

LOWER TUNLII - HELPING HANDS

YAVAPAI APACHE RESERVATION

CAMP VERDE, ARIZONA

APN 403-20-003C
WITHIN A PORTION OF THE SOUTH 1/2 SECTION 10 & THE NORTH 1/2 OF SECTION 15, TOWNSHIP 14
NORTH, RANGE 4 EAST OF THE GILA & SALT RIVER BASE AND MERIDIAN, WITHIN THE TOWN OF CAMP
VERDE, YAVAPAI COUNTY, ARIZONA

SHEET INDEX

- C-1 COVER SHEET
- C-2 GENERAL CONSTRUCTION NOTES - SHEET 1 OF 2
- C-3 GENERAL CONSTRUCTION NOTES - SHEET 2 OF 2
- C-4 OVERALL SITE PLAN
- C-5 GRADING & DRAINAGE PLAN
- C-6 DRY WELL PLAN & PROFILE - SHEET 1 OF 2
- C-7 DRY WELL PLAN & PROFILE - SHEET 2 OF 2



DEVELOPER:

YAVAPAI-APACHE HOUSING AUTHORITY
1500 CHERRY LANE
CAMP VERDE, ARIZONA 86322
PHONE: (928) 567-4191

CIVIL ENGINEER:

SEFTON ENGINEERING CONSULTANTS
40 STUTZ BEARCAT DR.
SEDONA, ARIZONA 86336
PHONE: (928) 202-3999
LUKE A. SEFTON, P.E. 37322
TIMOTHY HUSKETT, P.E. 58609

LAND SURVEYOR:

HERITAGE LAND SURVEY & MAPPING
738 S. PARKS DRIVE
CAMP VERDE, ARIZONA 86322
PHONE: (928) 567-9170
DUGAN MCDONALD, R.L.S. 26925

GEOTECHNICAL ENGINEER:

WESTERN TECHNOLOGIES
2400 EAST HUNTINGTON DRIVE
FLAGSTAFF, AZ 86004
PHONE: (928) 774-8700
CRAIG P. WIEDEMAN, P.E.

COVER SHEET

TUNLII - HELPING HANDS

YAVAPAI APACHE NATION

SHEET TITLE:
PROJECT TITLE:

DRAWN BY: LAS
SCALE: 1" = 30'
DATE: 11-05-25
PROJECT NO: 140701X

SHEET NO.

C-1



© 2022, Sefton Engineering Consultants LLC, All Rights Reserved. This document is protected under the United States Copyright Act. No part may be reproduced in any form or by any means or stored in a database or retrieval system, without the prior written permission of Sefton Engineering Consultants, LLC. These plans/documents have been prepared using technical knowledge that would be applied by other qualified registrants who practice the same profession in the same area and at the same time. Efforts have been made to be as accurate as possible. However, plans/documents could contain unintentional technical inaccuracies, omissions, or errors. Users of these plans/documents should understand that it is highly probable that errors and omissions will occur in any plan/document preparation process. The user shall notify the registrant for clarification.

1 GENERAL

- 1.1 ALL PAVING, GRADING PIPING AND UTILITY LINE CONSTRUCTION WORK WITHIN THE PUBLIC RIGHT-OF-WAY, ON PRIVATE STREETS, ACCESS WAYS, LOT GRADING, MATERIALS, AND WORKMANSHIP SHALL COMPLY WITH ENGINEERING STANDARDS AND SPECIFICATIONS, AND SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) AND A.D.O.T. STANDARD DETAILS AND SPECIFICATIONS. GRADING WORK SHALL CONFORM TO MAG SPECS, THE SOILS REPORT AND CHAPTER 70 ENTITLED "EXCAVATION AND GRADING" OF THE UNIFORM BUILDING CODE (UBC) LATEST EDITION, SUBSECTIONS 7001 TO 7005, 7009 TO 7013, FIGURES 70-1 AND 70-2 AND AS STATED THEREIN. LOCAL MUNICIPAL STANDARD DETAILS WILL CONTINUE TO APPLY WHERE NOT ADOPTED OR INCLUDED BY MAG. THE FOLLOWING NOTES AND SPECIFICATIONS ARE HEREBY MADE A PART OF THE CONTRACT DOCUMENTS AND PROJECT MANUAL. WHERE THERE EXISTS A CONFLICT BETWEEN THESE NOTES, MAG SPECS, UBC, THE SOILS REPORT OR THE PROJECT MANUAL, THE MORE STRINGENT OF THE REQUIREMENTS SHALL GOVERN UNLESS PRIOR CLARIFICATION FROM THE ENGINEER HAS BEEN GIVEN IN WRITING TO THE CONTRACTOR. THE CONTRACTOR AS STATED HEREIN SHALL MEAN THE GENERAL CONTRACTOR AND HIS ASSOCIATED SUBCONTRACTORS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND PERFORMANCE OF THE WORK OF ALL OF HIS SUBCONTRACTORS AND SUPPLIERS.
- 1.2 ALL WORK SHALL BE BID AND INSTALLED BY THE CONTRACTOR COMPLETE AND OPERATIONAL TO LINES, GRADES AND FUNCTIONS INDICATED ON ALL PLANS AND SPECIFICATIONS. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO COMPLETE ALL PROJECT EARTHWORK AND SITE WORK INCLUDING BUT NOT LIMITED TO: SITE CLEARING, GRUBBING, DEMOLITION'S, DEBRIS REMOVALS FROM THE SITE, IMPORT AND/OR EXPORT OF SOILS AND OTHER MATERIALS TO AND FROM THE SITE, BORROW MATERIALS, TEMPORARY SOILS MATERIAL STOCKPILING, BACKFILL OF ONSITE BORROW PITS, MOVING OF MATERIALS, CUT AND FILL, SLOPES, SOILS AND BANK STABILIZATION AND PROTECTION, BERMING, ROADWAY EXCAVATIONS, RELOCATION'S, STRUCTURE EXCAVATIONS, TRENCHING, ALL BACKFILLING, SITE GRADING, PAVING, PIPING, UTILITY LINE AND STORM DRAINAGE CONSTRUCTION, CURBS, SITE CONCRETE WORK AND OTHER MISCELLANEOUS SITE WORK STRUCTURES AND ITEMS INDICATED ON THE PLANS AND IN THE CONTRACT DOCUMENTS.
- 1.3 ALL OBSTRUCTIONS IN THE ROAD PRISM SHALL BE REMOVED BEFORE ANY CONSTRUCTION IS PERMITTED.
- 1.4 ANY QUANTITIES SHOWN ON PLANS ARE NOT VERIFIED BY THE ENGINEER. QUANTITIES ARE APPROXIMATE ONLY AND INTENDED AS A GUIDE FOR OWNERS PURPOSES. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HIS OWN QUANTITY TAKE OFF'S. THE CONTRACTOR SHALL VISIT THE SITE AND REVIEW THE SOILS CONDITIONS AND THE SOILS REPORT (WESTERN TECHNOLOGIES #2528JW051 ADDENDUM NO.1) WITH THE PROJECT SOILS ENGINEER PRIOR TO BIDDING THIS PROJECT. ANY DISCREPANCIES IN SITE MATERIALS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER 7 DAYS MINIMUM PRIOR TO BID OPENING FOR REVIEW. ALL SHRINK OF EARTH MATERIAL OR EXCESS MATERIAL FROM UTILITY TRENCHES AND FOUNDATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
- 1.5 THE ENGINEER MAY REQUIRE THE SUBMITTAL OF A "CERTIFICATE OF COMPLIANCE" AND/OR "MANUFACTURER'S GUIDELINES" FOR ANY MATERIALS USED IN THE WORK. MANUFACTURER'S GUIDELINES SHALL CONSIST OF WRITTEN INSTRUCTIONS FOR SHIPPING, HANDLING, UNLOADING, CUTTING, JOINING, INSTALLATION, STORAGE, AND/OR ANY OTHER FACETS OF CONSTRUCTION.
- 1.6 THE ENGINEER WILL REQUIRE ANY MATERIALS USED IN THE WORK TO BE TESTED ACCORDING TO AASHTO AND ASTM STANDARDS. THE CONTRACTOR SHALL, AT HIS EXPENSE, SUPPLY CERTIFICATES OR RESULTS OF TESTING.
- 1.7 ALL WORK AND MATERIALS NOT CONFORMING TO SPECIFICATIONS OR PERFORMED WITHOUT THE CONSENT OF THE OWNER OR HIS REPRESENTATIVE WILL BE SUBJECT TO REJECTION BY THE OWNER AND/OR ENGINEER AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 1.8 THE CONTRACTOR SHALL GUARD AGAINST DAMAGE DURING CONSTRUCTION TO ADJACENT PROPERTIES, FENCES, WALLS AND UTILITY EQUIPMENT. ANY ITEMS DAMAGED BY CONSTRUCTION SHALL BE REPLACED WITH SAME KIND OR BETTER AT CONTRACTOR'S EXPENSE.
- 1.9 NO CONSTRUCTION SHALL BEGIN UNTIL CONFLICTING UNDERGROUND UTILITY MITIGATING CONSTRUCTION IS COMPLETED, IF ANY.
- 1.10 NO EXISTING SURVEY MONUMENTATION SHALL BE REMOVED OR DISTURBED BY THE CONTRACTOR WITHOUT NOTIFICATION AND APPROVAL OF THE PROJECT SURVEYOR. THE CONTRACTOR SHALL CONTACT THE PROJECT SURVEYOR FOR THE SETTING OF REFERENCE POINTS 48 HOURS PRIOR TO DISTURBING OR REMOVING ANY MONUMENTS. THE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR COSTS TO REESTABLISH MONUMENTATION OR CONTROLS REMOVED WITHOUT PRIOR NOTICE AND APPROVAL.
- 1.11 TRAFFIC CONTROL SHALL CONFORM TO THE LOCAL ADOPTED STANDARDS AND MUTCD. CONTRACTOR SHALL SUBMIT PLAN TO PROJECT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO STARTING CONSTRUCTION.
- 1.12 BENCH MARK: ELEVATIONS ESTABLISHED WITH REFERENCE TO THE BENCH MARKS AS INDICATED ON THE SITE PLAN (SHEET C-4).
- 1.13 CONTRACTOR SHALL COORDINATE HIS WORK WITH THE DESIGN ENGINEER, OWNER, PUBLIC UTILITY COMPANIES AND OTHER ASSOCIATED TRADES ON AND ADJACENT TO THE PROJECT SITE. COORDINATE INSTALLATION OF ALL PUBLIC AND PRIVATE UNDERGROUND UTILITIES, PIPES, CONDUITS AND PIPE SLEEVE SIZES AND LOCATIONS PRIOR TO THEIR PLACEMENT. INSTALLATION: THE CONTRACTOR IS RESPONSIBLE FOR SETTING CAPPED SLEEVES AND PROVIDING TYPE 1 COMPACTION IN ALL BACKFILLED TRENCHES IN PAVED AREAS AND EASEMENTS. PROVIDE TRACER WIRE AND MARKER AT GRADE LEVEL FOR FUTURE LOCATING.
- 1.13.5 COMPACT TO THE FOLLOWING SPECIFIED PERCENT OF MAXIMUM DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D698 AND MAG SECTION 211.
- MINIMUM PERCENT COMPACTION:
- SUBGRADE SOIL:
ROADWAY AND STRUCTURE AREAS-----95
PAVED AREAS (PAVEMENTS, SIDEWALKS, & PADS)-----95
- EARTH FILL:
ROADWAY AND STRUCTURE AREAS-----95
PAVED AREAS (PAVEMENTS, SIDEWALKS, & PADS)-----95
GRASSED AND PLANTING AREAS-----85
AGGREGATE BASE COURSE-----100
BACKFILL AROUND STRUCTURES-----95
- BACKFILL FOR UTILITY TRENCHES (PER MAG SECTION 601) EXCEPT AS FOLLOWS: BACKFILL FOR TRENCHES SHALL BE COMPACTED TO 100%.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING AND UNDERSTANDING THE PROJECT SOIL REPORT.

- 1.14 CONTRACTOR TO BE RESPONSIBLE FOR ALL IDENTIFIED AND REQUIRED TESTING AND CONSTRUCTION STAKING, AND FOR THE FOLLOWING ADDITIONAL ENGINEERING SERVICES SHOULD THEY OCCUR:
- A. RE-OBSERVATION, COORDINATION AND EXTRA TESTING OR RETESTING COSTS INCURRED BECAUSE OF IMPROPER OR FAULTY CONSTRUCTION.
- B. ANY RESTAKING REQUIRED BY THE CONTRACTOR.
- C. CHANGES AND SUBSTITUTIONS IN MATERIALS CONSTRUCTION METHODS, REQUESTED BY THE CONTRACTOR, THAT MUST BE REVIEWED, RECALCULATED OR APPROVED BY THE PROJECT ENGINEER.
- D. ENGINEERING DESIGN SERVICES REQUESTED BY THE CONTRACTOR OR CAUSED BY ERRORS OR OMISSIONS BY THE CONTRACTOR.
- E. ANY ENGINEERING DESIGN APPROVED BY OTHERS AND SUBMITTED FOR REVIEW. THESE SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN ARIZONA.

- 1.15 ANY DIFFERENCE BETWEEN PLANS AND SPECIFICATIONS AND QUESTIONS AS TO THEIR MEANING SHALL BE DETERMINED PRIOR TO BID OPENING OF THE CONTRACT AND SHALL BE INTERPRETED BY THE ENGINEER. THE GENERAL INTENT AND MEANING OF THE PLANS AND SPECIFICATIONS WILL GOVERN AND SHALL NOT WARRANT ANY ADDITIONAL COMPENSATION TO THE CONTRACTOR. THE ENGINEER WILL PROVIDE FULL INSTRUCTIONS WHEN DISCREPANCIES ARE DISCOVERED IN THE DOCUMENTS.
- 1.16 THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LIMITS OF THE WORK AREA PRIOR TO BEGINNING CONSTRUCTION ALL CONSTRUCTION LIMITS, AREAS OF WORK, SETBACKS, PERIMETERS, ADJACENT PROPERTY LINES, BOUNDARIES, AND OTHER CRITERIA DEFINING THE LIMITS OF THE CONTRACTOR'S WORK AREA AND LIMITS, SHALL BE STAKED BY THE CONTRACTOR'S SURVEYOR PRIOR TO CONSTRUCTION OR CLEARING OF THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH THE EXTENT OF WORK TO BE DONE IN EACH SEPARATE PHASE OF THE PROJECT, AND ANY WORK NECESSARY IN INACTIVE PHASES REQUIRED TO DEEM THE ACTIVE PHASES FINISHED, SAFE, AND SERVICEABLE.
- 1.17 THE CONTRACTOR OR SUBCONTRACTORS SHALL NOT DEViate FROM THESE PLANS OR MAKE FIELD CHANGES WITHOUT WRITTEN APPROVAL FROM THE NATION. ANY CHANGES MADE WITHOUT APPROVAL OF THE PROJECT ENGINEER ARE SUBJECT TO REMOVAL AT THE EXPENSE OF THE CONTRACTOR.
- 1.18 THE PROJECT ENGINEER RESERVES THE RIGHT TO MAKE MINOR FIELD MODIFICATIONS TO GRADES AND STRUCTURE DESIGNS TO ACCOMMODATE FIELD CONDITIONS FOUND ON SITE THAT DO NOT INVOLVE COST OR TIME. THIS INCLUDES BUT IS NOT LIMITED TO MINOR MODIFICATIONS TO GRADE, ALIGNMENT, SLOPE OR STRUCTURE LOCATIONS.
- 1.19 NO JOB WILL BE CONSIDERED COMPLETE UNTIL FINE GRADING IS COMPLETE AND ALL CURBS, PAVEMENT AND SIDEWALKS HAVE BEEN SWEEP CLEAN OF ALL DIRT AND DEBRIS. ALL SURVEY MONUMENTS ARE INSTALLED AND ALL VALVES, MANHOLES AND BOXES HAVE BEEN ADJUSTED ACCORDING TO THE PLANS AND STANDARD DETAILS.
- 1.20 EXISTING GRADES INDICATED ON PLANS ARE BASED ON PRE-GRADING CONDITIONS. LOSSES IN MATERIAL DUE TO SHRINKAGE OF MATERIAL, DEMOLITION OF EXISTING SITE FEATURES, CLEARING AND GRUBBING OF THE SITE SHALL BE INCLUDED IN CONTRACTOR'S BID.
- 1.21 SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR PER MAG SECTION 105.2.
- 1.22 ALL SERVICES SHALL BE MAINTAINED TO ALL AREAS AT ALL TIMES DURING THE CONSTRUCTION PERIOD, EXCEPT WHEN IT IS NECESSARY TO SHUT DOWN A LINE TO MAKE A CONNECTION WITH THE NEW LINE. RESIDENTS SHALL BE GIVEN A 24 HOUR NOTICE WHEN IT IS KNOWN THAT SERVICE WILL BE INTERRUPTED.
- 1.23 NO EXISTING SURVEY MONUMENTATION SHALL BE REMOVED OR DISTURBED BY THE CONTRACTOR WITHOUT NOTIFICATION AND APPROVAL OF THE PROJECT SURVEYOR. THE CONTRACTOR SHALL CONTACT THE PROJECT MANAGER FOR THE SETTING OF REFERENCE POINTS 48 HOURS PRIOR TO DISTURBING OR REMOVING ANY MONUMENTS. THE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR COSTS TO REESTABLISH MONUMENTATION OR CONTROLS REMOVED WITHOUT PRIOR NOTICE AND APPROVAL.
- 1.24 N/A
- 1.25 N/A
- 1.26 N/A
- 1.27 N/A
- 1.28 THE CONTRACTOR SHALL COORDINATE HIS WORK AND COOPERATE WITH ANY OTHER PERSONS OR ENTITIES OPERATING ON OR ADJACENT TO THE SITE OF THE PROJECT.
- 1.29 N/A

2 PERMITS

- 2.1 CONTRACTOR SHALL OBTAIN ALL PERMITS AT HIS OWN EXPENSE FROM FEDERAL, STATE OR LOCAL MUNICIPAL AND AIR POLLUTION CONTROL AUTHORITIES PRIOR TO BEGINNING CONSTRUCTION.
- 2.2 REQUIRED PERMITS SHALL BE SECURED BY THE CONTRACTOR FROM THE APPROPRIATE AGENCIES.
- 2.3 THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AT HIS OWN EXPENSE ALL APPROPRIATE INSURANCE FORMS FOR PERMIT REQUIREMENTS.
- 2.4 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR THE RELOCATION AND RELOCATION COSTS, IF ANY, OF ALL UTILITIES, AND SUBMIT A UTILITY RELOCATION SCHEDULE TO THE MUNICIPALITY AND DESIGN ENGINEER PRIOR TO CONSTRUCTION. ALL PUBLIC UTILITY EQUIPMENT POLES, BOXES, STRUCTURES AND MUNICIPAL UTILITY COMPANY EQUIPMENT SHALL BE RELOCATED BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY BEFORE ANY WORK IS STARTED.

3 APPROVALS

- 3.1 THE CONTRACTOR IS TO USE ONLY THAT OFFICIAL CONSTRUCTION SET OF DRAWINGS WHICH CONTAINS THE APPROVAL OF THE GOVERNMENT AGENCY SIGNED ON THE COVER SHEET OF THE PLANS. THE CONTRACTOR SHALL NOT PLACE BIDS ON A SET OF DRAWINGS UNSIGNED BY THE GOVERNMENT AGENCY AND/OR MARKED "NOT FOR CONSTRUCTION".

4 RECORD DRAWINGS

- 4.1 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND KEEP AN UPDATED RECORD SET OF AS-BUILT INFORMATION DRAWINGS IN GOOD CONDITION ON THE JOB SITE FOR THE PROJECT MANAGER & UTILITY DIRECTOR TO INSPECT AND PROVIDE A COPY TO THE PROJECT ENGINEER AT COMPLETION OF THE WORK. WITH THE RECORD SET SHOWING FIELD VERIFIED LOCATIONS OF ALL VALVES, BOXES, MANHOLES, UTILITY POLES, PIPE SLEEVES, UTILITY ENCASEMENT AND OTHER UTILITY LINES AND EQUIPMENT ABOVE AND BELOW GROUND WHICH THE CONTRACTOR ENCOUNTERS AND INSTALLS IN HIS AREA OF WORK.
- 4.2 ACCEPTANCE OF THE COMPLETED PAVING, GRADING OR UTILITY INSTALLATION WILL NOT BE GIVEN UNTIL REPRODUCIBLE AS-BUILT PLANS HAVE BEEN SUBMITTED BY THE CONTRACTOR TO THE ENGINEER AND APPROVED BY THE LOCAL GOVERNING AGENCY INCLUDING HOUSING AND UTILITY DEPARTMENTS.

5 OBSERVATION

- 5.1 ALL MATERIALS USED AND ALL WORK DONE BY THE CONTRACTOR SHALL BE SUBJECT AT ALL TIMES TO THE OBSERVATION, TESTING AND APPROVAL OF THE ENGINEER AND GOVERNING AGENCY. SPECIAL INSPECTION AND TESTING SERVICES SHALL BE PROVIDED AT THE CONTRACTOR'S EXPENSE, AS REQUIRED BY THE CONTRACT DOCUMENTS.
- 5.2 THE CONTRACTOR SHALL CONTACT THE APPROPRIATE PUBLIC UTILITY COMPANIES FOR INSPECTION OF TRENCHING, BEDDING AND BACKFILLING DONE IN CONJUNCTION WITH INSTALLATION OF THOSE UTILITIES ON THIS PROJECT.
- 5.3 THE NATION OR ITS DESIGNATED AGENT WILL PREPARE AND SUBMIT THE ENGINEER'S CERTIFICATE AND AUTHORITY TO OPERATE. THE CONTRACTOR SHALL PROVIDE ALL THE TESTING AND WRITTEN RESULTS REQUIRED TO SUPPORT THESE ACTIONS.
- 5.4 SOILS COMPACTION TEST RESULTS MUST BE SUBMITTED TO THE PROJECT ENGINEER'S OFFICE FOR ALL FILL MATERIAL FOR ROADS, TRENCH BACKFILL AND SITE FILL MATERIALS UNDER SLABS AND STRUCTURES. NO FILL MATERIALS SHALL BE PLACED WITHOUT TESTING DURING PLACEMENT. NO EARTH MATERIAL SHALL BE PLACED WITHOUT APPROVAL OF THE PREVIOUS LIFTS. THE CONTRACTOR SHALL SUBMIT ALL TEST RESULTS TO THE PROJECT ENGINEER.
- 5.5 THE CONTRACTOR WILL BE RESPONSIBLE FOR SCHEDULING AND COORDINATION OF ALL TESTING INCLUDING THE FOLLOWING ITEMS WHICH SHALL BE TESTED IN ACCORDANCE WITH MAG SPECIFICATIONS...
- SUBGRADE COMPACTION
 - BASE COURSE COMPACTION
 - ASPHALT PAVEMENT MIX DESIGN QUALITY
 - CONCRETE STRENGTH
 - TRENCH BEDDING AND BACKFILL
 - TESTING FOR UTILITIES, PIPING AND DRAINAGE SYSTEMS
 - RETAINING WALLS CONCRETE AND COMPACTION
- 5.6 THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR 24 HOURS PRIOR TO BEGINNING DIFFERENT ASPECTS OF CONSTRUCTION SO THAT INSPECTIONS MAY BE SCHEDULED.

Bureau of Indian Affairs Minimum Sampling and Testing Guide			
Material	Test For	Frequency	Remarks
Culvert			
End Sections			Manufacturer's Certificate of Compliance with each Shipment.
Guardrail, Fencing, and Misc. Items			
Backfill	Moisture-Density in accordance with ASTM D698 (AASHTO T238) Method C.	One per Soil Classification.	
	Compaction in accordance with ASTM D2922 (AASHTO T238) or ASTM D1556 (AASHTO T191).	One per 6-inch lift, each side and above the structure.	
Granular Backfill	Gradation in accordance with ASTM C136	One per 2,000 cubic yards.	
	Compaction in accordance with ASTM D2922 (AASHTO T238) or ASTM D1556 (AASHTO T191).	One per 6-inch lift, each side and above the structure.	
Backfill at Utility Trenches	Moisture-Density in accordance with ASTM D698 (AASHTO T238) Method C.	One per Soil Classification.	
	Compaction in accordance with ASTM D2922 (AASHTO T238) or ASTM D1556 (AASHTO T191).	One per 6-inch lift, per each 500 linear feet of trench.	Conduct a minimum of 2 tests per each 6-inch lift on trenches less than 500 linear feet.
Coarse Aggregate	Quality in accordance with AASHTO M80.	One per source.	
	Gradation in accordance with AASHTO T27.	One per 100 cubic yards.	
Fine Aggregate	Quality in accordance with AASHTO M80.	One per source.	
	Gradation in accordance with AASHTO T27.	One per 100 cubic yards.	
Reinforcing Steel			Manufacturer's Certificate of Compliance with each Shipment.
Water	Quality in accordance with AASHTO T26.	One per source.	Test to be run on questionable water sources.
Concrete	28 Day Compressive Strength in accordance with ASTM C39 (AASHTO T22).	See Remarks.	1. Prepare 3 sets of test cylinders, at random, for each day's production in accordance with ASTM C31 (AASHTO T23).
	Slump in accordance with ASTM C143 (AASHTO T119).	One per batch.	2. Acceptance or rejection of each set of cylinders is to be based on the average strength of both cylinders.
	Air Content in accordance with ASTM C231 (AASHTO T152).	One per batch.	
			Manufacturer's Certificate of Compliance with each Shipment.
Expansion Joint Filler			
Asphalt Cement	Quality in accordance with AASHTO M205.		
Liquid Asphalt	Quality in accordance with AASHTO M80 or M88.	One per each day's production.	
Emulsions	Quality in accordance with AASHTO M1342 or M208.		
Asphalt	Gradation in accordance with AASHTO T30.		Conduct a minimum of 1 test for each 500 tons.
	Asphalt Content in accordance with AASHTO T1.	One per each day's run.	
	Theoretical Maximum Specific Gravity in accordance with ASTM D2041.	One per mixture.	
	Compaction in accordance with ASTM D2950.	One per 500 linear feet of roadway.	1. Conduct a minimum of 2 tests on each section of roadway less than 500 linear feet.
Blutuminous Mixture		One per 50 linear feet.	2. Measure pavement thickness and width in conjunction with this test.
	Surface Tolerance using a 10-foot straight edge.		

6 FINAL ACCEPTANCE

- 6.1 APPROVAL OF A PORTION OF THE WORK IN PROGRESS DOES NOT GUARANTEE ITS FINAL ACCEPTANCE. TESTING AND EVALUATION MAY CONTINUE UNTIL WRITTEN FINAL ACCEPTANCE OF A COMPLETE WORKABLE UNIT. ACCEPTANCE OF COMPLETED IMPROVEMENTS WILL NOT BE GIVEN UNTIL DEFECTIVE OR UNAUTHORIZED WORK IS REMOVED, AND FINAL CLEANUP IS COMPLETE.

7 UTILITIES

- 7.1 A UTILITY COORDINATION MEETING SHALL BE COORDINATED BY THE CONTRACTOR PRIOR TO THE START OF ANY WORK. ALL UTILITY ISSUES SHALL BE ADDRESSED IN ACCORDANCE WITH MAG
- 7.2 THE CONTRACTOR SHALL CALL "BLUE STAKE" AND NOTIFY THE APPROPRIATE PRIVATE, PUBLIC AND MUNICIPAL UTILITY COMPANIES 48 HOURS PRIOR TO ANY CONSTRUCTION WORK TO VERIFY LOCATION AND DEPTH OF ALL UTILITY LINES IN THE AREA OF WORK. UTILITIES IF INDICATED ON PLANS ARE APPROXIMATE LOCATIONS ONLY. TAKEN FROM THE UTILITY COMPANY MAPS. IF THE CONTRACTOR ENCOUNTERS ANY LINES NOT INDICATED ON THE DRAWINGS OR MARKED IN THE FIELD BY THE UTILITY COMPANY THAT MAY INTERFERE WITH HIS WORK, HE SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY IMMEDIATELY FOR DISPOSITION OF THOSE FACILITIES.
- 7.3 THE CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF GRADE, TRENCHING, BACKFILLING, PAD CONSTRUCTION AND CONCRETE PADS FOR UTILITY EQUIPMENT INSTALLED ON THIS PROJECT. CONTRACTOR SHALL CONTACT LOCAL UTILITY COMPANIES FOR DETAILS AND REQUIREMENTS.
- 7.4 REQUIRED UTILITY SLEEVES SHALL BE PLACED PRIOR TO SUBBASE CONSTRUCTION AND PAVING. CONTACT APPROPRIATE UTILITY COMPANIES FOR REQUIREMENTS IN ALL AREAS.

8 CONSTRUCTION STAKING

- 8.1 THE ACCURACY OF ALL CONSTRUCTION WORK SHALL BE MAINTAINED AND VERIFIED BY A REGISTERED LAND SURVEYOR. CONSTRUCTION STAKING SUITABLE TO THE ENGINEER WILL BE SET ESTABLISHING LINES AND GRADES (FINISH OR FLOWLINE) FOR ALL CONSTRUCTION INCLUDING ROADS, CURB AND GUTTER, SIDEWALKS, UTILITIES, STRUCTURES, AND OTHER WORK AS CONSIDERED NECESSARY BY THE PROJECT ENGINEER. ALL SURVEY CONTROL SHALL BE SET BY THE SURVEYOR FROM MONUMENTS ACCEPTABLE TO THE ENGINEER.
- 8.2 THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING.

9 GRADING AND EARTHWORK

- 9.1 NOT USED.
- 9.2 NO GRADING OR TRENCHING WORK SHALL BEGIN PRIOR TO SUPPORTING AND PROTECTING EXISTING ONSITE AND ADJACENT PROPERTY FROM SETTLING, CRACKING, OR OTHER DAMAGE WHICH MIGHT RESULT.
- 9.3 WATER SOURCE: THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR OBTAINING ALL WATER REQUIRED FOR SOIL COMPACTION, DRINKING PURPOSES AND DUST CONTROL. (MAG SPEC 225)
- 9.4 CLEARING AND GRUBBING: EXAMINE SITE AND PROVIDE NECESSARY EQUIPMENT AND LABOR TO REMOVE FROM THE SITE AND DISPOSE OF STUMPS, ROOTS, ROCKS, LOOSE FILL, VEGETATION, DEBRIS, AND ANY OTHER OBJECTIONABLE MATERIALS FROM THE BUILDING AND FILL AREAS. CLEAN, UNCLASSIFIED ONSITE SOILS MAY BE USED IN GENERAL AS FILL MATERIAL. SEE MAG SPECIFICATION SECTIONS 201 AND 215.
- 9.5 TOPSOIL THAT WILL BE AFFECTED BY ROUGH GRADING OR EXCAVATION SHALL BE STOCKPILED ON THE SITE SEPARATELY AND SHALL NOT BE USED FOR FILL, BUT SHALL BE CONSERVED AND USED FOR FINE AND FINISH GRADING.
- 9.6 SITE DRAINAGE: CONSTRUCTION OF ALL SWALES, CHANNELS, DRAINAGE PIPES, DRAINAGE STRUCTURES AND BANK PROTECTION SHALL BE CONSTRUCTED DURING THE FIRST PHASES OF SITE CONSTRUCTION TO PROTECT ALL OTHER CONSTRUCTION FROM SURFACE WATERS. DIVERT RUN OFF WATER AROUND CONSTRUCTION OPERATIONS. CARE SHALL BE TAKEN BY THE CONTRACTOR NOT TO ADVERSELY AFFECT ADJACENT PROPERTIES. DRAIN EXCAVATIONS BY PUMPING OR OTHER SATISFACTORY METHOD TO PREVENT SOFTENING OF THE FOUNDATION SOILS, UNDERCUTTING OF FOOTINGS, OR OTHER ACTIONS DETRIMENTAL TO PROPER CONSTRUCTION PROCEDURES.
- 9.7 THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL WALLS AND FOUNDATIONS. ALL STORM DRAINS, DRAIN LINES, OVERFLOWS, OUTLETS, AND/OR OTHER DRAINAGE TYPE OUTLETS WHICH CONDUCT MOISTURE NEAR THE STRUCTURES SHALL BE POSITIVELY DRAINED AWAY FROM THE STRUCTURE. NO WATER SHALL BE PERMITTED TO POND NEAR STRUCTURES OR FOUNDATIONS. ALL DRAINAGE SHALL BE CHANNLED AND TAKEN A MINIMUM OF 10 FEET AWAY FROM ALL STRUCTURES.
- 9.8 SUBGRADE PREPARATION: IF THE NATURAL SUBGRADE IS LESS THAN THE REQUIRED DENSITY, IT SHALL BE SCARIFIED AND COMPACTED TO A MINIMUM DEPTH OF TWELVE INCHES OR AS NOTED IN THE SOILS REPORT IMMEDIATELY PRIOR TO PLACING SUBSEQUENT FILL MATERIAL THEREON. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND REPAIR OF DAMAGE TO PREPARED SUBGRADE CAUSED BY CONTRACTOR'S OPERATIONS OR PUBLIC TRAFFIC UNTIL ACCEPTANCE OF PROJECT. NO MATERIALS SHALL BE PLACED UPON THE PREPARED SUBGRADE UNTIL IT MEETS THE SPECIFIED REQUIREMENTS. ROADWAY SUBGRADE COMPACTION INCLUDES SUBGRADE UNDER ALL PAVEMENT, CURB, SIDEWALKS, SHOULDERS AND FILL SLOPES. SUBGRADE TOLERANCES SHALL BE AS SPECIFIED IN MAG SECTION 301. OPEN LANDSCAPED AREAS SHALL BE GRADED TO +/- 0.20 FEET.
- 9.9 EARTH FILL: AREAS TO BE FILLED SHALL BE LEVELED TO PROVIDE A LEVEL BASE TO SUPPORT FILL MATERIALS. SUBGRADE AND SUBBASE AREAS REQUIRING FILL MATERIAL SHALL BE SCARIFIED MOISTENED AND COMPACTED PRIOR TO PLACING FILL. ALL FILL, SUBGRADE AND SUBBASE MATERIALS SHALL BE COMPACTED TO SPECIFIED DENSITIES AT OR NEAR OPTIMUM MOISTURE CONTENTS AS VERIFIED AND RECOMMENDED BY THE SOILS ENGINEER. PLACE FILL IN HORIZONTAL LIFTS NOT EXCEEDING SIX INCHES IN LOOSE THICKNESS BEFORE COMPACTION. SLOPED SURFACES SHALL BE PLOWED, STEPPED, AND BENCHED SO THAT THE FILL MATERIAL WILL BOND WITH THE EXISTING MATERIAL. BENCH AT THE TOE OF FILL SLOPES AND PERIODIC INTERVALS UP THE FILL SLOPES BENCHES.
- 9.10 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE SOILS ENGINEER FOR SCHEDULING OF COMPACTION TESTING. THE FREQUENCY OF DENSITY AND MOISTURE TESTS REQUIRED FOR ADEQUATE CONTROL SHALL BE THE RESPONSIBILITY OF THE SOILS ENGINEER WHO SHALL CERTIFY TO THE ENGINEER AND CONTRACTOR AT PROJECT END THAT THE ROADBED FILL IS COMPACTED AS OUTLINED HEREIN. COMPACTION SHALL BE ACHIEVED BY MECHANICAL MEANS. IN NO CASE SHALL STRUCTURE BACKFILLING BE FLOOD WATER SETTLED.

9 GRADING AND EARTHWORK

- 9.11 ALL SLOPE CONSTRUCTION AND ROADWAY EXCAVATION SHALL CONFORM TO THE REQUIREMENTS OF MAG SPECIFICATIONS SECTION 201, 205, 212, 301, AND UBC SECTIONS 7009 AND 8010. CUT AND FILL SLOPES SHALL BE AS INDICATED ON THE DETAILS AND PLANS. CUT AND FILL SLOPE GRADIENTS SHALL NOT EXCEED 2:1 IN STEEPNESS WITHOUT WRITTEN AUTHORIZATION FROM THE PROJECT ENGINEER AND EXAMINATION BY THE PROJECT ENGINEER. ALL SLOPE CONDITIONS SHALL BE PROVIDED WITH THE APPROPRIATE BENCHES AS SPECIFIED IN THE REFERENCE DOCUMENTS AND INDICATED ON THE PLANS. IF SOILS CONDITIONS ARE ENCOUNTERED WHICH DO NOT ALLOW THE ESTABLISHMENT OF THE INDICATED CUT OR FILL SLOPES, THE PROJECT ENGINEER AND SOILS ENGINEER SHALL BE CONTACTED IMMEDIATELY TO DETERMINE AN ADJUSTMENT TO THE SLOPE GRADIENT OR TO ESTABLISH A METHOD OF STABILIZATION. ALL FILL SLOPES SHALL BE COMPACTED AS EACH LIFT OF FILL MATERIAL IS PLACED. ALL CUT AND FILL SLOPES SHALL BE UNIFORMLY GRADED TO LINES AND GRADES INDICATED. TOPS OF ALL CUT SLOPES SHALL BE ROUNDED AND ALL UNSTABLE AND LOOSE MATERIAL AT TOP OF SLOPE SHALL BE REMOVED. TOP OF CUT SLOPES OVER 10' HIGH SHALL BE PROVIDED WITH BROW DITCHES FOR DRAINAGE.
- NOTE: REFER TO SECTION 15 FOR SEED MIX DESIGN.
- NOTE: THERE ARE EXISTING SEWER, WATER, GAS, AND DRY UTILITIES LOCATED WITHIN THE ROAD PRISM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT THESE UTILITIES DURING CONSTRUCTION.

10 PAVING

- 10.1 COMPLETE ASPHALTIC CONCRETE PAVEMENT INSTALLATION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
- A. TACK COATING OF CONCRETE SURFACES, UNDLUTED .02 TO .10 GAL/SY, DILUTED 1:1 MIXTURE, .05 TO .15 GAL/SY, OR AS DIRECTED.
- B. PAINT FOR PAVEMENT STRIPING AND MARKING SHALL CONFORM TO FEDERAL SPEC. NO. TTP-155E. PAINT, TRAFFIC, HIGHWAY WHITE AND YELLOW COLORS FOR PAVEMENT MARKING AND STRIPING SHALL BE AS SPECIFIED BY THE PROJECT ENGINEER.
- C. TRAFFIC CONTROL DEVICES: SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" LATEST EDITION, PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.
- 10.2 ASPHALTIC PAVEMENT SHALL CONFORM TO MAG SPECIFICATION SECTION 32 WITH THICKNESS AND DESIGN MIX AS INDICATED ON THE PLANS.
- 10.3 ALL FRAMES, COVERS, VALVE BOXES, AND MANHOLES IN PAVED AREAS AND RIGHT-OF-WAY SHALL BE ADJUSTED TO GRADE BY THE PAVING CONTRACTOR. IN NON-PAVED AREAS THEY SHALL BE ADJUSTED TO GRADE BY THE GENERAL CONTRACTOR.
- 10.4 ALL PAVING WORK SHALL BE PLACED IN STRICT CONFORMANCE TO MAG SECTION 321 PAR.321.3 WEATHER AND MOISTURE CONDITIONS. ALL WORK AND MATERIALS PLACED IN VIOLATION OF THESE REQUIREMENTS WILL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 10.5 EXACT POINT OF PAVEMENT MATCHING, TERMINATION AND/OR OVERLAY, IF NECESSARY, SHALL BE SUBJECT TO FIELD APPROVAL BY THE ENGINEER, HIS REPRESENTATIVE AND LOCAL MUNICIPAL AUTHORITIES. EDGE OF EXISTING PAVEMENT WHERE NECESSARY SHALL BE UNIFORMLY SAWCUT AND TACK COAT APPLIED.
- 10.6 THE CONTRACTOR SHALL IN ALL AREAS OF PAVING PROVIDE A UNIFORM DENSE SURFACE SMOOTH AND TRUE TO LINE. SURFACE SHALL BE FREE OF PITS, DEPRESSIONS, ROCK POCKETS AND PATCHES.

11 FIELD INSPECTION

- 11.1 THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTAINING ALL CONSTRUCTION STAKING. ANY ADDITIONAL STAKING WILL BE AT THE COST OF THE CONTRACTOR.
- 11.2 THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR 24 HOURS PRIOR TO BEGINNING DIFFERENT ASPECTS OF CONSTRUCTION SO THAT INSPECTIONS MAY BE SCHEDULED.
- 11.3 ANY QUESTIONS RAISED RELATIVE TO ACCURACY OF IMPROVEMENT INSTALLATION SHALL NOT BE RAISED SUBSEQUENT TO COMPLETION OF THE WORK UNLESS ALL SUCH STAKES ARE MAINTAINED INTACT. SHOULD SUCH STAKES NOT BE PRESENT AND VERIFIED AS TO THEIR ORIGIN, NO CLAIM FOR ADDITIONAL COMPENSATION FOR CORRECTION SHALL BE PRESENTED TO ANY PARTY AND SUCH WORK SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.

13 WARRANTY

- 13.1 ANY DEFECTS WHICH APPEAR IN THE WORK WITHIN TWO YEARS FROM THE DATE OF ACCEPTANCE AND WHICH ARE DUE TO IMPROPER WORKMANSHIP OR INFERIOR MATERIALS SUPPLIED SHALL BE CORRECTED BY OR AT THE EXPENSE OF THE CONTRACTOR.

14 ADEQ WATER AND SEWER SYSTEM NOTES

- 14.1 WATER SYSTEM THRUST BLOCKING AND/OR JOINT RESTRAINT
- 14.2 PIPE LINES SHALL BE PROVIDED WITH CONCRETE THRUST BLOCKS AT ALL CHANGES IN DIRECTION AND SIZE AND AT ALL TEES, VALVES, PLUGS, AND DEAD ENDS, PER MAG STANDARD DETAILS 301 AND 380 AND YAG STANDARD DETAIL 3-03. PIPE LINES MAY ALSO BE PROVIDED WITH RESTRAINED JOINTS AT ALL CHANGES IN DIRECTION AND SIZE AND AT ALL TEES, VALVES, PLUGS, AND DEAD ENDS, PER MAG STANDARD DETAILS 302 AND 303.
- 14.3 TRENCHING AND BACKFILLING
- 14.3.1 ROUGH GRADING SHALL BE COMPLETED PRIOR TO INSTALLATION OF UNDERGROUND UTILITIES.
- 14.3.2 TRENCH BOTTOM SHALL BE COMPACTED BY SUITABLE MEANS APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF BEDDING MATERIAL. BEDDING MATERIAL SHALL BE PLACED TO PROVIDE UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE. THE CONTRACTOR SHALL ENSURE THAT A MINIMUM COMPACTED DEPTH OF 6" IS MAINTAINED UNDERNEATH THE PIPE. BELL HOLES SHOULD BE PROVIDED AT EACH JOINT TO PERMIT PROPER ASSEMBLY WHILE MAINTAINING UNIFORM SUPPORT.
- 14.3.3 BEDDING MATERIAL SHALL BE AGGREGATE BASE COURSE WITH A MAXIMUM PARTICLE SIZE OF 3/4" AND SHALL BE NON-PLASTIC. WHERE DEPTH OF COVER IS 2-FT. OR LESS, BACKFILL MATERIAL SHALL BE ROUNDED GRAVEL WITH A MAXIMUM PARTICLE SIZE OF 1/2" AND WITH NO MORE THAN 20% PASSING THE #200 SIEVE.
- 14.4 GENERAL CONTRACTOR TO STUB OUT UTILITIES 1-FT WITHIN EACH PROPERTY AND MARKED. UTILITY STUB-OUT TO BE MARKED W/ 12" #4 REBAR TIED TO END OF UTILITY W/ 2x4 WHICH WILL EXTEND FROM PIPE INVERT TO 12" ABOVE FINISHED GRADE. PAINTED ALL SIDES WITH UTILITY COLOR GREEN FOR SEWER, BLUE FOR WATER AND RED FOR APS. PIPES ALSO TO HAVE TRACER WIRE AND MARKING TAPE.

GENERAL CONSTRUCTION NOTES - SHEET 1 OF 2

SHEET TITLE:
PROJECT TITLE:

DRAWN BY: LAS
SCALE: NTS
DATE: 11-05-25
PROJECT NO: 140701X
SHEET NO.



TUNLI - HELPING HANDS
YAVAPAI APACHE NATION

C-2



VOLUMES

EARTHWORKS: (PROPOSED LESS EXIST)

CUT: 110 CY

FILL: 9,720 CY

NET: 9,610 CY (FILL)

OVERALL SITE PLAN

SHEET TITLE:

PROJECT TITLE:

DRAWN BY: LAS

SCALE: 1" = 30'

DATE: 11-05-25

PROJECT NO: 140701X

SHEET NO.

C-4



Sefton
Engineering
Consultants

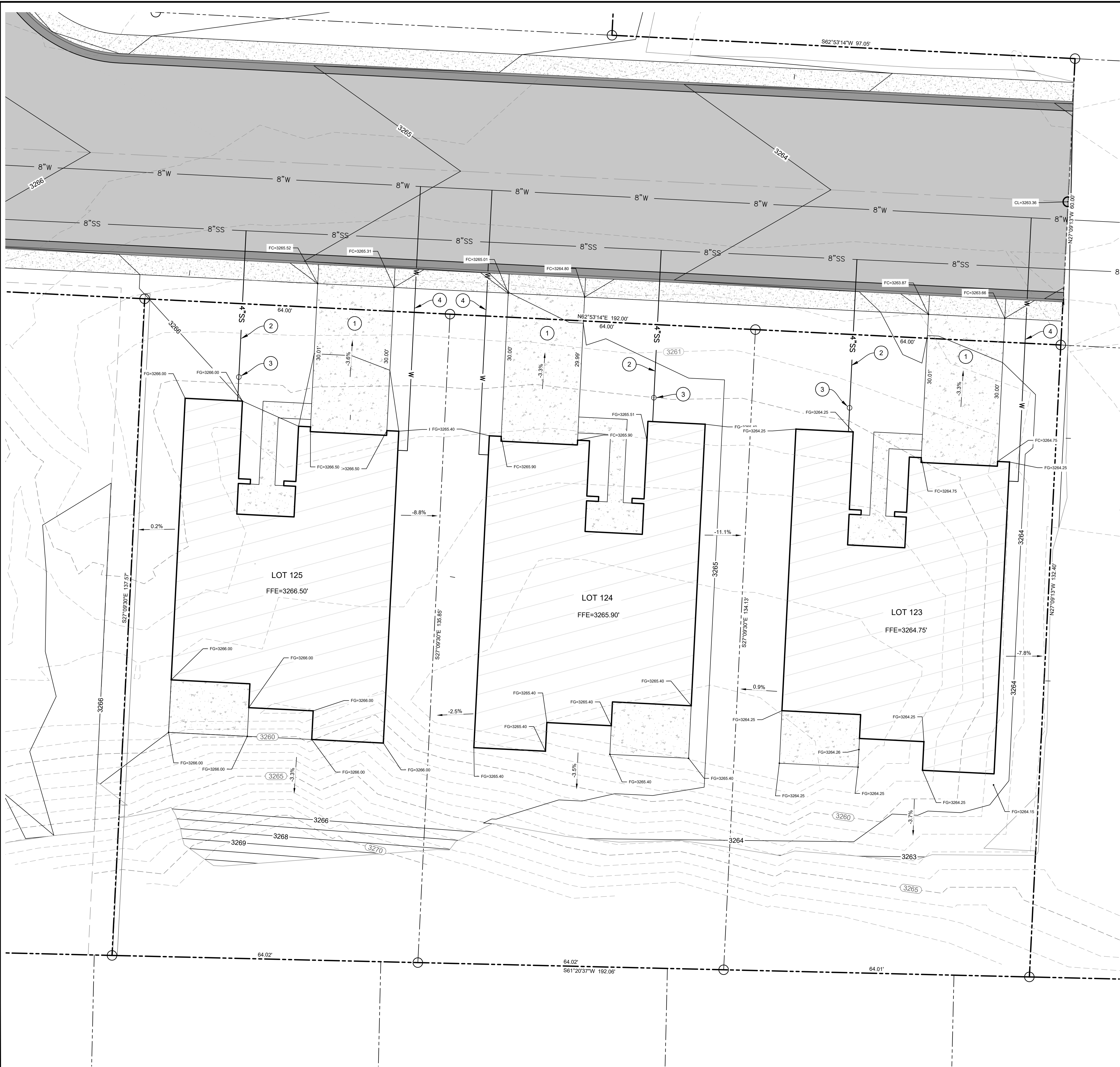
Your Ideas to Completion

Surveying • Engineering • Land Planning



LUKE A. SEFTON
37322
ENGINEER
ARIZONA, U.S.A.

40 STUTZ BEARCAT DR. #8
SCOTIA, ARIZONA 86336
PH: (928) 202-5995 LS@SEFTONCO.COM



GENERAL GRADING AND DRAINAGE NOTES:

1. SITE BENCHMARK IS A 3-IN. BRASS CAP STAMPED 26925 AT THE INTERSECTION OF CHERRY CREEK ROAD AND OLD STATE HIGHWAY 279 WITH AN ELEVATION OF 3277.78'
2. SURVEY AND TOPOGRAPHY DATA PROVIDED BY HERITAGE LAND SURVEYING & MAPPING INC. AND COOPER AERIAL SURVEYS CO. TOPOGRAPHY WAS PERFORMED IN JUNE OF 2025.
3. SITE BENCHMARK IS A 1/2" REBAR WITH A CAP MARKED U.S. 14184 FOUND AT THE SE CORNER OF LOT 11 WITH AN ELEVATION OF 4482.70. BENCHMARK ELEVATION REFERENCES CITY OF SEDONA BENCHMARK NO. 53.
4. TOP OF CUT SLOPES SHALL BE MADE NOT NEARER TO A SITE BOUNDARY LINE THAN 1/5 OF THE THE VERTICAL HEIGHT OF THE CUT WITH A MINIMUM OF 2 FEET. THE TOE OF FILL SLOPES SHALL BE MADE NOT NEARER TO A SITE BOUNDARY LINE THAN 1/2 OF THE VERTICAL HEIGHT OF THE FILL, WITH A MINIMUM OF 2 FEET. ALL CUT OR FILL SLOPES STEEPER THAN 2:1 SHALL BE STABILIZED WITH RIPRAP.
5. THE GROUND SURFACE SHALL BE PREPARED TO RECEIVE FILL BY REMOVING ALL VEGETATION, NON-COMPLYING FILL, AND OTHER UNSUITABLE MATERIALS.
6. NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL WITH A MAXIMUM DIMENSION GREATER THAN 12" SHALL BE ALLOWED IN FILLS IN THE ABSENCE OF A SOILS REPORT AND INSPECTION BY A SOILS ENGINEER.
7. ALL FILLS SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AND VERIFIED BY A COMPACTION REPORT WHEN SUPPORTING A STRUCTURE.
8. ANY SUB-BASE FILL PLACED GREATER THAN A DEPTH OF 8 FEET BELOW FINISHED HOUSE PAD AND FINISHED ROADWAY GRADE SHALL BE COMPACTED TO A MINIMUM OF 100% OF THE ASTM D698 MAXIMUM DENSITY, PLACED IN 8-INCH LIFTS.

KEY NOTES:

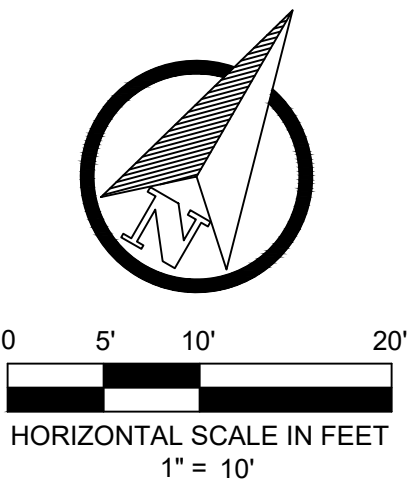
1. INSTALL 4" THICK CONC. DRIVEWAY. WIDTH PER PLAN.
2. INSTALL 4" DIA. SCH 40 PVC SEWER SERVICE LINE w/ BACKFLOW VALVE
3. INSTALL 4" SEWER CLEANOUT
4. INSTALL 3/4" WATER SERVICE w/ 3/4" NEPTUNE T-10 METER IN POLYMER BOX

SPOT ELEVATIONS LEGEND

BOC	BACK OF CURB
BOW	BOTTOM OF WALL
BM	BENCH MARK
CL	CENTER LINE
EG	EXISTING GROUND
FC	FINISHED CONCRETE
FF	FINISHED FLOOR
FG	FINISHED GROUND
FL	FLOW LINE
EOP	EDGE OF PAVEMENT
GB	GRADE BREAK
HP	HIGH POINT
LP	LOW POINT
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
TOW	TOP OF WALL
TOC	TOP OF CURB

SANITARY SEWER CONSTRUCTION NOTES:

1. SEWER SERVICES TO BE INSTALLED 1-FT INSIDE OF BUILDING SITES AND MARKED AS STATED IN THE GENERAL NOTES.
2. NO STEPS TO BE INSTALLED WITHIN ANY SEWER MANHOLE.



GRADING & DRAINAGE PLAN

SHEET TITLE:
PROJECT TITLE:

DRAWN BY: LAS
SCALE: 1" = 10'
DATE: 11-05-25
PROJECT NO: 140701X
SHEET NO.

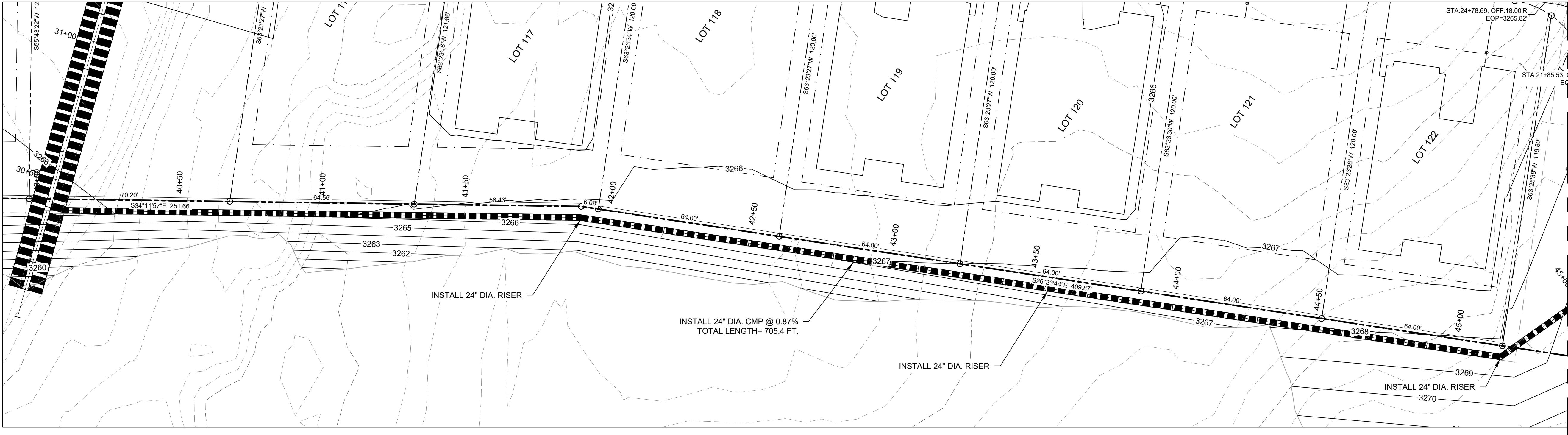
TUNLII - HELPING HANDS

YAVAPAI APACHE NATION

C-5



© 2022, Sefton Engineering Consultants LLC, All Rights Reserved. This document is protected under the United States Copyright Act. No part may be reproduced in any form or by any means or stored in a database or retrieval system, without the prior written permission of Sefton Engineering Consultants, LLC. These plans/documents have been prepared using technical knowledge that would be applied by other qualified registrants who practice the same profession in the same area and at the same time. Efforts have been made to be as accurate as possible. However, plans/documents could contain unintentional technical inaccuracies, typographical errors or omissions. Users of these plans/documents should understand that it is highly probable that errors and omissions will occur in any plan/document preparation process, the user shall notify the registrant for clarification.



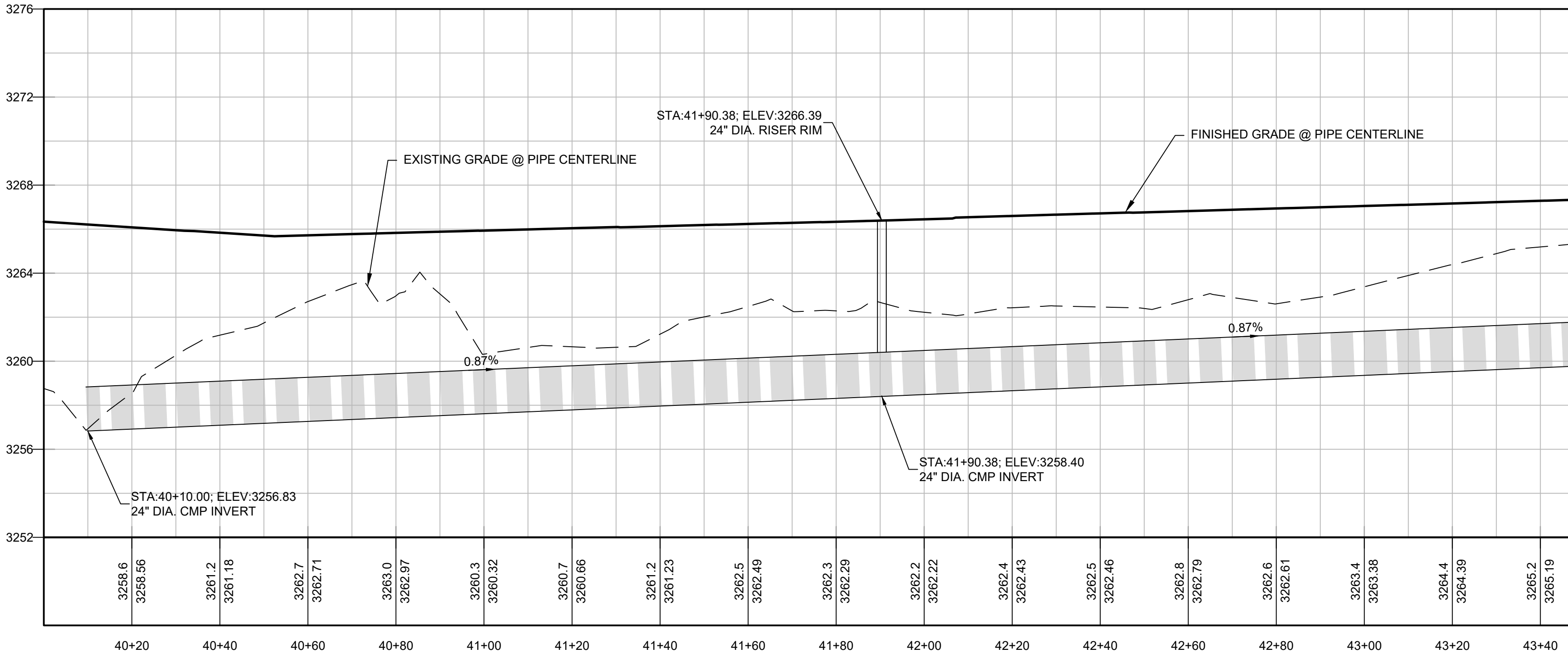
MATCH LINE SEE SHEET C-7

DRY WELL PLAN

0 10' 20' 40'

HORIZONTAL SCALE IN FEET

1" = 20'



DRY WELL PROFILE

0 10' 20' 40'

HORIZONTAL SCALE IN FEET

1" = 20'

VERTICAL SCALE IN FEET

1" = 4'

DRY WELL PLAN AND PROFILE - SHEET 1 OF 2

TUNLII - HELPING HANDS

YAVAPAI APACHE NATION

SHEET TITLE:
PROJECT TITLE:
DRAWN BY: LAS
SCALE: 1" = 20'
DATE: 11-05-25
PROJECT NO: 140701X
SHEET NO:

C-6



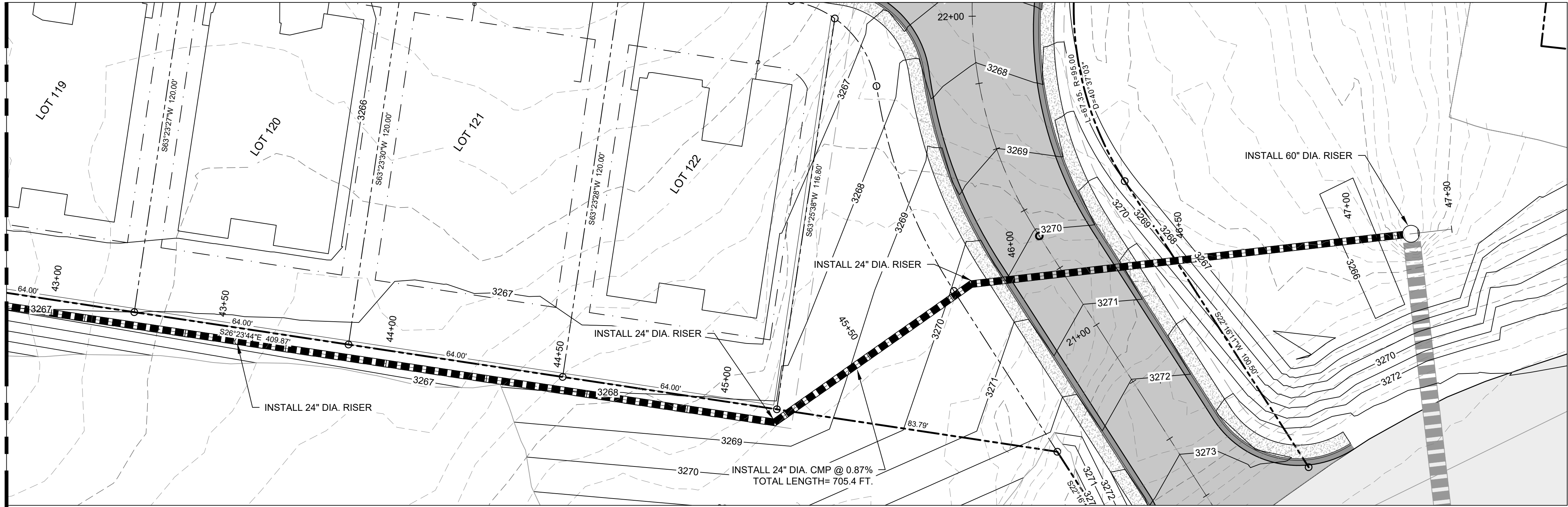
Sefton
Engineering
Consultants
Your Ideas to Completion
Surveying • Engineering • Land Planning

SEFTON, ARIZONA 86336
40 STUTZ BEARCAT DR. #8
PH: (928) 202-5995 L5@SEFTONCO.COM

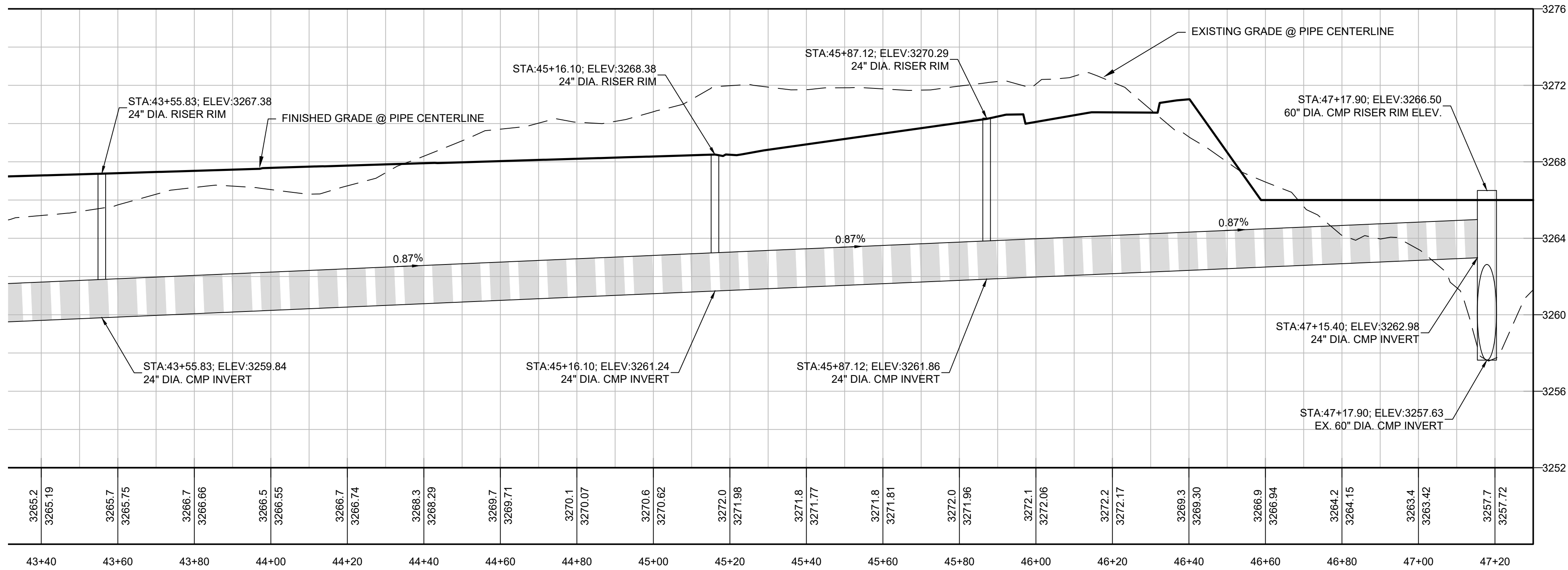
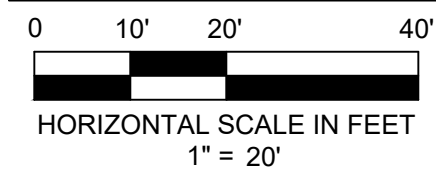


© 2022, Sefton Engineering Consultants LLC, All Rights Reserved. This document is protected under the United States Copyright Act. No part may be reproduced in any form or by any means or stored in a database or retrieval system, without the prior written permission of Sefton Engineering Consultants, LLC. These plans/documents have been prepared using technical knowledge that would be applied by other qualified registrants who practice the same profession in the same area and at the same time. Efforts have been made to be as accurate as possible. However, plans/documents could contain unintentional technical inaccuracies, typographical errors or omissions. Users of these plans/documents should understand that it is highly probable that errors and omissions will occur in any plan/document preparation process. The user shall notify the registrant for clarification.

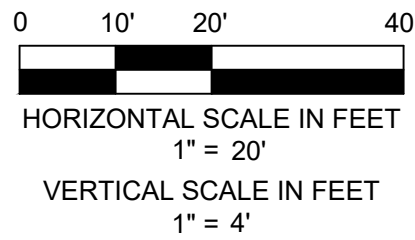
MATCH LINE SEE SHEET C-6



DRY WELL PLAN



DRY WELL PROFILE



DRY WELL PLAN AND PROFILE - SHEET 2 OF 2

TUNLII - HELPING HANDS

YAVAPAI APACHE NATION



PH: (928) 202-5995 LS@SENGCO.COM

SHEET TITLE:

PROJECT TITLE:

DRAWN BY: LAS

SCALE: 1" = 20'

DATE: 11-05-25

PROJECT NO: 140701X

SHEET NO.

C-7