATIONS, LARGE STONES OR DEBRIS THAT WILL INHIBIT CONTINUOUS CONTACT OF THE FIBER ROLL WITH THE GRADE.
 4. PRIOR TO FIBER ROLL INSTALLATION EXCAVATE A CONCAVE TRENCH 2" MIN., 4" MAX. DEEP ALONG THE PROPOSED FIBER ROLL LOCATION.
 5. INSTALL FIBER ROLLS WITH CONTINUOUS CONTACT OF THE BOTTOM OF THE EXCAVATED TRENCH.
 6. STAKE ROLL ON BOTH SIDES 2' FROM OF ENDS AND AT 4' MAXIMUM SPACING WITH 2" X 2" X 24" STAKES. DRIVE STAKES IN ON ALTERNATING SIDES OF THE ROLL AND OVERLAP ADJUTING ROLL ENDS 12" MIN.
 7. BACKFILL BOTH SIDES TO WATTLE AND TAMP SOIL TO FIRM AND STABLE.
 8. CONTRACTOR SHALL MAKE WEEKLY INSPECTIONS OR AS INDICATED IN STORMWATER POLLUTION PREVENTION PLAN, OR THE STATE GENERAL PERMIT FOR STORMWATER DISCHARGE.

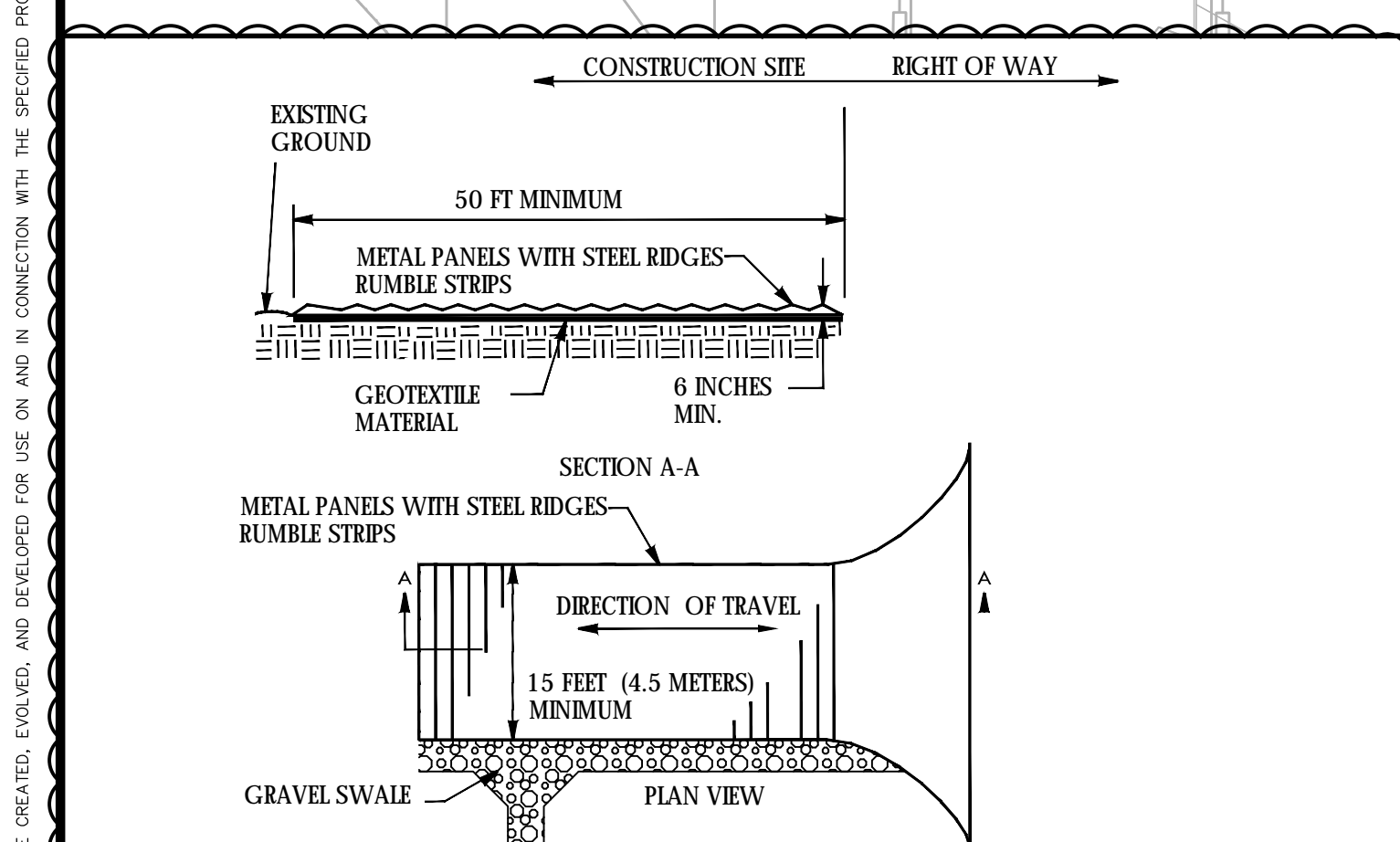
A SEDIMENT RETENTION FIBER ROLL NTS



B STORM DRAIN INLET FILTER FOR EXISTING AND PROPOSED STORM DRAINS NTS

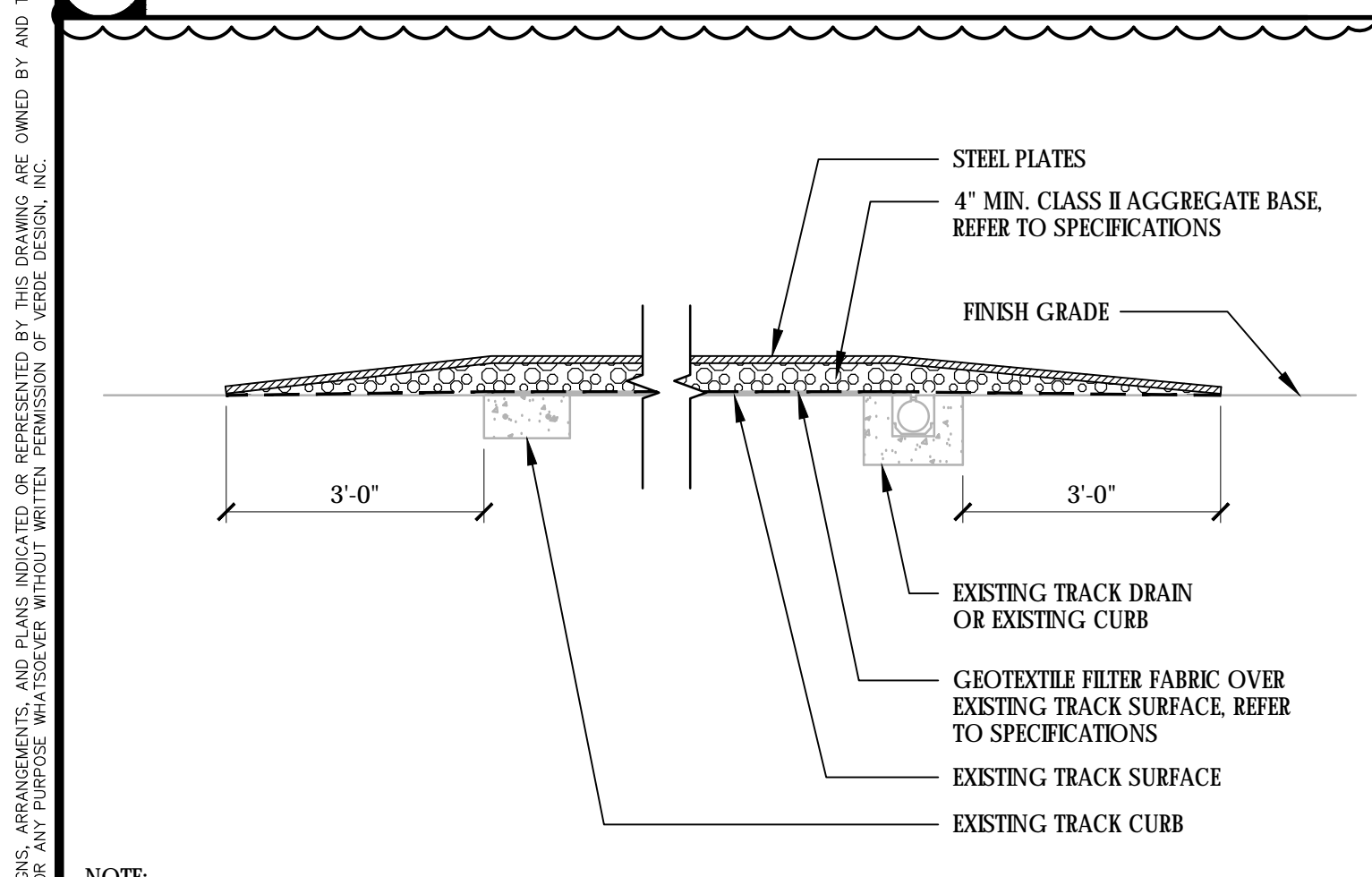


C TEMPORARY CONCRETE WASHOUT FACILITY NTS



- NOTES:
1. CONSTRUCTION SITE ACCESS SHALL BE CONSTRUCTED OF METAL PANELS WITH STEEL RIDGES OR CORRUGATIONS TO A MINIMUM LENGTH OF 40 FT. AND MINIMUM WIDTH OF 15 FT. PANELS TO BE PLACED ON STABLE BASE.
 2. LENGTH OF ENTRANCE SHALL BE FROM EXISTING PAVED SURFACE TO LIMIT OF WORK. WIDTH SHALL BE AS NECESSARY TO COVER ALL VEHICULAR INGRESS AND EGRESS. PROVIDE AMPLE TURNING RADIUS.
 3. THE ENTRANCE SHALL BE KEPT IN GOOD CONDITION BY OCCASIONAL TOP DRESSING WITH MATERIAL AS SPECIFIED IN NOTE 1.
 4. ACCESSES SHALL BE INSPECTED WEEKLY DURING PERIODS OF HEAVY USAGE, MONTHLY DURING NORMAL USAGE AND AFTER EACH RAINFALL, WITH MAINTENANCE PROVIDED AS NECESSARY. PERIODIC TOP DRESSING SHALL BE DONE AS NEEDED.
 5. TEMPORARY ACCESS ROAD SHALL BE REMOVED AT THE END OF THE PROJECT. AREA TO BE BROUGHT BACK TO "AS GOOD" OR BETTER CONDITION THAN EXISTING PRIOR TO PROJECT CONSTRUCTION.

E STABILIZED CONSTRUCTION ENTRY NTS



D TRACK BRIDGE NTS

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STAMP

CONSULTANT

SHEET TITLE
EROSION AND SEDIMENT CONTROL PLAN - OVERALL CAMPUS PLAN

PROJECT NAME
COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS

PROJECT ADDRESS
835 COLLEGE AVE. KENTFIELD, CA 94904

SUBMITTAL	DATE
80% CD SUBMITTAL	06/16/17
100% SUBMITTAL	06/30/17

NO.	REVISIONS	DATE
△	ADDENDUM #1	08/17/17

DRAWN BY: **KL** CHECKED BY: **DC**
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 PROJ. NO.: **1702200**

SHEET NO. **L2.0**



CONSULTANT

SHEET TITLE
**DEMOLITION PLAN -
 SOCCER/LACROSSE
 AND TENNIS COURTS**

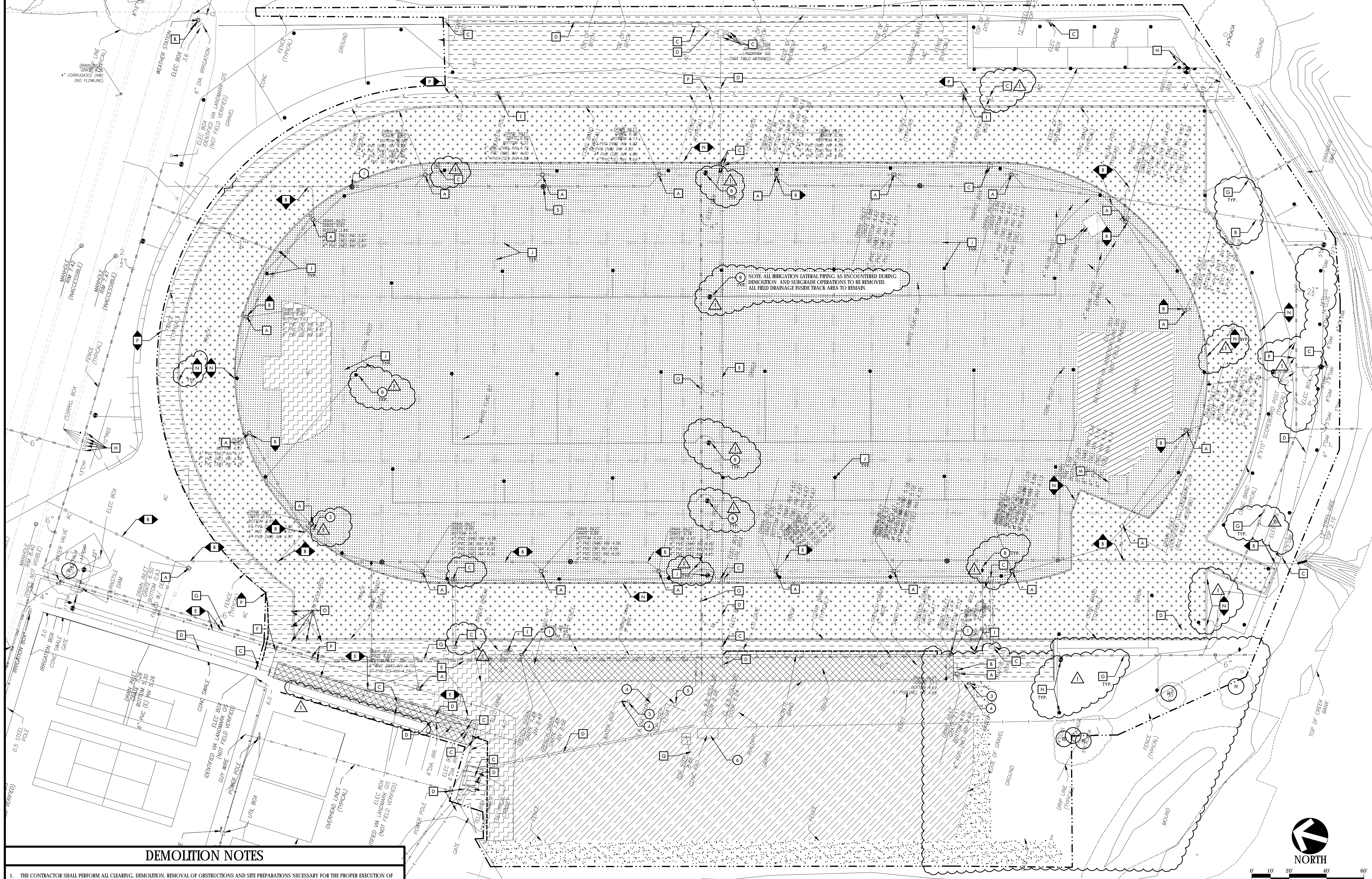
PROJECT NAME
**COLLEGE OF MARIN
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DRAWN BY	WD	CHECKED BY	DC
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PROJ. NO.	1702200	SHEET NO.	L3.1



NOTE: ALL IRRIGATION LATERAL PIPING AS ENCOUNTERED DURING DEMOLITION AND SURGRADE OPERATIONS TO BE REMOVED. ALL FIELD DRAINAGE INSIDE TRACK AREA TO REMAIN.

DEMOLITION NOTES

- THE CONTRACTOR SHALL PERFORM ALL CLEARING, DEMOLITION, REMOVAL OF OBSTRUCTIONS AND SITE PREPARATIONS NECESSARY FOR THE PROPER EXECUTION OF ALL WORK CONTAINED IN THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND PROVIDE THE REQUIRED COORDINATION FOR THEIR TEMPORARY DISCONNECTION, PROTECTION, REMOVAL AND/OR STORAGE AS MAY BE REQUIRED DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE WHETHER TEMPORARY SERVICES ARE NECESSARY.
- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID SUBMITTAL TO DETERMINE THE EXACT EXTENT AND DEPTH OF SITE DEMOLITION REQUIRED AND VERIFY COMPLIANCE WITH DRAWINGS. THE OWNER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THE CONTRACT DOCUMENTS SHALL BE DEEMED TO BE APPROXIMATIONS ONLY. ALL DISCREPANCIES BETWEEN WHAT IS SHOWN AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 227-2800 PRIOR TO ANY DEMOLITION OR EXCAVATION. UPON COMPLETION OF USA MARKING OPERATIONS, CONTRACTOR SHALL RECORD ALL UTILITY MARKINGS ON A SEPARATE SET OF DRAWINGS. THIS SET SHALL BE KEPT ON-SITE FOR REFERENCE FOR DURATION OF CONTRACT. NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY SHOULD CONFLICTS ARISE AND REDIRECT WORK TO AVOID DELAY.
- ALL EXISTING ITEMS ARE TO REMAIN UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING. AT CONTRACTOR'S EXPENSE ANY EXISTING ITEM DAMAGED OR DESTROYED BY CONSTRUCTION OPERATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY AND ALL DAMAGES TO ADJACENT PROPERTIES. THE DAMAGED ITEMS SHALL BE RESTORED TO AN "AS-WAS" OR BETTER CONDITION OR REPLACED PER THE DISCRETION OF THE OWNER'S REPRESENTATIVE.
- PRIOR TO ANY DEMOLITION WORK, CONTRACTOR SHALL INSTALL SELF-SUPPORTING INTERLOCKING CHAIN-LINK TEMPORARY CONSTRUCTION FENCING TO ENCLOSE AND SECURE THE PROJECT AREA LIMIT OF WORK. THE FENCING SHALL CONTAIN PEDESTRIAN AND/OR VEHICULAR ACCESS GATES AS NECESSARY AND SHALL BE MINIMUM 6 FEET HIGH WITH A TOP AND BOTTOM RAIL WITH KNUCKLED TOP AND BOTTOM SEWAGE (NO BARBED WIRE PERMITTED). ASHALL INCLUDE FULL HEIGHT FREESTRIP SHADE CLOTH COVERING. THE CONSTRUCTION FENCING WORK SHALL BE SUBJECT TO THE DISCRETION OF THE OWNER'S REPRESENTATIVE.
- PRIOR TO ANY DEMOLITION WORK, CONTRACTOR SHALL PROTECT ALL EXISTING PLANT MATERIAL NOT SCHEDULED FOR REMOVAL BY INSTALLING TEMPORARY 4 FOOT HIGH "BLAZE ORANGE" CONSTRUCTION SAFETY FENCING AT THE DIAPHRAGM OR PERIMETER. THE FENCING SHALL BE SECURED WITH DRIVEN METAL STAKES. ALL TREE PROTECTION WORK SHALL BE SUBJECT TO THE DISCRETION OF THE OWNER'S REPRESENTATIVE.
- DEMOLITION SHALL INCLUDE THE REMOVAL OF ITEM AND ANY FOUNDATION OR STRUCTURAL SUPPORT RELATED TO ITEM FOR PLANT MATERIAL. THIS SHALL INCLUDE STUMPS AND ROOTS OVER 2 INCHES IN DIAMETER. DISPOSAL SHALL BE OFF-SITE IN A LEGAL MANNER ACCEPTABLE TO THE OWNER'S REPRESENTATIVE AND IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
- REFER TO SPECIFICATIONS FOR ADDITIONAL CLEARING, GRUBBING, TOPSOIL STOCKPILING AND OTHER PERTINENT INFORMATION.

DEMOLITION LEGEND

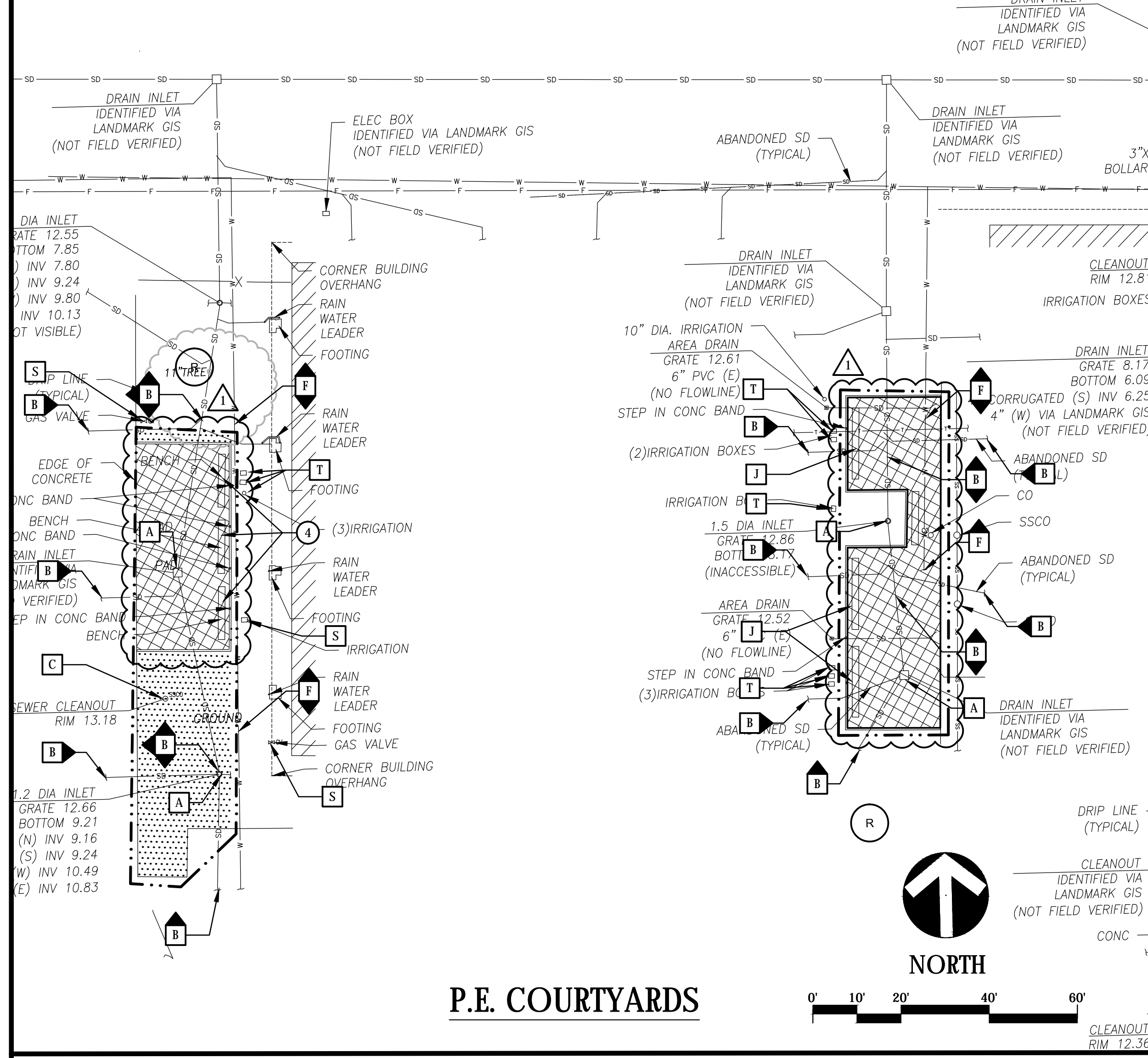
SYM	DESCRIPTION	SYM	DESCRIPTION
[Hatched Pattern]	LIMIT OF WORK	[Hatched Pattern]	EXISTING ASPHALT PAVING, INCLUDING BASE MATERIAL TO BE DEMOLISHED AND REMOVED.
[Hatched Pattern]	CLEAR AND GRUB EXISTING VEGETATED AREA. ORGANIC MATERIAL TO BE REMOVED FROM NEW SYNTHETIC TURF AND TRACK SURFACING AREAS.	[Hatched Pattern]	REMOVE EXISTING TREES
[Hatched Pattern]	CLEAR AND GRUB EXISTING VEGETATED AREA. EXISTING NATIVE MATERIAL TO BE CLEAR AND STRIPPED.	[Hatched Pattern]	TREE TO REMAIN AND BE PROTECTED. REFER TO SPECIFICATIONS
[Hatched Pattern]	EXISTING ASPHALT PAVING INCLUDING BASE MATERIALS AND HEADERBOARDS TO REMAIN AND BE PROTECTED.	[Hatched Pattern]	SAWCUT AND REMOVE EXISTING PAVING INCLUDING BASE MATERIAL.
[Hatched Pattern]	EXISTING ALL-WEATHER TRACK SURFACING TO REMAIN AND BE PROTECTED		
[Hatched Pattern]	EXISTING EXPOSED SOIL/SUBGRADE TO BE REMOVED AS NECESSARY TO ACHIEVE NEW GRADES FOR PROPOSED WORK. STOCKPILED SOIL SHALL BE STOCKPILED AND USED AS FILL MATERIAL. CONTRACTOR TO PROVIDE ARCHITECT GEOTECH WITH PROPOSED BRUSH LOCATION AND GAIN APPROVAL BEFORE USE.		
[Hatched Pattern]	EXISTING TRACK PINES TO BE DEMOLISHED AND REMOVED.		
[Hatched Pattern]	EXISTING GRAVEL, INCLUDING BASE MATERIAL, TO BE STOCKPILED AND REUSED AND AS BASE MATERIAL. CONTRACTOR TO PROVIDE ARCHITECT WITH PROPOSED BRUSH LOCATION AND GAIN APPROVAL BEFORE USE.		

DEMOLITION ITEMS

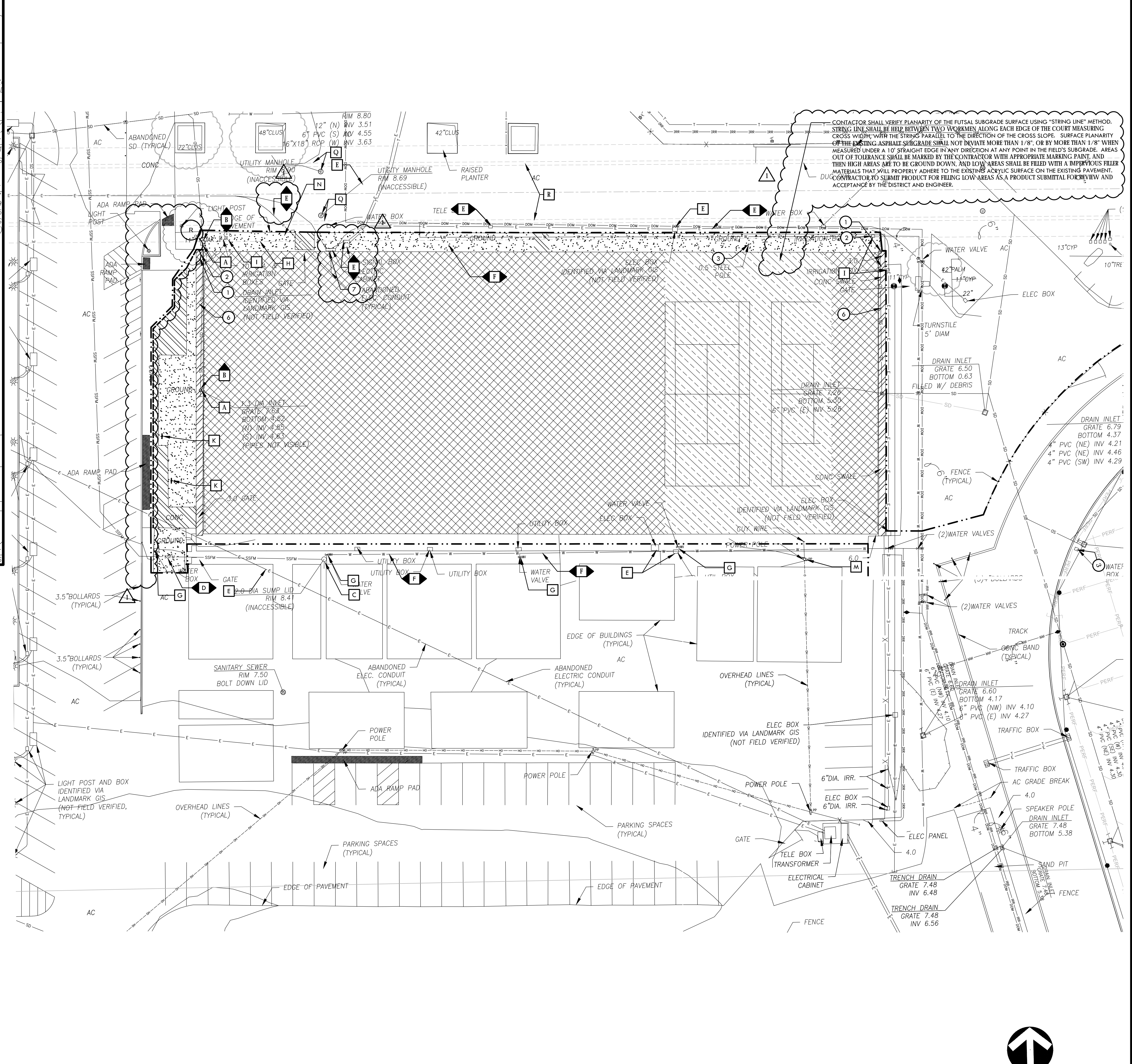
ITEMS TO BE DEMOLISHED & REMOVED/ABANDONED	ITEMS TO BE PROTECTED OR RELOCATED	ITEMS TO BE PROTECTED OR RELOCATED
1 STORM DRAIN STRUCTURE TO BE DEMOLISHED AND REMOVED.	A STORM DRAIN STRUCTURE TO REMAIN AND BE PROTECTED. STRUCTURES WITHIN LIMITS OF PROPOSED SYNTHETIC TURF THAT ARE NOT A PART OF THE NEW STORM SYSTEM SHALL BE FITTED WITH NEW SOLID METAL LID AND ABANDON IN PLACE. STRUCTURES TO BE MODIFIED SHALL BE FITTED WITH NEW SOLID METAL LID AND SET TO PROPOSED TOP OF ROCK ELEVATION. STRUCTURES IN HARDSCAPE TO BE ADJUSTED TO PROPOSED FINISH SURFACE ELEVATION. REFER TO DRAINAGE PLAN FOR ADDITIONAL INFORMATION.	I LIGHT POLE AND ASSOCIATED BASE MATERIALS SHALL REMAIN AND BE PROTECTED.
2 STORM DRAIN LINE TO BE DEMOLISHED AND REMOVED.	B STORM DRAIN LINE TO REMAIN AND BE PROTECTED. ALL FIELD DRAINAGE INSIDE TRACK AREA TO REMAIN.	J PERFORATED DRAIN LINES WITHIN FIELD TO REMAIN UNLESS THEY ARE IN CONFLICT WITH PROPOSED WORK. IN WHICH CASE, LINES SHALL BE DEMOLISHED AND REMOVED.
3 WATER VALVE AND BOX TO BE DEMOLISHED AND REMOVED.	C ELECTRICAL BOXES SHALL REMAIN AND BE PROTECTED. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. ELECTRICAL BOXES WITHIN SYNTHETIC TURF SHALL RECEIVE NEW BOXES. REFER TO DETAIL Q, SHEET D1.0	K WEATHER STATION TO REMAIN AND BE PROTECTED.
4 WATER LINE TO BE CUT, CAPPED AND ABANDON UNLESS IT IS IN CONFLICT WITH PROPOSED IMPROVEMENTS, IN WHICH IT SHALL BE DEMOLISHED AND REMOVED.	D ELECTRICAL LINES SHALL REMAIN AND BE PROTECTED. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.	L DISCUS PAD AND CAGE, INCLUDING FOOTINGS, SHALL REMAIN AND BE PROTECTED.
5 DRINKING FOUNTAIN TO BE DEMOLISHED AND REMOVED.	E WATER LINE TO REMAIN AND BE PROTECTED.	M SHOT PUT PAD TO REMAIN AND BE PROTECTED.
6 CONCRETE PAD/EDGE BAND, INCLUDING BASE MATERIAL, TO BE DEMOLISHED AND REMOVED.	F WATER VALVE TO REMAIN AND BE PROTECTED.	N TRACK EDGE TO REMAIN AND BE PROTECTED.
7 STORM DRAIN CLEANOUT TO BE CAPPED AND ABANDONED BELOW PROPOSED TOP OF ROCK ELEVATION	G IRRIGATION MAINLINE TO REMAIN AND BE PROTECTED.	O BOLLARDS TO REMAIN AND BE PROTECTED.
8 IRRIGATION LATERAL LINE TO BE DEMOLISHED AND REMOVED.	H IRRIGATION VALVE AND BOX TO REMAIN AND BE PROTECTED.	P FENCING AND GATE TO REMAIN AND BE PROTECTED.
9 IRRIGATION HEADS, VALVES, QUICK COUPLER VALVES AND BOXES TO BE SALVAGED AND TURNED OVER TO OWNER'S REPRESENTATIVE.		Q INFORMATIONAL KIOSK TO BE SALVAGED AND RELOCATED. REFER TO MATERIAL PLANS FOR LOCATION.



CONSULTANT



P.E. COURTYARDS



CONTRACTOR SHALL VERIFY PLANNARITY OF THE FUTSAL SUBGRADE SURFACE USING "STRING LINE" METHOD. STRING LINE SHALL BE HELD BETWEEN TWO WORKMEN ALONG EACH EDGE OF THE COURT BY MARKING CROSS WIDTHS WITH THE STRINGS PARALLEL TO THE DIRECTION OF THE CROSS SLOPE. SURFACE PLANNARITY OF THE EXISTING ASPHALT SUBGRADE SHALL NOT DEVIATE MORE THAN 1/8" OR BY MORE THAN 1/8" WHEN MEASURED UNDER A 10' STRECHER AT ANY POINT BY THE FIELD'S SUBGRADE. AREAS OUT OF TOLERANCE SHALL BE MARKED BY THE CONTRACTOR WITH APPROPRIATE MARKING PAINT, AND THEN HIGH AREAS ARE TO BE GROUND DOWN, AND LOW AREAS SHALL BE FILLED WITH A IMPROVED FILL MATERIALS THAT WILL PROPERLY ADHERE TO THE EXISTING ASPHALT SURFACE ON THE EXISTING PAVEMENT. CONTRACTOR TO SUBMIT PRODUCT FOR FILING LOW AREAS AS A PRODUCT SUBMITAL FOR REVIEW AND ACCEPTANCE BY THE DISTRICT AND ENGINEER.

ALL UTILITIES SHOWN ON THIS DRAWING ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO ANY DEMOLITION OR EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COORDINATION WITH ALL AFFECTED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES TO REMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REMOVAL OF ALL EXISTING UTILITIES AND SERVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REMOVAL OF ALL EXISTING UTILITIES AND SERVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REMOVAL OF ALL EXISTING UTILITIES AND SERVICES.

DEMOLITION NOTES

- THE CONTRACTOR SHALL PERFORM ALL CLEARING, DEMOLITION, REMOVAL OF OBSTRUCTIONS AND SITE PREPARATIONS NECESSARY FOR THE PROPER EXECUTION OF ALL WORK CONTAINED IN THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND PROVIDE THE REQUIRED COORDINATION FOR THEIR TEMPORARY DISCONNECTION, PROTECTION, REMOVAL AND/OR STORAGE AS MAY BE REQUIRED DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE WHETHER TEMPORARY SERVICES ARE NECESSARY.
- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID SUBMITTAL TO DETERMINE THE EXACT EXTENT AND DEPTH OF SITE DEMOLITION REQUIRED AND VERIFY COMPLIANCE WITH DRAWINGS. THE OWNER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THE CONTRACT DOCUMENTS SHALL BE DEEMED TO BE APPROXIMATIONS ONLY. ALL DISCREPANCIES BETWEEN WHAT IS SHOWN AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 277-2600 PRIOR TO ANY DEMOLITION OR EXCAVATION. UPON COMPLETION OF USA MARKING OPERATIONS, CONTRACTOR SHALL RECORD ALL UTILITY MARKINGS ON A SEPARATE SET OF DRAWINGS. THIS SET SHALL BE KEPT ON-SITE FOR REFERENCE FOR DURATION OF CONTRACT. NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY SHOULD CONFLICTS ARISE AND REDIRECT WORK TO AVOID DELAY.
- ALL EXISTING ITEMS ARE TO REMAIN UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT CONTRACTOR'S EXPENSE, ANY EXISTING ITEM DAMAGED OR DESTROYED BY CONSTRUCTION OPERATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY AND ALL DAMAGES TO ADJACENT PROPERTIES. THE DAMAGED ITEMS SHALL BE RESTORED TO AN "AS-WAS" OR BETTER CONDITION OR REPLACED PER THE DISCRETION OF THE OWNER'S REPRESENTATIVE.
- PRIOR TO ANY DEMOLITION WORK, CONTRACTOR SHALL INSTALL SELF-SUPPORTING INTERLOCKING CHAIN-LINK TEMPORARY CONSTRUCTION FENCING TO ENCLOSE AND SECURE THE PROJECT AREA LIMIT OF WORK. THE FENCING SHALL CONTAIN PEDESTRIAN AND/OR VEHICULAR ACCESS GATES AS NECESSARY AND SHALL BE MINIMUM 6 FEET HIGH WITH A TOP AND BOTTOM RAIL WITH KNUCKLED TOP AND BOTTOM SILVAE (NO BARBED WIRE PERMITTED). ASPHALT INCLUDE FULL HEIGHT GREEN SHADE CLOTH COVERING. THE CONSTRUCTION FENCING WORK SHALL BE SUBJECT TO THE DISCRETION OF THE OWNER'S REPRESENTATIVE.
- PRIOR TO ANY DEMOLITION WORK, CONTRACTOR SHALL PROTECT ALL EXISTING PLANT MATERIAL NOT SCHEDULED FOR REMOVAL BY INSTALLING TEMPORARY 4 FOOT HIGH "BLAZE ORANGE" CONSTRUCTION SAFETY FENCING AT THE DRIPLINE OR PERMETER. THE FENCING SHALL BE SECURED WITH DRIVEN METAL STAKES. ALL TREE PROTECTION WORK SHALL BE SUBJECT TO THE DISCRETION OF THE OWNER'S REPRESENTATIVE.
- DEMOLITION SHALL INCLUDE THE REMOVAL OF ITEM AND ANY FOUNDATION OR STRUCTURAL SUPPORT RELATED TO ITEM FOR PLANT MATERIAL THIS SHALL INCLUDE STUMPS AND ROOTS OVER 2 INCHES IN DIAMETER. DISPOSAL SHALL BE OFF-SITE IN A LEGAL MANNER ACCEPTABLE TO THE OWNER'S REPRESENTATIVE AND IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
- REFER TO SPECIFICATIONS FOR ADDITIONAL CLEARING, GRUBBING, TOPSOIL STOCKPILING AND OTHER PERTINENT INFORMATION.

DEMOLITION LEGEND

SVM	DESCRIPTION	SVM	DESCRIPTION
(Symbol)	LIMIT OF WORK	(Symbol)	
(Symbol)	CLEAR AND GRUB EXISTING VEGETATED AREA. ORGANIC MATERIAL TO BE REMOVED FROM NEW SYNTHETIC TURF AREAS.	(Symbol)	
(Symbol)	CLEAR AND GRUB EXISTING VEGETATED AREA. EXISTING NATIVE MATERIAL TO BE CLEAR AND STRIPPED.	(Symbol)	
(Symbol)	EXISTING EXPOSED SOIL/SUBGRADE TO BE REMOVED AS NECESSARY TO ACHIEVE NEW GRADES FOR PROPOSED WORK. STOCKPILED SOIL SHALL BE STOCKPILED AND USED AS FILL MATERIAL. CONTRACTOR TO PROVIDE ARCHITECT GROUCH WITH PROPOSED REUSE LOCATION AND GAIN APPROVED BEFORE USE.	(Symbol)	
(Symbol)	EXISTING TENNIS SURFACING TO REMAIN AND BE PROTECTED.	(Symbol)	
(Symbol)	EXISTING HARDSCAPE, INCLUDING BASE MATERIAL, TO BE DEMOLISHED AND REMOVED.	(Symbol)	
(Symbol)	TREE TO REMAIN AND BE PROTECTED. REFER TO SPECIFICATIONS	(Symbol)	
(Symbol)	SAWCUT AND REMOVE EXISTING PAVING INCLUDING BASE MATERIAL.	(Symbol)	

DEMOLITION ITEMS

ITEMS TO BE DEMOLISHED AND/OR REMOVED	ITEMS TO BE PROTECTED OR RELOCATED	ITEMS TO BE PROTECTED OR RELOCATED
1 WATER LINE TO BE CUT, CAPPED, AND ABANDON IN PLACE IN LESS IT IS IN CONFLICT WITH PROPOSED IMPROVEMENTS, IN WHICH CASE, LINE TO BE DEMOLISHED AND REMOVED. 2 DRINKING FOUNTAIN TO BE DEMOLISHED AND REMOVED. 3 POST AND FOOTING TO BE DEMOLISHED AND REMOVED. 4 BENCHES, INCLUDING FOOTING, TO BE DEMOLISHED AND REMOVED. 5 NOT USED 6 CONCRETE DRAINAGE SWALE TO BE DEMOLISHED AND REMOVED. 7 ELECTRICAL BOX TO BE DEMOLISHED AND REMOVED. ELECTRICAL ITEMS WITHIN BOX TO REMAIN. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.	A STORM DRAIN STRUCTURE TO REMAIN AND BE PROTECTED. ADJUST RIM TO FINISH SURFACE ELEVATION. B STORM DRAIN LINE TO REMAIN AND BE PROTECTED. C SANITARY SEWER STRUCTURE TO REMAIN AND BE PROTECTED. D SANITARY SEWER LINE TO REMAIN AND BE PROTECTED. E ELECTRICAL LINES AND BOXES SHALL REMAIN AND BE PROTECTED. F WATER LINE TO REMAIN AND BE PROTECTED. G WATER VALVE TO REMAIN AND BE PROTECTED. H IRRIGATION MAINLINE TO REMAIN AND BE PROTECTED. I IRRIGATION VALVE AND BOX TO BE SALVAGED AND TURNED OVER TO OWNER. J BENCHES TO REMAIN AND BE PROTECTED. K ADA PARKING SIGNS TO BE SALVAGED TURNED OVER TO OWNER. L NOT USED	M OVER HEAD POWER POLE AND LINE TO REMAIN AND BE PROTECTED. N SHED TO BE SALVAGED AND TURNED OVER TO OWNER. O NOT USED P NOT USED Q MANHOLES AT CONCRETE CULVERT TO REMAIN AND BE PROTECTED. R EXISTING 20 FOOT WIDE CONCRETE CULVERT TO REMAIN AND BE PROTECTED. S GAS VALVE AND GAS LINES TO REMAIN AND BE PROTECTED. CONTRACTOR TO PHOTOGRAPH AND VERIFY LOCATION OF VALVE AND LINE PRIOR TO WORK IN THIS AREA. T IRRIGATION VALVES TO REMAIN AND BE PROTECTED.

DEMOLITION PLAN - VOLLEYBALL, FUTSAL, AND P.E. COURTYARDS

PROJECT NAME
COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS

PROJECT ADDRESS
**835 COLLEGE AVE.
 KENTFIELD, CA
 94904**

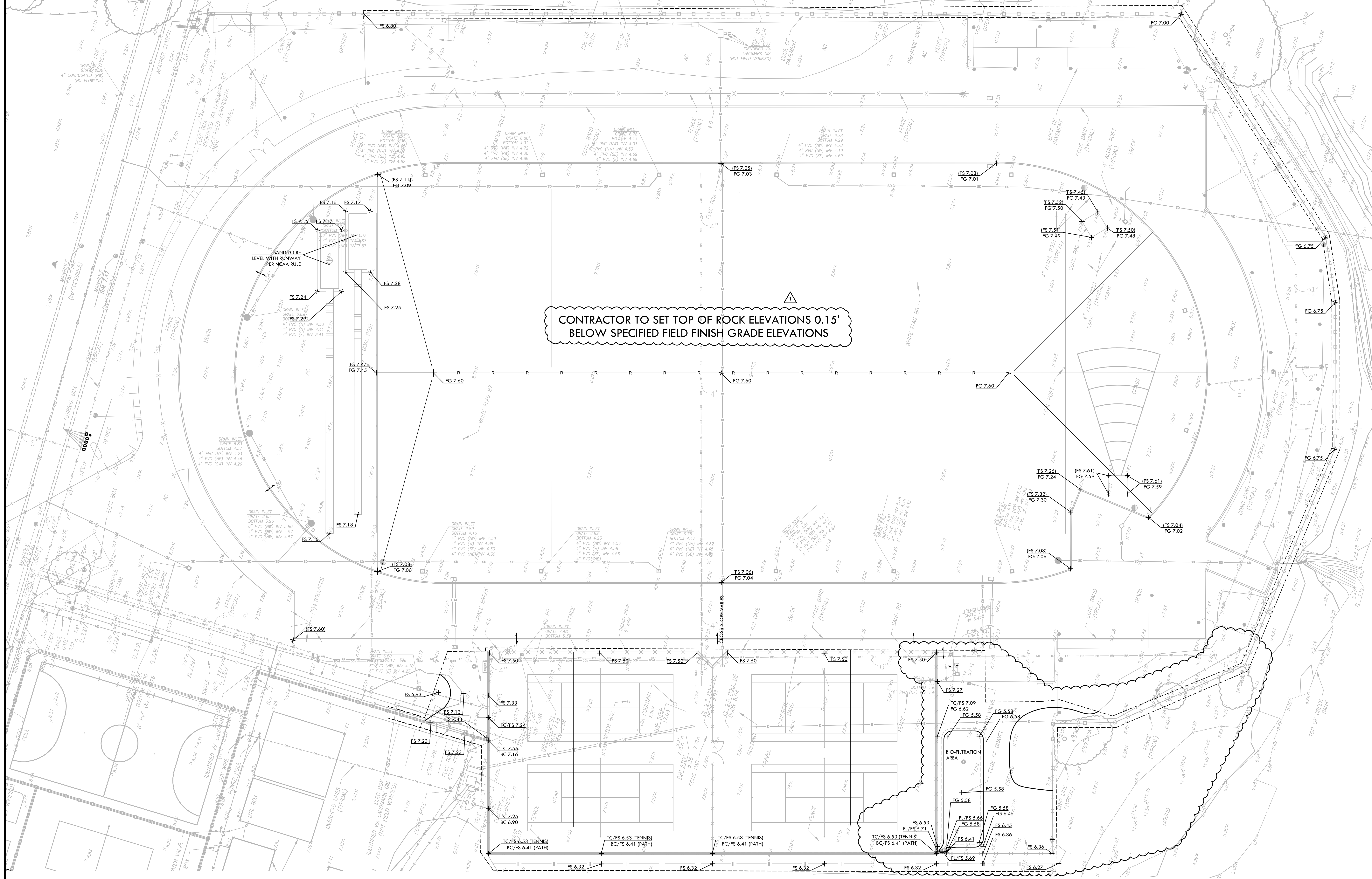
SUBMITTAL	DATE
80% CD SUBMITTAL	06/16/17
100% SUBMITTAL	06/30/17

NO.	REVISIONS	DATE
1	ADDENDUM #1	08/17/17

DRAWN BY: **WD** CHECKED BY: **DC**
 DATE ISSUED: **06/30/17** SCALE: **1" = 20'-0"**
 PROJ. NO.: **1702200**
 SHEET NO.: **L3.2**



STAMP
 CONSULTANT



CONTRACTOR TO SET TOP OF ROCK ELEVATIONS 0.15'
 BELOW SPECIFIED FIELD FINISH GRADE ELEVATIONS

SHEET TITLE
**GRADING PLAN -
 SOCCER /LACROSSE
 AND TENNIS COURTS**

PROJECT NAME
**COLLEGE OF MARIN
 ATHLETIC FACILITIES
 IMPROVEMENTS**

PROJECT ADDRESS
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 KENTFIELD, CA
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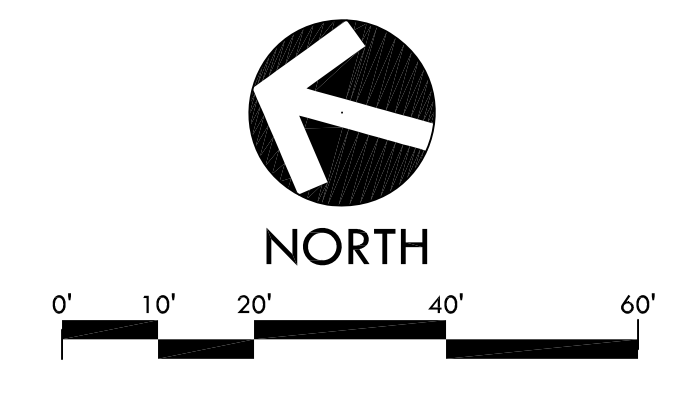
SHEET NO.: **L4.1**

GRADING NOTES

- EXISTING GRADES ARE BASED ON INFORMATION PROVIDED BY CSW/STZ ENGINEERING GROUP, INC. CONTRACTOR SHALL VERIFY EXISTING GRADES FOR ACCURACY PRIOR TO THE START OF GRADING, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY SHOULD CONFLICTS ARISE AND REDIRECT WORK TO AVOID DELAY.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THE CONTRACT DOCUMENTS SHALL BE DEEMED TO BE APPROXIMATIONS ONLY. ALL DISCREPANCIES BETWEEN WHAT IS SHOWN AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT UNDER GROUND SERVICE ALERT (USA) AT (800) 227-2600 PRIOR TO ANY DEMOLITION OR EXCAVATION. UPON COMPLETION OF USA MARKING OPERATIONS, CONTRACTOR SHALL RECORD ALL UTILITY MARKINGS ON A SEPARATE SET OF DRAWINGS. THIS SET SHALL BE KEPT ON-SITE FOR REFERENCE FOR DURATION OF CONTRACT.
- PROPOSED GRADES SHALL MEET EXISTING GRADES WITH A SMOOTH AND CONTINUOUS TRANSITION SO AS TO AVOID TRAPPING WATER. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IF PUDDING IS SUSPECTED AND REDIRECT WORK SO AS TO AVOID DELAY WHILE AWAITING RESPONSE.
- ALL EXISTING DRAINAGE STRUCTURES, BOXES, UTILITY VAULTS ETC. SHALL BE BROUGHT TO FINAL FINISH GRADE PRIOR TO FINAL SURFACE TREATMENT.

GRADING LEGEND

SYM	DESCRIPTION	SYM	DESCRIPTION
	PROPOSED CONTOUR		EXISTING CONTOUR
	PROPOSED FINISH GRADE ELEVATION OF SOFTSCAPE		EXISTING SURVEY/TOPO ELEVATION
	PROPOSED FINISH SURFACE ELEVATION OF HARDSCAPE		CONFORM TO EXISTING GRADE
	PROPOSED SUBGRADE ELEVATION OF SYNTHETIC TURF		SLOPE
	TOP OF CURB		GRADING CONFORM LINE - CONFORM TO EXISTING GRADE AT THIS LOCATION
	LOW POINT / RIM ELEVATION OF DRAIN		
	EXISTING ELEVATION		
	FLOW LINE OF COBBLE SWALE		
	CROWN OF FIELD, OR RIDGE LINE		



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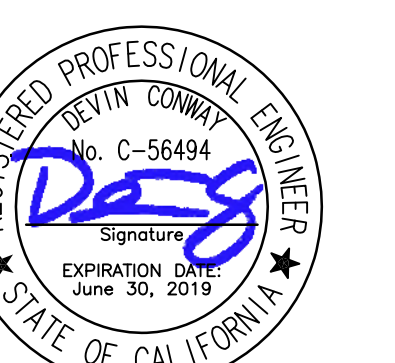


VERDE DESIGN

LANDSCAPE ARCHITECTURE
CIVIL ENGINEERING
SPORT PLANNING & DESIGN

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Santa Clara, CA 95050
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www.VerdeDesign.com

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SHEET TITLE

GRADING PLAN -
VOLLEYBALL/FUTSAL/
P.E. COURTYARDS

PROJECT NAME

COLLEGE OF MARIN
ATHLETIC FACILITIES
IMPROVEMENTS

PROJECT ADDRESS

835 COLLEGE AVE.
KENTFIELD, CA
94904

SUBMITTAL

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SCALE

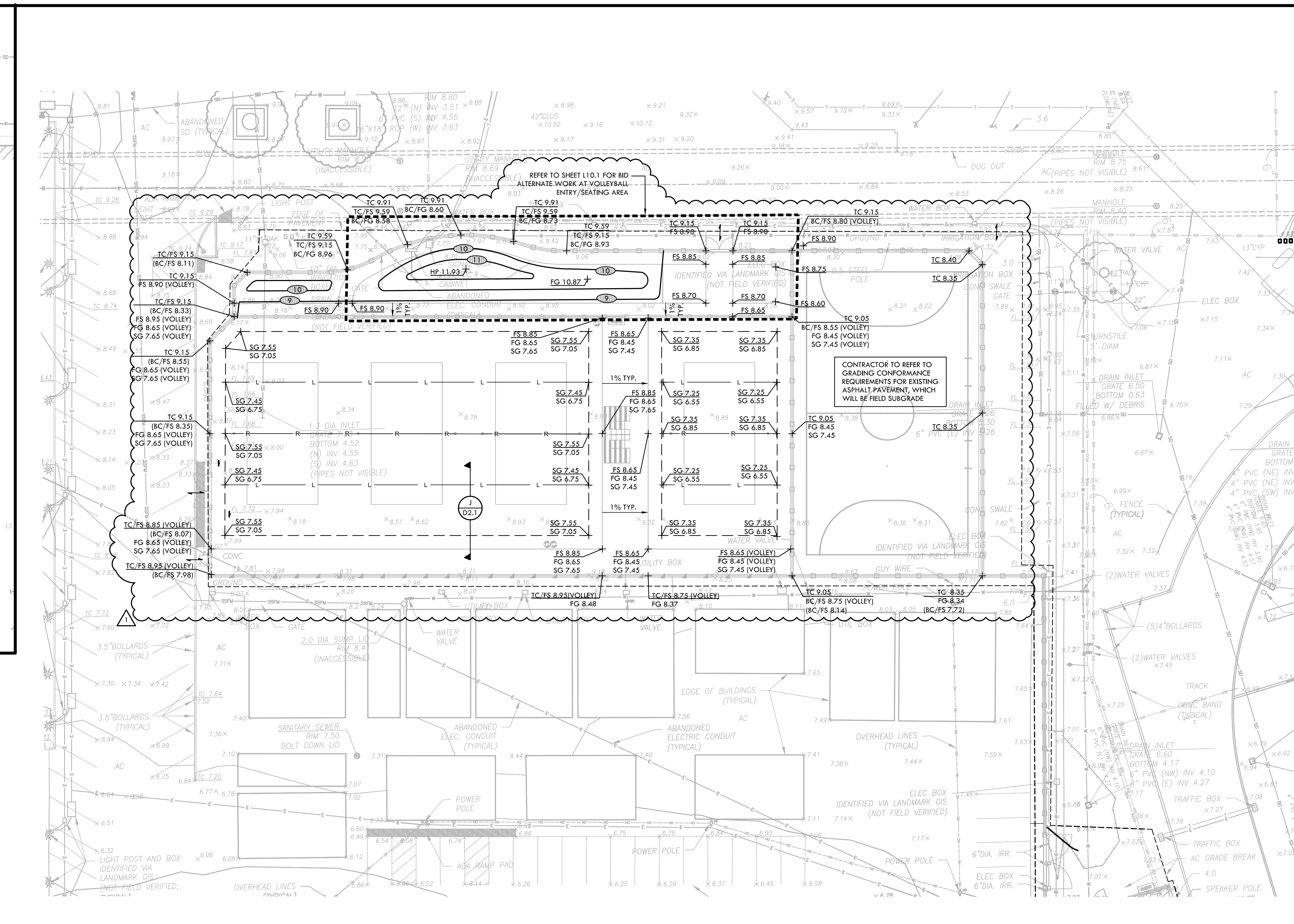
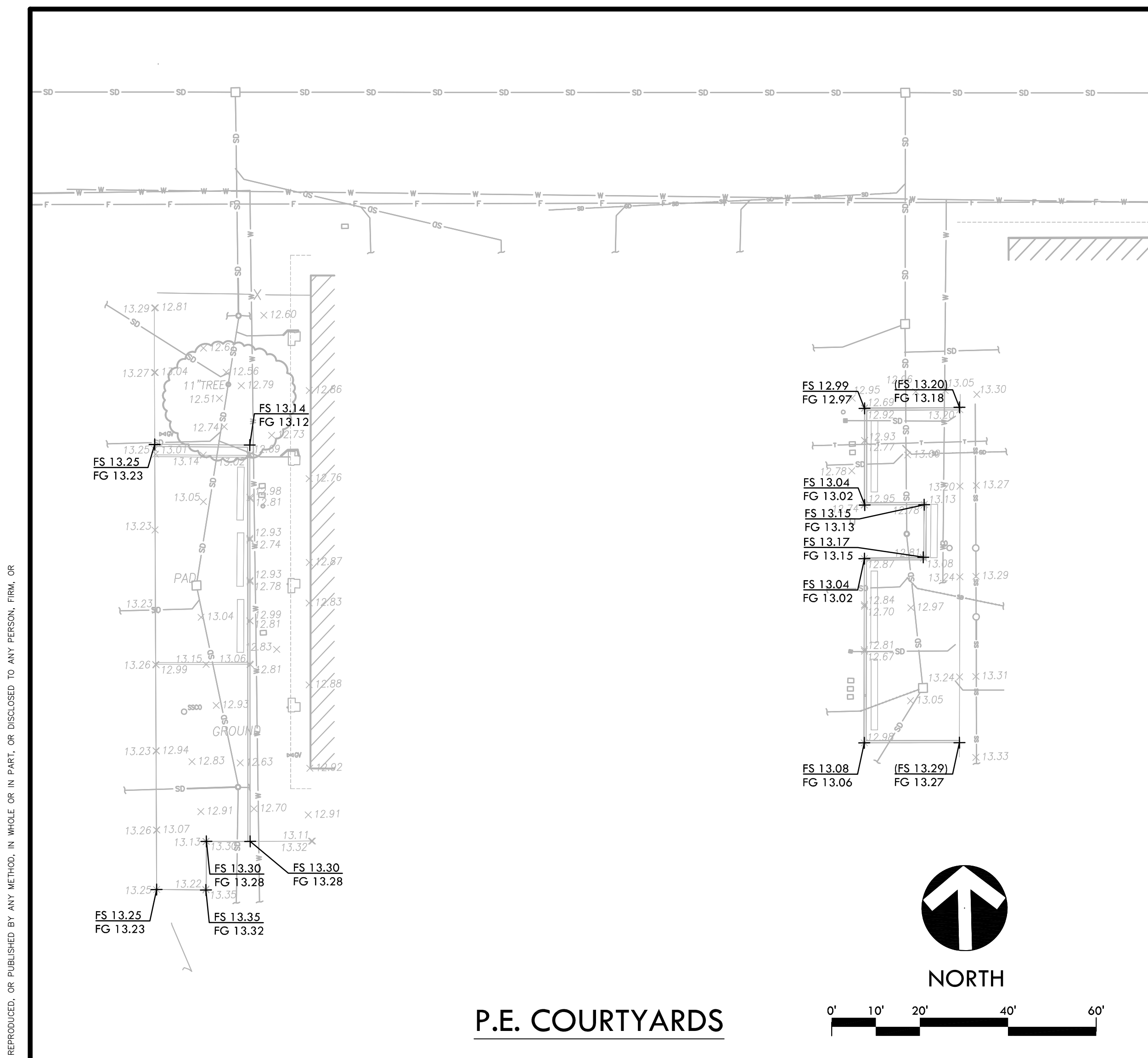
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PROJ. NO.

1702200

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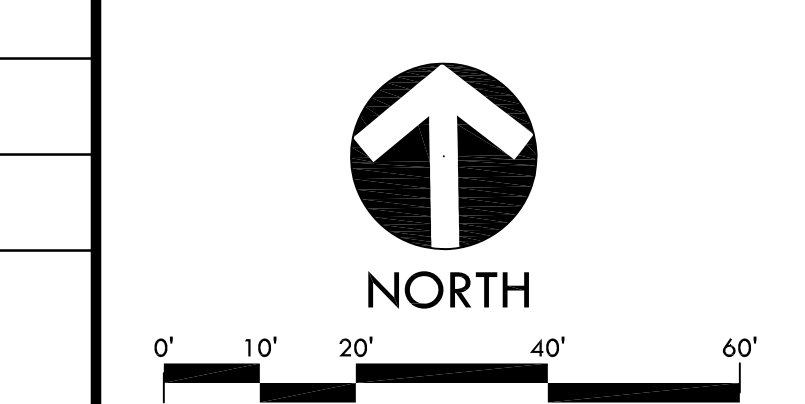
L4.2



GRADING NOTES	
1.	EXISTING GRADES ARE BASED ON INFORMATION PROVIDED BY: CSM/ST2 ENGINEERING GROUP, INC. CONTRACTOR SHALL VERIFY EXISTING GRADES FOR ACCURACY PRIOR TO THE START OF GRADING, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY SHOULD CONFLICTS ARISE AND REDIRECT WORK TO AVOID DELAY.
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3.	PROPOSED GRADES SHALL MEET EXISTING GRADES WITH A SMOOTH AND CONTINUOUS TRANSITION SO AS TO AVOID TRAPPING WATER. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IF PUDDLING IS SUSPECTED AND REDIRECT WORK SO AS TO AVOID DELAY WHILE AWAITING RESPONSE.
4.	ALL EXISTING DRAINAGE STRUCTURES, BOXES, UTILITY VAULTS ETC. SHALL BE BROUGHT TO FINAL FINISH GRADE PRIOR TO FINAL SURFACE TREATMENT.

GRADING LEGEND			
SYM	DESCRIPTION	SYM	DESCRIPTION
(B)	PROPOSED CONTOUR	---	SUBGRADE STEP LOCATION, REFER TO DETAIL J, SHEET D2.1
FG 7.50	PROPOSED FINISH GRADE ELEVATION OF SOFTSCAPE	---	CONFORM TO EXISTING ELEVATIONS
FS 7.50	PROPOSED FINISH SURFACE ELEVATION OF HARDSCAPE	---	CONTINUOUS LOW POINT
SG 7.50	PROPOSED SUBGRADE ELEVATION OF SYNTHETIC TURF	---	CONFORM TO EXISTING GRADE
TC 7.50	TOP OF CURB	0.5 %	SLOPE
RIM 7.50	LOW POINT / RIM ELEVATION OF DRAIN	---	EXISTING CONTOUR
HP 7.50	HIGH POINT OF SOFTSCAPE	8.30	EXISTING ELEVATION
(VOLLEY)	INDICATES GRADE INSIDE BEACH VOLLEYBALL AREA		
R	RIDGE LINE OF SUBGRADE		

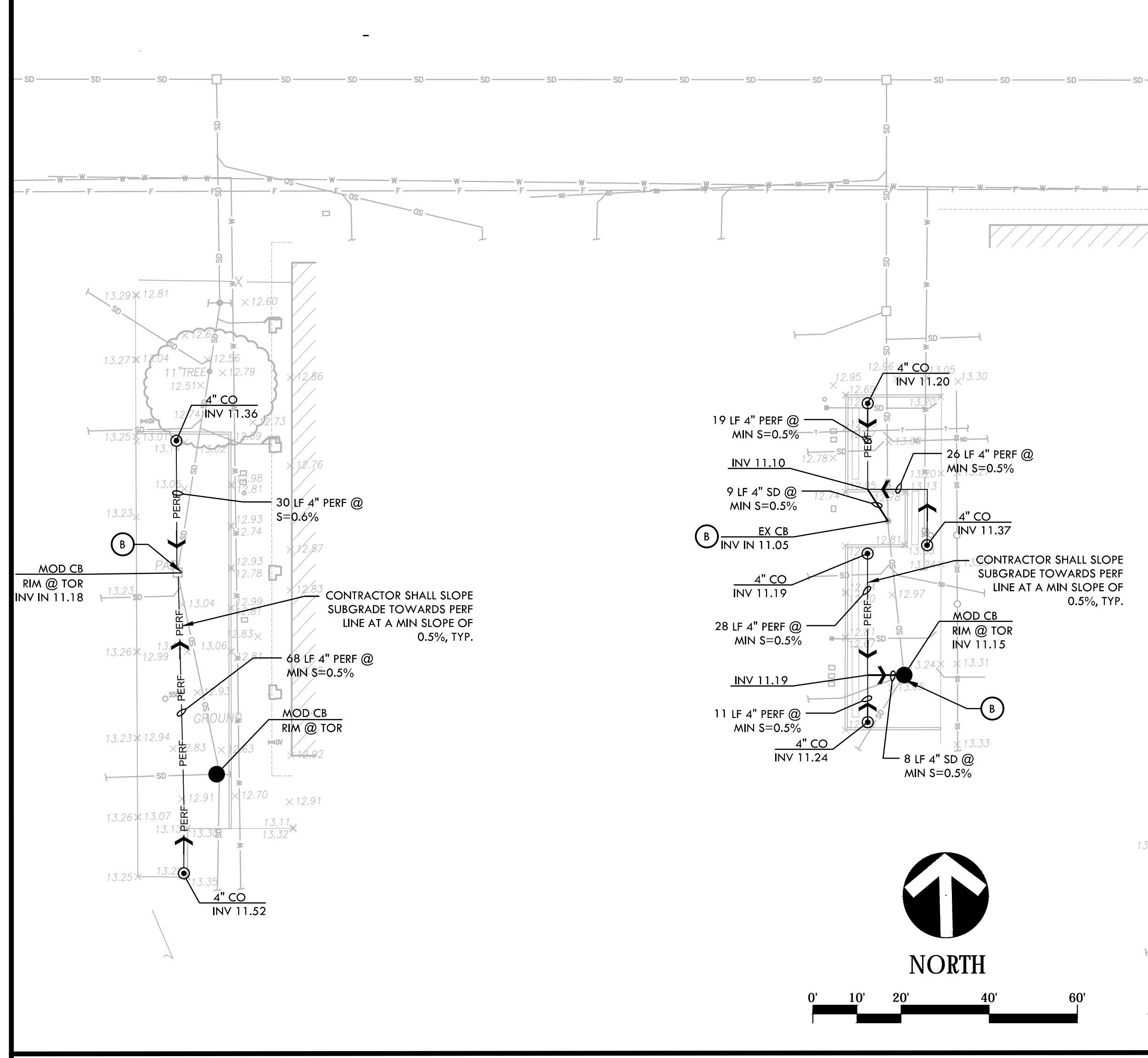
BID ALTERNATES	
BID ALTERNATE #1 - VOLLEYBALL SEATING AND ENTRY FURNISHINGS	
IF BID ALTERNATE #1 IS ACCEPTED, GRADING FOR MOUNDED SEATING AREA SHALL BE PER BID ALTERNATE GRADING PLAN ON SHEET L10.1	



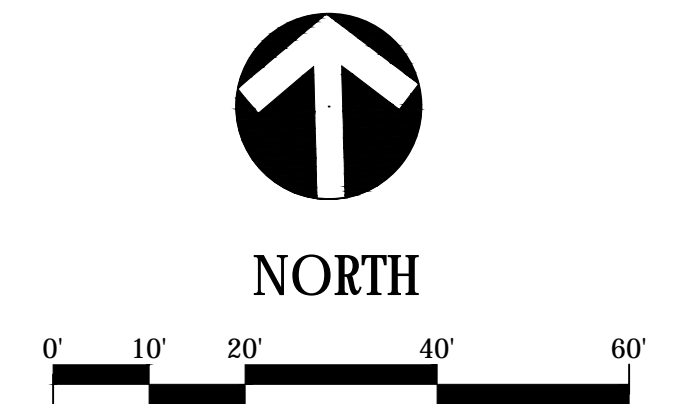
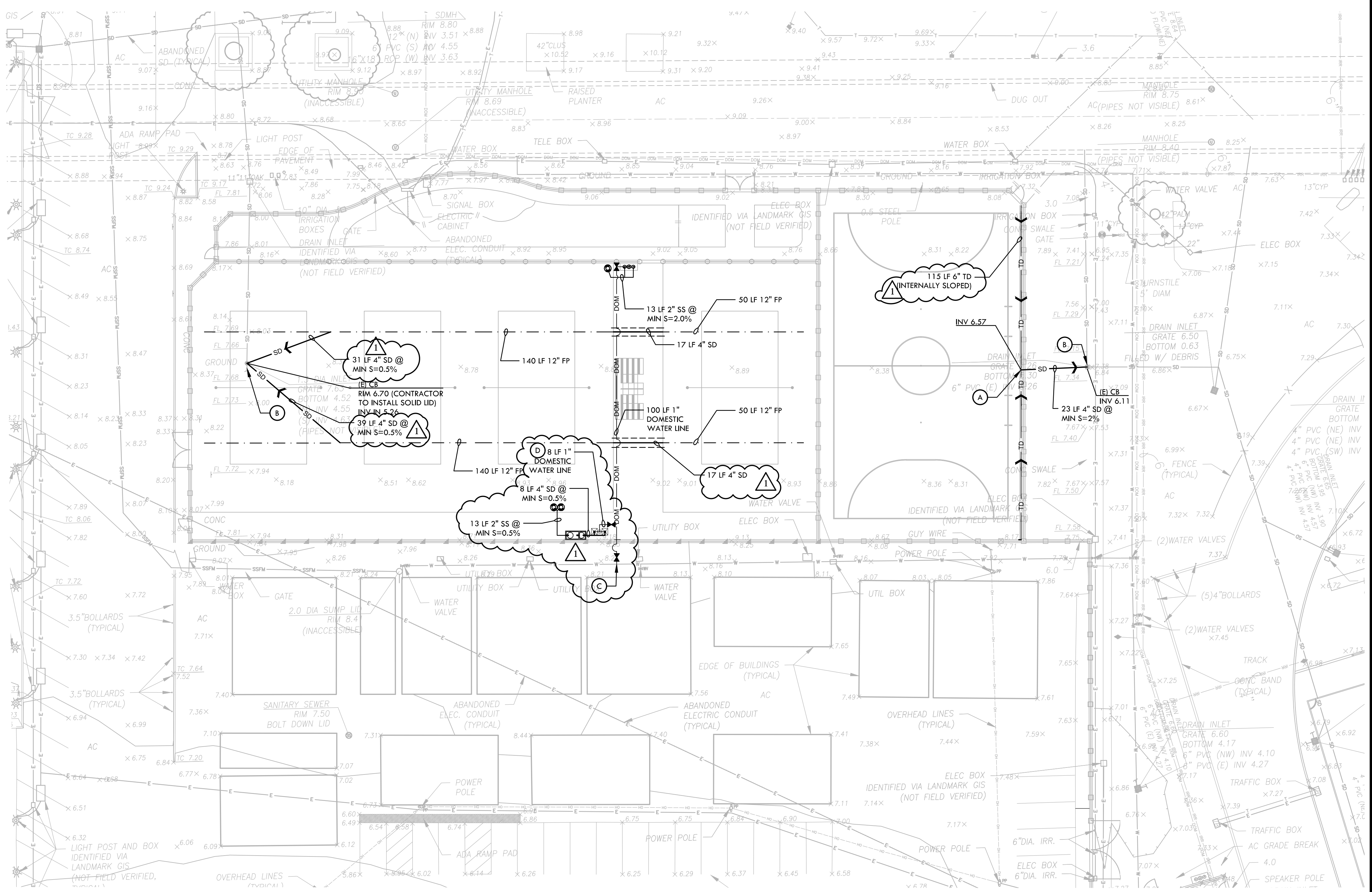
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CONSULTANT



P.E. COURTYARDS



DRAINAGE & UTILITY NOTES

- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES, AND SERVICES SHOWN IN THE CONTRACT DOCUMENTS SHALL BE APPROXIMATIONS ONLY. ALL DISCREPANCIES BETWEEN WHAT IS SHOWN AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT UNDER GROUND SERVICE ALERT (USA) AT (800) 227-2800 PRIOR TO ANY DEMOLITION OR EXCAVATION. UPON COMPLETION OF USA MARKING OPERATIONS, CONTRACTOR SHALL RECORD ALL UTILITY MARKINGS ON A SEPARATE SET OF DRAWINGS. THIS SET SHALL BE KEPT ON SITE FOR REFERENCE FOR DURATION OF CONTRACT.
- ALL EXISTING DRAINAGE STRUCTURES, BOXES, UTILITY VAULTS ETC. TO REMAIN, SHALL BE BROUGHT TO FINAL FINISH GRADE PRIOR TO FINAL SURFACE TREATMENT.
- THE CONTRACTOR IS TO PROTECT DRAINAGE SYSTEM FROM DEBRIS, INCLUDING: SOIL, ROCK MATERIAL, AND TRASH FROM ENTERING THE PIPE DURING CONSTRUCTION. CONTRACTOR SHALL AVOID PLACING CONSTRUCTION VEHICLES OVER INSTALLED DRAINAGE TRENCHES TO PREVENT CRUSHING OF PIPE.
- COORDINATE ALL SLEEVING AND UTILITY LOCATIONS AS SHOWN ON THE PLANS AND DETAILS CONTAINED WITHIN THESE CONTRACT DOCUMENTS.
- THE CONTRACTOR IS TO ENSURE THAT ALL REMAINING ACTIVE AND NEW DRAINAGE AND UTILITY LINES ARE PROTECTED AND UNDAMAGED FROM TRENCHING AND FOOTING EXCAVATIONS FOR NEW FOOTINGS, PARTICULARLY FOR NEW FENCING AND WALLS.
- ALL ABANDONED STORM LINES SHALL REMAIN IN PLACE UNLESS IN CONFLICT WITH PROPOSED DRAINAGE, UTILITY, OR SUBGRADING OPERATIONS. IN WHICH CASE ABANDONED PIPE IN CONFLICT SHALL BE REMOVED. REMAINING ABANDONED STORM PIPE SHALL BE SEALED WITH APPROPRIATELY SIZED CONCRETE CAP (3 SACK MIX 6" ENVELOPE OUTSIDE AND INSIDE DIAMETER OF PIPE).
- PRIOR TO ALL DRAINAGE AND UTILITY WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL POTENTIAL DRAINAGE CONNECTIONS AND EXISTING UTILITY BY POT-HOLING. IN ADDITION, ALL DOWNSTREAM CONNECTIONS TO EXISTING STRUCTURES SHALL BE THE START OF THESE OPERATIONS, AND GRADES SHALL BE VERIFIED.
- CONTRACTOR SHALL FLUSH AND CLEAN ALL EXISTING STORM DRAIN LINES THAT WILL SERVE AS POINTS OF CONNECTION FOR THE PROJECT IMPROVEMENTS. ALL DEBRIS INSIDE THE LINES IS TO BE REMOVED BY THE STORM DRAIN LINES AT THE APPROPRIATE DOWNSTREAM (OR UPSTREAM, IF NECESSARY) DRAINAGE STRUCTURE. NO DEBRIS IS ALLOWED TO BE PUSHED DOWNSTREAM INTO SUBSEQUENT PIPING OR FURTHER INTO THE STORM DRAIN SYSTEM.

DRAINAGE/UTILITY LEGEND

SYM	DESCRIPTION	DTL REF	SYM	DESCRIPTION	DTL REF	SYM	DESCRIPTION
⊙	CLEANOUT IN SYNTHETIC TURF (COST)	D D1.0	←	TRENCH DRAIN AT FUTSAL	R D1.0	←	PIPE SLOPE DIRECTION
○	CLEANOUT IN SAND (CO)	D D1.0	LF	FLAT PANEL DRAIN (FP)	M D1.0	LF	LINEAL FEET
●	MODIFIED CATCH BASIN (MOD)	O D1.0	☑	ACCESSIBLE DRINKING FOUNTAIN	D.F D1.1	(E)	EXISTING
⊕	JUNCTION BOX (JB)	J D1.1	☹	SAND/OIL INTERCEPTOR	I D1.1	MIN.	MINIMUM
⊕	DOMESTIC WATER VALVE	I D1.0	⚠	8" x 8" OUTDOOR SHOWER DRAIN, REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.	R D1.1	TOR	TOP OF ROCK
○	DRY WELL	I D1.1	⚠	SLEEVE - CLASS 200 PVC. SIZE TO BE MIN. TWO TIMES THE TOTAL OF PIPE DIAMETER INSIDE SLEEVE.	I D1.0	INV	INVERT
SD	SOLID WALL STORM DRAIN LINE (SD)	I D1.0	A	TRENCH DRAIN INLINE CATCH BASIN AND OUTLET AT SYNTHETIC TURF TO INTO STORM DRAIN SYSTEM VIA 4" STORM DRAIN LINE.	I D1.0	S=0.5%	SLOPE
PERF	PERFORATED SUBDRAIN LINE (PERF)	G D1.0	B	PROPOSED STORM DRAIN POINT OF CONNECTION TO EXISTING SYSTEM. CONTRACTOR TO VERIFY THE IN LOCATIONS AND EXISTING INVERTS PRIOR TO DEMOLITION.	I D1.0		
DOM	DOMESTIC WATER	E D6.0	C	TE IN DOMESTIC WATER LINE TO EXISTING WATER LINE. CONTRACTOR TO VERIFY EXISTING LOCATION ON SITE.	I D1.0		
SS	SANITARY SEWER LINE (SS)	J D1.0	D	TE IN DOMESTIC WATER LINE TO NEW OUTDOOR SHOWER	I D1.0		

SHEET TITLE

DRAINAGE PLAN - VOLLEYBALL/FUTSAL/P.E. COURTYARDS

PROJECT NAME

COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS

PROJECT ADDRESS

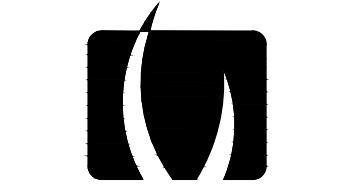
**835 COLLEGE AVE.
KENTFIELD, CA
94904**

SUBMITAL	DATE
80% CD SUBMITAL	06/16/17
100% SUBMITAL	06/30/17

NO.	REVISIONS	DATE
▲	ADDENDUM #1	08/17/17

DRAWN BY: **KL** CHECKED BY: **DC**
 DATE ISSUED: **06/30/17** SCALE: **1" = 20'-0"**

PROJ. NO.: **1702200**
 SHEET NO.: **L5.2**



VERDE DESIGN
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CONSULTANT

SHEET TITLE
**LAYOUT PLAN -
 SOCCER/LACROSSE
 AND TENNIS COURTS**

PROJECT NAME
**COLLEGE OF MARIN
 ATHLETIC FACILITIES
 IMPROVEMENTS**

PROJECT ADDRESS
**835 COLLEGE AVE.
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PROJ. NO. **1702200**
 SHEET NO. **L6.1**

CONTRACTOR SHALL INSTALL A GATE POST FOR 8' TALL, 12' WIDE DOUBLE SWING GATE (GATE NOT IN PACKAGE). REFER TO DETAIL B, SHEET D3.0 FOR ADDITIONAL INFORMATION.

NOTE:
 1. POINT OF BEGINNING (POB) IS LOCATED AT THE OUTSIDE EDGE OF TRACK CONCRETE CURB;
 CONTROL POINT IS LOCATED AT THE OUTSIDE EDGE OF TRACK CONCRETE CURB.
 2. BASELINE A IS DETERMINED BY ESTABLISHING A CONTROL LINE FROM POB TO CONTROL POINT.
 3. LAYOUT GRID IS DETERMINED BY ROTATING COUNTER CLOCKWISE 0°.
 4. BASELINE B IS 90° FROM BASELINE A AT POB.
 5. GRID IS 100' OFFSETS FROM EACH BASELINE.

LAYOUT NOTES

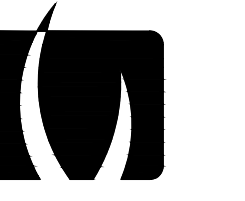
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ELEMENTS INCLUDING UTILITY LOCATIONS AND REQUIRED SLEEVING PRIOR TO INSTALLATION. VERIFY CRITICAL DIMENSIONS, REFERENCE POINT LOCATIONS AND CONSTRUCTION CONDITIONS PRIOR TO INITIATING CONSTRUCTION. TEMPORARY BENCHMARKS OR REFERENCE POINTS SHALL BE SET BY THE CONTRACTOR AS NECESSARY. NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY SHOULD DISCREPANCY ARISE AND REDIRECT WORK TO AVOID DELAYS.
- ALL DIMENSIONS SHALL BE VERIFIED IN FIELD AND CHALKED, STRING LINED OR FLAGGED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY MINOR ADJUSTMENTS MADE TO ACHIEVE OVERALL DESIGN LAYOUT SHALL BE ACCEPTED BY THE OWNER PRIOR TO CONSTRUCTION.
- LAYOUT IS BASED ON THE POINTS OF BEGINNING (P.O.B.) AND BASELINES) OR GRID SYSTEM AS SHOWN. DIMENSIONS SHOWN ARE ROUNDED TO THE NEAREST INCH.
- ALL LAYOUT AND GRADES SHALL BE COMPLETED BY A LICENSED SURVEYOR.



LAYOUT LEGEND

SYM	DESCRIPTION	SYM	DESCRIPTION	SYM	DESCRIPTION
	POINT OF BEGINNING SYMBOL	(POB)	POINT OF BEGINNING	(EOP)	EDGE OF PAVEMENT
	CONTROL POINT	(COP)	CENTER OF POST	(EHB)	EDGE OF HEADER BOARD
	RADIUS POINT / CENTER MARK	(RAD)	RADIUS POINT		
	PROPOSED ANGLE BETWEEN ELEMENTS	(TAN)	TANGENT POINT		
	ALIGN EDGES OF ELEMENTS	(COD)	CENTER OF DRAIN/CLEANOUT		
	BASELINE & GRID	(CTD)	CENTER OF TRENCH DRAIN		
	CONTROL LINE	(IC)	INSIDE EDGE OF CURB		
	CENTER LINES	(OEC)	OUTSIDE EDGE OF CURB		
	NORTHING/EASTING LAYOUT COORDINATE CALLOUT	(EOS)	EDGE OF STRIPING		

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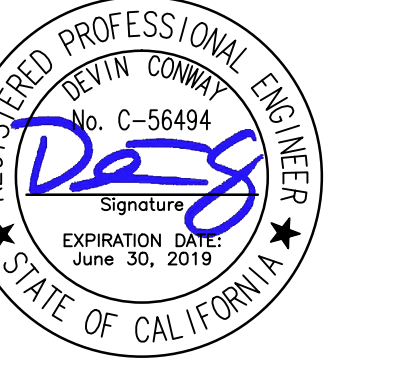


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CONSULTANT

SHEET TITLE

MATERIAL PLAN -
SOCCER/LACROSSE
AND TENNIS COURTS

PROJECT NAME

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IMPROVEMENTS

PROJECT ADDRESS

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L7.1

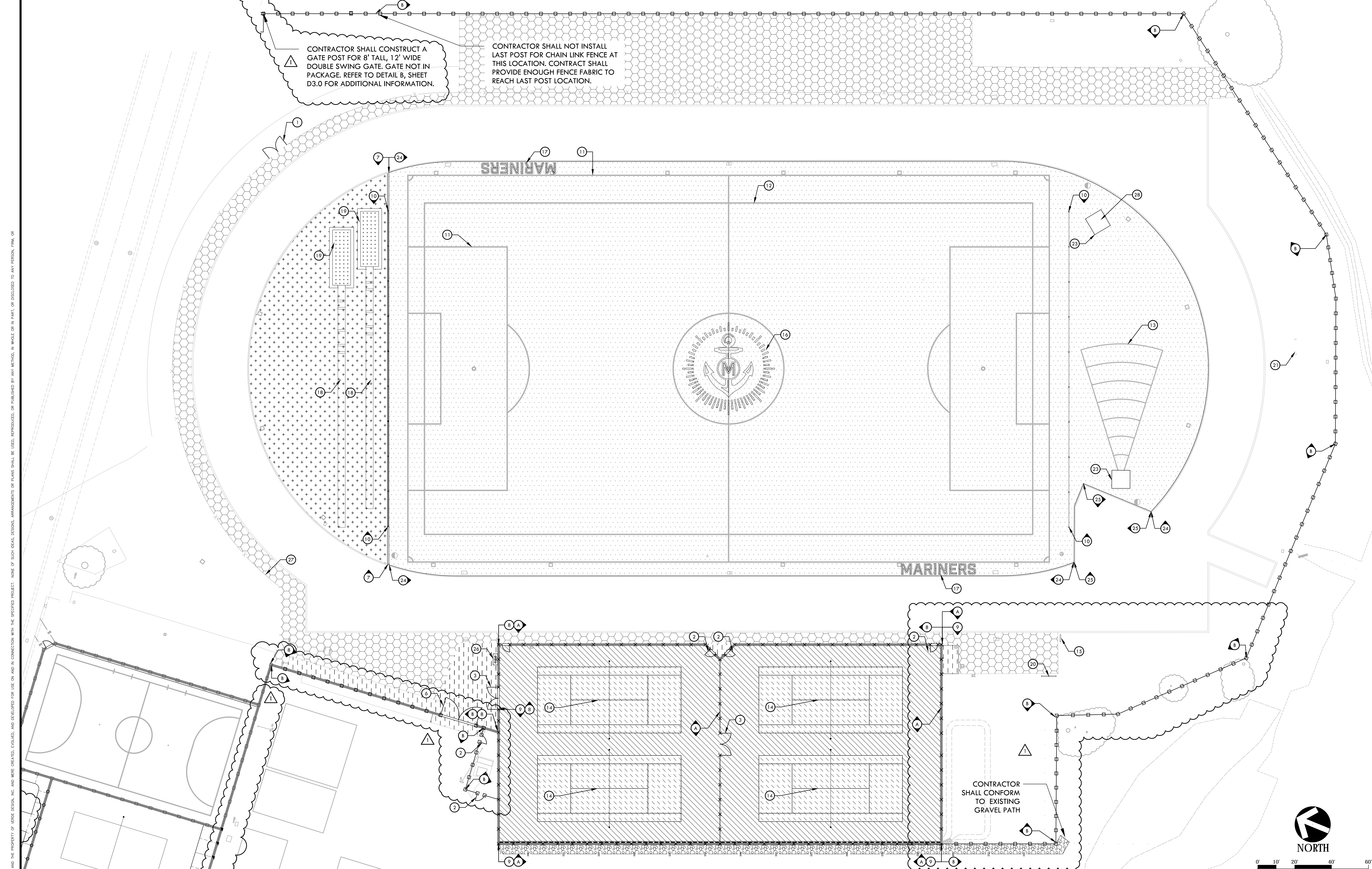
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SCALE

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06/30/17



CONTRACTOR SHALL CONSTRUCT A GATE POST FOR 8' TALL, 12' WIDE DOUBLE SWING GATE. GATE NOT IN PACKAGE. REFER TO DETAIL B, SHEET D3.0 FOR ADDITIONAL INFORMATION.

CONTRACTOR SHALL NOT INSTALL LAST POST FOR CHAIN LINK FENCE AT THIS LOCATION. CONTRACT SHALL PROVIDE ENOUGH FENCE FABRIC TO REACH LAST POST LOCATION.

CONTRACTOR SHALL CONFORM TO EXISTING GRAVEL PATH

MATERIAL NOTES

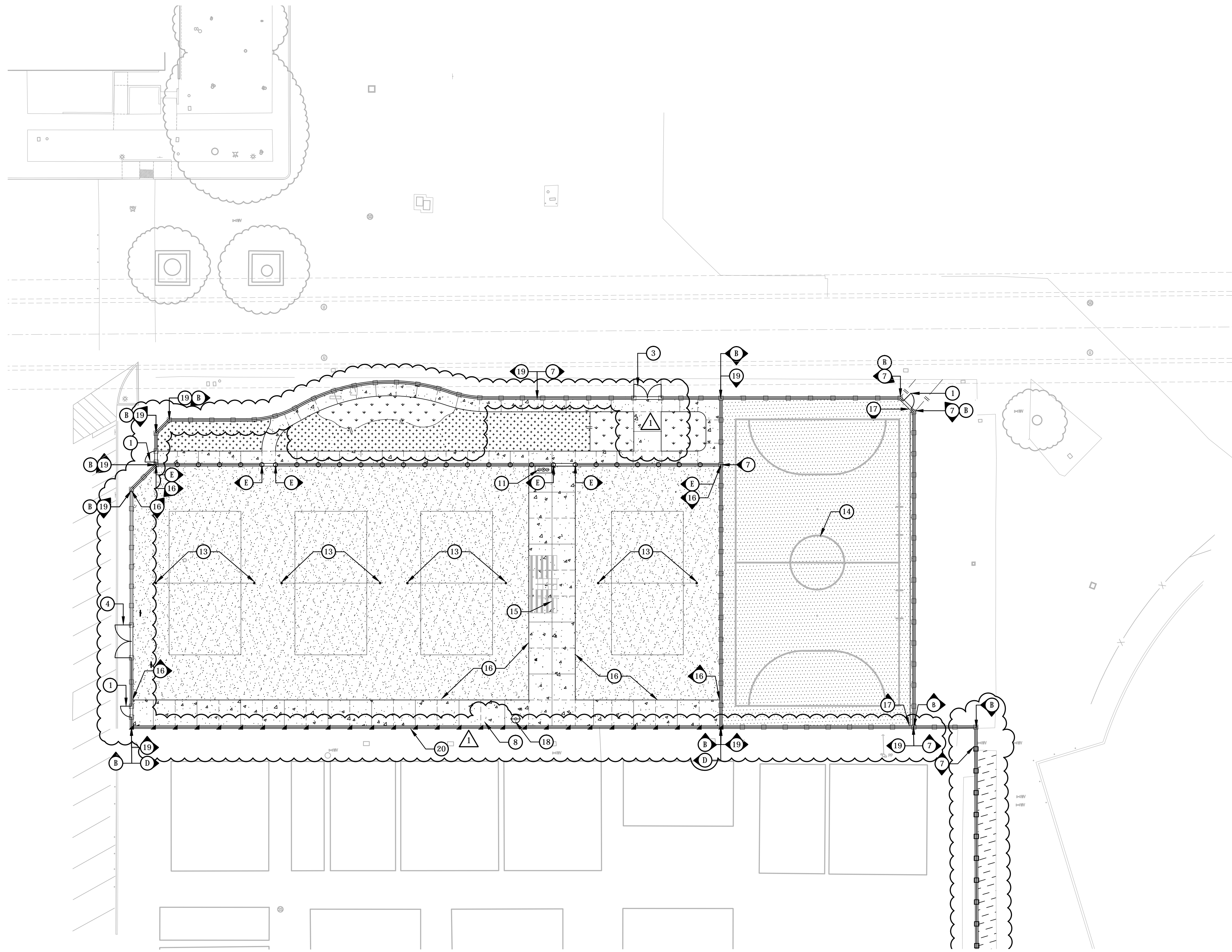
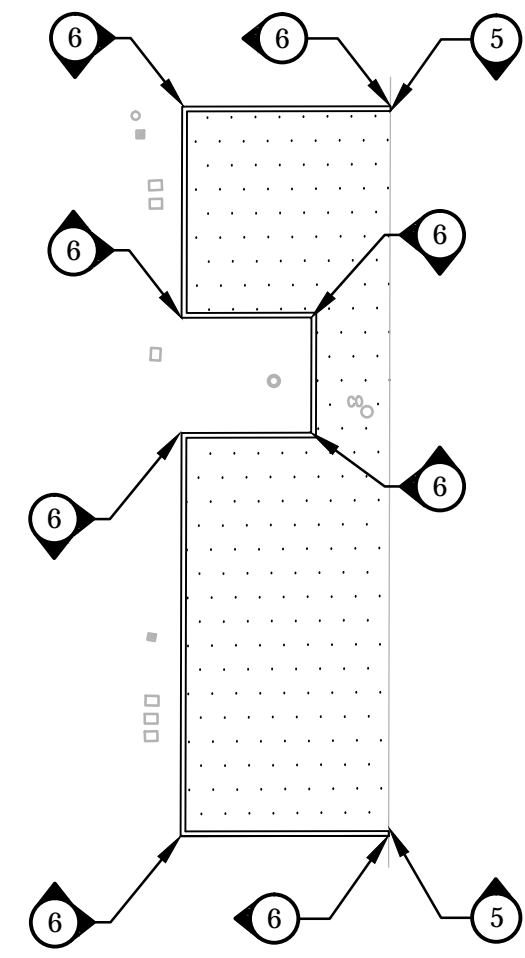
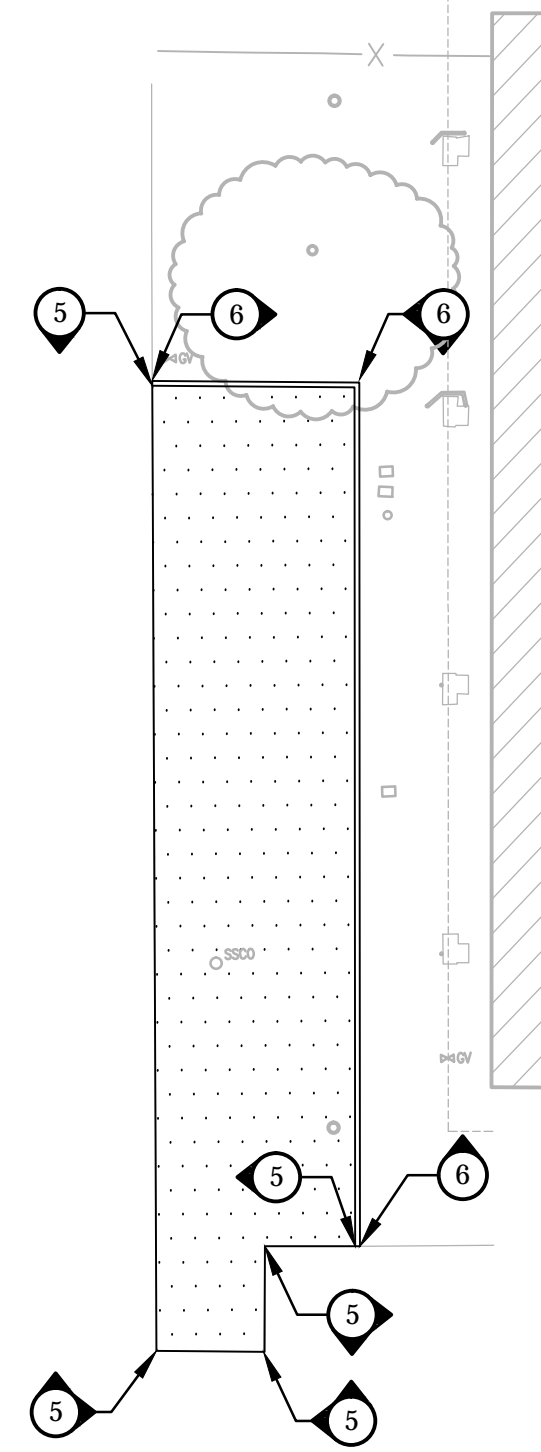
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- THE INTERFACE OF ALL PROPOSED IMPROVEMENTS TO EXISTING SITE SHALL CONFORM AND BE SMOOTH AND UNIFORM.
- ALL REINFORCING AND FORMS SHALL BE SECURED IN PLACE AND ACCEPTED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING ANY CONCRETE.
- CONCRETE FINISHES SHALL BE AS NOTED. CONTRACTOR SHALL PROVIDE 4'X4' SAMPLES OF ALL SPECIFIED FINISHES OF CONCRETE USING THE SAME MATERIALS THAT WILL BE USED IN THE ACTUAL CONSTRUCTION FOR EACH TYPE SPECIFIED. SAMPLES SHALL BE PREPARED WELL ENOUGH IN ADVANCE OF SCHEDULED CONCRETE POUR TO ALLOW FOR REVIEW AND POSSIBLE RE-POURING OF UNACCEPTABLE SAMPLES. UNACCEPTABLE SAMPLES SHALL BE RE-PREPARED UNTIL ACCEPTED BY THE OWNER'S REPRESENTATIVE. ACCEPTED SAMPLES SHALL BE PROTECTED AND REMAIN ON SITE FOR REFERENCE UNTIL FINAL ACCEPTANCE.
- ALL FENCES AND GATES SHOWN ON PLAN ARE GRAPHIC REPRESENTATIONS. REFER TO DETAILS AND SPECIFICATIONS FOR PRECISE LOCATION.
- ASPHALT SHALL NOT BE INSTALLED UNTIL ALL EDGES AND SITE FURNISHING PADS ARE INSTALLED.

MATERIAL LEGEND

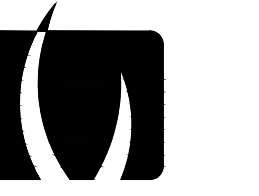
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(P) D2.0	SYNTHETIC TURF (OWNER INSTALLED)	(P) D2.0	(A)	PLANTING AREA, REFER TO PLANTING PLAN	(M) D2.1	(12)	LACROSSE STRIPING (REFERENCE ONLY)	(C) D4.0	(21)	SCOREBOARD, REFER TO STRUCTURAL PLANS	(S) D2.0			
(O) D2.0	ALL-WEATHER SYNTHETIC TRACK SURFACE	(M) D2.0	(B)	HEADER BOARD	(G) D3.0	(4)	NOT USED	(J) D4.0	(22)	NOT USED	(R) D2.0			
(M) D2.0	TENNIS COURT SURFACING - GREEN	(M) D2.0	(A)	10' TALL CHAIN LINK FENCE IN 12" WIDE EDGE BAND OR TALL CURB	(G) D3.0	(5)	NOT USED	(J) D4.0	(23)	SYNTHETIC TURF CONNECTION AT EXISTING THICKENED CONCRETE EDGE (DISCUS, SHOT PUT)	(R) D2.0			
(M) D2.0	TENNIS COURT SURFACING - BLUE	(M) D2.0	(A)	NOT USED	(G) D3.0	(6)	8' TALL X 20" WIDE DOUBLE SWING CHAIN LINK GATE	(J) D3.0	(15)	INFORMATION SIGN (OWNER FURNISHED - SALVAGED MATERIAL)	(R) D2.0			
(M) D2.0	ASPHALT PAVING - PEDESTRIAN	(M) D2.0	(B)	8' TALL CHAIN LINK FENCE IN 12" WIDE EDGE BAND	(F) D2.0	(7)	9" WIDE EDGE BAND AT SYNTHETIC TURF EDGE	(N) D4.0	(16)	MID-FIELD LOGO	(R) D2.0			
(M) D2.0	SLURRY COAT ON THE SURFACE OF EXISTING ASPHALT PAVING. REFER TO SPECIFICATIONS	(M) D2.0	(B)	8' TALL CHAIN LINK FENCE	(F) D2.0	(8)	12" WIDE EDGE BAND IN FENCE	(C) D5.1	(17)	SIDE LINE LETTERING	(R) D2.0			
(M) D2.0	4" THICK SECTION CLASS II BASE ROCK. REFER TO SPECIFICATIONS	(M) D2.0	(A)	10' TALL CHAIN LINK FENCE	(G) D3.0	(9)	CURB TYPE 1	(D) D5.1	(18)	LONG JUMP/TRIPLE JUMP	(R) D2.0			
(M) D2.0	SAND PIT SAND - OWNER TO PROVIDE SAND FOR STOCKPILE MATERIAL ON SITE. CONTRACTOR TO PROVIDE ADDITIONAL MATERIAL AS NEEDED TO BRING SAND TO TOP OF PIT (UP TO 5 CUBIC YARDS PER PIT)	(M) D2.0	(A)	42" TALL X 12" WIDE DOUBLE SWING CHAIN LINK GATE	(G) D3.0	(10)	LACROSSE NETTING SYSTEM	(E) D4.0	(19)	SAND PIT WITH SAND CATCHERS	(C) D4.0	(28)	EXISTING DISCUS CAGE IF ADDITIONAL CONCRETE IS NEEDED AROUND DISCUS CAGE POLES TO RAISE GRADES TO NEW FINISH SURFACE ELEVATION OR TO ATTACHED SYNTHETIC TURF TO, CONTRACTOR SHALL INSTALL A 4" WIDE BAND AROUND DISCUS POLES. CONTRACTOR SHALL INSTALL A FIBROUS MATERIAL BETWEEN CONCRETE AND DISCUS POLES TO ENSURE POLES CAN STILL BE REMOVED FROM SLEEVES.	(K) D3.1
(M) D2.0	10' TALL X 4' WIDE SWING CHAIN LINK GATE	(O) D3.0	(2)	10' TALL X 4' WIDE SWING CHAIN LINK GATE	(O) D3.0	(11)	SOCCER STRIPING (REFERENCE ONLY)	(D) D4.0	(20)	PULL-UP BARS	(K) D3.1			

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DRINKING FOUNTAIN REPLACEMENT
CONTRACTOR SHALL REPLACE EXISTING DRINKING FOUNTAIN LOCATED AT
PE 20 WITH NEW WALL MOUNTED DRINKING FOUNTAIN. REFER TO
SPECIFICATION FOR MANUFACTURE AND MODEL.



P.E. COURTYARDS



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CONSULTANT

SHEET TITLE

**MATERIAL PLAN -
VOLLEYBALL/FUTSAL/
P.E. COURTYARDS**

PROJECT NAME

**COLLEGE OF MARIN
ATHLETIC FACILITIES
IMPROVEMENTS**

PROJECT ADDRESS

**835 COLLEGE AVE.
KENTFIELD, CA
94904**

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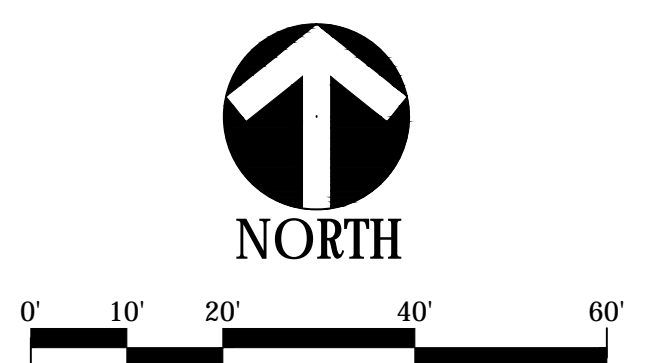
1702200

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L7.2

MATERIAL NOTES

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MATERIAL LEGEND

SYM	DESCRIPTION	DTL REF	SYM	DESCRIPTION	DTL REF	SYM	DESCRIPTION	DTL REF
(P)	SYNTHETIC TURF (OWNER INSTALLED)	P 02.0	(1)	8' TALL, 4' WIDE SWING CHAIN LINK GATE	(P) 03.0	(14)	FUTSAL FIELD STRIPING	(I) 04.0
(Q)	SYNTHETIC TURF AT FUTSAL FIELD (OWNER INSTALLED)	Q 02.0	(2)	NOT USED		(15)	5-RW BLEACHERS LOCATION (OWNER FURNISHED)	
(H)	CONCRETE PAVING	H 02.0	(3)	8' TALL, 10' WIDE DOUBLE SWING CHAIN LINK GATE	(N) 03.0	(16)	BEACH VOLLEYBALL SAND SECTION/EGDE	(J) 02.1
	BEACH VOLLEYBALL SAND, REFER TO SPECIFICATIONS		(4)	8' TALL, 12' WIDE DOUBLE SWING CHAIN LINK GATE	(H) 03.0	(17)	FUTSAL EDGE/ FIELD TRENCH DRAIN	(R) 01.0
	PLANTING AREA, REFER TO PLANTING PLAN		(5)	SYNTHETIC TURF CONNECTION AT EXISTING PAVEMENT	(S) 02.0	(18)	OUTDOOR SHOWER (INSTALL PER MANUFACTURER'S RECOMMENDATIONS)	
	NATURAL GRASS, REFER TO SPECIFICATIONS		(6)	6" WIDE EDGE BAND AT SYNTHETIC TURF	(E) 02.0	(19)	CURB TYPE 1	(B) 02.0
	SCORE JOINT	(I) 02.0	(7)	12" WIDE EDGE BAND IN FENCE	(C) 02.0	(20)	BEACH VOLLEYBALL WINDSCREEN	(J) 03.1
	EXPANSION JOINT	(M) 02.1	(8)	SAND/OIL INTERCEPTOR	(M) 01.1			
	HEADER BOARD	(E) 03.0	(9)	NOT USED				
	8' TALL CHAIN LINK FENCE IN 12" WIDE EDGE BAND		(10)	NOT USED				
	NOT USED		(11)	DRINKING FOUNTAIN	(F) 01.1			
	8' TALL CHAIN LINK FENCE WITH WINDSCREEN	(F) 03.0	(12)	NOT USED				
	42" TALL CHAIN LINK FENCE IN 12" WIDE EDGE BAND	(D) 03.0	(13)	BEACH VOLLEYBALL NET FOOTING, REFER TO SPECIFICATIONS FOR NETTING INFORMATION	(L) 04.0			
	ASPHALT PAVING - PEDESTRIAN	(K) 02.0						

BID ALTERNATES

- BID ALTERNATE #1 - VOLLEYBALL SEATING AND ENTRY FURNISHINGS**
IF BID ALTERNATE #1 IS ACCEPTED, CONTRACTOR TO LAYOUT AND INSTALL CONCRETE SEATING AREA, SEATWALL, PLINTS, AND HEADER BOARD AS SHOWN ON SHEET L10.1



STAMP
 CONSULTANT

SHEET TITLE
**IRRIGATION PLAN -
 SOCCER /LACROSSE
 AND TENNIS COURTS**

PROJECT NAME
**COLLEGE OF MARIN
 ATHLETIC FACILITIES
 IMPROVEMENTS**

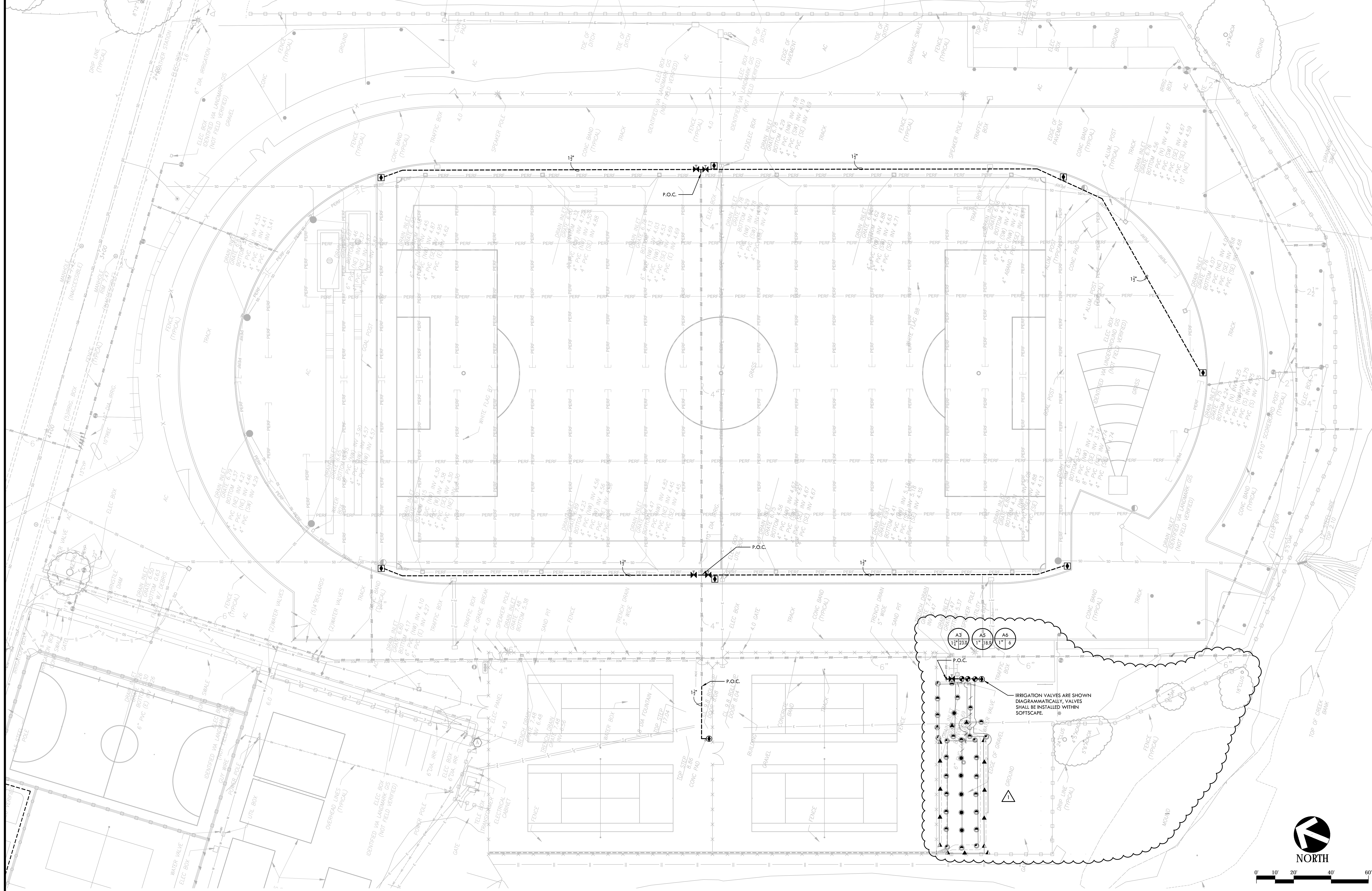
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PROJ. NO.: 1702200
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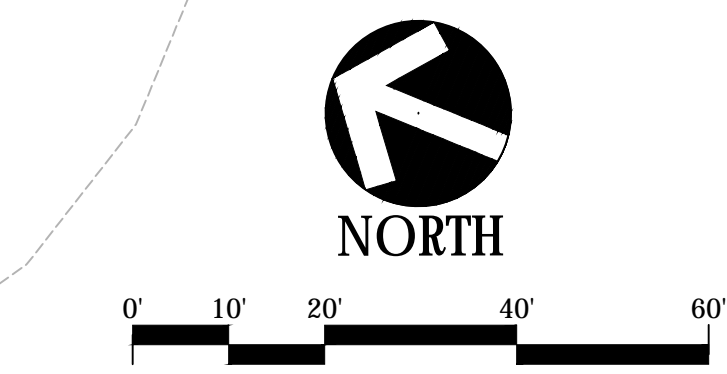


IRRIGATION NOTES

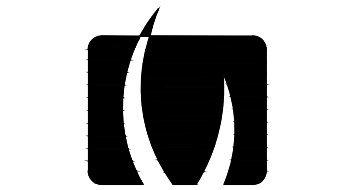
- THIS SYSTEM IS DESIGNED TO OPERATE AT A MAXIMUM FLOW OF (180) GPM WITH A (65) STATIC P.S.I. AT THE POINT OF CONNECTION. CONTRACTOR SHALL VERIFY PRESSURE PRIOR TO BEGINNING WORK. CONTACT OWNER IMMEDIATELY SHOULD DISCREPANCY ARISE AND RE-DIRECT WORK TO AVOID DELAY.
- IRRIGATION SYSTEM DESIGN IS DIAGRAMMATIC. WHERE PIPING, VALVES, QUICK COUPLERS, ETC. ARE SHOWN OUTSIDE PLANTING AREAS, OR LIMIT OF WORK, INTENT IS FOR PIPING, VALVES, ETC. TO BE INSTALLED WITHIN PLANTING AREAS OF PROPERTY. INDICATE EXACT LOCATIONS OF IRRIGATION EQUIPMENT ON RECORD DRAWINGS. REFER TO SPECIFICATIONS.
- CONTRACTOR SHALL PROGRAM CONTROLLER TO INSURE PROPER IRRIGATION COVERAGE AND RUNTIMES BASED ON PLANT TYPE, EXPOSURE, SOLE, SOIL TYPE, AND SEASON.
- CONTRACTOR SHALL USE EXTREME CARE WHERE IT IS NECESSARY TO TRENCH NEAR EXISTING TREES. EXCAVATION IN AREAS EXHIBITING ROOT 3" AND LARGER SHALL BE DONE BY HAND. ROOTS 2" OR LARGER IN DIAMETER DAMAGED IN CONSTRUCTION SHALL BE CLEANLY CUT, AND KEPT COVERED AND MOIST WITH WET BURLAP UNTIL TRENCHES ARE BACKFILLED.
- CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO HEAD LOCATIONS IN FIELD AS NECESSARY.
- CONTRACTOR SHALL REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

IRRIGATION LEGEND

SYM.	MANUF.	MODEL NO./ DESCRIPTION	DES. RAD./ CAT. CODE	GPM	PSI	DTL. REF.	DESCRIPTION
(Symbol)	RAINBRD	1405-BUBBLER HEAD 4 PER TREE	.50	30	(N) (D6.0)	GRS WOLD 2030 REMOTE CONTROL VALVE - SIZE AS NOTED	1-1/2" LATERAL LINE - SCH 40. PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.
(Symbol)	RAIN BRD	1612-SAM-PS BODY WITH 5Q, 5H, 5F, VAN NOZZLES	4.5'-5'	10-41	(D6.0)	NIBCO	GATE VALVES 2" AND SMALLER SHALL BE NIBCO T-113-LF. FOR VALVES ABOVE 2" IN SIZE UTILIZE NIBCO F-619-F FLANGED VALVE WITH SQUARE OPERATING NUT.
(Symbol)	RAIN BRD	1812-SAM-PS BODY WITH 8Q, 8H, 8F, VAN NOZZLES	7'-8'	26-105	(D6.0)	RAIN BRD	44-LRC QUICK COUPLER VALVE IN SOFTSCAPE
(Symbol)	RAIN BRD	1812-SAM-PS BODY WITH 10Q, 10H, 10F, VAN NOZZLES	9'-10'	39-158	(D6.0)	RAIN BRD	44-LRC QUICK COUPLER VALVE IN SYNTHETIC TURF
(Symbol)	RAIN BRD	1812-SAM-PS BODY WITH 12Q, 12H, 12F, VAN NOZZLES	10.8'-12'	65-260	(D6.0)	RAIN BRD	44-LRC QUICK COUPLER VALVE IN HARDSCAPE
(Symbol)	RAIN BRD	1806-SAM-PS BODY WITH 15Q, 15H, 15F, VAN NOZZLES	13.5'-15'	92-370	(D6.0)	RAIN BRD	3/4" LATERAL LINE - SCH 40. PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.
(Symbol)	RAIN BRD	1812-SAM-PS BODY WITH 15EST NOZZLES	4 X 15	61	(D6.0)	RAIN BRD	1" LATERAL LINE - SCH 40. PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.
(Symbol)	RAIN BRD	1812-SAM-PS BODY WITH 15CST NOZZLES	4 X 30	1.21	(D6.0)	RAIN BRD	1-1/4" LATERAL LINE - SCH 40. PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.



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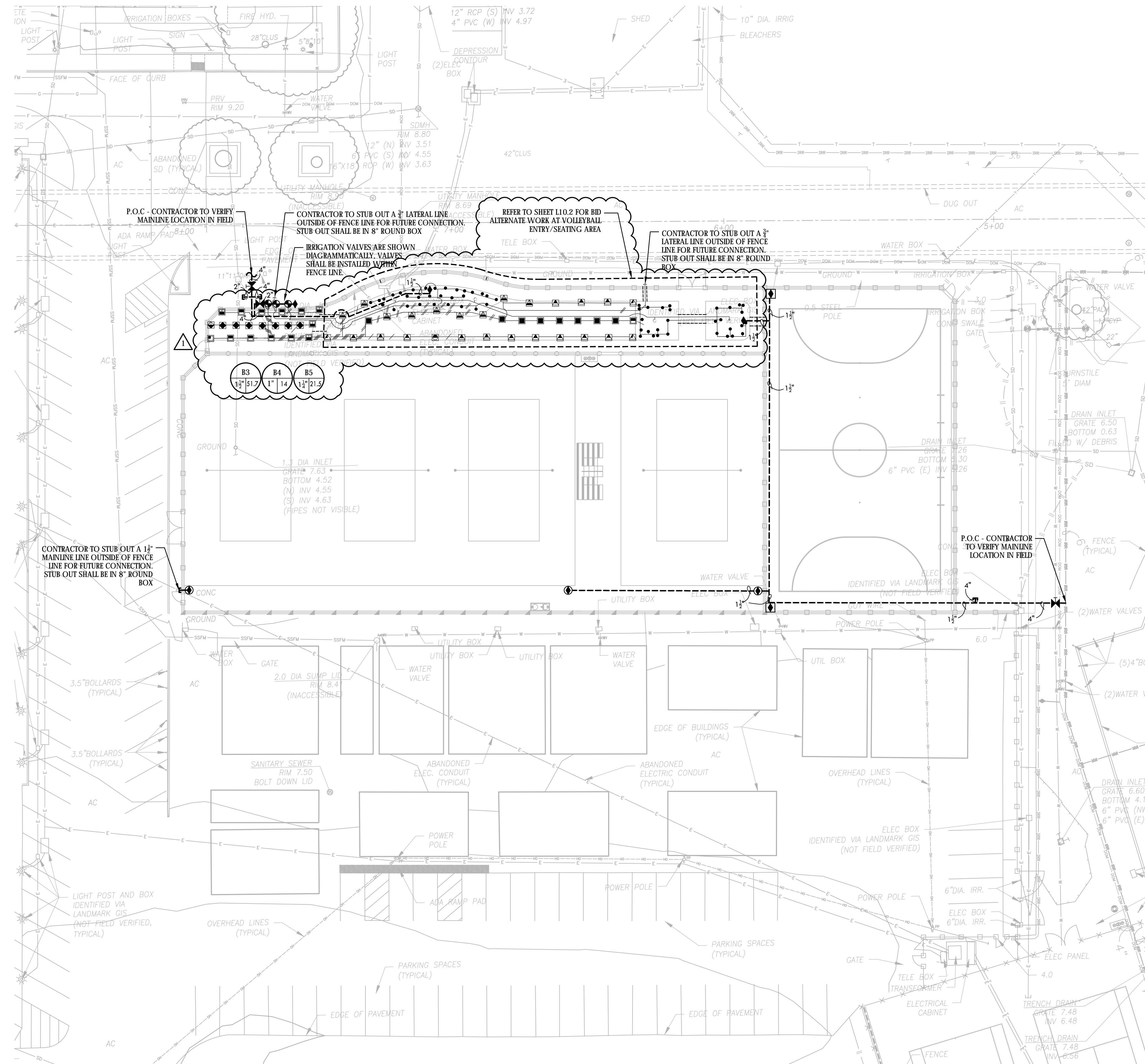
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SHEET TITLE

IRRIGATION PLAN -
VOLLEYBALL/FUTSAL

PROJECT NAME

COLLEGE OF MARIN
ATHLETIC FACILITIES
IMPROVEMENTS

PROJECT ADDRESS

835 COLLEGE AVE.
KENTFIELD, CA
94904

SUBMITTAL

80% CD SUBMITTAL 06/16/17

100% SUBMITTAL 06/30/17

NO. REVISIONS DATE

ADDENDUM #1 08/17/17

DRAWN BY WD CHECKED BY DC

DATE ISSUED 06/30/17 SCALE 1" = 20'-0"

PROJ. NO. 1702200

SHEET NO. 18.2

IRRIGATION NOTES

- 1. THIS SYSTEM IS DESIGNED TO OPERATE AT A MAXIMUM FLOW OF 1180 GPM WITH A MINIMUM (65) STATIC P.S.I. AT THE POINT OF CONNECTION. CONTRACTOR SHALL VERIFY PRESSURE PRIOR TO BEGINNING WORK. CONTACT OWNER IMMEDIATELY SHOULD DISCREPANCY ARISE AND RE-DIRECT WORK TO AVOID DELAY.
- 2. IRRIGATION SYSTEM DESIGN IS DIAGRAMMATIC. WHERE PIPING, VALVES, QUICK COUPLERS, ETC. ARE SHOWN OUTSIDE PLANTING AREAS, OR LIMIT OF WORK, INTENT IS FOR PIPING, VALVES, ETC., TO BE INSTALLED WITHIN PLANTING AREAS OF PROPERTY. INDICATE EXACT LOCATIONS OF IRRIGATION EQUIPMENT ON RECORD DRAWINGS. REFER TO SPECIFICATIONS.
- 3. CONTRACTOR SHALL PROGRAM CONTROLLER TO INSURE PROPER IRRIGATION COVERAGE AND RUNTIMES BASED ON PLANT TYPE, EXPOSURE, SOIL TYPE, AND SEASON.
- 4. CONTRACTOR SHALL USE EXTREME CARE WHERE IT IS NECESSARY TO TRENCH NEAR EXISTING TREES. EXCAVATION IN AREAS EXHIBITING ROOTS 3" AND LARGER SHALL BE DONE BY HAND. ROOTS 2" OR LARGER IN DIAMETER DAMAGED IN CONSTRUCTION SHALL BE CLEANLY CUT, AND KEPT COVERED AND MOST WITH WET BURLAP UNTIL TRENCHES ARE BACKFILLED.
- 5. CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO HEAD LOCATIONS IN FIELD AS NECESSARY.
- 6. CONTRACTOR SHALL REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

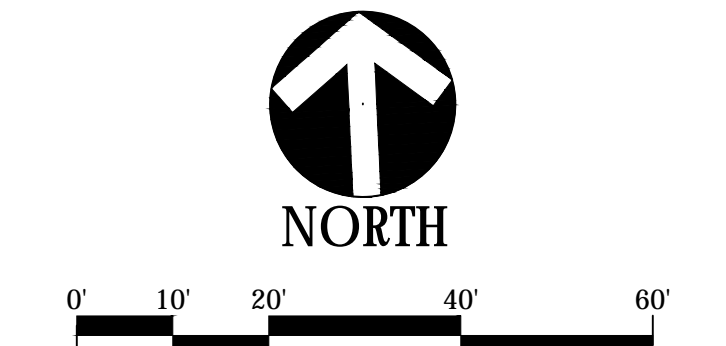
IRRIGATION LEGEND

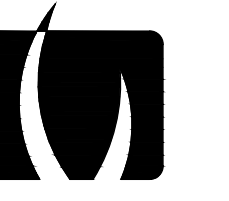
SYM.	MANUF.	MODEL NO./ DESCRIPTION	DES. RATIO / CAT. RAD.	GPM	PSI	DTL. REF.	REMARKS
	RAINBRD	1401-BUBBLER HEAD	.25	30			
	RAINBRD	1405-BUBBLER HEAD 4 PER TREE	.50	30			
	RAIN BRD	1806-SAM-PRS BODY WITH 8Q, 8H, 8F, VAN NOZZLES	4.5'-5'	10-41	30		
	RAIN BRD	1806-SAM-PRS BODY WITH 10Q, 10H, 10F, VAN NOZZLES	7-8'	26-1.05	30		
	RAIN BRD	1806-SAM-PRS BODY WITH 12Q, 12H, 12F, VAN NOZZLES	9'-10'	39-1.58	30		
	RAIN BRD	1806-SAM-PRS BODY WITH 15Q, 15H, 15F, VAN NOZZLES	10.8'-12'	65-2.60	30		
	RAIN BRD	1806-SAM-PRS BODY WITH 15Q, 15H, 15F, VAN NOZZLES	13.5'-15'	92-3.70	30		
		P-2230 REMOTE CONTROL VALVE - SIZE AS NOTED					
	NIBCO	GATE VALVES 2" AND SMALLER SHALL BE NIBCO F-113-1F. FOR VALVES ABOVE 2" IN SIZE UTILIZE NIBCO F-610-1F FLANGED VALVE WITH SQUARE OPERATING NUT.					
	RAINBRD	44-LIC QUICK COUPLER VALVE IN SOFTSCAPE					
	RAINBRD	44-LIC QUICK COUPLER VALVE IN SYNTHETIC TURF					
	RAINBRD	44-LIC QUICK COUPLER VALVE IN HARDSCAPE					
		MANIFINE - 2" AND SMALLER: SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS; 2-1/2" AND 3": CLASS 315 PVC WITH RING - THE CONNECTIONS, 4" AND LARGER: CLASS 200 WITH 24" COVER.					
		3/4" LATERAL LINE - SCH 40, PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.					
		1" LATERAL LINE - SCH 40, PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.					
		1-1/4" LATERAL LINE - SCH 40, PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.					
		1-1/2" LATERAL LINE - SCH 40, PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.					
		2" LATERAL LINE - SCH 40, PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.					
		IRRIGATION SLEEVE - CLASS 315 PVC. SIZE TO BE TWICE THE SIZE OF TOTAL PIPE DIAMETERS WITHIN THE SLEEVE, WITH 30" COVER.					
		CONTROLLER STATION NUMBER					
		APPROX. GPM FLOW THROUGH VALVE					
		CONTROL VALVE SIZE					
		POINT OF CONNECTION - THE PROPOSED MAIN LINES TO EXISTING SUPPLY LINE AND WATER PRESSURE. PROVIDE STATIC WATER PRESSURE RATING TO OWNER'S REPRESENTATIVE.					
		STUB AND CAP MAIN LINE IN 8" ROUND VALVE BOX, RUN 3 ADDITIONAL CONTROL WIRES AND ONE COMMON FROM CONTROLLER AND COIL 24" OF WIRE IN VALVE BOX					
		IRRIGATION MAINLINE TO REMAIN UNLESS OTHERWISE NOTED. CONTRACTOR TO VERIFY LOCATION IN FIELD.					
		EXISTING IRRIGATION CONTROLLER					

BID ALTERNATES

NO.	REVISIONS	DATE
	ADDENDUM #1	08/17/17

BID ALTERNATE #1 - VOLLEYBALL SEATING AND ENTRY FURNISHINGS
IF BID ALTERNATE #1 IS ACCEPTED, IRRIGATION FOR ADJACENT TO SEATING AREA SHALL BE PER BID ALTERNATE IRRIGATION PLAN ON SHEET L10.2



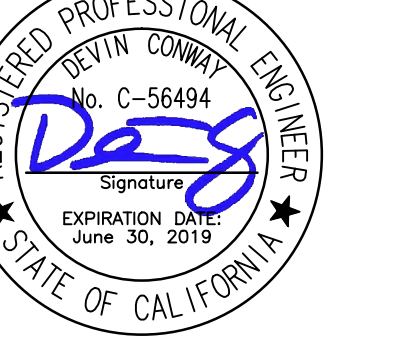


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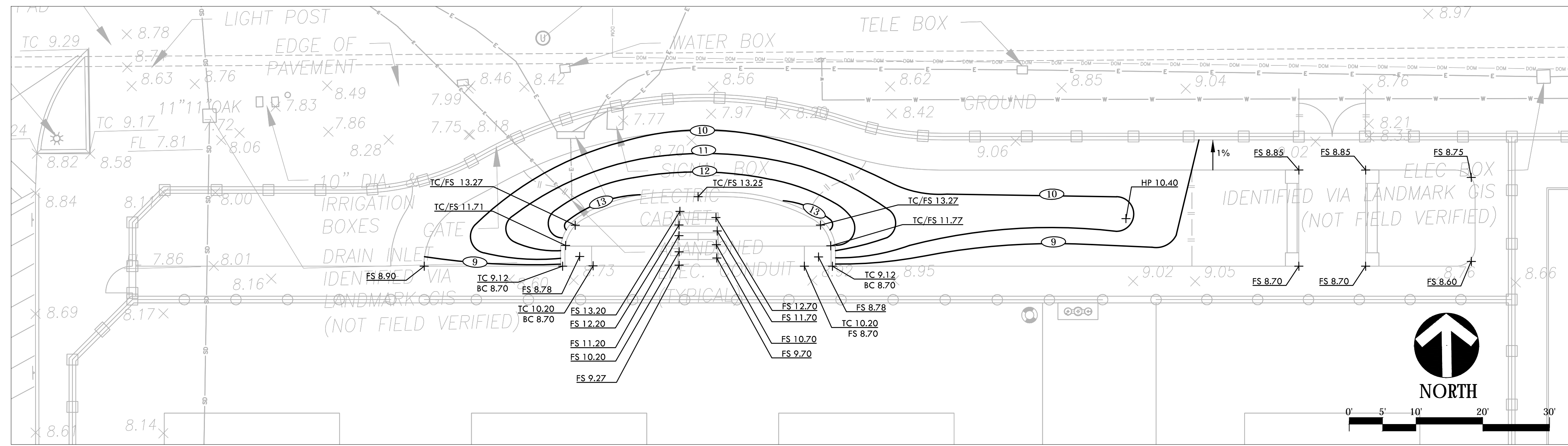
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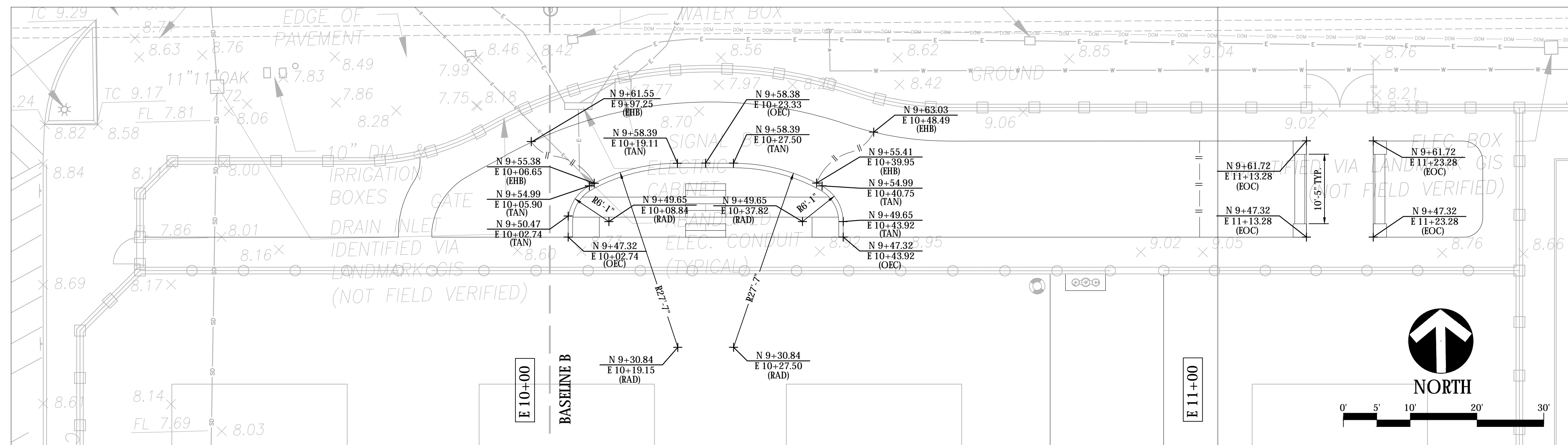


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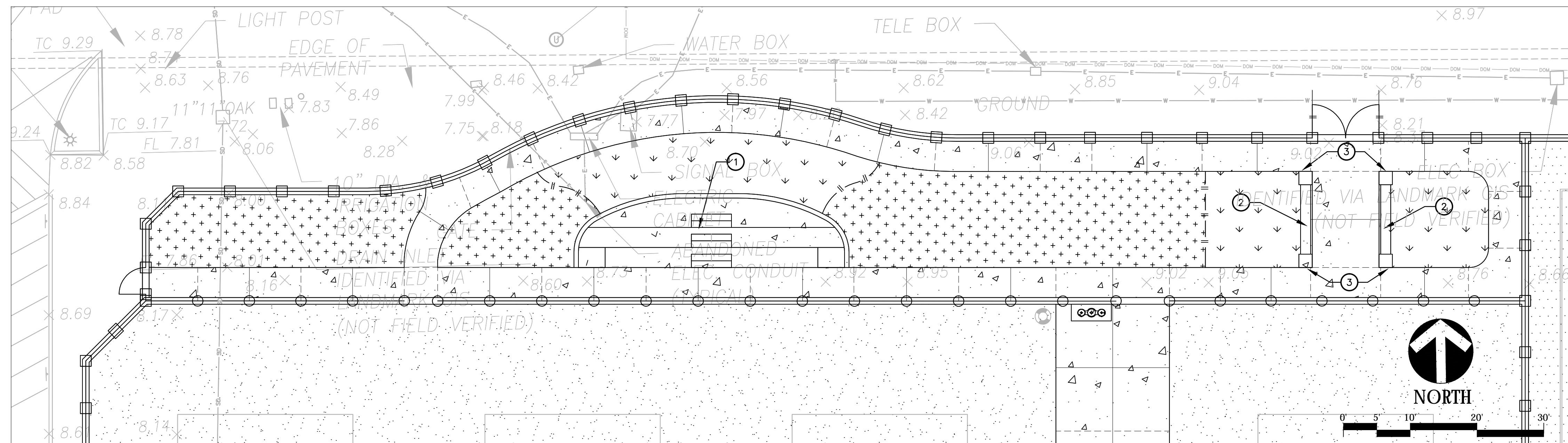
GRADING PLAN

GRADING LEGEND	
SYM	DESCRIPTION
9	PROPOSED CONTOUR
FS 9.50	PROPOSED FINISH SURFACE ELEVATION OF HARDSCAPE
TC 9.50	TOP OF CURB
BC 9.50	BOTTOM OF CURB
HP 9.50	HIGH POINT OF SOFTSCAPE
1.0 %	SLOPE



LAYOUT PLAN

LAYOUT LEGEND			
SYM	DESCRIPTION	SYM	DESCRIPTION
(RAD)	RADIUS POINT	(BOC)	EDGE OF COLUMN
(TAN)	TANGENT POINT	(EHB)	EDGE OF HEADER BOARD
(OEC)	OUTSIDE EDGE OF CURB		



MATERIALS PLAN

MATERIALS LEGEND		
SYM	DESCRIPTION	DTL
①	CONCRETE SEATING	(N 02.1)
②	CONCRETE SEAT WALL	(A.R 02.1)
③	SEATWALL PLINTHS	(A.L 02.1)

SHEET TITLE

BID ALTERNATES:
GRADING, LAYOUT,
AND MATERIALS
PLANS

PROJECT NAME

COLLEGE OF MARIN
ATHLETIC FACILITIES
IMPROVEMENTS

PROJECT ADDRESS

835 COLLEGE AVE.
KENTFIELD, CA
94904

SUBMITTAL

80% CD SUBMITTAL

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DATE

06/16/17

06/30/17

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DATE

ADDENDUM #1

08/17/17

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CHECKED BY

DC

DATE ISSUED

06/30/17

SCALE

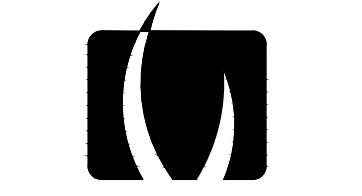
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PROJ. NO.

1702200

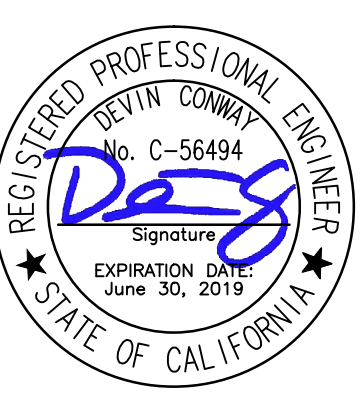
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L10.1 BID ALTERNATE

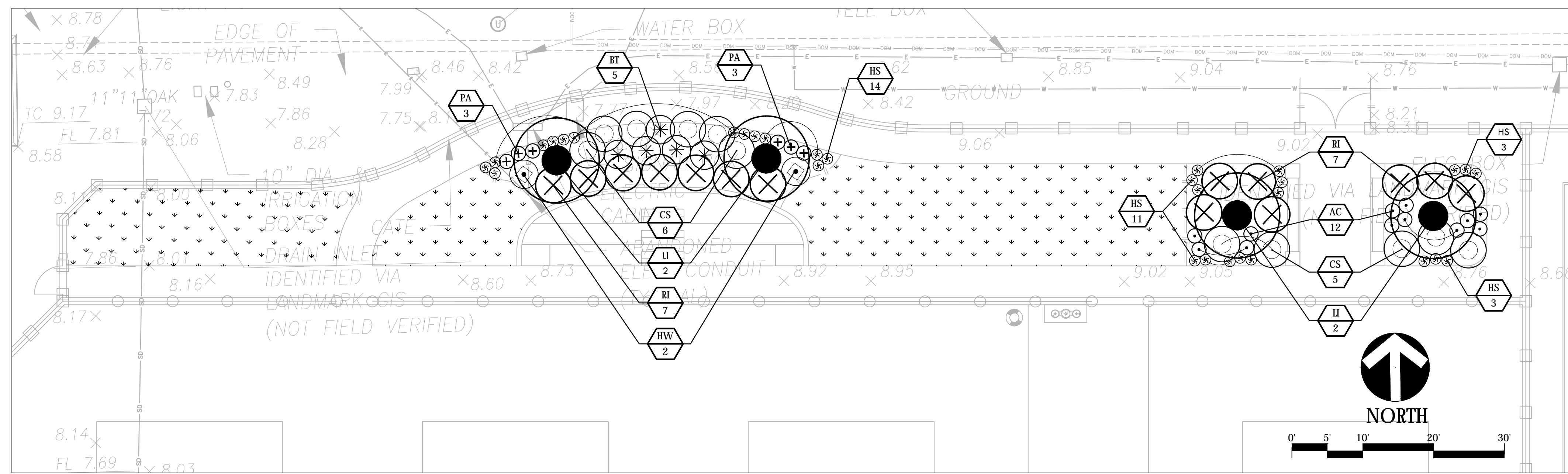


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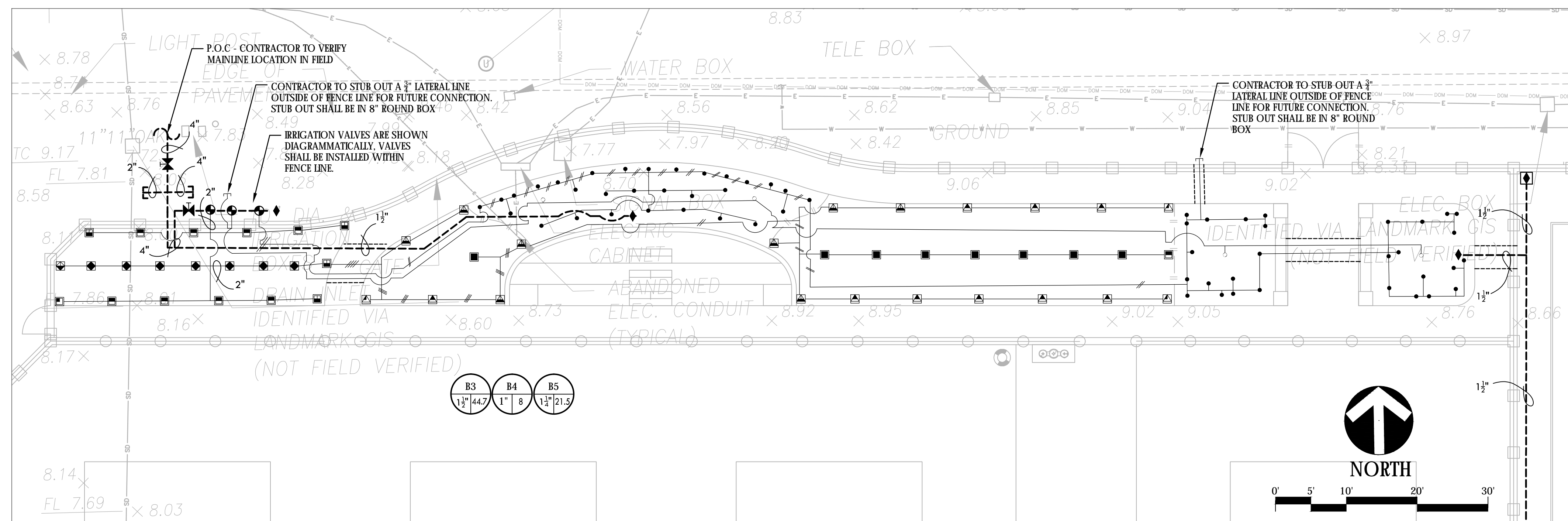


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PLANTING PLAN

PLANTING LEGEND					
SYM	QTY	SIZE	BOTANICAL/CANADIAN/COMMON/ABBREVIATION	SPACING/ COMMENTS	DTL REF
TURF					
	1,440 SF		SODDED TURF - BLUE-RYE. REFER TO SPECIFICATIONS.		
TREES					
CO	4	24" BOX	CERCIS OCCIDENTALS WESTERN REDBUD	15'-0" O.C.	(N) (DB.0)
LI	4	24" BOX	LAGERSTROEMIA INDICA 'TUSCARORA' PINK CREPE MYRTLE	25'-0" O.C.	(N) (DB.0)
SHRUBS					
AC	64	5 GAL	ANIGZOANTHUS 'CAPE AURORA' CAPE AURORA KANGAROO PAW	2'-0" O.C.	(O) (DB.0)
BT	5	5 GAL	BERBERIS THUNBERGII 'CHERRY BOMB' CHERRY BOMB JAPANESE BARBERY	4'-0" O.C.	(O) (DB.0)
CS	11	5 GAL	COLEONEMA 'SUNSET GOLD' SUNSET GOLD BREATH OF HEAVEN	4'-0" O.C.	(O) (DB.0)
HW	5	5 GAL	HESPERUYUCCA WHIPPLEI 'RCF' WHIPPLES YUCCA	4'-0" O.C.	(O) (DB.0)
PA	147	1 GAL	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY' LITTLE BUNNY DWARF FOUNTAIN GRASS	2'-0" O.C.	(O) (DB.0)
RI	14	5 GAL	RHAPLOPSEUS INDICA 'SPRINGTIME' SPRINGTIME INDIAN HAWTHORN	5'-0" O.C.	(O) (DB.0)
GROUND COVERS					
HS	116	1 GAL	HEMEROCALLIS X 'STELLA DE ORO' STELLA DE ORO DWARF DAYLILY	18" O.C.	(O) (DB.0)



IRRIGATION PLAN

IRRIGATION LEGEND						
SYM.	MANUF.	MODEL NO./ DESCRIPTION	DIS. RAD. /CAT. RAD.	GPM	PSI	DTL. REF.
•	RAINBRD	1401-BUBBLER HEAD	-	25	30	(O) (DB.0)
○	RAINBRD	1405-BUBBLER HEAD 4 PER TREE	-	.50	30	(N) (DB.0)
■	RAIN BRD	1806-SAM-PRS BODY WITH 8Q, 8H, 8F, VAN NOZZLES	7'-8"	26-1.05	30	(I) (DB.0)
■	RAIN BRD	1806-SAM-PRS BODY WITH 10Q, 10H, 10F, VAN NOZZLES	9'-10"	.39-1.58	30	(I) (DB.0)
⊙	GRSWOLD	F-2230 REMOTE CONTROL VALVE - SIZE AS NOTED				(A) (DB.0)
⊕	NIBCO	GATE VALVES 2" AND SMALLER SHALL BE NIBCO F-113-1F. FOR VALVES ABOVE 2" IN SIZE UTILIZE NIBCO F-619-1F FLANGED VALVE WITH SQUARE OPERATING NUT.				(L.C.D) (DB.0)
◆	RAINBRD	44-LRC QUICK COUPLER VALVE IN SOFTSCAPE				(F) (DB.0)
⊕	RAINBRD	44-LRC QUICK COUPLER VALVE IN SYNTHETIC TURF				(H) (DB.0)
MAINLINE - 2" AND SMALLER, SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS, 2'-1/2" AND 3" CLASS 315 PVC WITH RING. THE CONNECTIONS, 4" AND LARGER CLASS 200 WITH 24" COVER.						
3/4" LATERAL LINE - SCH 40, PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.						
1" LATERAL LINE - SCH 40, PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.						
1-1/4" LATERAL LINE - SCH 40, PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.						
1-1/2" LATERAL LINE - SCH 40, PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.						
2" LATERAL LINE - SCH 40, PVC PIPE & SOLVENT WELD FITTINGS, WITH 18" COVER.						
IRRIGATION SLEEVE - CLASS 315 PVC. SIZE TO BE TWICE THE SIZE OF TOTAL PIPE DIAMETERS WITHIN THE SLEEVE WITH 30" COVER.						
⊙	CONTROLLER STATION NUMBER					
⊕	APPROX. GPM FLOW THROUGH VALVE					
⊕	CONTROL VALVE SIZE					
⊕	STUB AND CAP MAIN LINE IN 8" ROUND VALVE BOX. RUN 3 ADDITIONAL CONTROL WIRES AND ONE COMMON FROM CONTROLLER AND COIL 24" OF WIRE IN VALVE BOX.					

SHEET TITLE

**BID ALTERNATES:
PLANTING AND
IRRIGATION PLANS**

PROJECT NAME

**COLLEGE OF MARIN
ATHLETIC FACILITIES
IMPROVEMENTS**

PROJECT ADDRESS

**835 COLLEGE AVE.
KENTFIELD, CA
94904**

SUBMITTAL

80% CD SUBMITTAL	DATE
	06/16/17

100% SUBMITTAL

100% SUBMITTAL	DATE
	06/30/17

NO. REVISIONS

NO.	REVISIONS	DATE
▲	ADDENDUM #1	08/17/17

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DATE ISSUED	06/30/17	SCALE	1" = 10'-0"

PROJ. NO.

1702200

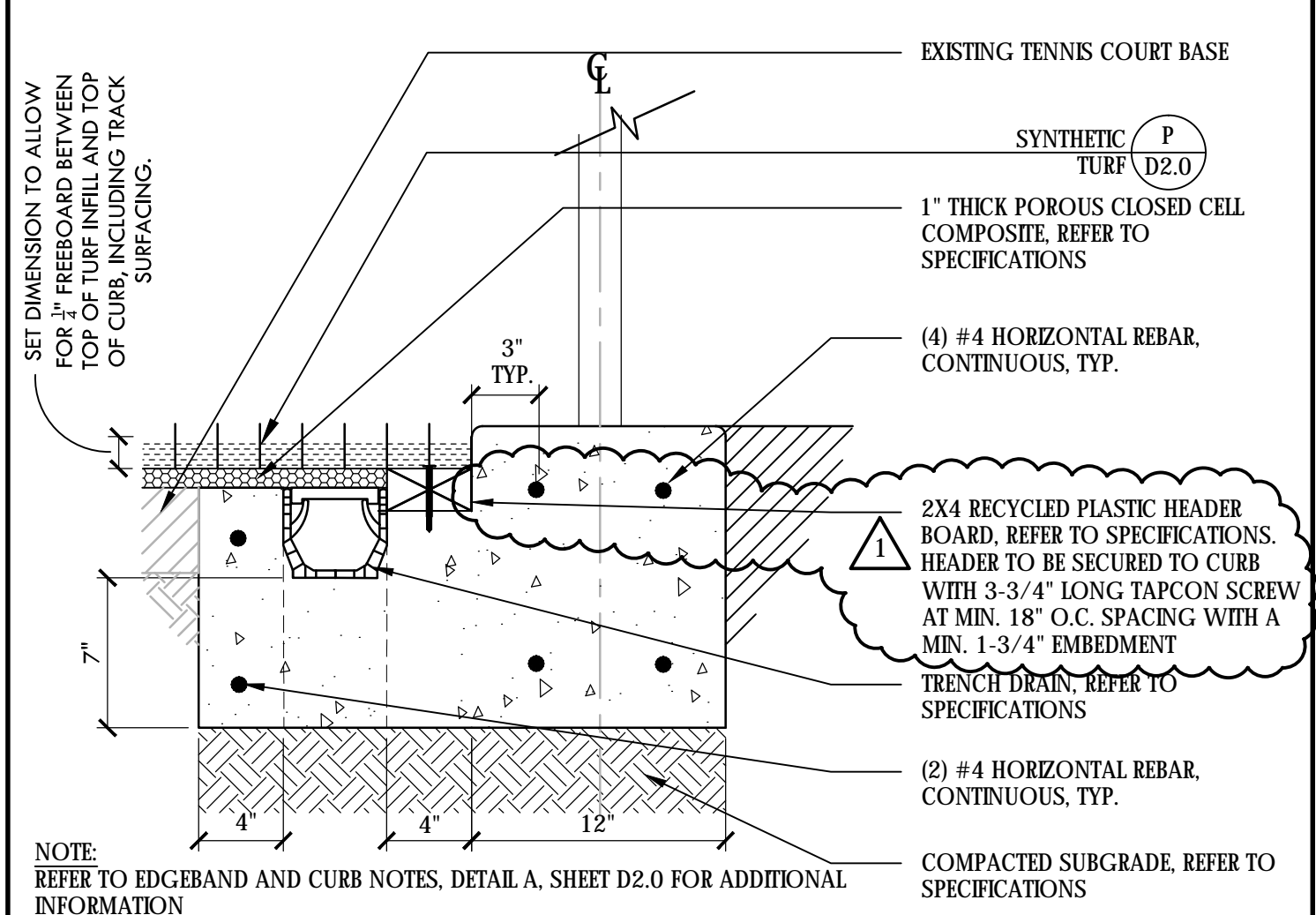
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L10.2 BID ALTERNATE

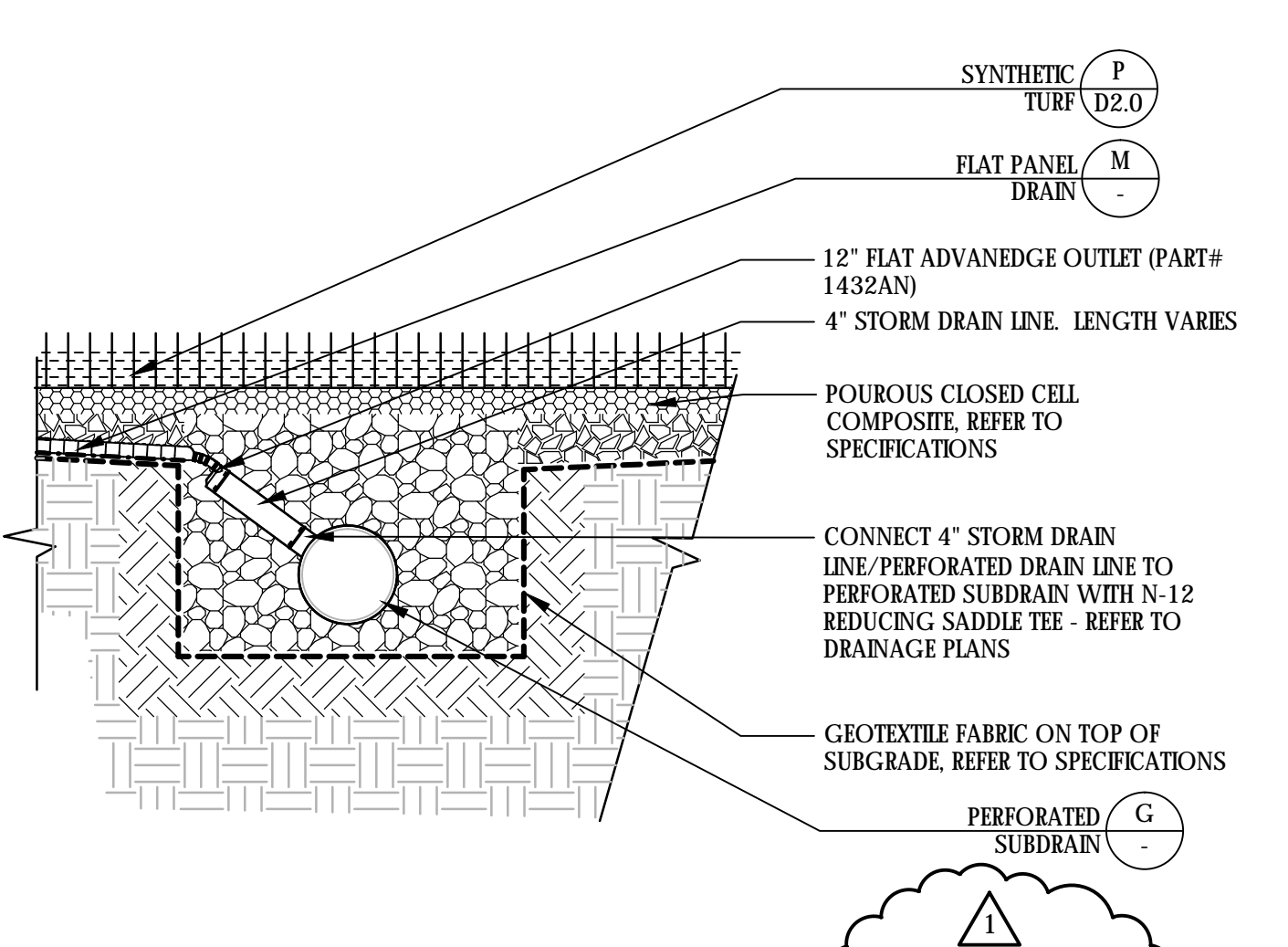
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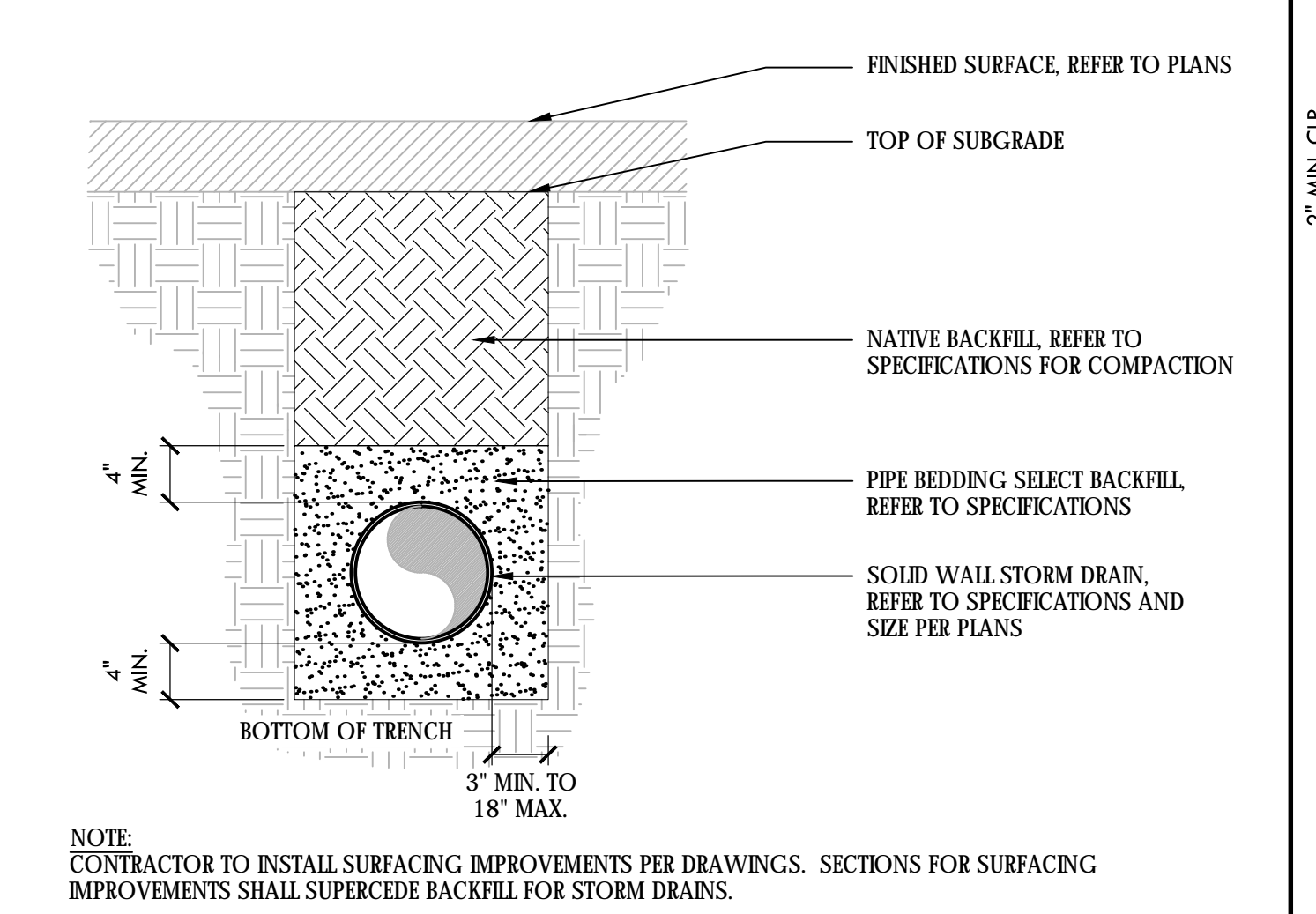
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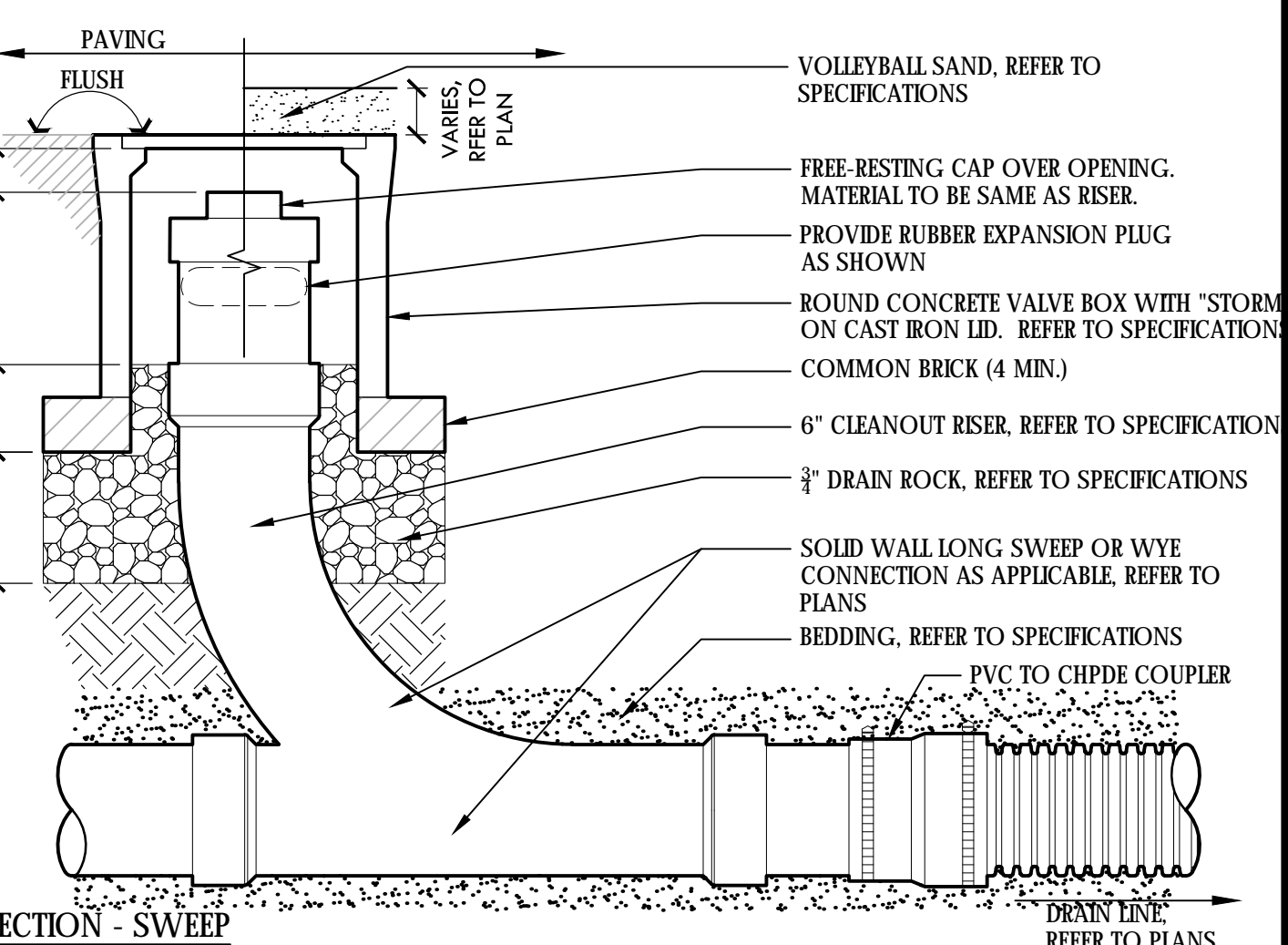
R FUTSAL EDGE/FIELD TRENCH DRAIN NTS



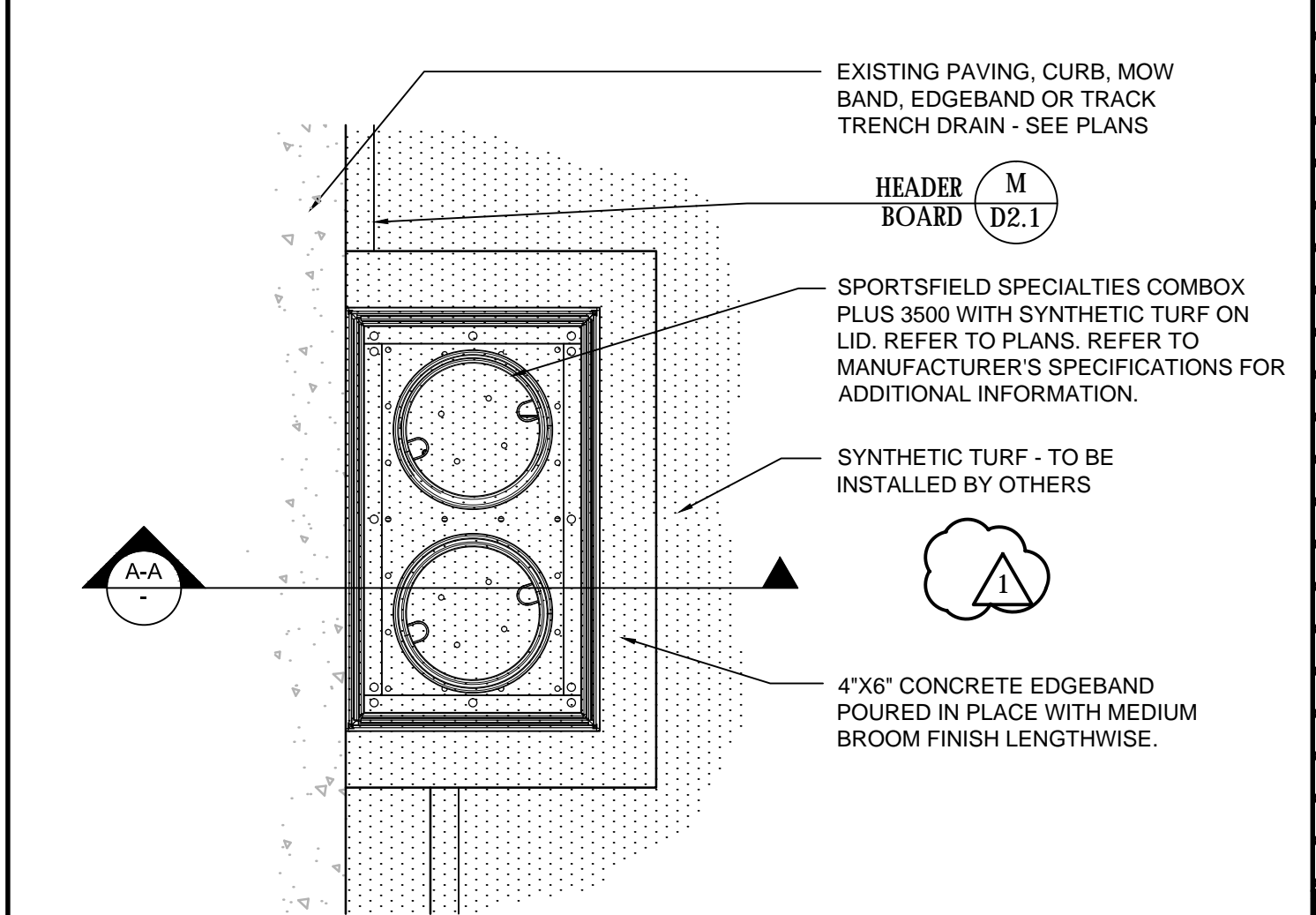
N FLAT PANEL DRAIN CONNECTION - SOCCER FIELD NTS



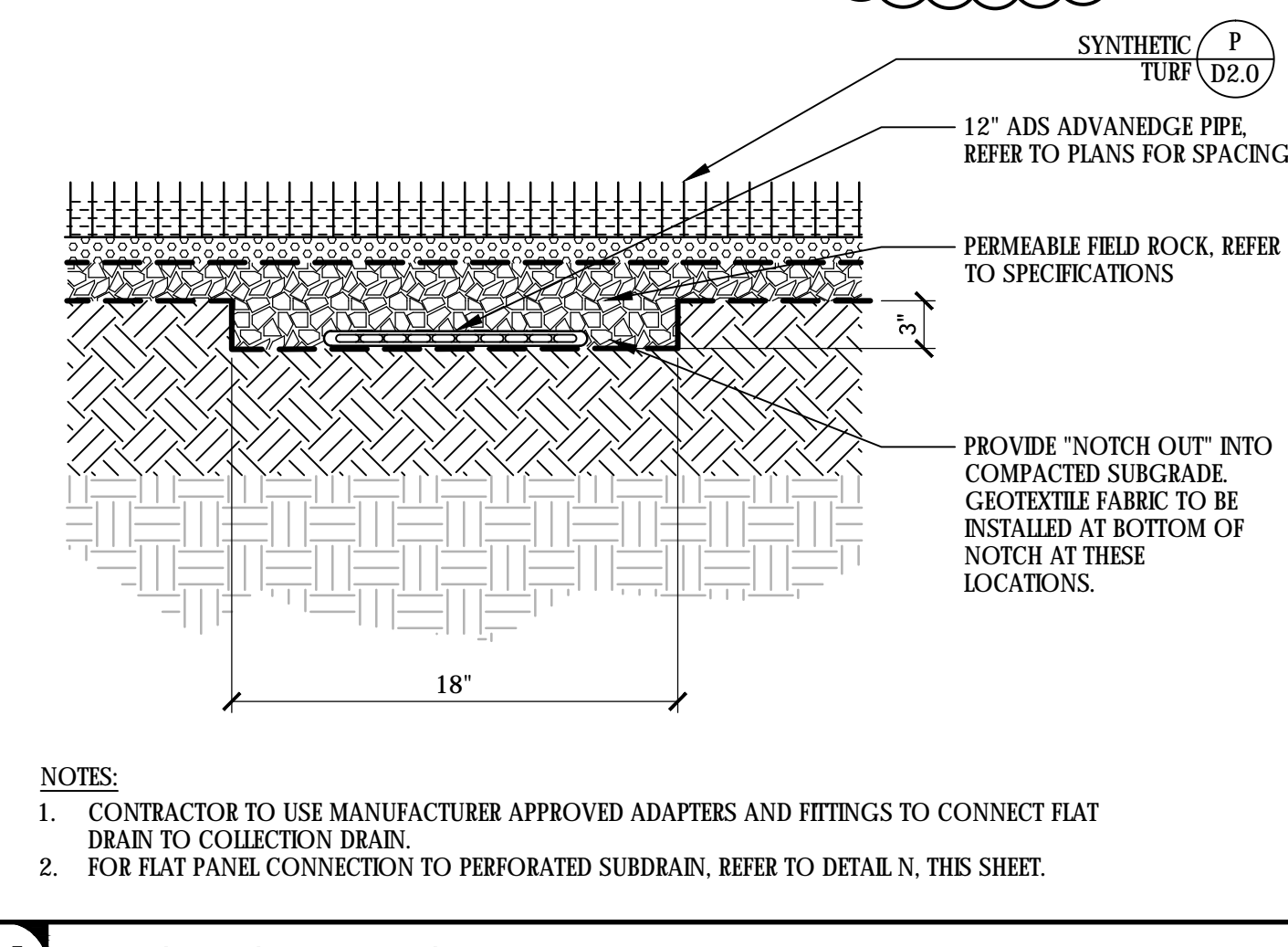
J TRENCH BACKFILL - SOLID WALL STORM/SEWER NTS



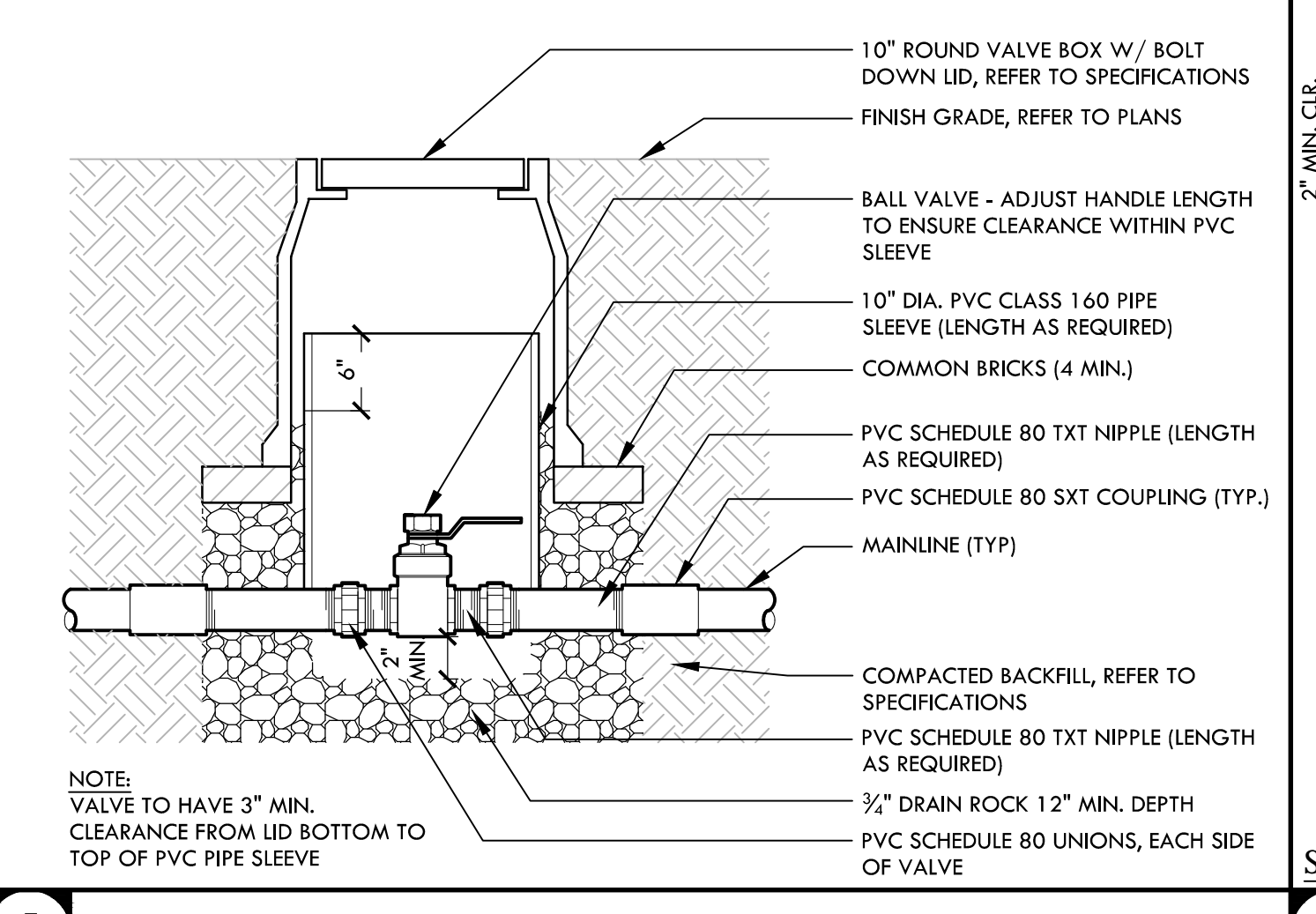
E CLEANOUT IN HARDSCAPE/SAND NTS



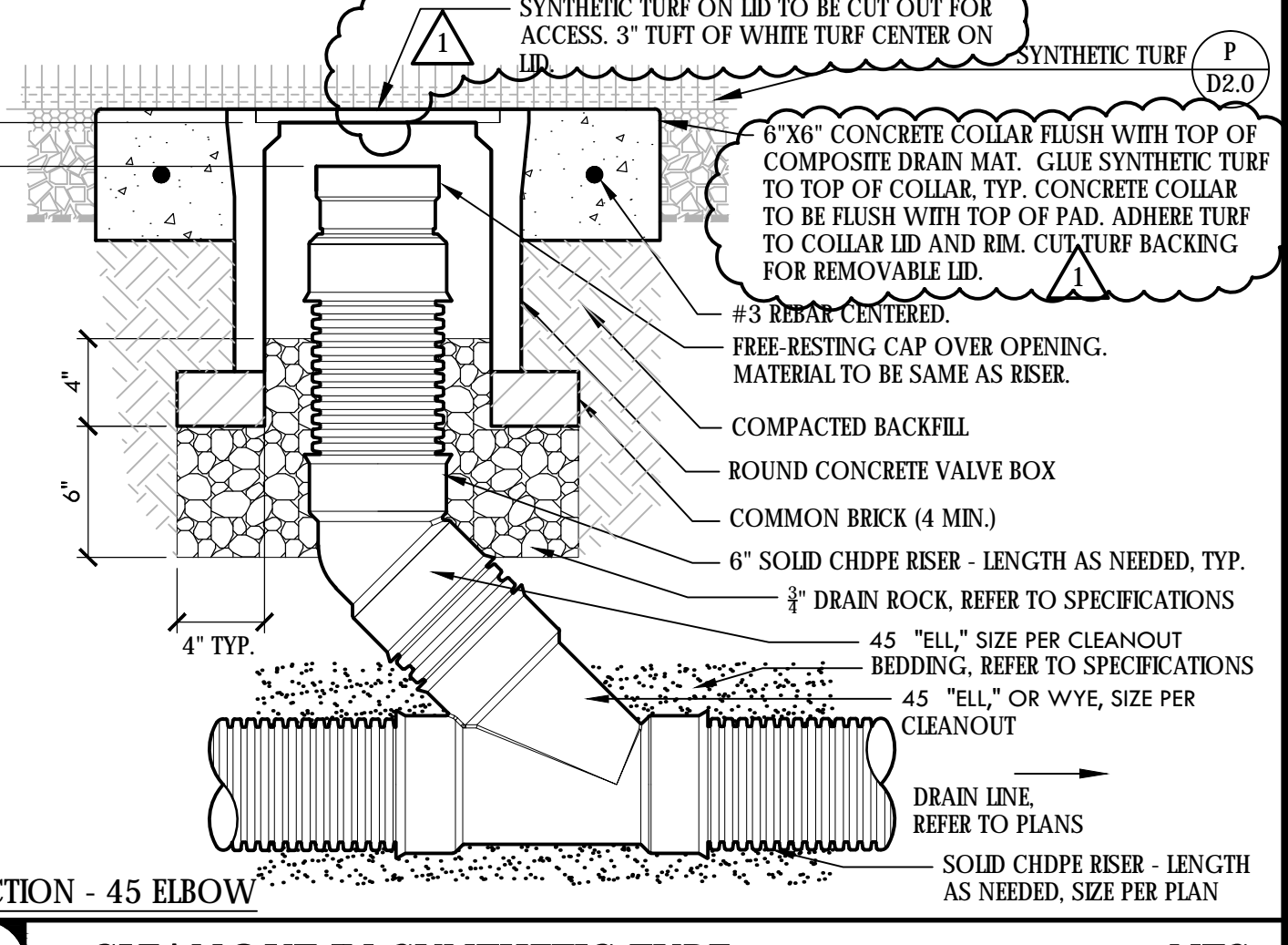
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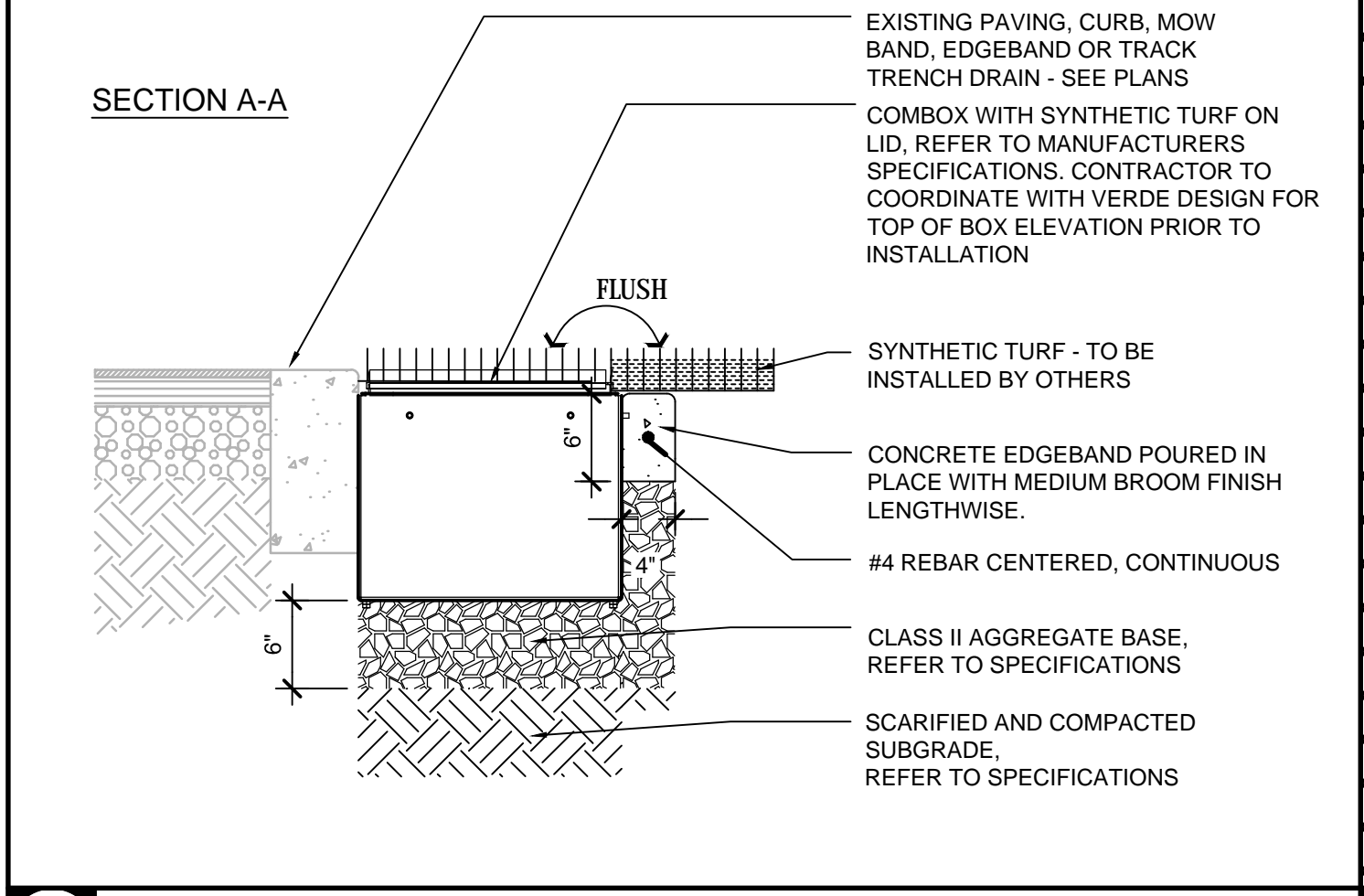
I BALL VALVE NTS



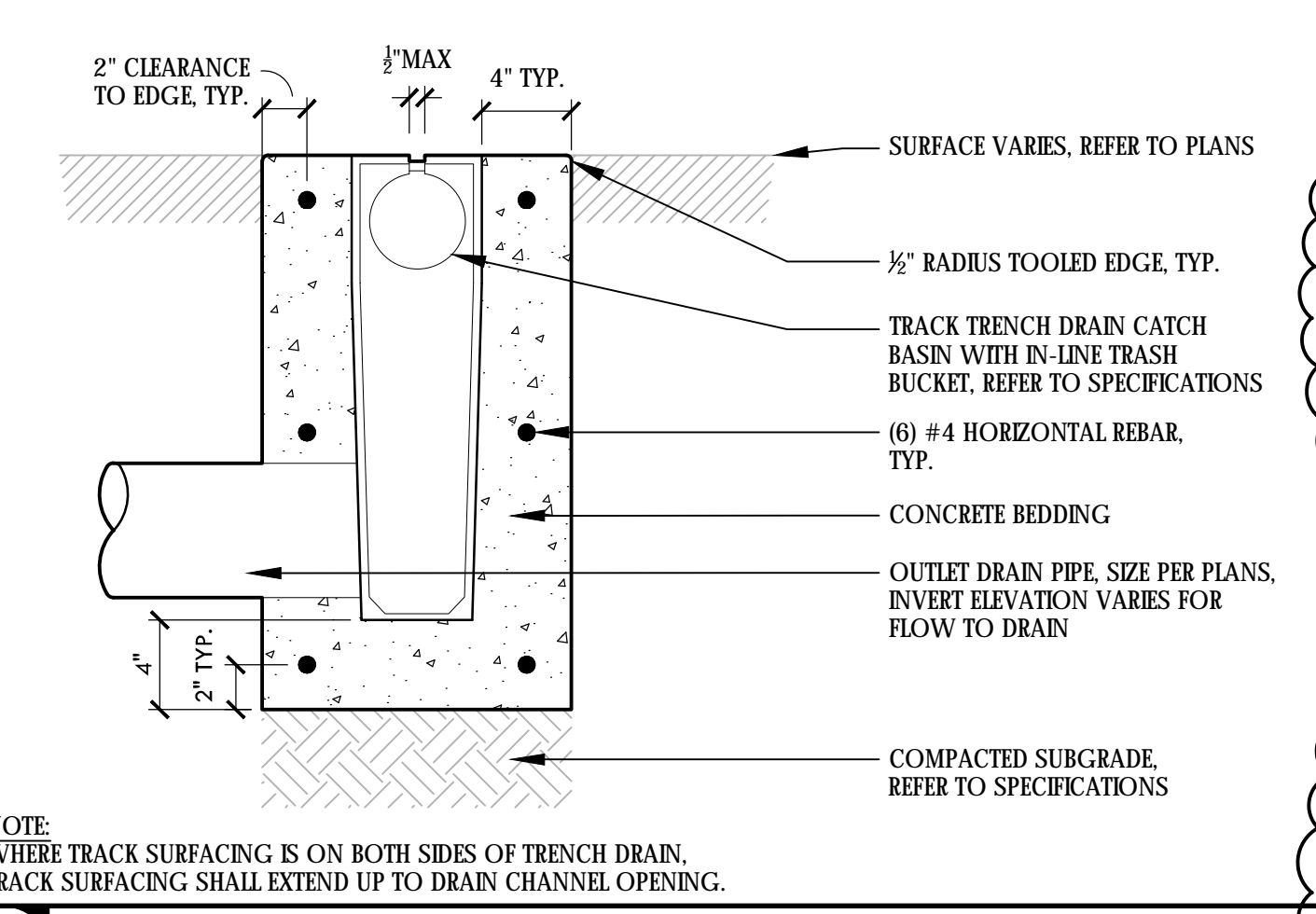
D CLEANOUT IN SYNTHETIC TURF NTS



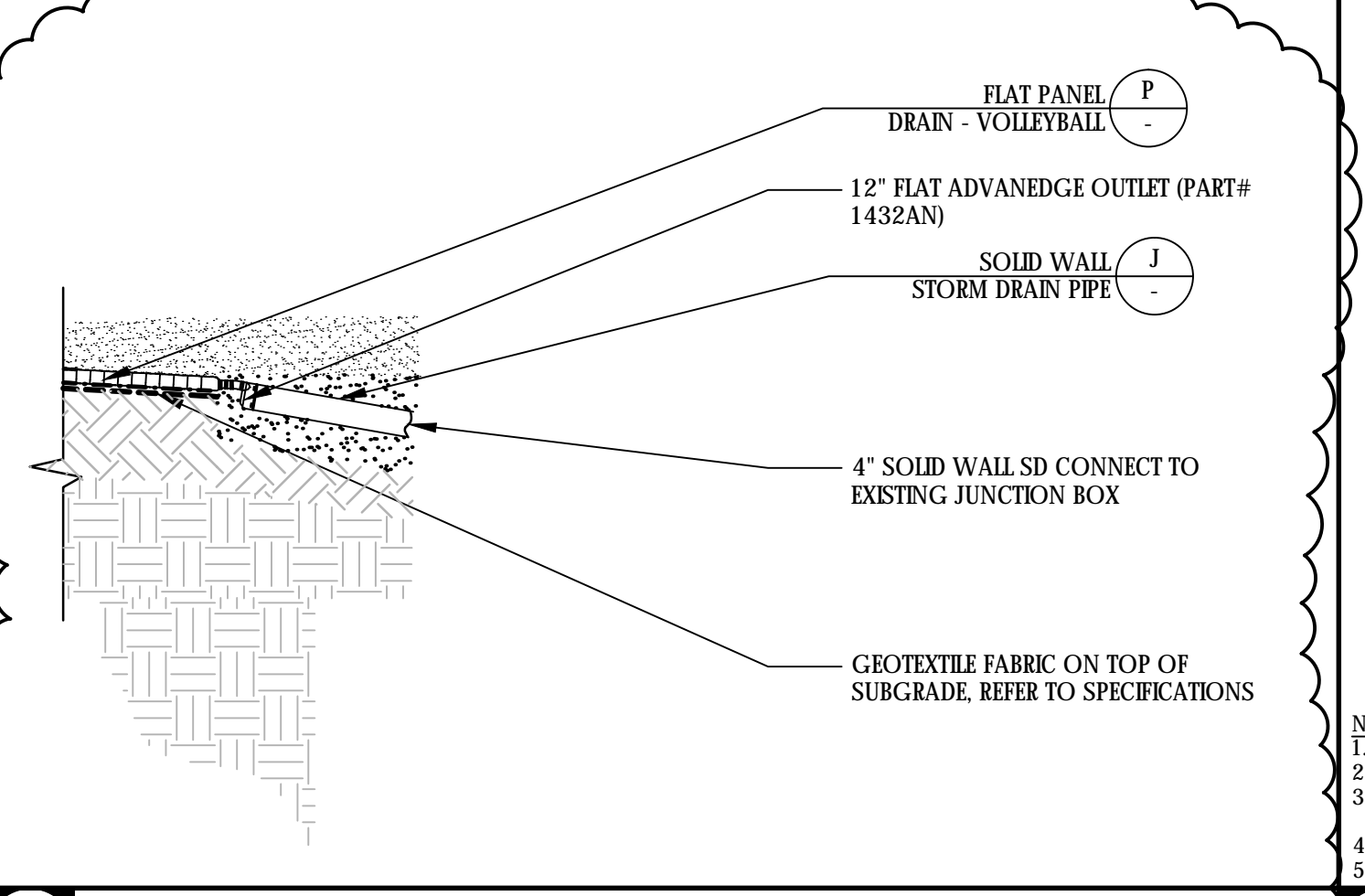
H FLAT PANEL DRAIN CONNECTION - VOLLEYBALL NTS



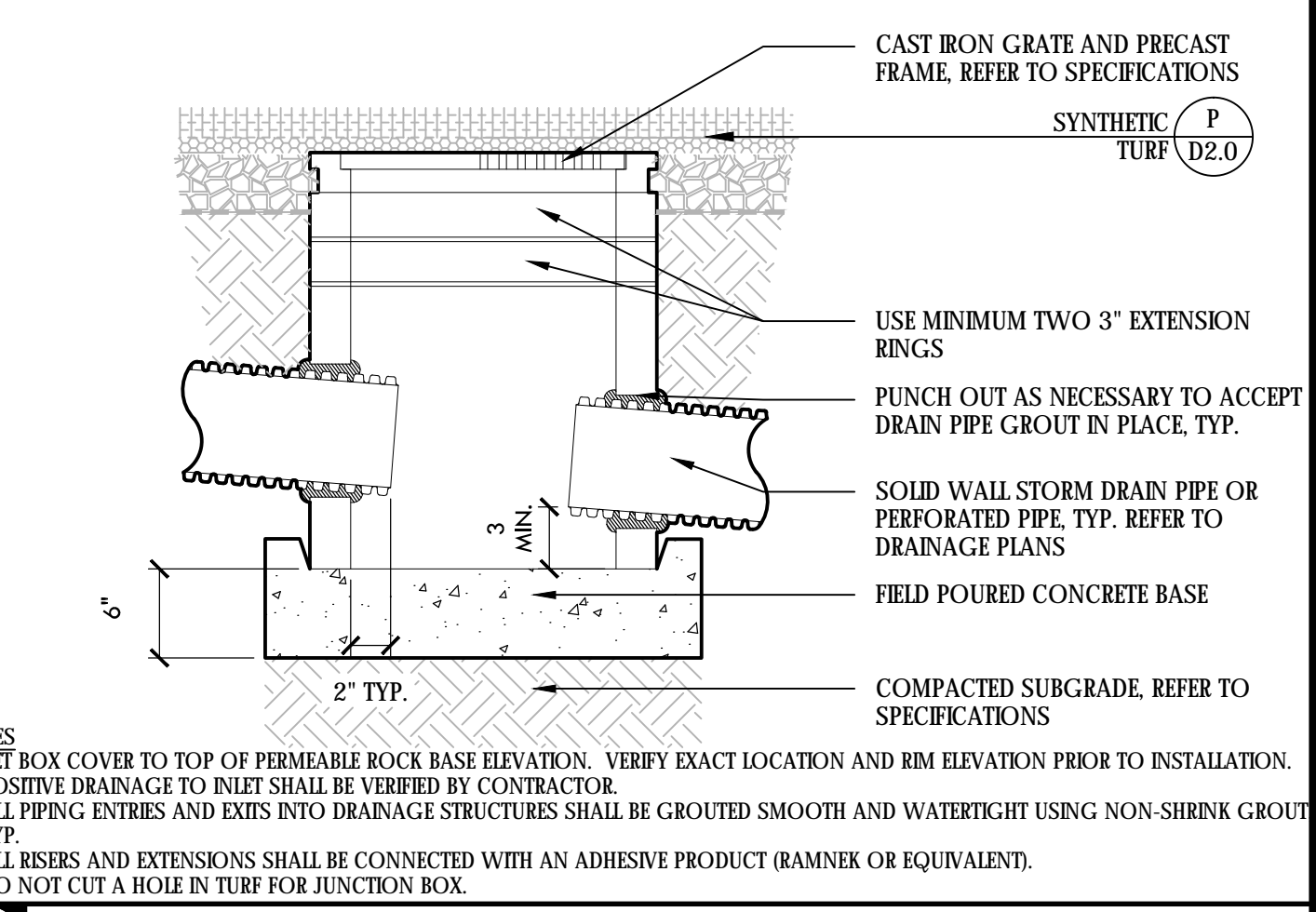
Q ELECTRICAL COMBOX NTS



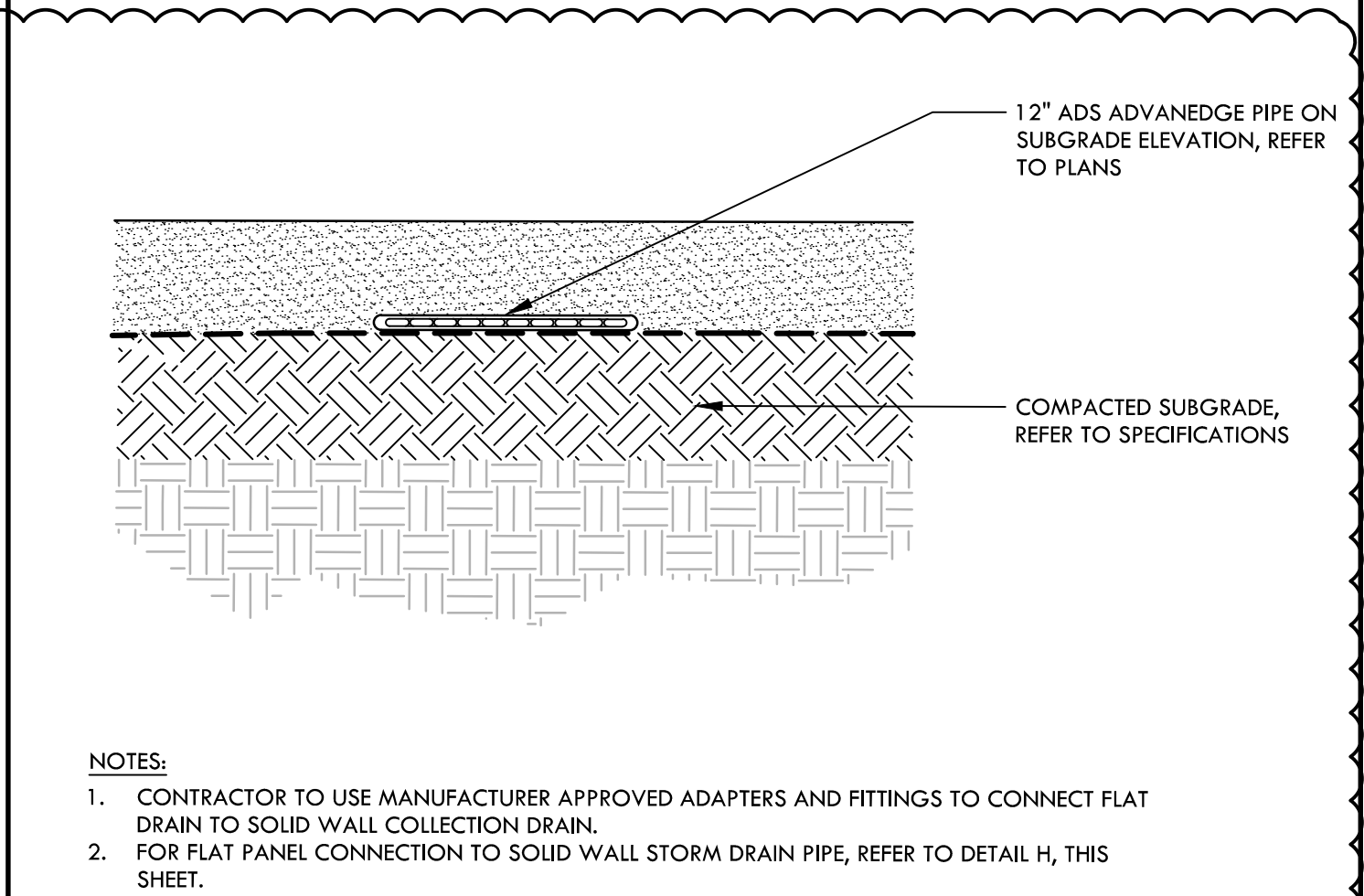
L TRENCH DRAIN CATCH BASIN NTS



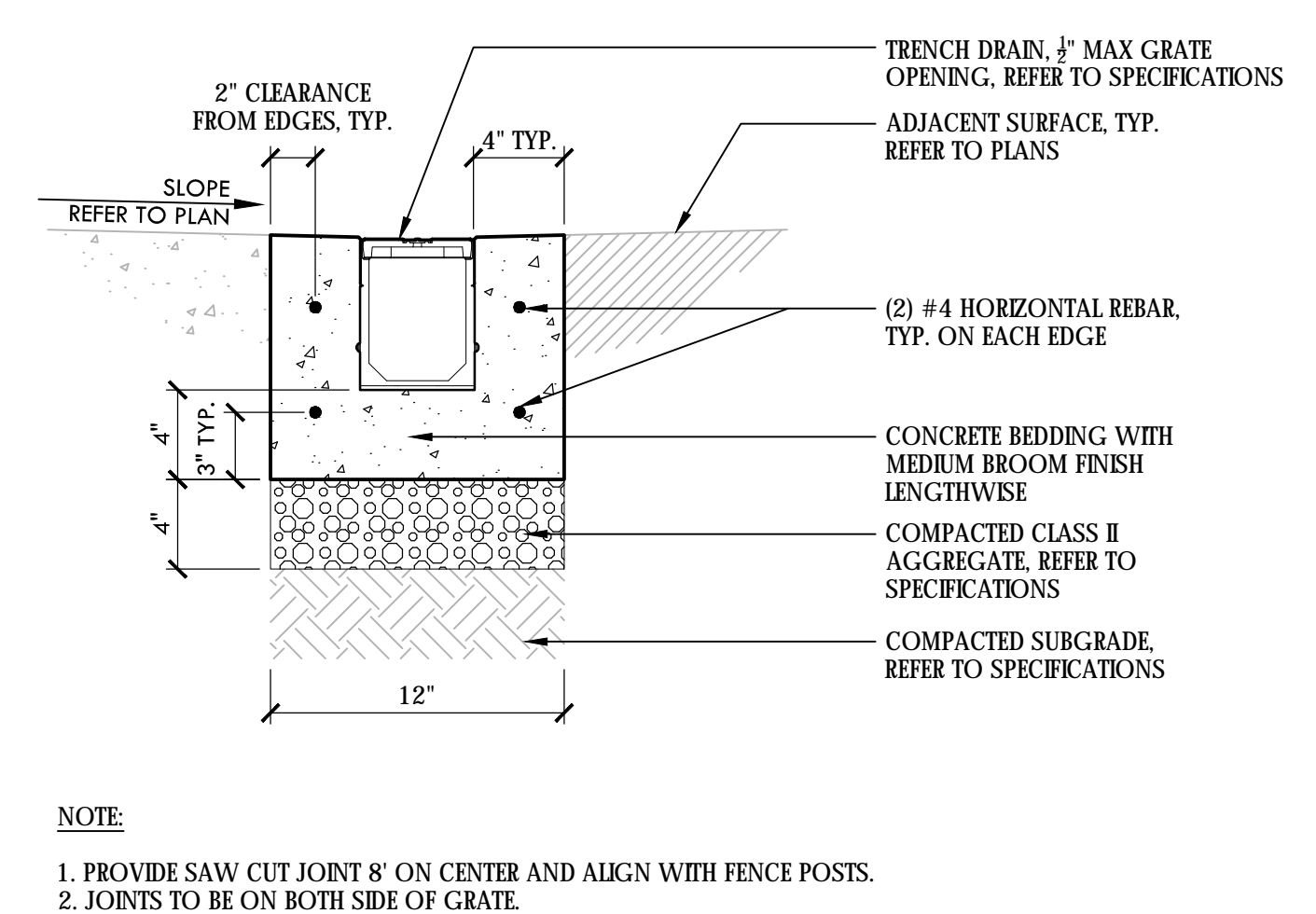
G PERFORATED SUBDRAIN LINE NTS



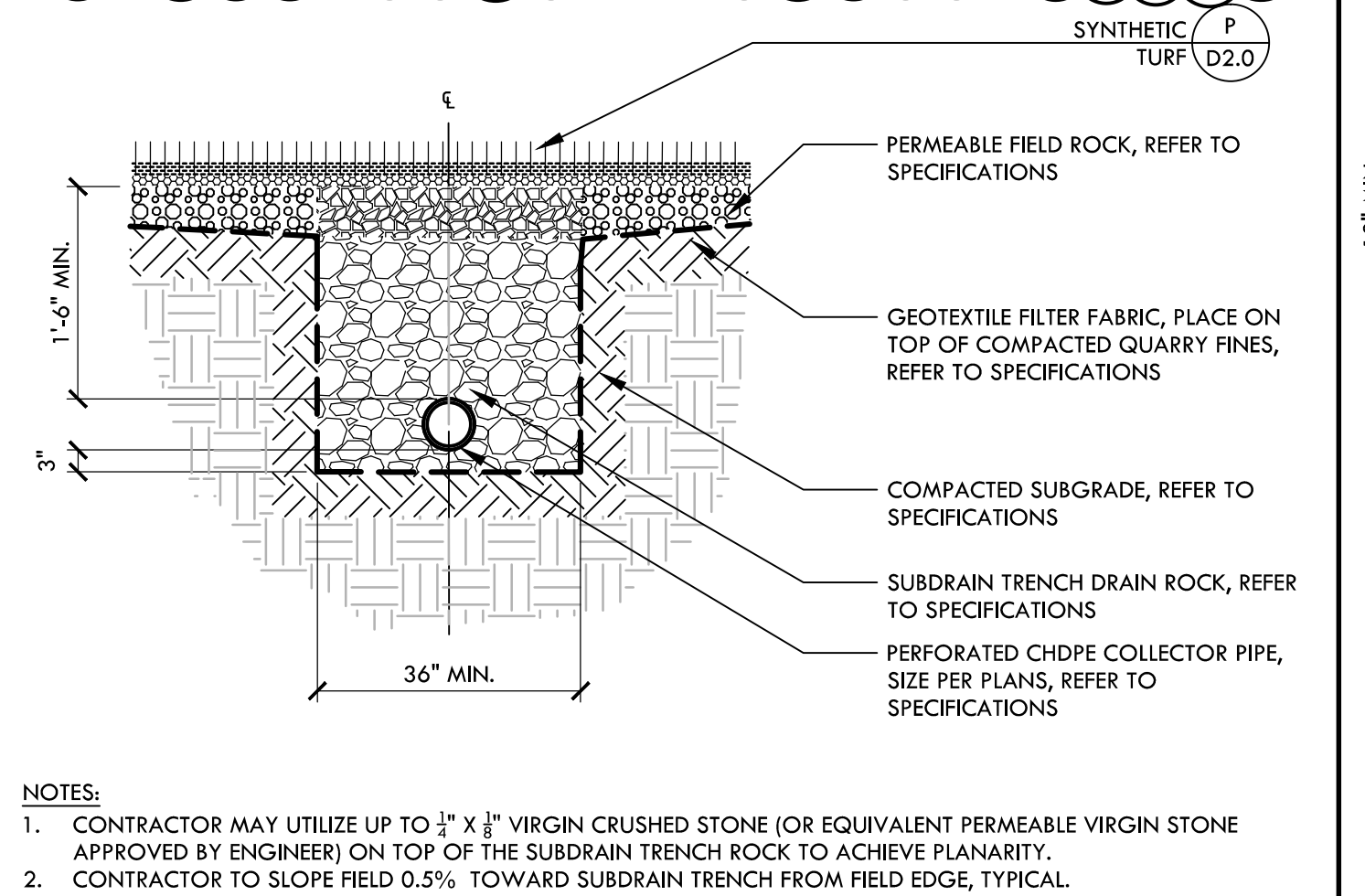
C JUNCTION BOX NTS



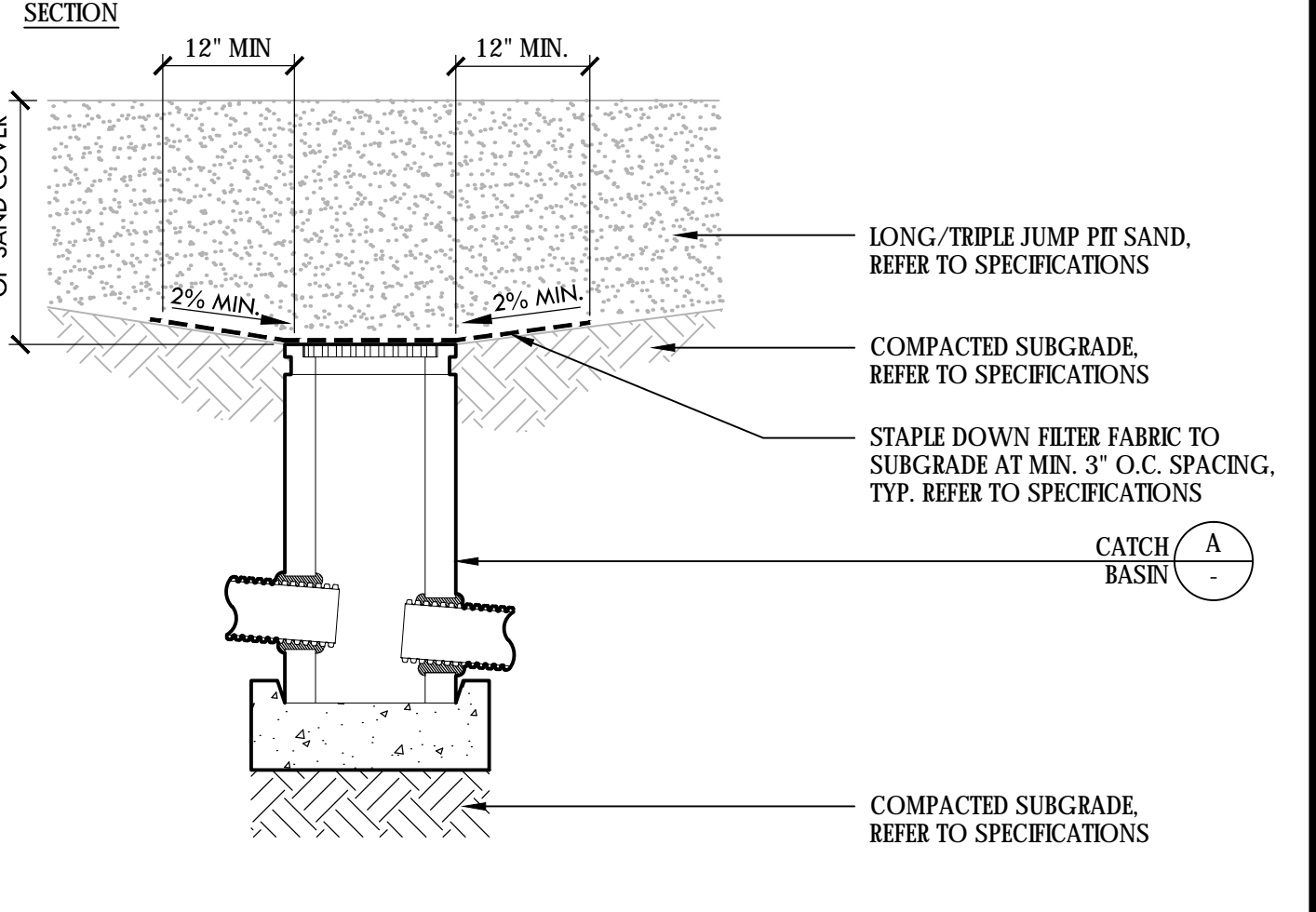
P FLAT PANEL DRAIN - VOLLEYBALL NTS



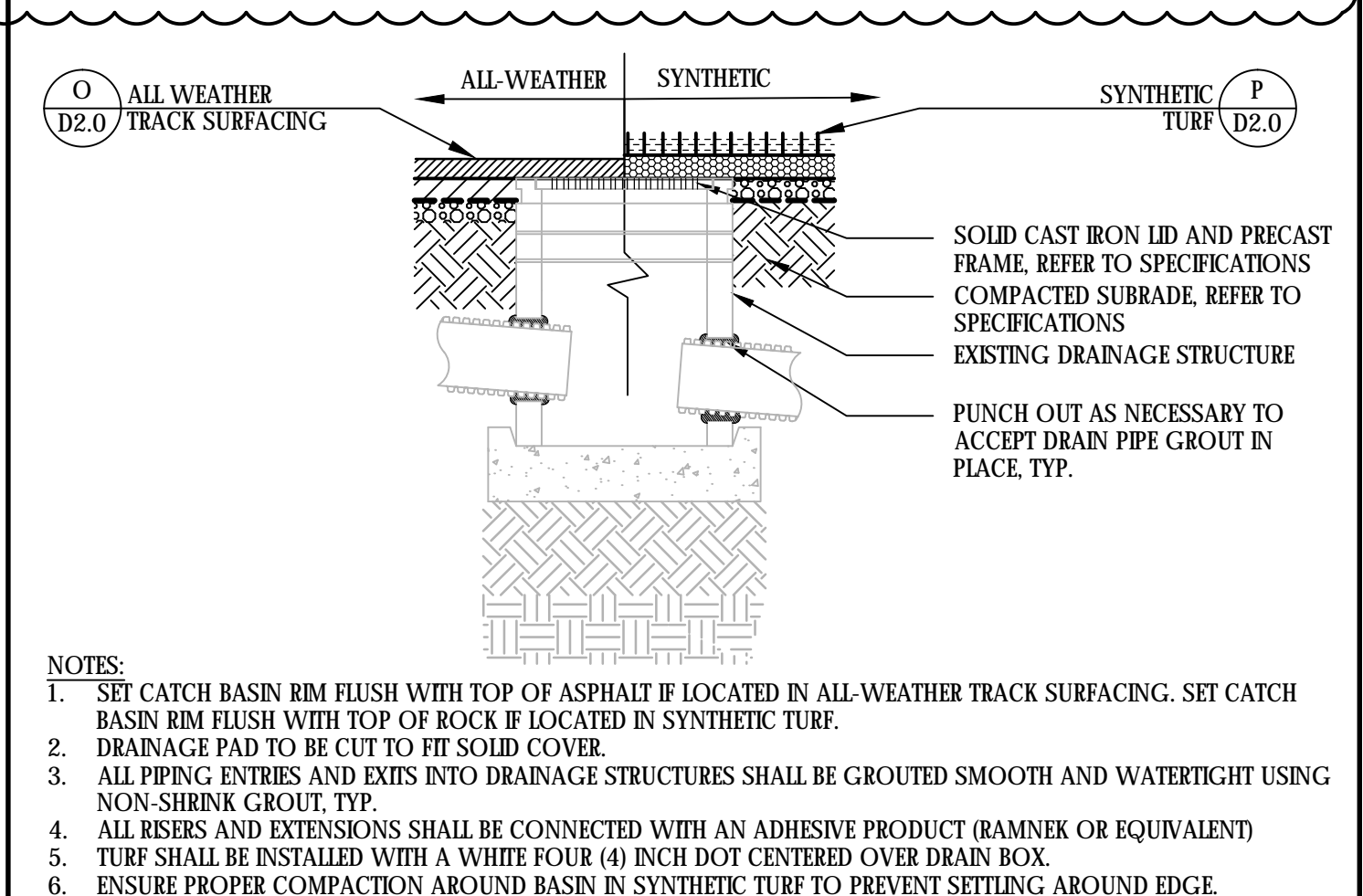
K TRENCH DRAIN AT TENNIS COURTS NTS



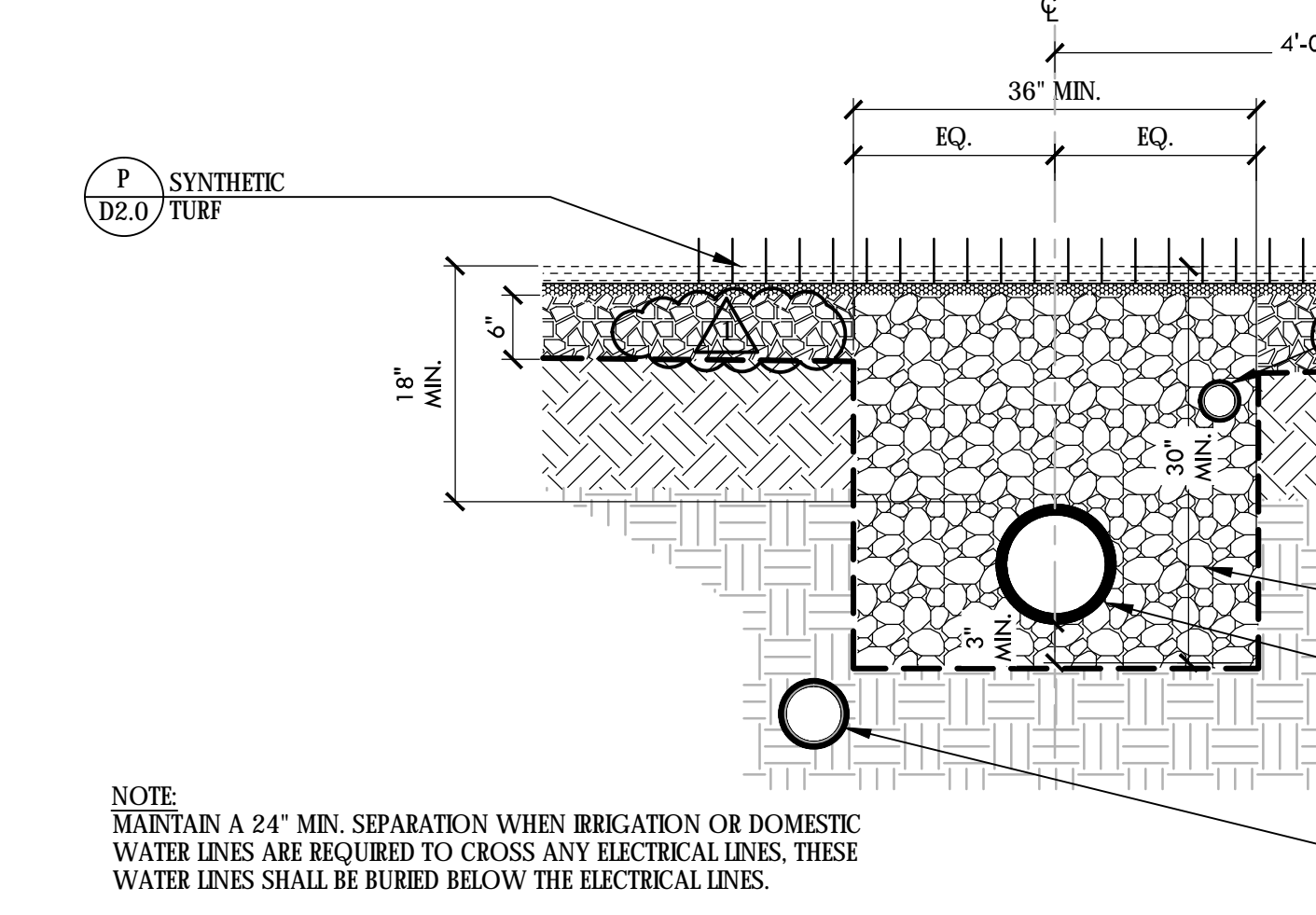
B CATCH BASIN IN SAND PIT NTS



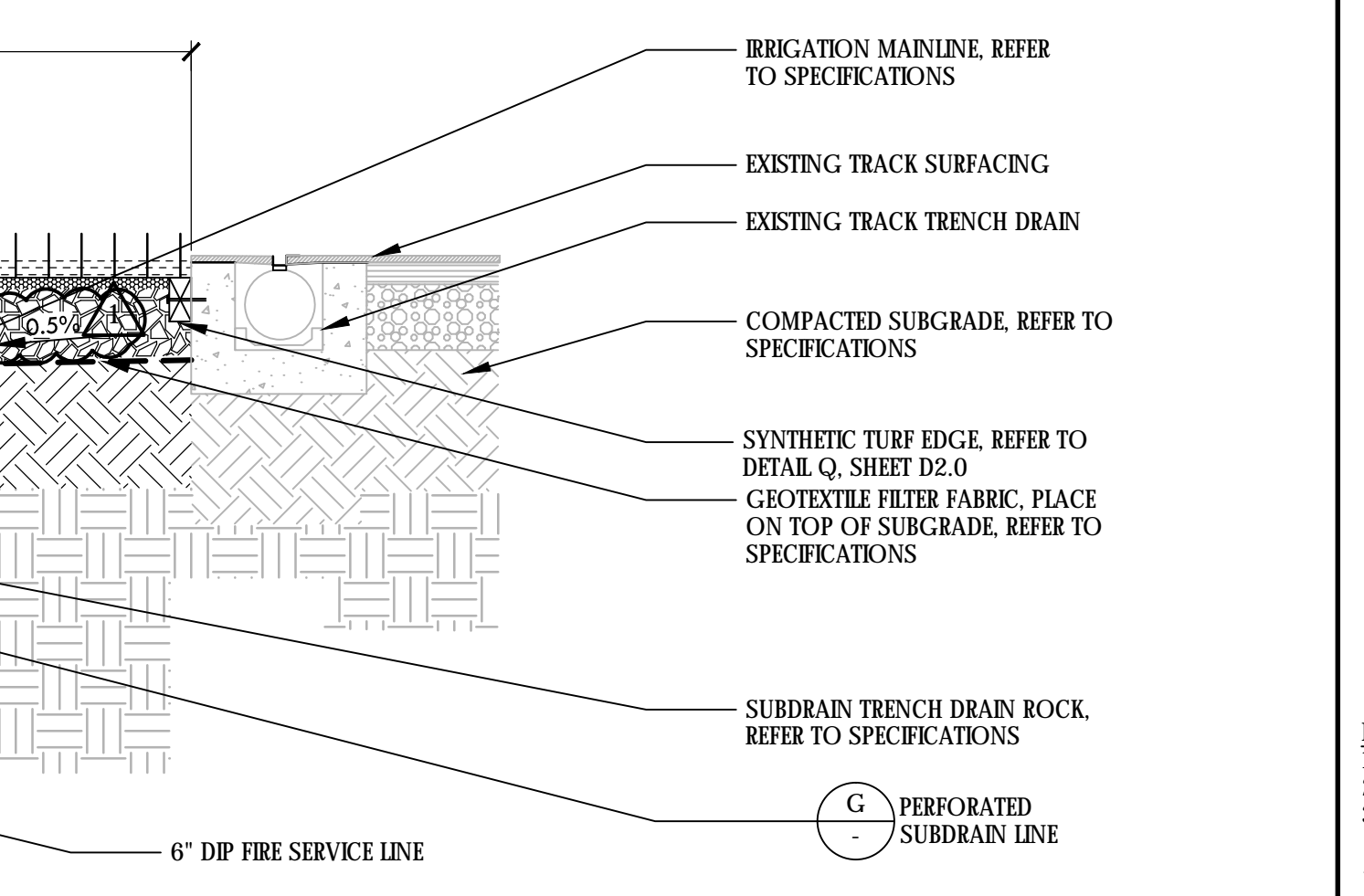
A CATCH BASIN NTS



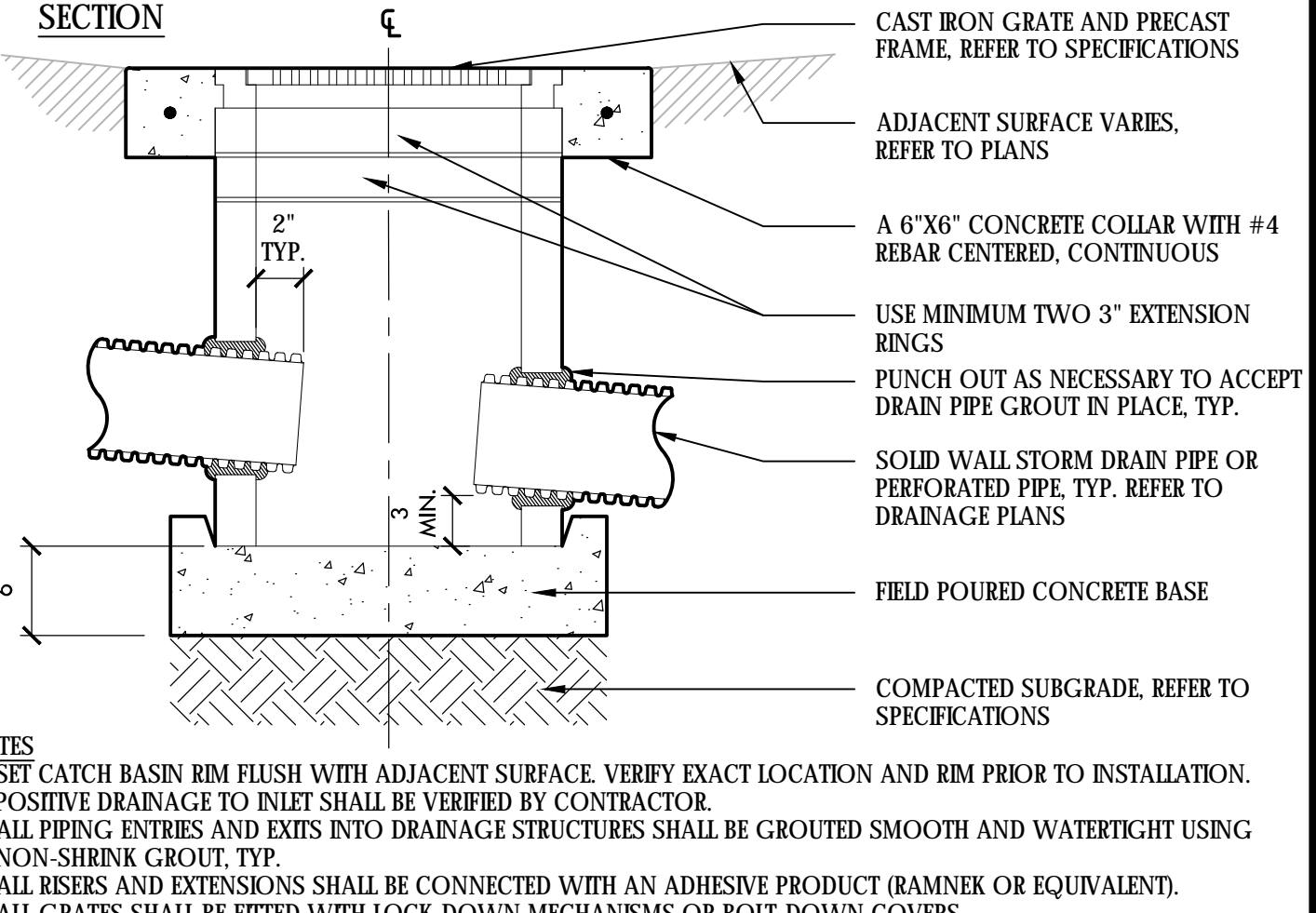
O MODIFIED CATCH BASIN NTS



F TYPICAL FIELD & PIPE SECTION W/ VERTICAL TRENCH NTS



G PERFORATED SUBDRAIN LINE NTS



A CATCH BASIN NTS

SHEET TITLE
DRAINAGE AND UTILITY DETAILS

PROJECT NAME
COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS

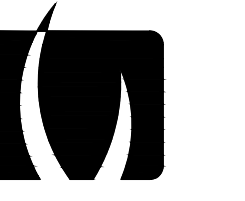
PROJECT ADDRESS
835 COLLEGE AVE. KENTFIELD, CA 94904

SUBMITTAL	DATE
80% CD SUBMITTAL	06/16/17
100% SUBMITTAL	06/30/17

NO.	REVISIONS	DATE
ADDENDUM #1		08/17/17

DRAWN BY: **VERDE** CHECKED BY: **DC**
 DATE ISSUED: **06/30/17** SCALE: **NTS**
 PROJ. NO.: **1702200**
 SHEET NO.: **D1.0**

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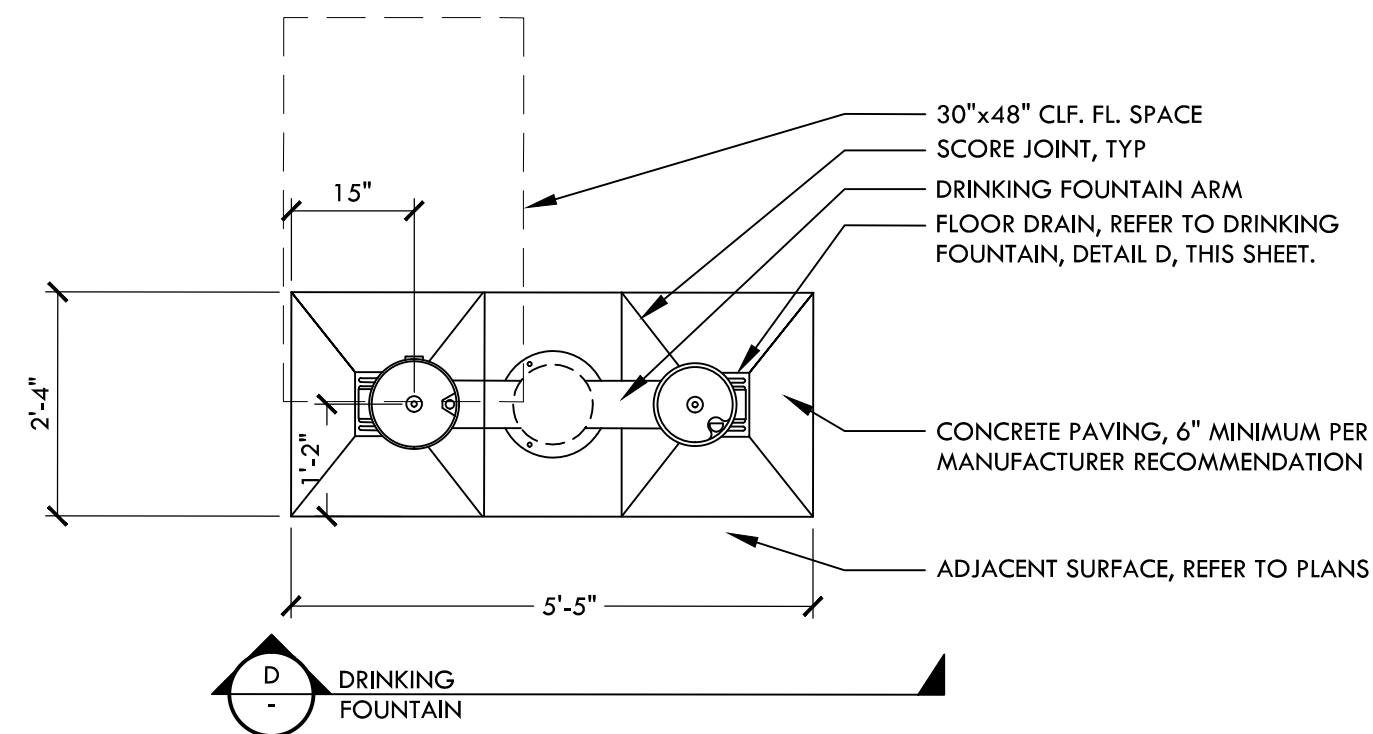


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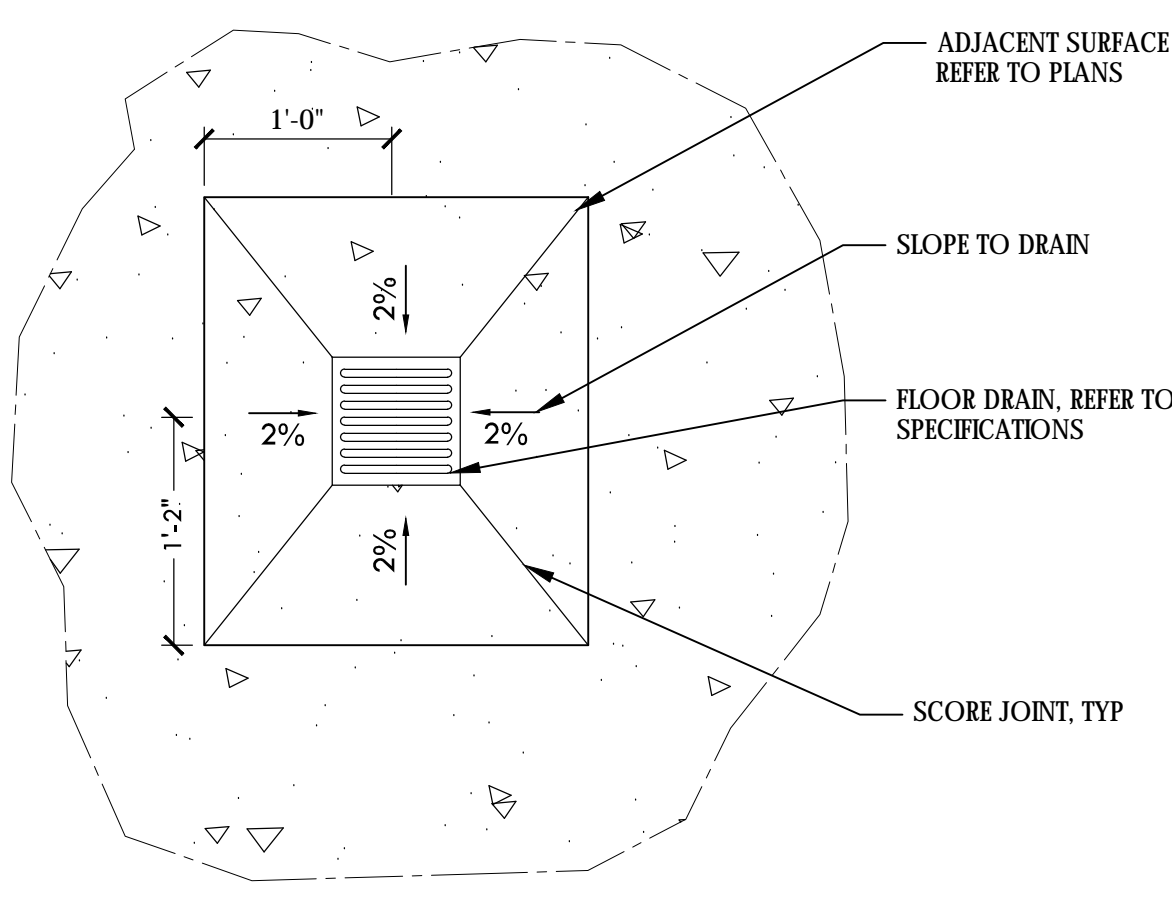
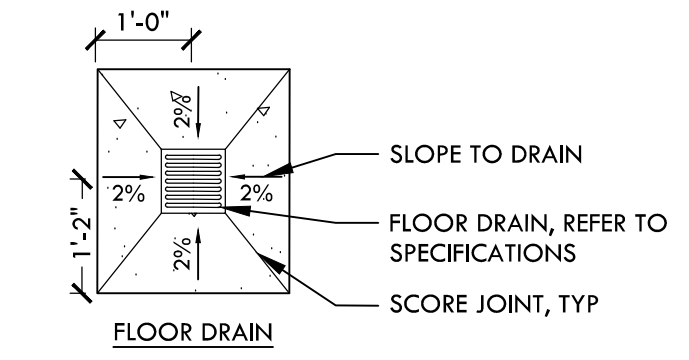


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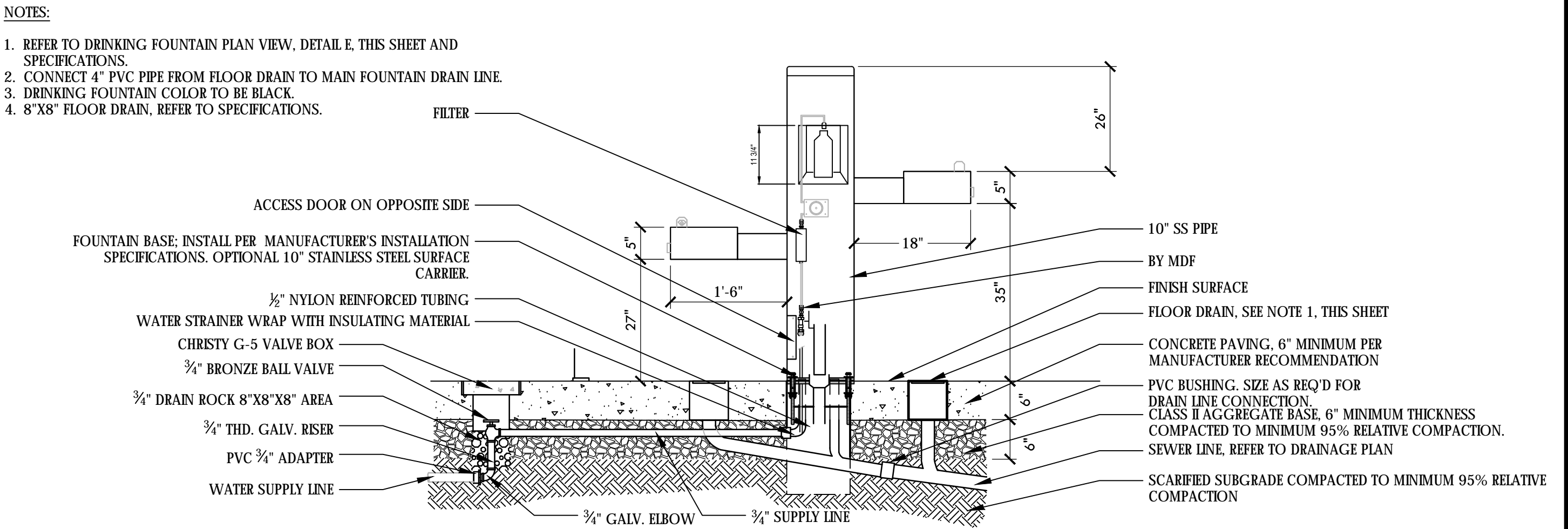


- NOTES:**
1. REFER TO DRINKING FOUNTAIN, DETAIL D, THIS SHEET AND SPECIFICATIONS.
 2. FOUNTAIN TO BE INSTALLED SHALL HAVE SAME DIRECTION OF APPROACH FOR BOTH HI & LO USERS.
 3. DRINKING FOUNTAIN BUTTONS TO FACE TOWARD APPROACH.

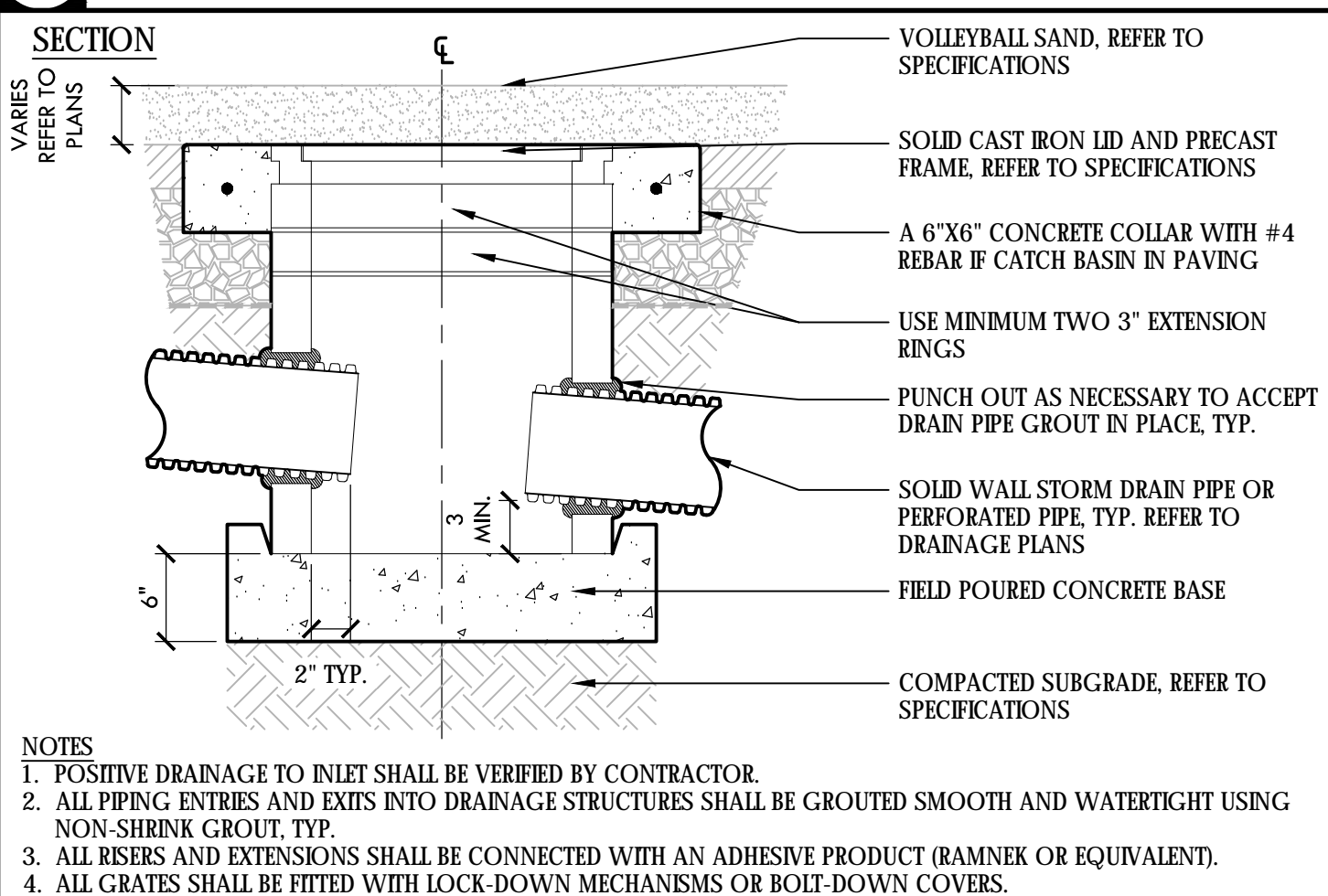
E DRINKING FOUNTAIN (PLAN) NTS



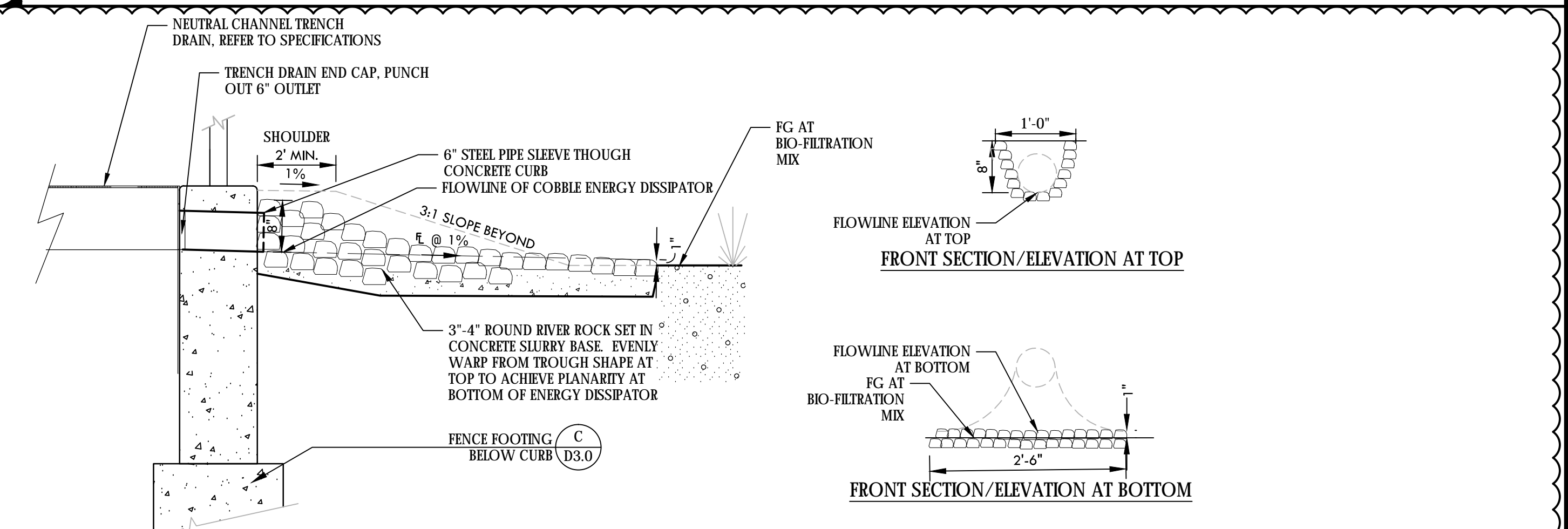
K SHOWER FLOOR DRAIN NTS



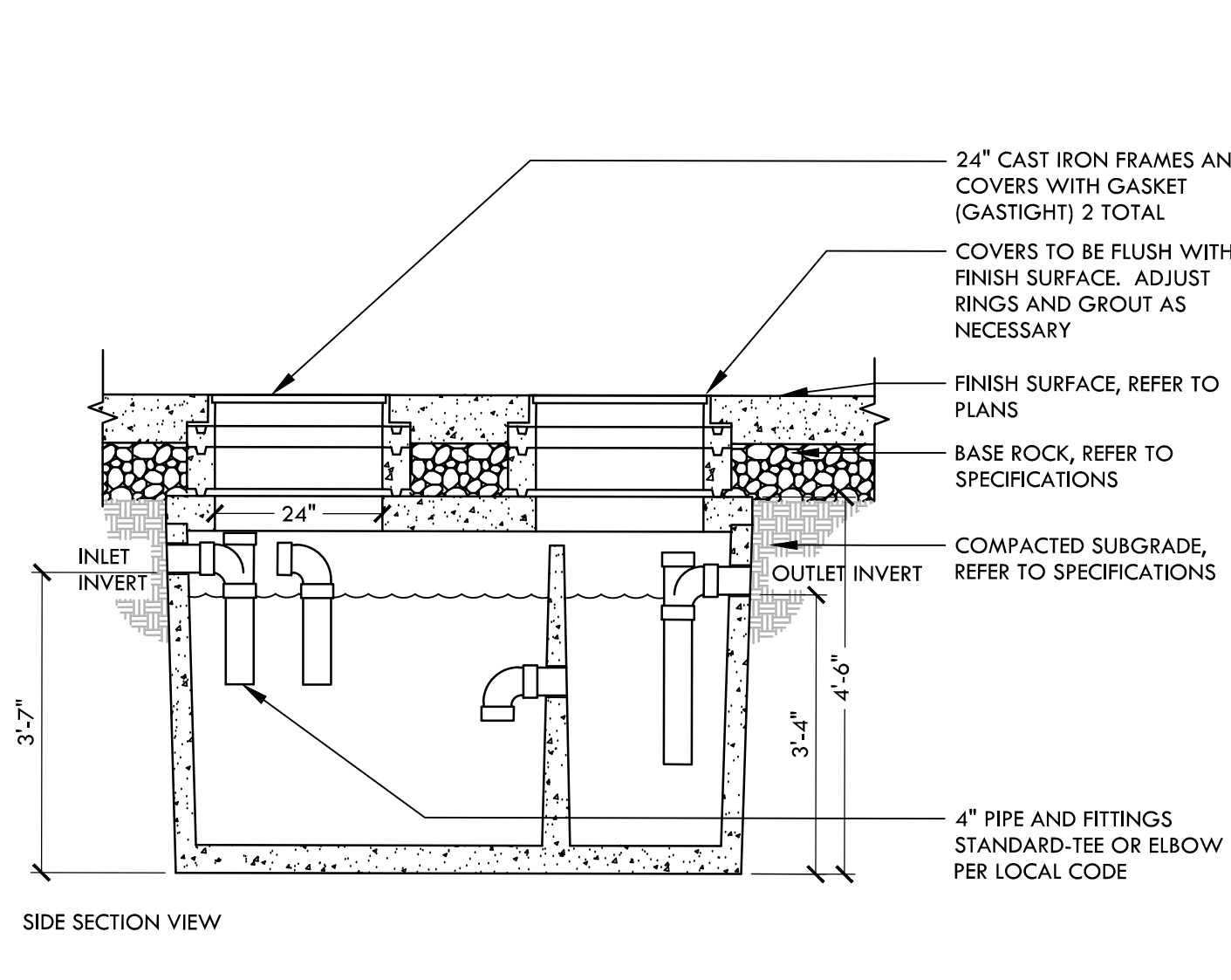
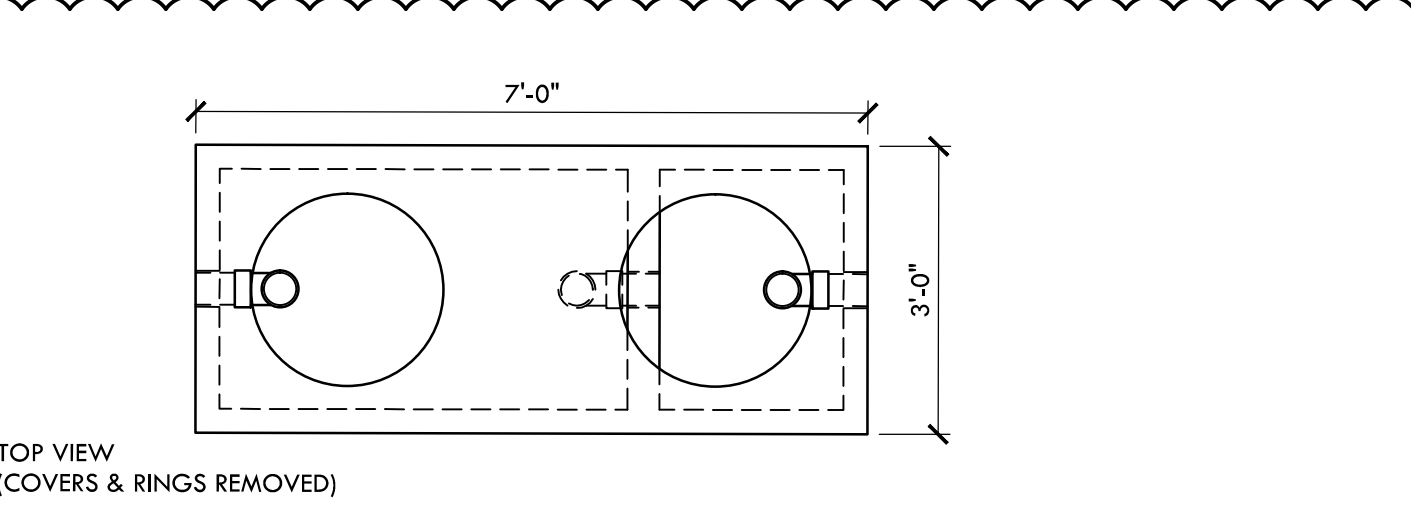
D DRINKING FOUNTAIN NTS



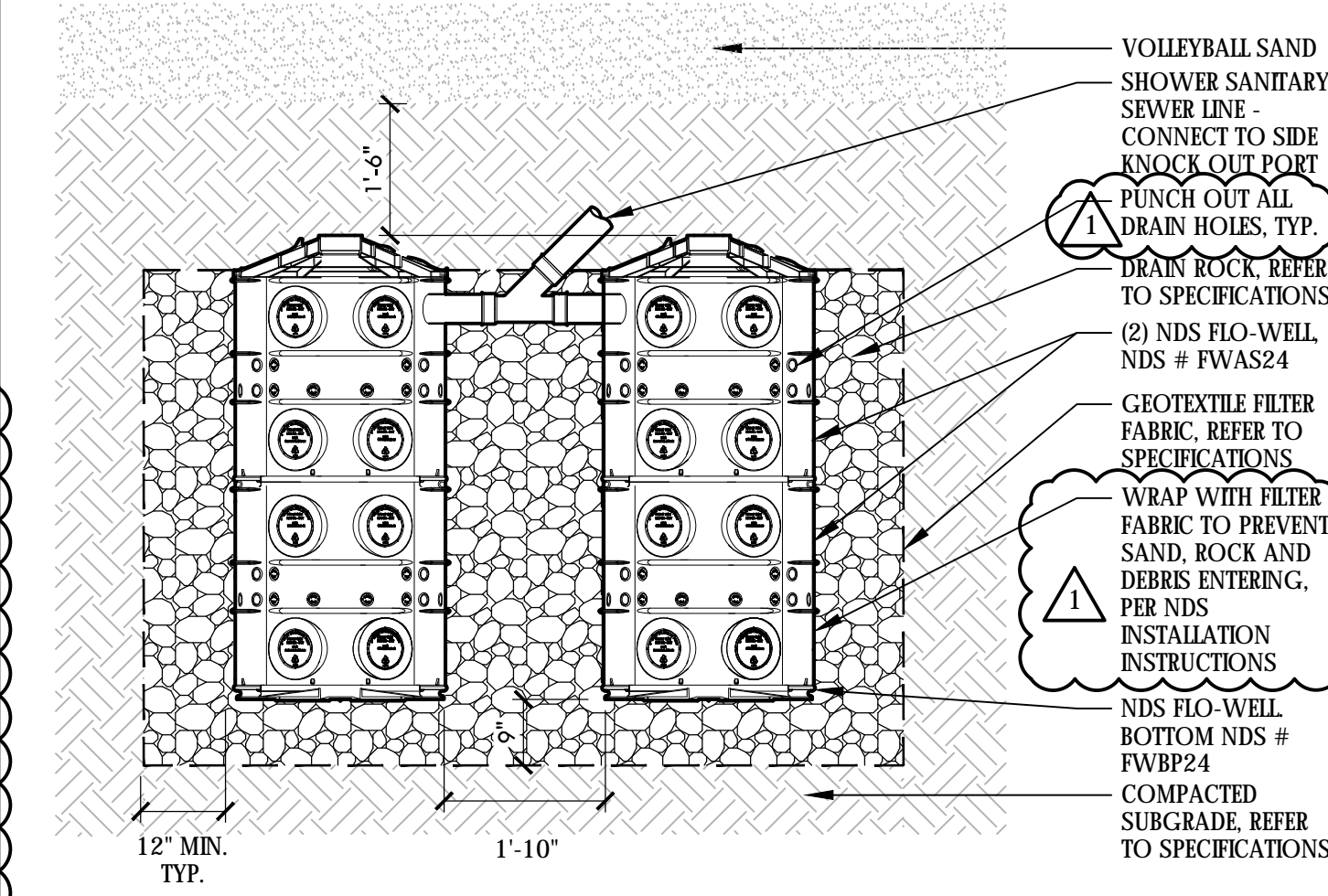
J JUNCTION BOX IN SAND NTS



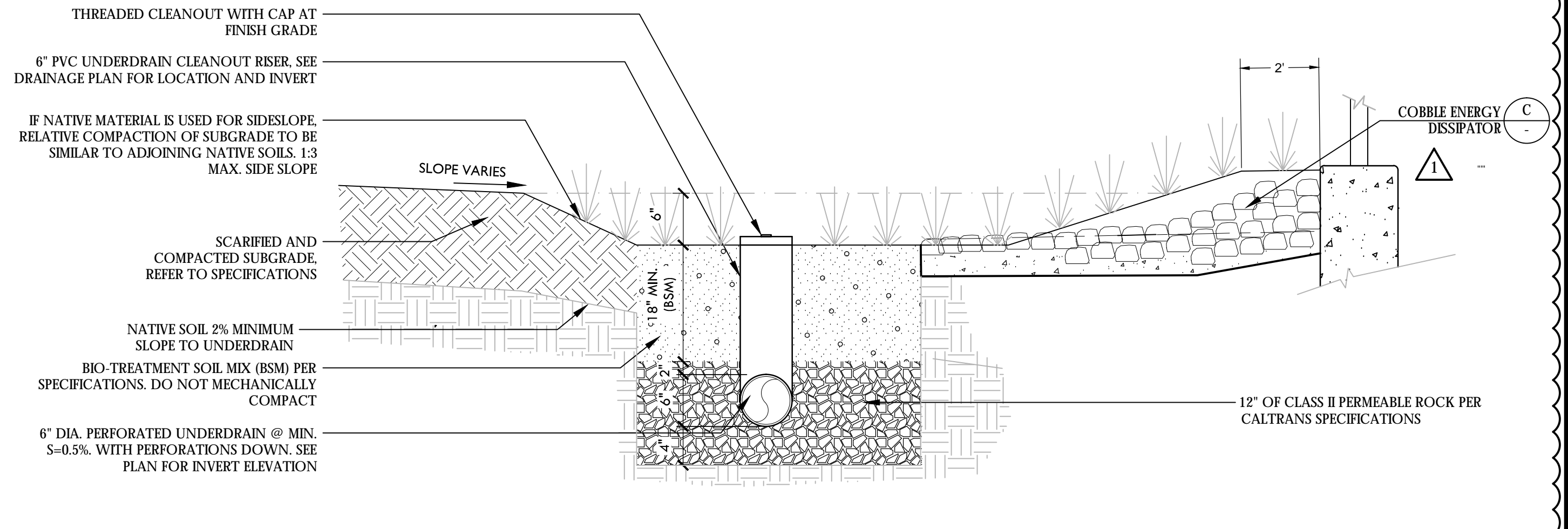
C COBBLE ENERGY DISSIPATOR NTS



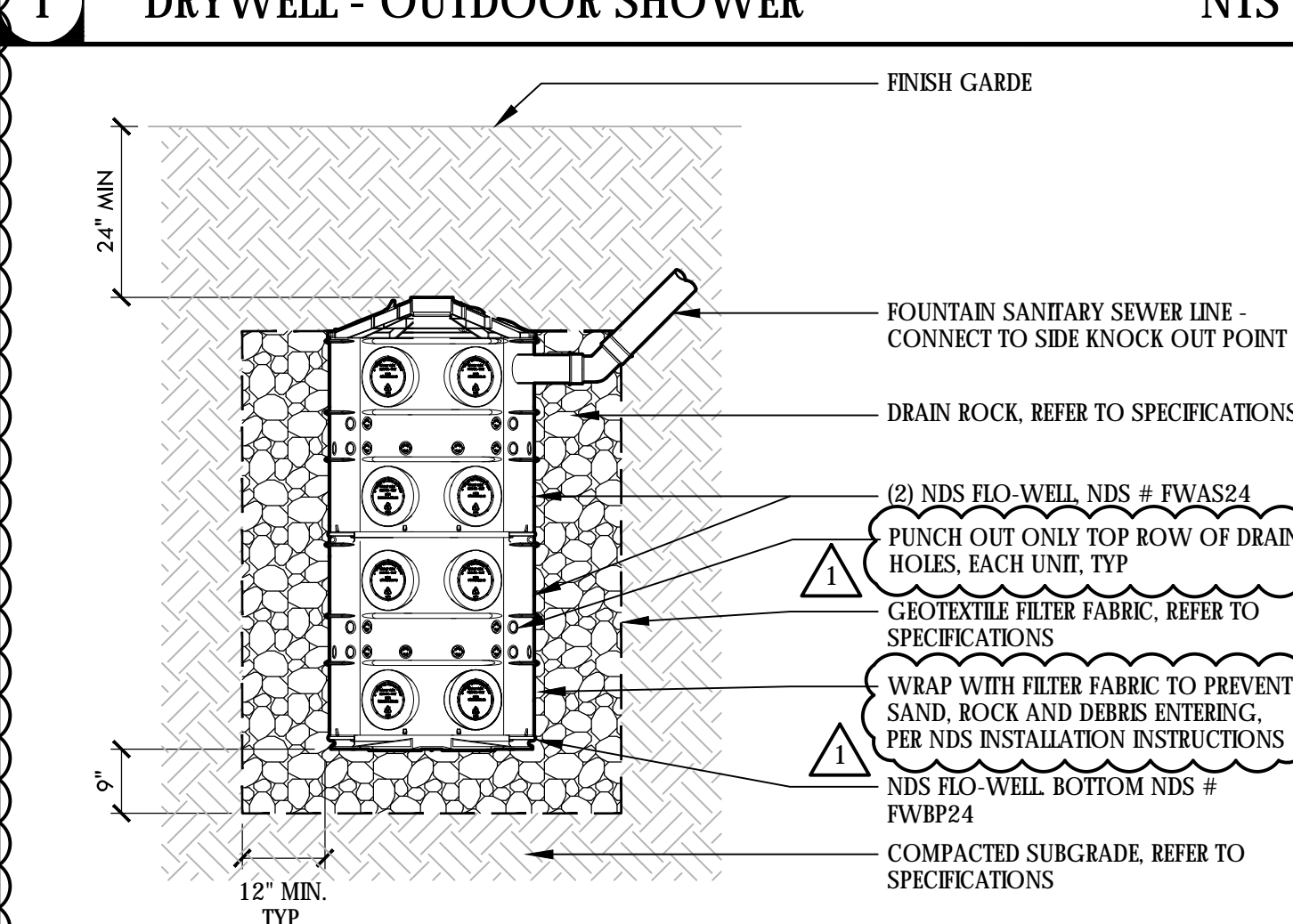
M SAND/OIL INTERCEPTOR NTS



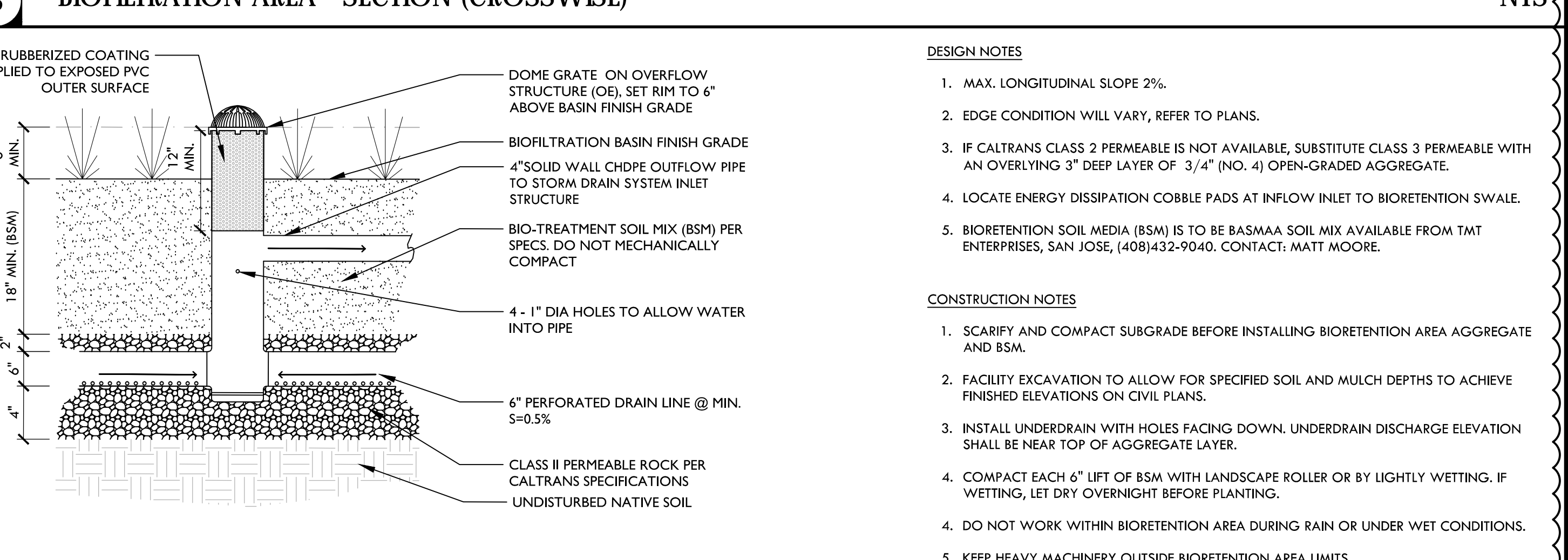
I DRYWELL - OUTDOOR SHOWER NTS



B BIOFILTRATION AREA - SECTION (CROSSWISE) NTS



H DRYWELL - DRINKING FOUNTAIN NTS



A BIOFILTRATION AREA WITH OUTFLOW STRUCTURE NTS

- DESIGN NOTES**
1. MAX. LONGITUDINAL SLOPE 2%.
 2. EDGE CONDITION WILL VARY, REFER TO PLANS.
 3. IF CALTRANS CLASS 2 PERMEABLE IS NOT AVAILABLE, SUBSTITUTE CLASS 3 PERMEABLE WITH AN OVERLYING 3" DEEP LAYER OF 3/4" (NO. 4) OPEN-GRADED AGGREGATE.
 4. LOCATE ENERGY DISSIPATION COBBLE PADS AT INFLOW INLET TO BIORETENTION SWALE.
 5. BIORETENTION SOIL MEDIA (BSM) IS TO BE BASMAA SOIL MIX AVAILABLE FROM TMT ENTERPRISES, SAN JOSE, (408)432-9040. CONTACT: MATT MOORE.
- CONSTRUCTION NOTES**
1. SCARIFY AND COMPACT SUBGRADE BEFORE INSTALLING BIORETENTION AREA AGGREGATE AND BSM.
 2. FACILITY EXCAVATION TO ALLOW FOR SPECIFIED SOIL AND MULCH DEPTHS TO ACHIEVE FINISHED ELEVATIONS ON CIVIL PLANS.
 3. INSTALL UNDERDRAIN WITH HOLES FACING DOWN. UNDERDRAIN DISCHARGE ELEVATION SHALL BE NEAR TOP OF AGGREGATE LAYER.
 4. COMPACT EACH 6" LIFT OF BSM WITH LANDSCAPE ROLLER OR BY LIGHTLY WETTING, IF WETTING, LET DRY OVERNIGHT BEFORE PLANTING.
 4. DO NOT WORK WITHIN BIORETENTION AREA DURING RAIN OR UNDER WET CONDITIONS.
 5. KEEP HEAVY MACHINERY OUTSIDE BIORETENTION AREA LIMITS.

SHEET TITLE
DRAINAGE AND UTILITY DETAILS

PROJECT NAME
COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS

PROJECT ADDRESS
835 COLLEGE AVE. KENTFIELD, CA 94904

SUBMITTAL	DATE
80% CD SUBMITTAL	06/16/17
100% SUBMITTAL	06/30/17

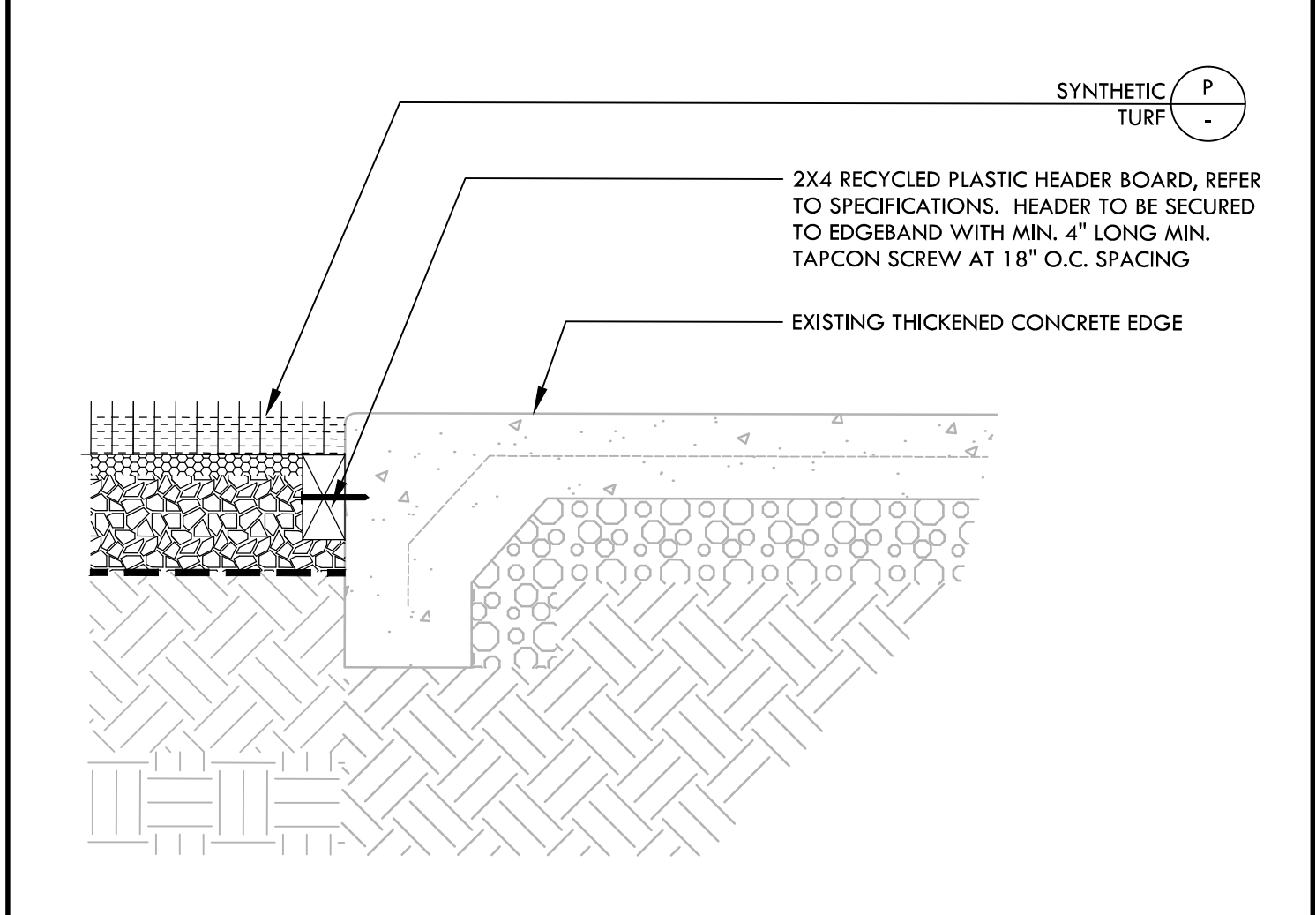
NO.	REVISIONS	DATE
ADDENDUM #1		08/17/17

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PROJ. NO.	
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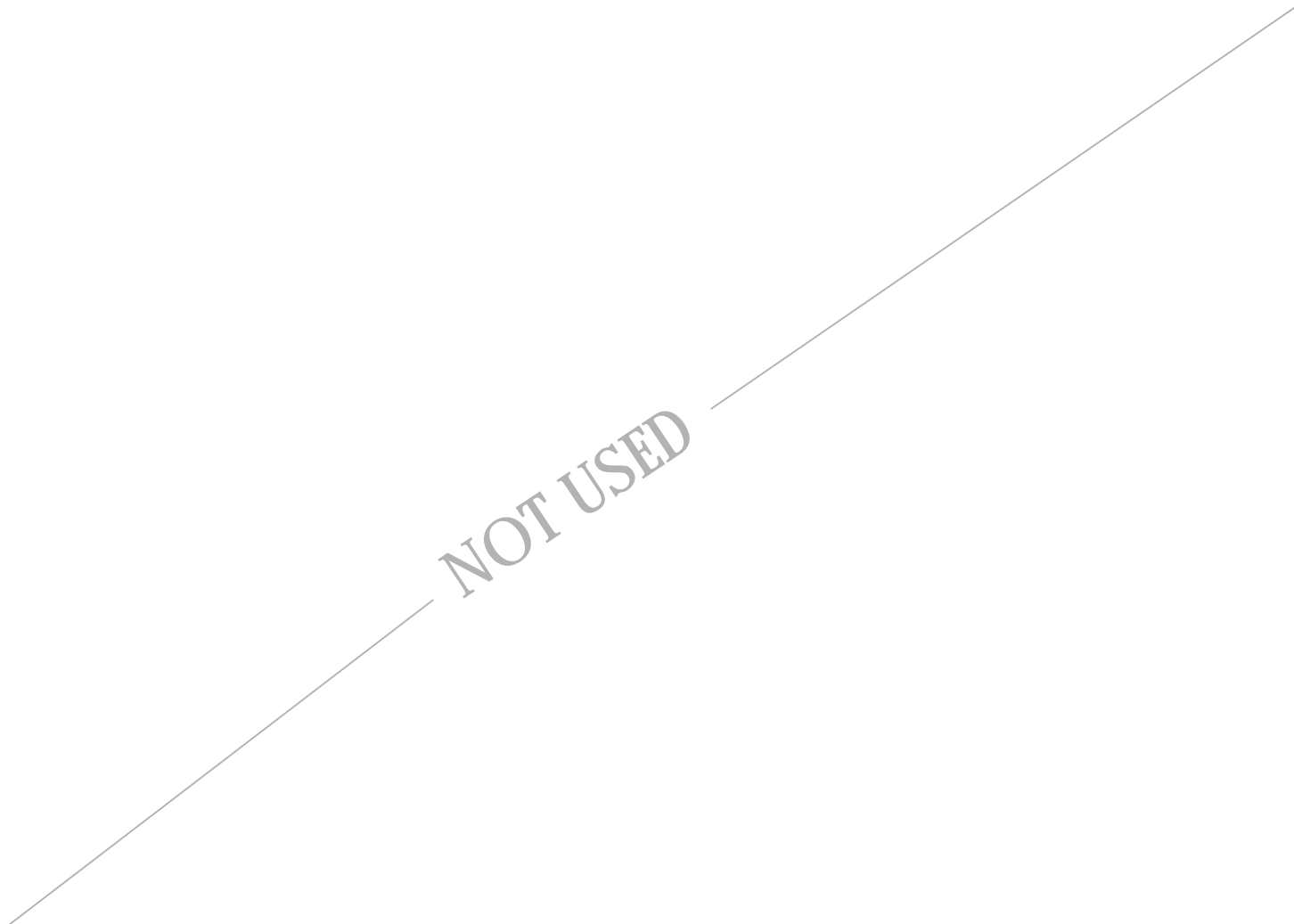
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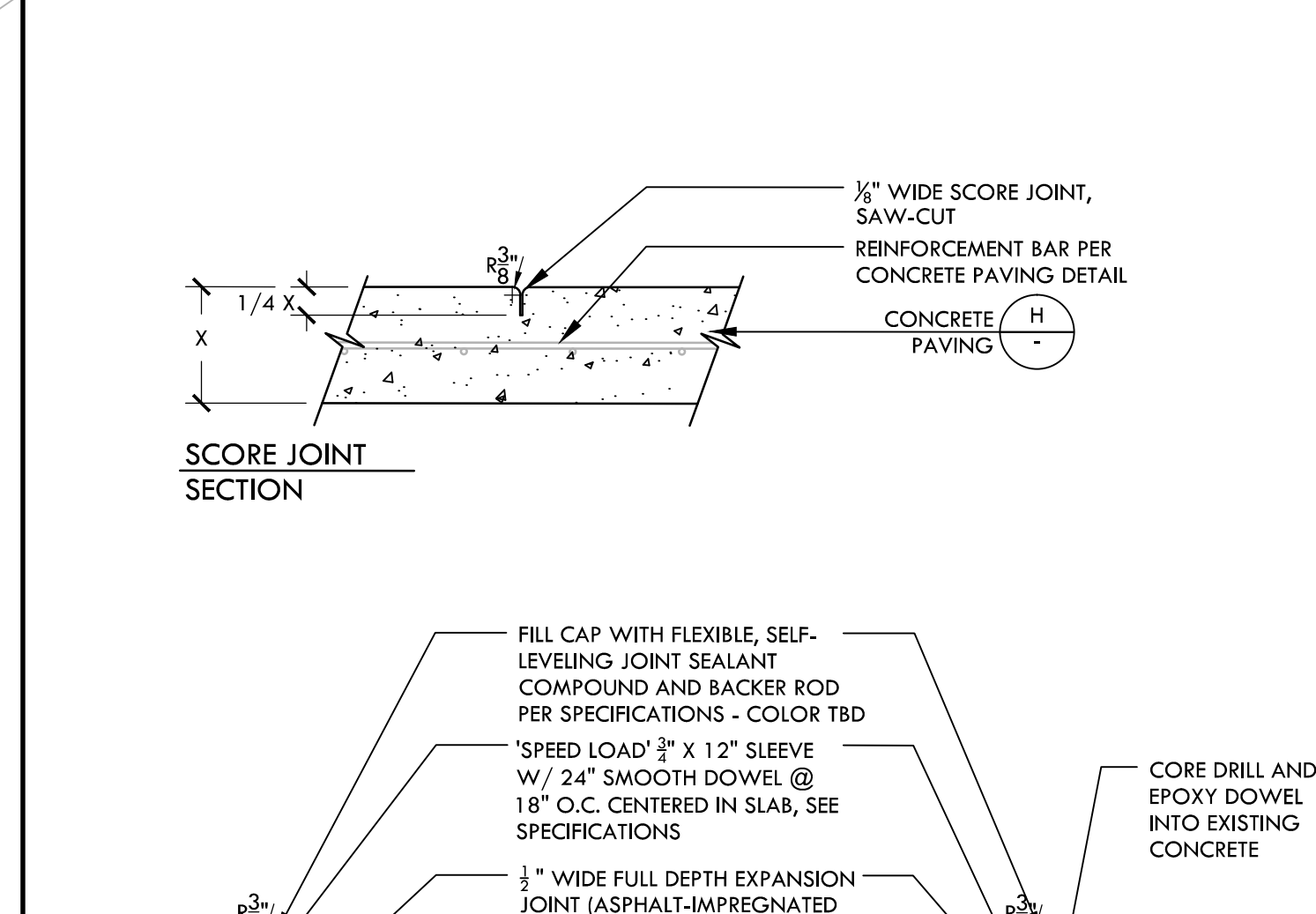
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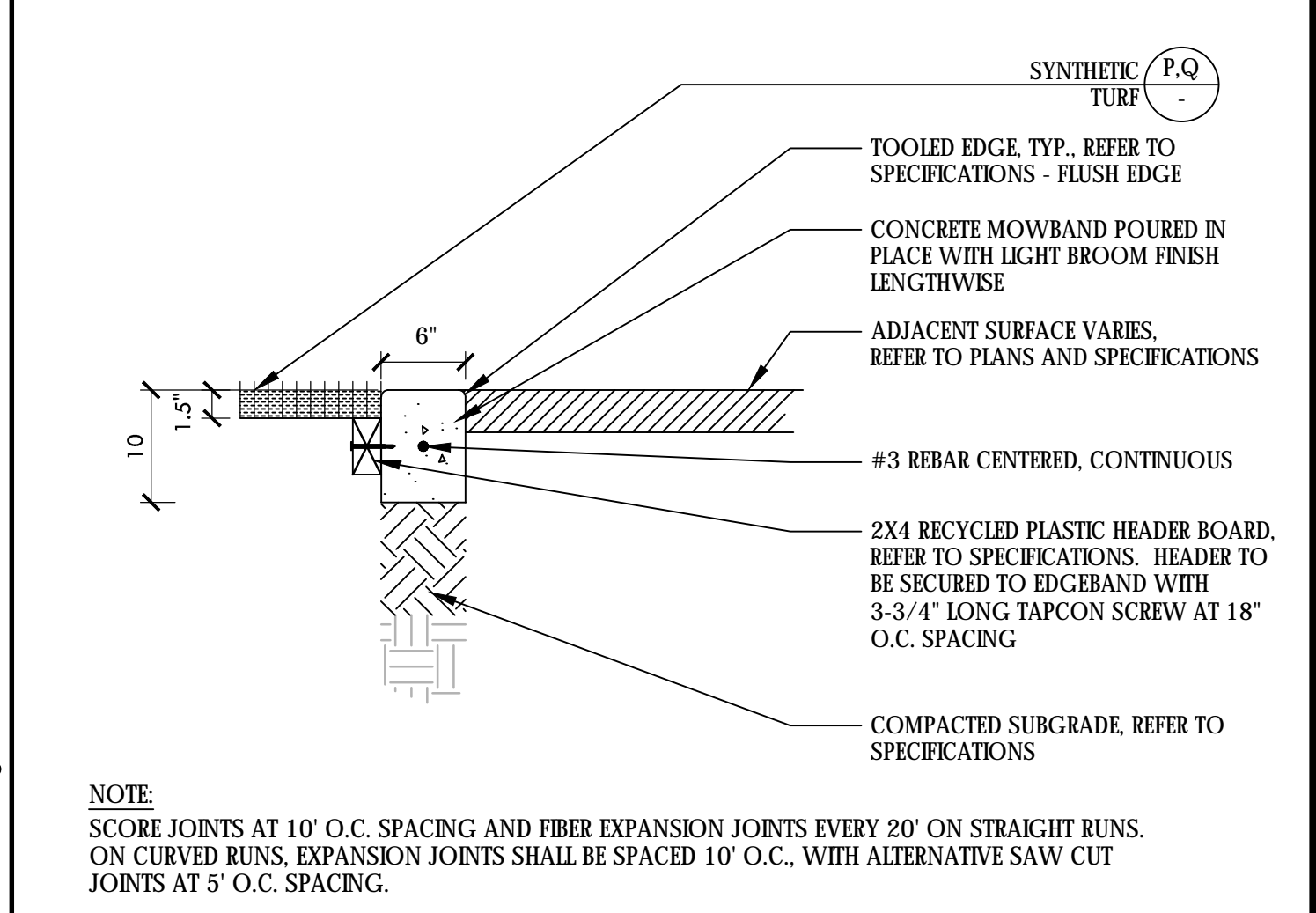
S SYNTHETIC TURF CONNECTION AT EXISTING THICKENED CONCRETE EDGE NTS



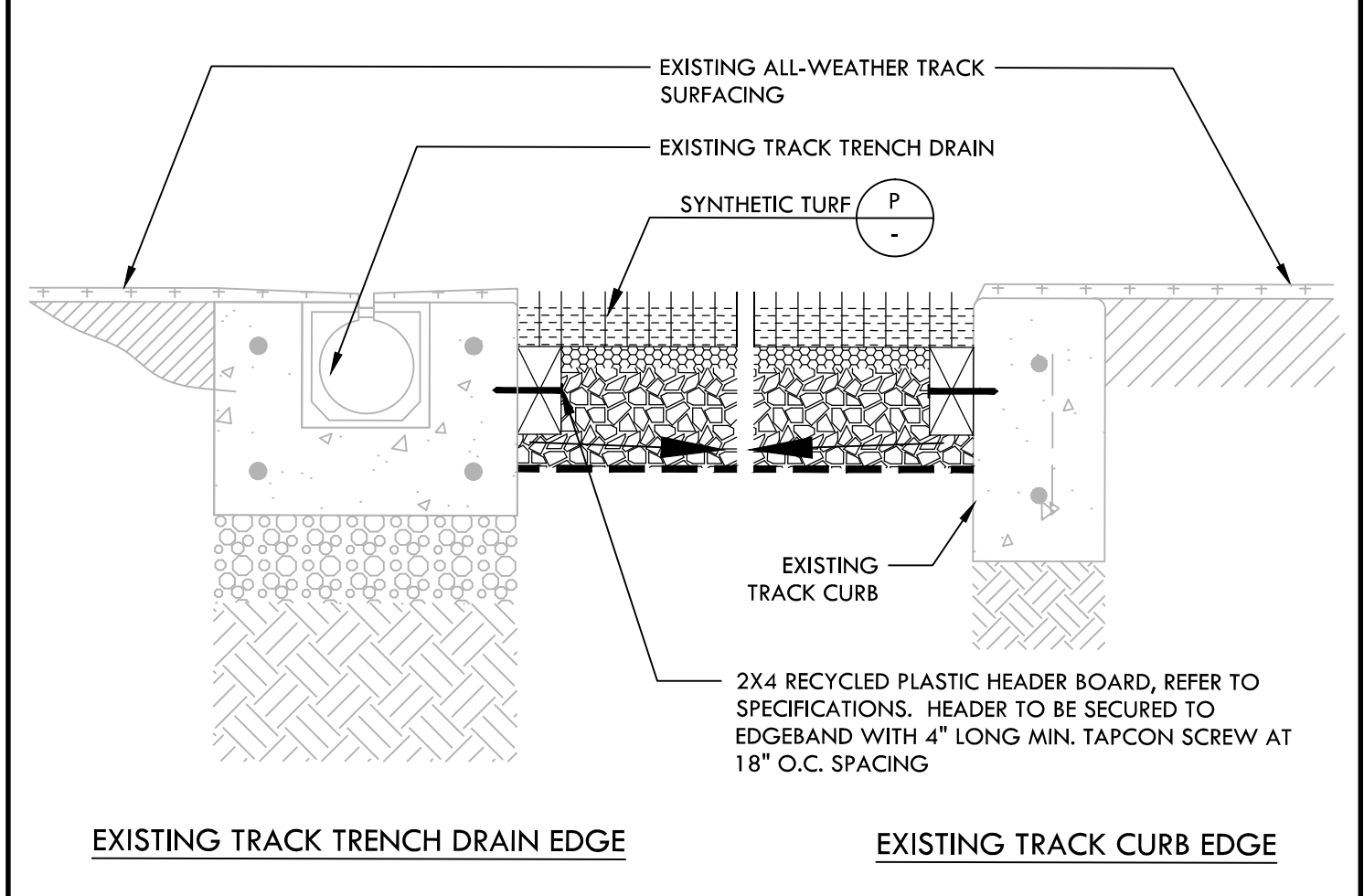
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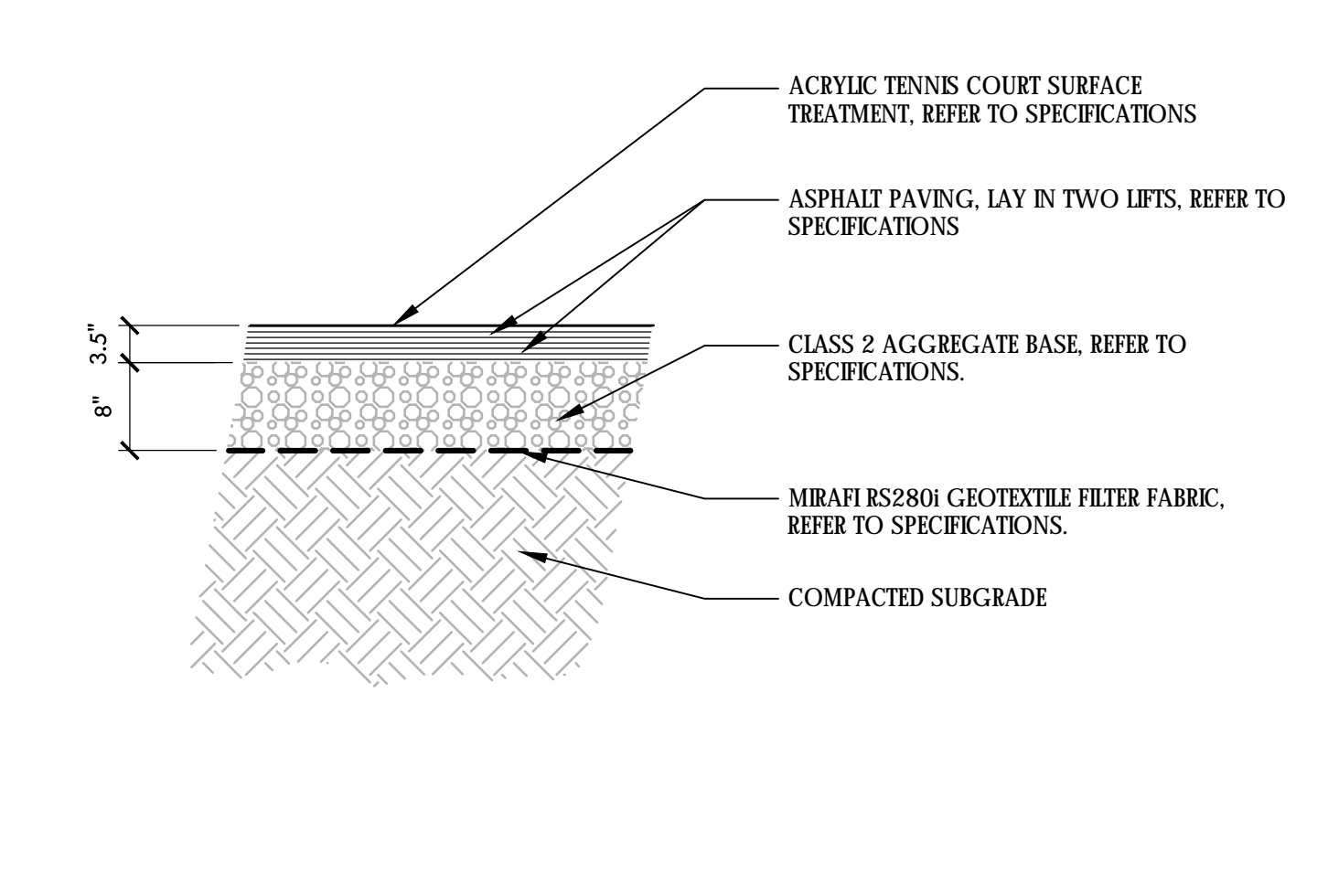
E SYNTHETIC TURF EDGE NTS



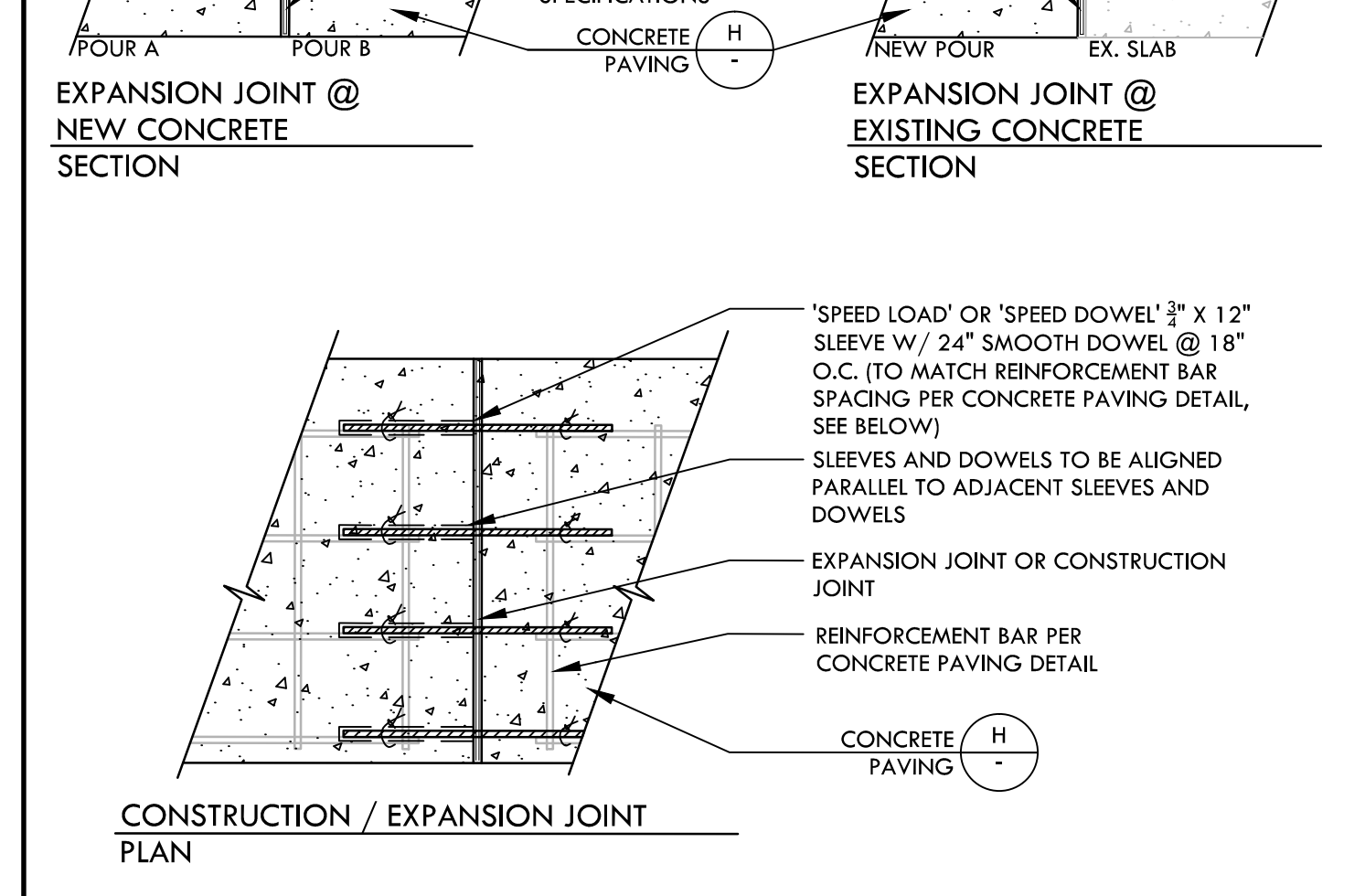
E SYNTHETIC TURF EDGE NTS



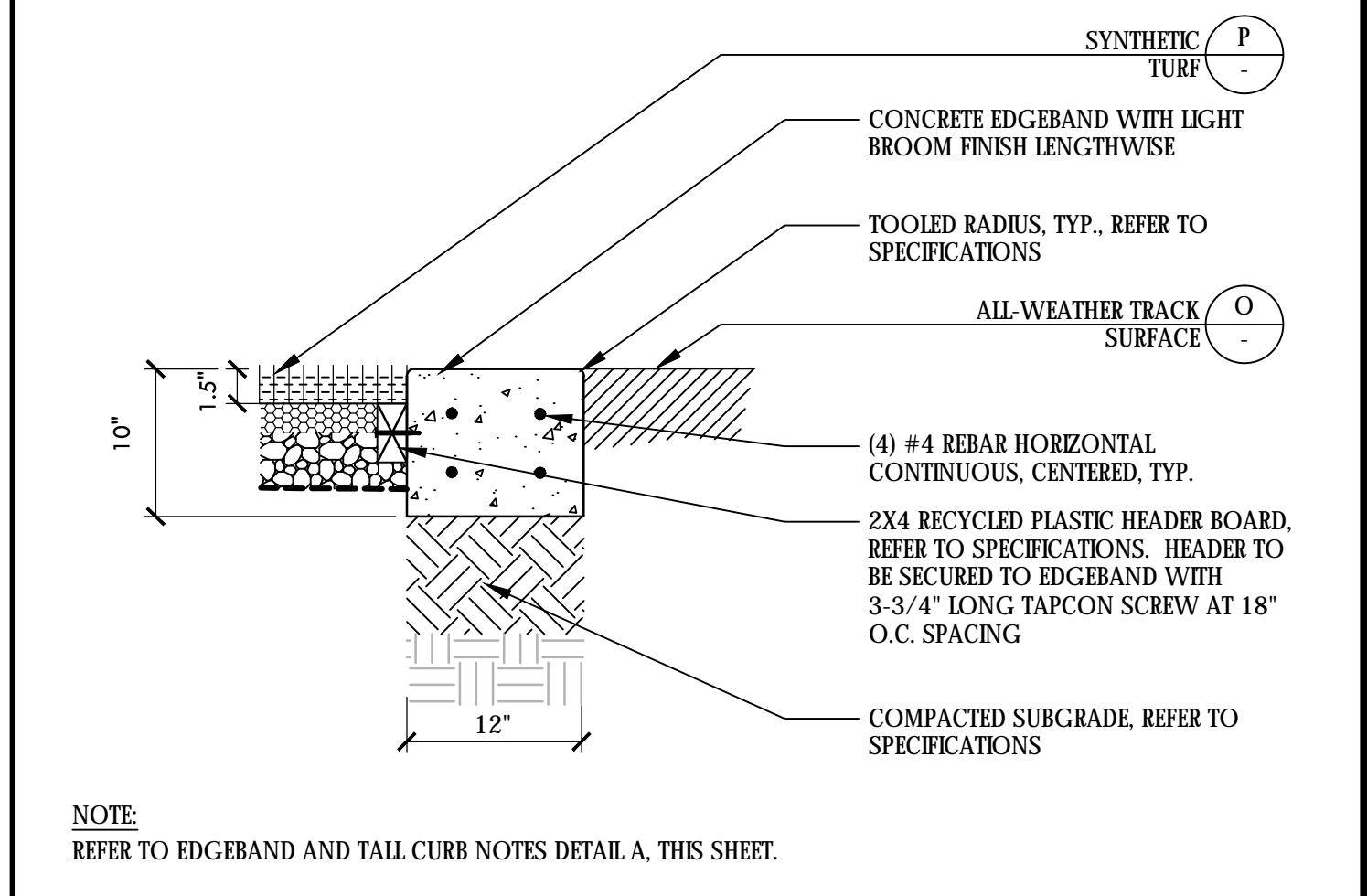
R SYNTHETIC TURF CONNECTION AT EXISTING TRACK EDGE NTS



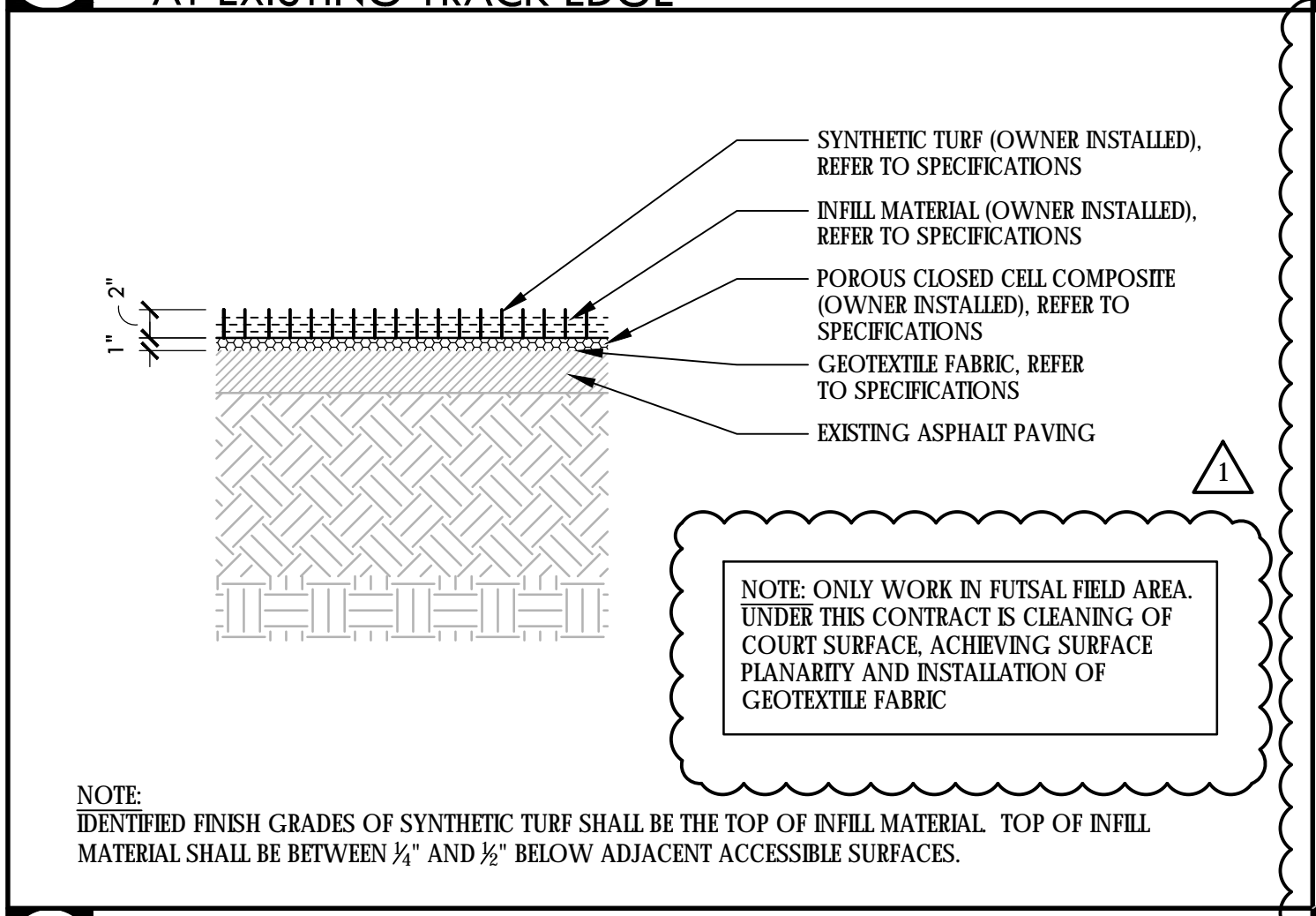
M TENNIS COURT PAVING NTS



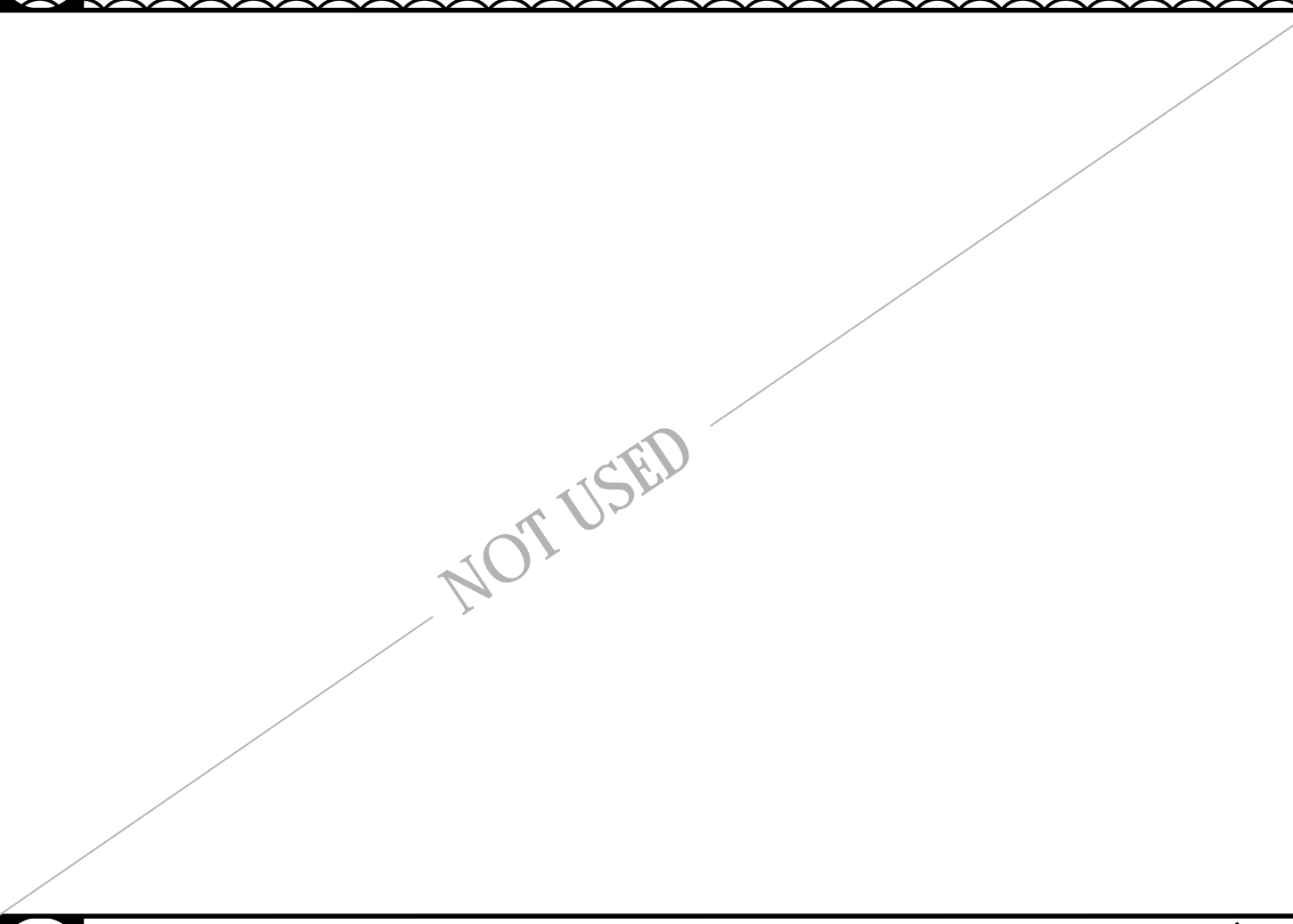
I CONCRETE JOINTS NTS



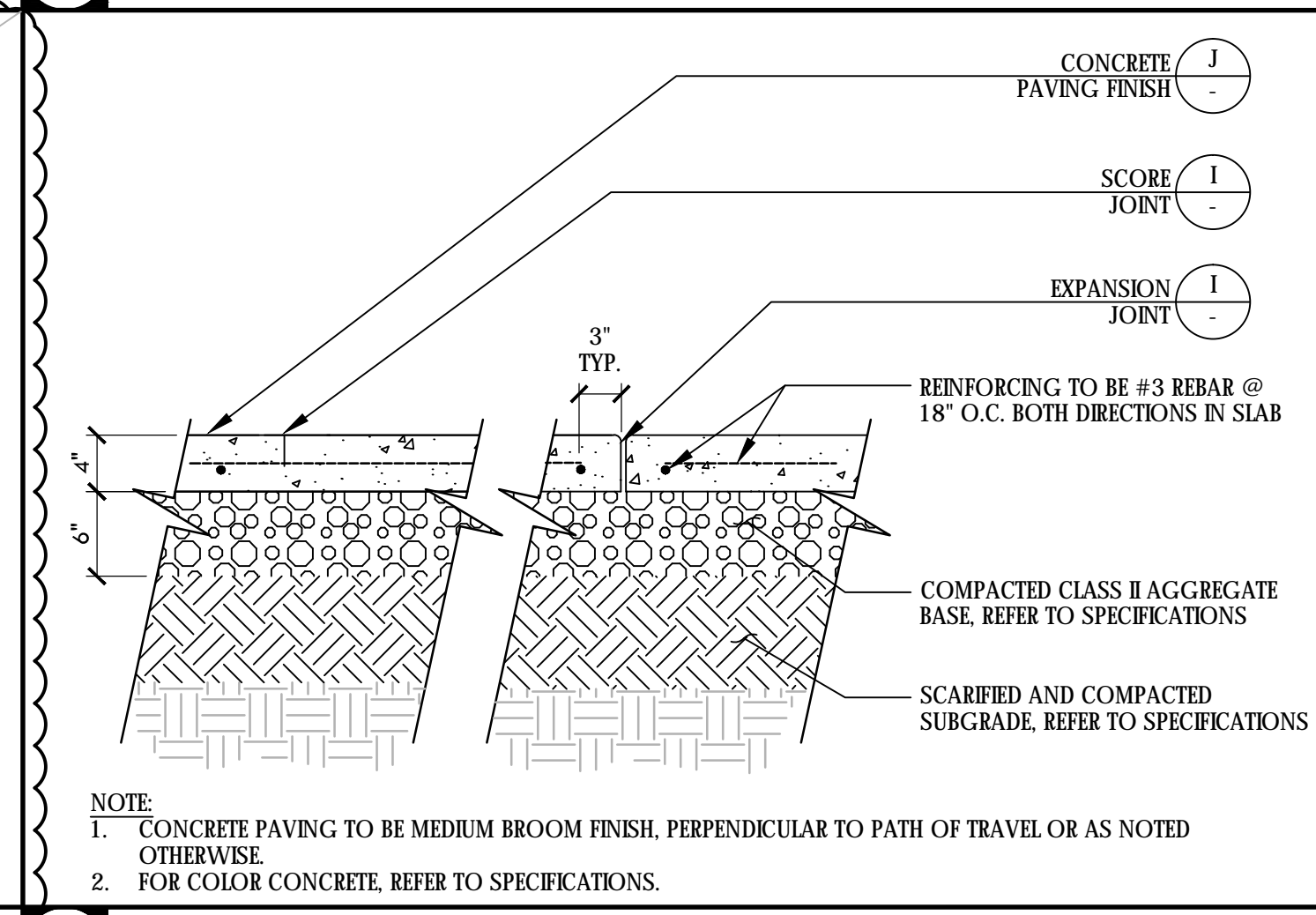
D 12" WIDE EDGE BAND AT SYNTHETIC TURF EDGE NTS



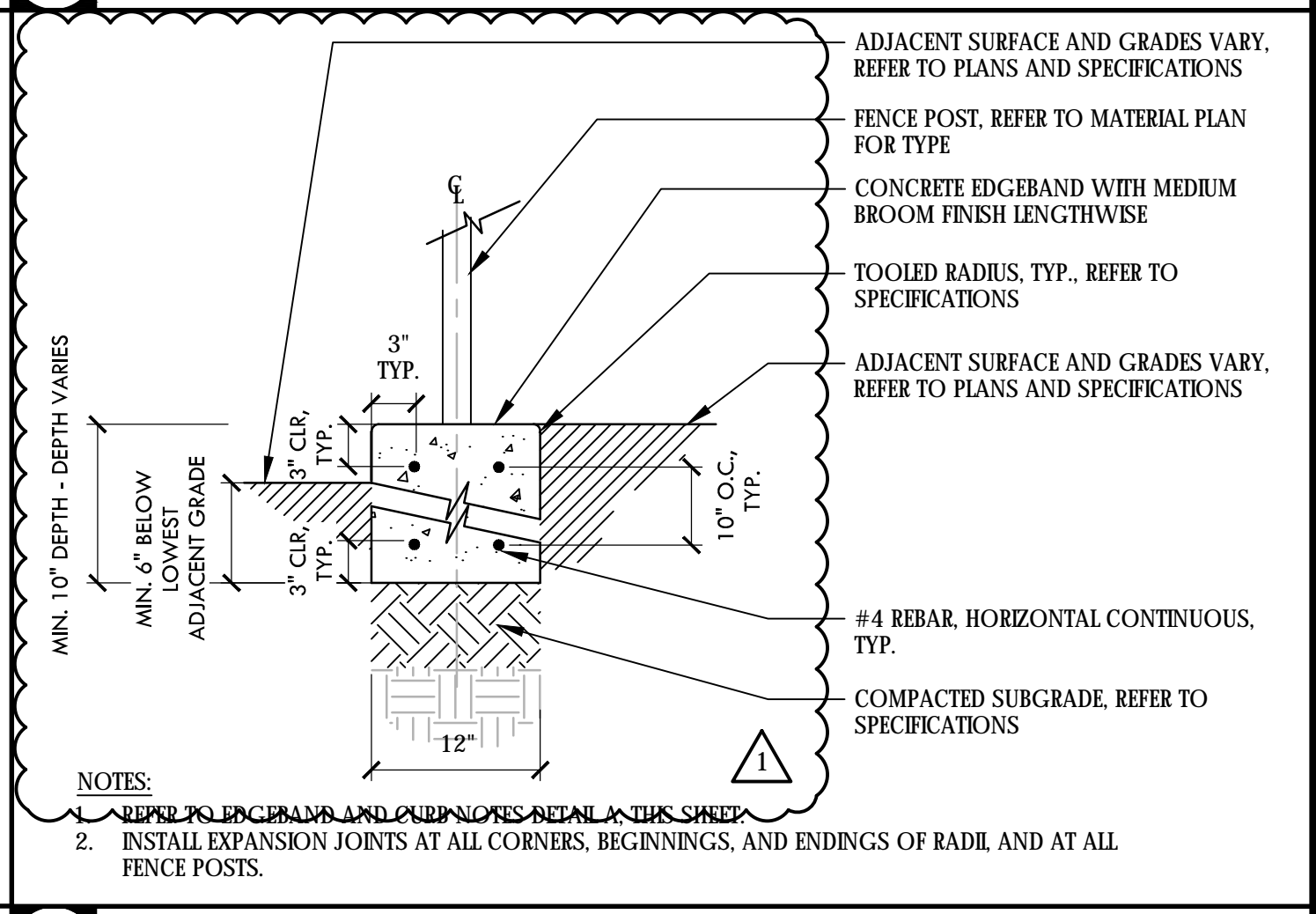
Q SYNTHETIC TURF AT FUTSAL FIELD NTS



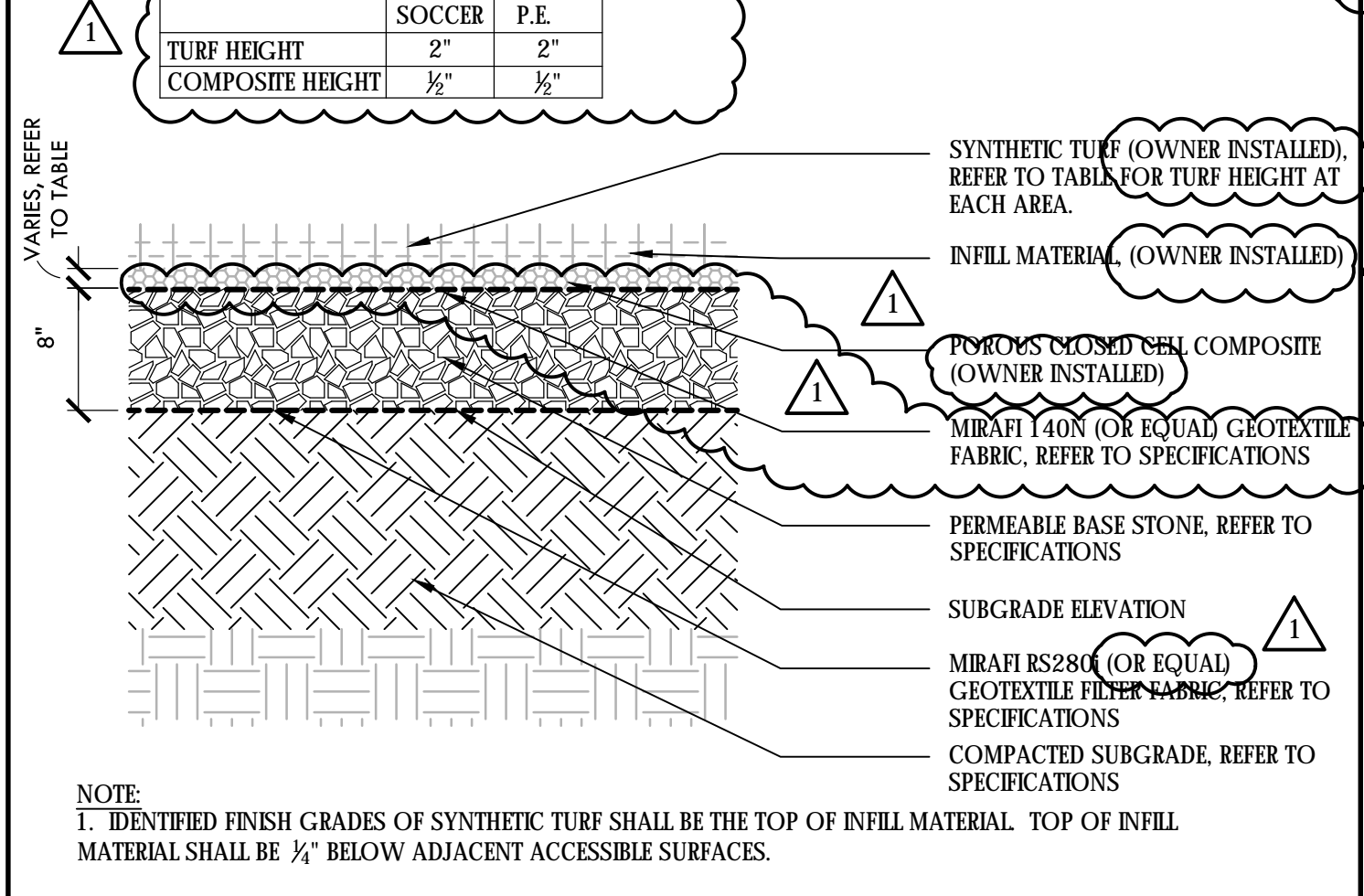
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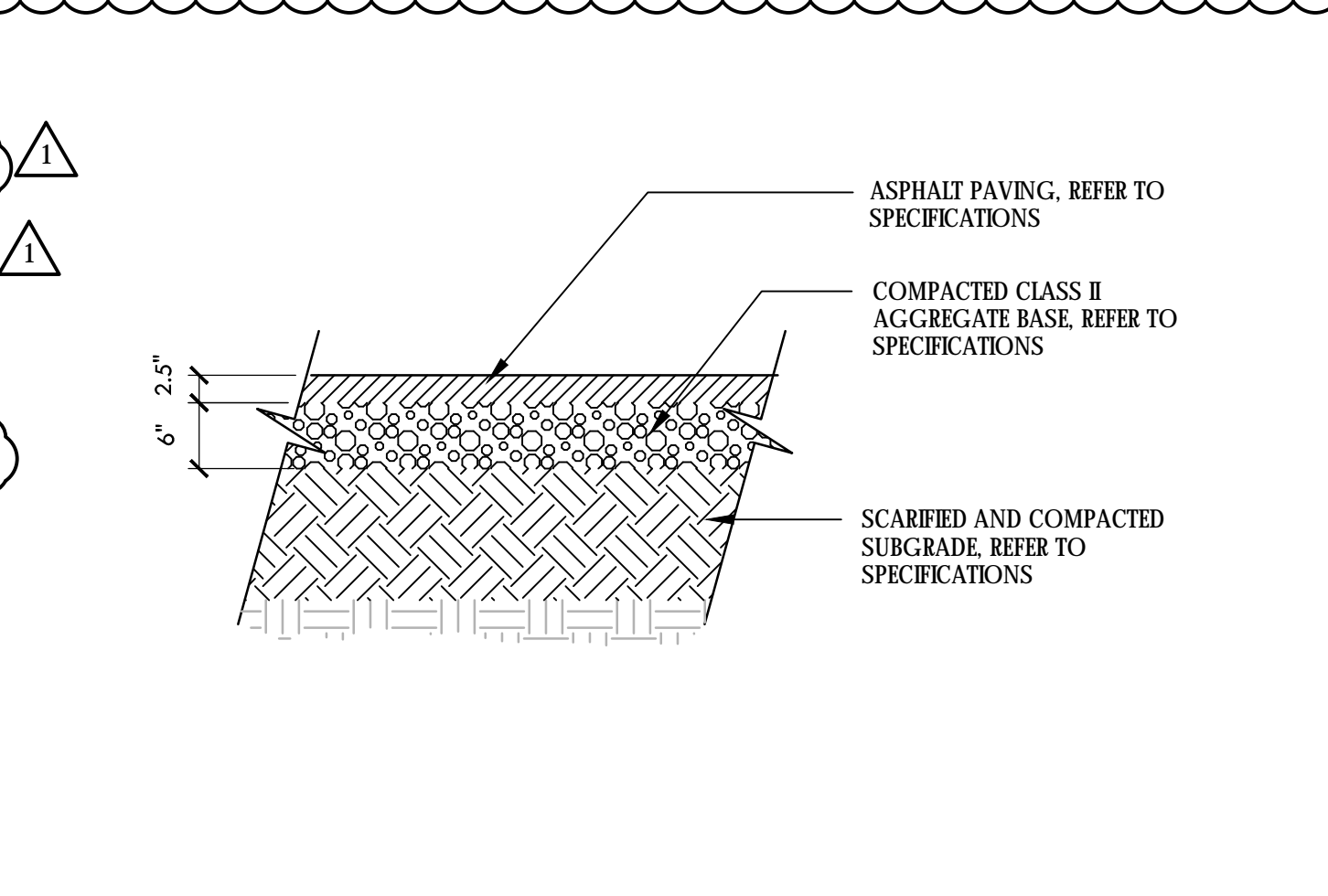
H CONCRETE PAVING NTS



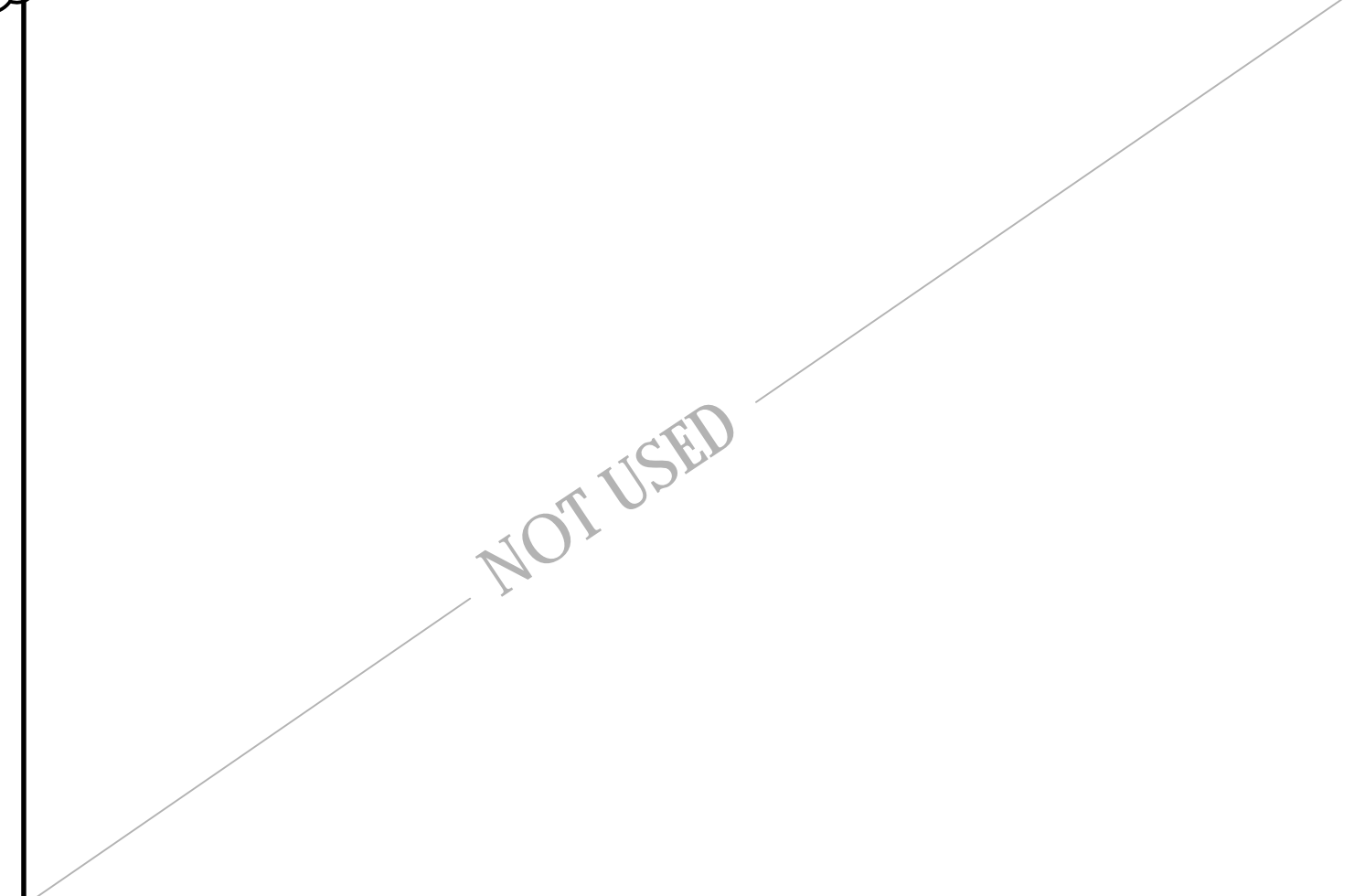
C 12" WIDE EDGE BAND IN FENCE NTS



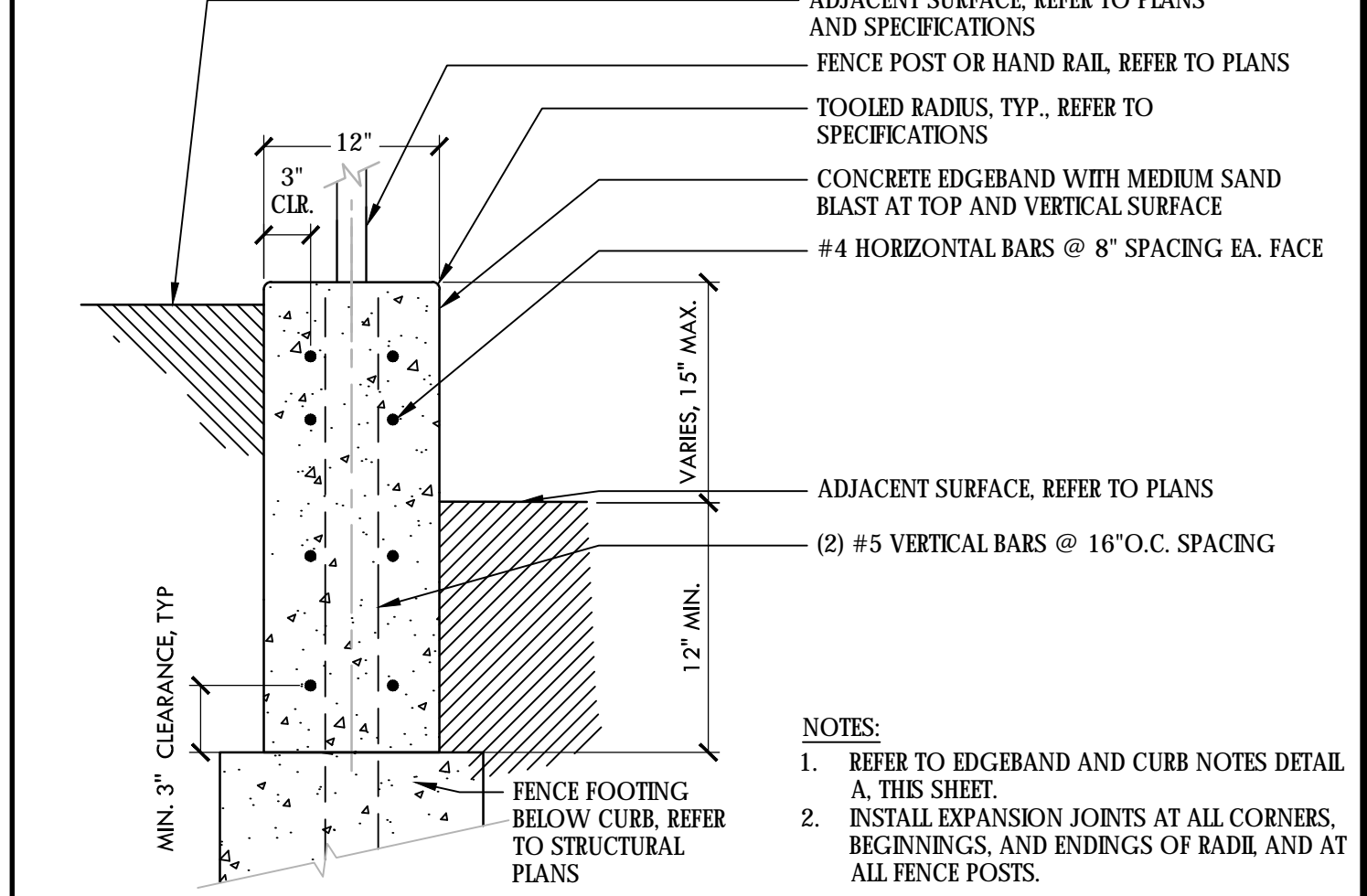
P SYNTHETIC TURF NTS



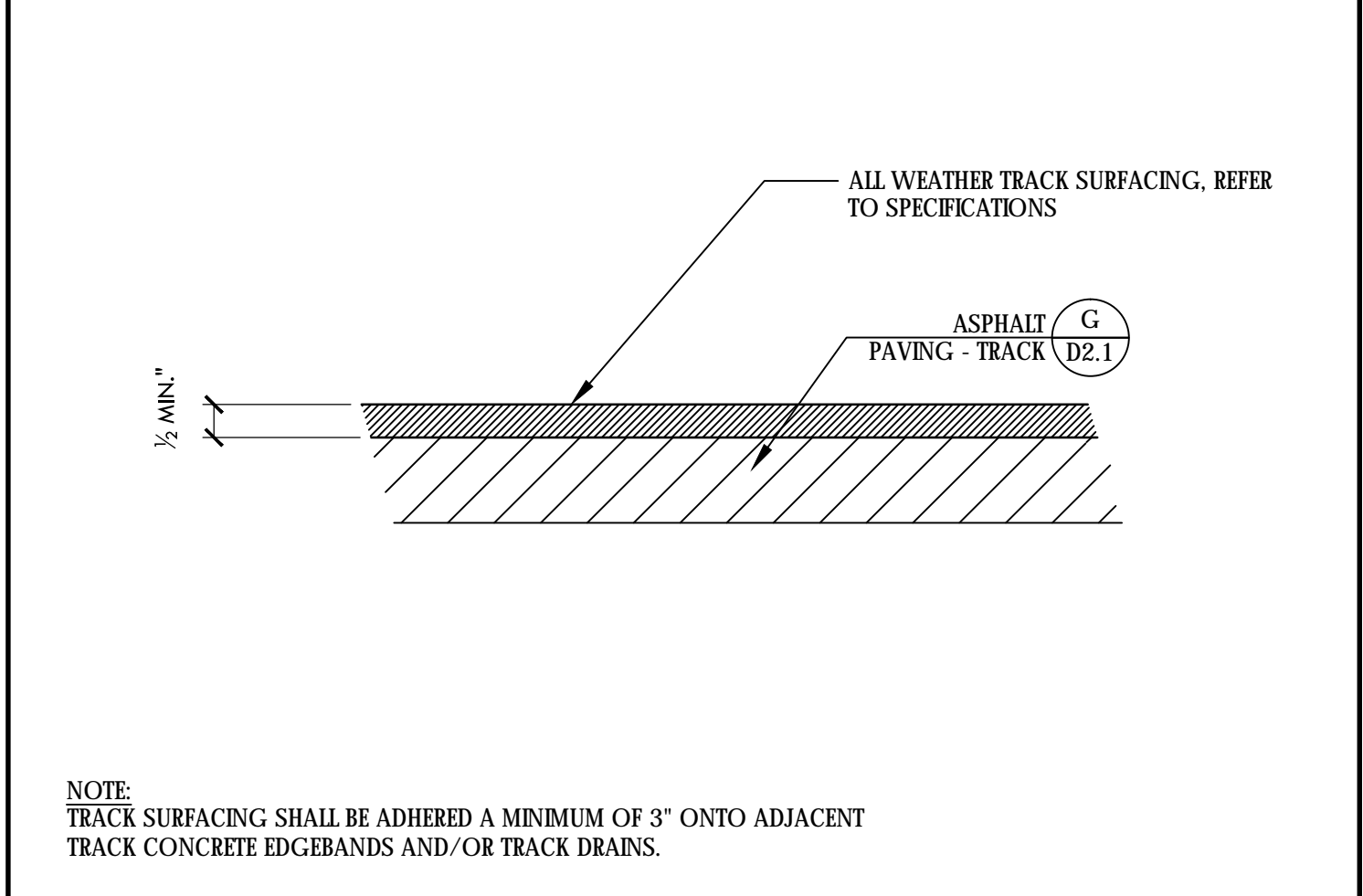
K ASPHALT PAVING - PEDESTRIAN NTS



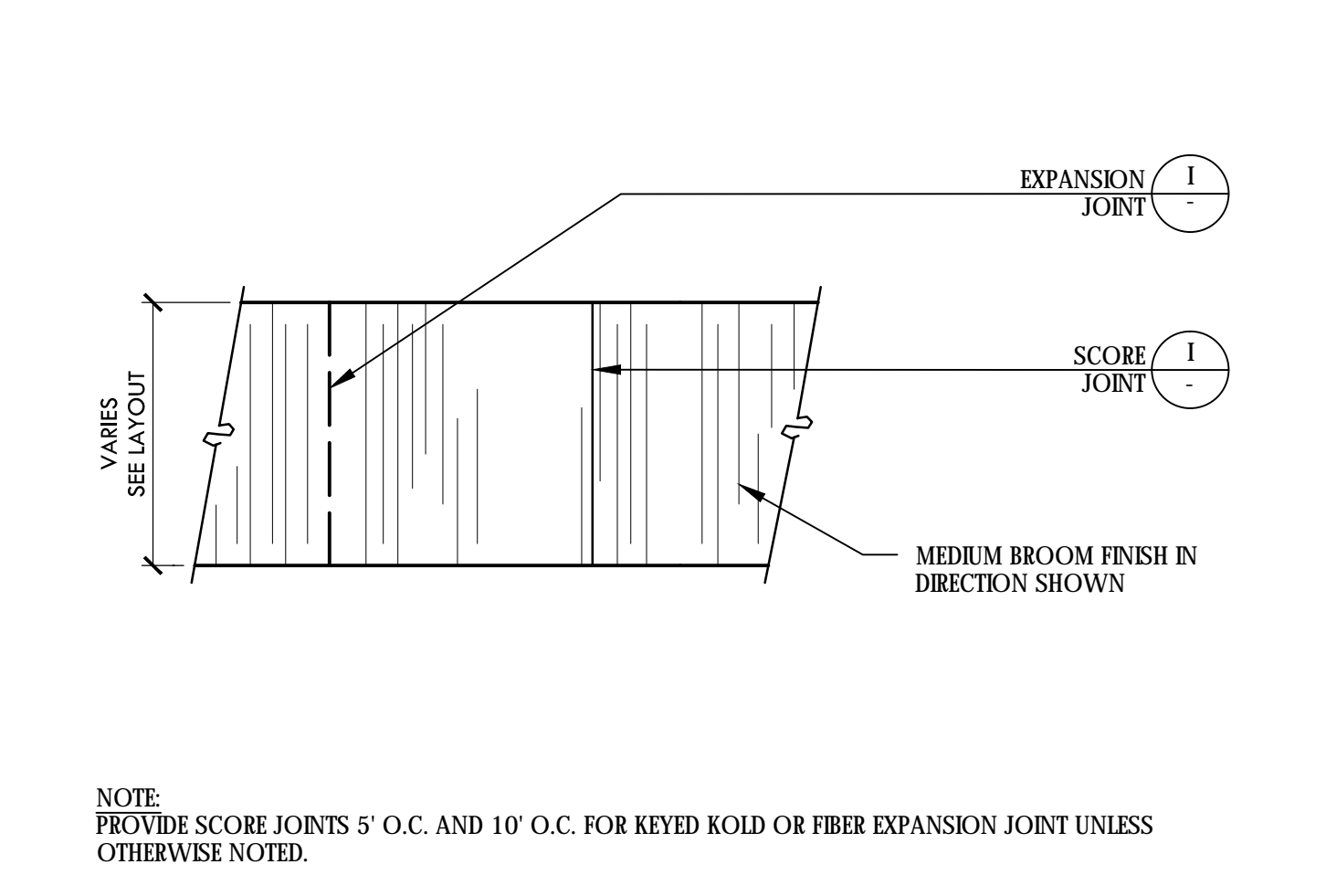
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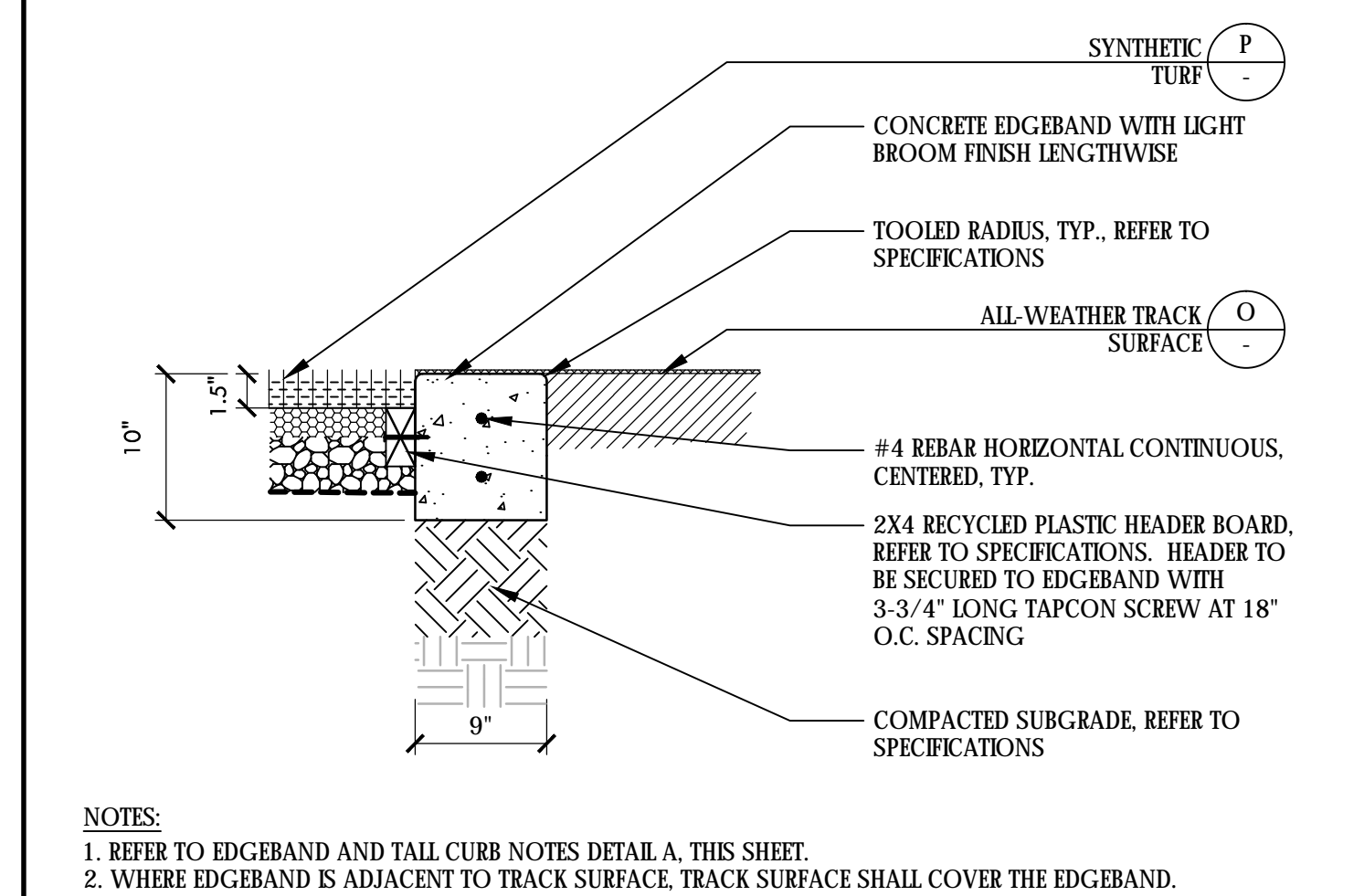
B CURB - TYPE 1 NTS



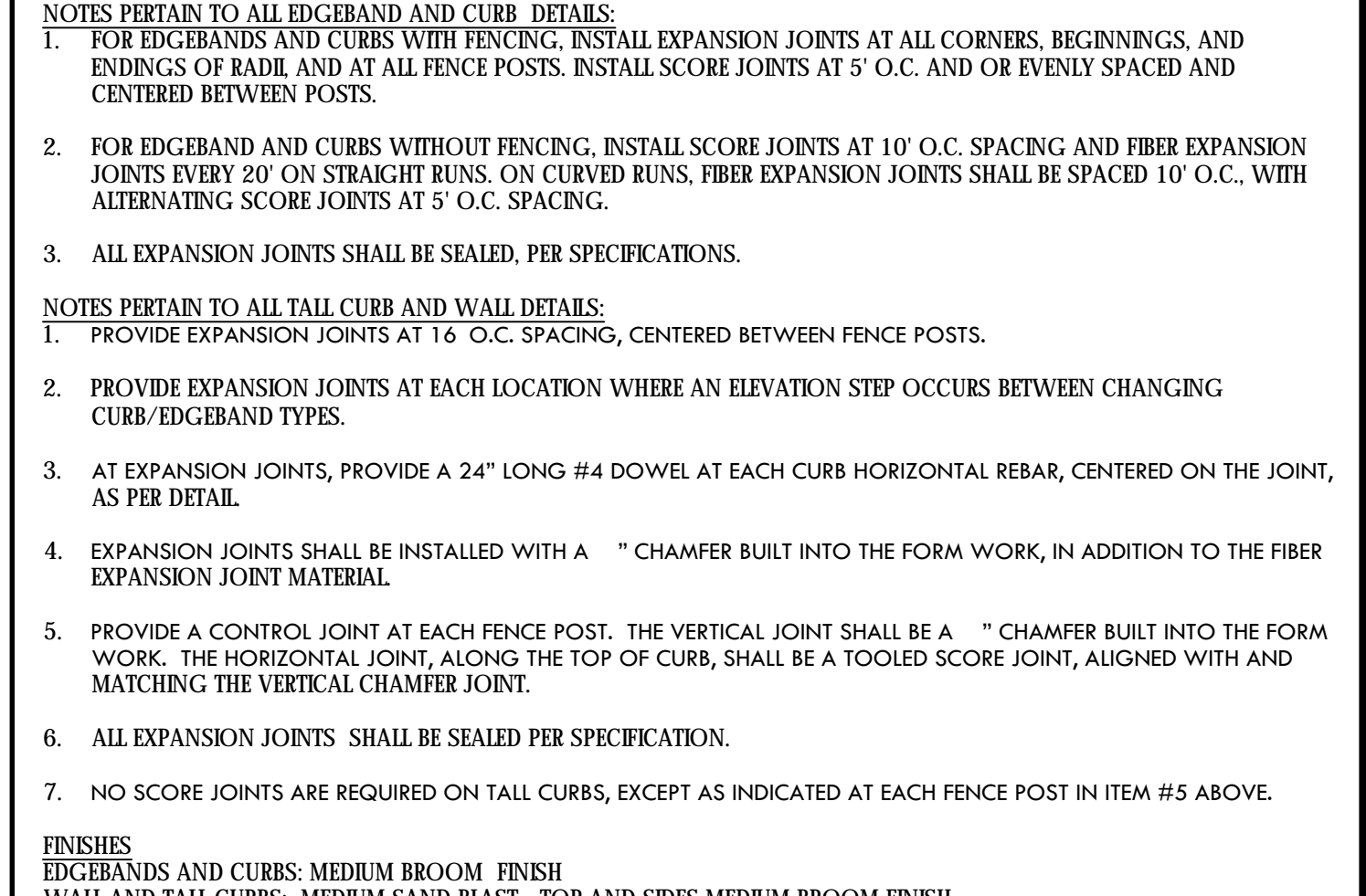
O ALL-WEATHER TRACK SURFACING NTS



J CONCRETE PAVING FINISH NTS



F 9" WIDE EDGE BAND AT SYNTHETIC TURF EDGE NTS



A EDGE BAND AND CURB NOTES NTS

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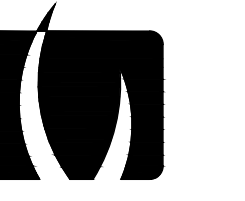
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VERDE DESIGN
 LANDSCAPE ARCHITECTURE
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CONSTRUCTION DETAILS

PROJECT NAME

**COLLEGE OF MARIN
 ATHLETIC FACILITIES
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PROJECT ADDRESS

**835 COLLEGE AVE.
 KENTFIELD, CA
 94904**

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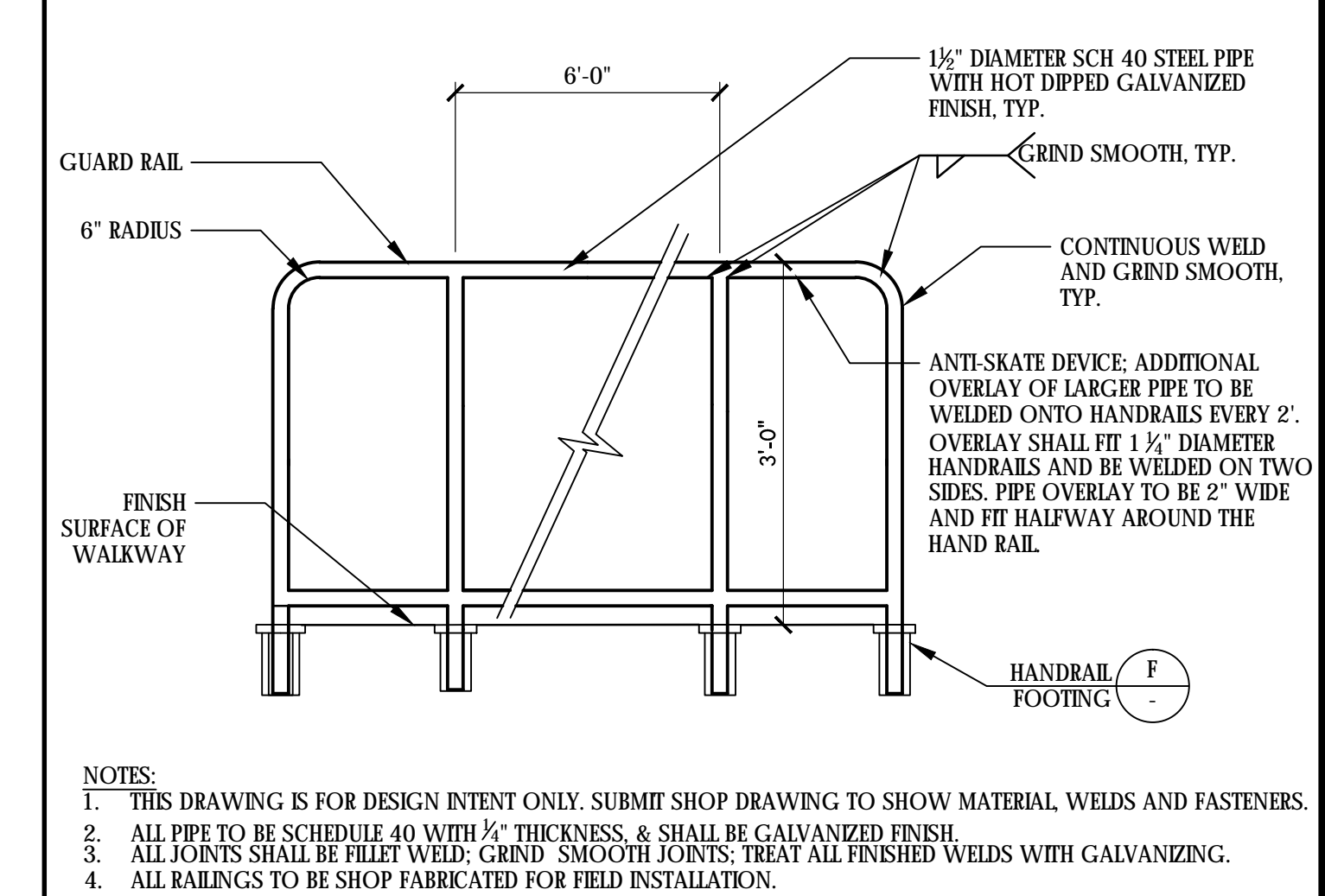
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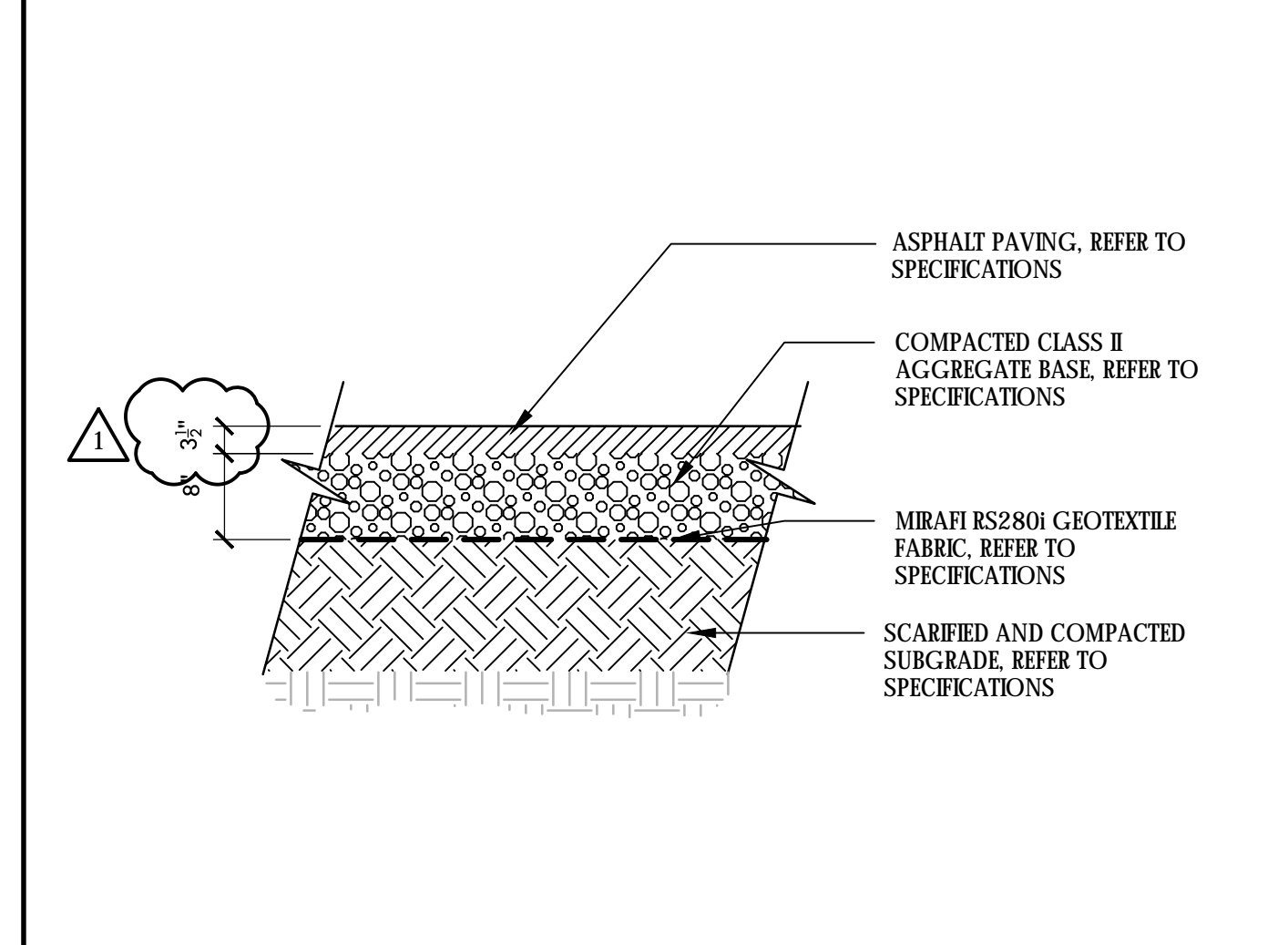
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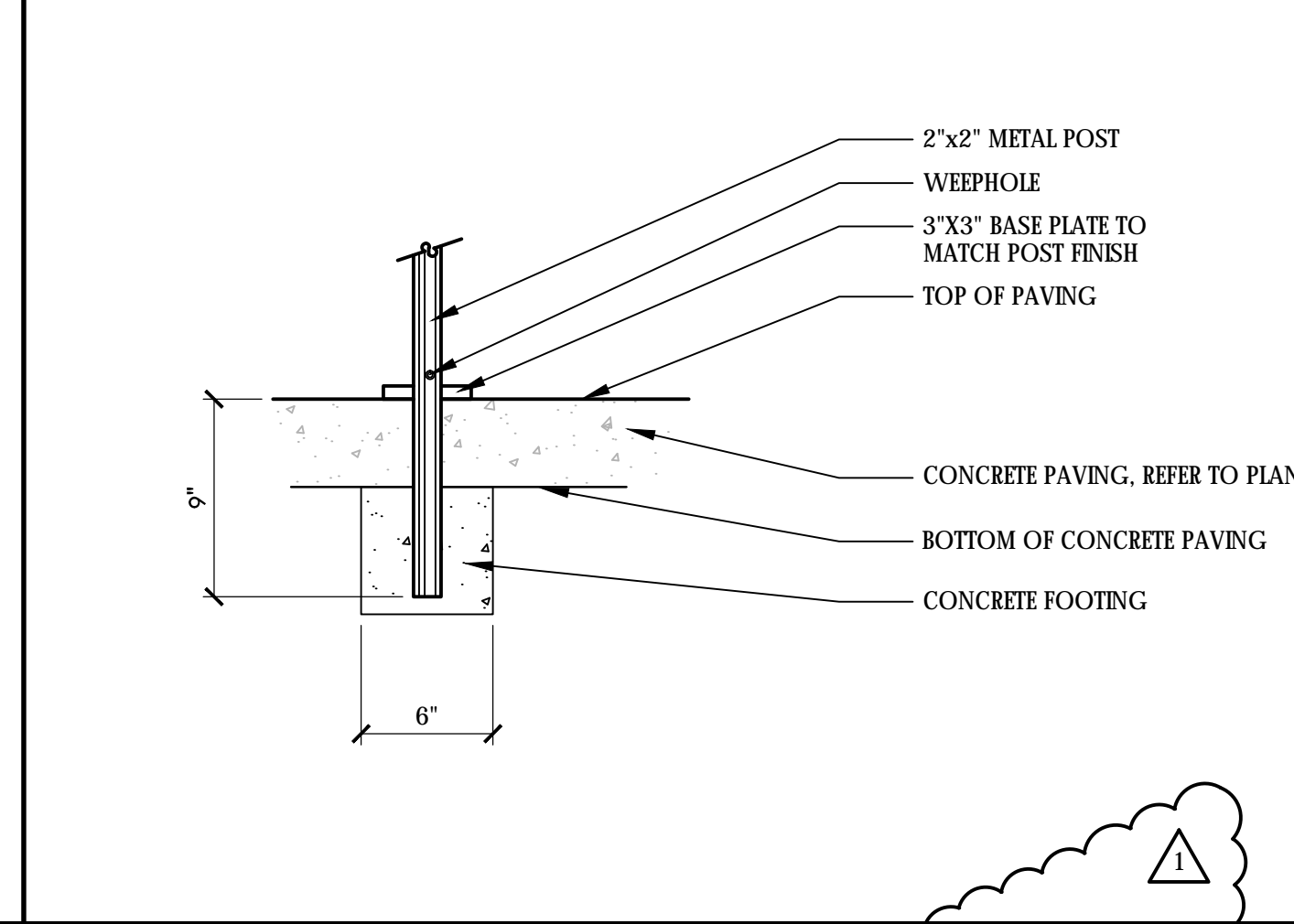
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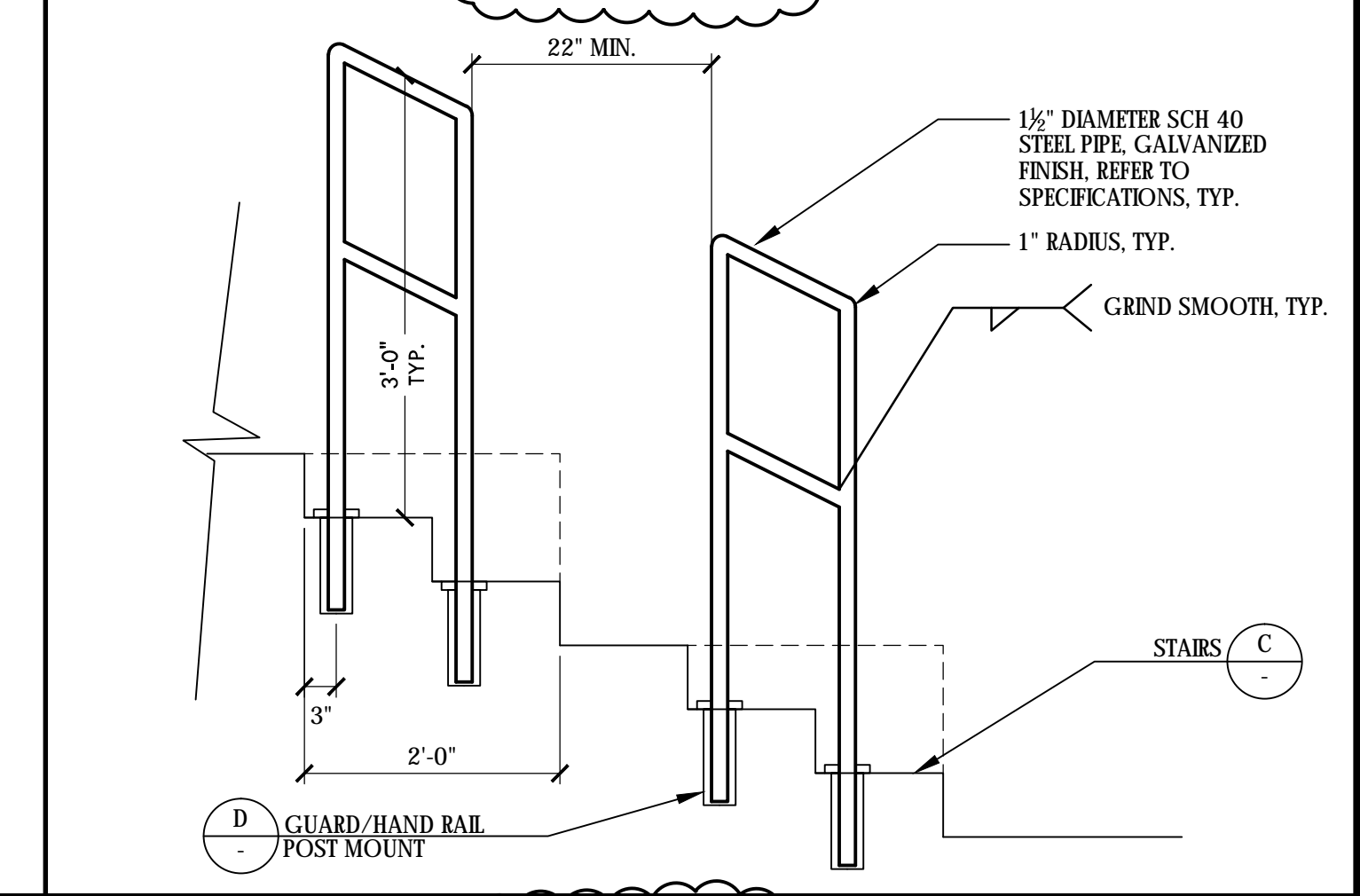
E GUARD RAIL (BID ALT #1) NTS



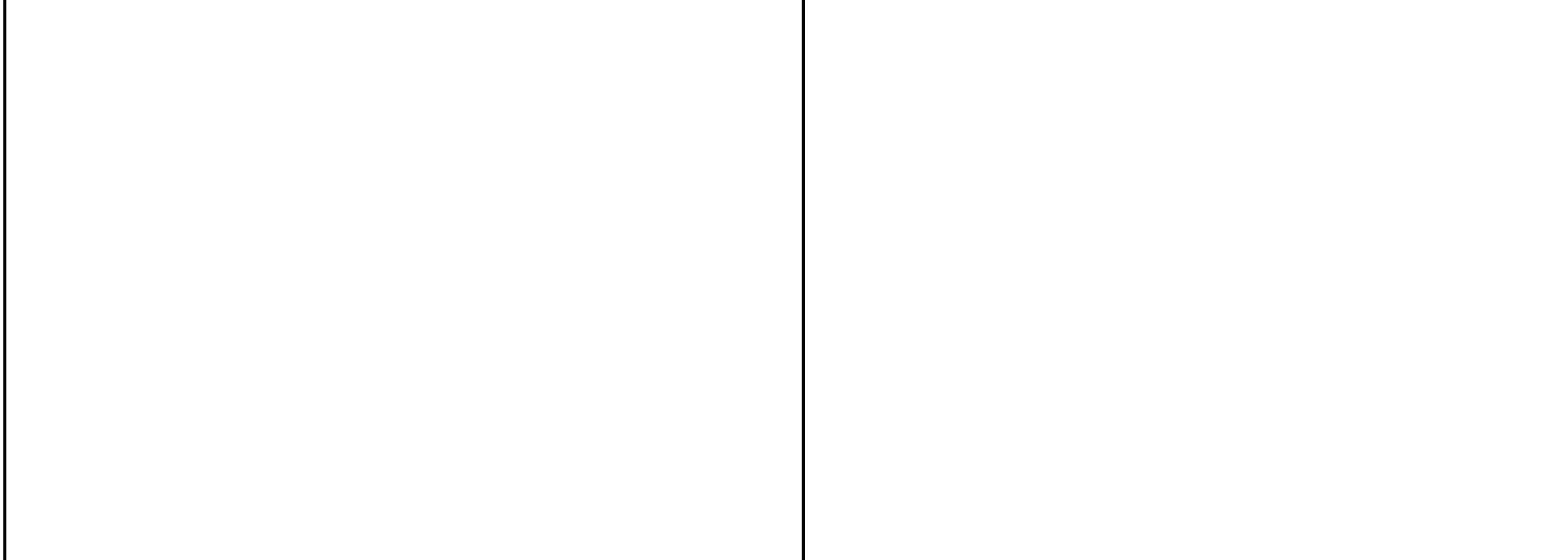
G ASPHALT PAVING - TRACK NTS



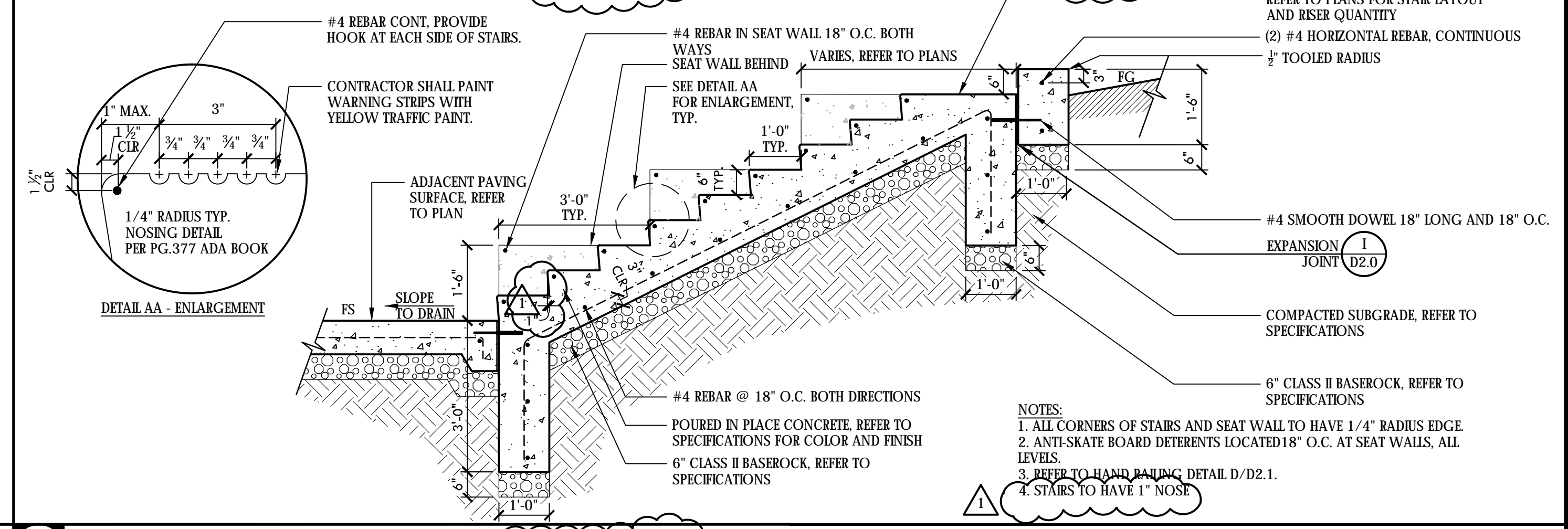
F GUARD/HAND RAIL POST MOUNT (BID ALT #1) NTS



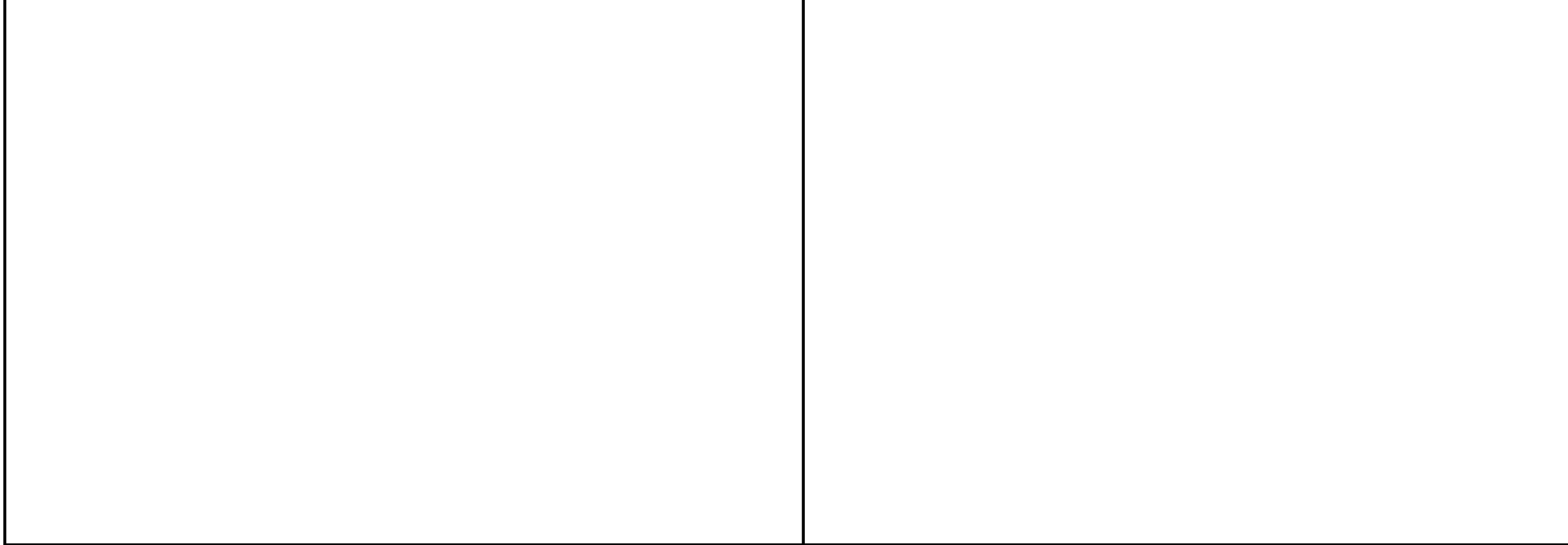
D HAND RAIL (BID ALT #1) NTS



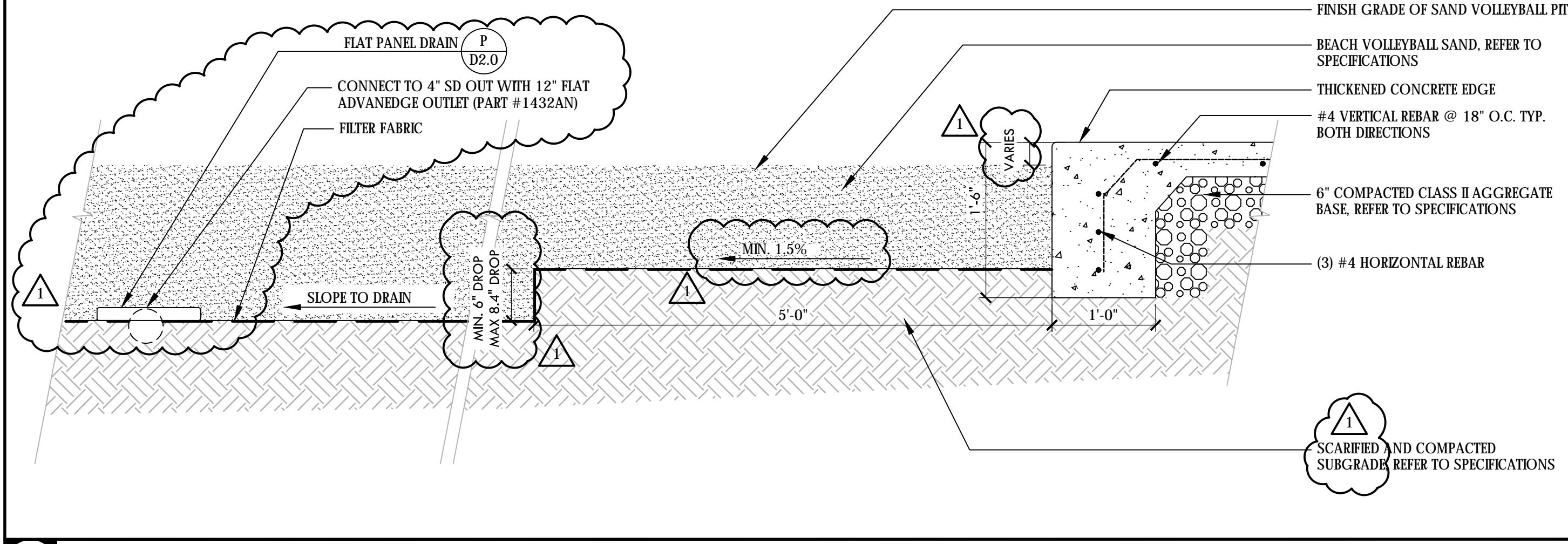
J BEACH VOLLEYBALL SAND SECTION NTS



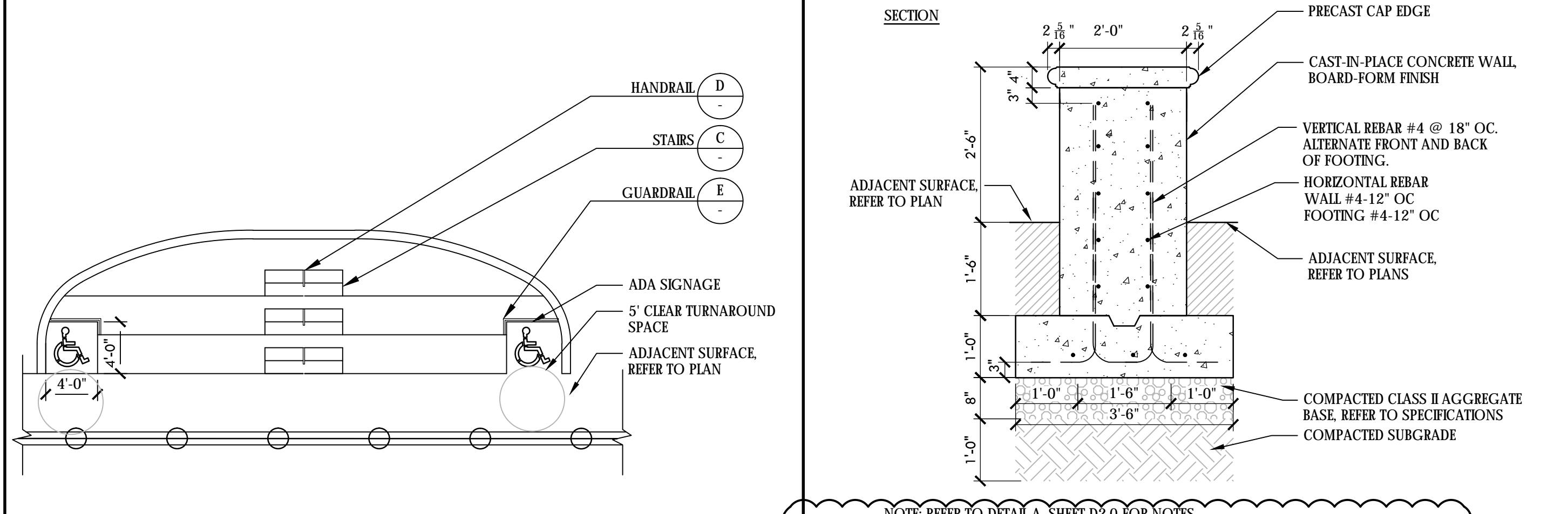
C CONCRETE SEATING - SECTION (BID ALT #1) NTS



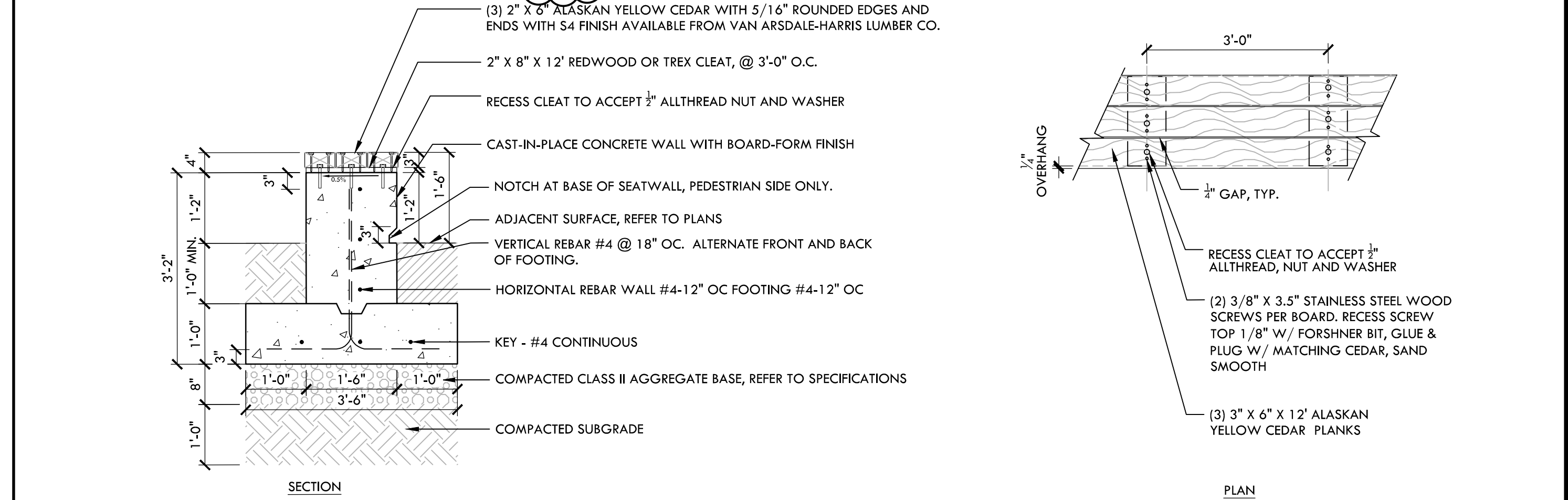
I CONCRETE PLINTH - SECTION (BID ALT #1) NTS



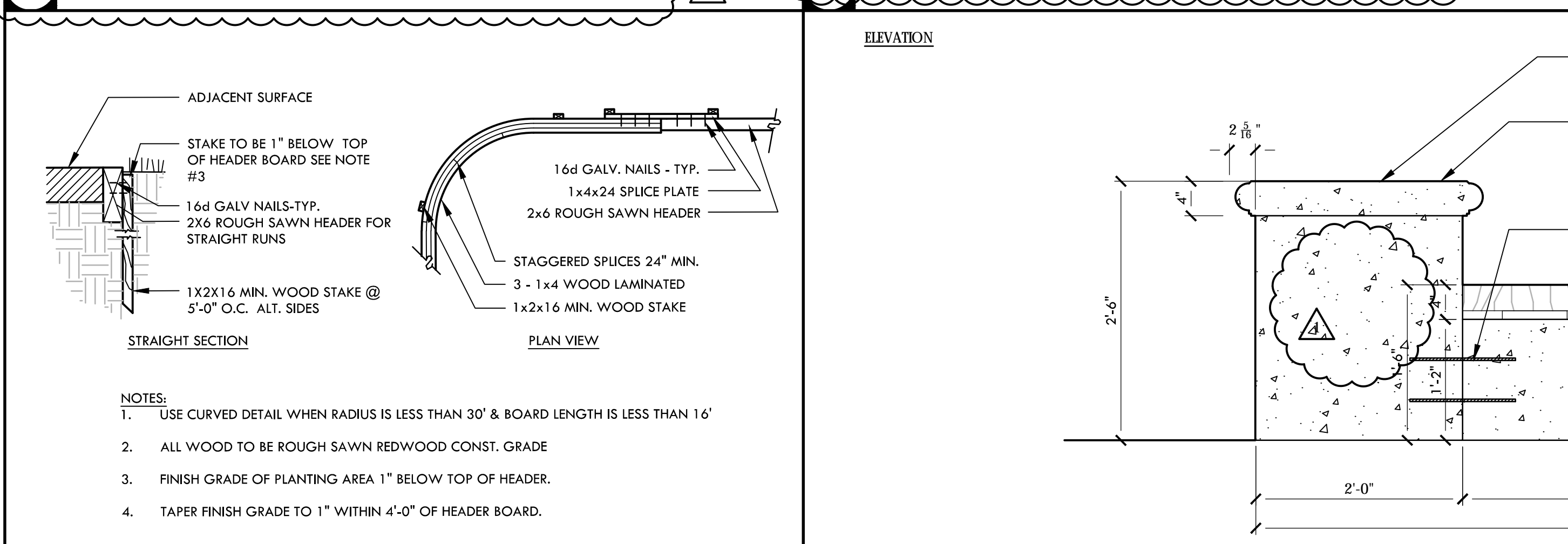
B CONCRETE SEATWALL WITH WOOD SEAT (BID ALT #1) NTS



N CONCRETE SEATING - PLAN (BID ALT #1) NTS



A CONCRETE SEATWALL WITH WOOD SEAT AND PLINTHS ELEVATION (BID ALT #1) NTS

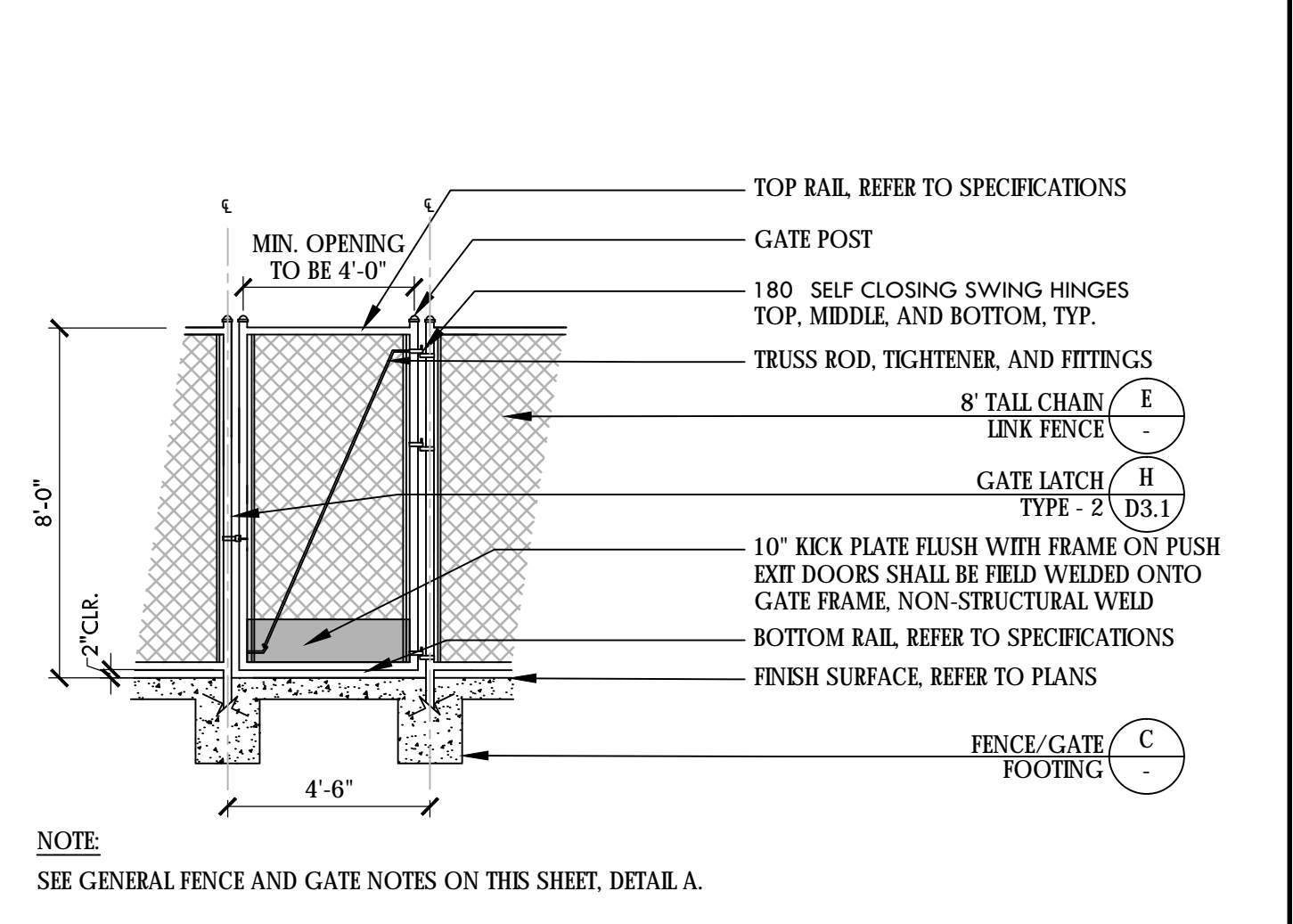


M REDWOOD HEADER BOARD NTS

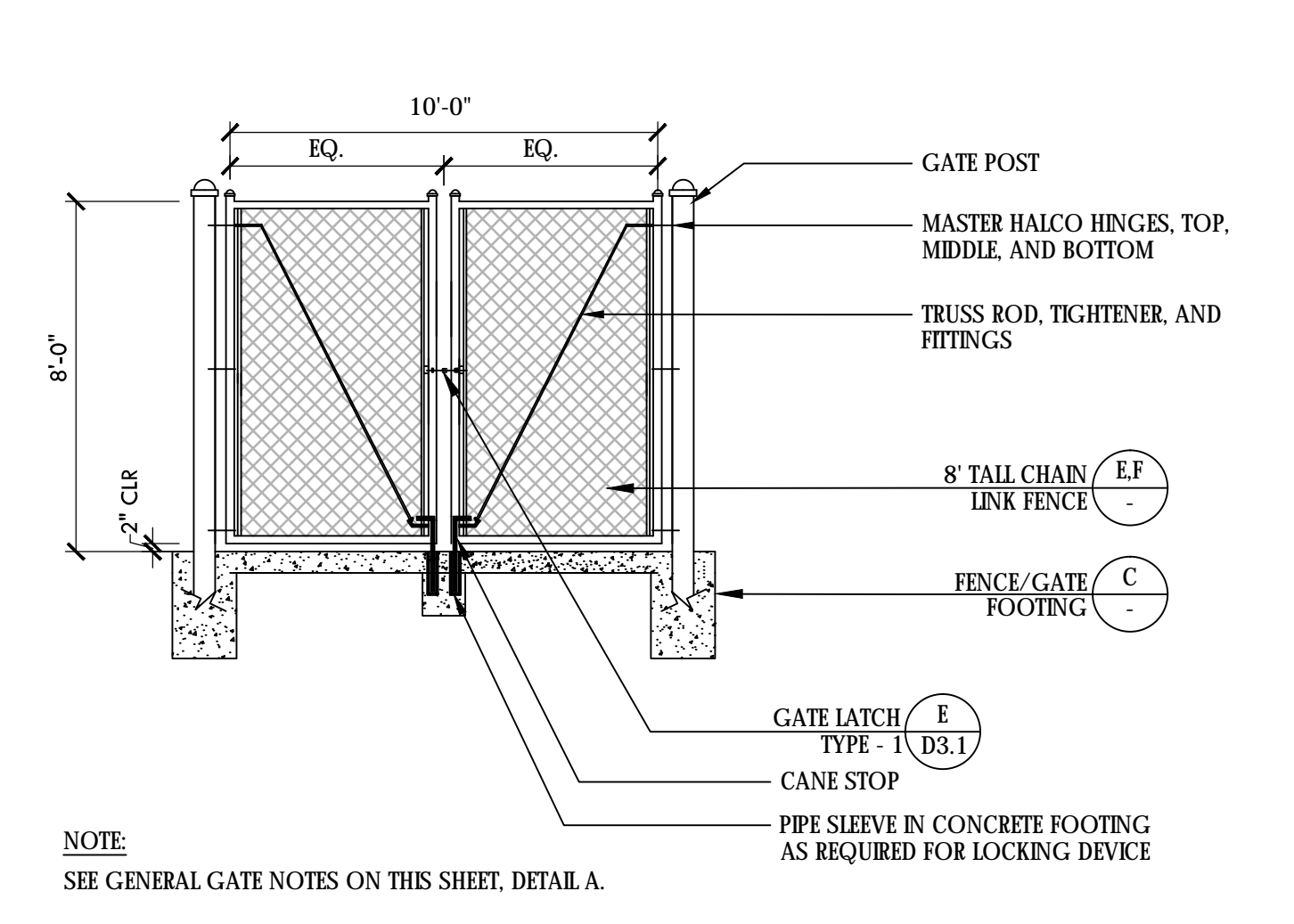
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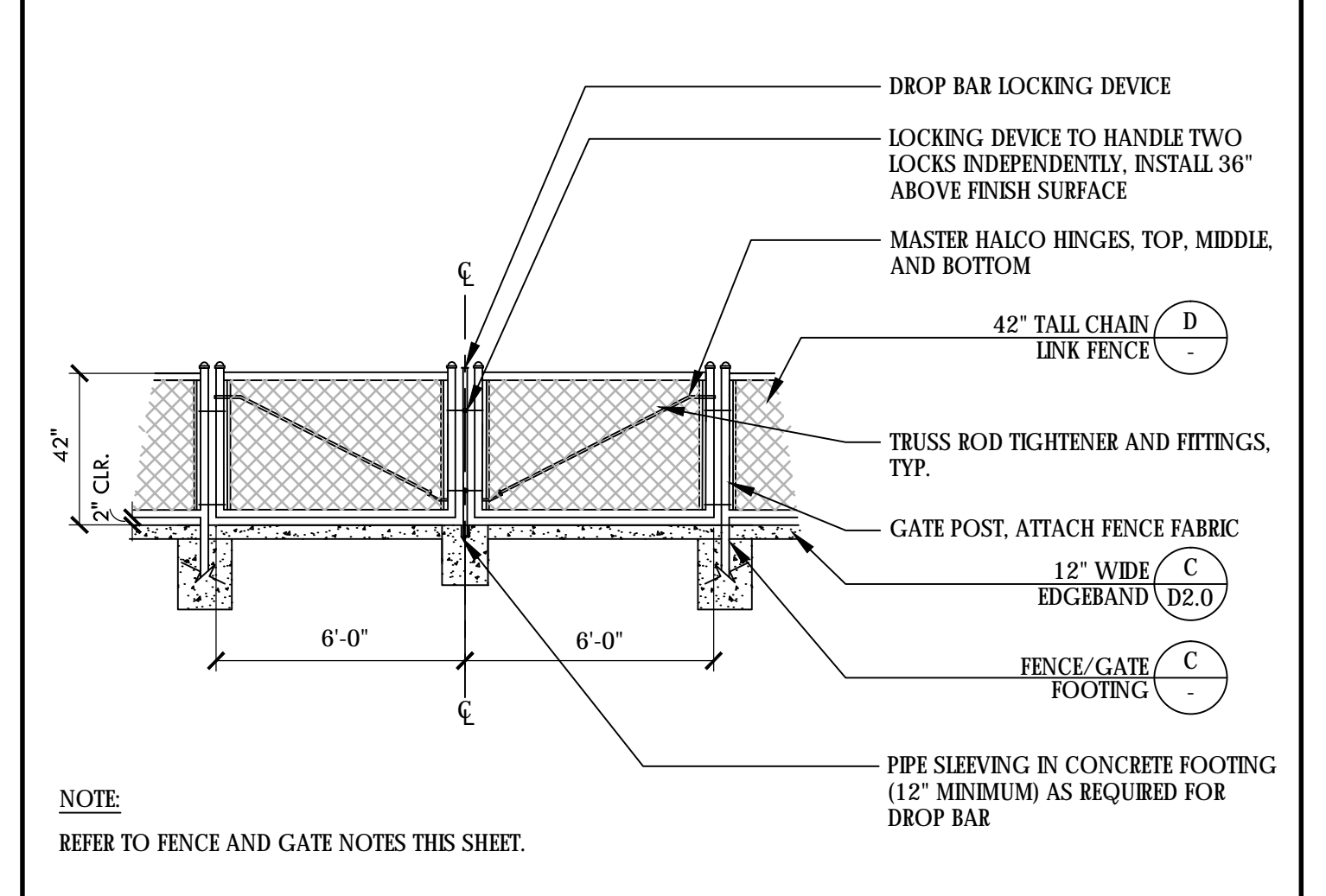
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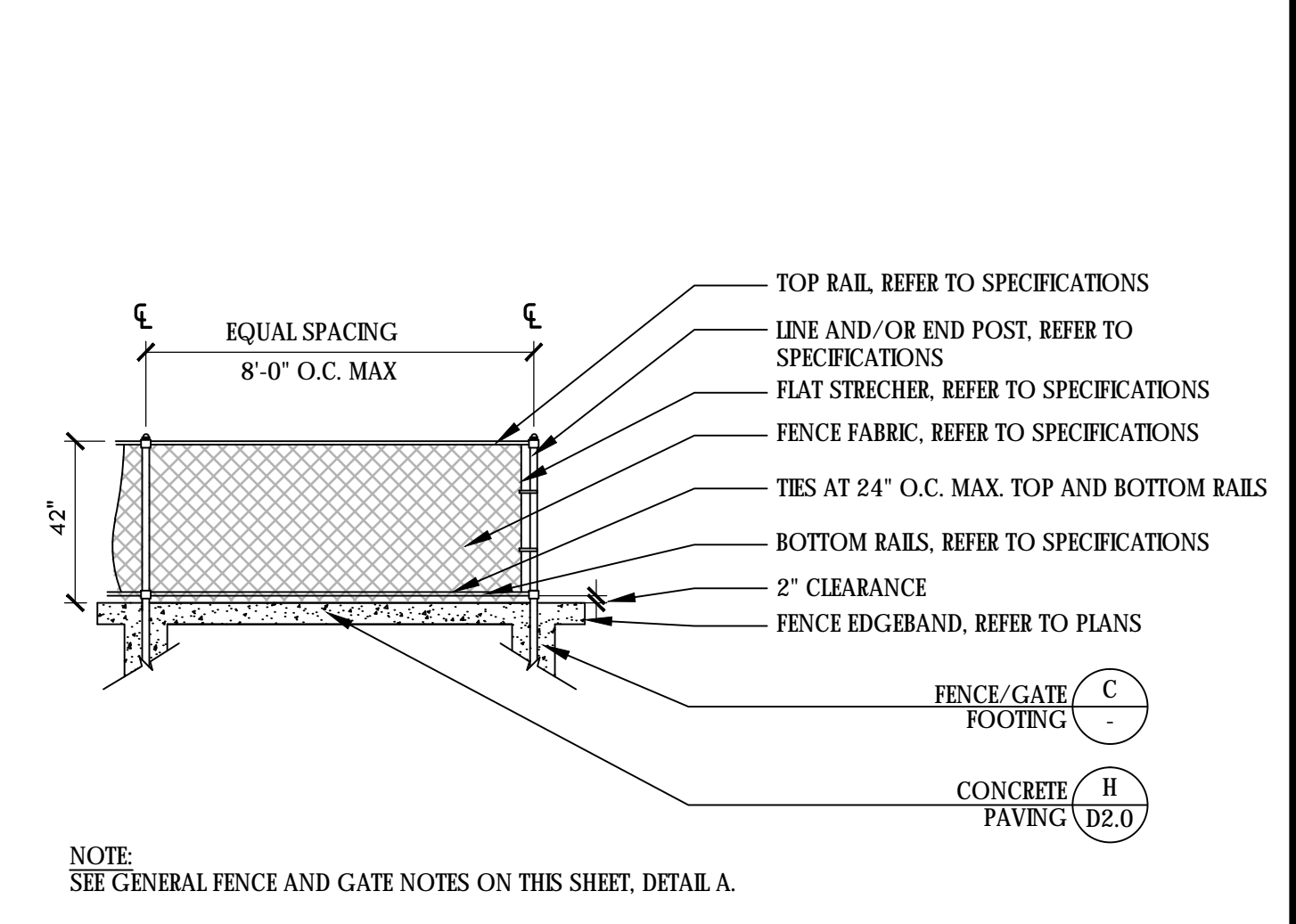
P 8' TALL X 4' WIDE SWING CHAIN LINK GATE NTS



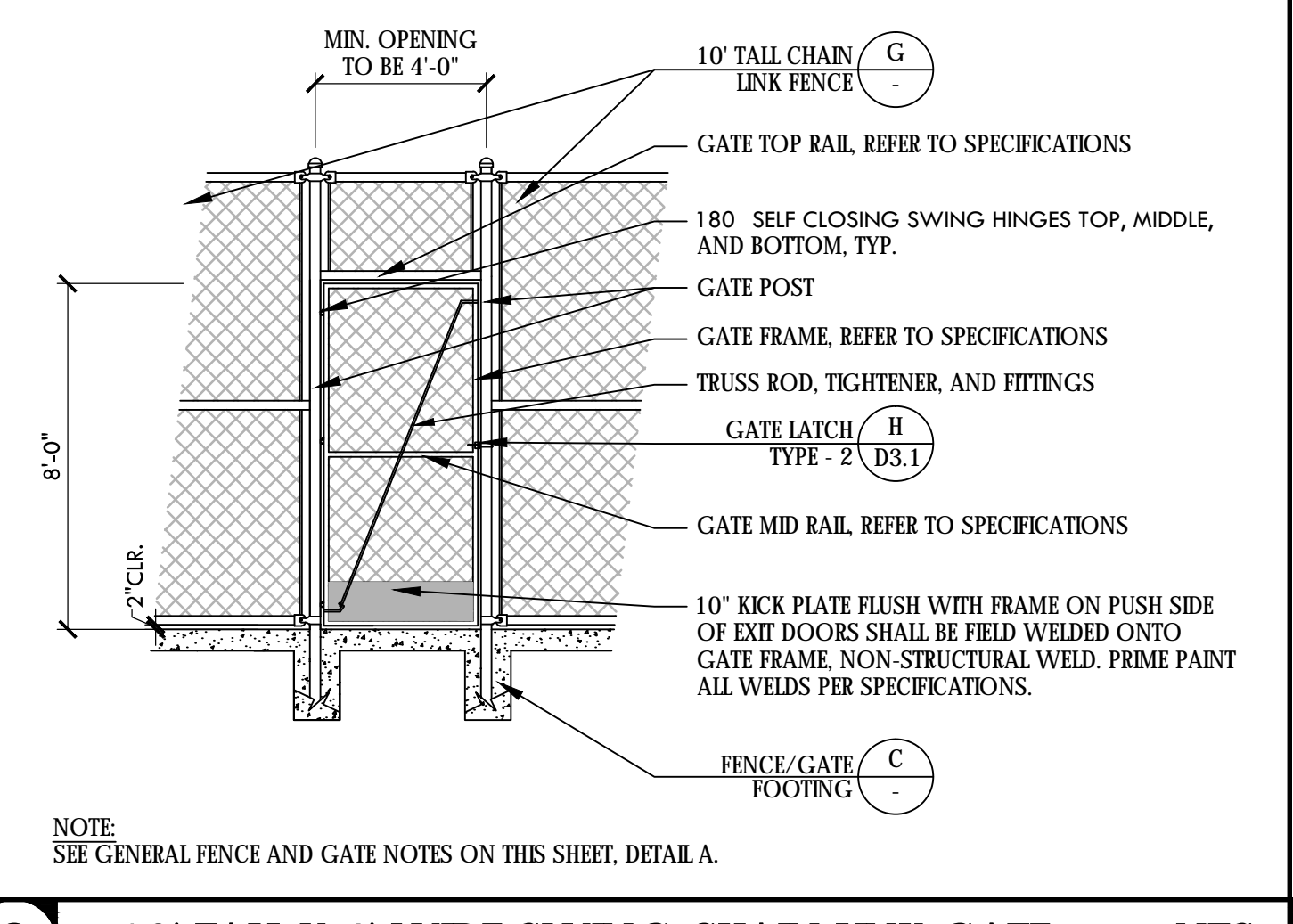
N 8' TALL X 10' WIDE DOUBLE SWING CHAIN LINK GATE NTS



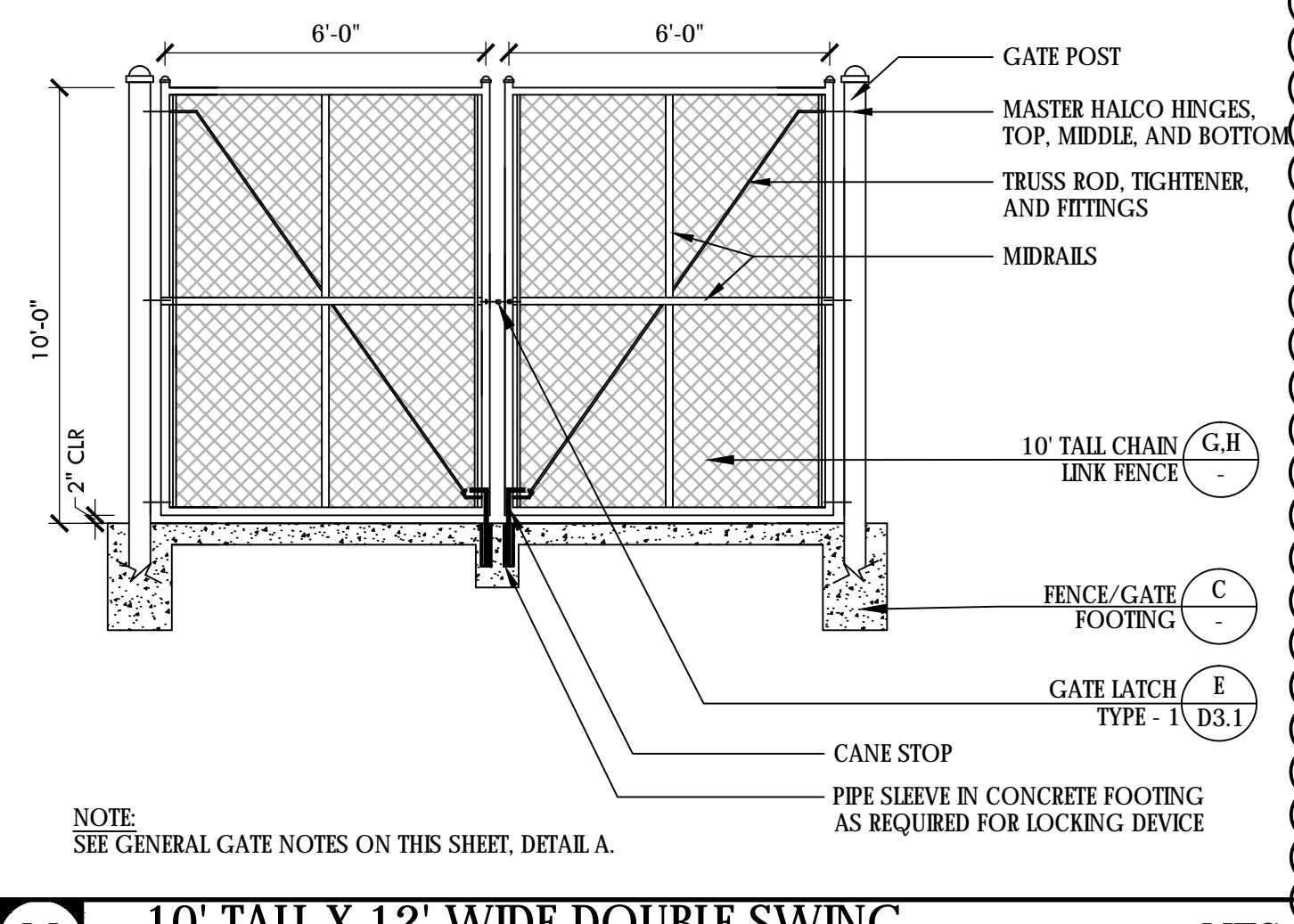
I 42" TALL X 12' WIDE DOUBLE SWING CHAIN LINK GATE NTS



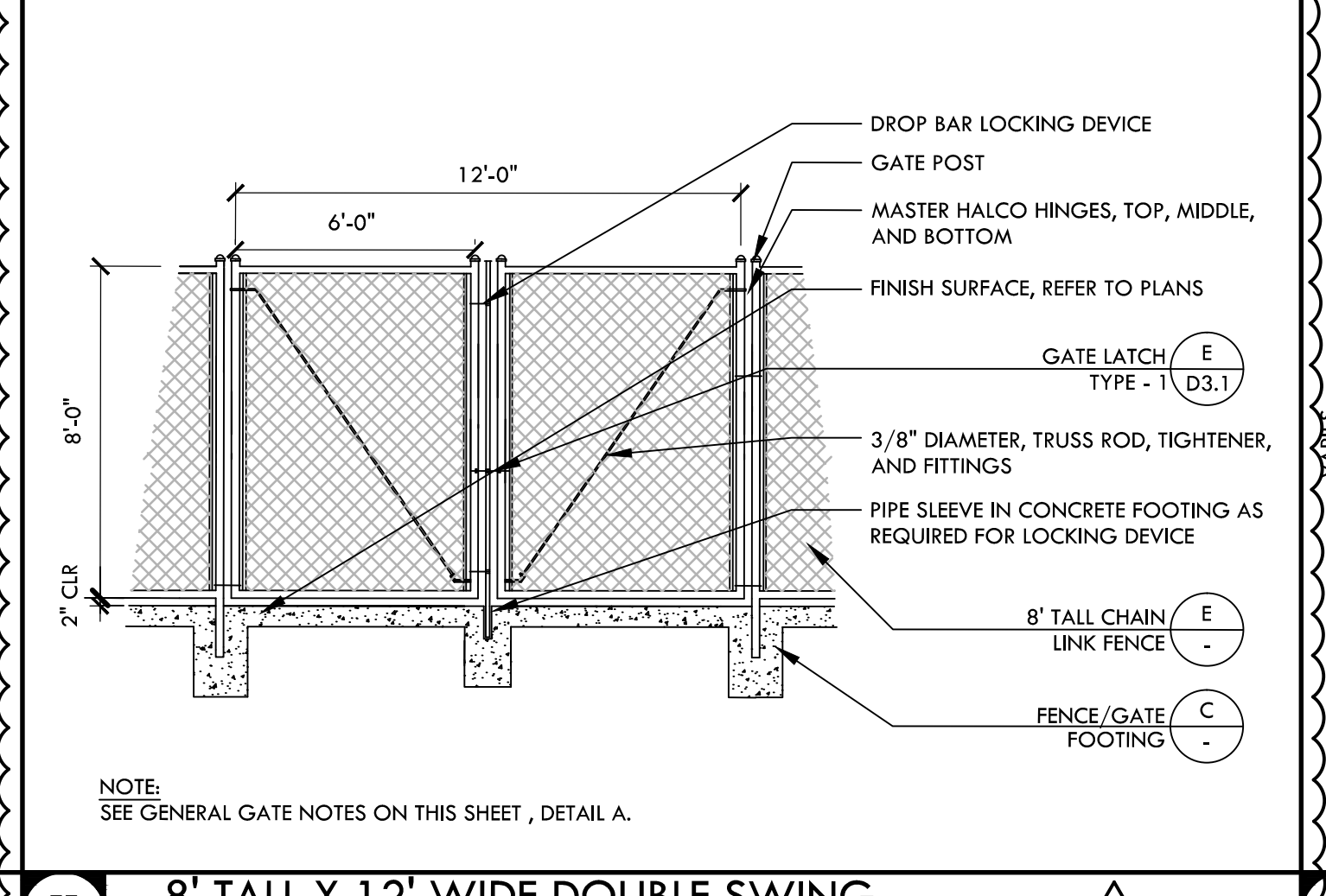
D 42" TALL CHAIN LINK FENCE NTS



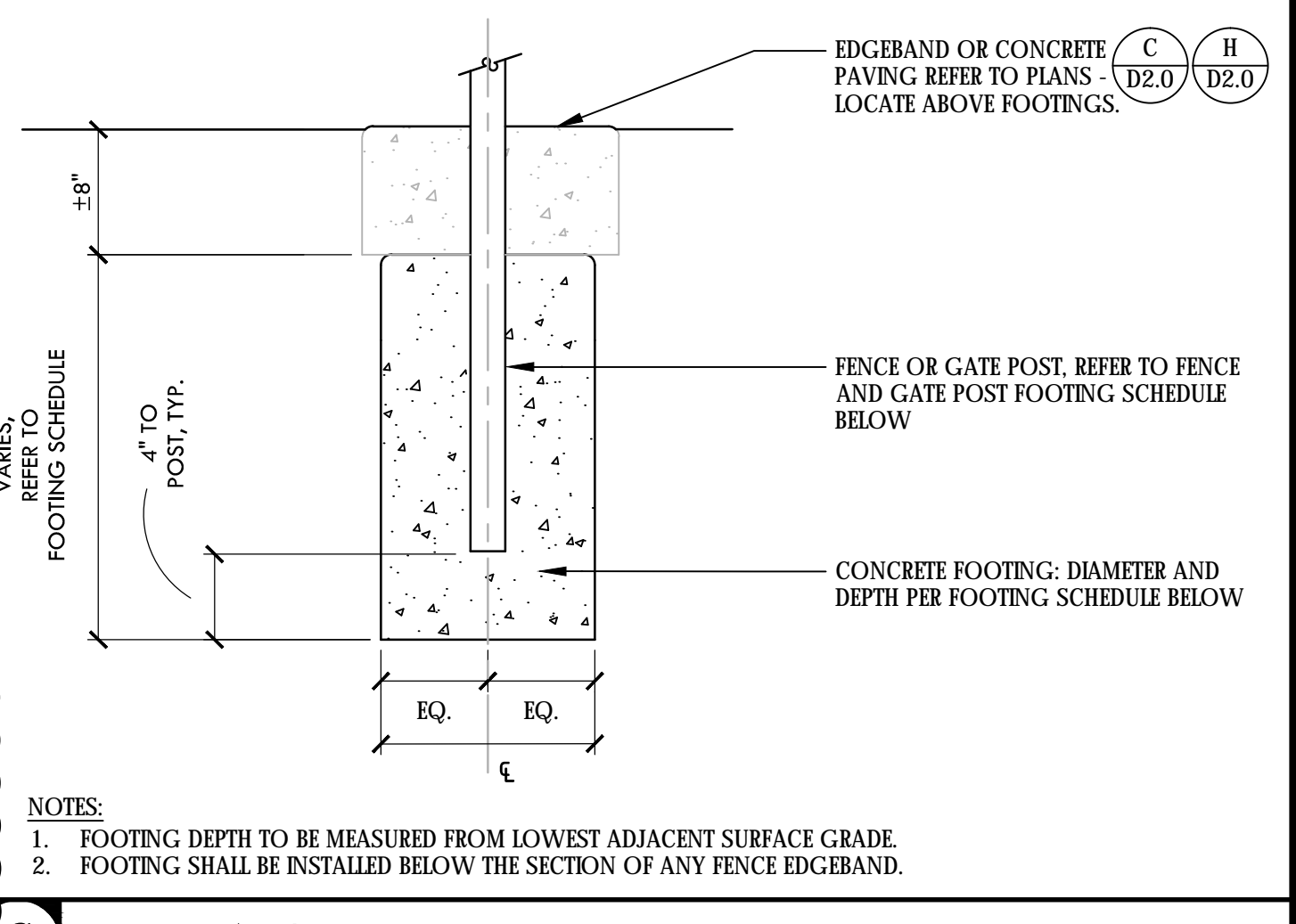
O 10' TALL X 4' WIDE SWING CHAIN LINK GATE NTS



M 10' TALL X 12' WIDE DOUBLE SWING CHAIN LINK GATE NTS



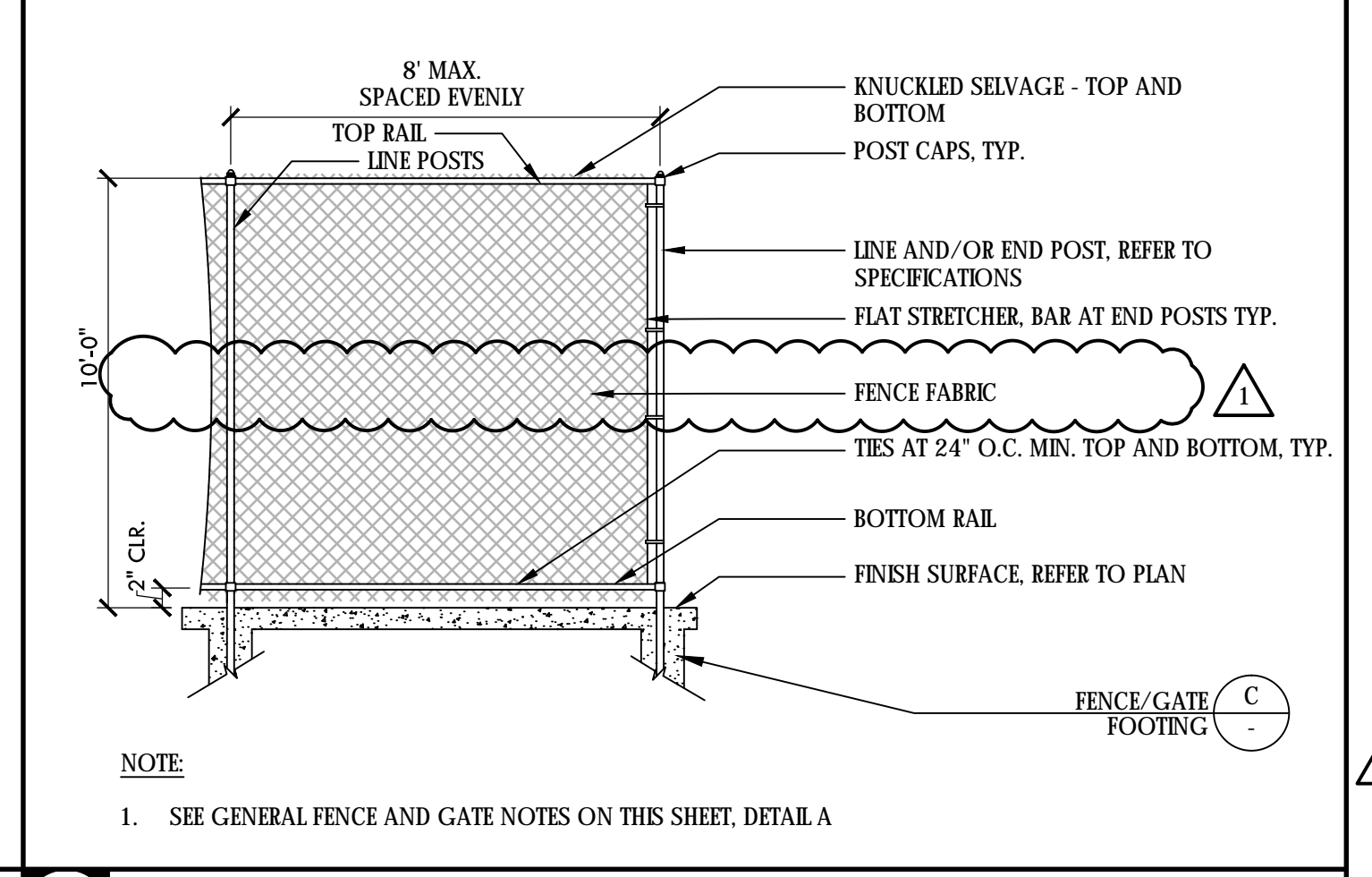
H 8' TALL X 12' WIDE DOUBLE SWING CHAIN LINK GATE NTS



C FENCE/GATE FOOTING NTS

NOT USED

L



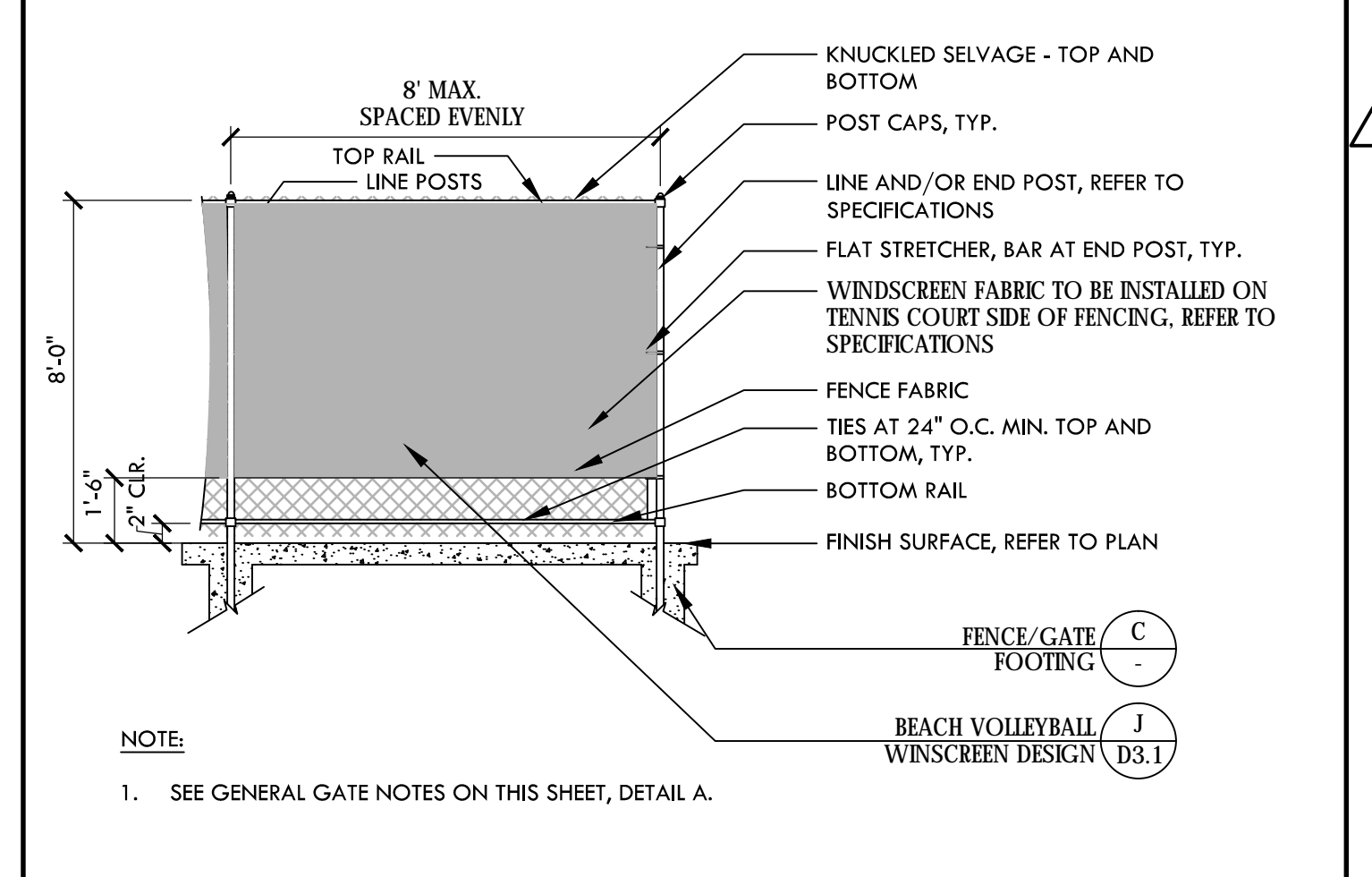
G 10' TALL CHAIN LINK FENCE NTS

CHAIN LINK FENCES

DESCRIPTION	HEIGHT	LINE POST SIZE (STD. GALV. PIPE)	CORNER/END POST (STD. GALV. PIPE)	POST FOOTING	SPACING (MAX)
4' MESH AT DUGOUT	4'-0"	1 1/2"	2" DIA. STD. PIPE	12" DIA. X 3'-0" DEEP	8'-0"
8' CHAIN LINK	8'-0"	2 1/2"	3" DIA. STD. PIPE	12" DIA. X 3'-0" DEEP	8'-0"
8' CHAIN LINK W/WINDSCREEN	8'-0"	3"	3" DIA. STD. PIPE	16" DIA. X 5'-0" DEEP	8'-0"
10' CHAIN LINK	10'-0"	3"	4" DIA. STD. PIPE	16" DIA. X 6'-0" DEEP	8'-0"

NOT USED

K

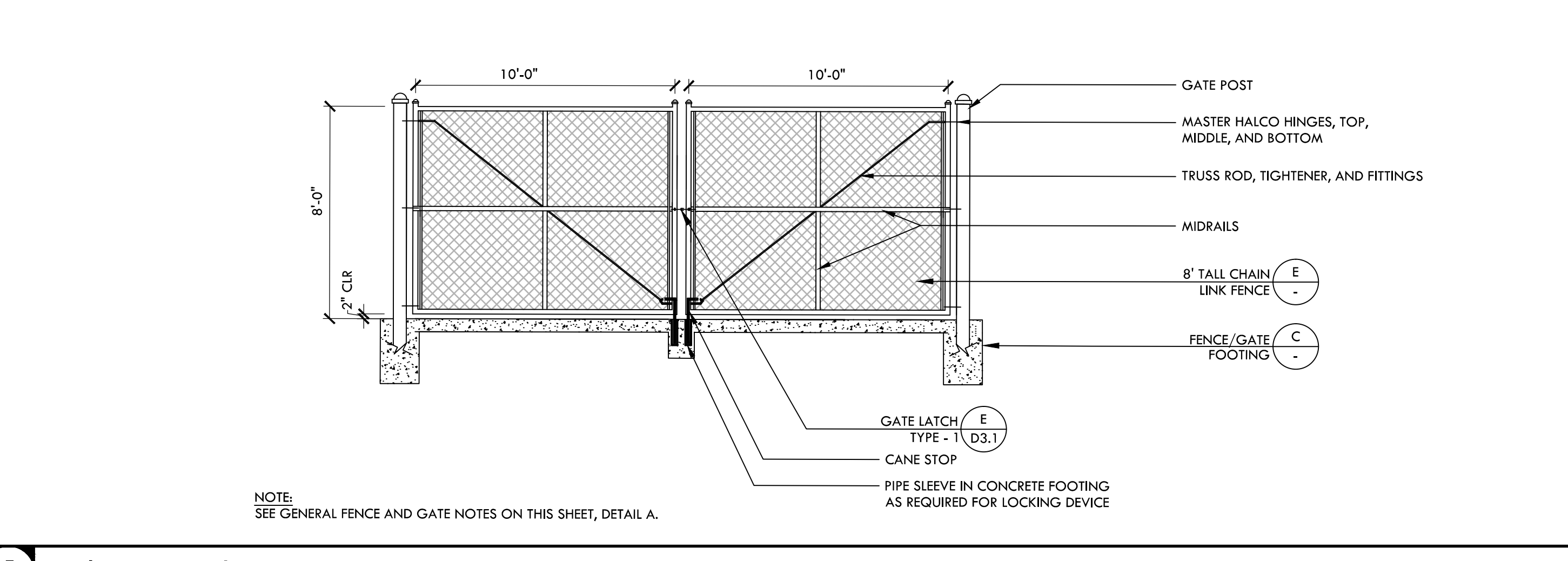


F 8' TALL CHAIN LINK FENCE WITH WINDSCREEN NTS

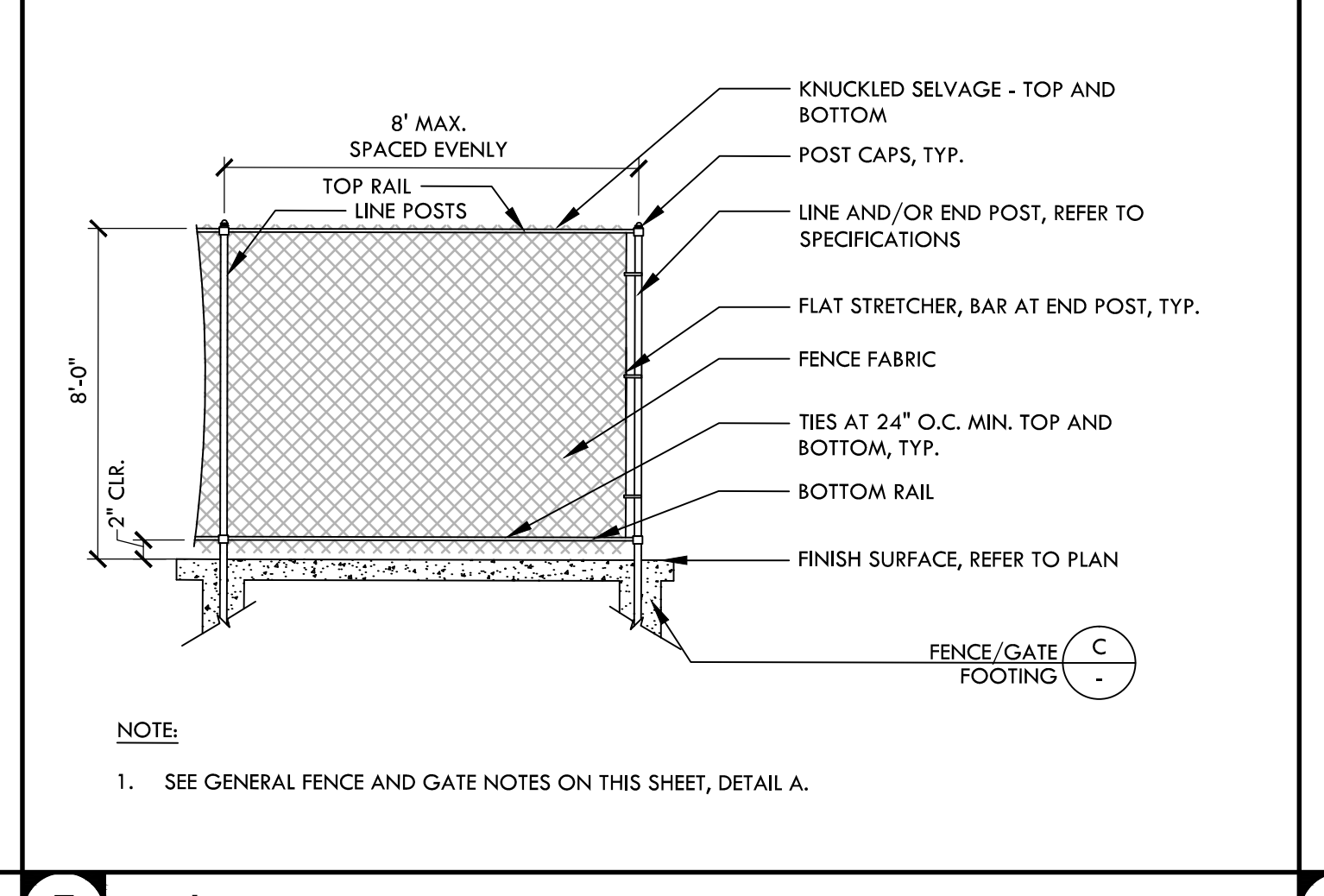
GATES

DESCRIPTION	SIZE (H x W)	GATE POST (STD. GALV. PIPE)	POST FOOTING
42"x12' DOUBLE SWING GATE	42' X 12'	2" DIA. STD.	12" DIA. X 3'-0" DEEP
8'x4' SWING GATE	8' X 4'	2" DIA. STD.	6'-6" DEEP
8'x10' DOUBLE SWING GATE	8' X 10'	3" DIA. STD.	12" DIA. X 5'-0" DEEP
8'x12' DOUBLE SWING GATE	8' X 12'	3" DIA. STD.	16" DIA. X 5'-0" DEEP
8'x20' DOUBLE SWING GATE	8' X 20'	4" DIA. STD.	16" DIA. X 5'-0" DEEP
10'x4' SWING GATE	10' X 4'	3" DIA. STD.	16" DIA. X 4'-6" DEEP
10'x20' DOUBLE SWING GATE	10' X 20'	4" DIA. STD.	16" DIA. X 5'-0" DEEP
10'x25' DOUBLE SWING GATE	10' X 25'	4" DIA. STD.	16" DIA. X 6'-0" DEEP

NOTES:
1. REFER TO PLANS & DETAILS FOR POST LOCATIONS AND TOP OF POST FOOTING.
2. REFER TO FENCE FOOTING DETAILS FOR DESIGN AND CONSTRUCTION.
3. THE PIPE SIZES INDICATED ARE STANDARD PIPE SCHEDULE 40, UNLESS NOTED OTHERWISE.



J 8' TALL X 20' WIDE DOUBLE SWING CHAIN LINK GATE NTS



E 8' TALL CHAIN LINK FENCE NTS

FENCE/GATE POST FOOTING SCHEDULE

NOTES PERTAIN TO ALL GATE AND FENCE DETAILS:

- FENCE FABRIC ON PERIMETER OF PLAY FIELD FENCING IS TO BE ON FIELD AND TRACK SIDE AND ON TENNIS COURT SIDE FOR TENNIS COURT FENCING.
- BOTTOM RAIL TO BE 2" ABOVE FINISH GRADE. FENCE FABRIC BOTTOM EDGE TO BE 1" ABOVE FINISH GRADE.
- SUBMIT SHOP DRAWINGS FOR ACCEPTANCE BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- GATES IN ACCESSIBLE PATH OF TRAVEL MUST MEET ENTRY AND EXIT DOOR REQUIREMENTS FOR ACCESSIBILITY PER 2013 CALIFORNIA BUILDING CODE.
- FOR PEDESTRIAN GATES, PROVIDE LOCKING DEVICE TO SECURE GATE IN OPEN POSITION.
- ALL PEDESTRIAN SWING GATES SHALL HAVE A KICK PLATE ATTACHMENT.
- REFER TO PLANS FOR EDGE BAND TYPE UNLESS OTHERWISE NOTED.
- REFER TO PLANS AND DETAILS FOR FENCING WITHIN CURBS AND AT CHANGES IN ELEVATION.
- FOR GATES WITH DROP BAR, PROVIDE 8" DIA. X 12" DEEP FOOTING WITH SCH. 40 STEEL PIPE SLEEVE, CANE STOP TO GO DOWN 4" INTO CONCRETE IN CLOSED POSITION AND OPEN POSITION.
- TACK WELD HINGES TO POSTS AT GATES.
- DOUBLE SWING GATES THAT ARE IN LINE WITH FENCING, GATE POSTS SHALL BE OFFSET FROM THE FENCE TO ALLOW SWING GATES TO OPEN A FULL 180 DEGREE AGAINST THE FENCE PER PLAN LAYOUT.
- THE PIPE SIZES INDICATED ARE NPS FOR STANDARD PIPE SCHEDULE 40.
- ALL FENCE POST SET IN CONCRETE SHALL BE COATED WITH ONE COAT OF BITUMINOUS PAINT.
- TOP, MID AND BOTTOM RAIL SIZES IN SPECIFICATIONS.
- TACK WELD POST CAPS.

A GENERAL FENCE & GATE NOTES

SHEET TITLE: **CONSTRUCTION DETAILS**

PROJECT NAME: **COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS**

PROJECT ADDRESS: **835 COLLEGE AVE. KENTFIELD, CA 94904**

SUBMITTAL	DATE
80% CD SUBMITTAL	06/16/17
100% SUBMITTAL	06/30/17

NO.	REVISIONS	DATE
ADDENDUM #1		08/17/17

DRAWN BY: **KL** CHECKED BY: **DC**

DATE ISSUED: **06/30/17** SCALE: **NTS**

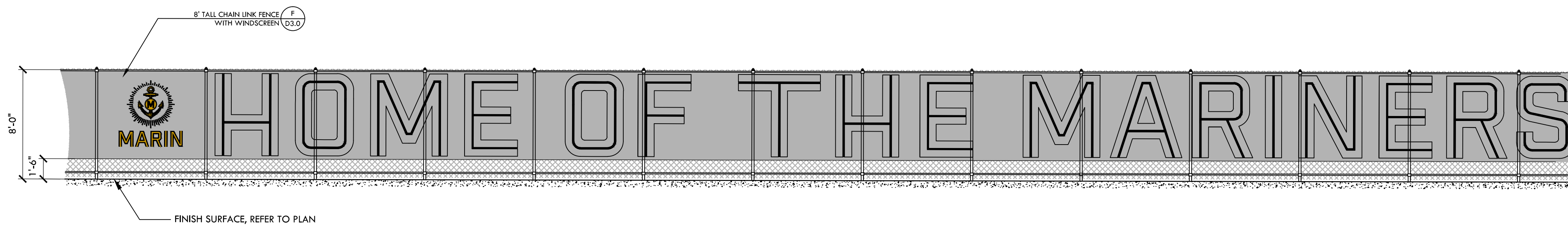
PROJ. NO.: **1702200**

SHEET NO.: **D3.0**

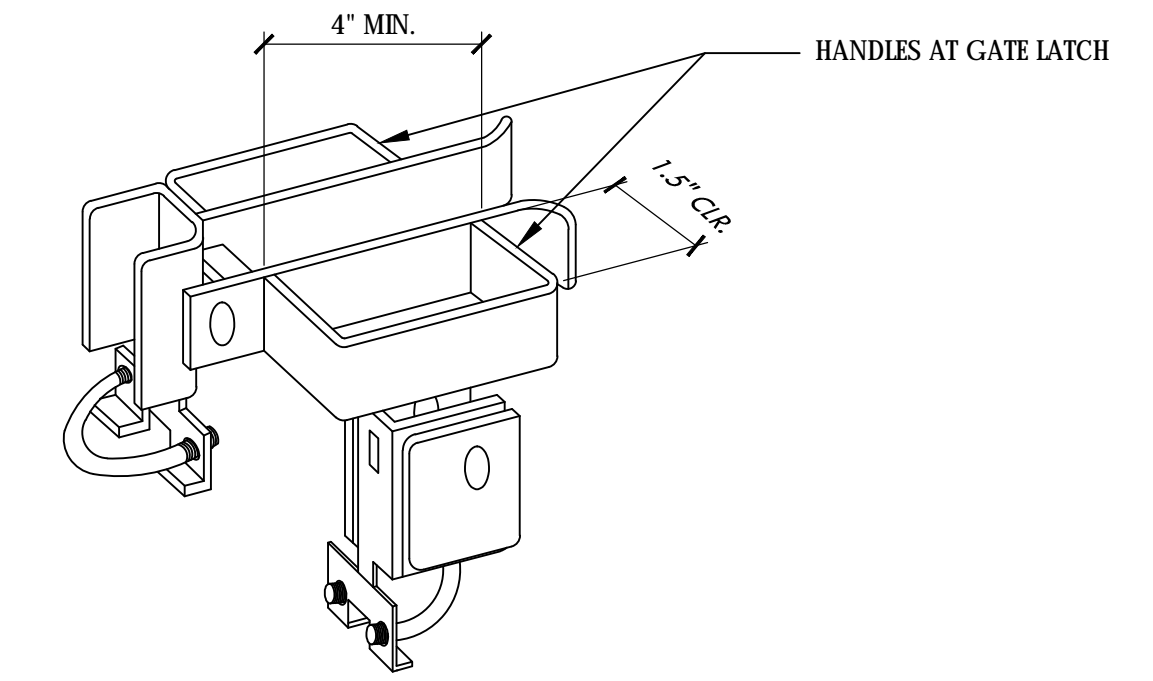
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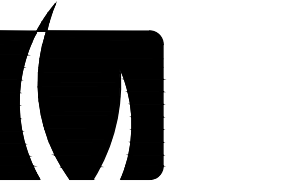
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NOTE:
1. SEE GENERAL GATE NOTES ON SHEET D3.0, DETAIL A.



NOTES:
1. FELICUM GATE LATCH, AVAILABLE FROM THOLL FENCE, INC. (775) 358-8680.
2. LATCH HANDLE MEASURED FROM INSIDE EDGE.
3. WELD HANDLE ON BOTH SIDES, MOUNT LEVER ON GATE.
4. CONTRACTOR TO REFER TO STRUCTURAL DRAWINGS FOR RECEIVING FENCE POST SIZES AND REFER TO SPECIFICATIONS FOR GATE FRAME SIZES. CONTRACTOR TO COORDINATE FABRICATION WITH MANUFACTURER FOR APPROPRIATE GATE LATCH SIZES.

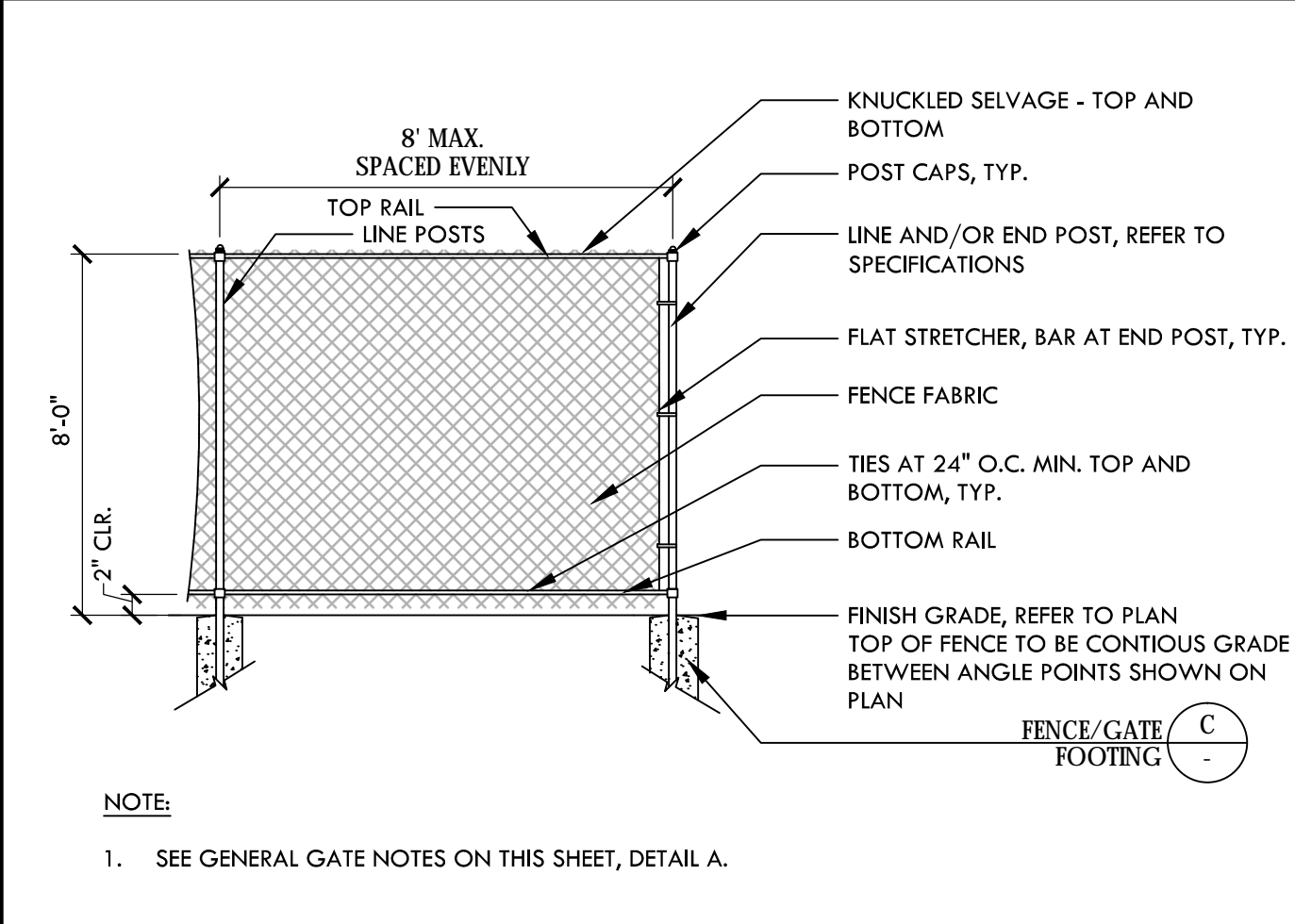
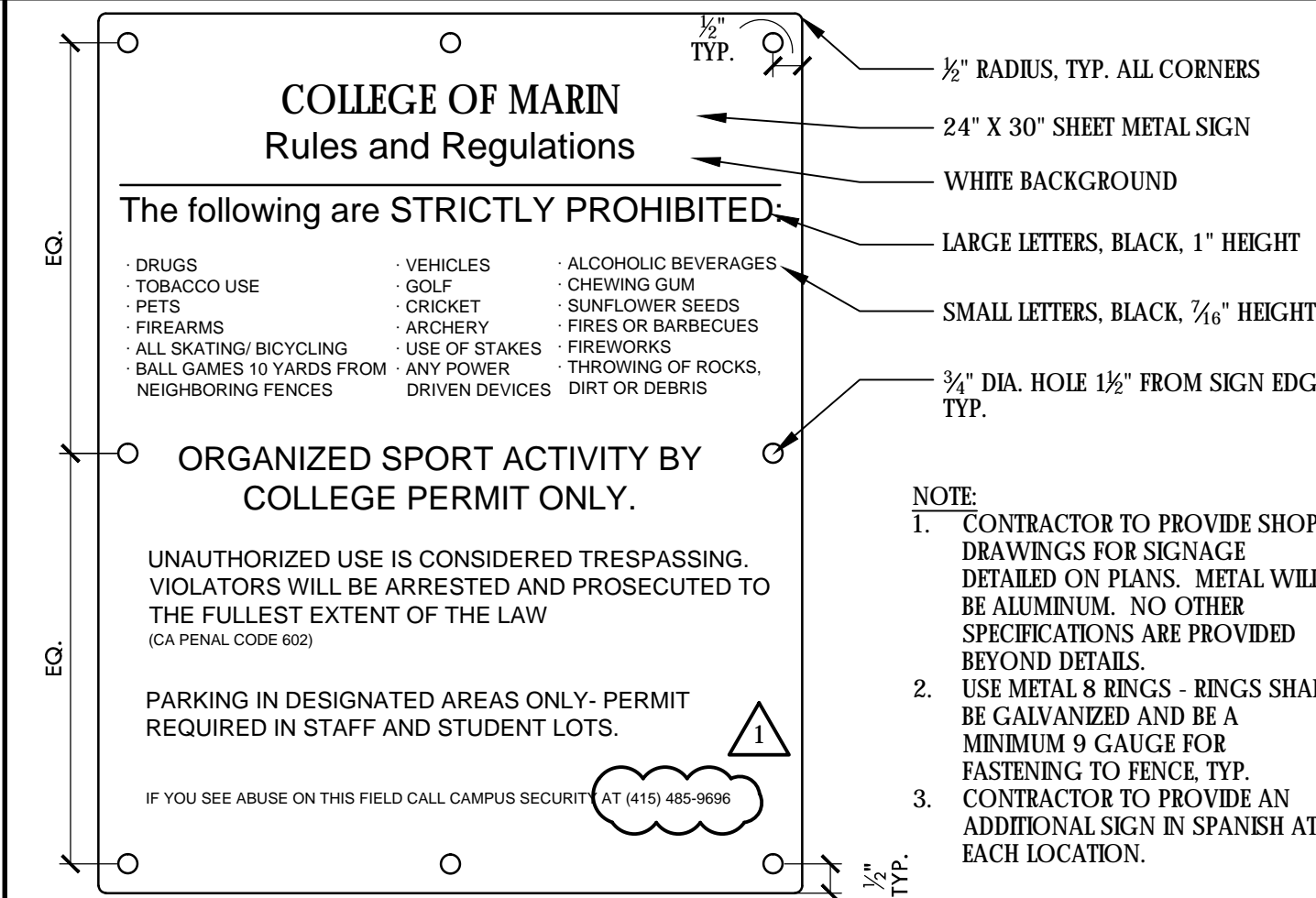


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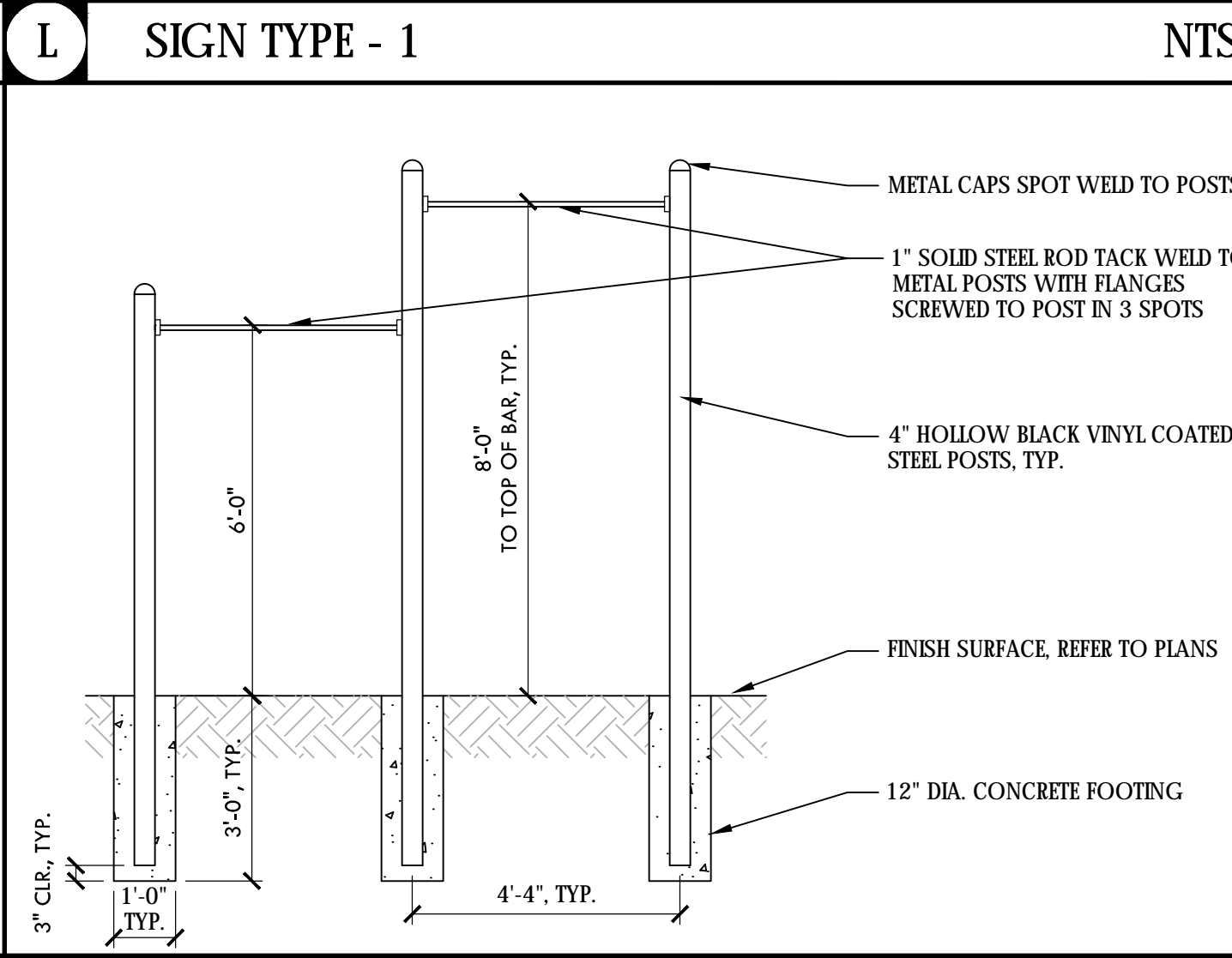


J BEACH VOLLEYBALL WINDSCREEN DESIGN

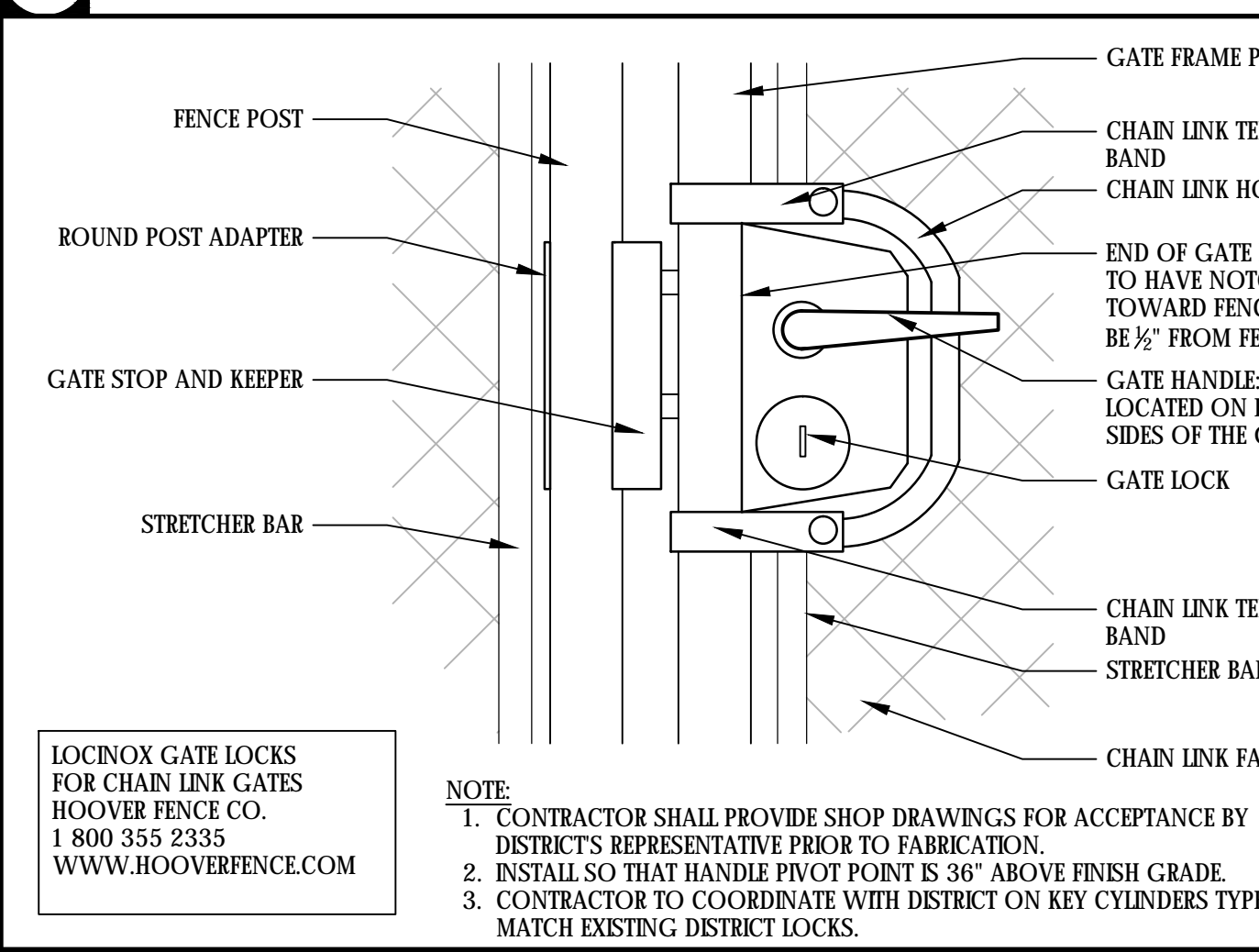


E GATE LATCH - TYPE 1

L SIGN TYPE - 1



I 8' TALL CHAIN LINK FENCE - NO EDGEBAND



D GATE LATCH - TYPE 2

K PULL UP BARS



H GATE LATCH - TYPE 2

C GATE LATCH - TYPE 2

CONSTRUCTION DETAILS

PROJECT NAME
COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS

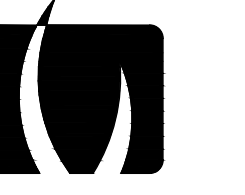
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CONSULTANT

SHEET TITLE
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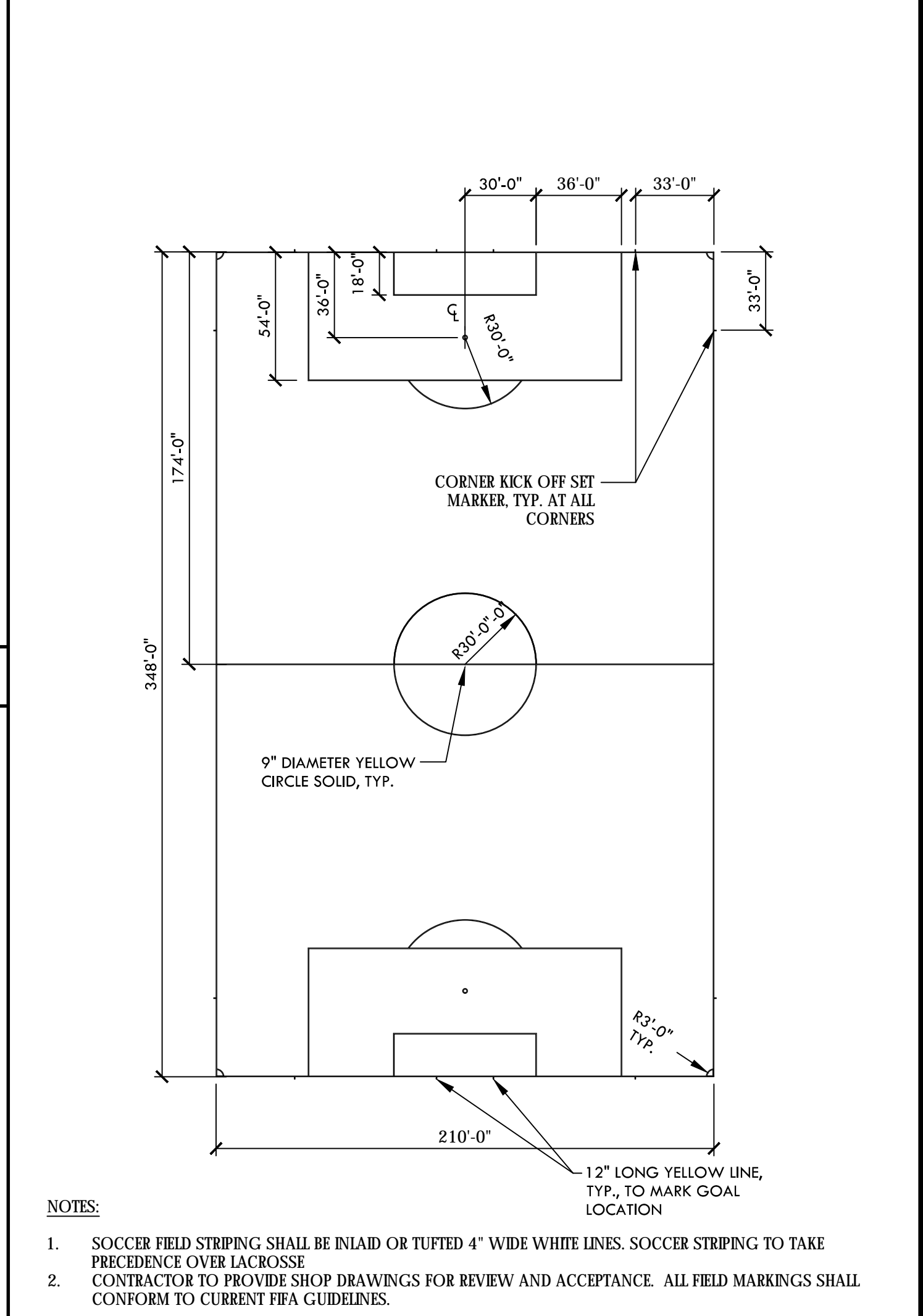
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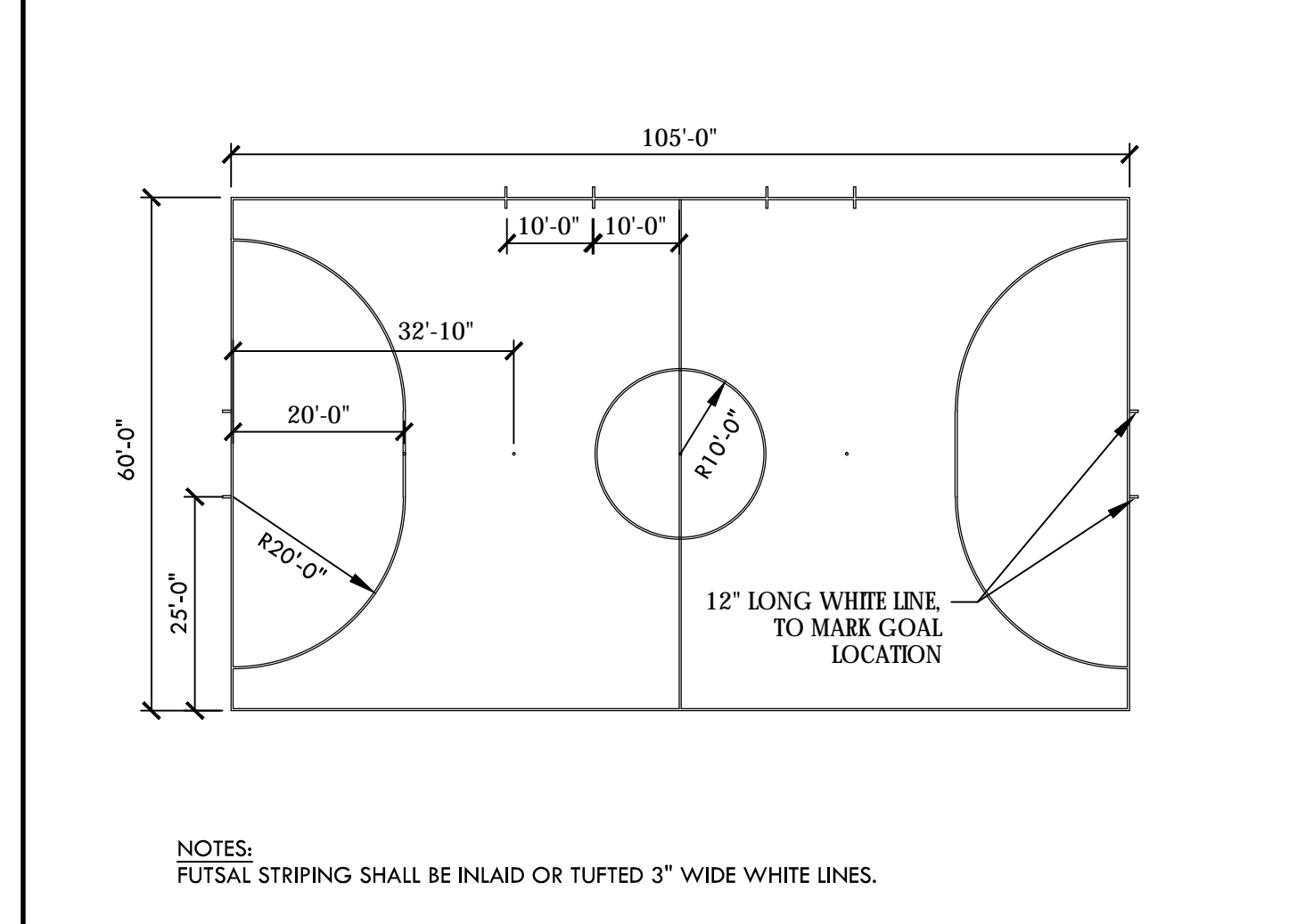
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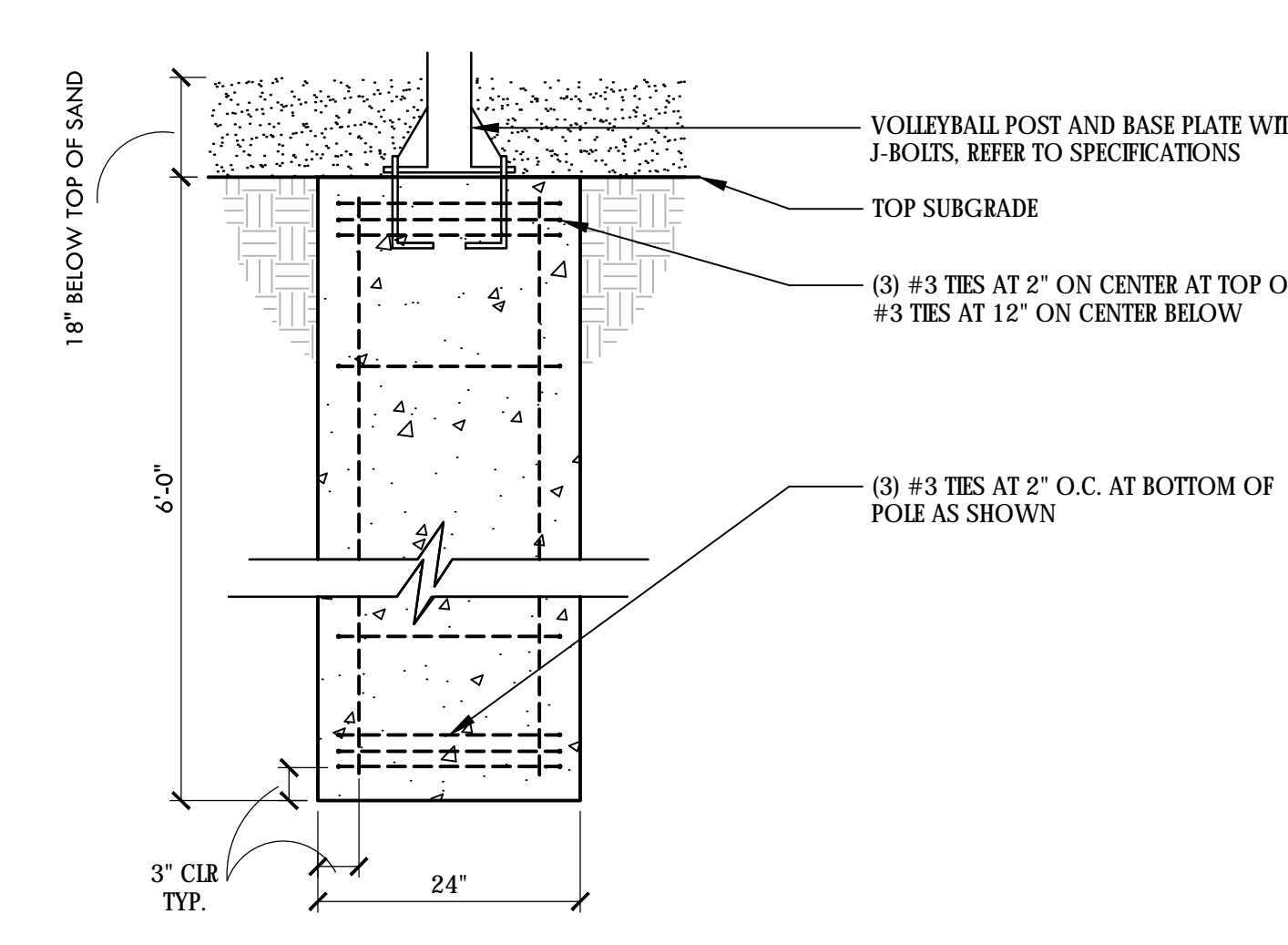
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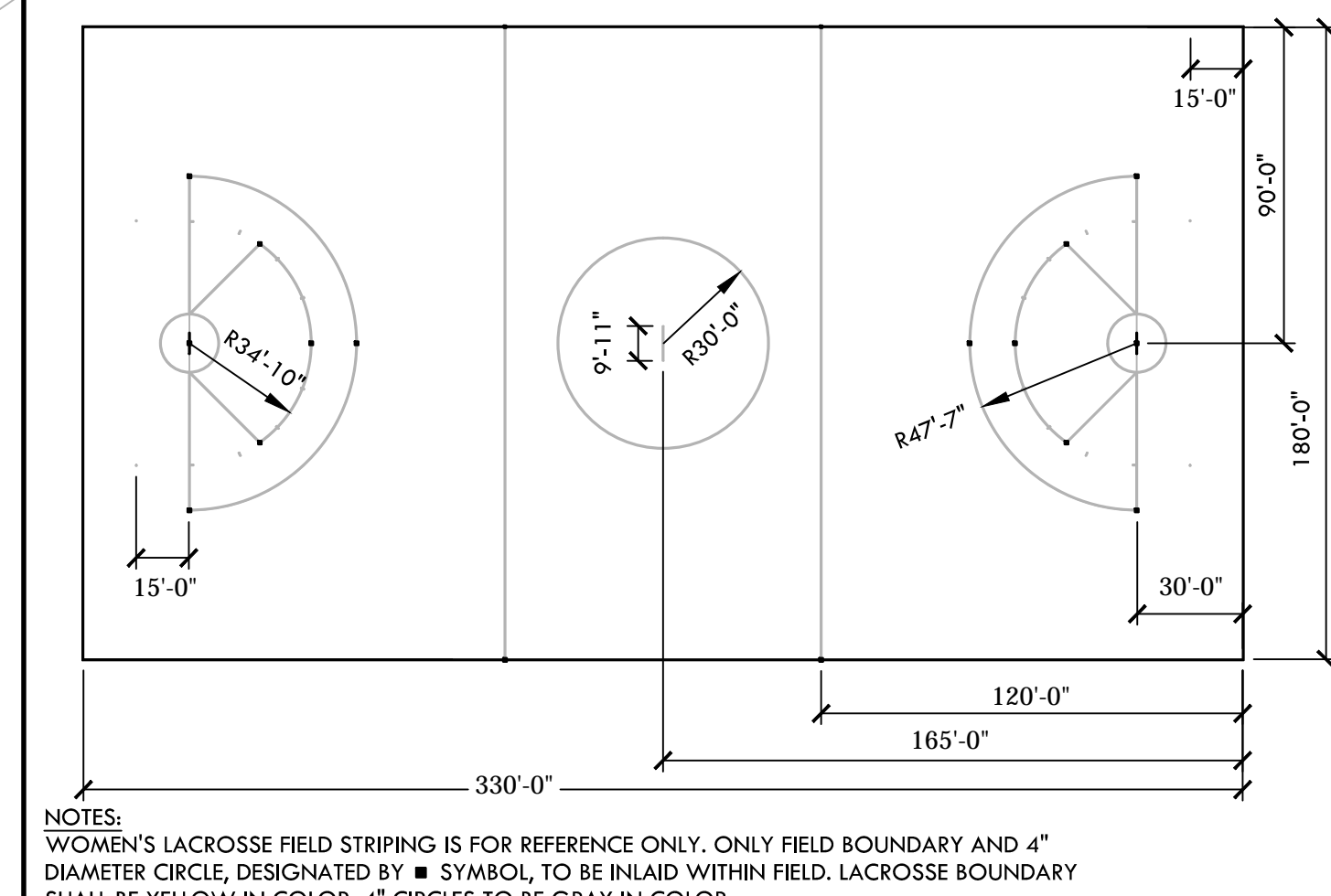
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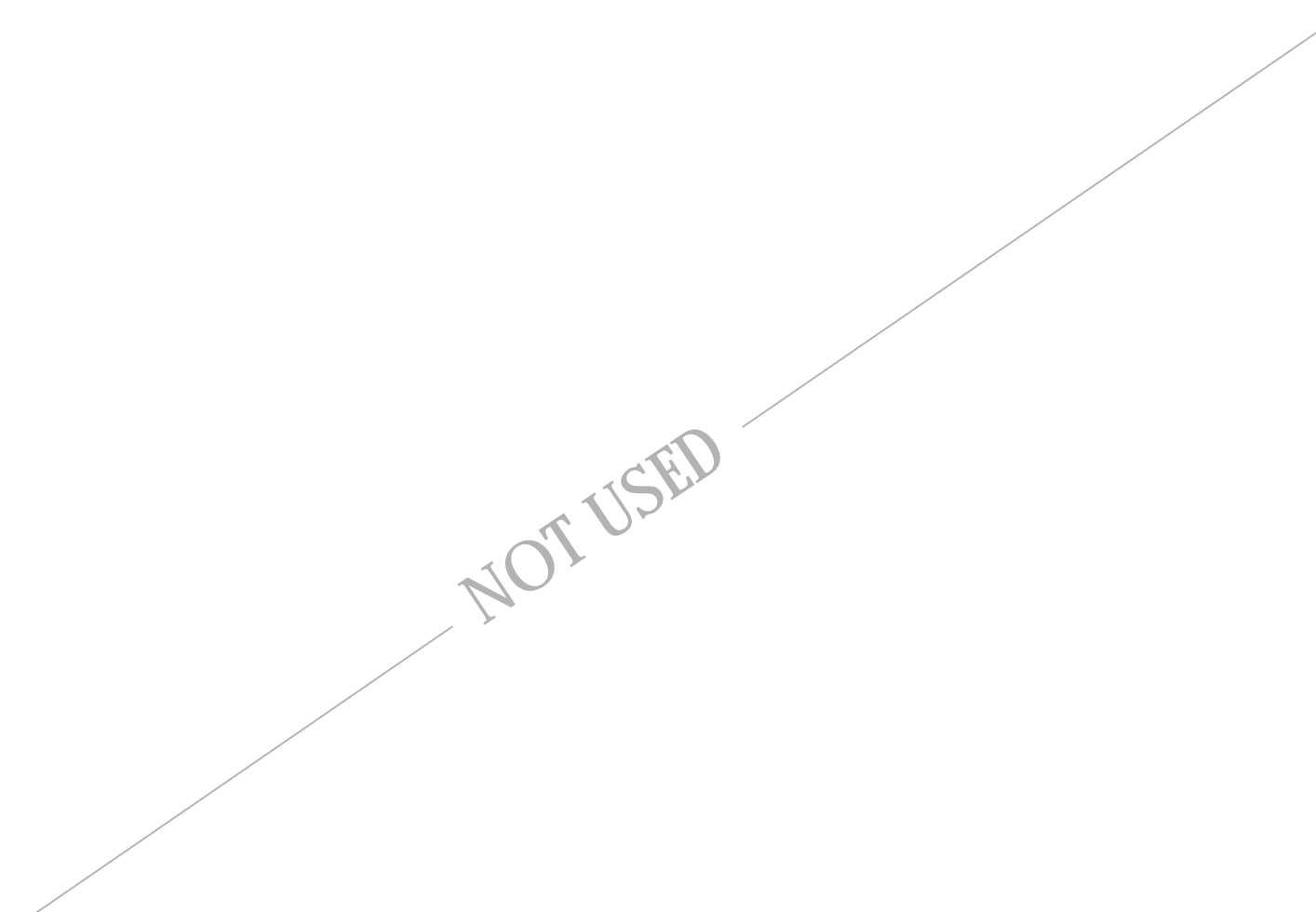
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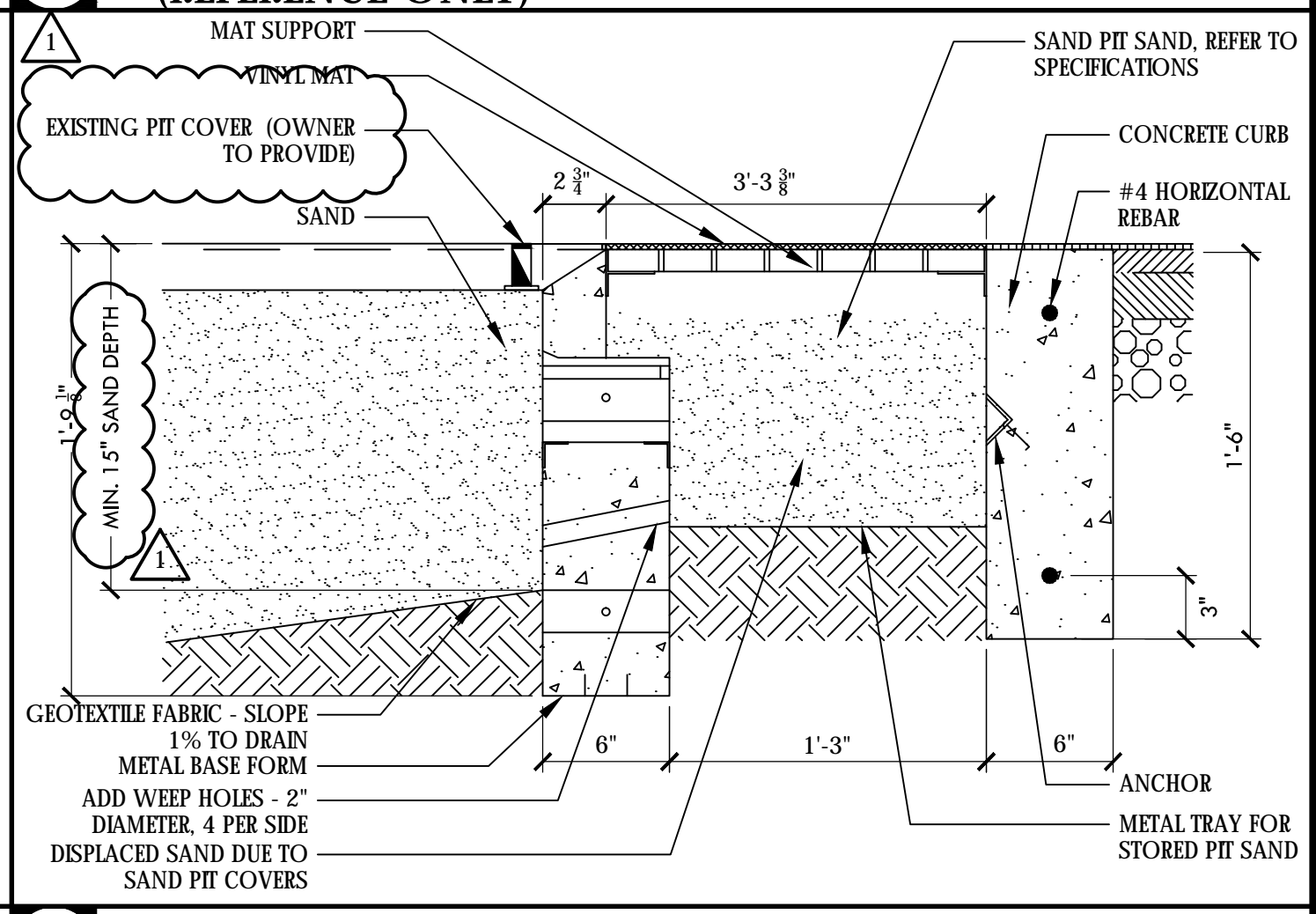
L BEACH VOLLEYBALL NET FOOTING NTS



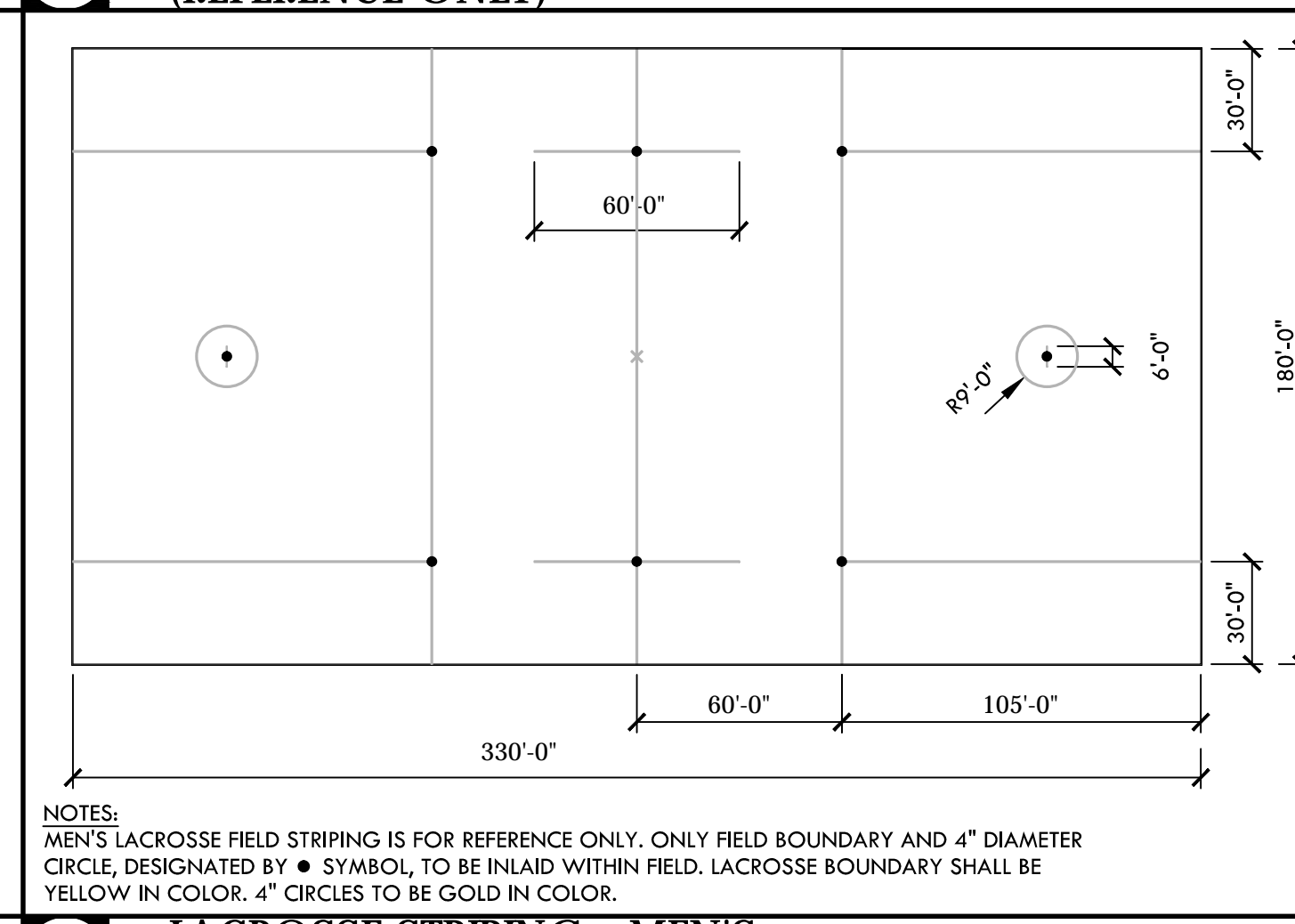
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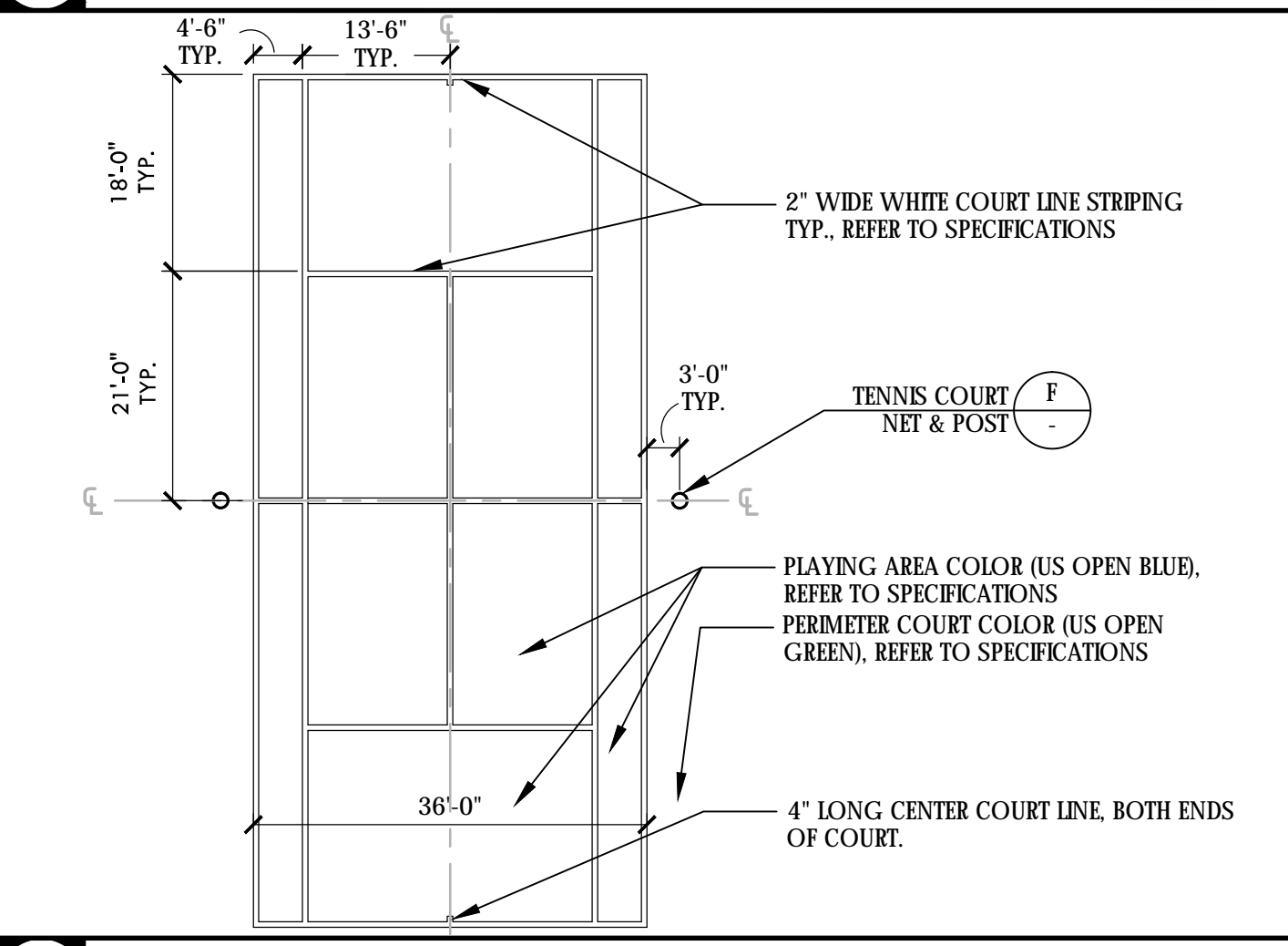
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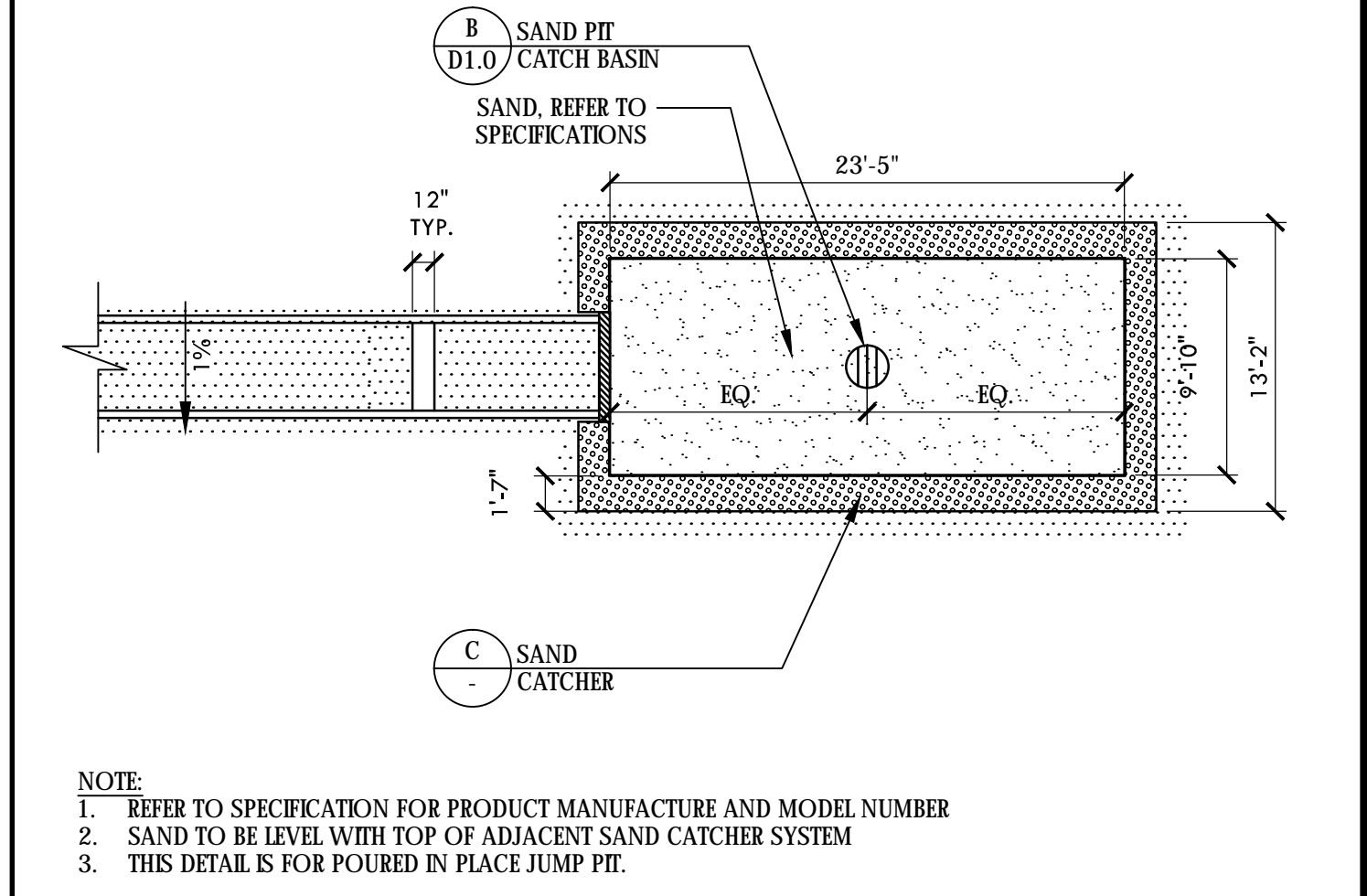
C SAND PIT WITH SAND CATCHERS NTS



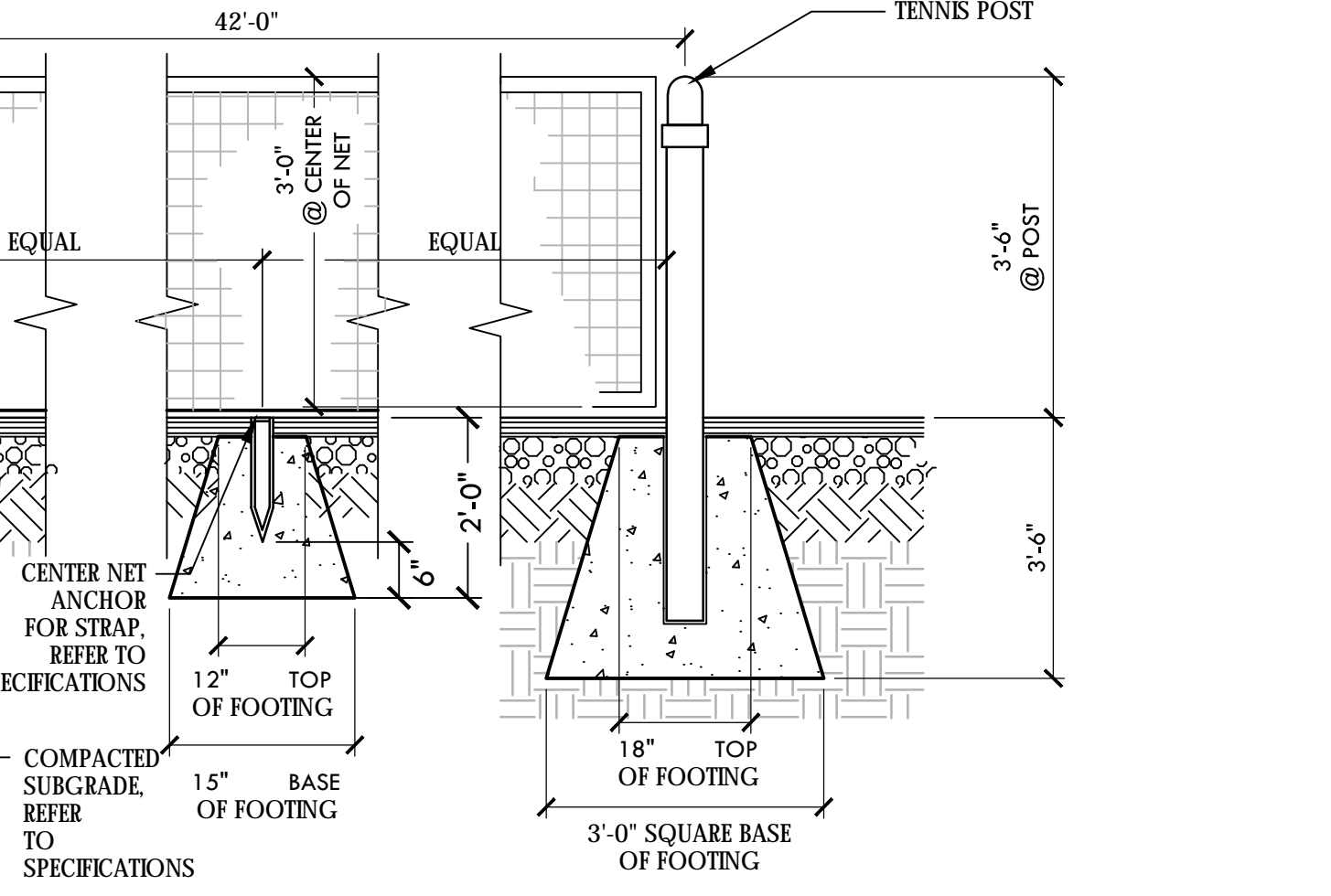
J TENNIS COURT LAYOUT NTS



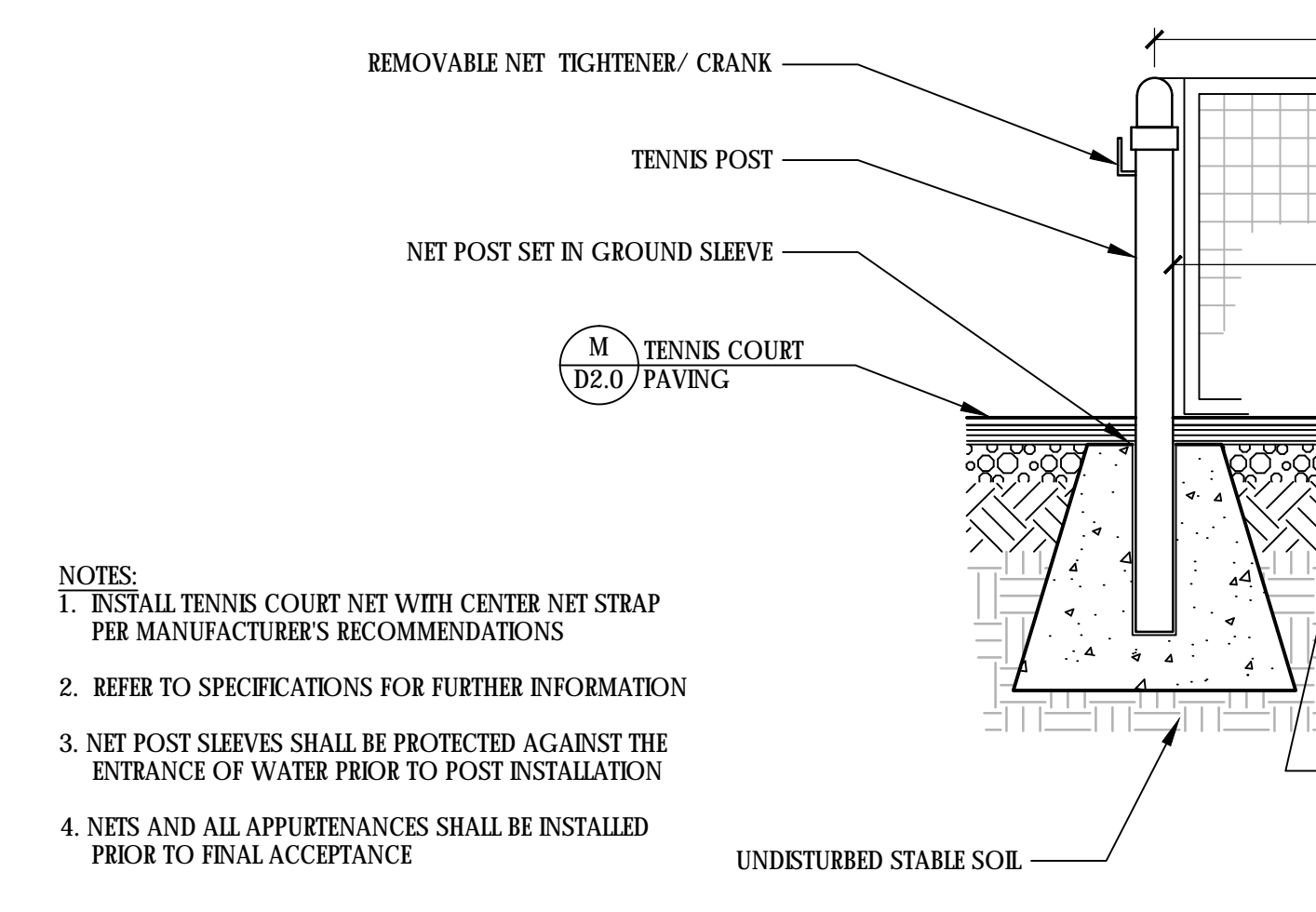
F TENNIS COURT NET AND POSTS NTS



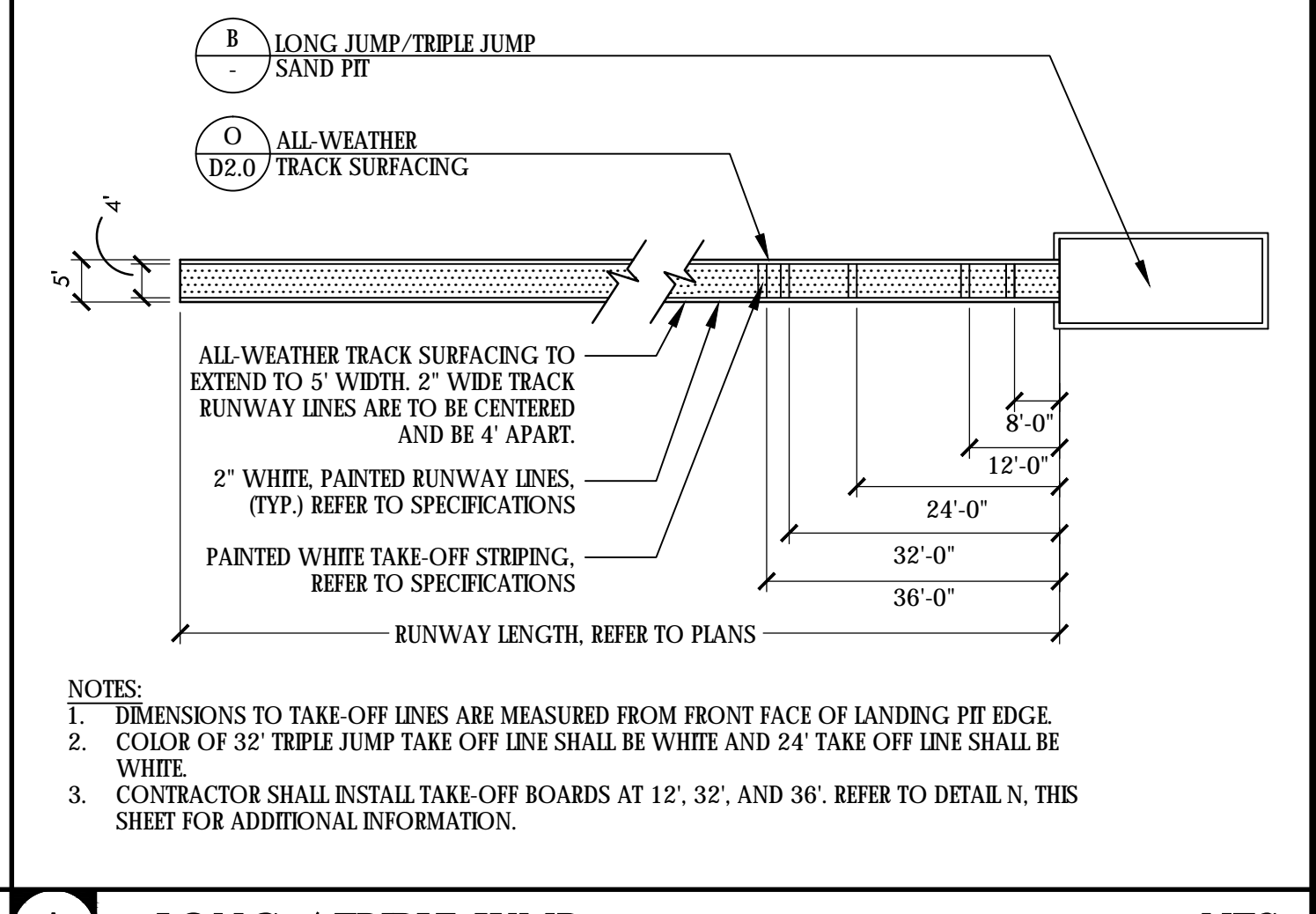
B LONG / TRIPLE JUMP SAND PIT NTS



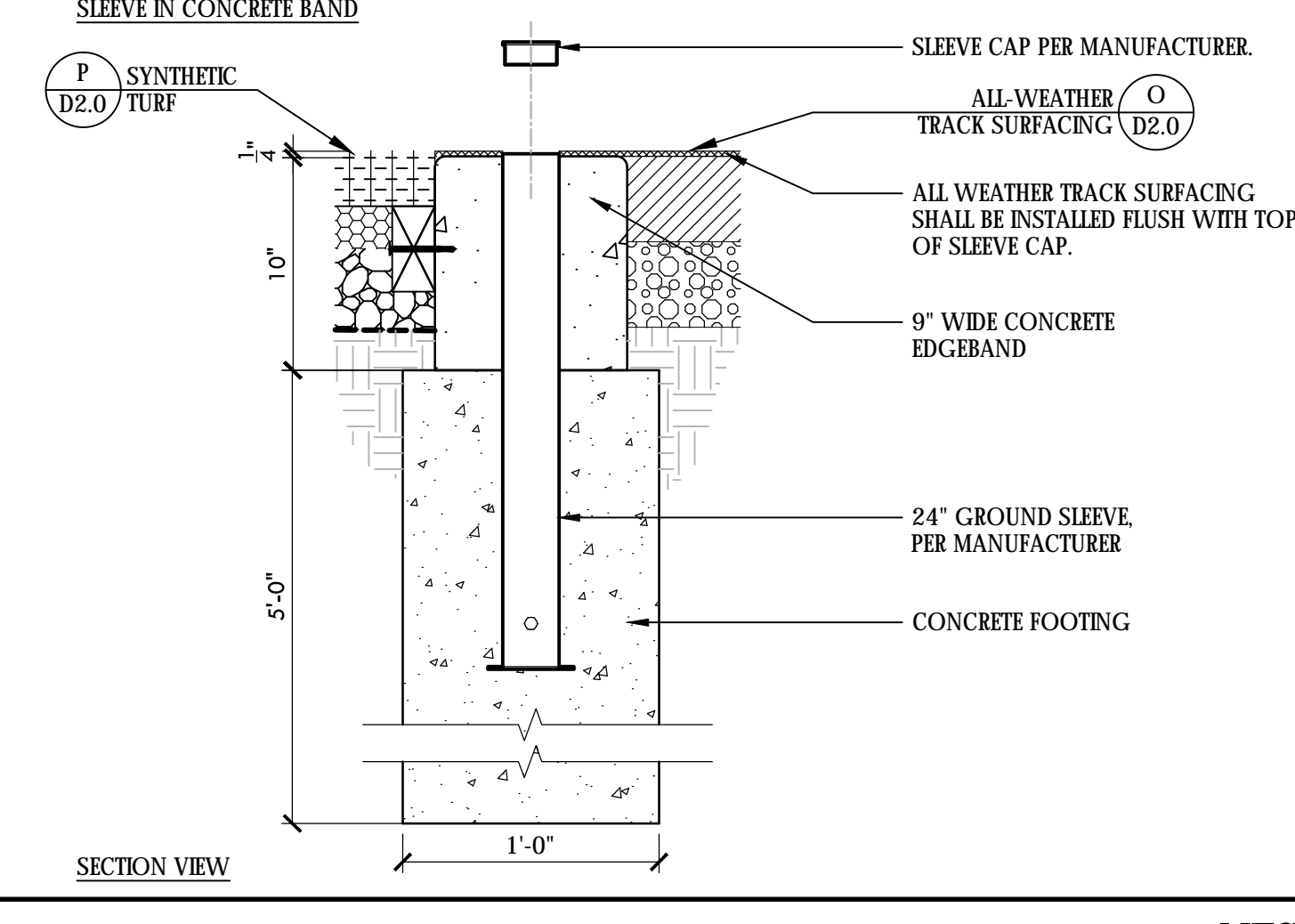
E LACROSSE NETTING SLEEVE NTS



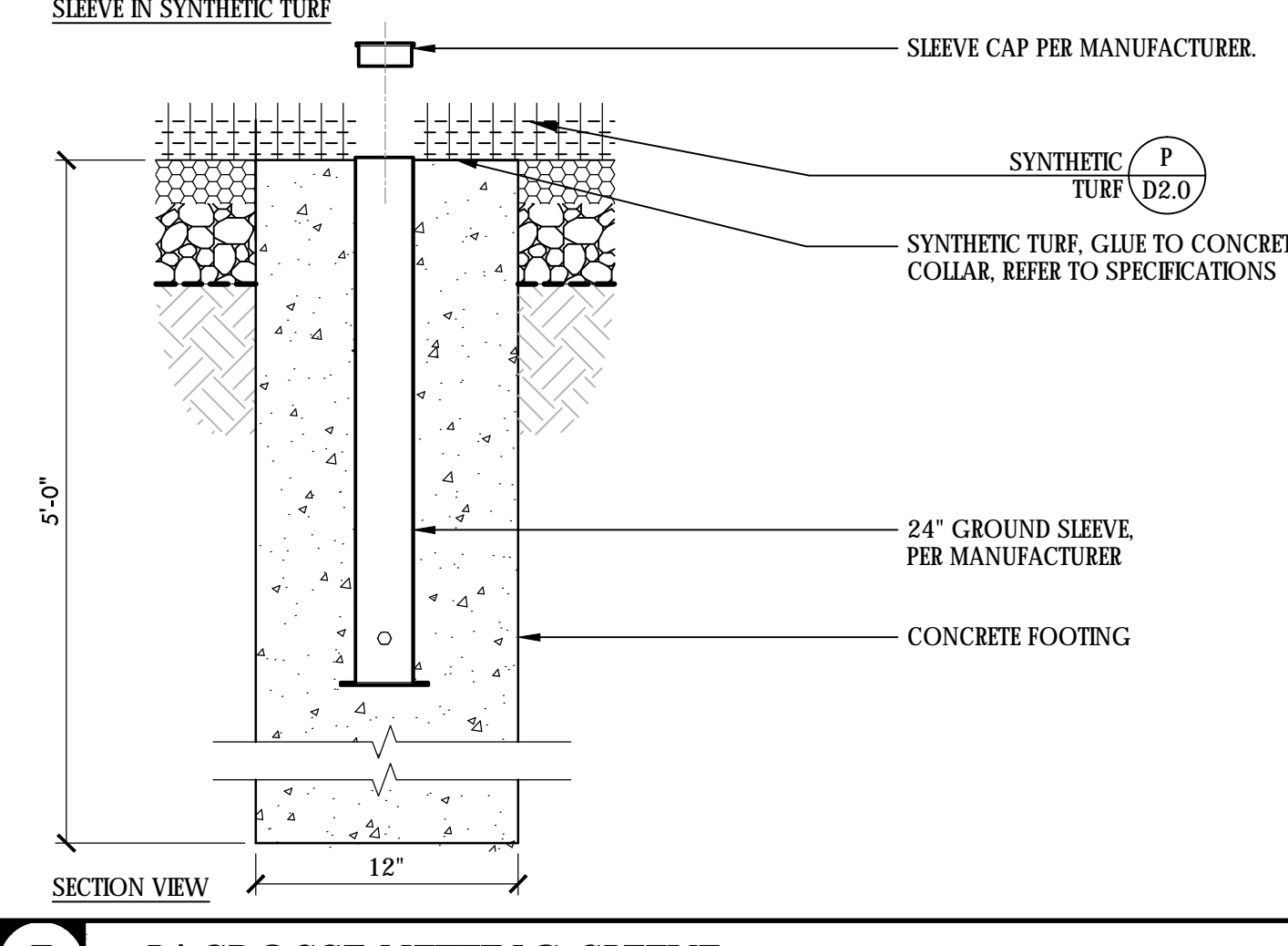
N TAKE-OFF BOARD NTS



A LONG / TRIPLE JUMP NTS



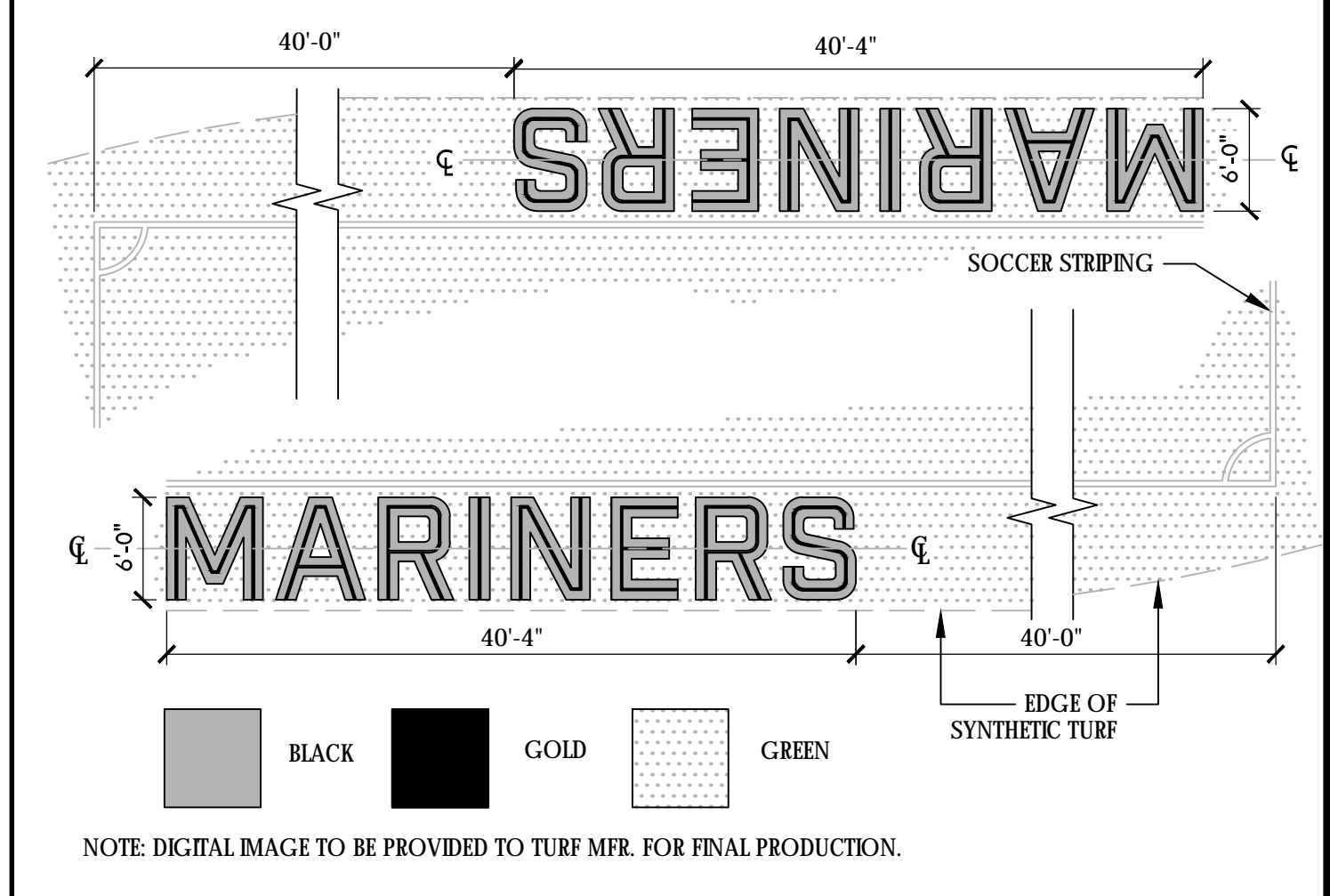
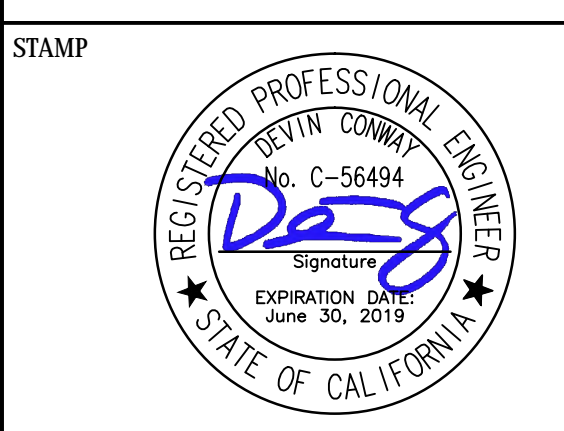
M SHOT PUT STRIPING (REFERENCE ONLY) NTS



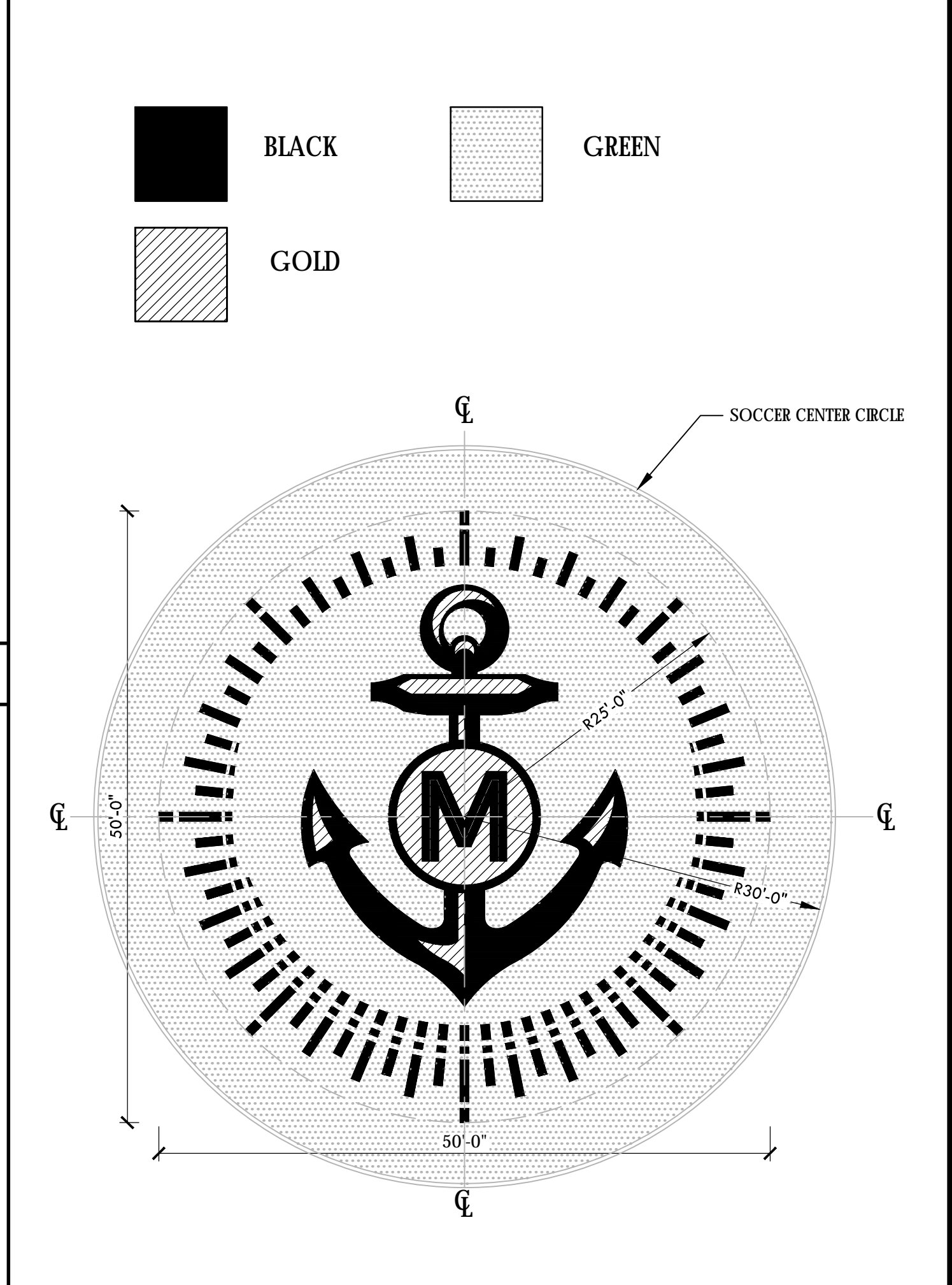
O SHOT PUT TAKE-OFF AREA NTS

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D SOCCER SIDE LINES LETTERING (REFERENCE ONLY) NTS



C SOCCER MIDDLE FIELD LOGO (REFERENCE ONLY) NTS

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CONSULTANT

SHEET TITLE

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KL DC

DATE ISSUED

06/30/17 SCALE NTS

PROJ. NO.

1702200

SHEET NO.

D5.1

CONSTRUCTION DETAILS

NOT USED

NOT USED

GENERAL NOTES:

1. READ THE COMPLETE SPECIFICATIONS, CONTRACT DOCUMENTS AND COMPLY WITH EACH REQUIREMENTS.
2. THE COMPLETE ELECTRICAL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE N.E.C., AND ALL APPLICABLE STATE AND LOCAL CODES ISSUED BY AUTHORITIES HAVING JURISDICTION.
3. THE CONTRACTOR SHALL BE LICENSED BY THE STATE OF CALIFORNIA C-10 AND SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. MATERIALS AND EQUIPMENT SHALL BE LISTED AND LABELED FOR THE APPLICABLE CODES.
4. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTION FEES REQUIRED BY THIS CONTRACT WORK.
5. PRIOR TO SUBMITTING A BID THE CONTRACTOR SHALL VISIT THE SITE. REVIEW THE EXISTING CONDITIONS AND ALLOW FOR LABOR, MATERIAL AND COORDINATION THAT IS NECESSARY TO PROVIDE A COMPLETE INSTALLATION OF EACH SYSTEM. THE CONTRACTOR SHALL OBTAIN AND BE FAMILIAR WITH ALL OTHER TRADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL WORK NOTED AND CALLED OUT ON ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN OTHER TRADES ON PROJECT.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONS AND PROPERTY AND SHALL PROVIDE INSURANCE COVERAGE AS NECESSARY FOR LIABILITY, PERSONAL, PROPERTY DAMAGE, TO FULLY PROTECT THE OWNER, ARCHITECT AND ENGINEER FROM ANY AND ALL CLAIMS RESULTING FROM THIS WORK.
7. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJECT SITE INDICATING ALL MODIFICATIONS TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL AT THE CONCLUSION OF THE PROJECT PROVIDE ACCURATE "AS-BUILT" DRAWINGS. "AS-BUILT" DRAWINGS SHALL SHOW ACTUAL CHANGES TO ORIGINAL ELECTRICAL DRAWING, SHOW LOCATIONS OF PULLBOXES, CONDUIT RUNS AND WIRING CHANGES.
8. ALL MATERIALS PROVIDED TO THE PROJECT SHALL BE UL OR CSA LISTED AND SHALL BE NEW. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL INCIDENTAL MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
9. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED CUTTING, PATCHING, EXCAVATION, BACKFILL AND REPAIRS NECESSARY TO RESTORE DAMAGED SURFACES TO EQUAL OR BETTER THAN ORIGINAL CONDITIONS EXISTING AT START OF WORK. THE CONTRACTOR SHALL CONTACT "UNDERGROUND SERVICES ALERT" FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF UNDERGROUND WORK.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAINTING ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT. REFER TO ARCHITECTS PAINTING SECTION FOR REQUIREMENTS.
11. ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE WEATHERPROOF. EXTERIOR CONDUITS RUN INTO BUILDINGS SHALL BE INSTALLED WITH FLASHING, GALKED AND SEALED. CONDUITS FOR EXTERIOR ELECTRICAL DEVICES SHALL BE RUN INSIDE BUILDINGS UNLESS OTHERWISE NOTED ON DRAWINGS. ALL EXTERIOR CONDUITS SHALL BE "RSG" UNLESS OTHERWISE NOTED ON DRAWINGS.
12. ALL CONDUITS UNLESS OTHERWISE NOTED ON DRAWINGS SHALL HAVE A MINIMUM TWO (2) #12S WITH ONE (1) #12 GROUND. "TICK" MARKS SHOWN ON CIRCUITRY ARE FOR "ROUGH" ESTIMATING ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRES AND WIRE SIZES REQUIRED BY LATEST CODE.
13. COORDINATE ALL CONDUIT RUNS, ELECTRICAL EQUIPMENT AND PANELS WITH ALL OTHER WORK TO AVOID CONFLICTS.
14. ELECTRICAL EQUIPMENT SHOWN ON THIS DRAWING HAS BEEN SELECTED BASED ON DIMENSIONS TO FIT THE SPACE. THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT DIMENSIONS PRIOR TO ORDERING OF THE EQUIPMENT.
15. CONTRACTOR SHALL REVIEW EQUIPMENT REQUIREMENTS OF OTHER TRADES AND PROVIDE POWER CIRCUITS AND CONNECTIONS TO ELECTRICALLY OPERATED EQUIPMENT.
16. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF UNDERGROUND POWER AND TELEPHONE SERVICES FROM SERVING UTILITIES. FIELD ADJUSTMENTS MAY BE REQUIRED IN INDIVIDUAL SERVICE LOCATIONS.
17. THE CONTRACTOR SHALL CONTACT "UNDERGROUND SERVICES ALERT" FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF UNDERGROUND WORK.
18. NEW DUCT ROUTES ARE APPROXIMATE ONLY AND MAY BE ADJUSTED IN THE FIELD TO CLEAR OTHER UNDERGROUND UTILITIES. PROVIDE AS-BUILT DRAWINGS TO INDICATE ACTUAL LOCATION OF CONDUIT ROUTING.
19. EFFECTIVELY BOND ELECTRICAL CABINETS, ENCLOSURES AND CONDUIT RACENWAYS TO CODE APPROVED GROUND AS PART OF THE CONTINUOUS GROUNDING SYSTEM.
20. FROM ALL NEW PANELS, THE CONTRACTOR SHALL STUB UP INTO ACCESSIBLE CEILING SPACE A MINIMUM OF FOUR (4) 3/4" CONDUITS FOR FUTURE USE.
21. UTILITY SERVICE WORK SHALL BE IN ACCORDANCE WITH THE SERVING UTILITY COMPANY'S RULES, REGULATIONS AND STANDARDS. AND SHALL BE VERIFIED WITH UTILITY COMPANY'S ENGINEERING DRAWINGS AND FIELD SUPERVISOR PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL DETERMINE EXACT LOCATION OF UNDERGROUND POWER, CATV AND TELEPHONE SERVICES FROM SERVING UTILITIES. FIELD ADJUSTMENTS MAY BE REQUIRED IN INDIVIDUAL SERVICE LOCATIONS. THE CONTRACTOR SHALL REMAIN IN CONTACT WITH UTILITY COMPANY ENGINEERING DEPARTMENTS THROUGHOUT PROJECT TO INSURE COORDINATION AND SCHEDULING OF WORK.
22. THE CONTRACTOR SHALL PROVIDE IN EVERY CONDUIT A DRAW STRING FOR USE IN FUTURE CONSTRUCTION. STRINGS SHALL BE NYLON PULLSTRINGS ROPE/STRINGS.
23. POWER FEEDERS MAY NOT BE SHOWN ON THE DRAWINGS, REFER TO THE SINGLE LINE DIAGRAM FOR CONDUIT AND FEEDER INFORMATION. ALL DRAWINGS ARE DIAGRAMMATIC INDICATING LOCATION OR POSITION OF EQUIPMENT. FIELD VERIFY CONDITIONS PRIOR TO INSTALLATION OF ANY WORK.
24. MANUFACTURER'S RECOMMENDATIONS FOR CONDUCTOR SIZING, CIRCUIT BREAKER OR FUSE PROTECTION OF ELECTRICALLY OPERATED EQUIPMENT MAY DIFFER FROM THOSE INDICATED ON DRAWINGS. CONTRACTOR SHALL CONFIRM RATINGS PRIOR TO ORDERING EQUIPMENT. PROVIDE ELECTRICAL PROTECTION TO EQUIPMENT IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS AND PER NATIONAL ELECTRICAL CODE REQUIREMENTS.
25. PROVIDE SEISMIC BRACING FOR ALL PENDANT LIGHT FIXTURES, FREESTANDING ELECTRICAL DISTRIBUTION EQUIPMENT, MOTOR CONTROL CENTERS ETC. AND CONDUIT RACKS PER SEISMIC CRITERIA 2013 CBC REQUIREMENTS INCLUDING ENGINEERED LOAD CALCULATIONS COMPLETE WITH SNAY BRACING CRITERIA.
26. DO NOT SUBSTITUTE SPECIFIED MATERIAL OR EQUIPMENT WITHOUT FIRST OBTAINING APPROVAL FROM THE OWNER OR HIS REPRESENTATIVE.
27. ALL SPACES ON PANELS OR SWITCHBOARDS SHALL BE COMPLETE WITH HARDWARES AND BUSING FOR FUTURE BREAKER OR SWITCH.
28. ALL ELECTRICAL WORK SHALL COMPLY WITH THE 2014 NATIONAL ELECTRICAL CODE AS AMENDED BY THE 2013 CALIFORNIA ELECTRICAL CODE.
29. CONTRACTOR SHALL INCLUDE IN HIS/BER BID PROFESSIONAL UNDERGROUND CONDUIT LOCATOR TO INVESTIGATE (E) UNDERGROUND ELECTRICAL AND LOW VOLTAGE UTILITIES IN ORDER TO AVOID DAMAGE TO UTILITIES TO REMAIN. IF (E) UTILITIES TO REMAIN ARE IN CONFLICT WITH (N) TRENCH, CONTRACTOR TO PROVIDE ADDITIONAL 2FT DEEP TRENCH TO FACILITATE NEW WORK.

SYMBOL LIST:

	PLAN, DETAIL OR SECTION DESIGNATION.
	ROOM NUMBER.
	SHEET REFERENCE SYMBOL - SEE ASSOCIATED NOTE ON SAME SHEET.
	FEEDER SCHEDULE SYMBOL.
	MECHANICAL EQUIPMENT TAG.
	INDICATES FIXTURE TYPE

WIRING & CONDUIT RUN SYMBOLS

	CONDUIT - CONCEALED IN WALLS OR CEILINGS.
	CONDUIT - EXPOSED.
	CONDUIT - IN OR BELOW FLOOR. 3/4" MIN.
	CONDUIT - HOME RUN TO PANEL, TERMINAL CABINET, ETC. RUNS MARKED WITH GROSSHATCHES INDICATE NUMBER OF #12 AWG WIRES. GROSSHATCH WITH SUBSCRIPT 'G' INDICATES GREEN GROUND WIRE. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE. GROSSHATCHES WITH "R10" INDICATES WIRE SIZE OTHER THAN #12S.
	FLEX CONDUIT WITH CONNECTION.
	CONDUIT - STUB UP.
	CONDUIT - STUB DOWN.
	CONDUIT EMERGENCY SYSTEM.
	CAPPED CONDUIT.
	CONDUIT CONTINUATION.

POWER DISTRIBUTION SINGLE LINE SYMBOLS

	CIRCUIT BREAKER.
	'SMUD' METER W/ CURRENT TRANSFORMER.
	TRANSFORMER.

LUMINAIRE SYMBOLS

	LUMINAIRE - SEE SCHEDULE.
	LUMINAIRE - SEE SCHEDULE.
	LUMINAIRE - SEE SCHEDULE.
	POLE MOUNTED LUMINAIRE - SEE SCHEDULE.
	POLE MOUNTED LUMINAIRE - SEE SCHEDULE.
	LUMINAIRE - SEE SCHEDULE.
	LUMINAIRE - SEE SCHEDULE.
	LUMINAIRE WALL MOUNTED-SEE SCHEDULE.
	EMERGENCY LUMINAIRE - PROVIDE EMERGENCY BATTERY BALLAST
	EMERGENCY LUMINAIRE - PROVIDE EMERGENCY BATTERY BALLAST
	EMERGENCY LUMINAIRE - PROVIDE EMERGENCY BATTERY BALLAST
	EMERGENCY LUMINAIRE WALL MOUNTED- PROVIDE EM, BATTERY BALLAST
	EXIT LIGHT SINGLE FACE - SEE SCHEDULE.
	EXIT LIGHT SINGLE FACE (WITH ARROW)- SEE SCHEDULE.
	EXIT LIGHT (DOUBLE FACED WITH ARROW)- SEE SCHEDULE.
	EMERGENCY BATTERY PACK EXIT LIGHT INSTALL AS DIRECTED.

TYPICAL LUMINAIRE NOMENCLATURE

	INDICATES SWITCHING DESIGNATION
	INDICATES CIRCUIT NUMBER

ABBREVIATIONS:

SWITCH SYMBOLS

\$	SINGLE POLE SWITCH, + 48" AFF UON.
\$a	SINGLE POLE SWITCH, + 48" AFF UON, a = CIRCUIT CONTROLLED.
\$3	THREE WAY SWITCH + 48" AFF UON.
\$4	FOUR WAY SWITCH + 48" AFF UON.
\$	MOTOR RATED SWITCH
⊗	OCCUPANCY SENSOR

RECEPTACLE SYMBOLS

	CONVENIENCE RECEPTACLE - DUPLEX AT + 18" AFF UON.
	6FCI CONVENIENCE RECEPTACLE - DUPLEX.
	RECEPTACLE DOUBLE DUPLEX AT + 18" AFF UON.
	SINGLE RECEPTACLE - NEMA 5-20R UON, AT + 18" AFF UON.
	SINGLE RECEPTACLE - NEMA L21 - 200 VOLT, THREE PHASE, 5 WIRE, AT + 18" AFF UON.
	FLOOR BOX WITH CONVENIENCE RECEPTACLE, TELEPHONE AND DATA OUTLET.
	FLUSH FLOOR BOX WITH SINGLE CONVENIENCE RECEPTACLE.
	WIRE RACEWAY, INSTALL AT + 36" AFF UON.

POWER DISTRIBUTION SYMBOLS

	PANELBOARD - SURFACE OR FLUSH MOUNTED.
	LIGHTING CONTROL CABINET.
	EMERGENCY POWER INVERTER.
	JUNCTION BOX - CEILING OR WALL MOUNTED, SIZE TO CODE, TAPE AND TAG WIRES. PROVIDE FLEX AND/OR RECEPTACLE AS REQUIRED TO CONNECT EQUIPMENT.
	DISTRIBUTION PANEL.
	MOTOR.
	COMBINATION MAGNETIC STARTER FUSED DISCONNECT SWITCH. RATING AS INDICATED.
	UNFUSED DISCONNECT SWITCH - RATING AS INDICATED.
	FUSED DISCONNECT SWITCH - SIZE FUSES PER MOTOR MANUFACTURER'S RECOMMENDATIONS, RATING AS INDICATED.
	MAGNETIC STARTER - NEMA SIZE INDICATED.
	TRANSFORMER - SEE SINGLE LINE FOR SIZE.
	GROUND ROD.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE LOCATING ALL EXISTING UNDERGROUND SYSTEMS IN AREA OF NEW TRENCHING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL DAMAGED SYSTEMS TO OWNERS SATISFACTION. EXTREME CARE SHALL BE MAINTAINED DURING TRENCHING AS EXISTING SYSTEMS ARE KNOWN TO EXIST IN AREA. MODIFICATIONS TO EXISTING SYSTEMS MAY BE REQUIRED TO ACCOMMODATE NEW SYSTEM CONFIGURATION AND SHALL BE MADE BY THE CONTRACTOR WITHOUT EXTRA EXPENSE TO THE OWNER. THE DRAWINGS AND SPECIFICATIONS ARE FOR THE ASSISTANCE AND GUIDANCE OF THE CONTRACTOR. EXACT LOCATIONS, DISTANCES AND ELEVATIONS WILL BE GOVERNED BY ACTUAL CONDITIONS. THE CONTRACTOR SHALL EXAMINE THE CONTRACT DOCUMENTS AND FIELD CONDITIONS TO DETERMINE EXACT ROUTING AND FINAL TERMINATIONS FOR ALL NEW WORK.

DRAWING INDEX	
SHEET NO.	SHEET TITLE
E01	GENERAL NOTES, SYMBOL LIST, ABBREVIATIONS AND FIXTURE SCHEDULE
E10	ELECTRICAL SITE PLAN - DEMOLITION
E11	ELECTRICAL NEW SITE PLAN
E22	ELECTRICAL FLOOR PLAN - PARKING/ ENTRY/ VOLLEYBALL/FUTSAL
E23	ELECTRICAL FLOOR PLAN - SOCCER/ LACROSSE AND TENNIS COURT
E41	SINGLE LINE DIAGRAM
E51	ELECTRICAL DETAILS
E52	ELECTRICAL DETAILS

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 AC _____ FIS _____ SS _____
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 ISA PROJECT TRACKING NO:
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SHEET TITLE
**GENERAL NOTES,
 SYMBOL LIST,
 ABBREVIATIONS AND
 FIXTURE SCHEDULE**

PROJECT NAME
**COLLEGE OF MARIN
 ATHLETIC FACILITIES
 IMPROVEMENTS**

PROJECT ADDRESS
**835 COLLEGE AVE.
 KENTFIELD, CA
 94904**

SUBMITTAL	DATE
80% CD SUBMITTAL	06/16/17
100% SUBMITTAL	06/30/17

NO.	REVISIONS	DATE

DRAWN BY _____ CHECKED BY **DC**
 DATE ISSUED **06/30/17** SCALE **NO SCALE**
 PROJ. NO. **1702200**
 SHEET NO. **E0.1**

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GENERAL DEMOLITION NOTES:

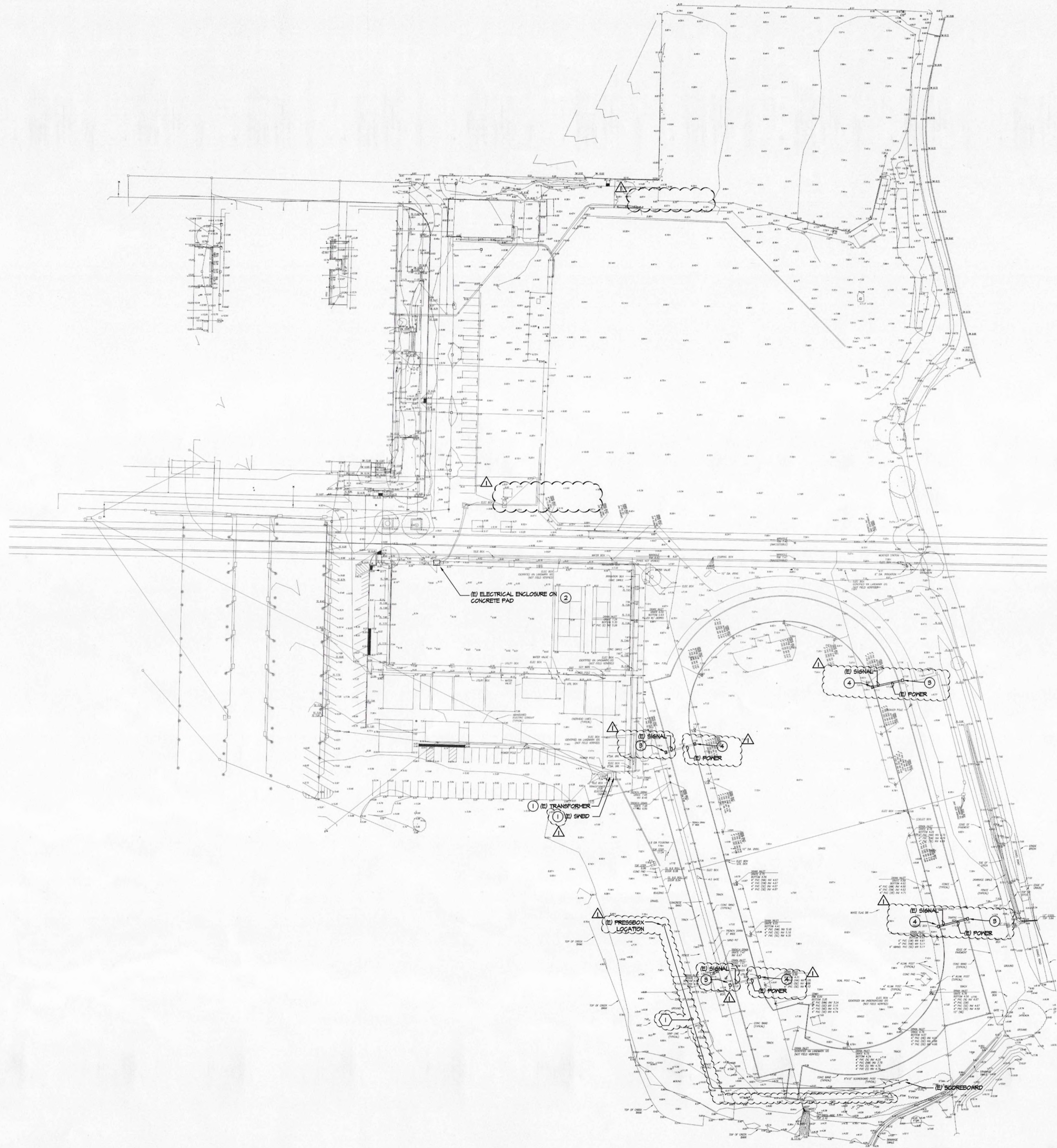
- (E) PULL BOX SHOWN ON DRAWINGS TO REMAIN AND SHALL NEED TO BE ADJUSTED TO FINISH GRADE. CONTRACTOR TO PROVIDE AND INCLUDE IN BID, BOX ADJUSTMENTS, ADJUSTMENTS INCLUDE (N) GRAVEL AND ADDITIONAL PULL BOX APPROX.
- ALL (E) CONDUITS SHOWN ON DRAWINGS ARE DIAGRAMMATIC AND MAY NOT REFLECT EXACT ROUTING. CONTRACTORS TO INCLUDE IN BID PROFESSIONAL UNDERGROUND CONDUIT LOCATOR AS NEEDED FOR HE/S/HE TO BE FAMILIAR WITH THE (E) SITE CONDITIONS AND PROVIDE REQUIRED WORK AND ADJUSTMENTS TO EXTEND/RECONNECT POWER CONDUITS AS NOTED IN DRAWINGS.

DEMOLITION SHEET NOTES:

- CONTRACTOR TO VERIFY AND CONFIRM EXACT LOCATION OF EXISTING SWITCHGEARD AND P64E TRANSFORMER.
- (E) ELECTRICAL/POWER ENCLOSURE ON CONCRETE PAD IS IN WAY OF NEW CONSTRUCTION. THE CONTRACTOR SHALL DISCONNECT SPILGE CONNECTION AND PULL POWER FEEDERS TO NEAREST IN-GRADE PULL-BOX AS REQUIRED TO FACILITATE AREA FOR NEW CONSTRUCTION. SEE NEW PLAN (E2.2) FOR NEW REQUIREMENT.
- (E) ELECTRICAL COMBO BOXES TO REMAIN.
- (E) ELECTRICAL COMBO BOXES TO BE REPLACED WITH NEW. SEE CIVIL DWGS FOR REQUIREMENT. (E) ELECTRICAL CONDUITS AND CABLES TO REMAIN. THE CONTRACTOR SHALL INCLUDE IN THEIR BID TO REMOVE (E) RECEPTACLE PROTECT AND REINSTALL. PROVIDE ALL MATERIALS (CABLES, LUGS, ETC) TO REINSTALL. (E) RECEPTACLE. (E) RECEPTACLE IN (N) COMBO BOXES.

SHEET NOTES:

- THE CONTRACTOR TO INCLUDE IN THEIR BID TO FIELD VERIFY EXISTING SCOREBOARD POWER CONDUIT EXACT CONDITION AND LOCATION FROM (E) PRESSBOX TO (E) SCOREBOARD. SUBMIT A REPORT LETTING THE DESIGN TEAM KNOW IF THE CONDUIT IS IN GOOD CONDITION AND THE CONTRACTOR HAS NO PROBLEM PULLING CABLES IN THE EXISTING CONDUIT. PROVIDE (E) CONDUIT SIZE.



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SHEET TITLE
**ELECTRICAL
 SITE PLAN -
 DEMOLITION**

PROJECT NAME
**COLLEGE OF MARIN
 ATHLETIC FACILITIES
 IMPROVEMENTS**

PROJECT ADDRESS
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 KENTFIELD, CA
 94904**

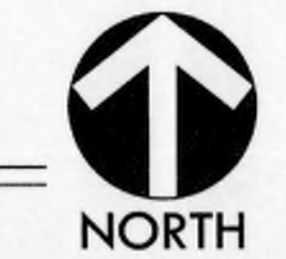
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1	ADDENDUM #1	08/17/17

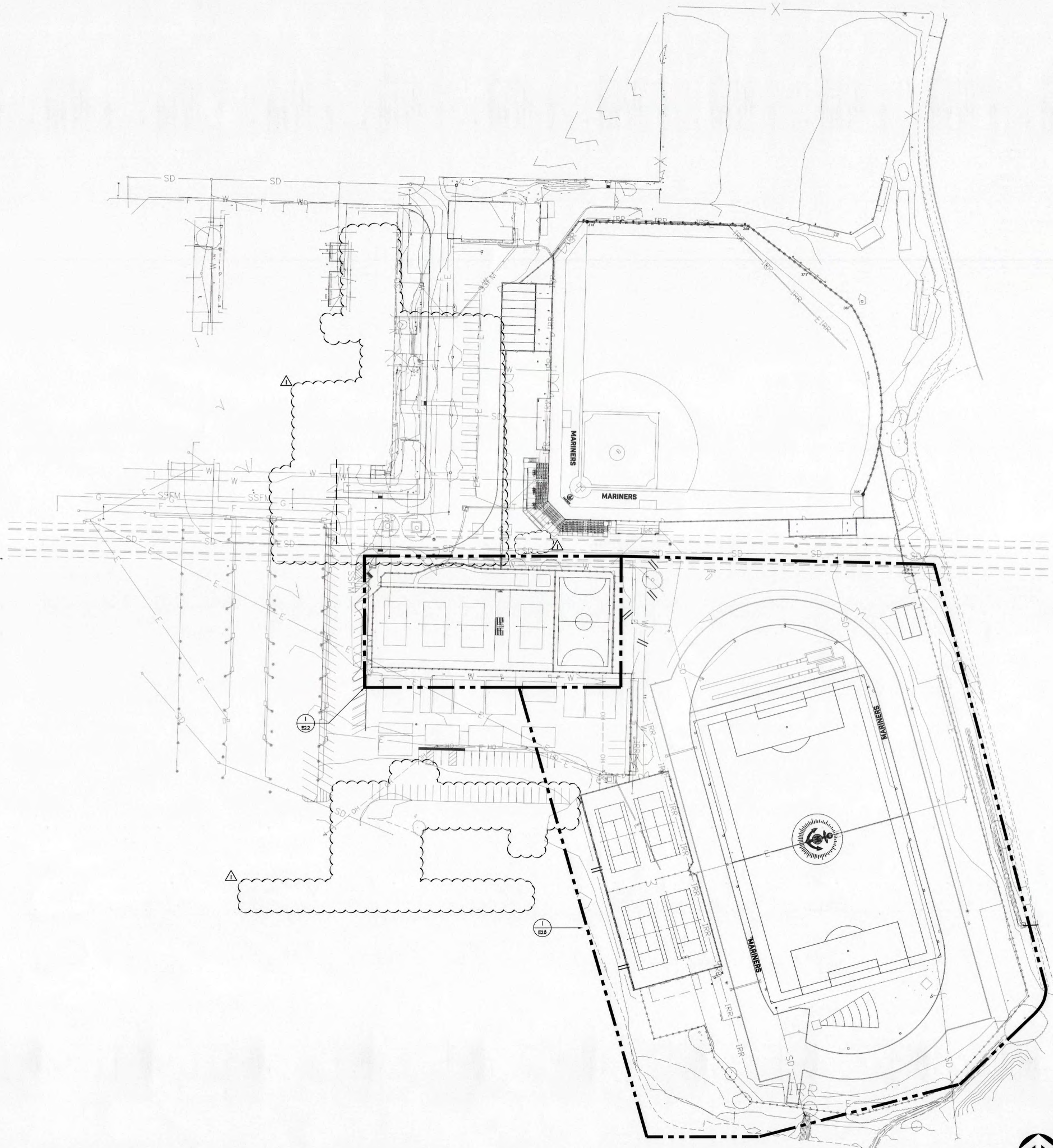
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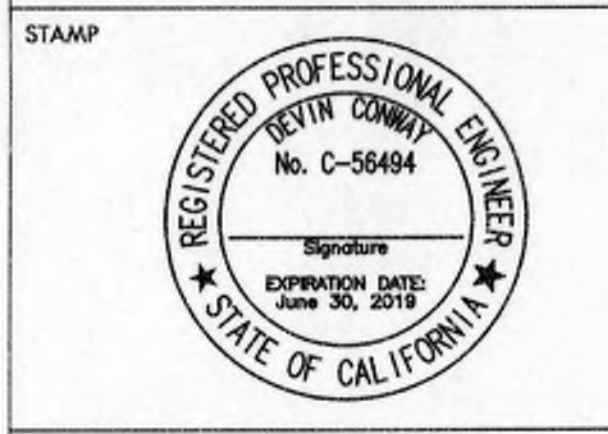
GENERAL NOTES:

1. SEE SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
2. CONTRACTOR TO SITE SURVEY (E) CONDITIONS AND LOCATIONS OF (E) UNDERGROUND SYSTEMS, WHERE (N) TRENCHWORK OCCURS PRIOR TO BIDDING. CONTRACTOR SHALL TAKE PROPER PRECAUTIONS TO ENSURE (E) UNDERGROUND SYSTEMS/CONDUITS/PIPES ARE NOT DAMAGED DURING INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR ANY REPAIRS REQUIRED IN THE EVENT THE (E) UNDERGROUND SYSTEMS ARE DAMAGED AS A RESULT OF THE (N) ELECTRICAL TRENCHWORK.
3. PRIOR TO ALL (N) TRENCHES, CONTRACTOR TO USA ALL (E) ELECTRICAL CONDUITS AND OTHER UTILITIES TO FAMILIARIZE THEMSELVES WITH THE FIELD CONDITIONS AND ADJUST (N) TRENCHES ACCORDINGLY.
4. COORDINATE ALL (N) UNDERGROUND CONDUITS WITH ESRESS LIGHTING PLAN AND FA DRAWINGS. PROVIDE AND INSTALL CONDUIT IN COMMON TRENCH PER DETAIL 1/E4.3.
5. IN-GRADE PULL BOX IDENTIFIED WITH 'F' SHALL HAVE LID LABELED 'ELECTRICAL'.
6. IN-GRADE PULL BOX IDENTIFIED WITH 'S' SHALL HAVE LID LABELED 'SIGNAL'.
7. CONTRACTOR SHALL COORDINATE UNDERGROUND REQUIREMENTS WITH ALL OTHER TRADES TO AVOID CONFLICT.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SAM CUTTING AND REMOVAL OF EXISTING SURFACES TO FACILITATE UNDERGROUND SYSTEMS. THE CONTRACTOR SHALL PATCH AND REPAIR ALL DAMAGED AND CUT SURFACES TO MATCH ADJACENT.
9. CONCRETE ENCASED ELECTRODE GROUNDING SYSTEM PROVIDED BY THE MANUFACTURER FOR ALL SPORT FIELD LIGHTS OTHERWISE GROUND PER DETAIL 5/E4.2.
10. CONTRACTOR TO COORDINATE ELECTRICAL SITE PLAN, FA AND PEDESTRIAN SITE PLAN TO COMBINE ALL UNDERGROUND CONDUITS IN COMMON TRENCH AS NECESSARY.
11. ALL EMPTY CONDUIT SHALL BE PROVIDED WITH NYLON PULL CORD AS NOTED IN THE SPECIFICATIONS.

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SHEET TITLE
**ELECTRICAL
 NEW SITE PLAN**

PROJECT NAME
**COLLEGE OF MARIN
 ATHLETIC FACILITIES
 IMPROVEMENTS**

PROJECT ADDRESS
**835 COLLEGE AVE.
 KENTFIELD, CA
 94904**

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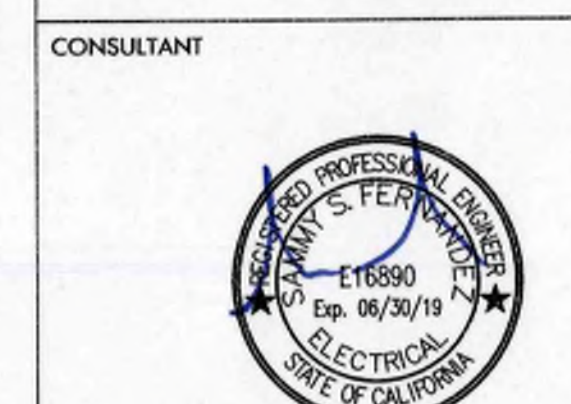
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PROJ. NO. 1702200
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1 ELECTRICAL NEW SITE PLAN
 E1.1 SCALE: 1" = 50'-0"





GENERAL NOTES:

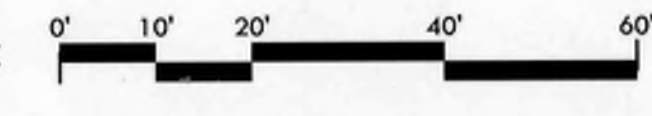
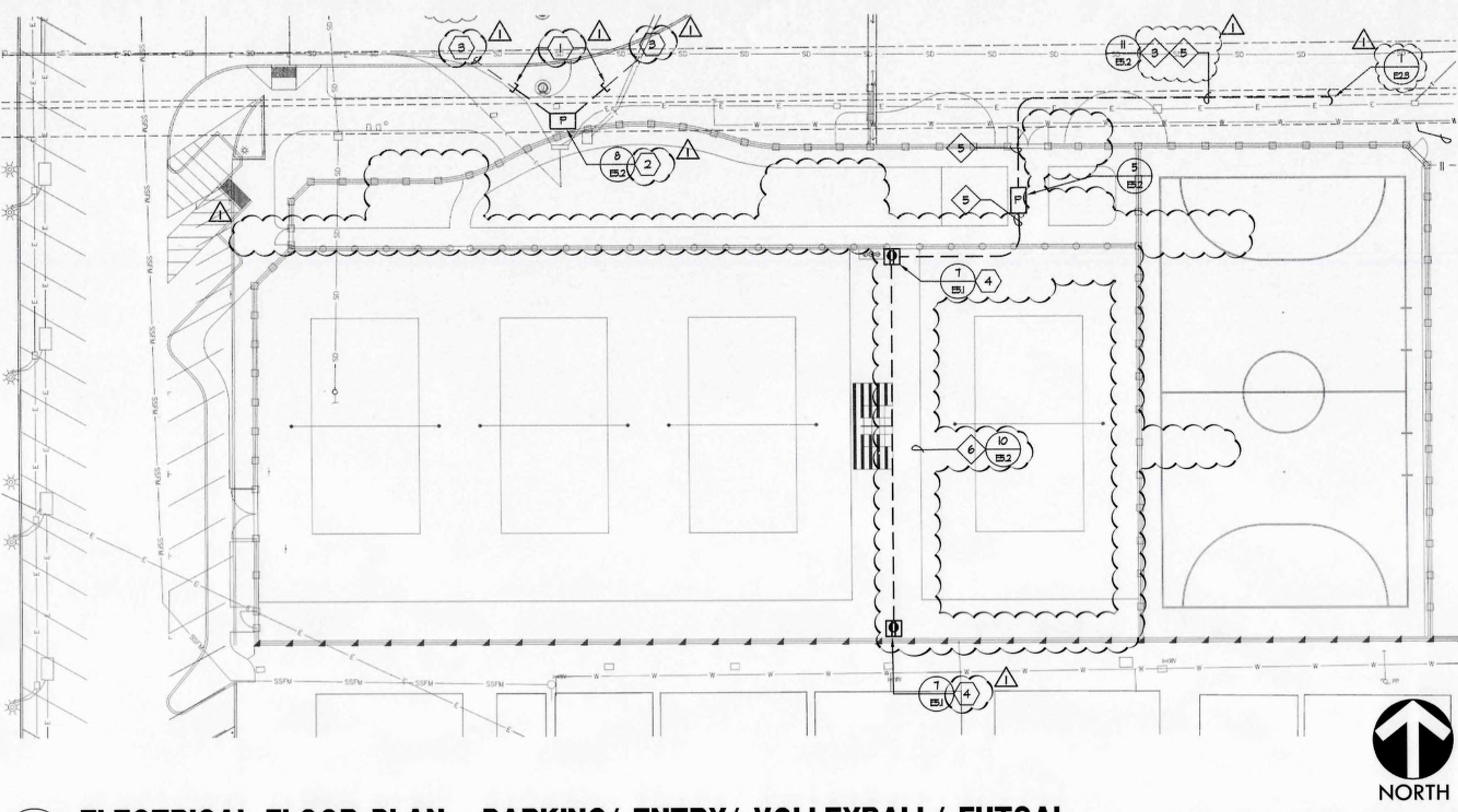
1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE 2018 CALIFORNIA ELECTRICAL CODE.
2. SEE SINGLE LINE DIAGRAM FOR POWER CONNECTION REQUIREMENTS.
3. CONNECT ALL DATA/TEL DEVICES PER THE DATA/TEL RISER DIAGRAM.
4. ROUTE ALL LOW VOLTAGE CABLES ON J-HOOKS FOR ACCESSIBLE CEILING AND T-BAR CEILING. PROVIDE CONDUIT FOR NON-ACCESSIBLE AND HARD LID INSTALLATIONS.
5. REFER TO ELECTRICAL PLAN OF MODULAR DRAWINGS FOR EXACT LOCATION OF ELECTRICAL PANEL AND POWER RECEPTACLES.
6. REFER TO FA DRAWINGS FOR UNDERGROUND CONDUIT BOXES.

SHEET NOTES:

1. CONTRACTOR TO LOCATE AND INTERCEPT EXISTING CONDUITS WITH NEW CONDUIT TO NEW IN-GRADE PULL-BOX AS SHOWN. MATCH EXISTING CONDUIT SIZES.
2. PROVIDE NEW POWER PULL-BOX. SEE LANDSCAPE DRAWINGS FOR EXACT LOCATION. PULL EXISTING FEEDERS INTO NEW PULL-BOX. PROVIDE NEW SPLICE LUG TO RECONNECT EXISTING FEEDERS. NEW SPLICE LUG SHALL BE RATED FOR DIRECT BURIAL, OUTDOOR USE, AND SUBMERSIBLE APPLICATION. CONNECT PER NEG.
3. EXISTING CONDUITS TO EXISTING PULL-BOX TO REMAIN.
4. PROVIDE (N) WEATHERPROOF W/ILE-IN-USE 6FCI RECEPTACLE. RECEPTACLE SHALL BE MOUNTED ON A WEATHERPROOF BOX WITH LOCKABLE ACCESS COVER. COVER SHALL BE THOMAS & BETTS RED DOT 80KMSV OR EQUAL.

CONDUIT SCHEDULE:

- 1 NOT USED
- 2 NOT USED
- 3 NOT USED
- 4 NOT USED
- 5 (N) (1) 2" - POWER (VOLLEYBALL COURT RECEPTACLES)
(N) (1) 2" - POWER (SPARE)
- 6 (N) (1) 2" - POWER (VOLLEYBALL COURT RECEPTACLES)



1 ELECTRICAL FLOOR PLAN - PARKING/ ENTRY/ VOLLEYBALL/ FUTSAL
 E2.2 SCALE: 1"=20'-0"

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SHEET TITLE
**ELECTRICAL FLOOR PLAN
 PARKING/ENTRY/
 VOLLEYBALL/FUTSAL**

PROJECT NAME
**COLLEGE OF MARIN
 ATHLETIC FACILITIES
 IMPROVEMENTS**

PROJECT ADDRESS
**835 COLLEGE AVE.
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 94904**

SUBMITTAL	DATE
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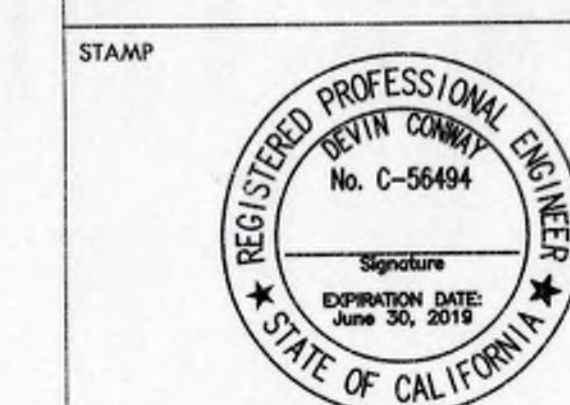
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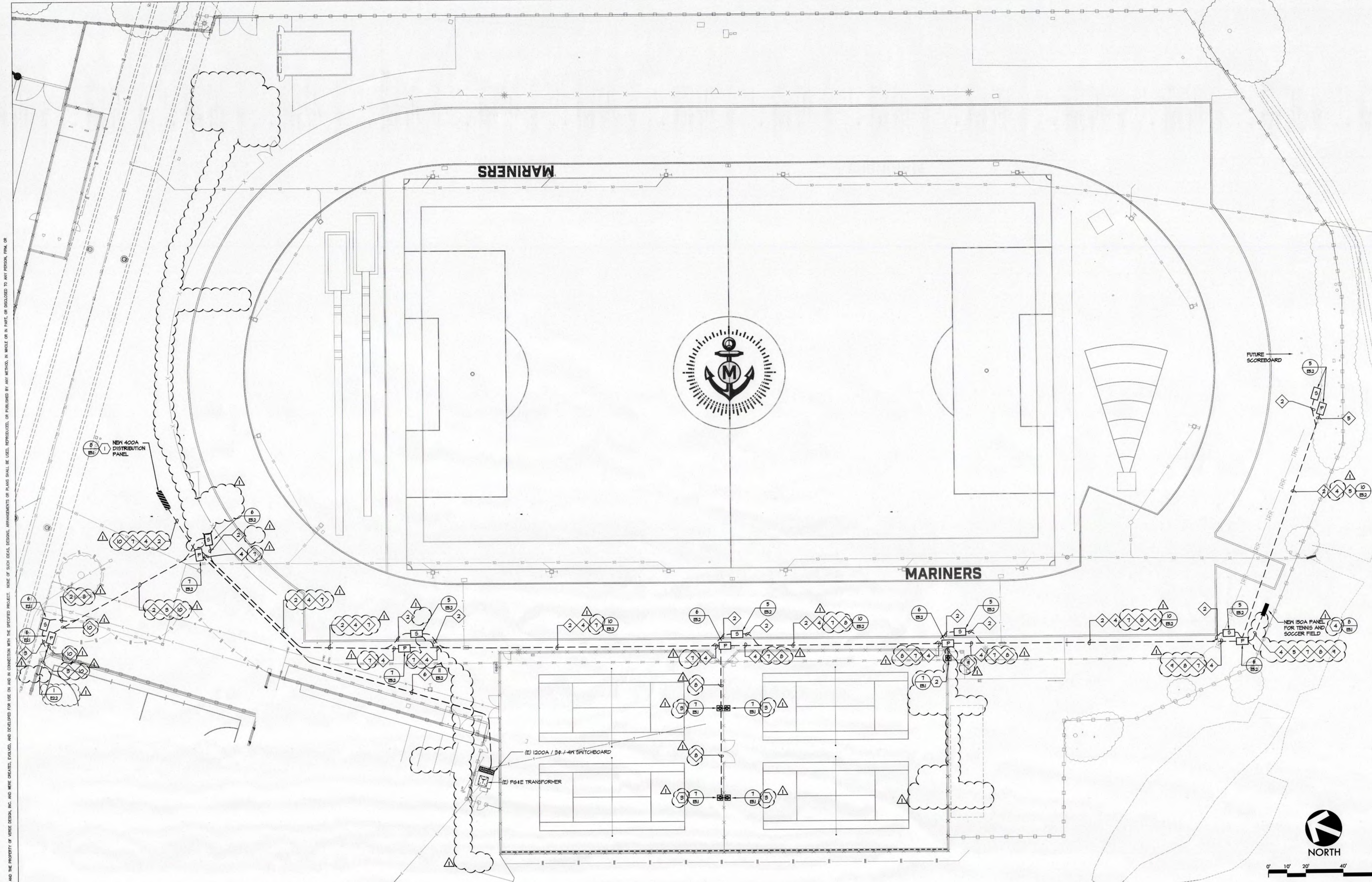
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1 ELECTRICAL FLOOR PLAN - SOCCER/ LACROSSE AND TENNIS COURTS

E2.3 SCALE: 1"=20'-0"

GENERAL NOTES:

1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE 2018 CALIFORNIA ELECTRICAL CODE.
2. SEE SINGLE LINE DIAGRAM FOR POWER CONNECTION REQUIREMENTS.
3. CONNECT ALL DATA/TEL DEVICES PER THE DATA/TEL RISER DIAGRAM.
4. ROUTE ALL LOW VOLTAGE CABLES ON J-HOOKS FOR ACCESSIBLE CEILING AND T-BAR CEILINGS. PROVIDE CONDUIT FOR NON-ACCESSIBLE AND HARD LID INSTALLATIONS.
5. REFER TO ELECTRICAL PLAN OF MODULAR DRAWINGS FOR EXACT LOCATION OF ELECTRICAL PANEL AND POWER RECEPTACLES.
6. REFER TO FA DRAWING FOR UNDERGROUND CONDUIT BOXES.

SHEET NOTES:

- 1 (N) ELECTRICAL DISTRIBUTION PANEL. COORDINATE WITH DESIGN TEAM FOR INSTALLATION.
- 2 FOR TIMING SYSTEM. PROVIDE (N) WEATHERPROOF WHILE-IN-USE 6FCI RECEPTACLE. RECEPTACLE SHALL BE MOUNTED ON A WEATHERPROOF BOX WITH LOCKABLE ACCESS COVER. COVER SHALL BE THOMAS & BETTS RED DOT RCKM5V OR EQUAL. SEE CIVIL DRAWINGS FOR EXACT LOCATION.
- 3 PROVIDE (N) WEATHERPROOF WHILE-IN-USE 6FCI RECEPTACLE. RECEPTACLE SHALL BE MOUNTED ON A WEATHERPROOF BOX WITH LOCKABLE ACCESS COVER. COVER SHALL BE THOMAS & BETTS RED DOT RCKM5V OR EQUAL.
- 4 (N) ELECTRICAL PANEL PROVIDE UNISTRUT MOUNT ON CONCRETE PAD PER DETAILS.

CONDUIT SCHEDULE:

- 1 NOT USED
- 2 (N) (1) 2"CO - DATA (SPARE)
(N) (1) 2"CO - DATA (N-FI)
- 3 (N) (1) 2"CO - FIRE ALARM
- 4 (N) (2) 2"CO - POWER (SPARE)
(N) (2) 3"CO - POWER (SPARE)
- 5 (N) (1) 2"CO - POWER (FUTURE SCOREBOARD)
- 6 (N) (2) 3"CO - POWER (400A DISTRIBUTION PANEL)
- 7 (N) (2) 3"CO - POWER (150A PANEL - TENNIS/SOCCER FIELD)
- 8 (N) (1) 2"CO - POWER (TENNIS COURT RECEPTACLES)
- 9 (N) (1) 2"CO - POWER (FINISH LINE TIMING SYSTEM)
- 10 (N) (1) 2"CO - POWER (VOLLEYBALL COURT RECEPTACLES)
(N) (1) 2"CO - POWER (SPARE)

SHEET TITLE
 ELECTRICAL FLOOR PLAN
 SOCCER /LACROSSE
 AND TENNIS COURTS

PROJECT NAME
 COLLEGE OF MARIN
 ATHLETIC FACILITIES
 IMPROVEMENTS

PROJECT ADDRESS
 835 COLLEGE AVE.
 KENTFIELD, CA
 94904

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PROJ. NO. 1702200

SHEET NO. E2.3



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SHEET TITLE

**ELECTRICAL
SINGLE LINE DIAGRAM**

PROJECT NAME

**COLLEGE OF MARIN
ATHLETIC FACILITIES
IMPROVEMENTS**

PROJECT ADDRESS

**835 COLLEGE AVE.
KENTFIELD, CA
94904**

SUBMITTAL	DATE
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PROJ. NO. 1702200

SHEET NO. **E4.1**

GENERAL NOTES:

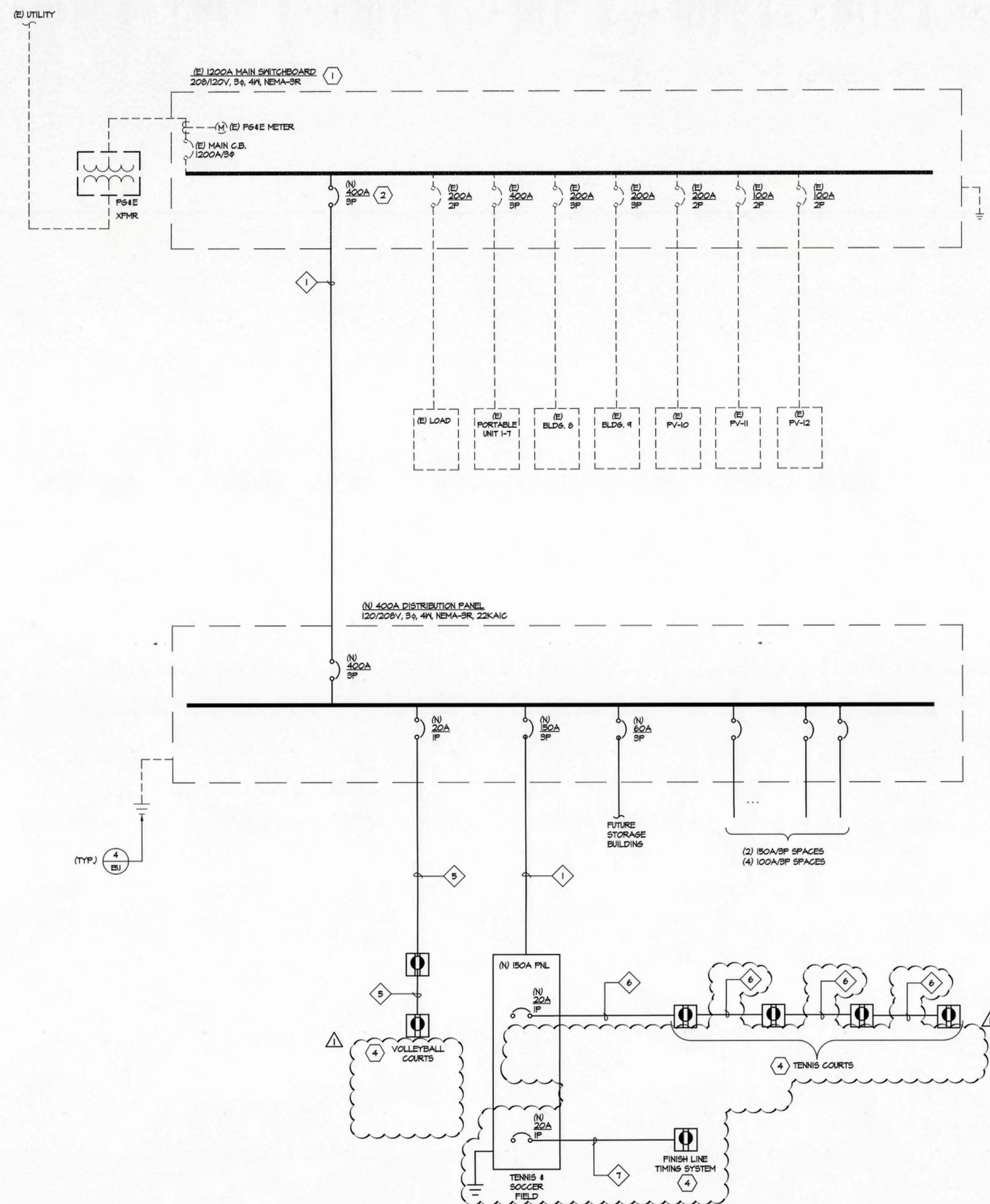
- SEE SITE PLAN FOR APPROXIMATE LOCATION OF (E) MAIN SWITCHBOARD.
- ALL NEW CIRCUIT BREAKERS IN SCHED OR DIST. BOARD SHALL BE PROVIDED WITH NAME PLATE TO IDENTIFY EQUIPMENT. SEE SPECS FOR REQUIREMENTS.

SHEET NOTES:

- (E) 1200A MAIN ELECTRICAL SWITCHBOARD "MSB" TO REMAIN.
- PROVIDE (N) BREAKER MATCH FROM STYLE AND BRAGINS.
- CONTRACTOR TO PROVIDE GFCI BREAKERS IN PANEL.
- PROVIDE (N) WEATHERPROOF WHILE-IN-USE GFCI RECEPTACLE. RECEPTACLE SHALL BE MOUNTED ON A WEATHERPROOF BOX WITH LOCKABLE ACCESS COVER. COVER SHALL BE THOMAS & BETTS RED DOT #K9EV OR EQUAL.

CONDUIT SCHEDULE:

- ① (N) 2 SETS OF 3" - (4) #800 KCHL + (1) #2 CU GND
- ② NOT USED
- ③ NOT USED
- ④ NOT USED
- ⑤ (N) 2" - (2) #10 + (1) #6 CU GND
- ⑥ (N) 2" - (2) #10 + (1) #6 CU GND
- ⑦ (N) 2" - (2) #10 + (1) #6 CU GND



1 ELECTRICAL SINGLE LINE DIAGRAM
E4.1 NO SCALE

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STRUCTURAL NOTES

GENERAL

- All work to be in conformance with the 2016 California Building Code (CBC) as adopted by the local governing agency, and any applicable local ordinances.
- All conditions and dimensions shown on the plans to be verified by the Contractor, any discrepancies that require clarification or revisions to be provided to the attention of the Architect/Engineer before commencing with the work.
- Contractor to provide the requirements of all structural detail callouts denoted as TYPICAL, or TYP at specifically noted conditions and at all like conditions throughout the project, unless otherwise noted. All details on detail sheets titled "TYPICAL" and not directly referenced on plans, to be incorporated at occurring locations throughout the project. Requirements of details not denoted or titled as TYPICAL, to be provided at the specific location shown on the plan and adjacent areas as applicable. Requirements of details denoted as "SIMILAR" or "SIL" to be provided with differences as indicated or implied on referenced details and plans.
- Details may be depicted diagrammatically. For example, roof pitches, floor/roof wall thickness, framing members, etc., may differ in scale from actual proposed conditions. Details to be understood in context with other drawings conveying structural and architectural design intent.
- Structural design or review of temporary shoring, additional reinforcing, bracing, formwork, scaffolding, erection methods, etc. required for proper construction of the project to be the responsibility of the Contractor.
- See Architectural Drawings for wall locations and dimensions, unless otherwise noted. Drawings to not be scaled.
- See Architectural Drawings for all finishing, waterproofing, finishes and venting requirements.
- Refer to architectural plans for finish floor elevations, floor depressions, openings, slopes, drains, curbs, pads, embedded items, non-bearing partitions, stairs, etc. Refer to civil, mechanical and electrical plans for utilities, sleeves, pipes, ducts, equipment, etc.
- Shop drawings are an aid for field placement and are superseded by the structural drawings. It is the responsibility of the General Contractor to make certain that all construction is in full agreement with the latest approved contract documents.
- Dimensions, unless otherwise noted, are the centerline of columns and beams, or to the face of concrete surfaces and rough framing.
- All referenced publications to be the latest edition, unless otherwise noted.
- The contract structural drawings and specifications represent the finished structure, and, except where specifically shown, do not indicate the method or means of construction. The Contractor to supervise and direct the work and to be solely responsible for all construction means, methods, procedures, techniques, safety and sequence.

5100 170410501 1/16/17

DESIGN CRITERIA

- VERTICAL LOADS**
 - Roof Live Load = 20 psf (May be reduced for slope and tributary area)
 - Floor Live Load = 40 psf
 - For Dead Loads See Framing Notes and or Structural Calculations
- LATERAL LOADS**
 - Wind (Analytical Method):
Ultimate Design Wind Speed: $V_{ult} = 110$ mph
Nominal Design Wind Speed: $V_{nom} = 85$ mph
Exposure Category = "C"
Risk Category = II
Design Pressures - See Structural Calculations

5100 170410501 1/16/17

FOUNDATIONS/SITE WORK

- Foundation design is based on minimum footing dimensions as set forth in TABLE 1809.7 and TABLE 1809.2 in the CBC. Assume class 5 soil with allowable soil bearing pressure of 1500 psf with a constant expansion index less than 20.
- MMK & Associates has not reviewed soil conditions of the building site and is not responsible for general site stability or soil suitability for the proposed project. A review by a Geotechnical Engineer or geologist may be desirable by the owner.
- MMK & Associates has not reviewed soil conditions of the building site and is not responsible for general site stability or soil suitability for the proposed project. A review by a Geotechnical Engineer or geologist may be desirable by the owner.
- All foundations to bear on undisturbed, native soil at depths shown on the drawings.
- All footing excavations to be neat. Over-excavations to be filled with concrete. All loose soils to be removed from excavations prior to placement of concrete. Wet trenches immediately before placing concrete.

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STRUCTURAL OBSERVATION

- Structural performance letters indicating general conformance to the structural contract documents can only be provided by MMK & Associates if structural observation has been performed by MMK & Associates or another Engineer designated by MMK & Associates.
- MMK & Associates is not required to perform structural observation. If these services are desired, contact MMK & Associates prior to start of construction. If Owner and Contractor choose not to employ MMK & Associates to perform structural observations, Owner and Contractor shall, to the fullest extent permitted by law, indemnify and hold MMK & Associates harmless from any loss, claim, or cost, including reasonable attorney's fees and costs of defense, arising from the lack of structural observation services or the performance of such services by other persons or entities and from all claims arising from modifications, clarifications, interpretations, adjustments, or changes made to the Contract Documents to reflect field changes or other conditions, except for claims arising from the sole negligence or willful misconduct of MMK & Associates.
- Structural observation is limited to the periodic visual observation of the structural system for general conformance to the approved plans and specifications at applicable construction stages and at completion of the structural system. Structural observation does not include or waive the responsibility for inspections required by the building department or special inspections required by the CBC. Job site visits by the Engineer are solely for the purpose of determining if the work of the Contractor is proceeding in accordance with the structural contract documents. This limited site observation should not be construed as exhaustive or continuous to check the quality or quantity of the work, but rather periodic in an effort to guard the Owner against defects or deficiencies in the work of the Contractor.

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STEEL

- MATERIALS**
 - Steel W and WT-shapes to conform to ASTM A992.
 - Steel M, S, HP, MI and ST-shapes, structural plates, bars, angles and channels to conform to ASTM A36 or ASTM A572, GR50.
 - Rectangular and square HSS shapes to conform to ASTM A500, grade B.
 - Round HSS shapes to conform to ASTM A500, grade B.
 - Steel pipes to conform to ASTM A53, grade B.
 - A307 bolts to be used unless otherwise noted and where specifically indicated on the drawings. A307 bolts to conform to ASTM A307 grade A, "Standard Specification for Carbon Steel Externally Threaded Standard Fasteners".
 - Anchor rods to conform to ASTM F1554, grade 36, unless otherwise noted.
 - Weld metal to match base metal per AWS requirements. Electrodes for welding to be as specified below:
 - Electrodes for structural steel:
 - SMW: E70XX low hydrogen.
 - FCW: E7XX-X (except -2, -3, -10, -GS) (AWS A5.20).
 - Electrodes for sheet metal less than 1/8" thick:
 - SMW: E70XX low hydrogen.
 - All steel exposed to wet conditions to be galvanized or epoxy primed and epoxy painted. All epoxy paint applied to steel to be compatible with the primer used.
 - All interior steel to be prime coated unless otherwise noted.
- INSTALLATION**
 - All work to be in conformance with AISC, "Specification for Structural Steel Buildings" latest edition.
 - A307 bolts to be tightened with an impact wrench to a snug tight condition. The snug-tight condition is defined as the tightness obtained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench.
 - All structural steel and reinforcing steel welding to be done in accordance with AWS, latest edition, and to have special inspection. See "SPECIAL INSPECTION" Section.
 - Holes for connectors:
 - Bolts and lag screws (3/8" diameter and greater): Hole diameter to be 1/16" larger than the bolt or lag screw diameter.

PRODUCT SUBSTITUTIONS

- Material substitutions to be submitted to the Architect/Engineer for review prior to use. Substitution reviews may require additional design costs. These additional costs to be paid by the person or company requesting the substitution.
- Substituted products to have ICC-ES approval and to be installed per product manufacturer's specifications. Substituted product materials, finishes, details, and installation to be of a nature similar to originally specified product so as to not conflict with any intended structural or architectural design conditions, whether depicted or implied on plans or specifications. The substituted product to have design values (i.e. design loads, impact resistance, etc.) which are equal to or greater than the originally specified product. Any and all warranties offered by the originally specified product manufacturer for the item to be substituted to have similar warranties offered by the substituted product manufacturer.
- Submit to the Architect/Engineer a list of only the items to be substituted, complete with all pertinent material including but not limited to manufacturer's supplied design loads listed for the originally specified product and the proposed substitution product.

SPECIAL INSPECTION

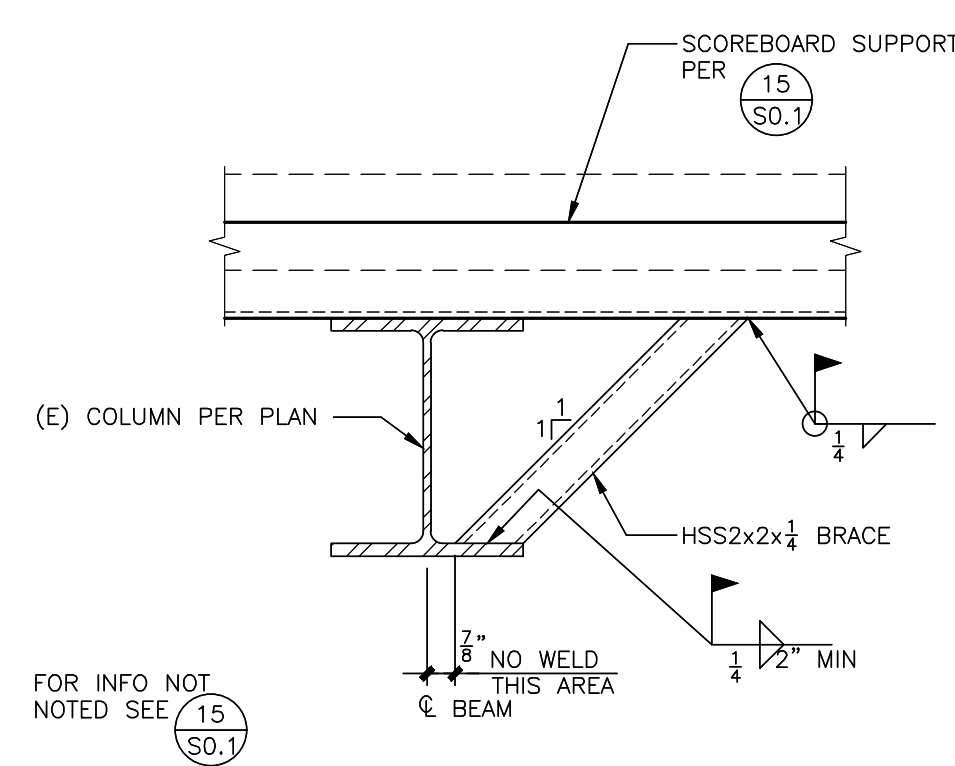
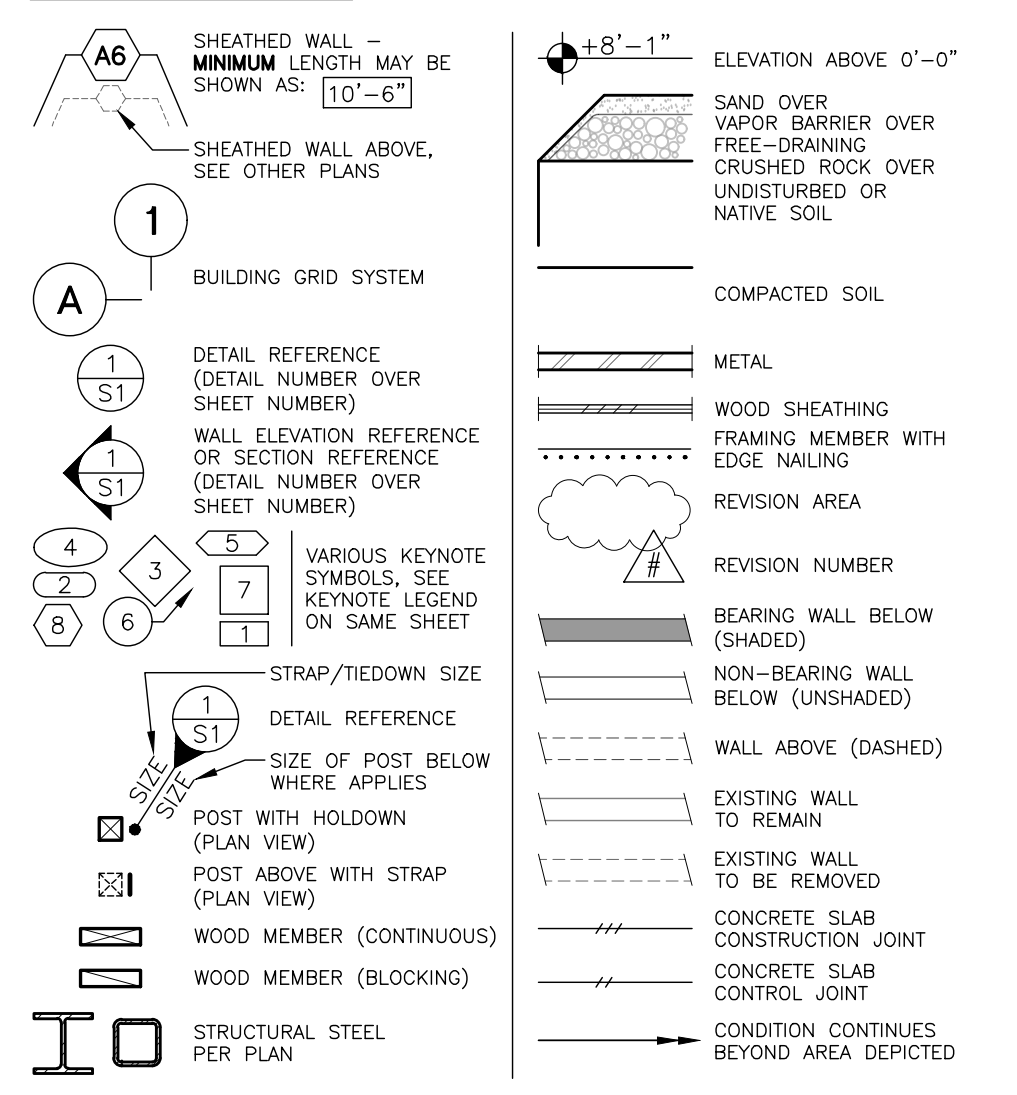
- GENERAL**
 - In addition to the inspections required by Section 110A of the CBC, the Owner shall employ a Special Inspector during construction on the types of work indicated below. All special inspection to be performed in accordance with Section 1704 of the CBC.
 - SPECIAL INSPECTOR DUTIES**
 - After due notice from the Contractor, provide qualified personnel as necessary.
 - Perform inspections as follows:
 - Perform specified reviews, inspections, sampling and testing of materials as indicated below.
 - Verify conformance of all special inspected work with the approved plans.
 - Verify that the work complies with specified standards and methods of construction.
 - Ascertain compliance of materials with requirements of the approved plans.
 - Promptly notify Architect (Designer), Engineer and Contractor of observation irregularities or deficiencies within one working day. If irregularities or deficiencies are uncorrected, the Special Inspector to notify the Architect (Designer), Engineer and the governing agency.
 - Promptly submit written report of each test and inspection with a copy each to the Architect (Designer), Engineer, Owner, Contractor, Governing Agency and other designated persons within three working days. Each report to include:
 - Date issued.
 - Project title and number.
 - Testing laboratory name, address and telephone number.
 - Name and signature of laboratory test or inspection.
 - Date and time of sampling, test or inspection.
 - Type of inspection or test.
 - Location of sample or test in the project.
 - Test results. Report to indicate compliance or noncompliance with approved details and plans.
 - In addition to the above required reports, the Special Inspector shall submit a final signed report stating whether the work requiring special inspection was, to the best of his knowledge, in conformance with the approved plans and the applicable provisions of the California Building Code.
- SCOPE OF WORK** (By Special Inspector Company/Firm)
 - Welding:
 - Owner's testing laboratory.
 - All structural welding to have special continuous inspection. All full and partial penetration welds that are part of moment frames to be ultrasonically inspected.
 - EXCEPTION: Single pass fillet welds $\leq \frac{3}{8}$ " may have periodic inspection unless otherwise noted.

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ABBREVIATIONS

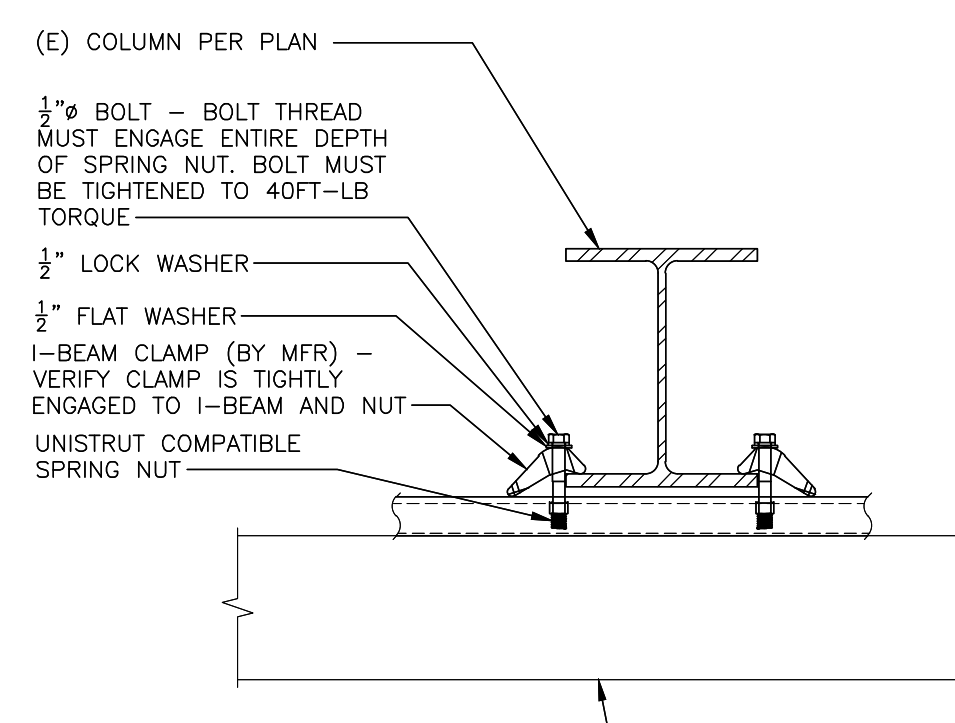
Z or L	Angle	FIN GR	Finish Grade	OPT	Optional
A	Anchor Bolt(s)	FHMS	Flat Head Machine Screw	O.S.B.	Oriented Strand Board
AB	Anchor Bolt	FHW	Flat Head Wood Screw	O.W.S.J.	Open Web Steel Joist
ABV	Above	F.J.	Flange Joist	PHSM	Pre-Hardened Metal Sheet
AC	Asphaltic Concrete	F.N.	Face Nail	P	Perpendicular
ADL	Adjacent	F.O.C.	Face of Concrete	P.D.F.	Power Driven Fastener
ADU	Adjustable	F.O.P.	Face of Post	PERF	Perforated Plate
AFF	Above Finish Floor	F.O.S.	Face of Stud	P.F.	Partial Penetration
ALT	Alternate	F.O.H.C.	Free of Heart Guts	P.L.	Plate
APA	American Plywood Association	FRMG	Framing Plywood	P.P.	Partial Penetration
APRX	Approximate	F.S.	For-Side	P.L.F.	Plate Line Foot
ASTM	American Society for Testing and Materials	FT	Foot	P.S.I.	Pounds Per Square Inch
A.T.R.	All-Threaded Rod	FTG	Footing	P.S.F.	Pounds Per Square Foot
A.Y.C.	Alaska Yellow Cedar	G	Gauge or Gage	P.T.	Preservative Treated
B.F.F.	Below Finish Floor	GA	Gauge or Gage	P-T	Preservative Treated
B.L.C.	Block	GA/V	Galvanized	Q	Quantity (Number of Imp)
BLK	Block(ing)	G.I.	Galvanized Iron	R	Radius
BLW	Beam	G.L.	Galvanized Laminated	R.C.	Relative Compaction
BM	Beam	G.L.B.	Galvanized Laminated Beam	REIN	Reinforcing
BT	Bottom	G.M.	Grade Beam	RET	Retaining
BRG	Bearing	G.R.	Grid	REQD	Required
BTWN	Between	G.T.B.	Grid Truss	REV	Revision
CANT	Can't	G.P.B.	Grid Truss	R.O.	Rough Opening
CBC	California Building Code	GP	Gypsum Board	R.H.W.S.	Round Head Wood Screw
C.C.	Centerline	H.T.	Height	R.S.	Radius
CLG	Chloride	H.D.G.	Hot-Dipped Galvanized	R.W.D.	Redwood
CLR	Clear	HDR	Header	R.W.D.	Redwood
C.M.U.	Concrete Masonry Unit	HGR	Hanger	S.C.D.	See Civil Drawings
COL	Column	HORZ	Horizontal	SCHED	Schedule
COLL	Collector	H.S.	High Strength	S.E.D.	See Structural Drawings
COMB	Combination	HSS	Hollow Structural Section (Tube)	SCL	Structural Composite Lumber
COND	Condition	HT	Height	S.S.	Structural Steel
CONN	Connection	INT	Interior	S.S.	Select Structural Steel
CONST	Construction	JST	Joist	STAG	Staggered
CONT	Concrete	JST	Joist	STD	Standard
C.P.	Complete	K	K(P)(S) (1000 lb)	STF	Stiffener
CSK	Countersink	KD	King Stud	STL	Stainless Steel
d	diameter	K.P.	King Post	STR	Structural
DBL	Double	LB	Lead	SIP	Structural Insulated Panel
D.F.	Detail	LG	Long	S.M.	Symmetrical
D.F.	Detail	LL	Live Load	T&B	Top & Bottom
DM	Dimension	LL.H.	Long Leg Horizontal	THD	Threaded
DL	Dead Load	LL.V.	Long Leg Vertical	THK	Thick or Thickness
D.T.	Drag Truss	L.L.C.	Long Leg Vertical Location(s)	T.N.	Tennell
DWG	Drawing	MAX	Maximum	T-U	Through (Concrete Panel)
E	Existing	M.B.	Machine Bolt(s)	S.W.	Structural Sheathed Wall
E.A.	Expansion Bolt	MEM	Manufacturer	S.Y.M.	Symmetrical
E.E.	Each End	MM	Manufacturer	T&B	Top & Bottom
E.F.	Each Face	MM	Manufacturer	T&G	Top & Groove
ELEC	Electrical	MW	Malleable Iron Washer	THK	Thick or Thickness
E or B/B	Elevation	MSC	Miscellaneous Metal	T.U.	Tennell
E.N.	Edge Nail	M	Manufacturer	T-U	Through (Concrete Panel)
ENR	Engineer	(N)	New	TYP	Typical
E.O.R.	Engineer of Record	N/A	Not Applicable	U.O.N.	Unless Otherwise Noted
E.O.	Equal or Equivalent	N.C.	Not in Contract	U.R.M.	Unreinforced Masonry
E.W.	Each Way	N.B.	Not in Contract	VERT	Vertical
EXT	Exterior	N.S.	Non-Sparking (or Non-Side)	V.I.F.	Verify in Field
FDN	Foundation	O	Over (On)	W/	With
FLR	Floor	O.C.	On Center	W	Wood
FF EL	Finish Floor Elevation	O.D.	Outside Diameter	WP	Waterproof
		O.H.	Opposite Hand	W.P.T.	Work Point
		OPN	Opening	W	Weight
		OPP	Opposite	W.F.	Welded Wire Fabric

SYMBOLS LEGEND (SOME SYMBOLS MAY NOT BE APPLICABLE TO PROJECT)



1 FLANGE BRACE

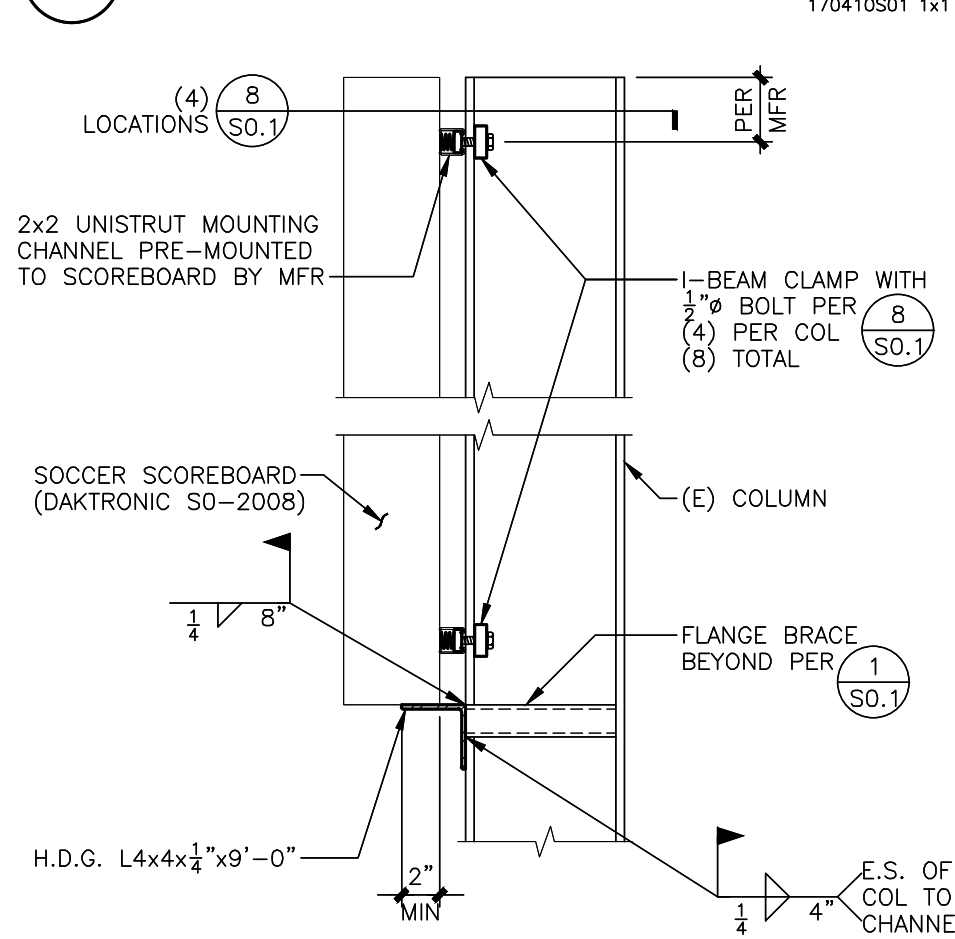
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NOTE: DO NOT USE ANY LUBRICANT ON ANY MOUNTING HARDWARE

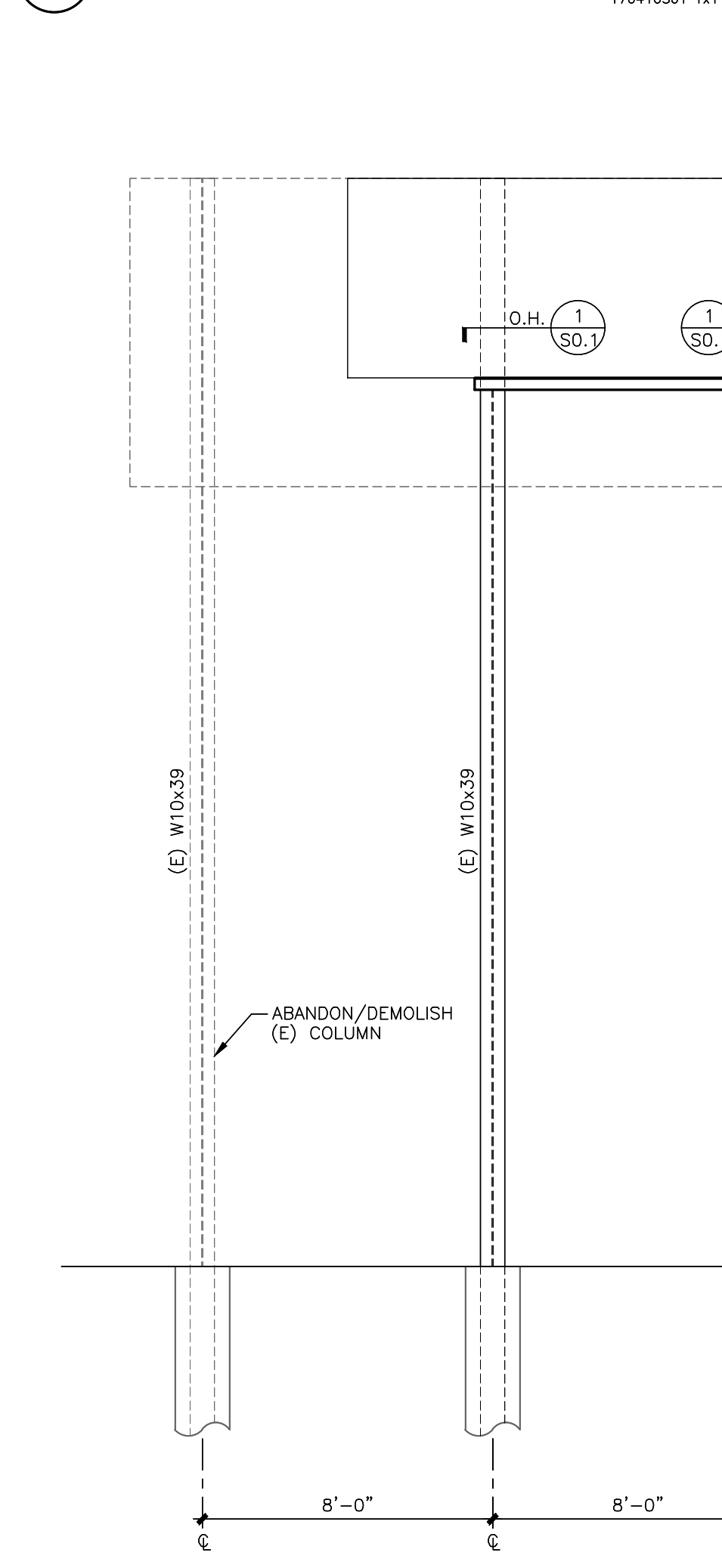
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15 SCOREBOARD SUPPORT

170410501 1x1



19 (E) SCOREBOARD REPLACEMENT

170410501 1x2

1 SOCCER STADIUM KEY PLAN

D1/B

1 FC 07/13/17 170410501 1x1



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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APPL 01-XXXXXX
FILE XXXX
AC _____ RIS _____ SS _____
DATE _____

ISA PROJECT TRACKING NO:
XXXXXX

SHEET TITLE

SOCCER FIELD SCOREBOARD

PROJECT NAME

COLLEGE OF MARIN ATHLETIC FACILITIES IMPROVEMENTS

PROJECT ADDRESS
835 COLLEGE AVE. KENTFIELD, CA 94904

SUBMITTAL DATE

ISA SUBMITTAL 08/04/17

NO.	REVISIONS	DATE

DRAWN BY: TB CHECKED BY: NS

DATE ISSUED: 8-4-17 SCALE: NTS

PROJ. NO. 1702200 (MMK 170410)

SHEET NO. **SO.1**

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