

# CITY OF PHOENIX AVIATION DEPARTMENT DESIGN & CONSTRUCTION SERVICES

PROJECT NAME

**PHOENIX SKY HARBOR INTERNATIONAL AIRPORT  
PHX T3 RECIRCULATION ROADWAY IMPROVEMENTS**

ADDRESS

**3400 EAST SKY HARBOR BOULEVARD, PHOENIX, AZ 85034**

PROJECT NUMBER

**AV14000029**



MAYOR  
KATE GALLEGO

VICE MAYOR  
DEBRA STARK

CITY COUNCIL

DISTRICT NO. 1 ANN O'BRIEN  
DISTRICT NO. 2 JIM WARING  
DISTRICT NO. 3 DEBRA STARK  
DISTRICT NO. 4 LAURA PASTOR

DISTRICT NO. 5 BETTY GUARDADO  
DISTRICT NO. 6 KEVIN ROBINSON  
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CITY MANAGER

JEFFREY BARTON

CITY ENGINEER

ERIC J. FROBERG, P.E.

DIRECTOR OF AVIATION SERVICES

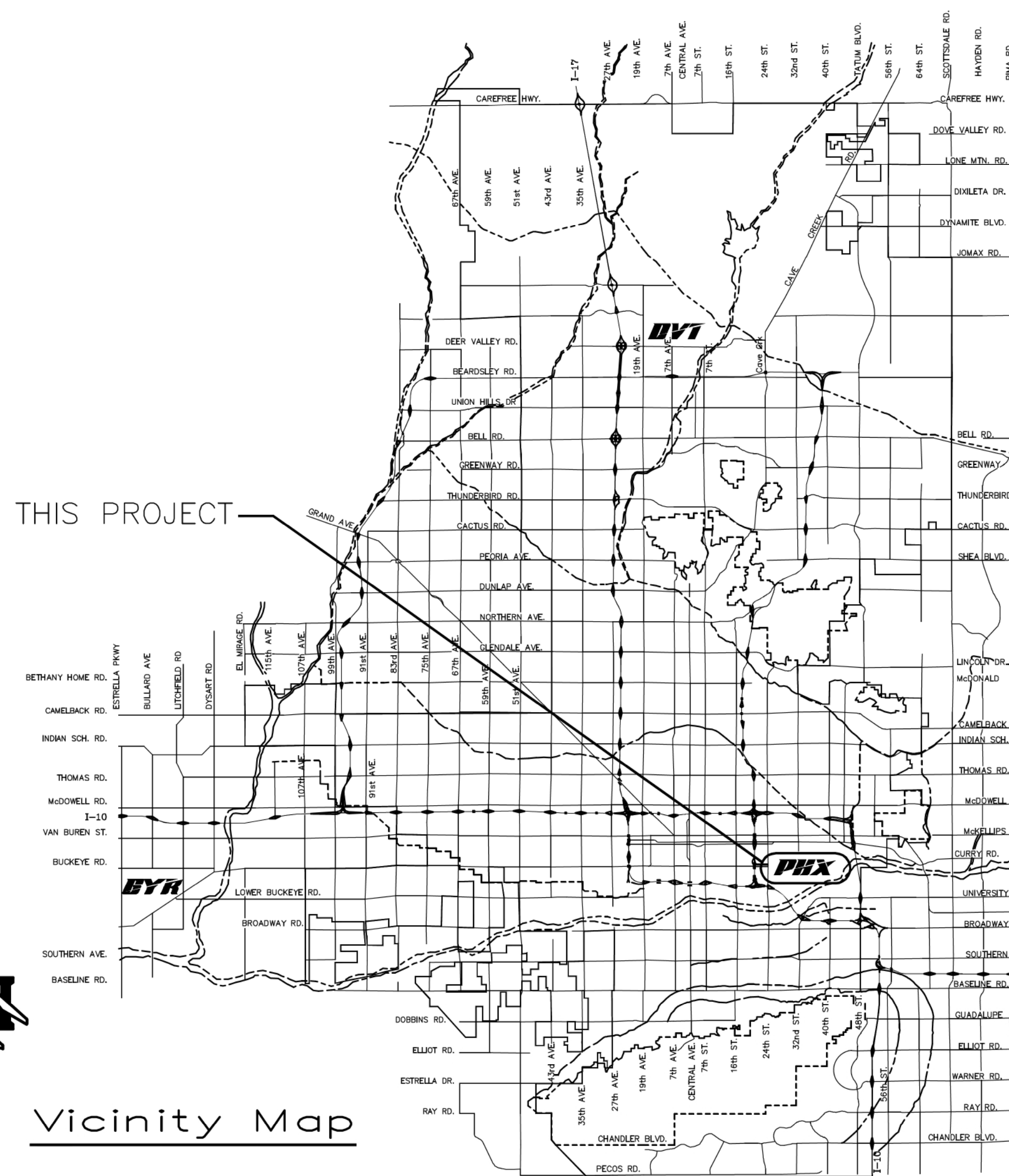
CHAD R. MAKOVSKY

APPROVALS

*Candace Huff*  
Candace Huff (Aug 20, 2024 10:52 PDT)  
DEPUTY AVIATION DIRECTOR  
DESIGN & CONSTRUCTION SERVICES DIVISION

Aug 20, 2024

DATE



Vicinity Map



"Per City of Phoenix City Code Chapter 2, Section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of the Contractor's contract with the City of Phoenix."

AV14000029 - ISSUED FOR BID

PHX BYR AVIATION DEPARTMENT



**GENERAL NOTES:**

- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL SAFETY REGULATIONS.
- CONSTRUCTION OF THIS PROJECT SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL AVIATION ADMINISTRATION'S (FAA) STANDARDS AND SPECIFICATIONS, ADOT STANDARDS AND SPECIFICATIONS, CITY OF PHOENIX (COP) SUPPLEMENTARY CONDITIONS, COP SUPPLEMENTS, 2021 MAG UNIFORM STANDARD GOVERNMENTS' (MAG) UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS. IN THE EVENT OF ANY CONFLICT BETWEEN THE CONTRACT DOCUMENTS FOR THIS PROJECT AND THE STANDARDS, THE CONTRACT DOCUMENTS FOR THIS PROJECT SHALL PREVAIL.  
  
CALCULATED DIMENSIONS WILL GOVERN OVER SCALED DIMENSIONS.
- THE CONTRACTOR SHALL COMPLY WITH ALL CITY, COUNTY, AND STATE TRAFFIC REGULATIONS CONCERNING THE USE OF STREETS AND ROADWAYS FOR HAULING. ANY DAMAGE DONE TO THE ROADWAYS DUE TO THE CONTRACTOR'S EQUIPMENT OR HAULING OPERATIONS SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT NO COST TO THE OWNER.
- THESE PLANS SHOW ITEMS TO BE CONSTRUCTED UNDER THIS CONTRACT. ACTUAL FIELD CONDITIONS, GRADES, LOCATIONS AND OTHER FEATURES MAY DIFFER FROM CONDITIONS INDICATED IN THESE DOCUMENTS.
- HAUL ROUTES – THE LOCATION OF HAUL ROUTES ON THE AIRPORT SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE COP AVIATION DEPARTMENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES WITH THE PARTY HAVING JURISDICTION OVER THE AFFECTED ROUTE. ON-SITE HAUL ROUTES WILL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE. TAXIWAY AND RUNWAY PAVEMENT CROSSINGS ALONG HAUL ROUTES SHALL BE PROTECTED, FENCING, DRAINAGE, GRADING OR OTHER WORK NECESSARY TO CONSTRUCT HAUL ROUTES ON THE AIRPORT IS THE CONTRACTOR'S RESPONSIBILITY AND MUST BE APPROVED BY THE ENGINEER AND AIRPORT PRIOR TO THE WORK. EXCESS SOILS PLACEMENT – EXCESS SOILS, EXCESS MILLED ASPHALT CONCRETE, CONCRETE, RUBBLE, AND UNSUITABLE EXCAVATION SHALL BE DISPOSED OF OFF-SITE ACCORDING TO LOCAL LAWS AND REGULATIONS. MILLED ASPHALT CONCRETE IS TO BE PLACED IN THE LOCATIONS APPROVED BY THE AIRPORT.  
  
COSTS ASSOCIATED WITH THE MATERIALS AND TASKS ABOVE ARE CONSIDERED INCIDENTAL TO THE CONTRACT. THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO THE COP AVIATION DEPARTMENT INDICATING THE LOCATION AND QUANTITY OF ALL MATERIAL DISPOSED OF OFF AIRPORT PROPERTY.  
  
ANY REMOVAL ITEMS OF VALUE ARE TO REMAIN THE PROPERTY OF THE COP UNLESS OTHERWISE INDICATED. ALL MATERIAL TO BE HAULED OFF-SITE SHALL BE SAMPLED PRIOR TO HAUL OFF. CONTRACTOR TO COORDINATE WITH COP AVIATION PLANNING AND ENVIRONMENTAL PRIOR TO START OF CONSTRUCTION.
- SALVAGED ITEMS – ANY SALVAGED ITEMS ARE TO REMAIN THE PROPERTY OF AIRPORT.
- NO MATERIAL SHALL BE WASTED OR STOCKPILED ON THE AIRPORT UNLESS APPROVED BY THE ENGINEER AND AIRPORT. STOCKPILED MATERIAL SHALL BE CONSTRAINED IN A MANNER TO PREVENT MOVEMENT AS A RESULT OF AIRCRAFT OPERATIONS OR WIND AND IN ACCORDANCE WITH FAA ADVISORY CIRCULARS.
- CONTRACTOR GENERATED DEBRIS, WASTE AND LOOSE MATERIAL CAPABLE OF CAUSING DAMAGE TO AIRCRAFT LANDING GEAR, PROPELLERS AND ROTORS OR OF BEING INGESTED BY JET ENGINES SHALL NOT BE LEFT ON ACTIVE MOVEMENT AREAS. MATERIAL DROPPING WITHIN THESE AREAS SHALL BE REMOVED IMMEDIATELY AND CONTINUOUSLY BY THE CONTRACTOR DURING WORKING HOURS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL COP PROPERTY AND SHALL LOCATE AND PROTECT CAREFULLY FROM DAMAGE OR DISTURBANCE ALL BENCHMARKS, LAND MONUMENTS AND PROPERTY MARKERS. IF DAMAGE OR INJURY TO PROPERTY DOES OCCUR DURING THE WORK, THE CONTRACTOR SHALL RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE, BY REBUILDING OR RESTORING AS DIRECTED BY THE COP AVIATION DEPARTMENT AND THE ENGINEER.
- THE CONTRACTOR IS ADVISED THAT OTHER CONSTRUCTION WILL BE IN PROGRESS DURING ALL OR PART OF THIS PROJECT. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF OTHER CONTRACTORS AT THE AIRPORT.
- EXISTING AIRPORT SURVEY MONUMENTS ARE LOCATED THROUGHOUT THE CONSTRUCTION AREA. THE CONTRACTOR SHALL AT HIS EXPENSE, HAVE A REGISTERED LAND SURVEYOR REPLACE ANY DISTURBED MONUMENT USING CITY OF PHOENIX STANDARDS. REPLACED MONUMENTS SHALL BE PLACED AT LEAST 10' BUT NOT MORE THAN 50' FROM THE ORIGINAL MONUMENT.
- SAFETY AND SECURITY – SAFETY AND SECURITY IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE COORDINATED WITH AIRPORT OPERATIONS, COP AVIATION DEPARTMENT AND THE ENGINEER. SEE SPECIAL CONDITIONS FOR SAFETY, SECURITY, BADGE AND OPERATING REQUIREMENTS IN THE CSPP.
- THE CONTRACTOR SHALL NOT ENTER ONTO ANY AREA OUTSIDE OF THE CONSTRUCTION LIMITS, STAGING AREA OR DESIGNATED HAUL ROUTES WITHOUT THE WRITTEN APPROVAL BY THE ENGINEER AND AIRPORT.
- THE CONTRACTOR SHALL NOTIFY THE COP AVIATION DEPARTMENT IN WRITING, THROUGH THE ENGINEER, A MINIMUM OF SEVENTY-TWO (72) HOURS IN ADVANCE TO OBTAIN CLEARANCE FOR WORK. THE CONTRACTOR SHALL SUBMIT A CPM SCHEDULE FOR APPROVAL AT THE PRE-CONSTRUCTION CONFERENCE.
- THE OWNER RESERVES THE RIGHT TO MAKE REVISIONS TO THE FINISHED ELEVATIONS AND GRADIENTS. IF CHANGES ARE NECESSARY, THE OWNER WILL FURNISH A REVISED GRADING OR PAVING PLAN. UNIT PRICES SHALL GOVERN FOR REVISED QUANTITIES.
- SPECIFICATIONS ARE PROVIDED WHICH REQUIRE THE CONTRACTOR TO APPLY WATER, CHEMICALS, VEGETATION OR OTHER MATERIALS TO PREVENT THE OCCURRENCE OF DUST WHICH IS OBJECTIONABLE TO THE OPERATIONS OR USERS OF THE AREA. THESE SHALL INCLUDE BUT NOT BE LIMITED TO AIRPORT AUTHORITY OPERATIONS, MAINTENANCE, AIRCRAFT OPERATIONS, AND AIRFIELD OPERATIONS, AND LAND SIDE OPERATIONS. THE CONTRACTOR SHALL ALSO DISCONTINUE OPERATIONS, WHICH VIOLATE EXISTING LAWS AND REGULATIONS OR CREATE A UNIQUE HAZARD TO AIR TRAFFIC. ALL COST FOR CONTROLLING DUST OR POLLUTANTS TO THE AIR OF ANY KIND SHALL BE INCIDENTAL TO THE CONTRACT.
- EXISTING UTILITY INFORMATION, LIGHTING DUCTS, AND CABLES SHOWN ON THE PLANS CONCERNING THE TYPE, SIZE AND LOCATION WERE COMPILED BASED ON THE BEST AVAILABLE UTILITY RECORDS TO THE ENGINEER AND AIRPORT AND ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A UTILITY LOCATOR AND VERIFY THE ACTUAL LOCATION PRIOR TO CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS NOTED OTHERWISE OR SPECIFIED. THE OWNER AND ENGINEER BEAR NO RESPONSIBILITY FOR UTILITIES NOT SHOWN ON THE PLANS OR NOT IN THE LOCATION SHOWN ON THE PLANS. ANY AND ALL DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. EXCAVATION IMMEDIATELY NEAR UTILITIES SHALL BE DONE BY HAND. UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE RESET OR RELOCATED BY THE UTILITY COMPANY CONCERNED UNLESS NOTED OTHERWISE. CONTRACTOR SHALL CONTACT THE FOLLOWING UTILITY COMPANIES AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO BEGINNING CONSTRUCTION:  
  
ARIZONA PUBLIC SERVICE (602) 371-6451, CONTACT: DON CROWDER  
FAA FACILITIES (602) 305-2532, CONTACT: ROGER GUSTAFSON  
LUMEN (602) 530-0496, CONTACT: JOHN O'DELL  
GAS (SW GAS) (602) 484-5344, CONTACT: NORMA JARDIN  
CITY WATER/SEWER (602) 261-8229, CONTACT: JAMI ERICKSON  
COP ENVIRONMENTAL (602) 273-3396, CONTACT: REBECCA GODLEY  
ALL EMERGENCY, FIRE,  
POLICE, MEDICAL, (602) 273-3311, CONTACT: OPERATOR  
COP ELECTRICAL (602) 683-3846, CONTACT: JOE ROSALES III  
COP COMMUNICATIONS (602) 708-0244, CONTACT: CHAD BLOTKAMP  
COP UTILITIES (602) 708-0244, CONTACT: CHAD BLOTKAMP

- THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL UTILITY OWNERS AND THE PROGRAM MANAGER TO LOCATE ALL EXISTING AND PROPOSED UTILITIES PRIOR TO PERFORMING TRENCHING, MASS EXCAVATION, OR OTHER EARTHWORK.
- SEVERAL UTILITY OWNERS INCLUDING THE COP AVIATION DEPARTMENT, SOLID WASTE MANAGEMENT DEPARTMENT, HUMAN SERVICES DEPARTMENT, FEDERAL AVIATION ADMINISTRATION, AND OTHERS ARE NOT MEMBERS OF THE BLUE STAKE CENTER NOTIFICATION SYSTEM AND MUST BE NOTIFIED INDIVIDUALLY. CONTRACTOR TO USE A THIRD PARTY UTILITY LOCATOR.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND ELECTRICAL SYSTEMS TO REMAIN PRIOR TO COMMENCING ANY DRAINAGE EXCAVATION.
- POWER, CONTROL CABLES AND FIXTURES FOR AIRFIELD LIGHTING AND NAVIGATIONAL AIDS ARE LOCATED IN THE CONSTRUCTION AREAS. THE CONTRACTOR'S PERSONNEL SHALL BECOME FAMILIAR WITH THESE CABLE AND FIXTURE LOCATIONS AND KEEP VEHICLES AND EQUIPMENT CLEAR OF THEM AT ALL TIMES. ADHERENCE TO AVIATION LOCKOUT/TAGOUT PROCEDURES SHALL BE STRICTLY ENFORCED.
- ANY DAMAGE TO THE EXISTING AIRPORT LIGHTING SYSTEM CAUSED BY CONSTRUCTION OPERATIONS SHALL BE IMMEDIATELY NOTED TO THE OWNER AND REPAIRED BY THE CONTRACTOR AT ITS OWN EXPENSE.
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FIRE HYDRANTS AT ALL TIMES.
- THE CONTRACTOR SHALL NOT DRAW WATER FROM ANY FIRE HYDRANT FOR USE ON THE WORK WITHOUT FIRST OBTAINING A WRITTEN PERMIT FROM THE CONTROLLING FIRE DEPARTMENT.
- THE CONTRACTOR WILL BE REQUIRED TO COORDINATE WITH THE COP AVIATION DEPARTMENT ON THE PRECISE LOCATION AND LIMITS OF THE STAGING AREA, AS WELL AS ANY SPECIAL REQUIREMENTS FOR FENCING, SECURITY OR ACCESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL UTILITIES AND HOOKUPS NECESSARY FOR THE CONTRACTOR'S USE AND FOR ALL PROJECT FIELD OFFICES AS REQUIRED IN THE SPECIAL PROVISIONS.
- THE EXACT LIMITS, LIGHTING, AND SECURITY REQUIREMENTS OF THE CONTRACTOR'S STAGING AND STORAGE AREA SHALL BE ESTABLISHED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER AND AIRPORT IN THE AREAS GENERALLY AS SHOWN ON THE PLANS. ANY AND ALL REQUIRED UTILITIES FOR THE CONTRACTOR'S OPERATIONS SHALL BE ARRANGED FOR AND PAID FOR BY THE CONTRACTOR AND PAID DIRECTLY TO THE APPROPRIATE UTILITY. UTILITY ARRANGEMENTS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AND AIRPORT. THE CONTRACTOR SHALL USE THE STORAGE AND STAGING AREAS SHOWN ON THE PLANS FOR HIS/HER SHOP, MATERIAL AND EQUIPMENT STORAGE AND OTHER PROJECT RELATED ACTIVITIES, INCLUDING EMPLOYEE PARKING. ALL COSTS ASSOCIATED WITH PREPARING THE STORAGE AND STAGING AREA SITE SHALL BE BORNE BY THE CONTRACTOR. THIS INCLUDES BUT IS NOT LIMITED TO CLEARING AND GRADING OF THE SITE, CONSTRUCTION OF ALL TEMPORARY UTILITIES, ACCESS ROADS, ALL SECURITY FENCING, CLEAN-UP AND RESTORATION OF SITE TO ORIGINAL CONDITION.
- THE CONTRACTOR SHALL SUBMIT A DRAWING SHOWING THE PROPOSED SITE LAYOUT OF ANY BATCH PLANTS. THE PLAN SHALL BE APPROVED BY THE ENGINEER AND AIRPORT PRIOR TO STARTING ANY WORK AT THE CONTRACTOR'S STAGING AREA.
- THE CONTRACTOR SHALL INVESTIGATE THE AVAILABILITY OF AN ADEQUATE SUPPLY OF SUITABLE WATER, MAKE ALL ARRANGEMENTS (PERMITS) FOR THE PURCHASE OF THE WATER, AND PROVIDE NECESSARY FACILITIES TO FURNISH WATER FOR USE DURING CONSTRUCTION, SOLELY AT HIS EXPENSE.
- BATCH PLANT SITES AND OTHER AREAS USED DURING CONSTRUCTION ARE TO BE RESTORED TO THEIR ORIGINAL CONDITION UPON COMPLETION OF THE PROJECT AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL COMPLETE CLEAN UP AND RESTORATION OF ENTIRE PROJECT AREA, INCLUDING STAGING AND STORAGE AREAS, AS APPROVED BY THE ENGINEER AND AIRPORT WITHIN 10 DAYS OF CONTRACT COMPLETION DATE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY ELECTRICAL TIE-OVERS THAT WILL BE REQUIRED TO KEEP TAXIWAY EDGE LIGHTS AND SIGNS IN OPERATION AT ALL TIMES WHEN THE PAVEMENT AREAS ARE AVAILABLE TO AIRCRAFT TRAFFIC.
- THE CONTRACTOR SHALL CONDUCT THE FINAL CLEANING OF AFFECTED AIRPORT PAVEMENTS PRIOR TO REOPENING THE PAVEMENTS TO AIR TRAFFIC. CONTRACTOR TO PROTECT ALL EXISTING UTILITY VAULTS AND LIDS DURING CONSTRUCTION. CONTRACTOR SHALL ENSURE THAT ALL VAULT LIDS ARE OPERATIONAL FOLLOWING COMPLETION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTINUOUS DAILY CLEAN UP OF HIS/HER WORK AREA. THE CONTRACTOR SHALL CONDUCT POWER VACUUM CLEANING OF AFFECTED AIRPORT PAVEMENTS PRIOR TO REOPENING EACH PHASE OF THE PAVEMENTS TO AIR TRAFFIC, AND FOR ACTIVE TAXIWAYS AND RUNWAYS IMMEDIATELY FOLLOWING ANY ACCESS ONTO OR CROSSING OF THE PAVEMENT BY CONSTRUCTION TRAFFIC.
- THE CONTRACTOR IS REQUIRED TO PROVIDE LIGHTING FOR CONSTRUCTION DURING THE HOURS OF DARKNESS AS REQUIRED TO PERFORM CONSTRUCTION AND RELATED ACTIVITIES. COSTS FOR LIGHTING SHALL BE INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR'S SUPERINTENDENT SHALL BE ON THE CONSTRUCTION SITE AT ALL TIMES DURING WORKING HOURS WHILE THIS PROJECT IS IN PROGRESS. THE CONTRACTOR'S SUPERINTENDENT SHALL BE THE DESIGNATED RESPONSIBLE CONTRACTOR REPRESENTATIVE AND SHALL BE AVAILABLE IN CASE OF EMERGENCIES ON A 24-HOUR DAILY BASIS.
- MOST CONSTRUCTION WORK IN THIS PROJECT WILL OCCUR WITHIN THE AIR OPERATIONS AREA (AOA) AND IS SUBJECT TO OPERATIONAL SAFETY AND SECURITY REQUIREMENTS OF THE COP AND FAA. ANY ADDITIONAL REQUIREMENTS AS MAY BE DEEMED NECESSARY BY THE COP OR THE FAA WILL BE COMPLIED WITH BY THE CONTRACTOR AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSPORTING EMPLOYEES TO AND FROM THE PROJECT SITE IF NECESSARY.
- ROADS USED AS CONTRACTOR ROUTES MAY BE USED BY OTHER AIRPORT VEHICLES. THE CONTRACTOR SHALL NOT INTERFERE WITH OTHER VEHICLE TRAFFIC AND SHALL YIELD TO EMERGENCY VEHICLES ALONG ANY OF THE AIRPORT OR PUBLIC ROADS.
- EACH CONTRACTOR/SUBCONTRACTOR, INCLUDING EACH CONTRACTOR/SUBCONTRACTOR EMPLOYEE, WHO OPERATES A GROUND VEHICLE ON ANY PORTION OF THE AOA AT THE AIRPORT MUST BE FAMILIAR WITH:  
  - PHX RULES AND REGULATIONS.
  - PHX PROCEDURES FOR THE OPERATION OF GROUND VEHICLES.
  - FAILURE TO COMPLY WITH PHX RULES AND REGULATIONS AND/OR PROCEDURES FOR THE OPERATION OF GROUND VEHICLES, WILL REQUIRE THE PERSON TO ATTEND A MOVEMENT AREA OPERATING PROCEDURES CLASS
- ALL CONTRACTOR VEHICLES, INCLUDING HAULING VEHICLES, CONSTRUCTION EQUIPMENT (IE. ROLLERS, BACKHOES, SCRAPERS, ETC.) THAT ARE AUTHORIZED TO OPERATE ON THE AIRPORT WITHIN THE DESIGNATED LIMITS OF CONSTRUCTION OR HAUL ROUTES, SHALL DISPLAY IN FULL VIEW ABOVE THE VEHICLE A 3'X3' OR LARGER ORANGE AND WHITE CHECKERBOARD FLAG, EACH CHECKERBOARD COLOR BEING 1' SQUARE, WHEN OPERATING DURING PERIODS OF DARKNESS OR LIMITED VISIBILITY, CONTRACTOR'S VEHICLES SHALL BE EQUIPPED WITH ROTATING OR FLASHING AMBER LIGHTS. DURING SUCH PERIODS, HAULING VEHICLES NOT SO EQUIPPED SHALL BE ESCORTED BY A VEHICLE SO SUPPLIED.

- ALL VEHICLES AND EQUIPMENT SHALL BE KEPT WITHIN THE WORK AREAS ESTABLISHED FOR EACH WORKSHIFT UNLESS TRAVELING TO OR FROM THE SITE. ALL VEHICLES AND EQUIPMENT SHALL BE PARKED IN STAGING AREAS AS APPROVED BY THE ENGINEER AND AIRPORT.
- CONTRACTOR SHALL PROVIDE TRAINED FLAGMEN TO COORDINATE AND CONTROL CONSTRUCTION TRAFFIC WHEN OPERATING ACROSS ANY ACTIVE TAXIWAY. FLAGMEN SHALL BE EQUIPPED WITH RADIOS ON GROUND CONTROL FREQUENCY AND SHALL ALLOW TRAFFIC CROSSINGS ON ACTIVE TAXIWAYS AND RUNWAYS ONLY UPON SPECIFIC AUTHORIZATION BY AIR TRAFFIC CONTROL. FLAGMEN SHALL ALSO BE PROVIDED FOR CONTROLLING EQUIPMENT ENTERING AND LEAVING THE PROJECT AREA.
- THE CONTRACTOR SHALL AT NO TIME CROSS AN ACTIVE RUNWAY OR TAXIWAY UNLESS ESCORTED BY A COP RADIO ESCORT. VIOLATION COULD RESULT IN PERMANENT EJECTION FROM THE AIRPORT PROPERTY AND/OR THE ASSESSMENT OF FINES.
- CONTRACTOR ACCESS GATE SHALL BE MANNED BY A CONTRACTOR SUPPLIED GATE GUARD OR REMAIN LOCKED AT ALL TIMES (WHEN NOT OCCUPIED). APPROVED GATE GUARD SHALL CONTROL ACCESS TO ALLOW ONLY AUTHORIZED CONSTRUCTION TRAFFIC TO ENTER THE SITE.
- CONSTRUCTION EQUIPMENT SHALL NOT PENETRATE THE HEIGHT RESTRICTIONS FOR FAR PART 77.
- ALL SURFACE RUNOFF FROM THE STAGING AREA OR THE AREAS UNDER CONSTRUCTION SHALL BE COLLECTED AND ADEQUATELY FILTERED BEFORE DISCHARGE INTO THE EXISTING DRAINAGE SYSTEM. CONTRACTOR SHALL MITIGATE THE IMPACTS OF RUNOFF FROM THE SITE IN CONFORMANCE WITH THE SPECIFICATIONS.
- NO ADJUSTMENT FOR ADDITIONAL COMPENSATION AND TIME WILL BE MADE FOR TIME LOST IN WORK AREAS CONTIGUOUS TO TAXIWAYS AND RUNWAYS DUE TO AIRCRAFT TRAFFIC.
- CONTRACTOR SHALL NOTE IN THE RECORD DRAWINGS ANY AND ALL PIPES, DUCTS AND CABLES FOUND DURING EXCAVATION. INDICATE EXACT POSITION, ELEVATION, DIRECTION, SIZE, MATERIAL, PURPOSE AND ACTIVE STATUS, IF KNOWN.
- ANY PAINT USED FOR NEW PAVEMENT MARKINGS SHALL BE LEAD FREE CERTIFIED. CONTRACTOR TO PROVIDE MATERIAL SAFETY DATA SHEET TO THE AIRPORT FOR APPROVAL PRIOR TO CONSTRUCTION.
- BEFORE ANY WORK COMMENCES, AN ASBESTOS AND LEAD SURVEY NEEDS TO BE COMPLETED. THE CONTRACTOR SHALL CONTACT LAURA JARDIEANU AT 602-273-4300 APPROXIMATELY 3-4 WEEKS PRIOR TO CONSTRUCTION ACTIVITIES TO HAVE THE ASBESTOS AND LEAD SURVEY DONE. ANY ENVIRONMENTAL HAZARDS FOUND DURING THIS SURVEY SHALL BE ABATED PRIOR TO ANY DISTURBANCE. CONTRACTOR TO ALSO NOTIFY DAVID GORDON FOR ANY SUBSURFACE MATERIALS FOUND DURING CONSTRUCTION. CONTRACTOR SHALL ASSUME ALL SUSPECT MATERIALS CONTAIN ASBESTOS (ANYTHING OTHER THAN UNPAINTED WOOD, METAL, OR GLASS) UNLESS OTHERWISE NOTIFIED.
- IF SOIL IS TO BE REMOVED FROM THE AIRPORT, THEN PRIOR TO ANY WORK COMMENCING, SOIL SAMPLING NEEDS TO BE COMPLETED. THE CONTRACTOR SHALL CONTACT LAURA JARDIEANU APPROXIMATELY 3-4 WEEKS PRIOR TO CONSTRUCTION ACTIVITIES TO HAVE THE SOIL SAMPLING COMPLETED. THE SOIL SHALL BE SAMPLED BY COP ENVIRONMENTAL ON-CALL CONSULTANTS WITH ASSISTANCE FROM THE CONTRACTOR. CONTRACTOR SHALL PROVIDE BARRICADES, COMMUNICATE WITH OPERATIONS AND REPLACE THE CORED AREA AFTER SAMPLING IS COMPLETE PER AIRPORT SPECIFICATIONS.
- THE PROJECT WILL DISTURB MORE THAN 1/10 OF AN ACRE. THE CONTRACTOR SHALL OBTAIN A MARICOPA COUNTY DUST CONTROL PERMIT PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION GENERAL PERMIT FROM ADEQ AND IMPLEMENT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE SUBMITTED TO COP AIRPORT ENVIRONMENTAL FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
- ANY WASTE OR CONSTRUCTION DEBRIS MUST BE DISPOSED OF PROPERLY. THE DISPOSAL OF MATERIAL OFF-SITE SHALL BE DONE IN A LAWFUL MANNER AND AT A SITE HAVING CURRENT APPROVAL TO ACCEPT SOLID WASTE FOR DISPOSAL.
- CONTRACTOR TO OBTAIN PERMIT FROM THE WATER DEPARTMENT TO ACCESS STORM DRAINS, STORM DRAIN MANHOLES, AND SANITARY SEWER MANHOLES IF REQUIRED.
- SERVICE ROAD ACCESS SHALL BE MAINTAINED AT ALL TIMES. ALIGNMENT FOR SERVICE ROAD DETOURS SHALL BE APPROVED BY AIRPORT OPERATIONS AND SECURITY.

PHX Sky Harbor  
 City of Phoenix Aviation Department  
 Phoenix Sky Harbor  
 International Airport  
 PHX T3 Recirculation  
 Roadway Improvement  
 Project No. AV1400029



DESIGNED BY: K. ROZITIS  
 DRAWN BY: C. BODINE  
 CHECKED BY: C. JHAVERI  
 DATE: 8/9/2024  
 DWG SCALE:

TRACE CONSULTING  
 101 E. WILSON ST. SUITE 111 PHOENIX, AZ 85012  
 PRIME CONSULTANT  
 SUB CONSULTANT

SHEET OVERVIEW TITLE

**LEGEND, ABBREVIATIONS,  
DETAILS, & QUANTITY  
SUMMARY**

REFER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28. THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX.

|    |           |             |      |
|----|-----------|-------------|------|
| NO | REVISIONS | SUBMISSIONS | DATE |
|    |           |             |      |

SHEET REFERENCE NUMBER:  
**GI-002**

SHEET 2 OF 23

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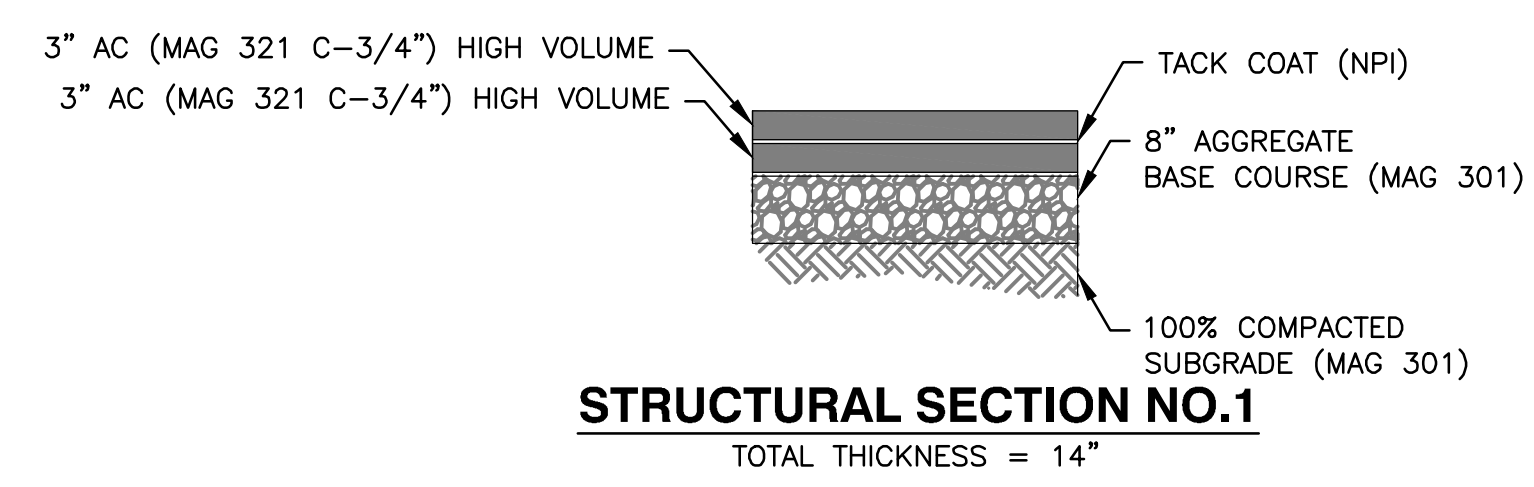
N:\2019\191101 - Engineering\_Support\_for\_Aviation\_JOC\191101.08 - PHX T3 Recirculation\_Roadway\_Improvements\Draw\191101.08 - GI-003.dwg - Aug 23, 2024, 11:13am

### ABBREVIATIONS

| ABBREVIATIONS | DEFINITIONS                            |
|---------------|--|
| 7L/25R        | RUNWAY DESIGNATION                     |
| ABC           | AGGREGATE BASE COURSE                  |
| AC            | ASPHALTIC CONCRETE                     |
| ADOT          | ARIZONA DEPARTMENT OF TRANSPORTATION   |
| AIP           | AIRPORT IMPROVEMENT PROGRAM            |
| APS           | ARIZONA PUBLIC SERVICE                 |
| ASTM          | AMERICAN SOCIETY FOR TESTING MATERIALS |
| CL OR C       | CENTER LINE                            |
| C TO C        | CENTER TO CENTER                       |
| CMP           | CORRUGATED METAL PIPE                  |
| CONC          | CONCRETE                               |
| CF OR CU FT   | CUBIC FEET                             |
| CY            | CUBIC YARDS                            |
| CZ            | CLEAR ZONE                             |
| DIA           | DIAMETER                               |
| DIP           | DUCTILE IRON PIPE                      |
| D             | DIAMETER OF 50% ROCK SIZE              |
| E             | EAST OR EASTING                        |
| EA            | EACH                                   |
| ELEC          | ELEC/ELECTRICAL                        |
| EL OR ELEV    | ELEVATION                              |
| EX OR EXST    | EXISTING                               |
| FAA           | FEDERAL AVIATION ADMINISTRATION        |
| FIN           | FINISHED                               |
| FL OR F       | FLOW LINE                              |
| FT            | FOOT                                   |
| GPM           | GALLONS PER MINUTE                     |
| ID            | INSIDE DIAMETER                        |
| IE            | INVERT ELEVATION                       |
| JB            | JUNCTION BOX                           |
| L             | LENGTH OR LEFT                         |
| LBS           | POUNDS                                 |
| LF            | LINEAL FOOT                            |
| LS            | LUMP SUM                               |
| LT            | LEFT                                   |
| MAG           | MARICOPA ASSOCIATION OF GOVERNMENTS    |
| MAX           | MAXIMUM                                |
| MH            | MANHOLE                                |
| MIN           | MINIMUM                                |
| N             | NORTH OR NORTHING                      |
| NO.           | NUMBER                                 |
| NPI           | NON-PAY-ITEM                           |
| NTS           | NOT TO SCALE                           |
| N/A           | NON APPLICABLE                         |
| OC            | ON CENTER                              |
| OD            | OUTSIDE DIAMETER                       |
| PROP          | PROPOSED                               |
| PVC           | POLYVINYL CHLORIDE                     |
| PVMT          | PAVEMENT                               |
| R             | RADIUS OR RIGHT                        |
| RCP           | REINFORCED CONCRETE PIPE               |
| REINF         | REINFORCING                            |
| ROW           | RIGHT-OF-WAY                           |
| RSA           | RUNWAY SAFETY AREA                     |
| RT            | RIGHT                                  |
| RWY           | RUNWAY                                 |
| S             | SOUTH OR SLOPE                         |
| SAL           | SAFETY AREA LIMITS                     |
| SD            | STANDARD DETAIL OR STORM DRAIN         |
| SECT          | SECTION                                |
| SHT           | SHEET                                  |
| SPECS         | SPECIFICATIONS                         |
| STA           | STATION                                |
| SY            | SQUARE YARDS                           |
| T             | TANGENT LENGTH                         |
| T.C.          | TOP OF CONCRETE                        |
| TSA           | TAXIWAY SAFETY AREA                    |
| TWY           | TAXIWAY                                |
| TYP           | TYPICAL                                |
| UG            | UNDERGROUND                            |
| VCP           | VITRIFIED CLAY PIPE                    |
| W             | WEST OR WATER                          |
| w             | WATT                                   |
| WT            | WEIGHT                                 |
| #             | REBAR SIZE NUMBER                      |

### ABBREVIATIONS

| ABBREVIATIONS | DEFINITIONS                                 |
|---------------|---|
| ⊙             | AT  |
| ILS           | INSTRUMENT LANDING SYSTEM                   |
| HP            | HIGH POINT                                  |
| GALV          | GALVANIZED                                  |
| GAL           | GALLON                                      |
| GA            | GAUGE                                       |
| EVC           | END VERTICAL CURVE                          |
| ESMT          | EASEMENT                                    |
| CONST         | CONSTRUCTION                                |
| CFS           | CUBIC FEET PER SECOND                       |
| BVC           | BEGIN VERTICAL CURB                         |
| BOT           | BOTTOM                                      |
| BC            | BEGIN CURVE                                 |
| ATCT          | AIR TRAFFIC CONTROL TOWER                   |
| APPROX        | APPROXIMATE                                 |
| ARFF          | AIRPORT RESCUE AND FIRE FIGHTING            |
| AOA           | AIR OPERATIONS AREA                         |
| ALT           | ALTERNATE                                   |
| CTB           | CEMENT TREATED BASE                         |
| SWPPP         | STORM WATER POLLUTION PREVENTION PLAN       |
| SCHD          | SCHEDULE                                    |
| PSHA          | PHOENIX SKY HARBOR INTERNATIONAL AIRPORT    |
| RGRCP         | RUBBER GASKET REINFORCED CONCRETE PIPE      |
| KV            | KILOVOLT                                    |
| NAVD          | NORTH AMERICAN VERTICAL DATUM               |
| CLSM          | CONTROLLED LOW STRENGTH MATERIAL            |
| NEMA          | NATIONAL ELECTRICAL MANUFACTURERS ASSOC.    |
| NOTAM         | NOTICE TO AIRMAN                            |
| TBM           | TEMPORARY BENCH MARKS                       |
| COP           | CITY OF PHOENIX                             |
| PC            | POINT OF CURVATURE                          |
| PI            | POINT OF INTERSECTION                       |
| PCC           | PORTLAND CEMENT CONCRETE                    |
| PCCP          | PORTLAND CEMENT CONCRETE PAVEMENT           |
| PETRO         | PETROLEUM                                   |
| PT            | POINT OF TANGENCY                           |
| PVI           | POINT OF VERTICAL INTERSECTION              |
| CPM           | CRITICAL PATH METHOD                        |
| ADEQ          | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY |
| SF            | SQUARE FEET OR SEMI-FLUSH                   |
| STD           | STANDARD                                    |
| VC            | VERTICAL CURVE                              |
| V OR VERT     | VERTICAL                                    |
| TOFA          | TAXIWAY OBJECT FREE AREA                    |
| N.O.T.        | NOTICE OF TERMINATION                       |
| N.O.I.        | NOTICE OF INTENT                            |
| SIDA          | SECURITY IDENTIFICATION DISPLAY AREA        |
| DVT           | DEER VALLEY AIRPORT                         |
| CPM           | CRITICAL PATH METHOD                        |
| POB           | POINT OF BEGINNING                          |
| POE           | POINT OF ENDING                             |
| PCC           | POINT OF COMPOUND CURVATURE                 |
| PRC           | POINT OF REVERSE CURVATURE                  |



(USE FOR BIDDING PURPOSES ONLY, MATCH EXISTING PAVEMENT SECTION FOR CONSTRUCTION)  
IN NO CASE SHALL THE CONSTRUCTED PAVEMENT REPLACEMENT BE LESS THAN STRUCTURAL SECTION NO. 1

### LEGEND

| DESCRIPTION                        | EXISTING | PROPOSED |
|------------------------------------|----------|----------|
| CONCRETE SIGN BASE                 |          |          |
| SANITARY SEWER AND MANHOLE         |          |          |
| STORM DRAIN, MANHOLE & INLET       |          |          |
| CHAIN LINK FENCE                   |          |          |
| MAJOR CONTOUR LINES                |          |          |
| MINOR CONTOUR LINES                |          |          |
| FIBER OPTIC                        |          |          |
| GRADE BREAK                        |          |          |
| FLOW LINE                          |          |          |
| FILL LIMITS                        |          |          |
| APS MANHOLE                        |          |          |
| WATER LINE                         |          |          |
| TELEPHONE                          |          |          |
| GAS LINE                           |          |          |
| ELECTRICAL                         |          |          |
| CONSTRUCTION NOTE                  |          |          |
| SEE ELECTRICAL SHEETS              |          |          |
| ADJUSTMENT/REMOVAL/DEMOLITION NOTE |          |          |
| MATCH EXISTING                     |          |          |
| BOLLARD                            |          |          |
| RAILING                            |          |          |

### SHEET INDEX

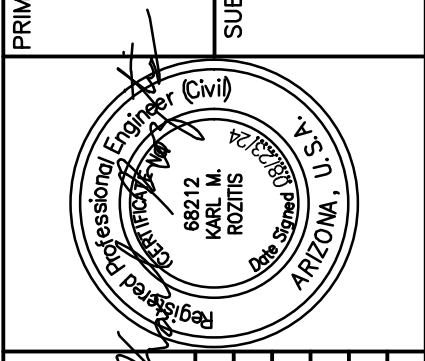
| SHEET NO. | SHEET REF. NO. | SHEET DESCRIPTION                                  |
|-----------|----------------|--|
| 1         | GI-001         | COVER SHEET  |
| 2         | GI-002         | LEGEND, ABBREVIATIONS, DETAILS, & QUANTITY SUMMARY |
| 3         | GI-003         | GENERAL NOTES                                      |
| 4         | GI-401         | PROJECT AREA PLAN                                  |
| 5         | VF-401         | T3 TURN AROUND SURVEY CONTROL PLAN                 |
| 6         | CD-101         | T3 TURN AROUND DEMOLITION PLAN                     |
| 7         | CP-101         | T3 TURN AROUND CIVIL IMPROVEMENT PLANS             |
| 8         | CP-102         | T3 TURN AROUND SIGNING AND STRIPING PLAN           |
| 9         | VF-402         | T3 MERGE SURVEY CONTROL PLAN                       |
| 10        | CD-102         | T3 MERGE DEMOLITION PLAN                           |
| 11        | CP-103         | T3 MERGE CIVIL IMPROVEMENT PLAN                    |
| 12        | CP-104         | T3 MERGE SIGNING AND STRIPING PLAN                 |
| 13        | DT-101         | DETAILS  |
| 14        | E001           | ELECTRICAL LEGEND AND NOTES                        |
| 15        | ED101          | ELECTRICAL DEMOLITION PLAN                         |
| 16        | ED102          | T3 TURN AROUND ELECTRICAL DEMOLITION PLAN          |
| 17        | ED103          | T3 MERGE ELECTRICAL DEMOLITION PLAN                |
| 18        | EA101          | ELECTRICAL INSTALLATION PLAN                       |
| 19        | EA102          | T3 TURN AROUND ELECTRICAL INSTALLATION PLAN        |
| 20        | EA103          | T3 MERGE ELECTRICAL INSTALLATION PLAN              |
| 21        | EA501          | ELECTRICAL DETAILS                                 |
| 22        | EA502          | ELECTRICAL DETAILS                                 |
| 23        | EA601          | PANEL LB SCHEDULE                                  |

### APPROXIMATE CIVIL QUANTITY SUMMARY

| ITEM | DESCRIPTION  | UNIT  | T3 TURN AROUND | T3 MERGE | QUANTITY |
|------|--|-------|----------------|----------|----------|
| 1    | ALLOWANCE FOR UNFORESEEN UTILITY RELOCATIONS   | ALLOW | -              | -        | 1        |
| 2    | CONSTRUCTION SURVEYING AND LAYOUT  | JOB   | -              | -        | 1        |
| 3    | MOBILIZATION/DEMOLITION  | JOB   | -              | -        | 1        |
| 4    | CLEARING AND GRUBBING  | LS    | -              | -        | 1        |
| 5    | CONSTRUCT ASPHALT CONCRETE FOR PERMANENT PAVEMENT REPLACEMENT TYPE C-3/4, 6" THICK       | SY    | 146            | 57       | 203      |
| 6    | SLURRY SEAL COAT PER MAG SPEC 332  | SY    | -              | 3921     | 3921     |
| 7    | CONSTRUCT CONCRETE VALLEY GUTTER PER MAG STD DTL 240, MOD PER PLANS                      | SF    | -              | 92       | 92       |
| 8    | CONSTRUCT CONCRETE CURB AND GUTTER PER MAG STD DTL 220-1, TYPE A                         | LF    | 343            | 65       | 408      |
| 9    | REMOVE EXISTING CONCRETE CURB AND GUTTER   | LF    | 344            | 65       | 409      |
| 10   | REMOVE EXISTING CONCRETE VALLEY GUTTER   | SF    | -              | 102      | 102      |
| 11   | REMOVE EXISTING SIGN, POSTS, & FOUNDATIONS   | EA    | 1              | 2        | 3        |
| 12   | OBLITERATE EXISTING PAVEMENT MARKINGS (4" EQUIVALENT)                                    | LF    | 209            | 2710     | 2919     |
| 13   | OBLITERATE EXISTING PAVEMENT SYMBOL MARKINGS   | EA    | -              | 17       | 17       |
| 14   | INSTALL WHITE HAZARD MARKER PER MAG STD DTL 141, TYPE 1                                  | EA    | -              | 32       | 32       |
| 15   | INSTALL NEW SIGN PANEL, FLAT SHEET ALUMINUM, RETRO-REFLECTIVE SHEETING (TYPE IV OR EQV.) | SF    | 18             | 66       | 84       |
| 16   | INSTALL NEW SIGN POST AND FOUNDATION PER MAG STD DTL 131, TYPE C                         | EA    | 2              | 5        | 7        |
| 17   | APPLY PAVEMENT MARKING (WHITE PAINT) (4" EQUIVALENT)                                     | LF    | 790            | 2488     | 3278     |
| 18   | APPLY PAVEMENT MARKING PREFORMED SINGLE ARROW (THRU)                                     | EA    | -              | 3        | 3        |
| 19   | APPLY PAVEMENT MARKING PREFORMED SINGLE ARROW (MERGE LEFT)                               | EA    | -              | 4        | 4        |
| 20   | APPLY PAVEMENT MARKING PREFORMED "ONLY"  | EA    | -              | 1        | 1        |
| 21   | APPLY PAVEMENT MARKING, PREFORMED "MPH 25"   | EA    | -              | 5        | 5        |
| 22   | APPLY PAVEMENT MARKING, PREFORMED "MPH 35"   | EA    | -              | 2        | 2        |
| 23   | ALLOWANCE FOR TEMPORARY TRAFFIC CONTROL  | ALLOW | -              | -        | 1        |
| 24   | INSTALL STEEL SLEEVE BOLLARD (5' O.C.) PER DETAIL 2, SHEET 13                            | EA    | -              | 13       | 13       |
| 25   | INSTALL SWING GATE PER OWNER'S SPECIFICATIONS  | EA    | -              | 1        | 1        |
| 26   | INSTALL RAILING PER DETAIL 1, SEE SHEET 13   | LF    | -              | 45       | 45       |

SEE ELECTRICAL SHEETS FOR ELECTRICAL QUANTITIES

TRACE CONSULTING  
101 E. WASHINGTON ST. SUITE 110 PHOENIX, AZ 85004



PRIME CONSULTANT  
SUB CONSULTANT  
DATE  
NO. REVISIONS / SUBMISSIONS

PHX DOT BYR  
CITY OF PHOENIX AVIATION DEPARTMENT  
PHOENIX SKY HARBOR INTERNATIONAL AIRPORT  
PHX T3 RECIRCULATION ROADWAY IMPROVEMENT  
PROJECT NO. AV14000029

Designed by: K. ROZITIS  
Drawn by: C. BODINE  
Checked by: C. JHAVERI  
Date: 8/9/2024  
Dwg. scale:

SHEET OVERVIEW TITLE  
**GENERAL NOTES**

SHEET REFERENCE NUMBER:  
**GI-003**  
SHEET 3 OF 23



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|  |                         |  |
|--|-------------------------|--|
| SHEET OVERVIEW TITLE<br><b>PROJECT AREA PLAN</b> | Designed by: K. ROZITIS | SHEET REFERENCE NUMBER:<br><b>GI-401</b> |
|  | Drawn by: C. BODINE     |  |
| Checked by: C. JHAVERI                           | Date: 8/9/2024          | SHEET 4 OF 23                            |
| Dwg scale:                                       |                         |  |

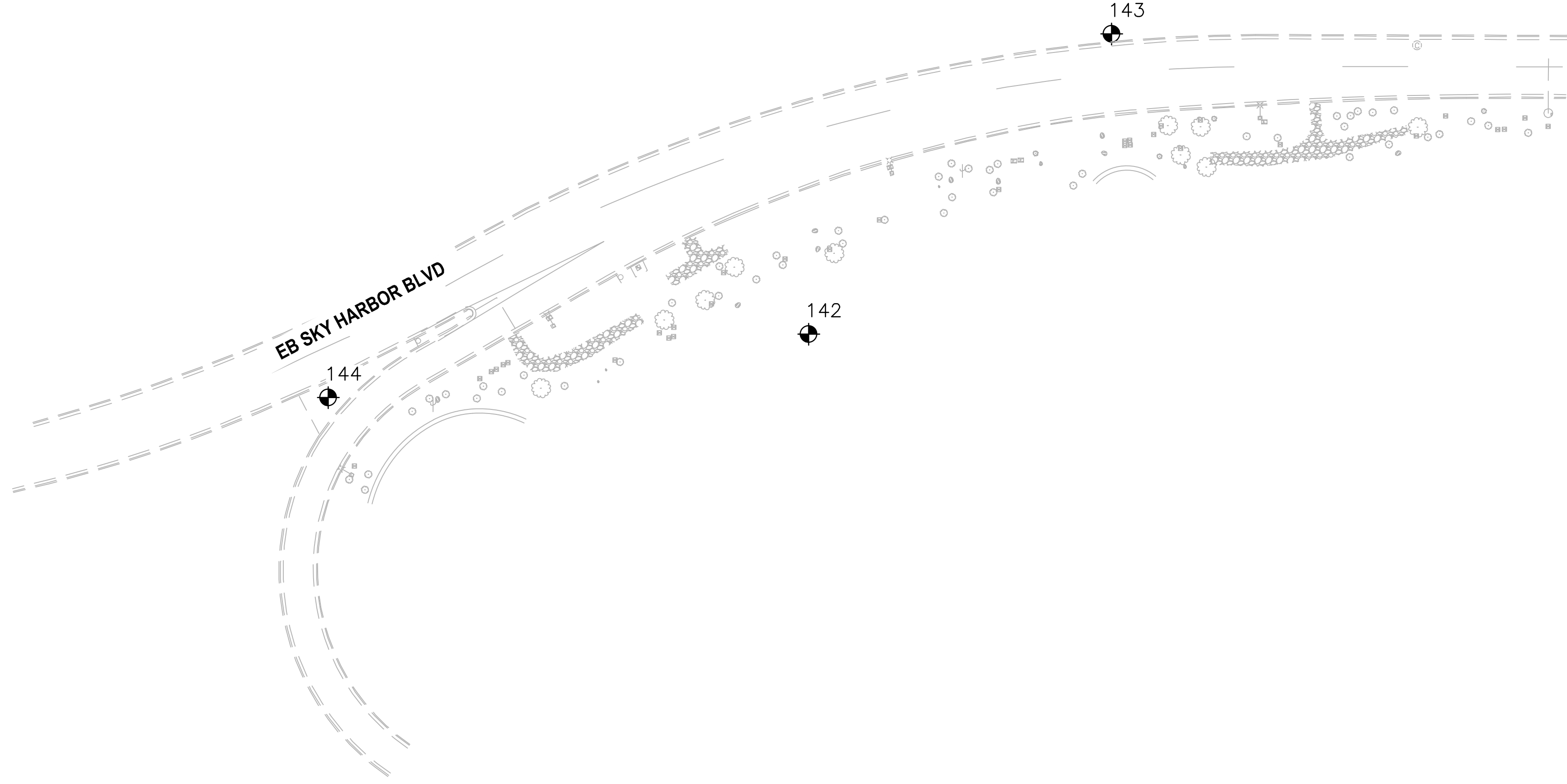
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|--|--|
| <br>CITY OF PHOENIX AVIATION DEPARTMENT<br><b>PHOENIX SKY HARBOR INTERNATIONAL AIRPORT</b><br><b>PHX T3 RECIRCULATION ROADWAY IMPROVEMENT</b><br><b>PROJECT NO. AV14000029</b> | PRIME CONSULTANT<br><br>TRACE CONSULTING<br><small>101 E. WASHINGTON ST. SUITE 110 PHOENIX, AZ 85004</small> |
|  | SUB CONSULTANT<br><br>K. ROZITIS<br>PE<br>19110  |

|  |  |
|--|--|
| <small>PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX.</small> | NO. _____<br>REVISIONS / SUBMISSIONS<br>DATE _____ |
|--|--|



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| SURVEY CONTROL POINTS |           |           |           |                        |
|-----------------------|-----------|-----------|-----------|------------------------|
| POINT #               | NORTHING  | EASTING   | ELEVATION | DESCRIPTION            |
| 142                   | 886917.57 | 669699.60 | 1121.44   | SED 60D NAIL           |
| 143                   | 887055.84 | 669839.08 | 1115.92   | SET 60D NAIL           |
| 144                   | 886888.39 | 669478.42 | 1115.36   | CHISELED X IN CONCRETE |

**SURVEY CONTROL NOTES**

THE SURVEY CONTROL PARAMETERS FOR THIS SURVEY ARE BASED ON THE CITY OF PHOENIX SKY HARBOR INTERNATIONAL AIRPORT CONTROL PLAN DATED SEPTEMBER 27, 2001 BY AZTEC ENGINEERING, PROJECT NO. AZ0011402.

ALL COORDINATES ARE NAD 83 ARIZONA CENTRAL ZONE STATE PLANE COORDINATES SCALED TO GROUND ABOUT 0,0 BY A FACTOR OF 1.0001480129.

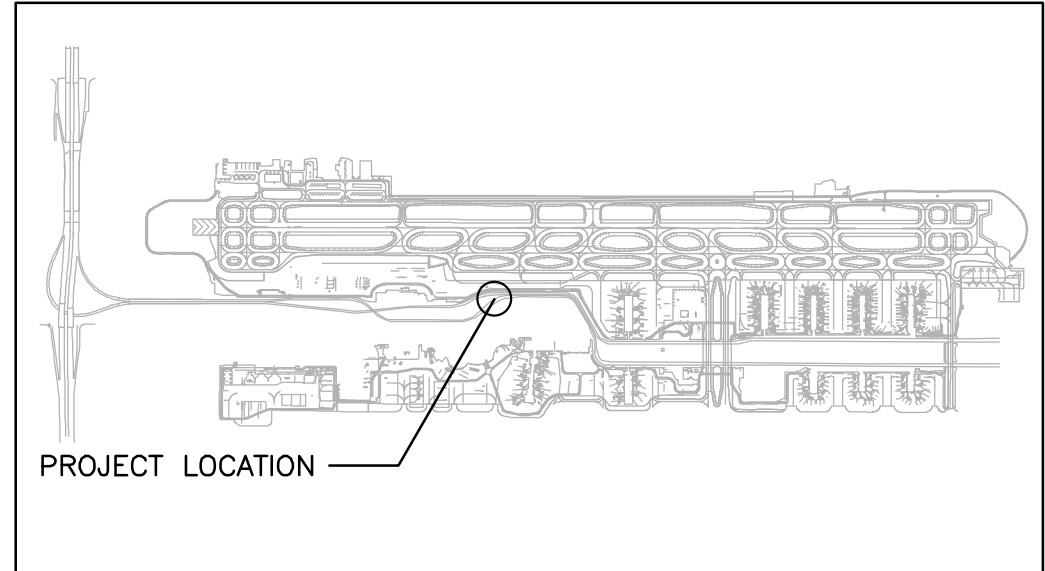
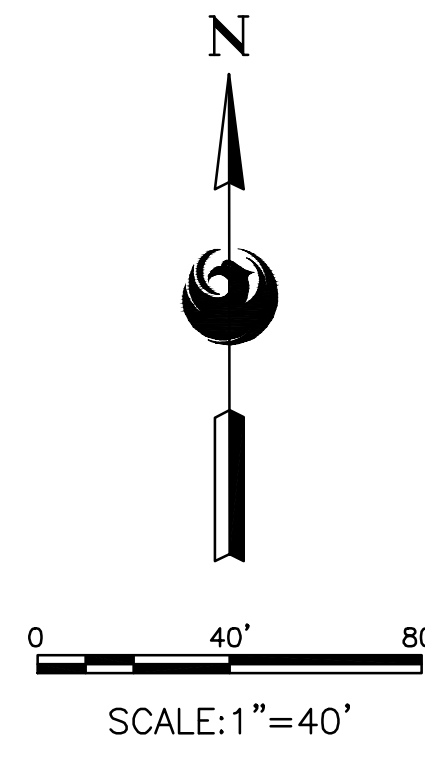
INTERMEDIATE GRID CONTROL POINTS AND SURVEY CONTROL POINTS FOR INDIVIDUAL WERE SET BASED ON THE CONTROL PLAN DESCRIBED ABOVE.

THE FIELD PORTION OF THIS SURVEY WAS PERFORMED DURING THE MONTH OF APRIL, 2022.

**PROJECT BENCHMARK:**

N: 886993.9868  
E: 673056.0629  
ELEV: 1121.55

CP#5, A BRASS CAP IN THE NORTHEAST CORNER OF A BLAST FENCE FOUNDATION, PER THE CITY OF PHOENIX SKY HARBOR INTERNATIONAL AIRPORT CONTROL PLAN DATED SEPTEMBER 27, 2001 BY AZTEC ENGINEERING, PROJECT NO. AZ0011402

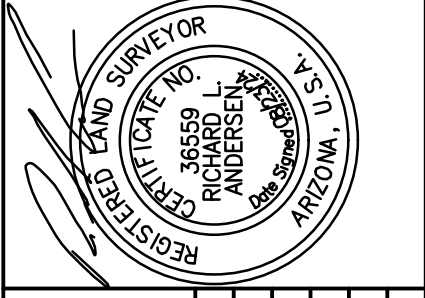


**KEY MAP**  
NTS

**TRACE CONSULTING**  
201 E. WASHINGTON ST. SUITE 110 PHOENIX, AZ 85004

PRIME CONSULTANT

SUB CONSULTANT



PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX.

| NO | REVISIONS / SUBMISSIONS | DATE |
|----|-------------------------|------|
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CITY OF PHOENIX AVIATION DEPARTMENT

**PHOENIX SKY HARBOR INTERNATIONAL AIRPORT PHX T3 RECIRCULATION ROADWAY IMPROVEMENT PROJECT NO. AV14000029**

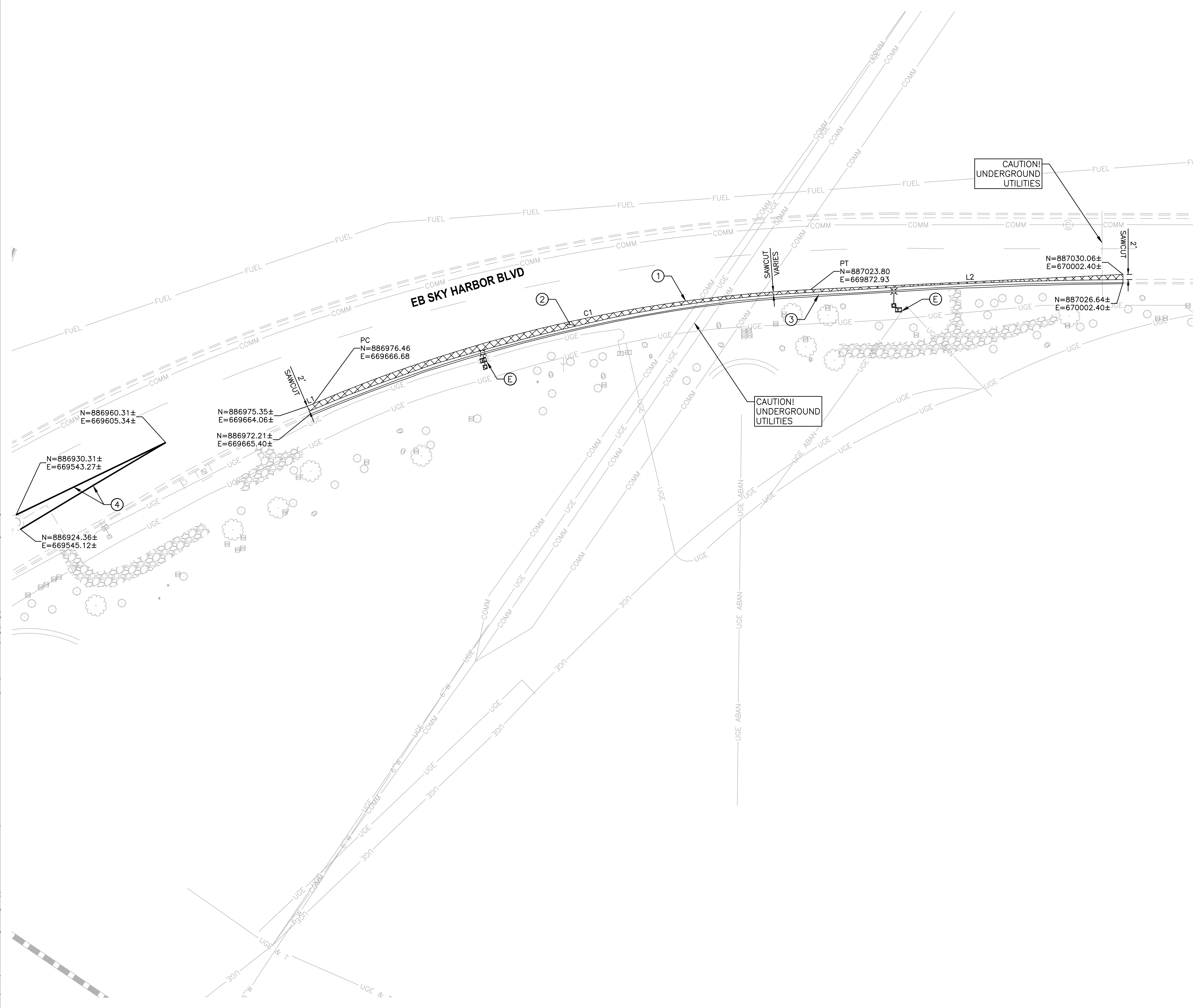
Designed by: K. ROZITIS  
Drawn by: C. BODINE  
Checked by: C. JHAVERI  
Date: 8/9/2024  
Dwg scale:

SHEET OVERVIEW TITLE

**SURVEY CONTROL PLAN  
T3 TURN AROUND**



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| REMOVAL NOTES |  |      |     |
|---------------|--|------|-----|
| NO            | DESCRIPTION  | UNIT | QTY |
| ①             | SAWCUT EXISTING PAVEMENT FULL DEPTH                    | NPI  | -   |
| ②             | REMOVE EXISTING ASPHALT PAVEMENT (PAID UNDER M3360260) | NPI  | -   |
| ③             | REMOVE EXISTING CONCRETE CURB AND GUTTER               | LF   | 344 |
| ④             | OBLITERATE EXISTING PAVEMENT MARKINGS (4" EQUIVALENT)  | LF   | 209 |

| LEGEND |                                   |
|--------|-----------------------------------|
|        | EXISTING ASPHALT PAVEMENT REMOVAL |

| LINE TABLE |         |             |
|------------|---------|-------------|
| LINE #     | LENGTH  | BEARING     |
| L1         | 2.85'   | S66°55'02"W |
| L2         | 129.62' | S87°13'53"W |

| CURVE TABLE |         |         |            |         |
|-------------|---------|---------|------------|---------|
| CURVE #     | LENGTH  | RADIUS  | DELTA      | TANGENT |
| C1          | 212.73' | 600.00' | 020°18'51" | 107.49' |

NOTE: SEE ELECTRICAL PLANS FOR ELECTRICAL DEMOLITION ITEMS.

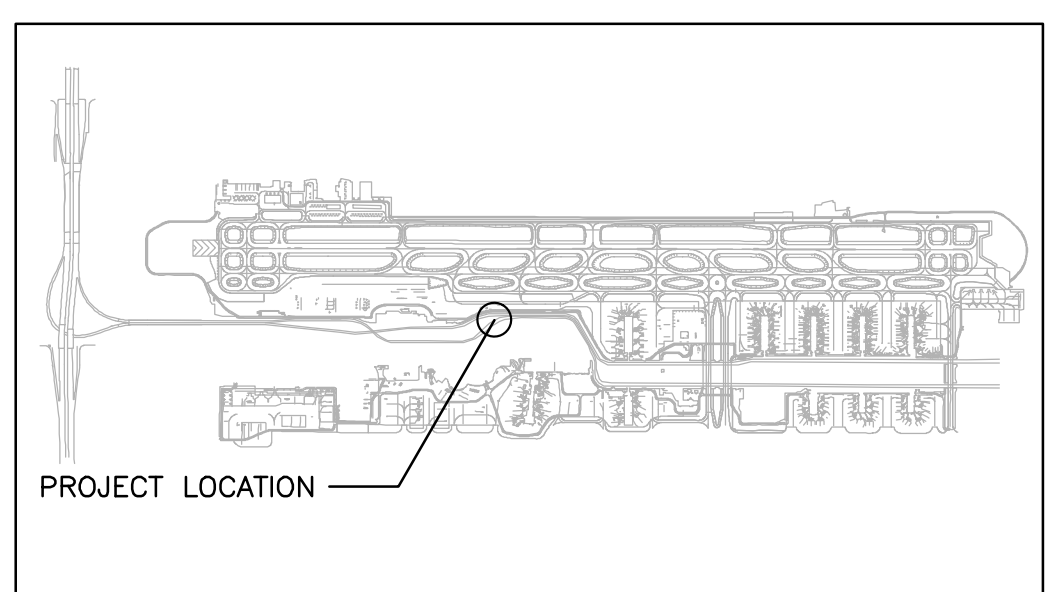
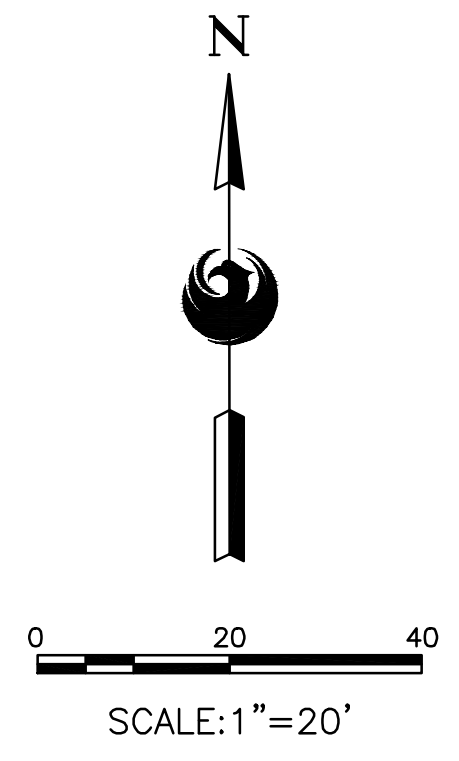
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 SUB CONSULTANT

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| NO | REVISIONS / SUBMISSIONS | DATE |
|----|-------------------------|------|
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**PHOENIX SKY HARBOR INTERNATIONAL AIRPORT**  
**PHX T3 RECIRCULATION ROADWAY IMPROVEMENT**  
**PROJECT NO. AV14000029**

Designed by: K. ROZITIS  
 Drawn by: C. BODINE  
 Checked by: C. JHAVERI  
 Date: 8/9/2024  
 Dwg scale:



SHEET OVERVIEW TITLE

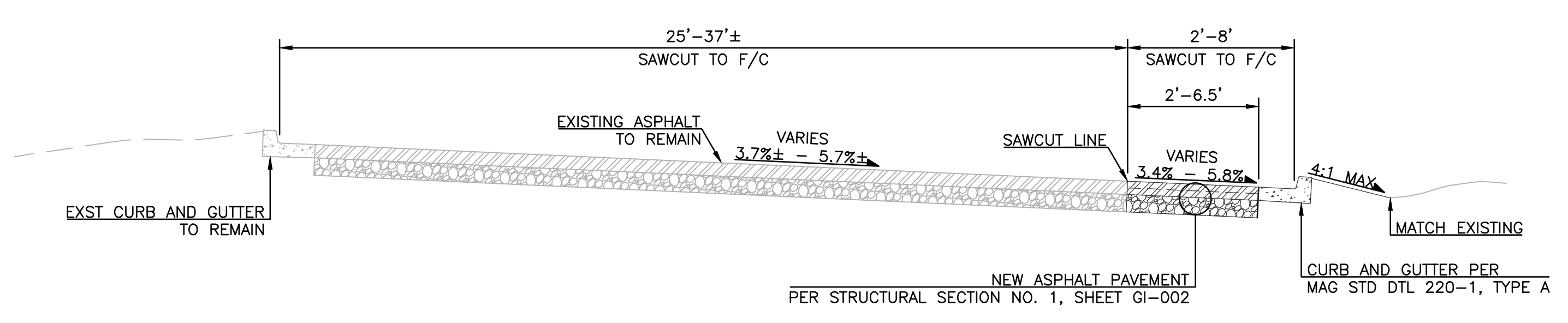
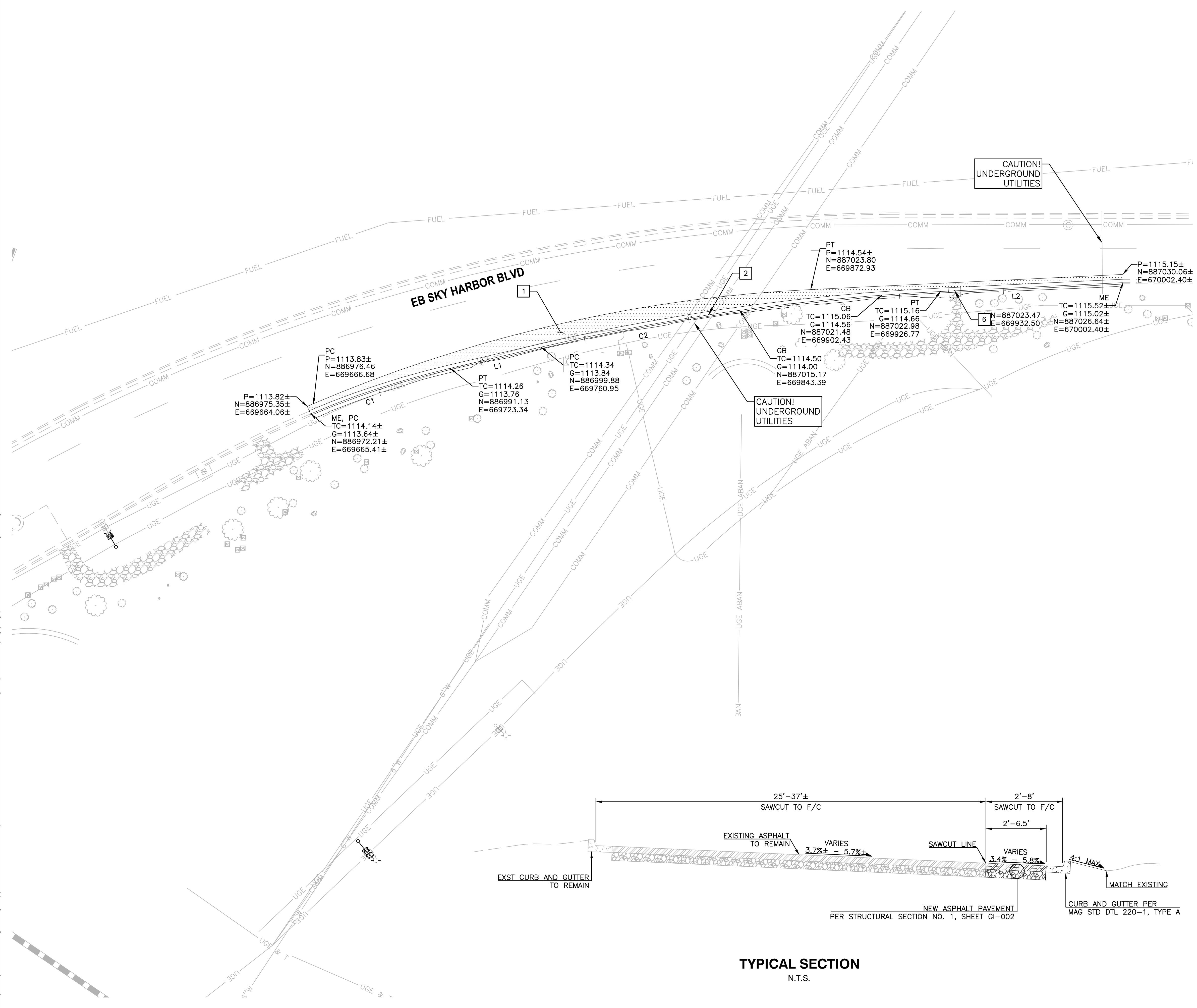
**DEMOLITION PLAN**  
**T3 TURN AROUND**

SHEET REFERENCE NUMBER:  
**CD-101**

SHEET 6 OF 23



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**TYPICAL SECTION**  
N.T.S.

| CONSTRUCTION NOTES |  |      |     |
|--------------------|--|------|-----|
| NO                 | DESCRIPTION  | UNIT | QTY |
| 1                  | CONSTRUCT ASPHALT CONCRETE FOR PERMANENT PAVEMENT REPLACEMENT PER STRUCTURAL SECTION NO. 1, MAG 336 AND COP SUPPLEMENTS                | SY   | 146 |
| 2                  | CONSTRUCT CONCRETE CURB AND GUTTER PER MAG STD DTL 220-1, TYPE A   | LF   | 343 |
| 6                  | CONSTRUCT CONCRETE CURB CUT TYPE 1, PER MAG STD DTL 226-1, MOD. TO W=5', LOCATION PER PLAN SHOWN AT CENTER OF CURB CUT AT FACE OF CURB | EA   | 1   |

LEGEND

|  |  |
|--|--|
|  | ASPHALT PERMANENT PAVEMENT REPLACEMENT |
|--|--|

**GENERAL NOTES**

1. CONTROL POINTS AND LINE/CURVE INFORMATION ALONG CURB IS SHOWN AT THE FACE OF CURB.

LINE TABLE

| LINE # | LENGTH | BEARING     |
|--------|--------|-------------|
| L1     | 38.71' | N76°54'30"E |
| L2     | 75.71' | N87°13'53"E |

CURVE TABLE

| CURVE # | RADIUS  | LENGTH  | DELTA     | TANGENT |
|---------|---------|---------|-----------|---------|
| C1      | 350.00' | 61.03'  | 9°59'27"  | 30.59'  |
| C2      | 930.00' | 167.56' | 10°19'24" | 84.01'  |

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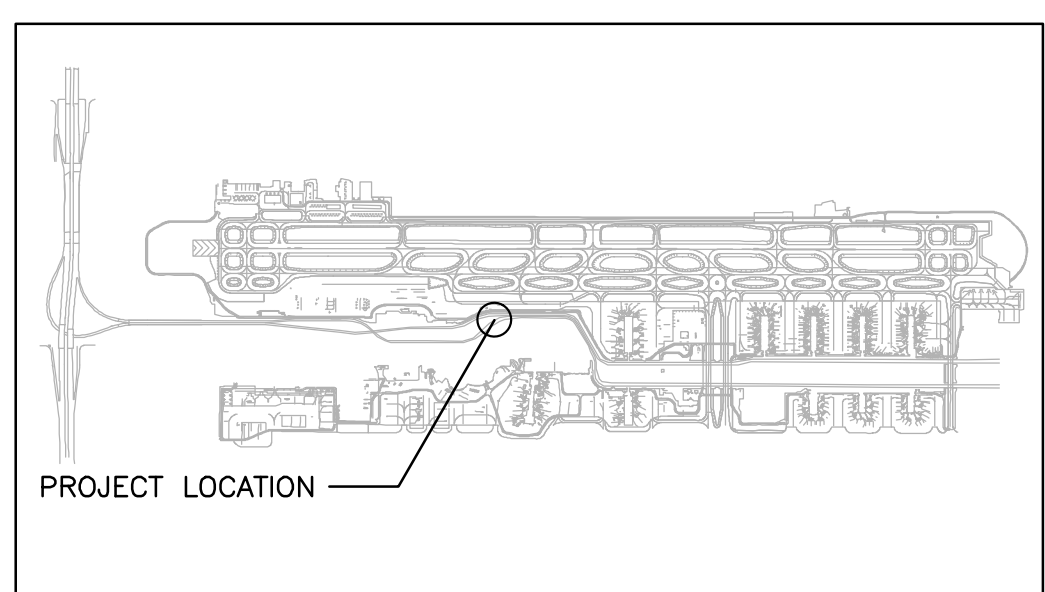
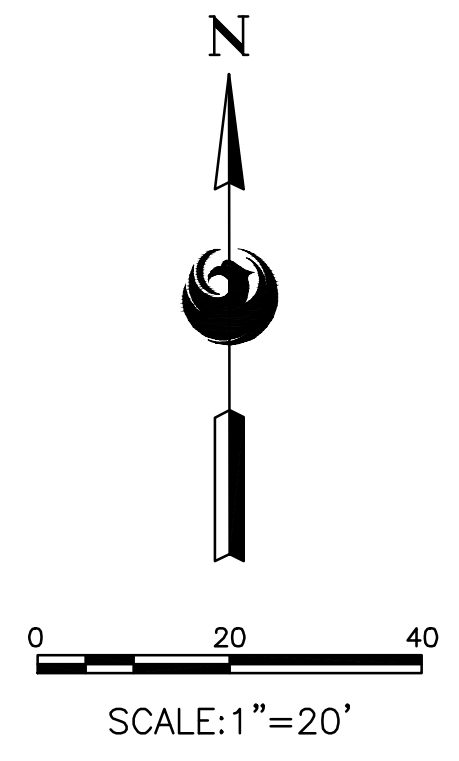
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| NO | REVISIONS / SUBMISSIONS | DATE |
|----|-------------------------|------|
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|    |                         |      |
|    |                         |      |

**PHX DOT BYR**  
CITY OF PHOENIX AVIATION DEPARTMENT  
**PHOENIX SKY HARBOR INTERNATIONAL AIRPORT PHX T3 RECIRCULATION ROADWAY IMPROVEMENT PROJECT NO. AV14000029**

Designed by: K. ROZITIS  
Drawn by: C. BODINE  
Checked by: C. JHAVERI  
Date: 8/9/2024  
Dwg scale:



**KEY MAP**  
NTS

SHEET OVERVIEW TITLE

**CIVIL IMPROVEMENT PLANS  
T3 TURN AROUND**

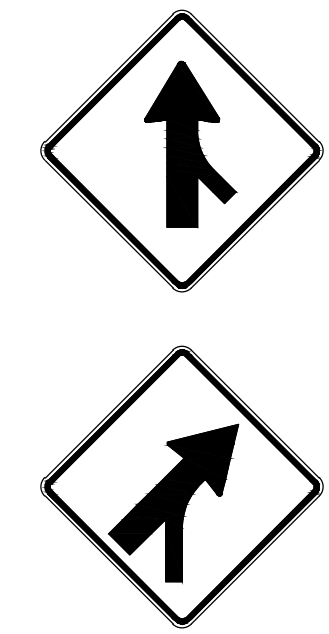
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**CP-101**

SHEET 7 OF 23



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**SIGN LEGEND**



W4-1 (36"X36") BLACK ON YELLOW  
 1 NEW - MOUNT ON NEW POST AND  
 FOUNDATION (POST AND FOUNDATION PER  
 MAG STD DTL 131, TYPE C)

W4-5 (36"X36") BLACK ON YELLOW  
 1 NEW - MOUNT ON NEW POST AND  
 FOUNDATION (POST AND FOUNDATION PER  
 MAG STD DTL 131, TYPE C)

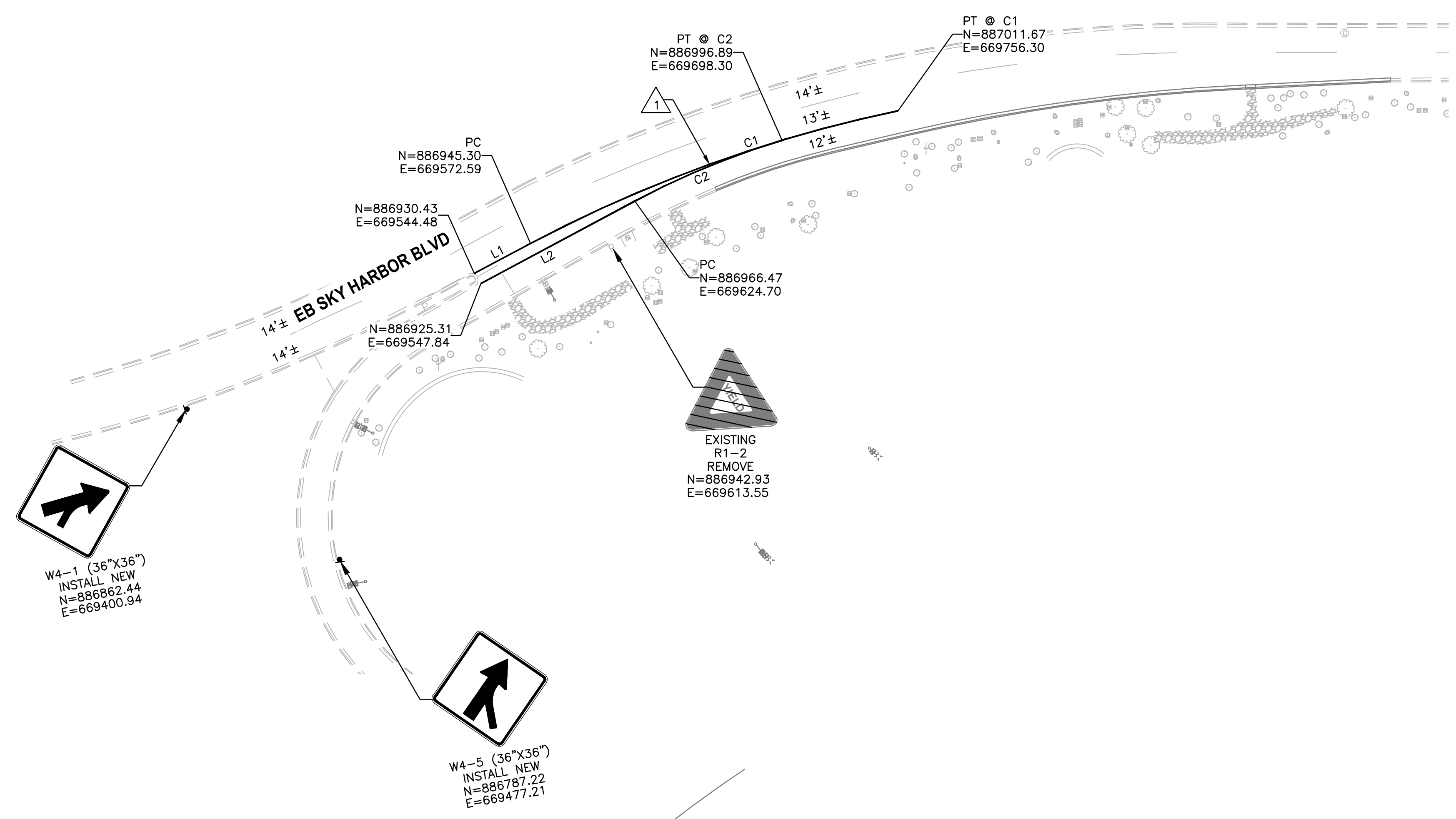
**PAVEMENT MARKING NOTES**

| NO | DESCRIPTION  | UNIT | QTY |
|----|--|------|-----|
| 1  | APPLY 8-INCH (8") SOLID WHITE PAVEMENT MARKING (4" EQUIVALENT) | LF   | 790 |

NOTES:  
 1. CONTRACTOR SHALL OBLITERATE ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS.

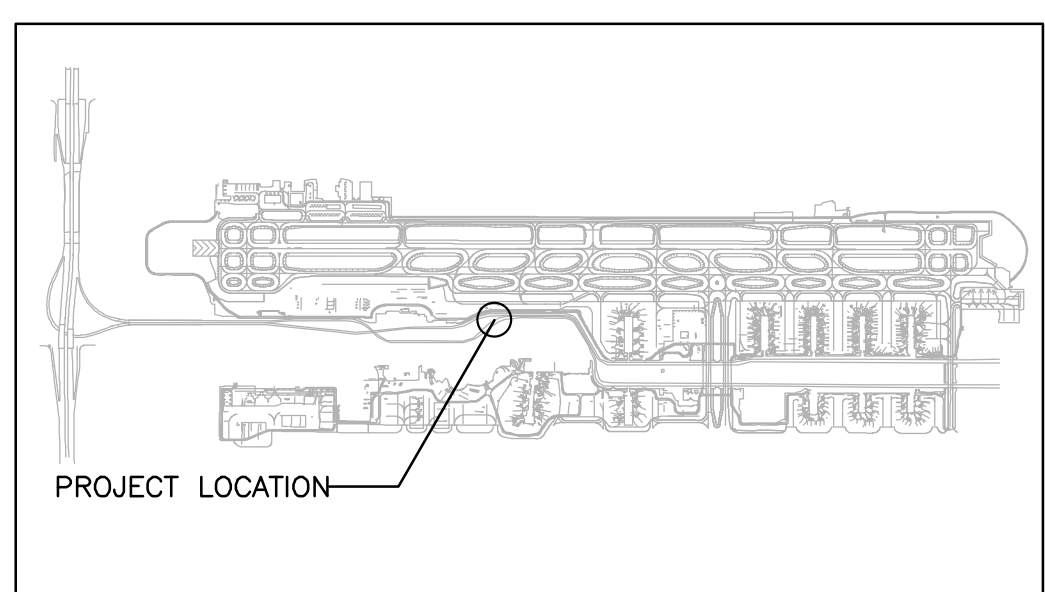
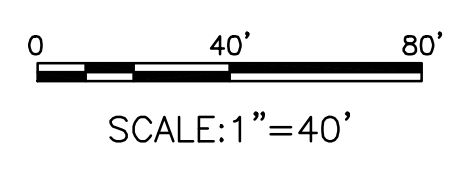
| LINE TABLE |        |             |
|------------|--------|-------------|
| LINE #     | LENGTH | BEARING     |
| L1         | 31.80' | N62°06'57"E |
| L2         | 87.18' | N61°49'42"E |

| CURVE TABLE |         |         |           |         |
|-------------|---------|---------|-----------|---------|
| CURVE #     | RADIUS  | LENGTH  | DELTA     | TANGENT |
| C1          | 700.00' | 195.97' | 16°02'25" | 98.63'  |
| C2          | 400.00' | 79.78'  | 11°25'37" | 40.02'  |

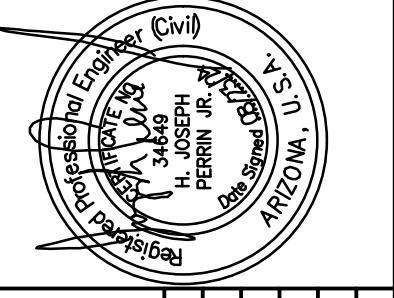


W4-1 (36"X36")  
 INSTALL NEW  
 N=886862.44  
 E=669400.94

W4-5 (36"X36")  
 INSTALL NEW  
 N=886787.22  
 E=669477.21



**TRACE CONSULTING**  
 101 E. WASHINGTON ST. SUITE 1100 PHOENIX, AZ 85004  
 PRIME CONSULTANT  
 SUB CONSULTANT



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| NO | REVISIONS / SUBMISSIONS | DATE |
|----|-------------------------|------|
|    |                         |      |
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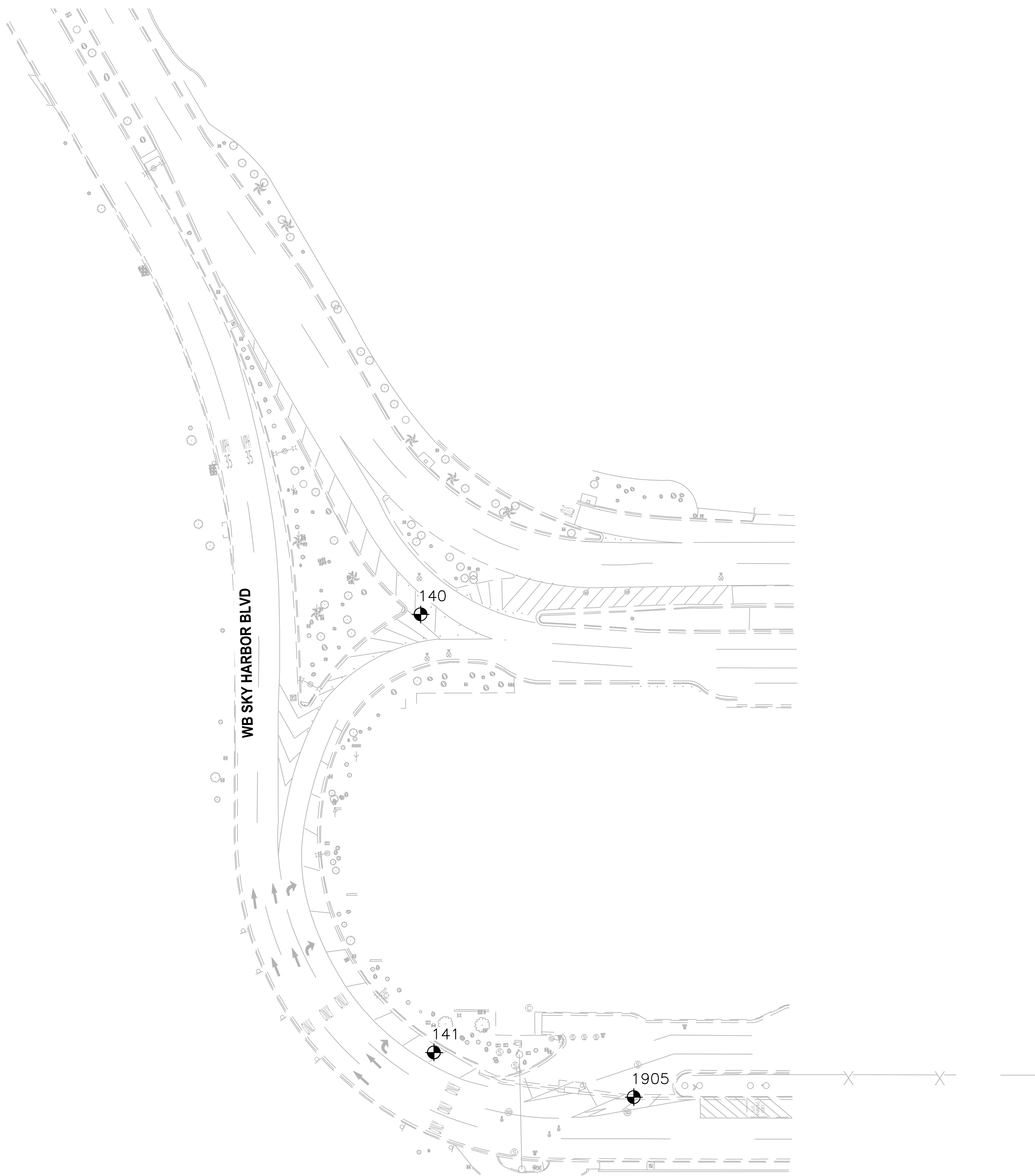
**PHX AVIATION**  
 CITY OF PHOENIX AVIATION DEPARTMENT  
**PHOENIX SKY HARBOR INTERNATIONAL AIRPORT**  
**PHX T3 RECIRCULATION ROADWAY IMPROVEMENT**  
**PROJECT NO. AV14000029**

Designed by: K. ROZITIS  
 Drawn by: C. BODINE  
 Checked by: C. JHAVERI  
 Date: 8/9/2024  
 Dwg scale:

SHEET OVERVIEW TITLE  
**SIGNING AND STRIPING PLAN**  
**T3 TURN AROUND**



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| SURVEY CONTROL POINTS |           |           |           |                       |
|-----------------------|-----------|-----------|-----------|-----------------------|
| POINT #               | NORTHING  | EASTING   | ELEVATION | DESCRIPTION           |
| 140                   | 886247.53 | 671575.94 | 1106.16   | SET MAG NAIL          |
| 141                   | 885988.41 | 671583.83 | 1105.35   | SET MAG NAIL          |
| 1905                  | 885962.05 | 671702.03 | 1105.19   | FOUND BRASS CAP FLUSH |

**SURVEY CONTROL NOTES**

THE SURVEY CONTROL PARAMETERS FOR THIS SURVEY ARE BASED ON THE CITY OF PHOENIX SKY HARBOR INTERNATIONAL AIRPORT CONTROL PLAN DATED SEPTEMBER 27, 2001 BY AZTEC ENGINEERING, PROJECT NO. AZ0011402.

ALL COORDINATES ARE NAD 83 ARIZONA CENTRAL ZONE STATE PLANE COORDINATES SCALED TO GROUND ABOUT 0,0 BY A FACTOR OF 1.0001480129.

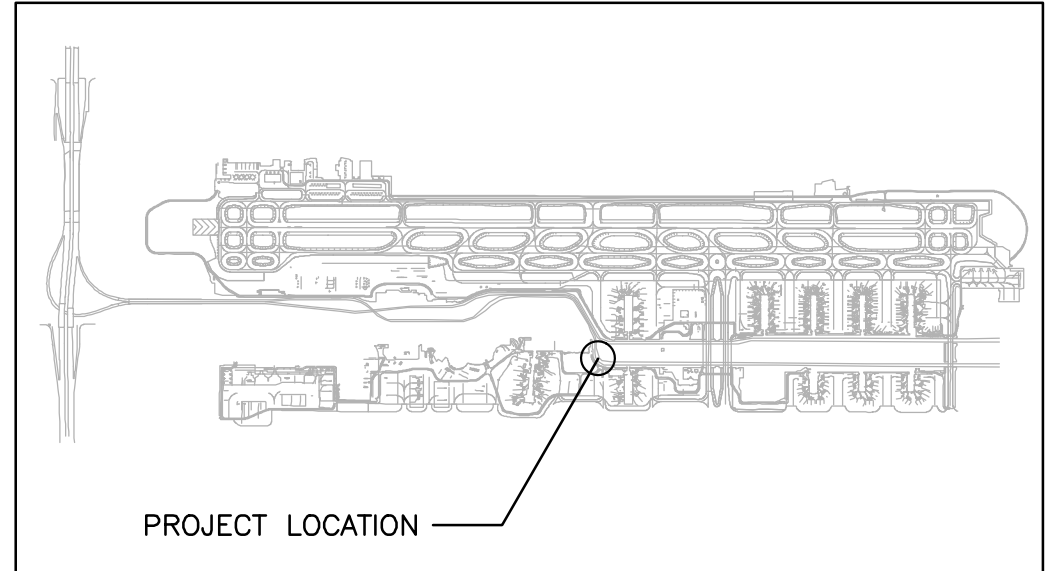
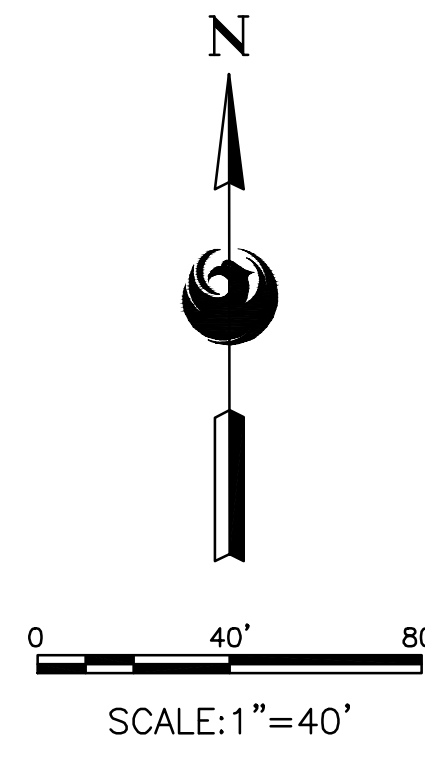
INTERMEDIATE GRID CONTROL POINTS AND SURVEY CONTROL POINTS FOR INDIVIDUAL WERE SET BASED ON THE CONTROL PLAN DESCRIBED ABOVE.

THE FIELD PORTION OF THIS SURVEY WAS PERFORMED DURING THE MONTH OF APRIL, 2022.

**PROJECT BENCHMARK:**

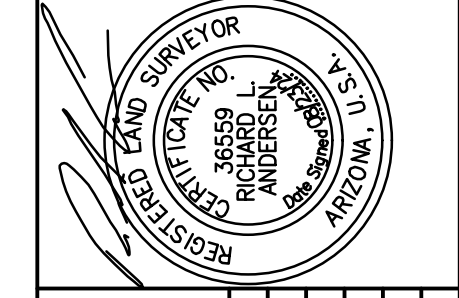
N: 886993.9868  
E: 673056.0629  
ELEV: 1121.55

CP#5, A BRASS CAP IN THE NORTHEAST CORNER OF A BLAST FENCE FOUNDATION, PER THE CITY OF PHOENIX SKY HARBOR INTERNATIONAL AIRPORT CONTROL PLAN DATED SEPTEMBER 27, 2001 BY AZTEC ENGINEERING, PROJECT NO. AZ0011402



**TRACE CONSULTING**  
201 E. Wisconsin St. Suite 110 Phoenix, AZ 85004

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SUB CONSULTANT



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| NO | REVISIONS / SUBMISSIONS | DATE |
|----|-------------------------|------|
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**PHX BYR**  
CITY OF PHOENIX AVIATION DEPARTMENT  
**PHOENIX SKY HARBOR INTERNATIONAL AIRPORT PHX T3 RECIRCULATION ROADWAY IMPROVEMENT PROJECT NO. AV14000029**

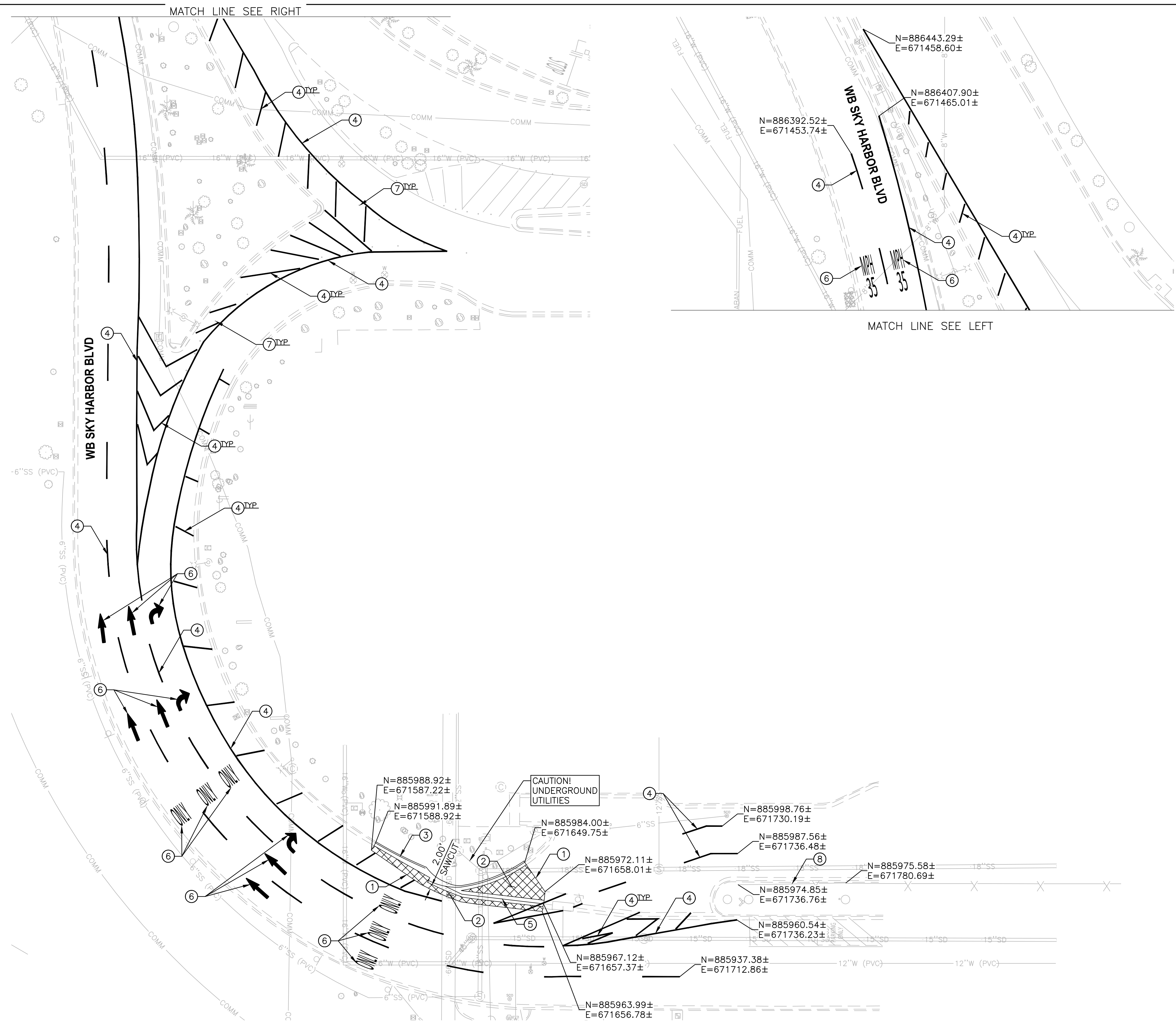
Designed by: K. ROZITIS  
Drawn by: C. BODINE  
Checked by: C. JHAVERI  
Date: 8/9/2024  
Dwg scale:

SHEET OVERVIEW TITLE

**SURVEY CONTROL PLAN  
T3 MERGE**



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| REMOVAL NOTES |  |      |      |
|---------------|--|------|------|
| NO            | DESCRIPTION  | UNIT | QTY  |
| ①             | SAWCUT EXISTING PAVEMENT FULL DEPTH                    | NPI  | -    |
| ②             | REMOVE EXISTING ASPHALT PAVEMENT (PAID UNDER M3360260) | NPI  | -    |
| ③             | REMOVE EXISTING CONCRETE CURB AND GUTTER               | LF   | 65   |
| ④             | OBLITERATE EXISTING PAVEMENT MARKINGS (4" EQUIVALENT)  | LF   | 2710 |
| ⑤             | REMOVE EXISTING CONCRETE VALLEY GUTTER                 | SF   | 102  |
| ⑥             | OBLITERATE EXISTING PAVEMENT LEGEND SYMBOL             | EA   | 17   |
| ⑦             | REMOVE EXISTING PLASTIC DELINEATOR                     | EA   | 18   |
| ⑧             | REMOVE EXISTING TEMPORARY BARRIER                      | LF   | 44   |

| LEGEND |                                   |
|--------|-----------------------------------|
|        | EXISTING ASPHALT PAVEMENT REMOVAL |

NOTE: SEE ELECTRICAL PLANS FOR ELECTRICAL DEMOLITION ITEMS.

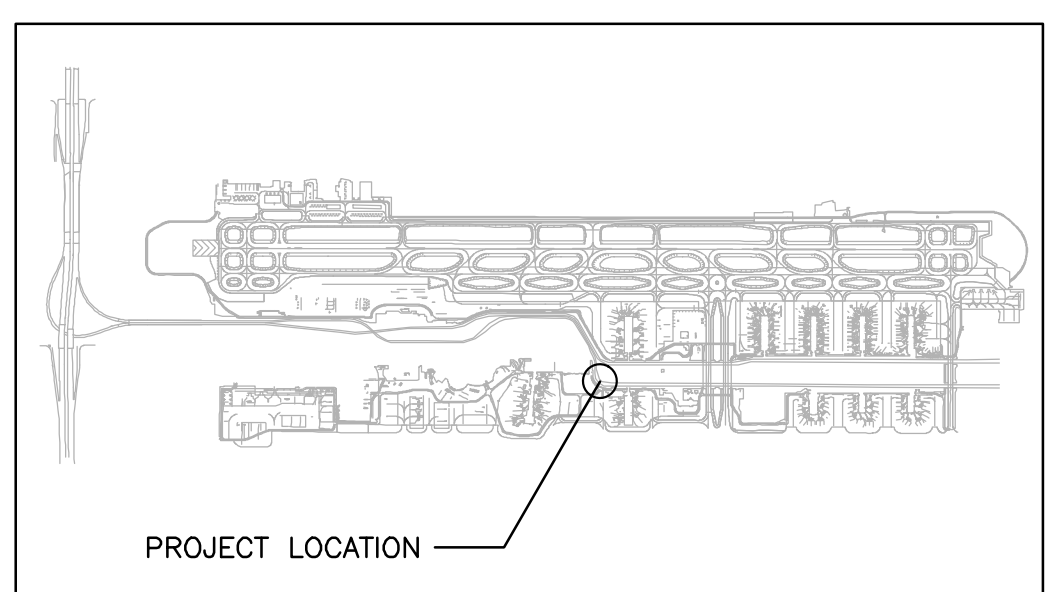
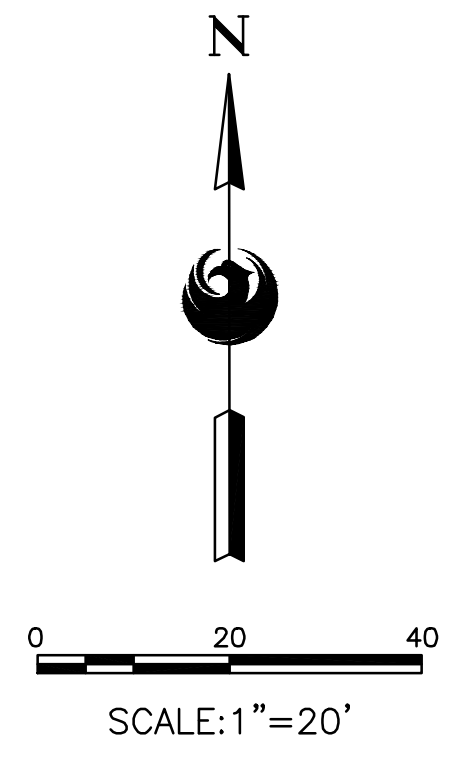
TRACE CONSULTING  
101 E. WASHINGTON ST. Suite 1100 Phoenix, AZ 85004

PRIME CONSULTANT  
SUB CONSULTANT

DESIGNED BY: K. ROZITIS  
DRAWN BY: C. BODINE  
CHECKED BY: C. JHAVERI  
DATE: 8/9/2024  
DWG SCALE:

PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX.

| NO | REVISIONS / SUBMISSIONS | DATE |
|----|-------------------------|------|
|    |                         |      |



KEY MAP  
NTS

PHX AVIATION DEPARTMENT  
PHOENIX SKY HARBOR INTERNATIONAL AIRPORT  
PHX T3 RECIRCULATION ROADWAY IMPROVEMENT  
PROJECT NO. AV14000029

DESIGNED BY: K. ROZITIS  
DRAWN BY: C. BODINE  
CHECKED BY: C. JHAVERI  
DATE: 8/9/2024  
DWG SCALE:

SHEET OVERVIEW TITLE  
**DEMOLITION PLAN  
T3 MERGE**

SHEET REFERENCE NUMBER:  
**CD-102**

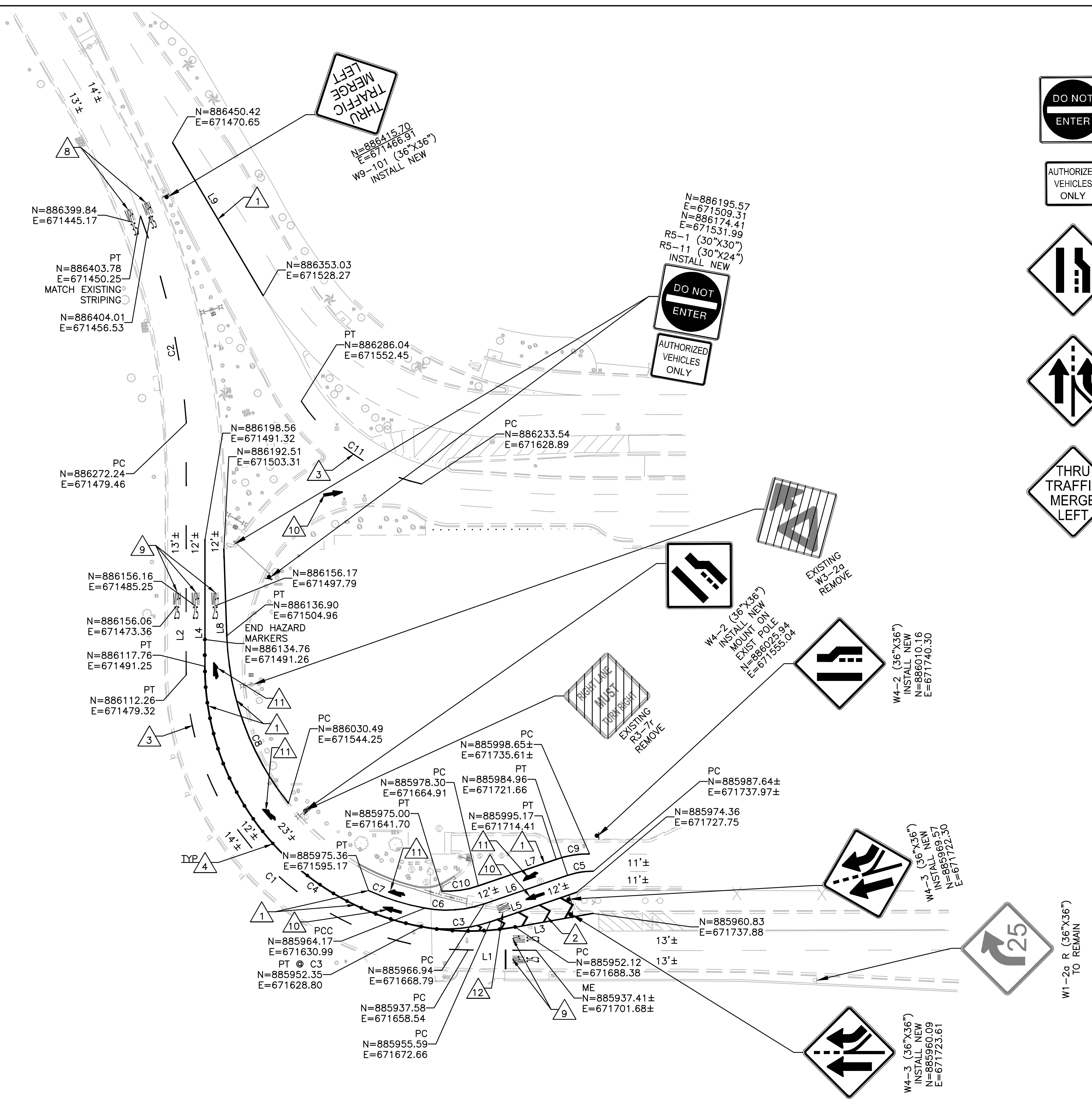
SHEET 10 OF 23



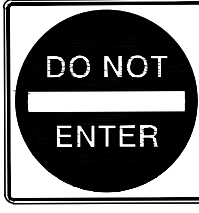

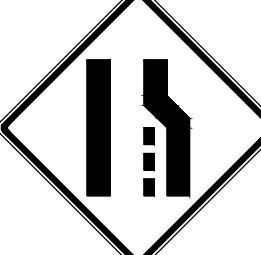
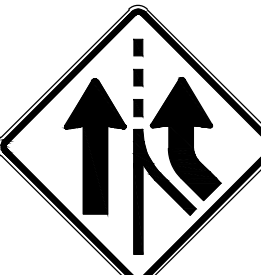





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### SIGN LEGEND

-  R5-1 (30"x30") WHITE ON RED  
2 NEW - MOUNT ON NEW POST AND FOUNDATION (POST AND FOUNDATION PER MAG STD DTL 131, TYPE C)
-  R5-11 (30"x24") BLACK ON WHITE  
2 NEW
-  W4-2 (36"x36") BLACK ON YELLOW  
1 NEW - MOUNT ON NEW POST AND FOUNDATION (POST AND FOUNDATION PER MAG STD DTL 131, TYPE C)  
1 NEW - MOUNT ON EXISTING LIGHT POLE
-  W4-3 (36"x36") BLACK ON YELLOW  
2 NEW - MOUNT ON NEW POST AND FOUNDATION (POST AND FOUNDATION PER MAG STD DTL 131, TYPE C)
-  W9-101 (36"x36") BLACK ON YELLOW  
1 NEW - MOUNT ON NEW POST AND FOUNDATION (POST AND FOUNDATION PER MAG STD DTL 131, TYPE C)

| LINE # | LENGTH  | BEARING     |
|--------|---------|-------------|
| L1     | 43.00'  | N89°46'08"W |
| L2     | 160.00' | N00°03'01"E |
| L3     | 50.00'  | S80°01'20"W |
| L4     | 74.76'  | N00°03'01"E |
| L5     | 58.00'  | S71°10'34"W |
| L6     | 55.80'  | S71°10'34"W |
| L7     | 52.30'  | S71°10'34"W |
| L8     | 55.64'  | N01°42'02"W |
| L9     | 113.16' | S30°36'35"E |

| CURVE # | RADIUS  | LENGTH  | DELTA      | TANGENT |
|---------|---------|---------|------------|---------|
| C1      | 180.00' | 276.67' | 88°04'01"  | 174.03' |
| C2      | 470.00' | 135.22' | 16°29'02"  | 68.08'  |
| C3      | 87.00'  | 44.44'  | 29°16'07"  | 22.72'  |
| C4      | 168.00' | 293.30' | 100°01'41" | 200.31' |
| C5      | 50.00'  | 16.60'  | 19°01'16"  | 8.38'   |
| C6      | 75.00'  | 38.31'  | 29°16'07"  | 19.58'  |
| C7      | 156.00' | 37.60'  | 13°48'41"  | 18.89'  |
| C8      | 180.00' | 115.39' | 36°43'51"  | 59.76'  |
| C9      | 65.00'  | 21.58'  | 19°01'05"  | 10.89'  |
| C10     | 63.00'  | 23.39'  | 21°16'31"  | 11.83'  |
| C11     | 125.00' | 95.00'  | 43°32'47"  | 49.93'  |

| NO | DESCRIPTION   | UNIT | QTY  |
|----|---|------|------|
| 1  | APPLY 8-INCH (8") SOLID WHITE PAVEMENT MARKING (4" EQUIVALENT)  | LF   | 2322 |
| 2  | APPLY 12-INCH (12") SOLID WHITE PAVEMENT MARKING, 45' AT 15' SPACING (4" EQUIVALENT)  | LF   | 509  |
| 3  | APPLY 4-INCH (4") SKIP WHITE PAVEMENT MARKING, 15' LINE, 25' GAP  | LF   | 285  |
| 4  | INSTALL WHITE HAZARD MARKERS PER MAG STD DTL 141, TYPE 1, AT 10' SPACING  | EA   | 32   |
| 8  | APPLY PREFORMED PAVEMENT MARKING (MPH 35), TYPE 1 (PERMANENT) PER ADOT SECTION 705 & ADOT STD DTL M-7, M-8, & M-9, LOCATION PER PLAN SHOWN AT APPROXIMATE CENTER OF MARKING. PLACE CENTERED WITHIN LANE                   | EA   | 2    |
| 9  | APPLY PREFORMED PAVEMENT MARKING (MPH 25), TYPE 1 (PERMANENT) PER ADOT SECTION 705 & ADOT STD DTL M-7, M-8, & M-9, LOCATION PER PLAN SHOWN AT APPROXIMATE CENTER OF MARKING. PLACE CENTERED WITHIN LANE                   | EA   | 5    |
| 10 | APPLY PREFORMED PAVEMENT MARKING (SINGLE ARROW, STRAIGHT), TYPE 1 (PERMANENT) PER ADOT SECTION 705 & ADOT STD DTL M-7, M-8, & M-9, LOCATION PER PLAN SHOWN AT APPROXIMATE CENTER OF MARKING. PLACE CENTERED WITHIN LANE   | EA   | 2    |
| 11 | APPLY PREFORMED PAVEMENT MARKING (SINGLE ARROW, MERGE LEFT), TYPE 1 (PERMANENT) PER ADOT SECTION 705 & ADOT STD DTL M-7, M-8, & M-9, LOCATION PER PLAN SHOWN AT APPROXIMATE CENTER OF MARKING. PLACE CENTERED WITHIN LANE | EA   | 4    |
| 12 | APPLY PREFORMED PAVEMENT MARKING (ONLY), TYPE 1 (PERMANENT) PER ADOT SECTION 705 & ADOT STD DTL M-6, LOCATION PER PLAN SHOWN AT APPROXIMATE CENTER OF MARKING. PLACE CENTERED WITHIN LANE                                 | EA   | 1    |

**TRACE CONSULTING**  
101 E. WASHINGTON ST. SUITE 1100 PHOENIX, AZ 85004

PRIME CONSULTANT  
SUB CONSULTANT

PHX DOT BYR  
CITY OF PHOENIX AVIATION DEPARTMENT  
PHOENIX SKY HARBOR INTERNATIONAL AIRPORT  
PHX T3 RECIRCULATION ROADWAY IMPROVEMENT  
PROJECT NO. AV14000029

DESIGNED BY: K. ROZITIS  
DRAWN BY: C. BODINE  
CHECKED BY: C. JHAVERI  
DATE: 8/9/2024  
DWG SCALE:

SHEET OVERVIEW TITLE  
**SIGNING AND STRIPING PLAN  
T3 MERGE**

SHEET REFERENCE NUMBER:  
**CP-104**

SHEET 12 OF 23

PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX.

NO REVISIONS / SUBMISSIONS DATE

NOTES:  
1. CONTRACTOR SHALL OBLITERATE ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS.

Contact Arizona 811 at least two full working days before you begin excavation  
**ARIZONA 811**  
Call 811 or click Arizona811.com

SCALE: 1" = 40'

KEY MAP  
NTS

PROJECT LOCATION

W1-20 R (36"x36")  
TO REMAIN

W4-3 (36"x36")  
INSTALL NEW  
N=885960.09  
E=671723.61

W4-2 (36"x36")  
INSTALL NEW  
N=886010.16  
E=671740.30

W4-2 (36"x36")  
INSTALL NEW  
MOUNT ON  
EXISTING POLE  
N=886023.94  
E=671553.04

EXISTING  
W3-29  
REMOVE

EXISTING  
R3-77  
REMOVE

W9-101 (36"x36")  
INSTALL NEW  
N=886152.70  
E=671466.91

R5-1 (30"x30")  
R5-11 (30"x24")  
INSTALL NEW  
N=886195.57  
E=671509.31  
N=886174.41  
E=671531.99

DO NOT ENTER  
AUTHORIZED VEHICLES ONLY

PT  
N=886353.03  
E=671528.27

PT  
N=886286.04  
E=671552.45

PC  
N=886198.56  
E=671491.32  
N=886192.51  
E=671503.31

PC  
N=886272.24  
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PT  
N=886156.16  
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PT  
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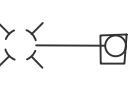

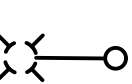


**GENERAL ELECTRICAL REQUIREMENTS**

1. THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED N.E.C.A. STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AS REQUIRED BY THE CODE(S).
2. CONTRACTOR SHALL COORDINATE A VISIT TO THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
3. UNLESS OTHERWISE NOTED, ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND REVIEWED BY THE ENGINEER BEFORE ORDERING.
4. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED UNDER THIS DIVISION AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE AND SHALL BE REPLACED AT NO COST TO THE OWNER.
5. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
6. CIRCUIT CONDUCTORS #6 AWG OR SMALLER TO BE "THHN" COPPER. #4 THRU #2 AWG TO BE "XHHW" STRANDED COPPER. #1 AWG OR LARGER SHALL BE "XHHW-2" STRANDED COPPER. MINIMUM CONDUCTOR SIZE TO BE #12 AWG WITH #12 GND.
7. UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 24", MINIMUM SIZE 2", UNLESS OTHERWISE SHOWN ON THE PLANS.
8. CONDUITS EXPOSED TO BE GALVANIZED RIGID STEEL, MINIMUM SIZE 3/4", UNLESS OTHERWISE NOTED ON THE PLANS.
9. ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED AND RATED FOR HEAVY DUTY SERVICE.
10. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE.
11. ALL ELECTRICAL EQUIPMENT, CONDUIT, WIRING, BOXES, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.
12. IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK, SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED, AND WILL BE SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND O & M MANUALS.

**ELECTRICAL LEGEND:**

(UNLESS OTHERWISE NOTED ON PLANS)

-  NEW UNDERGROUND ELECTRICAL CONDUIT OR CONDUIT/CONDUCTOR (QUANTITY AND SIZE AS INDICATED ON PLAN SHEETS)
-  UGE EXISTING ELECTRICAL CONDUIT AND CONDUCTOR
-  EXISTING PULL BOX
-  EXISTING LIGHT POLE AND FIXTURE
-  NEW PULL BOX
-  NEW LIGHT POLE AND FIXTURE

**ELECTRICAL ABBREVIATIONS:**

- APS ARIZONA PUBLIC SERVICE
- BCC BARE COPPER CONDUCTOR GROUND
- CE CONCRETE ENCASED
- CKT CIRCUIT
- GND GROUND
- GRS GALVANIZED RIGID STEEL
- KW KILOWATT
- LED LIGHT EMITTING DIODE
- LF LINEAR FEET
- NPI NON-PAY ITEM
- PSHIA PHOENIX SKY HARBOR INTERNATIONAL AIRPORT
- PVC POLY-VINYL CHLORIDE
- SE SLURRY ENCASED
- TYP TYPICAL

**SHEET INDEX**

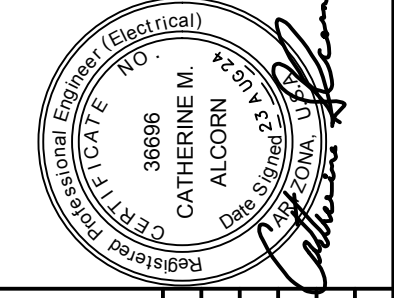
- E001 ELECTRICAL LEGEND AND NOTES
- ED101 ELECTRICAL DEMOLITION PLAN
- ED102 T3 TURNAROUND ELECTRICAL DEMOLITION PLAN
- ED103 T3 MERGE ELECTRICAL DEMOLITION PLAN
- EA101 ELECTRICAL INSTALLATION PLAN
- EA102 T3 TURNAROUND ELECTRICAL INSTALLATION PLAN
- EA103 T3 MERGE ELECTRICAL INSTALLATION PLAN
- EA501 ELECTRICAL DETAILS
- EA502 ELECTRICAL DETAILS
- EA601 PANEL LB SCHEDULE

**TRACE**  
CONSULTING

201 E. WASHINGTON ST. Suite 21 Phoenix, AZ 85004  
 480.441.1111  
 www.trace-engineers.com

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SUB CONSULTANT



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| NO | REVISIONS / SUBMISSIONS | DATE |
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**PHX BYR**  
 CITY OF PHOENIX AVIATION DEPARTMENT  
 PHOENIX SKY HARBOR INTERNATIONAL AIRPORT  
 PHX T3 RECIRCULATION ROADWAY IMPROVEMENT  
 PROJECT NO. AV14000029

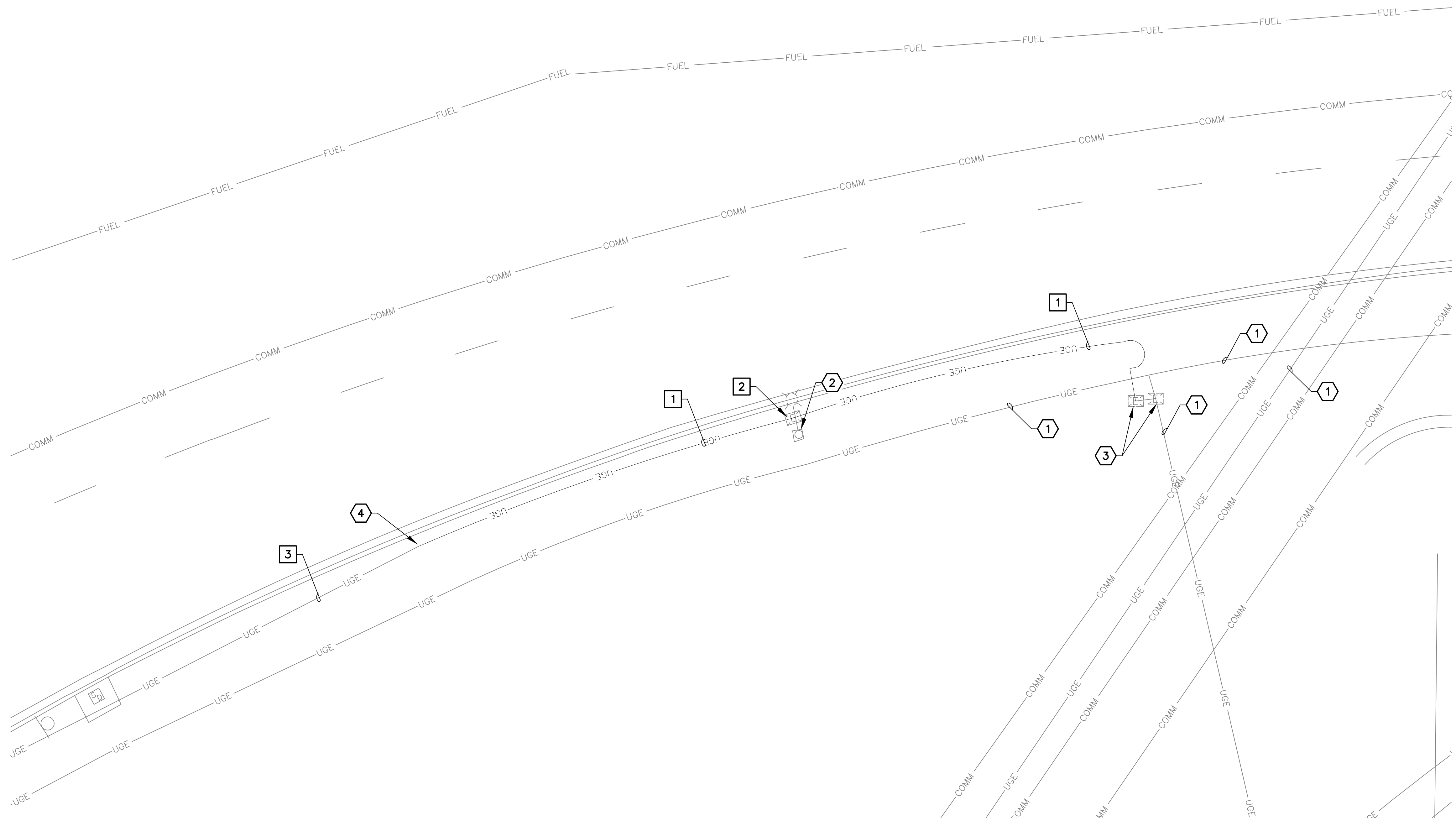
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 Drawn by: JBW  
 Checked by: CA  
 Date: 08/23/2024  
 Dwg scale:

**ELECTRICAL LEGEND AND NOTES**

SHEET REFERENCE NUMBER:  
**E001**  
 SHEET X OF X



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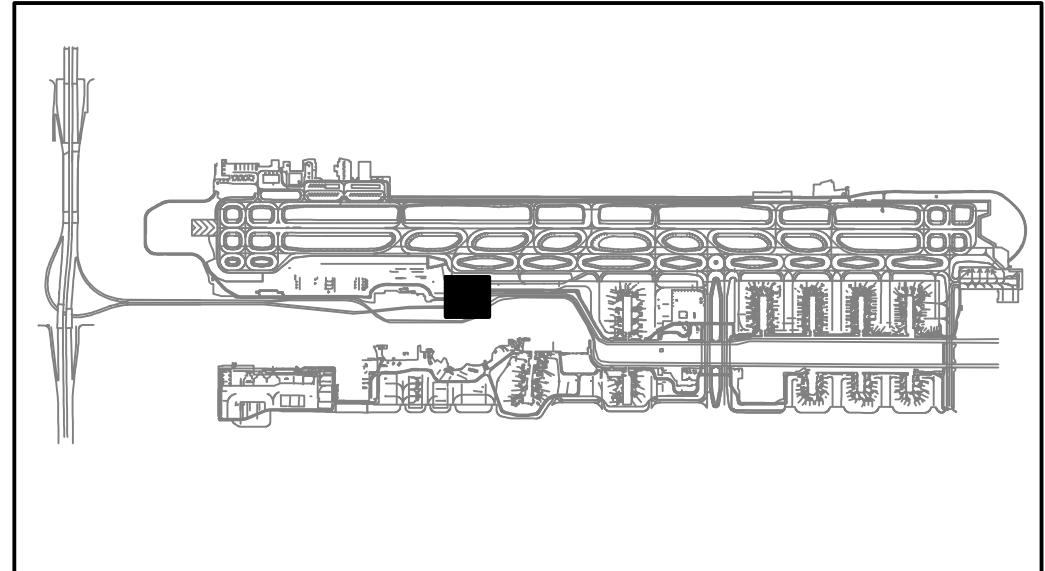
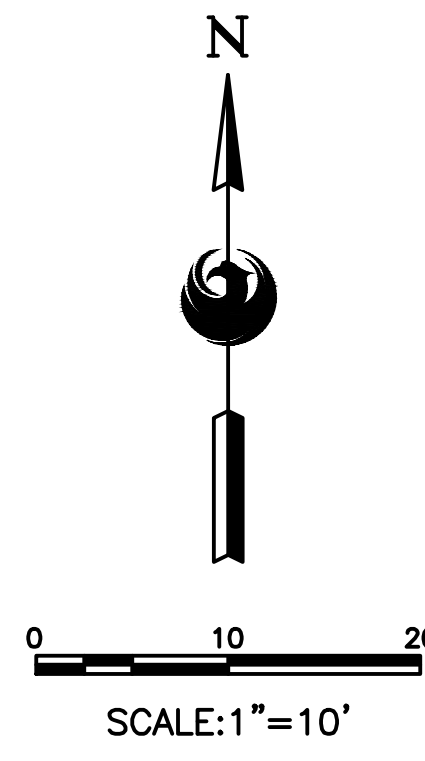
REMOVAL NOTES

- 1 EXISTING CONDUIT AND CONDUCTOR TO BE REMOVED.
- 2 EXISTING PULL BOX TO BE REMOVED/RELOCATED.
- 3 REMOVE EXISTING CONDUCTORS TO NEXT EXISTING PULL BOX OR LIGHT POLE. CONDUIT TO REMAIN.

REFERENCE NOTES

- 1 EXISTING CONDUIT AND CONDUCTORS TO REMAIN - PROTECT IN PLACE
- 2 EXISTING LIGHT POLE AND FIXTURE TO REMAIN - PROTECT IN PLACE
- 3 EXISTING ELECTRICAL PULL BOX TO REMAIN - PROTECT IN PLACE
- 4 APPROXIMATE SPLICE POINT OF CONDUIT

**GENERAL NOTE:**  
CONTRACTOR SHALL FIELD VERIFY POWER SOURCE LOCATION FOR EXISTING STREET LIGHTS.



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Phoenix, AZ 85016  
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**CR engineers**  
1875 E. Camelback Rd., Suite 300  
Phoenix, AZ 85016  
SUB CONSULTANT

Professional Engineer (Electrical)  
Catherine M. Alcorn  
36986  
301 E. Camelback Rd., Suite 300  
Phoenix, AZ 85016

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| NO | REVISIONS / SUBMISSIONS | DATE |
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**PHX BYR**  
CITY OF PHOENIX AVIATION DEPARTMENT  
PHOENIX SKY HARBOR INTERNATIONAL AIRPORT  
PHX T3 RECIRCULATION ROADWAY IMPROVEMENT  
PROJECT NO. AV14000029

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| Designed by: CA  |
| Drawn by: JBW    |
| Checked by: CA   |
| Date: 08/23/2024 |
| Dwg scale:       |

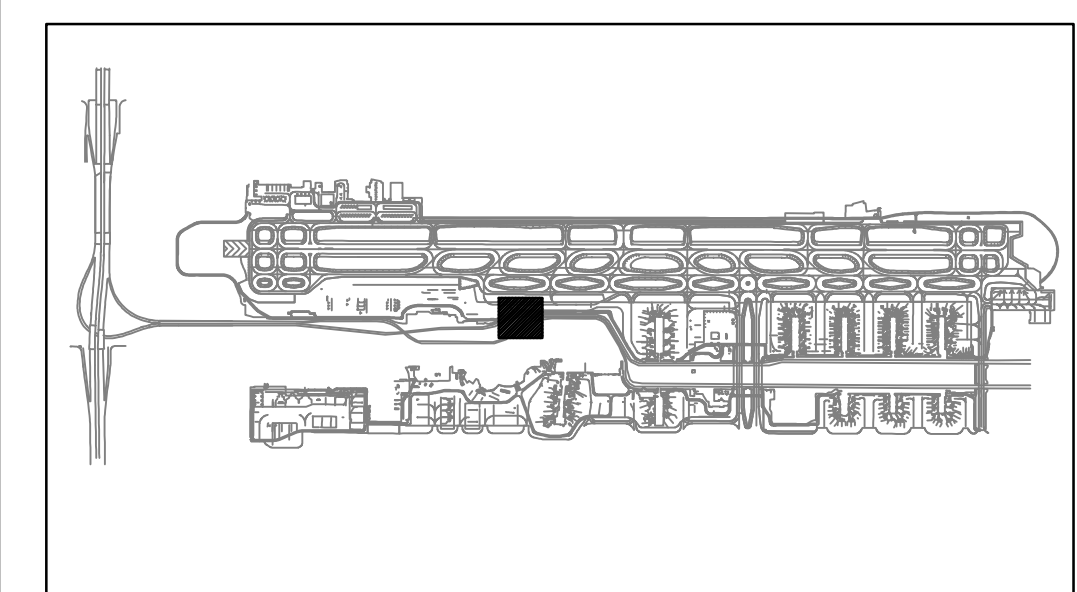
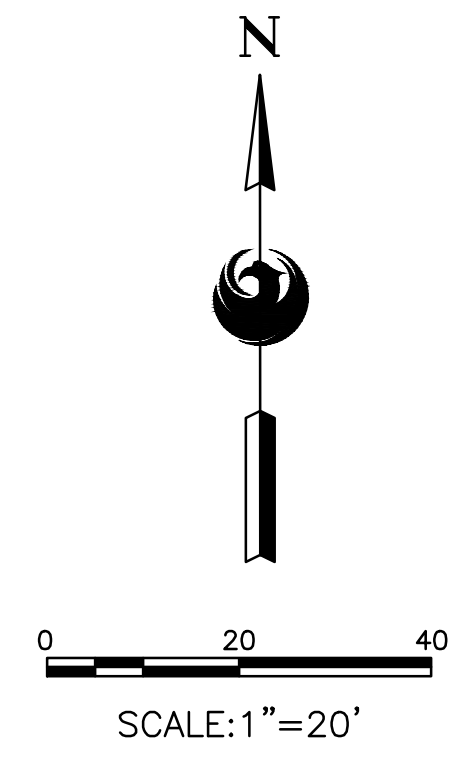
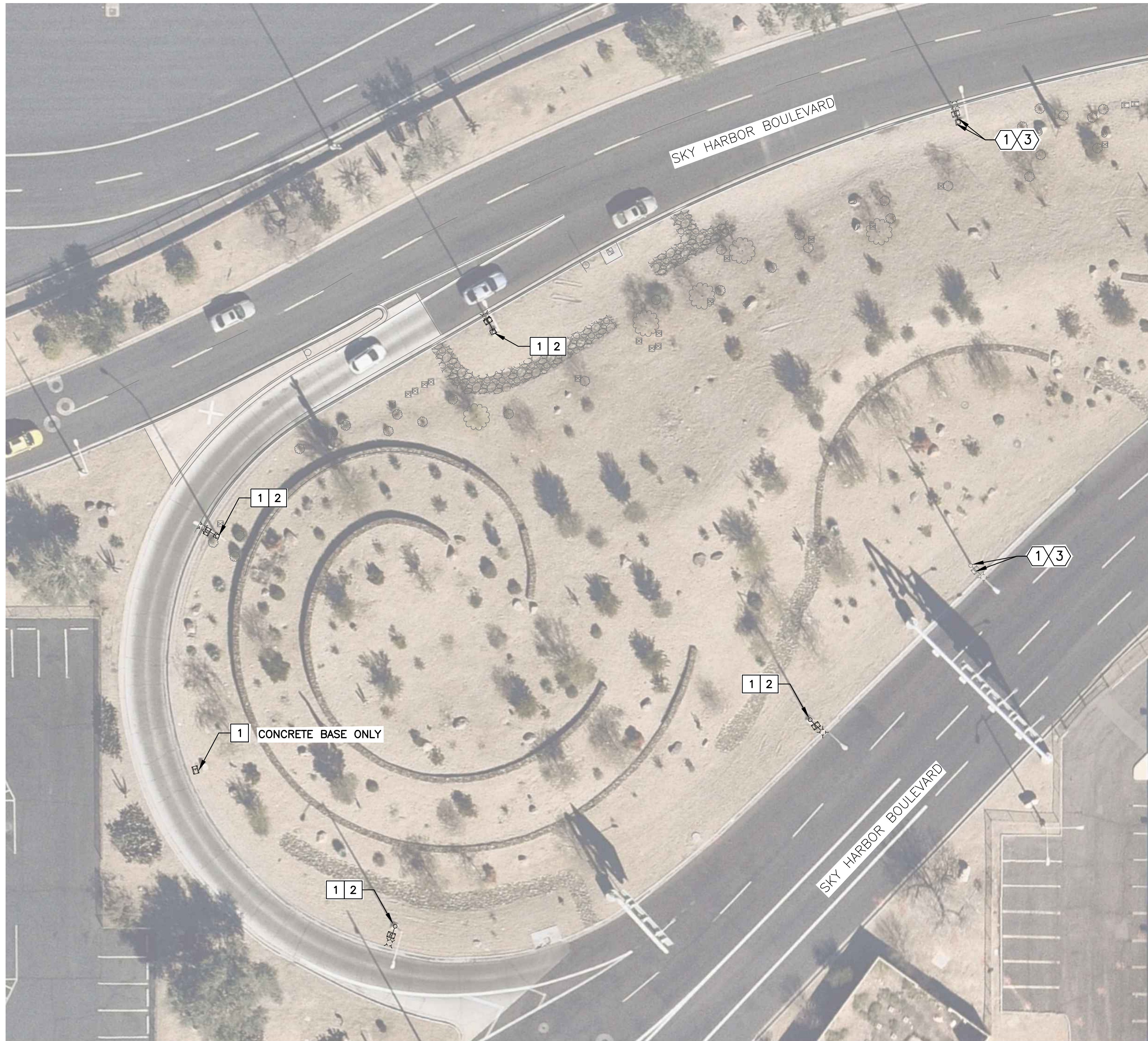
SHEET OVERVIEW TITLE

**ELECTRICAL DEMOLITION PLAN**

SHEET REFERENCE NUMBER:  
**ED101**  
SHEET XX OF XX



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DEMOLITION NOTES

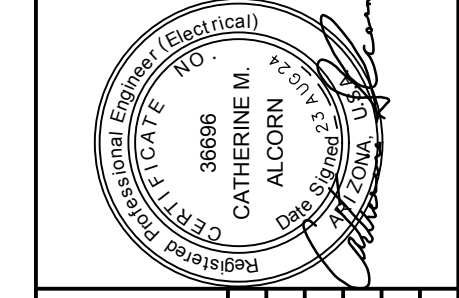
- 1 REMOVE AND DISPOSE OF EXISTING LIGHT POLE. BACKFILL WITH SUITABLE MATERIAL AS REQUIRED BY MAG.
- 2 EXCAVATE AND REMOVE EXISTING PULL BOX

REFERENCE NOTES

- 1 EXISTING LIGHT POLE TO REMAIN - PROTECT IN PLACE
- 3 EXISTING PULLBOX TO REMAIN - PROTECT IN PLACE

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SUB CONSULTANT  
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 Fax: (480) 816-5540  
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| NO | REVISIONS / SUBMISSIONS | DATE |
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**PHX BYR**  
 CITY OF PHOENIX AVIATION DEPARTMENT  
**PHOENIX SKY HARBOR INTERNATIONAL AIRPORT PHX T3 RECIRCULATION ROADWAY IMPROVEMENT PROJECT NO. AV14000029**

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| Designed by: RD      |
| Drawn by: JBW        |
| Checked by: CA       |
| Date: 08/23/2024     |
| Dwg. scale: AS SHOWN |

SHEET OVERVIEW TITLE

**T3 TURN AROUND ELECTRICAL DEMOLITION PLAN**



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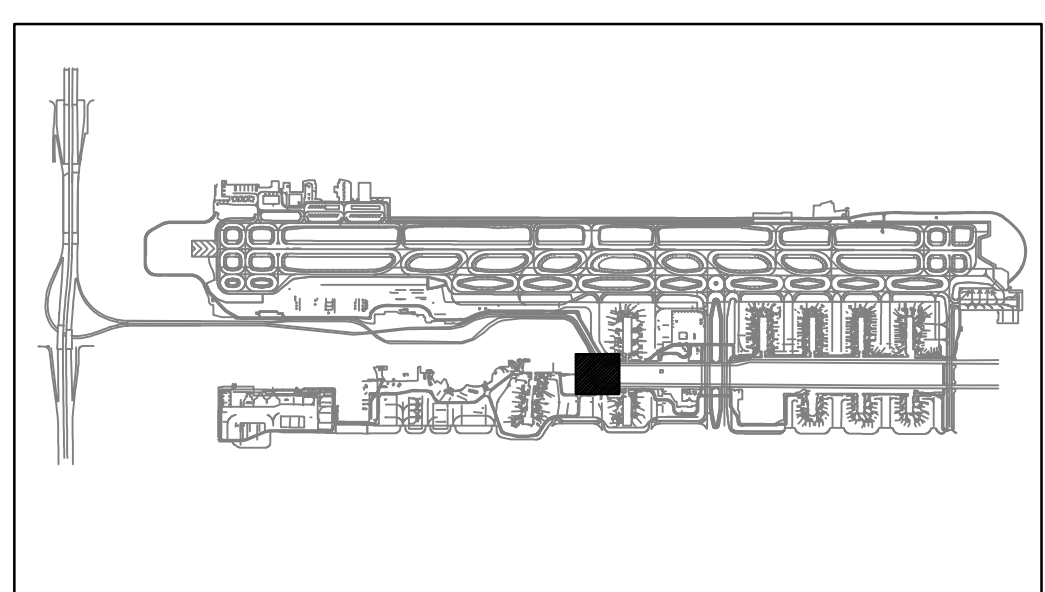
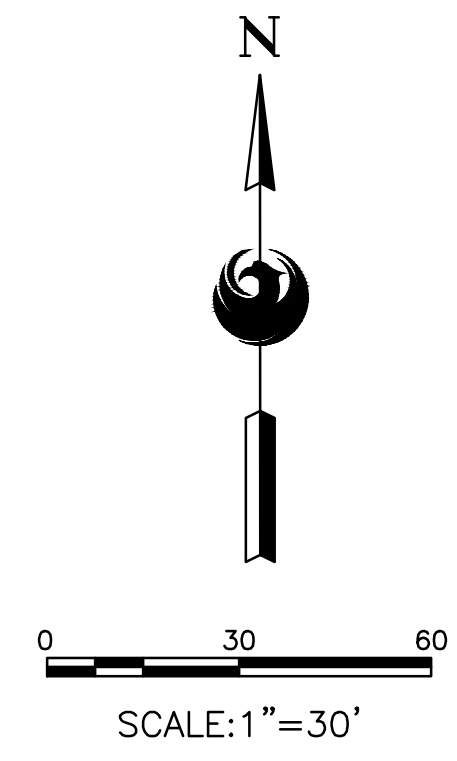


DEMOLITION NOTES

- 1 REMOVE AND DISPOSE OF EXISTING LIGHT POLE. BACKFILL WITH SUITABLE MATERIAL AS REQUIRED BY MAG.
- 2 EXCAVATE AND REMOVE EXISTING PULL BOX

REFERENCE NOTES

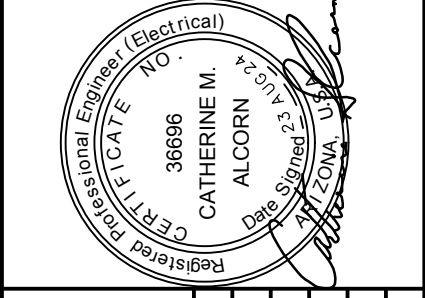
- 1 EXISTING LIGHT POLE TO REMAIN - PROTECT IN PLACE
- 3 EXISTING PULLBOX TO REMAIN - PROTECT IN PLACE



KEY MAP  
NTS

PRIME CONSULTANT  
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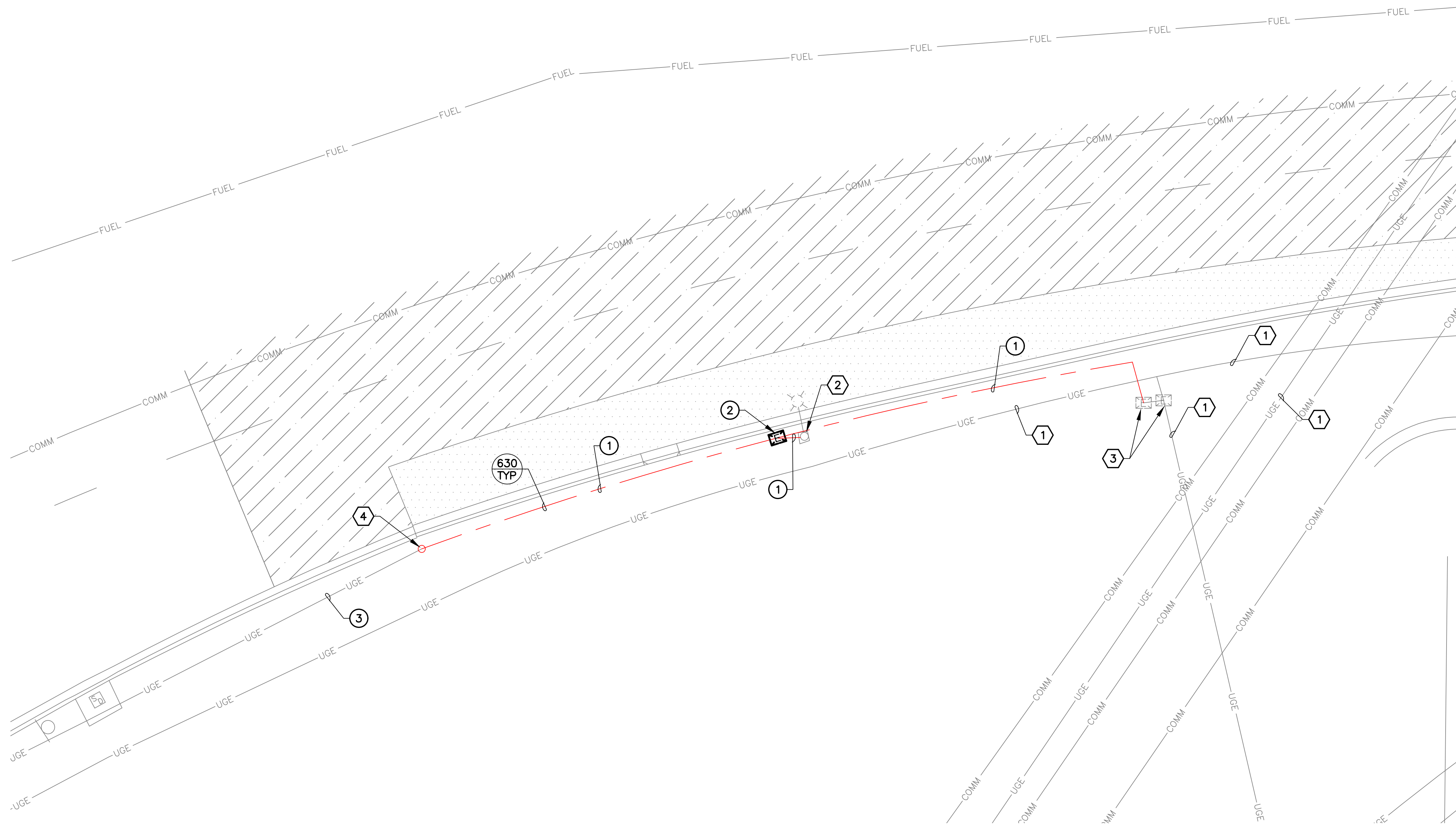
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 CITY OF PHOENIX AVIATION DEPARTMENT  
**PHOENIX SKY HARBOR INTERNATIONAL AIRPORT  
 PHX T3 RECIRCULATION  
 ROADWAY IMPROVEMENT  
 PROJECT NO. AV14000029**

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| Designed by: RD      |
| Drawn by: JBW        |
| Checked by: CA       |
| Date: 08/23/2024     |
| Dwg. scale: AS SHOWN |

SHEET OVERVIEW TITLE  
**T3 MERGE  
 ELECTRICAL DEMOLITION PLAN**



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○ CONSTRUCTION NOTES ○

- ① NEW CONDUIT AND CONDUCTORS – CONTRACTOR TO MATCH CONDUIT AND CONDUCTOR SIZE WITH EXISTING.
- ② NEW #5 PULL BOX
- ③ NEW CONDUCTORS TO SPLICE POINT AT NEXT EXISTING PULL BOX OR LIGHT POLE. CONTRACTOR TO MATCH CONDUCTOR SIZE WITH EXISTING.

◻ REFERENCE NOTES ◻

- ① EXISTING CONDUIT AND CONDUCTORS
- ② EXISTING LIGHT POLE AND FIXTURE
- ③ EXISTING ELECTRICAL PULL BOX
- ④ APPROXIMATE SPLICE POINT OF CONDUIT

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 Phoenix, AZ 85016  
 (602) 998-8888

SUB CONSULTANT  
**CR engineers**  
 10714 N. 28th Ave., Suite 102  
 Phoenix, AZ 85018  
 (602) 998-8888

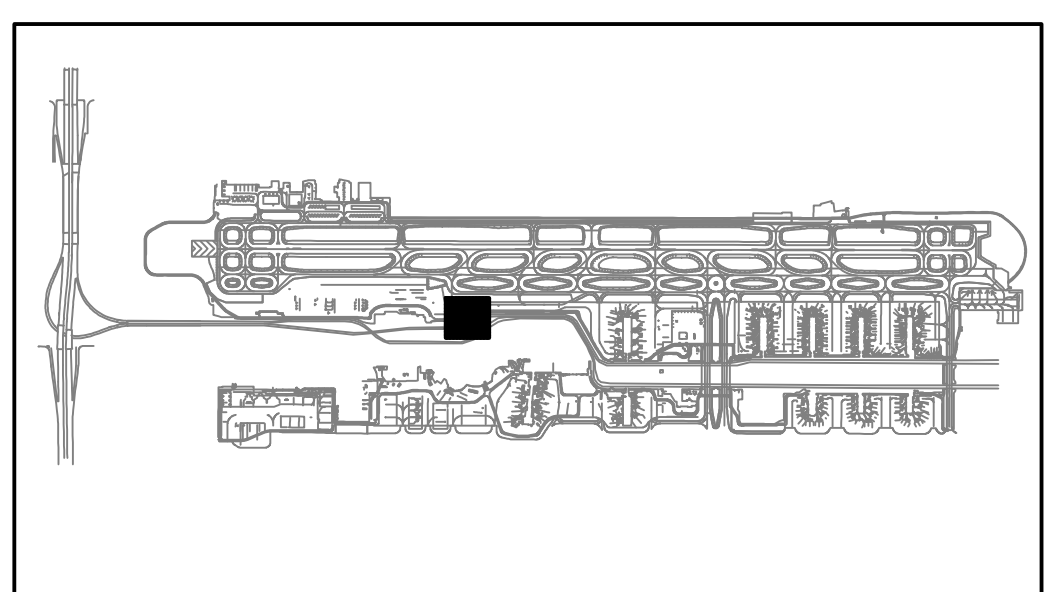
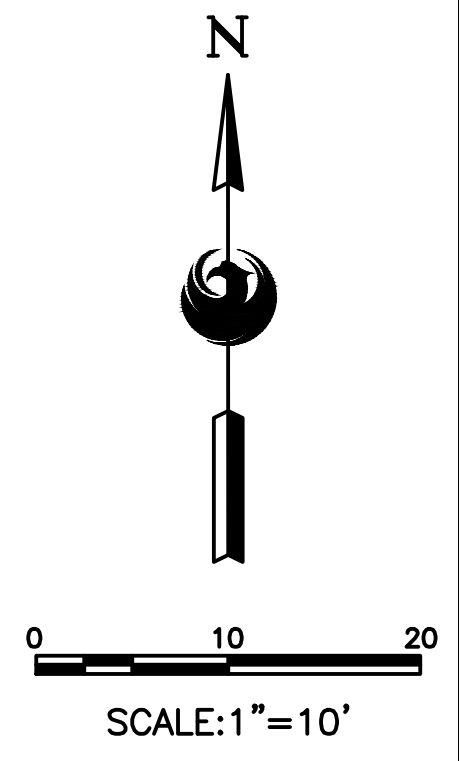
Professional Engineer (Electrical)  
 CATHERINE M. ALCOBORN  
 License No. 36996  
 State of Arizona

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| NO | REVISIONS / SUBMISSIONS | DATE |
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**PHOENIX SKY HARBOR INTERNATIONAL AIRPORT**  
**PHX T3 RECIRCULATION ROADWAY IMPROVEMENT**  
 PROJECT NO. AV14000029

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| Designed by: CA  |
| Drawn by: JBW    |
| Checked by: CA   |
| Date: 08/23/2024 |
| Dwg scale:       |



**KEY MAP**  
NTS

SHEET OVERVIEW TITLE  
**ELECTRICAL INSTALLATION PLAN**


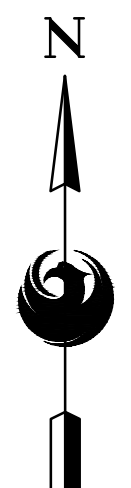
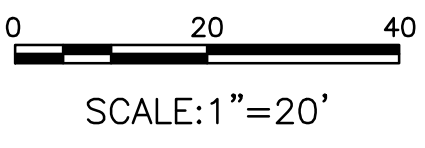
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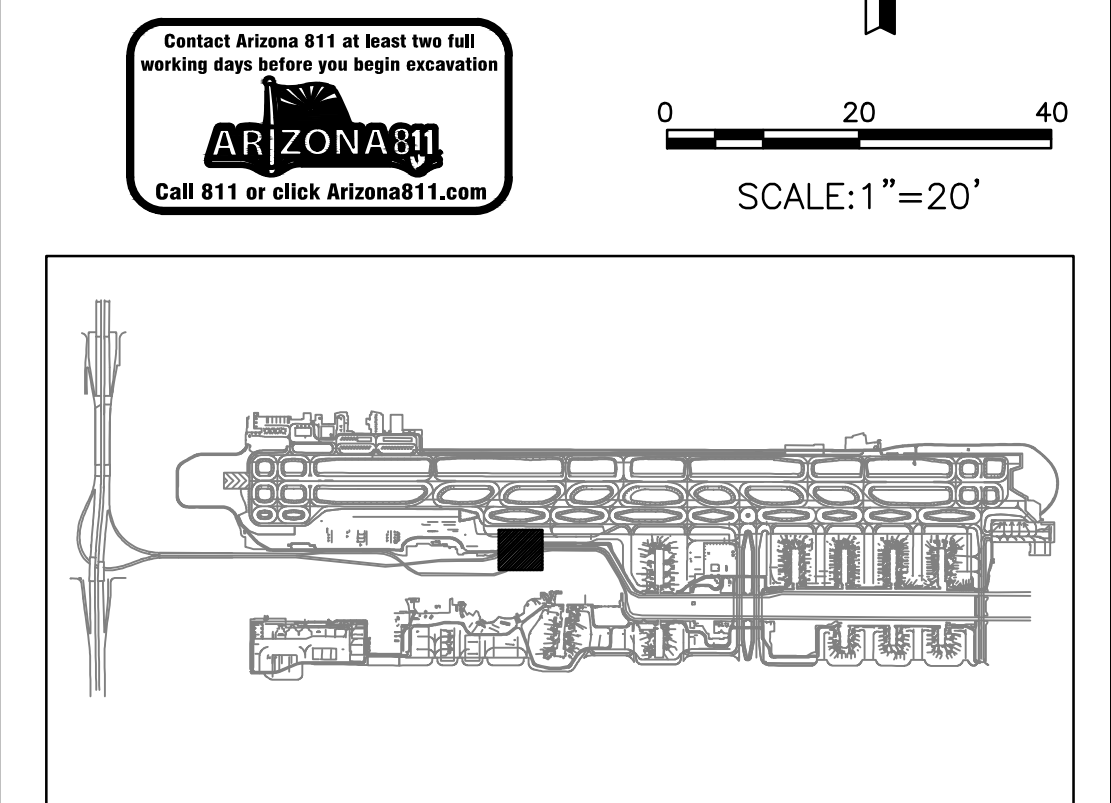
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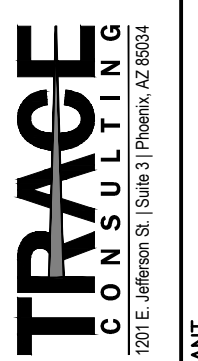




- CONSTRUCTION NOTES ○
- ① NEW STREET LIGHT FIXTURE ON DIRECT BURIED POLE
  - ② NEW PULL BOX PLACED AT OLD POLE LOCATION
  - ③ NEW 2-#10, #10 GND, 1" DIRECT BURIED CONDUIT FROM NEW JUNCTION BOX TO NEW POLE
- ◇ REFERENCE NOTES ◇
- ① EXISTING LIGHT POLE TO REMAIN – PROTECT IN PLACE
  - ③ EXISTING PULLBOX TO REMAIN – PROTECT IN PLACE



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|---|---|---|---|
|    |  |  | PRIME CONSULTANT<br><b>TRACE CONSULTING</b><br>1771 E. Jefferson St., Suite 310, Phoenix, AZ 85024<br>16719 East Palisades Blvd., Suite 202, Fountain Hills, AZ 85248<br>Phone: (480) 816-5541<br>Fax: (480) 816-5540<br>www.traceg.com |
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|   |   | NO  | SUBMISSIONS   |
|   |   | NO  | REVISIONS   |
|   |   | NO  | DATE  |

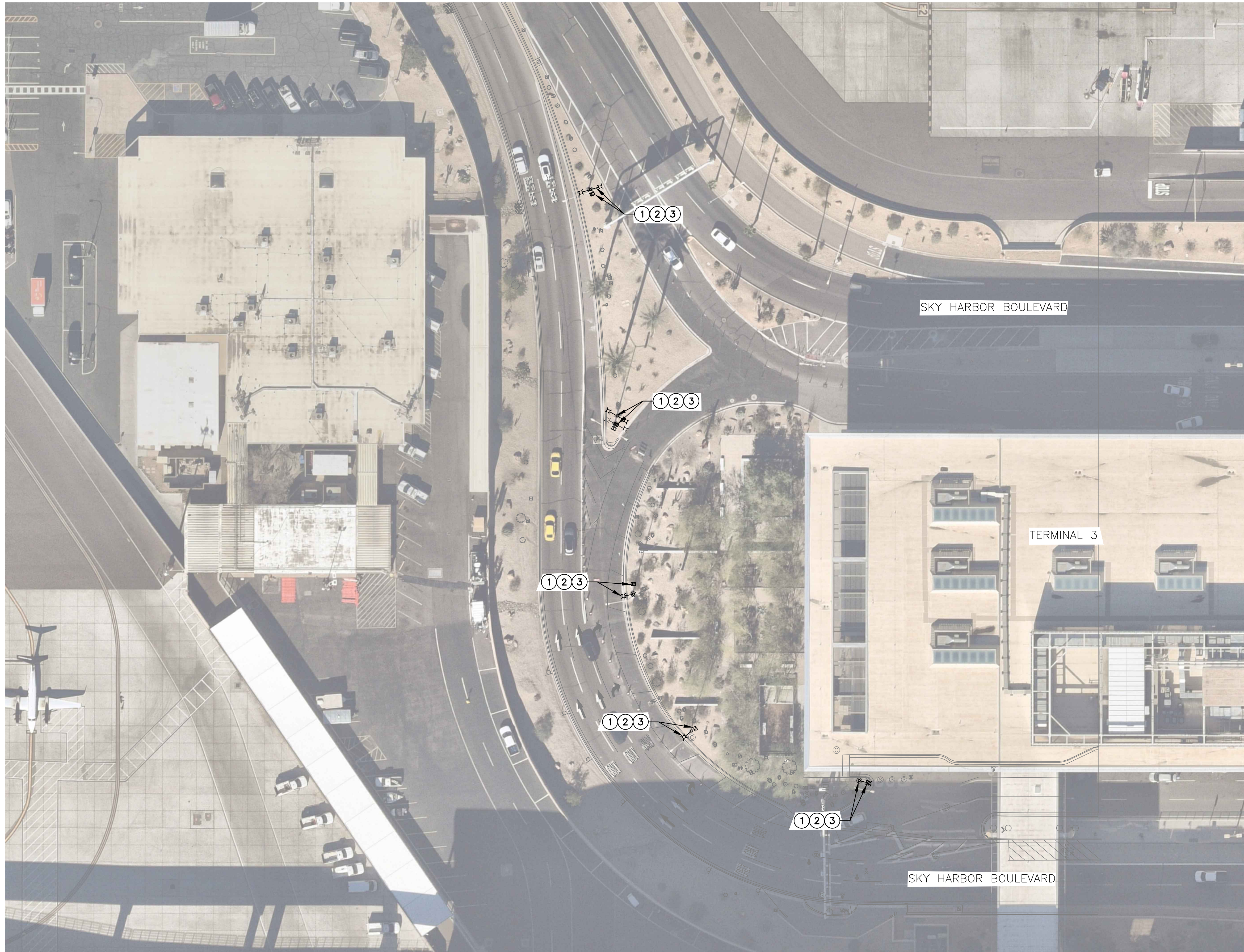
PHX WVI BYR  
 CITY OF PHOENIX AVIATION DEPARTMENT  
 PHOENIX SKY HARBOR INTERNATIONAL AIRPORT  
 PHX T3 RECIRCULATION ROADWAY IMPROVEMENT  
 PROJECT NO. AV14000029

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| Designed by: RD<br>Drawn by: JBW<br>Checked by: CA<br>Date: 08/23/2024<br>Dwg. scale: AS SHOWN | T3 TURN AROUND<br>ELECTRICAL INSTALLATION PLAN |
| EA102  |  |
| SHEET REFERENCE NUMBER: EA102<br>SHEET x OF x  |  |

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○ CONSTRUCTION NOTES ○

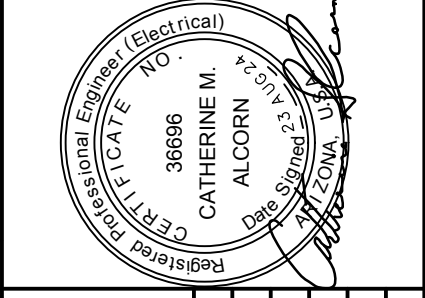
- ① NEW STREET LIGHT FIXTURE ON DIRECT BURIED POLE
- ② NEW PULL BOX PLACED AT OLD POLE LOCATION
- ③ NEW 2-#10, #10 GND, 1" DIRECT BURIED CONDUIT FROM NEW JUNCTION BOX TO NEW POLE

◇ REFERENCE NOTES ◇

- ① EXISTING LIGHT POLE TO REMAIN - PROTECT IN PLACE
- ③ EXISTING PULLBOX TO REMAIN - PROTECT IN PLACE

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 36686  
 CATHERINE M. ALCOORN  
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 State of Arizona  
 Electrical Engineering

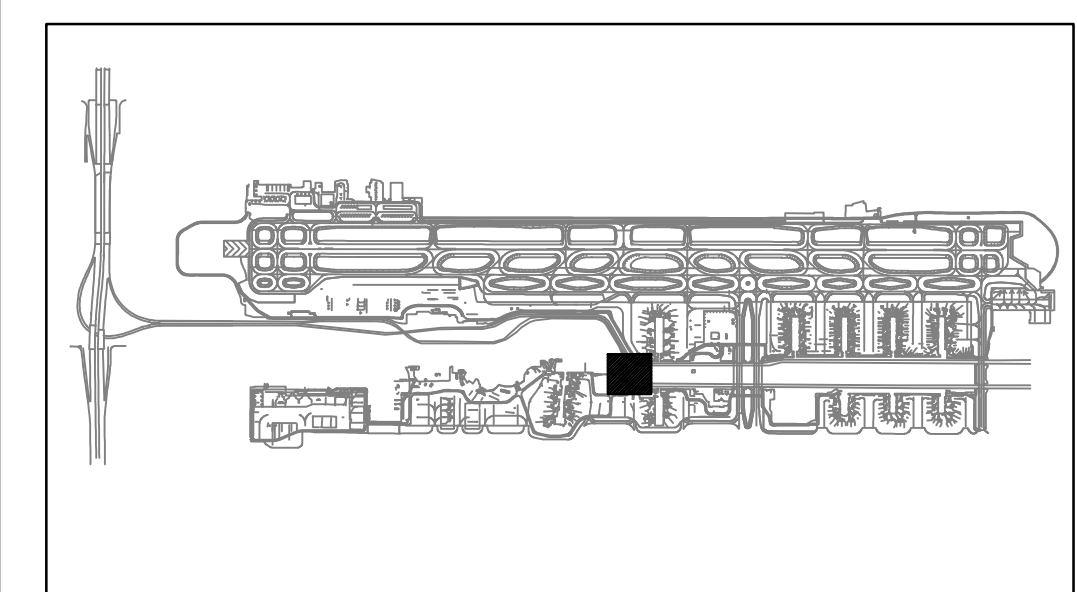
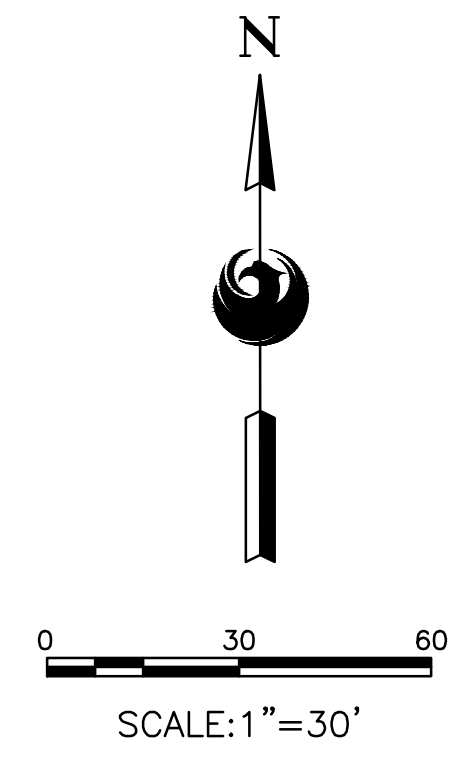


PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX.

| NO | REVISIONS / SUBMISSIONS | DATE |
|----|-------------------------|------|
|    |                         |      |
|    |                         |      |
|    |                         |      |
|    |                         |      |

**PHX BYT BYR**  
 CITY OF PHOENIX AVIATION DEPARTMENT  
**PHOENIX SKY HARBOR INTERNATIONAL AIRPORT**  
**PHX T3 RECIRCULATION ROADWAY IMPROVEMENT**  
**PROJECT NO. AV14000029**

Designed by: RD  
 Drawn by: JBW  
 Checked by: CA  
 Date: 08/23/2024  
 Dwg. scale: AS SHOWN

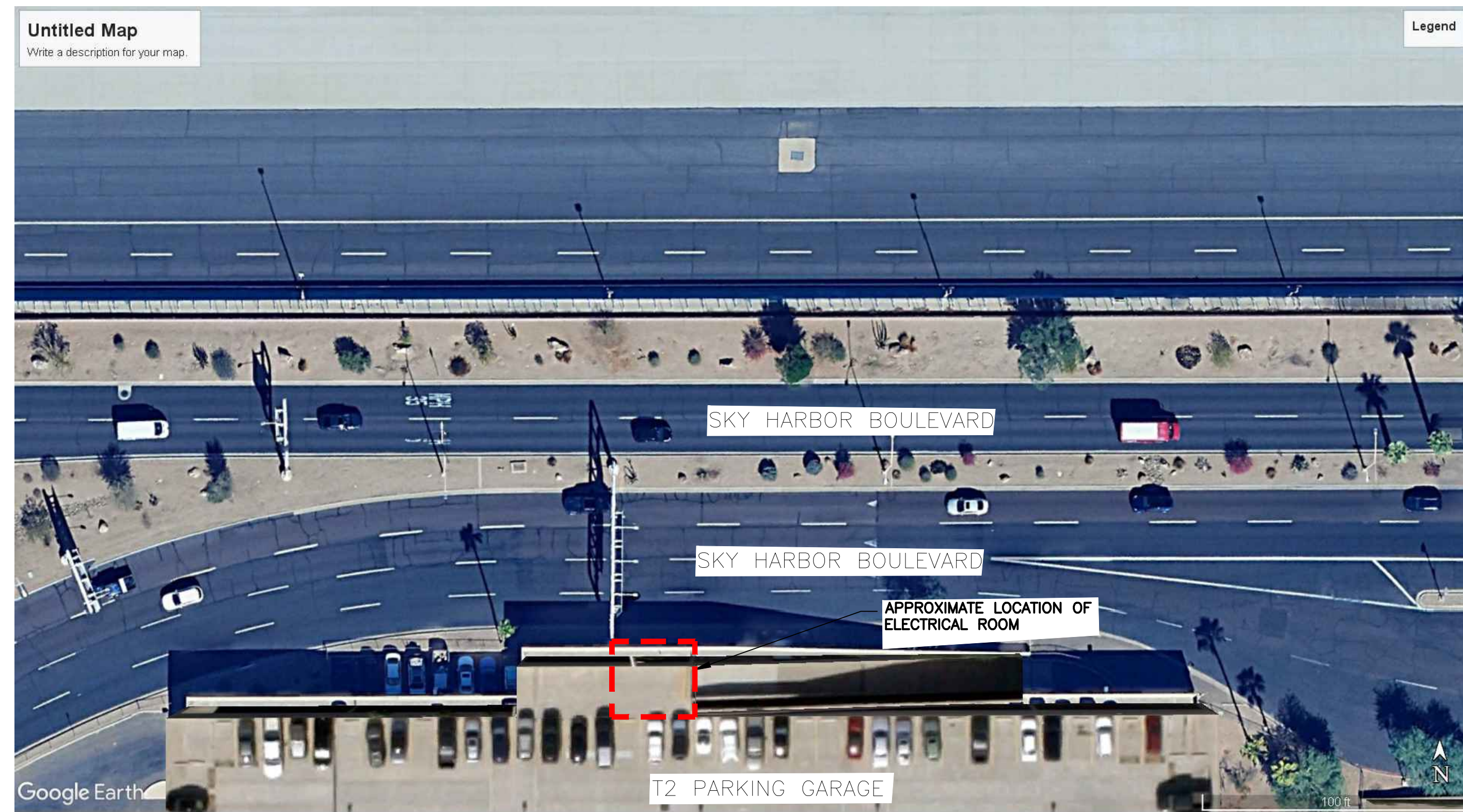


KEY MAP  
NTS

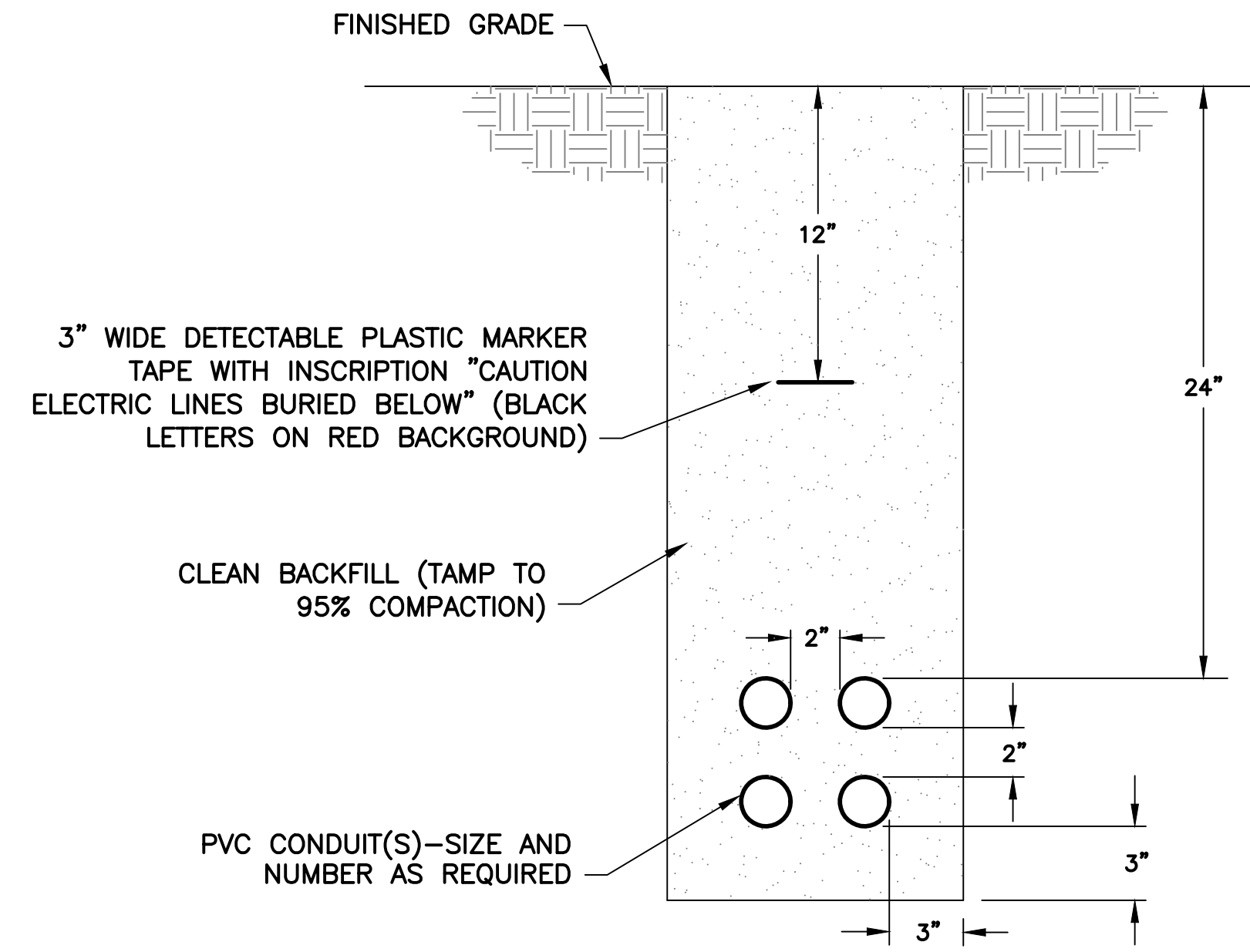
SHEET OVERVIEW TITLE  
**T3 MERGE**  
**ELECTRICAL INSTALLATION PLAN**

SHEET REFERENCE NUMBER:  
**EA103**  
 SHEET x OF x



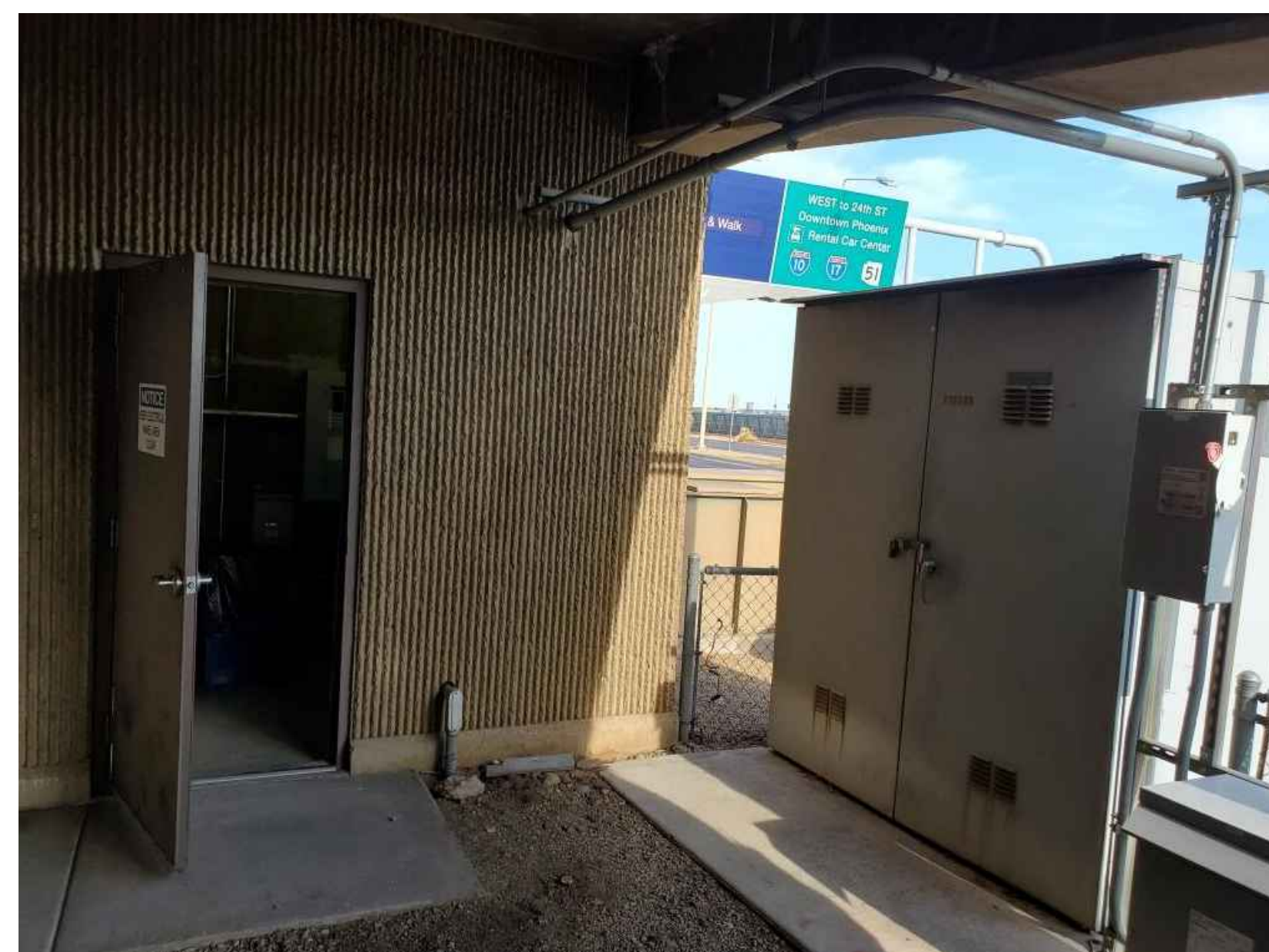


**A** ELECTRICAL ROOM LOCATION  
NTS

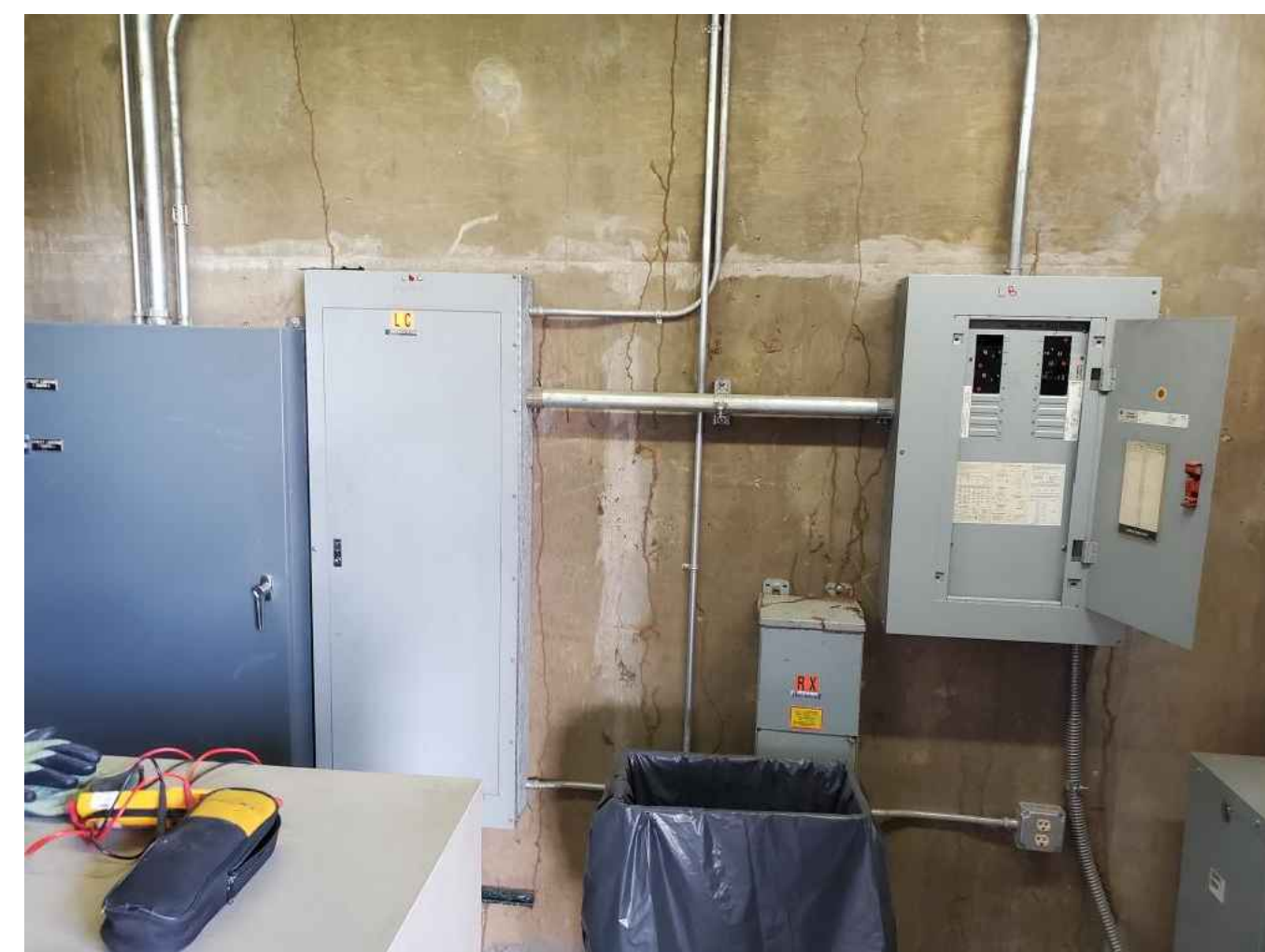


ALL DIMENSIONS ARE MINIMUM

**630** DIRECT BURIED CONDUIT  
TYP NTS



DOOR LEADING TO ELECTRICAL ROOM



ELECTRICAL EQUIPMENT LAYOUT



PANEL LB



CONTACTOR CABINET

PRIME CONSULTANT  
**TRACE**  
CONSULTING  
201 E. WASHINGTON ST. Suite 101 Phoenix, AZ 85004

SUB CONSULTANT  
**CR**  
engineers  
1911 E. Camelback Road, Suite 202  
Phoenix, AZ 85016  
PHOENIX, AZ 85016

PER CITY OF PHOENIX CITY CODE CHAPTER 2 SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX.

| NO | REVISIONS / SUBMISSIONS | DATE |
|----|-------------------------|------|
|    |                         |      |

**PHX BYR**  
CITY OF PHOENIX AVIATION DEPARTMENT  
PHOENIX SKY HARBOR INTERNATIONAL AIRPORT  
PHX T3 RECIRCULATION ROADWAY IMPROVEMENT  
PROJECT NO. AV14000029

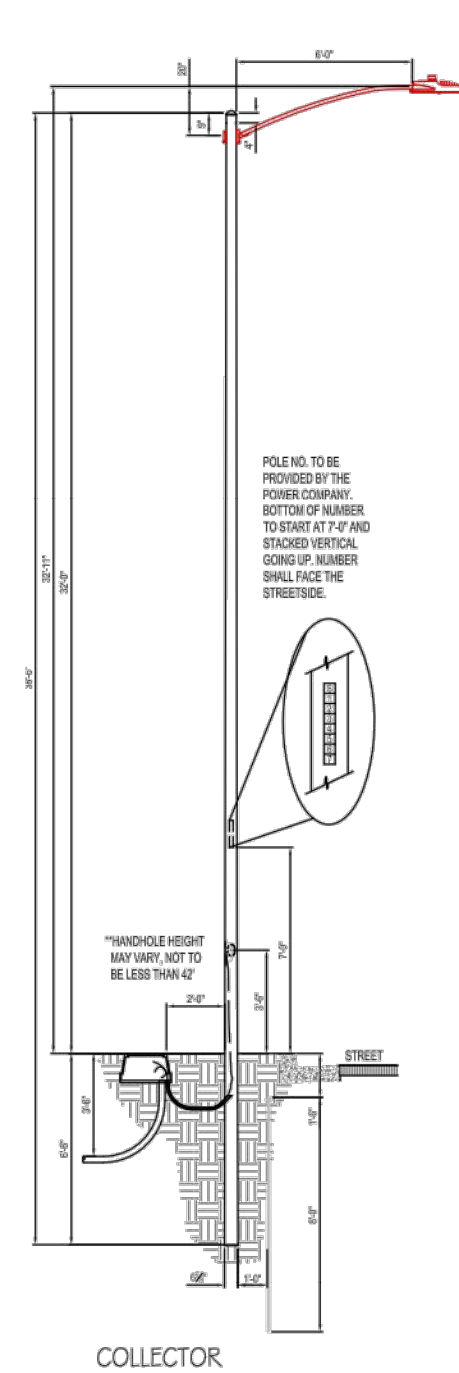
Designed by: CA  
Drawn by: JBW  
Checked by: CA  
Date: 08/23/2024  
Dwg scale:

SHEET OVERVIEW TITLE  
**ELECTRICAL DETAILS**

SHEET REFERENCE NUMBER:  
**EA501**  
SHEET XX OF X

G:\PROJECTS\22000\22003\_Sky\_Harbor\_Bldg\_Vest\_of\_Terminal\_3\_Streetlight\_Relocation\_CAD\_SHEETS\_FA501 - ELECTRICAL\_DETAILS.dwg - Aug 26 2024 8:12am





1944

- 19 = 19" Ø POLE SNG SIMPLEX
- 30 = 30" Ø POLE SNG SIMPLEX
- 38 = 38" Ø POLE SNG SIMPLEX
- 38X = 38" Ø POLE DBL SIMPLEX
- \*\* SEE SPEC. NOTE

- CONSTRUCTION NOTES:**
- ADJUST PHOTO EYE TO FACE NORTH
  - A GROUND ROD IS PROVIDED WITH THE JUNCTION BOX. WHERE A GROUND ROD CANNOT BE DRIVEN ALTERNATE GROUND SHALL BE USED. SEE 2449 THRU 2460 FOR APPROVED ALTERNATES.
  - THE 40'-6" SELF-SUPPORTING STEEL POLE AND ONE OF THE 38'-0" HAVE TWO MANUFACTURED INSTALLED SIMPLEX FITTINGS 180 APART FOR DOUBLE ARMS. SEE CHART.
  - APN 33701054 IS A POLE BAND ADAPTOR WITH A SIMPLEX FITTING. ADAPTOR IS REQUIRED FOR THE SECOND ARM IN DOUBLE ARM APPLICATIONS ON EXISTING PLES IN THE FIELD WITHOUT TWO SIMPLEX FITTINGS. SEE 8198 FOR AVAILABLE SIZES.
  - POLES THAT HAVE MORE THAN ONE LUMINAIRE REQUIRE A SEPARATE CIRCUIT WITH FUSING FROM THE J-BOX TO EACH LUMINAIRE.

- ENGINEERING NOTES:**
- A THE LIGHT CODE PROVIDES TWO SAME WATTAGE LUMINAIRES WHEN DOUBLE ARM ARE SPECIFIED.
- B SEE SPEC 8130 - 8131 FOR IN-LINE FUSE FOR UNDERGROUND FEEDS.
- C SEE 8100 THRU 8107 FOR OVERHEAD ATTACHMENTS.

| LIGHT CODE | COLOR | APN      | TYPE | WATTS                  | MULTIVOLT | INITIAL LUMENS | PHOTOMETRIC CURVE |
|------------|-------|----------|------|------------------------|-----------|----------------|-------------------|
| CL61       | GRAY  | 00128329 | 29   | 120/208/240/277 DRIVER | 3,500     | 454689         |                   |
| CL61       | GRAY  | 00128330 | 37   | 120/208/240/277 DRIVER | 4,700     | 454689         |                   |
| CL62       | GRAY  | 00128331 | 68   | 120/208/240/277 DRIVER | 8,000     | 454577         |                   |
| CL63       | GRAY  | 00128332 | 87   | 120/208/240/277 DRIVER | 9,700     | 454688         |                   |
| CL64       | GRAY  | 00128364 | 140  | 120/208/240/277 DRIVER | 16,800    | 454942         |                   |

| POLE TYPE | POLE CODE | POLE LENGTH | POLE BURY DEPTH | POLE ABOVE GROUND | POLE BUTT DIAMETER | LUMINAIRE HEIGHT ABOVE GROUND ON ARM |   |
|-----------|-----------|-------------|-----------------|-------------------|--------------------|--------------------------------------|---|
|           |           |             |                 |                   | STEP TAPER         | WEIGHT 20" X 6" 3" X 8" 6" X 8"      |   |
| LOCAL     | 1944.30   | 30'-6"      | 5'-6"           | 25'-0"            | 5-9/16" 7-5/16"    | 460 25'-11" 27'-3"                   | - |
| COLLECTOR | 1944.38   | 38'-6"      | 6'-6"           | 32'-0"            | 6-5/8" 9-3/4"      | 640 32'-11" 34'-3" 39'-3"            |   |
| ARTERIAL  | 1944.38X  | 38'-6"      | 6'-6"           | 32'-0"            | 6-5/8" 9-3/4"      | 640 32'-11" 34'-3" 39'-3"            |   |

\*\*FOR NON-STANDARD POLES, CONTACT THE STREET TRANSPORTATION STREETLIGHTING SECTION FOR INFORMATION.

**GRAY ROADWAY POLE STANDARDS**  
1/4"=1'-0"

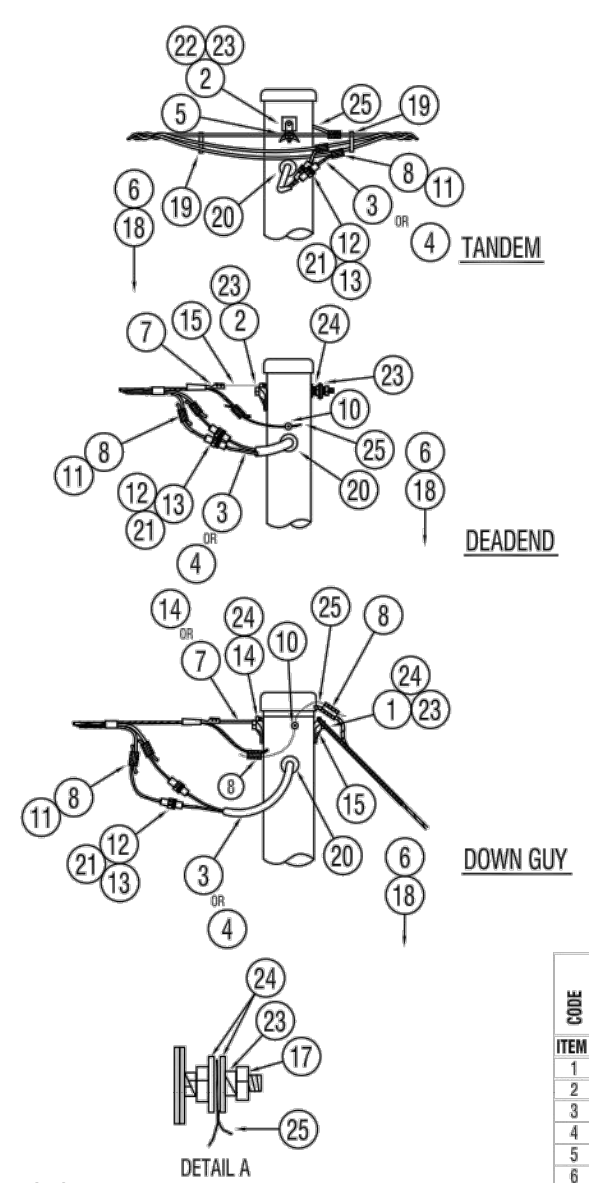
- ELECTRICAL REQUIREMENTS FOR NEW POLE INSTALLATION**
- JUNCTION BOXES SHALL MEET UTILITY COMPANY STANDARDS.
  - CONDUIT, CONDUCTORS, AND FUSE HOLDERS SHALL BE LISTED AND LABELED FOR USE IN A WET LOCATION WHEN USED IN A JUNCTION BOX. (NEC 300.5(B), 310.8(C))
  - IN-LINE FUSE HOLDER USED IN HAND HOLE OR SERVICE DROP SHALL BE CONSIDERED AS DISCONNECTING MEANS. FUSE HOLDERS TO BE RATED AT 22,000 AMP MINIMUM. (NEC 240.40)
  - ELECTRICAL CONNECTIONS-CONDUCTORS OF DISSIMILAR METALS SHALL NOT BE INTERMIXED IN A TERMINAL OR SPLICING CONNECTOR WHERE PHYSICAL CONTACT OCCURS BETWEEN DISSIMILAR CONDUCTORS. (COPPER, ALUMINUM) UNLESS THE DEVICE IS IDENTIFIED FOR THE PURPOSE AND CONDITIONS OF USE. (NEC 110.14)
  - ELECTRICAL CONNECTIONS OR SPLICES IN AN UNDERGROUND INSTALLATION SHALL BE APPROVED FOR WET LOCATIONS. (NEC 300.5)
  - NON-CURRENT CARRYING CONDUCTIVE MATERIALS ENCLOSING ELECTRICAL CONDUCTORS OR EQUIPMENT, OR FORMING PART OF SUCH EQUIPMENT, SHALL BE CONNECTED TO EARTH IN A MANNER THAT WILL LIMIT THE VOLTAGE IMPOSED BY LIGHTNING OR UNINTENTIONAL VOLTAGE DUE TO SHORT CIRCUITS AND LIMIT THE VOLTAGE TO GROUND ON THESE MATERIALS. (NEC 250.4(B) (GROUND RODS))
  - AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED FROM THE GROUND LUG IN THE HAND-HOLE TO THE LUMINAIRE WITH THE CURRENT CARRYING CONDUCTORS. (NEC 410.30(B)(3))
  - CONNECTION TO THE GROUND ROD AND THE GROUNDING ELECTRODE SHALL BE LISTED AND LABELED FOR USE. (NEC 250.8)
  - CONNECT #6 BARE COPPER WIRE FROM THE GROUND ROD ADJACENT TO THE POLE OR IN JUNCTION BOX TO THE GROUND LUG IN THE POLE.

- CONSTRUCTION NOTES:**
- ADJUST PHOTO EYE TO FACE NORTH
  - A GROUND ROD IS PROVIDED WITH THE JUNCTION BOX. WHERE A GROUND ROD CANNOT BE DRIVEN ALTERNATE GROUND SHALL BE USED. SEE 2449THRU 2460 FOR APPROVED ALTERNATES.
  - THE 40'-6" SELF-SUPPORTING STEEL POLE AND ONE OF THE 38'-0" HAVE TWO MANUFACTURED INSTALLED SIMPLEX FITTINGS 180 APART FOR DOUBLE ARMS. SEE CHART.
  - APN 33701054 IS A POLE BAND ADAPTOR WITH A SIMPLEX FITTING. ADAPTOR IS REQUIRED FOR THE SECOND ARM IN DOUBLE ARM APPLICATIONS ON EXISTING PLES IN THE FIELD WITHOUT TWO SIMPLEX FITTINGS. SEE 8198 FOR AVAILABLE SIZES.
  - POLES THAT HAVE MORE THAN ONE LUMINAIRE REQUIRE A SEPARATE CIRCUIT WITH FUSING FROM THE J-BOX TO EACH LUMINAIRE.
- ENGINEERING NOTES:**
- A THE LIGHT CODE PROVIDES TWO SAME WATTAGE LUMINAIRES WHEN DOUBLE ARM ARE SPECIFIED.
- B SEE SPEC 8130 - 8131 FOR IN-LINE FUSE FOR UNDERGROUND FEEDS.
- C SEE 8100 THRU 8107 FOR OVERHEAD ATTACHMENTS.

**20 YEAR PHOTOCELL REQUIREMENTS**

APN# 00073241 CONTROL PHOTO MULTI BR-20 CONTROL, PHOTO-ELECTRIC, BROWN, 20YEAR FAIL OFF, 120/208/240/277 MULTIVOLT, SILICON, SLOD STATE 2.40 TO 3.80 FC ON 1.2 TO 2.4 FC OFF, 60 HERTZ, 300 JOULE MOV, INVERSE ON/OFF RATIO: 8:1 +/- 1, FALL OFF, THREE PIN NEMA TWISLOCK, 20 YEAR LIFE, 8483-SIDE SELC, MODEL #84832T1M8R

| WATT | LUMEN  | DESCRIPTION  | APN    | MODEL#            |
|------|--------|--|--------|-------------------|
| 29W  | 3,500  | SCALABLE ROADWAY GE LED GRAY Pedestrian LUMINAIRE 31WATT, 2700K, 3,800 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, GRAY, MULTIVOLT 120/208/240/277 DRIVER, ES NARROW ASYMMETRIC MEDIUM, ANSIC136.41 7 PIN TWISLOCK PHOTO CONTROL, RECEPTACLE, CSA OR UL CERTIFIED, ANSIC136.15 WATTAGE LABEL.              | 128329 | ERL1004AS27A GRAY |
| 37W  | 4,700  | SCALABLE ROADWAY GE LED GRAY Local Street LUMINAIRE 39WATT, 2700K, 4,700 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, GRAY, MULTIVOLT 120/208/240/277 DRIVER, ES NARROW ASYMMETRIC MEDIUM, ANSIC136.41 7 PIN TWISLOCK PHOTO CONTROL, RECEPTACLE, CSA OR UL CERTIFIED, ANSIC136.15 WATTAGE LABEL.            | 128330 | ERL1005AS27A GRAY |
| 68W  | 8,000  | SCALABLE ROADWAY GE LED GRAY Collector Street LUMINAIRE 71WATT, 2700K, 7,800 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, GRAY, MULTIVOLT 120/208/240/277 DRIVER, ES NARROW ASYMMETRIC MEDIUM, ANSIC136.41 7 PIN TWISLOCK PHOTO CONTROL, RECEPTACLE, CSA OR UL CERTIFIED, ANSIC136.15 WATTAGE LABEL.        | 128331 | ERL1009C527A GRAY |
| 87W  | 9,700  | SCALABLE ROADWAY GE LED GRAY Major Roadway LUMINAIRE 97WATT, 2700K, 9,250 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, GRAY, MULTIVOLT 120/208/240/277 DRIVER, ES NARROW ASYMMETRIC MEDIUM, ANSIC136.41 7 PIN TWISLOCK PHOTO CONTROL, RECEPTACLE, CSA OR UL CERTIFIED, ANSIC136.15 WATTAGE LABEL.           | 128332 | ERL1010C527A GRAY |
| 140W | 16,800 | SCALABLE ROADWAY GE LED GRAY Special Major Roadway LUMINAIRE 149WATT, 2700K, 16,000 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, GRAY, MULTIVOLT 120/208/240/277 DRIVER, ES NARROW ASYMMETRIC MEDIUM, ANSIC136.41 7 PIN TWISLOCK PHOTO CONTROL, RECEPTACLE, CSA OR UL CERTIFIED, ANSIC136.15 WATTAGE LABEL. | 128364 | ERL2019C527A GRAY |



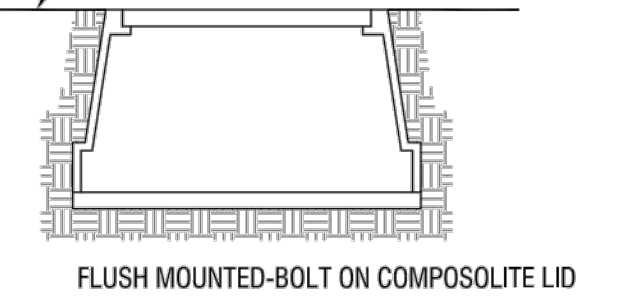
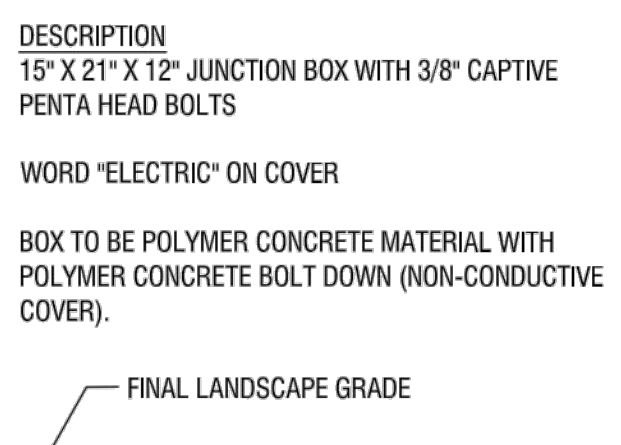
- 8100. --- TWO WIRE 120V, 277V TANGENT
- 8101. --- THREE WIRE 208V, 240V TANGENT
- IF APPLICABLE: DE = DUSK-TO-DAWN WIRE CODE
- 8102. --- TWO WIRE 120V, 277V DEADEND
- 8103. --- THREE WIRE 208V, 240V
- 8106. --- TWO WIRE 120V, 277V DEADEND WITH GUY HOOK
- 8107. --- THREE WIRE 208V, 240V DEADEND WITH GUY HOOK

**MATERIAL LIST**

| ITEM | QTY | UNIT | DESCRIPTION                 | APN      |
|------|-----|------|-----------------------------|----------|
| 1    | 1   | EA   | BOLT GALV HX 5/8" X 10"     | 30001549 |
| 2    | 1   | EA   | BOLT GALV HX 5/8" X 8"      | 30001547 |
| 3    | 10  | EA   | CABLE D/C #14CU LF          | 31102132 |
| 4    | 10  | EA   | CABLE D/C #14CU LF          | 31102133 |
| 5    | 1   | EA   | CLAMP ANGLE 182 TO 80       | 30002592 |
| 6    | 1   | EA   | CLAMP GROUND ROD 5/8"       | 30002589 |
| 7    | 1   | EA   | CLAMP WEDGE FLS 4-SM/L      | 30002772 |
| 8    | 2   | EA   | CONN AL PG - SEE 2256       |          |
| 9    | 1   | EA   | CONN CU 1/2" - SEE 2256     |          |
| 10   | 1   | EA   | CONN POST 1/2" X 5/8" X 1-0 | 30005704 |
| 11   | 1   | EA   | COVER DIE INSULATING        | 30003192 |
| 12   | 1   | EA   | FUSE CARTRIDGE 15A          | 72602410 |
| 13   | 1   | EA   | FUSHER BR IN-LINE 800V      | 09007502 |
| 14   | 1   | EA   | GRP DE PRES - SEE 2135      |          |
| 15   | 1   | EA   | HOOK GUY - MED DUTY 5/8"    | 30003931 |
| 16   | 1   | EA   | NUT W/SHR RIVNT             | 09055522 |
| 17   | 1   | EA   | NUT 5/8 GALV 5/8"           | 30004178 |
| 18   | 1   | EA   | RD COPPERCLAD GRD 5/8" X 8" | 30004020 |
| 19   | 2   | EA   | SPRNG MULTIPLEX CABLE       | 30005919 |
| 20   | 1   | EA   | STOPPER BUSH AND DUST       | 30006555 |
| 21   | 1   | EA   | TUBING SPRINGWIRE 1/4"      | 71606200 |
| 22   | 2   | EA   | WASHER GALV 1/2" X 3/8"     | 30007159 |
| 23   | 1   | EA   | WASHER GALV DBL COIL 5/8"   | 30007154 |
| 24   | 1   | EA   | WASHER GALV 1/2" X 5/8"     | 30007165 |
| 25   | 2   | EA   | WIRE BARE #6 SOLID CU       | 30007580 |

- NOTES:**
- STEEL POLES AND ALL MAST ARMS MUST BE GROUNDED.
  - OVERHEAD ATTACHMENTS MUST BE GROUNDED TO THE STREET LIGHT POLE. A 1/2" HOLE HAS BEEN ADDED BELOW TOP OF STREET LIGHT POLE TO INSTALL A GROUNDING INSERT APN 00055522. TOOL TO INSTALL RIVNUT IS APN 00053279. SEE STANDARD 2408. WHERE RIVNUTS ARE NOT AVAILABLE GROUND PER DETAIL A.
  - ALL OVERHEAD FEED STREET LIGHT POLES SHALL HAVE A GROUND ROD INSTALLED AND A #6 GROUND WIRE BONDED TO THE GROUNDING LUG AT THE BACK OF THE HAND HOLE.
  - THESE CODES PROVIDE THE #14 CU FOR THE MAST ARMS, HARDWARE FOR ATTACHING TANGENT OR DEADEND SECONDARY, AND THE CONNECTORS.

**STREET LIGHT POLE CABLE ATTACHMENTS AND GROUNDING DETAIL**  
1/2"=1'-0"



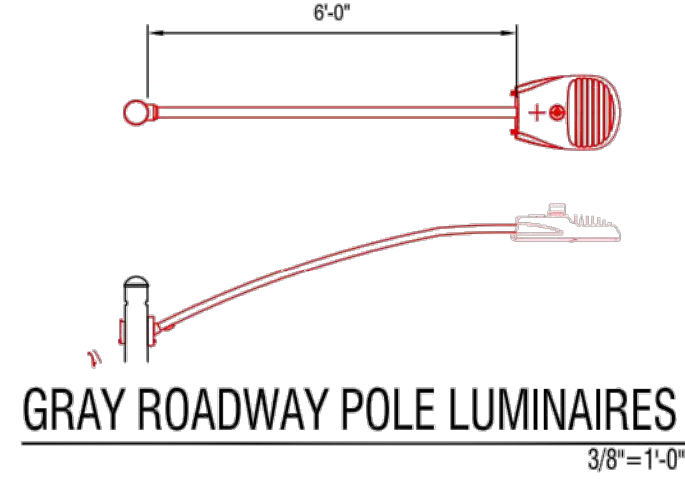
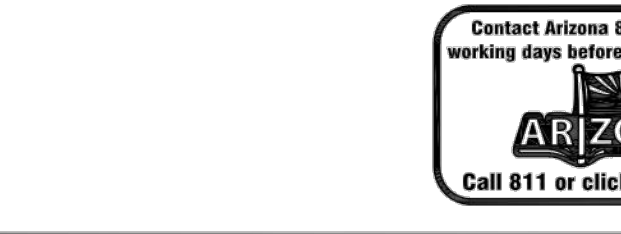
**SRP APPROVED SUPPLIERS**

STRONGWELL  
ARMORCAST PRODUCTS  
CDR SYSTEMS  
CARSON & ASSOCIATES

**PART NUMBER**

PC11188513 BOX  
PC1118C504-17/UH0390AA COVER WITH ELECTRIC  
A6001429A  
PA40-1015-12  
HLW111B-12 BOX  
HLW111B-PO LID

**J-BOX SECTION**  
3/8"=1'-0"



**GRAY ROADWAY POLE LUMINAIRES**  
3/8"=1'-0"

**GRAY ROADWAY LUMINAIRE DESCRIPTIONS**

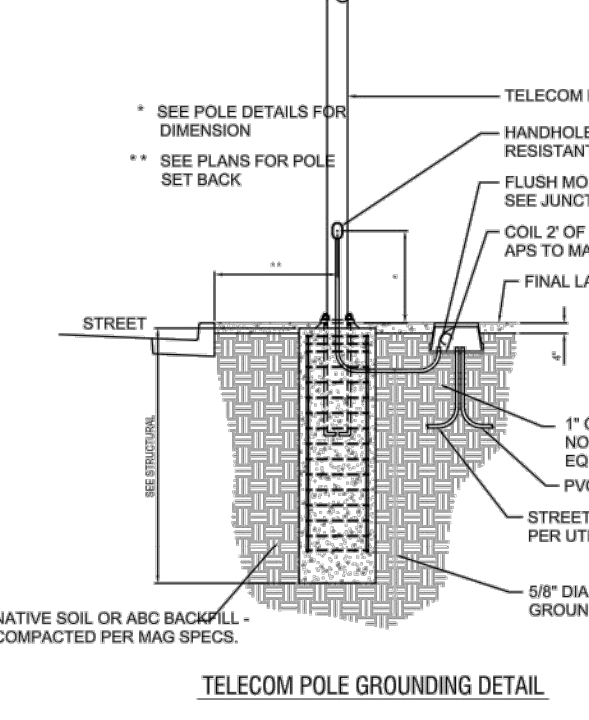
APN# 128329  
29W LED RWGR - PEDESTRIAN  
ERL1004AS27A GRAY

APN# 128330  
37W LED RWGR - LOCAL  
ERL1005AS27A GRAY

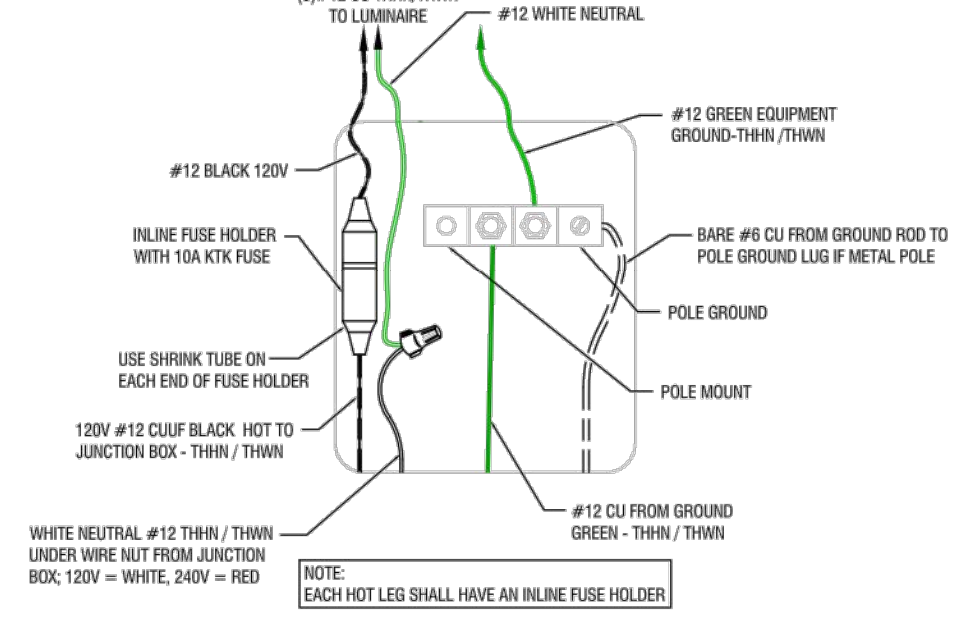
APN# 128331  
68W LED RWGR - COLLECTOR  
ERL1009C527A GRAY

APN# 128332  
87W LED RWGR - MAJOR  
ERL1010C527A GRAY

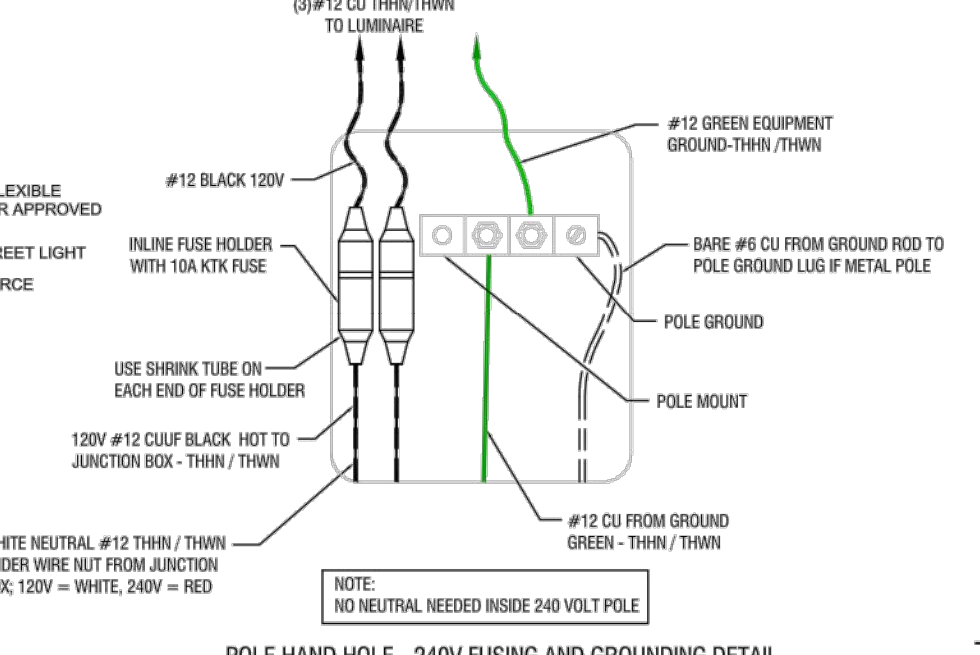
APN# 128364  
140W LED RWGR - SPECIAL MAJOR  
ERL2019C527A GRAY



**POLE GROUNDING DETAIL**  
3/16"=1'-0"



**POLE HAND HOLE - 110V FUSING AND GROUNDING DETAIL**

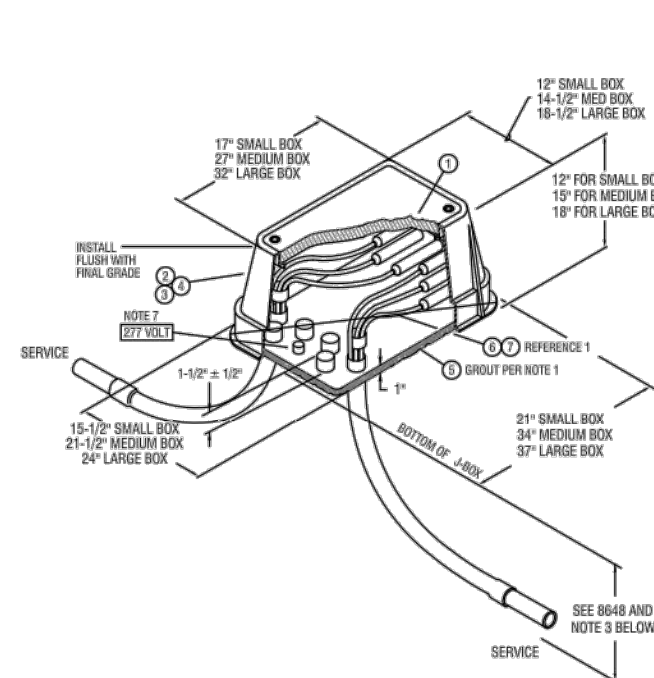


**POLE HAND HOLE FUSING DETAIL**  
3/16"=1'-0"

**JUNCTION BARS**

| CODE | DESCRIPTION            |
|------|------------------------|
| A    | THREE-POSITION MOLDS   |
| B    | FIVE-POSITION MOLDS    |
| C    | EIGHT-POSITION MOLDS   |
| D    | TWO-POSITION GEL PACKS |
| N    | NO CONNECTORS          |

- 8655. --- SEE NOTE 10 AND 11 SMALL BOX
- 8656. --- SEE NOTE 10 AND 12 MEDIUM BOX
- 8657. --- SEE NOTE 13 LARGE BOX
- IF APPLICABLE G = APS GROUT PROVIDED
- IF APPLICABLE L = LIGHTS
- D = DUSK-TO-DAWN
- SECONDARY WIRE CODES
- JUNCTION BARS



**APS J-BOX DETAIL**  
1/4"=1'-0"

- NOTES:**
- CONCRETE GROUT SHALL BE PREMIX APN 71301280 OR EQUIVALENT.
  - PENTA-HEAD BOLTS SHALL BE INSTALLED PRIOR TO ENERGIZING NEW UNDERGROUND SYSTEMS. LOST OR MISPLACED PENTA-HEAD BOLTS SHALL BE REPLACED WITH APN 71402808.
  - BRINGING ALL CABLES/CONDUITS AND GROUND ROD INTO THE SAME END OF THE BOX TO ENABLE CABLES TO BE RAISED AND LOWERED EASILY. CONDUIT SWEEPS SHALL BE POSITIONED AND ALIGNED SO THAT WHEN TWO AND FOUR POSITION JUNCTION BARS ARE SPECIFIED, THE ST. LT., SECONDARY AND SERVICE CONDUITS SHALL BE INSTALLED AS SHOWN IN DETAIL "A". WHEN SIX POSITION JUNCTION BARS ARE SPECIFIED, THE ST. LT., SECONDARY AND SERVICE CONDUITS SHALL BE INSTALLED AS SHOWN IN DETAIL "B".
  - COMPACTION BENEATH AND AROUND JUNCTION BOX SHALL BE A MINIMUM OF 85 PERCENT.
  - REPLACEMENT LID FOR MEDIUM PLASTIC JUNCTION BOX IS 33100961. PENTA-HEAD BOLTS AND EMS MARKER MUST BE REUSED FROM OLD LID.
  - ADDITIONAL TRENCH DEPTH IS USUALLY REQUIRED AT ALL EQUIPMENT LOCATIONS. SEE 8648 FOR THE MINIMUM TRENCH DEPTHS AND THE DEGREE OF SLOPE ALLOWED AS THE TRENCH DEPTH CHANGES.
  - ON 277 VOLT STREET LIGHT CIRCUITS, INSTALL "277 VOLT" RED MICARTA TAG (APN 00087036) PROVIDED BY SPEC 8129.
  - TORQUE BOLTS TO 5 FT - LBS (60 IN - LBS).

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY & MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

**GRAY ROADWAY STREET LIGHTS**  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

PROJECT #:

DR: DES: CK: DATE: SHEET NO: TOTAL SHEETS

SCALE: NTS OS: #:

**TRACE CONSULTANT**  
CONSULTANT ENGINEERING (INCORPORATED)  
36986 CATHERINE M. ALCORN  
10715 N. 19TH AVENUE, SUITE 102  
PHOENIX, ARIZONA 85024  
PH: 602.998.8888  
F: 602.998.8889  
www.traceaz.com

**CR engineers**  
10715 N. 19TH AVENUE, SUITE 102  
PHOENIX, ARIZONA 85024  
PH: 602.998.8888  
F: 602.998.8889  
www.traceaz.com

PRIME CONSULTANT  
SUB CONSULTANT

PER CITY OF PHOENIX CITY CODE CHAPTER 2 SECTION 2-2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX.

DESIGNED BY: CA  
DRAWN BY: JBW  
CHECKED BY: CA  
DATE: 08/23/2024  
DWG SCALE:

**PHX BYR**  
CITY OF PHOENIX AVIATION DEPARTMENT  
PHOENIX SKY HARBOR  
INTERNATIONAL AIRPORT  
PHX T3 RECIRCULATION  
ROADWAY IMPROVEMENT  
PROJECT NO. AV14000029

**ELECTRICAL DETAILS**

SHEET OVERVIEW TITLE

SHEET REFERENCE NUMBER:  
**EA502**  
SHEET X OF XX



G:\PROJECTS\22000\22003\_Sky\_Harbor\_Bldg\_West\_of\_Terminal\_3\_Streetlight\_Relocation\CAD\SHEETS\_EA601 - PANEL LB SCHEDULE.dwg - Aug 26, 2024 8:13am

| PANEL:                                  | LB      | VOLTAGE:  | 277/480 | MAIN CB: | 125     | BUS AMPS: | 125 |                     |  |
|---|---------|-----------|---------|----------|---------|-----------|-----|---------------------|--|
| CB TYPE:                                | BOLT-ON | MOUNTING: | SURFACE | BRACING: | 10K     | BKR AIC:  | 10K |                     |  |
| CIRCUIT DESCRIPTION                     | BKR     | CIRCUIT   | PHASE A | PHASE B  | PHASE C | CIRCUIT   | BKR | CIRCUIT DESCRIPTION |  |
| BLANK                                   |         | 1         |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 2         | 50  | NORTH STREETLIGHTS  |  |
| SOUTH STREET LIGHTS                     | 50      | 3         |         |          |         |           | /   |                     |  |
|   | /       |           |         |          |         | 4         | 2   |                     |  |
|   | 2       | 5         |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 6         | 50  | CHARGER PANEL XFMR  |  |
| T3 SUICIDE CURVE STREET LIGHTS          | 50      | 7         |         |          |         |           |     |                     |  |
|   | /       |           |         |          |         | 8         | /   | CH1L 3 PHASE 4 WIRE |  |
|   | 2       | 9         |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 10        | 3   | 100A 120/208 VOLT   |  |
|   |         | 11        |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 12        |     |                     |  |
|   |         | 13        |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 14        |     |                     |  |
|   |         | 15        |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 16        |     |                     |  |
|   |         | 17        |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 18        |     |                     |  |
|   |         | 19        |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 20        |     |                     |  |
|   |         | 21        |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 22        |     |                     |  |
|   |         | 23        |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 24        |     |                     |  |
|   |         | 25        |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 26        |     |                     |  |
|   |         | 27        |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 28        |     |                     |  |
|   |         | 29        |         |          |         |           |     |                     |  |
|   |         |           |         |          |         | 30        |     |                     |  |
| CONNECTED KVA PER PHASE                 |         |           | 0.0     | 0.0      | 0.0     | NOTES:    |     |                     |  |
| CONNECTED AMPS PER PHASE                |         |           | 0.0     | 0.0      | 0.0     |           |     |                     |  |
| 25% OF CONTINUOUS & LIGHTING LOAD (KVA) |         |           | 0.0     | 0.0      | 0.0     |           |     |                     |  |
| LARGEST MOTOR (25%)                     |         |           | 0.0     | 0.0      | 0.0     |           |     |                     |  |
| CODE KVA PER PHASE                      |         |           | 0.0     | 0.0      | 0.0     |           |     |                     |  |
| CODE AMPS PER PHASE AT 120V             |         |           | 0.0     | 0.0      | 0.0     |           |     |                     |  |

PANEL LB SCHEDULE

EXISTING HPS STREET LIGHT FIXTURES (9 TOTAL) 4,500W

EXISTING LED STREET LIGHT FIXTURES (10 TOTAL) 710W

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TOTAL LOAD REDUCTION ON PANEL LB: 3,790W

| <br><b>TRACE</b><br>CONSULTANT  | <br><b>CR</b><br>engineers<br><small>101 E. Johnson St. Suite 110 Phoenix, AZ 85004</small>  |      |                         |      |  |  |  |  |  |  |  |  |  |
|--|---|------|-------------------------|------|--|--|--|--|--|--|--|--|--|
| <br>Catherine M. Alcorn<br>Professional Engineer<br>No. 36986<br>State of Arizona   | PRIME CONSULTANT<br>SUB CONSULTANT  |      |                         |      |  |  |  |  |  |  |  |  |  |
| PER CITY OF PHOENIX CITY CODE CHAPTER 2 SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX. | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO</th> <th>REVISIONS / SUBMISSIONS</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table> | NO   | REVISIONS / SUBMISSIONS | DATE |  |  |  |  |  |  |  |  |  |
| NO   | REVISIONS / SUBMISSIONS   | DATE |                         |      |  |  |  |  |  |  |  |  |  |
|  |   |      |                         |      |  |  |  |  |  |  |  |  |  |
|  |   |      |                         |      |  |  |  |  |  |  |  |  |  |
|  |   |      |                         |      |  |  |  |  |  |  |  |  |  |
| <br><b>PHX BYR</b><br>CITY OF PHOENIX AVIATION DEPARTMENT  | <b>PHOENIX SKY HARBOR INTERNATIONAL AIRPORT PHX T3 RECIRCULATION ROADWAY IMPROVEMENT PROJECT NO. AV14000029</b>   |      |                         |      |  |  |  |  |  |  |  |  |  |
| Designed by: CA<br>Drawn by: JBW<br>Checked by: CA<br>Date: 08/23/2024<br>Dwg scale:   | <b>PANEL LB SCHEDULE</b>  |      |                         |      |  |  |  |  |  |  |  |  |  |
| SHEET OVERVIEW TITLE   | SHEET REFERENCE NUMBER:<br><b>EA601</b><br>SHEET X OF XX  |      |                         |      |  |  |  |  |  |  |  |  |  |