

Addendum



ADDENDUM NO: 1

PROJECT: **SUMMIT MIDDLE SCHOOL TRACK**

CONTEXT PROJECT NO: 25-1923

DATE: 03/04/2026

BY: Fred Prazeau

This Addendum is issued in accordance with the provisions of "The General Conditions of the Contract for Construction," Article 1, "Contract Documents" and becomes a part of the Contract Documents as provided therein. This Addendum includes:

PART 1 – BIDDING AND CONTRACT REQUIREMENTS

- A. Geotechnical Report for Project Site has been provided.
- B. REPLACE the original Bid Form with the 'Revised Bid Form' enclosed with this Addendum. Alternate C, D, E have been added for clarity.

PART 2 – SPECIFICATIONS

- A. 'ALTERNATE D' has been added to the Revised Bid Form. The following Specification Sections have been added to account for Pedestrian Walks, Stairs, and Railings related to the alternate.
 - 1. Section 03 30 01 'Site Cast-in-Place Concrete' has been added to the Project.
 - 2. Section 05 50 13 'Site Miscellaneous Metals' has been added to the Project.
 - 3. Section 07 92 01 'Site Wall Joint Sealants' has been added to the Project.
- B. **ADD** Section 11 68 33.43 'Track & Field Equipment'. Select track and field equipment has been requested by the Owner to be a part of Base Bid.
- C. **REVISE** Section 2.9 'Miscellaneous' of Section 32 92 15 'Synthetic Turf Field Construction' with the following:
 - 1. *"Power/Data Access Boxes: Base Bid shall provide and install access boxes intended for synthetic turf installation as called for within Civil and Landscape plans. Install at the back of nailer curb when indicated along a sideline. Install utility access boxes as called for on outside of track as shown on Civil and Landscape Plans. Connect each access box with 2" blank conduits as shown."*

PART 3 – DRAWINGS

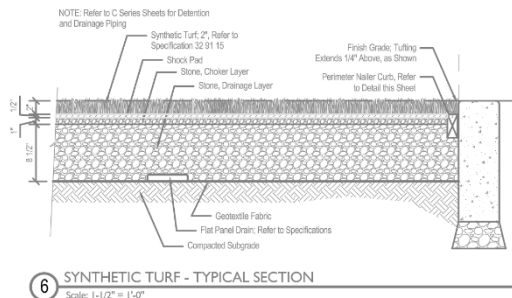
- A. Sheet C1.0 Site Demolition Plan has been updated to include:
 - 1. Location of additional track demolition for conduit clarified.
 - 2. Extents of vegetation removal at swale at south edge of property clarified.
- B. Sheet C2.0 Site Grading Plan has been updated to include:

Addenda

1. Grading at 'Alternate D' stair and connecting walk has been revised.
2. Grading for swale at south edge of property has been revised.
- C. Sheet C3.0 Site Utility Plan – North & C3.1 Site Utility Plan – South have been updated to include:
 1. Subdrain for swale at south edge of property has been added to the Project.
- D. Sheet C4.0 Site Construction Erosion Control Plan - North
 1. Erosion control at 'Alternate D' stair and connecting walk has been revised.
 2. Erosion control at swale at south edge of property has been revised.
- E. Sheet C5.0 Site Utility Details
 1. Detail 18 'Natural Turf with Sub-Drain' has been added to the Project.
 2. Detail 19 'Nyloplast Inlet' has been added to the Project.
- F. Sheets L101 Site Materials Plan, L201 Layout Plan, L600 Site Details, and new Sheet L602 Site Details for Stairs have been updated to account for Pedestrian Walks, Stairs, and Railings related to 'ALTERNATE D'.
 1. New sidewalk connection to parking lot has been added to the Project.
 2. New service connection west of concession building has been added to the Project.
 3. New stairs and connecting walk added into Project.
 4. Details for 'Alternate D' stairs and handrails have been added to Project.

PART 4 – QUESTIONS & ANSWERS

1. **Q: Can you clarify the depth of stone desired for Detail 6/L601?**
A: *The depth of drainage stone media is indeed slightly deeper than a common synthetic profile. The extra depth is necessary to provide additional storm water storage capacity. The image below clarifies the choker layer stone depth to be 1" and drainage stone media to be 8.5". Also clarified is a turf pile height of 2" and the inclusion of the specified shock pad.*



2. **Q: The original specifications allude to a price needed for BSS 1000 coatings. Is that still required based upon Pre-Bid Meeting discussions?**
A: *Bidders shall omit any references to BSS 1000. The Owner is satisfied with BSS 300 as their baseline finish for middle schools.*

Addenda

3. **Q: After inspecting the existing track, the finished surface undulations a bit. If we mill and resurface the track, should bidders also anticipate wedging to resolve the planarity?**
A: Yes, any wedge and level needed to keep a consistent, even finish shall be included within Base Bid.
4. **Q: Can EnPlast Shockdrain KDA 780 be approved for use on the project?**
A: The Landscape Architect has reviewed the submitted information on the product. While the testing data conforms to the specified standards, Context's last two (2) installations using this pad have had revealed misaligned perforations. Numerous perforations were located on the sides or tops of the domes which appeared to limit effective drainage. We have no problem with the product itself so long as the quality control of perforations is resolved.
5. **Q: The high jump areas call to be milled and overlaid. However the proposed high jump extents don't match the existing high jumps. Can you please clarify?**
A: The existing high jump areas shown are taken from the survey which is marked to the edge of the overgrown lawn. The actual expected edge of the pavement under the grass is what is drawn in the plans.

END OF ADDENDUM 1

To: Metropolitan School District of Southwest Allen County
4824 Homestead Road
Fort Wayne, IN 46814

From (Bidder): _____

Address: _____

Telephone No.: _____

Date of Bid Preparation: _____, 2026.

The undersigned, having become familiar with all conditions of the project site, and having examined and become fully cognizant of the Project Manual and all associated Drawings and Addenda, hereby agrees to furnish all labor, materials, equipment, fixtures and incidentals required for the construction of the Project in conformance with the intent of the Construction Documents.

Pursuant to these requirements, the undersigned submits the following bids, which include all applicable taxes, overhead and profit. The Owner reserves the right to award any combination of responses they believe create Best Value for the corporation.

BASE BID, All improvements reflected in Plans and Specifications to achieve turn-key delivery of the Track Renovation, Synthetic Turf Field, all flatwork, fencing, field events, infrastructure, and any improvements not otherwise covered in the Alternate Bid descriptions. Carefully review Plans and Technical Specifications. Price shall be lump sum.

_____ Dollars (\$_____._____) (written)

ALTERNATE Bid A, Base Bid for the Synthetic Turf System coverage shall include a fully pre-paid 8-year third-party insured warranty as listed within Technical Specifications. Alternate Bid A shall represent the differential cost to add 2-years of additional coverage, matching the same terms and conditions of the original warranty, to achieve 10 total years of protection for the Owner. This "bonus" 2-year portion may be manufacturer-backed rather than third-party insured. Price shall be lump sum.

_____ Dollars (\$_____._____) (written)

ALTERNATE Bid B, Base Bid for Synthetic Turf infill shall include rubber/sand ballast. Alternate Bid B shall represent the differential cost to upgrade to an organic infill. Various products are suitable for this use, as listed within the Technical Specifications. Price shall be lump sum.

_____ Dollars (\$_____._____) (written)

ALTERNATE Bid C, Base Bid for Track Renovation includes a 1.5" mill and resurface as shown in the Plans and Technical Specifications. Alternate Bid C shall represent the differential cost to remove and replace the binder down to existing stone. Bidders shall anticipate grading, recompacting, and supplementing stone as needed to prepare the base for 3.5" of binder as part of Alternate Bid C. Price shall be lump sum.

_____ Dollars (\$_____._____) (written)

ALTERNATE Bid D, Alternate Bid D shall represent the turn-key price to the additional pedestrian flatwork linkage shown on L101 [as clouded in Addendum #1], including the stairs, railings, and associated grading and drainage. Refer to all site-civil sheets for this area. Price shall be lump sum.

_____ Dollars (\$_____._____) (written)

ALTERNATE Bid E (deduct), Base Bid for managing excess soils includes the Bidder removing and disposing of any such material offsite. Alternate Bid E shall represent the savings to the Owner if Bidders are allowed to bulk place excess soils on SACS property at 13100 Covington Road. Bidders are NOT required to respond to this alternate bid if no savings are yielded. Exact location on the property will be coordinated during the Pre-Construction Conference. Price shall be lump sum.

_____ Dollars (\$_____._____) (written)

Bidders shall attach to this Bid Form the following documents:

- A fully executed Form 96, including the Non-Collusion Affidavit
- Appropriate Bid Security, as described in the Notice to Bidders

UNIT PRICING

The Owner anticipates adding miscellaneous scope to the extent budget permits, via Unit Prices listed below. Include price per unit of measurement for materials or services potentially adjusted in the Contract Sum by appropriate modification. Unit prices shall include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.

- A. Unit Price A – Add additional **Concrete Pedestrian Sidewalk** at 5" thickness. Include excavation, base preparation, and required materials and labor to expand pedestrian pavements. Assume areas affected will be no less than 1,500 square foot or greater in scope enhancement.

_____ per square foot
Time of Completion:

Presuming a Notice to Proceed is issued no later than March 18, 2026; the undersigned affirms that all work of this contract shall be substantially complete on or before September 15, 2026. Staging may begin after May 20, 2026. Mobilization of equipment and any construction activities that could disrupt use of the site shall occur on or immediately after May 28, 2026.

Allowance:

Bidder acknowledges by submission of this Bid that **Allowance No. 1** is included within their Base Bid.

Addenda:

Receipt of Addenda issued to the Drawings and Project Manual is hereby acknowledged:

Addenda Nos.: _____

Supervisory Assignments:

Please indicate below the names of individual(s) responsible for Project Supervision:

(remainder of this page intentionally left blank)

Individuals and Sole Proprietors complete below:

IN TESTIMONY WHEREOF, the Bidder (an Individual) has hereunto set his hand this _____ day of _____, 2026.

Signature of the Individual Bidder: _____

Firms and Partnerships complete below:

IN TESTIMONY WHEREOF, the Bidder (a firm or partnership) has hereunto set their hands this _____ day of _____, 2026.

Name of firm or partnership: _____

By: _____

By: _____

Subscribed and Sworn to before me by
this _____ day of _____, 2026.

My commission expires: _____

Corporations complete below:

IN TESTIMONY WHEREOF, the Bidder (a Corporation) has caused this proposal to be signed by its President and Secretary, and affixed its Corporate Seal, this _____ day of _____, 2026.

Name of corporation: _____

President: _____

Secretary: _____

END OF SECTION



GME[®]

GME TESTING

A  UES Company

Geotechnical Report

GME Project No. G25-113246

**Proposed New Track and Field -
Summit Middle School**

**4509 Homestead Road
Fort Wayne, IN**

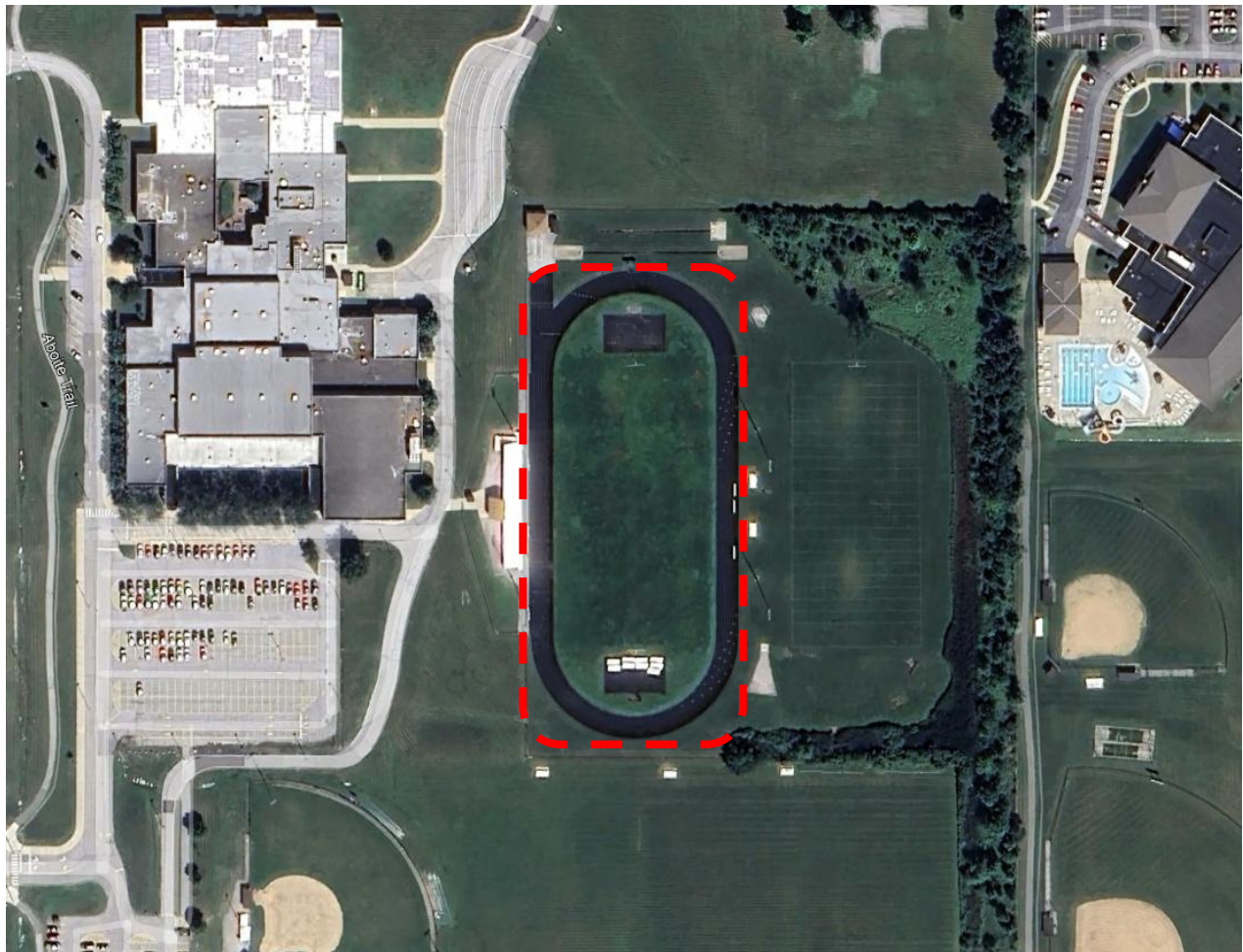
January 13, 2026

Prepared For:

Southwest Allen County Schools (SACS)
C/O: Engineering Resources, Inc. (ERI)
4175 New Vision Drive
Fort Wayne, IN 46845
Attn: Scott Karst, PE

Prepared By:

GME Testing
3517 Focus Dr
Fort Wayne, IN 46818





A  UES Company

January 13, 2026
G25-113246

Southwest Allen County Schools (SACS)
C/O: Engineering Resources, Inc. (ERI)
4175 New Vision Drive
Fort Wayne, IN 46845
Attn: Scott Karst, PE

REF: GEOTECHNICAL INVESTIGATION AND EVALUATION
Proposed New Track and Field
Summit Middle School
4509 Homestead Road
Fort Wayne, IN

Dear Scott:

In compliance with your recent request and authorization, **GME Testing** is pleased to submit this report containing the results of our geotechnical investigation. This investigation was conducted as part of the proposed new track and field at the existing Summit Middle School running track, as referenced above. The information provided in this report will assist Southwest Allen County Schools (SACS) and Engineering Resources, Inc. (ERI) in preparing the track pavement improvement plans.

Our services were performed according to our proposal (GMPE25-110594) dated November 12, 2025, and your authorization via email on November 20, 2025. GME Testing coordinated their fieldwork logistics, site access, utilities marking, and the geotechnical drilling program schedule with a client representative to conduct this geotechnical engineering investigation.

Existing Site Conditions

At the time of our field investigation, the site was observed to have a grass-covered infield surrounded by an asphalt running track. Sporadic snow coverage could be seen on both the track and the infield.

Figure 1 provides example photographs of the track at the time of this investigation.



Figure 1 – Photographs Taken at the Time of our Field Investigation

The infield area was grass-covered over very moist clay. Photographs of ruts that occurred when accessing the test borings are shown in Figure 2 below.



Figure 2 – Photographs of the Infield Surface After our Field Investigation

Project Description

Based on the preliminary information provided, the objective of this study was to evaluate existing pavement thicknesses within the running track and to characterize subsurface soil conditions beneath both the running track and infield areas.

Test borings B-1 through B-5 were performed within the running track to evaluate the existing pavement section and underlying soils, while test borings B-6 through B-8 were performed within the grass-covered infield area to evaluate surficial topsoil and underlying subsurface conditions.

It is our understanding that Summit Middle School planners are considering rehabilitation of the existing running track and installation of a new turf infield. Rehabilitation of the track surface is anticipated to occur through either a mill-and-overlay approach or full reconstruction of the existing pavement section.

The design, layout, and installation of the turf field will be the responsibility of the turf contractor. Subgrade preparation and drainage for the track and turf areas should be performed in accordance with the guidelines established by the Track Builders Association, the American Sports Builders Association (ASBA), or project specifications, whichever is more stringent. The pavement thickness will be designed by other professionals, incorporating the geotechnical data obtained from this investigation.

If significant changes occur or our assumptions are inaccurate, our office should be contacted to determine if any changes to our recommendations will be necessary after our review.

Field and Laboratory Testing

Our fieldwork consisted of collecting eight (8) test borings and collecting soil samples immediately beneath the pavement. The maximum depth of the test borings extended to ten feet. Our test borings were conducted at locations determined by Engineering Resources, Inc. The approximate test locations are shown in Exhibit A, included in Appendix A of this report.

The approximate existing surface elevations were extracted from a topographical survey of the site, performed by Miller Land Surveying and provided to GME Testing by ERI, and included on the bore logs in Appendix B for presentation reference only.

Our test borings were performed in accordance with the Standard Penetration Test, ASTM D-1586. The stratification of soils, as shown on the accompanying boring logs, included in Appendix B of this report, represents the soil conditions at the drilled borehole locations.

Our laboratory testing program included performing **a)** visual soil classifications according to ASTM D-2487 and ASTM D-2488, **b)** natural moisture content tests according to ASTM D-2216 on all samples, and **c)** unconfined compressive strength tests, including calibrated spring hand penetration tests in general accordance with ASTM D-2166. Our test results are included in the individual boring logs included in Appendix B.

Existing Pavement Thickness

The thicknesses of the existing track pavements (i.e., in borings B-1 through B-5) were determined by a GME Testing representative during drilling. The results are summarized in Table 1 below.

Table 1: Average Thickness of Pavement at Core Locations		
Coring Number	Asphalt Thickness (inches)	Aggregate Base Thickness (inches)
B-1	±5 ½	±6 ½
B-2	±6	±6
B-3	±5	±9
B-4	±6	±9
B-5	±6	±8

Generalized Subsurface and Groundwater Conditions

The following discussions are general. The test boring logs included in Appendix B of this report provide a more detailed description of the subsurface conditions encountered at the test boring locations.

Below the existing track pavement materials (asphalt and aggregate base), the near-surface soils encountered in the test borings revealed clay soils, visually classified as (possible fill) silty clay, sandy silty clay, and mottled silty clay. These clay soils generally exhibited medium-stiff to very-stiff consistencies.

The mottled clay soil disclosed in test borings B-4, B-6, and B-7 exhibited elevated moisture contents and consistencies ranging between soft and medium stiff. Particular attention should be given to existing clays disclosed in B-6, where moisture contents exceeded 30 percent, and an N-value of 4 was observed. The mottled clays were soft and will further decrease in strength with an increase in moisture content.

The consistency and relative density of the soil samples were evaluated based on the results of the Standard Penetration Test (SPT) N-values, according to ASTM D-1586. Our **General Notes** sheet, which follows the boring logs included in Appendix B, explains these correlations.

Test boring B-8 encountered groundwater during our drilling program at a depth of 4 feet and at a depth of 2.5 feet upon completion of our drilling program. Groundwater depths shown on the boring logs reflect groundwater levels only for the date on which the borings were drilled. The groundwater levels beneath the study site will fluctuate with time due to variations in rainfall, lateral drainage conditions, and other factors not evident at the time of this investigation.

Pavement Improvement Recommendations

Geotechnical Considerations

Based upon the asphalt pavement thickness data collected during our drilling operation, it appears that the thickness of the overall track pavement is consistent. The existing asphalt thickness extended to depths of approximately 5 to 6 inches and was underlain by over 6 inches of a crushed limestone base and geogrid as observed by our drilling crew. The subgrade beneath the track generally consisted of medium-stiff to stiff clay.

Wherever severe pavement cracking is observed in the existing pavement track, it should be remediated with an adequate bituminous asphalt seal to reduce the risk of further deterioration and to reduce water intrusion into the underlying soil subgrade. This remediation is necessary if the existing pavement is to remain.

In summary, the existing clay soils exhibiting moisture contents greater than 2 percent of the Optimum Moisture Contents (OMC), as determined by the appropriate Proctor, should be remediated. Remediation of the subgrade will be discussed in later sections of this report. A GME Testing representative should be retained on-site to ensure that the subgrade is suitable for construction traffic.

Pavement Improvement Considerations

Depending on the method and plan of pavement track improvements, two options will be presented:

- 1) Milling and Resurfacing; and**
- 2) Removal and Replacement**

The project civil engineer and the owner can entertain other alternatives and should assess the existing pavement conditions to select the most appropriate rehabilitation approach, considering long-term planning, comparative economics, and construction advantages.

Please note that all pavements require regular maintenance and repair due to normal wear and tear. Periodic maintenance over the course of its service life should be anticipated. Additionally, as discussed above, any post-construction cracks should be properly sealed to reduce further water intrusion, which can cause additional pavement deterioration.

It is strongly recommended that the entire pavement be carefully evaluated to identify distressed areas that will require immediate repair and/or replacement.

1) Milling and Resurfacing

The mill and overlay option involves removing (by grinding) a portion of the existing pavement surface (typically the upper 1 inch) and restoring the surface with new, superior thickness (typically 2 or more inches) hot-mix asphalt pavement. However, the exposed (milled) surface needs to be inspected prior to the application of the new surface. Any severely deteriorated sections that develop after milling should be cut to full depth before remediation.

In general, milling and placing an adequate overlay thickness will prolong the pavement life before any periodic maintenance is implemented. Milling and overlaying any areas experiencing significant distress may cause reflective cracking into the new overlay, leading to post-construction pavement distress. Milling and/or pavement wedge and levels may be required as determined by the engineer.

2) Removal and Replacement

If removal and replacement of the existing pavement is selected, the subgrade should be evaluated after the asphalt and aggregate base have been removed. Any areas that yield and pump should be replaced with crushed limestone aggregate, such as INDOT No. 1, 2, or 53. The extent of remediation will depend on several factors, including weather conditions at the time of construction and the condition of existing soils at the design subgrade.

Based on our evaluation of the existing clayey soils disclosed in borings, such soils should be properly prepared and conditioned to withstand construction traffic. The subgrade soils should be compacted as discussed in the “Site Preparation” and “Engineered Fill” sections of this report. We recommend that an undistributed quantity of geogrid and crushed limestone aggregate (i.e., equal to 65 percent of the subgrade area) be included in the contract document, if needed, to replace or mitigate any unstable areas encountered during construction.

GME Testing should be retained to inspect and document the track subgrade before proceeding with pavement replacement or placement of new grade-raise fill. Based on soil conditions in the test borings, a California Bearing Ratio (CBR) value of approximately 2 percent (a resilient modulus value equivalent to approximately 3,000 psi) has been estimated. This value is predicated on subgrade preparation as recommended herein.

The subgrade surface should be uniformly sloped to facilitate drainage through the granular base to the shoulders or inlets and to avoid any ponding of water beneath the pavement. Underdrains may also be useful tools to facilitate drainage below the pavement and prolong the pavement life but should be evaluated by the designer as they will require maintenance and will add a cost to the project.

Site Preparation Recommendations

The extent of track improvement will depend on which of the two methods (milling and removal and replacement) discussed previously will be considered. However, the following general site preparation for the new track and infield is presented.

This should include the removal of vegetation, topsoil, and any unsuitable soils (e.g., compressible, yielding, or pumping materials). All unsuitable materials must be removed prior to placing any new grade-raise fill.

After removal, GME Testing should perform proofrolling and probing to evaluate subgrade conditions. Any unstable areas must be undercut and replaced with engineered fill or otherwise stabilized before constructing any pavement, track, or turf areas. Subgrade treatments such as aeration, moisture conditioning, or stabilization may also be required, depending on seasonal conditions, in-situ moisture content, and construction traffic.

If site preparation is performed during wet seasons (e.g., late fall or early spring), moisture control becomes unmanageable, and a more expensive remediation method (i.e., chemical stabilization) should be expected. Earthwork operations should be scheduled during warm, dry conditions whenever possible to reduce subgrade instability and delays. Construction traffic should be restricted to designated access routes to prevent pumping, yielding, or localized subgrade failures from repeated loading over prepared areas.

Engineered Fill

In areas where new grade-raise fill will be necessary or unsuitable materials are to be replaced, new fill should consist of naturally occurring clay soils and/or non-expansive granular soils (i.e., INDOT No. 53). All fill materials should be approved by GME Testing and placed within a moisture content tolerance of about ± 2 percent of Optimum Moisture Content (OMC). Fill material should be mechanically compacted in uniform horizontal lifts at a relative compaction of 95 percent of the maximum Proctor density, in accordance with ASTM D-1557 (Modified Proctor).

To achieve the recommended compaction limit of the fill, the fill material should be placed and compacted in layers not exceeding 8 inches in loose thickness (the loose lift thickness should be reduced to 6 inches when utilizing small hand compactors) and within the specified range of OMC. All fill placements should be monitored by a GME Testing representative.

Construction Monitoring

Our experience indicates that the actual subsoil conditions at a site could vary from those generalized on the basis of a test borehole made at a specific location.

We recommend that a GME Testing geotechnical engineer or designee be retained to continuously evaluate and test the encountered materials on-site during the actual construction.

During construction, it is recommended that adequate proof rolling inspections and compaction tests be performed to ensure the subgrade is firm and non-yielding.

If the entire pavement will be replaced, care should be taken to check the subgrade moisture content and density for satisfactory results. Asphalt materials (surface and binder) should be placed with the consistencies specified on the plans and compacted per the plans and specifications, and density tests should be performed on each layer.

General Comments and Limitations

This field evaluation, laboratory testing, and geotechnical analyses presented in this geotechnical investigation report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. Although individual test borings are representative of the subsurface conditions at the boring locations on the dates drilled, they are not necessarily representative of the subsurface conditions between boring locations or subsurface conditions during other seasons of the year.

The lines of demarcation shown on the logs represent approximate boundaries between the various classifications. The stratification of soils, as shown on the accompanying test borehole logs, represents the soil conditions at the drilled borehole locations, and variations may occur between the boreholes. In-situ strata changes could occur gradually or at different levels. Also, it should be noted that the boreholes depict conditions at the particular-locations and times indicated.

The report was prepared by GME Testing solely for the use of the Client in accordance with an executed contract. The Client's use of or reliance on this report is limited by the terms and conditions of the contract and by the qualifications and limitations stated in the report. It is also acknowledged that the Client's use of and reliance of this report is limited for reasons which include actual site conditions that may change with time; hidden conditions, not discoverable within the scope of the assessment may exist at the site; and the scope of the investigation may have been limited by time, budget and other constraints imposed by the client.

Neither the report nor its contents, conclusions or recommendations are intended for the use of any party other than the Client. GME Testing and the Client assume no liability for any reliance placed on this report by such party. The rights of the client under contract may not be assigned to any person or entity, without the consent of GME Testing which shall not be unreasonably withheld.

Our services have been provided consistent with its professional standards of care. No other warranties are made, either expressed or implied.

Sincerely,
GME Testing

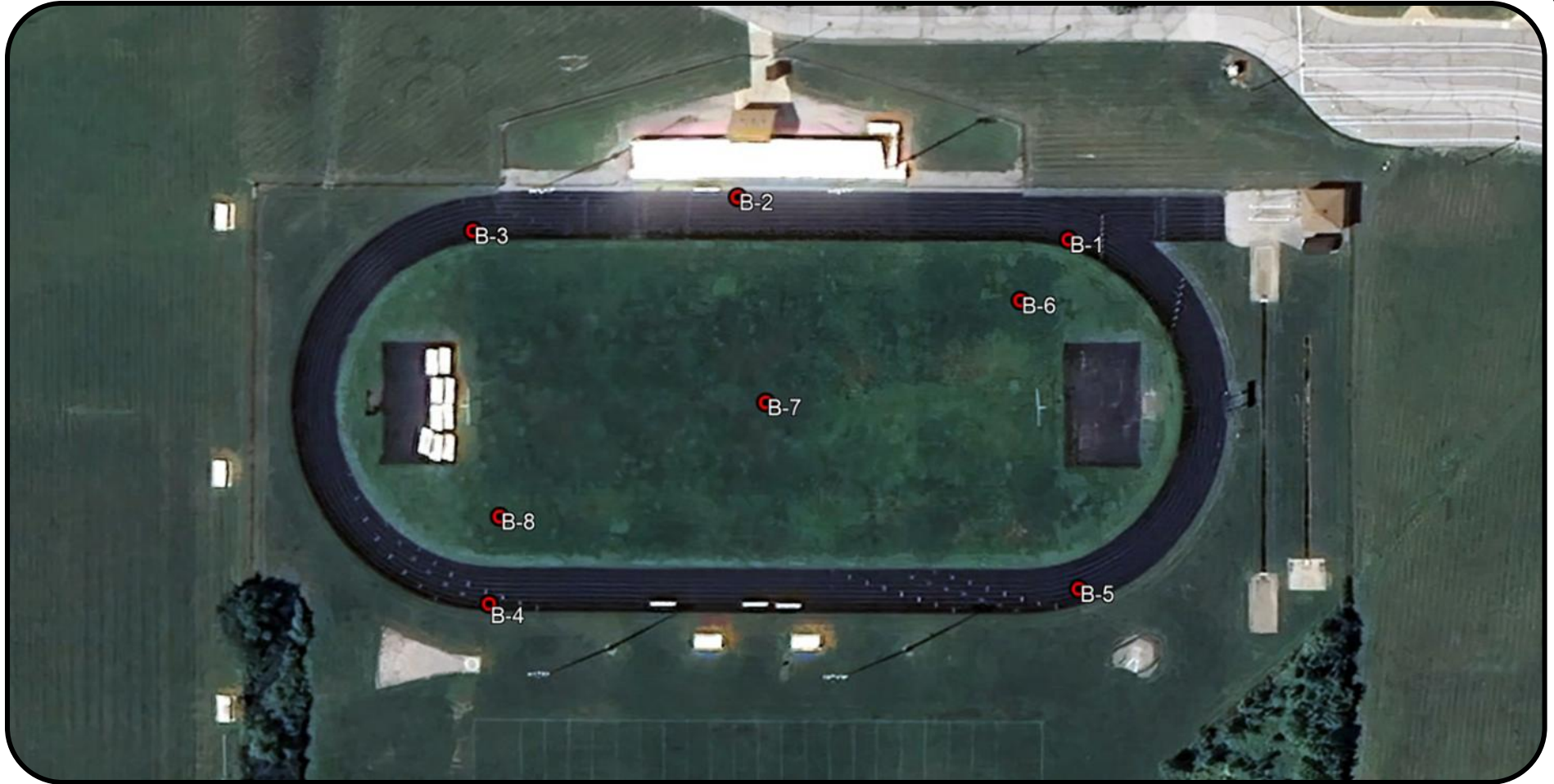


Rami M. Anabtawi, P.E., BC.GE




S M Naziur Mahmud, E.I.T.

APPENDIX A

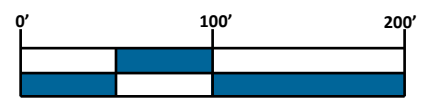


LEGEND

 APPROXIMATE BORING LOCATION

NOTE:

1. AERIAL IMAGE TAKEN FROM GOOGLE EARTH WITH AN IMAGE DATE OF 08/17/2025.



GRAPHIC SCALE: 1" = 100'



EXHIBIT A

BORING LOCATION DIAGRAM
Proposed New Track and Field - Summit Middle School
4509 Homestead Road, Fort Wayne, IN

No.	Revision Date	Date: 1/13/26
		Prepared By: JA
		Scale: AS NOTED
		Client: ERI
		Project: G25-113246

APPENDIX B



TEST BORING LOG

BORING NO.: B-4
 SHEET 1 OF 1
GME PROJECT NO: G25-113246
 STRUCTURE _____
 DATUM: _____
 DATE STARTED : 01-05-26
 DRILLER/INSP : RS/AB

CLIENT: Southwest Allen County Schools (SACS); C/O: Engineering Resources, Inc. (ERI)
 PROJECT TYPE: Proposed New Track and Field - Summit Middle School
 LOCATION: 4509 Homestead Road, Fort Wayne, IN

ELEVATION : <u>802.0</u>	BORING METHOD : <u>ASTM D-1586</u>	LATITUDE : <u>41.042423</u>
STATION : _____	RIG TYPE : <u>Skid</u>	LONGITUDE : <u>-85.280915</u>
OFFSET : _____	CASING DIA. : <u>3.3 in</u>	
LINE : _____	HAMMER : <u>Auto</u>	
DEPTH : <u>10.0 ft</u>		

GROUNDWATER: Encountered at Dry At completion Dry

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6" (N)	% RECOVERY	% MOISTURE CONTENT	UNCONF. COMP., tsf	Qp (tsf)	REMARKS
801.5		±6" ASPHALT PRODUCT. 0.5							
800.8		±9" LIMESTONE PRODUCT. 1.3							
799.0	2.5	POSSIBLE FILL: Dark Gray, Moist, Silty Clay.	SS 1	3-4-4 (8)	75	20.8		2.0	Geogrid Observed at ±15"
	5.0	Brown and Gray, Moist, Mottled SILTY CLAY.	SS 2	3-3-3 (6)	100	21.3		2.0	
796.0	7.5	Gray, SANDY SILTY CLAY, Trace Fine Gravel.	SS 3	3-5-6 (11)	100	17.2	4.9	4.0	
792.0	10.0	Bottom of Boring at 10.0 ft	SS 4	4-5-7 (12)	100	14.8	5.3	4.0	

TEST BORING LOG

BORING NO.: **B-8**
 SHEET 1 OF 1
GME PROJECT NO: G25-113246
 STRUCTURE _____
 DATUM : _____
 DATE STARTED : 01-05-26
 DRILLER/INSP : RS/AB

CLIENT: Southwest Allen County Schools (SACS); C/O: Engineering Resources, Inc. (ERI)
 PROJECT TYPE: Proposed New Track and Field - Summit Middle School
 LOCATION: 4509 Homestead Road, Fort Wayne, IN

ELEVATION : <u>802.0</u>	BORING METHOD : <u>ASTM D-1586</u>	LATITUDE : <u>41.042441</u>
STATION : _____	RIG TYPE : <u>Skid</u>	LONGITUDE : <u>-85.281115</u>
OFFSET : _____	CASING DIA. : <u>3.3 in</u>	
LINE : _____	HAMMER : <u>Auto</u>	
DEPTH : <u>10.0 ft</u>		

GROUNDWATER: Encountered at 4.0 ft At completion 2.5 ft Caved in at 7.5 ft

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6" (N)	% RECOVERY	% MOISTURE CONTENT	UNCONF. COMP., tsf	Qp (tsf)	REMARKS
801.1	0.9	±11" Dark Brown, Silty Sandy Clayey TOPSOIL.							
798.0	2.5	POSSIBLE FILL: Brown, Sandy Silty Clay, Trace Fine Gravel.	SS 1	4-5-6 (11)	100	15.3	4.5	3.5	
796.0	4.0	POSSIBLE FILL: Brown and Gray, Very Moist, Mottled Silty Clay, Trace Clay and Tiles.	SS 2	2-2-5 (7)	100	20.0		1.5	
792.0	6.0	Brown, Moist, SANDY SILTY CLAY.	SS 3	10-12-14 (26)	100	15.0	7.7	4.5+	
792.0	10.0	Bottom of Boring at 10.0 ft	SS 4	8-9-11 (20)	100	16.6	6.5	4.0	

GENERAL NOTES

SAMPLE IDENTIFICATION

Visual soil classifications are made in general accordance with the United States Soil Classification System on the basis of textural and particle size categorization, and various soil behavior and characteristics. Visual classifications should be made by appropriate laboratory testing when more exact soil identification is required to satisfy specific project applications criteria.

RELATIVE PROPORTIONS OF COHESIONLESS SOILS

<u>Term</u>	<u>Defining Range by % of Weight</u>
Trace	1-10 %
Little	11-20 %
Some	21-35 %
And	36-50 %

WATER LEVEL MEASUREMENT

NE	No Water Encountered
BF	Backfilled upon Completion

ORGANIC CONTENT BY COMBUSTION METHOD

<u>Soil Description</u>	<u>LOI</u>
w/ organic matter	4-15 %
Organic Soil (A-8)	16-30 %
Peat (A-8)	More than 30%

LABORATORY TESTS

Qp	Penetrometer Reading, tsf
Qu	Unconfined Strength, tsf
MC	Moisture Content, %
LL	Liquid Limit, %
PL	Plastic Limit, %
PI	Plastic Index
SL	Shrinkage Limit, %
pH	Measure of Soil Alkalinity/Acidity
γ	Dry Unit Weight, pcf
LOI	Loss of Ignition, %

DRILLING AND SAMPLING SYMBOLS

AS	Auger Sample
BS	Bag Sample
PID	Photo ionization Detector (Hnu meter) volatile vapor level,(PPM)
COA	Clean-Out Auger
CS	Continuous Sampling
FA	Flight Auger
HA	Hand Auger
HAS	Hollow Stem Auger
NR	No Recovery
PT	3" O.D. Piston Tube Sample
RB	Rock Bit
RC	Rock Coring
REC	Recovery
RQD	Rock Quality Designation
RS	Rock Sounding
S	Soil Sounding
SS	2" O.D. Split-Barrel Sample
2ST	2" O.D. Tin-Walled Tube Sample
3ST	3" O.D. Thin-Walled Tube Sample
VS	Vane Shear Test
DB	Diamond Bit
WS	Wash Sample
RB	Roller Bit
ST	Shelby Tube, 2" O.D. or 3" O.D.
CB	Carbide Bit
WOH	Weight of the Hammer

GRAIN SIZE TERMINOLOGY

<u>Soil fraction</u>	<u>Particle size</u>	<u>Us standard sieve size</u>
Boulders	larger than 75 mm	Larger than 3"
Gravel	2mm to 75 mm	#10 to 75 mm
Coarse Sand	0.425 mm to 2 mm	#40 to #10
Fine Sand	0.075mm to 0.425 mm	#200 to #40
Silt	0.002 mm to 0.075 mm	Smaller than #200
Clay	Smaller than 0.002 mm	Smaller than #200

RELATIVE DENSITY

<u>Term</u>	<u>"N" Value</u>
Very Loose	0-5
Loose	6-10
Medium Dense	11-30
Dense	31-50
Very Dense	51+

CONSISTENCY

<u>Term</u>	<u>"N" Value</u>
Very Soft	0-3
Soft	4-5
Medium Stiff	6-10
Stiff	11-15
Very Stiff	16-30
Hard	31+

PLASTICITY

<u>Term</u>	<u>Plastic Index</u>
None to Slight	0-4
Slight	5-7
Medium	8-22
High/Very High	Over 22

Note(s):

The penetration resistance, "N" Value, is the summation of the number of blows required to effect two successive 6-inch penetrations of the 2-inch split-barrel sampler. The sampler is driven with a 140-lb. weight falling 30-inches and is seated to a depth of 6-inches before commencing the standard penetration test.

Water level measurements shown on the boring logs represent conditions at the time indicated and may not reflect static levels, especially in cohesive soils





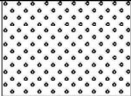
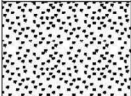

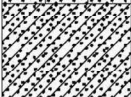


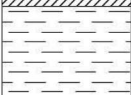


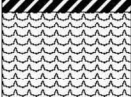
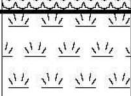
GME TESTING

3517 Focus Drive
Fort Wayne, IN 46818

(260) 497- 8127 • (877) 660-4GME • (260) 497- 0826 fax
Division of **GEOTECHNICAL & MATERIALS ENGINEERS, INC.**

www.gmetesting.com

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS	
			GRAPH	LETTER		
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES	
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
			CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
					SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES	
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES	
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
					CH	INORGANIC CLAYS OF HIGH PLASTICITY
					OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SECTION 03 30 01 – SITE CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED SECTIONS

- A. This section includes footings, foundations, structural support, and reinforcing for a variety of conditions within Plans. Please note that separate, yet similar, specification information may exist for A-Series Plans.
- B. See Specification Section “Concrete Paving” for all pedestrian walks and flatwork.
- C. See Specification Section “Earth Moving” for additional subgrade preparation and related information.

1.2 SUBMITTALS

- A. In addition to Product Data, submit design mixes and the following for each concrete mix:
 - 1. Shop Drawings detailing fabrication, bending, and placement.
 - 2. Material certificates signed by product manufacturers certifying that product complies with requirements.

1.3 QUALITY ASSURANCE

- A. Comply with ACI 301, "Specification for Structural Concrete," and ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
 - 1. Installer Qualifications: An experienced installer who has completed concrete Work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
 - 2. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

- A. As follows:
 - 1. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
 - 2. Plain-Steel Wire: ASTM A 82, as drawn.
 - 3. Plain-Steel Welded Wire Fabric (when applicable): ASTM A 185, flat sheets.

2.2 CONCRETE MATERIALS

- A. As follows:

1. Portland Cement: ASTM C 150, Type I, gray. Supplement with Fly Ash: ASTM C 618, Class C or F.
2. Aggregate: ASTM C 33, uniformly graded, from a single source throughout the project.
 - a. Maximum Coarse-Aggregate Size: 1 inch nominal.
 - b. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
3. Water: ASTM C 94 and potable.

2.3 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 1. Water-Reducing Admixture: ASTM C 494, Type A.
 2. Retarding Admixture: ASTM C 494, Type B.
 3. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.
 4. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.
 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494, Type G.
 6. Plasticizing and Retarding Admixture: ASTM C 1017, Type II.
 7. Synthetic Fiber (when applicable): Fibrillated or monofilament polypropylene fibers engineered and designed for use in concrete, complying with ASTM C 1116, Type III, 1/2 to 1-1/2 inches (13 to 38 mm) long.

2.4 RELATED MATERIALS (when applicable)

- A. As follows:
 1. Flexible Waterstops: Rubber, CE CRD-C 513, or PVC, CE CRD-C 572.
 2. Vapor Retarder: ASTM E 1745, Class C, not less than 7.8 mils (0.18 mm) thick; or polyethylene sheet, ASTM D 4397, not less than 10 mils (0.25 mm) thick.
 3. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.
 4. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
 5. Epoxy-Bonding Adhesive: ASTM C 881, two-component epoxy resin, of type, class, and grade to suit requirements.

2.5 CURING MATERIALS

- A. As follows:
 1. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
 2. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) dry.
 3. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
 4. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
 5. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.6 CONCRETE MIXES

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
- B. Cementitious Material Substitution: Use fly ash, to reduce the total amount of Portland cement. Maximum Portland cement reduction for fly ash replacement: 20 percent.
- C. Admixtures: Use admixtures according to manufacturer's written instructions.
 - 1. Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete, as required, for placement and workability.
 - 2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
 - 3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.
- D. Footings: Proportion normal-weight concrete mixture as follows:
 - 1. Minimum Compressive Strength: 3,500 psi at 28 days.
 - 2. Maximum Water-Cementitious Materials Ratio: 0.58.
 - 3. Slump Limit: 5 inches, plus or minus 1 inch.
 - 4. Air Content: Optional.
- E. Exterior Concrete: As indicated within Division 32 - 'Concrete Paving'

2.7 SYNTHETIC FIBERS (when applicable)

- A. Uniformly disperse in concrete mix at manufacturer's recommended rate, but not less than 1.5 lb/cu. yd. (0.90 kg/cu. m).

2.8 READY-MIXED CONCRETE

- A. Measure, batch, mix, and deliver concrete according to ASTM C 94 and ASTM C 1116, and furnish batch ticket information.

2.9 PROJECT-SITE MIXING

- A. Measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Ensure subgrade to support concrete footings and foundations has been compacted to achieve 95% SPD, unless otherwise indicated. Coordinate testing to demonstrate compliance according to the provisions of the Specifications.

- B. Design, construct, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.
- C. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use Setting Drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
- D. Leave formwork that supports weight of concrete in place until concrete has achieved 28-day design compressive strength.
- E. Comply with ACI 318 (ACI 318M), ACI 301, and recommendations in ACI 347R for design, installation, and removal of shoring and reshoring.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering as required.

3.3 VAPOR RETARDER (when applicable)

- A. Place, protect, and repair vapor-retarder sheets according to ASTM E 1643. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.4 STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

3.5 JOINTS AND WATERSTOPS

- A. Locate and install waterstops, construction joints, isolation joints, and contraction joints per industry standards.

3.6 CONCRETE PLACEMENT

- A. Deposit concrete continuously and avoid segregation. Deposit concrete in forms in horizontal layers no deeper than 24 inches (600 mm), avoiding cold joints.
 - 1. Consolidate concrete with mechanical vibrating equipment.

2. Screed and initial-float concrete floors and slabs using bull floats or darbies to form a uniform and open-textured surface plane, free of humps or hollows, before excess moisture or bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.
 3. Comply with ACI 306.1 for cold-weather concrete placement.
 4. Place concrete according to recommendations in ACI 305R when hot-weather conditions exist.
- B. Finish formed surfaces as follows:
1. Apply rough-formed finish, defined in ACI 301, to concrete surfaces indicated or not exposed to public view.
 2. Apply smooth-formed finish, defined in ACI 301, to concrete surfaces indicated and exposed to public view or to be covered with a coating or covering material applied directly to concrete, such as waterproofing, dampproofing, veneer plaster, or painting.
 - a. Do not apply rubbed finish to smooth-formed finish.

3.7 CONCRETE PROTECTION AND CURING

- A. Protect concrete from excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with recommendations in ACI 305R for hot-weather protection during curing. All costs related to summer or winter conditions shall be the responsibility of the Contractor as part of achieving the project schedule.
1. Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause excessive moisture loss.
 2. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
 3. Cure formed and unformed concrete for at least seven days by moisture curing, moisture-retaining-cover curing, or curing compound.
 4. Cure and seal floors and slabs with a curing and sealing compound according to manufacturer's written instructions.

3.8 TESTING AGENCY

- A. Contractor will engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement. Tests shall be performed according to ACI 301.

3.9 DEFECTIVE CONCRETE

- A. Repair and patch defective areas when approved by Landscape Architect. Remove and replace concrete that cannot be repaired and patched to Landscape Architect's satisfaction.

END OF SECTION

SECTION 05 50 13 – SITE MISCELLANEOUS METALS

PART 1 - GENERAL

1.01 SUMMARY

- A. The work covered by this Section includes the furnishing of all material, equipment and the performing of all labor to complete the miscellaneous metal work as shown on the Contract Drawings and as herein specified.
- B. This work includes metalwork shown in Drawings.
 - 1. Furnish and install all handrails, posts, brackets, anchors, fasteners, plates, and miscellaneous metal work, as shown on the Drawings.

1.02 REQUIREMENTS

- A. The rules and practices set forth in the latest edition of The Aluminum Association's specification for Aluminum Structures, shall govern this work, except as otherwise specified or as noted on the Contract Drawings.
- B. All welding shall be in accordance with the latest edition of American Welding Society Structural Welding Code, D1.2.
- C. Substitution of sections or modifications of details, or both, shall be made only when approved by the Project Engineer.

1.03 MISCELLANEOUS ITEMS

- A. All items shall be of sizes and shapes and constructed of material as indicated on the Contract Drawings or as specified. Items furnished, unless otherwise specified, shall be the manufacturer's standard approved products and shall be fabricated in accordance with the best shop methods. The Contractor shall verify all measurements and shall take all other measurements necessary before fabrication.
- B. Shearing and punching shall leave clean, true lines and surfaces. Permanent connections shall be welded. Exposed surfaces shall have a smooth finish and sharp well-defined lines and arises. Thickness of metal and details of assembly and supports shall give ample strength and stiffness. Unless otherwise shown, all exposed fastenings shall be of the same material and finish as the metal to which applied.
- C. Members shall be framed in substantial manner and all details connections and fastenings shall be in accordance with the best accepted practice and shall be subject to the approval of the Project Engineer.

1.04 QUALITY ASSURANCE

A. Field Measurements:

1. Take field measurements prior to preparation of shop drawings and fabrication where possible.
2. Do not delay job progress; allow for trimming and fitting when taking field measurements before fabrication so work will not be delayed.

B. Shop Assembly:

1. Preassemble items in shop to greatest extent possible to minimize field splicing and assembly.
2. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

1.05 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM B26/B26M, Standard Specification for Aluminum-Alloy Sand Castings.
2. ASTM B209/B209M, Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
3. ASTM B210/B210M, Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes.
4. ASTM B221/B221M, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
5. ASTM B247/B247M, Standard Specification for Aluminum and Aluminum-Alloy Die Forgings, Hand Forgings, and Rolled Ring Forgings.
6. ASTM B429/B429M, Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube.
7. ASTM C1048, Standard Specification for Heat-Treated Flat Glass - Kind HS, Kind FT Coated and Uncoated Glass.
8. ASTM C1107, Standard Specification for Packaged Dry, Hydraulic Cement Grout (Non-Shrink).
9. ASTM E488, Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements.
10. ASTM E985, Standard Specification for Permanent Metal Railing Systems and Rails for Buildings.

B. American Welding Society:

1. D1.2 - "Structural Welding Code - Aluminum", latest edition.

C. Aluminum Association, Inc. (AA):

1. AA SAS-30, Specifications for Aluminum Structures.

D. The Indiana Department of Transportation (INDOT) Standard Specifications, with all latest addenda and supplements, are to be used for this Section, except as modified herein.

1.06 SUBMITTALS

- A. Submit shop drawings showing all material, sizes, finishes, locations, attached hardware and fittings. Details for all items and fabricated metalwork, including field erection details showing cuts, copes, connections, holes, threaded fasteners and welds. Indicate all welds, both shop and field, by symbols conforming to AWS standards.
- B. Furnish setting diagrams, erection plans, templates and directions for the installation of backing plates, anchors and other items.
- C. Submit catalog descriptions of manufacturer's standard items.
- D. Reproduction of Engineer's Contract Drawings for the purpose of making shop drawings shall not be permitted.
- E. All submittals shall state the location and usage for each product.

1.07 PRODUCT DELIVERY, HANDLING AND STORAGE

- A. Positively identify and match-mark if applicable, all material, items and fabrications for installation and field assembly.
- B. Wherever practicable, deliver items to jobsite as complete units, ready for installation or erection, with all anchors, hangers, fasteners and miscellaneous metal items required for installation.
- C. Store steel above the ground surface on platforms, skids, blocking or other supports.
- D. Protect from exposure to conditions that produce rust.
- E. Handle steel so no parts are bent, broken or otherwise damaged and avoid damage to other material and work.
- F. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Project Engineer and at no additional cost to the Owner.

1.08 LOCATION AND QUANTITIES

- A. It is the intent of the Specification to indicate the quality, character and type of the items. The location and size shall be as shown on the Contract Drawings.

PART 2 - PRODUCTS

2.01 FASTENERS

- A. Anchor Bolts and Hardware: Shapes as indicated, ASTM A307 stainless or better.

2.02 ROUGH HARDWARE

- A. Provide bent or otherwise custom fabricated plates, anchors, hangers, dowels and other miscellaneous steel and iron shapes as required for framing, supporting woodwork and for anchoring or securing woodwork to concrete and other structures.
- B. Manufacture or fabricate items of sizes, shapes and dimensions required.

2.03 RAILING

- A. Railing assembly shall withstand a minimum concentrated load of 200 pounds applied vertically downward or horizontally in any direction, but not simultaneously, at any point on the top rail.
- B. Railing assembly shall withstand a minimum uniform load of 50 pounds per foot applied horizontally or vertically downward, but not simultaneously, on the top rail.
- C. When applicable, guard intermediate rails, balusters, panel fillers, posts or cables shall be designed for a uniform load of not less than 50 pounds per square foot applied horizontally over the gross area of the guard of which they are part. Reactions due to this loading need not be added to the loading specified for the main supporting members of the guard.
- D. Material
 - 1. Aluminum: Alloy 6061
 - a. Bar: ASTM B 221
 - b. Pipe and Tubing: ASTM B 210
 - c. Finishes (Submit samples for approval):
 - 1) Clear Anodized

PART 3 - EXECUTION

3.01 FABRICATION

- A. General:
 - 1. Fabricate all work true to shape, size and tolerances as indicated on the Contract Drawings and approved shop and working drawings; with straight lines, square corners or smooth bends; free from twists, kinks, warps, dents and other imperfections. Straighten work bent by shearing or punching.
 - 2. Thickness of the metal and details of assembly and support shall provide sufficient strength and stiffness to resist distortion during shipment, handling, installation and under severe service conditions. Dress exposed edges and ends of metal smooth, with no sharp edges and with corners slightly rounded. Construct connections and joints exposed to weather to exclude water.
 - 3. Provide sufficient quantity and size of anchors for the proper fastening of the work.
- B. Connections:
 - 1. Shop connections in weldable material, not designed for service removal shall be welded. All welding shall conform to AWS Handbook requirements. Weld behind finished surfaces wherever possible. Grind all exposed welds smooth. Remove weld, brazing and shoulder

spatter, flux, slag and oxides from finished surfaces. Use sheet metal lock seams only where indicated on the Contract Drawings or approved shop and work drawings.

2. Complete all provisions for bolted field connections in the shop unless otherwise indicated.
3. Burning of holes for bolts in the shop or field will not be permitted; these shall be punched or drilled. Shapes may be cut in the shop by standard flame cutting machines and may be cut in the field only with the written consent of the Engineer.
4. Match exposed work to produce continuity of line and design. Fabricate and fasten metalwork so that the work will not be distorted, the finish impaired, nor the fasteners overstressed from the expansion and contraction of the metal. Conceal fastenings wherever practicable. Use fastenings exposed to public view of the same color and appearance as the surrounding metal.

3.02 ERECTION AND INSTALLATION

A. Fastening to In-Place Construction:

Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction including threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws and other connectors as required.

B. Cutting, Fitting and Placement:

1. Perform cutting, drilling and fitting required for installation of miscellaneous metal fabrications.
2. Set work accurately in location, alignment elevation, plumb, level, true and free of rack, measured from established lines and levels.
3. Provide temporary bracing or anchors in formwork for items which are to be built into concrete, masonry or similar construction.

C. Fit exposed connections accurately together to form tight hairline joints. Weld connections which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Grind exposed joints smooth and touch up shop paint coat. Do not weld, cut or abrade the surfaces of exterior units which have been hot dip galvanized after fabrication and are intended for bolted or screwed field connections.

D. Field Welding:

1. Comply with AWS Code for procedures of manual shielded metal arc welding, appearance and quality of welds made and methods used in correcting welding work.

3.03 WELDED CONNECTIONS

A. Weld all shop and field connections unless otherwise indicated. All welding shall be performed by AWS certified welders.

END OF SECTION

SECTION 07 92 01 – SITE WALL JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section APPLIES ONLY TO SITE WALLS DOCUMENTED ON THE L-SERIES DRAWINGS
- B. This Section includes sealants for the following applications, including those specified by reference to this Section.
 - 1. Exterior joints in the following vertical surfaces and non-traffic horizontal surfaces:
 - a. Control and expansion joints in cast-in-place concrete walls.
 - b. Control and expansion joints in masonry walls and copings.
 - c. Other joints as required.
- C. Related Sections including the following:
 - 1. Division 3 Section "Site Cast-in-Place Concrete" for concrete control and expansion joint fillers and gaskets.
 - 2. Division 32 Section "Concrete Paving" for Joint Sealants for concrete flatwork.

1.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Color Chart: Provide manufacture's full standard color range for final selection by Landscape Architect.
- C. Samples for Verification: For each type and color of joint sealant required. Install joint-sealant samples in 1/2-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Product Certificates: Signed by manufacturers of joint sealants certifying that products furnished comply with requirements and are suitable for the use indicated.
- E. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects/Engineers and Owners, and other information specified.
- F. Compatibility and Adhesion Test Reports: From joint sealant manufacturer indicating the following:
 - 1. Materials forming joint substrates and joint-sealant backer materials have been tested for compatibility and adhesion with joint sealants.
 - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- G. Product Test Reports: From a qualified testing agency indicating joint sealants comply with requirements, based on comprehensive testing of current product formulations.

1.4 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining of deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.5 SUBMITTALS

- A. General: Submit the following in accordance with the Conditions of the Contract and Division 1 Specification Sections.
- B. Product Data: For each joint-sealant product indicated.
- C. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- D. Samples for Verification: For each type and color of joint sealant required. Install joint sealants in 1/2 -inch (13-mm) wide joints formed between two 6-inch (150-mm) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- E. Product Certificates: Signed by manufacturers of joint sealants certifying that products furnished comply with requirements and are suitable for the use indicated.
- F. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects/Engineers and Owners, and other information specified.
- G. Compatibility and Adhesion Test Reports: From sealant manufacturer indicating the following:
 - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
 - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- H. Product Test Reports: From a qualified testing agency indicating sealants comply with requirements, based on comprehensive testing of current product formulations.
- I. Warranties: Special warranties specified in this Section.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An installer with not less than three (3) years experience who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

- C. Mockups: Before installing joint sealants, apply elastomeric sealants as follows to verify selections made under sample submittals and to demonstrate aesthetic effects and qualities of material and execution:
 - 1. Joints in mockups of assemblies specified in other Sections that are indicated to receive elastomeric joint sealants, which are specified by reference to this Section.
 - 2. Ensure full authorization of mockup by the Landscape Architect, in writing, prior to commencing with built work in-place.
- D. Pre-installation Conference: Conduct conferences at Project site to comply with requirements in Division 1 Section "Project Meetings."

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multi-component materials.
- B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer.
 - 2. When joint substrates are wet.
- B. Do not install solvent curing sealants in enclosed building spaces.
- C. Joint-Width Conditions: Do not proceed with installation of joint sealant where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.
- D. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.
- E. Maintain temperature and humidity as recommended by sealant manufacturer during and after installation.

1.9 WARRANTY

- A. General Warranty: Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of Contract Documents.
- B. Special Installer's Warranty: Written warranty, signed by Installer agreeing to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Two (2) years from date of Substantial Completion.

- C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
 - 1. Movement of the structure resulting in stress on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
 - 2. Disintegration of joint substrates from natural causes exceeding design specifications.
 - 3. Mechanical damage caused by individuals, tools, or other outside agents.
 - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products indicated for each type in the sealant schedules at the end of Part 3.

2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Landscape Architect from manufacturer's full range of standard colors.

2.3 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant in the Elastomeric Joint-Sealant Schedule at the end of Part 3, including those referencing ASTM C 920 classifications for type, grade, class, and uses.
- B. Additional Movement Capability: Where additional movement capability is specified in the Elastomeric Joint-Sealant Schedule, provide products with the capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, to withstand the specified percentage change in the joint width existing at the time of installation and remain in compliance with other requirements of ASTM C 920 for uses indicated.
- C. Stain-Test-Response Characteristics: Where elastomeric sealants are specified in the Elastomeric Joint-Sealant Schedule to be non-staining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

2.4 LATEX JOINT SEALANTS

- A. Latex Sealant Standard: Comply with ASTM C 834 for each product of this description indicated in the Latex Joint-Sealant Schedule at the end of Part 3.

2.5 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experiences and laboratory testing.
- B. Cylindrical Sealant Backing: ASTM C 1330, of type indicated below and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
 - 1. Type C: Closed-cell material with a surface skin.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.6 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants with joint substrates.
- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Discrepancies: In the event of a discrepancy, immediately notify the Architect.
 - 1. Do not proceed with installation until all discrepancies and/or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellants, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable

of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joint with oil-free compressed air. Porous joint surfaces including the following:

- a. Concrete.
 - b. Masonry.
3. Remove laitance and form-release agents from concrete.
 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
 - a. Metal.
 - b. Glass.
- B. Joint Priming: Prime joint substrates where recommended in writing by joint sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Joint Spacing: Provide movement joints in masonry wall construction as indicated. Where not shown, provide maximum spacing between joints of 40 feet and maximum distance between outside corners and joints of 10 feet. Provide joints between all interior load-bearing and non-load bearing walls at all abrupt changes in heights and at all changes in wall thickness. Verify final movement joint locations whether or not indicated on the Drawings with Architect prior to starting work.
- C. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- D. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 1. Do not leave gaps between ends of sealant backings.
 2. Do not stretch, twist, puncture, or tear sealant backings.
 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- E. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and back of joints.
- F. Install sealants by proven techniques to comply with the following and at the same time backings are installed:
 1. Place sealants so they directly contact and fully wet joint substrates.
 2. Completely fill recesses provided for each joint configuration.
 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

- G. Tooling of Nonsag Sealant: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealants from surfaces adjacent to joint.
 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
 - a. Use masking tape to protect adjacent surfaces of recessed tooled joints.

3.4 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
1. Extent of Testing: Test completed elastomeric sealant joints as follows:
 - a. Perform 10 tests for the first 1000 feet (300 m) of joint length for each type of elastomeric sealant and joint substrate.
 - b. Perform one test for each 1000 feet (300 m) of joint length thereafter or one test per each floor per elevation.
 2. Test Method: Test joint sealants by hand-pull method described below:
 - a. Make knife cuts from one side of joint to the other, followed by two cuts approximately 2 inches (50 mm) long at sides of joint and meeting cross cut at one end. Place a mark 1 inch (25 mm) from cross-cut end of 2-inch (50-mm) piece.
 - b. Use fingers to grasp 2-inch (50-mm) piece of sealant between cross-cut end and 1-inch (25-mm) mark; pull firmly at a 90-degree angle or more in direction of side cuts while holding a ruler alongside of sealant. Pull sealant out of joint to the distance recommended by sealant manufacturer for testing adhesive capability, but not less than that equaling specified maximum movement capability in extension; hold this position for 10 seconds.
 - c. For joints with dissimilar substrates, check adhesion to each substrate separately. Do this by extending cut along one side, checking adhesion to opposite side, and then repeating this procedure for opposite side.
 3. Inspect joints for complete fill, for absence of voids, and for joint configuration complying with specified requirements. Record results in a field adhesion test log.
 4. Inspect tested joints and report on the following:
 - a. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
 - b. Whether sealants filled joint cavities and are free from voids.
 - c. Whether sealant dimensions and configurations comply with specified requirements.
 5. Record test results in a field adhesion test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
 6. Repair sealants pulled from test area by applying new sealants following same procedures used to originally seal joints. Ensure that original sealant surfaces are clean and new sealant contacts original sealant.
- B. Evaluation of Field-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements, will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

- A. Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

3.7 ELASTOMERIC JOINT-SEALANT SCHEDULE

- A. Low-Modulus Nonacid-Curing Silicone Sealant [ES-1]: Where joint sealants of this type are indicated, provide products complying with the following:
 - 1. Products: Provide one of the following:
 - a. 790; Dow Corning.
 - b. Silpruf; GE Silicones.
 - c. Ultrapruf SCS2300; GE Silicones.
 - d. 864; Pecora Corp.
 - e. 890; Pecora Corp.
 - f. Omniseal; Sonneborn Building Products Div., ChemRex Inc.
 - g. Spectrem 1; Tremco.
 - 2. Type and Grade: S (single component) and NS (nonsag).
 - 3. Class: 25.
 - 4. Additional Movement Capability: 100 percent movement in extension and 50 percent movement in compression for a total of 150 percent movement.
 - 5. Use Related to Exposure: NT (nontraffic).
 - 6. Use Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
 - a. Use O Joint Substrates: Limestone and masonry.
 - 7. Stain-Test-Response Characteristics: Nonstaining to porous substrates per ASTM C 1248.
 - 8. Applications: Limestone and Masonry.
- B. Medium-Modulus Neutral-Curing Silicone Sealant [ES-2]: Where joint sealants of this type are indicated, provide products complying with the following:
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. 791; Dow Corning.
 - b. Spectrum 2; Tremco.
 - c. Trensil 600; Tremco.
 - 2. Type and Grade: S (single component) and NS (nonsag).
 - 3. Class: 25.
 - 4. Use Related to Exposure: NT (nontraffic).
 - 5. Use Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
 - a. Use O Joint Substrates: Galvanized steel and wood.
 - 6. Applications: General weatherproofing perimeter sealants, including expansion and control, perimeter seals around doors and window frames.

- C. Mildew-Resistant Silicone Sealant [ES-3]: Where joints of this type are indicated, provide products formulated with fungicide that are intended for sealing interior ceramic tile joints and other nonporous substrates that are subject to in-service exposures of high humidity and temperature extremes, and that comply with the following:
1. Products: Provide one of the following:
 - a. 786 Mildew Resistant; Dow Corning.
 - b. Sanitary 1700; GE Silicones.
 - c. 898 Silicone Sanitary Sealant; Pecora Corp.
 - d. Tremsil 600 White; Tremco.
 2. Type and Grade: S (single component) and NS (nonsag).
 3. Class: 25.
 4. Use Related to Exposure: NT (nontraffic).
 5. Use Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
 - a. Use O Joint Substrates: Color anodic aluminum, aluminum coated with a high performance coating, and ceramic tile.
 6. Applications: Interior joints in vertical surfaces around plumbing fixtures.
- D. Single-Component Pourable Urethane Sealants [ES-4]: Where joints of this type are indicated, provide products that comply with the following:
1. Products: Provide one of the following:
 - a. Vulkem; Mameco International.
 - b. Vulkem Nova 300 SSL; Mameco International.
 - c. NR-201; Pecora Corp.
 - d. SL 1; Sonneborn Building Products Div., ChemRex Inc.
 2. Type and Grade: S (single component) and P (pourable).
 3. Class: 25.
 4. Use Related to Exposure: T (traffic) and NT (nontraffic).
 5. Use Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
 - a. Use O Joint Substrates: Color anodic aluminum, aluminum coated with a high performance coating, galvanized steel, masonry, and wood.
 6. Applications: Interior and exterior concrete (flatwork).

3.8 LATEX JOINT-SEALANT SCHEDULE

- A. Latex Sealant [LS-1]: Where joint sealants of this type are indicated, provide products complying with the following:
1. Products: Provide one of the following:
 - a. AC-20; Pecora Corp.
 - b. Sonolac; Sonneborn Building Products Div., ChemRex, Inc.
 - c. Tremflex 843; Tremco.
 2. Applications: Interior joints exposed to view.

END OF SECTION 07 92 01

SECTION 11 68 33.43 – TRACK & FIELD EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes equipment consisting of the following:
 - 1. High Jump Stands and Landing System
 - 2. Pole Vault Stands and Landing System
- B. Related Sections include the following:
 - 1. Division 31 Section "Earth Moving" for excavation and grading work.
 - 2. Division 32 Section "Synthetic Turf Construction" for equipment intended specifically within the synthetic field area, such as football goals and turf grooming equipment.
 - 3. Division 32 Section "Crushed Aggregate Surface" for edging system to retain Shot Put fill materials.

1.3 DEFINITIONS

- A. HDPE: High-density polyethylene.
- B. MDPE: Medium-density polyethylene.
- C. PVC: Polyvinyl chloride.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For each type of track equipment, include materials, plans, details, method of field assembly, connections, and installation details.
- C. Product Certificates: Signed by manufacturers of equipment and certifying that products furnished comply with all sanctioning body requirements for High School competition.
- D. Installer Certificates: Signed by manufacturer certifying that installers comply with requirements.
- E. Manufacturer Certificates: Signed by manufacturers certifying that they comply with requirements.

- E. Product Test Reports: From a qualified testing agency indicating playground equipment complies with requirements, based on comprehensive testing of current products.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has specialized in installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer of equipment.
- B. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.

1.6 COORDINATION

- A. Contractor shall supply all necessary labor and materials to fully install the described track equipment for competitive use based upon NFHS guidelines. All required formwork, bracing, fastening and installation procedures required to implement the equipment shall be included within the base-bid. Sequence work so equipment can be installed concurrently with concrete foundations, platforms, and adjacent resilient surfacing.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide complete track equipment systems as indicated in the Drawings.
- B. Manufacturers: The products identified below are intended as a basis of design, not as a proprietary limitation to competitive bidding. Other manufacturers are encouraged to submit product information to the Landscape Architect to be reviewed for equality during the bidding process. All such requests shall arrive no less than ten (10) days prior to bid opening.
- C. High Jump Stands and Landing System: Subject to compliance with requirements, provide products from the following manufacturer, or approved equal prior to bidding.
 - 1. Basis of Design: S1 High Jump Value Pack (16'-6" x 8' x 26"), Model #VP64117C0202, as manufactured by Gill Athletics, 2808 Gemini Court, Champaign, IL, 61822, Phone 1-800-637-3090.
 - 2. Color to be selected from manufacturer's full range of color. Anticipated color to be Green.
 - 3. Install per all manufacturer's recommendations. Include all accessories for a complete system ready for use, including but not limited to pilot holes, drainage weeps, braces, and forms required for installation and maintenance.
 - 4. Pre-approved Equals:
 - a. High Jump Economy Value Pack (16'-6" x 8' x 26"), Model #HJECONVP as manufactured by Sportsfield Specialties Inc. Delhi, NY 13753, Phone 1-888-975-3343.
- D. Pole Vault Stands and Landing System: Subject to compliance with requirements, provide products from the following manufacturer, or approved equal prior to bidding.

1. Basis of Design: Essentials Pole Vault Value Pack (19'-9" x 10'-2" x 26"), Model #VP300, as manufactured by Gill Athletics, 2808 Gemini Court, Champaign, IL, 61822, Phone 1-800-637-3090.
2. Install per all manufacturer's recommendations. Include all accessories for a complete system ready for use, including but not limited to pilot holes, drainage weeps, braces, and forms required for installation and maintenance.
3. Pre-approved Equals:
 - a. Pole Vault Economy Value Pack (19'-9" x 10'-2" x 26"), Model #PVECONVP as manufactured by Sportsfield Specialties Inc. Delhi, NY 13753, Phone 1-888-975-3343.

2.2 GENERAL

- A. Colors: As selected by Landscape Architect from manufacturer's standard colors during Shop Drawing and Submittal Review process.

2.3 MATERIALS

- A. Opaque Plastic: Color impregnated, UV stabilized, and mold resistant.
- B. Hardware and Fasteners: Manufacturer's standard, commercial-quality, corrosion-resistant, stainless steel, or aluminum; secure, vandal-resistant design.
- C. Drainage Fill: Washed coarse-aggregate mixture of crushed stone, or crushed or uncrushed gravel, as required to properly install and drain the system.
- D. Paint and PVC-Coat Finish: Comply with 16 CFR 1303 for limiting lead in paint.

2.4 CAST-IN-PLACE CONCRETE

- A. Concrete Materials and Properties: Comply with requirements in "Cast-in-Place Concrete" to produce normal-weight, air-entrained concrete with a minimum 28-day compressive strength of 3,000 psi (20.7 MPa), 3-inch (75-mm) slump, and 1-inch- (25-mm-) maximum size aggregate.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions for compliance with requirements for site clearing, earthwork, site surface and subgrade drainage, and other conditions affecting performance.
 1. Do not begin installation before final grading required for athletic surfacing is completed, unless otherwise permitted by Landscape Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Verify locations of track equipment to IHSA and NFHS guidelines. Verify that layout and equipment locations comply with requirements for each type and component of equipment.

3.3 CLEANING

- A. After completing equipment installation, inspect components. Remove spots, dirt, and debris. Repair damaged finishes to match original finish or replace component.

END OF SECTION

SECTION 32 91 15 – SYNTHETIC TURF FIELD CONSTRUCTION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract.

1.2 SUMMARY

A. Work Includes:

1. New synthetic turf system for football, soccer, and physical education use.
 - a. Concrete Curb and Perimeter Nailer. The Builder shall install a 6" wide x 12" deep perimeter concrete curb and nailer as described within this Specification for areas where synthetic turf abuts any paved condition.
 - b. Complete underdrain system. The Builder will be responsible for providing and installing all layers of the complete synthetic system, including synthetic base preparation and drainage. Collect and tie flat-panel underdrain system, on a 25' o.c. spacing, to the nearest header drain trench and/or and storm structures shown in the C-Series Plans. The Builder shall utilize C-Series Plans for anticipated invert elevations yet calculate his own slopes to verify positive drainage.
 - c. Geo-textile fabric installation; Tencate-Mirafi® 140N or equivalent.
 - d. Field subgrade confirmation. The Builder shall be present for a proof roll of subgrade as part of reviewing and accepting subgrade conditions prior to beginning work.
 - e. Base installation. Builder shall achieve final surface grade on fields as shown in the Civil Drawings. Ensure the Civil Engineer and Landscape Architect are fully aware and approve of any anticipated deviations.
 - f. Synthetic turf, ballast, turf installation, and select maintenance.
 - g. Shock Pad. Include pre-approved Shock Pad in Base Bid.
 - h. Football Goals. Constructor shall remove existing football goalposts and install new Football Goal Posts.
 - i. Soccer Goals. Include within the Base Bid a pair of pre-approved Soccer Goals that are fully compatible with the manufacturer and anchoring system of the football goals. See Bid Form. Ensure goals are fully compatible to slide under football gooseneck/crossbar.
 - j. Game lines, yard line numbers, arrows, hash lines, sideline zones, midfield logos, end zone treatments, etc shall be provided as shown in plans and coordinated during the submittal process. All markings shall fully comply with IHSA and NFHS standards. Coordinate all marking details during submittals at no additional charge to the Owner. Marking Plans are provided for reference. Minor deviations during submittal coordination may occur as the Landscape Architect and Manufacturer finalize details.
 - a. New Field shall be striped for football (white), soccer (yellow).
 - k. Field finishing, including infill installation and grooming, as specified within. No additional cost will be borne by the Owner for coordination or adjustments after bidding.
 - l. Goalpost Pads. Provide protective pads at each new football goalpost. Coordinate color selection and text for the pad with the Landscape Architect during submittals.
 - m. Sideline Base Aggregate. The Constructor shall include within their Base Proposal removing and replacing a 10' wide strip of existing base stone, along both the Home and Visitor sidelines, immediately atop existing header/collector pipes. Existing collectors are 12" diameter perforated HDPE. Remove and replace existing aggregate media atop the header to reinvigorate drainage performance.

B. Bidding Approach

Include all necessary surveying, staking, drainage infrastructure, geotextiles, curbing, football goals, stone aggregate layers, installation of all base-related systems, shop drawings and coordination, synthetic carpet, infill/ballast, nailers, grooming, grooming equipment, inspection/maintenance requirements, deep cleaning, GMAX testing, and associated installation of all turf-related systems listed here. Warranties shall be included within the Base Bid.

C. Submittals

1. Bid Submittals

- a. List of similar projects completed by the Builder within the last two (2) years utilizing substantially similar turf product. Provide full Client contact information and details of the turf manufacturer and turf type.
- b. Identify any pending litigation involving either the synthetic turf manufacturer or Builder or both. Such documentation shall be provided confidentially to the Owner rather than the Design Team. Similarly, the Owner reserves the right to request insurance documentation and company financial reports from any Bidder or subcontractor performing work on-site as a means to evaluate capacity to perform the work.
- c. Identify the Foreman, Supervisor and Crew experience for the team executing this project installation. Include a list of completed projects in the last three (3) years by this specific team.
- d. Builder to provide independent laboratory testing data, such as Lisport testing or similar, to substantiate the comparative durability of the proposed synthetic system the other competing systems that may be offered for the Owner's consideration.
- e. Provide documentation of sources of infill materials. Local and regional sources are encouraged whenever possible.

2. Post-Bid Analysis

- A. **Credentials:** Qualifications and credentials are a critical component of determining the most responsive Bid for all athletic field construction. Provide a listing of previous field installations, including full Client contact information, within the sealed Bid submitted for this project. The successful Bidder shall demonstrate his or her experience, industry knowledge, specialized construction methods/techniques, and overall project approach.
- B. **Bidding:** Builders are advised that evaluating the most responsive Bid will include a combination of price, product type, credentials, and project approach. The Owner will review all materials, approach, credentials, and pricing within a Bidder's submission to determine which Bid is most responsive to the project goals and offers best value.
- C. **Samples:** Apparent most responsive Bidder shall provide a 2' x 2' sample of complete carpet and infill system. Samples should be constructed in a wood frame and capable of holding one person so they may stand on the finish product. One sample box for each turf type used in overall project, when applicable.

3. Pre-Construction Submittals

- a. Cut sheets and product samples for all products listed in Bid Submittals for Owner review and approval.
- b. Complete and detailed shop drawings from the Turf Manufacturer including layout of all components, parts and materials required for a complete synthetic system.

- c. Verification in writing provided to the Owner indicating no patent infringements have occurred in the Manufacturer's proposed synthetic system. The Owner and all his design, construction, and administrative agents shall be held harmless by the Manufacturer with regard to any legal action relating to patent infringements.
- d. Staking of shall be under the full control of the Builder. The Builder shall utilize a registered surveyor to provide all necessary stakes, batter boards, lines, etc., to establish grades required and corresponding benchmarks. The cost of staking shall be included in the Base Bid. A digital record of the actual field as-built measurements shall be made for the Owner's archives in both AutoCAD and PDF format.

4. Post-Construction Submittals

- a. Provide Record Drawings of the completed installation. Submit Record Drawings for review by the Owner ten (10) days prior to Substantial Completion. Include the following:
 - 1) Underdrain locations and inverts.
 - 2) Location of primary seam locations on the synthetic turf installation.
 - 3) Operation & Maintenance Manuals.
 - 4) All warranty documents related to third-party coverage of base construction and synthetic turf, plus applicable coverage for field grooming equipment.

C. Quality Control

1. Turf Inspection: The Owner, the Owner's agents, and the Builder shall inspect all turf at the site prior to the start of any installation. Any damaged or defective items shall be rejected and subsequently replaced by the Builder.
2. Installed Turf: Installed turf shall be inspected for, but not limited to the following:
 - a. Acceptable seams
 - b. Uniformity of product and color
 - c. Surface bubbles
 - d. Field markings
 - e. Field edge installation
 - f. Pile height of each roll supplied shall be measured
 - g. Pile height in its finished position
 - h. Surface tension

Any products or materials that fail to meet the minimum requirements shall be rejected.

3. Manufacturer shall provide up to three (3) random samplings of the turf product obtained during the specific manufacturing process of this project's order. Verify that all carpet meets or exceeds the specifications prior to shipment to ensure installation delays are avoided.
4. Weather Conditions: Only install turf according to weather requirements provided by the Manufacturer. Review all installation requirements and product limitations with Owner and Landscape Architect prior to commencing work.
5. Workmanship: All seams and inlaid markings shall be flat, tight, and permanent with no separation or fraying.
6. Cushioning: The dynamic cushioning of the combined turf and infill material supplied shall not exceed the following criteria:
 - a. ASTM Test F355e- Average maximum value of GMAX 110 upon initial installation. A GMAX 140 may not be exceeded over the full warranty period.
 - b. ASTM Test F3146- Average maximum value of HIC 1000 at 1.3 meters upon initial installation.

- c. ASTM Test F3189-
 1. Shock Absorption- Average value between 55-70% upon initial installation.
 2. Energy Restitution- Average value between 20-50% upon initial installation.
 3. Vertical Deformation- Average value between 5.5-11mm upon initial installation.
- d. The Builder shall engage a third-party testing agency acceptable to the Owner to perform both GMAX and HIC testing on an annual basis throughout the warranty period as part of the Base Bid. No fewer than six (6) tests shall be performed by each testing device during each testing visit to compile a diverse, random assessment of the field. Any failures or deficiencies shall be remedied by the Builder as warranty work at no cost to the Owner.

D. Warranties

1. Turf Warranty: Within his or her Base Bid, the Builder shall provide a third-party, fully insured, pre-paid, and enforceable Warranty for no less than (8) years from the date of Substantial Completion of the project. UV degradation, drainage performance, base integrity, fiber strength, stability of the backing, tufted yarn and seam integrity, and all other related components of the synthetic turf system.
 - a. All warranties shall be in writing and remain valid should the Manufacturer be acquired by another company prior to the conclusion of said warranty.
 - b. Confirming warranty language shall be provided with each Respondent's bid. No pro-rated warranties shall be accepted.
 - c. Warranty coverage shall be a single-source, third-party insured warranty from an A-Rated domestic insurance carrier. Letters of credit, financial statements, and related-party companies are not permissible. Per claim coverage shall meet or exceed \$5,000,000 in protection to the Owner.

ALTERNATE BID A WARRANTY: The Builder shall provide an additional two (2) years of extended warranty protection added to the conclusion of the insured 8-year warranty included within Base Bid. The Owner shall allow this portion of the warranty to be by-Manufacturer rather than third-party insured.

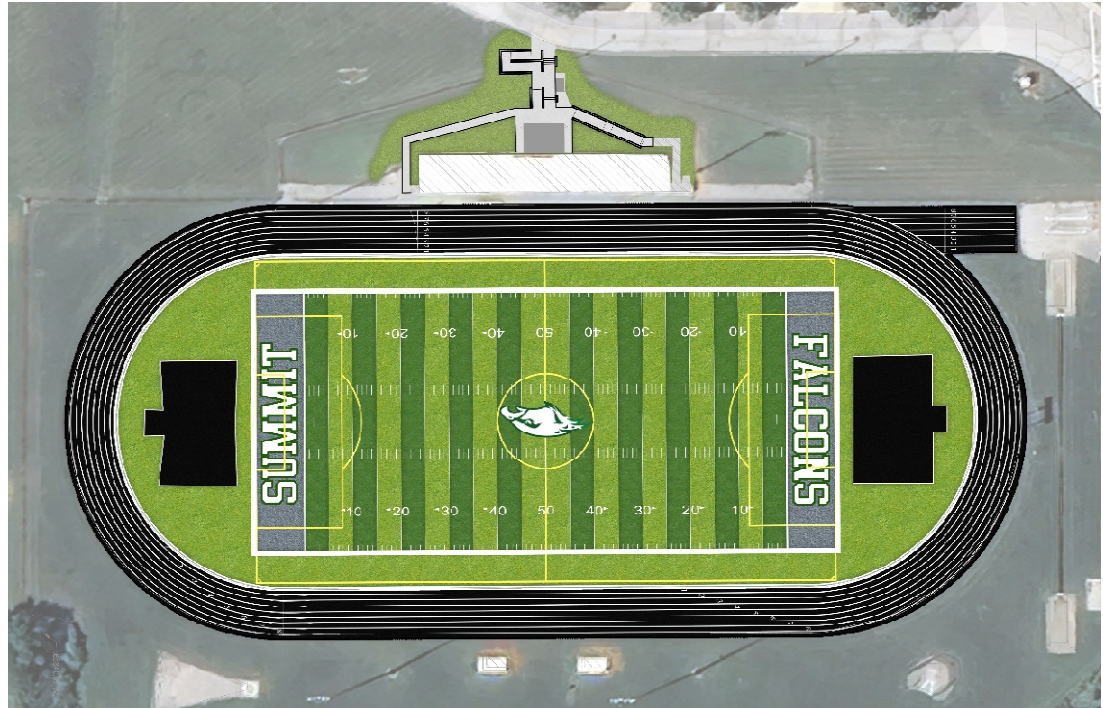
2. Quality Assurance: The Builder shall make inspections of the fields on no less than a quarterly basis during the two (2) year period following Substantial Completion to monitor performance and condition of the system. Bidder shall commit to utilizing a Certified Field Builder (CFB) as credentialed by the American Sports Builders Association, to perform inspections. Each inspection shall be conducted with the Owner present. Document and submit notes, pictures and a formal inspection report each inspection to the Owner. Any proactive measures required of the Builder to keep the field in proper working order shall be remedied within ten (10) days of such inspections by the Builder and Owner.
3. Training: Train the Owner for proper maintenance and upkeep of the synthetic system to ensure the warranty remains in force. Include one (1) deep clean of the infill material of the synthetic field at the conclusion of the first year of service for the turf within the Base Bid. Schedule to suit the Owner's convenience.
4. Attic Stock: Provide the Owner with a palette of crumb rubber "attic stock" material (2,000 lbs in either 50 lb individually-wrapped bags or a single oversized bag) at the conclusion of the project for their future use. Ensure the material is an exact match to the approved and installed rubber ballast on the field.
5. Repair Response Time: The Builder shall provide response time commitments for the execution of warranty repairs for inside & outside play-critical zones. See Bid Form.

PART 2 – PRODUCTS

2.1 Synthetic Turf Systems.

A. Football-Soccer-Lacrosse Field:

1. Dual-fiber System
 - Pile Weight: 52 oz. Dual fiber system anticipated with combination of slit-film and monofilaments. Provide and demonstrate long-lasting, durable performance in a high school facility anticipating heavy usage. Provide data with micron ratings and validation of yarn types for consideration by the Landscape Architect as part of the proposal response.
 - Contractor may elect to include any alternate proposal items addressing thatch, 8 oz. to 10 oz. Nylon or Texturized MFPE in their bid.
2. Pile Height: Consistent 2" height throughout all areas of the playing field and safety zones.
3. Construction Method: Broadloom Tufted.
4. Tufting Gauge: Minimum 3/8" or as approved in submitted samples.
5. Primary/Secondary Backing: 13 Pic Polybac / US80NW or equal Non-woven /18 Pic Polybac or as approved in submitted samples. Achieve no less than 10 lbs tuft bind per ASTM D1335.
6. Secondary Coating: Minimum 26 oz. Urethane or as approved in submitted samples.
7. Total Product Weight: Minimum 80 oz. / sq. yard or as approved in submitted samples.
8. Finished Roll Width: 180" Untrimmed.
9. Line Markings: In addition to the tufted lines and inlaid lines, the pile surface shall be suitable for both temporary and permanent line markings using paint specifically developed for this use and recommended by the turf manufacturer.
10. Seams: Seams shall be consistently stitched, glued, or both throughout the entirety of the field. Any seaming shall include fabric recommended by synthetic turf manufacturer.
11. Overall Color Intent: Colors inside the football playing area are anticipated to be a 'mown look' of alternating panels of Field Green and Rye Green. The "mown look" effect shall be subtle rather than heavy contrast. The Vendor shall validate color fields and finalize color blends during submittal process at no additional cost to the Owner.



12. Warranty: Eight (8) Year minimum Base Bid warranty. See option for 10-year warranty coverage.
13. Fill Requirement: A blend of Crumb Rubber and Silica Sand is base bid. The Owner anticipates a 50/50 blend of rubber/sand. The Vendor shall accommodate minor changes in the blend (up to 10% variation) at no additional expense to the Owner. Rubber materials shall be new media and the supplier disclosed within the response. Sources shall include Liberty Tire, Entech, Genan, or approved equal prior to responding. An Alternate Bid B contemplates organic infill, such as Safeshell, Greenplay, NaturalCool, Brockfill, Smoothplay, CoolPlay, or other pre-approved products prior to bidding. See Bid Form.
14. Fill Weight: Minimum of 5 lbs total weight, including no less than 3 lbs of rubber. Owner shall require 1/2" to 3/4" exposed fiber throughout the duration of the warranty.
15. Alternative Products. Should an alternate product be pursued, said system shall comply with all manufacturer recommendations for a high performance, durable use that meets or exceeds the requirements of this specification.

2.2 Synthetic Turf Underdrainage System

- A. Furnish geo-textile covered perforated flat panel drains with all end caps, adapters, transitions and fittings required for a complete system.
- B. Approved Manufacturers:
 1. Hydraway, 800-223-7015, 12" Hydraway 2000
 2. Advanced Drainage Systems, 800-821-6710; Model AdvanEdge 12"
 3. Varicore Technologies, Inc., 800-978-8007; Multi-Flow 12"

2.3 Collector Drains: Utilize C-Series Plans. Include all associated fittings, transitions, end caps, adapters, couplers, outlets, and connectors. Lateral flat-panel drains may terminate directly into detention trenches without fitted connections.

2.4 Concrete Curb and Perimeter Nailer:

- A. Curb: 3,500 PSI, minimum; Top Edges - 1/4" Radius Tooled.

B. Nailer: 2x4 Composite Wood or Treated Wood nailers appropriate for this application, fastened with tapcon or ramset every 24" on center.

2.5 Football Goals: Goals shall be provided with all associated footings, anchors, and hardware. All football goal products shall be an 8' offset, yellow powder coated, official High School width, 30' upright height with flags. Builder shall ensure model numbers shown below adhere to the criteria listed above. Also provide corresponding Soccer Goals to match manufacturer and model compatible of each Football Goal. Ensure retractable anchoring system is provided at the base of the football goal to latch and secure the Soccer Goal during use.

- a. Sportsfield Specialties - 8' Offset (preferred)
- b. Gill - 8' Offset.

2.6 Aggregate: A1 Stone Drainage Layer

Sieve Size	Percent Passing
1 1/2"	100%
1"	95-100%
3/4"	80-100%
1/2"	60-80%
3/8"	30-50%
#4	20-40%
#8	10-30%
#16	7-25%
#40	5-17%
#200	0-4%

Submit laboratory test providing a complete breakdown of the material and permeability prior to starting work.

2.7 Aggregate: A2 Washed Stone Choker Layer

Sieve Size	Percent Passing
1/2"	100%
3/8"	95-100%
#4	70-85%
#8	45-60%
#16	25-40%
#40	2-12%
#200	0-3%

Minor adjustments to aggregate blends may be approved by the Owner with prudent testing data to support the deviation. Permeability must be greater than 16" per hour for the finished synthetic system. Submit laboratory test providing a complete breakdown of the material and permeability prior to starting the work.

2.8 Shock Pad

A. Shock Pads: Contractor to provide shock pad under the entire extent of synthetic turf area. Coordinate grade transitions at perimeter curb edges to accommodate the thickness of the pad.

- 1. Pre-approved Shock Pad Products
 - a. ProPlay Sport 20
 - b. Brock SP17
 - c. Thermagreen Sportlite 15

2.9 Miscellaneous

- A. Power/Data Access Boxes: Base Bid shall provide and install access boxes intended for synthetic turf installation as called for within Civil and Landscape plans. Install at the back of nailer curb when indicated along a sideline. Install utility access boxes as called for on outside of track as shown on Civil and Landscape Plans. Connect each access box with 2" blank conduits as shown.**

PART 3 – EXAMINATION

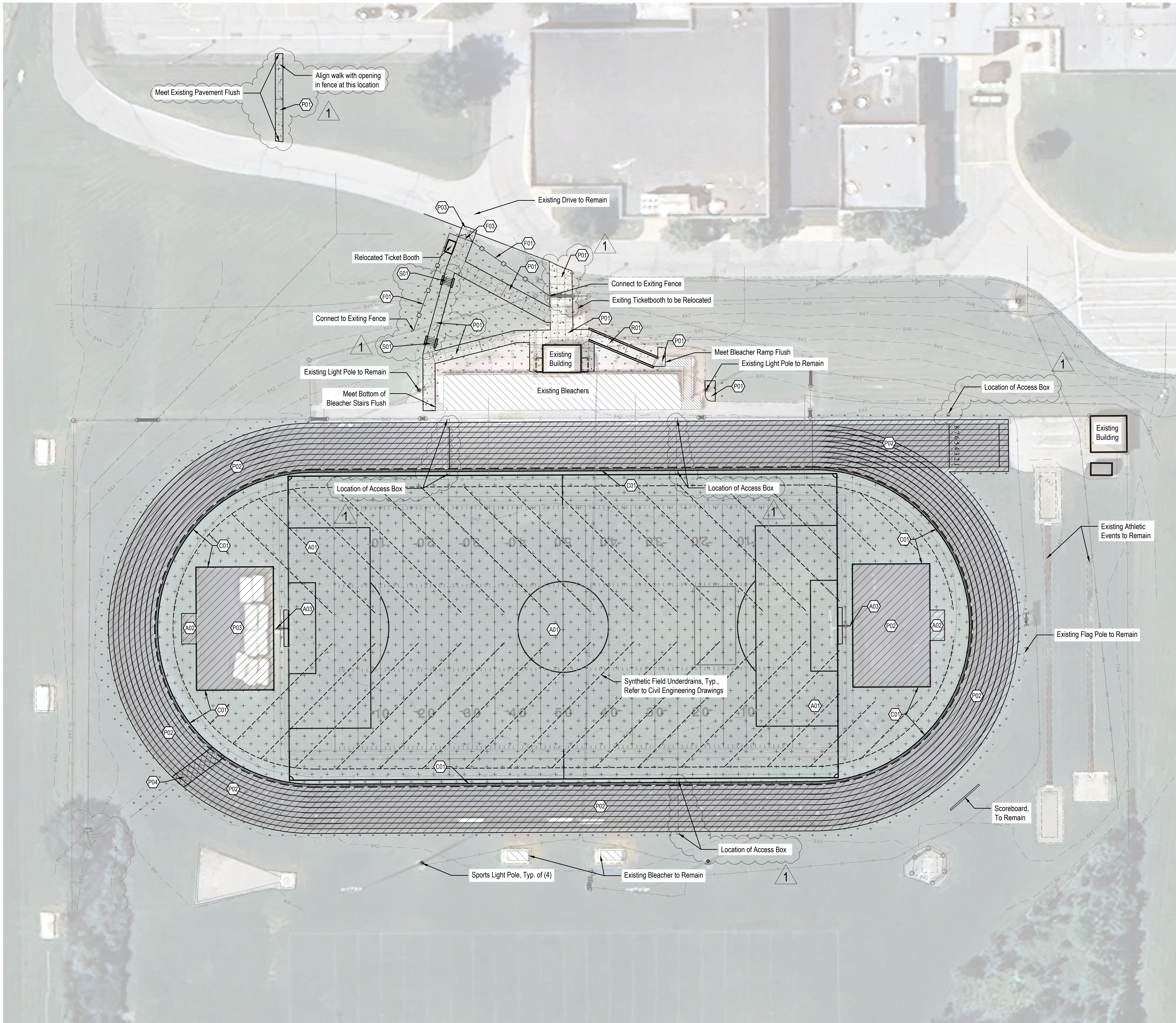
- A. The Builder shall validate pre-existing subgrade conditions prior to commencing work. Ensure proof roll requirements are met for a fully functioning, durable system.
- B. Verify that all sub-base leveling is complete prior to installation.
- C. The completed grade of the base and perimeter nailer shall be verified by means of a laser and plotted on a 10-foot grid. The Bidder shall supply a third-party professional survey documenting the conditions to ensure full compliance with the specifications. Based upon the Builder's inspection of the topographical survey, the Builder shall fine grade the base suitably, including properly rolling and compacting the base to achieve a surface planarity within 1/4" in 10-feet (+0, -1/4"). OWNER, ENGINEER, OR BUILDER SHALL NOT APPROVE THE BASE FOR TOLERANCE TO GRADE WITHOUT OBTAINING THE TOPGRAPHICAL SURVEY.
- D. The compaction of the aggregate base shall be 95% or greater, according to the Modified Proctor procedure (ASTM D1557), and the surface tolerance shall not exceed 0-1/4 inch over 10 feet and 0-1/2" from design grade.
- E. The Builder shall field-test the permeability of the base prior to the installation of the turf. Initial testing may be self-performed by the Builder over no less than five (5) broad areas of the playing surface to ensure that no less than 16" per hour of permeability can be achieved for the finished synthetic system. Verify the means for the test with the Landscape Architect prior to beginning testing. Should such tests validate performance indicative of the third-party drainage testing, no additional reports or documentation will be required to commence with turf replacement. If questions remain regarding performance, the Owner reserves the right to request third-party validation.

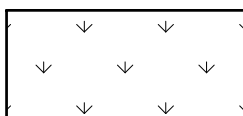
PART 4 – INSTALLATION

- A. Install in accordance with Manufacturer's instructions. The Builder shall strictly adhere to the installation procedures outlined under this section. Any variance from these requirements must be accepted in writing, by the Manufacturer's onsite representative, and submitted to the Landscape Architect and Owner for approval. The Builder shall verify that any changes or deviations do not adversely affect performance or the warranty. Infill materials shall be approved by the Manufacturer and installed in accordance with the Manufacturer's standard procedures.
- B. The carpet rolls are to be installed directly over the properly prepared aggregate base. Extreme care should be taken to avoid disturbing the aggregate base, both in regard to compaction and planarity. It is suggested that a 2-5 ton static roller is on site and available to repair and properly compact any disturbed areas of the aggregate base.
- C. The full width rolls shall be laid out across the field. Turf shall be of sufficient length to permit full cross-field installation from edge to edge of play limits whenever practical. Utilizing state of the art seaming procedures, as approved through the shop drawing and submittal process, each roll shall be attached to the next.
- D. Infill materials shall be applied in numerous thin lifts. The turf shall be brushed as the mixture is applied. The infill material shall be installed to a depth determined by the Manufacturer and approved in samples submitted during the bidding process.
- E. Infill materials shall be installed to fill the voids between the fibers and allow the fibers to remain vertical and non-directional. Ensure all blended infill materials are fully homogenous.

- F. The Bidder shall cooperate with the Owner to sequence work on and around the field.
Coordination with adjoining trades is essential to delivering the scope of work.

END OF SECTION



MATERIAL LEGEND	
PAVEMENT	
KEY	DESCRIPTION / REFERENCE
P01	STANDARD DUTY CONCRETE PAVEMENT, REFER TO DETAILS 2-4/L600 AND SPECIFICATION 321313
P02	ASPHALT MILL AND RESURFACE WITH TRACK SURFACING, REFER TO DETAIL 7/L600 AND SPECIFICATIONS 321216 AND 321823
P03	STANDARD DUTY ASPHALT, REFER TO DETAIL 1/L600 AND SPECIFICATION 321216
P04	STANDARD DUTY ASPHALT WITH TRACK SURFACING, REFER TO DETAIL 1/L601 AND SPECIFICATIONS 321216 AND 321823
RAMPS	
KEY	DESCRIPTION / REFERENCE
R01	RAMPS WITH CONCRETE CURB REFER TO DETAIL 6/L600
FENCING	
KEY	DESCRIPTION / REFERENCE
F01	CHAIN-LINK FENCE 6'-0" HT. BLACK VINYL COATED, REFER TO DETAIL 7/L600 AND SPECIFICATION 323113
F02	GATE, 4'-0" WIDE, MATCH ADJACENT FENCE HT. AND SPECIFICATION 323113
F03	GATE, DOUBLE LEAF 8'-0" WIDE, MATCH ADJACENT FENCE HT. AND SPECIFICATION 323113
ATHLETICS	
KEY	DESCRIPTION / REFERENCE
A01	SYNTHETIC TURF FIELD, REFER TO DETAIL 6/L601 AND SPECIFICATION 321813
A02	HIGH JUMP, REFER TO DETAIL 4/L601
A03	FIELD GOAL POST REFER TO SPECIFICATION 321813
CURBS	
KEY	DESCRIPTION / REFERENCE
C01	PERIMETER NAILER CURB, REFER TO DETAIL 7/L601 AND SPECIFICATION 321313
STAIRS	
KEY	DESCRIPTION / REFERENCE
S01	ALTERNATE: STAIRS, 5 RISERS, REFER TO DETAILS 1-3/L602 AND SPECIFICATION 033001
 SEEDED LAWN AREA, REFER TO SPECIFICATION 329200	



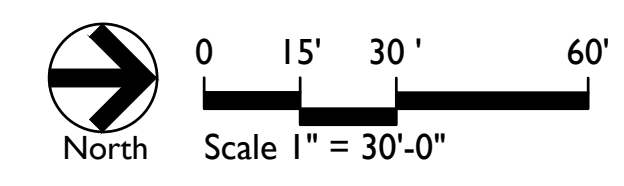
Construction Documents
Summit Middle School Track
4509 Homestead Rd., Fort Wayne, IN, 46814
Materials and Notes Plan

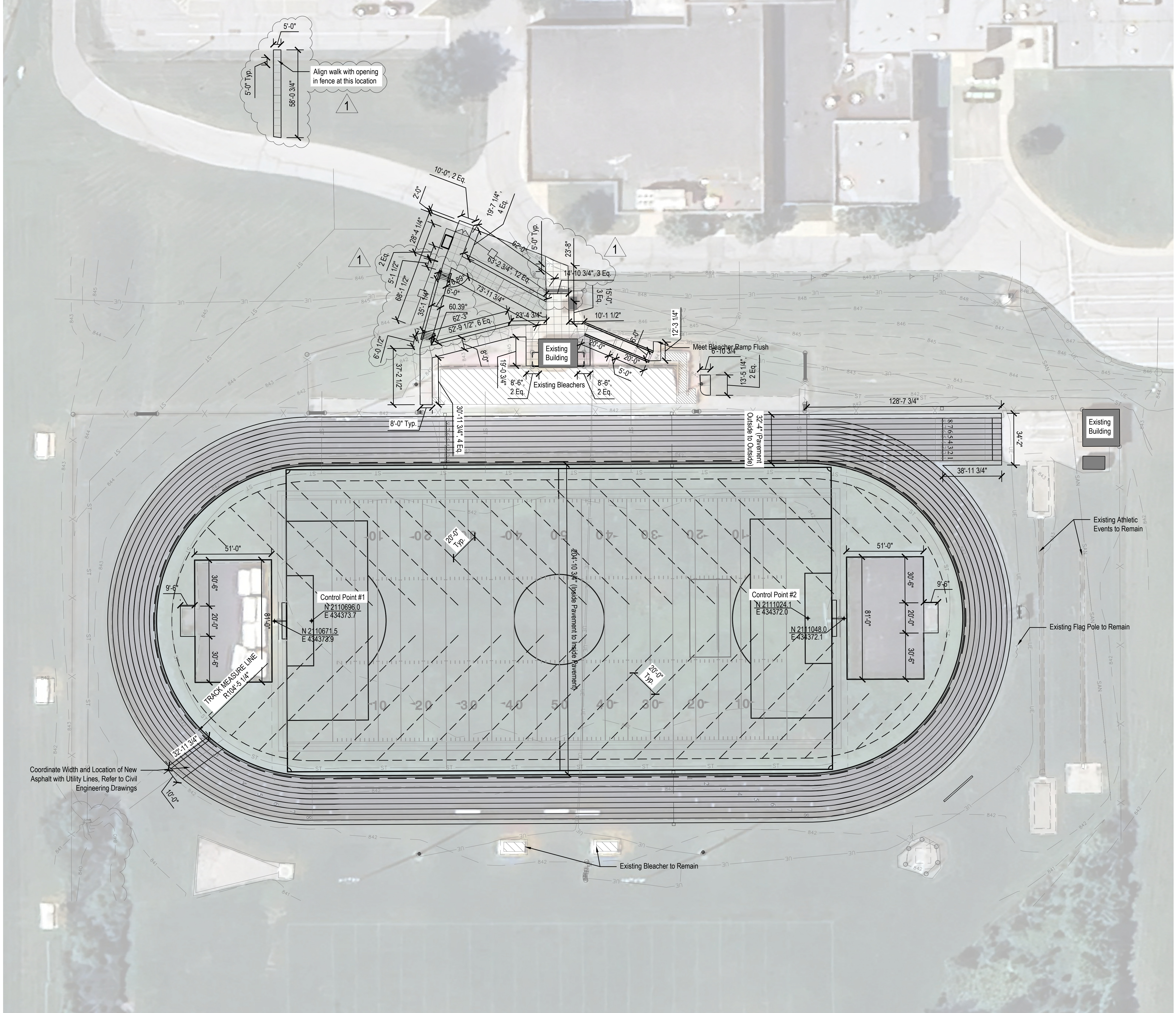
Revision	Date	Description
1	2026-03-04	Addendum #1

Date: 2026/02/06
Project No: 25-1923
Drawn by: CCH/BH/JT
Checked by: CCH

These Drawings and Specifications, and all copies thereof are and shall remain the property and copyright of the Landscape Architect. They shall be used only with respect to this Project and are not to be used on any other Project or Work without prior written permission from the Landscape Architect.

Sheet No:
L101





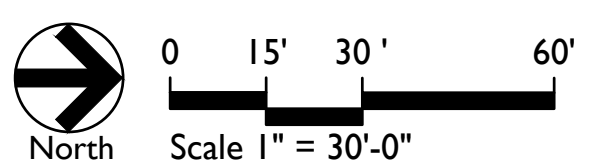
LAYOUT NOTES

- Dimensions are shown to Face of Curb unless otherwise noted.
- Contractor shall coordinate final joint locations in the field with the Landscape Architect. Align to existing conditions when practical, including at building and wall corners, connections to existing work, and to centerlines of doors.
- Space control joints evenly between all bands and expansion joints as shown, unless otherwise dimensioned. Space interim joints equally whenever possible.
- Digital AutoCAD files will be provided to the successful bidder as a courtesy to assist with field layout. The Contractor maintains all responsibility for the use, accuracy, and confirmation of such data.
- All pavement striping shown shall adhere to Specifications. The Contractor shall include in their bid any miscellaneous copy, striping, or curb painting that may be requested by the Fire Marshal.
- All disturbed areas not proposed to receive pavements shall be dressed with topsoil and seeded per Specifications.
- Contractor shall provide and install One (1) Accessible Parking Sign per accessible parking space indicated in plans. Coordinate final location in the field with Landscape Architect.



Construction Documents
Summit Middle School Track
 4509 Homestead Rd, Fort Wayne, IN, 46814
 Layout Plan

Coordinate Width and Location of New Asphalt with Utility Lines, Refer to Civil Engineering Drawings

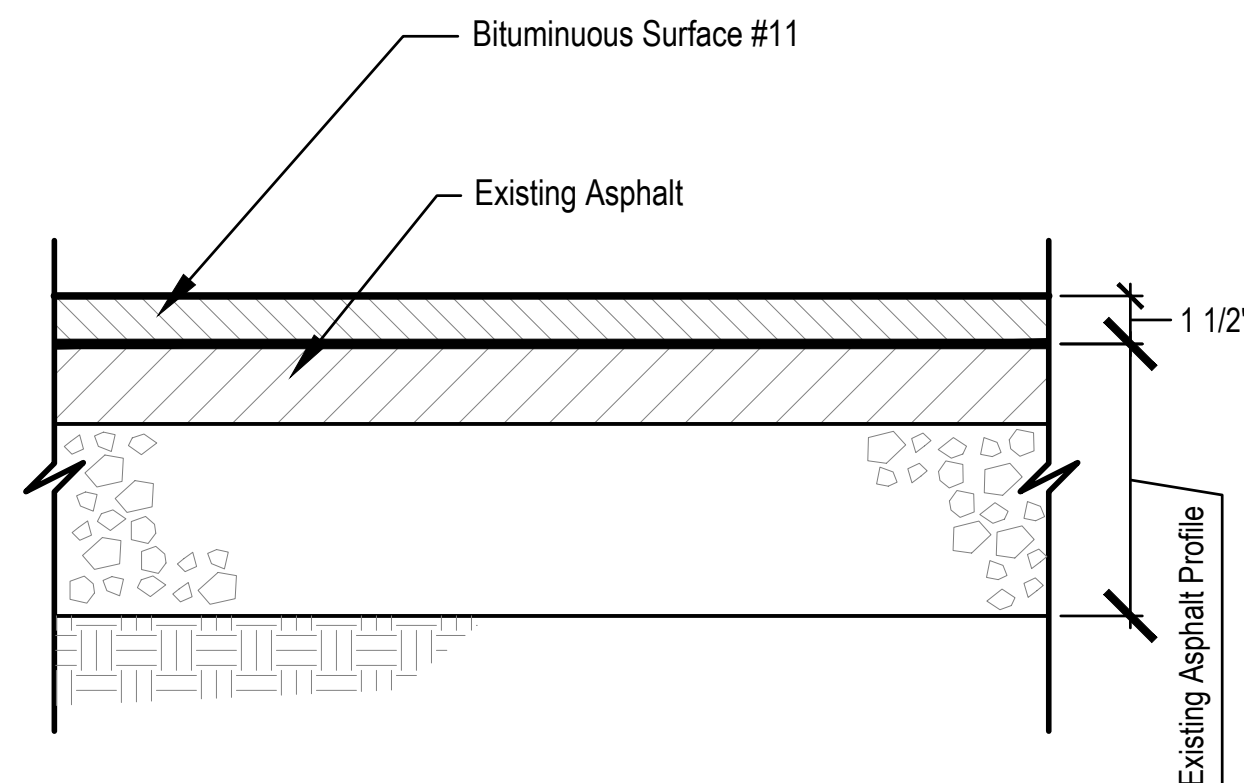


Revision	Date	Description
1	2026-03-04	Addendum #1

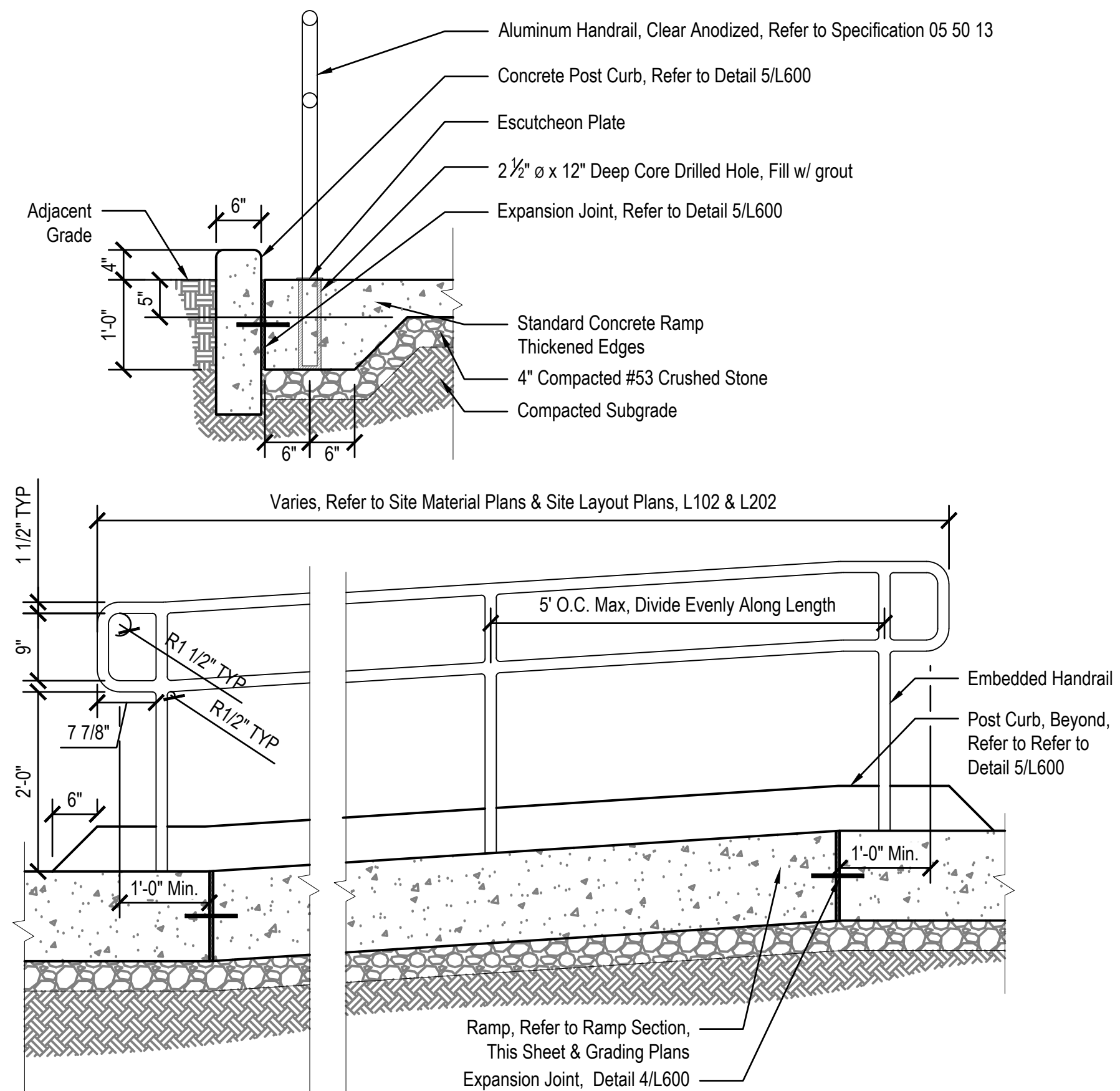
Date: 2026/02/06
 Project No: 25-1923
 Drawn by: CCH/BH/JT
 Checked by: CCH

These Drawings and Specifications, and all copies thereof are and shall remain the property and copyright of the Landscape Architect. They shall not be used for any other Project or Work without prior written permission from the Landscape Architect.

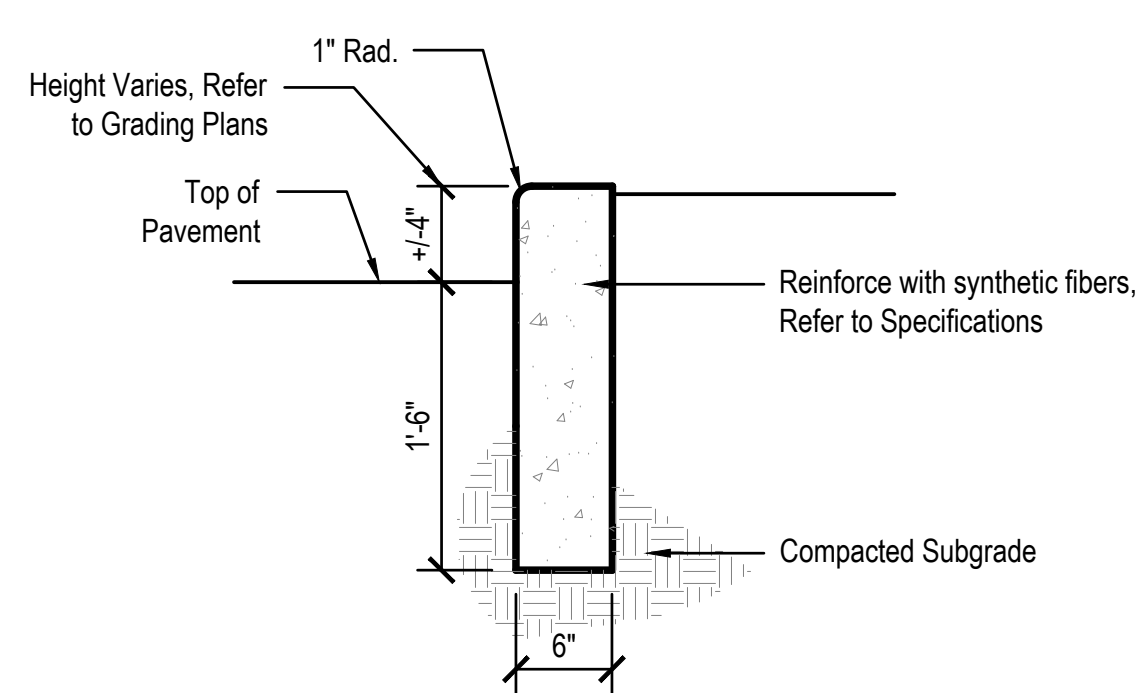
Sheet No:
L201



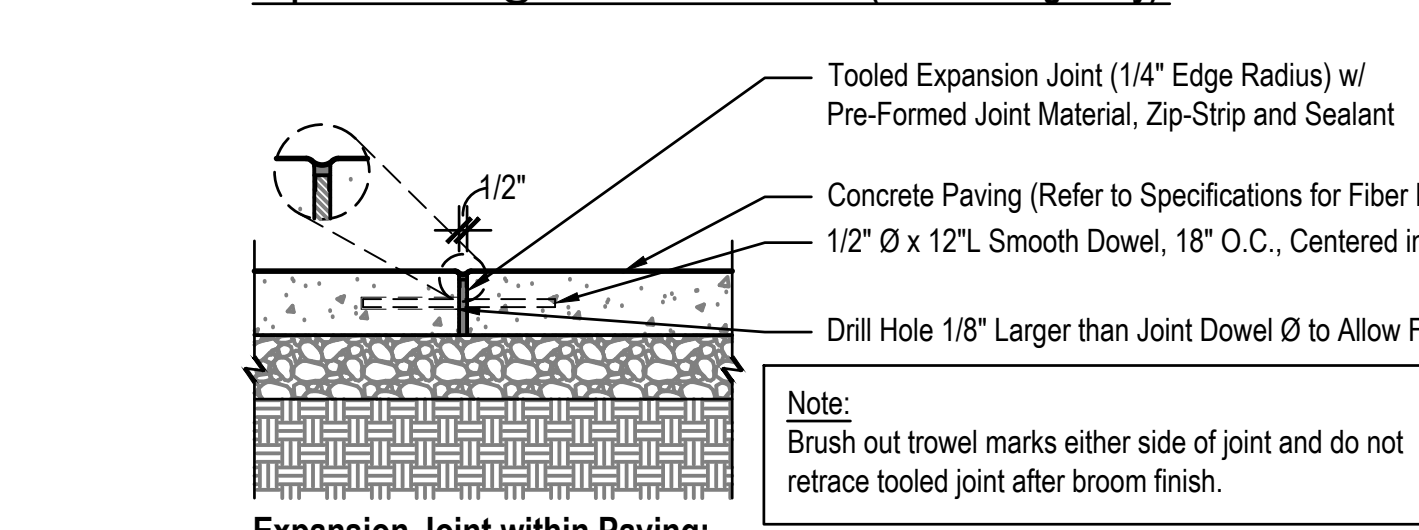
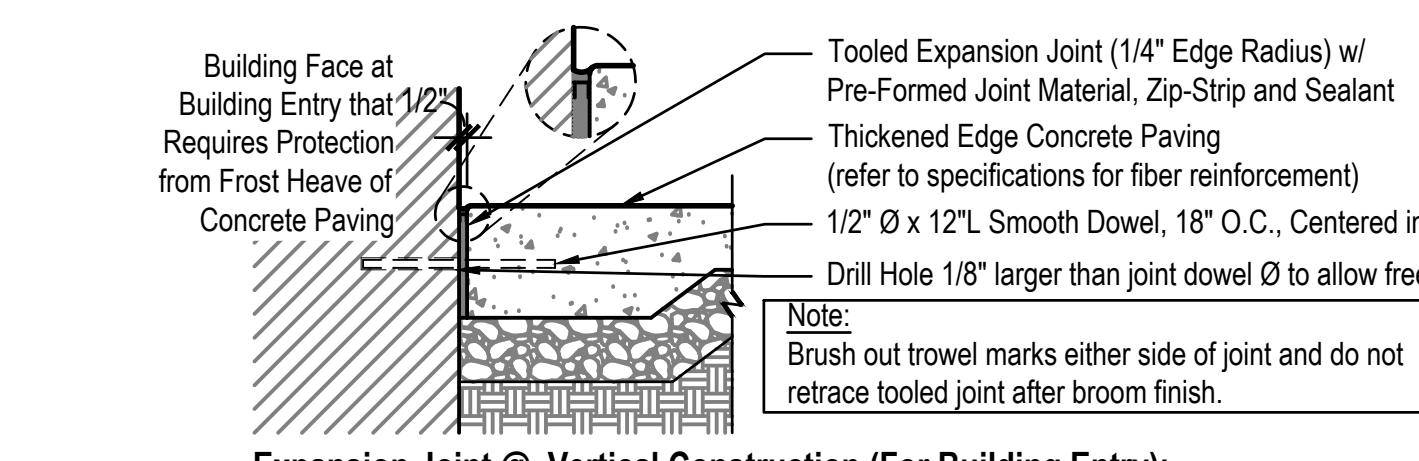
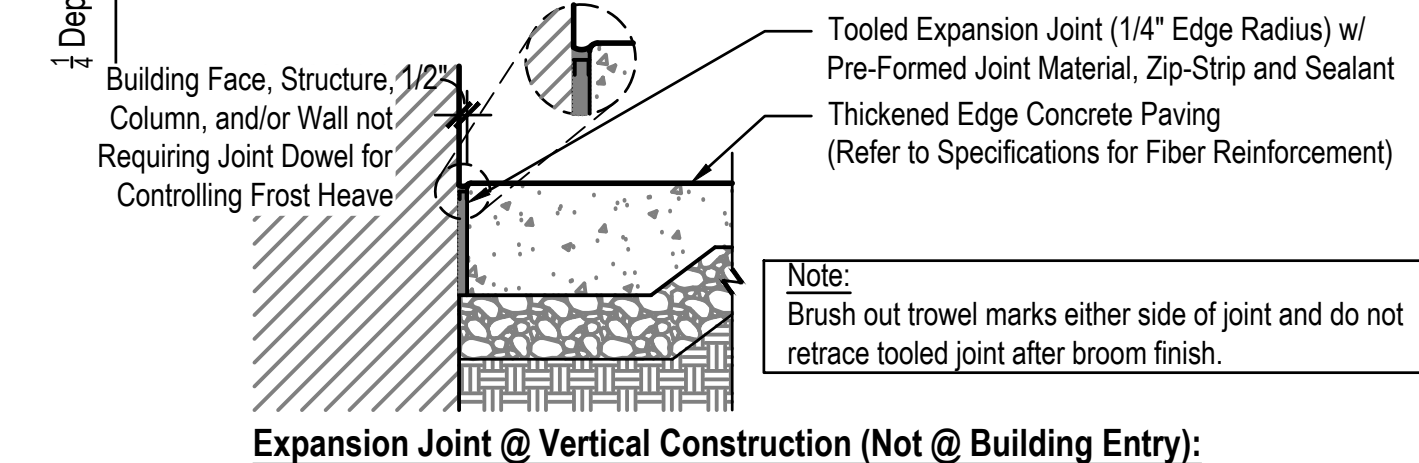
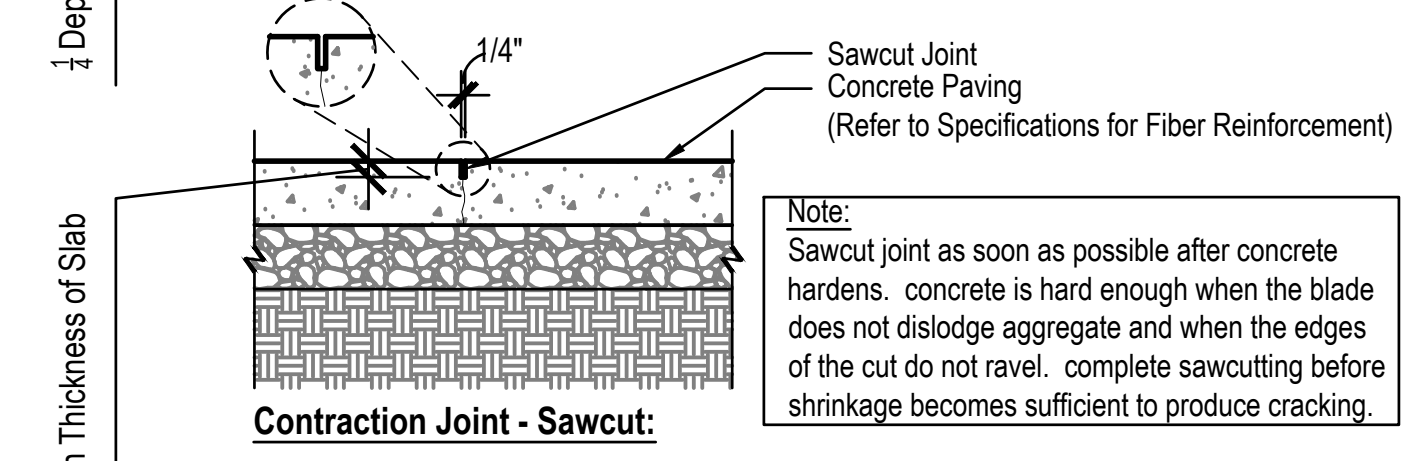
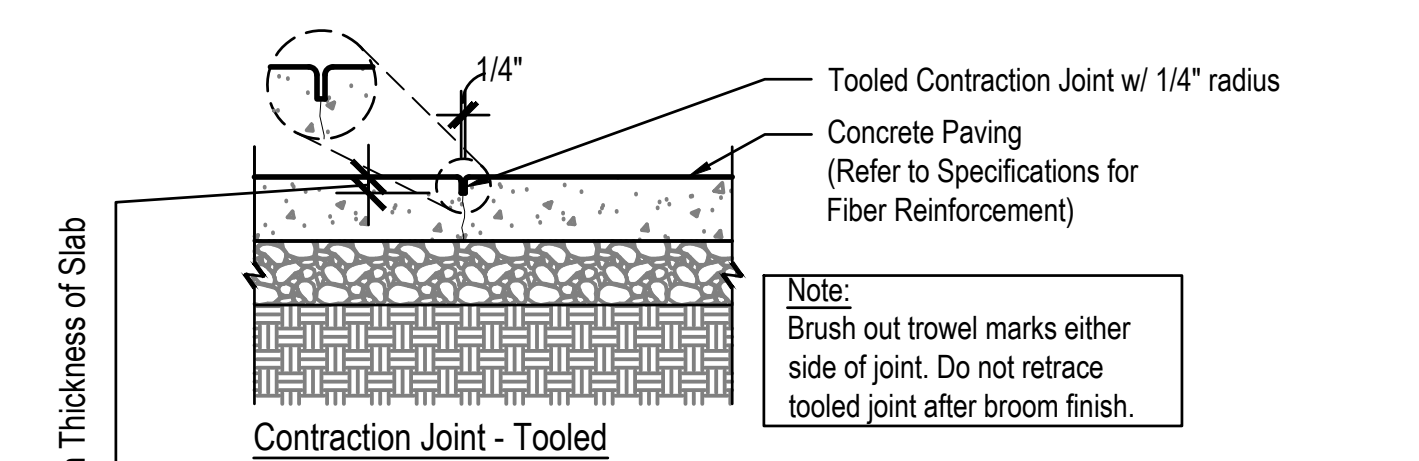
7 ASPHALT MILL AND RESURFACE
Not to Scale



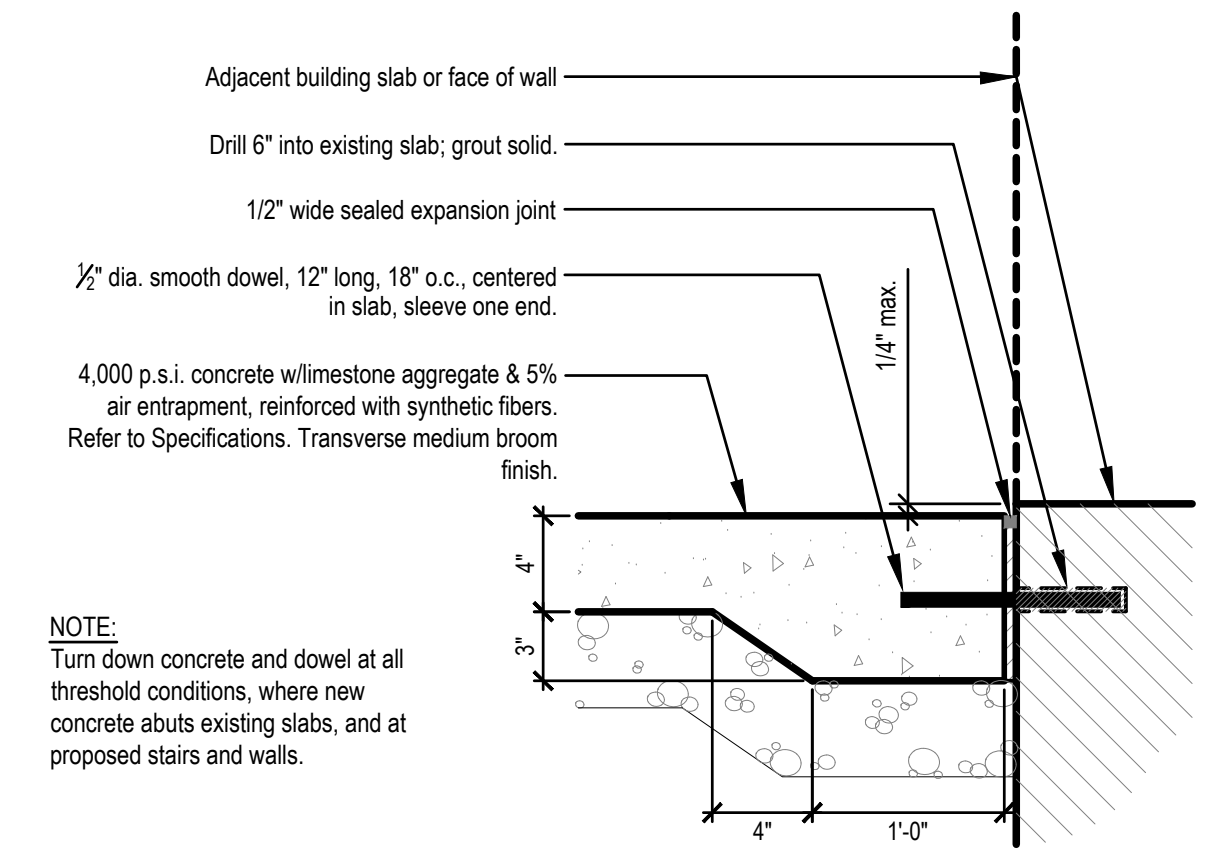
6 RAMP SECTION & ELEVATION, PROTOTYPICAL
Scale: 3/4" = 1'-0"



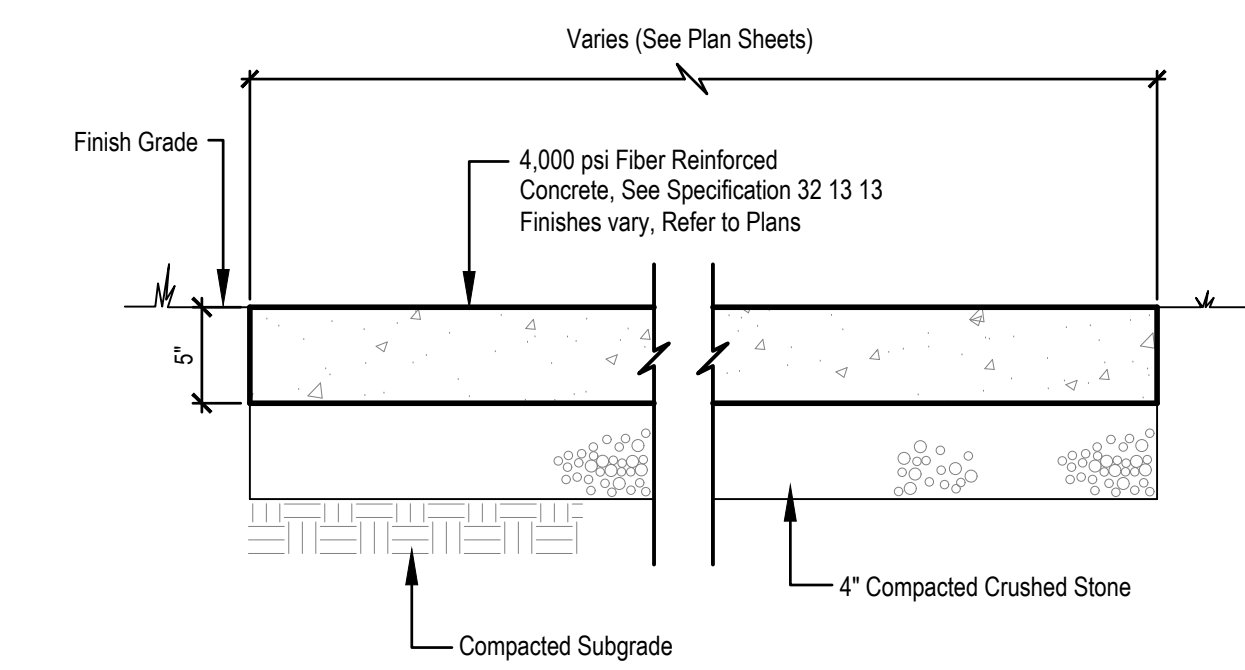
5 CONCRETE POST CURB
Scale: 1" = 1'-0"



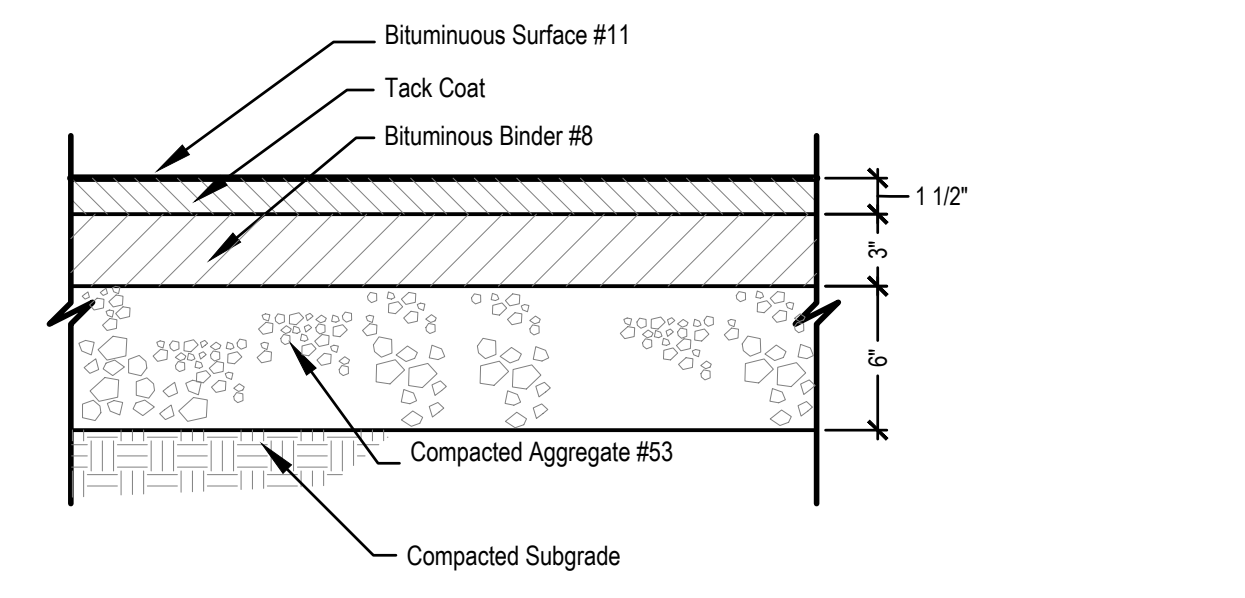
4 CONCRETE JOINTING
Scale: 1" = 1'-0"



3 DOWELS IN CONCRETE @ THRESHOLD
Scale: 1" = 1'-0"



2 STANDARD CONCRETE PAVEMENT
Not to scale



1 STANDARD ASPHALT PAVEMENT
Not to Scale

Revision	Date	Description
1	2026-03-04	Addendum #1

Date: 2026/02/06
Project No: 25-1923
Drawn by: CCH/BH/JT
Checked by: CCH

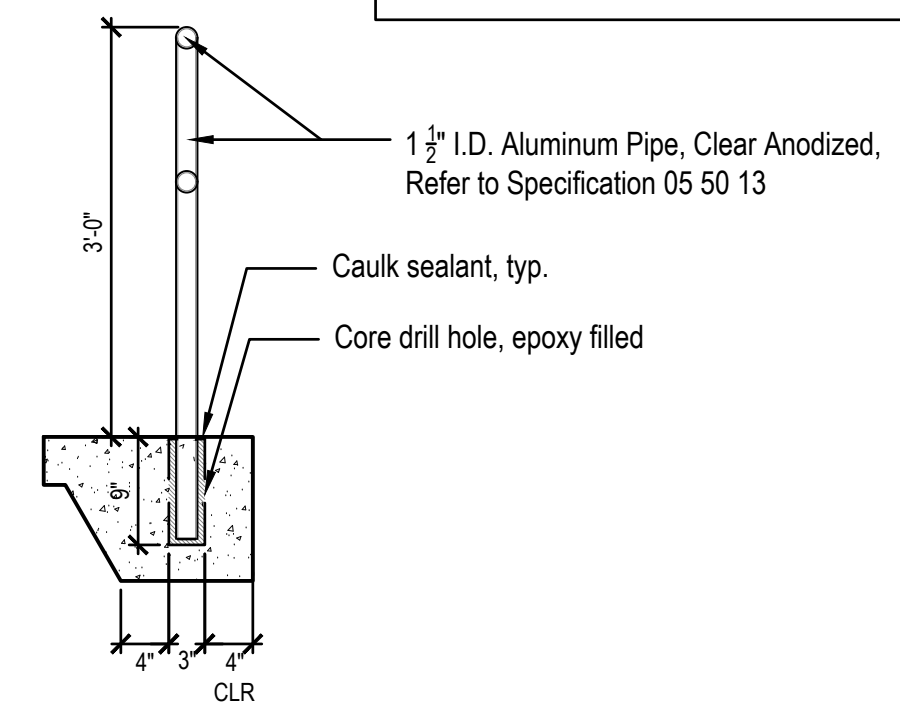
These Drawings and Specifications, and all copies thereof are and shall remain the property and copyright of the Landscape Architect. They shall be used only with respect to the Project and are not to be used on any other Project or Work without prior written permission from the Landscape Architect.

Revision	Date	Description
1	2026-03-04	Addendum #1

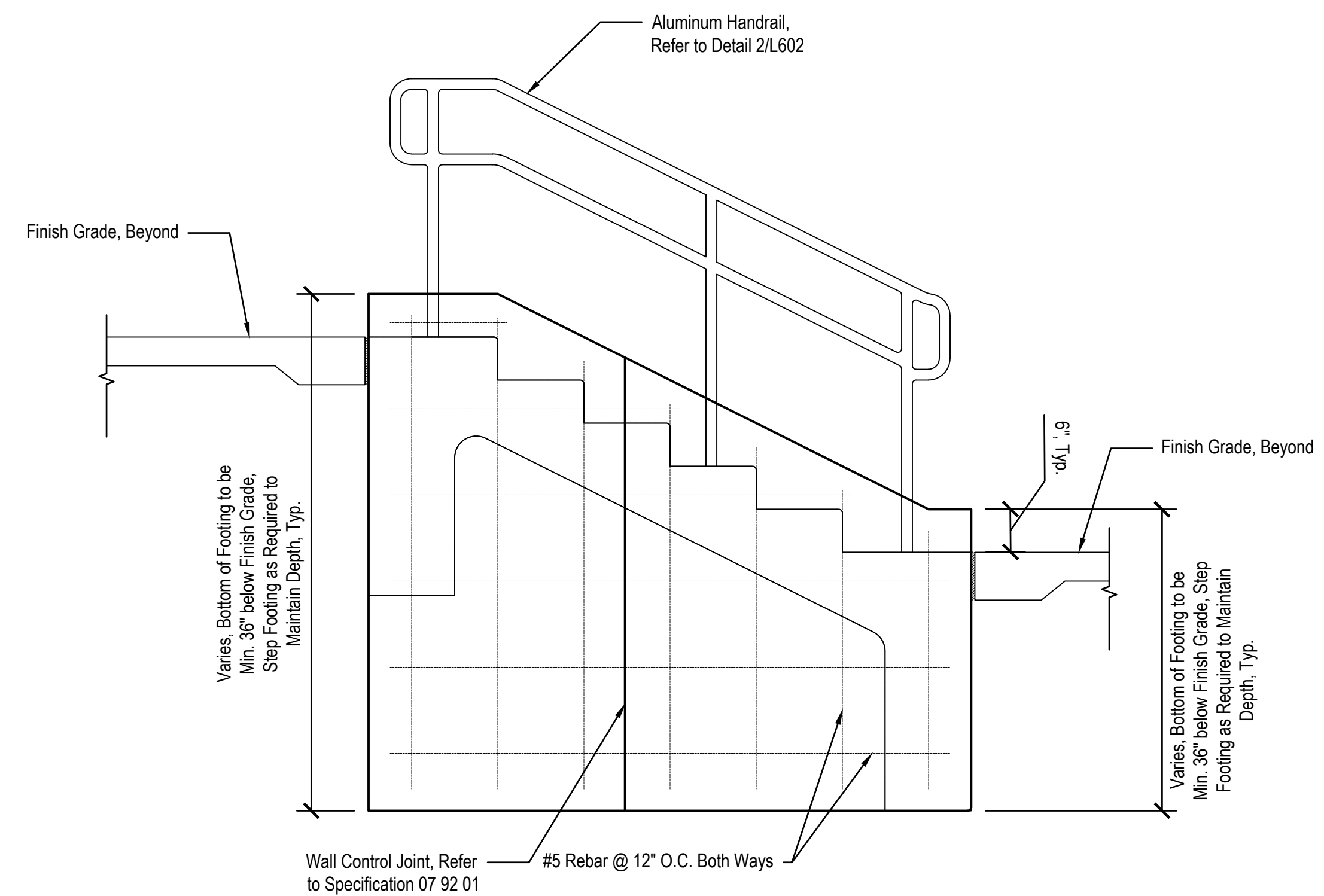
Date: 2026/02/06
Project No: 25-1923
Drawn by: CCH/BH/JT
Checked by: CCH

These Drawings and Specifications, and all copies thereof are and shall remain the property and copyright of the Landscape Architect. They shall be used only with respect to the Project and are not to be used on any other Project or Work without prior written permission from the Landscape Architect.

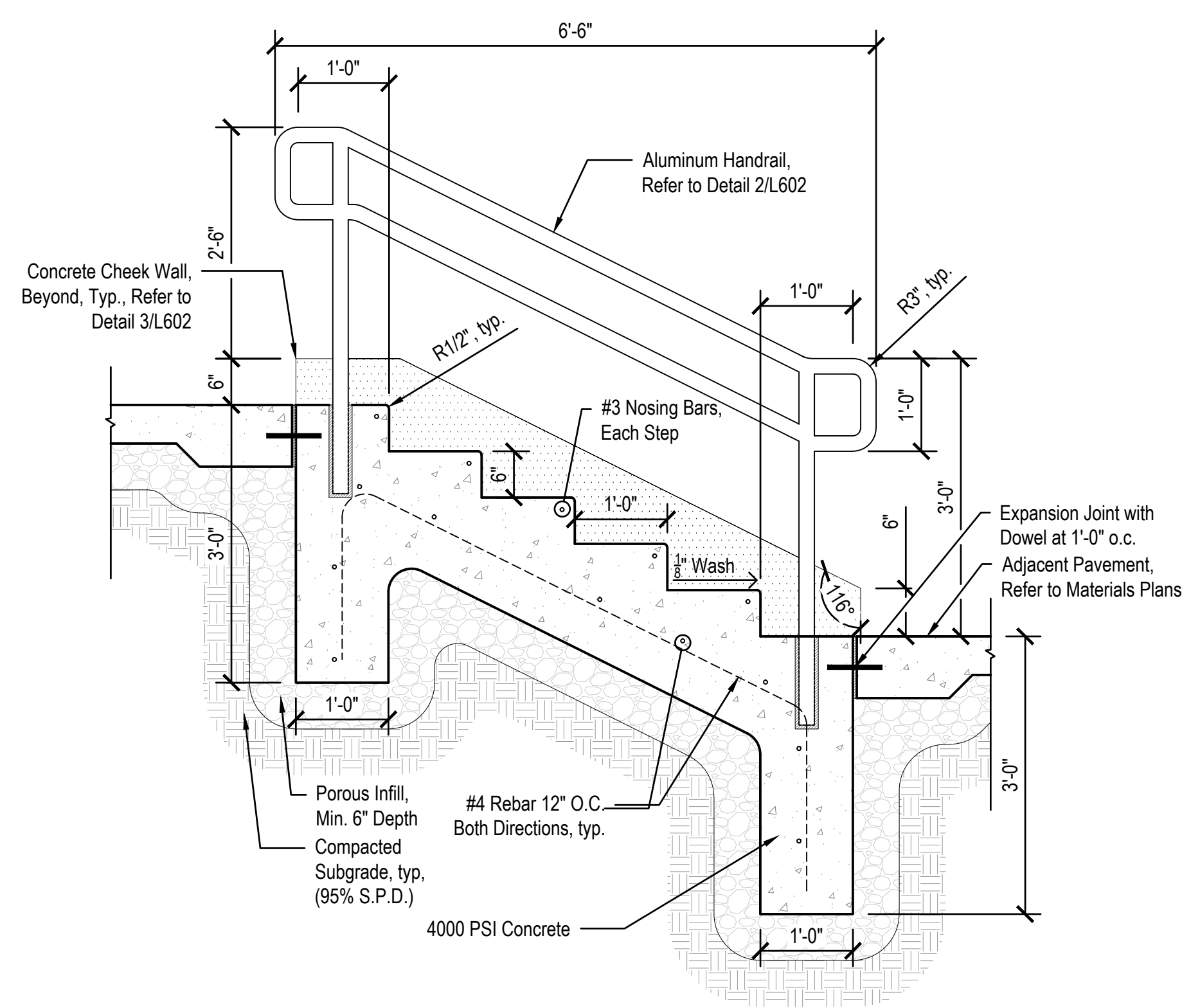
- NOTES:**
- Maintain handrail height at a constant 36" height above walking surface.
 - Miter cut, weld clean, and grind smooth all visible metal connections. Turn handrail back into posts at 90 degrees and weld connection at end conditions.
 - Submit shop drawings of all metal components to Landscape Architect for review prior to fabrication.
 - All Aluminum components shall be cleaned, primed, and clear anodized as specified by Landscape Architect in bid package.
 - Contractor to ensure all handrails can withstand no less than 200 pounds (890N) applied in any downward or outward direction within 2" of any point along the top edge of the rail.



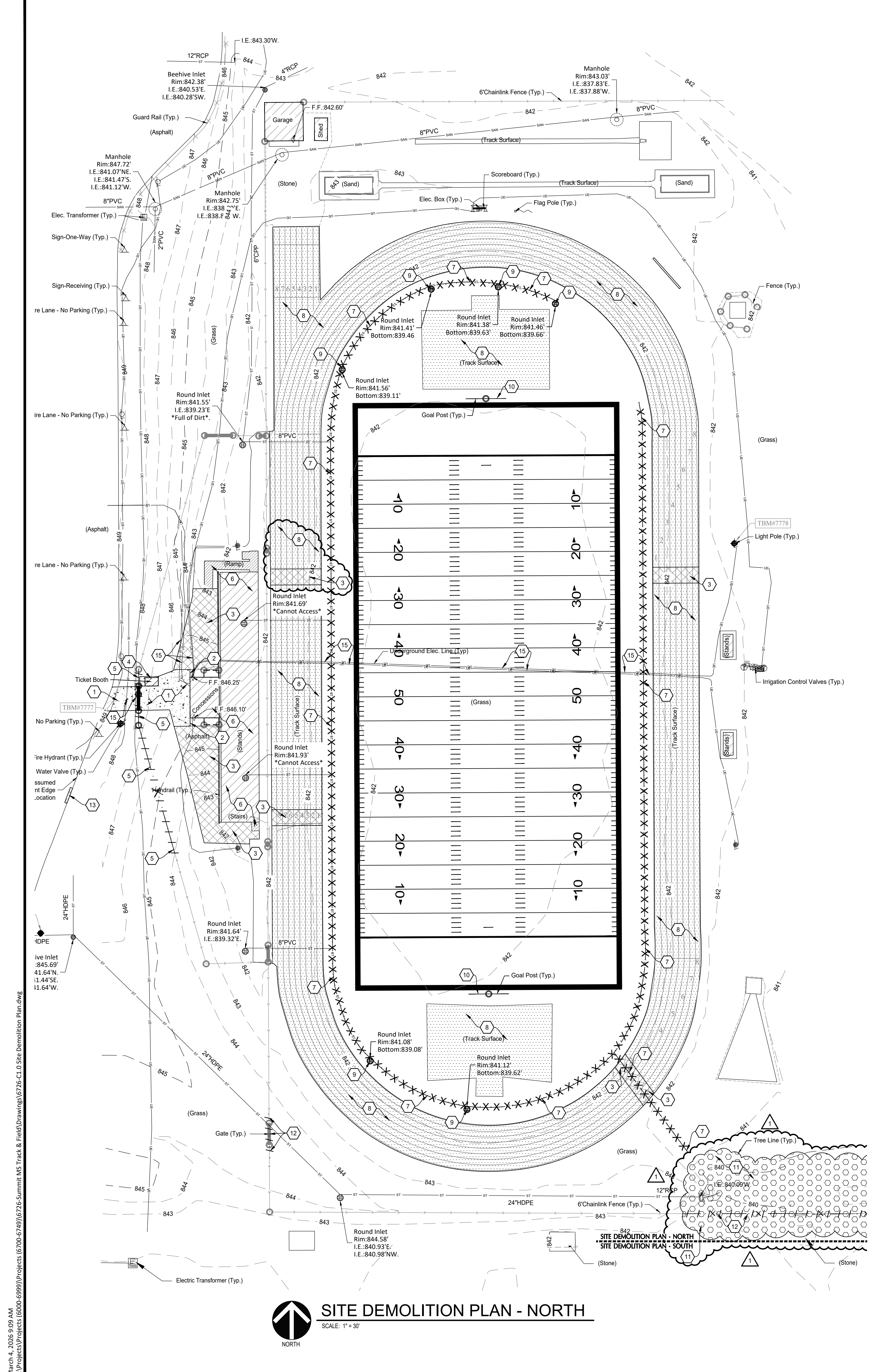
2 METAL HANDRAIL, EMBEDDED
Scale: 3/4" = 1'-0"



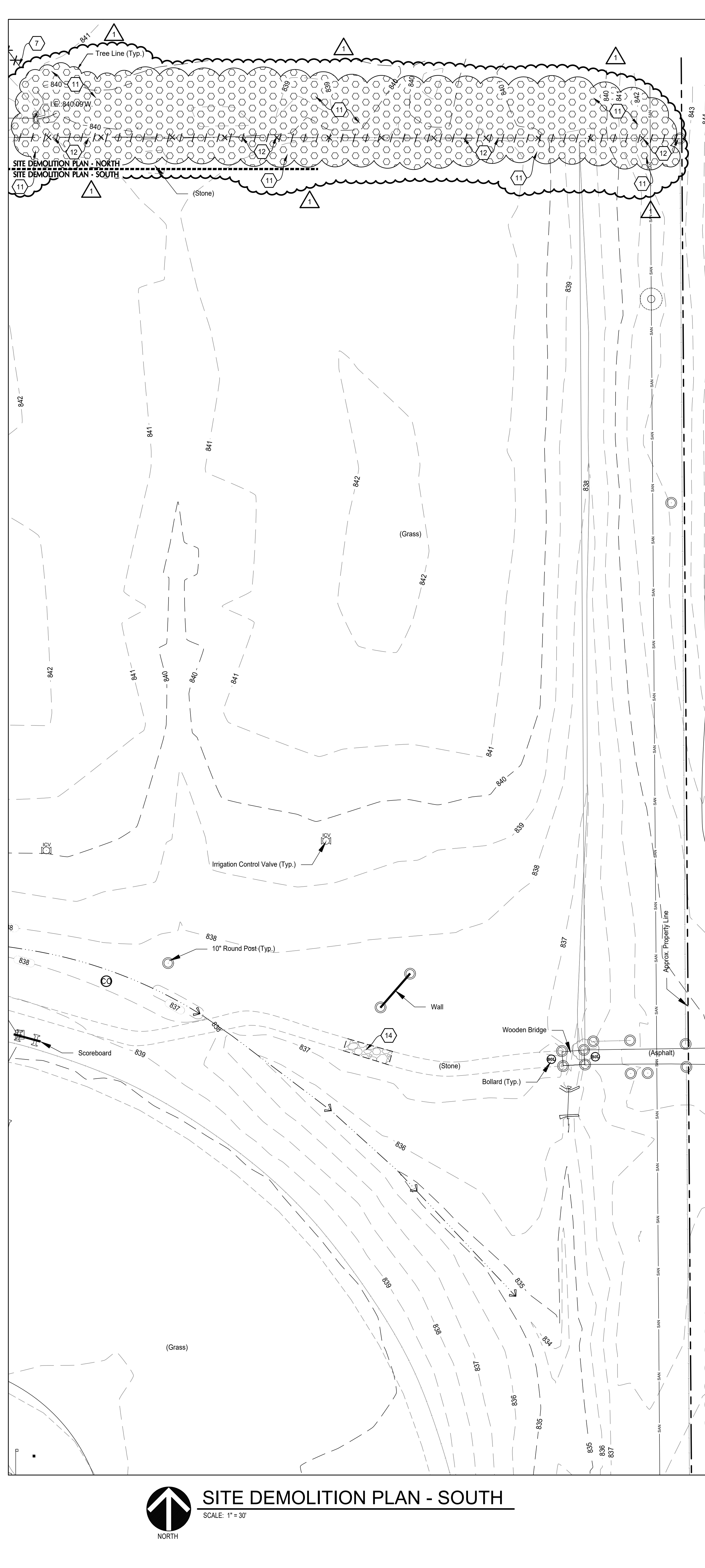
3 CONCRETE CHEEK WALL - SECTION
Scale: 3/4" = 1'-0"



1 STAIR, 5 STEPS
Scale: 3/4" = 1'-0"



SITE DEMOLITION PLAN - NORTH
SCALE: 1" = 30'

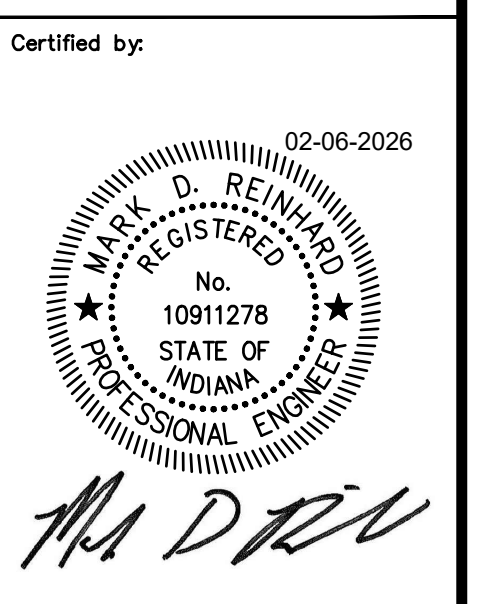


SITE DEMOLITION PLAN - SOUTH
SCALE: 1" = 30'

- DEMOLITION LEGEND:**
- SAWCUT AND REMOVE ASPHALT PAVEMENT.
 - SAWCUT AND REMOVE CONCRETE SIDEWALK, DRIVE, OR SLAB.
 - MILL 1 1/2" MIN. OF EXISTING TRACK SURFACE. SEE GRADING PLAN FOR FINAL PROPOSED GRADES.
 - REMOVE TREES AND BRUSH.
 - REMOVE STONE.
 - REMOVE OR ABANDON UTILITY, AS REQUIRED, FOR NEW CONSTRUCTION. COORDINATE ALL WORK WITH UTILITY OWNER.
 - REMOVE FENCE INCLUDING FOUNDATIONS.

- DEMOLITION NOTES:**
- 1 SAWCUT AND REMOVE CONCRETE SIDEWALK/PAVEMENT.
 - 2 SAWCUT AND REMOVE CONCRETE SIDEWALK AT NEAREST JOINT.
 - 3 SAWCUT AND REMOVE ASPHALT PAVEMENT.
 - 4 REMOVE AND RELOCATE TICKET BOOTH, SEE ARCHITECTURAL DRAWINGS.
 - 5 REMOVE FENCE INCLUDING FOUNDATIONS.
 - 6 PROTECT EXISTING CONCESSIONS BUILDING & BLEACHERS FROM DAMAGE DURING CONSTRUCTION.
 - 7 REMOVE STORM LINE.
 - 8 MILL 1 1/2" MIN. OF EXISTING TRACK SURFACE. SEE GRADING PLAN FOR FINAL PROPOSED GRADES.
 - 9 REMOVE STORM STRUCTURE.
 - 10 REMOVE GOAL POST INCLUDING FOUNDATIONS.
 - 11 REMOVE TREE(S) AND BRUSH, INCLUDING ROOT BALLS.
 - 12 REMOVE AND REPLACE FENCE, GATE, AND POSTS, AS NEEDED FOR CONSTRUCTION OR AS NEEDED FOR CONSTRUCTION EQUIPMENT ACCESS.
 - 13 SAWCUT AND REMOVE 12" MIN. ASPHALT PAVEMENT TO PROVIDE A CLEAN EDGE.
 - 14 REMOVE STONE PATH AS NEEDED FOR CONSTRUCTION OF UTILITY.
 - 15 CONTRACTOR TO PROTECT EXISTING UTILITIES.

- GENERAL NOTES:**
1. OBTAIN ALL REQUIRED PERMITS AND COORDINATE INSPECTIONS FROM AUTHORITIES HAVING JURISDICTION.
 2. CONTRACTOR SHALL NOT INTERRUPT ANY SERVICE TO ADJACENT PROPERTIES WITHOUT WRITTEN AUTHORIZATION FROM PROPERTY OWNER. AN EMERGENCY PLAN SHALL BE PROVIDED TO THE ENGINEER PRIOR TO CONSTRUCTION TO OUTLINE CORRECTIVE MEASURES IN THE EVENT OF ANY UNAUTHORIZED UTILITY SHUTDOWN.
 3. CONTRACTOR SHALL STUDY ALL DRAWINGS PRIOR TO CONSTRUCTION. RESEARCH PUBLIC UTILITY RECORDS, CONTACT THE LOCAL UTILITY LOCATOR SERVICE, AND FIELD VERIFY ALL EXISTING STRUCTURES PRIOR TO CONSTRUCTION. CONTACT ENGINEER FOR DIRECTION IF EXISTING UTILITY CONDITIONS CONFLICT WITH PROPOSED WORK, OR ANY ALTERATIONS SHALL BE THE CONTRACTORS RESPONSIBILITY.
 4. EXISTING UTILITIES ARE APPROXIMATIONS BASED ON BEST AVAILABLE DATA. CAUTION SHALL BE EXERCISED TO NOT INTERRUPT SERVICE TO ANY BUILDING. EXPLORATORY TRENCH TO VERIFY DEPTH AND LOCATION OF SEWERS PRIOR TO CONSTRUCTION OF NEW SEWER UTILITIES. ASSURE ALL SANITARY FLOW IS DIRECTED INTO THE SANITARY SEWER ON-SITE AND ALL STORM WATER IS DIRECTED INTO THE STORM SEWER SYSTEM.
 5. CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION REQUIRED BY UTILITY OWNERS TO CONSTRUCT PROJECT.
 6. PROVIDE RECORD DRAWINGS TO THE OWNER FOR BELOW GRADE IMPROVEMENTS. INCLUDE MATERIALS OF CONSTRUCTION, SIZE, ELEVATIONS, AND LOCATION DESCRIPTIONS IN THE RECORD. RECORD DRAWINGS SHALL BE CERTIFIED BY A LAND SURVEYOR REGISTERED IN THE STATE OF INDIANA.
 7. CONTRACTOR SHALL COORDINATE WITH EACH UTILITY PROVIDER TO DETERMINE TOTAL COST OF SERVICE TO BUILDING AND TO INCLUDE IN THE COST OF THE PROJECT.
 8. CONTRACTOR SHALL LOCATE ALL PRIVATE UTILITIES NOT COVERED BY THE PUBLIC LOCATING SERVICE.
 9. CONSTRUCTION DE-WATERING AS NECESSARY BY CONTRACTOR.
 10. ADJUST ANY EXISTING MANHOLES, VALVES, HYDRANTS, AND HANDHOLES, LOCATED WITHIN PROJECT LIMITS, TO PROPOSED GRADES.
 11. CONTRACTOR SHALL SUPPORT AND PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION OF ADJACENT WORK.
 12. SEE SITE SURVEY FOR EXISTING CONDITIONS. IF ABANDONED WELLS ARE DISCOVERED ON THE PROPERTY, THEY MUST BE CAPPED BY A LICENSED WELL DRILLER ACCORDING TO INDIANA WELL DRILLING CODES AND REGULATIONS.
 13. COORDINATE ALL DEMOLITION WORK WITH OWNER.
 14. CONTRACTOR IS RESPONSIBLE FOR ALL PERMIT FEES, TAPPING FEES, INSPECTION FEES, ETC.



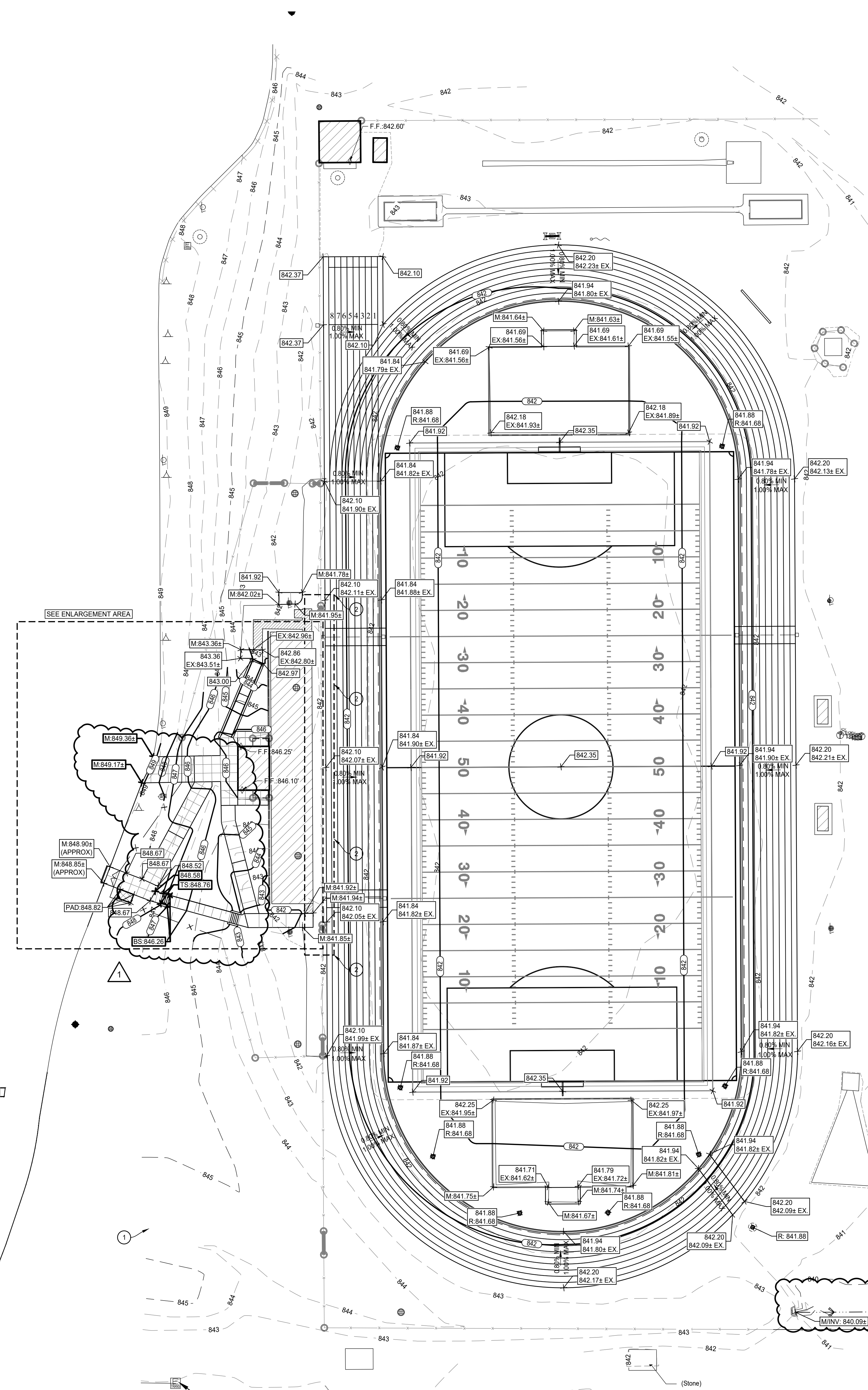
Revision	Date	Description
	03-04-2026	ADDENDUM #1

Date: 2/6/2026
Project No: 25-1923
Drawn by: KRK
Checked by: SK

These Drawings and Specifications, and all copies thereof are and shall remain the property and copyright of the Landscape Architect. They shall be used only with respect to this Project and are not to be used on any other Project or Work without prior written permission from the Landscape Architect.

March 4, 2025 9:59 AM S:\Projects\Projects (6000-6999)\Projects (6700-6749)\6725-Summit MS Track & Field\Drawings\6725-CI.0 Site Demolition Plan.dwg

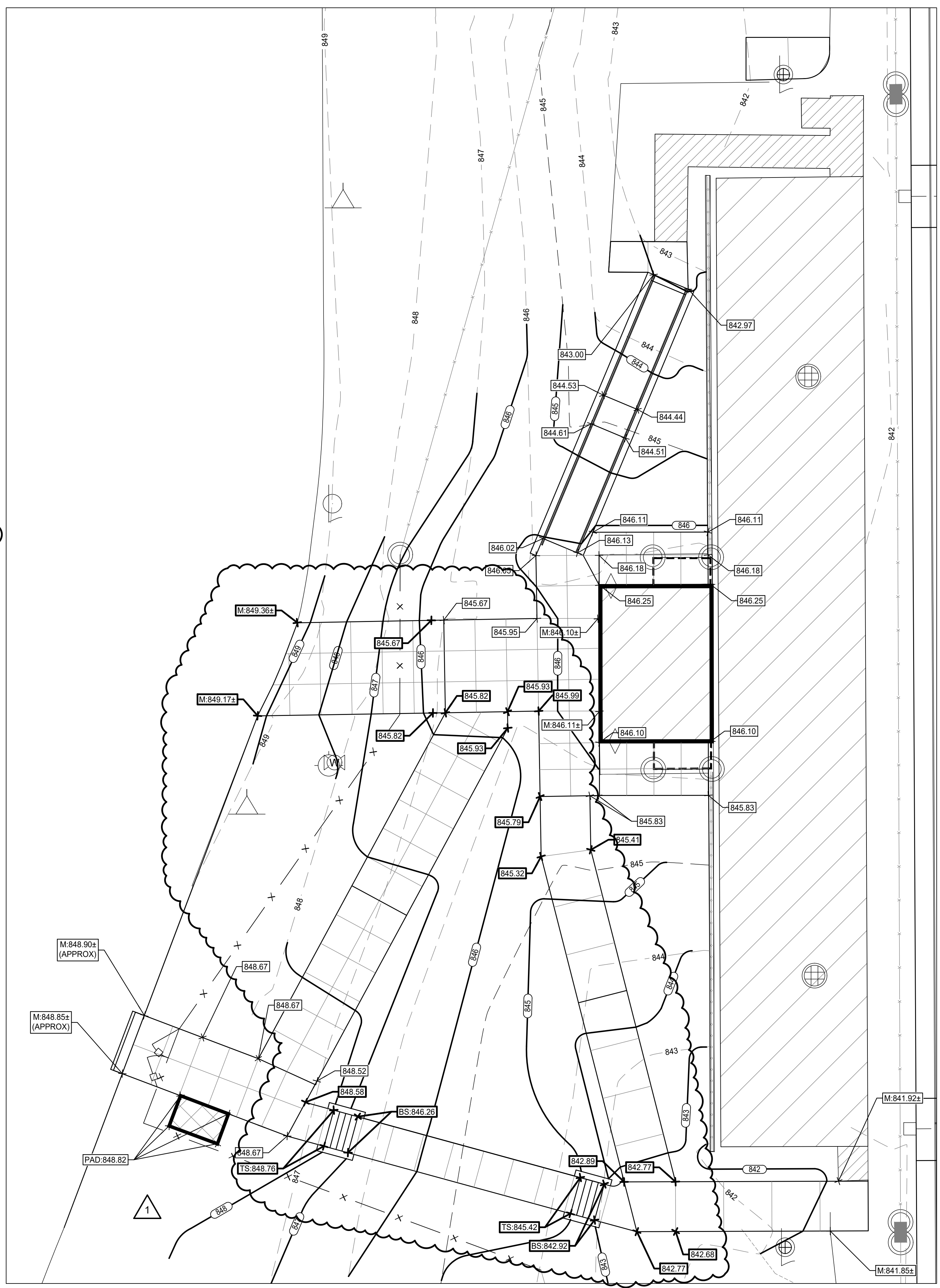
March 4, 2025 9:59 AM
 S:\Projects\Projects (6000-6999)\Projects (6000-6999)\5725-Summit MS Track & Field\Drawings\5725-C2.0 Site Grading Plan.dwg



- GRADING LEGEND:**
- 800 — PROPOSED CONTOUR
 - - - 801 - - - EXISTING CONTOUR
 - + MXXX.XX MATCH EXISTING SPOT
 - + EXXXX.XX EXISTING SPOT
 - + PXXX.XX PROPOSED SPOT
 - + RXXX.XX PROPOSED RIM
 - + TWLXXX.XX PROPOSED TOP OF WALL
 - + BWLXXX.XX PROPOSED BOTTOM OF WALL
 - + TSXXX.XX PROPOSED TOP OF STEP
 - + BSXXX.XX PROPOSED BOTTOM OF STEP
 - - - - - PROPOSED DRAINAGE SWALE
 - - - - - PROPOSED BREAKLINE
 - [Symbol] ENERGY DISSIPATER

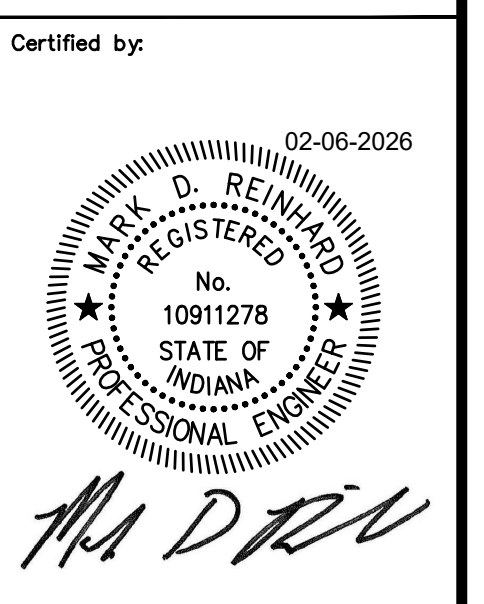
NOTE: ALL ELEVATIONS ARE TO TOP OF PAVEMENT OR LAWN UNLESS NOTED OTHERWISE.

- GRADING NOTE:**
- 1 CONTRACTOR TO VERIFY EXISTING SPOT ELEVATIONS AND NOTIFY ENGINEER OF RESULTS PRIOR TO CONSTRUCTION
 - 2 CONTRACTOR TO BLEND PAVEMENT ELEVATIONS BETWEEN EXISTING AND PROPOSED 2" WIDTH
 - 3 REGRADE SWALE WITH POSITIVE DRAINAGE TO THE EAST.



GRADING ENLARGEMENT
 SCALE: 1" = 10'

SITE GRADING PLAN
 SCALE: 1" = 30'



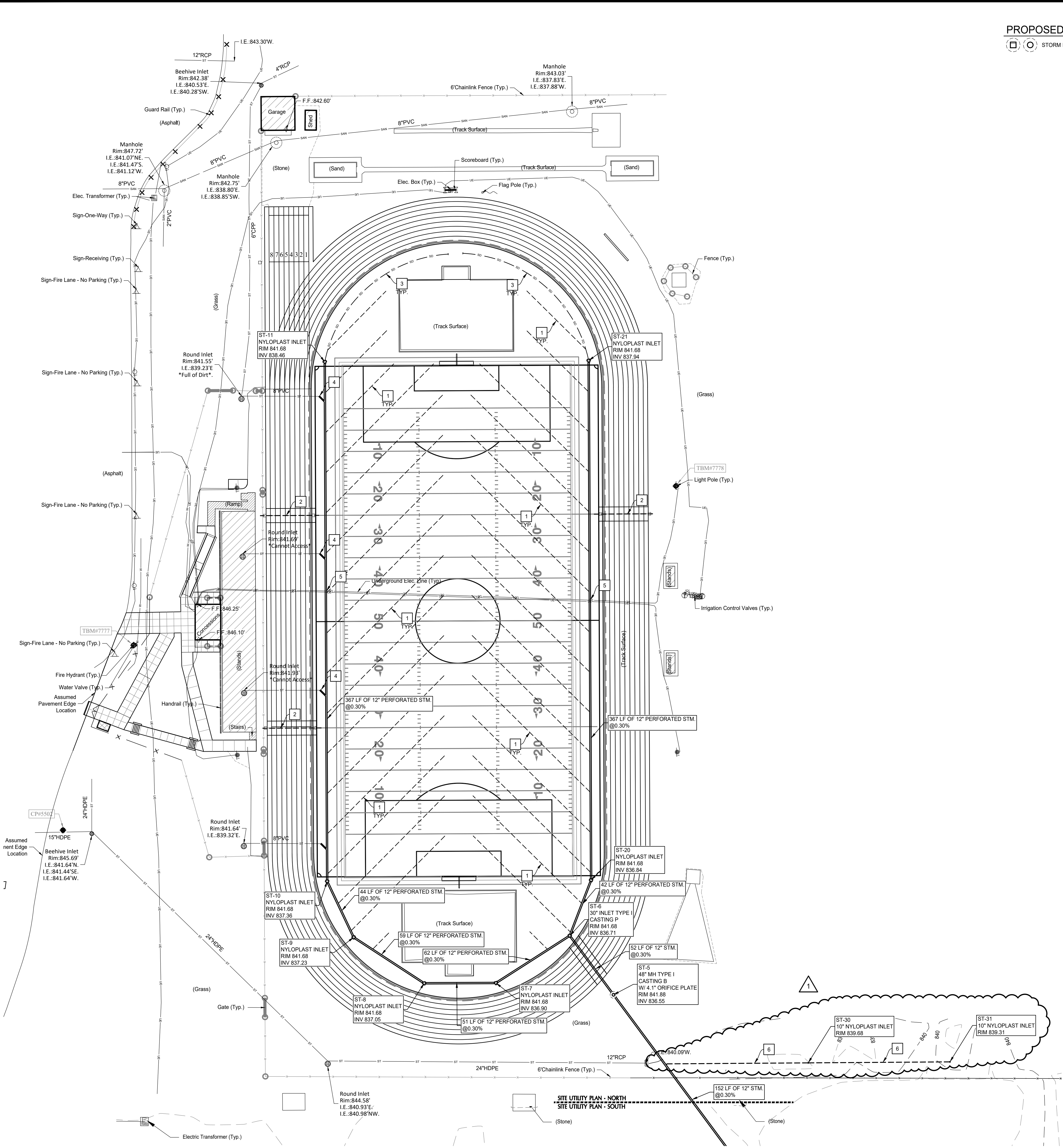
CONSTRUCTION DOCUMENTS
Summit Middle School Track
 4509 Homestead Rd, Fort Wayne, IN 46814

Sheet Title:
Site Grading Plan

Revision	Date	Description
	03-04-2026	ADDENDUM #1

Date: 2/6/2026
 Project No: 25-1923
 Drawn by: KRK
 Checked by: SK

These Drawings and Specifications, and all copies thereof are and shall remain the property and copyright of the Landscape Architect. They shall not be used on any other Project or Work without prior written permission from the Landscape Architect.



PROPOSED LEGEND:

- STORM INLET / MANHOLE
- STORM SEWER
- - - UNDERDRAIN
- - - SUBDRAIN

UTILITY NOTES:

- 1 UNDERDRAIN, SEE TURF FIELD PLANS & DETAILS.
- 2 INSTALL 4" SCH 40 CONDUIT UNDER TRACK WITH 3" MINIMUM COVER.
- 3 SUBDRAIN, SEE TURF FIELD PLANS & DETAILS.
- 4 CONTRACTOR TO JET OUT AND COLLECT DEBRIS IN PIPE. DISPOSE OF IN A LEGAL MANNER. CONNECT TO EXISTING STORM PIPE WITH HDPE N-12 FITTINGS. VERIFY EXISTING INVERT AND NOTIFY ENGINEER IF EXISTING STORM IS LOWER THAN PROPOSED STORM PRIOR TO CONSTRUCTION.
- 5 PROTECT EXISTING UTILITY DURING CONSTRUCTION. PRIOR TO CONSTRUCTION POTHOLE AND FIELD VERIFY EXISTING UTILITY AND ASSURE CONFLICT DOES NOT EXIST. CONTACT ENGINEER IF PROPOSED CONSTRUCTION CONFLICTS WITH EXISTING UTILITY.
- 6 6" SUBDRAIN @ MIN. 1.00% PER DETAIL #18/C5.0.

NOTE: CONTRACTOR PROTECT ALL UTILITIES SERVING THE CONCESSIONS BUILDING.

NOTE: CONTRACTOR SHALL CAP ALL EXISTING IRRIGATION LINES AT THE OUTSIDE EDGE OF THE TRACK. PROTECT ALL IRRIGATION OUTSIDE THE TRACK.

NOTE: PIPE LENGTHS ARE MEASURED TO THE CENTER OF STRUCTURES AND THE END OF END SECTIONS/TRASH RACKS UNLESS OTHERWISE NOTED.

NOTE: ADJUST ALL EXISTING MANHOLES, VALVES, HYDRANTS AND HANDHOLES TO PROPOSED GRADES.

NOTE: CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AS REQUIRED BY STATE AND LOCAL AUTHORITIES.

NOTE: CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY OF FINAL UTILITIES. PROVIDE COPY TO LOCAL AUTHORITIES AS REQUIRED.

STORM SEWER NOTES:

1. MATERIAL AND WORKMANSHIP SHALL COMPLY WITH THE ALLEN COUNTY SURVEYOR'S OFFICE STANDARDS AND SPECIFICATIONS.
2. ALL PIPE 12" AND SMALLER SHALL BE SDR 35 PVC, OR ADS N-12 HDPE UNLESS OTHERWISE NOTED. ALL PIPE LARGER THAN 12" SHALL BE ADS N-12 HDPE OR C76 CL-111 RCP UNLESS OTHERWISE NOTED. ALL PIPE SHALL BE INSTALLED ACCORDING TO SPECIFICATIONS AND PIPE TRENCH DETAIL #2/C5.0.
3. MAINTAIN 10'-0" MINIMUM HORIZONTAL AND 18" MINIMUM VERTICAL SEPARATION BETWEEN ALL SEWER PIPING AND POTABLE WATER PIPING. WHEN MINIMUM TOLERANCES CANT BE MAINTAINED, USE WATERWORKS GRADE PIPE AND FITTINGS OF MATERIAL SELECTED.

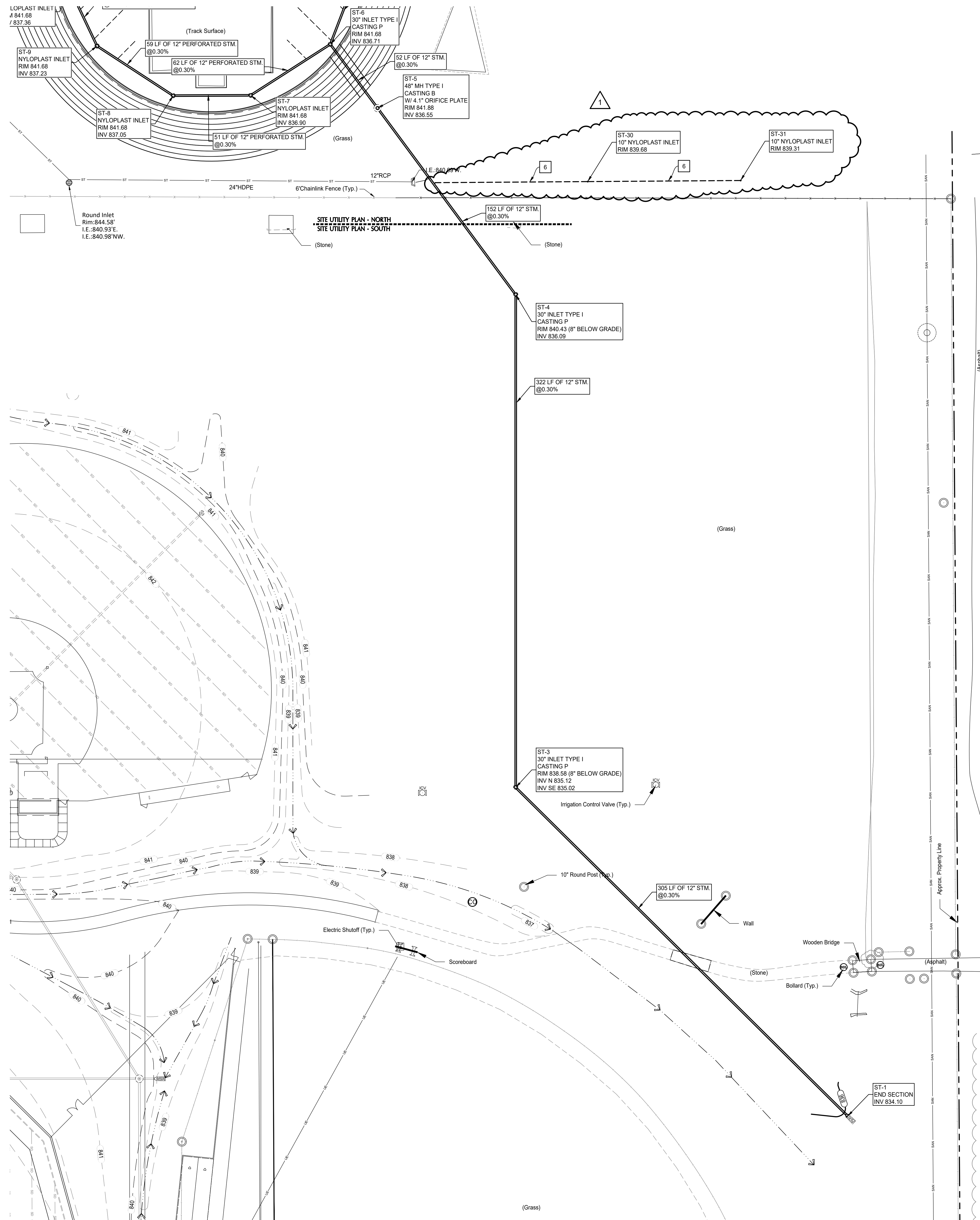
SITE UTILITY PLAN - NORTH
SCALE: 1" = 30'

Revision	Date	Description
	03-04-2026	ADDENDUM #1

Date: 2/6/2026
Project No: 25-1923
Drawn by: KRK
Checked by: SK

These Drawings and Specifications, and all copies thereof are and shall remain the property and copyright of the Landscape Architect. They shall be used only with respect to this Project and are not to be used on any other Project or Work without prior written permission from the Landscape Architect.

March 4, 2025 9:59 AM
 S:\Projects\Projects (6000-6999)\Projects (6700-6749)\6725-Summit MS Track & Field\Drawings\6725-C3.10 Site Utility Plan.dwg



SITE UTILITY PLAN - SOUTH
 SCALE: 1" = 30'

PROPOSED LEGEND:

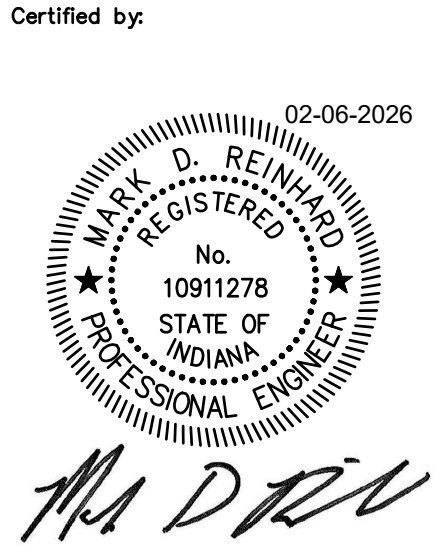
- STORM INLET / MANHOLE
- STORM SEWER
- - - UNDERDRAIN
- · - · - SUBDRAIN

NOTE: CONTRACTOR PROTECT ALL UTILITIES SERVING THE CONCESSIONS BUILDING.

- NOTE: CONTRACTOR SHALL CAP ALL EXISTING IRRIGATION LINES AT THE OUTSIDE EDGE OF THE TRACK. PROTECT ALL IRRIGATION OUTSIDE THE TRACK.
- NOTE: PIPE LENGTHS ARE MEASURED TO THE CENTER OF STRUCTURES AND THE END OF END SECTIONS/TRASH RACKS UNLESS OTHERWISE NOTED.
- NOTE: ADJUST ALL EXISTING MANHOLES, VALVES, HYDRANTS AND HANDHOLES TO PROPOSED GRADES.
- NOTE: CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AS REQUIRED BY STATE AND LOCAL AUTHORITIES.
- NOTE: CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY OF FINAL UTILITIES. PROVIDE COPY TO LOCAL AUTHORITIES AS REQUIRED.

UTILITY NOTES:

- 1 UNDERDRAIN. SEE TURF FIELD PLANS & DETAILS.
- 2 INSTALL 4" SCH 40 CONDUIT UNDER TRACK WITH 3" MINIMUM COVER.
- 3 SUBDRAIN. SEE TURF FILED PLANS & DETAILS.
- 4 CONTRACTOR TO JET OUT AND COLLECT DEBRIS IN PIPE. DISPOSE OF IN A LEGAL MANNER. CONNECT TO EXISTING STORM PIPE WITH HDPE N-12 FITTINGS. VERIFY EXISTING INVERT AND NOTIFY ENGINEER IF EXISTING STORM IS LOWER THAN PROPOSED STORM PRIOR TO CONSTRUCTION.
- 5 PROTECT EXISTING UTILITY DURING CONSTRUCTION. PRIOR TO CONSTRUCTION POTHOLE AND FIELD VERIFY EXISTING UTILITY AND ASSURE CONFLICT DOES NOT EXIST. CONTACT ENGINEER IF PROPOSED CONSTRUCTION CONFLICTS WITH EXISTING UTILITY.
- 6 6" SUBDRAIN @ MIN. 1.00% PER DETAIL #18/C5.0.



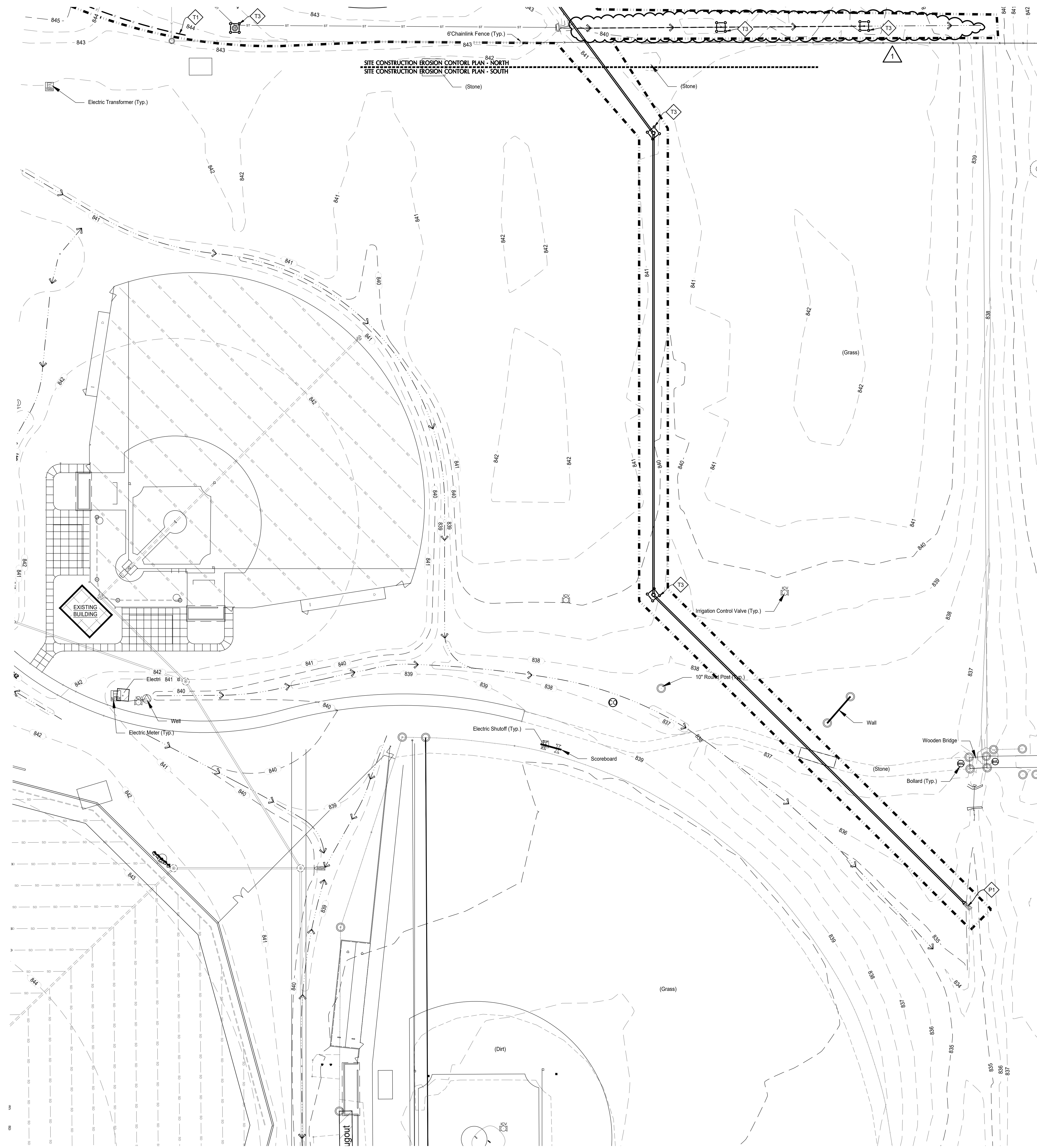
CONSTRUCTION DOCUMENTS
Summit Middle School Track
 4509 Homestead Rd, Fort Wayne, IN 46814
 Sheet Title: **Site Utility Plan - South**

Revision	Date	Description
	03-04-2026	ADDENDUM #1

Date: 2/6/2026
 Project No: 25-1923
 Drawn by: KRK
 Checked by: SK

These Drawings and Specifications, and all copies thereof are and shall remain the property and copyright of the Landscape Architect. They shall not be used on any other Project or Work without prior written permission from the Landscape Architect.

March 4, 2025 9:59 AM
 S:\Projects\Projects (6000-6999)\Projects (6700-6749)\6725-Summit MS Track & Field\Drawings\6725-C4.1 Site Erosion Control Plan.dwg



SITE CONSTRUCTION EROSION CONTROL PLAN - SOUTH
 SCALE: 1" = 30'

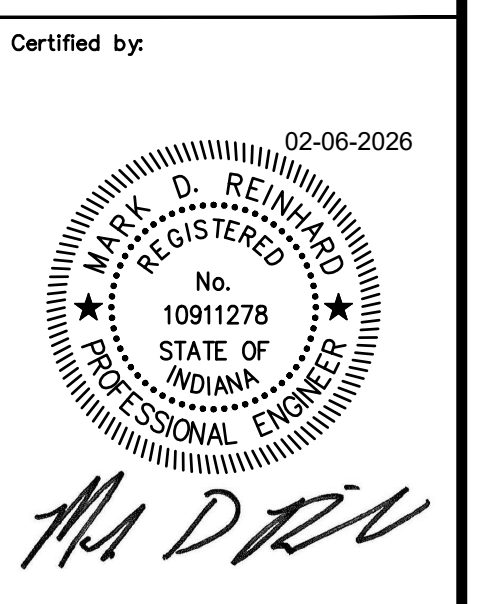
EROSION CONTROL LEGEND:

- SILT FENCE
- AGGREGATE BASE FOR STABLE CONSTRUCTION ENTRANCE
- INLET PROTECTION
- CONCRETE WASHOUT AREA
- CONSTRUCTION LIMITS
- EROSION CONTROL SIGNAGE
- ENERGY DISSIPATER
- EROSION CONTROL BLANKET

EROSION CONTROL KEY:

TEMPORARY EROSION CONTROL DEVICES AND MEASURES	PERMANENT EROSION CONTROL DEVICES AND MEASURES
T1	P1
T2	P2
T3	
T4	
T5	
T6	
T7	
T8	
T9	
T10	
T11	
T12	
T13	
T14	
T15	
T16	
T17	
T18	
T19	
T20	
T21	
T22	
T23	
T24	
T25	
T26	
T27	
T28	
T29	
T30	
T31	
T32	
T33	
T34	
T35	
T36	
T37	
T38	
T39	
T40	
T41	
T42	
T43	
T44	
T45	
T46	
T47	
T48	
T49	
T50	
T51	
T52	
T53	
T54	
T55	
T56	
T57	
T58	
T59	
T60	
T61	
T62	
T63	
T64	
T65	
T66	
T67	
T68	
T69	
T70	
T71	
T72	
T73	
T74	
T75	
T76	
T77	
T78	
T79	
T80	
T81	
T82	
T83	
T84	
T85	
T86	
T87	
T88	
T89	
T90	
T91	
T92	
T93	
T94	
T95	
T96	
T97	
T98	
T99	
T100	

NOTE:
 STORM WATER SEWER LINES SHOWN ARE FOR REFERENCE ONLY. SEE SHEET C3.0 SITE UTILITY PLAN FOR STORM WATER SEWER LINE SIZE, INVERT, ETC.

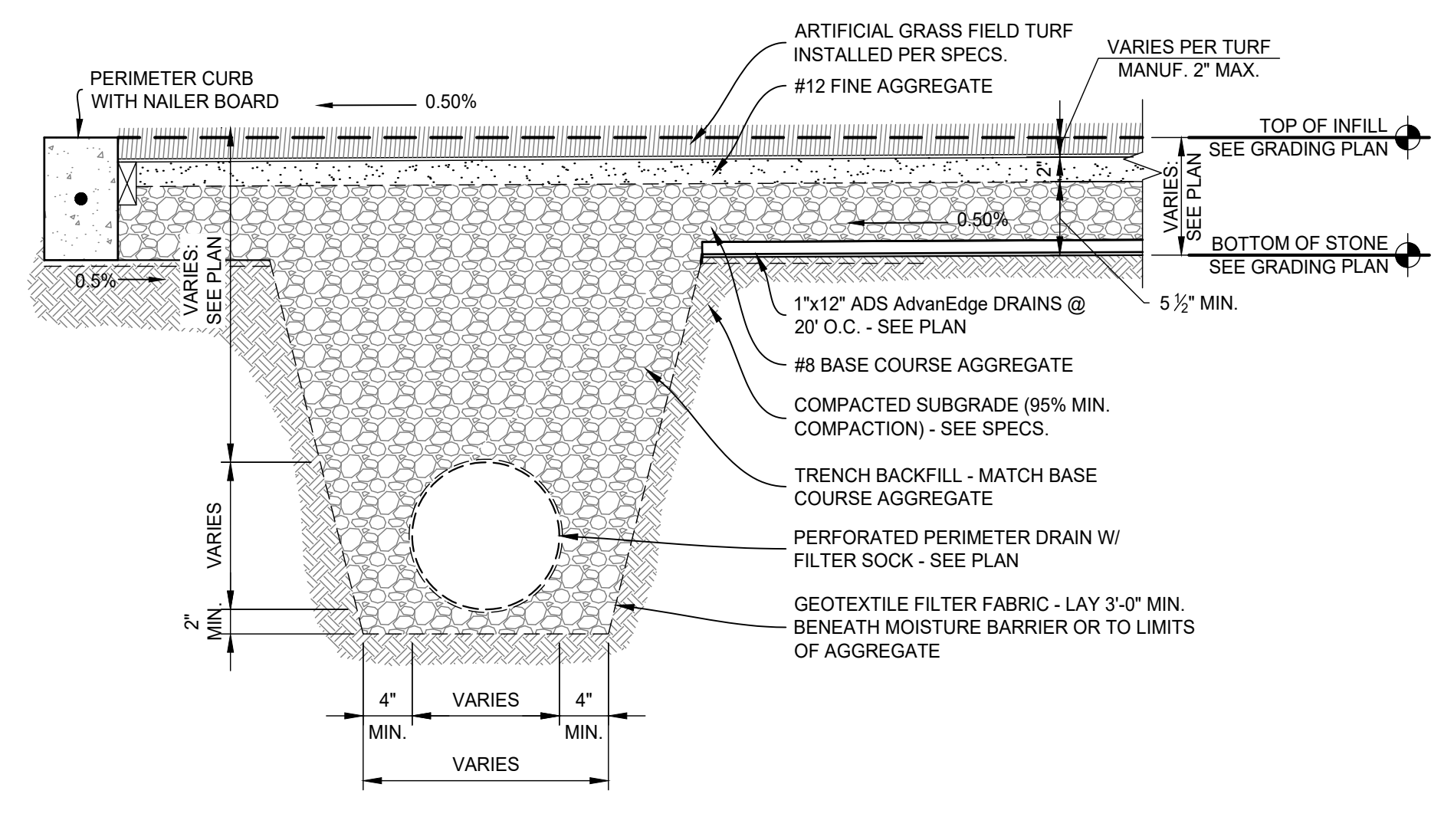


CONSTRUCTION DOCUMENTS
Summit Middle School Track
 4509 Homestead Rd, Fort Wayne, IN 46814
 Sheet Title:
Site Construction Erosion Control Plan - South

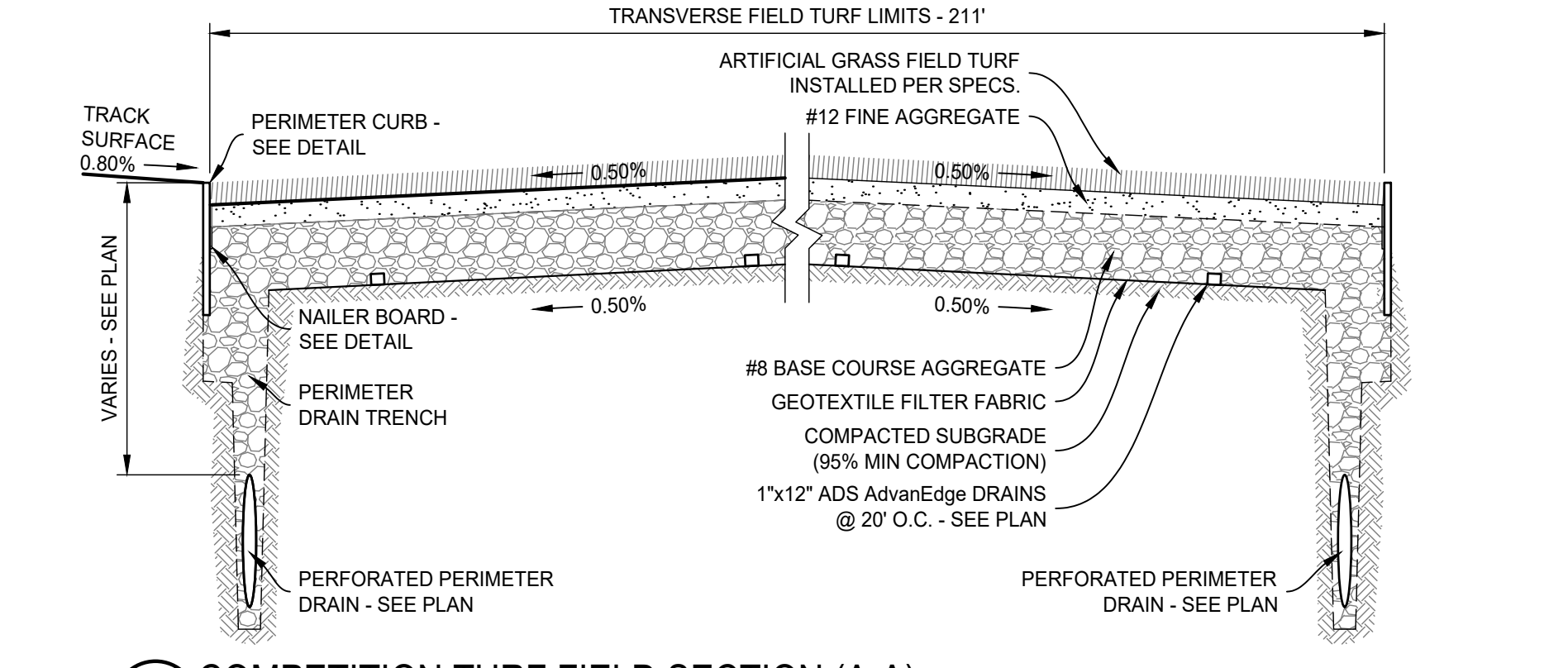
Revision	Date	Description
	03-04-2026	ADDENDUM #1

Date: 2/6/2026
 Project No: 25-1923
 Drawn by: KRK
 Checked by: SK

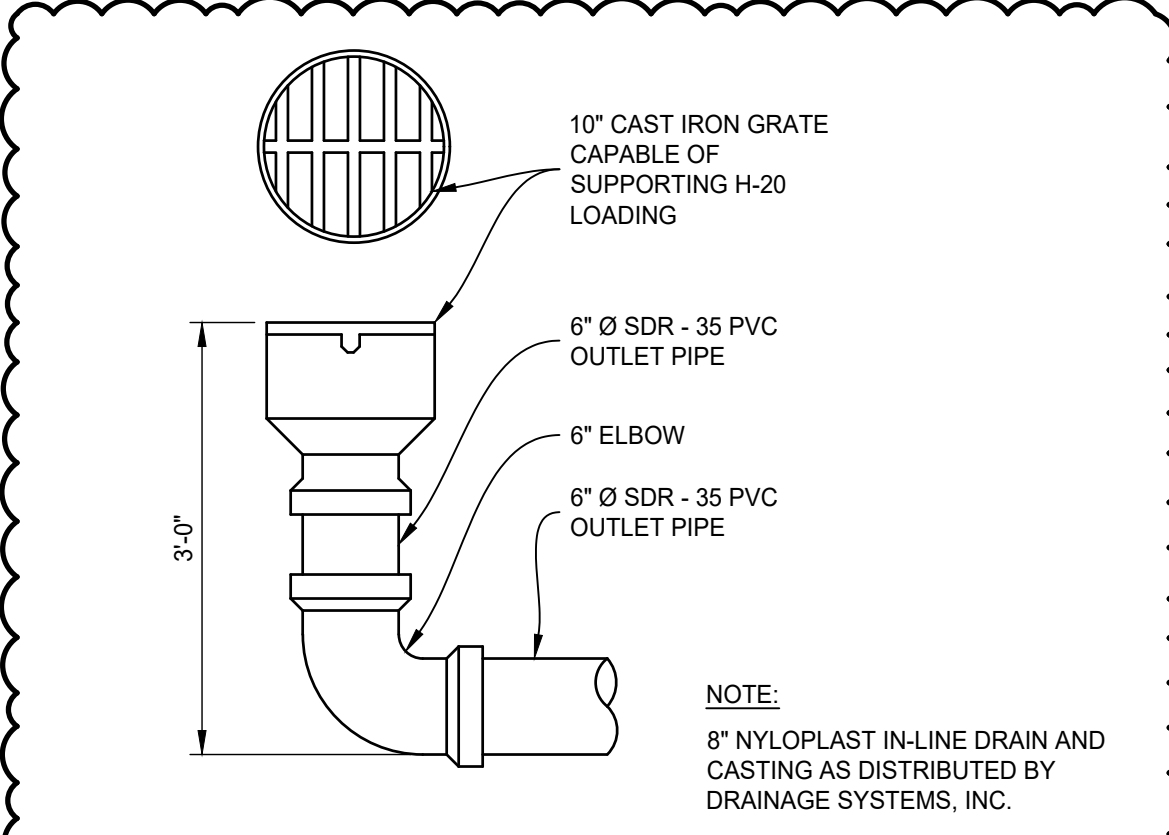
These Drawings and Specifications, and all copies thereof are and shall remain the property and copyright of the Landscape Architect. They shall not be used on any other Project or Work without prior written permission from the Landscape Architect.



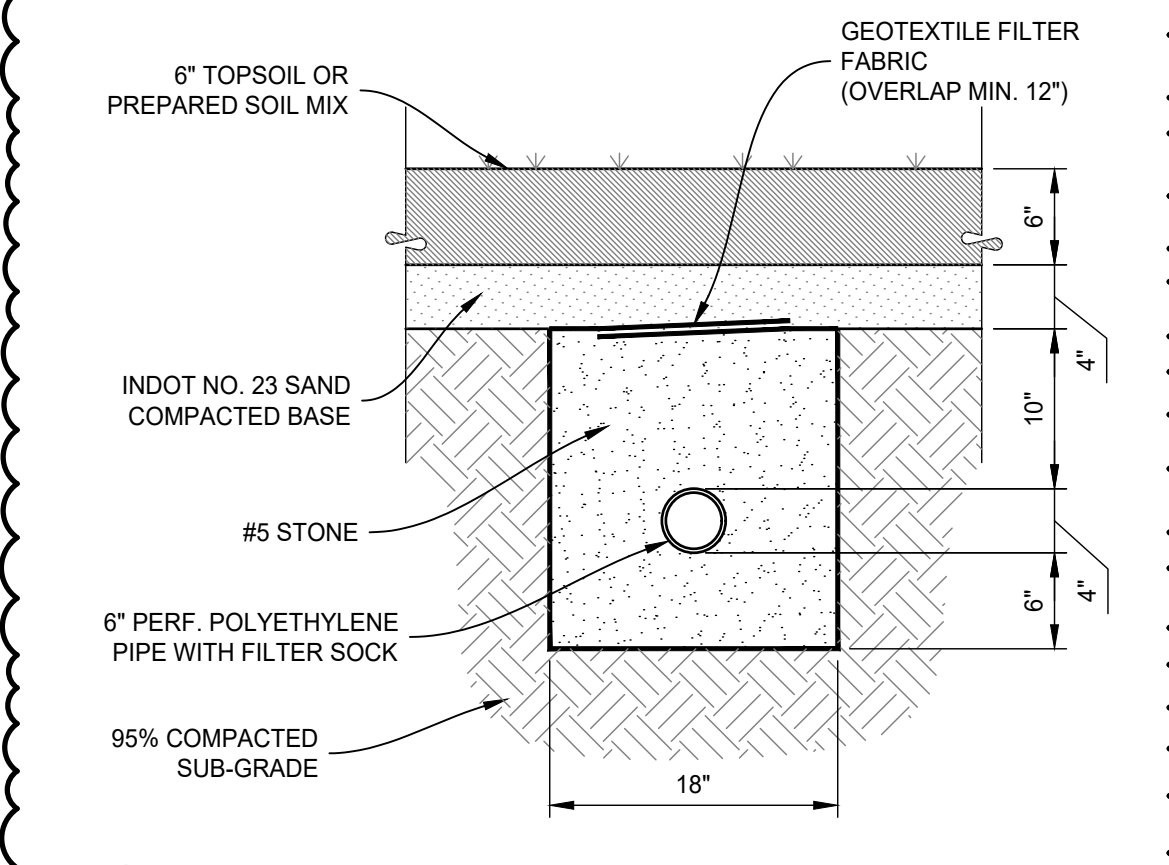
16 PERIMETER DRAIN CONNECTION
SCALE: NONE



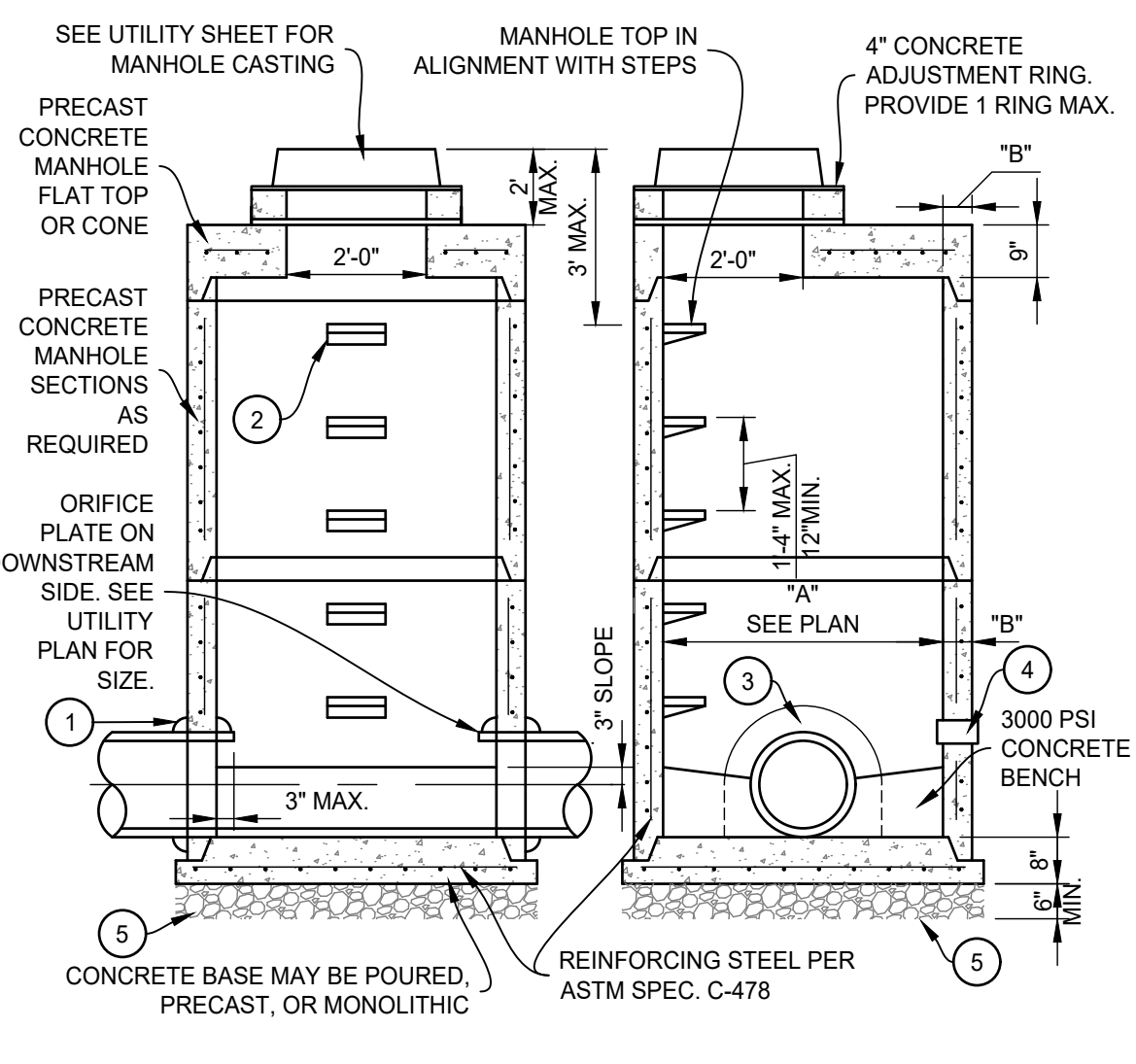
15 COMPETITION TURF FIELD SECTION (A-A)
SCALE: NONE



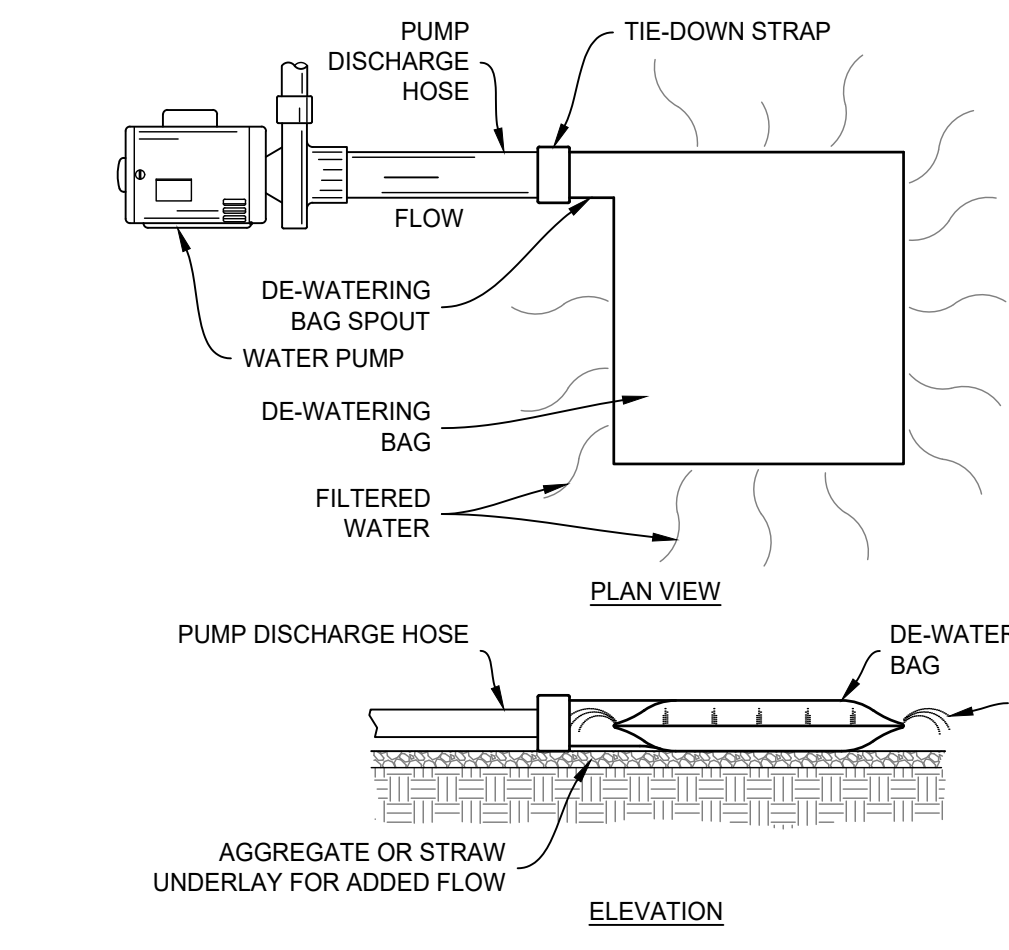
19 NYLOPLAST INLET
SCALE: 3/4" = 1'-0"



18 NATURAL TURF W/ SUB-DRAIN
SCALE: 1" = 1'-0"



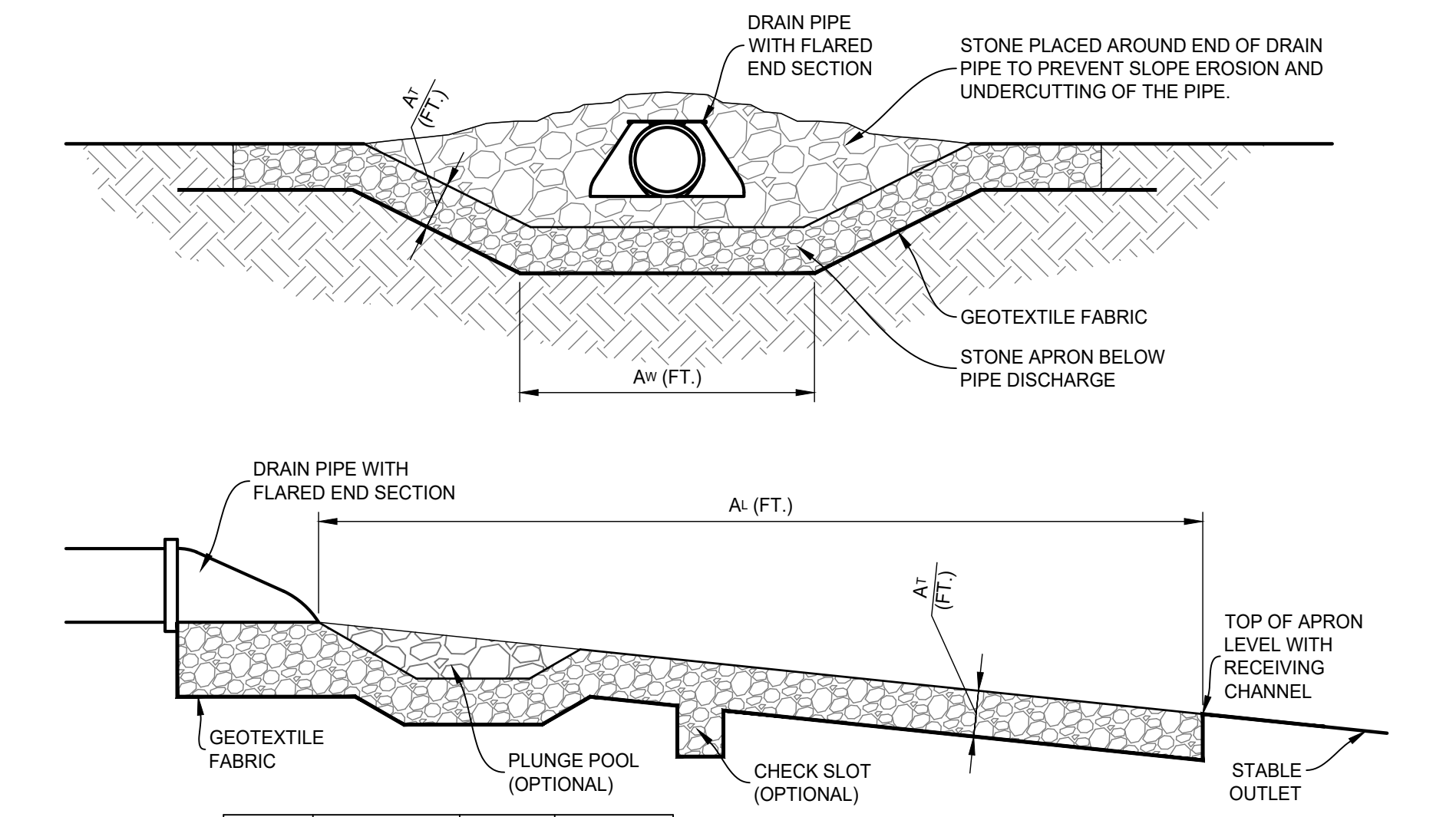
17 STORM MANHOLE TYPE I
SCALE: 3/8" = 1'-0"



DE-WATERING BAG NON-WOVEN GEOTEXTILE FABRIC REQUIREMENTS

PHYSICAL PROPERTY	TEST METHOD	MINIMUM VALUE
GRAB TENSILE STRENGTH	ASTM D 4632	200 LBS.
GRAB TENSILE ELONGATION	ASTM D 4632	50
PUNCTURE STRENGTH	ASTM D 4833	120 LBS.
APPARENT OPENING SIZE (AOS)	ASTM D 4751	#60 U.S. SIEVE
WATER FLOW RATE	ASTM D 4491	95 GAL/MIN/SQFT

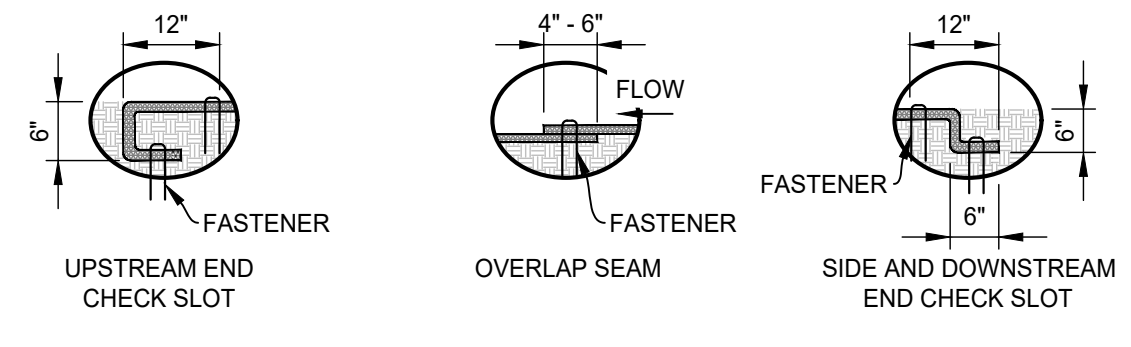
14 DE-WATERING BAG
SCALE: NONE



ENERGY DISSIPATER TABLE

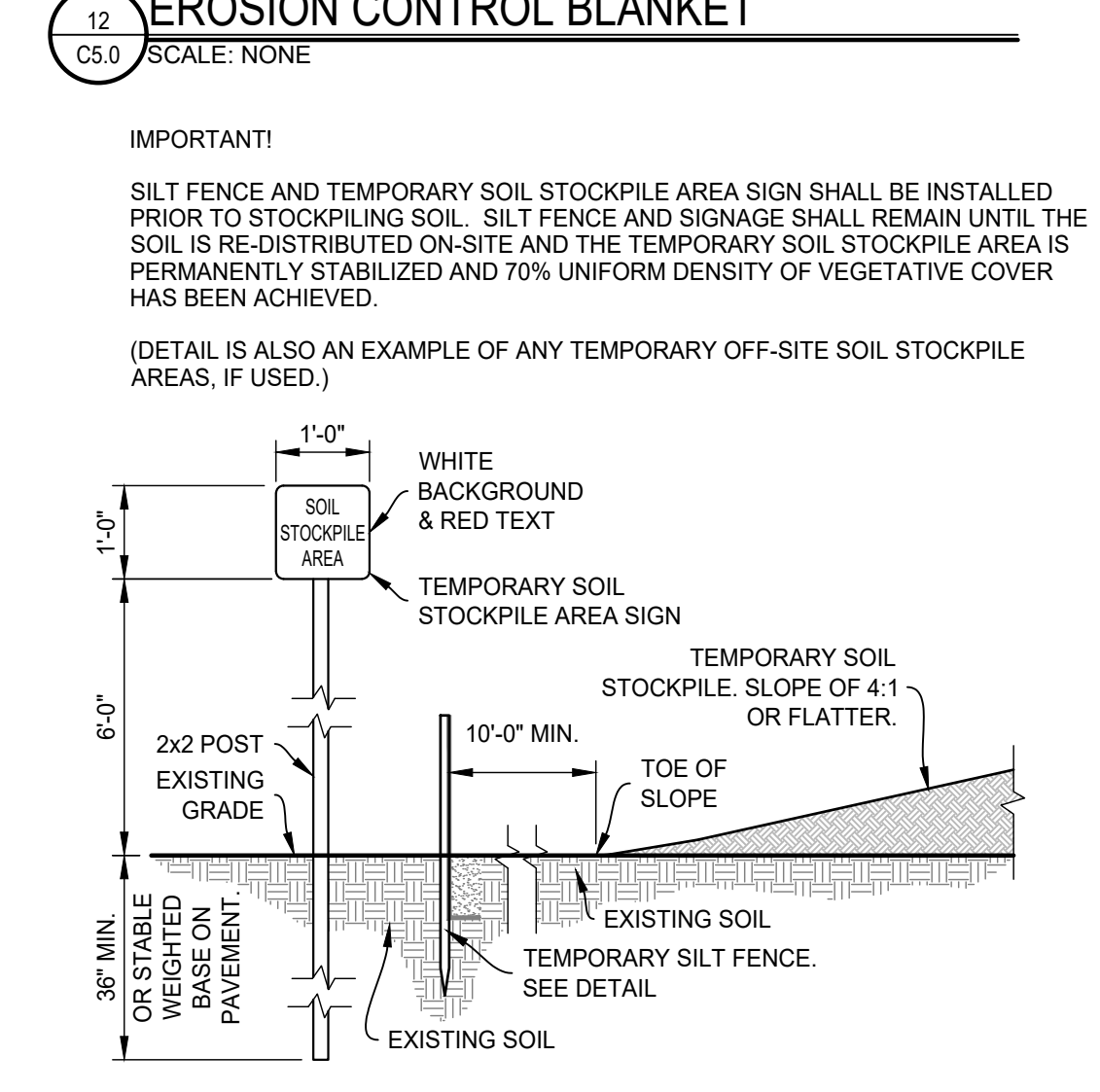
PIPE SIZE (IN.)	AVERAGE RIP-RAP DIAMETER (IN.)	APRON WIDTH (A _W) (FT.)	APRON LENGTH (A _L) (FT.)
8	3	2-3	5-7
12	5	3-4	6-12
15	6	3.5-5	7-15
18	8	4-6	8-18
24	10	6-8	12-22
30	12	8-10	14-28
36	14	10-12	16-32
42	16	12-14	18-38
48	20	14-16	25-44

13 ENERGY DISSIPATER
SCALE: NONE



12 EROSION CONTROL BLANKET
SCALE: NONE

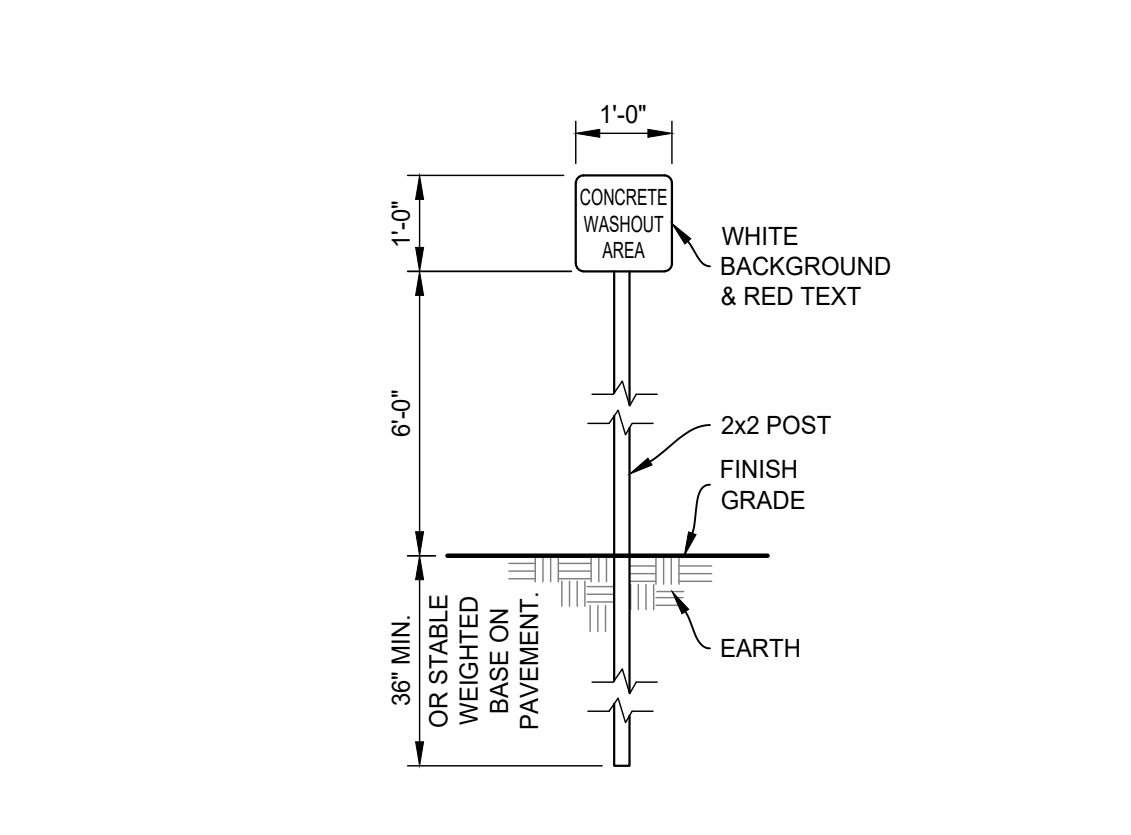
- INSTALLATION:
- CONTRACTOR TO SELECT A 12-MONTH BIODEGRADABLE EROSION CONTROL BLANKET RATED FOR 3:1 TO 2:1 SLOPES.
 - INSTALL EROSION CONTROL MEASURES AND PRACTICES NEEDED TO CONTROL EROSION AND RUNOFF, SUCH AS SEDIMENT CONTROL DEVICES.
 - GRADE THE SITE AS SPECIFIED IN THE CONSTRUCTION PLAN.
 - ADD TOPSOIL WHERE APPROPRIATE.
 - PREPARE THE SEEDBED, FERTILIZE (AND LIME, IF NEEDED), AND SEED THE AREA IMMEDIATELY AFTER GRADING.
 - FOLLOWING MANUFACTURER'S DIRECTIONS, LAY THE BLANKETS ON THE SEEDBED AREA SUCH THAT THEY ARE IN CONTINUOUS CONTACT WITH THE SOIL AND THAT THE UPSLOPE OR UPSLOPE ONES OVERLAP THE LOWER ONES BY AT LEAST 8 INCHES.
 - TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SILT TRENCH), BACKFILL WITH SOIL AND TAMP DOWN.
 - ANCHOR THE BLANKETS AS SPECIFIED BY THE MANUFACTURER. THIS TYPICALLY INVOLVES DRIVING 6" TO 8" METAL STAPLES INTO THE GROUND IN A PATTERN DETERMINED BY THE SITE CONDITIONS AND TYPE OF EROSION CONTROL BLANKET.



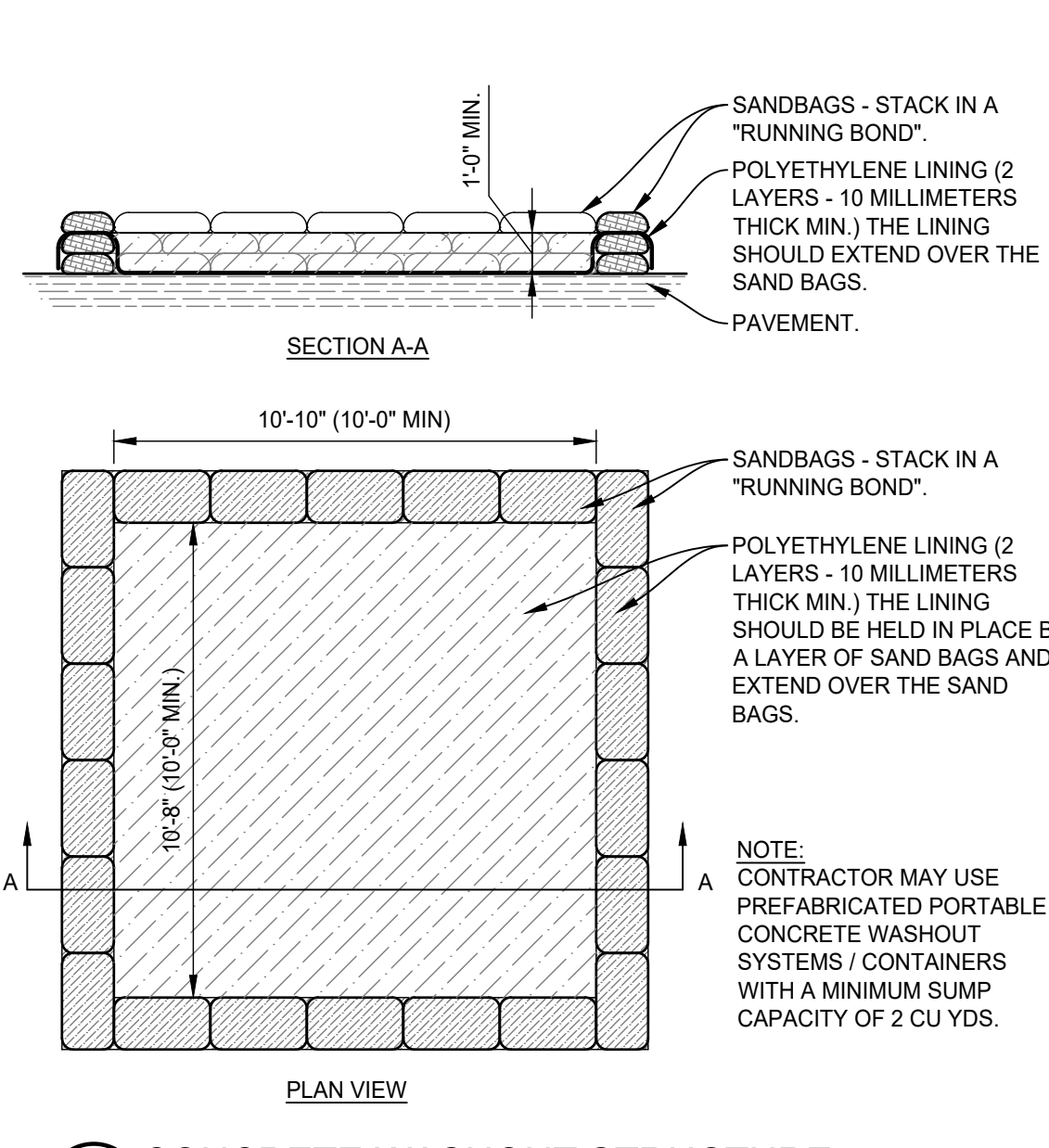
11 TEMP. SOIL STOCKPILE AREA
SCALE: NONE

- IMPORTANT!
- SILT FENCE AND TEMPORARY SOIL STOCKPILE AREA SIGN SHALL BE INSTALLED PRIOR TO STOCKPILING SOIL. SILT FENCE AND SIGNAGE SHALL REMAIN UNTIL THE SOIL IS RE-DISTRIBUTED ON-SITE AND THE TEMPORARY SOIL STOCKPILE AREA IS PERMANENTLY STABILIZED AND 70% UNIFORM DENSITY OF VEGETATIVE COVER HAS BEEN ACHIEVED.
- (DETAIL IS ALSO AN EXAMPLE OF ANY TEMPORARY OFF-SITE SOIL STOCKPILE AREAS, IF USED.)
- INSTALLATION:
- REMOVE GRATE
 - DROP FLEXSTORM INLET FILTER INTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
 - REPLACE GRATE

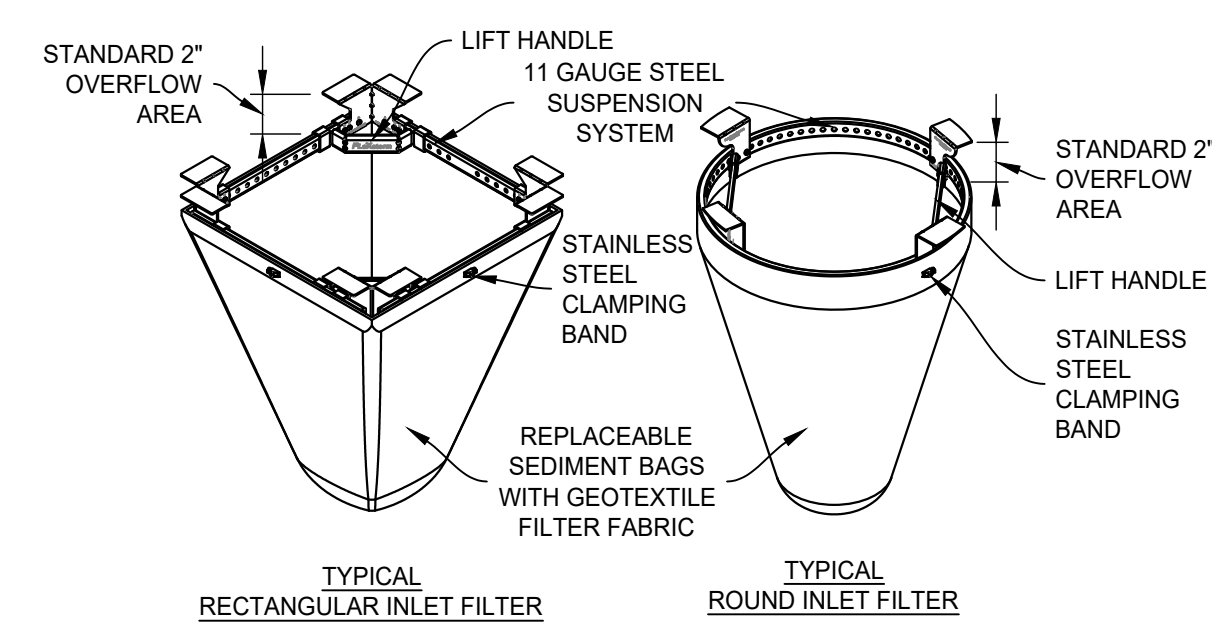
10 CONCRETE WASHOUT SIGN
SCALE: 1/2" = 1'-0"



9 CONCRETE WASHOUT STRUCTURE
SCALE: 1/4" = 1'-0"



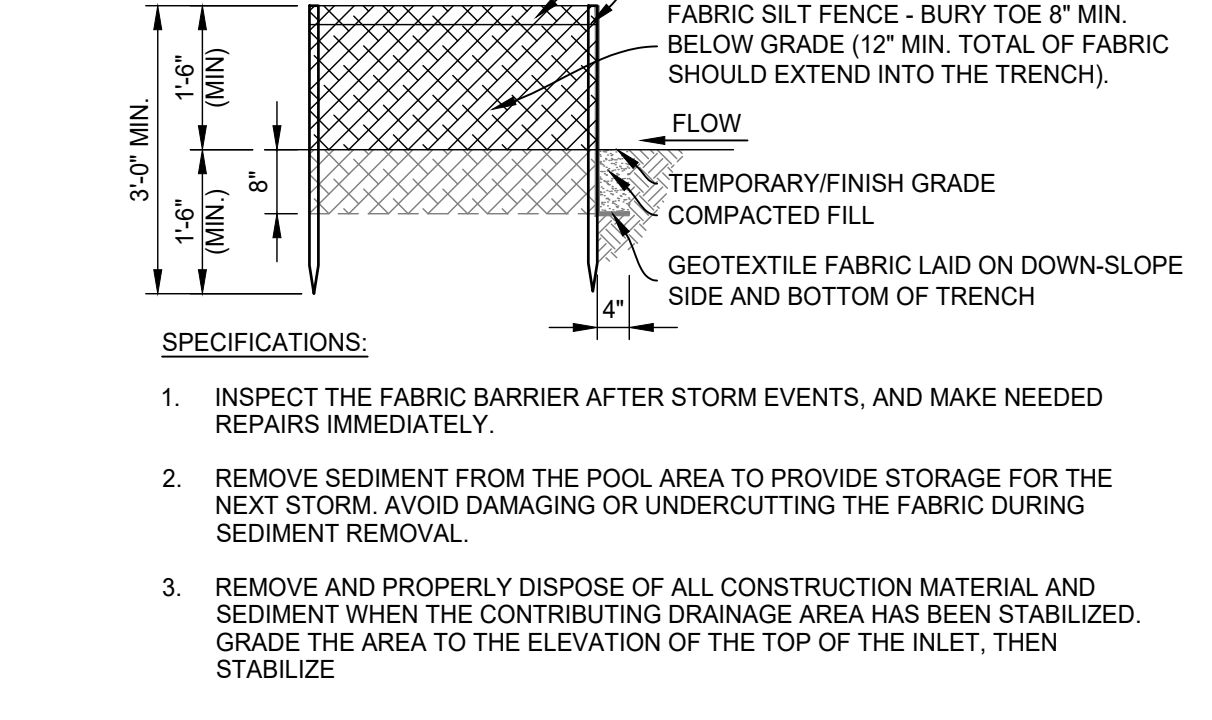
8 PAVEMENT INLET PROTECTION
SCALE: NONE



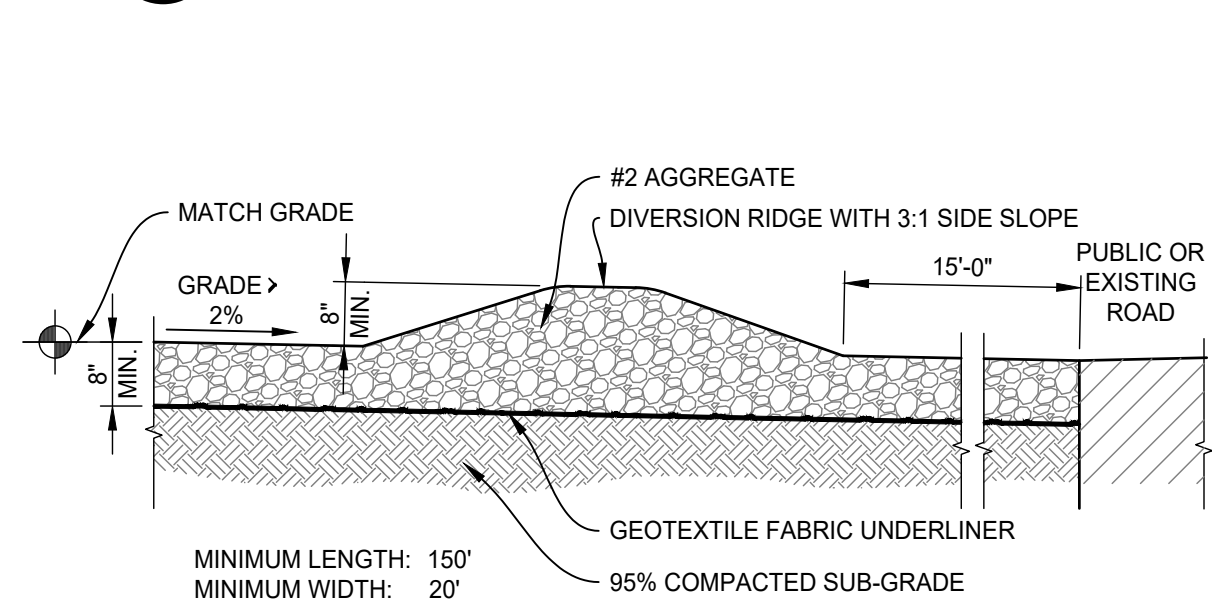
7 YARD INLET PROTECTION
SCALE: 1/2" = 1'-0"

- SPECIFICATIONS:
- INSPECT THE SILT FENCE AND TEMPORARY SOIL STOCKPILE PERIODICALLY AND AFTER EACH 3/4" STORM EVENT.
 - STOCKPILED SOIL SHOULD BE TEMPORARILY SEED OR COVERED WITH A TARP IF IT IS TO BE LEFT INACTIVE FOR SEVEN (7) DAYS OR MORE.
 - IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
 - REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO BULGE.
 - AVOID UNDERMINING THE SILT FENCE DURING THE REMOVAL OF DEPOSITED SEDIMENT.
 - REMOVE THE SIGN, SILT FENCE, AND SEDIMENT DEPOSITS AFTER THE SOIL IS RE-DISTRIBUTED. BRING THE DISTURBED AREA TO GRADE AND STABILIZE.

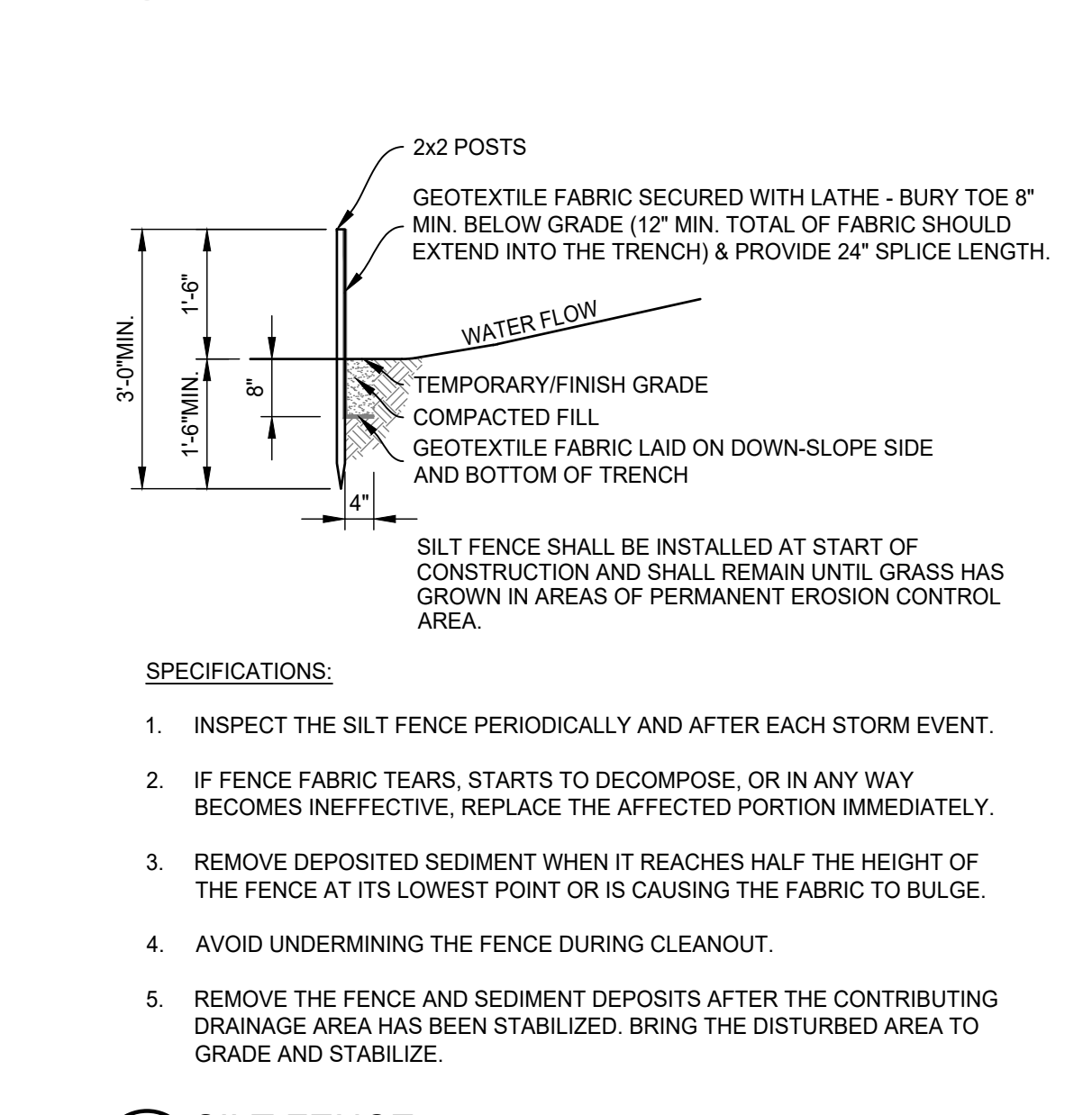
6 CONSTRUCTION ENTRANCE
SCALE: 1/2" = 1'-0"



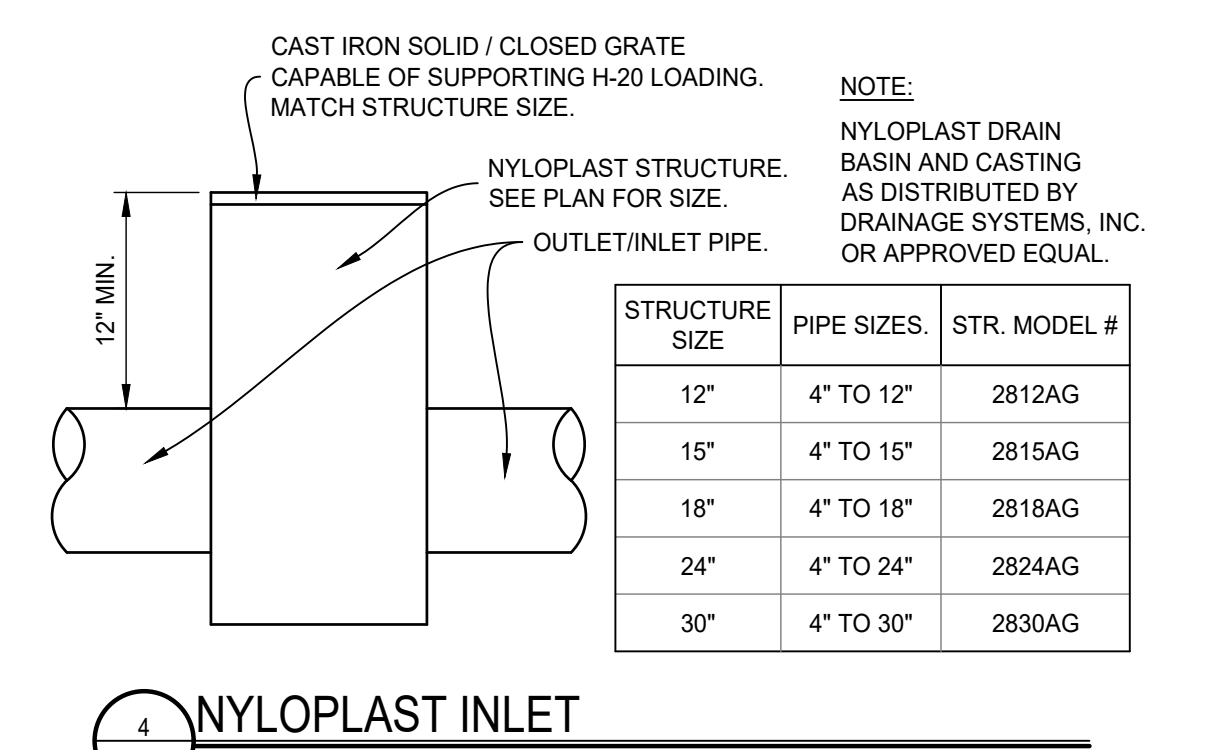
5 SILT FENCE
SCALE: 1/2" = 1'-0"



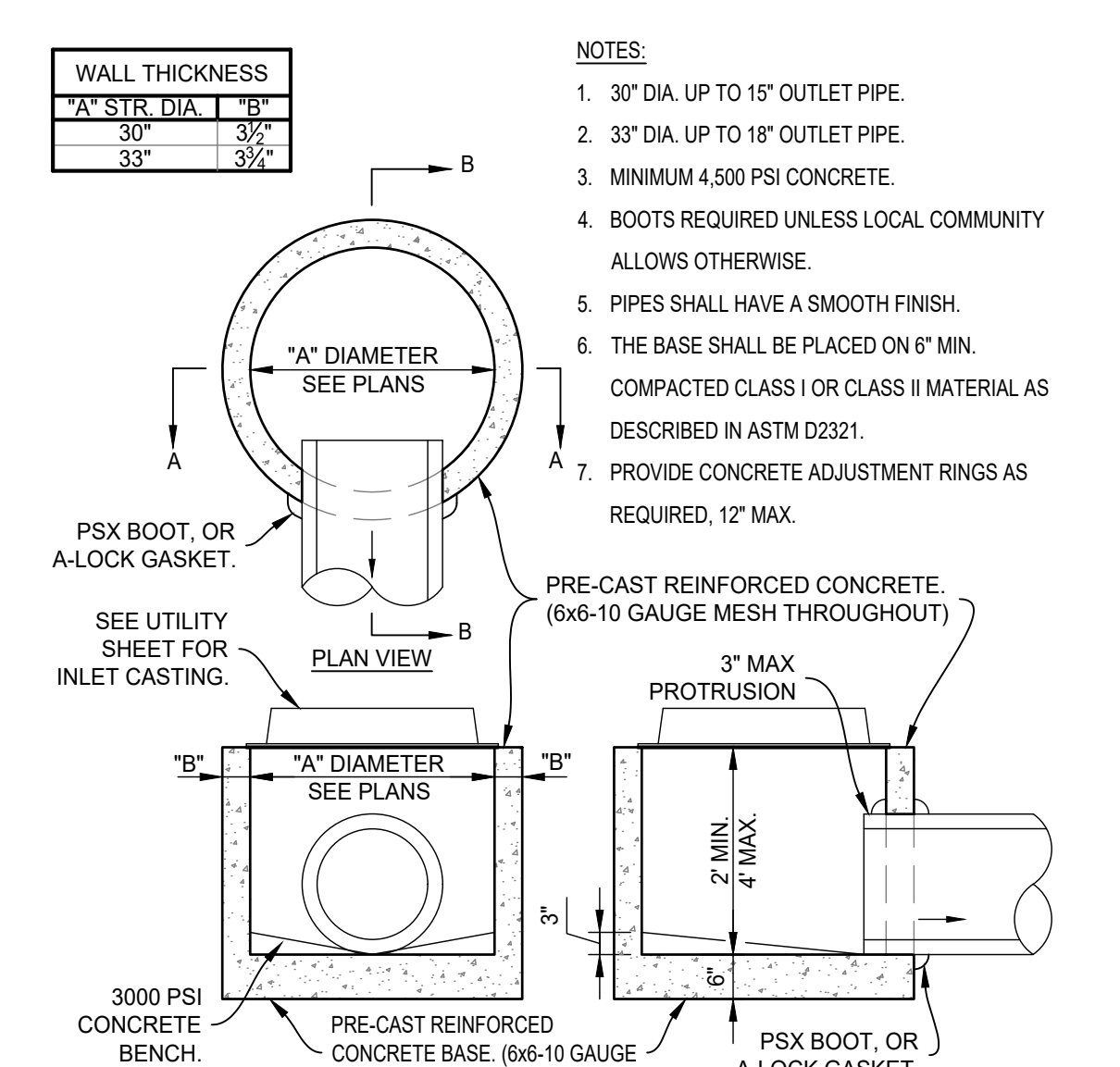
4 CASTING DETAIL
SCALE: NONE



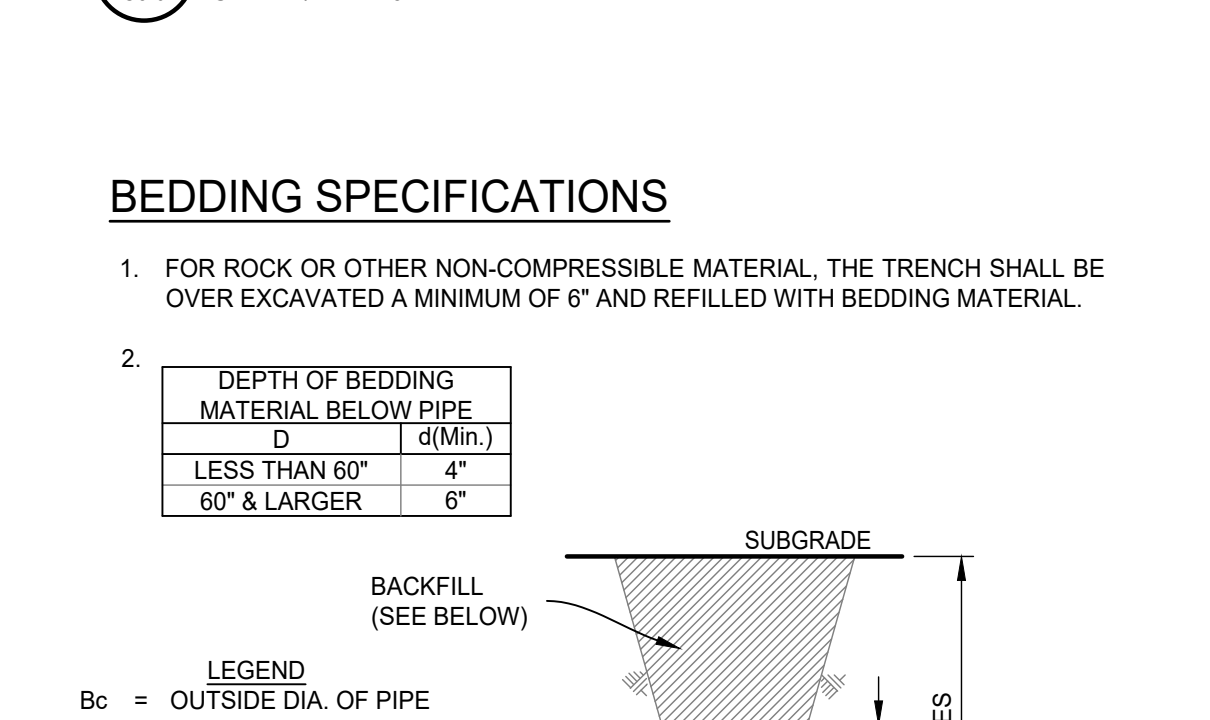
3 INLET TYPE I
SCALE: 1/2" = 1'-0"



2 PIPE TRENCH DETAIL
SCALE: NONE



1 CASTING DETAIL
SCALE: NONE



NYLOPLAST INLET TABLE

STRUCTURE SIZE	PIPE SIZES	STR. MODEL #
12"	4" TO 12"	2812AG
15"	4" TO 15"	2815AG
18"	4" TO 18"	2818AG
24"	4" TO 24"	2824AG
30"	4" TO 30"	2830AG

NYLOPLAST INLET NOTES:

- 30" DIA. UP TO 15" OUTLET PIPE.
- 33" DIA. UP TO 18" OUTLET PIPE.
- MINIMUM 4,500 PSI CONCRETE.
- BOOTS REQUIRED UNLESS LOCAL COMMUNITY ALLOWS OTHERWISE.
- PIPES SHALL HAVE A SMOOTH FINISH.
- THE BASE SHALL BE PLACED ON 6" MIN. COMPACTED CLASS I OR CLASS II MATERIAL AS DESCRIBED IN ASTM D2221.
- PROVIDE CONCRETE ADJUSTMENT RINGS AS REQUIRED, 12" MAX.

NYLOPLAST INLET NOTES (continued)

- REMOVE GRATE
- DROP FLEXSTORM INLET FILTER INTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
- REPLACE GRATE

NYLOPLAST INLET NOTES (continued)

- INSPECT THE SILT FENCE AND TEMPORARY SOIL STOCKPILE PERIODICALLY AND AFTER EACH STORM EVENT.
- IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
- REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO BULGE.
- AVOID UNDERMINING THE SILT FENCE DURING CLEAROUT.
- REMOVE THE FENCE AND SEDIMENT DEPOSITS AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. BRING THE DISTURBED AREA TO GRADE AND STABILIZE.

NYLOPLAST INLET NOTES (continued)

- CASTINGS SPECIFIED, OR APPROVED EQUAL
- ALL BEARING SURFACES TO BE MACHINED.
- COMPLY WITH ASTM A48-83 CLASS B35.
- WHEN USED WITH STORM INLET, CONTRACTOR TO VERIFY IF A SPECIAL ORDER CASTING IS NEEDED TO PROVIDE SUFFICIENT SUPPORT.

NYLOPLAST INLET NOTES (continued)

- CONTRACTOR MAY USE PREFABRICATED PORTABLE CONCRETE WASHOUT SYSTEMS / CONTAINERS WITH A MINIMUM SUMP CAPACITY OF 2 CU YDS.

NYLOPLAST INLET NOTES (continued)

- CONTRACTOR SHALL USE PROPRIETY DEVICES PROVIDING A MINIMUM REMOVAL EFFICIENCY OF 80% OF TOTAL SUSPENDED SOLIDS (TSS) (DETAIL OF DANDY DE-WATERING BAG SHOWN)
- THE DEVICE SHALL BE MADE OF A NON-WOVEN FABRIC MEETING OR EXCEEDING THE MINIMUM REQUIREMENTS OF THE FOLLOWING TABLE AND BE CONSTRUCTED SPECIFICALLY FOR THE PURPOSES OF SEDIMENT CONTROL FROM DE-WATERING PIPES AND HOSES.
- REPLACE THE UNIT, OR EMPTY SEDIMENT, WHEN THE BAG IS HALF FULL OF SEDIMENT OR WHEN FLOW RATE IS GREATLY REDUCED.
- RE-SPREAD SEDIMENT FROM BAG ON-SITE, OR DISPOSE OF SEDIMENT IN ACCORDANCE TO LOCAL, STATE AND FEDERAL REQUIREMENTS.

NYLOPLAST INLET NOTES (continued)

- INSPECT THE FABRIC BARRIER AFTER STORM EVENTS, AND MAKE NEEDED REPAIRS IMMEDIATELY.
- REMOVE SEDIMENT FROM THE POOL AREA TO PROVIDE STORAGE FOR THE NEXT STORM. AVOID DAMAGING OR UNDERCUTTING THE FABRIC DURING SEDIMENT REMOVAL.
- REMOVE AND PROPERLY DISPOSE OF ALL CONSTRUCTION MATERIAL AND SEDIMENT WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. GRADE THE AREA TO THE ELEVATION OF THE TOP OF THE INLET, THEN STABILIZE.

NYLOPLAST INLET NOTES (continued)

- BACKFILL WITHIN PUBLIC R.O.W. UNDER PAVED AREAS, AND WITHIN THE INFLUENCE OF BUILDING STRUCTURES SHALL BE INDOT #53#73. INFLUENCE ZONE SHALL EXTEND AT A 1:1 SLOPE FROM ABOVE ITEM. COMPACTION SHALL MEET OR EXCEED 95% OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 1557.
- BACKFILL WITHIN LAWN AREAS AND OUT OF THE INFLUENCE OF BUILDING STRUCTURES, PAVED AREAS, AND PUBLIC R.O.W. SHALL BE STANDARD BACKFILL. STANDARD BACKFILL SHALL BE FREE OF ROCK AND GRAVEL LARGER THAN 3" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATERIAL ACCORDING TO ASTM D 2487. COMPACTION SHALL MEET OR EXCEED 90% OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 1557.

NYLOPLAST INLET NOTES (continued)

- CRUSHED STONE INDOT #5, #8 (FLEXIBLE PIPE)
- GRANULAR MATERIAL INDOT #5, #8, #9 (RIGID PIPE)

NYLOPLAST INLET NOTES (continued)

- LEGEND
- Bc = OUTSIDE DIA. OF PIPE
- D = INSIDE DIA. OF PIPE
- d = BEDDING MATERIAL BELOW PIPE BELL

NYLOPLAST INLET NOTES (continued)

- INFLUENCE LINE SCALE: N.T.S.

NYLOPLAST INLET NOTES (continued)

- CONSTRUCTION ENTRANCE

NYLOPLAST INLET NOTES (continued)

- PIPE TRENCH DETAIL

NYLOPLAST INLET NOTES (continued)

- CASTING DETAIL

NYLOPLAST INLET NOTES (continued)

- NYLOPLAST INLET

NYLOPLAST INLET NOTES (continued)

- PERIMETER DRAIN CONNECTION

NYLOPLAST INLET NOTES (continued)

- COMPETITION TURF FIELD SECTION (A-A)

NYLOPLAST INLET NOTES (continued)

- NATURAL TURF W/ SUB-DRAIN

NYLOPLAST INLET NOTES (continued)

- STORM MANHOLE TYPE I

ENGINEERING RESOURCES, INC.
4175 New Vision Drive, Fort Wayne, IN 46845
PH: (260) 496-1025 www.er.com

context DESIGN

5825 Lawton Loop E. Dr. Indianapolis, IN 46216
317-465-6900 | www.contextdesign.com

Certified by:
Professional Engineer
No. 1091278
STATE OF INDIANA
M.A. DREW

CONSTRUCTION DOCUMENTS
Summit Middle School Track
4509 Homestead Rd, Fort Wayne, IN 46814

Sheet Title: Site Utility Details

Description	ADDENDUM #1
Date	03-04-2026
Revision	

Date: 2/6/2026
Project No: 25-1923
Drawn by: KRK
Checked by: SK

These Drawings and Specifications, and all copies thereof are and shall remain the property and copyright of the Landscape Architect. They shall not be used on any other Project or Work without prior written permission from the Landscape Architect.

Sheet No: **C5.0**

March 4, 2025 9:59 AM
S:\Projects\Projects (6000-6999)\Projects (6700-6749)\6725-Summit MS Track & Field\Drawings\6725-C5.0 Site Details.dwg