



## SUBCONTRACT WORK AUTHORIZATION AGREEMENT

**SUBCONTRACTOR:** Desert Services LLC  
**PROJECT:** Diamond View at Ballpark  
**WORK ORDER #:** WA-25206-161096  
**ADDRESS:** P.O. Box 236, Scottsdale, Arizona 85252  
**AUTHORIZED CONTACT PERSON:** Dawn Wagner  
**PHONE:** (480) 513-8986 ext. 106  
**E-MAIL:** dawn@desertservices.net  
**DATE:** 1/15/2026

Catamount Constructors, Inc. ("Contractor") and Desert Services LLC ("Subcontractor") (hereinafter collectively the "Parties"), enter into this Subcontractor Work Authorization ("Work Authorization") with the intent and understanding that it sets forth the Project-specific terms and requirements for Subcontractor's work at the Project generally referred to as Diamond View at Ballpark (the "Project"). The Parties agree that this Work Authorization incorporates by reference the Master Subcontract Agreement entered into by the Parties on 6/10/2025 161096-2025-SAN (the "Subcontract" or "Agreement"), and that said Agreement and this Work Authorization shall for all purposes be interpreted and enforced as an integrated contract agreement by and between the Parties for the Project.

### **I. PROJECT-SPECIFIC TERMS AND REQUIREMENTS**

- 1. Compensation.** Subject to the terms, conditions, additions, and deductions as provided for herein, and provided Subcontractor's rate of progress and performance are satisfactory to Contractor, Contractor shall pay Subcontractor in installments for the full and faithful performance of Subcontractor's work, subject to retainage of ten percent (10.0%), the amount of thirty-nine thousand one hundred eighty-five dollars and eighty cents (\$39,185.80) (hereafter the "Contract Sum" and/or "Contract Price"). The agreed Contract Sum is a lump sum price, and is intended to account for all of Subcontractor's applicable taxes (including but not limited to state, county, city, local, transit, sales, and use taxes), benefits, insurances and all required licenses and permits to perform Subcontractor's work. Except as to allowance items, any price itemization on the specifications or other documents is informational only. No changes in the Contract Sum will be permitted absent Subcontractor's strict compliance with the Change Order process set forth in the Agreement.
- 2. Scope of Work.** Subcontractor shall furnish all labor and materials necessary to furnish and install a complete SWPPS & Erosion Control for the Project. Subcontractor's work shall be completed in a prompt, diligent, and workmanlike manner, in strict conformance with all applicable local, state, and federal laws, regulations, building codes, and all conditions and/or specifications relating to this Agreement. Subcontractor agrees to complete its entire Scope of Work in strict accordance with the Contract Documents, together with all work reasonably inferable from the plans, specifications, drawings, requirements, or otherwise necessary, customary, prudent, or clearly intended to have been included as part of the Scope of Work whether or not specifically described herein. Subcontractor's Scope of Work shall include, but is not limited to the following:
  - 1) Subcontractor's employees, while on site, shall participate in daily stretch and flex program coordinated by General Contractor.
  - 2) Subcontractor's Foreman will participate in daily foreman's huddle immediately following the stretch and flex.
  - 3) Subcontractor and Subcontractor's employees agree to follow all safety requirements required by Catamount Constructors, Inc. Safety and Health Program (attached) including but not limited to hard soled leather work boots, long pants, high visibility vest or clothing, hardhat and 100% level 4 glove and 100% ANSI Z-87.1 eye protection.
  - 4) This Subcontractor shall perform site specific safety plan with JHA's for each activity performed and submit daily to General Contractor Catamount Constructors, Inc. Procure prior to the start of the following work day.
  - 5) Clean up and removal of all materials and all other work associated is included in this Agreement.
  - 6) Subcontractor shall be responsible for removal of all debris generated by this scope, from the work area daily as required by Contractor to ensure a safe work environment. All debris shall be placed in containers provided by General Contractor (excluding demo).
  - 7) Clean up shall include legally disposing and/or placing all trash, scrap material, etc. associated with Subcontractor's work in dumpsters. Any reusable material shall be separated and moved to the next building and stored in an orderly fashion.
  - 8) All clean up including site clean-up shall be done on an "as you go" basis. If, in the General Contractor's reasonable judgment, the Subcontractor does not clean up its work areas daily, General Contractor shall hire labor to clean for Subcontractor and all corresponding costs will be back charged to the Subcontractor.
  - 9) General Contractor to supply trash containers (excluding demo). The Subcontractor will provide trash cans in their crew's work areas to prevent trash and construction debris. The Subcontractor shall be responsible for getting trash to the designated containers.
  - 10) The Subcontractor shall break down all cardboard boxes before placing them into dumpsters.
  - 11) General Contractor will not be responsible for excess waste caused by the Subcontractor.
  - 12) Any excess dumpster pulls because of this trade shall be the responsibility of this trade.
  - 13) If there is failure to maintain proper cleanliness of roads, General Contractor reserves the right to provide proper cleaning per man hour in addition to any associated material and equipment costs.
  - 14) All breaks, to include lunch, will be held in one area designated by General Contractor, with ongoing clean up by Subcontractor to eliminate trash throughout the buildings or area designated by General All debris to be disposed of properly in containers provided by General Contractor. No eating or drinking is allowed in building structures.
  - 15) No smoking allowed in or within the project site except for designated smoking areas.
  - 16) No tobacco products such as dip, chew etc. will be allowed onsite.
  - 17) No foul language or offensive language will be allowed onsite.
  - 18) No offensive clothing, T Shirts or hats will be allowed onsite.
  - 19) Radios and loud music are not permitted as this is a safety concern for communication.
  - 20) Any second-tier subcontractor of Subcontractor on-site must be identified to General Contractor's Superintendent or PM prior to any work being performed.
  - 21) This project is located in Arizona and will follow the state tax codes and requirements.

- 22) Subcontractor shall secure material cost and hold all pricing per the SOV for the duration of the project. Change order for cost escalation will not be accepted. This project is a lump sum contract. General Contractor expects Subcontractor to secure material cost and order material to prevent additional cost.
- 23) General Contractor will not issue change orders for damages by other trades. In the event another trade damages Subcontractor's Work, Subcontractor will pursue financial responsibility with the trade responsible and not General Subcontractor waives all claims against General Contractor and against Owner for damage to Subcontractor's Work that is caused by other trades or subcontractors.
- 24) All questions, concerns or necessary field clarifications shall be presented to General Contractor in an acceptable RFI form. Verbal RFI information will not be accepted and will not be held binding. Subcontractor is responsible for providing RFIs to the General Contractor within a timely manner to prevent delays of work. Subcontractor is responsible for reviewing and planning ahead. RFIs provided without ample time to process will not relieve Subcontractor of Subcontractor's responsibility to recover lost days.
- 25) The job schedule must be maintained. Extended work hours during weekdays, weekends and holidays will be used as make up days, as determined by the General Contractor Superintendent(s).
- 26) Insurance: see contract attachment in section V for details of General Contractor Controlled Insurance Policy. Subcontractor will provide insurance updates as required by Catamount insurance provider and Project Controller.
- 27) It is Subcontractor's responsibility to inform all second-tier subs, suppliers & renters of the required pay request date to be paid on the following month.
- 28) Subcontractor shall develop its own punch list by a qualified superintendent or project manager and correct punch list items prior to General Contractor / Owner / Architect punch list at each major stage of construction. Completion of this punch list shall be signed off on by a qualified representative of Subcontractor.
- 29) Subcontractor must provide all patching of asphalt cuts when required.
- 30) Subcontractor shall ensure elevations, slopes and grades are per the plans and provide proper drainage to stormwater systems and to limit ponding or standing water. If adjustments are needed the Subcontractor shall provide an RFI to document and correct any grades that need adjustments.
- 31) Subcontractor has reviewed all plan sets and included possible deviation and or possible adjustments needed in coordination between Architectural, Structural, and MEP sets of plans in their contracted price.
- 32) Subcontractor is required to locate all existing utilities before commencing work. In the event Subcontractor does not properly locate utilities, Subcontractor will be responsible for damages.
- 33) Subcontractor's work shall include, but not be limited to, all hoisting, excavation, trenching, backfilling, fine grading, shoring, and bracing, where required, pumping and dewatering, if required, and compaction work associated with the proper installation of all work required of this Subcontract. All excavation, trenching, backfilling, fine grading, and compaction work shall be completed in accordance with the safe excavation practices, governed by the Occupational Safety and Health Administration (OSHA).
- 34) Subcontractor is responsible for all penalties, notices of violations, fine, fees, and cost repair impact due to improper workmanship or failure to abide by local code requirements or other Applicable Laws.
- 35) Subcontractor is responsible for maintaining the fire ratings required by the Subcontract Documents and by Applicable Codes.
- 36) All work is to be coordinated with General Contractor's Superintendent including but not limited to material delivery, unloading, storage, placing and installing materials in building.
- 37) Subcontractor is responsible for equipment needed to handle their materials and deliveries. General Contractor will not receive or accept equipment or materials deliveries for Subcontractor.
- 38) Subcontractor shall notify General Contractor's Superintendent prior to removal of any unforeseen conditions or obstructions for verification of same. Failure to do so prior to proceeding with work will result in forfeiture of payment of the same.
- 39) Coordination with other trades may be required in the performance of the work contemplated herein. All such coordination and scheduling of the work must be supervised and approved by General
- 40) Subcontractor shall submit (4) samples of all products / materials to be used in the work prior to commencement and will need approval to proceed.
- 41) Subcontractor's project manager, superintendent, and foreman will have equipment (iPad, computer, or smart device) to review and used General Contractor's Procore while in the field. This is to ensure Subcontractor is able to review the most accurate plans, submittals, and RFI items while constructing the project.
- 42) Subcontractor shall provide full-size electronic copies of all final redline as-builts.
- 43) Subcontractor shall provide electronic copies of installation literature, etc. at the time of all products used in the work.
- 44) Subcontractor shall provide an electronic copy of all Letters of Warranty upon completion of work.
- 45) Subcontractor shall coordinate and schedule all inspections through the General Contractor on site field offices.
- 46) Subcontractor will place trash, debris, and waste in appropriate dumpster or storage location and will sort trash, debris, and waste according to arrangements made by General Contractor or by Project or site requirements.
- 47) Subcontractor shall provide all labor, materials, and equipment necessary to construct one exterior and one interior mock up for approval. Project will be constructed in accordance with look-ahead schedules created by General Contractor's Superintendent.
- 48) The schedule attached to subcontract is for general use and activity reference. This Subcontractor (its project manager and superintendent / site foreman) is responsible for attending meetings and/or corresponding with Project Superintendent to allow adequate time for ordering and delivery of materials and for providing adequate labor to meet project schedule.
- 49) It is understood that some equipment and utilities will potentially be in the way during this operation. Subcontractor agrees to work around the obstacles to meet schedule requirements.
- 50) Warranties and Close-out Manuals shall include, but not be limited to, the following:
  - a) An electronic copy of all instructions on operation, care, and maintenance for each piece of equipment furnished under the Subcontract.
  - b) An electronic copy of final for record drawings/as built drawings for Subcontractor's scope of work.
  - c) Copies of all approved submittals for Subcontractor's scope of work.
  - d) Copies of all testing certifications and letters.
  - e) Copies of all camera video(s) if applicable to trade.
  - f) Warranty Affidavit Letters upon completion of work.
  - g) Copies of all Product Manufacturer Warranties and Equipment / Appliances.
  - h) Project Specified Equipment, Meter #'s and Appliance Information Tabulations. This is for all equipment and appliances associated with or installed by Subcontractor and is to be provided in PDF and Microsoft Excel Format. The list is to be organized by equipment tag / ID given within the drawings and specifications and shall also include the Serial #, Make and Model numbers for each piece of equipment or appliance and detail which Unit and/or Building location it is tied to.
  - i) All closeout documentation is due to General Contractor no later than 30 days after substantial completion of the work. Closeout documentation is to be submitted in a clearly identified manner.

- 51) Subcontractor is responsible for managing and moving all spoils to the location determined by the Catamount Superintendent. All spoils not used by the Subcontractor will be kept clean of debris and stored for hauling per Catamount Superintendent's direction. The spoils will be protected per SWPPP requirements. Multiple move-ins will be required to perform work.
- 52) All work to comply with Alpha Geotechnical & Materials, Inc. Geotechnical report dated 04.03.2023 and drawing log.
- 53) Damage to any existing utility services (including irrigation) shall be brought to the prime General Contractor's attention immediately to address repair, as required. Assume all services are live and need to stay in working condition unless specifically noted otherwise. Costs to repair damage of known and located utilities shall be borne by the damaging subcontractor. Delay costs caused by the damage and repair of known and located utilities shall be borne by the damaging subcontractor.
- 54) All requests for survey must be in writing via e-mail a minimum of 72 hours before the survey is needed. Subcontractor agrees to work OT at Subcontractors' costs to mitigate any delays caused by not following this requirement. Survey requests will have a cover page noting plan pages, requested survey points and highlighted/clouded plan of the requested information. Only rough grade survey request will be staked with 4' stakes. All other requests can be staked with 2' stakes or what survey crew sees fit.
- 55) SWPPP/Dust Control: **this is fine because it says subcontractor area at the top**
- Subcontractor provide SWPPP/Dust Control for all areas of Subcontractor's work area.**
  - At the end of every working day prior to a forecasted rain / weather event, double check entire project to make certain all areas surface drain to storm sewer inlets to prevent water from standing at any location on the site. Subcontractor shall monitor weather so as to not open up large cuts prior to large rain events. **In the event Subcontractor's cuts are flooded during large rain events, it is the Subcontractor's responsibility to mitigate standing water. Stockpiles of dirt will be covered with plastic tarps and protected with straw wattle and/or sandbag. Cut, fill, blade and back drag as required insuring surface drainage is maintained per project SWPPP, MCDC, AQMD and erosion control requirements.**
  - Subcontractor shall provide all equipment and manpower to provide dust control measures as required by the authority having jurisdiction, specifically Maricopa County Dust Control Measures/ Pinal County Dust Control Measures.
  - Subcontractor shall provide a trained and certified dust control technician as required by Maricopa County Rule 310 if applicable and or Pinal County. Whatever county AHJ requires.
  - Subcontractor shall comply with the SWPPP protocols established for the project and shall provide dust control for its own work. Subcontractor shall take all precautions to ensure the activities of this scope do not spread dirt, mud, or debris on city streets. Include all means to clean streets that may become dirty due to this Subcontractor's operations.
  - Subcontractor shall be responsible to manage dust control operations so that site is in compliance with local monitoring regulations. If a violation is issued to Catamount Constructors Inc. due to operations performed by Subcontractor, it shall become Subcontractor's responsibility to reimburse to Catamount Constructors Inc. Provide water truck for dust control for all durations that Subcontractor is performing the Work in this scope. All water trucks, hoses or other equipment and labor required to maintain compliance is included. Site roads and site access is included in Subcontractor's dust control operations.**
  - Subcontractor will be held responsible for any damage to existing onsite SWPP and erosion control materials. Cost to replace damaged items will be this Subcontractor's responsibility. Any SWPP, BMP and/ or fence items removed must be reinstalled by Subcontractor. Items must pass 3rd party, General Contractor Superintendent and city inspections.**
- 56) Work will be completed via multiple move-ins per General Contractor's Superintendent's direction. All move-ins and costs associated with move-ins are included in this scope of work. These move-ins shall include, but will not necessarily be limited to the following:
- Subcontractor to include all mobilizations as required to completed scope of work.
  - All mobilizations to meet the project sequencing are included in this agreement, even if the sequencing is not yet defined. Mobilizations and sequencing will be at the discretion of Catamount Superintendents.
  - This project will require careful coordination. Work out schedule and sequencing with onsite Superintendent prior to start of work. Subcontractor acknowledges that this project will require adjustments of work schedule at request of onsite Superintendent to allow for correct sequencing and progression of other subcontractor's work. All accommodation will be provided to minimize impact to this scope of work but in cases, may be unavoidable.
- 57) Subcontractor acknowledges that the site will be shared with other subcontractors performing their scope at the same time. Coordination and communication is key.
- 58) Subcontractor will compact and backfill per soil report and inspectors requirements.
- 59) Subcontractor is responsible for bringing all work areas back to the required grade elevations in all Subcontractor's work areas. Subcontractor will bear the cost of survey if deemed necessary by Catamount Superintendent due to Subcontractor inadvertently damaging site grades or stakes.
- 60) Subcontractor is responsible for verifying existing work is ready and accurate before moving on or starting their work. If something is out of place and will prevent the Subcontractor from starting on schedule the Subcontractor must notify the Catamount Superintendent 72 hours prior to the Subcontractor's start date.
- 61) Subcontractor shall be responsible for surveying and locating of any underground utilities. Damage to existing underground utilities arising from the Subcontractor's negligence shall be repaired and/or replaced at the Subcontractor's own expense.
- 62) Subcontractor shall make note of crossovers with other underground utilities and shall coordinate with other trades and utilities as needed. Subcontractor shall provide the proper and required spacing between utilities as required by the plans.
- 63) Subcontractor agrees that site improvements shall be constructed in accordance with the most current version of the Maricopa Association of Governments (MAG) Uniform Standard Details for Public Works Construction and work pertaining to this scope of work shall be constructed in accordance with these standards.
- 64) Subcontractor shall provide and maintain its own traffic control devices throughout the duration of this scope of work.
- 65) Subcontractor shall provide its own temporary power.
- 66) Subcontractor shall provide its own water for construction use.
- 67) Subcontractor shall provide its own fuel for all equipment.
- 68) Subcontractor shall provide its own temporary lighting.
- 69) This Subcontractor shall complete and submit Daily Logs every day using Catamount Constructors, Inc. Procure fillable forms for all activity on site and will complete and submit multiple Daily Logs if this Subcontractor is performing work in multiple areas of the project within the same work day.
- 70) Catamount Constructors Inc has the right to require subcontractor to replace any onsite supervision provided by subcontractor.
- 71) Subcontractor must obtain Catamount Constructors Inc approval prior to replacing any onsite supervision. CCI reserves the right to keep subcontractor supervisor onsite until subcontractor's entire scope of work is completed.

**Specific Scope of Work includes, but is not limited to, the following:**

- 1) Provide (1) SWPPP Narrative Design Manual – Required per EPA Specifications. Narratives alone (no BMP installations) will be \$1,550.00.
- 2) Compost Filter - Installation of 9" Compost Filter Sock (4,365 linear feet) at \$2.45 per linear feet (EPA approved equal to silt fence as specified) add for staking if greater than 4:1 slope at \$0.50 per linear feet.
  - a) AS ALTERNATE (IF ABSOLUTELY REQUIRED).
    - i) Installation of wire backed silt fence on job site (at \$4.90 per linear feet).
    - ii) Installed using steel t-posts via Tommy Slice Method (orange safety caps for steel t-posts are included).
    - iii) Gravel backfill not required when Slice Method of installation is used.
- 3) Rock Entrance – (1) Rock Entrances installed with rock and Filterfabric per SWPPP Plan at \$2,475.00 each. Prices can change depending on rock availability.
  - a) Miscellaneous
    - i) Installation of rumble grates on job site included in above price if rented from Desert Services and installed at the same time as the rock entrance (additional cost if installed later) for 12 months at \$4,800.00.
    - ii) Monthly rental charge for rumble grates on the job site.
      - (1) \$400.00 per month + tax per entrance.
      - (2) Maintenance not included.
    - iii) Rumble Grate Removal Fee will be equal to the Mobilization Charge.
- 4) Inlet Protection – Install (17) Inlet Protection at \$145.00 each.
- 5) Concrete Rolloff – Provide (1) 15 Cubic Yard Concrete Rolloff System at \$725.00.
  - a) Additional move charges, and contaminated water pump off charges may apply.
- 6) SWPPP Sign – Install (1) SWPPP Sign per ADEQ Specifications at \$275.00.
- 7) Spill Kit – Provide (1) Spill Kit per ADEQ Specifications at \$345.00.
- 8) Dust Control Sign – Install (1) Dust Control Sign at \$575.00.
- 9) Miscellaneous
  - a) Install (1) City approved Fire Access Sign at \$675.00.
  - b) Textura setup charge at \$100.00.
  - c) CCIP/OCIP/Insurance portal fees/Prequal portal fees at \$250.00
- 10) Inspections – Perform (51) SWPPP Inspections (approximately 24 months) performed every 14 days (1/2 in rain) at \$195.00 each.
  - a) Includes additional inspections for months with more than 4 weeks.
  - b) For inspections performed every 30 days, add \$100.00.
  - c) Additional inspections for rain events and/or project extension are not included in this total & will be bill at \$195.00 each.
- 11) Mobilization Charges – (2) Mobilization charges at \$255.00 each.
  - a) Any additional trips for BMP installations will be billed at the same price.

**3. Specifications.** Subcontractor's Scope of Work shall adhere to the requirements of the following Specifications:

Studio B Design Group Spec Book 9/22/2025

**4. Addendums.** Subcontractor's Scope of Work shall adhere to the requirements of the following Addendums:

N/A

**5. Schedules.** Subcontractor's Scope of Work includes all costs and manpower to meet the specific schedules defined below. Any overtime costs required to maintain the specified schedule will be borne by this Subcontractor. The durations listed include time required for layout, mobilization, etc. through completion of the work, and ready for other trades to start sequential work. Durations are for working days (Monday – Saturday) and commence when Subcontractor is scheduled to start work.

Please see attached for your reference

**6. Cost Breakouts.** Subcontractor's Scope of Work includes the following Cost Breakouts:

#	COST CODE	DESCRIPTION	TYPE	AMOUNT
1	02-270-__ - Slope Protect/Erosion Control	SWPPP Narrative Design Manual	Subcontractor	\$ 1,350.00
2	02-270-__ - Slope Protect/Erosion Control	Install 9" Compost Filter Sock (2400LF)	Subcontractor	\$ 6,600.00
3	02-270-__ - Slope Protect/Erosion Control	(2) Rock Entrance (Rock and Filterfabric)	Subcontractor	\$ 4,950.00
4	02-270-__ - Slope Protect/Erosion Control	(2) Rumble Grate Rentals for (12) Months	Subcontractor	\$ 9,600.00
5	02-270-__ - Slope Protect/Erosion Control	(2) Rumble Grate Rental Tax	Subcontractor	\$ 820.80
6	02-270-__ - Slope Protect/Erosion Control	15 Cubic Yard Concrete Rolloff System	Subcontractor	\$ 725.00
7	02-270-__ - Slope Protect/Erosion Control	SWPPP Sign	Subcontractor	\$ 275.00
8	02-270-__ - Slope Protect/Erosion Control	Spill Kit	Subcontractor	\$ 345.00
9	02-270-__ - Slope Protect/Erosion Control	Dust Control Sign	Subcontractor	\$ 575.00
10	02-270-__ - Slope Protect/Erosion Control	City Approved Fire Access Sign	Subcontractor	\$ 675.00
11	02-270-__ - Slope Protect/Erosion Control	Textura Setup Charge	Subcontractor	\$ 100.00
12	02-270-__ - Slope Protect/Erosion Control	(17) Inlet Protection	Subcontractor	\$ 2,465.00

13	02-270-____ - Slope Protect/Erosion Control	CCIP/OCIP/ Insurance portal fees/Prequal portal fees	Subcontractor	\$ 250.00
14	02-270-____ - Slope Protect/Erosion Control	(51) SWPPP Inspections	Subcontractor	\$ 9,945.00
15	02-270-____ - Slope Protect/Erosion Control	(2) Mobilization Charges	Subcontractor	\$ 510.00
16	02-270-____ - Slope Protect/Erosion Control	Asphalt Curb Ramp Construction Entrance	Subcontractor	\$ 0.00
<b>Grand Total:</b>				<b>\$ 39,185.80</b>

**7. Unit Prices and Alternates.** All unit prices include all engineering, submittals, materials, trucking, delivery, installation, overhead, and profit. Unit prices shall apply to both added and deductive changes. It is at the discretion of Contractor whether to utilize unit prices for changes in the Subcontract scope, or whether to convert changes to lump sum costs. Subcontractor's Scope of Work includes the following Unit Prices and Alternates:

- 1) Water Truck Services
  - a) Provide water truck services for dust control prevention and track out. Several schedules available:
    - i) Services beginning at \$100.00 per hr based 5X2X and \$110.00 per hr based on 5X1X Schedules with 1 hr min.
    - ii) Onsite full time trucks with Maricopa Certified drivers available to completely manage your site at \$75.00 per hour, based on 8 hrs per day.
  - b) Plus 10% Fuel Surcharge.
- 2) Temp Fencing
  - a) Installation of temp fence @ \$1.35/LF + trip charge + tax.
  - b) Price is the same for pounded or on stands (add \$15.00 per stand for sand bags).
  - c) Gate is included in install/remove price.
  - d) Privacy screen is an additional \$2.75/LF + tax installed.
  - e) Rental is \$0.35/LF + tax per month (\$100.00 minimum monthly rental charge)
  - f) \$255.00+ tax per trip charge (initial installation and any additional trips)
- 3) Portable Toilets
  - a) Porta John Services @ \$110.00 per month
    - i) Include (1) cleaning per week.
    - ii) \$25.00 delivery & \$25.00 pick up + 10% fuel surcharge + tax.
    - iii) Monthly price may vary dependent upon service location.
  - b) 2x weekly service @ \$140.00 per month plus 10% fuel surcharge of \$14.00
  - c) 3x weekly service @ \$140.00 per month plus 10% fuel surcharge of \$19.50
  - d) Rental Tax is City Specific
- 4) Roll Offs
  - a) 40 yard @ \$450.00 per pull + 10% fuel surcharge.
    - i) 4 ton included.
      - (1) \$75.00 per ton over 4
    - ii) Rental is good for 21 days.
      - (1) Over 21 days without exchange is \$20.00 per day.
  - b) 30 Yard Container @ \$420.00
    - i) Delivery-Empty/Return of 30 cubic yard container for waste disposal.
    - ii) +10% fuel surcharge
    - iii) Overage after 3 tons
    - iv) Non-activity fee after 21 days
  - c) 20 Yard Container @ \$390.00
    - i) Delivery-Empty/Return of 20 cubic yard container for waste disposal.
    - ii) +10% fuel surcharge
    - iii) Overage after 2 tons
    - iv) Non-activity fee after 21 days
  - d) 15 Yard Container @ \$350.00
    - i) Delivery-Empty/Return of 15 cubic yard container for waste disposal.
    - ii) +10% fuel surcharge
    - iii) Overage after 2 tons
    - iv) Non-activity fee after 21 days
- 5) Street Sweepers
  - a) Provide street sweeping services at \$120.00 per hour with a two hour minimum + 10% fuel surcharge.
- 6) Rock Entrance Refresh
  - a) Install refreshed rock entrance with rock and Filterfabric per SWPPP Plan at \$1895.00.

**8. Exclusions.** This Scope of Work excludes the following:

N/A

## **II. GENERAL TERMS AND REQUIREMENTS**

- a. Subcontractor has visited the site prior to the start of its work. Subcontractor's start of its work is considered acceptance of all existing conditions.
- b. Subcontractor shall verify with Contractor's onsite superintendent that it has the correct set of Contract Documents prior to commencement of Subcontractor's work from time to time. Any costs associated with working from the incorrect set of documents will be the responsibility of the Subcontractor.
- c. Subcontractor shall legally dispose of all debris created by their work off-site or into dumpster provide by Contractor, unless otherwise noted.
- d. Subcontractor shall examine all drawings and all sections of the specifications, respective to its trade, to insure all work to be performed by Subcontractor is in accordance with all design and testing criteria, specifications, and details contained in the Contract Documents.
- e. This Subcontract includes out of sequence work due construction sequencing and logistics.
- f. This Subcontract includes all mobilizations necessary to complete its work. Subcontractor is responsible for review of incomplete scope items prior to de-mobilizing and coordinating remobilization with the Project Superintendent or Project Manager.
- g. Subcontractor shall have a foreman or competent person present at the time of inspections as it applies to its own trade's work.
- h. Subcontractor shall include moving and relocating own trades' materials, tools, and equipment as directed by Contractor's staff.
- i. Subcontractor is solely responsible for the security of its material and equipment throughout the life of the Project, including loss from damages, theft, or vandalism.
- j. Contractor reserves the right to have any Subcontractor's personnel removed from the Project and replaced.
- k. Subcontractor shall unload, store, move, hoist, convey, protect and stage all tools, materials, and equipment as required including materials provided by others, installed by this scope.
- l. Subcontractor is responsible for notifying Contractor in writing if it becomes reasonably aware of the work specified in the Contract Documents will void any warranty of any material or system that is being provided for the Project. Subcontractor will be responsible for the warranty if proper and timely notification is not given.
- m. Subcontractor shall not communicate with Owner, Architect or consultants directly unless authorized by Contractor. Subcontractor understands that it is to take direction from Contractor only.
- n. Subcontractor shall conform to the quality control standards as outlined in the Contract Documents and Contractor's quality control program. If there are multiple quality control standards that conflict, the most stringent shall apply. If there is no quality control standard specified, Subcontractor shall adhere to the nationally recognized standards associated with this scope of work. This will be determined at the sole discretion of the Contractor.
- o. Subcontractor shall provide drinking water as required for its crews.
- p. Subcontract includes all costs necessary to maintain, relocate, and repair temporary controls such as site fencing, barricades, and dust control, as required to complete Subcontractor's scope of work.
- q. Subcontract includes all layout for Subcontractor's work. A bench mark for horizontal and vertical control will be provided by Contractor.
- r. Contractor will provide 120 V temporary power. Subcontractor will be required to provide their own temporary power when working in remote areas, or with non 120 V equipment and tools.
- s. Subcontractor is solely responsible for delivering all submittals per specifications in Contractor's schedule in a timely manner as to not delay the Project Schedule and in accordance with the Schedules set forth in this Work Authorization. Subcontractor shall allow approximately two weeks of review time for Contractor, and proper review time for the Architect as per the specifications. Subcontractor shall take into account additional time required if re-submittals are required and lead time of items. Additional time will not be granted due to submittal process delays. Subcontractor shall denote all changes on resubmittals.
- t. Subcontractor shall submit a complete submittal package. Partial submittal packages will not be accepted unless previously approved. Subcontractor shall label all submittals with relevant specification numbers and paragraphs.
- u. Subcontractor shall submit all closeout documents per the requirements of the Contract Documents for review and approval prior to final payment, which will not be released until all closeout documents are received and approved.
- v. Subcontractor is solely responsible for informing all of its field personnel working on the Project of the requirements of this Subcontract. Subcontractor is responsible for distributing all required information to its field personnel including but not limited to the Contract Documents, Project Schedule, and plan revisions.
- w. Subcontractor understands that there is limited lay down and staging area available and agrees to coordinate and sequence multiple deliveries with the schedule to eliminate any delays.
- x. Subcontractor shall provide complete and detailed back-up for all Change Order requests as requested. Lump sum Change Order requests will not be accepted.
- y. Subcontractor must have internet capabilities and have an email address established for the purpose of sending and receiving notifications and information pertinent to the Project. This includes RFI's, submittals, schedule updates, and Construction Document changes.
- z. Contractor Quality Control (CQC) Requirements: Subcontractor to provide, as required, specialized personnel to assist the CQC System Manager.
- aa. Subcontractor shall not provide for or be involved in any media coverage pertaining to this Project.
- bb. Subcontractor shall not use any Project information, photographs, etc. for any marketing or advertising purposes without Contractor's consent.
- cc. Subcontractor shall have a full English-speaking representative at the Project at all times Subcontractor's Work is being performed.
- dd. Subcontractors will attend pre-installation coordination meetings to facilitate coordination efforts with other trades.
- ee. Subcontractor shall be responsible for all of Subcontractor's penetrations and shall include the cutting and sealing of all openings and adjacent surfaces through walls, floors, ceilings, membranes, etc., as it applies to Subcontractor's scope of work. Penetrations required for Subcontractor's work after walls, floors, ceiling and roof are installed shall be the Subcontractor's sole responsibility.
- ff. Subcontractor shall receive, verify quantities, unload, store and protect, transport, and hoist all materials required for the installation of Subcontractor's work.

### **III. DESIGN TERMS AND REQUIREMENTS**

- 1. Subcontractor Design Responsibilities. The Contractor and Subcontractor shall initial here if design responsibilities are included in Subcontractor's Scope of Work:** Contractor: \_\_\_\_\_ Subcontractor: N/A
- 2. Subcontractor agrees to furnish by properly licensed and qualified architects and/or engineers, as applicable, all professional design services necessary for the proper design of Subcontractor's work, as described and intended by Contractor and/or its agents. In such instance, the following provisions shall apply to Subcontractor:**

N/A
- 3. It is the responsibility of Subcontractor to completely coordinate its design and construction with that of the Owner, Contractor, any other design professionals, and any other design/build subcontractors. Complete system design drawings, stamped by a registered architect and/or professional engineer duly licensed in the state where the Project is located shall be provided by the Subcontractor with sufficient information to coordinate with other trades. All drawings shall contain all information and requirements necessary to receive proper building permits and shall meet all federal, state, and local codes, ordinances, and inspection requirements.**
- 4. Subcontractor shall furnish all said design services in accordance with all applicable laws, building codes, ordinances, regulations and orders of any public authority bearing on the design and/or construction of the work of Subcontractor. Subcontractor bears all responsibility for the professional and technical accuracy of the design and performance of the work. Any deficiencies in design or performance shall be Subcontractor's sole responsibility and any corrections or modifications necessary, either before or after construction, to achieve the design intent shall be provided by Subcontractor at no additional cost to the Owner or Contractor.**
- 5. Subcontractor shall submit for Contractor's review, in accordance with the Overall Project Schedule, all necessary design development documents, plans, drawings, specifications, working drawings, shop drawings, samples, data, and specifications of materials proposed to be incorporated into Subcontractor's work, in the form and quantities required by Contractor.**
- 6. Subcontractor shall advise Contractor and other affected trades of all design development changes in a timely manner so as to preclude additional costs and conflict with work of others on the Project, and Subcontractor shall be liable for all extra costs incurred due to failure to provide such timely notice to Contractor and Owner, if so required.**
- 7. The plans, drawings, and specifications furnished by Subcontractor for the Project shall remain the property of the Contractor but will not be used by Contractor on any other project without the prior written approval of Subcontractor. However, if Subcontractor defaults in the performance of the Subcontract or applicable Work Authorization, Contractor may use the plans, drawing, specifications, etc., in order to complete Subcontractor's work on the Project. Additionally, Contractor shall be permitted to retain copies, including reproducible copies, of the plans, drawings and specifications, etc., for information and reference in connection with the Owner's use and occupancy of the Project. Submission or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as use or publication in derogation of Subcontractor's rights.**
- 8. Subcontractor and/or its consultants shall affect and maintain professional liability errors and omissions insurance (in an amount not less than one million dollars (\$1,000,000.00) per claim with an insurer acceptable to Contractor) to protect against any claims arising out of or related to the performance of the design services pursuant to, or as required by, this Subcontract and/or applicable Work Authorization by Subcontractor and/or its consultants, and/or anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. All such insurance shall have no retroactive date and shall be maintained throughout the term of the Project and shall have an extended reporting period of at least (10) years after completion of the construction of the Project and the acceptance thereof by the Owner. Subcontractor will submit to Contractor certificates of insurance (and copies of the actual policies if requested) evidencing the insurance required by this paragraph; such certificate(s) shall indicate that coverage thereunder will not be canceled, materially changed or not renewed until at least sixty (60) days prior written notice by registered mail has been given to Contractor. The policy or policies procured by will be endorsed to provide that the insurance company or companies waive all rights of subrogation against Contractor. Subcontractor shall provide all information related to renewal or substitution of coverage to Contractor within forty-eight (48) hours of receipt by Subcontractor from its insurance broker.**
- 9. Subcontractor acknowledges that it may not limit its prospective liability based on design services provided by Subcontractor or its consultants for the Project. Rather, to the maximum extent allowable by any applicable laws of the state where the Project is located, any purported limitations of liability in favor of Subcontractor or its consultants are hereby agreed by the parties herein to be expressly waived and superseded by the terms of this Subcontract.**

#### **IV. STATE SPECIFIC AND/OR FEDERAL SUPPLEMENTAL CONDITIONS**

To the maximum extent allowable by any applicable laws of the state where the Project is located, the following terms and conditions shall apply:

1. **Retainage.** To the extent that any applicable laws of the state where the Project is located require an alteration of the retainage provision set forth herein, then this process shall comport with the state law requirements and be deemed amended to comport with those requirements.
2. **Prompt Pay.** To the maximum extent allowable by any applicable laws of the state where the Project is located, the terms of any applicable Prompt Pay Act(s) are hereby agreed by the parties herein to be expressly waived and superseded by the terms of this Subcontract.
3. **Indemnity.** To the maximum extent allowable by any applicable laws of the state where the Project is located, the terms of the applicable indemnity requirements contained herein are hereby agreed by the parties herein to be expressly waived and superseded by the terms of this Subcontract.
4. **Taxes.** Subcontractor shall be required to comply with the following tax requirements:

This project is located in Arizona and will follow the state tax codes and requirements.

#### **V. ATTACHMENTS**

ATTACHMENT A: PHASING PLAN, DRAWING LOG & SCHEDULE

ATTACHMENT B: NOTICE TO SUBCONTRACTORS - SAFETY POLICY AND PROCEDURES

ATTACHMENT C: SUBCONTRACTOR SAFETY AGREEMENT

ATTACHMENT D: SUBCONTRACTOR'S LIST OF SUB-SUBCONTRACTORS/SUPPLIERS

ATTACHMENT E: TEXTURA NOTIFICATION TO SUPPLIERS

ATTACHMENT F-1: TEXTURA PAYMENT MANAGEMENT INFORMATION

ATTACHMENT F-2: TEXTURA TRAINING AND SUPPORT

ATTACHMENT F-3: EARLY PAYMENT PROGRAM

ATTACHMENT G: EQUAL OPPORTUNITY DISCLOSURE

ATTACHMENT H: COVID-19 SAFETY POLICY AND PROCEDURES

ATTACHMENT I: LIEN WAIVER PACKAGE – GEORGIA

ATTACHMENT J: ARIZONA FORM 5005 – TPT

ATTACHMENT K: PROJECT INSURANCE MANUAL

ATTACHMENT L: GEOTECHNICAL REPORT

IN WITNESS WHEREOF, the parties have executed this Agreement through their proper officers or duly authorized agents.

**CONTRACTOR:**

**SUBCONTRACTOR:**

Desert Services LLC

By: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

Name/Title: Dawn Wagner

Date: \_\_\_\_\_

Federal ID #: \_\_\_\_\_





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Job #: 25206 Diamond View at Ballpark  
 NE Qtr of Section 17, Township 1 North, Range 1 West, of the  
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## Current Drawings

Drawing No.	Drawing Title	Revision	Drawing Date	Received Date	Set
<b>Architectural</b>					
A0.0	COVER SHEET	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.1	GENERAL NOTES & SYMBOLS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.3.1	IECC COMPLIANCE REPORTS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.3.2	IECC COMPLIANCE REPORTS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.3.3	IECC COMPLIANCE REPORTS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.3.4	IECC COMPLIANCE REPORTS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.7.1	BUILDING TYPE 1 OCCUPANT LOAD, EXITING & SEPARATION	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.7.2	BUILDING TYPE 2 OCCUPANT LOAD, EXITING & SEPARATION	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.7.3	BUILDING TYPE 3 OCCUPANT LOAD, EXITING & SEPARATION	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.7.4	BUILDING TYPE 4 OCCUPANT LOAD, EXITING & SEPARATION	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.7.5	BUILDING TYPE 5 OCCUPANT LOAD, EXITING & SEPARATION	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A0.7.6	CLUBHOUSE, FITNESS, AND MAINTENANCE OCCUPANT LOAD, EXITING & SEPARATION	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A1.0	REFERENCE SITE PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A1.1	ENLARGED SITE PLAN	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A1.2	ENLARGED SITE PLAN	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A2.0.1	BUILDING TYPE 1 SLAB PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.0.2	BUILDING TYPE 2 SLAB PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.0.3	BUILDING TYPE 3 SLAB EDGE PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.0.4	BUILDING TYPE 4 - SLAB EDGE PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.0.5	BUILDING TYPE 5 - SLAB EDGE PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.0.6	CLUBHOUSE SLAB EDGE PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.0.7	FITNESS SLAB PLAN	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A2.1.1	BUILDING TYPE 1 FIRST & SECOND FLOOR PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.1.2	BUILDING TYPE 1 THIRD FLOOR PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.2.1	BUILDING TYPE 2 FIRST & SECOND FLOOR PLANS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.2.1 - 1	BUILDING TYPE 2 FIRST & SECOND FLOOR PLANS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A2.2.1 - 2	BUILDING TYPE 2 FIRST & SECOND FLOOR PLANS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A2.2.2	BUILDING TYPE 2 THIRD FLOOR PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.3.1	BUILDING TYPE 3 FIRST & SECOND FLOOR PLANS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.3.1 - 1	BUILDING TYPE 3 FIRST & SECOND FLOOR PLANS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A2.3.1 - 2	BUILDING TYPE 3 FIRST & SECOND FLOOR PLANS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A2.3.2	BUILDING TYPE 3 THIRD FLOOR PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.4.1	BUILDING TYPE 4 FIRST & SECOND FLOOR PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)



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Drawing No.	Drawing Title	Revision	Drawing Date	Received Date	Set
A2.4.2	BUILDING TYPE 4 THIRD FLOOR PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.5.1	BUILDING TYPE 5 FIRST & SECOND FLOOR PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.5.2	BUILDING TYPE 5 THIRD FLOOR PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.6.1	CLUBHOUSE & FITNESS FLOOR PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A2.6.2	FITNESS FLOOR PLAN	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A2.7.1	MAINTENANCE SLAB, FLOOR, ROOF, AND RCP PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A3.1.1	BUILDING TYPE 1 ROOFS A & B PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A3.2.1	BUILDING TYPE 2 ROOF PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A3.3.1	BUILDING TYPE 3 ROOF PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A3.4.1	BUILDING TYPE 4 ROOF PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A3.5.1	BUILDING TYPE 5 A & B ROOF PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A3.6.1	CLUBHOUSE & FITNESS ROOF PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A3.6.2	FITNESS ROOF PLAN	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A3.7.1	ROOF DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A3.7.2	ROOF DETAILS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.1.1	BUILDING TYPE 1 ARCH-A ELEVATIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.1.1C	BUILDING TYPE 1 ARCH-A COLOR ELEVATIONS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.1.2	BUILDING TYPE 1 ARCH-B ELEVATIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.1.2C	BUILDING TYPE 1 ARCH-B COLOR ELEVATIONS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.2.1	BUILDING TYPE 2 ELEVATIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.2.1C	BUILDING TYPE 2 COLOR ELEVATIONS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.3.1	BUILDING TYPE 3 ELEVATIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.3.1C	BUILDING TYPE 3 COLOR ELEVATIONS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.4.1	BUILDING TYPE 4 ARCH-A CS 21 ELEVATIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.4.1C	BUILDING TYPE 4 ARCH-A CS 21 COLOR ELEVATIONS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.4.2	BUILDING TYPE 4 ARCH-A CS 23 ELEVATIONS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
A4.4.2C	BUILDING TYPE 4 ARCH-A CS 23 COLOR ELEVATIONS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.5.1	BUILDING TYPE 5 ARCH-A ELEVATIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.5.1C	BUILDING TYPE 5 ARCH-A COLOR ELEVATIONS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.5.2	BUILDING TYPE 5 ARCH-B ELEVATIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.5.2C	BUILDING TYPE 5 ARCH-B COLOR ELEVATIONS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.6.1	CLUBHOUSE ELEVATIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.6.1C	CLUBHOUSE COLOR ELEVATIONS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.6.2	FITNESS ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A4.7.1	FITNESS ELEVATIONS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.7.1C	FITNESS COLOR ELEVATIONS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.8.1	MAINTENANCE ELEVATIONS AND SECTIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.9.1	BUILDING TYPE 1 BUILDING SECTIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)



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Drawing No.	Drawing Title	Revision	Drawing Date	Received Date	Set
A4.10.1	BUILDING TYPE 2 BUILDING SECTIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.11.1	BUILDING TYPE 3 BUILDING SECTIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.12.1	BUILDING TYPE 4 BUILDING SECTIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.13.1	BUILDING TYPE 5 ARCH-A BUILDING SECTIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.13.2	BUILDING TYPE 5 ARCH-B BUILDING SECTIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A4.14.1	CLUBHOUSE BUILDING SECTIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.15.1	FITNESS BUILDING SECTIONS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.16.1	WALL SECTIONS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.16.2	WALL SECTIONS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.16.3	WALL SECTIONS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A4.16.4	WALL SECTIONS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.1.1	BUILDING TYPE 1 LEVEL 1 & 2 REFLECTED CEILING PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.1.2	BUILDING TYPE 1 LEVEL 3 A & B REFLECTED CEILING PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.2.1	BUILDING TYPE 2 FIRST & SECOND FLOOR REFLECTED CEILING PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.2.2	BUILDING TYPE 2 LEVEL 3 REFLECTED CEILING PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.3.1	BUILDING TYPE 3 REFLECTED CEILING PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.3.2	BUILDING TYPE 3 REFLECTED CEILING PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.4.1	BUILDING TYPE 4 LEVEL 1 & 2 REFLECTED CEILING PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.4.2	BUILDING TYPE 4 LEVEL 3 REFLECTED CEILING PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.5.1	BUILDING TYPE 5 REFLECTED CEILING PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.5.2	BUILDING TYPE 5 REFLECTED CEILING PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.6.1	CLUBHOUSE REFLECTED CEILING PLAN	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A5.6.2	FITNESS REFLECTED CEILING PLAN	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A6.0.1	ACCESSIBILITY GENERAL DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.0.2	TYPE A UNIT ACCESSIBLE DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.0.3	TYPE B UNIT ACCESSIBLE DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.0.4	UNIT MATRIX	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.1.1	A1 UNIT PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.2.1	A1 TYPE A UNIT PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.3.1	B1 UNIT PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.4.1	B1 TYPE A UNIT PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.5.1	C1 UNIT PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.6.1	C1 TYPE A UNIT PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.7.1	CLUBHOUSE ENLARGED PLANS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.7.2	CLUBHOUSE INTERIOR ELEVATIONS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.7.3	CLUBHOUSE INTERIOR ELEVATIONS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.8.1	FITNESS ENLARGED PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A6.8.2	FITNESS ENLARGED PLANS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)



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Drawing No.	Drawing Title	Revision	Drawing Date	Received Date	Set
A7.1.1	STAIR PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.1.2	STAIR PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.2.1	STAIR PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.2.2	STAIR PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.3.1	STAIR PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.3.2	STAIR PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.3.3	STAIR PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.4.1	STAIR 1 - PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.4.2	STAIR 2 - PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.4.3	STAIR 3 - PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.5.1	TYPICAL STAIR 1 PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A7.5.2	TYPICAL STAIR 2 PLANS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A7.5.3	STAIR 3 - PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.5.4	STAIR 4 - PLANS, SECTIONS & ELEVATIONS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A7.6.1	STAIR DETAILS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
A7.7.1	STAIR DETAILS	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
A8.1.1	DOOR SCHEDULE	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A8.1.2	DOOR DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A8.2.1	WINDOW SCHEDULE	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A8.2.2	WINDOW DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A8.3.1	STOREFRONT SCHEDULE	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A8.3.2	STOREFRONT DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A8.3.3	STOREFRONT DETAILS	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A9.1.1	WALL TYPE ASSEMBLIES	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A9.1.2	WALL TYPE ASSEMBLIES	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A9.2.1	ROOF & FLOOR ASSEMBLIES	0	11/22/2025	11/24/2025	IFC Set (10/20/25)
A9.2.2	FIRE-RATED ASSEMBLIES	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A9.2.3	FIRE-RATED ASSEMBLIES	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A9.3.1	FIRE-RATED PENETRATION DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A9.3.2	FIRE-RATED PENETRATIONS DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A10.1	ARCHITECTURAL FOUNDATION DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A10.2	ARCHITECTURAL DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A10.3	ARCHITECTURAL DETAILS	2	11/22/2025	11/24/2025	IFC Set (10/20/25)
A10.4	ARCHITECTURAL DETAILS	1	11/22/2025	11/24/2025	IFC Set (10/20/25)
<b>Civil</b>					
DW17	DRYWELL DETAIL	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD01	COVER SHEET	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD02	GENERAL NOTES SHEET	1	10/20/2025	10/22/2025	IFC Set (10/20/25)



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Drawing No.	Drawing Title	Revision	Drawing Date	Received Date	Set
GD03	ONSITE GRADING AND DRAINAGE PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD04	ONSITE GRADING AND DRAINAGE PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD05	ONSITE GRADING AND DRAINAGE PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD06	ONSITE GRADING AND DRAINAGE PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD07	ONSITE GRADING AND DRAINAGE PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD12	CLUBHOUSE GRADING	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD13	GRADING DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD14	GRADING DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD15	STORM DRAIN DETAIL	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD16	STORM DRAIN DETAIL	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
GD18	SECTIONS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
SD08	STORM DRAIN PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
SD09	STORM DRAIN PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
SD10	STORM DRAIN PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
SD11	STORM DRAIN PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
SWP01	COVER SHEET	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
SWP02	STORMWATER POLLUTION PREVENTION PLAN - INITIAL	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
SWP03	STORMWATER POLLUTION PREVENTION PLAN - INTERIM	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
SWP04	STORMWATER POLLUTION PREVENTION PLAN - FINAL	0	10/20/2025	10/22/2025	IFC Set (10/20/25)
SWP05	DETAILS	0	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT01	COVER SHEET	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT02	NOTES SHEET	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT03	ONSITE UTILITY PLAN KEYMAP	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT04	8" SANITARY SEWER PLAN & PROFILE KEYMAP	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT05	ONSITE UTILITY PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT06	ONSITE UTILITY PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT07	ONSITE UTILITY PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT08	ONSITE UTILITY PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT09	ONSITE UTILITY PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT10	8" SANITARY SEWER LINE PLAN & PROFILE	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT11	8" SANITARY SEWER LINE PLAN & PROFILE	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT12	8" SANITARY SEWER LINE PLAN & PROFILE	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT13	8" SANITARY SEWER LINE PLAN & PROFILE	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT14	8" SANITARY SEWER LINE PLAN & PROFILE	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT15	8" SANITARY SEWER LINE PLAN & PROFILE	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
UT16	ONSITE UTILITY DETAILS	0	10/20/2025	10/22/2025	IFC Set (10/20/25)
<b>Electrical</b>					
E0.0	ELECTRICAL SYMBOLS AND SPECIFICATIONS	2	11/03/2025	11/05/2025	IFC Set (10/20/25)



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E0.1	ELECTRICAL NOTES AND SCHEDULES	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E0.2	ELECTRICAL IECC CALCULATIONS	0	11/03/2025	11/05/2025	IFC Set (10/20/25)
E1.0	ELECTRICAL SITE UTILITY PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E1.1	ELECTRICAL SITE POWER PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E1.2	ELECTRICAL SITE LIGHTING PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E1.3	SITE PHOTOMETRICS PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E1.4	SITE PHOTOMETRICS PLAN IECC DIMMED	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E1.5	ELECTRICAL CUT SHEETS	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.1.1	BUILDING FP1 LEVEL 1 & 2 ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.1.2	BUILDING FP1 LEVEL 3 & ROOF ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.2.1	BUILDING FP2 LEVEL 1 & 2 ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.2.2	BUILDING FP2 LEVEL 3 & ROOF ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.3.1	BUILDING FP3 LEVEL 1 & 2 ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.3.2	BUILDING FP1 LEVEL 3 & ROOF ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.4.1	BUILDING FP4 LEVEL 1 ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.4.2	BUILDING FP4 LEVEL 2 ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.4.3	BUILDING FP4 LEVEL 3 ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.4.4	BUILDING FP4 ROOF ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.5.1	BUILDING FP5 LEVEL 1 ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.5.2	BUILDING FP5 LEVEL 2 ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.5.3	BUILDING FP5 LEVEL 3 ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E2.5.4	BUILDING FP5 ROOF ELECTRICAL PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E3.0	ELECTRICAL CLUBHOUSE POWER PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E3.1	ELECTRICAL CLUBHOUSE LIGHTING PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E3.2	ELECTRICAL CLUBHOUSE ROOF POWER PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E3.3	ELECTRICAL POOL POWER PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E3.4	ELECTRICAL FITNESS POWER PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E3.5	ELECTRICAL FITNESS LIGHTING PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E3.6	ELECTRICAL FITNESS ROOF PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E4.0	ELECTRICAL MAINTENANCE POWER PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E5.0	ELECTRICAL UNIT A1 PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E5.1	ELECTRICAL UNIT A1A PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E5.2	ELECTRICAL UNIT B1 PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E5.3	ELECTRICAL UNIT B1A PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E5.4	ELECTRICAL UNIT C1 PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E5.5	ELECTRICAL UNIT C1A PLAN	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E6.0	ELECTRICAL PANEL SCHEDULES	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E6.1	ELECTRICAL PANEL SCHEDULES	2	11/03/2025	11/05/2025	IFC Set (10/20/25)



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Drawing No.	Drawing Title	Revision	Drawing Date	Received Date	Set
E6.2	ELECTRICAL DISTRIBUTION BOARD CALCULATIONS	0	11/03/2025	11/05/2025	IFC Set (10/20/25)
E7.0	ELECTRICAL ONE-LINE DIAGRAM - SES-3	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E7.1	ELECTRICAL ONE-LINE DIAGRAM - SES-4	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
E8.0	ELECTRICAL ONE-LINE NOTES	2	11/03/2025	11/05/2025	IFC Set (10/20/25)
<b>Fire Protection</b>					
FP1.1	SITE PLAN FIRE SPRINKLERS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.1.1	BUILDING TYPE ONE FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.1.2	BUILDING TYPE ONE FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.2.1	BUILDING TYPE TWO FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.2.2	BUILDING TYPE TWO FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.3.1	BUILDING TYPE THREE FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.3.2	BUILDING TYPE THREE FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.4.1	BUILDING TYPE FOUR FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.4.2	BUILDING TYPE FOUR FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.5.1	BUILDING TYPE FIVE FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.5.2	BUILDING TYPE FIVE FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
FP2.6.1	CLUBHOUSE AND FITNESS FIRE SPRINKLER PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
<b>Interior</b>					
ID-1.0	KEYNOTES	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-1.1	KEYNOTES	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-2.0	FINISH PLAN	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-2.1	FINISH PLAN	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-3.0	FURNITURE PLAN	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-3.1	FURNITURE PLAN	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-4.0	SPECIALITY POWER	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-4.1	SPECIALITY POWER	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-5.0	REFLECTED CEILING PLAN	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-5.1	REFLECTED CEILING PLAN	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-6.0	INTERIOR ELEVATIONS	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-6.1	INTERIOR ELEVATIONS	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-6.2	INTERIOR ELEVATIONS	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-6.3	INTERIOR ELEVATIONS	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-6.4	INTERIOR ELEVATIONS	1	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-7.0	SECTIONS AND DETAILS	0	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-8.0	OUTDOOR AMENITY PLAN	0	09/11/2025	09/17/2025	90% Set (09/10/25)
ID-9.0	STANDARD UNIT FINISHES	0	09/11/2025	09/17/2025	90% Set (09/10/25)
IDN-1.0	PROJECT STANDARDS AND SHEET INDEX	1	09/11/2025	09/17/2025	90% Set (09/10/25)
IDN-1.1	GENERAL NOTES	1	09/11/2025	09/17/2025	90% Set (09/10/25)



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Drawing No.	Drawing Title	Revision	Drawing Date	Received Date	Set
IDN-1.2	GENERAL NOTES	1	09/11/2025	09/17/2025	90% Set (09/10/25)
IDN-1.3	SECTIONS AND DETAILS	1	09/11/2025	09/17/2025	90% Set (09/10/25)
IDN-1.4	FINISH SCHEDULE	1	09/11/2025	09/17/2025	90% Set (09/10/25)
IDN-1.5	SITE PLAN	1	09/11/2025	09/17/2025	90% Set (09/10/25)
<b>Landscape</b>					
L0.00	COVER	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L0.01	LANDSCAPE ZONES	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L0.02	WALL PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L1.01	SCHEDULES (HARDSCAPE & PLANTING)	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L1.02	SITE-HARDSCAPE PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L1.03	SITE-HARDSCAPE PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L1.04	SITE-HARDSCAPE PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L1.05	SITE-HARDSCAPE PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L1.06	SITE-HARDSCAPE PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L2.00	OVERALL PLANTING PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L2.01	PLANT SCHEDULE	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L2.02	PLANTING PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L2.03	PLANTING PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L2.04	PLANTING PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L2.05	PLANTING PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L2.06	PLANTING PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L3.00	OVERALL IRRIGATION PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L3.01	IRRIGATION PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L3.02	IRRIGATION PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L3.03	IRRIGATION PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L3.04	IRRIGATION PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L3.05	IRRIGATION PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L3.06	IRRIGATION PLAN	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.00	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.01	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.02	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.03	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.04	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.05	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.06	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.07	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.08	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.09	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)



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Drawing No.	Drawing Title	Revision	Drawing Date	Received Date	Set
L4.10	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
L4.11	LANDSCAPE DETAILS	1	10/20/2025	10/22/2025	IFC Set (10/20/25)
<b>Mechanical</b>					
M0.1	MECHANICAL NOTES	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M0.2	MECHANICAL SCHEDULES	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M0.3	MECHANICAL CALCULATIONS	0	09/10/2025	09/17/2025	90% Set (09/10/25)
M1.1.1	BUILDING TYPE 1 MECHANICAL PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M1.2.1	BUILDING TYPE 2 MECHANICAL PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M1.3.1	BUILDING TYPE 3 MECHANICAL PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M1.4.1	BUILDING TYPE 4 MECHANICAL PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M1.5.1	BUILDING C TYPE 5 MECHANICAL PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M6.1.1	UNIT TYPE A1 MECHANICAL PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M6.1.2	UNIT TYPE B1 MECHANICAL PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M6.1.3	UNIT TYPE C1 MECHANICAL PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M6.2.1	CLUBHOUSE MECHANICAL PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M6.2.2	FITNESS MECHANICAL PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M6.3.1	MAINTENANCE MECHANICAL PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M9.1	MECHANICAL DETAILS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
M9.2	MECHANICAL DETAILS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
<b>Offsite</b>					
OU01	COVER SHEET	0			GMP Set (07/28/25)
OU02	NOTES SHEET	0			GMP Set (07/28/25)
OU03	OFFSITE WATER AND FIRE LINE PLAN	0			GMP Set (07/28/25)
OU04	OFFSITE SANITARY SEWER LINE PLAN & PROFILE	0			GMP Set (07/28/25)
RP01	COVER SHEET	0			GMP Set (07/28/25)
RP02	NOTES SHEET	0			GMP Set (07/28/25)
RP03	OFFSITE PAVING PLAN & PROFILE	0			GMP Set (07/28/25)
RP04	OFFSITE PAVING PLAN & PROFILE	0			GMP Set (07/28/25)
RP05	OFFSITE PAVING PLAN & PROFILE	0			GMP Set (07/28/25)
RP06	OFFSITE PAVING PLAN & PROFILE	0			GMP Set (07/28/25)
RP07	OFFSITE PAVING PLAN & PROFILE	0			GMP Set (07/28/25)
RP08	OFFSITE PAVING PLAN & PROFILE	0			GMP Set (07/28/25)
RP09	OFFSITE PAVING PLAN & PROFILE	0			GMP Set (07/28/25)
RP10	OFFSITE PAVING PLAN & PROFILE	0			GMP Set (07/28/25)
RP11	OFFSITE PAVING PLAN & PROFILE	0			GMP Set (07/28/25)
SD12	OFFSITE STORM DRAIN PLAN & PROFILE	0			GMP Set (07/28/25)
SD13	CENTURY VAULT DETAIL	0			GMP Set (07/28/25)
SD14	CENTURY VAULT DETAIL	0			GMP Set (07/28/25)



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SD15	DETAIL SHEET	0			GMP Set (07/28/25)
SL1	STREET LIGHT PLAN COVER	1	12/24/2025	12/24/2025	Wright Engineering Rev1 Street Lights (12/24/25)
SL2	STREET LIGHT PLAN	1	12/24/2025	12/24/2025	Wright Engineering Rev1 Street Lights (12/24/25)
SL3	STREET LIGHT PLAN	1	12/24/2025	12/24/2025	Wright Engineering Rev1 Street Lights (12/24/25)
SL4	STREET LIGHT PLAN	1	12/24/2025	12/24/2025	Wright Engineering Rev1 Street Lights (12/24/25)
<b>Plumbing</b>					
P0.1	PLUMBING NOTES & SCHEDULES	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P1.0	PLUMBING SITE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P2.1.1	BUILDING TYPE 1 WASTE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P2.1.2	BUILDING TYPE 1 WASTE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P2.2.1	BUILDING TYPE 2 WASTE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P2.2.2	BUILDING TYPE 2 WASTE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P2.3.1	BUILDING TYPE 3 WASTE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P2.3.2	BUILDING TYPE 3 WASTE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P2.4.1	BUILDING TYPE 4 WASTE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P2.4.2	BUILDING TYPE 4 WASTE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P2.5.1	BUILDING TYPE 5 WASTE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P2.5.2	BUILDING TYPE 5 WASTE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.1.1	BUILDING TYPE 1 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.1.2	BUILDING TYPE 1 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.1.3	BUILDING TYPE 1 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.2.1	BUILDING TYPE 2 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.2.2	BUILDING TYPE 2 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.3.1	BUILDING TYPE 3 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.3.2	BUILDING TYPE 3 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.4.1	BUILDING TYPE 4 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.4.2	BUILDING TYPE 4 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.5.1	BUILDING TYPE 5 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.5.2	BUILDING TYPE 5 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P3.5.3	BUILDING TYPE 5 WATER & STORM DRAINAGE PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P6.1.1	TYPICAL UNITS PLUMBING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P6.1.2	TYPICAL UNITS PLUMBING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P6.7.1	CLUBHOUSE BLDG. PLUMBING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P6.7.2	CLUBHOUSE BLDG. PLUMBING PLAN ROOF	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P6.8.1	FITNESS BUILDING PLUMBING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)



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P6.9.1	MAINT. BLDG. PLUMBING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P7.1	PLUMBING SCHEMATICS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P7.2	PLUMBING SCHEMATICS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P7.3	PLUMBING SCHEMATICS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P7.4	PLUMBING SCHEMATICS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
P10.1	PLUMBING DETAILS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
<b>Structural</b>					
S0.0.1	GENERAL STRUCTURAL NOTES & SHEET INDEX	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S0.0.2	GENERAL STRUCTURAL NOTES (CONTINUED)	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S0.1.1	TYPICAL DETAILS 01-19	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S0.1.2	TYPICAL DETAILS 21-39	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S0.1.3	TYPICAL DETAILS 41-59	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S0.1.4	TYPICAL DETAILS 61-79	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S0.2.1	TYPICAL SHEAR WALL DETAILS SW1-SW19	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S0.2.2	TYPICAL SHEAR WALL DETAILS SW21-SW39	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S0.3.1	SCHEDULES	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.1.0	BUILDING 1 POST-TENSIONED SLAB PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.1.1	BUILDING 1 FOUNDATION PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.1.1A	BUILDING 1 SHEAR / STUD WALL PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.1.2	BUILDING 1 SECOND FLOOR FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.1.3	BUILDING 1 THIRD FLOOR FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.1.4A	BUILDING 1 ROOF TYPE A FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.1.4B	BUILDING 1 ROOF TYPE B FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.2.0	BUILDING 2 POST-TENSIONED SLAB PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.2.1	BUILDING 2 FOUNDATION PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.2.1A	BUILDING 2 SHEAR WALL PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.2.2	BUILDING 2 SECOND FLOOR FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.2.3	BUILDING 2 THIRD FLOOR FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.2.4	BUILDING 2 ROOF FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.3.0	BUILDING 3 POST-TENSIONED SLAB PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.3.1	BUILDING 3 FOUNDATION PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.3.1A	BUILDING 3 SHEAR WALL PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.3.2	BUILDING 3 SECOND FLOOR FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.3.3	BUILDING 3 THIRD FLOOR FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.3.4	BUILDING 3 ROOF FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.4.0	BUILDING 4 POST-TENSIONED SLAB PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.4.1	BUILDING 4 FOUNDATION PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.4.1A	BUILDING 4 SHEAR WALL PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)



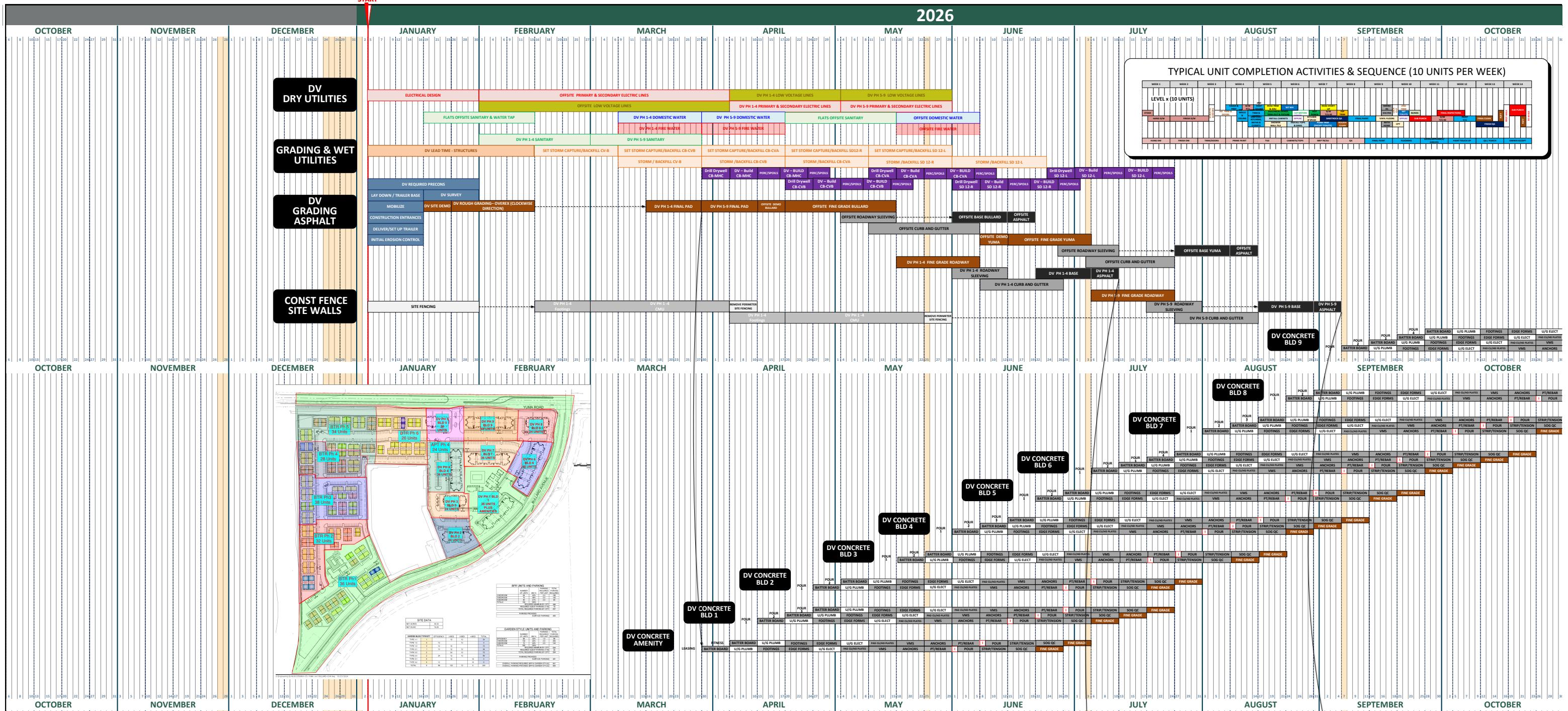
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Drawing No.	Drawing Title	Revision	Drawing Date	Received Date	Set
S2.4.2	BUILDING 4 SECOND FLOOR FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.4.3	BUILDING 4 THIRD FLOOR FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.4.4	BUILDING 4 ROOF FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.5.0	BUILDING 5 POST-TENSIONED SLAB PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.5.1	BUILDING 5 FOUNDATION PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.5.1A	BUILDING 5 SHEAR WALL PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.5.2	BUILDING 5 SECOND FLOOR FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.5.3	BUILDING 5 THIRD FLOOR FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.5.4A	BUILDING 5 ROOF TYPE -A FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.5.4B	BUILDING 5 ROOF TYPE-B FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.6.0	FITNESS & CLUBHOUSE POST-TENSIONED SLAB PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.6.1	FITNESS & CLUBHOUSE FOUNDATION PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.6.1A	CLUBHOUSE SHEAR WALL PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.6.2	FITNESS & CLUBHOUSE ROOF FRAMING PLAN	1	09/10/2025	09/17/2025	90% Set (09/10/25)
S2.7.0	MAINTENANCE BUILDING PLANS	1	09/10/2025	09/17/2025	90% Set (09/10/25)
SD1.1	FOUNDATION DETAILS 101-119	1	09/10/2025	09/17/2025	90% Set (09/10/25)
SD1.2	FOUNDATION DETAILS 121-139	0	07/28/2025	09/10/2025	GMP Set (07/28/25)
SD2.1	FLOOR FRAMING DETAILS 201-219	1	09/10/2025	09/17/2025	90% Set (09/10/25)
SD2.2	FLOOR FRAMING DETAILS 221-239	1	09/10/2025	09/17/2025	90% Set (09/10/25)
SD3.1	ROOF FRAMING DETAILS 301-319	1	09/10/2025	09/17/2025	90% Set (09/10/25)
SD3.2	ROOF FRAMING DETAILS 321-339	1	09/10/2025	09/17/2025	90% Set (09/10/25)
SD3.3	ROOF FRAMING DETAILS 341-359	0	09/10/2025	09/17/2025	90% Set (09/10/25)
SD4.1	STAIR FRAMING DETAILS 401-419	1	09/10/2025	09/17/2025	90% Set (09/10/25)
SD5.1	STRUCTURAL SITE DETAILS 501-519	1	09/10/2025	09/17/2025	90% Set (09/10/25)
SD5.2	STRUCTURAL SITE DETAILS 521-539	1	09/10/2025	09/17/2025	90% Set (09/10/25)



# DIAMOND VIEW AT BALLPARK



**ATTACHMENT B:  
NOTICE TO SUBCONTRACTORS  
SAFETY POLICY AND PROCEDURES**

**SUBCONTRACTORS RESPONSIBILITIES**

**SUBCONTRACTORS WILL BE HELD ACCOUNTABLE FOR THEIR SAFETY PERFORMANCE.**

Catamount requires each subcontractor to fully implement a comprehensive safety program. Catamount will randomly inspect subcontractors' efforts to adequately educate and train their employees.

Subcontractor safety responsibilities include, but are not limited to, the following:

Have a comprehensive written safety policy and program germane and commensurate with the scope of work. Programs shall be at least as stringent as Catamount Constructors, Inc. policy manual or OSHA minimum compliance requirements, whichever is more strict.

All subcontractors shall comply with Catamount Constructors, Inc. personal protective equipment requirements.

Hard Hats are to be worn by all subcontractors at all times when on the job site.

Proper work clothes are required at all times. Tank top shirts and muscle shirts are not permissible. Shirts must have sleeves that cover at least three inches of the shoulder. Shorts are not acceptable. Jeans or work pants are required to protect the employee from overexposure to the sun, chemicals, and burns from exhaust equipment.

Proper work boots are required (no tennis shoes, tennis shoe look-a-likes, soft hiking boots, sandals, etc.). Wearing boots that are held together with duct tape, etc. will not be acceptable on the job site.

Provide personal protective equipment for each operation for which they are responsible, as required by Material Safety Data Sheets, OSHA, Catamount Constructors, Inc. policy manual, and as each job dictates.

No Alcohol or Drug use is allowed at any time immediately before or during work hours.

Maintain a First Aid kit and associated supplies, and have First aid services available.

Provide for protection of the general public for the projects' duration.

The jobsite is to be kept clean and all debris is to be placed in the location designated by job site superintendent on a daily basis. Work areas will be cleaned up on an on-going basis.

Cooperate with Catamount Constructors, Inc. and their Loss Control Representatives.

Provide Catamount Constructors, Inc. site superintendent copies of Material Safety Data sheets (MSDS) on all hazardous materials in the workplace that are being used or provided by your firm.

Hold regular safety meetings and written reports of the specific items discussed and the employees present.

Train employees in safe working practices. The employee should be shown where to work, what to do, and how to do it safely. The employee should be instructed with regard to his responsibility for his own safety and the safety of his fellow workers. All training is documented.

Report safety violations and injuries to Catamount Constructors, Inc. site superintendent.

Maintain competent persons and general oversight for all job tasks, specifically where OSHA requires a competent person on specific hazards.

Failure to comply with any of Catamount Constructors, Inc. safety policies and procedures will result in a written warning. If the violation is not corrected, the individual or company will be removed from the project. Any loss in revenue to Catamount Constructors, Inc. due to this situation will be borne by the company in violation.

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_



**ATTACHMENT C:  
SUBCONTRACTOR SAFETY AGREEMENT**

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# Subcontractor Safety Agreement

SUBCONTRACTOR NAME: \_\_\_\_\_

Dear Subcontractor:

As part of our Safety Program and compliance on your part, there are requirements you must abide by in order to be on our jobsites. All OSHA requirements must be met. All insurance and safety compliance forms must be at our corporate office before starting work. This agreement should be completed and signed on page 3. A copy of the agreement should be returned to management.

## **WE BELIEVE IN SAFETY AND INSIST UPON IT**

We require the following and will not tolerate anything less:

- The competent person(s) for our company is/are: \_\_\_\_\_
- If you change who the competent person is, you must notify site management prior.
- A copy of your complete Company Safety & Hazard Communication Program with SDSs must be provided to site management prior to you starting work on our sites.
- Your company's weekly safety meetings must be made available upon request.
- Your employees must understand that HARD HATS are required on our jobsites.
- Your employees must respect and obey all safety rules.
- Your employees must respond to and abate any safety violations they are issued immediately.
- A rep from your company MUST attend all Safety Meetings while your company is on the job site.
- If your employees will be exposed to falls on this site, you must also complete our subcontractor fall protection plan checklist and return this to site management.
- If you plan to use a crane while on this site, you must provide all required documentation to the site management prior to starting work. This includes but is not limited to: Crane Inspection/Certification, Certified Crane Operator documentation and documentation of qualified signal persons and riggers.
- All scaffold used onsite must be inspected prior to use and after any changes by a competent person. We expect you to use scaffold inspection tags at all times.
- A Hot Work Permit must be used when any hot work is performed.
- You agree that your company is aware of the OSHA training requirements on various pieces of equipment and that you only allow trained employees to operate these types of equipment on our job sites. This applies if you own, rent, lease or borrow this equipment. Some examples of this equipment include but is not limited to: forklifts, aerial lifts, skid steers, scaffolding and fall protection.
- As the employer, you will be held responsible for the actions of your subs and employees while on the job site as well as any damage that may be imposed upon the project or the equipment that your subs or employees may be operating.

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

**ATTACHMENT C:**  
**SUBCONTRACTOR SAFETY AGREEMENT (Continued)**



# Subcontractor Safety Agreement

## Fall Protection Checklist

QUESTION	YES	NO
Are your employees and/or subcontractors ever exposed to fall hazards? <ul style="list-style-type: none"> <li>• If yes, please complete the rest of this checklist, if no, please sign below and return to management.</li> </ul>		
Do you have a written fall protection program? <ul style="list-style-type: none"> <li>• Please provide a copy to the management.</li> </ul>		
Is your program consistent with the OSHA fall protection standard?		
Have you received a citation from OSHA for fall protection before?		
Have you trained all employees and subcontractors in fall protection?		
Can you provide documents verifying this fall protection training?		
Have you provided fall protection equipment for your employees?		
Have you ensured that all subcontractors have fall protection?		
Do your employees/subs understand that a proper personal fall arrest system (PFAS) consists of a 3-point system: <ul style="list-style-type: none"> <li>• separate anchor point for each worker meeting 5000 lb. requirement</li> <li>• lanyard with shock absorber or self-retracting lifeline</li> <li>• full body harness proper fit and adjusted</li> </ul>		
Do your employees/subs know how to inspect all components of their PFAS?		
Have your employees/subs been trained on proper anchor placement?		
Do your employees/subs understand that a proper guardrail system includes: <ul style="list-style-type: none"> <li>• Top rail at 42"</li> <li>• Mid rail at 21"</li> <li>• Toe boards installed</li> <li>• Supports at least 200 lbs. in all directions</li> <li>• Vertical supports no farther than 8 feet apart</li> </ul>		

### Safety Reprimand Policy-Subcontractors

All workers are expected to comply with safety rules and regulations related to their work and work areas. Violations of these rules will not be tolerated. Workers shall follow these steps to remain safe and avoid this policy:

- Workers shall not undertake a job until they have received appropriate instructions and are satisfied that they can do the job properly and safely. Workers should speak up if they are not ready.
- No worker shall undertake a job that appears to be unsafe.
- No worker shall undertake any job or use any machinery while under the influence of illegal and/or legal drugs, alcohol or a prescription or over the counter drug that impairs the worker's ability to work safely.
- No worker shall perform any work without using required personal protective equipment.
- All workers must report every accident, including injuries, property damages and near misses to their supervisor.

**ATTACHMENT C:**  
**SUBCONTRACTOR SAFETY AGREEMENT (Continued)**



## Subcontractor Safety Agreement

**Speak up if you feel something is unsafe. Discuss with your immediate supervisor or their supervisor if you don't get an appropriate response. Workers who raise safety concerns will not be subject to retaliation.**

The company wants its employees and subcontractors to work in a positive, productive atmosphere. However, employees and/or subcontractors who violate safety rules must be disciplined to protect their own safety and the safety of their coworkers. The following procedures should be followed by supervisors:

**Subcontractors-Violations** by subcontractors of the company should be handled in the following manner:

- Minor Violations: Company supervisor should stop work and request correction by subcontractor. If subcontractor does not correct the issue when requested by supervisor, this moves to a major violation.
- Major Violations: Company supervisor should stop the work. Subcontractor management should be contacted to come to site and ensure the violation is corrected. Work is not allowed to continue until corrections are properly completed. The company has the option to use the following reprimands: send worker home, issue fine to subcontractor up to the amount in contract, require additional training, etc. A safety violation form should be filled out for this violation and kept on file. Continual major violations by the subcontractor may result in meetings with upper management to determine how to stop future violations. The results of these meetings could include termination of contract.

### **Minor Violations:**

This list of minor violations is provided as examples and is not a complete list of what could be considered a minor violation. A minor violation is one that would not result in a serious injury.

- Violation of personal protective equipment policy that does not result in injury to oneself or others
- Poor housekeeping
- Failure to participate in safety meetings
- Failure to properly and immediately report any accident or injury
- Failure to perform inspections of tools or machinery
- Failure to report machine or tool deficiencies
- Failure to learn company safety rules and regulations
- Failure to report conditions that one believes to be unsafe
- Smoking or eating in unauthorized area

### **Major Violations:**

This list of major violations is provided as examples and is not a complete list of what could be considered a major violation. A major violation is one that would typically result in a serious injury.

- Violation that results in damages property
- Violation that endangers the safety of others
- Speeding or unsafe operation of a forklift or any other company vehicle
- Driving a forklift or any other machinery without required approval
- Refusal to obey a supervisor's safety instructions
- Refusal to abate a safety violation

My signature below demonstrates that I understand and agree with this safety agreement.

Subcontractor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## SUBCONTRACTOR WORK AUTHORIZATION AGREEMENT

**ATTACHMENT D:****SUBCONTRACTOR'S LIST OF SUPPLIERS WITH EXPECTED EXPENDITURES OF \$500.00 OR MORE****SUBCONTRACTOR'S NAME & ADDRESS**

Desert Services LLC  
P.O. Box 236  
Scottsdale, AZ 85252

**PROJECT INFORMATION**

PROJECT NAME: Diamond View at Ballpark  
JOB No: 25206--  
SUBCONTRACT NO: WA-25206-161096

Company/Contact	Materials / Services Provided	Address	Phone Number	Approximate Expenditure

**Failure to provide this information will be interpreted as breach of contract and be grounds for termination, as provided in the Subcontract Agreement.**

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

SUBCONTRACTOR WORK AUTHORIZATION AGREEMENT

**ATTACHMENT E:  
TEXURA NOTIFICATION TO SUPPLIERS**

Re: Supplier Payments

Catamount Constructors, Inc., the General Contractor on the project Diamond View at Ballpark, has selected the Textura construction payment management (CPM) solution to directly pay all project participants. We wanted to make you aware of this and request your cooperation.

If your suppliers choose to use Textura, there is a \$100 fee for your suppliers; however, we expect that using Textura will significantly streamline the payment process for all parties involved. Please review the attached documentation to learn more about the Textura solution. You can also find more information online at [www.texturacorp.com](http://www.texturacorp.com) or by calling Textura support at 866-839-8872.

Sincerely,

Project Coordinator

Catamount Constructors, Inc.

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

## ATTACHMENT F-1: TEXURA PAYMENT MANAGEMENT INFORMATION

### Oracle® -Construction Payment Management™: Work Faster and More Efficiently

#### **What is Oracle-CPM™?**

Oracle-CPM is an Internet-Based construction invoicing and payment solution. With the Oracle-CPM system, subcontractors can electronically sign and submit their pay applications-including invoices, sworn statements, and conditional and /or unconditional lien waivers. Payments are made electronically via ACH (Automated Clearing House) resulting in faster access to your funds. In addition, Oracle® has revolutionized the construction payment process. Thousands of subcontractors currently use Oracle-CPM to submit their pay applications every month.

#### **Sign Pay Applications and Submit Electronically**

Oracle-CPM automatically generates the required Pay Application documents and transmits them to your GC electronically at the click of a button.

- Invoices are created by simply entering a percent complete or dollar value by line item of your budget.
- Electronic Submission of documents eliminates the expense and inconvenience of fax or hand delivery.
- Invoice amounts are verified with lien waiver and payment amounts, reducing the risk of error.

#### **Receive Payments via ACH**

Oracle-CPM uses the secure ACH network for electronic deposit of funds to accelerate draw payments.

- ACH will deliver funds faster than a manual check. Payments are made through Oracle-CPM directly by the GC and are subject to the terms of your contract.
- ACH works like direct deposit. Funds are immediately available. No waiting for checks to clear.
- Oracle-CPM alerts you via email that payments have been disbursed.

#### **Know What is Happening, When It Happens**

Oracle-CPM offers complete visibility throughout the draw process and notifies users of critical events.

- Receive real-time notifications when a draw is opened, change order issued, payment disbursed, etc.
- Receive email reminders to update expiring insurance documents and notification of non-compliance.
- Online invoice approval and rejection ensures that both parties are informed of final invoice amounts.

#### **Manage Documents Online**

Project documents created in or uploaded to the system are available for viewing, printing or downloading to your computer. Oracle-CPM will store these documents for a minimum of ten years.

- Pay application backup documents are submitted quickly and easily via an upload attachment feature.
- Electronic submission & tracking of legal documents such as insurance certificates reduces payment holds.
- Possibly for lost or delayed documents resulting in held payments is virtually eliminated.

#### **What Does It Cost to Use Oracle-CPM?**

- **0.22% of contract value**
  - Minimum – N/A
  - Maximum - \$5,000.00
  - Sub-tier subcontractors
- **Payment Methods**  
ACH (Default) or Credit Card (2.5% processing fee)
- **Deferral (Optional)**  
If the usage fee exceeds \$250, you may pay \$250 upfront and the remaining balance will be paid with your first draw payment. A \$45 deferral fee applies.
- **Annual Subscription (Optional)**
  - Covers unlimited use of Oracle-CPM
  - Payable in advance for 12-month period
  - Contact Oracle to discuss this option

#### **Technical Requirements:**

Oracle-CPM is completely web-based – there is no software to install. Users need only:

- Internet access (high-speed recommended)
- Email address for each user
- Adobe Acrobat reader 6.0 or higher (free download)

#### **Free Training & Support:**

- Free webinars available through Oracle's website
- Computer-Based training (CBT) modules
- Individual training by phone
- Classroom training where available.

Note: A Service Fee of \$22.50 will be added in the event that the usage fee cannot be collected successfully from your bank account or credit card. This is commonly due to a 'debit block' on the bank account.

**ORACLE®**  
Textura

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

## SUBCONTRACTOR WORK AUTHORIZATION AGREEMENT

**ATTACHMENT F-2:  
TEXTURA TRAINING AND SUPPORT**

We would like to take this time to remind you of the Textura Construction Payment Management (CPM) training / help options that are available to all subcontractors. All the options mentioned in this email are included in your current usage fee (no additional charges are incurred for using any of these options).

1. Webinar Training – Textura offers CPM training via the web three times a week. Please click the [link](#) to see available times and to sign up for the training: <http://www.texturacorp.com/training/webinarschedule.htm>.
2. Textura Customer Support at 866-TEXTURA (839-8872) – The customer support line is open from 6:00 AM to 7:00 PM MST and is operated out of Textura headquarters just North of Chicago, IL. Support agents are trained to answer all subcontractor questions. If a support agent does not answer the phone and you are sent to Voice Mail, **please leave a message**. During peak times Textura strives to return all Voice Mails within 60 minutes.
3. Email Customer Service – You can send an email to [customerservice@texturacorp.com](mailto:customerservice@texturacorp.com). During peak times, Textura strives to respond to all emails within 60 minutes.
4. Self Help - From any page within the CPM application, there is a [Help](#) link (<https://cpm.texturacorp.com/system/Static.psp?p=Subcontractor Reference Guide.pdf>) in the upper right hand corner.

The goal of using Textura CPM is to make the billing and payment process between Catamount and our Subcontractors more efficient. The resources outlined above will allow you to receive the necessary training and support that you will need to utilize the system. If you have any questions regarding the support and/or training options offered by Textura, please call 866-839-8872.

**When To Contact Textura Support**

- Assistance performing general steps in Textura (invoicing, uploading compliance certificates, signing documents, etc.)
- Troubleshooting the Textura application (difficulty signing PDF documents, error messages, etc.)
- Re-sending invitation emails to new organization users
- Information about Textura fees
- Internet Browser / PDF compatibility
- Deactivating user accounts

**When To Contact Catamount**

- Questions regarding being invited to a Draw
- Questions concerning when retention will be allowed to be billed
- Questions surrounding payment timing

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

**ATTACHMENT F-3:  
EARLY PAYMENT PROGRAM**

**Catamount Early Payment Program**

Catamount recognizes the challenges subcontractors face under the traditional payment terms in construction. Often, subcontractors face extended periods of time where they are required to fund operating expenses and cash flow is unpredictable. The Catamount Early Payment Program (EPP) is an offering which enables Catamount to address the unpredictability in payment terms and offer its subcontractors the option to be paid more quickly and in a more predictable payment cycle.

Under Catamount's EPP, in exchange for a modest fee, subcontractors can elect to receive payment for monthly draw requests much earlier than they would under Catamount's normal subcontract payment timing. Subcontractors can enroll or un-enroll at any time and control when they want to take advantage of the program – even on a month-by-month or invoice-by- invoice basis. This allows the subcontractor to limit the gap until payment from the general contractor. Potential benefits of the program to subcontractors could include:

- Supplier discounts – ability to utilize discounts from a supplier if they are paid early. Many vendors offer discounts if payment received within a certain time period (often 2% if paid within 10 days). Not only could these supplier discounts cover the costs of the EPP, but they might also contribute additional dollars toward the bottom line.
- Supplier relationship – the EPP would provide greater payment reliability, which could lead to preferential terms and access to products.
- Improved working capital – the EPP could enhance subcontractor liquidity, allowing for growth or expansion of business, additional investment in equipment, and improved ability to pay employees and suppliers on time. If funding business through debt, the EPP could limit amount outstanding and interest expense.
- Predictable cash flow – provides a set date for payment each month which is not dependent on funding from the Project owner. Funding is typically received 30-45 days earlier than the normal payment cycle, allowing subs to limit the amount of labor carried on a monthly basis as well as time vendor payments with more certainty.

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

## FAQ's

**Q:** Why is Catamount offering this program?

**A:** Catamount is offering this program to increase the financial strength of its subcontractors, allowing you to utilize the early payment to fund work in progress and utilize your working capital to enhance your business.

**Q:** How quickly will I be paid?

**A:** Catamount expects to pay all eligible monthly draw requests on the 7th day (or next business day) of the month following your submission. Depending upon specific owners, this can be 30 or more days earlier than normal payment cycles. In order to be eligible, your monthly draw requests must be submitted by the 30th of the current month and not on hold at time of payment. Funds will be deposited the day following disbursement notification.

**Q:** What fees will I be charged to receive my payment early?

**A:** Your EPP fee will be displayed on the EPP enrollment screen in Textura - TPM™.

**Q:** How did you determine my EPP fee?

**A:** The EPP fee takes into account the repayment risk Catamount takes with the owner, financial costs of early payment, and the number of days of spread.

**Q:** Will the EPP fee change; if so, will I be notified?

**A:** Your EPP fee is unique to a project. Therefore, different projects may have different EPP fees. For a given project we do not expect your EPP fee to change often, but if it does change, you will be notified.

**Q:** Do I have to always use the program once I start?

**A:** No, you can un-enroll at any time, or only use the program for certain projects. However, Catamount offers the program with the intent that you utilize it on a consistent basis to fund work in process and receive the benefits described in the Catamount Constructors EPP document.

**Q:** How long will this program be available?

**A:** It is Catamount's expectation that this program will be available for the foreseeable future.

**Q:** Do I have to install any technology or use a new technology platform?

**A:** No, the program is offered via the same Textura - TPM™ platform you are using today.

**Q:** How will my TPM interface change? How will I know if an early payment has been made?

**A:** Your TPM experience will not change, except for the original EPP enrollment process. Just as you do today, you will receive a receipt from TPM letting you know that you have been paid by Catamount and showing any associated EPP fee.

**Q:** How many monthly draw requests can I request early payment for?

**A:** You will be offered the option to enroll in specific projects and can request early payment for all monthly draw requests for that project, subject to approval by Project Manager.

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

**Q:** Will I be paid early for the entire monthly draw requests?

**A:** You will have the option to be paid early for the approved amount of the monthly draw requests – minus retention, any joint checks, and the EPP fee.

**Q:** How does this program impact retention?

**A:** Your EPP payment and fee are based on the net amount of your monthly draw request (total draw amount minus applicable retention and joint checks). Final retention draws will not be eligible for EPP unless otherwise notified by Project Manager. When you are allowed to request retention through TPM, you may contact Catamount for other early payment options.

**Q:** What happens if my monthly draw requests is on hold at the early payment date?

**A:** Ideally, all holds will be resolved early in the process. However, if your monthly draw request is not in compliance, or has a lien-waiver or manual hold, your draw will not be released until the hold is resolved.

**Q:** Do I need to open a new bank account?

**A:** No, the early payments will be deposited into the same account you have designated and set up in TPM.

**Q:** Do I have to sign any agreements with a financial institution?

**A:** No, there are no documents for you to sign with a financial institution. You simply have to accept the terms and conditions and funding notice when you enroll in the Catamount Early Payment Program.

**Q:** I have further questions. Where can I find out more information?

**A:** Please contact Paul Crandall, Catamount CFO, at 720.880.2211 for questions about your eligibility to participate in Catamount Early Payment Program. If you have questions about how to enroll in the program or use the TPM application, please contact Textura® support at 866.839.8872 or see attached for step-by-step instructions.

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_



# Early Payment Program Enrollment Guide

For assistance with the below, please contact Textura Support at 866-839-8872.

## I. Enrollment Screenshots

On your project home screen, find the 'Catamount Early Payment Program' tab. Click on 'Learn More' to begin the enrollment process.

This screenshot shows the 'Project Home' screen of the Textura Payment Management system. At the top, there's a navigation bar with links for 'Project Home', 'My Contract', 'Compliance', 'Subcontracts', 'Project Setup', and 'Project Tools'. Below the navigation bar, the main area is titled 'Project Home' and 'Overview'. Under 'Overview', there are three tabs: 'Tasks' (which is selected), 'Payment Summary', and 'Catamount Early Payment Program'. The 'Tasks' tab has a sub-section for 'Payment' which contains a button labeled 'Confirm Catamount Early Payment Program Enrollment for Contract'. This entire section is highlighted with a red box. Below the 'Tasks' tab, there's a 'Draws' section with buttons for 'In Progress' and 'Completed' and some filter icons.

This screenshot shows the same 'Project Home' screen as the previous one, but the 'Catamount Early Payment Program' tab is now selected. A red box highlights this tab. Below it, a message reads: 'Faster Payments You can enroll for a business cash advance on this contract. Find out how to have more predictable cash flow and less project risk from long payment delays.' Below this message is a blue 'Learn More' button, which is also highlighted with a red box. The rest of the interface is identical to the first screenshot.

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

## SUBCONTRACTOR WORK AUTHORIZATION AGREEMENT

Catamount Early Payment Program X

**1** Overview    **2** Enroll    **3** Confirmation



Catamount Constructors has invited you to participate in its Early Payment Program for this subcontract\*. Under Catamount's optional program, your eligible invoices submitted by the 30<sup>th</sup> of the month will be paid on the 7<sup>th</sup> day\*\* of the month following your submission, up to 30 days earlier than Catamount's normal payment timing.\*\*\* A fee of \$1.25 per \$100.00 of invoice value will be applied to each invoice submitted for early payment.

\* Participation in Catamount's Early Payment Program is subject to the EPP Terms and Conditions and Funding Statement provided below.

\*\* Or the next business day.

\*\*\* It can take up to three days for funds to appear on your account.

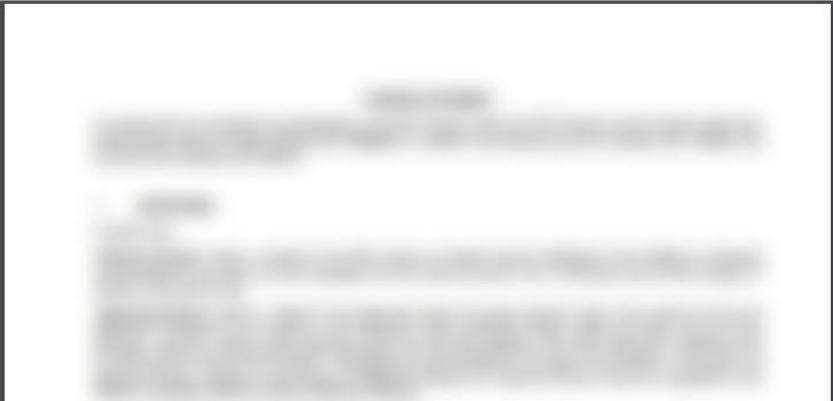
[Click here to learn more about Catamount's Early Payment Program.](#)

**Decline** **Enroll**

Catamount Early Payment Program X

**1** Overview    **2** Enroll    **3** Confirmation

Funding Notice



[Download](#)  I have read and accept the Funding Notice

**Decline** **Previous** **Enroll**

Subcontractor Initials: \_\_\_\_\_  
Catamount Constructors, Inc. Initials: \_\_\_\_\_

## 2. Email Confirmation of Enrollment

After enrolling, you will receive the below email from Textura confirming your enrollment.

		Message For :
<b>From:</b>	Textura System	
<b>To:</b>	User 103820	
<b>Date:</b>	Wednesday, 20-Oct-2021 08:04:13 AM	
<b>Project:</b>		
<b>Subject:</b>	[Textura System] Cedars Business Center II – PO-20049-10502 Catamount Early Payment Program Enrollment Confirmed	
<b>Message:</b>	<p>To the User(s) of</p> <p>Your acceptance of participation in Catamount Early Payment Program has been recorded. This enrollment covers invoices for:</p> <p>Project: Contract:</p> <p>To review the details of your enrollment click the link below:</p> <p><a href="https://uattpmus.texturacorp.com/tpm/tpm-ui?contractID=17672638&amp;eppEnrollmentView=1&amp;root=projectHome">https://uattpmus.texturacorp.com/tpm/tpm-ui?contractID=17672638&amp;eppEnrollmentView=1&amp;root=projectHome</a></p> <p>Kind Regards, Textura Payment Management System Customer Support: 866-TEXTURA (866-839-8872)   Hours: M-F 7am-8pm CT</p> <p>Notification: CPM105 is an automatically generated message from the Textura System. DO NOT reply to this message.</p>	

## 3. Submit Your Invoice

After enrolling, continue to submit your next invoice using the normal Enter Invoice process. The Review and Sign screen will show a confirmation that the invoice is enrolled in the EPP program and will be paid early.

Billing Summary	
Contract Sum To Date	325,420.00
% Complete	100.00%
<b>Completed to Date</b>	<b>325,420.00</b>
Retention Held This Period	1,325.00
Request Previously Held Retention	0.00
<b>Net This Period</b>	<b>11,925.00</b>
<b>Net Payment Due</b>	<b>11,925.00</b>
Early Payment Fee	149.06
Early Payment Amount	11,775.94
<b>Invoice Number *</b>	1-20049-0921

Does this information look correct?

**Enrolled for Cash Advance:** This invoice will be funded by the Catamount Early Payment Program Program and contains a cash advance fee of 1.25%. [Manage Enrollment](#)

**Draw Documents**

[Print Draw Documents](#)

[Attachments \(0\)](#)

**Documents**

Invoice	Generate
Unconditional Lien Waiver	Generate

Subcontractor Initials: \_\_\_\_\_  
 Catamount Constructors, Inc. Initials: \_\_\_\_\_

#### 4. Submit Your Invoice

---

- A. You can remove your organization from the early payment program by navigating to the **project home** screen, click on '**Catamount Early Payment Program**', and select '**Suspend Enrollment**'.
- B. To view a list of all submitted invoices and their status, use the Tools menu at the top right of your Textura screen to access the 'My Invoices' page.



The screenshot shows a table with the following data:

GC Name	Project Name	Contract	Draw	Draw End Date	Status	Payment Method	Approved Amount	Paid Amount	Payment Date	Funded Amount	Funding Date	Maturity Date	Amount Repaid	Outstanding Balance
Filter	Filter	Filter	All	All	All	All	All	All	All	All	All	All	All	All
Small, Inc.	Springfield Town Center	005	2	31-Dec-2017	Invoicing	EPP	0.00	0.00						
Small, Inc.	Springfield Town Center	005	1	30-Nov-2017	Submitted	ACH	58,880.70	0.00						
<b>Totals</b>							58,880.70	0.00		0.00		0.00	0.00	0.00
<b>Total: 2</b>														

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

**SUBCONTRACTOR WORK AUTHORIZATION AGREEMENT****ATTACHMENT G:  
EQUAL OPPORTUNITY DISCLOSURE****Equal Opportunity**

Catamount Constructors, Inc. is an equal opportunity employer. No person shall be discriminated against in any condition of employment because of race, color, religion, sex, sexual orientation, gender identity, national origin or other status protected by law. All qualified applicants will receive consideration for employment without regard to their protected veteran or disabled status and will not be discriminated against. In compliance with the Immigration Reform and Control Act of 1986, we will hire only U.S. citizens and aliens lawfully authorized to work in the United States (if the position is or will be one which is subject to U.S. law). We will provide reasonable accommodation for qualified individual with a disability where appropriate.

**The parties hereby incorporate the requirements of 41 C.F.R. § 60-1.4(a) and 29 C.F.R. § 471, Appendix A to Subpart A, if applicable.**

**This contractor and subcontractor shall abide by the requirements of 41 CFR 60-300.5(a) and 41 CFR 60-741.5(a), if applicable. These regulations prohibit discrimination against qualified protected veterans and qualified individuals with disabilities, and require affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans and qualified individuals with disabilities.**

**Pay Transparency Policy Statement**

The contractor will not discharge or in any other manner discriminate against employees or applicants because they have inquired about, discussed, or disclosed their own pay or the pay of another employee or applicant. However, employees who have access to the compensation information of other employees or applicants as a part of their essential job functions cannot disclose the pay of other employees or applicants to individuals who do not otherwise have access to compensation information, unless the disclosure is (a) in response to a formal complaint or charge, (b) in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or  
(c) consistent with the contractor's legal duty to furnish information.

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

## SUBCONTRACTOR WORK AUTHORIZATION AGREEMENT

**ATTACHMENT H:**  
**COVID-19 Safety Policy and Procedures**

Subcontractors are responsible for familiarizing themselves with, and adhering to, the Contractor's COVID-19 Health and Safety Plan, prior to mobilizing and beginning work at the project site.

Subcontractor is solely responsible for the supervision and enforcement of COVID-19 Safety for its own workforce while working on all projects to which this subcontract applies and shall comply with and enforce all requirements, guidance, executive orders, or other similar directives of all governing authorities, including but not limited to OSHA, CDC, state and local health departments, all city, county, and state governmental agencies, and federal laws and regulations with respect to COVID-19 or other pandemic requirements affecting this work.

Subcontractors shall be responsible for compliance and related behaviors for its employees, workers, vendors, suppliers, sub-subcontractors and job site visitors.

Everyone on site shall be responsible and participate in ensuring that all persons on site follow the necessary protocols and report any deficiencies, issues, concerns, or violations to the Contractor's site staff.

While each project may have a site specific-plan including additional requirements required by the project owner or jurisdiction, everyone on site shall comply with the more stringent of (a) site specific COVID-19 plan; (b) local jurisdiction requirements; or (c) the Contractor's COVID-19 Health and Safety Plan including but not limited to the following:

Prior to entry upon the jobsite **each day**, each Subcontractor employee, vendor, visitor, or affiliated person (including employees of suppliers, materialmen, or sub-subcontractors) (collectively, "Affiliated Person(s)") must complete a Self Health Screening via the touchless QR code which certifies:

- That the employee has not had a fever at or above 100.4 degrees Fahrenheit in the preceding 24 hours without fever-reducing medication;
- That the employee has not had COVID-19 Symptoms of respiratory infection, fever, cough, shortness of breath, or other symptoms as designated by the CDC or other governing health bodies; and
- That the employee has not had **close contact** (as defined by the CDC) to someone with a confirmed positive test for COVID-19.

Contractor reserves the right to implement temperature screening at its discretion – whether or not mandated by OSHA, State, County, Local Jurisdictions, or the Owner – as Contractor deems necessary for the safety of the personnel on the project.

In furtherance of Contractor's Health and Safety Plan, Subcontractor is required to ensure that Subcontractor employees and Affiliated Persons:

- Wear cloth face coverings at all times while on Contractor projects;
- Ensure that Subcontractor employees and Affiliated Persons maintain 6' social distancing while on Contractor projects, unless not practical and then will utilize additional preventive measures, such as face shields or other, to prevent and limit contact;
- Ensure that Subcontractor employees and Affiliated Persons perform daily cleaning/sanitizing of vehicles, tools, work areas, and equipment;
- Ensure that Subcontractor employees and Affiliated Persons are aware that anyone on site who develops any type of sickness related (or suspected to be related) to COVID-19 should notify his or her supervisor and leave the jobsite immediately;
  - (i) notify Contractor's superintendent in writing of any employee's suspected or confirmed COVID-19 positive cases;
  - (ii) confirm such employee's dismissal from the job site;
  - (iii) perform contact tracing of all personnel the employee had close contact with (as defined by the CDC); and
  - (iv) sanitize all surfaces, vehicles, tools, and equipment the employee had contact with;
- Subcontractor shall provide on-site access to electronic documents via Catamount's Procore software to reduce the use of paper documents and enable participation in the project management platform;
- Include COVID-19 Hazards in their hazard analysis and weekly safety meeting topics; and
- Participate in video conference meetings required for weekly job meetings, Quality Control preparatory meetings, Safety Meetings and Coordination meetings.

Subcontractor shall reimburse Contractor for all costs, fines, expenses, etc. incurred from delays or disruption of project schedule(s) incurred as a result of Subcontractor's failure to comply with Contractor's COVID-19 Health and Safety Plan and all similar plans of authorities having jurisdiction.

Subcontractor Initials: \_\_\_\_\_

Catamount Constructors, Inc. Initials: \_\_\_\_\_

Where the claimant is required to execute a waiver and release in exchange for or in order to induce the payment of a final payment and the claimant is not in paid in exchange for the waiver and release or a single payee check or joint payee check is given in exchange for the waiver and release, the waiver and release shall follow substantially the following form:

**ARIZONA LIEN WAIVER AND RELEASE FORM**  
**CONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT**

(Pursuant to A.R.S. 33-1008)

Project: \_\_\_\_\_

Job No.: \_\_\_\_\_

On receipt of the undersigned check from \_\_\_\_\_ (Maker of check)  
in the sum of \$ \_\_\_\_\_ (Amount of Check) payable to \_\_\_\_\_  
(Payee or Payees of Check) and when the check has  
been properly endorsed and has been paid by the bank on which it is drawn, this document  
becomes effective to release any mechanic's lien, any state or federal statutory bond right,  
any private bond right, any claim for payment and any rights under any similar ordinance,  
rule or statute related to claim or payment rights for persons in the undersigned's position,  
the undersigned has on the job of \_\_\_\_\_ (Owner) located  
at \_\_\_\_\_  
(Job Description). This release covers the final payment to the undersigned for all labor, services,  
equipment or materials furnished to the jobsite or to jobsite or to \_\_\_\_\_  
\_\_\_\_\_, (Person with whom undersigned contracted) except for the disputed claims  
in the amount of \$ \_\_\_\_\_. Before any recipient of this document relies  
on it, the person should verify evidence of payment to the undersigned.

The undersigned warrants that he either has already paid or will use the monies he receives  
from this final payment to promptly pay in full-all his laborers, subcontractors, materialmen  
and suppliers for all work, materials, equipment or services provided for or to the above-  
referenced project up to the date of this waiver.

Date: \_\_\_\_\_  
(Company Name)

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

Where the claimant is required to execute a waiver and release in exchange for or in order to induce the payment of a progress payment and the claimant is not in fact paid in exchange for the waiver and release or a single payee check or joint payee check is given in exchange for the waiver and release, the waiver and release shall follow substantially the following form:

**ARIZONA LIEN WAIVER AND RELEASE FORM  
CONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT**

(Pursuant to A.R.S. 33-1008)

Project: \_\_\_\_\_

Job No.: \_\_\_\_\_

On receipt of the undersigned check from \_\_\_\_\_ (Maker of check)  
in the sum of \$ \_\_\_\_\_ (Amount of Check) payable to  
\_\_\_\_\_ (Payee or Payees of Check) and when the check has  
been properly endorsed and has been paid by the bank on which it is drawn, this document  
becomes effective to release any bond right, any claim for payment and any rights under any  
similar ordinance, rule or statute related to claim or payment rights for persons in the  
undersigned's position that the undersigned has on the job of \_\_\_\_\_  
\_\_\_\_\_(Owner) located at \_\_\_\_\_  
\_\_\_\_\_(Job Description) to the following extent. This  
release covers a progress payment for all labor, services, equipment or materials furnished to  
the jobsite or to equipment or materials furnished to the jobsite or to \_\_\_\_\_  
\_\_\_\_\_, (Person with whom  
undersigned contracted) through \_\_\_\_\_ (Date) only and does not cover any  
retention, pending modifications and changes or items furnished after that date. Before any  
recipient of this document relies on it, that person should verify evidence of payment to the  
undersigned.

The undersigned warrants that he either has already paid or will use the monies he receives  
from this progress payment to promptly pay in full all his laborers, subcontractors, materialmen  
and suppliers for all work, materials, equipment or services provided for or to the above-  
referenced project up to the date of this waiver.

Date: \_\_\_\_\_  
(Company Name)

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

Where the claimant is required to execute a waiver and release in exchange for or in order to induce the payment of a final payment and the claimant asserts in the waiver that it has been paid the final payment, the waiver and release shall follow substantially the following form:

**ARIZONA LIEN WAIVER AND RELEASE FORM**  
**UNCONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT**

(Pursuant to A.R.S. 33-1008)

Project: \_\_\_\_\_

Job No.: \_\_\_\_\_

The undersigned has been paid in full for all labor, services, equipment, or material furnished to the jobsite or to \_\_\_\_\_ (Person with whom undersigned contracted) on the job of \_\_\_\_\_ (Owner) located at \_\_\_\_\_ (Job Description) and does hereby waive and release any right to mechanic's lien, any state or federal statutory bond right, any private bond right, any claim for payment and any rights under any similar ordinance, rule or statute related to claim or payment rights for persons in the undersigned's position, except for disputed claims for extra work in the amount of \$ \_\_\_\_\_.

The undersigned warrants that he either has already paid or will use the monies he receives from this final payment to promptly pay in full all his laborers, subcontractors, materialmen and suppliers for all work, materials, equipment or services provided for or to the above-referenced project up to the date of this waiver.

Date: \_\_\_\_\_  
(Company Name)

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

(Each Unconditional Waiver shall contain the following language, in type at least as large as the largest type otherwise on the document):

**NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.**

Where the claimant is required to execute a waiver and release in exchange for or in order to induce the payment of a progress payment and the claimant asserts in the waiver that it has been paid the progress payment, the waiver and release shall follow substantially the following form:

**ARIZONA LIEN WAIVER AND RELEASE FORM**  
**UNCONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT**

(Pursuant to A.R.S. 33-1008)

Project: \_\_\_\_\_

Job No.: \_\_\_\_\_

The undersigned has been paid and has received a progress payment in the sum of \$ \_\_\_\_\_ for all labor, services, equipment, or material furnished to the jobsite or to \_\_\_\_\_ (Person with whom undersigned contracted) on the job of \_\_\_\_\_ (Owner) located at \_\_\_\_\_ (Job Description) and does hereby release any to mechanic's lien, any state or federal statutory bond right, any private bond right, any claim for payment and any rights under any similar ordinance, rule or statute related to claim or payment rights for persons in the undersigned's position that the undersigned has on the above referenced project to the following extent. This release covers a progress payment for all labor, services, equipment or materials furnished to the jobsite or to \_\_\_\_\_ (Person with whom undersigned contracted) through \_\_\_\_\_ (Date) only and does not cover any retention, pending modifications and changes or items furnished after that date.

The undersigned warrants that he either has already paid or will use the monies he receives from this progress payment to promptly pay in full all his laborers, subcontractors, materialmen and suppliers for all work, materials, equipment or services provided for or to the above-referenced project up to the date of this waiver.

Date: \_\_\_\_\_  
(Company Name)

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

(Each Unconditional Waiver shall contain the following language, in type at least as large as the largest type otherwise on the document:)

**NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.**



**Arizona Form  
5005**

## Arizona Department of Revenue

### Contractor's Certificate Prime Contracting and MRRA

The purpose of this Certificate is to provide a subcontractor with the validation required for prime contracting transaction privilege tax (TPT) exemption, and for exemption from liability for an amount equal to retail TPT on materials incorporated or fabricated into maintenance, repair, replacement or alteration (MRRA) projects. The Certificate can be provided for a particular project, for a period of time, or until revoked. This Certificate establishes liability of the contractor issuing it for the prime contracting TPT and/or the amount equal to the retail TPT; therefore, it must be completed by the contractor assuming the liability. The asterisked (\*) items must be completed; otherwise, the Certificate is not valid. The Department may disregard this Certificate pursuant to A.R.S. § 42-5008.01 or A.R.S. § 42-5075.E if the Certificate is incomplete or erroneous. If disregarded, the subcontractor accepting the Certificate will have the burden of proving (pursuant to A.R.S. § 42-5008.01 or A.R.S. § 42-5075.D), that it is not liable for the prime contracting TPT and/or the amount equal to the retail TPT.

**Prime contractor should provide this Certificate to the subcontractor(s) and retain a copy for their records.**

#### A. Contractor

* Name  <b>Catamount Constructors, Inc.</b>	<input checked="" type="checkbox"/> TPT License # (if none, write "N/A - MRRA only") <b>07636528</b> <input type="checkbox"/> Tribal Business License _____ <input type="checkbox"/> Tribal Number _____		
* Address  <b>1527 Cole Blvd., Suite 100</b> AZ Contractor License Number <b>ROC167588</b>	* City, Town or Post Office  <b>Lakewood</b>	* State  <b>CO</b>	* ZIP Code  <b>80401</b>
* Phone Number <b>(303) 679-0087</b>			

I am a Native American Contractor working on the reservation established for my tribe. (Provide your Tribal Business License or Tribal Number above.)

I am performing contracting work for a  Native American member or  the Tribe for which the reservation is established named below.  
 Name of Tribe

#### B. Subcontractor

* Name  	* TPT License # (if none, write "N/A - MRRA only")		
* Address  	* City, Town or Post Office	* State	* ZIP Code
AZ Contractor License Number	* Phone Number		

#### C\*. Type of Certificate (check one and provide requested information)

Single Project Certificate

##### \*PROJECT DESCRIPTION

(\* For example: Building Permit #, Address, Subdivision, Book/Map/Parcel #s, and/or Legal Description)

**Diamond View at Ballpark**  
 1380 S Bullard Avenue  
 Goodyear, AZ 85338

Project Designation (see instructions for definitions)

MRRA

Modification

OR

Blanket Certificate (check applicable box and fill in requested information).\*

Period From: \_\_\_\_\_ Through: \_\_\_\_\_

Until revoked

\* NOTE: Blanket Certificate indicates the prime contractor is responsible for every contract during the period regardless of contract designation.

Specific Project Exclusion:

Description: \_\_\_\_\_

Designation:  MRRA  Modification

I hereby certify that I am the contractor issuing this form or I have authority to sign this Certificate on behalf of Contractor. I understand that by executing this Certificate, Contractor is licensed for TPT purposes and is assuming the prime contracting TPT liability and/or the amount equal to retail TPT liability applicable to the above referenced project(s).

SIGNATURE

*CFO*

TITLE

PRINT NAME

*Paul Crandall*

DATE SIGNED

*11/6/2026*

Attachment K – Project Insurance Manual

This item will come in the form of a change order.

Please send your COI to: [administrator@wrapupresources.com](mailto:administrator@wrapupresources.com)



July 2, 2025  
Alpha Project No. 24-G-14809

Lincoln Avenue Capital  
401 Wilshire Boulevard, Suite 1070  
Santa Monica, California 90401

Attention: Connor Mattoon

Regarding: Geotechnical Engineering Report  
Yuma and Bullard  
SWC of Yuma Road and Bullard Avenue  
Goodyear, Arizona

In accordance with your request, Alpha Geotechnical & Materials, Inc. (Alpha) has completed Geotechnical Engineering Services on the referenced Site. The Site is planned for the multi-family, residential development known as Yuma and Bullard.

Based on our findings, the Site is considered suitable for the proposed construction, provided foundation systems are properly designed, the site grading recommendations are followed, and foundation bearing soils are not exposed to moisture content fluctuations over the life of the improvements.

We appreciate this opportunity to be of service. If you have any questions concerning our report, or if we can be of further service, please contact us at (602) 453-3265.

Sincerely,  
**Alpha Geotechnical & Materials, Inc.**

/s/ Joshua Svatora

Joshua Svatora, E.I.T.  
Geotechnical Staff Professional

/s/ Chet L. Pearson

Chet L. Pearson, P.E.  
Principal Engineer

# GEOTECHNICAL ENGINEERING REPORT

## YUMA AND BULLARD

### SWC OF YUMA ROAD AND BULLARD AVENUE GOODYEAR, ARIZONA

DATED: JULY 2, 2025

PREPARED FOR:



**LINCOLN AVENUE CAPITAL**

401 WILSHIRE BOULEVARD, SUITE 1070  
SANTA MONICA, CALIFORNIA 90401

PREPARED BY:



**ALPHA GEOTECHNICAL & MATERIALS, INC.**  
2504 WEST SOUTHERN AVENUE  
TEMPE, ARIZONA 85282

ALPHA PROJECT No. 24-G-14809



By: Joshua Svatora For  
JOSHUA SVATORA, E.I.T.  
GEOTECHNICAL STAFF PROFESSIONAL

AND By: Chet Pearson  
CHET L. PEARSON, P.E.  
PRINCIPAL ENGINEER

GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD  
GOODYEAR, ARIZONA

JULY 2025  
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- Figure 2        Site Plan
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- Appendix A     Previous Data
- Appendix B     Photographic Log
- Appendix C     Test Boring Logs
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## 1.0 INTRODUCTION

---

### 1.1 GENERAL

Alpha Geotechnical & Materials, Inc. (Alpha) was retained by Lincoln Avenue Capital to conduct Geotechnical Engineering Services on approximately 30.33 acres of vacant located on the southwest corner of Yuma Road and Bullard Avenue in Goodyear, Arizona (the Site). The purpose of our services was to evaluate the general surface and subsurface conditions at the Site to provide geotechnical recommendations for the planned multi-family, residential development. As you know, Alpha previously prepared a geotechnical report for another client on the Site, and Lincoln Avenue Capital was given permission to use the previous data.

Our scope of services included a document review, review of previous data, subsurface exploration, laboratory testing, engineering analyses, and preparation of this report to provide recommendations for the development of the Site as detailed in our Proposal 24-G-14809, dated September 13, 2024. This report is valid for Lincoln Avenue Capital for the Yuma and Bullard development only, and no subsequent owners of the Site may use this report without Alpha's permission.

This geotechnical engineering report was prepared based on the information provided to us regarding site development, previous data, the results of the surface and subsurface exploration, and our engineering analyses. If the information concerning the proposed development is not correct, or if different subsurface conditions are identified, this report shall not be considered valid unless the new information is reviewed, and any appropriate modifications are made to this report by Alpha.

### 1.2 SITE LOCATION

The Site is identified as Maricopa County Assessor's Parcel Number (APN) 500-07-008Q. Maricopa County APNs of 500-07-008F and 500-07-008M contain City well sites and are excluded from the central portion of the Site. The Site is located within the northeastern quarter of Section 17 of Township 1 North, Range 1 West of the Gila and Salt River Baseline and Meridian System. The estimated center of the Site was located at a latitude of approximately 33.4338° North and a longitude of approximately 112.3790° West. The Site location is shown on the attached **Figure 1**.

### 1.3 PROJECT DESCRIPTION

The current proposed development plan consists of a multi-family development with 194 buildings, an office/clubhouse building, and pool in the western portion and an apartment

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development with 9 buildings, an office/clubhouse building, and pool in the eastern portion. A conceptual site plan, prepared by Bowman and provided by Lincoln Avenue Capital, showing the layout of the proposed development is shown on **Figure 2**. The residential buildings will be one- or two-stories without basements, and the apartment buildings will likely be two- or three-stories without basements. The residential and apartment buildings will likely be wood-framed and supported on post-tensioned slabs, shallow spread-type footings, and/or conventional shallow foundation systems. The office/clubhouse buildings will likely be constructed with a concrete slab-on-grade and conventional foundations. Maximum foundation loads are estimated to be about 30 kips for column loads and 3 kips per linear foot for wall loads. Asphalt paved areas for parking and driveways, as well as rigid pavement sections for sidewalks and dumpster areas have been anticipated. No basements or extraordinary slab-on-grade criteria have been assumed, and we have assumed that finished grades will be within a few feet of the existing grade.

Lincoln Avenue Capital also requested pavement design recommendations for Yuma Road and Bullard Avenue, so additional test borings were drilled along these roads.

#### 1.4 PREVIOUS REPORTS

Alpha had previously prepared a geotechnical report regarding the Site for Lyfe Living Communities. Lincoln Avenue Capital has received permission for Alpha to use the data from this report from Anton, the current seller which has received permission from Lyfe Living Communities. The original geotechnical report was prepared for a previous development called City Center Airpark, which consisted of a multi-family residential development including single- to two-story residential structures.

The previous geotechnical report regarding the Site was titled *Geotechnical Investigation Report, City Center Airpark, Bullard Avenue and Yuma Road, Goodyear, Arizona, Alpha Project No. 21-G-12128*, dated March 22, 2021. This report included six Test Borings B-01 through B-06 drilled to depths ranging from 15 to 25 feet below the ground surface (bgs) across the Site. The near surface soils encountered in these test borings across the Site consisted of Sandy Clay (CL) and Clayey Sand (SC), with some Silty Sand (SM) encountered below the surface clay and sand soil layers. The soils tested at the Site in the upper 4.5 feet bgs contained 35 to 52 percent fines (material passing the No. 200 sieve) and 8 to 18 percent gravel (material retained on the No. 4 sieve). These tested soil samples exhibited plasticity indices ranging from 11 to 14, considered low to medium plasticity. Light to moderate cementation was encountered in varying layers in the test borings. Expansion index testing was performed on two of the near surface samples and indicated expansion indices of 7 and 13, considered low expansion. Consolidation testing was performed on a relatively undisturbed ring-lined sample from the near surface and

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indicated a collapse potential of 3.0 percent when inundated with water under a loading condition of 1,000 pounds per square foot (psf), considered a low to moderate collapse potential. Soluble sulfate contents of 90 and 584 parts per million (ppm), and chloride contents of 62 and 78 ppm were found in the samples from the Site. The laboratory pH value from a near surface soil sample at the Site was 8.1, and the minimum resistivity value was 613 ohm-centimeters (ohm-cm). Based on our review of the current site development plan and the previous test borings, Alpha recommended additional field exploration for the new site plan.

## 2.0 FIELD AND LABORATORY SERVICES

---

### 2.1 FIELD EXPLORATION

Alpha contacted Arizona 811 to clear public utilities at the Site prior to our field exploration. No conflicts were identified on the Site. No access agreements, permits, or traffic control were required for the project.

The field exploration was conducted on September 26, 2024. Wildcat Drilling, Inc. (Wildcat) was subcontracted to complete drilling services. Wildcat utilized a truck-mounted CME-55 drill rig with an 8-inch outside diameter hollow-stem auger to complete the test borings. Our geotechnical exploration included 14 Test Borings, B-101 through B-114, to depths ranging from 5 to 15 feet bgs. The locations of the test borings are shown on **Figure 3**. Photographs of the Site and field exploration are shown in **Appendix B**.

Soil samples using undisturbed ring sampling and standard penetration testing (SPT) sampling methods were performed at a maximum of 5-foot intervals in each test boring. The relatively “undisturbed” samples were obtained with 3-inch outside diameter sampler lined with 2.42-inch inside diameter brass rings. The driving energy is generally recorded as the number of blows of a 140-pound, 30-inch free fall drop above ground hammer required to advance the samplers in 6-inch increments. The values are expressed in blows per 6 inches for the sampler on the boring logs. The resistance testing was conducted to provide indications of consistency and relative density of the encountered materials. Representative bulk samples of near surface material were collected from selected test borings. Completed test borings were backfilled with auger cuttings and surrounding soils.

Encountered soils were visually observed, classified in the field, and logged in general accordance with ASTM D2488. Field direction and test borehole logging were performed by Joshua Svatora, E.I.T. of Alpha. Logs of the test borings were modified after

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completion of the laboratory testing and are presented in **Appendix C**, which also includes a description of drilling and sampling procedures.

## 2.2 LABORATORY TESTING

Selected soil samples from the test borings were tested in the laboratory for classification purposes and to evaluate their engineering properties. The laboratory tests included:

- Sieve Analysis (ASTM C117/C136) – Soil gradation for classification and general engineering characteristics of the soil;
- Plasticity Index / Atterberg Limits (ASTM D4318) – Soil classification and general engineering characteristics related to plasticity and expansion;
- Hydrometer (ASTM D422) – Determination of percent silt and percent clay;
- Moisture-Density Relationship / Standard Proctor (ASTM D698) – Engineering characteristics of compacted soil;
- Swell Potential (ASTM D4546) – Swell or expansion potential of undisturbed or remolded soil samples inundated with water while under as surcharge load for engineering characteristics of the soil;
- R-Value (ASTM D2844) – Resistance R-Value and expansion pressure of compacted soils,
- In-Place Density (ASTM 2937) – Determination of in-place density and moisture at depth;
- Consolidation (ASTM D2435) – Assessment of compressibility of near-surface soils under embankment fills or structure loads;
- Soluble Sulfates and Chlorides (Arizona Test Methods 733 and 736) – Concentration in soil for corrosion potential of concrete and reinforcing steel in contact with soil; and,
- pH and Resistivity (Arizona Test Method 236) – Engineering characteristics of soil for corrosion potential on metal in contact with soil.

The laboratory test results are summarized in **Table D-1** along with individual laboratory sheets presented in **Appendix D**.

## 3.0 SITE CONDITIONS

---

### 3.1 GENERAL SITE HISTORY

Based on Alpha's review of historical records, the Site was apparently cleared of native vegetation by 1937, likely for future agricultural crop fields. An apparent developed area was located in the northeast corner of the Site. There was an apparent wash located on the western border of the Site and west of the Site. Some of the dense vegetation along the wash covered the western 250 feet of the Site. Some apparent channels extended east into the central portion of the Site. The developed area was orientated north-south with small structures in the northern and southern portions. By 1949, the wash was apparently channelized to the west, so fill materials were likely placed on the western 250 feet of the Site. There were four structures, likely a farm residence, and some barns or sheds in the northeast developed portion of the Site. Some of these structures were located within the current road right-of-way for Yuma Road and Bullard Avenue. The remainder of the Site appeared to be graded for an agricultural crop field. By 1967, the developed area was reduced to the northern half, and the southernmost structure was no longer present. This southern area was incorporated into the agricultural crop field. One of the northernmost structures was also removed by this time. One more structure was removed by 1975, leaving only one structure in the northeast corner of the Site.

In 1987, the water tank in the central exclusion area of the Site was present, and the remaining structure in the northeast corner was no longer present. The crop field was fallow. In 1988, the current curved alignment of Bullard Avenue was present along the eastern border of the Site. Additional site walls and a structure were constructed in the central exclusion area in 2004. In 2008, there were grading marks in the western portion of the Site along with improvements and widening to the channel along the western border. There was additional grading throughout the southeastern portion of the Site in 2009, along with drainage features and retention basin constructed along Bullard Avenue, and there was a construction yard in the northeastern portion of the Site. The construction yard was removed by late 2009. In 2020, there was a small construction storage yard, a construction access dirt roadway in the northwest portion of the Site, and underground utilities being installed along the northwestern border. The construction storage yard was removed by 2021, and the Site has remained relatively unchanged through 2024.

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### 3.2 SURFACE CONDITIONS

The Site at the time of the exploration was primarily vacant graded land. Minor spread fill piles approximately 1 to 3 feet tall were located across the western portion of the Site along dirt roadways. Small piles of debris, consisting of vegetation and concrete chunks, were located within the northeastern portion of the Site. There was likely graded fill on the western 250 feet of the western portion of the Site due to grading in the past along the drainage channel along the western boundary of the Site. Vegetation consisting of grasses, bushes, and trees were present on the Site, primarily in the northern portion of the Site. Retention basins were located along the southeastern boundary of the Site adjacent to Bullard Avenue, and vegetation was typically dense at the bottom of these basins. These retention basins also contained rip-rap material along the inlets from Bullard Avenue to protect against erosion. The previous concrete-lined irrigation ditch running east-west, with a north-south offset in the eastern portion of the ditch, was located along the northern boundary of the Site. The central exclusion area of the Site contained a City of Goodyear well site, and landscaped areas surrounded the Site. Yuma Road was located north of the Site, and Bullard Avenue was located south and east of the Site.

### 3.3 SUBSURFACE CONDITIONS

Fill/disturbed native soils were identified throughout the Site from the previous farming activities as well as the previous drainage channel improvements over the years. These fill/disturbed native soils were identified in the upper 1 to 2.5 feet bgs in the test borings across the majority of the Site, and in the upper 2.5 to 4 feet bgs in the test borings in the western portion of the Site affected by the construction of the drainage channel west of the Site. The northeast portion of the Site was previously developed with structures, and deeper areas of fill/disturbed native soils may exist in this area. In addition, there could be underground utility lines, septic systems, and other subsurface remnants of the previous development. The subgrade soils exposed during construction should be approved by the geotechnical engineer of record prior to any fill placement or construction of floor slabs and/or foundations.

The subsurface soils encountered during the field exploration consisted primarily of Sandy Clay (CL) and Clayey Sand (SC) with some Silty Clayey Sand (SC-SM) and Silty Sand (SM). The current near surface soil samples tested in the upper 4.5 feet bgs contained 44 to 71 percent fines (material passing the No. 200 sieve) and 4 to 18 percent gravel (material retained on the No. 4 sieve). These soils exhibited plasticity indices ranging from 7 to 16, considered low to medium plasticity. Most of the current test borings at the Site encountered varying layers of light to moderate cementation. The soils were typically characterized as stiff to very stiff for the fine-grained soil types, and medium dense to dense for the coarse-grained soil types.

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In-situ densities and moisture contents were taken across the Site at depths varying from 1.5 to 3 feet bgs, as well as at 5, 10, and 15 feet bgs in some test borings. The in-situ dry densities ranged from 86 pounds per cubic foot (pcf) to 120 pcf, with an average of 102 pcf. The moisture contents ranged from 4 to 22 percent, with an average of 8 percent.

### 3.3.1 Collapse Potential

Some shallow natural alluvial soils can “collapse” or settle a significant amount rapidly with the introduction of water while supporting load. These soils are typically found in semi-arid to arid climates, typically have low natural densities, and typically have low natural moisture contents. This phenomenon is intensified when the collapsible soils are supporting building foundations, fill surcharges, or other loads. Four relatively undisturbed ring-lined soil samples were obtained from the test borings for collapse potential testing as part of both the current 2024 and previous 2021 field explorations at the Site. The collapse potentials ranged from 2.8 to 3.3 percent at inundation under a loading condition of 1,000 psf, considered a moderate collapse potential. Based on these test results and the native soils encountered during the exploration, footings should be founded on engineered fill materials (on-site soils moisture conditioned and compacted as recommended in this report under engineering observation and testing). The foundation, site grading, and drainage recommendations presented in this report are intended to help reduce the potential for structural movements due to the compressibility and collapse potentials of some of the soils at the Site.

### 3.3.2 Expansion Potential

The bulk soils samples tested from the current 2024 and previous 2021 field explorations in the upper 4.5 feet bgs contained 35 to 71 percent fines and exhibited plasticity indices ranging from 7 to 16, considered low to medium plasticity. Swell potential testing was performed on four near surface soil samples from the Site as part of the current 2024 field exploration and indicated swell potentials ranging from 1.4 to 2.9 percent, considered low to moderate. Expansion index testing was also performed on two samples from the Site as part of the previous 2021 field exploration and indicated expansion indices of 7 and 13, considered low.

The Post-Tensioning Institute’s *Design and Construction of Post-Tensioned Slabs-on-Ground, 3<sup>rd</sup> Edition* (2008) indicates expansive soil designs should be used for soils with a Plasticity Index greater than 15, more than 10 percent fines (percent passing the No. 200 Sieve), and more than 10 percent of soil particles are less than 5 µm; or the soils have an Expansion Index greater than 20. Based on the testing, the soils at the Site are considered **active**. Therefore, we recommend using **expansive soil design parameters**

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for this Site, but we also recommend conducting a Post-Grading Geotechnical Engineering Evaluation or additional soil sampling and testing during finished grading to verify the soil conditions in the final pads.

In arid regions, the expansion potential of compacted soils can be increased by lower moisture contents and over-compaction of these soils. Therefore, the foundation, site grading, and drainage recommendations presented herein are intended to reduce the potential for structural movements due to expansion potentials.

### 3.4 REGIONAL GEOLOGY

The Site is situated in the western portion of the Salt River Valley in the Phoenix metropolitan area. The Salt River Valley is in the Basin and Range Province which extends from southern Oregon and Idaho through eastern California, Nevada, western Utah, the southern and western portions of Arizona into central Mexico. The Basin and Range Province is characterized by elongated mountain ranges trending northwest-southeast that are separated by broad alluvial valleys. The mountains in this Province consist of tilted blocks of Precambrian, Paleozoic, Mesozoic, and Cenozoic rocks that are bounded by faults and are usually severely eroded.

The Salt River Valley is an extensive basin containing alluvial soils often over 1,500 feet thick, as well as numerous small mountains. The alluvial soils between the mountains are highly variable and range from dense sand, gravel, and cobbles to silts and clays. In many areas, deposits of heavily cemented sandy clay and clayey sand ("caliche") are encountered, often having the characteristics of soft rock.

Groundwater in the Salt River Valley is managed as the Phoenix Active Management Area (AMA), and the entire basin is subdivided into sub-basins. The Site was located in the West Salt River Sub-Basin (WSRV) of the Phoenix AMA, which included the communities of Phoenix, Buckeye, Surprise, Glendale, Peoria, Goodyear, Tolleson, and Avondale. The WSRV is one of seven sub-basins located in the Phoenix AMA. Groundwater conditions change and develop over time due to both natural and human-induced fluctuations in the amount of water being added or removed. Groundwater enters the sub-basin from the Lake Pleasant, Northern Hassayampa, and East Salt River Valley (ESRV) Sub-basins, and from the Maricopa-Stanfield Sub-basin in the Pinal AMA. Agricultural irrigation water and effluent discharged from the City of Phoenix 23rd and 91st Avenue wastewater treatment plants also recharge the aquifer. As a result, water management is intended to result in balanced withdrawal and recharge.

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### **3.5 REGIONAL SEISMICITY**

The project Site is located within the Sonoran Zone. The Sonoran Zone is characterized by small, scattered mountain ranges and large flat plains and valleys. The seismic zone, as described by Euge and others (1992), are considered discrete seismic sources with limited potential for producing earthquakes. The possibility of a seismic event at the Site may be considered similar to the central Arizona region as a whole. We assume that structures in the Site vicinity may be subject to at least one seismic event during their life, so we recommend that all structures be designed and constructed in accordance with the International Building Code (IBC).

We believe that the potential for other seismic related hazards including ground shaking, liquefaction, seismicity-induced settlement, surface rupture, and ground lurching to affect the Site is considered negligible based on the seismicity, soil, and/or groundwater conditions present in the Site vicinity.

#### **3.5.1 Seismic Considerations**

The project Site is located in Goodyear, Arizona in south-central Arizona which is an area of low seismic activity. Based on our review of the test borings for the Site, our experience with the Site, and a review of nearby well logs, the Site should be classified as Site Class D (stiff soil). A Site Class C may be possible for the Site with additional field exploration. We understand that the City of Goodyear is using the 2018 IBC. For structural design based on the 2018 IBC and ASCE7-16, the following seismic parameters should be used:

#### **Seismic Design Parameters – ASCE7-16**

<b>Site Location: Latitude 33.4338° North, Longitude -112.3790° West</b>	
<b>Parameter</b>	<b>Value</b>
Site Class Definition	D
Spectral Acceleration for short periods (S <sub>s</sub> )	0.172 g
Spectral Acceleration for a one-second period (S <sub>1</sub> )	0.072 g
Site Coefficient F <sub>a</sub>	1.6
Site Coefficient F <sub>v</sub>	2.4
Spectral Acceleration S <sub>DS</sub>	0.183 g
Spectral Acceleration S <sub>D1</sub>	0.116 g

We understand that ASCE7-16 has been superseded by ASCE7-22. For structural design based on the 2018 IBC and ASCE7-22, the following seismic parameters should be used:

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**Seismic Design Parameters – ASCE7-22**

<b>Site Location: Latitude 33.4338° North, Longitude -112.3790° West</b>	
<b>Parameter</b>	<b>Value</b>
Site Class Definition	D
Spectral Acceleration for short periods ( $S_s$ )	0.16 g
Spectral Acceleration for a one-second period ( $S_1$ )	0.066 g
Site Coefficient $F_a$	1.69
Site Coefficient $F_v$	2.88
Spectral Acceleration $S_{DS}$	0.18 g
Spectral Acceleration $S_{D1}$	0.12 g

### **3.6 SURFACE WATER CONDITIONS**

The Site was located within the coverage area of the Perryville, Arizona, 7.5 Minute Series (Topographic) United States Geological Service (USGS) Map, 1958 edition. The Site was on gently sloping terrain with a natural elevation of approximately 970 feet above mean sea level (MSL). Based on surface contours on this map, the natural terrain in the Site vicinity sloped down to the southwest. However, grading activities and roadway improvements on and near the Site can locally alter surface water flow directions. Bullard Wash is located adjacent west of the Site and flows north to south. Bullard Wash has been channelized over the years and is currently an unlined drainage channel. The project's civil engineer should evaluate the potential for flooding at the Site. We have assumed that the project will be designed and graded to prevent ponding of water or flooding of structures and pavements.

### **3.7 GROUNDWATER CONDITIONS**

Groundwater was not encountered during the field exploration. A map showing approximate locations of index wells registered with the Arizona Department of Water Resources (ADWR) was reviewed on the ADWR web page (<https://azwatermaps.azwater.gov/gwsiweb>) to identify groundwater wells on and in the vicinity of the Site. Some groundwater wells are registered near the Site. The imaged well records indicated groundwater depths ranged from 60 to 199 feet bgs in wells near the Site installed from 1937 to 2019.

Based on an ADWR map titled *Maps Showing Groundwater Conditions in the Phoenix Active Management Area, Maricopa, Pinal, and Yavapai Counties, Arizona – Nov. 2002*

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– Feb. 2003, (ADWR Hydrologic Map Series Report No. 35, Depth to Water and Water-Level Altitude, Sheet 1 of 3), groundwater in the Site vicinity was reported at depths of about 60 to 78 feet bgs in 2002-2003 in wells surrounding the Site.

Seasonal variations could cause fluctuations in the surrounding groundwater depths. In addition, perched water tables may be encountered, especially after flood events and sustained flow in the west adjacent Bullard Wash.

### **3.8 LAND SUBLIMATION AND EARTH FISSURES**

The project Site is located within an area of 0 to 1 centimeter (cm) of measured land subsidence over a 14-year period (May 8, 2010 to April 12, 2024) within the West Valley Land Subsidence feature based on information accessed from ADWR's website. The project Site is located approximately 3.8 miles south of the Luke Earth Fissure Study Area in Maricopa County and approximately 5.5 miles south of the nearest confirmed earth fissure based on information accessed at the Arizona Geologic Survey (AZGS) website.

We did not observe indications of earth fissures on or near the Site during our aerial photograph review or our field exploration on the Site. Based on our review, we did not find information indicating the presence of earth fissures at or near the Site.

## **4.0 ENGINEERING DESIGN RECOMMENDATIONS**

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Geotechnical engineering recommendations for the support of proposed multi-family residential development are presented in the following sections. These recommendations are based upon our present understanding of the project and the results of the previous and current field and laboratory testing presented in **Appendices A, C, and D** of this report. Alternative recommendations may be possible and will be considered upon request. The proposed foundation systems should be designed and constructed in accordance with the guidelines contained herein and in the IBC.

The recommendations presented herein should be incorporated into the final design, grading, and construction phases of the proposed development. The engineering analyses performed concerning site preparation and the recommendations presented below have been developed using the information provided to us regarding site development. In the event that the information concerning proposed development is not correct, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed, and this report is modified or approved in writing by Alpha.

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Soil conditions across the Site vary, and site grading could result in soil conditions that may differ from those that currently exist in any specific area. As a result, the recommendations contained herein should be updated either through a more specific area and/or Post-Grading Geotechnical Report of any area to develop final design and foundation design criteria.

#### 4.1 POST-TENSIONED SLABS

Post-tensioned slabs founded at shallow levels below expected finished grades on engineered fill materials were evaluated for support of the residential structures. Recommendations for post-tensioned slabs are provided for relatively light foundation loading conditions, expected to be less than 30 k for column loads and less than 3 klf for wall loads for the structures. Based on the design procedure outlined in the PTI's *Design and Construction of Post-Tensioned Slabs-on-Ground, 3<sup>rd</sup> Edition* (2008), the on-site soils are classified as **Active**, so **expansive soil parameters** should be used. Based on the variable expansive characteristics of the surficial soils, we used a blended mix of soil for the recommended design parameters below.

Post-tensioning for this type of foundation system should utilize the recommended design procedure by the PTI's *Design and Construction of Post-Tensioned Slabs-on-Ground, 3<sup>rd</sup> Edition* (2008) and the IBC. All reinforcing (steel or post-tensioning) should be properly designed and specified by the structural engineer. The following design parameters should be used for Active Soil conditions:

<b>Maximum Allowable Bearing Pressure at 6 inches, <math>q_a</math>:</b>	1,250 psf
<b>Maximum Allowable Bearing Pressure at 12 inches, <math>q_a</math>:</b>	1,500 psf
<b>Coefficient of Subgrade Reaction, <math>k</math>:</b>	150 pci
<b>Coefficient of friction (select sand/type II)</b>	1.0
<b>Coefficient of friction (on-site soil)</b>	0.38
<b>Edge Moisture Variation Distance, <math>e_m</math></b>	
Edge Lift Condition:	4.8 feet
Center Lift Condition:	9.0 feet
<b>Maximum Differential Soil Movement, <math>y_m</math></b>	
Edge Lift Condition:	0.80 inches
Center Lift Condition:	0.21 inches

The post-tensioned slabs should be founded entirely on at least 20 inches of properly compacted fill and embedded a minimum of 6 or 12 inches, depending on the maximum

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allowable bearing pressure. In order to achieve embedment depth, the adjacent fill can be placed during fine grading of the Site and post construction of the stiffening beams. Exterior footings should maintain a minimum width of 12 inches. The bearing value may be increased by one-third for seismic or other temporary loads. We assumed completion of the Construction Recommendations in Section 5 for support of structures.

We understand that some high point loads may require an additional footing beneath the post-tensioned slab. The maximum allowable bearing pressure applicable beneath additional footings below post-tensioned slabs is also 1,500 psf provided they are embedded a minimum of 12 inches, founded on at least 12 inches of properly compacted engineered fill materials, and maintain a minimum width of 12 inches.

The post-tensioned slab enclosed within the perimeter thickened edges should be underlain with a minimum of 2 inches of sand or aggregate base course (ABC) material. Patios, porches, and garages that are part of the post-tensioned slabs should be founded on 2 inches of ABC or sand. Care should be taken to verify that slabs are not potentially undermined through erosion.

Post-tensioned slabs should be designed using sound engineering practice and be in conformance with local and/or national code requirements, including PTI's *Design and Construction of Post-Tensioned Slabs-on-Ground, 3<sup>rd</sup> Edition* (2008) and the IBC. All footings should maintain a minimum horizontal distance of 5 feet from the outside bottom edge of the footing to the face of an adjacent descending safe slope.

Local standard-of-care has historically not incorporated a vapor retarder in to design or construction. Final determination on the use of a vapor retarder should be left to the slab designer or architect. If a vapor retarder is used it should conform to the specifications presented in ASTM E1745 and should be placed as described in ASTM E1643 and the Guide for Concrete Floor and Slab Construction, published by the American Concrete Institute (ACI 302.1R).

## 4.2 CONVENTIONAL SPREAD AND CONTINUOUS FOOTINGS

Conventional spread (column) and continuous (wall) footings founded at shallow levels below existing and/or expected finished grades can be used to support the office/clubhouse buildings, as well as any ancillary structures at the Site.

Fill/disturbed native soils were identified throughout the Site in the upper 1 to 2.5 feet bgs in the test borings across the central and eastern portions of the Site, and in the upper 2.5 to 4 feet bgs in the test borings across the western portion of the Site affected by the construction of the drainage channel to the west of the Site. These fill/disturbed native

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soils should be removed, processed, and placed back into the excavation as engineered fill materials in accordance with the site grading recommendations in Section 5 of this report.

The underlying natural soils at the Site are expected to possess low to moderate bearing capacities and variable low collapse potentials at existing moisture contents. The soils are also expected to exhibit variable low to moderate increases in collapse due to moisture content increases while supporting foundation loads. Therefore, we believe that conventional at-grade shallow footings should be founded on engineered fill materials placed as recommended in this report. In addition, it will be important to construct and maintain positive drainage around the ancillary structures.

The ancillary structures can be supported by shallow spread footing type foundations bearing on engineered fill using the following parameters:

**Conventional At-Grade Footings**

Footing Depth Below Finished Grade (feet)	Minimum Depth of Engineered Fill Below Footings (feet)	Allowable Bearing Pressure (psf)	Maximum Wall Load (klf)	Maximum Column Load (k)
1.5	2.0	1,500	3	54
2.0	2.0	2,000	6	72

Footing depths shown are minimum values. Finished grade is the lowest adjacent grade within 5 feet for perimeter footings and floor level for interior footings. Footings must be founded on at least 2 feet of properly compacted engineered fill materials, as approved by the geotechnical engineer of record. For these allowable bearing pressures, we assumed completion of the site grading recommendations in Section 5 of this report for support of the office/clubhouse building and any ancillary structures at the Site.

The recommended foundation bearing pressures should be considered allowable maximums for dead plus design live loads and may be increased by one-third when considering combinations of total loads including transient wind or seismic forces. The weight of the foundation concrete below-grade (exterior grade for at-grade foundations) may be neglected in dead load computations. Minimum footing widths for structures should be in accordance with the local building code.

All footings, stem walls, and masonry walls should be reinforced to reduce the potential for distress caused by differential foundation movements. The use of joints at openings or other discontinuities in masonry walls is recommended. The foundation excavations should be observed by the geotechnical engineer or their qualified representative to verify and approve the bearing conditions prior to the placement of reinforcing steel and

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concrete. If undesirable (e.g., soft, loose, disturbed, water softened, low density, etc.) materials are encountered in the foundation excavations, the excavations should be deepened to extend through the undesirable bearing materials, or the undesirable materials should be removed and replaced with engineered fill or a lean concrete slurry as directed by the geotechnical engineer of record.

For lateral sliding resistance, a 0.38 coefficient of friction may be utilized for concrete to soil contact when multiplied by the dead load. Passive earth pressure may be computed as an equivalent fluid having a density of 350 psf per foot of depth with a maximum earth pressure of 2,500 psf.

#### 4.3 FLOOR SLABS-ON-GRADE

Conventional floor slabs for office/clubhouse buildings and ancillary features should be designed and constructed as recommended in this report and by the structural engineer, and the subgrade soils beneath conventional floor slabs must be prepared and maintained in accordance with the recommendations in this report. These slabs should have some temperature and shrinkage reinforcement as recommended by the structural engineer.

The near surface soils at the Site are primarily Sandy Clay and Clay with Sand (CL) and Clayey Sand (SC) soils, with mixtures thereof, with low to moderate swell potentials. There are some areas of Site where the near surface soils consist of Silty Sand (SM) and Silty Clayey Sand (SC-SM) soils. Any low swell potential SM or SC-SM soils from the Site may be used as fill materials beneath conventional floor slabs, provided they meet the engineered fill requirements in Section 5.6.2. The Sandy Clay and Clay with Sand (CL) and Clayey Sand (SC) soils with low to moderate swell potential should not be used as fill materials beneath conventional floor slabs. The top 12 inches of fill materials beneath conventional floor slabs must be low expansive fill materials or lime-treated on-site soils. Any subgrade preparation or fill of these soils in structure areas should be placed and maintained as recommended in this report.

Concrete floor slabs should be supported by a minimum of 4 inches of compacted ABC over 12 inches of engineered fill as recommended in this report. The upper 12 inches of engineered fill materials should be lime-treated on-site expansive soils or low expansive fill materials (1.5 percent or less swell potential) directly beneath the ABC. The low expansive fill materials may be on-site soils meeting the requirements of the table in Section 5.6.2 of this report or imported soils meeting these requirements. The engineered fill should extend at least 5 feet laterally beyond the building footprint. If lime treatment is selected, then a lime treatability study should be performed on the on-site soils to provide the recommended percentage of lime to be mixed with the on-site soils to reduce the

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expansion potential of these soils. Any loose or disturbed soil from excavation or other construction activities should be compacted as recommended in Section 5 of this report.

Concrete placement and curing operations should follow the American Concrete Institute (ACI) Manual recommendations. Improper curing techniques and/or high slump (high water cement ratio) could cause excessive shrinkage, cracking, or curling. Concrete slabs should be allowed to cure adequately before placing vinyl or other moisture sensitive floor coverings.

Local standard-of-care has historically not incorporated a vapor retarder in to design or construction. Final determination on the use of a vapor retarder should be left to the slab designer or architect. If a vapor retarder is used it should conform to the specifications presented in ASTM E1745 and should be placed as described in ASTM E1643 and the Guide for Concrete Floor and Slab Construction, published by the American Concrete Institute (ACI 302.1R).

#### 4.4 SETTLEMENT

Alpha estimates settlement of post-tensioned slabs and conventional footings designed and constructed in accordance with the recommendations in this report to be less than 1 inch with differential settlement less than 1/2 inch for stable subgrade soil moisture content.

We expect most of the settlement to occur during construction and loading of the foundations, so the actual settlement of the finished building may be lower than these estimates. Additional foundation movements could occur if water from any source infiltrates the foundation soils, so positive drainage should be provided in the final design, during construction, and over the life of the structure.

#### 4.5 RETAINING AND BLOCK WALLS

Retaining wall foundations may be designed using the conventional foundation recommendations previously provided in this report. Short or lightly loaded retaining walls and lightly loaded block walls can be supported on continuous footings using an allowable bearing value of 1,250 psf with a minimum width of 12 inches and a minimum depth of at least 18 inches bearing on engineered fill. For site walls, an allowable bearing value of 1,000 psf may be used for design of wall footings which maintain a minimum width of 12 inches and a minimum depth of at least 12 inches bearing on engineered fill. Wall footings should maintain a minimum 5-foot horizontal set back from the bottom outside edge of the footing and any adjacent descending safe slope face. The bearing value may be increased by one-third for seismic or other temporary loads.



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Lateral loads may be resisted by soil friction and by the passive resistance of the soils. A coefficient of friction of 0.38 may be used between the footings and the supporting soils. The passive resistance of the properly compacted engineered fill or undisturbed native soils may be calculated using an allowable equivalent fluid unit weight of 350 psf per foot of depth. The frictional resistance and the passive resistance of the soils may be combined without reduction in determining the total lateral resistance.

Rigid or restrained walls with little to no movement should be designed for the at-rest earth pressure represented by an equivalent fluid pressure of 60 psf per foot of depth plus any applicable surcharge loading conditions. Walls that can tolerate rotation or movement at the top of the wall or lateral translation equal to or greater than about 0.002 times the height of the wall, should be designed for active earth pressure represented by an equivalent-fluid soil unit weight of 40 psf per foot of depth plus any applicable surcharge loading conditions. Vertical surcharge loads and/or hydrostatic pressures will increase the recommended equivalent fluid pressures, so if these conditions are present, the retaining wall design should account for these factors. Alpha can provide additional information on lateral earth pressures from surcharge loading or hydrostatic pressures in the backfill.

The equivalent fluid pressures are provided for vertical walls and horizontal backfill less than 9 feet tall using on-site soils as the backfill material. Higher retaining walls or tiered retaining wall systems should be further evaluated by Alpha or the geotechnical engineer of record. Pressures do not include pressures imposed during compaction of backfill, swelling pressures of clay or expansive backfill, hydrostatic pressures from inundation of the backfill or free water behind the walls, traffic above the wall, surcharge loads, sloping fill above the top of the wall, seismic events, or adverse geologic conditions. Walls must be braced during backfilling to prevent damage and excessive movements.

If heavy mechanical compaction equipment will be operating within a distance of one-half the retained height, additional earth pressure induced by compaction should be used in wall design. The additional earth pressure should be estimated using the procedure presented by Clough and Duncan (1991). If compaction equipment used adjacent to the walls is to consist of small rollers and tampers, the additional earth pressure should not be used.

All walls should be reinforced to reduce the potential for distress caused by differential foundation movement in accordance with the structural engineer's recommendations. The walls should have both vertical and horizontal reinforcement and be designed to resist the effects of a two-way angular distortion and differential movements.

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All retaining walls should be provided with an adequate back drain system to reduce the buildup of hydrostatic pressure and to minimize potential buildup of effervescence along the front of the wall. We recommend the use of gravel, a free draining layer of soil or a manufactured synthetic material to be utilized as a back-drain system. A filter may be required between the soil backfill and a drainage layer. Proper surface drainage should also be provided.

## 4.6 OFF-SITE FLEXIBLE PAVEMENTS

### 4.6.1 General

The pavement recommendations contained in this report are based on our understanding of the project and the assumptions that the future roadway subgrade conditions are similar to the soil conditions encountered during our field exploration. The pavement recommendations were determined utilizing the Maricopa County Department of Transportation (MCDOT) Roadway Design Manual and the City of Goodyear Standard Detail G-3216.

The recommended pavement sections are considered minimal sections based on the anticipated traffic and the subgrade soil conditions encountered. The pavement is expected to function with periodic maintenance and overlays if positive drainage is provided and maintained over the life of the pavement. Some pavement damage may occur in localized areas during periods of abnormally heavy traffic loads, such as from repeated passage of construction equipment. Therefore, consideration should be given to a staged construction program or alternative access routes during construction to limit damage to the pavement sections.

The Site development includes the improvement of Yuma Road along the northern boundary of the Site and Bullard Avenue along the southeastern boundary of the Site. Both roadways are considered Arterial Streets. The soils at the Site should provide suitable support for pavement, provided it is prepared as recommended in Section 5.0 of this report. For design, we assumed that the pavement would be supported by compacted subgrade of the existing soils or imported soils with comparable properties.

### 4.6.2 Traffic Analysis

Alpha was provided with a traffic analysis report prepared by Lōkahi, LLC (Lōkahi) titled, *SWC Yuma Road and Bullard Avenue, Traffic Impact Study – Category I*, Lōkahi Project No. 24.5723, dated March 6, 2025. The report indicated that in 2019, the average daily traffic (ADT) for Yuma Road and Bullard Avenue at the Site were 6,836 vehicles per day and 6,718 vehicles per day, respectively. For the purpose of the design of the pavement

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sections for the roadways, we used a more conservative Average Daily Traffic of 10,000 vehicles per day in 2019. The report also utilized a growth rate of 5 percent, a heavy vehicle percentage of 2 percent, and the year 2027 for the start of the 20-year design period, for both roadways. Average daily traffic, growth rate, and percent trucks were estimated and are listed in the below Table 4.1.

The total traffic mix was not available. The traffic mix used to develop the design 18-kip equivalent single axle loads (ESALs), were estimated from typical urban vehicle distributions. The traffic equivalency factors (TEFs) presented in Table 10.2.2 of the MCDOT Roadway Design Manual were used. For design, the values presented in the following table were used to determine ESALs.

**Table 4.1: ESAL Calculation Parameters**

<b>Design Parameter</b>	<b>Yuma Road</b>	<b>Bullard Avenue</b>
2-Way Traffic Volume (2007)	14,775 Vehicles per Day	14,775 Vehicles per Day
Growth Rate	5%	5%
Percent Trucks	2%	2%
Percent Cars	98%	98%
Car-Load Equivalency Factor	0.0008	0.0008
Truck-Load Equivalency Factor	1.2	1.2
Directional Distribution	50%	50%
Lane Distribution (2 Lanes)	90%	90%
Design Period	20 years	20 years

Utilizing the design parameters in **Table 4.1**, the design ESALs for both Yuma Road and Bullard Avenue were computed. The calculated ESALs are based on the ADT from the year 2027, which is calculated using the provided ADT from 2019 and the provided growth rate of 5 percent. The design ESALs are presented in the **Table 4.2** below:

**Table 4.2: Calculated Design ESALs**

<b>Roadway</b>	<b>Total Two-Way Traffic ESALs</b>	<b>Design ESALs</b>
Yuma Road	4,419,363	1,988,714
Bullard Avenue	4,419,363	1,988,714



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#### 4.6.3 Pavement Design Parameters

**Table 4.3** presents a summary of laboratory test results including the percent passing the #200 sieve and plasticity index values as well as correlated and tested R-Values. The correlated R-Values were calculated utilizing **Equation 4.1** and **Equation 4.2** from the MCDOT R-Value correlation formula. The laboratory test results are included in **Appendix D**.

$$R_{Corr} = 0.018e^{\frac{SPF}{0.235}} + 6 \quad (\textbf{Equation 4.1})$$

$$SPF = 2.05 - 0.0033P_{200} - 0.017PI \quad (\textbf{Equation 4.2})$$

If  $R_{Corr} > 70$ , Set  $R_{Corr} = 70$

Where:

$R_{Corr}$  = Corrected R-Value

SPF = Sieve and PI factor

PI = Plasticity Index

$P_{200}$  = Percentage Passing the No. 200 Sieve

**Table 4.3: Subgrade Sample Summary**

Test Boring No.	Sample Depth (ft)	USCS Classification	Plasticity Index	Passing the #200 Sieve	Correlated R-Value	Tested R-Value
<b>Yuma Road</b>						
B-110	0 – 4.5	SC	13	66	29	28
B-111	0 – 4.5	CL	13	56	26	---
B-112	0 – 4.5	CL	10	58	32	---
<b>Bullard Avenue</b>						
B-112	0 – 4.5	CL	10	58	32	---
B-113	0 – 4.5	CL	12	53	28	21
B-114	0 – 4.5	CL	13	65	23	---

The correlated and tested R-Values were evaluated to determine a mean R-Value for design. There was not a significant variability of the correlated R-Values, therefore no reduction was made to the average correlated R-Value of 29 for Yuma Road and 28 for Bullard Avenue, in accordance with the MCDOT procedure.

The correlated R-Values and tested R-Values were evaluated using **Equation 4.3** to determine a mean R-Value for design:

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$$R_{mean} = \frac{2N_t SD_c^2 + N_c R_c SD_t^2}{2N_t SD_c^2 + N_c SD_t^2} \quad (\textbf{Equation 4.3})$$

Where:

$N_t$  = Number of R-Values Tested

$N_c$  = Number of R-Values Correlated

$R_t$  = R-Values Tested

$R_c$  = R-Values Correlated

$SD_t$  = Standard Deviation of R-Values Tested

$SD_c$  = Standard Deviation of R-Values Correlated

**Table 4.4** below presents the range of material passing the No. 200 sieve, the range of plasticity indices, the average correlated R-Values, the tested R-Values, and the Design R-Values.

**Table 4.4: R-Value Summary**

Roadway	Range of Minus #200 Sieve (%)	Range of Plasticity Indices	Average Correlated R-Value	Tested R-Value	Design (Mean) R-Value
Yuma Road	44 to 55	10 to 13	29	28	28
Bullard Avenue	52 to 65	10 to 13	28	21	21

The subgrade resilient modulus used in the pavement design was calculated using the design R-Value and is expressed by **Equation 4.4**.

$$M_R = \frac{1815 + 225R_{mean} + 2.4R_{mean}^2}{0.6SVF^{0.6}} \quad (\textbf{Equation 4.4})$$

Where:

$M_R$  = Subgrade Soil Resilient Modulus

$R_{mean}$  = Mean (Design) R-Value

SVF = Seasonal Variation Factor (SVF=1.0)

Soil Resilient Modulus Value ( $M_R$ ) of 16,661 psi was determined for Yuma Road and an  $M_R$  of 12,664 was determined for Bullard Avenue. These values are below the maximum  $M_R$  of 26,000 psi according to the MCDOT Roadway Design Manual.

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The procedures outlined in the MCDOT Roadway Design Manual were used to develop asphaltic concrete pavement sections for the proposed roadways. The design parameters used in determining the required structural capacity of the asphaltic concrete pavements are presented in **Table 4.5** below:

**Table 4.5: Flexible Pavement Design Parameters**

Design Parameter	Arterial
Standard Error	0.45
Level of Reliability	95%
Standard Normal Deviate ( $Z_r$ )	-1.645
Terminal Serviceability Index ( $P_t$ )	2.5
Change in Serviceability Index ( $\Delta_{psi}$ )	2.0
Design R-Value (Yuma Road)	28
Design R-Value (Bullard Avenue)	21
Resilient Modulus (psi) (Yuma Road)	12,125
Resilient Modulus (psi) (Bullard Avenue)	16,661
Drainage Coefficient (base material)	1.00

The MCDOT structural coefficients are presented in the table below:

**Table 4.6: MCDOT Structural Coefficient Values**

Layer Type	Coefficient Value
Asphaltic Concrete, $a_1$	0.42
Aggregate Base Course, $a_2$	0.12
Drainage Coefficient, $m_2$	1.0

#### 4.6.4 Flexible Pavement Design

Based on the pavement design parameters and projected traffic data, the following equation calculates the required SN based on the subgrade conditions:

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$$\log_{10}(W_{18}) = Z_R S_o + 9.36 \log_{10}(SN + 1) - 0.2 + \log_{10} \left( \frac{\frac{\Delta PSI}{4.2 - 1.5}}{0.4 + \left( \frac{1094}{(SN + 1)^{5.19}} \right)} \right) + 2.32 \log_{10}(M_R) - 8.07 \quad (\textbf{Equation 4.5})$$

The required SN using **Equation 4.5** resulted in a value of 2.99 for Yuma Road and 3.30 for Bullard Avenue.

The City of Goodyear provides minimum pavement sections for various types of roadways. For an Arterial roadway, a minimum pavement section of 5.0 inches of AC over 12 inches of ABC is required, specifically within a 1/4-mile radius of a residential development. This minimum pavement section includes the required use of rubberized asphalt (RAC) pavement as the final surface course. Using the structural coefficients and the pavement sections previously stated, the SN for the minimum pavement section can be calculated utilizing **Equation 4.6** below:

$$SN = a_1 D_1 + a_2 D_2 m_2 \quad (\textbf{Equation 4.6})$$

A SN of 3.54 was determined for the City of Goodyear minimum pavement section for an Arterial roadway within a 1/4-mile of a residential development. **Table 4.7** summarizes the SN based on the City of Goodyear minimum, and the calculated SN.

**Table 4.7: Structural Number (SN) Summary**

City of Avondale Minimum Pavement Section SN	Required SN for Yuma Road	Required SN for Bullard Avenue
3.54	2.99	3.30

The City of Goodyear minimum pavement section SN was greater than the required SNs for Yuma Road and Bullard Avenue. Therefore, the City of Goodyear minimum pavement section is acceptable for the assumed traffic conditions and subgrade conditions found at the Site.

The table below summarizes the acceptable pavement sections for Yuma Road and Bullard Avenue:

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**Table 4.8: Pavement Section**

Roadway	Basis of the Pavement Design	AC Section (inches)	ABC Section (inches)
Yuma Road	MCDOT Roadway Design Procedure and City of Goodyear Std. Detail G-3216	5.0	12.0
Bullard Avenue	MCDOT Roadway Design Procedure and City of Goodyear Std. Detail G-3216	5.0	12.0

The existing pavement sections along the existing Yuma Road and Bullard Avenue are unknown. It is recommended to maintain the same finished subgrade elevation and pavement section thickness as the existing pavement section to remain adjacent to any new pavement section in order to maintain proper drainage beneath the roadway. Based on the structural coefficient values, 1 inch of asphaltic concrete may be substituted for 3 inches of ABC to get matching pavement section thicknesses for the new and existing roadway.

The pavement materials and construction should conform to Maricopa Association of Governments (MAG) requirements and any City of Goodyear supplements. The City of Goodyear Detail G-3216 requires one lift of at least 1.5 inches of RAC (1/2" Mix) over 3.5 inches of AC (3/4" Mix) and that the construction materials conform to MAG Sections 321 and 710 and the city specifications identified in the City of Goodyear Engineering Design Standards and Policy Manual and Approved Materials List.

The MCDOT Roadway Design Manual requires stabilizing 6 inches of subgrade soil with lime or cement when the swell potential is between 2 to 5 percent and stabilizing 12 inches of subgrade soil with lime when the swell potential is greater than 5 percent. Swell potential testing for Site soils indicated swell potentials from 1.4 to 2.9 percent (different swell test than required by MCDOT). Therefore, subgrade stabilization may be required beneath the roadway and sidewalks for the off-site improvements.

#### **4.7 ON-SITE PAVEMENTS**

The on-site pavement recommendations contained in this report are based on our understanding of the project and the assumptions that the soil and subsurface conditions are those disclosed by the field exploration and the on-site soils are used as the compacted subgrade beneath all pavements. Traffic information was not provided to us for the planned streets and parking areas, but we anticipate that the streets and parking

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areas will mainly be used by passenger vehicles and periodically used by small- to medium-sized trucks.

Providing positive drainage away from pavement and preventing the ponding of water near the pavement sections must be completed during the design, construction, and life of the pavements at the Site. These recommendations will help reduce the potential for soil movements from water infiltration, but they may not eliminate soil movements or pavement distress.

The City of Goodyear provides minimum pavement sections in their Standard Detail G-3216 for pavements constructed within the City's right-of-way. It is anticipated that traffic volumes for the Site will be consistent with local residential streets based on anticipated volume and roadway speed. The flexible pavement sections for main drives and parking areas are provided below:

#### **Flexible Pavement Sections**

Roadway Type	Asphaltic Concrete Thickness	Aggregate Base Course Thickness
Main Drives	3.0 inches	6.0 inches
Parking Areas	2.5 inches	6.0 inches

The pavement subgrade and materials should be prepared and constructed as recommended in this report. The recommended pavement sections are considered minimal sections based on the anticipated traffic and the subgrade soil conditions encountered. However, they are expected to function with periodic maintenance and overlays if positive drainage is provided and maintained over the life of the pavement. Some pavement damage may occur in localized areas during periods of abnormally heavy traffic loads, such as from repeated passage of construction equipment. Therefore, consideration should be given to a staged construction program or alternative access routes during construction to limit damage to the pavement sections. Locally, 2- to 3-inch asphaltic concrete pavement sections often become brittle and experience cracking before the design life is attained. Therefore, the bituminous surface should be sealed after an initial summer of use (and routinely thereafter) to minimize water infiltration directly through the pavement section and to retard premature oxidation of the surfacing.

#### **4.8 DRAINAGE**

Positive drainage is a key to the successful performance of any foundations, slabs, or pavements at the Site. The usual source of increasing moisture in soils is from infiltrating surface water. Therefore, providing positive drainage away from structures, concrete

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slabs, and pavements and preventing the ponding of water near the structures, slabs, and pavements must be completed during the design, construction, and over the life of the structures, slabs, and pavements at the Site. In unpaved areas around structures, the final ground surface should be sloped away from the perimeter of the structure at a minimum grade of 5 percent for a minimum distance of 10 feet. Drainage inspections should verify that the recommended slope is met away from the structures.

Special attention should also be given to the collection and drainage of roof and surface runoff, and to the location and design of all sidewalks, planters, irrigation systems, drainage swales, and water retention basins. Backfill adjoining perimeter structure walls and exterior footings should be properly compacted to reduce possible moisture infiltration. Care should be taken in design and construction to provide adequate control of domestic and stormwater to limit seepage into the underlying soils around structures, slabs, and pavements. Sidewalks should not be installed across drainage swales or pathways, or some type of water conveyance across the sidewalk should be provided. Rain gutter discharges and watering of plants should be avoided adjacent to structures. Desert-type landscaping is advisable near structures. Plants, which require more water, should be located away from structures or placed in lined beds near structures with a drain away from the structure.

These recommendations should help reduce the potential for soil movements from water infiltration, but they may not eliminate soil movements or structural or pavement distress.

#### 4.9 CORROSION POTENTIAL

Selected samples of the near-surface soils, and deeper subsurface soils, encountered at the Site were subjected to chemical analysis for corrosion characteristics. The test results are provided in the attached **Appendices A and D**.

Near surface soluble sulfate contents of about 90 and 584 parts per million (ppm) were found at the Site as part of the 2021 geotechnical report. Subsurface sulfate contents of about 104 and 180 ppm were found at the Site from depths of 5 to 10 feet bgs as part of the current 2024 field exploration. The sulfate test measures the water-leachable or "available" sulfate content. These results were compared to Table 19.3.1.1, "*Exposure Categories and Classes*," in Section 19.3.1 of the ACI's Building Code Requirements for Structural Concrete. Based on the laboratory results, the soils are classified as S0 in terms of sulfate exposure. Based on Table 19.3.2.1, "*Requirements for Concrete by Exposure Class*," in Section 19.3.2 of ACI 318M/318RM, Type II cement should be utilized for concrete mixtures. Type II cement or equivalent for negligible to moderate sulfate exposure conditions is acceptable for concrete mixtures. Additional testing is

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recommended during construction if soils from below 5 feet bgs are to be used as engineered fill material for the pads.

Near surface chloride contents of about 62 and 78 ppm were found at the Site as part of the previous 2021 geotechnical report. Subsurface chloride contents of about 142 and 212 ppm were found at the Site from depths of 5 to 10 feet bgs as part of the current 2024 field exploration. Based on the available published data regarding chloride ion content in soils, a concentration of 500 ppm or greater is considered corrosive and may require additional concrete cover or encapsulation for steel reinforcement. Based on the laboratory results of the samples collected for this project, chloride contents of the on-site soils tested indicate that the soil has a low potential for degradation of concrete and steel reinforcement.

The slab designer should use the corrosion test results in this report to evaluate the need for corrosion protection in accordance with ACI requirements. All concrete should be designed, mixed, placed, finished, and cured in accordance with guidelines presented by the Portland Cement Association (PCA), the ACI, the PTI, and the IBC.

The near surface laboratory pH values were 8.1 as part of the previous 2021 geotechnical report, and 6.7 and 6.9 as part of the current 2024 field exploration. The subsurface laboratory pH values of samples collected at depths from 5 to 10 feet bgs were 6.2 and 7.4 as part of the current 2024 field exploration. The near surface minimum resistivity values were 1,497 ohm-centimeters (ohm-cm) as part of the previous 2021 geotechnical report, and 470 and 681 ohm-cm as part of the current 2024 field exploration. The subsurface minimum resistivity values of samples collected at depths from 5 to 10 feet bgs were 885 and 1,293 ohm-cm as part of the current 2024 field exploration. These values indicate the natural soils from both the near surface and subsurface, especially when at elevated moisture content, are highly to severely corrosive to buried ferrous metals. Therefore, special protection may be warranted for buried metal piping or conduits that would be in direct contact with the natural soils subject to high moisture content. In addition, protection may be necessary where dissimilar metals are placed in close proximity or are joined. Consideration should be given to the use of approved non-metallic or coated conduits. We recommend the laboratory test results included in **Appendices A and D** be reviewed by a firm qualified in corrosion protection design and the Structural Engineer and Civil Engineer of record to determine the appropriate corrosion protection needed.

#### 4.10 SLOPE STABILITY

No significantly high (greater than 10 feet) slopes exist or are anticipated to be constructed on the Site. All slopes should be designed at gradients of 3H to 1V (Horizontal

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to Vertical) or flatter. All slopes should be constructed in accordance with the minimum requirements of MAG and IBC. Cut and fill slopes are anticipated to perform adequately in the future with respect to gross and surficial stability if the soil materials are maintained and are limited to the heights prescribed herein. The slopes should be adequately protected from erosion. Alpha should be contacted for recommendations on higher or steeper slopes.

## 5.0 CONSTRUCTION RECOMMENDATIONS

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The design recommendations presented in this report are contingent upon the earthwork and site grading being conducted and maintained as recommended in this report and verified by Alpha's geotechnical engineer through construction inspections and materials testing. Any significant time delay between the earthwork/site grading and construction of improvements could result in reduced performance of the improvements. Alpha should be contacted regarding any required re-processing of soils due to time delays over 90 days. Since the design recommendations are contingent upon the construction being completed as recommended in this report and verified by Alpha's geotechnical engineer during construction inspections and materials testing, if others provide the inspections and testing, they should review and approve of the recommendations in this report and will become the geotechnical engineer of record, so Alpha will no longer provide geotechnical recommendations on this project.

If contractors should have any questions regarding site conditions, excavation conditions, site preparation, or the recommendations provided in this report, they should contact Alpha for any necessary clarifications prior to submitting bids.

All applicable requirements of local and national construction and general industry safety orders, the Occupational Safety and Health Act, and the Construction Safety Act should be met during construction at the Site.

### 5.1 CLEARING AND GRUBBING

Prior to site grading, clearing and grubbing of the area will be required to remove debris, trash and dumped piles, existing vegetation, disturbed soils, remnants of previous development, and undocumented fill materials. Additional details on over-excavation requirements are presented below. If excavated materials are intended to be used for engineered fill materials, special care should be taken to remove roots and foreign objects

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from the soil as much as practical. Oversized rock particles may need to be removed from excavated soils.

The geotechnical engineer of record should approve all excavated areas resulting from the removal of vegetation or remnants of previous development to confirm removal of remnants and disturbed soils prior to preparation for engineered fill material placement. All backfill should be observed and tested in order to be considered competent to support the proposed improvements.

## 5.2 GENERAL EXCAVATION

Based on subsurface conditions identified by our work, we believe that conventional excavation equipment may be used to excavate the subsurface materials in the upper 10 to 15 feet bgs. Light to moderate cementation was encountered at varying layers throughout the depth of the test borings.

Deeper excavations may require the use of heavy-duty, specialized equipment to facilitate removal. The speed and ease of excavation is dependent on the nature of the soils, the type of equipment used, and the skill and experience of the equipment operator. More accurate information regarding the excavation conditions should be evaluated by contractors from test excavations using the intended equipment and extending to the required depths.

## 5.3 EXCAVATION AND TEMPORARY SLOPES

Instability in the form of slope raveling, caving, and sloughing should be expected in the excavations and trenches at the Site due to the nature of most of the on-site soils. Excavations and trenches at the Site should be braced, sloped, and/or designed as required to provide personnel safety and satisfy safety code regulations. Construction site safety is the sole responsibility of the contractor. Under no circumstances should the information in this report be interpreted to mean that Alpha is assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

Temporary excavation slopes should conform to Occupational Safety and Health Administration and Arizona Division of Occupational Safety and Health regulations. Within this system, the classification of the on-site soils is considered to be Type C. Unsupported temporary cut slopes in these soils be made no steeper than 1.5H to 1V (Horizontal to Vertical) for excavations less than 10 feet deep. Deeper excavations or taller temporary slopes should be evaluated on an individual basis by Alpha.

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Soil piles should be located no closer than 6 feet from the crest of the slopes. Large particles, including cobbles and soil clods, should be kept away from the crest of the slopes. Moisture increases in the soils will weaken them and could cause slope failures. Some localized raveling could occur as the exposed soils dry. The excavations should be protected from stormwater runoff or other sources of moisture. Small berms may be necessary to protect the excavations from stormwater runoff. If the soils are subjected to moisture increases, the stability of the slopes should be reevaluated.

Heavy construction equipment, building materials, and vehicular traffic should not be allowed within one-third of the slope height from the top of any excavation. Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning may be required to provide structural stability and to protect personnel working within the excavation. Shoring, bracing, or underpinning required for the project (if any) should be designed by a professional engineer registered in the State of Arizona.

#### 5.4 SITE GRADING

All site grading in the structure and on-site pavement areas should conform to requirements in this report along with applicable building codes, and all grading in off-site pavement or future public roadway or utility line areas should conform to the IBC, MAG specifications and local supplements, if applicable. During earthwork construction, all removals, subgrade preparation, and the general grading procedures of the contractor should be observed, and the fill selectively tested by a representative of the geotechnical engineer of record.

The Site has historically been developed as agricultural crop land with some structural development in the northeast portion of the Site, grading work in the western portion of the Site associated with the adjacent drainage channel to the west of the Site, and retention basins located near the southeastern boundary of the Site.

Across the majority of the Site, we identified 1 to 1.5 feet of fill materials / disturbed native soils at the test boring locations associated with the previous agricultural crop farming activities. Therefore, we recommend a 1-foot over-excavation over the central portion of the Site not shaded in **Figure 3**. We identified 2.5 to 5 feet of fill materials / disturbed native soils at the test borings locations in the western portion of the Site associated with the construction of the drainage channel west of the Site. This area is shown as shaded light purple on **Figure 3**. We recommend a 4-foot over-excavation beneath all future structure areas within the western area affected by the construction of the adjacent drainage channel to verify the removal of existing fill materials. Some areas may require deeper over-excavation, and some areas could require less over-excavation depending

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on observations during site grading. The previously developed area in the northeastern portion of the Site shown as a light green shaded area in **Figure 3** could contain underground pipelines, septic systems, trash pits, or other remnants of the previous development. Therefore, we recommend a 2.0-foot over-excavation beneath all future structure areas in this area to verify the removal of remnants of the previous development. The geotechnical engineer of record should observe the over-excavation areas for remaining indications of other undesirable materials or features. Any soft and yielding soils, or soils suspected to be fill materials, exposed in the over-excavation area should be excavated until competent undisturbed natural soils are encountered. The excavated soils may be replaced into the excavation as processed, moisture conditioned, and compacted engineered fill materials, per the recommendations in this report.

If the on-site existing retention basins are not to be used in the future, these areas should also be over-excavated to a minimum of depth of 1-foot below the bottom of the retention basin until slightly damp, un-yielding, organic free, natural soils are encountered. The geotechnical engineer of record should observe the over-excavation of the retention basins for any moist, soft, or yielding soils.

There are regulatory requirements associated with the removal or abandonment of some features like septic systems or groundwater wells. State and local regulatory requirements should be followed including submission of paperwork to document the activities.

The following site grading should be completed to provide for the specified depths and lateral extent of engineered fill materials beneath the planned structures and pavement.

- In post-tensioned slab areas, a minimum of 20 inches of processed, moisture conditioned, and compacted soil should be provided as measured from the existing ground surface or finished pad elevation, with the greater depth or lower elevation to govern. The engineered fill materials should extend a minimum of 5 feet beyond all structures.
- In conventional footing areas, a minimum of 2 feet of processed, moisture conditioned, and compacted soil should be provided below the bottom of the footing or a minimum of 2 feet of processed, moisture conditioned, and compacted soil should be provided as measured from the existing ground surface, with the greater depth or lower elevation to govern. The engineered fill materials should extend a minimum of 2 feet beyond all footing edges.
- In concrete floor slab and concrete pavement areas, a minimum of 12 inches of processed, moisture conditioned, and compacted soil should be provided as measured from the existing ground surface or final subgrade elevation, with the



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greater depth or lower elevation to govern. The upper 12 inches of engineered fill materials beneath the ABC should be lime treated on-site expansive soils or low expansive fill materials (1.5 percent or less swell potential) directly beneath the ABC. The low expansive fill materials may be on-site soils or imported soils meeting the requirements of the table in Section 5.6.2 of this report. These improvements should extend a minimum of 5 feet beyond the edges of the slab and concrete pavement areas.

- In asphaltic concrete pavement areas, engineered fill materials should be provided to a minimum depth of 12 inches below finished subgrade level.

For general site grading, excavated on-site soils may be placed in relatively thin lifts, cleaned of vegetation and debris, brought to at least optimum moisture content, and compacted to a minimum relative compaction of either 92 or 95 percent of the laboratory standard ASTM D698 maximum dry density and above the laboratory standard ASTM D698 optimum moisture content. The maximum lift thickness to meet both the compaction and moisture content requirements is a function of several variables including the type of soil, the moisture content of the soil, the type and size of compaction equipment, the number of passes of the compaction equipment, and the support characteristics of the underlying materials. Therefore, the maximum lift thickness can vary considerably and still achieve proper moisture content and relative compaction of engineered fill materials. If compaction is not achieved, changes to lift thickness, equipment, or other processes may be required.

A sufficient number of field density tests shall be performed to provide an opinion to the degree of moisture conditioning and compaction achieved in subgrade preparation areas and in engineered fill materials. Field density tests should be performed at a minimum rate of one test for every 1,000 cubic yards of material placed, one for every 2 feet of material placed, whichever is greater, or where there is a significant change of soil type. In general, field density tests should be performed during fill placement to avoid the use of potholes to expose untested fill materials.

## 5.5 EARTHWORK FACTORS

Based on the laboratory testing and Alpha's experience with similar site conditions, we estimated a ground height loss of 0.10 to 0.20 feet for compaction of the top 1 foot of soil at the Site. We also estimated an earthwork factor of about 15 to 20 percent shrinkage for native soils compacted to 95 percent of the maximum dry density as determined by ASTM D698. Compaction to greater than 95 percent of the maximum dry density will

increase the total shrinkage. Final earthwork factors could vary significantly depending upon soil type and compactive effort. Therefore, we recommend that the grading contractor periodically check the shrinkage estimates and reserve some areas where the grades can be adjusted up or down near the completion of grading in order to accommodate differences in the earthwork balance for the project.

## 5.6 FILL MATERIALS

The following sections present our recommendations for fill materials to be used for the planned development. Since materials characteristics are dependent upon a variety of parameters, and some characteristics can be mitigated by other procedures, the final decision on acceptance of a construction material should be by the Alpha's geotechnical engineer or the geotechnical engineer of record in consultation with the owner/developer and other design professionals.

### 5.6.1 On-Site Soils

The on-site soils in the upper 5 feet that are cleaned of organic material and debris may be utilized as engineered fill materials in post-tensioned slab, conventional footing, and asphaltic concrete pavement areas subject to the limitations of this report. On-site expansive soils may not be used in the upper 12 inches beneath concrete floor slabs or concrete pavement areas unless they meet the requirements of Section 5.6.2. Soils with significant quantities of organics should not be used as fill material in building or pavement areas. Deeper soils greater than 5 feet below the existing grade should be evaluated by sampling and testing by the geotechnical engineer of record prior to use as engineered fill material in future structure and pavement areas.

### 5.6.2 Imported Soils and Engineered Fill Materials

Imported soils and on-site soils may also be used as engineered fill material if it meets the requirements presented in the table below. Soils used in the upper 12 inches beneath concrete floor slabs and concrete pavement areas should meet the requirements presented in the table below. Imported soils and on-site soils may also be used as engineered fill material beneath column and wall footings. Representative sampling and testing of the imported soils should be completed at a frequency of one test per 5,000 cubic yards of imported soil or minimum of two tests per source, whichever is greater. The geotechnical engineer of record should be contacted if imported soil is to be used at the Site to confirm the testing frequency is sufficient, evaluate the variability of the import source, and determine if the import impacts any improvement designs.

**GEOTECHNICAL ENGINEERING REPORT  
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**Imported Soils and On-Site Soils for use as Engineered Fill Requirements**

<b>Sieve Size</b>	<b>Percent Passing</b>	<b>Required Test</b>
6 inches	100	ASTM C117/136
No. 200	Less than 50	ASTM C117/136

<b>Characteristic</b>	<b>Recommendation</b>	<b>Required Test</b>
Plasticity Index	15 or Less	ASTM D4318
Expansion Index	20 or Less	ASTM D4829
Swell Potential	1.5 percent or Less	ASTM D4546*
Sulfates Content	1,000 ppm or Less	ARIZ 733
Chloride Content	500 ppm or Less	ARIZ 736

\* Sample remolded to 95 percent of the ASTM D698 maximum dry density at a moisture content of 2 percent below optimum moisture content, confined with a 100 psf load, and inundated with water.

The intent of these specifications is to provide general requirements for imported soils and on-site soils used as fill materials at the Site. Since soil characteristics are dependent upon a variety of parameters, and some characteristics can be mitigated by other procedures, the final decision on acceptance of the imported soil for use as fill materials should be by the geotechnical engineer of record in consultation with the owner/developer and other design professionals. The on-site expansive on-site soils may be used as fill materials beneath post-tensioned slabs provided that the post-tensioned slabs were designed to support the appropriate edge lift based on the soil conditions.

Oversized materials, greater than 6 inches but less than 12 inches, may be used in the lower portions of fill zones over 2 feet below finished grade beneath future structures and pavements provided that the oversized particles are distributed throughout the fill materials, and no nesting of oversized particles occurs (no open voids in the fill materials). Particles in excess of 12 inches in size may be used in the deeper fill areas with the approval of the geotechnical engineer of record. However, the large particles must not be placed in close proximity to other large particles, and they must be placed in such a manner as to allow the compaction equipment to adequately compact the soil between and around the oversized large particles. We would not consider the presence of a small percentage of oversized material beyond the size limits specified above to be detrimental to the performance of the compacted structural fill. However, the oversized materials may present challenges with utility line or footing excavations in the future. The fill materials used in the upper 2 feet of finished pads should be reasonably free of particles having a diameter greater than 6 inches.

### **5.6.3 Engineered Fill Material Placement**

Engineered fill material should be utilized to provide support for future structures and to establish finished grades. Areas to receive engineered fill should be approved by the geotechnical engineer of record to verify the removal of undocumented fill materials and other undesirable materials prior to any engineered fill material placement. Final excavation areas should be proof rolled prior to fill placement to identify any soft or loose soils. The engineered fill material thickness can include up to 12 inches of subgrade soils processed in place. Any additional engineered fill materials must be placed in open excavations.

Excavation areas should be widened to accommodate the construction equipment and to provide a level base for placing engineered fill materials. Slopes should be benched on a regular basis (cutting back into the natural soil slopes) to provide a level area for placing fill. Fill materials should be placed and compacted in horizontal lifts of thicknesses compatible with the compaction equipment used. Compaction of subgrade soil, fill material, backfill, subgrade fill, and trench backfill should be completed to the following density criteria using the maximum dry density determined by ASTM D698 and optimum moisture content (opt.) for each fill soil type. Engineered fill placement should be conducted under observation and materials testing directed by the geotechnical engineer of record.

#### **Engineered Fill Material Requirements**

Design Element or Placement Area <sup>1</sup>	Required Compaction	Required Moisture Content
Below Post-Tensioned Slabs	Minimum 95%	Opt. to Opt. +3%
Below Conventional Footings	Minimum 95%	Opt. -1% to Opt. +3%
Below Conventional Floor Slabs above Footing Bearing Elevation including underground utility line trenches	Minimum 92%	Opt. to Opt. +3%
Below Flexible Pavement	Minimum 95%	Opt. -3% to Opt. +1%
General Site Fill (no structure or pavement areas)	Minimum 90%	Opt. -3% to Opt. +3%

1 - Depth of soil improvement or fill thicknesses should follow the recommendations in this report for the given design element or area of placement.

Engineered fill materials removed or disturbed (by weed growth, erosion, repeated construction traffic, etc.) should be replaced with compacted engineered fill materials

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placed under observation and testing by the geotechnical engineer of record. In the arid environment at the Site, compacted engineered fill materials will lose moisture over time. Engineered fill materials in structure areas should be maintained in a moist condition until placement of base course and concrete slabs, or the engineered fill materials should be re-conditioned and re-certified within 30 days prior to placement of the floor slab base course materials. After 90 days, the engineered fill materials should be evaluated by the geotechnical engineer of record for the potential depth of drying over time and the need to re-moisture conditioning fill materials at depth.

## 5.7 LIME-TREATED SOILS

If lime treatment is selected, then a lime treatability study should be performed on the on-site expansive soils to provide the recommended percentage of lime to be mixed with the on-site soils to reduce the expansion potential of these soils. The lime treatment and construction should meet the MAG *Uniform Standard Specifications and Details for Public Works Construction* Section 309 (2024) with any applicable supplements.

## 5.8 AGGREGATE BASE COURSE

ABC for use beneath slabs, pavements, and as bedding material for utilities should meet the requirements of aggregate base material as listed in MAG *Uniform Standard Specifications and Details for Public Works Construction* Section 702 (2024) and any applicable supplements.

ABC should be placed on compacted engineered fill materials, except in utility line trenches as discussed below. ABC shall be compacted per MAG Section 310 (2024) and any applicable supplements. ABC shall be compacted to 95 percent of the ASTM D698 maximum dry density at a moisture content within 3 percent of optimum moisture content beneath concrete floor slabs and post-tensioned slabs.

## 5.9 PIPE BACKFILL AND BEDDING

Based on our sampling and testing, it should be anticipated that materials would need to be imported to the Site for use as pipe bedding and pipe zone material. Utility trench backfill should be placed in accordance with the appropriate MAG and any applicable supplements. Generally, on-site soils would not meet specifications for select and granular trench backfill. Pipes should be placed on pipe bedding material meeting the requirements of aggregate base as discussed in this report. In general, pipe bedding should be placed from the bottom of the trench to approximately the springline of the pipe.

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On-site soils may be utilized as backfill for non-metallic pipe trenches where applicable, provided the soil is free from broken concrete, broken pavement, wood, or other deleterious material and with no piece/clods larger than 4 inches.

Metal pipe trenches should be backfilled with material that meets the manufacturer's requirements or the design engineer's requirements. All backfill of utility trenches outside of structure areas should be in accordance with MAG.

As an alternative to backfill directly above the pipe, Alpha recommends that all utility trenches may be backfilled with  $\frac{1}{2}$ -sack CLSM meeting the requirements of MAG Section 604 (2024). The CLSM should extend from the springline to 12 inches above the pipe. The remainder of the trench should be backfilled with engineered fill material as recommended in this report.

The remainder of the trench should be backfilled in general accordance MAG Section 601 or local supplements, if applicable.

Utility line trench backfill in residential pad and clubhouse areas should be placed, moisture conditioned, and compacted in accordance with the requirements for engineered fill materials beneath post-tensioned slabs and concrete floor slabs.

## 5.10 ASPHALT PAVEMENT

The pavement materials and construction should conform to MAG Section 710, City of Goodyear supplements, and any other applicable local supplements. Placement requirements for the asphaltic concrete pavement should be in accordance with the requirements presented in the MAG Standard Specifications for Asphalt Concrete Pavement (MAG Section 321). Asphalt pavement should be placed on compacted base course or engineered fill materials in accordance with the design requirements.

All pavement section changes should be properly transitioned. If adverse conditions are encountered during the preparation of subgrade materials, special construction methods may be needed. All subgrade materials should be compacted to a minimum relative compaction of 95 percent of AASHTO T-99, Standard Proctor. All aggregate bases should be compacted to a minimum relative compaction of 100 percent of AASHTO T-99, Standard Proctor. Pavement installation should be carried out under applicable portions of MAG Section 321 and any applicable supplements.

Engineering observation and testing should be performed as necessary to verify conformance with these recommended specifications, especially compaction requirements for asphaltic concrete surfacing. The subgrade should be prepared by

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removing undesirable materials, scarified, moistened, and compacted for a minimum depth of 10 inches prior to placement of pavement materials. Material and compaction requirements should conform to recommendations presented in this report, MAG, and any applicable supplements.

## 6.0 PLAN REVIEW

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Final grading and drainage, foundation, and improvement plans should be submitted to Alpha for review and comment as they become available, to reduce the potential for misunderstandings between the plans and the intent of the recommendations presented in this report. In addition, foundation excavations and earthwork construction performed on the Site should be observed and tested by Alpha. If conditions are found to differ substantially from those stated, appropriate modifications and recommendations would be provided at that time. If Alpha does not conduct engineering observation and testing during the earthwork and site grading, the geotechnical engineer observing and documenting these construction activities should review and approve the recommendations in this report prior to construction. Alpha will no longer provide geotechnical engineering recommendations on the project.

## 7.0 LIMITATIONS

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Alpha has performed the services for this project in general conformance with Alpha's Proposal No. 24-G-14809 dated September 13, 2024 and the contract terms and conditions. No other guarantees or warranties are expressed or implied. Our professional services have been performed using that degree and skill ordinarily exercised, under similar circumstances, by reputable Geotechnical Engineers practicing in this or similar localities. The opinions in this report have been derived in accordance with current standards of practice, and no warranty is expressed or implied. Standards of practice are subject to change with time.

The recommendations contained in this report are based on our field exploration, laboratory test results, previous data, engineering analyses, and our understanding of the proposed construction. The subsurface data used in the preparation of this report was obtained from the field exploration. It is anticipated that some variations in the soil and rock conditions will exist on the Site. The nature and extent of variations may not be evident until construction occurs. If any conditions are encountered at this Site that are different from those described in this report, we should be immediately notified so that we may make any necessary revisions to the recommendations contained in this report. In

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addition, if the scope of the proposed construction changes from that described in this report, Alpha should also be notified.

It is the Client's responsibility to see that all parties to the project including the designer, contractor, subcontractor, etc. are made aware of this report in its entirety. The use of information contained in this report for bidding purposes should be done at the contractor's option and risk.

This report is for the exclusive purpose of providing Geotechnical Engineering and/or testing information and recommendations. The scope of services for this project does not include, either specifically or by implication, any environmental assessment of the site or identification of contaminated or hazardous materials or conditions. If the owner is concerned about the potential for such contamination, other studies should be undertaken. This report has also not addressed the site geology and the possible presence of geologic hazards other than those discussed in the report.

This report may be used only by the Client and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both on and off the Site), or other factors may change over time, and additional work may be required with the passage of time. Any party, other than the Client, who wishes to use this report, should notify Alpha of such intended use. Based on the intended use of this report, Alpha may require that additional work be performed and that an updated report be issued.

This document and the information contained herein are applicable for one year from the date of this report and have been prepared solely for the use by Lincoln Avenue Capital. Any entity's receipt, review, and/or use of this report constitutes its acknowledgment to be bound the same as Lincoln Avenue Capital by the terms and conditions in our contract and this report. Any reliance on this report by other parties shall be at such party's sole risk. Third party reliance letters may be issued upon request and upon the payment of the fee for such letters. All third parties relying on this report, by such reliance, agree to be bound by Alpha's standard terms and conditions. No reliance by any party is permitted without such agreement, regardless of the content of the reliance letter.

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## 8.0 ADDITIONAL SERVICES

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This report is a **Geotechnical Engineering Report** completed to provide design and construction recommendations for development of the Site. The recommendations provided in this report are based on the assumption that an adequate program of construction inspections and materials testing will be performed by Alpha during the construction. These inspections and tests should be performed by Alpha's geotechnical



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Engineering | Testing | Solutions

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engineer or the geotechnical engineer of record and should include, but are not necessarily be limited to, the following:

- Observe that any existing surficial vegetation and other undesirable materials have been removed from the ground at the Site as required in the construction recommendation section. Observe the 1.0-foot, 2.0-foot, and 4-foot over-excavation areas beneath all future structure areas to verify the removal of existing fill materials / disturbed soils, remnants of the previous development, and other undesirable materials. The geotechnical engineer of record should observe the over-excavation area for remaining indications of other underground features. Any utility lines should be followed and removed. There are regulatory requirements associated with the removal or abandonment of some features like septic systems or groundwater wells, and these requirements should be followed.
- Approve any material used as engineered fill in structure and pavement areas to document that it meets the requirements outlined above before placement. Verify that low expansive or lime-treated soils are used in the upper 1 foot of subgrade beneath the conventional floor slab areas. If planned for use, a lime treatability study of the on-site soils should be completed.
- Monitor the scarification, moisture conditioning, and compaction operations of the exposed subgrade in structure and pavement areas. Provide recommendations for pumping soils, if necessary.
- Perform field density tests, as needed, to verify compaction compliance. The representative should monitor the progress of compaction and filling operations.
- Monitor footing excavations and approve the bearing soils prior to placement of reinforcing steel or concrete.
- Keep records of on-site activity and progress, and document these activities in a construction oversight report detailing the site grading and earthwork activities.
- Perform a post grading geotechnical evaluation after mass grading to verify the soil conditions present in the final structure pads. This sampling and testing can be conducted as part of the mass grading activities.

As previously discussed, if there is a delay of over 90 days between the site grading and construction of structures, the existing condition of the building pads should be verified by the geotechnical engineer of record to provide recommendations on any required reconditioning.

## 9.0 REFERENCES

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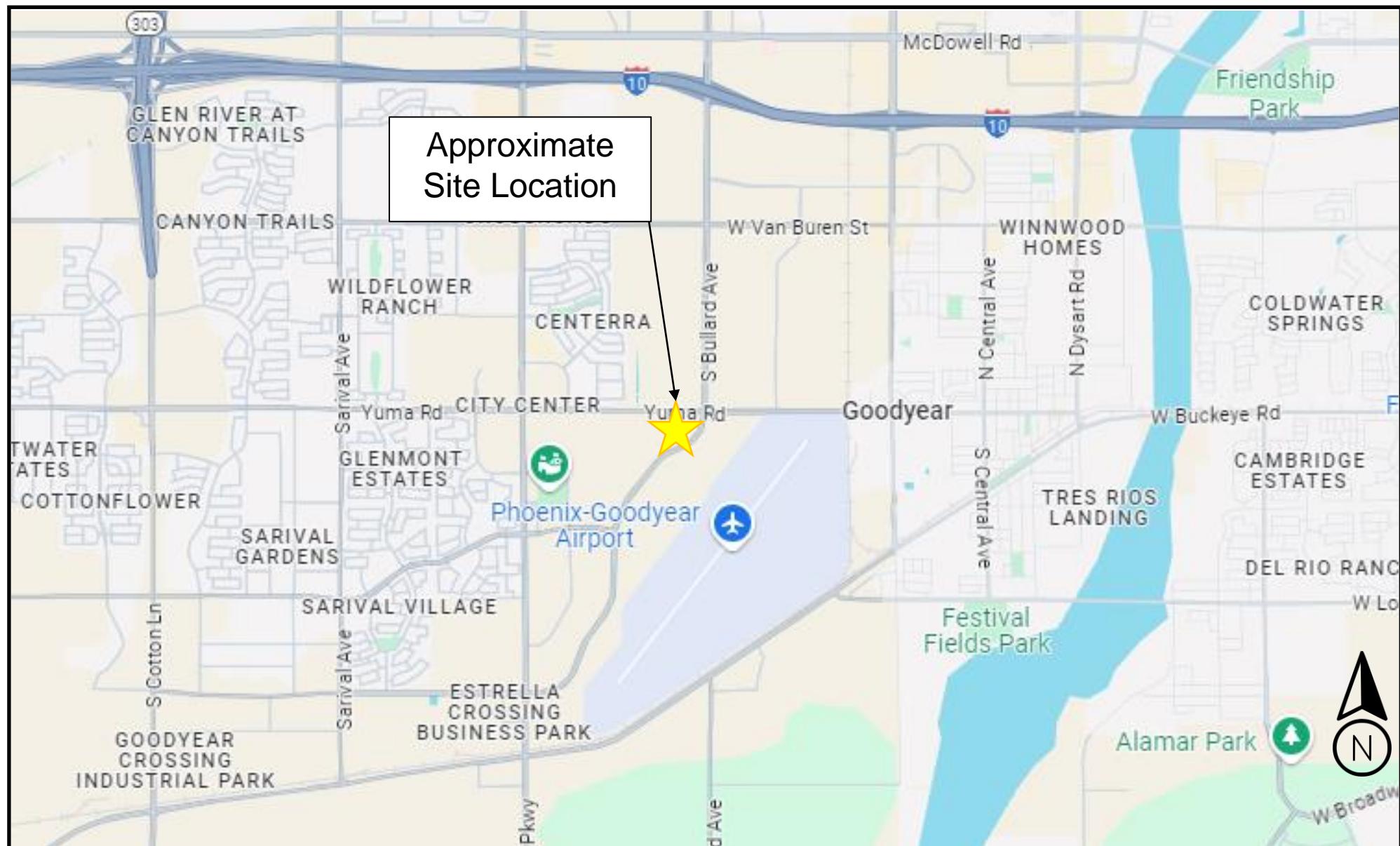
GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD  
GOODYEAR, ARIZONA

JULY 2025  
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FIGURES

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**FIGURES**

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**Yuma and Bullard**  
Bullard Avenue and Yuma Road  
Goodyear, Arizona

**Figure 2**  
**Site Plan**

Field Work Date: 9/26/2024

**Alpha**  
Geotechnical & Materials, Inc.

Project No.: 24-G-14809



**Yuma and Bullard**  
Bullard Avenue and Yuma Road  
Goodyear, Arizona

**Figure 3**  
**Geotechnical Map**

Field Work Date: 9/26/2024

**Alpha**  
Geotechnical & Materials, Inc.

Project No.: 24-G-14809

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APPENDIX A

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**APPENDIX A**  
PREVIOUS DATA

**GEOTECHNICAL INVESTIGATION REPORT  
CITY CENTER AIRPARK  
BULLARD AVENUE AND YUMA ROAD  
GOODYEAR, ARIZONA**



Prepared for:  
**Lyfe Living Communities**  
2575 East Camelback Road, Suite 500  
Phoenix, Arizona 85016

Prepared by:  
**Alpha Geotechnical & Materials, Inc.**  
2504 West Southern Avenue  
Tempe, Arizona 85282

**Alpha Project No. 21-G-12128  
March 22, 2021**

# Alpha

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## Geotechnical & Materials, Inc.

March 22, 2021  
Alpha Project No. 21-G-12128

Lyfe Living Communities  
2575 East Camelback Road, Suite 500  
Phoenix, Arizona 85016

Attention: Bert Kempfert

**Re:** Geotechnical Investigation Report  
City Center Airpark  
Bullard Avenue and Yuma Road  
Goodyear, Arizona

In accordance with your request and authorization, Alpha Geotechnical & Materials, Inc. (Alpha) has performed a geotechnical investigation for the City Center Airpark development. The purpose of this report is to provide recommendations relative to the geotechnical aspects of the design and construction.

Based on our findings, the site is considered suitable for the proposed construction, provided foundation systems are properly designed, specified site grading recommendations are used, and foundation bearing soils are not exposed to moisture infiltration or moisture content fluctuation. Specific recommendations regarding the geotechnical aspects of project design and construction are presented in the following report. The recommendations contained within this report are dependent on the provisions provided in the Limitations and Recommended Additional Services sections of this report.

We appreciate the opportunity to provide our services for this project. If you have questions regarding this report or if we may be of further assistance, please contact the undersigned.

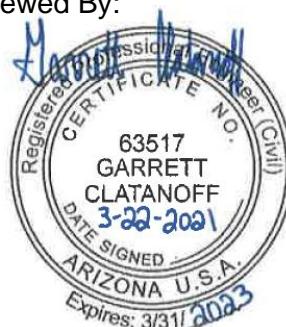
Sincerely,

**ALPHA GEOTECHNICAL & MATERIALS, INC.**



Asim Almujaddidi  
Geotechnical Staff Professional

Reviewed By:



Garrett Clatanoff, PE  
Geotechnical Engineer

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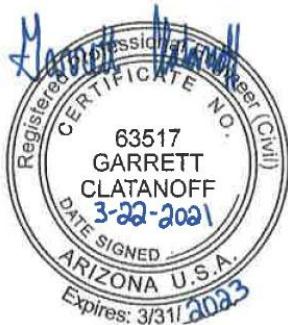
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Appendix A  
Appendix B

Field Investigation  
Laboratory Test Results





**City Center Airpark**  
Bullard Avenue and Yuma Road  
Goodyear, Arizona

**Figure 1 – Site Map**

- 15' Boring
- 25' Boring

## FIELD INVESTIGATION

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### SOIL TEST BORINGS

The subsurface conditions at the site were explored March 11, 2021 by advancing six soil test borings using a CME-75 truck-mounted drill rig. The locations of 6 soil test borings advanced for this investigation are shown in Figure 1 of the report.

Our engineer maintained a log of the excavations; visually classified soils encountered according to the Unified Soil Classification System (USCS) (see USCS Table) and obtained samples of the subsurface materials.

### SAMPLING PROCEDURES

Bulk samples were taken from the soil borings at selected intervals. Soil samples were packaged and sealed in the field to reduce moisture loss and disturbance and returned to our laboratory for further testing. The soil borings were backfilled with excavated materials at the completion of each test pit.

Dynamically driven tube samples are obtained at selected intervals in the borings. Two-inch outside diameter, 1 3/8-inch inside diameter samples are used to obtain the standard penetration resistance in accordance with ASTM D1586. "Undisturbed" samples are obtained with 3-inch outside diameter samples lined with 2.42-inch inside diameter brass rings in accordance with ASTM D3550. The driving energy is generally recorded as the number of blows of a 140-pound, 30-inch free fall drop above ground hammer required to advance the samples in 6-inch increments. The values are expressed in blows per 6 inches on the boring logs.

### LIST OF ATTACHMENTS

The following exhibits are attached and complete this appendix.

Unified Soil Classification System  
Soil Boring Logs

UNIFIED SOIL CLASSIFICATION SYSTEM			CONSISTENCY OR RELATIVE DENSITY				
Major Divisions		Group Symbols	Typical Names		CRITERIA		
Coarse-Grained Soils (More than 50% retained on No. 200 sieve)	Gravels (50% or more of coarse fraction retained on No. 4 sieve)	Clean Gravels	GW	Well-graded gravels and gravel-sand mixtures, little or no fines		<b>Standard Penetration Test</b> Density of Granular Soils  Penetration Resistance N (blows/ft)	
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines			
		Gravels With Fines	GM	Silty gravels, gravel-sand-silt mixtures			
			GC	Clayey gravels, gravel-sand-clay mixtures			
	Sands (More than 50% of coarse fraction passes No. 4 sieve)	Clean Sands	SW	Well-graded sands and sand-gravel mixtures, little or no fines		0-4 Very Loose	
			SP	Poorly graded sands and sand-gravel mixtures, little or no fines		5-10 Loose	
		Sands With Fines	SM	Silty sands, sand-gravel-silt mixtures		11-30 Medium Dense	
			SC	Clayey sands, sand-gravel-clay mixtures		31-50 Dense	
				>50 Very Dense			
Fine-Grained Soils (50% or more passes No. 200 sieve)	Silts and Clays (Liquid Limit 50% or less)	ML	inorganic silts, very fine sands, silty or clayey fine sands, clayey silts with slight plasticity		<b>Standard Penetration Test</b> Consistency of Cohesive Soils  Penetration Resistance N (blows/ft)		
		CL	Inorganic clays of low to medium plasticity, gravelly clays, silty clays, sandy clays, lean clays				
		OL	Organic silts and organic silty clays of low plasticity				
	Silts and Clays (Liquid Limit greater than 50%)	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts		0-4 Very Soft <0.25		
		CH	Inorganic clays of high plasticity, fat clays		5-8 Soft 0.25-0.50		
		OH	Organic clays and organic silts of medium to high plasticity		9-15 Moderately Firm 0.50-1.00		
	Highly Organic Soils	PT	Peat, humus, and swamp soils with high organic content		16-30 Firm 1.00-2.00		
			31-50 Very Firm 2.00-4.00				
			>50 Hard >4.0				

		3"	3/4"	#4	#10	#40	#200 U.S. Standard Sieve
Unified Soil Classification	Cobbles	Gravel		Sand			Silt or Clay
		coarse	fine	coarse	medium	fine	

#### MOISTURE CONDITIONS

#### MATERIAL QUANTITY

#### OTHER SYMBOLS

Slightly Moist	Absence of moisture, dusty, dry to the touch	rare	<2%	U	Undisturbed Sample
		occasional	<5%	S	SPT Sample
Moist	Damp but no visible water	trace	10%	A	Auger Sample
Wet	Visible free water; usually is below water table	some	20%	D	Disturbed Bulk Sample
		considerable	30%		

#### BASIC LOG FORMAT:

USCS Soil Type, Other Soil Types Present (Modifiers, Gradation, Angularity), Gradation/Angularity of Main Soil Type Modifier, Fradation/Angularity of Main Soil Type, Structure, Cementation, Plasticity, Color, Moisture, Firmness/Density, Dry Strength, Odor, Additional Descriptions

## UNIFIED SOIL CLASSIFICATION SYSTEM





Alpha Project Number:			21-G-12128				Boring No.	B-02
Project Name:			City Center Airpark				Rig Type:	CME-75
Project Location:			Goodyear, Arizona				Boring Type:	Hollow Stem Auger
Date(s) Complete:			3/11/2021				Boring Location:	See Figure 1 - Site Map

Depth (Feet)	Sample	Sample Type	Blow Count (6 inch Interval)			Dry Density (PCF)	Moisture (%)	Unified Soil Classification	Remarks	Field and Drilling Notes:			
0													<b>Visual Classification</b>
	X	S	2	5	8			SC	slightly moist moderately firm to hard	<b>CLAYEY SAND</b> trace fine grained, subangular to subrounded gravel, predominantly fine grained sand, medium plasticity, light brown  note: color changed to brown below 5'  note: increase in fines content below 10' note: weakly cemented below 10'  note: increase in gravel content below 15'  <b>Stopped auger at 14'6"</b> <b>Sampler refused at 14'11"</b> <b>Backfilled with drill cutting</b>			
	X	S	12	15	16								
	X	S	9	12	8								
	X	S	10	22	28								
	X	S	50/5"										

The stratification lines represent the approximate boundary lines between soil and rock types: In-situ, the transition may be gradual.

**Sample Type Key:** S = Split Spoon  
A = Auger Cuttings U = Relatively Undisturbed Ring D = Disturbed Bulk

Alpha Geotechnical & Materials, Inc. 2504 West Southern Avenue Tempe, Arizona 85282			<b>GROUNDWATER</b> DEPTH      TIME      DATE N/A      N/A      N/A		

<b>Alpha Project Number:</b>			21-G-12128			<b>Boring No.</b>	B-03	
<b>Project Name:</b>			City Center Airpark			<b>Rig Type:</b>	CME-75	
<b>Project Location:</b>			Goodyear, Arizona			<b>Boring Type:</b>	Hollow Stem Auger	
<b>Date(s) Complete:</b>			3/11/2021			<b>Boring Location:</b>	See Figure 1 - Site Map	

Depth (Feet)	Sample	Sample Type	Blow Count (6 inch Interval)	Dry Density (PCF)	Moisture (%)	Unified Soil Classification	Remarks	Field and Drilling Notes:
0								<b>Visual Classification</b>
	S	4	6	8			SC	slightly moist moderately firm to hard
	S	6	6	7				
5			S	4	8	12		
10			X	S	11	12	16	note: increase in sand content below 5'          
15			X	S	30	50/5"		note: increase in fines content below 15' note: weakly cemented below 15'            

The stratification lines represent the approximate boundary lines between soil and rock types: In-situ, the transition may be gradual.

**Sample Type Key:** S = Split Spoon  
A = Auger Cuttings U = Relatively Undisturbed Ring D = Disturbed Bulk

Alpha Geotechnical & Materials, Inc.  
2504 West Southern Avenue  
Tempe, Arizona 85282

#### GROUNDWATER

DEPTH	TIME	DATE
N/A	N/A	N/A

<b>Alpha Project Number:</b>			21-G-12128				<b>Boring No.</b>	B-04		
<b>Project Name:</b>			City Center Airpark				<b>Rig Type:</b>	CME-75		
<b>Project Location:</b>			Goodyear, Arizona				<b>Boring Type:</b>	Hollow Stem Auger		
<b>Date(s) Complete:</b>			3/11/2021				<b>Boring Location:</b>	See Figure 1 - Site Map		
Depth (Feet)	Sample	Sample Type	Blow Count (6 inch Interval)		Dry Density (PCF)	Moisture (%)	Unified Soil Classification	Remarks	Field and Drilling Notes:	
0									<b>Visual Classification</b>	
0' - 15'	S	S	5	4	8		SC	slightly moist moderately firm to firm	<b>CLAYEY SAND</b> trace fine grained, subangular to subrounded gravel, predominantly fine grained sand, medium plasticity, light brown	
		S	4	8	8					
	S	S	9	10	10				note: increase in sand content below 5'	
									note: decrease in gravel content below 5'	
10' - 15'	S	S	10	11	9			slightly moist hard	note: increase in fines content below 10' note: decrease in sand content below 10'	
	CL						CL		<b>SANDY CLAY</b> occasional fine grained, subangular to subrounded gravel, considerable fine grained sand, weakly cemented, medium plasticity, brown	
		S	28	27	28					
15' - 14'6"	X							slightly moist hard	Stopped auger at 14'6" Stopped sampler at 16' Backfilled with drill cutting	
The stratification lines represent the approximate boundary lines between soil and rock types: In-situ, the transition may be gradual.								<b>Sample Type Key:</b> S = Split Spoon A = Auger Cuttings U = Relatively Undisturbed Ring D = Disturbed Bulk		
Alpha Geotechnical & Materials, Inc. 2504 West Southern Avenue Tempe, Arizona 85282								<b>GROUNDWATER</b> DEPTH TIME DATE N/A N/A N/A		

Alpha Project Number:			21-G-12128					Boring No.	B-05
Project Name:			City Center Airpark					Rig Type:	CME-75
Project Location:			Goodyear, Arizona					Boring Type:	Hollow Stem Auger
Date(s) Complete:			3/11/2021					Boring Location:	See Figure 1 - Site Map
Depth (Feet)	Sample	Sample Type	Blow Count (6 inch Interval)		Dry Density	Moisture (%)	Unified Soil Classification	Remarks	
0								Field and Drilling Notes:	
Visual Classification									
0	X	S	5	12	17		SC	slightly moist firm to hard	CLAYEY SAND trace fine grained, subangular to subrounded gravel, predominantly fine grained sand, medium plasticity, brown
	X	S	50/3"						note: broken in cobbles or boulders below 3'
5	X	S	15	25	22			slightly moist firm to hard	note: weakly cemented between 5' to 6' note: increase in fines content between 5' o 6'
	X	S							
10	X	S	8	10	12		SM	slightly moist firm to hard	SILTY SAND WITH GRAVEL some fine grained, subangular to subrounded gravel, predominantly fine grained sand, nonplastic, brown
	X	S							
15	X	S	24	50/5"				slightly moist firm to hard	note: increase in gravel content below 15' note: cobbles up to 6" in diameter below 15'
	X	S							
20	X	S	24	31	22				
The stratification lines represent the approximate boundary lines between soil and rock types: In-situ, the transition may be gradual.								Sample Type Key: S = Split Spoon A = Auger Cuttings U = Relatively Undisturbed Ring D = Disturbed Bulk	
Alpha Geotechnical & Materials, Inc. 2504 West Southern Avenue Tempe, Arizona 85282								GROUNDWATER	
				DEPTH	TIME	DATE			
				N/A	N/A	N/A			



<b>Alpha Project Number:</b>			21-G-12128					<b>Boring No.</b>	B-06	
<b>Project Name:</b>			City Center Airpark					<b>Rig Type:</b>	CME-75	
<b>Project Location:</b>			Goodyear, Arizona					<b>Boring Type:</b>	Hollow Stem Auger	
<b>Date(s) Complete:</b>			3/11/2021					<b>Boring Location:</b>	See Figure 1 - Site Map	
Depth (Feet)	Sample	Sample Type	Blow Count (6 inch Interval)		Dry Density (PCF)	Moisture (%)	Unified Soil Classification	Remarks		Field and Drilling Notes:
0										<b>Visual Classification</b>
0		S	10	10	11		CL	slightly moist moderately firm to firm		<b>SANDY CLAY</b> trace fine grained, subangular to subrounded gravel, predominantly fine grained sand, medium plasticity, brown
1										
2										
3		S	6	7	9					
4										
5		S	7	6	7					note: increase in sand content below 5'
6										
7										
8										
9										
10		S	6	8	12		SC	slightly moist firm to hard		<b>CLAYEY SAND</b> occasional fine grained, subangular to subrounded gravel, predominantly fine to medium grained, subangular to subrounded sand, medium plasticity, brown
11										
12										
13										
14										
15		S	18	27	48					note: weakly to moderately cemented below 15'
16										note: color changed to light brown between 15' to 16'
17										
18										
19										
20	X	S	16	38	50/3"					
The stratification lines represent the approximate boundary lines between soil and rock types: In-situ, the transition may be gradual.								<b>Sample Type Key:</b> S = Split Spoon A = Auger Cuttings U = Relatively Undisturbed Ring D = Disturbed Bulk		
Alpha Geotechnical & Materials, Inc. 2504 West Southern Avenue Tempe, Arizona 85282								<b>GROUNDWATER</b>		
								DEPTH	TIME	DATE
								N/A	N/A	N/A



**Table B-1 - Summary of Laboratory Test Results**

Boring Number	Depth (ft <sup>1</sup> )		USCS/Group Symbol <sup>2</sup> (ASTM D2487)	Percent Fines (minus No. 200) (ASTM C136/C117)	Percent Sand (Retained Between the No. 4 and No. 200	Percent Gravel (Retained Above No. 4 Sieve)	Liquid Limit (ASTM D4318)	Plasticity Index (ASTM D4318)	Expansion Index (ASTM D4829)	Consolidation (% <sup>3</sup> ) (ASTM D2435)	Soluble Sulfates (ppm <sup>4</sup> ) ARIZ 733	Chlorides (ppm <sup>4</sup> ) (ARIZ 736)	Resistivity (Ohm-cm <sup>5</sup> ) (ARIZ 236)	pH (ARIZ 236)
	Begin	End												
B-01	0.0	4.5	SC	35	47	18	32	12		3.0				
B-01	2.5	3.5												
B-03	0.0	4.5	SC	50	40	10	33	14	13		90	78	613	8.1
B-06	0.0	4.5	CL	52	40	8	31	11	7		584	62		
Average		46	42	12	---	---	---	---	---	337	70	613	8.1	
Standard Deviation		9	4	5	---	---	---	---	---	349	11	---	---	
Minimum		35	40	8	31	11	7	3.0	3.0	90	62	613	8.1	
Maximum		52	47	18	33	14	13	3.0	3.0	584	78	613	8.1	
Count		3	3	3	3	3	2	1	1	2	2	1	1	

## Notes:

<sup>1</sup> ft = feet<sup>2</sup> USCS group symbol as determined by laboratory testing (ASTM D2487).<sup>3</sup> % = percent<sup>4</sup> ppm = parts per million<sup>5</sup> ohm-cm = ohm-centimeters

## APPENDIX B LABORATORY TESTING

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### **LABORATORY TESTS**

Laboratory tests were performed on selected samples to aid in soil classification and to evaluate physical properties of the soils, which may affect the Geotechnical aspects of project design and construction. A description of the laboratory testing program is presented below.

#### **Sieve Analysis**

Sieve analyses were performed to evaluate the gradation characteristics of the material and to aid in soil classification. Tests were performed in general accordance with ASTM Test Method C136/C117 and D2487.

#### **Atterberg Limits**

Atterberg Limits tests were performed to aid in soil classification and to evaluate the plasticity characteristics of the material. Additionally, test results were correlated to published data to evaluate the shrink/swell potential of near-surface site soils. Tests were performed in general accordance with ASTM Test Method D4318.

#### **Expansion Index**

Expansion index tests were performed on bulk soil samples to evaluate the expansion potential of the site soils. Test procedures were in general accordance with ASTM Test Method D4829.

#### **One-Dimensional Consolidation**

A one-dimensional consolidation test was performed on a ring samples to evaluate consolidation potential of the site soil. Test procedure was in general accordance with ASTM Test Method D 2435.

#### **Sulfate Content**

Sulfate content tests were performed to evaluate the corrosion potential of the on-site soils. Tests were performed in general accordance with ARIZ 733.

#### **Chloride Content**

Chloride content tests were performed to evaluate the corrosion potential of the on-site soils. Tests were performed in general accordance with ARIZ 736.

#### **pH and Resistivity**

pH and resistivity tests were performed on the bulk soil sample to evaluate the site soil corrosion potential. Test procedure was in general accordance with Arizona Test Method 236.

## Alpha Geotechnical & Materials, Inc.

<b>Project:</b>	City Center Airpark	<b>Project Number:</b>	21-G-12128
<b>Location:</b>	Estrella Parkway and Yuma Road	<b>Sample Number:</b>	44251
<b>Material:</b>	Native Soil	<b>Sample Date:</b>	03/11/21
<b>Sample Source:</b>	B-01 @ 0' - 4.5'	<b>Sampled by:</b>	AA
<b>Proposed Use:</b>	Pads		

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**Sieve Analysis of Fine and Coarse Aggregates (ASTM C136/C117)**  
**Liquid Limit, Plastic Limit, and Plasticity Index of Soils (ASTM D4318) (Dry Prep)**

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**Mechanical Analysis**

<b>Sieve Size</b>	<b>% Passing</b>	<b>Atterberg Limits</b>	
6 in / 152mm	100	LL:	32
4 in / 100mm	100	PL:	20
3 in / 75mm	100	PI:	12
2 in / 50mm	100		
1 1/2 in / 37.5mm	100		
1 1/4 in / 32 mm	100		
1 in / 25 mm	99		
3/4 in / 19 mm	97	USCS:	SC
1/2 in / 12.5 mm	93	AASHTO:	A-2-6(0)
3/8 in / 9.5 mm	90		
1/4 in / 6.4 mm	85		
#4, 4.75mm	82		
#8, 2.36mm	73		
#10, 2.00mm	72		
#16, 1.18mm	68		
#30, 0.60mm	63		
#40, .425mm	61		
#50, .300mm	57		
#100, .150mm	47		
#200, .075mm	35		

Reviewed by: \_\_\_\_\_ JV \_\_\_\_\_

## Alpha Geotechnical & Materials, Inc.

<b>Project:</b>	City Center Airpark	<b>Project Number:</b>	21-G-12128
<b>Location:</b>	Estrella Parkway and Yuma Road	<b>Sample Number:</b>	44252
<b>Material:</b>	Native Soil	<b>Sample Date:</b>	03/11/21
<b>Sample Source:</b>	B-03 @ 0' - 4.5'	<b>Sampled by:</b>	AA
<b>Proposed Use:</b>	Pads		

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**Sieve Analysis of Fine and Coarse Aggregates (ASTM C136/C117)**  
**Liquid Limit, Plastic Limit, and Plasticity Index of Soils (ASTM D4318) (Dry Prep)**  
**Expansion Index of Soils (ASTM D 4829)**

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### Mechanical Analysis

<b>Sieve Size</b>	<b>% Passing</b>	<b>Atterberg Limits</b>	
6 in / 152mm	100	LL:	33
4 in / 100mm	100	PL:	19
3 in / 75mm	100	PI:	14
2 in / 50mm	100		
1 1/2 in / 37.5mm	100	EI:	13
1 1/4 in / 32 mm	100		
1 in / 25 mm	99		
3/4 in / 19 mm	98	USCS:	SC
1/2 in / 12.5 mm	96	AASHTO:	A-6(4)
3/8 in / 9.5 mm	94		
1/4 in / 6.4 mm	91		
#4, 4.75mm	90		
#8, 2.36mm	86		
#10, 2.00mm	85		
#16, 1.18mm	82		
#30, 0.60mm	79		
#40, .425mm	76		
#50, .300mm	72		
#100, .150mm	62		
#200, .075mm	50		

Reviewed by: \_\_\_\_\_ JV \_\_\_\_\_

## Alpha Geotechnical & Materials, Inc.

<b>Project:</b>	City Center Airpark	<b>Project Number:</b>	21-G-12128
<b>Location:</b>	Estrella Parkway and Yuma Road	<b>Sample Number:</b>	44253
<b>Material:</b>	Native Soil	<b>Sample Date:</b>	03/11/21
<b>Sample Source:</b>	B-06 @ 0' - 4.5'	<b>Sampled by:</b>	AA
<b>Proposed Use:</b>	Pads		

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**Sieve Analysis of Fine and Coarse Aggregates (ASTM C136/C117)**  
**Liquid Limit, Plastic Limit, and Plasticity Index of Soils (ASTM D4318) (Dry Prep)**  
**Expansion Index of Soils (ASTM D 4829)**

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### Mechanical Analysis

<b>Sieve Size</b>	<b>% Passing</b>	<b>Atterberg Limits</b>	
6 in / 152mm	100	LL:	31
4 in / 100mm	100	PL:	20
3 in / 75mm	100	PI:	11
2 in / 50mm	100		
1 1/2 in / 37.5mm	100	EI:	7
1 1/4 in / 32 mm	100		
1 in / 25 mm	100		
3/4 in / 19 mm	100	USCS:	CL
1/2 in / 12.5 mm	99	AASHTO:	A-6(3)
3/8 in / 9.5 mm	97		
1/4 in / 6.4 mm	94		
#4, 4.75mm	92		
#8, 2.36mm	90		
#10, 2.00mm	89		
#16, 1.18mm	88		
#30, 0.60mm	84		
#40, .425mm	81		
#50, .300mm	76		
#100, .150mm	64		
#200, .075mm	52		

Reviewed by: \_\_\_\_\_ JV \_\_\_\_\_

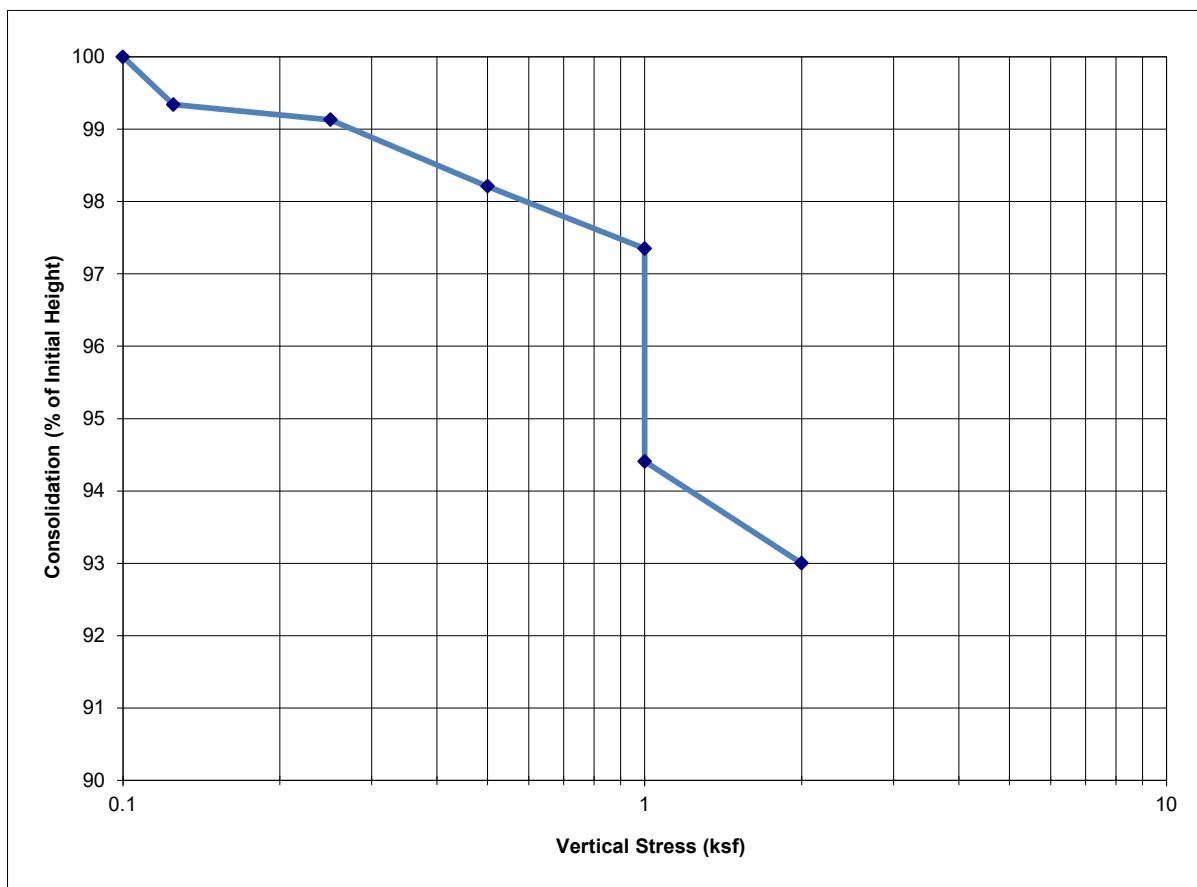
# Alpha Geotechnical & Materials, Inc.

**Project:** City Center Airpark  
**Project Location:** Estrella Parkway and Yuma Road  
**Client:** Lyfe Living, LLC  
**Material:** Native  
**Sample Source:** Boring B-01 @ 2.5'-3.5'  
**Sample Prep:** Insitu

**Project Number:** 21-G-12128  
**Sample Number:** 44254  
**Date Sampled:** 03/11/21

## One-Dimensional Consolidation Properties of Soils (ASTM D2435)

Initial Volume (cu.in)	4.60	Final Volume (cu.in)	4.28
Initial Moisture Content	7.9%	Final Moisture Content	25.0%
Initial Dry Density(pcf)	84.6	Final Dry Density(pcf)	91.0
Initial Degree of Saturation	22%	Final Degree of Saturation	81%
Initial Void Ratio	1.0	Final Void Ratio	0.8
Estimated Specific Gravity	2.65	Saturated at	1 ksf



Reviewed by: JV

## Alpha Geotechnical & Materials, Inc.

**Project:** City Center Airpark  
**Location:** Estrella Parkway and Yuma Road  
**Material:** Native Soil  
**Sample Source:** B-03 @ 0' - 4.5'  
**Proposed Use:** Pads

**Project Number:** 21-G-12128  
**Sample Number:** 44252  
**Sample Date:** 3/11/2021  
**Sampled by:** AA

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### pH & Resistivity (AZ 236)

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Resistivity (Ohm-cm)	pH
613	8.14

**Reviewed by:** JV



## Laboratory Analysis Report

Alpha Geotechnical and Materials  
 Juan Valenciano  
 2504 W. Southern Ave  
 Tempe, AZ 85282

Project: 21-G-12128  
 Date Received: 3/16/2021  
 Date Reported: 3/18/2021  
 PO Number: 21G12128

**Lab Number: 935993-1**

**44252 B-03 (0'-4.5')**

<b>Test Parameter</b>	<b>Method</b>	<b>Result</b>	<b>Units</b>	<b>Levels</b>
Sulfate	ARIZ 733b	90	ppm	
Chloride	ARIZ 736b	78	ppm	

**Lab Number: 935993-2**

**44253 B-06 (0'-4.5')**

<b>Test Parameter</b>	<b>Method</b>	<b>Result</b>	<b>Units</b>	<b>Levels</b>
Sulfate	ARIZ 733b	584	ppm	
Chloride	ARIZ 736b	62	ppm	

GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD  
GOODYEAR, ARIZONA

JULY 2025  
ALPHA PROJECT No. 24-G-14809  
APPENDIX B

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**APPENDIX B**  
**PHOTOGRAPHIC LOG**



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**GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD**

**SITE VISIT DATE: 9/26/2024  
ALPHA PROJECT NO. 24-G-14809**



**Photograph No. 01**

View of the Site from the northwest corner of the Site, looking south.



**Photograph No. 02**

View of the Site from the northwest corner of the Site, looking east.

**GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD**

**SITE VISIT DATE: 9/26/2024  
ALPHA PROJECT NO. 24-G-14809**



**Photograph No. 03**

View of the Site from the northeast corner of the Site, looking west.



**Photograph No. 04**

View of the Site from the northeast corner of the Site, looking south.

**GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD**

**SITE VISIT DATE: 9/26/2024  
ALPHA PROJECT NO. 24-G-14809**



**Photograph No. 05**

View of the Site from near Test Boring B-113, looking north-northwest.



**Photograph No. 06**

View of the Site from the southwest corner of the Site, looking north.

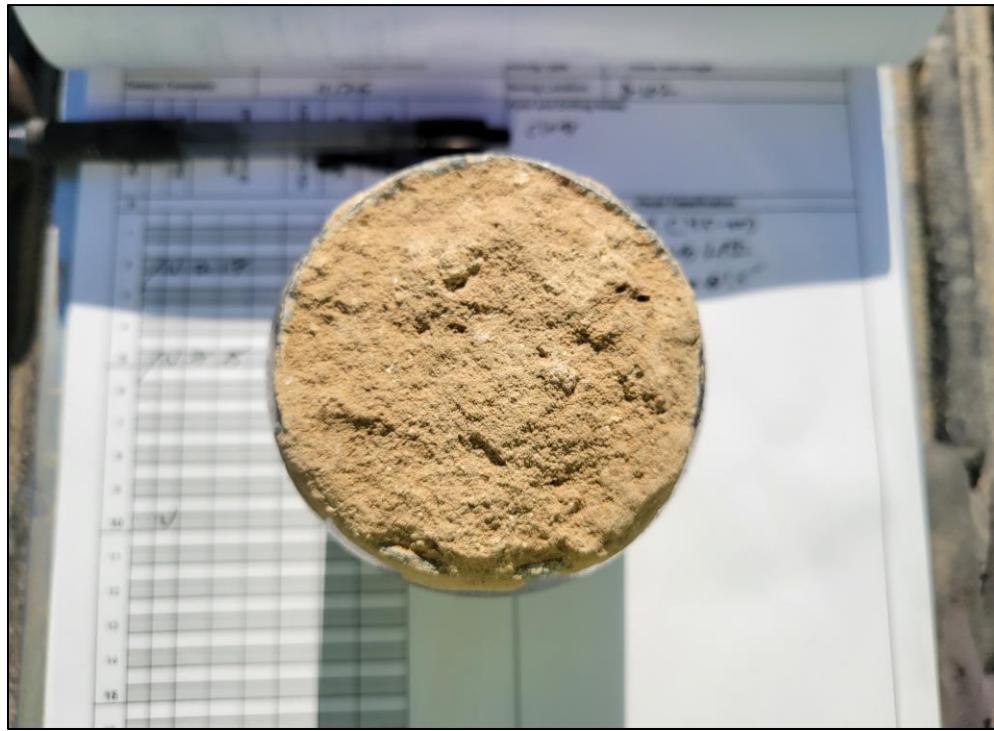
**GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD**

**SITE VISIT DATE: 9/26/2024  
ALPHA PROJECT NO. 24-G-14809**



**Photograph No. 07**

View of soil sample in shoe of ring sampler from Test Boring B-102 at a depth of 2.5 feet below the ground surface.



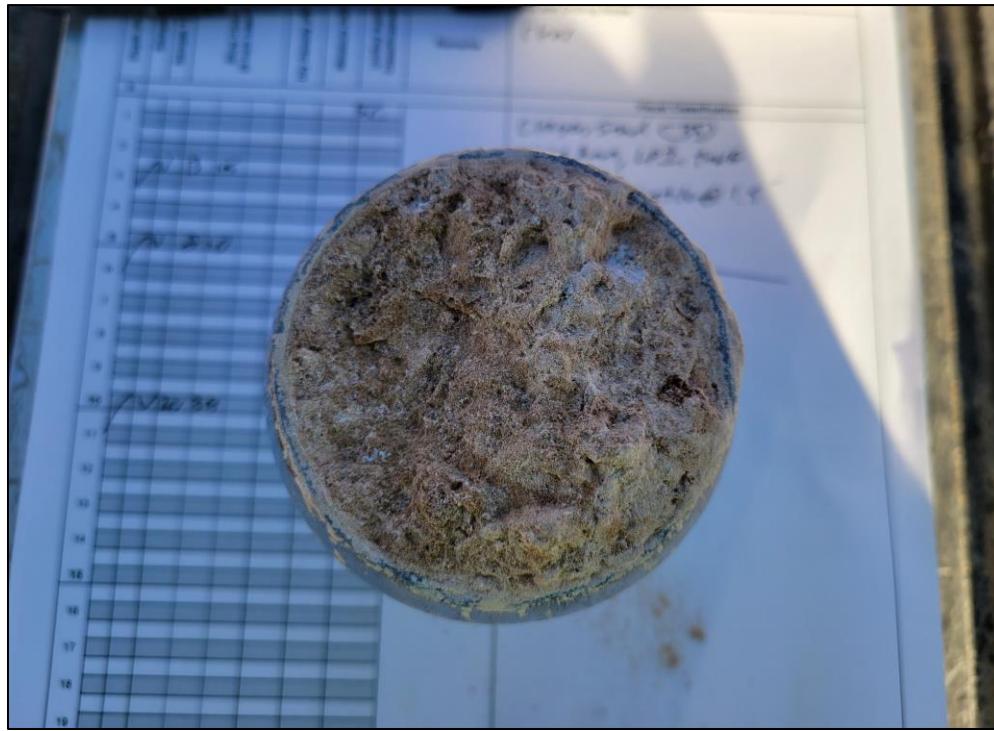
**Photograph No. 08**

View of soil sample in shoe of ring sampler from Test Boring B-102 at a depth of 4.5 feet below the ground surface.



**Photograph No. 09**

View of soil sample in shoe of ring sampler from Test Boring B-104 at a depth of 3 feet below the ground surface.

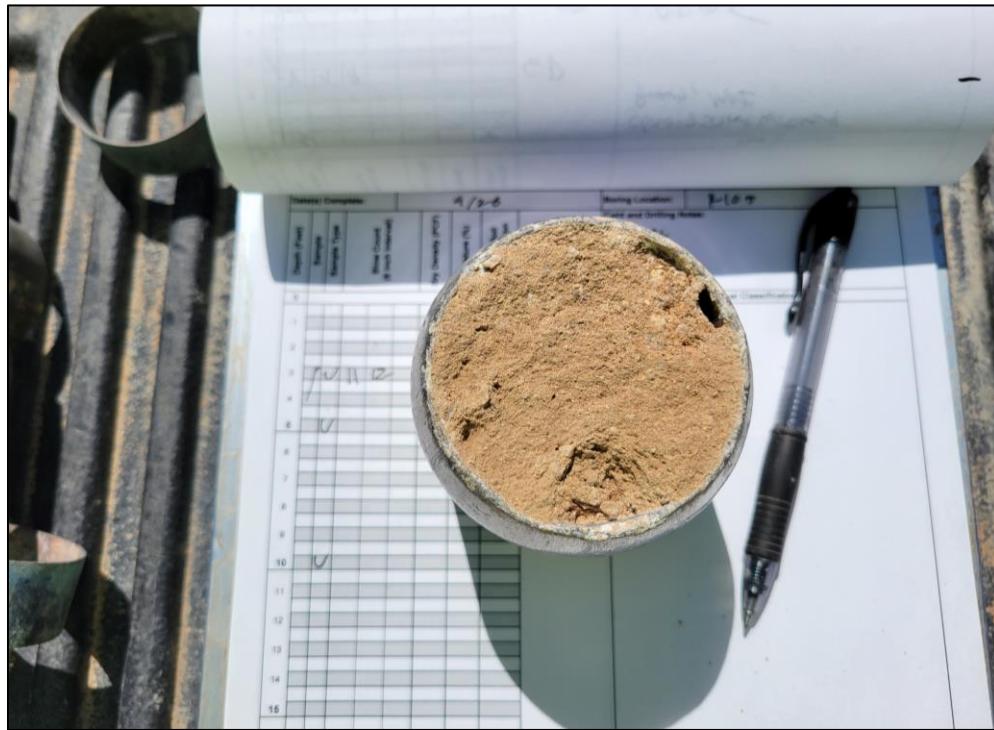


**Photograph No. 10**

View of soil sample in shoe of ring sampler from Test Boring B-104 at a depth of 10.5 feet below the ground surface.

**GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD**

**SITE VISIT DATE: 9/26/2024  
ALPHA PROJECT NO. 24-G-14809**



**Photograph No. 11**

View of soil sample in shoe of ring sampler from Test Boring B-105 at a depth of 3.5 feet below the ground surface.



**Photograph No. 12**

View of soil sample in shoe of ring sampler from Test Boring B-105 at a depth of 5.5 feet below the ground surface.



**Photograph No. 13**

View of soil sample in shoe of ring sampler from Test Boring B-108 at a depth of 3 feet below the ground surface.



**Photograph No. 14**

View of soil sample in shoe of ring sampler from Test Boring B-108 at a depth of 5.5 feet below the ground surface.



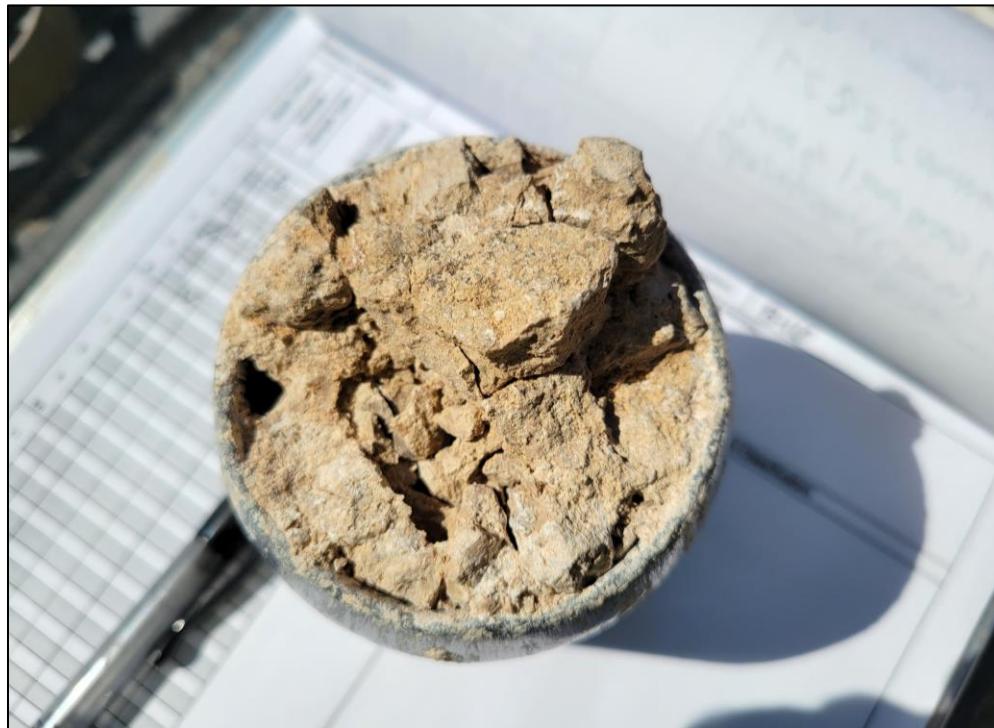
**Photograph No. 15**

View of soil sample in shoe of ring sampler from Test Boring B-109 at a depth of 3 feet below the ground surface.



**Photograph No. 16**

View of soil sample in shoe of ring sampler from Test Boring B-109 at a depth of 5.5 feet below the ground surface.



**Photograph No. 17**

View of soil sample in shoe of ring sampler from Test Boring B-110 at a depth of 3 feet below the ground surface.



**Photograph No. 18**

View of soil sample in shoe of ring sampler from Test Boring B-110 at a depth of 5.5 feet below the ground surface.

**GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD**

**SITE VISIT DATE: 9/26/2024  
ALPHA PROJECT NO. 24-G-14809**



**Photograph No. 19**

View of soil sample in shoe of ring sampler from Test Boring B-112 at a depth of 3.5 feet below the ground surface.



**Photograph No. 20**

View of soil sample in shoe of ring sampler from Test Boring B-112 at a depth of 5.5 feet below the ground surface.

GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD  
GOODYEAR, ARIZONA

JULY 2025  
ALPHA PROJECT No. 24-G-14809  
APPENDIX C

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**APPENDIX C**  
**TEST BORING LOGS**



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UNIFIED SOIL CLASSIFICATION SYSTEM			CONSISTENCY OR RELATIVE DENSITY				
Major Divisions		Group Symbols	Typical Names		Criteria		
Coarse-Grained Soils (More than 50% retained on No. 200 sieve)	Gravels (50% or more of coarse fraction retained on No. 4 sieve)	Clean Gravels	GW	Well-graded gravels and gravel-sand mixtures, little or no fines			
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines			
		Gravels With Fines	GM	Silty gravels, gravel-sand-silt mixtures			
			GC	Clayey gravels, gravel-sand-clay mixtures			
	Sands (More than 50% of coarse fraction passes No. 4 sieve)	Clean Sands	SW	Well-graded sands and sand-gravel mixtures, little or no fines			
			SP	Poorly graded sands and sand-gravel mixtures, little or no fines			
		Sands With Fines	SM	Silty sands, sand-gravel-silt mixtures			
			SC	Clayey sands, sand-gravel-clay mixtures			
				Penetration Resistance N (blows/ft)	Relative Density		
Fine-Grained Soils (50% or more passes No. 200 sieve)	Silts and Clays (Liquid Limit 50% or less)		ML	inorganic silts, very fine sands, silty or clayey fine sands, clayey silts with slight plasticity			
			CL	Inorganic clays of low to medium plasticity, gravelly clays, silty clays, sandy clays, lean clays			
			OL	Organic silts and organic silty clays of low plasticity			
	Silts and Clays (Liquid Limit greater than 50%)		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts			
			CH	Inorganic clays of high plasticity, fat clays			
			OH	Organic clays and organic silts of medium to high plasticity			
			PT	Peat, humus, and swamp soils with high organic content			
				Standard Penetration Test Consistency of Fine-Grained Soils	Consistency		

		3"	3/4"	#4	#10	#40	#200 U.S. Standard Sieve
Unified Soil Classification	Cobbles	Gravel		Sand			Silt or Clay
		coarse	fine	coarse	medium	fine	

**MOISTURE CONDITIONS****MATERIAL MODIFIERS****OTHER SYMBOLS**

Slightly Damp	Absence of moisture, dusty, dry to the touch	trace	<5%	<input type="checkbox"/> U Rel. Undisturbed Sample
Damp	Below optimum moisture content	few	5% - 14%	<input checked="" type="checkbox"/> S SPT Sample
Moist	Near or above optimum moisture content	little	15% - 25%	<input type="checkbox"/> B Bulk Sample
Wet	Visible free water; usually is below water table			

**BASIC LOG FORMAT:**

USCS Soil Type, Other Soil Types Present (if present), Color, Plasticity, Cementation, Odor (if present), Additional Descriptions. Moisture and Relative Density/Consistency in the remark's column.

## UNIFIED SOIL CLASSIFICATION SYSTEM

**Alpha**  
Geotechnical & Materials, Inc.

<b>Project Number:</b>			24-G-14809				<b>Log of Boring No.</b>	B-101
<b>Project Name:</b>			Yuma and Bullard				<b>Rig Type:</b>	CME-55
<b>Project Location:</b>			Goodyear, Arizona				<b>Boring Type:</b>	Hollow Stem Auger
<b>Date Completed:</b>			9/26/2024				<b>Boring Location:</b>	See Figure 3 - Geotechnical Map
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)		Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:
1		B					SC	Weather: Clear
2		U	15	15	99	7	SC	<b>FILL   CLAYEY SAND</b> trace gravel, light brown, low plasticity, medium dense, slightly damp
3								
4								
5		U	7	11	101	8		increase in fines content, low to medium plasticity
6								
7								
8								
9								
10		U	11	45	114	9		
11								<b>Stopped auger at 9'6"</b> <b>Sampled to 10'6"</b> <b>Backfilled with soil</b>
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>			24-G-14809				<b>Log of Boring No.</b>	B-102
<b>Project Name:</b>			Yuma and Bullard				<b>Rig Type:</b>	CME-55
<b>Project Location:</b>			Goodyear, Arizona				<b>Boring Type:</b>	Hollow Stem Auger
<b>Date Completed:</b>			9/26/2024				<b>Boring Location:</b>	See Figure 3 - Geotechnical Map
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)	Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:	
1						SC	Weather: Clear	
2	U	12	17	96	5	SC	<b>FILL   CLAYEY SAND</b> few gravel, light brown, low plasticity, medium dense, slightly damp	
3								
4								
5	U	7	8	89	10	CL	<b>NATIVE   CLAYEY SAND</b> few gravel, light brown, low plasticity, light cementation, medium dense, slightly damp	
6								
7								
8						SC	<b>SANDY CLAY</b> trace gravel, brown, low to medium plasticity, light cementation, stiff, slightly damp	
9								
10	U	38	45	108	8			
11							<b>CLAYEY SAND</b> trace gravel, brown, medium plasticity, light cementation, very dense, slightly damp to damp	
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>		24-G-14809					<b>Log of Boring No.</b>	B-103	
<b>Project Name:</b>		Yuma and Bullard					<b>Rig Type:</b>	CME-55	
<b>Project Location:</b>		Goodyear, Arizona					<b>Boring Type:</b>	Hollow Stem Auger	
<b>Date Completed:</b>		9/26/2024					<b>Boring Location:</b>	See Figure 3 - Geotechnical Map	
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)		Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:	
1		B					SC-SM	Weather: Clear	
2							SC-SM	<b>Visual Classification</b>	
3								<b>FILL   SILTY CLAYEY SAND</b> few gravel, light brown, low plasticity, damp	
4									
5		U	10	18	101	5	SM	<b>SILTY SAND</b> few gravel, brown, non-plastic to low plasticity, medium dense to very dense, slightly damp to damp	
6									
7									
8									
9								increase in sand and gravel content and light cementation	
10		U	23	31	120	10			
11									
12							SC	<b>CLAYEY SAND</b> trace gravel, brown, low to medium plasticity, light cementation, very dense, slightly damp	
13									
14									
15		U	25	30					
16								<b>Stopped auger at 14'6"</b> <b>Sampled to 15'6"</b> <b>Backfilled with soil</b>	
17									
18									
19									
20									
21									

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>			24-G-14809				<b>Log of Boring No.</b>	B-104
<b>Project Name:</b>			Yuma and Bullard				<b>Rig Type:</b>	CME-55
<b>Project Location:</b>			Goodyear, Arizona				<b>Boring Type:</b>	Hollow Stem Auger
<b>Date Completed:</b>			9/26/2024				<b>Boring Location:</b>	See Figure 3 - Geotechnical Map
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)	Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:	
1						SC	Weather: Clear	
2						SC	<b>Visual Classification</b>	
3	U	13	15	96	4		<b>FILL   CLAYEY SAND</b> few gravel, light brown, low plasticity, slightly damp	
4								
5	U	8	10	100	6	SM	<b>SILTY SAND</b> trace gravel, brown, non-plastic to low plasticity, medium dense to very dense, slightly damp to damp	
6								
7							increase in gravel content	
8								
9								
10	U	20	34	109	10			
11							<b>Stopped auger at 9'6"</b> <b>Sampled to 10'6"</b> <b>Backfilled with soil</b>	
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>			24-G-14809				<b>Log of Boring No.</b>	B-105
<b>Project Name:</b>			Yuma and Bullard				<b>Rig Type:</b>	CME-55
<b>Project Location:</b>			Goodyear, Arizona				<b>Boring Type:</b>	Hollow Stem Auger
<b>Date Completed:</b>			9/26/2024				<b>Boring Location:</b>	See Figure 3 - Geotechnical Map
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)	Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:	
1						SM	Weather: Clear	
2							<b>Visual Classification</b>	
3	U	11	12	100	4	SM	<b>FILL   SILTY SAND</b> few gravel, brown, non-plastic to low plasticity, medium dense, slightly damp	
4								
5	U	23	4	116	8	SC	<b>CLAYEY SAND</b> trace gravel, brown, low to medium plasticity, light cementation, medium dense, slightly damp to damp	
6								
7								
8								
9								
10	U	27	50/5"	94	17		few gravel, light brown, low plasticity, moderate cementation, caliche nodules, very dense, damp to moist	
11							<b>Stopped auger at 9'6"</b> <b>Sampled to 10'6"</b> <b>Backfilled with soil</b>	
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>		24-G-14809					<b>Log of Boring No.</b>	B-106			
<b>Project Name:</b>		Yuma and Bullard					<b>Rig Type:</b>	CME-55			
<b>Project Location:</b>		Goodyear, Arizona					<b>Boring Type:</b>	Hollow Stem Auger			
<b>Date Completed:</b>		9/26/2024					<b>Boring Location:</b>	See Figure 3 - Geotechnical Map			
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)	Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:				
1		B				SC	Weather: Clear				
2											
3						SC	<b>FILL   CLAYEY SAND</b> few gravel, light brown, low to medium plasticity, dense, slightly damp				
4		U	19 19	111	4						
5		U	27 34	103	5						
6							increase in fines content				
7											
8											
9						SM	<b>SILTY SAND</b> few gravel, brown, non-plastic to low plasticity, light cementation, medium dense to very dense, slightly damp				
10		U	7 10	90	12						
11											
12											
13											
14							increase in gravel content				
15		U	39 50/5"	106	9		increase in fines content				
16							<b>Stopped auger at 14'6"</b> <b>Sampled to 15'6"</b> <b>Backfilled with soil</b>				
17											
18											
19											
20											
21											

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

#### Sample Type Key:

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring



#### GROUNDWATER

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>			24-G-14809				<b>Log of Boring No.</b>	B-107	
<b>Project Name:</b>			Yuma and Bullard				<b>Rig Type:</b>	CME-55	
<b>Project Location:</b>			Goodyear, Arizona				<b>Boring Type:</b>	Hollow Stem Auger	
<b>Date Completed:</b>			9/26/2024				<b>Boring Location:</b>	See Figure 3 - Geotechnical Map	
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)		Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:	
1		B					CL	Weather: Clear	
2							CL	<b>Visual Classification</b>	
3		U	23	47	101	4		<b>FILL   SANDY CLAY</b> few gravel, light brown, low plasticity, slightly damp	
4									
5		U	8	11	101	4	SM	<b>SILTY SAND</b> few gravel, brown, non-plastic, medium dense, slightly damp	
6									
7									
8									
9							SC	<b>CLAYEY SAND</b> few gravel, brown, low plasticity, light to moderate cementation, very dense, slightly damp	
10		U	20	36	99	10			
11								increase in gravel content	
12									
13								increase in fines content	
14									
15		U	23	35	108	10			
16								<b>Stopped auger at 14'6"</b> <b>Sampled to 15'6"</b> <b>Backfilled with soil</b>	
17									
18									
19									
20									
21									

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>			24-G-14809				<b>Log of Boring No.</b>	B-108
<b>Project Name:</b>			Yuma and Bullard				<b>Rig Type:</b>	CME-55
<b>Project Location:</b>			Goodyear, Arizona				<b>Boring Type:</b>	Hollow Stem Auger
<b>Date Completed:</b>			9/26/2024				<b>Boring Location:</b>	See Figure 3 - Geotechnical Map
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)	Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:	
1		B				SC	Weather: Clear	
2							<b>Visual Classification</b>	
3	/	U	15 27	102	6	SC	<b>FILL   CLAYEY SAND</b> few gravel, light brown, medium plasticity, very high density, slightly damp	
4								
5	/	U	50/5"	103	8		increase in fines content and moderate cementation, caliche nodules	
6								
7						SM	<b>SILTY SAND</b> trace gravel, brown, non-plastic to low plasticity, medium dense, slightly damp to damp	
8								
9								
10	/	U	17 13	99	11			
11							<b>Stopped auger at 9'6"</b> <b>Sampled to 10'6"</b> <b>Backfilled with soil</b>	
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>			24-G-14809				<b>Log of Boring No.</b>	B-109
<b>Project Name:</b>			Yuma and Bullard				<b>Rig Type:</b>	CME-55
<b>Project Location:</b>			Goodyear, Arizona				<b>Boring Type:</b>	Hollow Stem Auger
<b>Date Completed:</b>			9/26/2024				<b>Boring Location:</b>	See Figure 3 - Geotechnical Map
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)	Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes: Located on spread fill Weather: Clear	
1		B				CL	<b>Visual Classification</b> <b>FILL   SANDY CLAY</b> trace gravel, brown, medium plasticity, hard, slightly damp	
2								
3		U	29 17	104	4			
4								
5		U	13 25	106	6	CL	<b>NATIVE   SANDY CLAY</b> trace gravel, brown, medium plasticity, hard, light cementation, slightly damp	
6						SC	<b>CLAYEY SAND</b> few gravel, brown, medium plasticity, light cementation, slightly damp	
7								
8						SM	<b>SILTY SAND WITH GRAVEL</b> light brown, non-plastic to low plasticity, light to moderate cementation, very dense, slightly damp	
9								
10		U	23 50/3"				sample disturbed	
11							<b>Stopped auger at 9'6"</b> <b>Sampler refused at 10'3"</b> <b>Backfilled with soil</b>	
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>		24-G-14809					<b>Log of Boring No.</b>	B-110	
<b>Project Name:</b>		Yuma and Bullard					<b>Rig Type:</b>	CME-55	
<b>Project Location:</b>		Goodyear, Arizona					<b>Boring Type:</b>	Hollow Stem Auger	
<b>Date Completed:</b>		9/26/2024					<b>Boring Location:</b>	See Figure 3 - Geotechnical Map	
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)		Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:	
1		B					SC	Weather: Clear	
2								<b>Visual Classification</b>	
3		U	19	19	112	6	SC	<b>FILL   CLAYEY SAND WITH GRAVEL</b> brown, medium plasticity, dense, slightly damp	
4									
5		U	15	10	97	9	SC	<b>NATIVE   CLAYEY SAND WITH GRAVEL</b> brown, medium plasticity, medium dense, slightly damp to damp	
6								decrease in plasticity	
7								<b>Stopped auger at 4'6"</b> <b>Sampled to 5'6"</b> <b>Backfilled with soil</b>	
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>		24-G-14809					<b>Log of Boring No.</b>	B-111	
<b>Project Name:</b>		Yuma and Bullard					<b>Rig Type:</b>	CME-55	
<b>Project Location:</b>		Goodyear, Arizona					<b>Boring Type:</b>	Hollow Stem Auger	
<b>Date Completed:</b>		9/26/2024					<b>Boring Location:</b>	See Figure 3 - Geotechnical Map	
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)		Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:	
1		B					CL	Weather: Clear	
2							CL	<b>Visual Classification</b>	
3		U	14	19	98	4		<b>FILL   SANDY CLAY</b> few gravel, brown, medium plasticity, slightly damp	
4									
5		U	5	9	86	12			
6		B							
7									
8									
9									
10		U	15	15	102	8			
11								decrease in plasticity	
12									
13									
14									
15		U	23	40	107	22			
16								<b>Stopped auger at 14'6"</b> <b>Sampled to 15'6"</b> <b>Backfilled with soil</b>	
17									
18									
19									
20									
21									

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>			24-G-14809				<b>Log of Boring No.</b>	B-112	
<b>Project Name:</b>			Yuma and Bullard				<b>Rig Type:</b>	CME-55	
<b>Project Location:</b>			Goodyear, Arizona				<b>Boring Type:</b>	Hollow Stem Auger	
<b>Date Completed:</b>			9/26/2024				<b>Boring Location:</b>	See Figure 3 - Geotechnical Map	
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)		Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:	
1		B					CL	Weather: Clear	
2							CL	<b>Visual Classification</b>	
3		U	13	22	99	5		<b>FILL   SANDY CLAY</b> few gravel, light brown, low plasticity, slightly damp	
4									
5		U	7	12	100	5			
6								<b>NATIVE   SANDY CLAY</b> few gravel, light brown, low plasticity, light cementation, very stiff to hard, slightly damp	
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

#### Sample Type Key:

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring



#### GROUNDWATER

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>		24-G-14809					<b>Log of Boring No.</b>	B-113
<b>Project Name:</b>		Yuma and Bullard					<b>Rig Type:</b>	CME-55
<b>Project Location:</b>		Goodyear, Arizona					<b>Boring Type:</b>	Hollow Stem Auger
<b>Date Completed:</b>		9/26/2024					<b>Boring Location:</b>	See Figure 3 - Geotechnical Map
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)	Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes:	
1		B				CL	Weather: Clear	
2							<b>Visual Classification</b>	
3		U	8 9	94	5	CL	<b>FILL   SANDY CLAY</b> few gravel, light brown, low plasticity, slightly damp	
4								
5		U	9 20	100	6			
6		B						
7								
8						SM	<b>SILTY SAND</b> few gravel, brown, non-plastic to low plasticity, light to moderate cementation, dense to very dense, slightly damp to damp	
9								
10		U	20 22	96	9			
11								
12								
13								
14								
15		U	21 40	100	15			
16							<b>Stopped auger at 14'6"</b> <b>Sampled to 15'6"</b> <b>Backfilled with soil</b>	
17								
18								
19								
20								
21								

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

<b>Project Number:</b>		24-G-14809					<b>Log of Boring No.</b>	B-114			
<b>Project Name:</b>		Yuma and Bullard					<b>Rig Type:</b>	CME-55			
<b>Project Location:</b>		Goodyear, Arizona					<b>Boring Type:</b>	Hollow Stem Auger			
<b>Date Completed:</b>		9/26/2024					<b>Boring Location:</b>	See Figure 3 - Geotechnical Map			
Depth (Feet)	Sample	Sample Type	Blow Count (6-inch Interval)	Dry Density (PCF)	Moisture (%)	Unified Soil Classification System	Field and Drilling Notes: Located on spread fill Weather: Clear				
1		B				CL	<b>Visual Classification</b> <b>FILL   SANDY CLAY</b> few gravel, brown, medium plasticity, very stiff, slightly damp				
2											
3		U	10 18	102	4	CL	<b>NATIVE   SANDY CLAY</b> few gravel, brown, medium plasticity, very stiff, slightly damp increase in gravel content				
4											
5		U	12 12	108	11						
6							<b>Stopped auger at 4'6"</b> <b>Sampled to 5'6"</b> <b>Backfilled with soil</b>				
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											

The stratification lines represent the approximate boundary between soil and rock types; the actual in-situ transition may be gradual.

**Sample Type Key:**

B = Bulk Sample, S = Split Spoon, U = Relatively Undisturbed Ring


**GROUNDWATER**

DEPTH	DATE	TIME
Not Encountered	N/A	N/A

GEOTECHNICAL ENGINEERING REPORT  
YUMA AND BULLARD  
GOODYEAR, ARIZONA

JULY 2025  
ALPHA PROJECT No. 24-G-14809  
APPENDIX D

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**APPENDIX D**  
**LABORATORY RESULTS**

**Table D-1 - 24-G-14809 Summary of Laboratory Test Results**

**Table D-1 - 24-G-14809 Summary of Laboratory Test Results**

Boring Number	Depth (ft <sup>1</sup> )		USCS/Group Symbol <sup>2</sup> (ASTM D2487)
	Begin	End	
B-105	2.5	3.5	Percent Fines (minus No. 200) (ASTM C136/C117)
B-105	4.5	5.5	Percent Sand (Retained Between the No. 4 and No. 200 Sieves)
B-105	9.5	10.5	Percent Gravel (Retained Above No. 4 Sieve)
B-106	3.0	4.0	Percent Fine Clay (2µm Hydrometer (ASTM D422)
B-106	4.5	5.5	Liquid Limit (ASTM D4318)
B-106	9.5	10.5	Plasticity Index (ASTM D4318)
B-106	14.5	15.5	In-Place Dry Density (pcf <sup>3</sup> ) (ASTM D2937)
B-107	2.5	3.5	Moisture Content (% <sup>4</sup> ) (ASTM D2216)
B-107	4.5	5.5	Swell Potential (% <sup>4</sup> ) (ASTM D4546)
B-107	9.5	10.5	Consolidation (%) (ASTM D2435)
B-107	14.5	15.5	Maximum Dry Density (pcf <sup>3</sup> ) (ASTM D698A)
B-108	2.0	3.0	Optimum Moisture Content (% <sup>4</sup> ) (ASTM D698A)
B-108	4.5	5.0	R-Value (ASTM D2844)
B-108	9.5	10.5	Soluble Sulfates (ppm <sup>5</sup> ) ARIZ 733
B-109	2.0	3.0	Chlorides (ppm <sup>5</sup> ) (ARIZ 736)
B-109	4.5	5.5	Minimum Resistivity (Ohm-cm <sup>6</sup> ) (ARIZ 236)
B-110	2.0	3.0	pH (ARIZ 236)
B-110	4.5	5.5	
B-111	2.5	3.5	
B-111	4.5	5.5	
B-111	9.5	10.5	
B-111	14.5	15.5	
B-112	2.5	3.5	
B-112	4.5	5.5	
B-113	2.5	3.5	
B-113	4.5	5.5	
B-113	9.5	10.5	
B-113	14.5	15.5	

**Table D-1 - 24-G-14809 Summary of Laboratory Test Results**

Boring Number	Depth (ft <sup>1</sup> )		USCS/Group Symbol <sup>2</sup> (ASTM D2487)	Percent Fines (minus No. 200) (ASTM C136/C117)	Percent Sand (Retained Between the No. 4 and No. 200 Sieves)	Percent Gravel (Retained Above No. 4 Sieve)	Percent Fine Clay (2 $\mu$ m) Hydrometer (ASTM D422)	Liquid Limit (ASTM D4318)	Plasticity Index (ASTM D4318)	In-Place Dry Density (pcf <sup>3</sup> ) (ASTM D2937)	Moisture Content (% <sup>4</sup> ) (ASTM D2216)	Swell Potential (% <sup>4</sup> ) (ASTM D4546)	Consolidation (%) (ASTM D2435)	Maximum Dry Density (pcf <sup>3</sup> ) (ASTM D698A)	Optimum Moisture Content (%) <sup>4</sup> (ASTM D698A)	R-Value (ASTM D2844)	Soluble Sulfates (ppm <sup>5</sup> ) ARIZ 733	Chlorides (ppm <sup>5</sup> ) (ARIZ 736)	Minimum Resistivity (Ohm- cm <sup>6</sup> ) (ARIZ 236)	pH (ARIZ 236)
	Begin	End																		
B-114	2.5	3.5								102	4									
B-114	4.5	5.5								108	11									
Average	55	36	10	--	--	--	102	8	2.2	3.1	115.3	13.5	25	142	177	832	6.8			
Standard Deviation	9	6	4	---	---	---	7	4	0.6	0.2	3.1	0.6	5	54	49	351	0.5			
Minimum	44	24	4	12	26	7	86	4	1.4	2.8	113.1	13.0	21	104	142	470	6.2			
Maximum	73	42	18	18	34	16	120	22	2.9	3.3	117.5	13.9	28	180	212	1,293	7.4			
Count	12	10	10	2	10	10	43	43	4	3	2	2	2	2	2	4	4			

**Notes:**<sup>1</sup> ft = feet<sup>2</sup> USCS group symbol as determined by laboratory testing (ASTM D2487).<sup>3</sup> pcf = pounds per cubic foot<sup>4</sup> % = percent<sup>5</sup> ppm = parts per million<sup>6</sup> ohm-cm = ohm-centimeters



**Project:** Yuma and Bullard - Geo  
**Location:** Goodyear, Arizona  
**Material Desc:** Fill/Native  
**Sample Source:** B-103 @ 0 - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XLQ  
**Sample Date:** 9/26/2024  
**Sampled By:** Josh J. Svatora

<b>Gradation of Soil or Aggregate ASTM C136 &amp; C117</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
3"-76.2mm	100
2"-50.8mm	100
1-1/2"-38.1mm	100
1-1/4"-31.75mm	100
1"-25.4mm	100
3/4"-19.05mm	100
1/2"-12.7mm	99
3/8"-9.525mm	97
1/4"-6.35mm	92
No. 4-4.75mm	90
No. 8-2.36mm	88
No. 10-2mm	87
No. 16-1.18mm	86
No. 30-0.6mm	82
No. 40-0.425mm	78
No. 50-0.3mm	72
No. 100-0.15mm	59
No. 200-0.075mm	48

<b>Plasticity Index (Dry Preparation) ASTM D4318</b>	
<b>LL:</b>	26
<b>PI:</b>	7
<b>Material Class:</b>	SC-SM

**Tested By:** Cameron L. Bode

**Manager:** Juan C. Valenciano



**Project:** Yuma and Bullard - Geo  
**Location:** Goodyear, Arizona  
**Material Desc:** Fill/Native  
**Sample Source:** B-106 @ 0 - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XLR  
**Sample Date:** 9/26/2024  
**Sampled By:** Josh J. Svatora

<b>Gradation of Soil or Aggregate ASTM C136 &amp; C117</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
3"-76.2mm	100
2"-50.8mm	100
1-1/2"-38.1mm	100
1-1/4"-31.75mm	100
1"-25.4mm	99
3/4"-19.05mm	99
1/2"-12.7mm	97
3/8"-9.525mm	96
1/4"-6.35mm	91
No. 4-4.75mm	88
No. 8-2.36mm	84
No. 10-2mm	83
No. 16-1.18mm	81
No. 30-0.6mm	78
No. 40-0.425mm	75
No. 50-0.3mm	70
No. 100-0.15mm	58
No. 200-0.075mm	48

<b>Plasticity Index (Dry Preparation) ASTM D4318</b>	
<b>LL:</b>	28
<b>PI:</b>	10
<b>Material Class:</b>	SC

**Tested By:** Cameron L. Bode

**Manager:** Juan C. Valenciano



**Project:** Yuma and Bullard - Geo  
**Location:** Goodyear, Arizona  
**Material Desc:** Fill/Native  
**Sample Source:** B-107 @ 0 - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XLS  
**Sample Date:** 9/26/2024  
**Sampled By:** Josh J. Svatora

<b>Gradation of Soil or Aggregate ASTM C136 &amp; C117</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
3"-76.2mm	100
2"-50.8mm	100
1-1/2"-38.1mm	100
1-1/4"-31.75mm	100
1"-25.4mm	100
3/4"-19.05mm	100
1/2"-12.7mm	99
3/8"-9.525mm	98
1/4"-6.35mm	93
No. 4-4.75mm	90
No. 8-2.36mm	85
No. 10-2mm	84
No. 16-1.18mm	83
No. 30-0.6mm	79
No. 40-0.425mm	76
No. 50-0.3mm	71
No. 100-0.15mm	60
No. 200-0.075mm	50

<b>Plasticity Index (Dry Preparation) ASTM D4318</b>	
<b>LL:</b>	27
<b>PI:</b>	9
<b>Material Class:</b>	CL

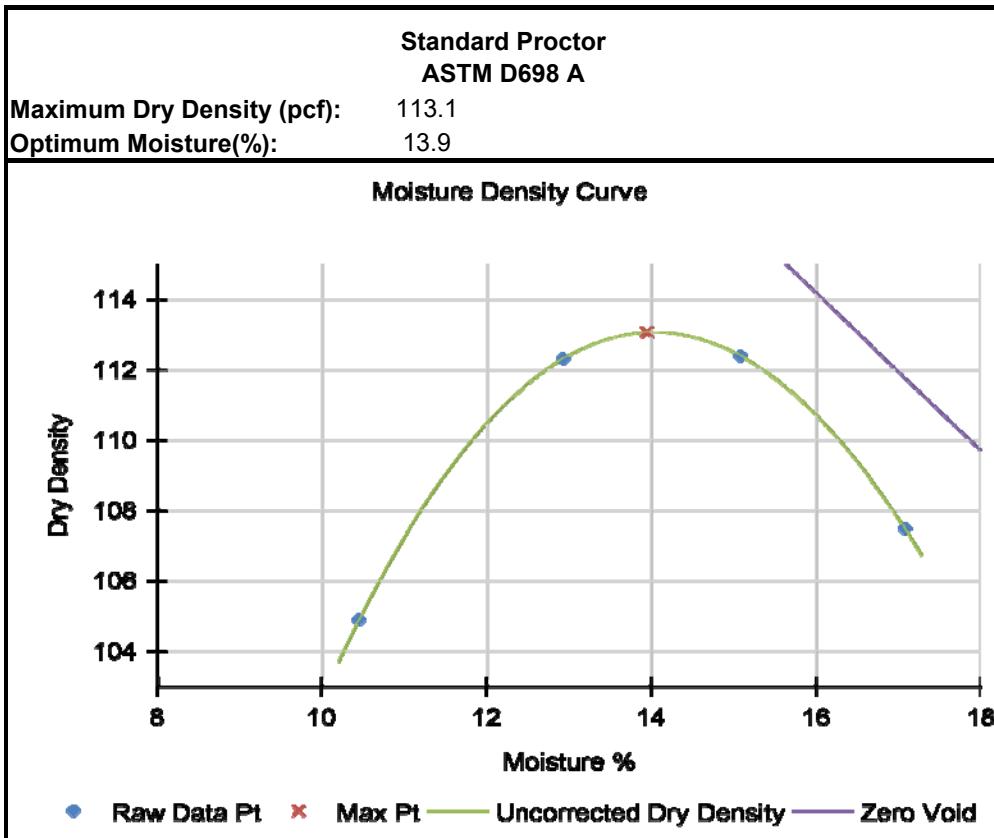
**Tested By:** Cameron L. Bode

**Manager:** Juan C. Valenciano



**Project:** Yuma and Bullard - Geo  
**Location:** Goodyear, Arizona  
**Material:** Fill/Native  
**Sample Source:** B-108 @ 0 - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XLT  
**Sample Date:** 9/26/2024  
**Sampled By:** Josh J. Svatora



<b>Swell Test (ASTM D4546)</b>	
Percent Swell:	2.0%

**Tested By:** Adriel G. Huerta  
**Manager:** Juan C. Valenciano

<b>Gradation of Soil or Aggregate</b> <b>ASTM C136 &amp; C117</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
3"-76.2mm	100
2"-50.8mm	100
1-1/2"-38.1mm	100
1-1/4"-31.75mm	100
1"-25.4mm	100
3/4"-19.05mm	100
1/2"-12.7mm	98
3/8"-9.525mm	96
1/4"-6.35mm	92
No. 4-4.75mm	89
No. 8-2.36mm	86
No. 10-2mm	85
No. 16-1.18mm	82
No. 30-0.6mm	79
No. 40-0.425mm	76
No. 50-0.3mm	72
No. 100-0.15mm	60
No. 200-0.075mm	49

**Material Class:** SC

<b>Plasticity Index (Dry Preparation)</b> <b>ASTM D4318</b>	
LL:	34
PI:	16
<b>pH &amp; Resistivity</b>	
AZ 236	
pH:	6.7
Resistivity(Oh m-cm):	681

**Notes:** - The Zero Air Voids Curve represents a specific gravity of 2.50.  
- This is a summarized report of the referenced procedures and does not include all reporting requirements. Additional data can be provided at the client's request.  
-Test results relate only to the sample tested. This test report shall not reproduced, except in full, without the prior written approval of Alpha Geotechnical & Materials, Inc.



**Project:** Yuma and Bullard - Geo  
**Location:** Goodyear, Arizona  
**Material Desc:** FIII/Native  
**Sample Source:** B-109 @ 0 - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XLV  
**Sample Date:** 9/26/2024  
**Sampled By:** Josh J. Svatora

<b>Gradation of Soil or Aggregate ASTM C136 &amp; C117</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
3"-76.2mm	100
2"-50.8mm	100
1-1/2"-38.1mm	100
1-1/4"-31.75mm	100
1"-25.4mm	99
3/4"-19.05mm	99
1/2"-12.7mm	98
3/8"-9.525mm	98
1/4"-6.35mm	97
No. 4-4.75mm	96
No. 8-2.36mm	95
No. 10-2mm	95
No. 16-1.18mm	94
No. 30-0.6mm	92
No. 40-0.425mm	90
No. 50-0.3mm	88
No. 100-0.15mm	80
No. 200-0.075mm	71

<b>Plasticity Index (Dry Preparation) ASTM D4318</b>	
LL:	30
PI:	13
<b>Material Class:</b>	CL
<b>Swell Test (ASTM D4546)</b>	
<b>Percent Swell:</b>	2.9%
<b>pH &amp; Resistivity AZ 236</b>	
pH:	6.9
Min Resistivity (Ohm-cm):	470

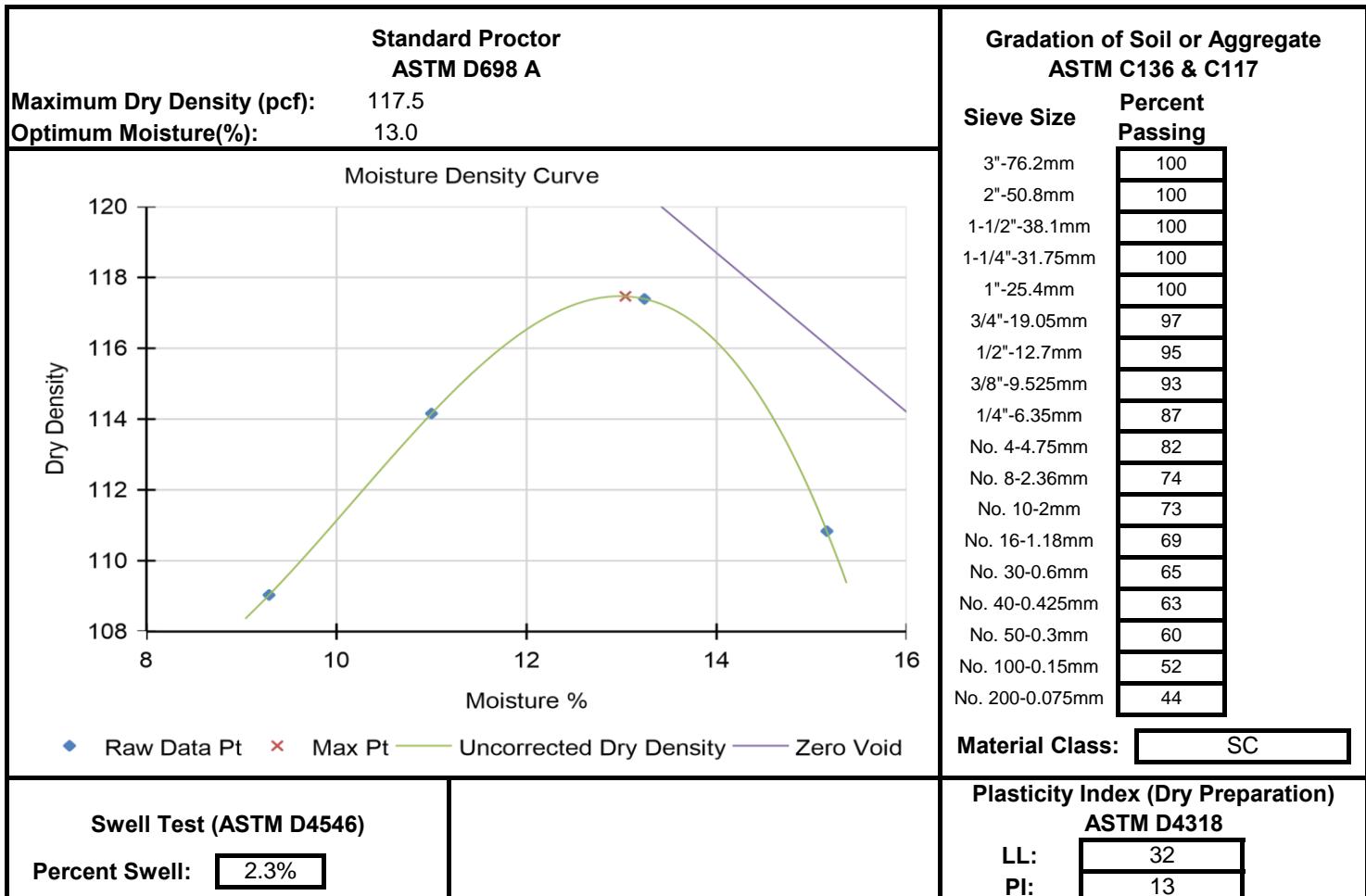
**Tested By:** Cameron L. Bode

**Manager:** Juan C. Valenciano



**Project:** Yuma and Bullard - Geo  
**Location:** Goodyear, Arizona  
**Material:** Fill/Native  
**Sample Source:** B-110 @ 0 - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XLW  
**Sample Date:** 9/26/2024  
**Sampled By:** Josh J. Svatora



**Tested By:** Adriel G. Huerta

**Manager:** Juan C. Valenciano

**Notes:** - The Zero Air Voids Curve represents a specific gravity of 2.50.

- This is a summarized report of the referenced procedures and does not include all reporting requirements. Additional data can be provided at the client's request.

- Test results relate only to the sample tested. This test report shall not reproduced, except in full, without the prior written approval of Alpha Geotechnical & Materials, Inc.



**Project:** Yuma and Bullard - Geo  
**Location:** Goodyear, Arizona  
**Material Desc:** Fill/Native  
**Sample Source:** B-111 @ 0 - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XLX  
**Sample Date:** 9/26/2024  
**Sampled By:** Josh J. Svatora

<b>Gradation of Soil or Aggregate ASTM C136 &amp; C117</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
3"-76.2mm	100
2"-50.8mm	100
1-1/2"-38.1mm	100
1-1/4"-31.75mm	100
1"-25.4mm	100
3/4"-19.05mm	100
1/2"-12.7mm	99
3/8"-9.525mm	97
1/4"-6.35mm	94
No. 4-4.75mm	91
No. 8-2.36mm	86
No. 10-2mm	85
No. 16-1.18mm	84
No. 30-0.6mm	81
No. 40-0.425mm	79
No. 50-0.3mm	76
No. 100-0.15mm	65
No. 200-0.075mm	55

<b>Plasticity Index (Dry Preparation) ASTM D4318</b>	
<b>LL:</b>	31
<b>PI:</b>	13
<b>Material Class:</b>	CL

**Tested By:** Cameron L. Bode

**Manager:** Juan C. Valenciano



**Project:** Yuma and Bullard - Geo  
**Location:** Goodyear, Arizona  
**Material Desc:** Fill/Native  
**Sample Source:** B-112 @ 0 - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XM0  
**Sample Date:** 9/26/2024  
**Sampled By:** Josh J. Svatora

<b>Gradation of Soil or Aggregate ASTM C136 &amp; C117</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
3"-76.2mm	100
2"-50.8mm	100
1-1/2"-38.1mm	100
1-1/4"-31.75mm	100
1"-25.4mm	100
3/4"-19.05mm	100
1/2"-12.7mm	99
3/8"-9.525mm	98
1/4"-6.35mm	95
No. 4-4.75mm	92
No. 8-2.36mm	91
No. 10-2mm	90
No. 16-1.18mm	88
No. 30-0.6mm	84
No. 40-0.425mm	81
No. 50-0.3mm	75
No. 100-0.15mm	61
No. 200-0.075mm	52

<b>Plasticity Index (Dry Preparation) ASTM D4318</b>	
<b>LL:</b>	28
<b>PI:</b>	10
<b>Material Class:</b>	CL

**Tested By:** Cameron L. Bode

**Manager:** Juan C. Valenciano



**Project:** Yuma and Bullard - Geo  
**Location:** Goodyear, Arizona  
**Material Desc:** Fill/Native  
**Sample Source:** B-113 @ 0 - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XM1  
**Sample Date:** 9/26/2024  
**Sampled By:** Josh J. Svatora

<b>Gradation of Soil or Aggregate ASTM C136 &amp; C117</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
3"-76.2mm	100
2"-50.8mm	100
1-1/2"-38.1mm	100
1-1/4"-31.75mm	100
1"-25.4mm	100
3/4"-19.05mm	100
1/2"-12.7mm	99
3/8"-9.525mm	97
1/4"-6.35mm	92
No. 4-4.75mm	89
No. 8-2.36mm	86
No. 10-2mm	85
No. 16-1.18mm	84
No. 30-0.6mm	81
No. 40-0.425mm	78
No. 50-0.3mm	74
No. 100-0.15mm	63
No. 200-0.075mm	53

<b>Plasticity Index (Dry Preparation) ASTM D4318</b>	
<b>LL:</b>	30
<b>PI:</b>	12
<b>Material Class:</b>	CL
<b>Swell Test (ASTM D4546)</b>	
<b>Percent Swell:</b>	1.4%

**Tested By:** Cameron L. Bode

**Manager:** Juan C. Valenciano



**Project:** Yuma and Bullard - Geo  
**Location:** Goodyear, Arizona  
**Material Desc:** Fill/Native  
**Sample Source:** B-114 @ 0 - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XM3  
**Sample Date:** 9/26/2024  
**Sampled By:** Josh J. Svatora

<b>Gradation of Soil or Aggregate ASTM C136 &amp; C117</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
3"-76.2mm	100
2"-50.8mm	100
1-1/2"-38.1mm	100
1-1/4"-31.75mm	100
1"-25.4mm	100
3/4"-19.05mm	99
1/2"-12.7mm	98
3/8"-9.525mm	97
1/4"-6.35mm	92
No. 4-4.75mm	89
No. 8-2.36mm	87
No. 10-2mm	87
No. 16-1.18mm	86
No. 30-0.6mm	84
No. 40-0.425mm	83
No. 50-0.3mm	80
No. 100-0.15mm	73
No. 200-0.075mm	65

<b>Plasticity Index (Dry Preparation) ASTM D4318</b>	
<b>LL:</b>	29
<b>PI:</b>	13
<b>Material Class:</b>	CL

**Tested By:** Cameron L. Bode

**Manager:** Juan C. Valenciano

# Alpha Geotechnical & Materials, Inc.

**Project:** Yuma and Bullard  
**Project Location:** Goodyear, AZ  
**Client:** Lincoln Avenue Capital  
**Material:** Native  
**Sample Source:** B-108 @ 0' - 4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XLT  
**Date Sampled:** 09/26/24

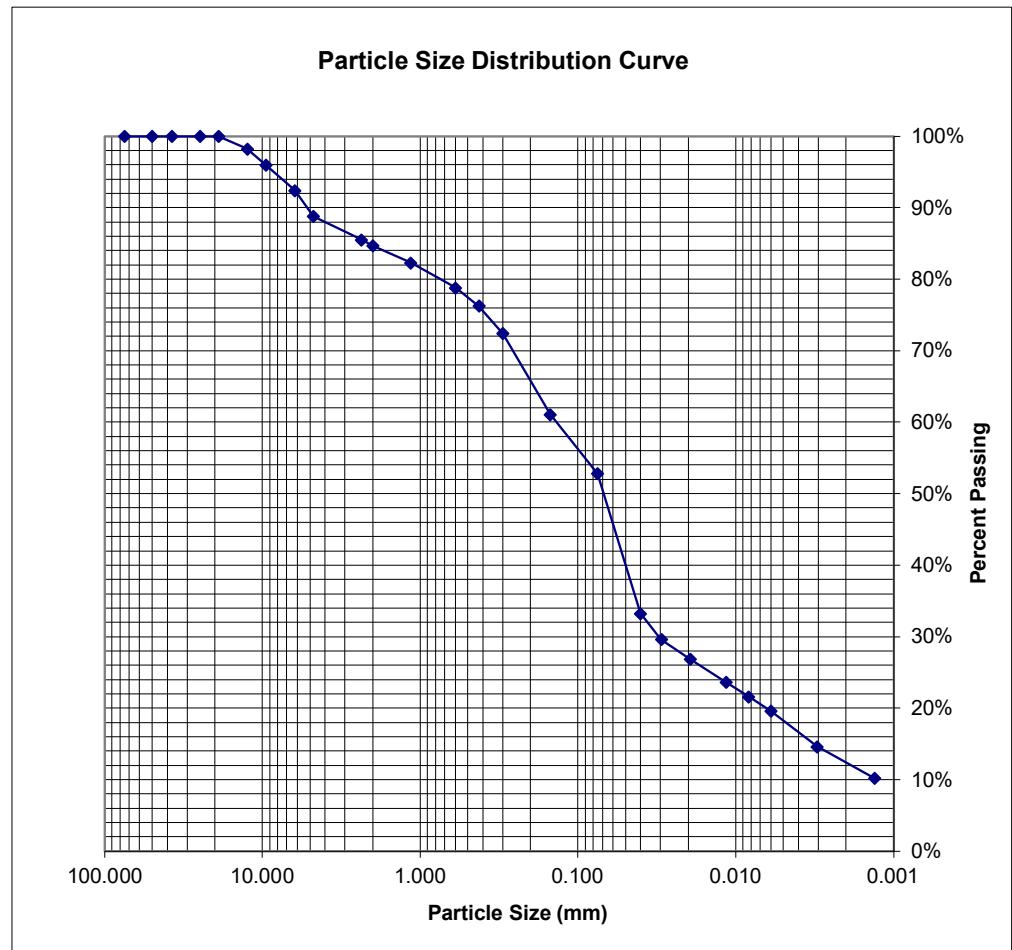
## Hydrometer Test Report (ASTM D422)

<b>Weight of Sample Dispersed</b>	<b>Specific Gravity of Solids</b>						<b>2.650</b>	
<b>Percent Passing #10 Sieve</b>	<b>84.7%</b>							
<b>Hydrometer Results (% Passing)</b>								
<b>Particle Size (DIA. mm)</b>	0.0297	0.0194	0.0115	0.0083	0.0060	0.0031	0.0013	0.0008
<b>Percent Sample Tested</b>	29.6%	26.8%	23.6%	21.6%	19.6%	14.6%	10.2%	8.6%
<b>Percent Total Sample</b>	25.1%	22.7%	20.0%	18.3%	16.6%	12.4%	8.6%	7.2%

### Full Sieve Analysis

**Mechanical Sieve & Hydrometer**  
(% Passing)

3 IN	100%
2 IN	100%
1 1/2 IN	100%
1 IN	100%
3/4 IN	100%
1/2 IN	98%
3/8 IN	96%
1/4 IN	92%
# 4	89%
# 8	86%
# 10	85%
# 16	82%
# 30	79%
# 40	76%
# 50	72%
# 100	61%
# 200	53%
0.0500	40%
0.0200	27%
0.0050	18%
0.0020	12%



Reviewed by: MR

# Alpha Geotechnical & Materials, Inc.

**Project:** Yuma and Bullard  
**Project Location:** Goodyear, AZ  
**Client:** Lincoln Avenue Capital  
**Material:** Native  
**Sample Source:** B-109 @ 0'-4.5'

**Project Number:** 24-G-14809  
**Sample Number:** XLV  
**Date Sampled:** 09/26/24

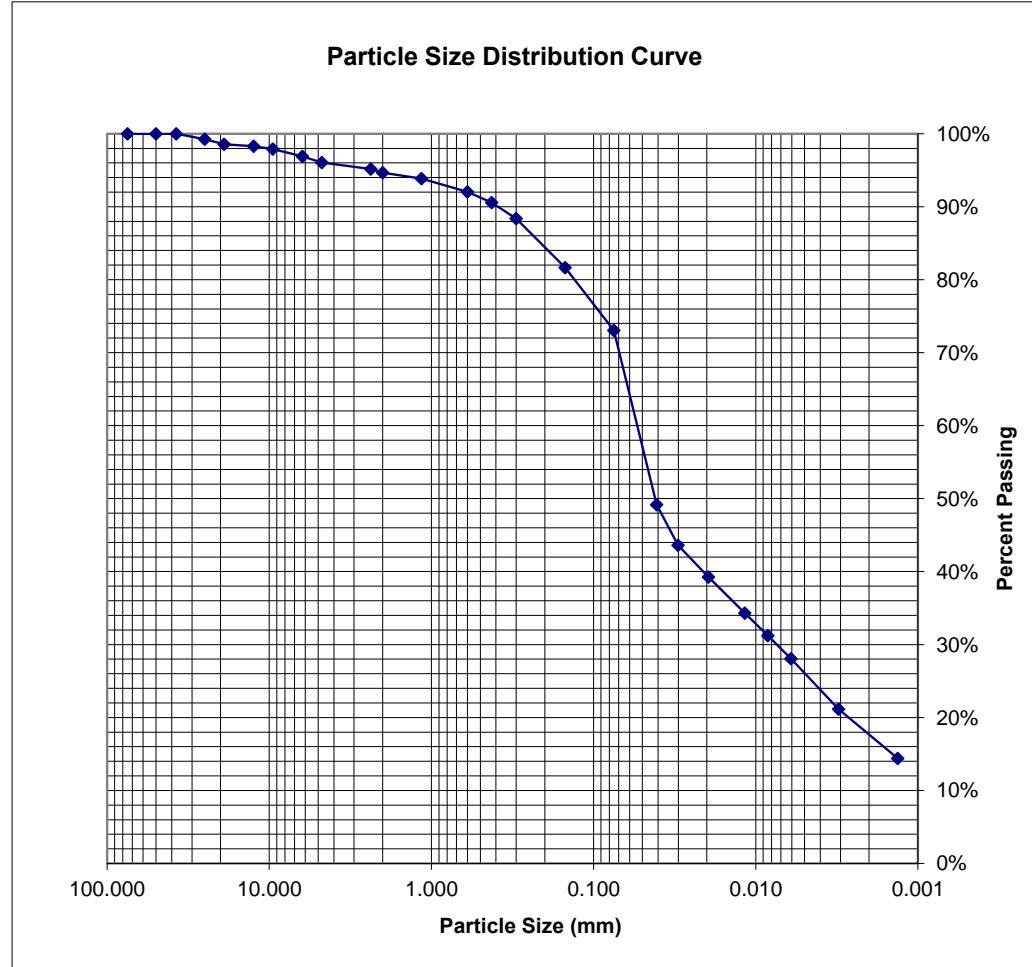
## Hydrometer Test Report (ASTM D422)

<b>Weight of Sample Dispersed</b>	<b>Specific Gravity of Solids</b>						<b>2.650</b>
<b>Percent Passing #10 Sieve</b>	<b>94.7%</b>						
<b>Hydrometer Results (% Passing)</b>							
<b>Particle Size (DIA. mm)</b>	0.0301	0.0196	0.0117	0.0084	0.0061	0.0031	0.0013
<b>Percent Sample Tested</b>	43.6%	39.3%	34.3%	31.2%	28.1%	21.2%	14.4%
<b>Percent Total Sample</b>	41.3%	37.2%	32.5%	29.5%	26.6%	20.0%	13.6%

### Full Sieve Analysis

### Mechanical Sieve & Hydrometer

	(% Passing)
3 IN	100%
2 IN	100%
1 1/2 IN	100%
1 IN	99%
3/4 IN	99%
1/2 IN	98%
3/8 IN	98%
1/4 IN	97%
# 4	96%
# 8	95%
# 10	95%
# 16	94%
# 30	92%
# 40	91%
# 50	88%
# 100	82%
# 200	73%
0.0500	57%
0.0200	39%
0.0050	26%
0.0020	18%



Reviewed by: JV

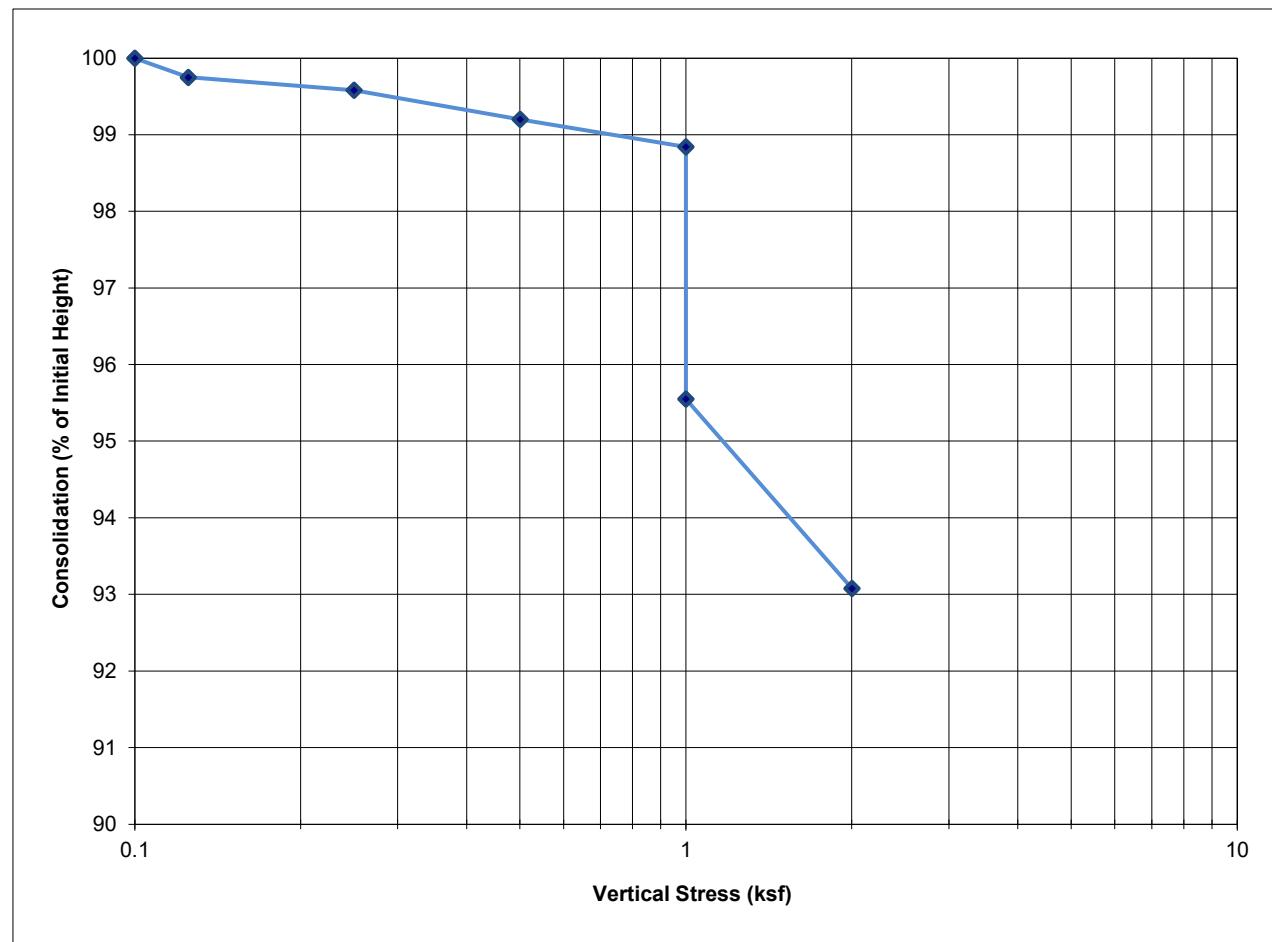
# Alpha Geotechnical & Materials, Inc.

**Project:** Yuma and Bullard  
**Project Location:** Goodyear, AZ  
**Client:** Lincoln Avenue Capital  
**Material:** Native  
**Sample Source:** Boring B-104 @ 4.5'-5.5'  
**Sample Prep:** Insitu

**Project Number:** 24-G-14809  
**Sample Number:** XM4  
**Date Sampled:** 09/26/24

## One-Dimensional Consolidation Properties of Soils (ASTM D2435)

Initial Volume (cu.in)	4.56	Final Volume (cu.in)	4.24
Initial Moisture Content	5.5%	Final Moisture Content	20.5%
Initial Dry Density (pcf)	99.8	Final Dry Density(pcf)	107.1
Initial Degree of Saturation	22%	Final Degree of Saturation	100%
Initial Void Ratio	0.7	Final Void Ratio	0.5
Estimated Specific Gravity	2.65	Saturated at	1 ksf



Reviewed by: \_\_\_\_\_ MR \_\_\_\_\_

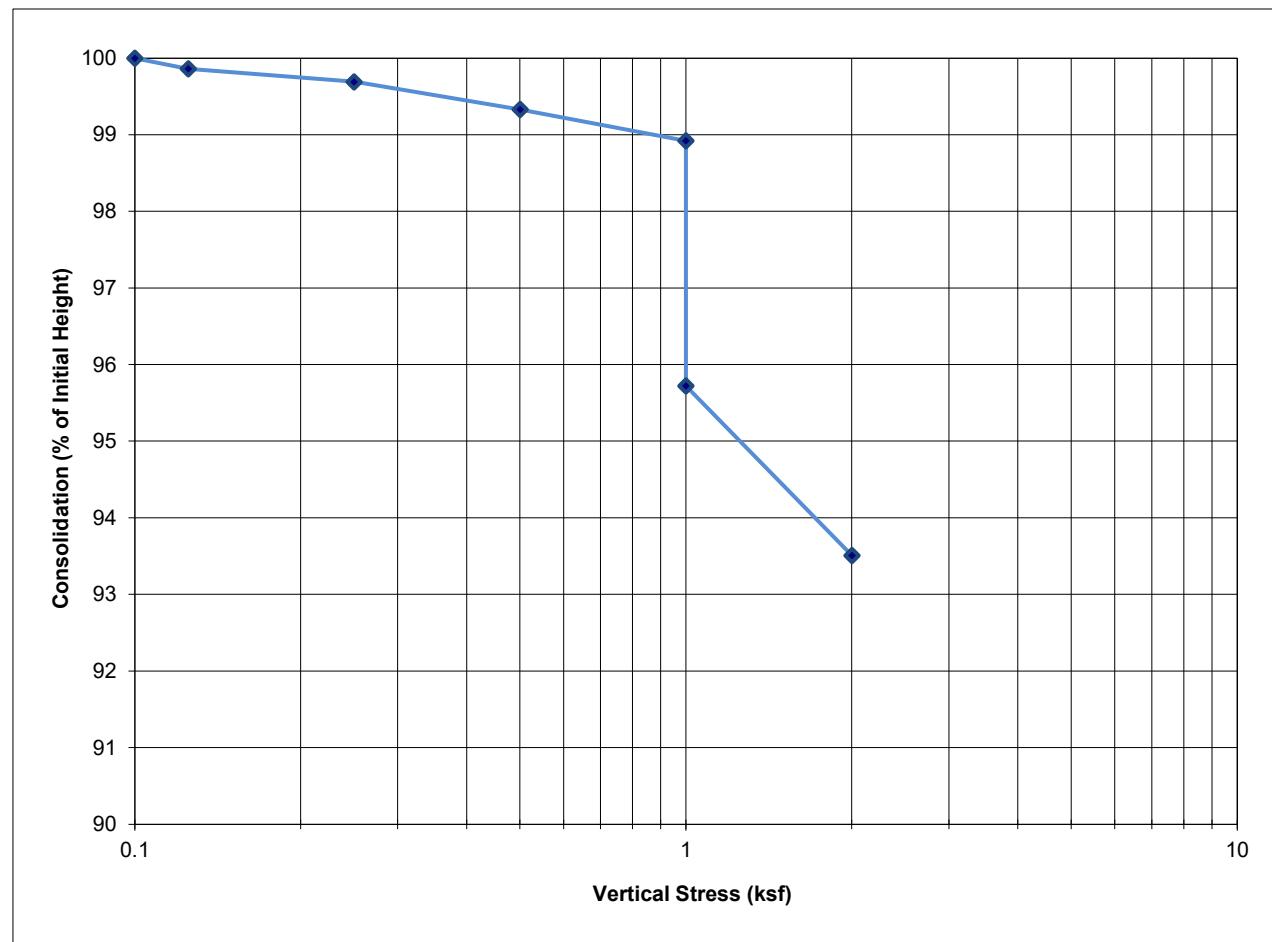
# Alpha Geotechnical & Materials, Inc.

**Project:** Yuma and Bullard  
**Project Location:** Goodyear, AZ  
**Client:** Lincoln Avenue Capital  
**Material:** Native  
**Sample Source:** Boring B-105 @ 2.5'-3.5'  
**Sample Prep:** Insitu

**Project Number:** 24-G-14809  
**Sample Number:** XM5  
**Date Sampled:** 09/26/24

## One-Dimensional Consolidation Properties of Soils (ASTM D2435)

Initial Volume (cu.in)	4.56	Final Volume (cu.in)	4.26
Initial Moisture Content	3.9%	Final Moisture Content	20.3%
Initial Dry Density (pcf)	100.1	Final Dry Density(pcf)	107.0
Initial Degree of Saturation	16%	Final Degree of Saturation	99%
Initial Void Ratio	0.7	Final Void Ratio	0.5
Estimated Specific Gravity	2.65	Saturated at	1 ksf



Reviewed by: \_\_\_\_\_ MR \_\_\_\_\_

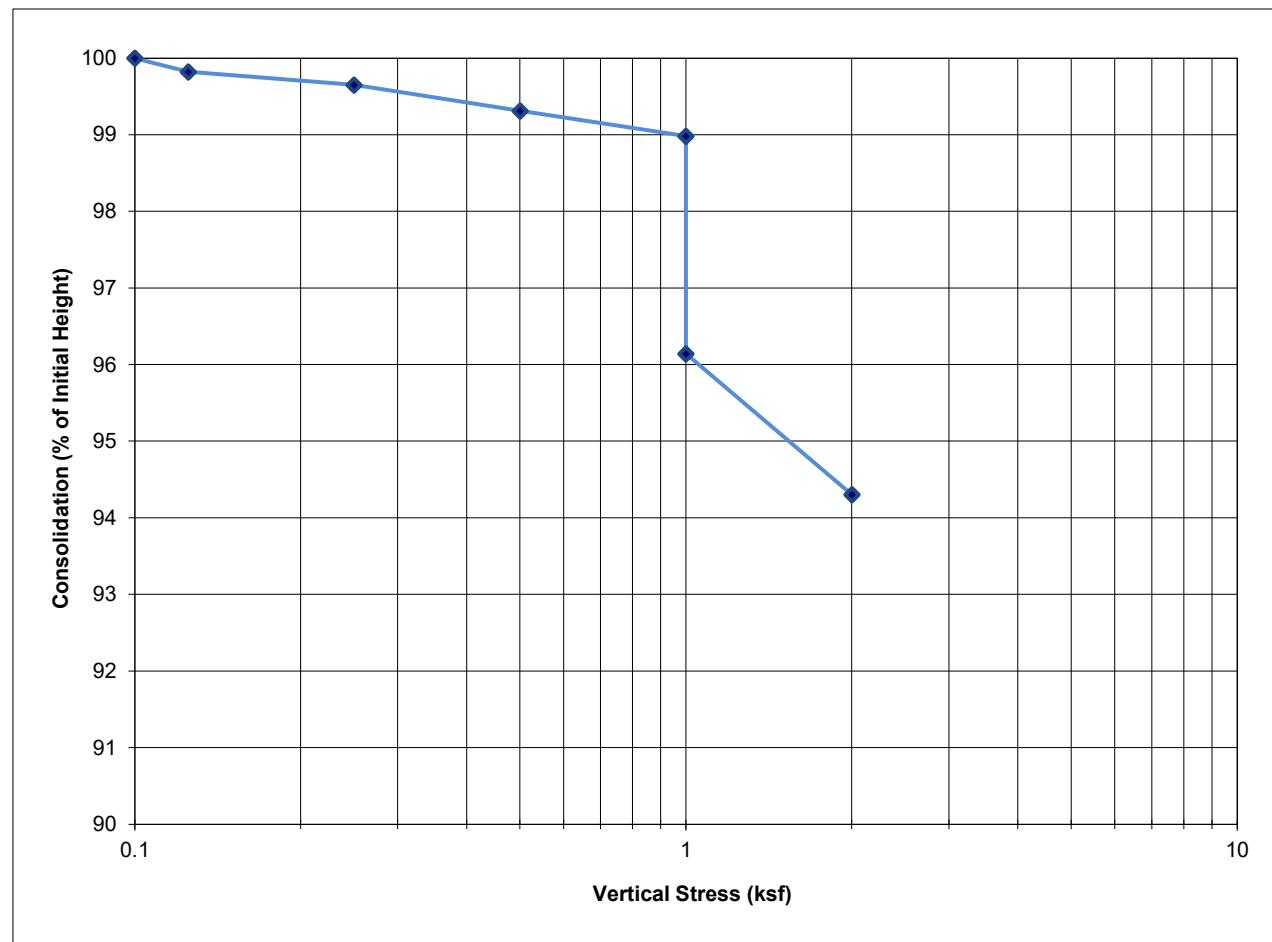
# Alpha Geotechnical & Materials, Inc.

**Project:** Yuma and Bullard  
**Project Location:** Goodyear, AZ  
**Client:** Lincoln Avenue Capital  
**Material:** Native  
**Sample Source:** Boring B-107 @ 4.5'-5.5'  
**Sample Prep:** Insitu

**Project Number:** 24-G-14809  
**Sample Number:** XM6  
**Date Sampled:** 09/26/24

## One-Dimensional Consolidation Properties of Soils (ASTM D2435)

Initial Volume (cu.in)	4.56	Final Volume (cu.in)	4.30
Initial Moisture Content	3.9%	Final Moisture Content	19.7%
Initial Dry Density (pcf)	101.2	Final Dry Density(pcf)	107.2
Initial Degree of Saturation	16%	Final Degree of Saturation	97%
Initial Void Ratio	0.6	Final Void Ratio	0.5
Estimated Specific Gravity	2.65	Saturated at	1 ksf



Reviewed by: \_\_\_\_\_ MR \_\_\_\_\_

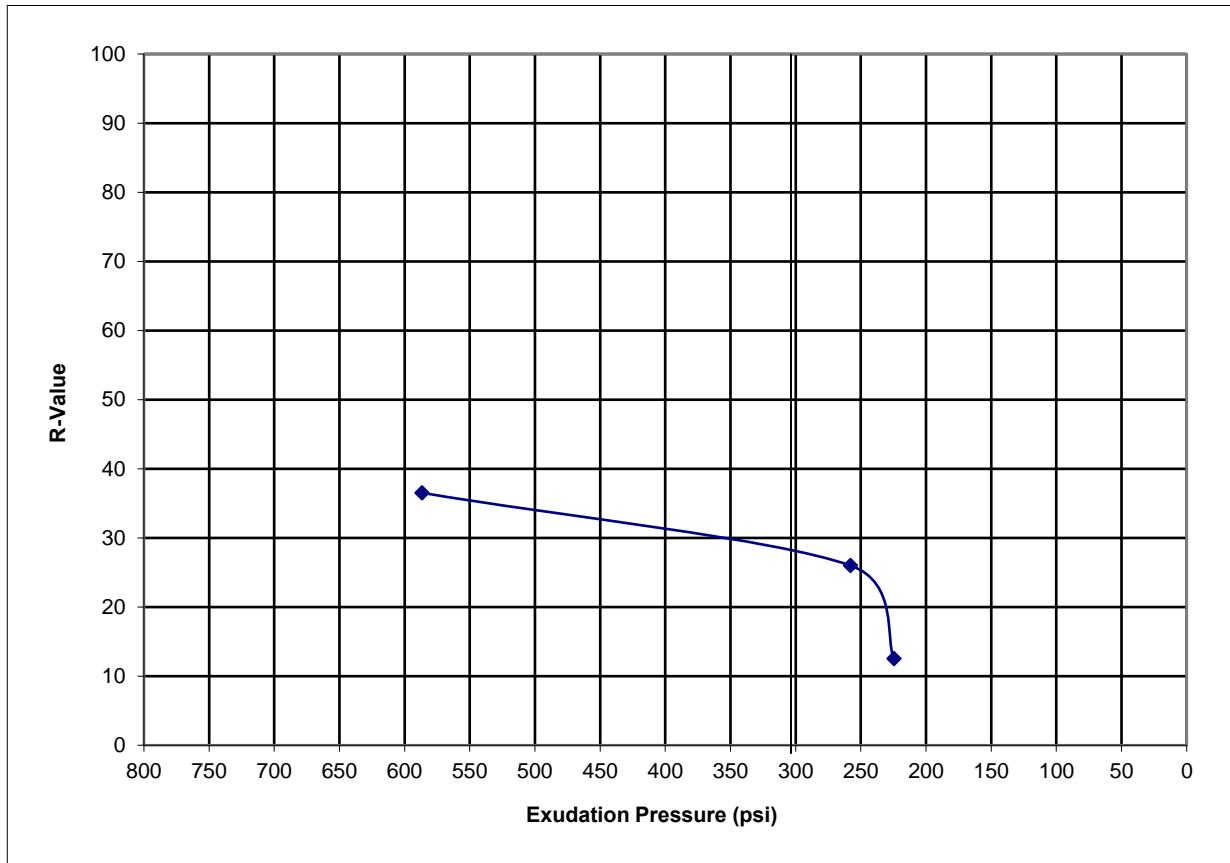
# Alpha Geotechnical & Materials, Inc.

**PROJECT:** Yuma and Bullard  
**LOCATION:** Goodyear, AZ  
**MATERIAL:** Native  
**SAMPLE SOURCE:** B-110 @ 0' - 4.5'

**JOB NO:** 24-G-14809  
**WORK ORDER NO:**  
**LAB NO:** XLW  
**DATE SAMPLED:** 09/26/24

## RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (ASTM D2844)

SPECIMEN I. D.	A	B	C
Moisture Content	13.2%	14.0%	14.9%
Compaction Pressure (psi)	350	185	140
Specimen Height (inches)	2.42	2.50	2.52
Dry Density (pcf)	116.0	118.3	113.8
Horiz. Pres. @ 1000lbs (psi)	58.0	64.0	72.0
Horiz. Pres. @ 2000lbs (psi)	88.0	109.0	133.0
Displacement	3.28	3.33	3.54
Expansion Pressure (psi)	1.3	0.0	0.0
Exudation Pressure (psi)	587	258	225
R Value	37	26	13



R Value at 300 PSI =

28

REVIEWED BY

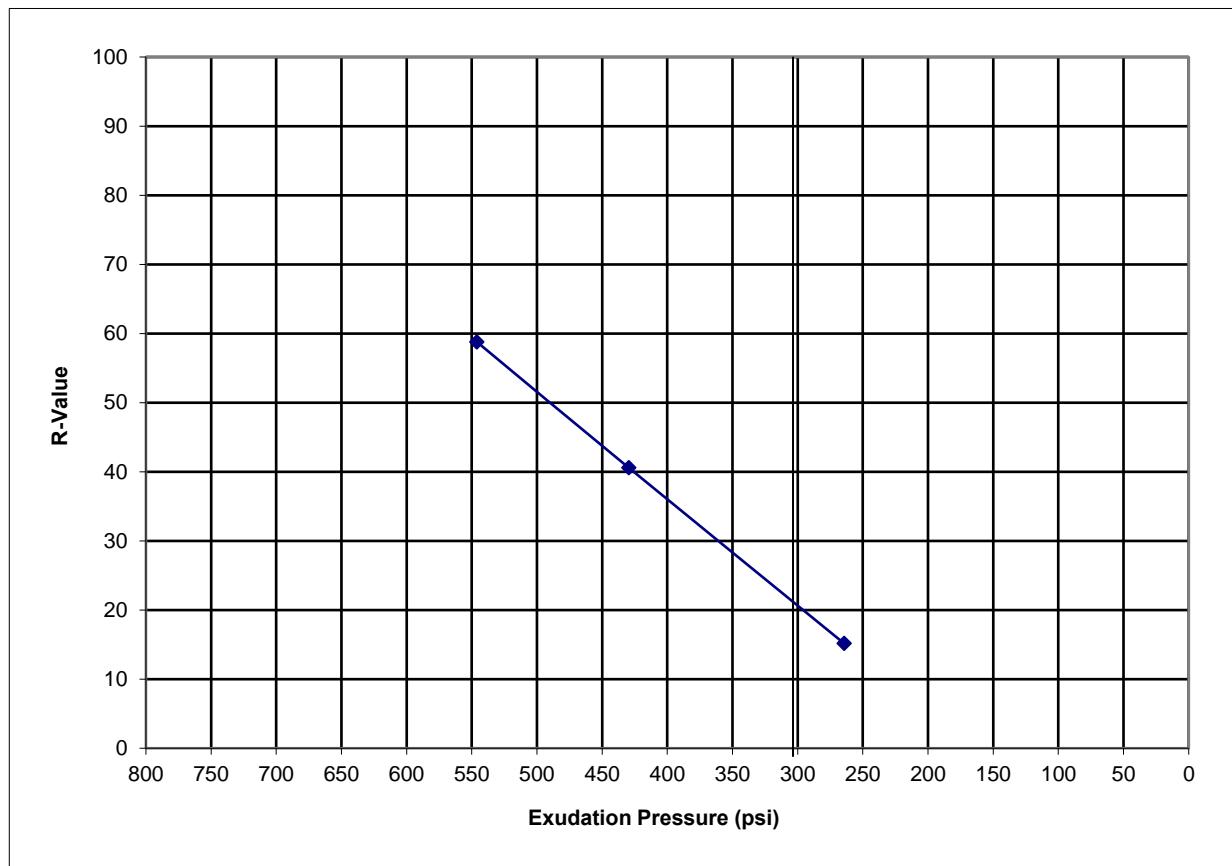
# Alpha Geotechnical & Materials, Inc.

**PROJECT:** Yuma and Bullard  
**LOCATION:** Goodyear, AZ  
**MATERIAL:** Native  
**SAMPLE SOURCE:** B-113 @ 0' - 4.5'

**JOB NO:** 24-G-14809  
**WORK ORDER NO:**  
**LAB NO:** XM1  
**DATE SAMPLED:** 09/26/24

## RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (ASTM D2844)

SPECIMEN I. D.	A	B	C
Moisture Content	12.4%	13.2%	14.1%
Compaction Pressure (psi)	350	350	167
Specimen Height (inches)	2.47	2.45	2.53
Dry Density (pcf)	115.2	115.8	114.4
Horiz. Pres. @ 1000lbs (psi)	43.0	57.0	72.0
Horiz. Pres. @ 2000lbs (psi)	54.0	81.0	125.0
Displacement	3.44	3.57	3.92
Expansion Pressure (psi)	0.0	0.0	0.0
Exudation Pressure (psi)	546	430	264
R Value	59	41	15



R Value at 300 PSI =

21

REVIEWED BY

*Jean Calixto*



Report: 952730  
 Reported: 10/11/2024  
 Received: 10/4/2024  
 PO: 24-G-14809

## Laboratory Analysis Report

Alpha Geotechnical and Materials

Juan Valenciano  
 2504 W. Southern Ave  
 Tempe, AZ 85282

Project: 24-G-14809

Lab Number	Sample ID
952730-1	XLZ B-111 (5-9.5')

### Test Parameter

Test	Method	Result	Units
Sulfate	ARIZ 733b	180	ppm
Chloride	ARIZ 736b	212	ppm

Lab Number	Sample ID
952730-2	XM2 B-113 (5-9.5')

### Test Parameter

Test	Method	Result	Units
Sulfate	ARIZ 733b	104	ppm
Chloride	ARIZ 736b	142	ppm



**Project:** Yuma and Bullard  
**Location:** Goodyear, Arizona  
**Material Desc.:** Native  
**Sample Source:** See Below

**Project Number:** 24-G-14809  
**Sample Number:** See Below  
**Sample Date:** See Below  
**Sampled By:** Joshua J. Svatora

**pH & Resistivity**  
**ARIZ 236e**

Sample Number	Sample Location	Sample Date	pH	Minimum Resistivity (ohm - cm)
XLZ	B-111 @ 5 - 9.5'	9/26/2024	6.2	885
XM2	B-113 @ 5 - 9.5'	9/26/2024	7.4	1,293

**Tested By:** Adriel G. Huerta

**Manager:** Juan C. Valenciano