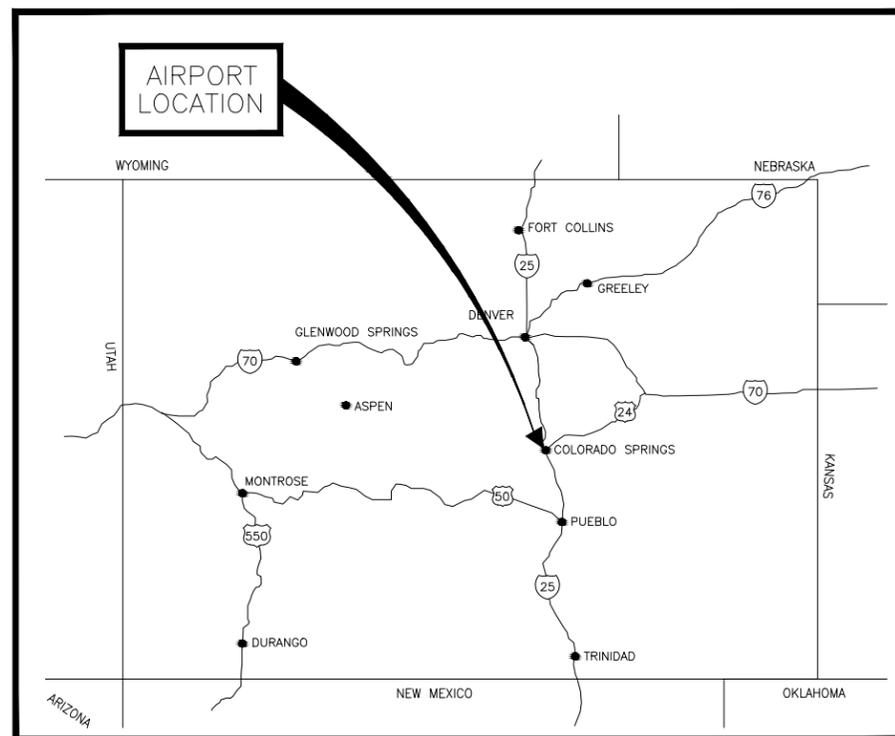


COLORADO SPRINGS AIRPORT

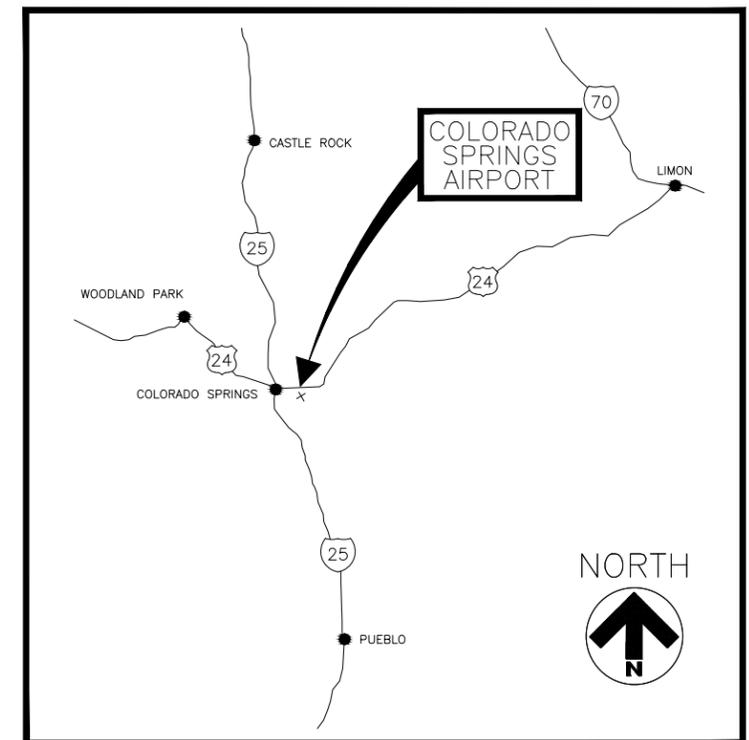
COLORADO SPRINGS, COLORADO

TAXIWAY C RECONSTRUCTION

SCHEDULE I:
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H
AND
REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7



PROJECT LOCATION MAP
NTS



VICINITY MAP
NTS

COS SOLICITATION NO.: B16-027IP
AIP PROJECT NO.: 3-08-0010-59



IN ASSOCIATION WITH:



7290 S. FRASER STREET
 CENTENNIAL, COLORADO 80112



14310 SULLYFIELD CR., SUITE 800
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FEBRUARY 23, 2016
BID DOCUMENTS

RS&H PROJECT NO.: 224-0124-003



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GENERAL NOTES:

- ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO FAA ADVISORY CIRCULAR 150/5370-2F (OR LATEST EDITION) AND THE AIRPORT SAFETY AND SECURITY REQUIREMENTS CONTAINED IN THE SPECIFICATIONS OR PROVIDED BY THE COLORADO SPRINGS AIRPORT.
- THE SITE PLAN IS INTENDED ONLY AS A GENERAL DESCRIPTION OF WORK ITEMS AND THEIR APPROXIMATE LOCATIONS AND LIMITS. IT SHALL NOT BE USED AS A CONSTRUCTION PLAN. REFER TO THE PLAN SHEETS FOR DETAILED CONSTRUCTION REQUIREMENTS, LOCATIONS, AND ITEMS OF WORK.
- THE CONTRACTOR SHALL FURNISH ALL PLANT, LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION AND ALL OTHER ELEMENTS NECESSARY TO CONSTRUCT ALL ELEMENTS OF THIS PROJECT AS DESCRIBED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS. THE PROJECT PAY ITEMS ARE INTENDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL INCIDENTAL WORK TO COMPLETE THE PROJECT, TO THE SATISFACTION OF THE ENGINEER, SHALL BE INCLUDED IN THE COST OF PERFORMING THE VARIOUS ITEMS OF WORK.
- THE RULES, REGULATIONS AND REFERENCE SPECIFICATIONS, ENUMERATED HEREIN, SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS. THEY SHALL NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING HIGHER GRADES OF MATERIAL AND WORKMANSHIP THAN ARE SPECIFIED HEREIN, OR WHEN SO REQUIRED.
- THE CONTRACTOR SHALL PAY CLOSE ATTENTION TO THE CONSTRUCTION SAFETY AND PHASING PLAN (CSPP), THE SAFETY AND SECURITY REQUIREMENTS DETAILED IN THIS DRAWING SET AND TO THE AIRPORT SAFETY/SECURITY REQUIREMENTS SECTION OF THE SPECIFICATIONS. THESE SHALL BE STRICTLY ENFORCED.
- CONSTRUCTION WILL BE IN OR ADJACENT TO RUNWAY AND TAXIWAY OPERATIONAL AREAS. ALL RUBBISH AND DEBRIS RESULTING FROM WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AS NEEDED THROUGHOUT THE DAY AND A MINIMUM OF ONCE DAILY.
- PERMITS: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AND PAY FOR ALL APPLICABLE PERMITS FOR CONSTRUCTION AND EQUIPMENT INCLUDING, BUT NOT LIMITED TO STORMWATER CONSTRUCTION GENERAL PERMIT, STORM WATER MANAGEMENT PLAN, AIR QUALITY PERMIT FOR BATCH PLANT, ETC.
- CLOSURES: RUNWAY AND TAXIWAY CLOSURES REQUIRED FOR CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DETAILS IN THE SAFETY PLANS.
- SURPLUS MATERIAL: UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL SURPLUS MATERIAL AND EQUIPMENT BELONGING TO HIM/HER, OR SUBCONTRACTOR'S FORCES, AND RESTORE THE SITE TO THE SATISFACTION OF THE ENGINEER.
- MEETINGS: THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION MEETING PRIOR TO BEGINNING WORK, TO COORDINATE WORK PROCEDURES WITH ALL INTERESTED PARTIES. THE CONTRACTOR SHALL ALSO ATTEND WEEKLY JOB MEETINGS. THE CONTRACTOR SHALL ALSO ATTEND PRE-WORK MEETINGS PRIOR TO ALL MAJOR CONSTRUCTION ACTIVITIES.
- ALL IDENTIFIED SALVAGEABLE ITEMS REMOVED FROM THE SITE SHALL REMAIN THE PROPERTY OF THE AIRPORT AS DIRECTED. CONTRACTOR SHALL COORDINATE WITH THE AIRPORT TO IDENTIFY WHAT ITEMS ARE SALVAGEABLE, PRIOR TO DEMOLITION.
- CONTROL: THE CONTRACTOR SHALL SET BASIC REFERENCE LINE AND BENCH MARK GRADE CONTROL FROM WHICH THE WORK IS BUILT. ALL ELEVATIONS ARE BASED ON USGS DATUM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXTENDING THE CONTROL AND FURNISHING ALL ADDITIONAL STAKING AND MARKINGS NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL CONTROL AND WILL BE RESPONSIBLE FOR THE COST OF RESETTING ANY CONTROL DESTROYED OR DISTURBED DUE TO NEGLIGENCE OR CONSTRUCTION EFFORTS OF THE CONTRACTOR.
- EXISTING UTILITIES: THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING IN AREAS OF EXISTING UTILITIES. EXISTING UTILITIES SHALL BE LOCATED AND MARKED IN ADVANCE OF EXCAVATION IN ALL AREAS. ANY DAMAGE DONE TO FUNCTIONING UTILITIES SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT HIS/HER EXPENSE AND AS DIRECTED. THE LOCATIONS AND DEPTHS OF ANY UTILITIES SHOWN ON THE PLANS ARE ONLY AN APPROXIMATION - THEY ARE NOT AN ACCURATE REPRESENTATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING OR REPAIRING ALL DAMAGE TO AIRPORT PROPERTY CAUSED BY HIS/HER FORCES AND HIS/HER SUBCONTRACTOR'S FORCES. THE CONTRACTOR SHALL CONTACT LOCAL UTILITY AND AIRPORT REPRESENTATIVES TO IDENTIFY UNDERGROUND CABLES, WATERLINES, ETC., PRIOR TO STARTING WORK. A MINIMUM OF 2 BUSINESS DAYS IS REQUIRED FOR IDENTIFICATION OF AIRPORT UTILITIES.
- HAUL ROUTES: LOCATION OF HAUL ROUTES ON THE AIRPORT SITE SHALL BE AS SPECIFIED ON SHEET C005 AND SHEET C006 OR AS APPROVED BY THE ENGINEER AND/OR AIRPORT OPERATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS, COUNTY ROADS OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. ON-SITE HAUL ROUTES SHALL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE, AS IDENTIFIED. THE BEFORE AND AFTER CONDITION OF ON-SITE HAUL ROUTES SHALL BE JOINTLY INSPECTED AND DETERMINED BY THE CONTRACTOR, THE ENGINEER AND AIRPORT REPRESENTATIVES. FENCING, DRAINAGE, GRADING AND OTHER MISCELLANEOUS CONSTRUCTION REQUIRED TO CONSTRUCT TEMPORARY HAUL ROUTES OR ACCESS POINTS ON THE AIRPORT WILL BE THE CONTRACTOR'S TOTAL RESPONSIBILITY AND SHALL BE APPROVED BY THE AIRPORT OPERATIONS PRIOR TO THE WORK. ALL ON-SITE FAA ACCESS ROADS TO FAA FACILITIES SHALL REMAIN OPEN AND MAINTAINED AT ALL TIMES. PHOTOGRAPHS AND A VIDEO OF THE HAUL ROUTES SPECIFIED BY THE PLANS MUST BE PROVIDED BY THE CONTRACTOR BEFORE AND AFTER CONSTRUCTION TO THE AIRPORT ADMINISTRATION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO HAUL ROUTES RESULTING FROM CONSTRUCTION TRAFFIC.
- CONSTRUCTION LIMITS AND FLAGMEN: ALL CONTRACTOR VEHICLES AND TRAFFIC SHALL REMAIN WITHIN THE DESIGNATED CONSTRUCTION LIMITS OR HAUL ROUTES. ABSOLUTELY NO CONTRACTOR VEHICLES WILL BE ALLOWED ON OTHER ACTIVE AIRFIELD OPERATIONS AREAS. CONTRACTOR HAUL ROUTES ACROSS ACTIVE AIRFIELD PAVEMENTS WILL REQUIRE MULTIPLE FLAG PERSONNEL AS COORDINATED WITH AIRPORT STAFF.
- CONTRACTOR UTILITIES: STAGING AREAS DO NOT HAVE UTILITIES. ANY UTILITIES REQUIRED BY THE CONTRACTOR SHALL BE COORDINATED WITH THE UTILITY COMPANIES AND SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ELECTRICAL SERVICE IS AVAILABLE AT THE TEMPORARY JOB TRAILER LOCATION. CONTRACTOR SHALL INSPECT PRIOR TO BID TO DETERMINE REQUIREMENTS TO ESTABLISH ELECTRICAL SERVICE TO THE JOB TRAILER AND LAB TRAILERS.
- WASTE DISPOSAL: ASPHALT, CONCRETE (INCLUDING FABRIC BOND BREAKER) AND CEMENT TREATED SOIL RUBBLE/WASTE MATERIAL REMOVED FROM THE CONSTRUCTION AREA SHALL BE DISPOSED OF LEGALLY OFF-SITE. ASPHALT REMOVED FROM THE CONSTRUCTION AREA SHALL BE DISPOSED OF LEAGALLY OFFSITE. CONCRETE AND CEMENT TREATED SOIL (INCLUDING FABRIC BOND BREAKER) SHALL BE RETAINED ON-SITE AND CRUSHED PER P-107 AND AS SHOWN IN THE PLANS. EXCESS UNCLASSIFIED EXCAVATION SHALL BE REMOVED FROM THE CONSTRUCTION AREA AND BE DISPOSED OF AT THE LOCATION DESIGNATED ON THE PLANS, SEE SHEET C005. THE CONTRACTOR SHALL STRIP/STOCKPILE THE TOPSOIL FROM THE WASTE AREA PRIOR TO PLACEMENT OF THE WASTE MATERIAL. THE WASTE MATERIAL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH P-152. THE WASTE SITE SHALL BE RESTORED UPON COMPLETION BY REPLACING THE TOPSOIL AND SEEDING WITH HYDROMULCH. PAYMENT FOR STRIPPING OF THE TOPSOIL, PLACEMENT OF WASTE MATERIAL AND RESTORATION OF THE SITE SHALL BE INCLUDED IN THE UNCLASSIFIED EXCAVATION UNIT PRICE.
- COORDINATION OF CONSTRUCTION ACTIVITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONSTANT COORDINATION BETWEEN THE SUBCONTRACTORS AND THE ENGINEER. ALL CONSTRUCTION ACTIVITIES PLANNED BY THE CONTRACTOR SHALL BE REVIEWED AND APPROVED BY THE ENGINEER AND AIRPORT OPERATIONS REPRESENTATIVES.



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**COLORADO SPRINGS
 AIRPORT**

**TAXIWAY C
 RECONSTRUCTION**

**SCHEDULE 1:
 RECONSTRUCT
 TAXIWAY C FROM
 TAXIWAY C7
 THROUGH TAXIWAY H
 AND
 REHABILITATE
 PORTIONS OF
 TAXIWAYS C3, C5,
 C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016

REVIEWED BY: ARM

DRAWN BY: JFF

DESIGNED BY: JFF

RS&H PROJECT NUMBER

224-0124-003

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**INDEX OF
 DRAWINGS &
 GENERAL NOTES**

DRAWING NUMBER

C002

SHEET 02 OF 75

**BID
 DOCUMENTS**



Drawing: I:\2240124\003 colorado springs - taxiway c recon\c002.dwg
 Plotted on: 2/23/2016 5:22 PM
 Printed by: Frouley, Jeff

SUMMARY OF CONTRACT QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	BID SCHEDULE I	
			BID QUANTITY	FINAL QUANTITY
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7				
GENERAL				
G-100-3.1	Mobilization	LS	1.00	
G-102-10.1	Safety & Security	LS	1.00	
G-103-4.1	Engineer's Field Office	LS	1.00	
G-104-5.1	Project Survey & Stakeout	LS	1.00	
G-105-5.1	Temporary Construction Items	LS	1.00	
G-106-5.1	Pavement Marking Obliteration (Concrete Pavements)	SF	17,750.00	
G-106-5.2	Pavement Marking Obliteration (Asphalt Pavements)	SF	6,700.00	
G-106-5.3	Thermoplastic Pavement Marking Obliteration	SF	940.00	
G-107-4.1	Portland Cement Concrete Taxiway Pavement Demolition - 14-Inch Full Depth	SY	31,800.00	
G-107-4.2	Portland Cement Concrete Taxiway Pavement Demolition - 14-Inch Panel Only	SY	2,650.00	
G-107-4.3	Cement Treated Subgrade Removal - 6-Inch Full Depth	SY	47,900.00	
G-107-4.4	Portland Cement Concrete Shoulder Pavement Demolition - 7-Inch Full Depth	SY	12,900.00	
G-107-4.5	Portland Cement Concrete Shoulder Pavement Demolition - 7-Inch Panel Only	SY	50.00	
G-107-4.6	Bituminous Concrete Pavement Demolition - 3-Inch Full Depth	SY	500.00	
G-108-5.1	Bituminous Pavement Milling - 3-Inch	SY	500.00	
CIVIL				
P-152-4.1	Unclassified Excavation	CY	12,000.00	
P-152-4.2	Subgrade Preparation	SY	47,100.00	
P-152-4.3	Over-Excavation	CY	2,400.00	
P-154-5.1	Subbase Course	CY	6,700.00	
P-156-5.1	Erosion & Sedimentation Control	LS	1.00	
P-156-5.2	Silt Fence	LF	9,000.00	
P-156-5.3	Inlet & Outlet Protection	EA	4.00	
P-209-5.1	Crushed Aggregate Base Course	CY	8,300.00	
P-403-8.1	Bituminous Surface Course (PG 64-28)	SY	15,700.00	
P-403-8.2	Bituminous Base Course (PG 64-22)	SY	33,400.00	
P-501-8.1	Portland Cement Concrete Pavement - 16-Inch	SY	31,250.00	
P-501-8.2	Portland Cement Concrete Pavement - 14-Inch	SY	2,650.00	
P-603-5.1	Bituminous Tack Coat	GAL	8,020.00	
P-605-5.1	PCC Joint Sealant Rehabilitation-0 to 5/8-Inch	LF	37,450.00	
P-605-5.2	PCC Joint Sealant Rehabilitation- 3/4-Inch and Greater	LF	550.00	
P-605-5.3	PCC Crack Repair	LF	250.00	
P-607-5.1	Spall Repair	SF	600.00	
P-611-5.1	Methacrylate Pavement Sealing	SF	17,750.00	
P-620-5.1	Pavement Markings with Type III Reflective Beads	SF	14,750.00	
P-620-5.2	Pavement Markings without Reflective Beads - Prime Coat	SF	14,750.00	
P-620-5.3	Pavement Markings without Reflective Beads - Black Outline	SF	24,500.00	
P-620-5.4	Thermoplastic Pavement Markings - Surface Painted Holding Position Signs	SF	2,850.00	
P-620-5.5	Thermoplastic Pavement Markings - Runway Holding Position Markings	SF	3,660.00	
P-620-5.6	Thermoplastic Pavement Markings - Enhanced Centerline Markings	SF	1,350.00	
P-620-5.7	Thermoplastic Pavement Markings - ILS Holding Position Markings	SF	1,350.00	
F-162-5.1	Install 24-Foot Double Swing Chain-Link Gate in Existing Fence	EA	1.00	
F-162-5.2	Install Temporary 8-Foot Chain-Link Fence	LF	1,900.00	
D-705-5.1	6-Inch Perforated Underdrain Pipe, Complete	LF	4,400.00	
D-705-5.2	6-Inch Non-Perforated Underdrain Pipe, Complete	LF	750.00	
D-705-5.3	6-Inch Non-Perforated Underdrain Pipe, Concrete Encased, Complete	LF	90.00	
D-751-5.1	6-Inch Underdrain Cleanout, Complete	EA	11.00	
D-751-5.2	Inspection Pit	EA	5.00	
D-751-5.3	Connect 6-Inch Underdrain Pipe into Existing Manhole/Inlet/Inspection Pit	EA	4.00	
T-901-5.1	Seeding with Hydromulch	AC	12.00	
T-905-5.1	Topsoiling (Removal, Replacement & Re-Conditioning)	AC	12.00	

SUMMARY OF CONTRACT QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	BID SCHEDULE I	
			BID QUANTITY	FINAL QUANTITY
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7				
ELECTRICAL				
L-108-5.1	1/C No. 8 AWG, 5kV, L-824, Type B, Unshielded Cable, Installed in Trench, Duct Bank or Conduit	LF	8,350.00	
L-108-5.2	1/C No. 6 AWG, 5kV, L-824, Type B, Unshielded Cable, Installed in Trench, Duct Bank or Conduit	LF	1,250.00	
L-108-5.3	1/C No. 6 AWG, Solid Bare Copper Counterpoise Wire Installed in Trench, above the Duct Bank or Conduit, including Ground Rods and Ground Connectors	LF	6,150.00	
L-110-5.1	CLSM Encased Electrical Conduit, 1-Way, 2-Inch Schedule 40 PVC	LF	5,125.00	
L-110-5.2	Concrete Encased Electrical Conduit, 1-Way, 2-Inch Schedule 40 PVC	LF	800.00	
L-110-5.3	Concrete Encased Electrical Conduit, 1-Way, 2-Inch Schedule 40 PVC Installed in Existing Paved Areas	LF	90.00	
L-110-5.4	Concrete Encased Electrical Conduit, 2-Way, 3-Inch Schedule 40 PVC	LF	150.00	
L-115-5.1	Electrical Junction Structure, L-867E Junction Box with 1/2" Thick Blank Cover	EA	2.00	
L-115-5.2	Electrical Junction Structure, L-867B Junction Box with 1/2" Thick Blank Cover	EA	1.00	
L-125-5.1	L-861T Taxiway Edge Light, on 24-Inch Deep, Size B Base Can	EA	41.00	
L-125-5.2	L-861T Taxiway Edge Light, on 24-Inch Deep, Size D Base Can	EA	7.00	
L-125-5.3	L-861T Taxiway Edge Light, on 30-Inch Deep, Size B Base Can	EA	6.00	
L-125-5.4	L-861T Taxiway Edge Light, on L-868 Base Can	EA	1.00	
L-125-5.5	L-861T Taxiway Edge Light, Installed in Proposed Concrete Shoulder	EA	1.00	
L-125-5.6	Remove and Replace L-861T Taxiway Edge Light, in Existing Shoulder Pavement	EA	3.00	
L-125-5.7	Remove and Replace Concrete Collar for L-861T Taxiway Edge Light	EA	31.00	
L-125-5.8	L-858 Guidance Sign, Size 3, 2 Module	EA	9.00	
L-125-5.9	L-858 Guidance Sign, Size 3, 4 Module	EA	1.00	
L-125-5.10	Remove and Replace Existing Sign Panels	EA	10.00	
L-125-5.11	Demolish Taxiway Edge Light and Base	EA	55.00	
L-125-5.12	Demolish Existing Junction Can	EA	1.00	
L-125-5.13	Demolish Guidance Sign	EA	6.00	
L-125-5.14	Remove Existing Airfield Lighting Cable	LS	1.00	
L-125-5.15	Remove Existing 1-Way, 2-Inch Conduit, DEB, Complete	LF	5,100.00	
L-125-5.16	Remove Existing 1-Way, 2-Inch Duct, Concrete Encased, Complete	LF	700.00	
L-125-5.17	Maintenance of Airport Lighting Systems	LS	1.00	



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COLORADO SPRINGS
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**SCHEDULE I:
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REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JFF
DESIGNED BY: JFF

RS&H PROJECT NUMBER
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**SUMMARY OF
CONTRACT
QUANTITIES**

DRAWING NUMBER
C003
SHEET 03 OF 75
**BID
DOCUMENTS**



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CONTRACTOR'S SAFETY AND SECURITY REQUIREMENTS

SAFETY

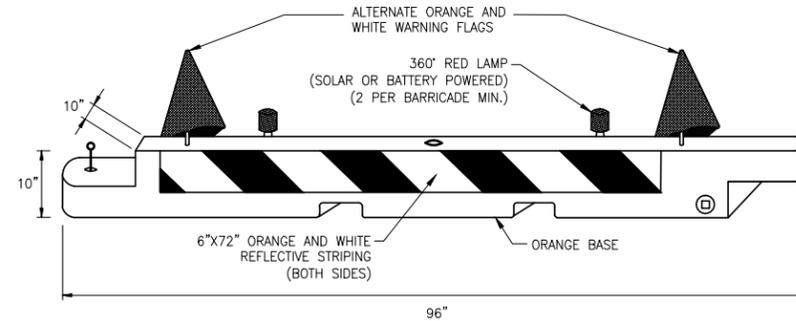
- THE CONTRACTOR SHALL ACQUAINT HIS SUPERVISORS AND EMPLOYEES OF THE AIRPORT ACTIVITY AND OPERATIONS THAT ARE INHERENT TO THIS ACTIVE AIR CARRIER AIRPORT AND SHALL CONDUCT THE CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND GUIDELINES ON SAFETY AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- ALL CONTRACTOR VEHICLES OR EQUIPMENT THAT ARE AUTHORIZED TO OPERATE ON THE AIRPORT IN THE AIRCRAFT OPERATIONS AREA (AOA) SHALL DISPLAY IN FULL VIEW A FLASHING AMBER (YELLOW) DOME-TYPE LIGHT OR ABOVE THE VEHICLE A 3' X 3' OR LARGER, ORANGE AND WHITE CHECKERBOARD FLAG, EACH CHECKERBOARD COLOR BEING 1-FOOT SQUARE, (SEE CONSTRUCTION SAFETY FLAG DETAIL THIS SHEET). ANY VEHICLE OR EQUIPMENT OPERATING IN THE AOA DURING THE HOURS OF DARKNESS SHALL BE EQUIPPED WITH A FLASHING AMBER (YELLOW) DOME LIGHT, MOUNTED ON TOP OF THE VEHICLE AND OF SUCH INTENSITY TO CONFORM TO LOCAL CODES AND AC 150/5370-2F (OR LATEST).
- ALL NON-RADIO EQUIPPED CONTRACTOR VEHICLES THAT ARE REQUIRED TO OPERATE ON OR ACROSS ACTIVE RUNWAYS, TAXIWAYS, APRONS AND RUNWAY APPROACH AND PROTECTION ZONES SHALL DO SO UNDER THE DIRECT CONTROL OF A RADIO EQUIPPED ESCORT VEHICLE. ESCORT VEHICLES, OPERATORS, AND RADIO EQUIPMENT SHALL BE APPROVED BY COLORADO SPRINGS AIRPORT (COS). ESCORT VEHICLES SHALL BE MARKED AND LIGHTED AS DESCRIBED IN PARAGRAPH NO. 2 ABOVE AND SHALL BE EQUIPPED WITH AN APPROVED AVIATION BAND RADIO. RADIO EQUIPPED VEHICLES SHALL CONTINUOUSLY MONITOR GROUND CONTROL FREQUENCY, AS DIRECTED BY COS OPERATIONS. ALL AIRCRAFT TRAFFIC ON RUNWAYS, TAXIWAYS AND APRONS SHALL HAVE PRIORITY OVER CONTRACTOR'S TRAFFIC.
- NO RUNWAY, TAXIWAY, APRON OR AIRPORT ROADWAY SHALL BE CLOSED WITHOUT WRITTEN APPROVAL OF COS. TO ENABLE NECESSARY "NOTICES TO AIRMEN" (NOTAM) OR ADVISORIES TO AIRPORT SERVICES OR TENANTS, A MINIMUM OF 48 HOURS WRITTEN NOTICE REQUESTING CLOSURE SHALL BE DIRECTED TO THE ENGINEER WHO WILL COORDINATE THE REQUEST WITH COS.
- ANY CONSTRUCTION ACTIVITY WITHIN 175 FEET OF AN ACTIVE RUNWAY EDGE, 92 FEET FROM AN ACTIVE TAXIWAY EDGE OR OPEN EXCAVATIONS IN EXCESS OF THREE INCHES DEEP WITHIN THE ABOVE AREAS, WILL REQUIRE CLOSURE OF THE AFFECTED RUNWAY OR TAXIWAY, UNLESS OTHERWISE APPROVED BY COS. CLOSURE REQUIRES THE SAME PROVISIONS AS PARAGRAPH NO. 4 ABOVE.
- OPEN FLAME WELDING OR TORCH CUTTING OPERATIONS ARE PROHIBITED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS HAVE BEEN TAKEN AND THE PROCEDURE APPROVED BY COS.
- STOCKPILED MATERIAL WITHIN THE PROJECT WORK LIMITS SHALL BE CONSTRAINED IN A MANNER TO PREVENT MOVEMENT RESULTING FROM AIRCRAFT JET BLAST OR WIND CONDITIONS IN EXCESS OF TEN MILES PER HOUR. STOCKPILE HEIGHT SHALL BE LESS THAN 15 FEET AND SHALL BE LOCATED OUTSIDE THE RUNWAY AND TAXIWAY OBJECT FREE AREAS. IN ADDITION, THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT FOD FROM MOVING ONTO THE AIRFIELD PAVEMENTS OR STOCKPILED MATERIAL POLLUTING WATERCOURSES DUE TO RUNOFF, AT NO ADDITIONAL COST.
- WASTE SITES ON AIRPORT PROPERTY SHALL BE AS DESIGNATED ON THE PLANS. ANY TEMPORARY WASTE AREA WILL BE APPROVED BY THE ENGINEER AND SHALL BE KEPT IN A NEAT CONDITION. COS MAY DIRECT THE CONTRACTOR TO REMOVE WASTE IF NOT PROPERLY MAINTAINED.
- OPEN TRENCHES, EXCAVATIONS AND STOCKPILED MATERIAL LOCATED IN THE AOA SHALL BE PROMINENTLY MARKED WITH FLAGS AND LIGHTED BY APPROVED LIGHT UNITS DURING HOURS OF RESTRICTED VISIBILITY AND DARKNESS.
- DEBRIS, WASTE AND LOOSE MATERIAL CAPABLE OF CAUSING DAMAGE TO AIRCRAFT LANDING GEARS, PROPELLERS OR BEING INGESTED IN JET ENGINES SHALL NOT BE ALLOWED ON ACTIVE AIRCRAFT MOVEMENT AREAS. IF THESE MATERIALS ARE OBSERVED TO BE ON ACTIVE AIRCRAFT MOVEMENT AREAS, THEY SHALL BE REMOVED IMMEDIATELY. THE CONTRACTOR SHALL CONTINUOUSLY MONITOR ALL ACTIVE AIRFIELD CROSSINGS AND AIRFIELD SURFACES ADJACENT TO CONSTRUCTION AREAS DURING CONSTRUCTION.
- THE ENGINEER WILL ARRANGE WITH COS FOR INSPECTION, PRIOR TO OPENING FOR AIRCRAFT USE, ANY RUNWAY OR TAXIWAY THAT HAS BEEN CLOSED FOR WORK, ON OR ADJACENT THERETO, OR THAT HAS BEEN USED FOR A CROSSING POINT OR HAUL ROUTE BY THE CONTRACTOR.
- THE CONTRACTOR IS DIRECTED TO COMPLY WITH AND ACQUAINT HIS/HER EMPLOYEES WITH THE FOLLOWING SAFETY GUIDELINES, RELATED MATERIALS AND FAA ADVISORY CIRCULARS:
 - 150/5200-18C (OR LATEST) "AIRPORT SAFETY--SELF INSPECTION"
 - 150/5210-5D (OR LATEST) "PAINTING, MARKING & LIGHTING OF VEHICLES USED ON AIRPORTS"
 - 150/5370-2F (OR LATEST) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION"
- THE CONTRACTOR'S SAFETY AND SECURITY OFFICER (CSSO) WILL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS. PRIOR TO COMMENCEMENT OF WORK, THE CSSO SHALL PROVIDE THE ENGINEER WITH A FORMALLY SUBMITTED AND APPROVED SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) WHICH DETAILS HOW THE CONTRACTOR WILL COMPLY WITH THE CONSTRUCTION SAFETY AND PHASING PLAN (CSPF), FOR THIS PROJECT. THE SPCD SHALL CONTAIN, BUT IS NOT LIMITED TO, AN OUTLINE OF A PROPOSED ACCIDENT AND FIRE PROTECTION PLAN FOR ALL WORK CONTEMPLATED UNDER THE CONTRACT. THE CONTRACTOR SHALL ALSO CONDUCT AT LEAST ONE SAFETY MEETING EACH MONTH FOR EACH SHIFT AND REQUIRE THE ATTENDANCE OF ALL SUPERVISORS AT SUCH MEETINGS. COPIES OF THE MINUTES OF SAFETY MEETINGS SHALL BE KEPT ON FILE IN THE CONTRACTOR'S FIELD OFFICE, A COPY PROVIDED TO THE ENGINEER, AND SHALL BE MADE AVAILABLE UPON DEMAND BY THE AIRPORT.
- CONSTRUCTION DURING THE PROJECT MAY BE HALTED AT ANY TIME BY THE ENGINEER, AND/OR COS IF IT IS DETERMINED TO BE IN THE BEST INTEREST OF COS OR SAFETY. THE CONTRACTOR MAY BE DIRECTED TO REMOVE EQUIPMENT AND/OR EVACUATE THE SITE IN ORDER TO ENABLE AIRCRAFT OPERATIONS. NECESSARY EXTENSIONS IN CONTRACT TIME MAY BE GRANTED OR A STOP WORK ORDER WILL BE ISSUED DUE TO THESE DELAYS, HOWEVER, THERE WILL BE NO ADJUSTMENTS IN CONTRACT PRICE DUE TO THESE DELAYS.
- FLAGMEN WILL BE REQUIRED TO CONTROL CONSTRUCTION TRAFFIC ACROSS ACTIVE AIRPORT PAVEMENTS. ALL FLAGMEN, HAUL ROUTE MONITORS, AND GATE SECURITY GUARDS SHALL UNDERSTAND AND BE ABLE TO COMMUNICATE IN ENGLISH. FLAGMEN AND THE CONSTRUCTION FOREMAN WILL BE EQUIPPED WITH RADIOS FOR COMMUNICATION WITH AND LISTENING TO AIRPORT GROUND CONTROL FREQUENCY. CELLULAR PHONES WILL ALSO BE POSSESSED BY EACH FLAGMAN AND ON-SITE SUPERVISOR FOR BACKUP COMMUNICATION. FULL LISTING OF PERSONNEL CALL SIGNS, APPROVED BY THE OWNER, TYPE OF EQUIPMENT FOR RADIO AND CELLULAR PHONE NUMBERS WILL BE PROVIDED TO THE ENGINEER PRIOR TO THE BEGINNING OF CONSTRUCTION ACTIVITIES. ALL FLAGGERS, HAUL ROUTE MONITORS AND GATE GUARDS WILL BE REQUIRED TO POSSESS TWO WAY RADIOS TO MAINTAIN CONSTANT COMMUNICATION BETWEEN EACH OTHER.
- ALL COORDINATION WITH THE AIR TRAFFIC CONTROL TOWER OR OTHER ELEMENTS OF THE AIRPORT SHALL BE THROUGH THE ENGINEER AND/OR COS EXCEPT AS REQUIRED TO OPERATE ACTIVE TAXIWAY CROSSINGS WITH FLAGGERS.
- THE EMERGENCY NUMBER TO CALL FOR ANY INCIDENT ON THE PROJECT OR AIRPORT SHALL BE 719-550-1919 UNLESS OTHERWISE NOTIFIED BY COS. COS OPERATIONS WILL THEN BE ABLE TO DISPATCH THE APPROPRIATE AUTHORITIES.
- CONTRACTOR IS NOT TO USE, TERMINATE, OPERATE OR INTERRUPT THE AIRFIELD CIRCUITRY WITHOUT SPECIFIC WRITTEN APPROVAL OF COS.

IN ADDITION, THE FOLLOWING SPECIAL SAFETY REQUIREMENTS WILL APPLY FOR NIGHT CONSTRUCTION, AS APPLICABLE:

- A DAILY SAFETY AND PROGRESS MEETING SHALL BE HELD BETWEEN THE ENGINEER AND THE CONTRACTOR'S SUPERINTENDENT TO DISCUSS REQUIREMENTS FOR THE NEXT NIGHTTIME WORK PERIOD.
- THE CONTRACTOR SHALL PREPARE A SAFETY PLAN SPECIFIC TO NIGHTTIME CONSTRUCTION OPERATIONS, AS WELL AS A CONTINGENCY PLAN TO ADDRESS CASES OF ABNORMAL FAILURES OR UNEXPECTED OCCURRENCES.
- HAUL ROUTES ON THE AIRFIELD SHALL BE DELINEATED WITH LIGHTED BARRICADES AS APPLICABLE, AND AS PRACTICAL TO GUIDE CONSTRUCTION TRAFFIC BUT NOT TO IMPEDE AIRCRAFT MOVEMENT. OTHER MEANS TO CLEARLY MARK THE ROUTES TO THE WORK SITE MAY BE APPROVED BY THE ENGINEER.
- EQUIPMENT TALLER THAN 30' SHALL NOT BE USED UNLESS SPECIFICALLY APPROVED BY COS.
- CONSTRUCTION EQUIPMENT AND VEHICLES SHALL NOT BE PARKED WITHIN THE LIMITS OF RUNWAY AND TAXIWAY SAFETY AREAS OUTSIDE OF THE PROJECT WORK LIMITS, REGARDLESS OF OPEN OR CLOSED STATUS OF RUNWAYS OR TAXIWAYS.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING AFFECTED ELECTRICAL CIRCUITS ARE DE-ENERGIZED, AND PROTECTED FROM BEING RE-ENERGIZED DURING CONSTRUCTION BY UTILIZING LOCK OUT PROCEDURES IMPACTING ELECTRICAL SYSTEMS, PER L-104, GENERAL ELECTRICAL SAFETY REQUIREMENTS AND TEMPORARY AIRFIELD LIGHTING, AND/OR LOCAL CODES.

SECURITY

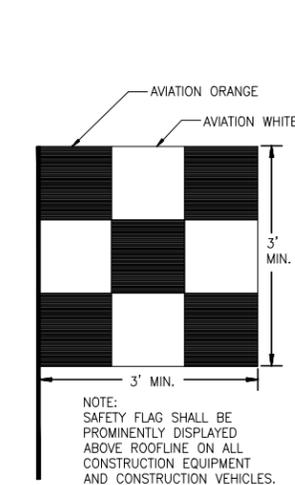
- GENERAL INTENT:** IT IS INTENDED THAT THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE AIRPORT SECURITY PLAN AND WITH THE SECURITY REQUIREMENTS SPECIFIED HEREIN, IN THE SPECIFICATIONS AND BY COS. THE CONTRACTOR SHALL DESIGNATE TO THE ENGINEER AND COS, IN WRITING, THE NAME OF HIS "CONTRACTOR SAFETY AND SECURITY OFFICER (CSSO)." THE CSSO SHALL BE FULL TIME AND SHALL BE ABLE TO REPRESENT THE CONTRACTOR ON THE SECURITY REQUIREMENTS FOR THE CONTRACT. THE CSSO SHALL BE RESPONSIBLE FOR ALL BADGES, ESCORTS AND AOA PERMITS ON THE PROJECT.
- CONTRACTOR PERSONNEL SECURITY ORIENTATION:** THE CSSO SHALL BE RESPONSIBLE FOR BRIEFING ALL CONTRACTOR, SUBCONTRACTOR, AND VENDOR PERSONNEL ON SECURITY REQUIREMENTS. ALL NEW CONTRACTOR PERSONNEL SHALL BE BRIEFED ON SECURITY REQUIREMENTS PRIOR TO WORKING IN THE CONSTRUCTION AREA.
- ACCESS TO THE SITE:** CONTRACTOR'S ACCESS TO THE SITE SHALL BE AS SHOWN ON THE PLANS THROUGH MANUAL GATE ACP 420. NO OTHER ACCESS POINTS SHALL BE ALLOWED UNLESS APPROVED BY COS. ALL CONTRACTOR TRAFFIC AUTHORIZED TO ENTER THE SITE SHALL BE EXPERIENCED IN THE ROUTE OR ESCORTED BY CONTRACTOR PERSONNEL WHO ARE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ANY REQUIRED ESCORT OPERATIONS AND PROVIDING TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE. A CONTRACTOR'S FLAGMAN OR TRAFFIC CONTROL PERSON SHALL NOT BE REQUIRED TO MAN THE CONTRACTOR ACCESS GATES FULL TIME. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE ONE PERSON TO MAN THE GATE AND ASSIST WITH DIRECTING TRAFFIC AND TO ACT AS THE START TO THE DELIVERY TRUCK DRIVERS "ESCORT" ONLY WHEN VISUAL ESCORT PROCEDURES ARE IN EFFECT. A THIRD PARTY SECURITY FIRM WILL PROVIDE SECURITY AT THE ACCESS GATES. THE CONTRACTOR IS NOT REQUIRED TO PROVIDE THE THIRD PARTY SECURITY. ACCESS GATES TO THE SITE WILL BE LOCKED AND SECURED AT ALL TIMES WHEN NOT ATTENDED BY THE GATE GUARD. ALL PERSONNEL WILL BE REQUIRED TO BADGE THROUGH THE GATE AT AN AIRPORT INSTALLED CARD READER. AOA PERMITS AND PROPER ESCORT PROCEDURES WILL ALSO BE VERIFIED PRIOR TO ACCESS TO THE AIRFIELD. COS OPERATIONS WILL UNLOCK THE GATE IN THE MORNING AND RE-LOCK EACH EVENING UPON WORK ACTIVITY COMPLETION.
- MATERIALS DELIVERY TO THE SITE:** ALL CONTRACTOR'S MATERIAL ORDERS FOR DELIVERY TO THE WORK SITE WILL USE AS A DELIVERY ADDRESS, THE STREET NAME ASSIGNED TO THE ACCESS POINT AT THE CONTRACTOR'S STAGING SITE AT THE AIRPORT. THE CONTRACTOR SHALL TAKE STEPS TO PREVENT DELIVERY TRUCKS FROM ENTERING INTO THE TERMINAL COMPLEX.
- CONSTRUCTION AREA LIMITS:** THE LIMITS OF CONSTRUCTION, MATERIAL STORAGE AREAS, PLANT SITE, EQUIPMENT STORAGE AREAS, PARKING AREAS AND OTHER AREAS DEFINED AS REQUIRED FOR THE CONTRACTOR'S EXCLUSIVE USE DURING CONSTRUCTION SHALL BE MARKED BY THE CONTRACTOR. TEMPORARY BARRICADES, FLAGGING AND FLASHING WARNING LIGHTS WILL BE REQUIRED AT CRITICAL ACCESS POINTS. TYPE OF MARKING AND WARNING DEVICES SHALL BE APPROVED BY THE AIRPORT ENGINEER AND BY COS.
- IDENTIFICATION--PERSONNEL:** ALL EMPLOYEES, AGENTS, VENDORS, INVITEES, ETC. OF THE CONTRACTOR OR SUBCONTRACTORS REQUIRING ACCESS TO THE CONSTRUCTION SITE SHALL, IN ACCORDANCE WITH THE COS SECURITY PROGRAM, BE REQUIRED TO DISPLAY AIRPORT ISSUED IDENTIFICATION OR BE UNDER ESCORT BY PROPERLY BADGED PERSONNEL. AT THE COMPLETION OF THE CONTRACT ALL BADGES WILL BE RETURNED TO THE AIRPORT. AS PART OF THE BADGE APPLICATION PROCESS, EACH APPLICANT WILL BE FINGERPRINTED FOR USE IN AN FBI CRIMINAL RECORDS SEARCH. ANY PERSON WHOSE CRIMINAL RECORD REVEALS OFFENSES LISTED BY TSA AS DISQUALIFYING OFFENSES WILL BE DENIED A BADGE AND WILL BE PROHIBITED FROM ACCESS TO THE PROJECT SITE. ALL REQUIRED PAPERWORK AND ID BADGE APPLICATIONS SHALL BE SUBMITTED A MINIMUM OF TWO (2) WEEKS BEFORE ISSUANCE OF ANY BADGE. THE CONTRACTOR AND ITS STAFF ARE RESPONSIBLE FOR ATTENDING SIDA TRAINING AND COMPLETING SECURITY BADGE APPLICATIONS, WHICH WILL INCLUDE AIR/GROUND RADIO, TAXIWAY AND AIRPORT FAMILIARIZATION. ATTENDANCE OF THE CLASS AND ISSUANCE OF THE BADGE MAY TAKE IN EXCESS OF 3 HOURS. THERE WILL BE A \$45 NON-REFUNDABLE CHARGE FOR THE FBI BACKGROUND CHECK AND FINGERPRINTING PROCESS. AT THE COMPLETION OF THE PROJECT, ALL BADGES SHALL BE RETURNED TO COS OPERATIONS. A FINE OF \$100 WILL BE IMPOSED FOR ANY BADGES THAT ARE NOT RETURNED WITHIN 30 DAYS OF PROJECT COMPLETION. SEE SPECIAL CONDITIONS, SECTION 2 OF THE PROJECT TECHNICAL SPECIFICATIONS FOR FURTHER INFORMATION, AS THESE REQUIREMENTS ARE SUBJECT TO CHANGE.
- IDENTIFICATION--VEHICLES:** THE CONTRACTOR, THROUGH THE CSSO, SHALL ESTABLISH AND MAINTAIN A LIST OF CONTRACTOR AND SUBCONTRACTOR VEHICLES AUTHORIZED TO OPERATE ON THE SITE. COS OPERATIONS SHALL ISSUE AN AOA PERMIT TO EACH VEHICLE WHICH SHALL BE PROMINENTLY DISPLAYED ON THE FRONT WINDSHIELD. AT THE COMPLETION OF THE PROJECT, ALL AOA PERMITS SHALL BE RETURNED TO COS OPERATIONS. A FINE OF \$50 WILL BE IMPOSED FOR ANY AOA PERMITS THAT ARE NOT RETURNED WITHIN 30 DAYS OF PROJECT COMPLETION. CONTRACTOR EMPLOYEE VEHICLES SHALL BE RESTRICTED TO THE CONTRACTOR'S EMPLOYEE PARKING AREA AND ARE NOT ALLOWED ON THE AOA AT ANY TIME. NO PERSONAL VEHICLES SHALL BE ALLOWED ON THE AIRFIELD. ALL CONSTRUCTION VEHICLES SHALL HAVE ITS CORPORATE NAME DISPLAYED PROMINENTLY ON BOTH SIDES OF THE VEHICLE AT A SIZE THAT CAN BE EASILY DISTINGUISHED AT A DISTANCE OF 50'. SEE SPECIAL CONDITIONS, SECTION 2 OF THE PROJECT TECHNICAL SPECIFICATIONS FOR FURTHER INFORMATION, AS THESE REQUIREMENTS ARE SUBJECT TO CHANGE.
- GATE LOCKS:** COS OPERATIONS WILL UNLOCK THE GATE AND CLOSE AND LOCK THE GATE DAILY, OR WHEN NOT IN USE. SEE SPECIAL CONDITIONS FOR FURTHER INFORMATION.
- THE CONTRACTOR SHALL PROVIDE A SHELTER/OFFICE FOR USE BY THE GATE GUARD, LOCATED AT ACP 420. THE SHELTER SHALL HAVE ELECTRICITY, HEAT, AC, DESK SPACE AND CHAIRS. UTILITIES ARE NOT PRESENT AT ACP 420. THE CONTRACTOR SHALL MAKE PROVISIONS TO PROVIDE ELECTRICAL SERVICE FROM THE TRAILER LOCATION TO THE SHELTER. COS WILL INSTALL THE CARD READER AT THE SHELTER. PORTABLE SANITARY FACILITIES SHALL BE PROVIDED AT THE SHELTER BY THE CONTRACTOR.
- SEE THE SPECIAL CONDITIONS IN THE PROJECT TECHNICAL SPECIFICATIONS FOR ADDITIONAL DETAILED SECURITY REQUIREMENTS.



NOTES:

- LOW LEVEL, LIGHTED BARRICADES SHALL BE PLACED AROUND ALL OPEN EXCAVATIONS, HOLES, TRENCHES, PAVEMENT DROPOFFS, AND AREAS IDENTIFIED ON THE PHASING PLAN.
- BARRICADES SHALL BE SHERWIN INDUSTRIES LOW-PROFILE BARRICADES MODEL AR-10X96 OR APPROVED EQUAL.
- PLACE BARRICADES @ 12 FT. O.C OR CONTINUOUSLY LINKED AS NOTED IN THE PLAN SET.
- BARRICADES SHALL BE WEIGHED WITH WATER TO PREVENT MOVEMENT FROM JET OR PROP BLAST. USE OF WATER IN FREEZING TEMPERATURES WILL REQUIRE ACTIONS TO PREVENT THE WATER FROM FREEZING.
- CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG FOR BARRICADE CHECKS. BARRICADE CHECKS SHALL BE COMPLETED A MINIMUM OF ONCE A CONSTRUCTION SHIFT AND AFTER ANY CHANGE TO THE BARRICADE POSITIONING. ANY DAMAGED BARRICADES SHALL BE PROMPTLY REPLACED.
- THE CONTRACTOR SHALL PROVIDE ENOUGH BARRICADES TO PROPERLY CLOSE THE AFFECTED RUNWAYS/TAXIWAYS. ALL COSTS FOR THE BARRICADES, MAINTENANCE, RE-POSITIONING FOR PHASES, ETC. SHALL BE INCLUDED IN P-105-5.1 TEMPORARY CONSTRUCTION ITEMS.

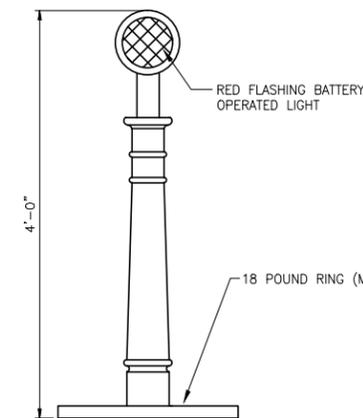
TYPE 1 BARRICADE - LOW PROFILE SAFETY BARRICADE



NOTE: SAFETY FLAG SHALL BE PROMINENTLY DISPLAYED ABOVE ROOFLINE ON ALL CONSTRUCTION EQUIPMENT AND CONSTRUCTION VEHICLES.

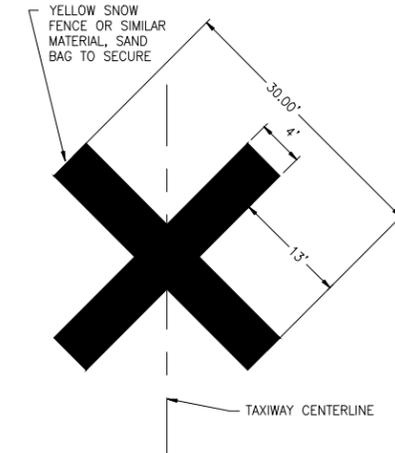
CONSTRUCTION SAFETY FLAG

NTS



TYPE 2 BARRICADE - CONSTRUCTION DELINEATOR CONE

NTS

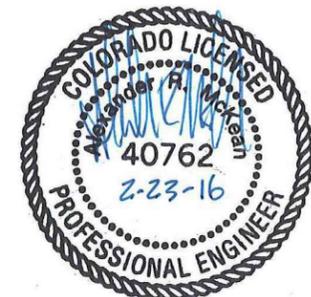


CLOSED TAXIWAY MARKING DETAIL

NTS

NOTES:

- THE CONTRACTOR SHALL PROVIDE CLOSED TAXIWAY MARKERS TO PROPERLY CLOSE THE AFFECTED TAXIWAYS. ALL COSTS FOR THE MARKERS, MAINTENANCE, RE-POSITIONING FOR PHASES, ETC. SHALL BE INCLUDED IN P-105-5.1 TEMPORARY CONSTRUCTION ITEMS.
- SAND BAGS SHALL BE YELLOW, OR PAINTED YELLOW TO MATCH THE CLOSURE X.



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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

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REVIEWED BY: ARM

DRAWN BY: JFF

DESIGNED BY: JFF

RS&H PROJECT NUMBER

224-0124-003

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SAFETY & SECURITY NOTES AND DETAILS

DRAWING NUMBER

C004

SHEET 04 OF 75

BID DOCUMENTS

CALL COLORADO UTILITY NOTIFICATION CENTER OF COLORADO BEFORE EXCAVATING 1-800-922-1987 NON-MEMBERS MUST BE CALLED DIRECTLY



Know what's below. Call before you dig.

TAXIWAY C RECONSTRUCTION

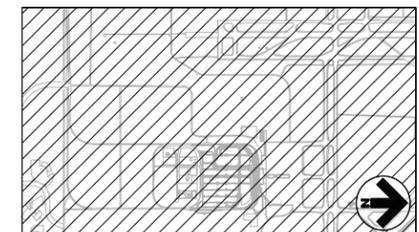
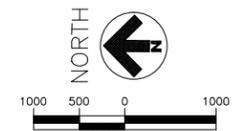
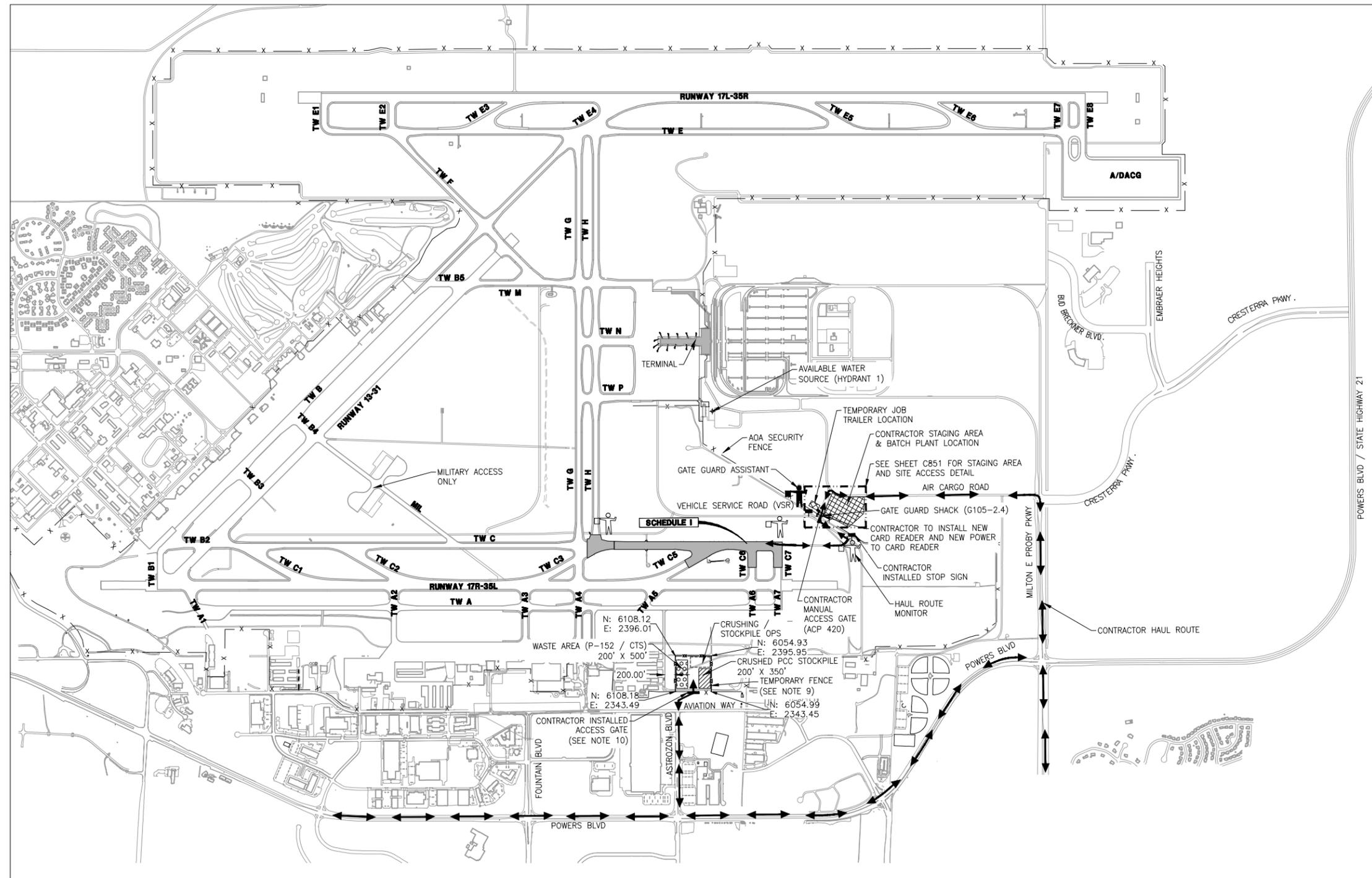
SCHEDULE 1 RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7

LEGEND:

- PROJECT WORK LIMITS
- CONTRACTOR STAGING AREA AND BATCH PLANT LOCATION
- CONTRACTOR WASTE AREA
- PCC & CTS STOCKPILE AREA
- CRUSHING / STOCKPILE OPS
- CONTRACTOR HAUL ROUTE
- GATE GUARD ASSISTANT
- HAUL ROUTE MONITOR OR FLAGGER
- AOA SECURITY FENCE
- TEMPORARY FENCE

WASTE AREA NOTES:

1. PROVIDE SILT FENCE AROUND PERIMETER OF STOCK PILE.
2. INSTALL 24'-FOOT DOUBLE SWING GATE IN EXISTING FENCE FOR ACCESS.
3. INSTALL VEHICLE TRACKING PAD AND OTHER REQUIRED EROSION CONTROL DEVICES PER CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUAL.
4. CUT EXISTING CURB, OR PROVIDE CURB RAMPS, REPLACE CURB UPON COMPLETION FOR ACCESS.
5. PROVIDE FLAGGERS AT THE AVIATION WAY / ASTROZON BLVD. INTERSECTION DURING HAULING OPERATIONS TO ESTABLISH A 4-WAY STOP AS REQUIRED.
6. PROVIDE TRAFFIC CONTROL AS REQUIRED ON AVIATION WAY. AVIATION WAY IS A PRIVATE AIRPORT OWNED ROADWAY. PROVIDE TRAFFIC CONTROL PLAN FOR AIRPORT APPROVAL.



NOTES:

1. OTHER CONSTRUCTION CONTRACTS MAY BE ON-GOING AT COLORADO SPRINGS AIRPORT WHICH MAY UTILIZE SOME OF THE SAME LANDSIDE OR AIRSIDE HAUL ROUTES. COORDINATION BETWEEN THE CONTRACTORS IS REQUIRED.
2. THE CONTRACTOR SHALL MAINTAIN THE HAUL ROUTES USED AS PROJECT ROUTES AS NECESSARY THROUGHOUT CONSTRUCTION. THIS WORK SHALL BE INCIDENTAL TO P-105-5.1 AND PERFORMED IN ACCORDANCE WITH APPLICABLE PROJECT SPECIFICATIONS.
3. CONTRACTOR SHALL CONSTRUCT/SUPPLY A CONCRETE WASHOUT AREA WITH IN THE LIMITS OF THE BATCH PLANT AREA THAT COMPLIES WITH ALL LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS, AND SHALL BE SIGNED.
4. THE CONTRACTOR SHALL REQUIRE EMPLOYEES TO PARK PERSONAL VEHICLES IN THE CONTRACTOR STAGING AREA OUTSIDE THE AOA FENCE.
5. WATER MAY BE AVAILABLE FROM HYDRANT 1 AS SHOWN ON THIS PLAN. THE CONTRACTOR SHALL OBTAIN PERMISSION FROM THE LOCAL WATER UTILITY TO USE SUCH HYDRANTS. THE CONTRACTOR SHALL OBTAIN A METER AND PAY FOR THE WATER USED. AN INSPECTION OF THE HYDRANT SHALL BE CONDUCTED BY THE AIRPORT, ENGINEER, AND THE CONTRACTOR PRIOR TO USE. THE CONDITION OF THE HYDRANT SHALL BE DOCUMENTED AND ANY DAMAGE TO THE HYDRANT AFTER USE WILL BE FIXED AT THE CONTRACTORS EXPENSE.
6. USE OF HYDRANT 1 IDENTIFIED ABOVE WILL REQUIRE PIPING TO A LOCATION NEAR THE STAGING AREA AS CONTINUOUS ACCESS TO THE HYDRANT LOCATION TO FILL WATER TRUCKS, ETC. WILL NOT BE PERMITTED. STAGING OF A WATER TOWER WILL BE LIMITED TO THAT LOCATION IDENTIFIED ABOVE OR AS APPROVED BY COS. ERECTION OF A WATER TOWER WILL NOT BE PERMITTED NEAR THE HYDRANT.
7. CONTRACTOR SHALL SIGN ALL HAUL ROUTES IN ACCORDANCE WITH STATE AND CITY LAWS AND REGULATIONS.
8. THE CONTRACTOR SHALL ACCESS THE MAIN WORK AREA THROUGH MANUAL GATE ACP 420.
9. THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT A TEMPORARY FENCE AROUND THE CONTRACTOR WASTE AREA AND STOCKPILE AREA. THE TEMPORARY FENCE LINE SHALL BE CONSIDERED THE NEW AOA BOUNDARY FOR THE DURATION OF THE STOCKPILING/DEMOLITION OPERATIONS. THIS FENCE MUST BE REMOVED UPON COMPLETION. REFERENCE SHEET C850 FOR TEMPORARY FENCE DETAILS.
10. CONTRACTOR SHALL INSTALL A SECURITY GATE AT THE APPROXIMATE LOCATION SHOWN ABOVE AFTER TEMPORARY FENCE INSTALLATION IS COMPLETE. THIS GATE SHALL BE REPLACED PRIOR TO REMOVING ANY PORTION OF THE TEMPORARY FENCE. REFERENCE SHEET C850 FOR SECURITY GATE DETAILS.
11. THE CONTRACTOR SHALL PROVIDE JUMPER WIRES FOR ALL AIRFIELD ELECTRICAL CIRCUITS BEING AFFECTED IN ORDER TO MAINTAIN ACTIVE CIRCUIT OPERATIONS DURING CONSTRUCTION. THE CONTRACTOR SHALL DE-ENERGIZE OR COVER TAXIWAY LIGHTS THAT LEAD TO OR ARE WITHIN THE PROJECT LIMITS, BUT NOT IDENTIFIED FOR REMOVAL. SEE SHEET C010.
12. ALL WASTE AND STOCKPILE MATERIAL SHALL NOT EXCEED 10' IN HEIGHT.

AIRPORT DATA TABLE

RUNWAY 13-31, 17R-35L, 17L-35R DESIGN GROUP	D-IV
RUNWAY SAFETY AREA WIDTH	500' (1/2 = 250')
RUNWAY OBJECT FREE AREA WIDTH	800' (1/2 = 400')
TAXIWAY DESIGN GROUP	TDG 5
TAXIWAY SAFETY AREA WIDTH	171' (1/2 = 85.5')
TAXIWAY OBJECT FREE AREA WIDTH	259' (1/2 = 129.5')

NOTE: DIMENSIONS ARE CENTERED ABOUT THE RUNWAY OR TAXIWAY CENTERLINE.



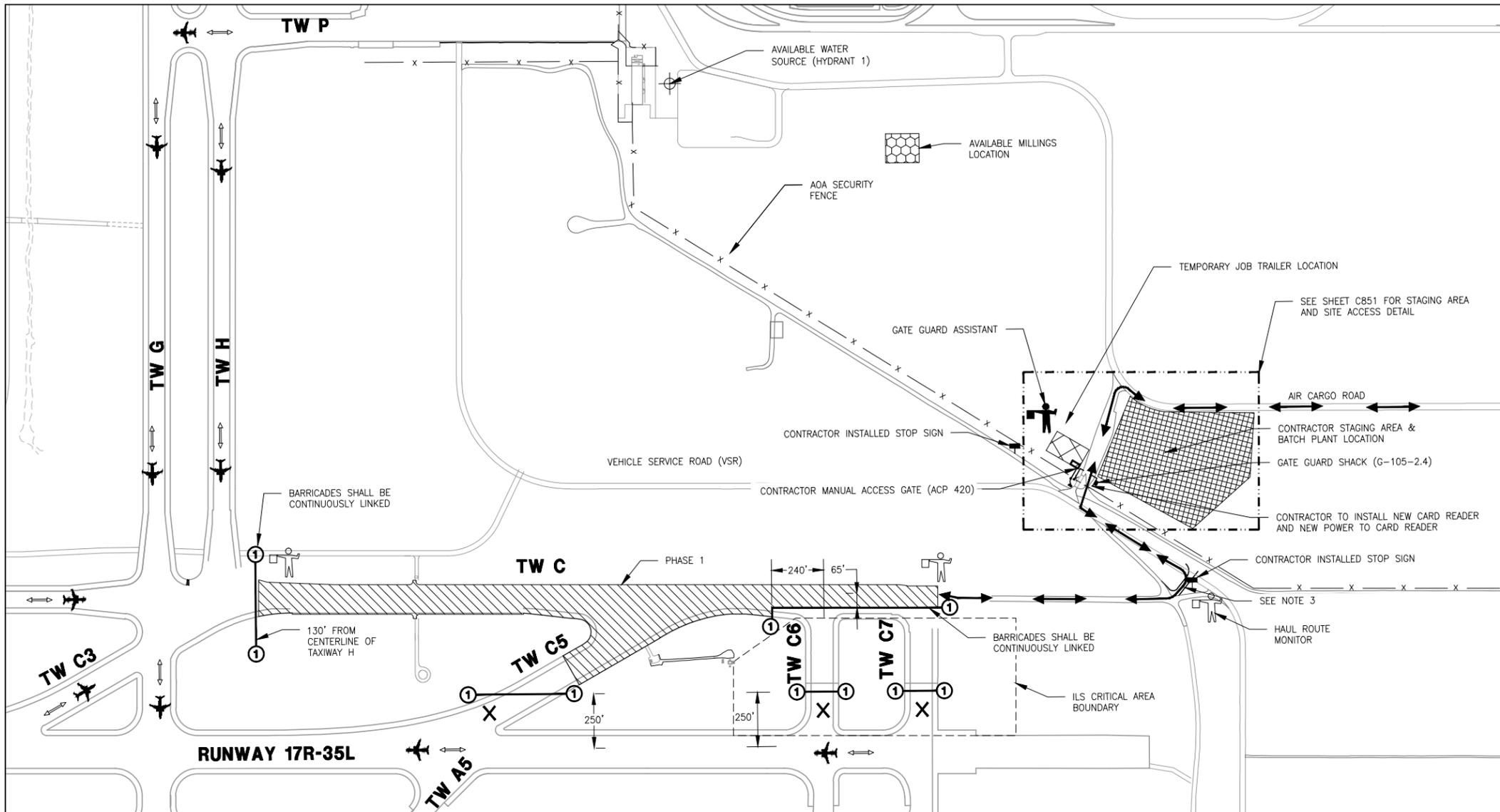
REVISIONS

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 REVIEWED BY: ARM
 DRAWN BY: JFF
 DESIGNED BY: JFF
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CONTRACT LAYOUT PLAN

DRAWING NUMBER
C005
 SHEET 05 OF 75
BID DOCUMENTS



LEGEND:

- PHASE 1 WORK AREA
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE
- GATE GUARD ASSISTANT
- HAUL ROUTE MONITOR OR FLAGGER
- AOA SECURITY FENCE
- AIRCRAFT TAXI ROUTE
- BARRICADES - TYPE 1, IN PLACE FOR PHASE 1
- CLOSED TAXIWAY MARKER
- STOP SIGN

GENERAL NOTES:

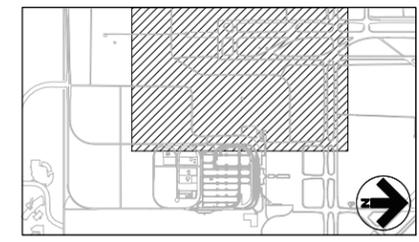
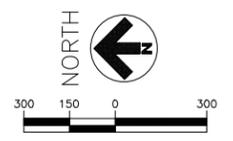
1. SEE GENERAL NOTES ON SHEET C007

AIRFIELD (AOA) STATUS

1. TAXIWAYS C (SOUTH OF TW H), C5, C6, AND C7 SHALL REMAIN CLOSED TO ALL AIR TRAFFIC FOR PHASE 1 DURATION.
2. TAXIWAYS G, H, C3 AND C NORTH OF PROJECT SITE SHALL REMAIN OPEN THROUGHOUT PHASE 1/1A.
3. PHASE 1 WORK SHALL BE COMPLETED DURING THE TIME ALLOTTED FOR PHASE 1.
4. THE CONTRACTOR SHALL CLEAN ALL PAVEMENT SURFACES TO THE SATISFACTION OF AIRPORT OPERATIONS PRIOR TO OPENING FOR AIRCRAFT USE.

BARRICADE NOTES:

1. SEE BARRICADE NOTES ON SHEET C007.



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TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

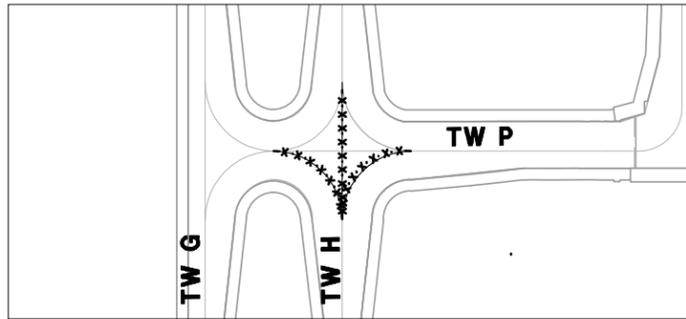
REVISIONS		
NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: SHC
DESIGNED BY: JFF
RS&H PROJECT NUMBER
224-0124-003
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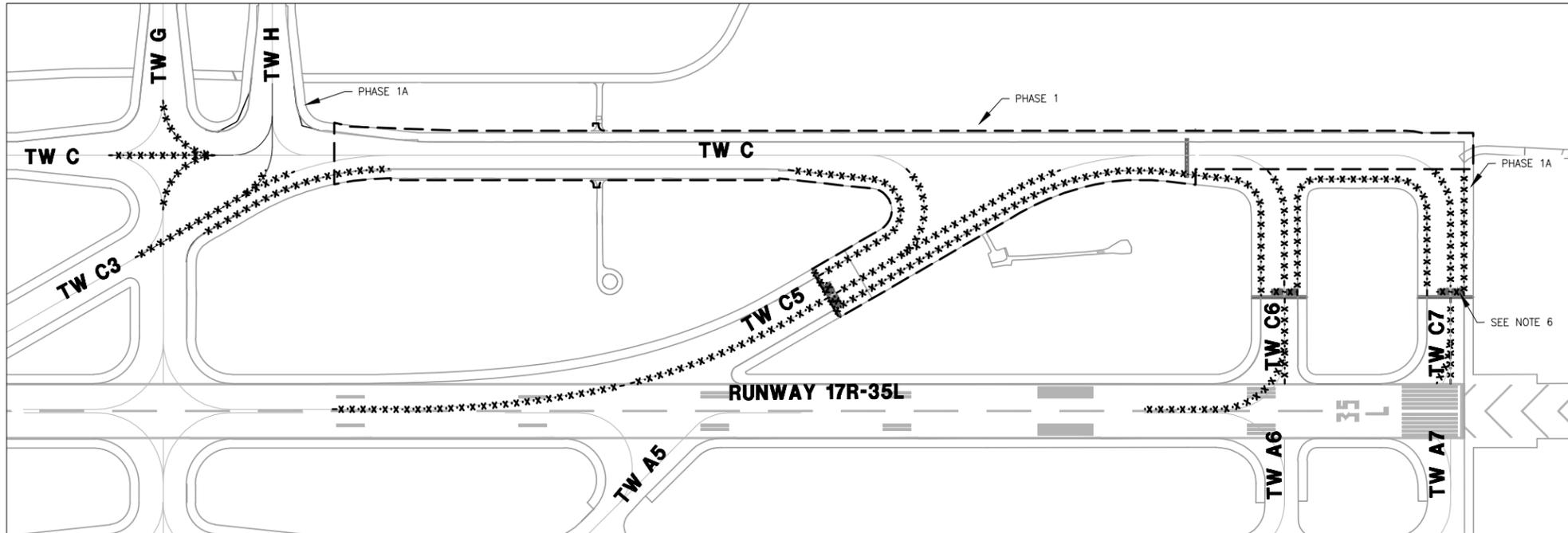
**PHASING PLAN
PHASE 1**

DRAWING NUMBER
C008
SHEET 08 OF 75
BID DOCUMENTS

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c008.dwg
 Plotted on: 2/23/2016 6:52 PM



TAXIWAY H - PHASE 1/1A



TAXIWAY C, C3, C5, C6, C7, G, & H - PHASE 1/1A

LEGEND:

-  EXISTING AIRFIELD MARKINGS TO REMAIN
-  EXISTING AIRFIELD MARKINGS TO BE OBLITERATED
-  PROJECT WORK LIMITS FOR CONSTRUCTION

NOTES:

1. ALL PAVEMENT CENTERLINE MARKINGS FOR EACH PHASE 1/1A WILL BE OBLITERATED AT THE BEGINNING OF PHASE 1/1A CONSTRUCTION. PHASE 1A MARKINGS WILL TAXIWAY BE RE-STRIPED PRIOR TO OPENING THE PHASE 1A WORK AREA TO AIRCRAFT, AS SHOWN ON THE STRIPING PLANS (SEE SHEET C701). THE PAVEMENT MARKINGS ON TAXIWAY C6 & C7 WITHIN THE PHASE 1A WORK AREA NEED TO BE COMPLETED WITHIN THE TIME ALLOTTED FOR PHASE 1A.
2. CONTRACTOR SHALL TAKE THOSE STEPS NECESSARY TO PROTECT PAVEMENT SURFACES DURING MARKING OBLITERATION.
3. OBLITERATION OF PAINT MARKINGS, AS SHOWN ON THIS SHEET, SHALL BE DONE WITH A COORDINATED CLOSURE OF THE AREAS INDICATED FOR EACH PHASE. THE CONTRACTOR SHALL COORDINATE WITH THE RPR AND COS OPERATIONS FOR A CLOSURE OF THE AREA.
4. RUNWAY 17R-35L CONSISTS OF GROOVED ASPHALT PAVEMENTS.
5. CONTRACTOR SHALL PROTECT ALL EXISTING RUNWAY CENTERLINE, EDGE, DESIGNATION, THRESHOLD, AND TOUCHDOWN MARKINGS DURING TAXIWAY CENTERLINE OBLITERATION. ANY RUNWAY MARKINGS DAMAGED SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
6. EXISTING SURFACE PAINTED HOLD SIGNS ON TAXIWAY C7 ARE THERMOPLASTIC. REMOVAL SHALL BE PAID UNDER ITEM G-106-5.3.
7. NIGHT CLOSURES ARE REQUIRED FOR REMOVAL OF THE TAXIWAY CENTERLINE MARKINGS THAT ARE WITHIN THE RSA. THESE CLOSURES SHALL BE COORDINATED WITH AIRPORT OPERATIONS.
8. REMOVAL OF PAVEMENT MARKINGS ON ASPHALT PAVEMENT SHALL INCLUDE THE SEALING OF THE PAVEMENT SCAR WITH GSB-88, AND SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE FOR OBLITERATION. THIS SEALER SHALL BE APPLIED AS SOON AS THE PRACTICAL AFTER THE MARKINGS HAVE BEEN REMOVED.



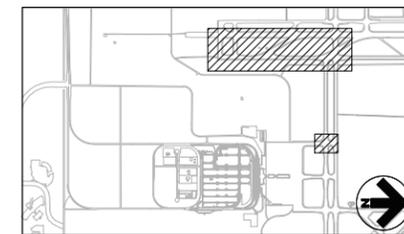
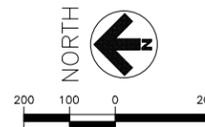
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COLORADO SPRINGS
AIRPORT

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**



KEYMAP

REVISIONS

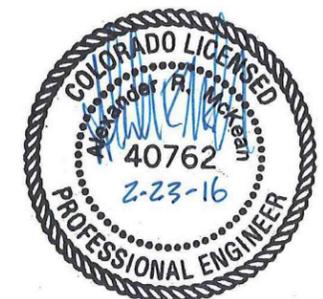
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DATE ISSUED: FEBRUARY 23, 2016
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DRAWN BY: SHC
DESIGNED BY: SHC

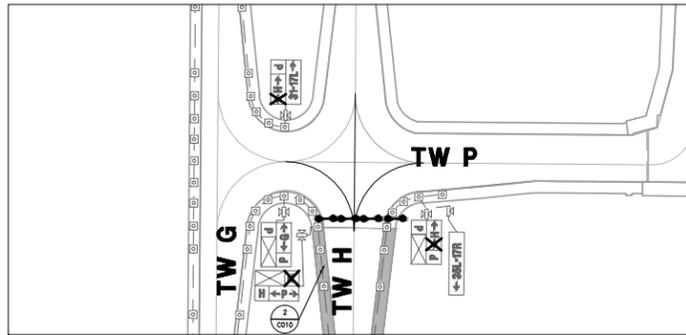
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**PAVEMENT
MARKING
OBLITERATION
PLAN**

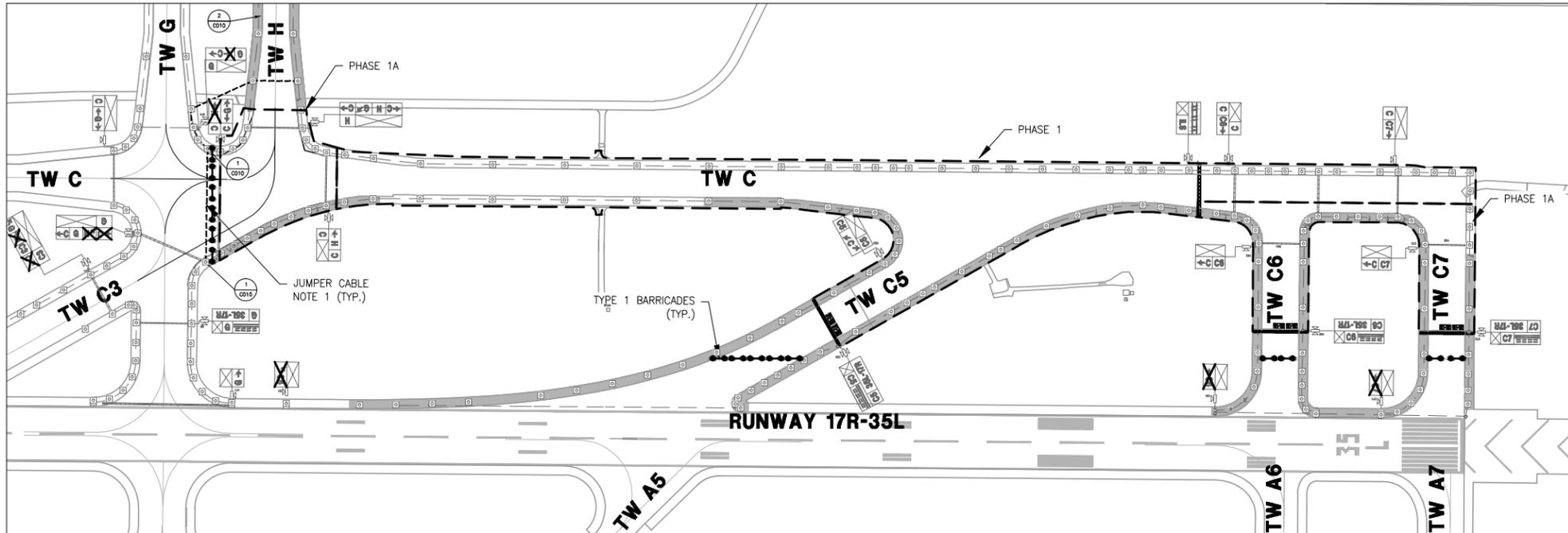
DRAWING NUMBER
C009
SHEET 09 OF 75
**BID
DOCUMENTS**



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 Plotted by: Fouley, Jeff



TAXIWAY H - PHASE 1/1A



TAXIWAY C, C3, C5, C6, C7, G, & H - PHASE 1/1A

LEGEND:

- TYPE 1 BARRICADES
- JUMPER CABLE
- GENERAL LOCATIONS OF EXISTING ELEVATED TAXIWAY EDGE LIGHTS TO BE COVERED OR DE-ENERGIZED
- EXISTING AIRFIELD SIGNAGE TO BE COVERED

JUMPER CABLE NOTES:

1. ELECTRICAL CABLE ASSOCIATED WITH TEMPORARY LIGHTING SHALL BE MAINTAINED IN SECURED 2" CONDUIT. THE CABLE AND CONDUIT SHALL BE PROVIDED BY THE CONTRACTOR.
2. CONTRACTOR SHALL PROVIDE SUFFICIENT SLACK TO ALLOW FOR CABLE EXPANSION AND CONTRACTION.
3. ALL CABLE SPLICES SHALL BE L-823 CONNECTORS AS SHOWN ON SHEET E403, DETAIL 5.
4. CONTRACTOR SHALL COORDINATE WITH COS OPERATIONS PRIOR TO INSTALLATION OF THIS JUMPER AND REDUCE THE AMOUNT OF TIME THIS CIRCUIT IS OUT OF OPERATION AS MUCH AS IS FEASIBLY POSSIBLE.
5. CONTRACTOR SHALL EXPOSE AND CUT BACK EXISTING DUCT TO MAKE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN ELECTRICAL SERVICE.



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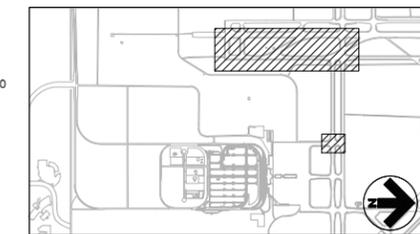
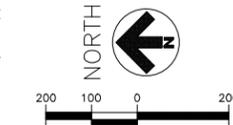
COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

TAXIWAY SIGN AND LIGHT NOTES:

1. THE FRONT SIGN PANEL IS DESIGNATED WHEN THE NEAREST PAVEMENT EDGE IS TO THE RIGHT OF THE SIGN.
2. SIGNS ARE SIZE 3 (18" LEGEND), 35' FROM SIGN TO PAVEMENT EDGE, AND INTERNALLY LIGHTED.
3. SIGNS SHOWN IN BOLD INDICATES SIGNS THAT WILL INCUR CHANGE.
4. COVER ELEVATED TAXIWAY EDGE LIGHTS AS SHOWN IN DETAIL 2, THIS SHEET, OR DE-ENERGIZE THOSE PORTIONS OF THE TAXIWAY EDGE LIGHT CIRCUIT AS REQUIRED.
5. CONTRACTOR SHALL MAINTAIN TAXIWAY LIGHTING CIRCUIT CONTINUITY AT ALL TIMES.
6. AIRFIELD SIGNS PROVIDING DIRECTIONS TO CLOSED AREAS SHALL BE COVERED WITH AN APPROVED NON-TRANSPARENT MATERIAL TO COMPLETELY BLOCK OUT THE SIGN FROM VIEW. BLACK PLASTIC SHALL NOT BE USED TO COVER THE SIGNS. NO DUCT TAPE OR ADHESIVE SHALL CONTACT THE SIGN OR SIGN PANELS. ALL AREAS CLOSED TO AIRCRAFT SHALL NOT BE LIGHTED. ADEQUATE LIGHTING IN THE OPINION OF THE RPR SHALL BE PROVIDED TO DELINEATE THE ACTIVE AND CLOSED AREAS OF THE AOA. ALL WORK ASSOCIATED WITH TEMPORARILY COVERING AND/OR REMOVAL OF SIGN PANELS SHALL BE INCLUDED IN THE COST OF THE MAINTENANCE OF AIRFIELD LIGHTING SYSTEMS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. LIGHTING CIRCUIT JUMPERS SHALL BE #8 AWG, L-824 5KV TYPE B CABLE AND BE INSTALLED IN 2" CONDUIT LAID ON THE GROUND AND ADEQUATELY ANCHORED FROM MOVEMENT BY WIRE TIED TO BARRICADES OR SANDBAGS IN OFF-PAVEMENT AREAS. DUCT USED FOR JUMPERS MAY NOT BE REUSED FOR ANY DUCT INSTALLED IN PROJECT. SUFFICIENT SLACK SHALL BE PROVIDED SO AS TO REDUCE THE POTENTIAL FOR SPLICES IN THE TEMPORARY JUMPER TO PULL APART AND ARC.
8. LOCATIONS OF JUMPERS MAY CHANGE TO ACCOMMODATE THE PHASING/AWARDING OF SCHEDULES. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THESE CHANGES.
9. UPON COMPLETION OF EACH PHASE, THE CONTRACTOR SHALL UNCOVER, RECONNECT AND MAKE LIVE ALL AIRFIELD LIGHTING FIXTURES AND SIGNS TO THEIR ORIGINAL CONDITION.
10. ALL EQUIPMENT, LABOR, AND TOOLS REQUIRED TO KEEP THE EXISTING AIRFIELD LIGHT OPERATIONAL AND MODIFIED AS INDICATED HEREIN SHALL BE INCLUDED IN THE COST FOR THE PAY ITEM MAINTENANCE OF AIRPORT LIGHTING SYSTEMS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.



REVISIONS

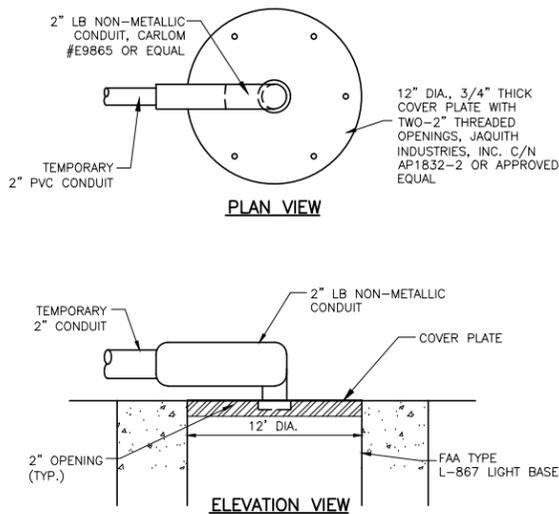
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REVIEWED BY: ARM
DRAWN BY: SHC
DESIGNED BY: SHC

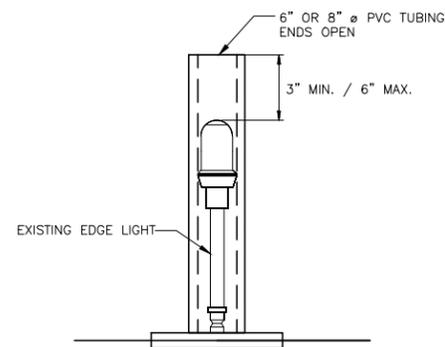
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224-0124-003
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AIRFIELD SIGN AND TAXIWAY LIGHT BLACKOUT PLAN

DRAWING NUMBER
C010
SHEET 10 OF 75
BID DOCUMENTS



1 TEMPORARY COVER PLATE DETAIL
C010 SCALE: NTS



2 TEMPORARY COVERED LIGHT DETAIL
C010 SCALE: NTS

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Plotted on: 2/23/2016 7:53 PM
Printed by: Fouley, Jeff

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016

REVIEWED BY: ARM

DRAWN BY: JFF

DESIGNED BY: JFF

RS&H PROJECT NUMBER

224-0124-003

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**HORIZONTAL &
VERTICAL
CONTROL PLAN**

DRAWING NUMBER

C020

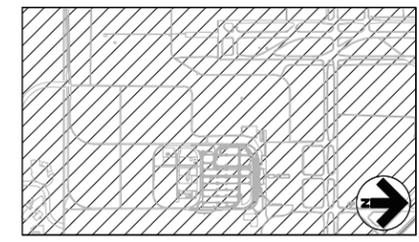
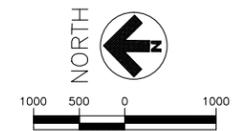
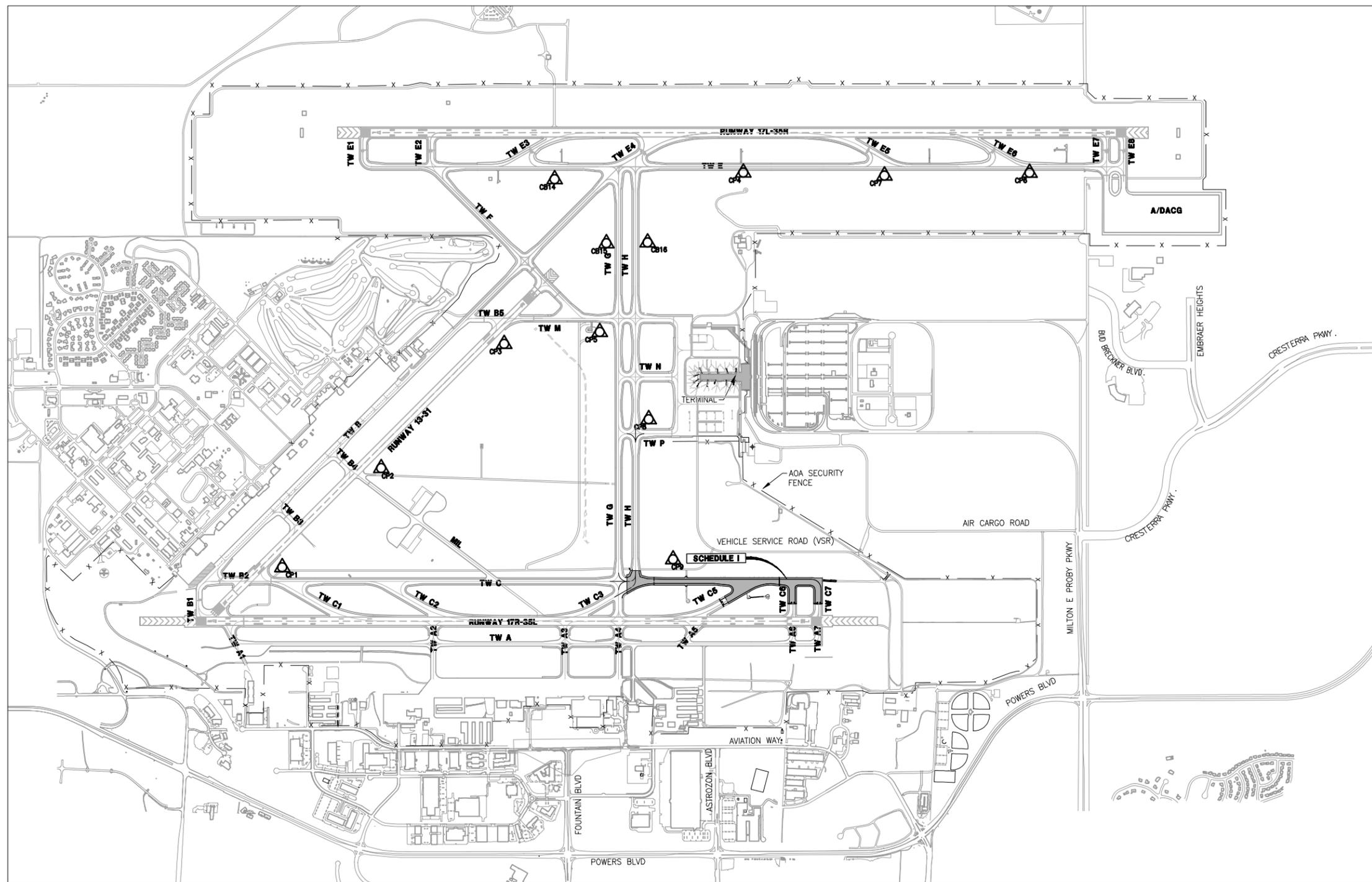
SHEET 11 OF 75

BID

DOCUMENTS

LEGEND:

- PROJECT WORK LIMITS
- SURVEY CONTROL POINTS



NOTES:

- GROUND SURVEY AND CONTROL POINTS PROVIDED BY POLARIS SURVEYING, INC., DECEMBER 2015.
- ELEVATIONS SHOWN ARE BASED UPON THE 1988 NATIONAL GEODETIC VERTICAL DATUM (NAVD88). THE NAVD88 IS APPROXIMATELY 3.29 FEET ABOVE THE NAVD29 DATUM.
- THE CONTRACTOR SHALL VERIFY, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES, ANY CONTROL POINTS TO BE USED FOR CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- CONTROL POINTS ARE LOCATED WITHIN THE AIRPORT OPERATIONS AREA (AOA). THE CONTRACTOR SHALL OBTAIN AUTHORIZATION OF THE ENGINEER AND COS PRIOR TO ACCESSING THE CONTROL POINTS OUTSIDE OF THE DESIGNATED WORK AREAS.
- SURVEYORS SHALL BE BADGED AND HAVE UNSCORTED MOVEMENT AREA DRIVING PRIVILEGES TO GAIN ACCESS TO CONTROL POINTS CP8, CP9, & CB16.

TAXIWAY REHABILITATION CONTROL POINTS

POINT #	NORTHING	EASTING	ELEVATION	LEVEL
CP1	80930.75	30955.47	6164.00	SECONDARY
CP2	79182.41	32699.86	6155.82	SECONDARY
CP3	77012.92	34883.06	6134.07	SECONDARY
CP4	72789.70	37893.99	6135.58	SECONDARY
CP5	75329.09	35091.16	6119.63	SECONDARY
CP6	67738.79	37885.28	6100.19	SECONDARY
CP7	70299.28	37838.68	6116.31	SECONDARY
CP8	74463.64	33554.43	6110.12	PRIMARY
CP9	74035.87	31085.22	6075.08	PRIMARY
CB14	76117.23	37781.42	6178.08	SECONDARY
CB15	75206.61	36652.43	6151.41	SECONDARY
CB16	74476.85	36669.09	6146.49	PRIMARY

AIRPORT DATA TABLE

RUNWAY 13-31, 17R-35L, 17L-35R DESIGN GROUP	D-IV
RUNWAY SAFETY AREA WIDTH	500' (1/2 = 250')
RUNWAY OBJECT FREE AREA WIDTH	800' (1/2 = 400')
TAXIWAY DESIGN GROUP	TDG 5
TAXIWAY SAFETY AREA WIDTH	171' (1/2 = 85.5')
TAXIWAY OBJECT FREE AREA WIDTH	259' (1/2 = 129.5')

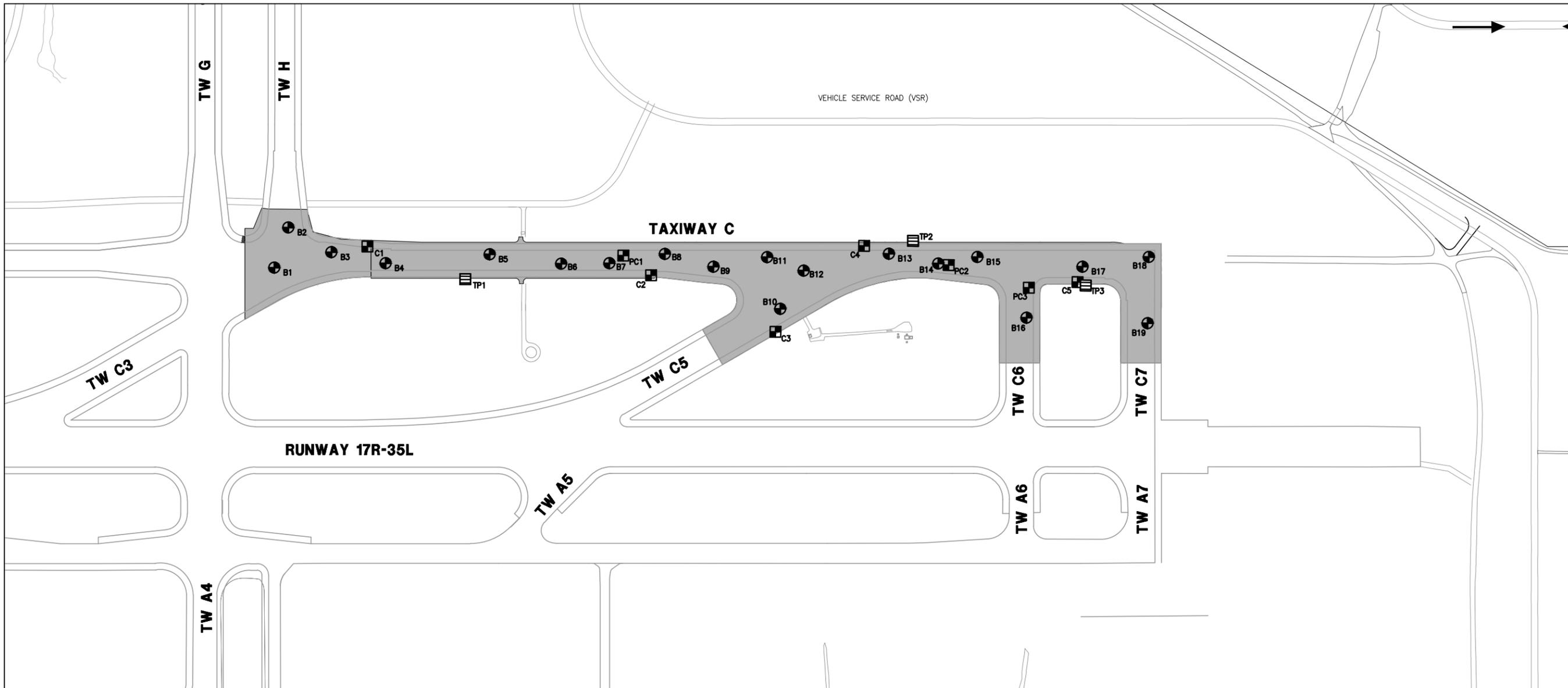
NOTE: DIMENSIONS ARE CENTERED ABOUT THE RUNWAY OR TAXIWAY CENTERLINE.





**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**



BORING LOCATIONS				
BORING #	NORTHING	EASTING	ELEVATION	PCC THICKNESS
B1	74738.2522	30671.9140	6079.1968	14.75"
B2	74685.2441	30822.35	6079.1728	15.50"
B3	74523.291	30729.5633	6076.6959	13.75"
B4	74319.7888	30688.0751	6073.964	14.75"
B5	73928.5831	30721.0666	6068.7392	14.50"
B6	73659.5885	30685.6394	6065.4731	14.25"
B7	73478.4677	30686.8883	6063.1673	14.00"
B8	73269.7178	30721.9228	6060.5103	14.25"
B9	73086.9239	30673.4542	6058.9828	14.25"
B10	72835.6581	30515.2849	6055.6037	14.75"
B11	72885.0545	30709.3166	6057.6834	14.00"
B12	72747.923	30658.6516	6056.3089	14.00"
B13	72426.9907	30721.4711	6054.1132	17.25"
B14	72241.5979	30684.6605	6052.8967	14.50"
B15	72094.5024	30708.8528	6051.7824	14.25"
B16	71909.8216	30480.8595	6047.3968	14.00"
B17	71699.2445	30672.0626	6048.6533	14.00"
B18	71449.8897	30708.1808	6046.9277	15.75"
B19	71454.6102	30459.7401	6043.6806	14.50"
C1	74388.296	30750.9943	6074.4771	-
C2	73321.7106	30641.6705	6060.4183	-
C3	72854.0692	30429.1295	6054.6563	-
C4	72520.6298	30751.1024	6054.2222	-
C5	71718.0853	30614.2578	6047.7421	-

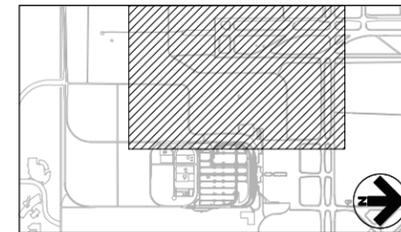
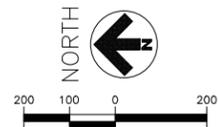
BORING LOCATIONS				
BORING #	NORTHING	EASTING	ELEVATION	PCC THICKNESS
PC1	73269.6389	30721.9041	6060.5984	-
PC2	72202.693	30678.7863	6052.6176	-
PC3	71901.1403	30593.3232	6049.0224	-
TP1	74020.5167	30627.7102	6068.5161	-
TP2	72336.0843	30769.3661	6052.1145	-
TP3	71687.5417	30601.4354	6047.0187	-

LEGEND:

- PROJECT WORK LIMITS
- B # SOIL BORING & CORE LOCATIONS
- PC # PETROGRAPHIC ANALYSIS PCC CORE LOCATIONS
- C # SHOULDER PCC CORE LOCATIONS
- TP # TEST PIT LOCATIONS

NOTES:

1. GEOTECH PROVIDED BY GEOCAL, INC., DECEMBER 2015.



REVISIONS

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DRAWN BY: JDP

DESIGNED BY: JFF

RS&H PROJECT NUMBER

224-0124-003

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**BORING LOCATION
& LAYOUT PLAN**

DRAWING NUMBER

C021

SHEET 12 OF 75

**BID
DOCUMENTS**



7290 South Fraser Street
Centennial CO 80112
Telephone: (303)337-0338
Fax: (303)337-0247

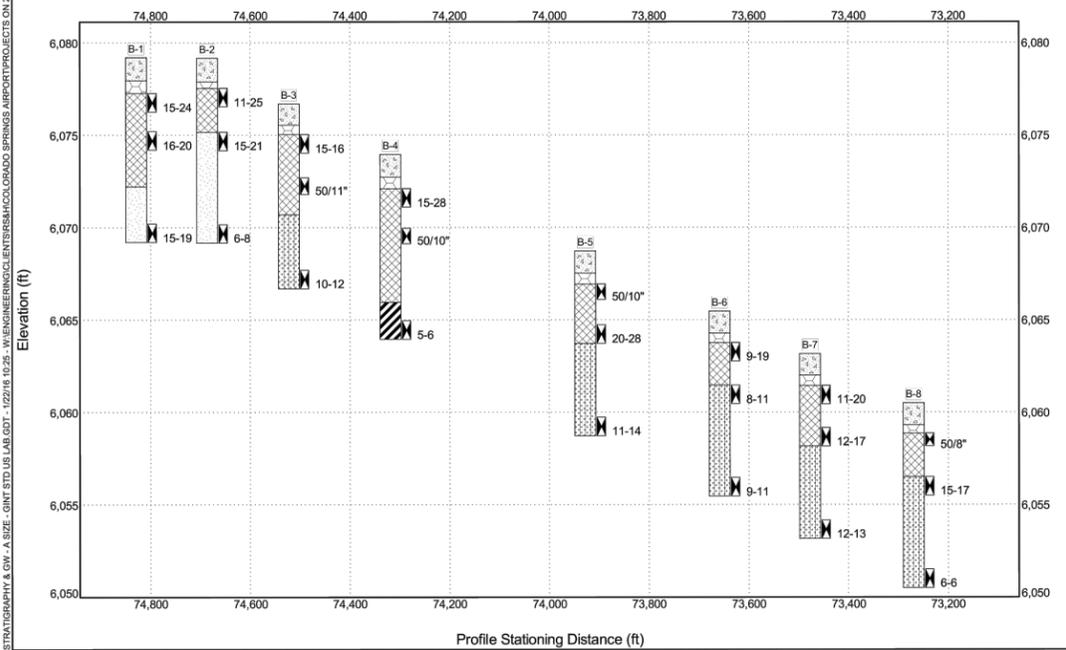
**FENCE DIAGRAM
FIGURE 2A**

CLIENT RS&H

PROJECT NAME COSA Reconstruction of Taxiway C

PROJECT NUMBER G14.1584.002

PROJECT LOCATION Colorado Springs, CO



7290 South Fraser Street
Centennial CO 80112
Telephone: (303)337-0338
Fax: (303)337-0247

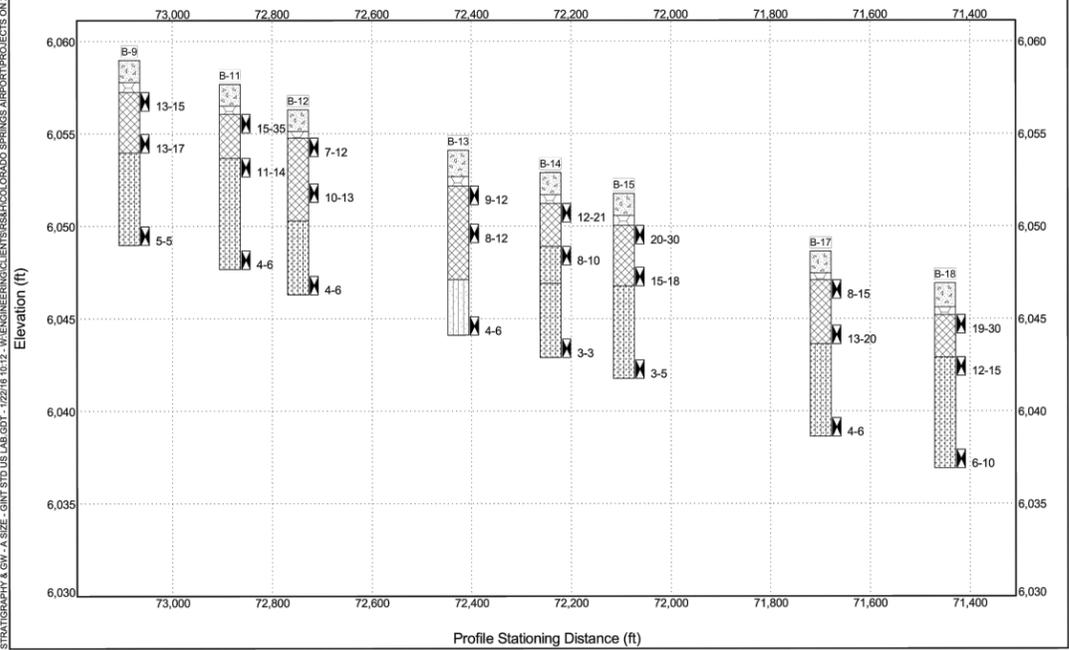
**FENCE DIAGRAM
FIGURE 2B**

CLIENT RS&H

PROJECT NAME COSA Reconstruction of Taxiway C

PROJECT NUMBER G14.1584.002

PROJECT LOCATION Colorado Springs, CO



7290 South Fraser Street
Centennial CO 80112
Telephone: (303)337-0338
Fax: (303)337-0247

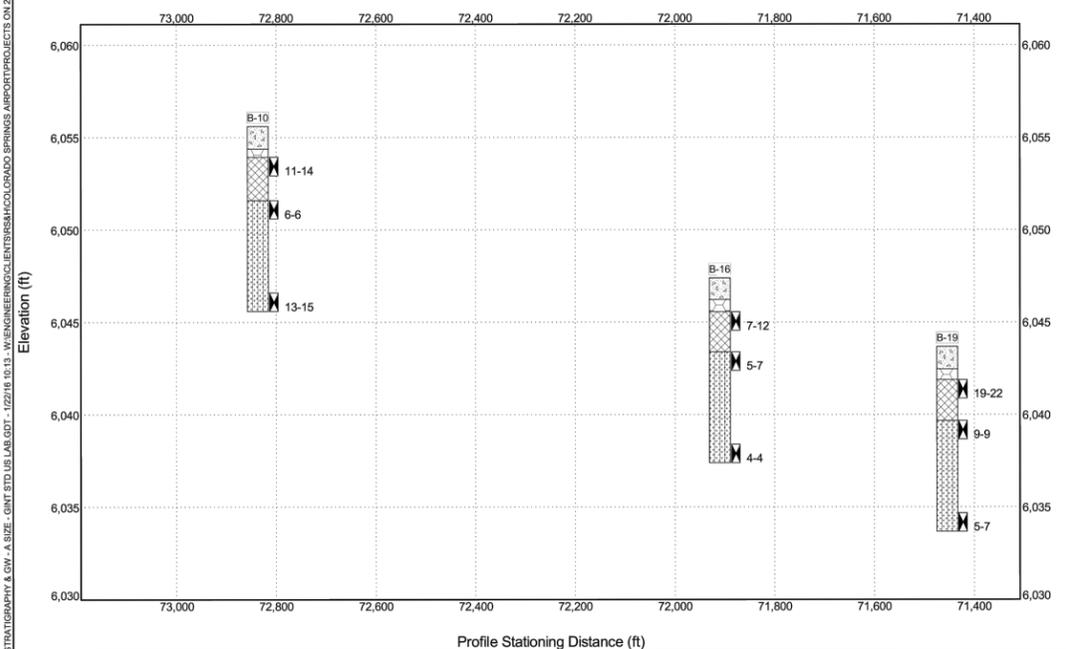
**FENCE DIAGRAM
FIGURE 2C**

CLIENT RS&H

PROJECT NAME COSA Reconstruction of Taxiway C

PROJECT NUMBER G14.1584.002

PROJECT LOCATION Colorado Springs, CO



7290 South Fraser Street
Centennial CO 80112
Telephone: (303)337-0338
Fax: (303)337-0247

**LEGEND AND NOTES FOR
EXPLORATORY BORINGS
FIGURE 3**

CLIENT RS&H

PROJECT NAME COSA Reconstruction of Taxiway C

PROJECT NUMBER G14.1584.002

PROJECT LOCATION Colorado Springs, CO

**LITHOLOGIC SYMBOLS
(Unified Soil Classification System)**

- CONCRETE
- CEMENT TREATED BASE
- FILL MIXTURES OF SILTY and CLAYEY SAND, medium dense to very dense, no plasticity to low plasticity, lightly moist, tan to dark brown and black, fine to medium sand, trace gravel
- SILTY SAND, loose to medium dense, no plasticity, lightly moist, tan, fine to medium sand
- SAND, medium dense to dense, no plasticity, lightly moist, tan, fine to coarse sand
- SANDY SILT, loose, no plasticity, lightly moist, light brown, fine sand
- CLAYEY SAND, loose, low plasticity, lightly moist, dark brown, fine to medium sand, trace gravel
- FAT CLAY with sand, stiff, high plasticity, lightly moist, light grey, fine sand

SAMPLER SYMBOLS

- Modified California Sampler

NOTES

1. Boring elevations and coordinates from survey data provided by RS&H

ABBREVIATIONS

- LL - LIQUID LIMIT (%)
- PI - PLASTIC INDEX (%)
- W - MOISTURE CONTENT (%)
- DD - DRY DENSITY (PCF)
- NP - NON PLASTIC
- 200 - PERCENT PASSING NO. 200 SIEVE
- PP - POCKET PENETROMETER (TSF)



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COLORADO SPRINGS
AIRPORT

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
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C6, AND C7**

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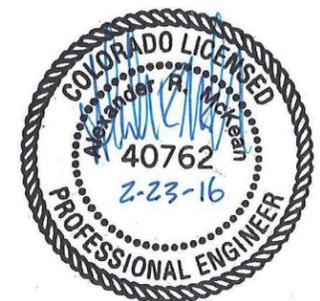
BORING LOGS

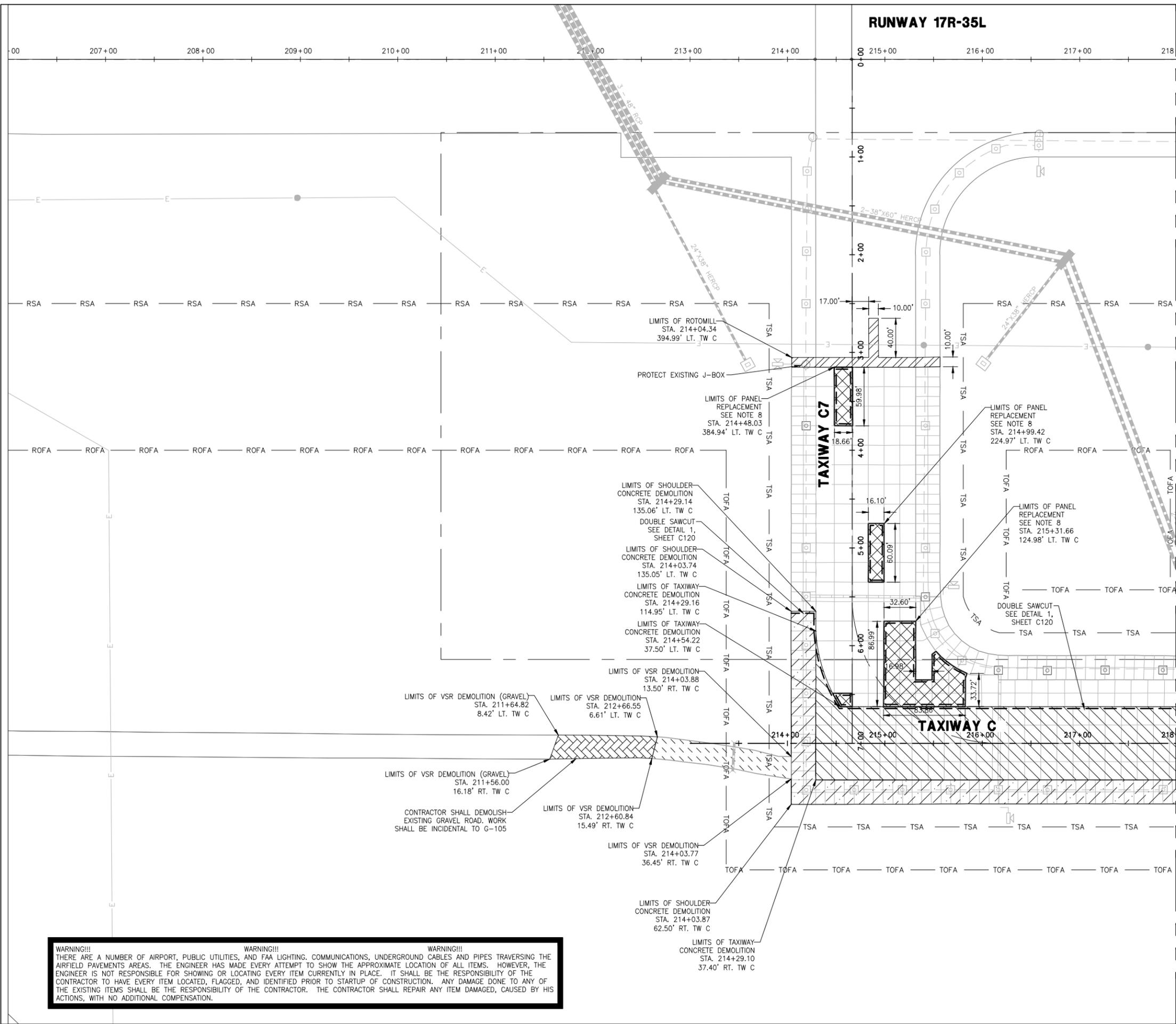
DRAWING NUMBER

C022

SHEET 13 OF 75

**BID
DOCUMENTS**



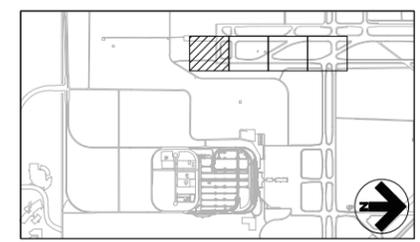
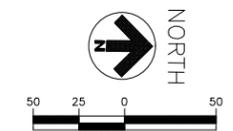


LEGEND:

- 14" FULL DEPTH CONCRETE TAXIWAY PAVEMENT REMOVAL
- 7" FULL DEPTH CONCRETE SHOULDER PAVEMENT REMOVAL
- 14" PCC PANEL REMOVAL
- 3" ASPHALT PAVEMENT REMOVAL
- 3" ASPHALT ROTOMILL REMOVAL
- 7" PCC CONCRETE SHOULDER REMOVAL
- TSA TAXIWAY SAFETY AREA
- TOFA TAXIWAY OBJECT FREE AREA
- RSA RUNWAY SAFETY AREA
- ROFA RUNWAY OBJECT FREE AREA
- DOUBLE SAWCUT

- NOTES:**
- SEE SHEET E101-E104 FOR ELECTRICAL DEMOLITION.
 - DIMENSIONS FOR PANEL REPLACEMENTS ARE APPROXIMATE.
 - SAW CUTS SHALL BE INCIDENTAL TO THE ITEMS OF WORK REQUIRING ITS USE. SEE SHEET C120 FOR SAWCUT DETAILS.
 - CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF ALL UTILITIES.
 - EXISTING MAINLINE PCC PAVEMENT SCHEDULED FOR DEMOLITION AND REMOVAL IS 14" THICK (NOMINAL). NO ADDITIONAL PAYMENT WILL BE MADE FOR THICKER PCC ENCOUNTERED. SEE SHEETS C021 AND C022 FOR PCC THICKNESS ENCOUNTERED. REMOVAL OF PCC THICKENED EDGES AT EXISTING EXPANSION JOINTS SHALL BE INCLUDED IN THE UNIT COST OF THE 14" PCC PAVEMENT REMOVAL.
 - GEOTEXTILE BONDBREAKER FABRIC EXISTS BETWEEN CTS AND PCC PAVEMENT. REMOVAL OF THIS ITEM SHALL BE INCIDENTAL TO PAVEMENT DEMOLITION.
 - SEE SHEET C120, SECTION K FOR EXISTING PAVEMENT SECTION.
 - CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN REMOVING ONLY PCC TO PREVENT DAMAGE TO UNDERLYING CTS. SEE PANEL REPLACEMENT DETAIL, SHEET C120, FOR PANEL REMOVAL DETAIL.
 - ALL JOINTS IN EXISTING PCC TO REMAIN ON TAXIWAYS C3, C5, C6, AND C7 WITHIN WORK LIMITS SHALL BE REHABILITATED. SEE SHEET C623 FOR DETAILS.

MATCH LINE - SEE SHEET C103



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TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
 RECONSTRUCT
 TAXIWAY C FROM
 TAXIWAY C7
 THROUGH TAXIWAY H
 AND
 REHABILITATE
 PORTIONS OF
 TAXIWAYS C3, C5,
 C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

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 DRAWN BY: JDP
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**DEMOLITION
 PLAN
 (SHEET 1 OF 4)**

DRAWING NUMBER
C101
 SHEET 14 OF 75
**BID
 DOCUMENTS**



WARNING!!!
 THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRaversing THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c01\C101-C104.dwg
 Plotted on: 2/22/2016 5:28 PM
 Created by: Frouley, Jeff

RUNWAY 17R-35L

00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230

LEGEND:

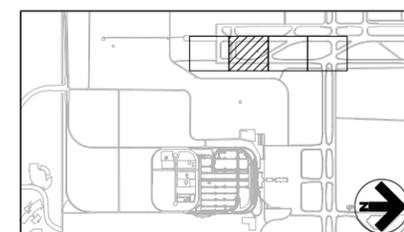
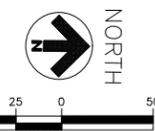
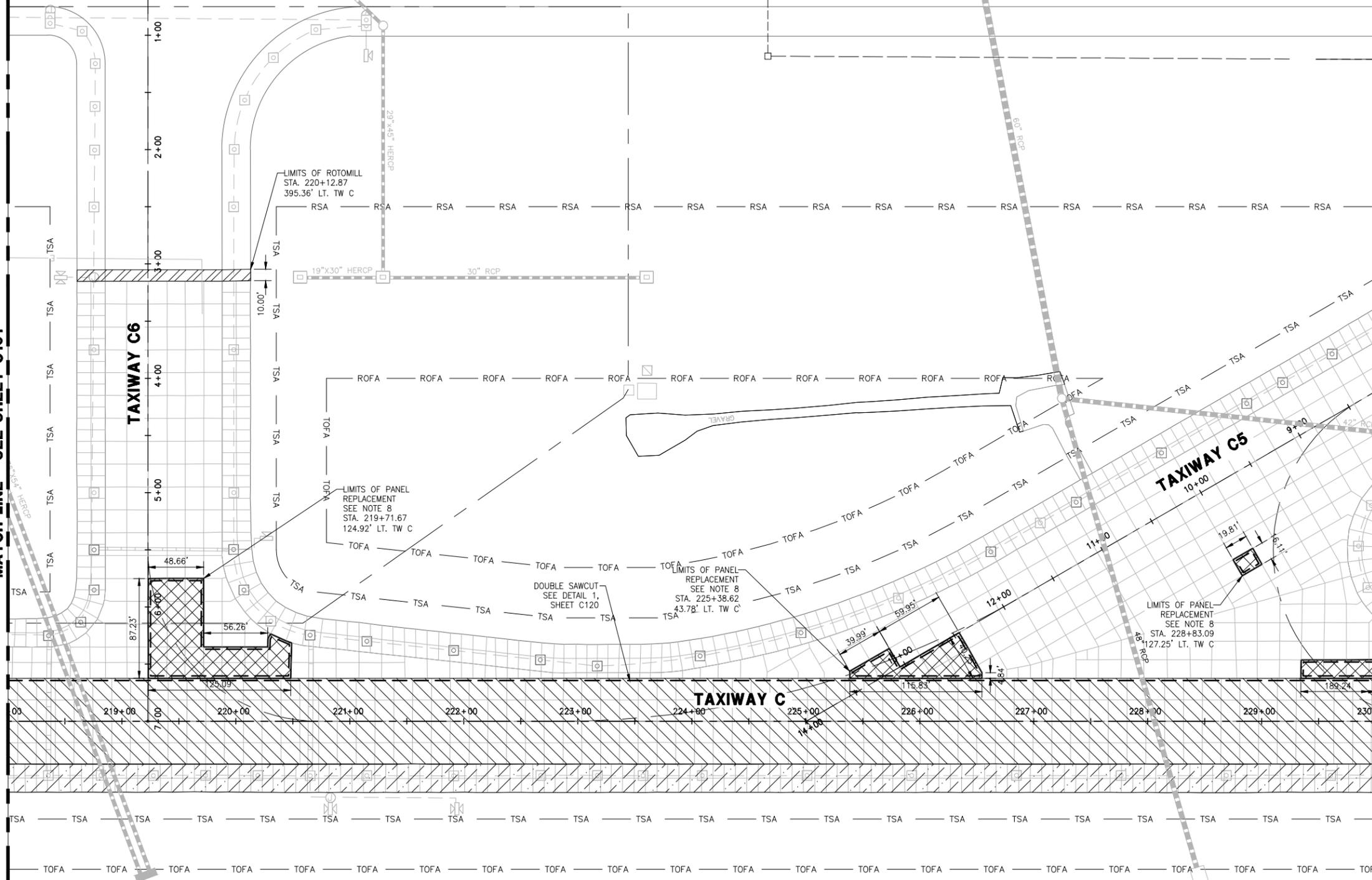
-  14" FULL DEPTH CONCRETE TAXIWAY PAVEMENT REMOVAL
-  7" FULL DEPTH CONCRETE SHOULDER PAVEMENT REMOVAL
-  14" PCC PANEL REMOVAL
-  3" ASPHALT PAVEMENT REMOVAL
-  3" ASPHALT ROTOMILL REMOVAL
-  7" PCC CONCRETE SHOULDER REMOVAL
-  TSA TAXIWAY SAFETY AREA
-  TOFA TAXIWAY OBJECT FREE AREA
-  RSA RUNWAY SAFETY AREA
-  ROFA RUNWAY OBJECT FREE AREA
-  DOUBLE SAWCUT

NOTES:

1. SEE SHEET E101-E104 FOR ELECTRICAL DEMOLITION.
2. DIMENSIONS FOR PANEL REPLACEMENTS ARE APPROXIMATE.
3. SAW CUTS SHALL BE INCIDENTAL TO THE ITEMS OF WORK REQUIRING ITS USE. SEE SHEET C120 FOR SAWCUT DETAILS.
4. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF ALL UTILITIES.
5. EXISTING MAINLINE PCC PAVEMENT SCHEDULED FOR DEMOLITION AND REMOVAL IS 14" THICK (NOMINAL). NO ADDITIONAL PAYMENT WILL BE MADE FOR THICKER PCC ENCOUNTERED. SEE SHEETS C021 AND C022 FOR PCC THICKNESS ENCOUNTERED. REMOVAL OF PCC THICKENED EDGES AT EXISTING EXPANSION JOINTS SHALL BE INCLUDED IN THE UNIT COST OF THE 14" PCC PAVEMENT REMOVAL.
6. GEOTEXTILE BONDBREAKER FABRIC EXISTS BETWEEN CTS AND PCC PAVEMENT. REMOVAL OF THIS ITEM SHALL BE INCIDENTAL TO PAVEMENT DEMOLITION.
7. SEE SHEET C120, SECTION K FOR EXISTING PAVEMENT SECTION.
8. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN REMOVING ONLY PCC TO PREVENT DAMAGE TO UNDERLYING CTS. SEE PANEL REPLACEMENT DETAIL, SHEET C120, FOR PANEL REMOVAL DETAIL.
9. ALL JOINTS IN EXISTING PCC TO REMAIN ON TAXIWAYS C3, C5, C6, AND C7 WITHIN WORK LIMITS SHALL BE REHABILITATED. SEE SHEET C623 FOR DETAILS.

MATCH LINE - SEE SHEET C101

MATCH LINE - SEE SHEET C103



TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

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**DEMOLITION
PLAN
(SHEET 2 OF 4)**

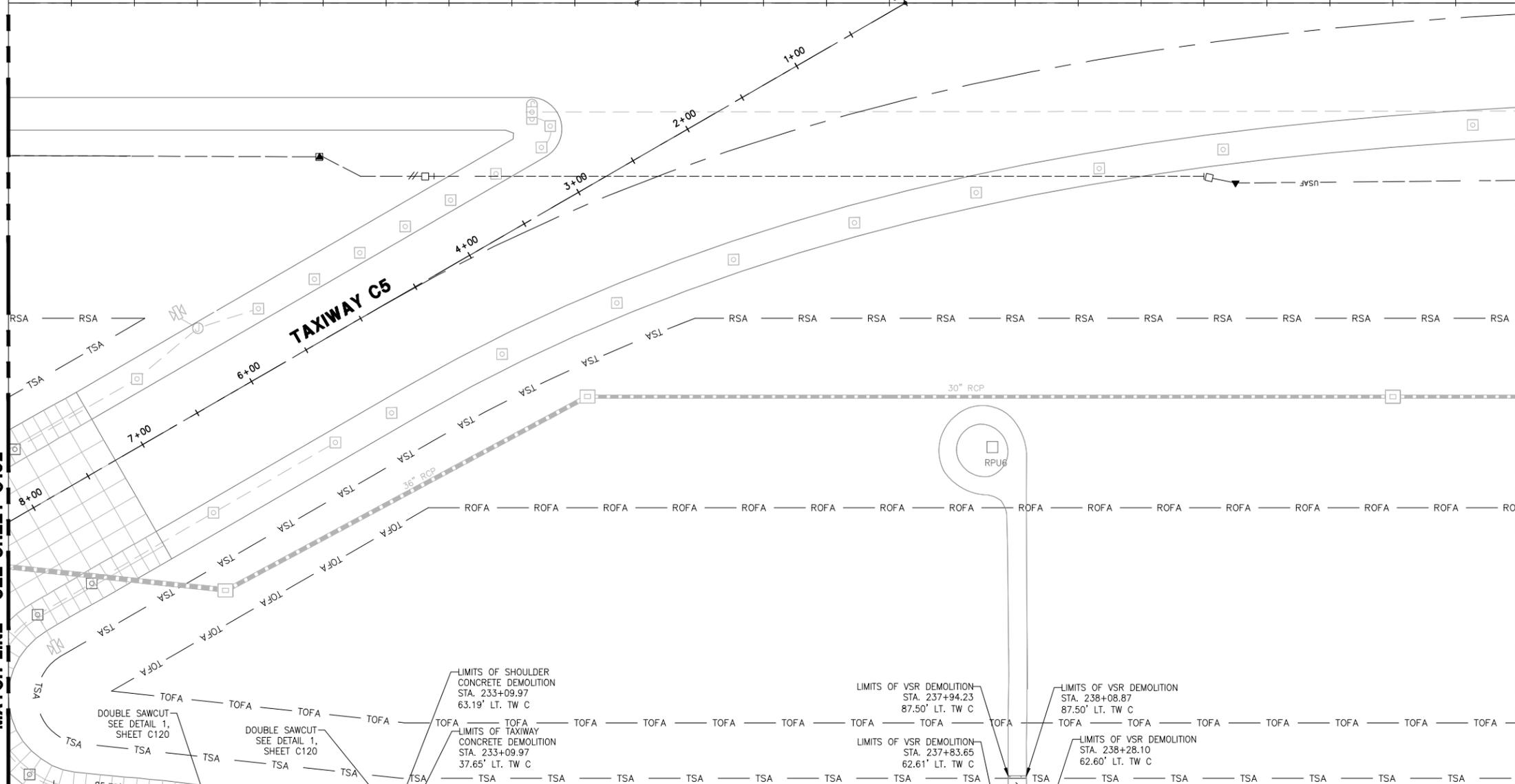
DRAWING NUMBER
C102
 SHEET 15 OF 75
**BID
DOCUMENTS**

WARNING!!!
 THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\Cad\A\C101-C104.dwg
 Plotted on: 2/22/2016 8:00 PM

RUNWAY 17R-35L

00 231+00 232+00 233+00 234+00 235+00 236+00 237+00 238+00 239+00 240+00 241+00 242



LEGEND:

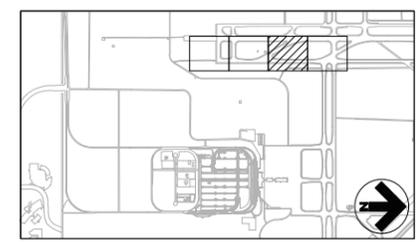
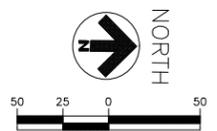
- 14" FULL DEPTH CONCRETE TAXIWAY PAVEMENT REMOVAL
- 7" FULL DEPTH CONCRETE SHOULDER PAVEMENT REMOVAL
- 14" PCC PANEL REMOVAL
- 3" ASPHALT PAVEMENT REMOVAL
- 3" ASPHALT ROTOMILL REMOVAL
- 7" PCC CONCRETE SHOULDER REMOVAL
- TSA TAXIWAY SAFETY AREA
- TOFA TAXIWAY OBJECT FREE AREA
- RSA RUNWAY SAFETY AREA
- ROFA RUNWAY OBJECT FREE AREA
- DOUBLE SAWCUT

NOTES:

1. SEE SHEET E101-E104 FOR ELECTRICAL DEMOLITION.
2. DIMENSIONS FOR PANEL REPLACEMENTS ARE APPROXIMATE.
3. SAW CUTS SHALL BE INCIDENTAL TO THE ITEMS OF WORK REQUIRING ITS USE. SEE SHEET C120 FOR SAWCUT DETAILS.
4. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF ALL UTILITIES.
5. EXISTING MAINLINE PCC PAVEMENT SCHEDULED FOR DEMOLITION AND REMOVAL IS 14" THICK (NOMINAL). NO ADDITIONAL PAYMENT WILL BE MADE FOR THICKER PCC ENCOUNTERED. SEE SHEETS C021 AND C022 FOR PCC THICKNESS ENCOUNTERED. REMOVAL OF PCC THICKENED EDGES AT EXISTING EXPANSION JOINTS SHALL BE INCLUDED IN THE UNIT COST OF THE 14" PCC PAVEMENT REMOVAL.
6. GEOTEXTILE BONDBREAKER FABRIC EXISTS BETWEEN CTS AND PCC PAVEMENT. REMOVAL OF THIS ITEM SHALL BE INCIDENTAL TO PAVEMENT DEMOLITION.
7. SEE SHEET C120, SECTION K FOR EXISTING PAVEMENT SECTION.
8. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN REMOVING ONLY PCC TO PREVENT DAMAGE TO UNDERLYING CTS. SEE PANEL REPLACEMENT DETAIL, SHEET C120, FOR PANEL REMOVAL DETAIL.
9. ALL JOINTS IN EXISTING PCC TO REMAIN ON TAXIWAYS C3, C5, C6, AND C7 WITHIN WORK LIMITS SHALL BE REHABILITATED. SEE SHEET C623 FOR DETAILS.

MATCH LINE - SEE SHEET C102

MATCH LINE - SEE SHEET C104



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TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
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DRAWN BY: JDP
DESIGNED BY: JFF
RS&H PROJECT NUMBER
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**DEMOLITION
PLAN
(SHEET 3 OF 4)**

DRAWING NUMBER
C103
SHEET 16 OF 75
**BID
DOCUMENTS**



WARNING!!!
THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c0a1\c101-C104.dwg
Plotted on: 2/27/2016 8:00 PM
Created by: Fouley, Jeff

RUNWAY 17R-35L

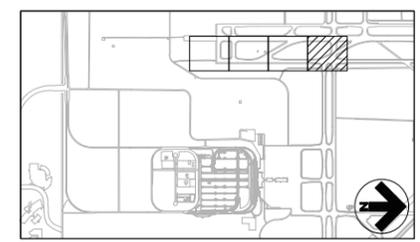
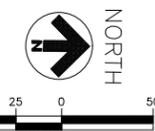
WARNING!!!
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LEGEND:

-  14" FULL DEPTH CONCRETE TAXIWAY PAVEMENT REMOVAL
-  7" FULL DEPTH CONCRETE SHOULDER PAVEMENT REMOVAL
-  14" PCC PANEL REMOVAL
-  3" ASPHALT PAVEMENT REMOVAL
-  3" ASPHALT ROTOMILL REMOVAL
-  7" PCC CONCRETE SHOULDER REMOVAL
-  TSA TAXIWAY SAFETY AREA
-  TOFA TAXIWAY OBJECT FREE AREA
-  RSA RUNWAY SAFETY AREA
-  ROFA RUNWAY OBJECT FREE AREA
-  DOUBLE SAWCUT

NOTES:

1. SEE SHEET E101-E104 FOR ELECTRICAL DEMOLITION.
2. DIMENSIONS FOR PANEL REPLACEMENTS ARE APPROXIMATE.
3. SAW CUTS SHALL BE INCIDENTAL TO THE ITEMS OF WORK REQUIRING ITS USE. SEE SHEET C120 FOR SAWCUT DETAILS.
4. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF ALL UTILITIES.
5. EXISTING MAINLINE PCC PAVEMENT SCHEDULED FOR DEMOLITION AND REMOVAL IS 14" THICK (NOMINAL). NO ADDITIONAL PAYMENT WILL BE MADE FOR THICKER PCC ENCOUNTERED. SEE SHEETS C021 AND C022 FOR PCC THICKNESS ENCOUNTERED. REMOVAL OF PCC THICKENED EDGES AT EXISTING EXPANSION JOINTS SHALL BE INCLUDED IN THE UNIT COST OF THE 14" PCC PAVEMENT REMOVAL.
6. GEOTEXTILE BONDBREAKER FABRIC EXISTS BETWEEN CTS AND PCC PAVEMENT. REMOVAL OF THIS ITEM SHALL BE INCIDENTAL TO PAVEMENT DEMOLITION.
7. SEE SHEET C120, SECTION K FOR EXISTING PAVEMENT SECTION.
8. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN REMOVING ONLY PCC TO PREVENT DAMAGE TO UNDERLYING CTS. SEE PANEL REPLACEMENT DETAIL, SHEET C120, FOR PANEL REMOVAL DETAIL.
9. ALL JOINTS IN EXISTING PCC TO REMAIN ON TAXIWAYS C3, C5, C6, AND C7 WITHIN WORK LIMITS SHALL BE REHABILITATED. SEE SHEET C623 FOR DETAILS.



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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
 RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
 REVIEWED BY: ARM
 DRAWN BY: JDP
 DESIGNED BY: JFF
 RS&H PROJECT NUMBER
 224-0124-003
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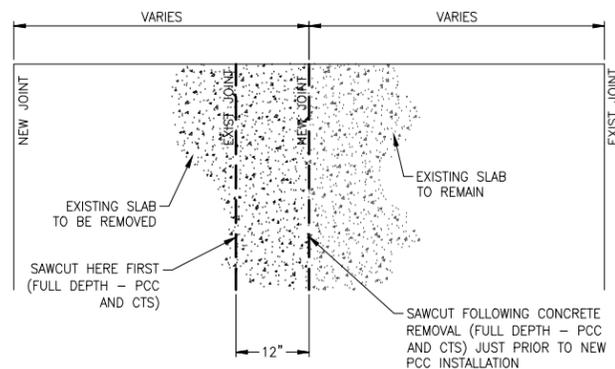
DEMOLITION PLAN (SHEET 4 OF 4)

DRAWING NUMBER
C104
 SHEET 17 OF 75
BID DOCUMENTS



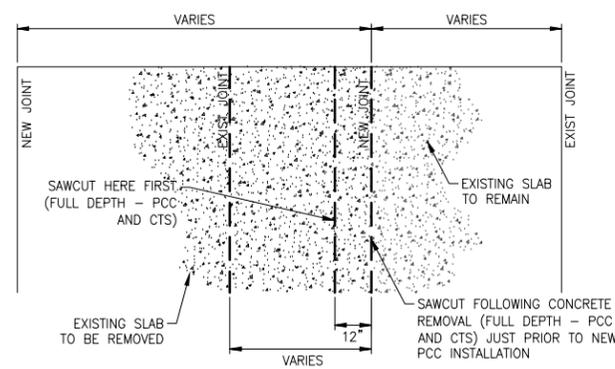
MATCH LINE - SEE SHEET C103

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c04\C104-C104.dwg
 Plotted on: 2/22/2016 5:30 PM



SAWCUT DETAIL 1

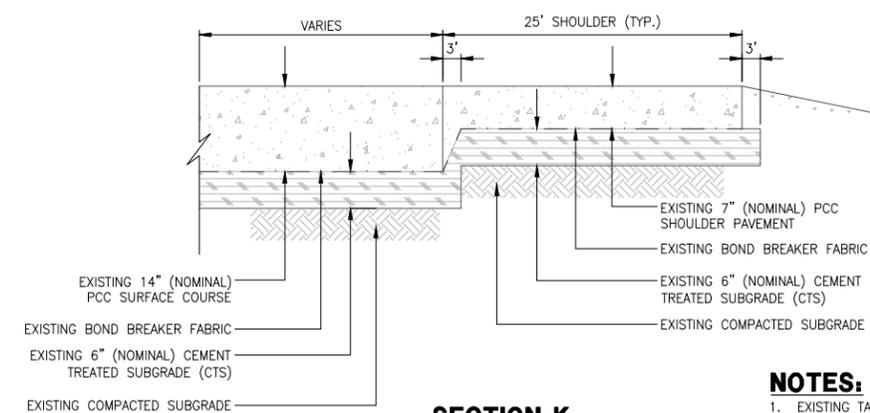
NTS



SAWCUT DETAIL 2

NOTES:

1. SAW CUTS SHALL BE INCIDENTAL TO THE ITEMS OF WORK REQUIRING ITS USE.

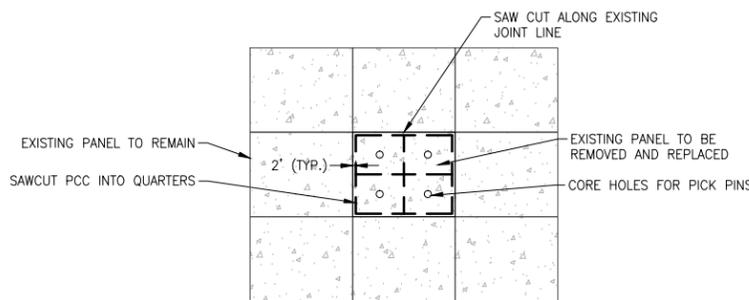


**SECTION K
TAXIWAY C & H - EXISTING SECTION**

NTS

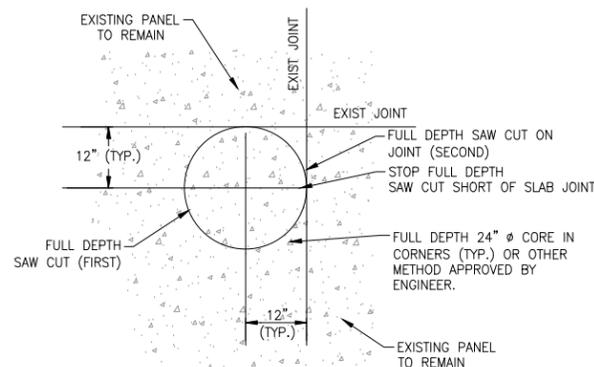
NOTES:

1. EXISTING TAXIWAY IS IDENTIFIED AS 14" (NOMINAL) PCC. INVESTIGATIONS HAVE IDENTIFIED A MAJORITY OF THE PCC TO BE IN EXCESS OF 14". NO ADDITIONAL PAYMENT WILL BE MADE FOR PCC THAT IS THICKER THAN 14". SEE SHEET C030 FOR EXISTING PCC THICKNESS.



PANEL REPLACEMENT - PCC & FULL DEPTH REMOVAL DETAIL

NTS



OVERSAW DETAIL

NTS

NOTES:

1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION FOR PANEL REMOVALS. ANY DAMAGE TO REMAINING UNDERLYING CTS OR SURROUNDING PANELS SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
2. ALL OPERATIONS SHALL BE CAREFULLY CONTROLLED TO PREVENT DAMAGE TO THE CONCRETE PAVEMENT AND TO THE UNDERLYING MATERIAL TO REMAIN IN PLACE. ALL SAW CUTS SHALL BE MADE PERPENDICULAR TO THE SLAB SURFACE.
3. **REMOVAL OF EXISTING PAVEMENT SLAB:** WHEN IT IS NECESSARY TO REMOVE EXISTING CONCRETE PAVEMENT AND LEAVE ADJACENT CONCRETE IN PLACE, THE JOINT BETWEEN THE REMOVAL AREA AND ADJOINING PAVEMENT, SCHEDULED TO REMAIN IN PLACE AND PROTECTED FROM DAMAGE, SHALL FIRST BE CUT TO THE DEPTH SPECIFIED IN THE PLANS (FULL DEPTH OR PCC ONLY) WITH A STANDARD DIAMOND-TYPE CONCRETE SAW. NEXT, A SAW CUT OF THE SAME DEPTH SHALL BE MADE PARALLEL TO AND AT LEAST 12 INCHES FROM THE EXISTING AND PREVIOUSLY SAW CUT JOINT LINE. ALL PAVEMENT BETWEEN THE INNER SAW CUT AND THE JOINT LINE SHALL BE CAREFULLY BROKEN UP AND REMOVED USING HAND-HELD JACKHAMMERS, 30 LB. OR LESS, OR APPROVED LIGHT-DUTY EQUIPMENT WHICH WILL NOT CAUSE STRESS TO PROPAGATE ACROSS THE SAW CUT JOINT LINE AND RESULT IN THE DEVELOPMENT OF DISTRESSES IN ADJACENT PAVEMENT WHICH IS TO REMAIN IN PLACE.
4. THE CONTRACTOR SHALL REMOVE THE REMAINING PORTIONS OF THE CONCRETE PAVEMENT SLAB BY LIFTING AND PLACING DIRECTLY INTO HAUL TRUCKS. THE CONTRACTOR WILL NOT BE ALLOWED TO USE HYDRAULIC RAMS ON EXCAVATORS, OR GUILLOTINE TYPE BREAKERS THAT MAY DAMAGE THE UNDERLYING CEMENT TREATED SOIL BELOW THE PCC PAVEMENTS TO BE REMOVED. SAW CUTTING DEPTHS MAY VARY. NO ADDITIONAL PAYMENT WILL BE ALLOTTED FOR VARYING DEPTHS OF PCC CONCRETE PAVEMENT.
5. CONTRACTOR MAY SUBMIT ALTERNATIVE METHOD FOR PCC PANEL REMOVAL TO ENGINEER FOR APPROVAL.
6. CONTRACTOR MAY USE A "SLAB CRAB" STYLE BUCKET FOR PANEL REMOVAL AFTER AN INITIAL PANEL IS REMOVED TO GAIN ACCESS TO THE DEMO AREA.



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COLORADO SPRINGS
AIRPORT

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

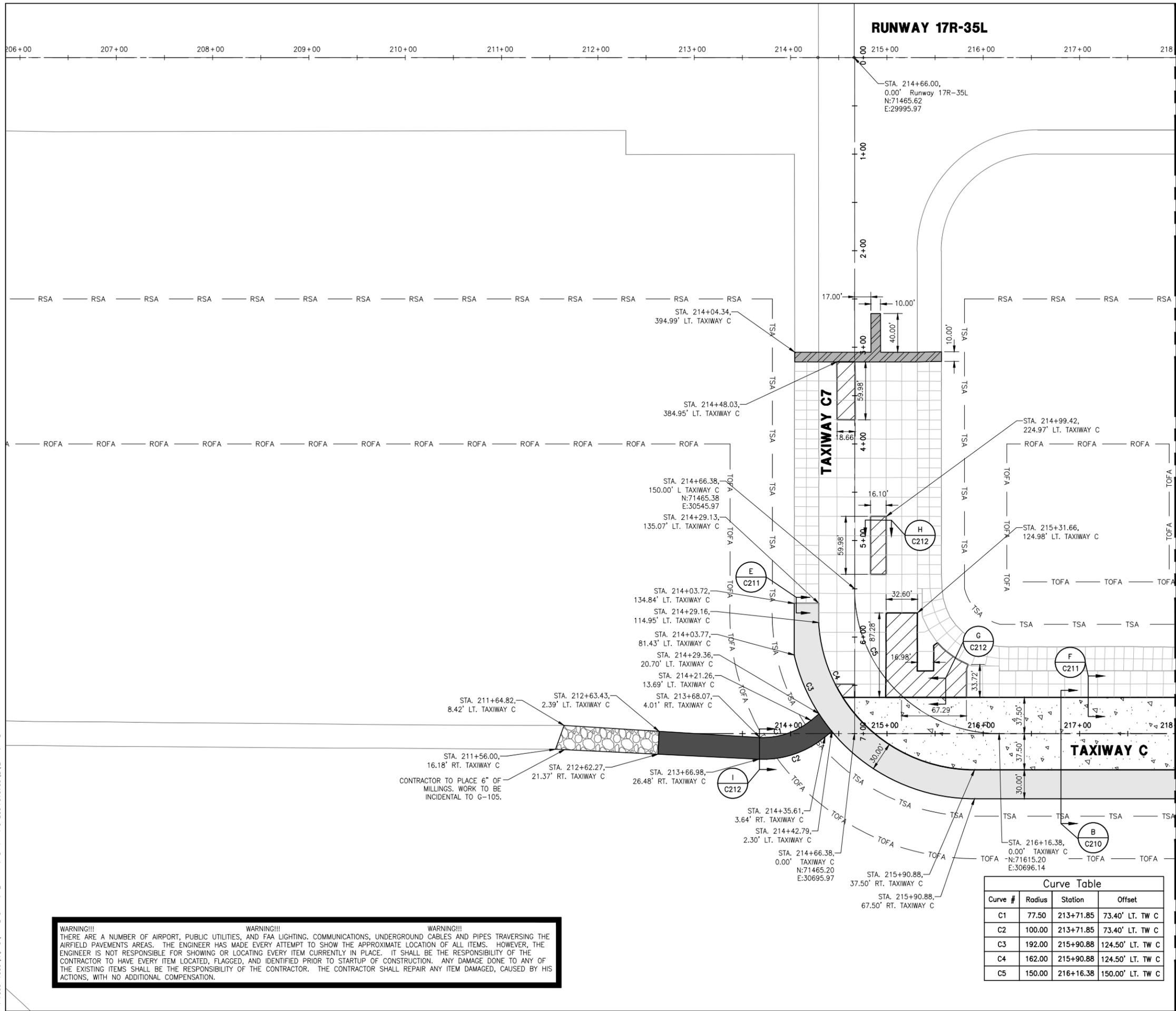
DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF

RS&H PROJECT NUMBER
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**TYPICAL
PAVEMENT
DEMOLITION
SECTIONS &
DETAILS**

DRAWING NUMBER
C120
SHEET 18 OF 75
**BID
DOCUMENTS**





RUNWAY 17R-35L

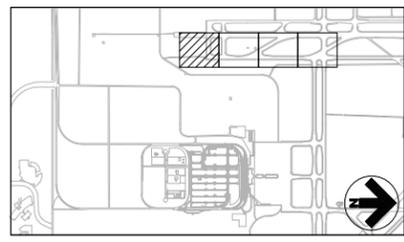
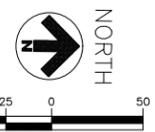
LEGEND:

- NEW CONCRETE TAXIWAY PAVEMENT - 16" DEPTH (P-501)
- NEW CONCRETE PANEL REPLACEMENT - 14" DEPTH (P-501)
- NEW ASPHALT TAXIWAY SHOULDER PAVEMENT (P-403)
- NEW 3" ASPHALT TAXIWAY PAVEMENT (P-403)
- NEW ASPHALT VSR PAVEMENT (P-403)
- NEW PCC TRANSITION SHOULDER DEPTH VARIES (P-501)
- TSA TAXIWAY SAFETY AREA
- TOFA TAXIWAY OBJECT FREE AREA
- RSA RUNWAY SAFETY AREA
- ROFA RUNWAY OBJECT FREE AREA

NOTES:

1. SEE SHEETS C210 - C212 FOR TYPICAL SECTIONS AND DETAILS.
2. DIMENSIONS FOR PANEL REPLACEMENTS ARE APPROXIMATE.
3. SEE SHEETS C601-C605 FOR SPALL REPAIR AND CONCRETE SEALING LOCATIONS.

MATCH LINE - SEE SHEET C202



Curve Table

Curve #	Radius	Station	Offset
C1	77.50	213+71.85	73.40' LT. TW C
C2	100.00	213+71.85	73.40' LT. TW C
C3	192.00	215+90.88	124.50' LT. TW C
C4	162.00	215+90.88	124.50' LT. TW C
C5	150.00	216+16.38	150.00' LT. TW C

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 THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.



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TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
 RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
 REVIEWED BY: ARM
 DRAWN BY: JDP
 DESIGNED BY: JFF
 RS&H PROJECT NUMBER: 224-0124-003
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GEOMETRY & PAVING PLAN (SHEET 1 OF 4)

DRAWING NUMBER
C201
 SHEET 19 OF 75
BID DOCUMENTS

Drawing: I:\P\2240124\003 Colorado Springs - Taxiway C Recon\Cad\A\C201-C204.dwg
 Plotted by: Fox, Trpp
 Plotted on: 2/23/2016 8:02 PM



**TAXIWAY C
RECONSTRUCTION**

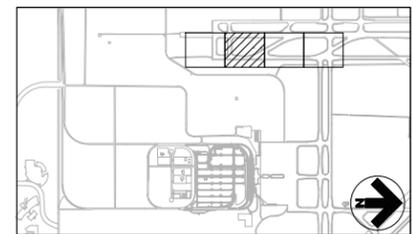
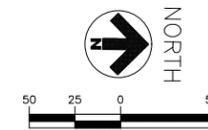
**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

LEGEND:

-
-
-
-
-
-
-
-
-
-

NOTES:

1. SEE SHEETS C210 - C212 FOR TYPICAL SECTIONS AND DETAILS.
2. DIMENSIONS FOR PANEL REPLACEMENTS ARE APPROXIMATE.
3. SEE SHEETS C601-C605 FOR SPALL REPAIR AND CONCRETE SEALING LOCATIONS.



REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016

REVIEWED BY: ARM

DRAWN BY: JDP

DESIGNED BY: JFF

RS&H PROJECT NUMBER

224-0124-003

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**GEOMETRY &
PAVING PLAN
(SHEET 2 OF 4)**

DRAWING NUMBER

C202

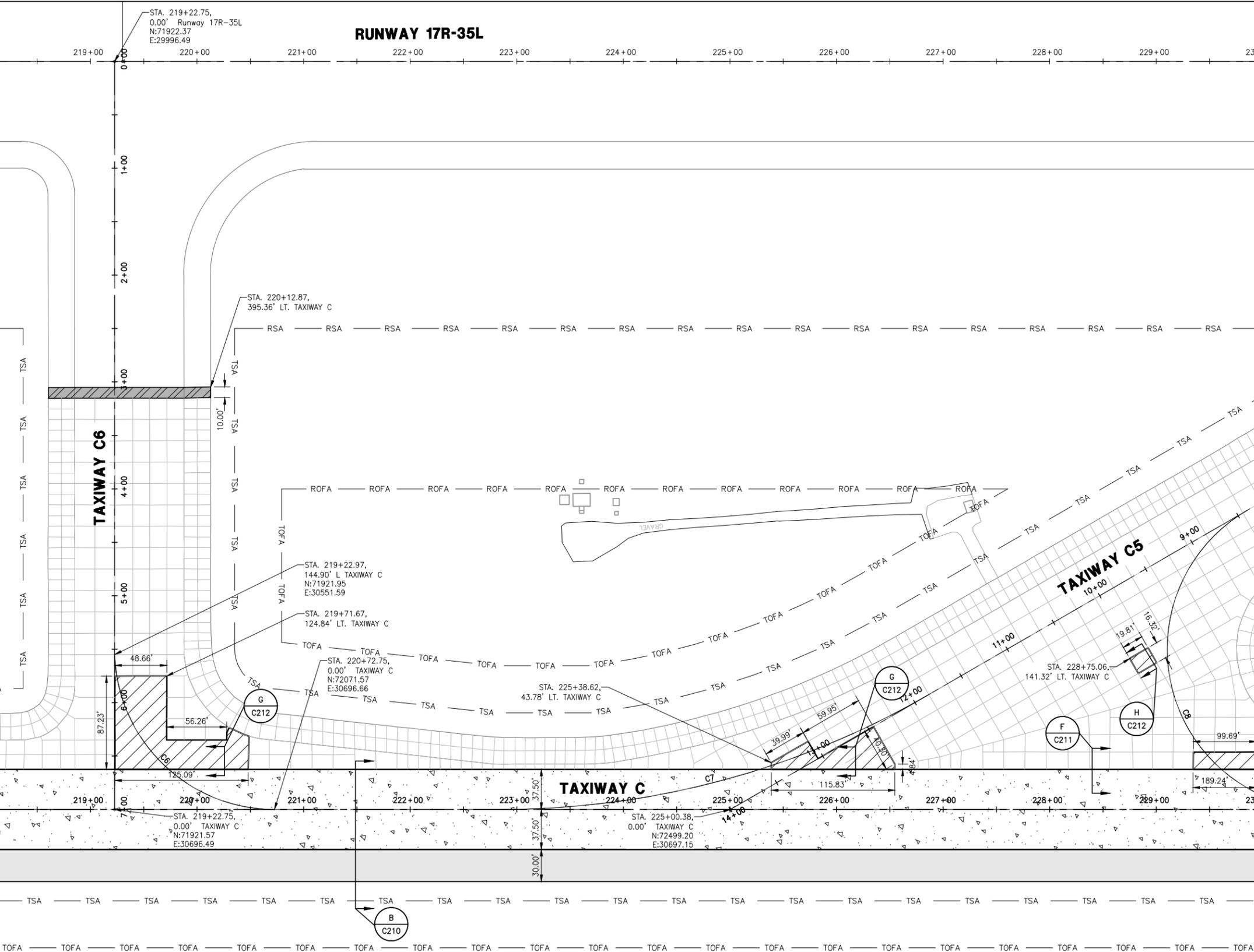
SHEET 20 OF 75

BID

DOCUMENTS



Curve Table			
Curve #	Radius	Station	Offset
C6	150.00'	220+72.75	150.00' LT. TW C
C7	800.00'	222+86.03	800.00' LT. TW C
C8	150.00'	230+60.19	150.00' LT. TW C

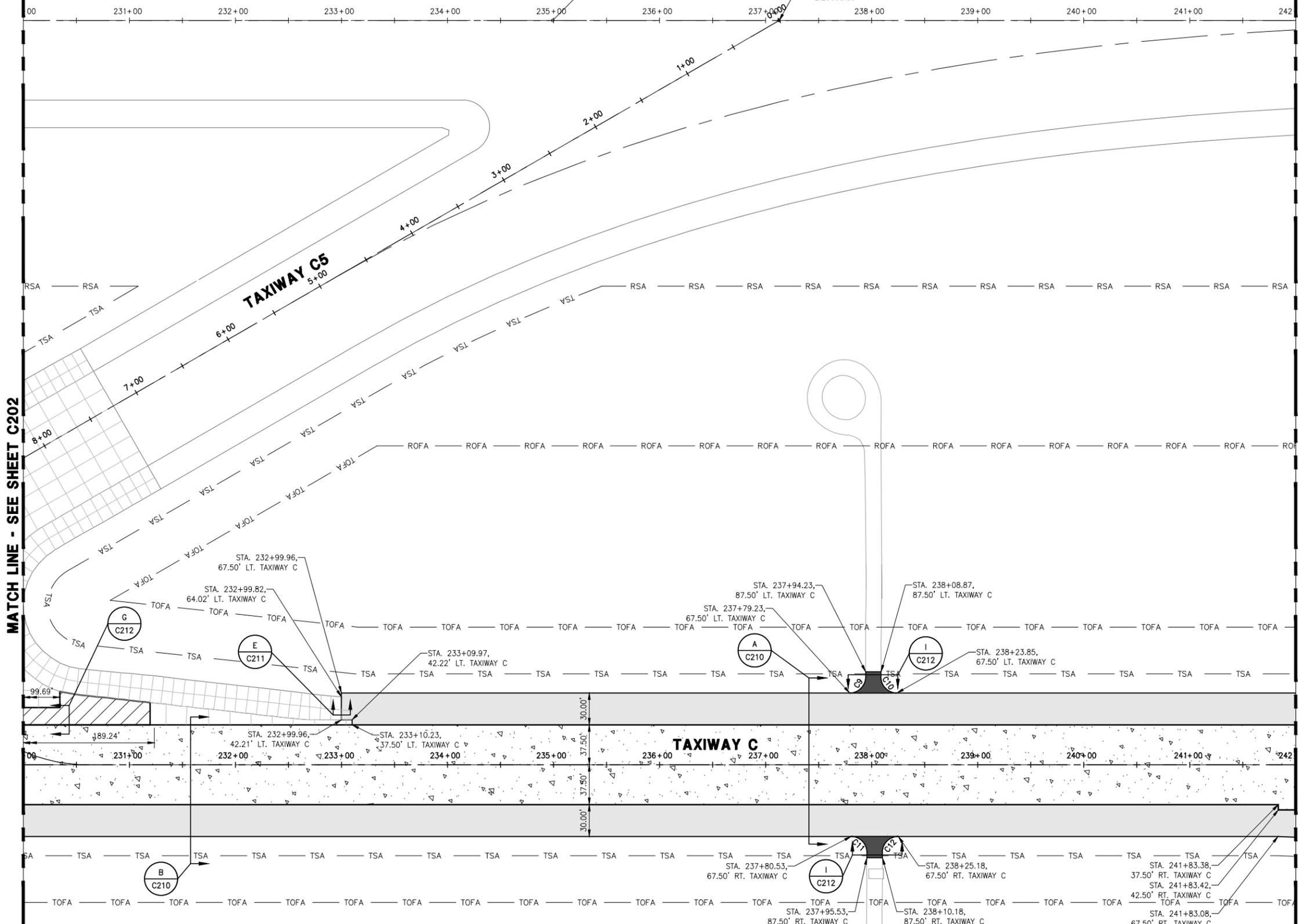


WARNING!!!
THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

Drawing: I:\P\2240124\003 Colorado Springs - Taxiway C Recon\CD\A\C201-C204.dwg
 Plotted on: 2/22/2016 8:02 PM
 Plotted by: Fox, Trpp

RUNWAY 17R-35L

STA. 237+12.82,
0.00' Runway 17R-35L
N:73712.44
E:29998.53



LEGEND:

- NEW CONCRETE TAXIWAY PAVEMENT - 16" DEPTH (P-501)
- NEW CONCRETE PANEL REPLACEMENT - 14" DEPTH (P-501)
- NEW ASPHALT TAXIWAY SHOULDER PAVEMENT (P-403)
- NEW 3" ASPHALT TAXIWAY PAVEMENT (P-403)
- NEW ASPHALT VSR PAVEMENT (P-403)
- NEW PCC TRANSITION SHOULDER DEPTH VARIES (P-501)
- TSA TAXIWAY SAFETY AREA
- TOFA TAXIWAY OBJECT FREE AREA
- RSA RUNWAY SAFETY AREA
- ROFA RUNWAY OBJECT FREE AREA

NOTES:

1. SEE SHEETS C210 - C212 FOR TYPICAL SECTIONS AND DETAILS.
2. DIMENSIONS FOR PANEL REPLACEMENTS ARE APPROXIMATE.
3. SEE SHEETS C601-C605 FOR SPALL REPAIR AND CONCRETE SEALING LOCATIONS.



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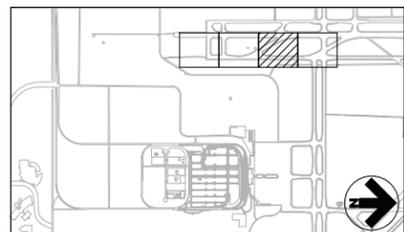
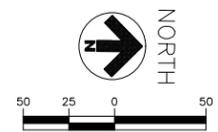


TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

MATCH LINE - SEE SHEET C204

MATCH LINE - SEE SHEET C202



REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF
RS&H PROJECT NUMBER
224-0124-003
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**GEOMETRY & PAVING PLAN
(SHEET 3 OF 4)**

DRAWING NUMBER
C203
SHEET 21 OF 75
BID DOCUMENTS



Curve Table			
Curve #	Radius	Station	Offset
C9	15.00'	237+79.23	82.50' LT. TW C
C10	15.00'	238+23.85	82.50' LT. TW C
C11	15.00'	237+80.53	82.50' RT. TW C
C12	15.00'	238+25.18	82.50' RT. TW C

WARNING!!!
THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

Drawing: I:\P\2240124\003 Colorado Springs - Taxiway C Reconst\Cad\A\C201-C204.dwg
Plotted by: Fox, Trpp
Plotted on: 2/22/2016 8:02 PM

RUNWAY 17R-35L

00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00 254

STA. 250+00.38,
0.00' Runway 17R-35L
N:75000.00
E:30000.00

WARNING!!!
THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

LEGEND:

- NEW CONCRETE TAXIWAY PAVEMENT - 16" DEPTH (P-501)
- NEW CONCRETE PANEL REPLACEMENT - 14" DEPTH (P-501)
- NEW ASPHALT TAXIWAY SHOULDER PAVEMENT (P-403)
- NEW 3" ASPHALT TAXIWAY PAVEMENT (P-403)
- NEW ASPHALT VSR PAVEMENT (P-403)
- NEW PCC TRANSITION SHOULDER DEPTH VARIES (P-501)
- TSA TAXIWAY SAFETY AREA
- TOFA TAXIWAY OBJECT FREE AREA
- RSA RUNWAY SAFETY AREA
- ROFA RUNWAY OBJECT FREE AREA

NOTES:

1. SEE SHEETS C210 - C212 FOR TYPICAL SECTIONS AND DETAILS.
2. DIMENSIONS FOR PANEL REPLACEMENTS ARE APPROXIMATE.
3. SEE SHEETS C601-C605 FOR SPALL REPAIR AND CONCRETE SEALING LOCATIONS.



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TAXIWAY C RECONSTRUCTION

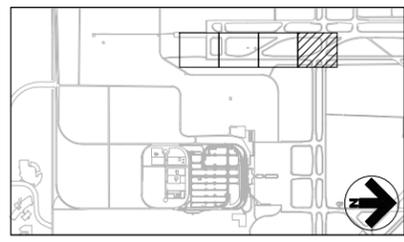
**SCHEDULE I:
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

MATCH LINE - SEE SHEET C203

TAXIWAY G

TAXIWAY G

TAXIWAY C



KEYMAP

Curve Table			
Curve #	Radius	Station	Offset
C13	800.00'	243+76.21	800.00' LT. TW C
C14	95.00'	246+05.38	95.00' RT. TW C
C15	150.00'	248+50.38	23.20' RT. TW C
C16	107.50'	248+07.88	107.50' RT. TW C
C17	150.00'	248+50.38	150.00' LT. TW C
C18	150.00'	248+50.38	150.00' RT. TW C
C19	15.00'	248+08.34	104.50' RT. TW C



REVISIONS		
NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF
RS&H PROJECT NUMBER
224-0124-003
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GEOMETRY & PAVING PLAN (SHEET 4 OF 4)

DRAWING NUMBER
C204
SHEET 22 OF 75
BID DOCUMENTS

Drawing: I:\P\2240124\003 Colorado Springs - Taxiway C Recon\CD\A\C201-C204.dwg
Plotted by: Fox, TRPP
Plotted on: 2/22/2016 8:02 PM

TAXIWAY C RECONSTRUCTION

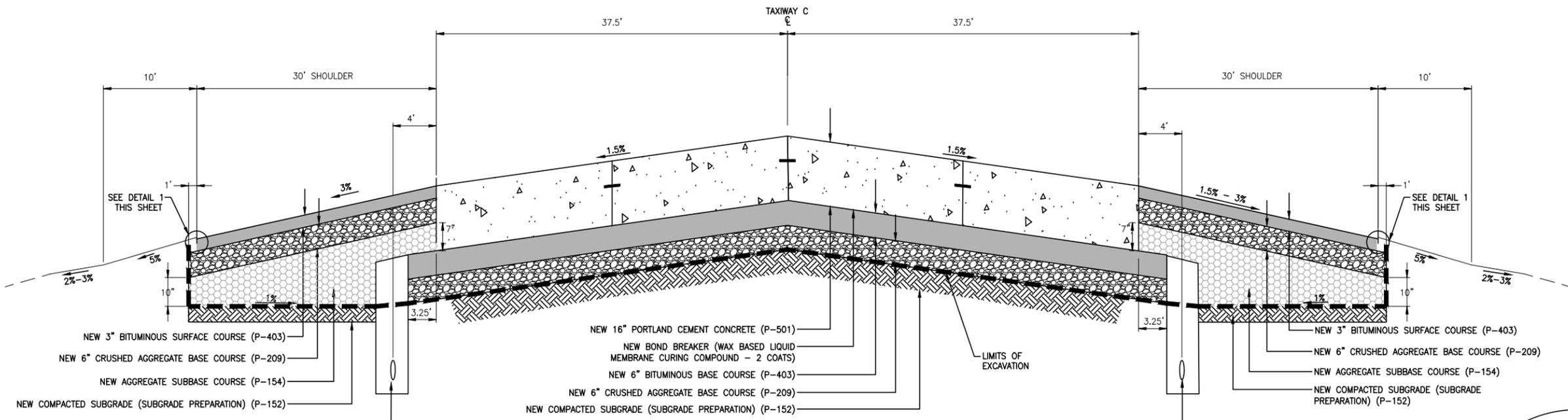
**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
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DESIGNED BY: JFF
RS&H PROJECT NUMBER
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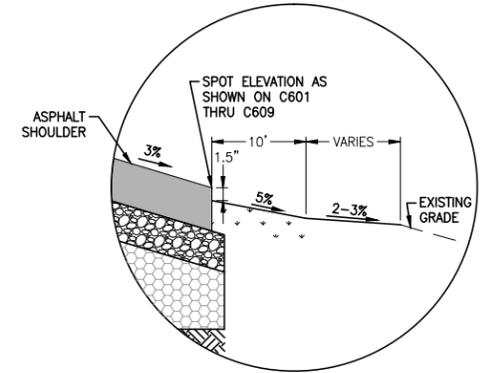
**TYPICAL
PAVEMENT
SECTIONS &
DETAILS
(SHEET 1 OF 3)**
DRAWING NUMBER
C210
SHEET 23 OF 75
**BID
DOCUMENTS**



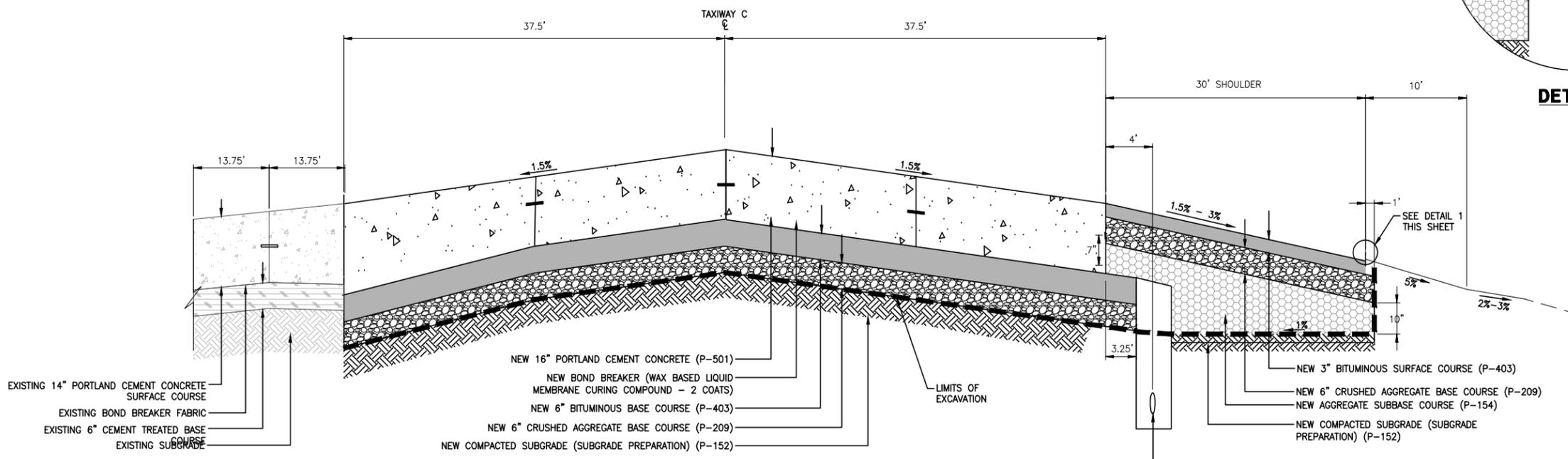
**SECTION A
TAXIWAY C**
NTS

NOTES:

1. INSTALLATION OF THE BOND BREAKER IS INCIDENTAL TO P-501.
2. TACK COAT SHALL BE APPLIED TO ALL ASPHALT SURFACES PRIOR TO NEW ASPHALT BEING PLACED.
3. REFER TO SHEET C620 - C621 FOR JOINT DETAILS.



DETAIL 1
NTS



**SECTION B
TAXIWAY C**
NTS



Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c0210-C210.dwg
Plotted on: 2/23/2016 5:51 PM
Plotted by: Fouley, Jeff

TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

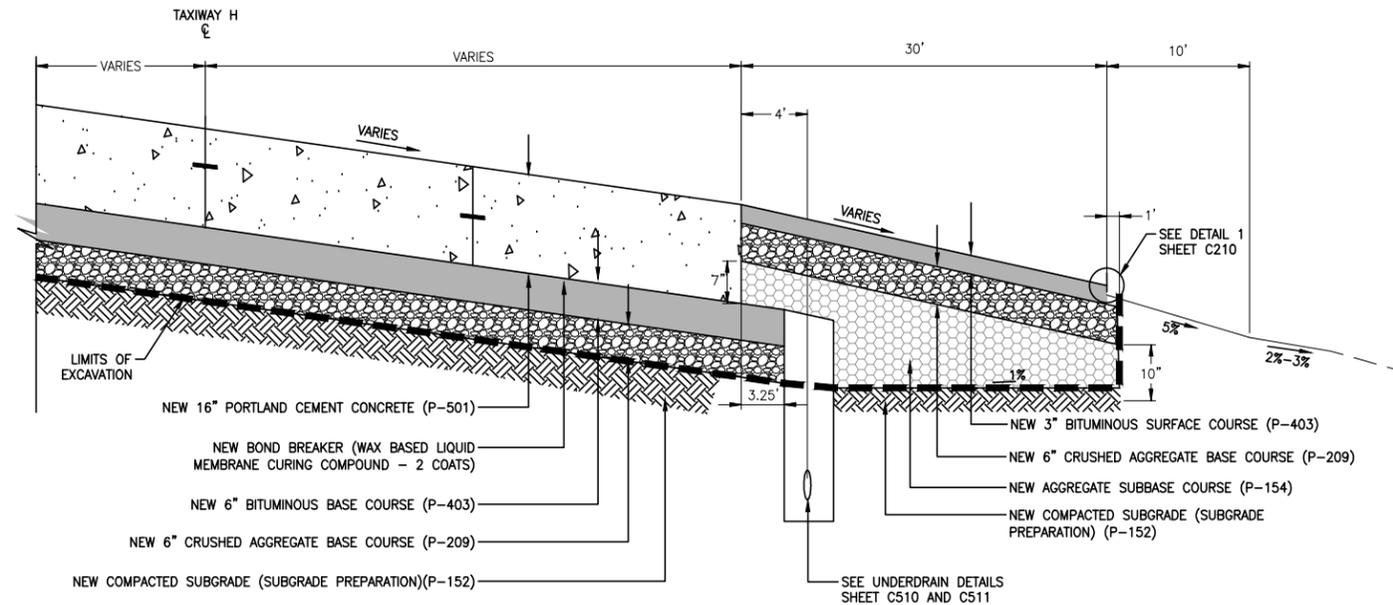
NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF

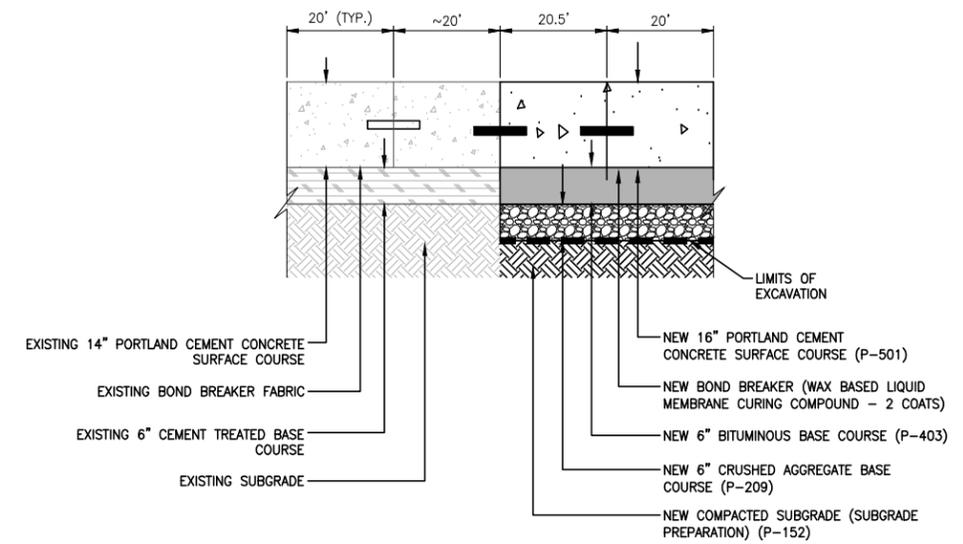
RS&H PROJECT NUMBER
224-0124-003
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**TYPICAL
PAVEMENT
SECTIONS &
DETAILS
(SHEET 2 OF 3)**

DRAWING NUMBER
C211
SHEET 24 OF 75
**BID
DOCUMENTS**



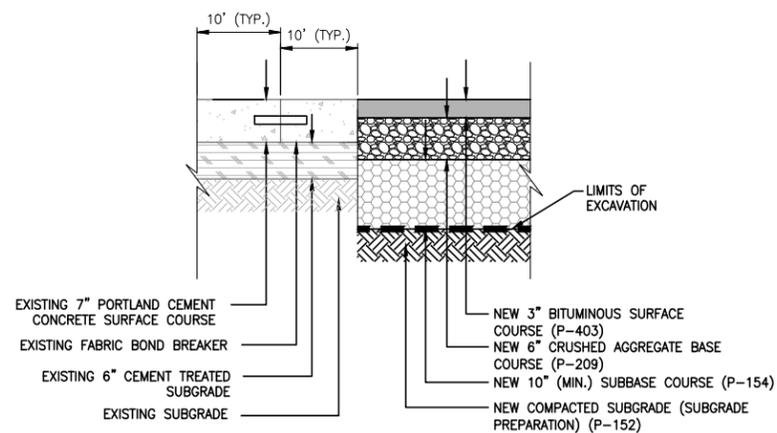
**SECTION C
TAXIWAY H**
NTS



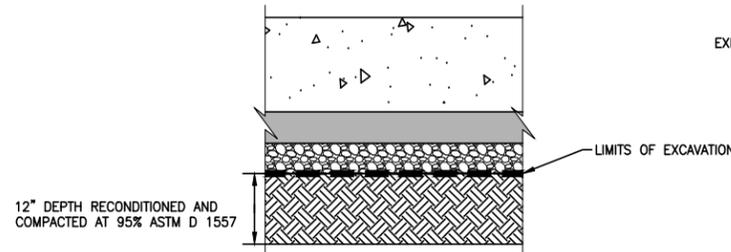
**SECTION D
TAXIWAY C
TIE-IN CONCRETE BUTT JOINT**
NTS

NOTES:

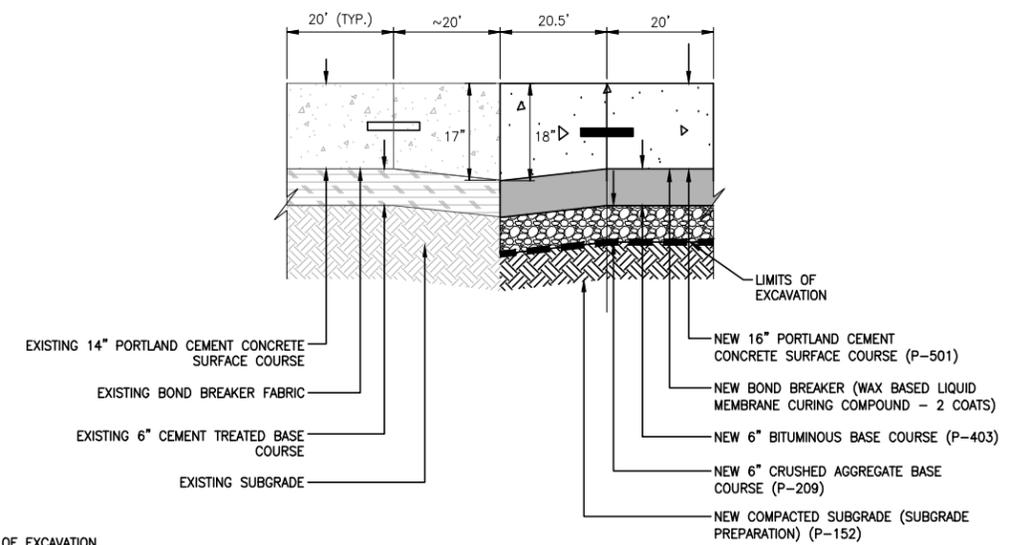
1. INSTALLATION OF THE BOND BREAKER IS INCIDENTAL TO P-501.
2. TACK COAT SHALL BE APPLIED TO ALL ASPHALT SURFACES PRIOR TO NEW ASPHALT BEING PLACED.
3. REFER TO SHEET C620 - C621 FOR JOINT DETAILS



**SECTION E
TAXIWAY SHOULDER CONCRETE AND
ASPHALT BUTT JOINT**
NTS



**SUBGRADE PREPARATION
DETAIL 1**
NTS



SECTION F
NTS



Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c0211\C211-0-C212.dwg
Plotted on: 2/23/2016 5:52 PM
Printed by: Fouley, Jeff

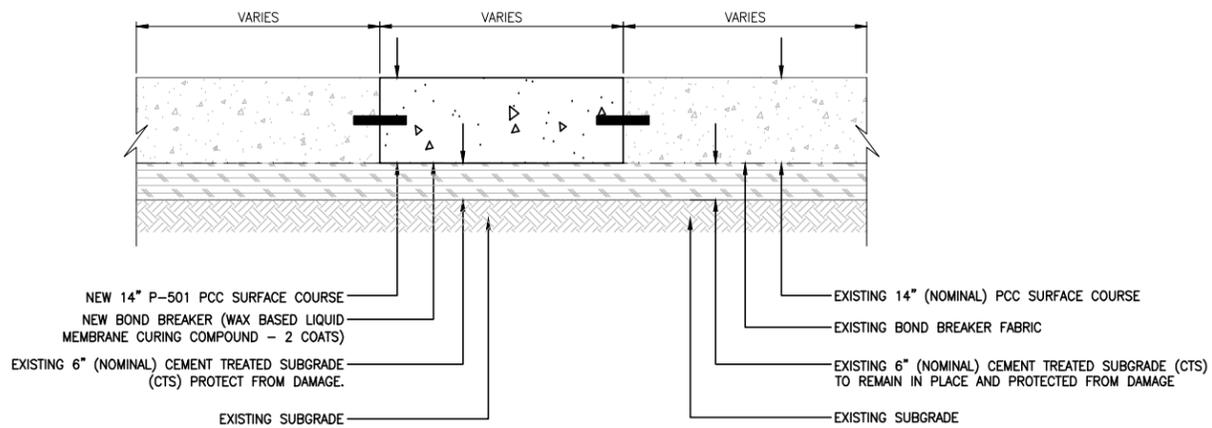
TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

REVISIONS		
NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF
RS&H PROJECT NUMBER
224-0124-003
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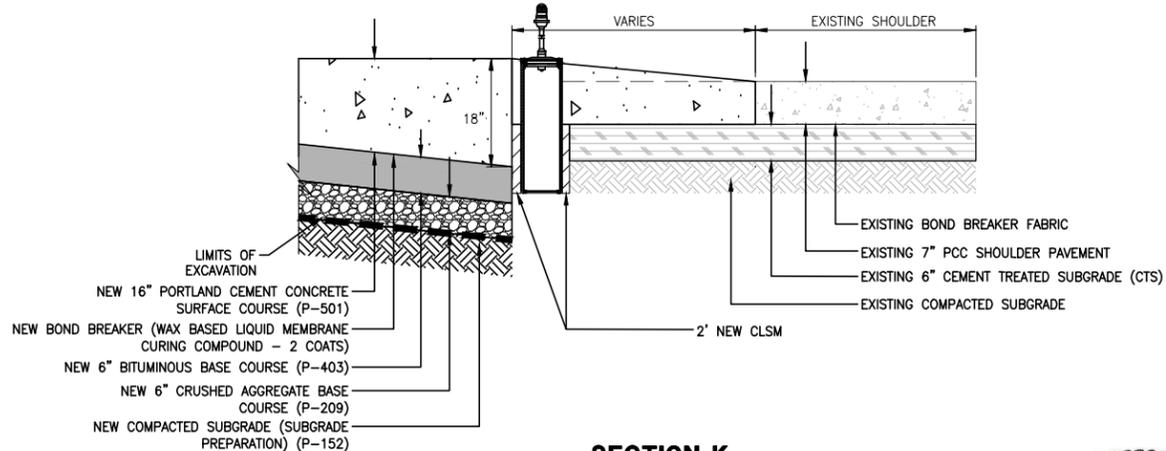
TYPICAL PAVEMENT SECTIONS & DETAILS (SHEET 3 OF 3)
DRAWING NUMBER
C212
SHEET 25 OF 75
BID DOCUMENTS



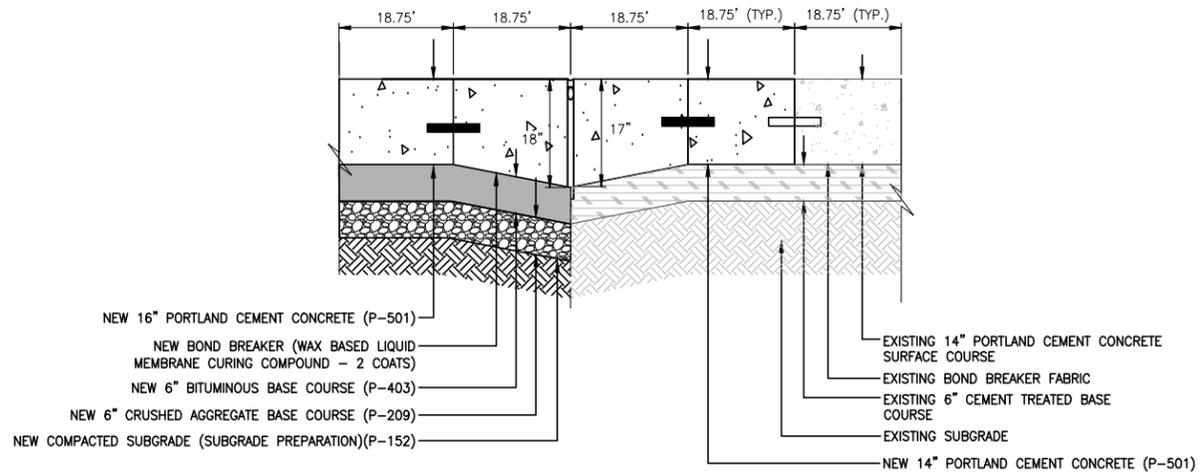
**SECTION H
PANEL REPLACEMENT SECTION (PCC ONLY)**
NTS

NOTES:

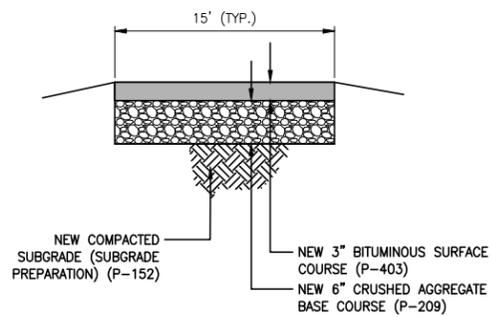
- CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN REMOVING PCC PANELS TO PREVENT DAMAGE TO CTS. ANY DAMAGE TO THE CTS OR REMAINING SURROUNDING PANELS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- LEAN MIX CONCRETE (P-306), NON-SHRINK GROUT, OR OTHER APPROVED MATERIAL SHALL BE USED TO REPAIR ANY GOUGED, POKETED OR MARRED CTS. THE REPAIR MATERIAL SHALL BE FINISHED SO AS TO PROVIDE A SMOOTH, EVEN SURFACE WITH ADJACENT CTS. 2- COATS OF A WAX BASED LIQUID BOND BREAKER SHALL THEN BE APPLIED TO THE TOP OF THE REPAIRED CTS MATERIAL PRIOR TO THE PLACEMENT OR INSTALLATION OF SUBSEQUENT PCC PAVEMENT. FULL DEPTH REPLACEMENT OF CTS WILL BE EVALUATED ON A CASE BY CASE BASIS AND WILL BE AT THE DISCRETION OF THE ENGINEER
- REFER TO SHEET C620 - C621 FOR JOINT DETAILS



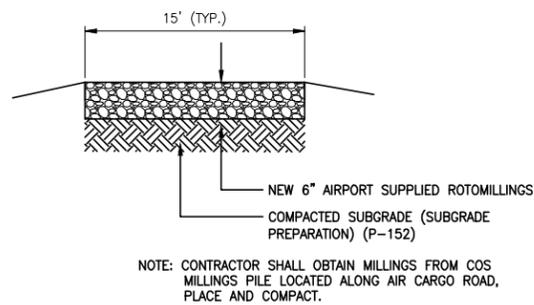
**SECTION K
PAVEMENT TRANSITION**
NTS



**SECTION G
PANEL REPLACEMENT A-JOINT**
NTS

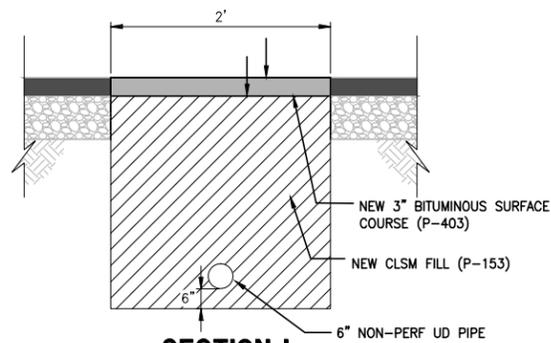


**SECTION I
SERVICE ROAD**
NTS



**SECTION J
SERVICE ROAD**
NTS

NOTE: CONTRACTOR SHALL OBTAIN MILLINGS FROM COS MILLINGS PILE LOCATED ALONG AIR CARGO ROAD, PLACE AND COMPACT.

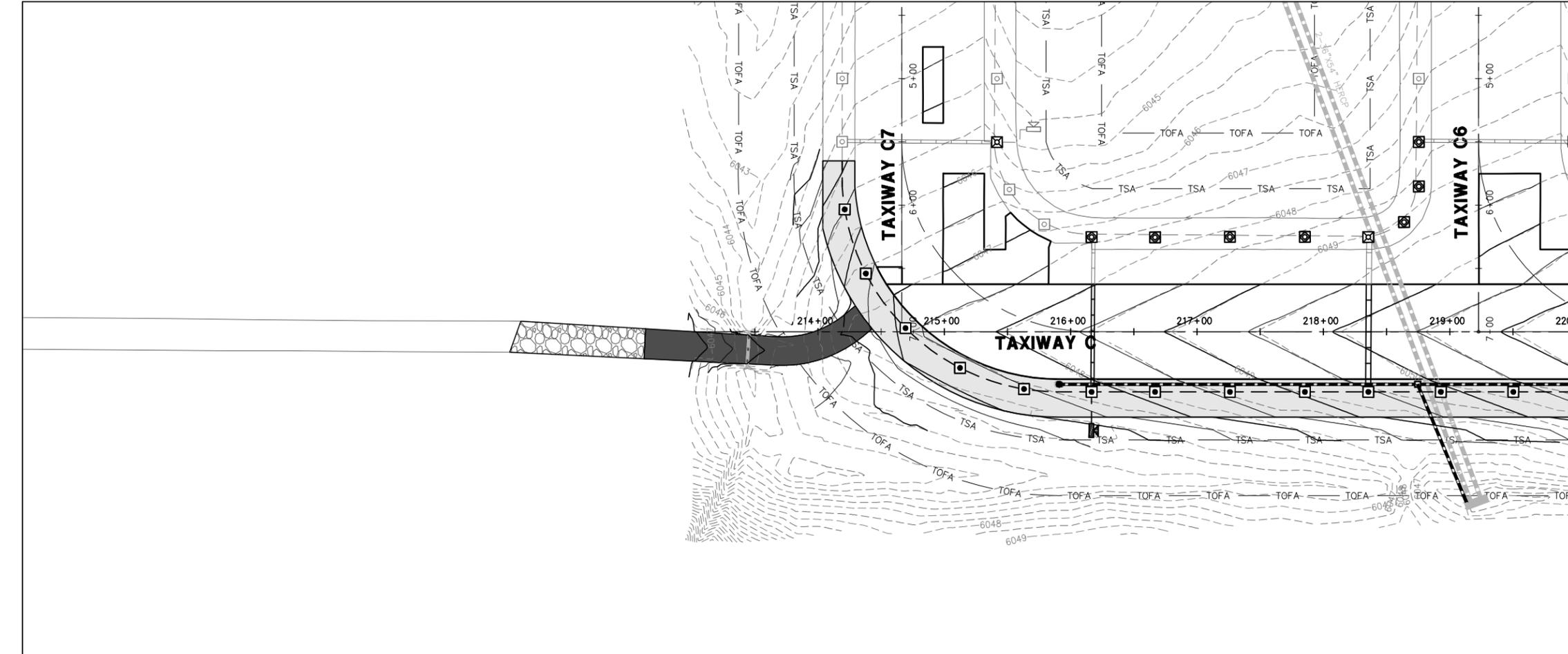


**SECTION L
SERVICE ROAD**
NTS

NOTE:

- CONTRACTOR TO COMPLETE WORK DURING NIGHT CLOSURE. CLOSURE SHALL BE COORDINATED WITH COLORADO SPRINGS AIRPORT OPERATIONS.

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\cadd\c212.dwg
Plotted on: 2/22/2016 5:52 PM
Printed by: Fouley, Jeff



LEGEND:

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- NEW MAJOR CONTOUR
- NEW MINOR CONTOUR
- EXISTING UNDERDRAIN/STORM DRAIN
- NEW UNDERDRAIN
- 3" PVC DRAIN PIPE
- NEW UNDERDRAIN CLEANOUTS
- NEW UNDERDRAIN INSPECTION PITS
- EXISTING DRAINAGE INLET
- NEW ASPHALT TAXIWAY SHOULDER PAVEMENT (P-403)



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TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

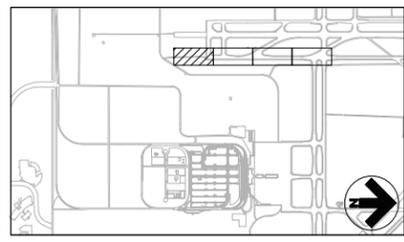
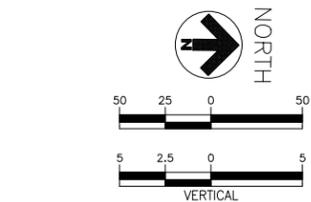
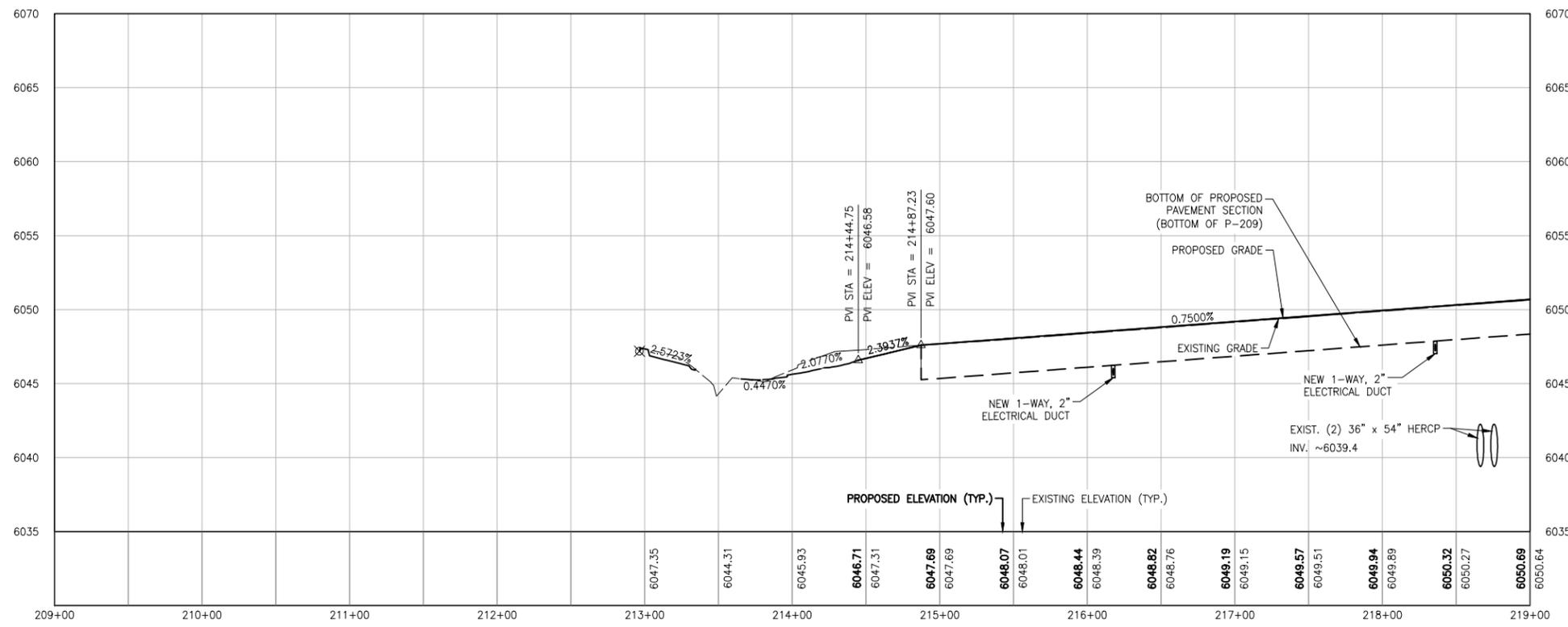
REVISIONS

NO.	DESCRIPTION	DATE

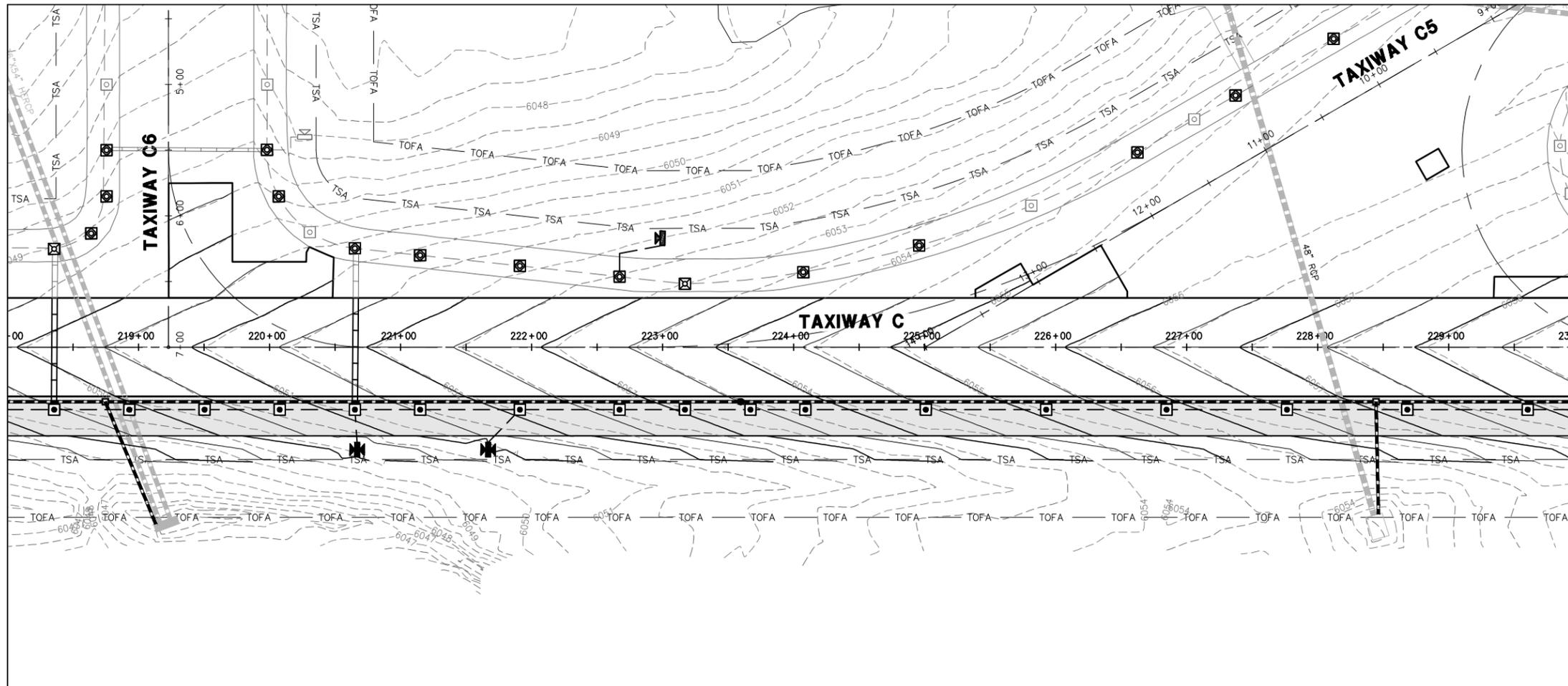
DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: SHC
DESIGNED BY: SHC
RS&H PROJECT NUMBER
224-0124-003
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**TAXIWAY C
PLAN AND PROFILE
(SHEET 1 OF 4)**

DRAWING NUMBER
C301
SHEET 26 OF 75
**BID
DOCUMENTS**



Drawing: I:\P\2240124\003 Colorado Springs - Taxiway C Recon\c01\C301-C304.dwg
Plotted by: Fox, TRP
Plotted on: 2/23/2016 8:09 PM



LEGEND:

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- NEW MAJOR CONTOUR
- NEW MINOR CONTOUR
- EXISTING UNDERDRAIN/STORM DRAIN
- NEW UNDERDRAIN
- 3" PVC DRAIN PIPE
- NEW UNDERDRAIN CLEANOUTS
- NEW UNDERDRAIN INSPECTION PITS
- EXISTING DRAINAGE INLET
- NEW ASPHALT TAXIWAY SHOULDER PAVEMENT (P-403)



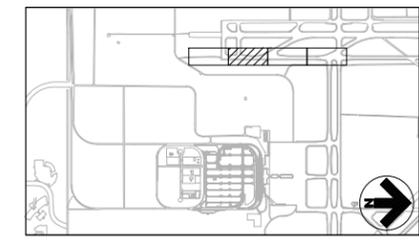
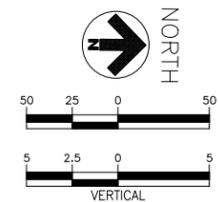
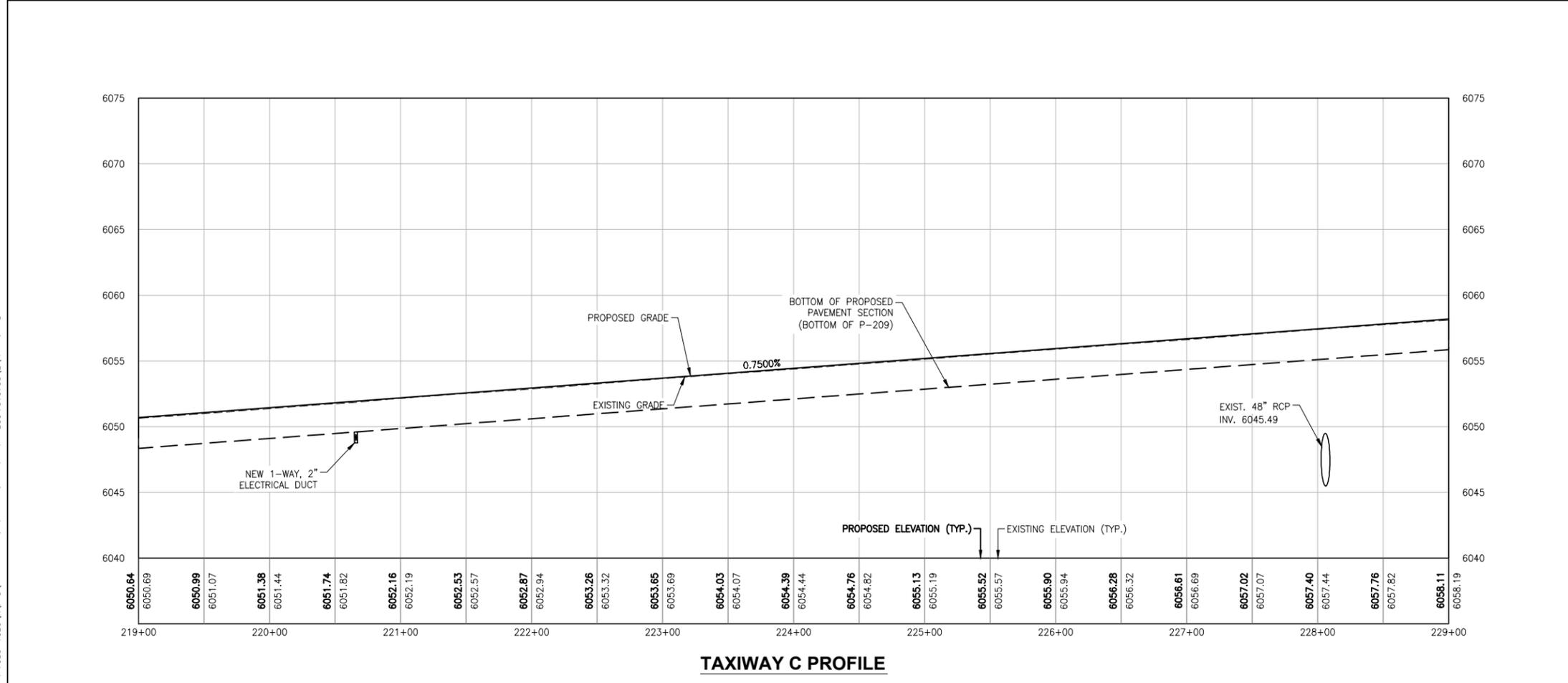
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COLORADO SPRINGS
AIRPORT

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**



KEYMAP



REVISIONS

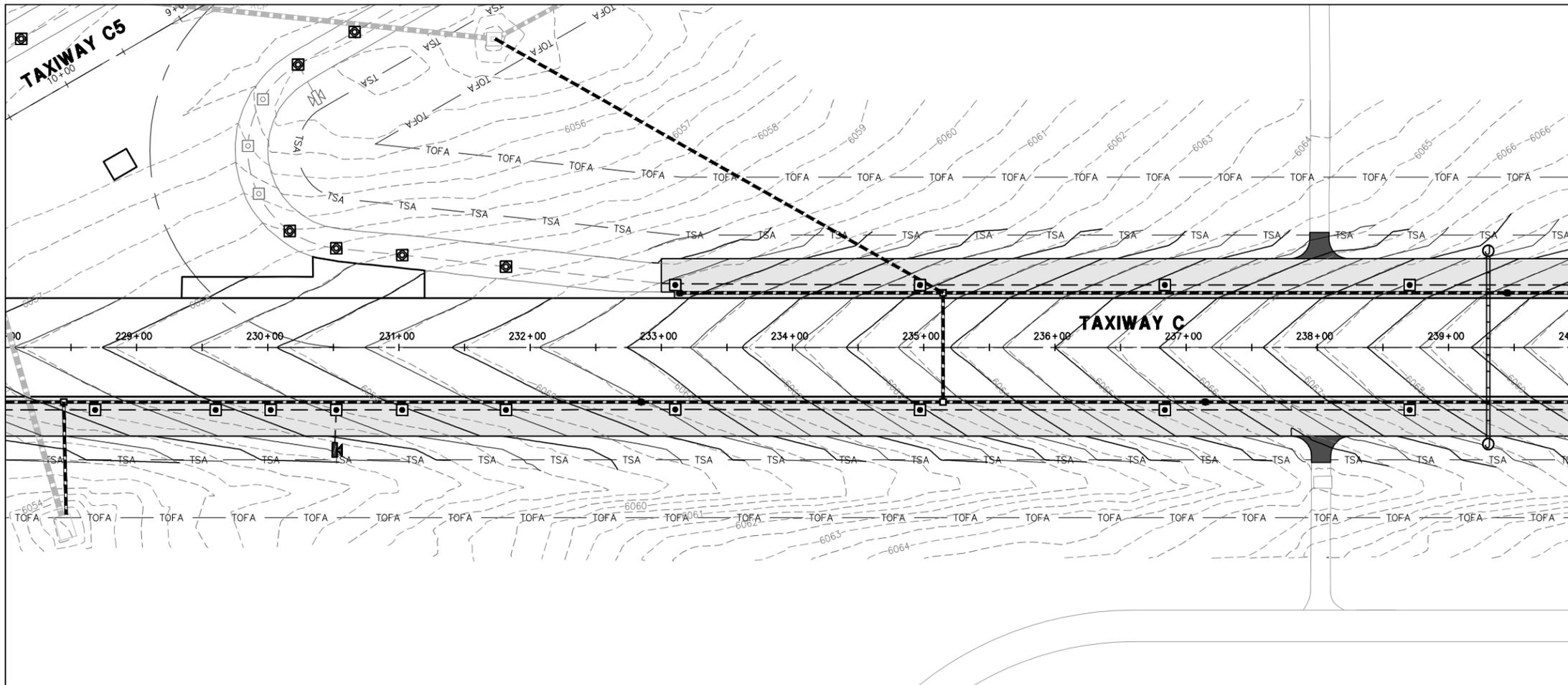
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DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: SHC
DESIGNED BY: SHC
RS&H PROJECT NUMBER
224-0124-003
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**TAXIWAY C
PLAN AND PROFILE
(SHEET 2 OF 4)**

DRAWING NUMBER
C302
SHEET 27 OF 75
**BID
DOCUMENTS**

Drawing: I:\P\2240124\003 colorado springs - taxiway c revision\c302\C302-C304.dwg
Plotted by: Fouley, Jeff
Plotted on: 2/22/2016 5:54 PM



LEGEND:

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- NEW MAJOR CONTOUR
- NEW MINOR CONTOUR
- EXISTING UNDERDRAIN/STORM DRAIN
- NEW UNDERDRAIN
- 3" PVC DRAIN PIPE
- NEW UNDERDRAIN CLEANOUTS
- NEW UNDERDRAIN INSPECTION PITS
- EXISTING DRAINAGE INLET
- NEW ASPHALT TAXIWAY SHOULDER PAVEMENT (P-403)



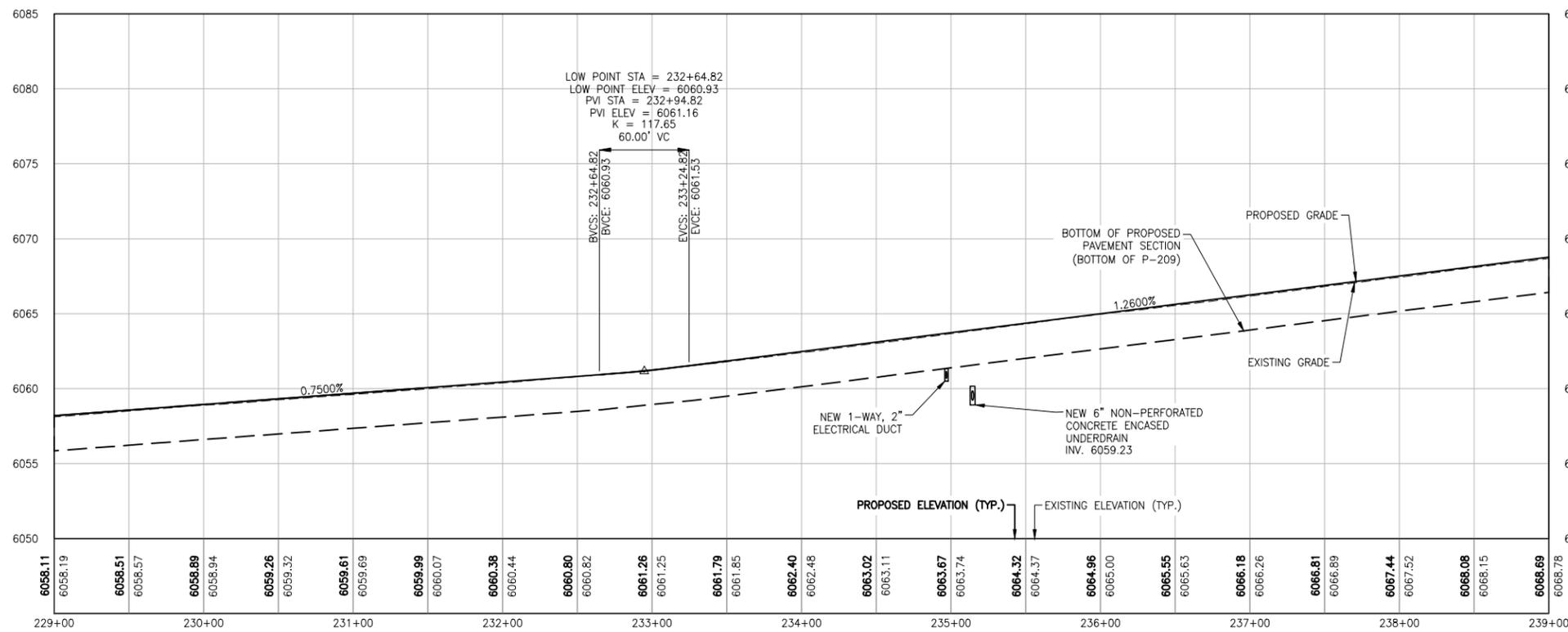
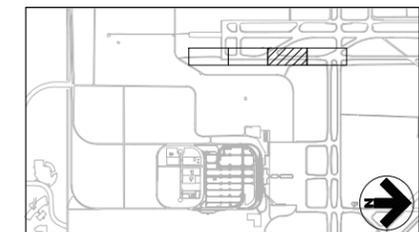
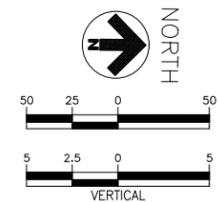
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COLORADO SPRINGS
AIRPORT

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**



TAXIWAY C PROFILE

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: SHC
DESIGNED BY: SHC

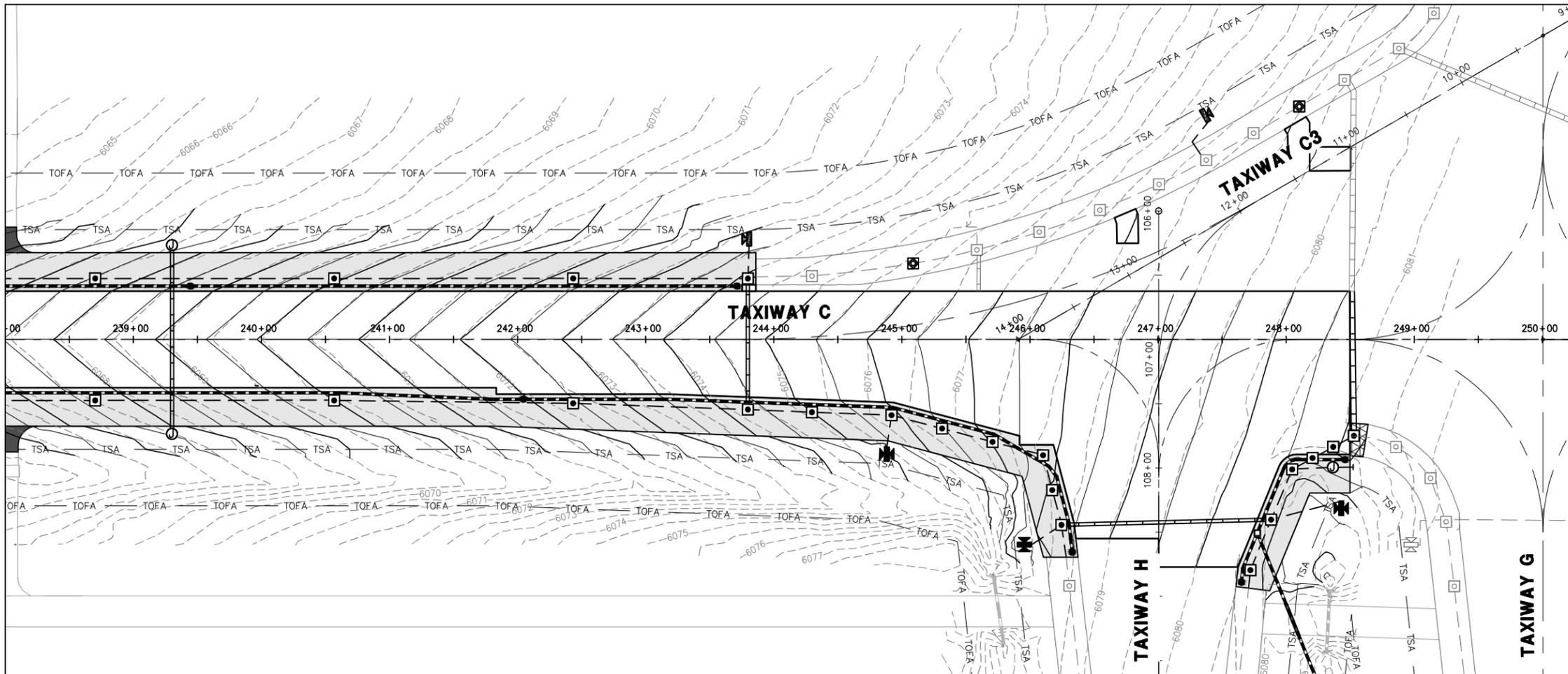
RS&H PROJECT NUMBER
224-0124-003
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**TAXIWAY C
PLAN AND PROFILE
(SHEET 3 OF 4)**

DRAWING NUMBER
C303
SHEET 28 OF 75
**BID
DOCUMENTS**



Drawing: I:\P\2240124\003 colorado springs - taxiway c reason\cadd\VC301-C304.dwg
Plotted by: Fouley, Jeff
Plotted on: 2/22/2016 5:34 PM



LEGEND:

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- EXISTING MINOR CONTOUR
- NEW MAJOR CONTOUR
- NEW MINOR CONTOUR
- EXISTING UNDERDRAIN/STORM DRAIN
- NEW UNDERDRAIN
- 3" PVC DRAIN PIPE
- NEW UNDERDRAIN CLEANOUTS
- NEW UNDERDRAIN INSPECTION PITS
- EXISTING DRAINAGE INLET
- NEW ASPHALT TAXIWAY SHOULDER PAVEMENT (P-403)



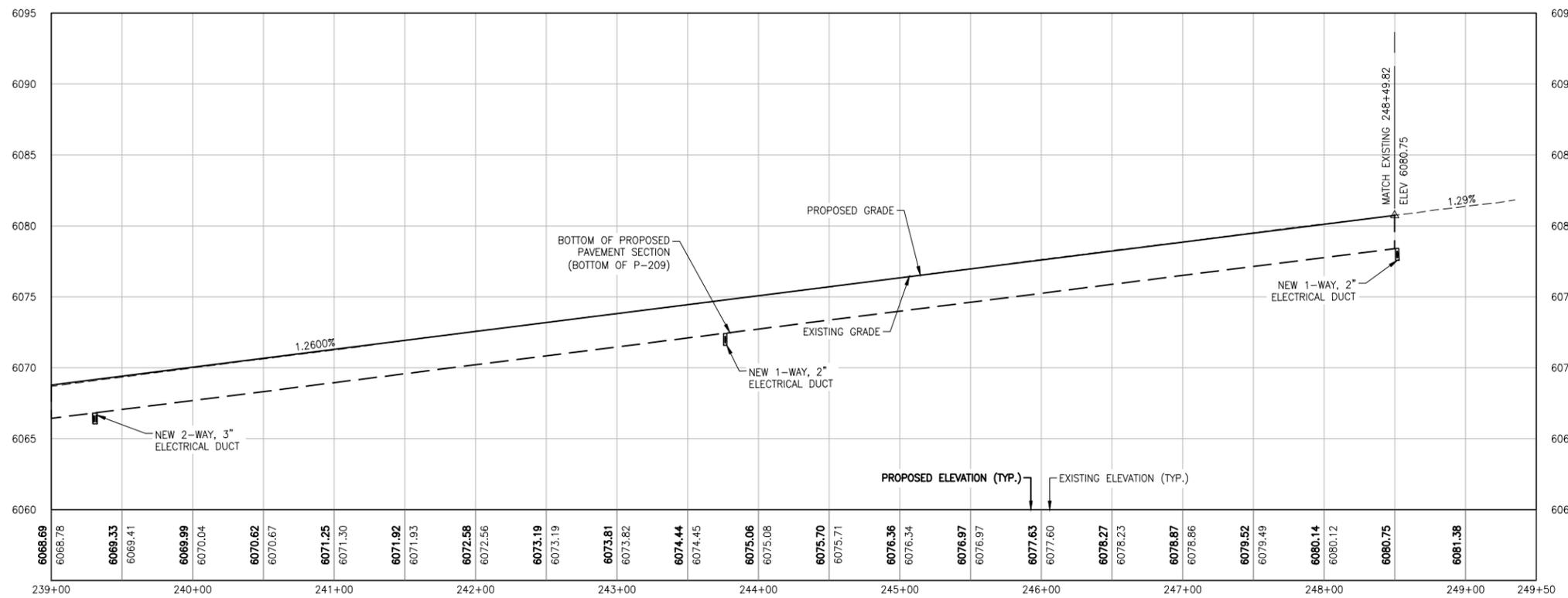
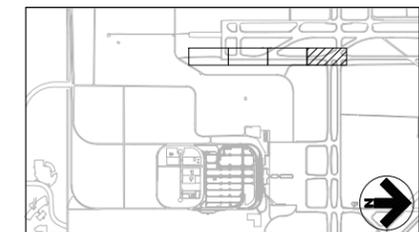
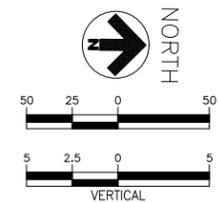
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**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
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THROUGH TAXIWAY H
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PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**



TAXIWAY C PROFILE

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: SHC
DESIGNED BY: SHC

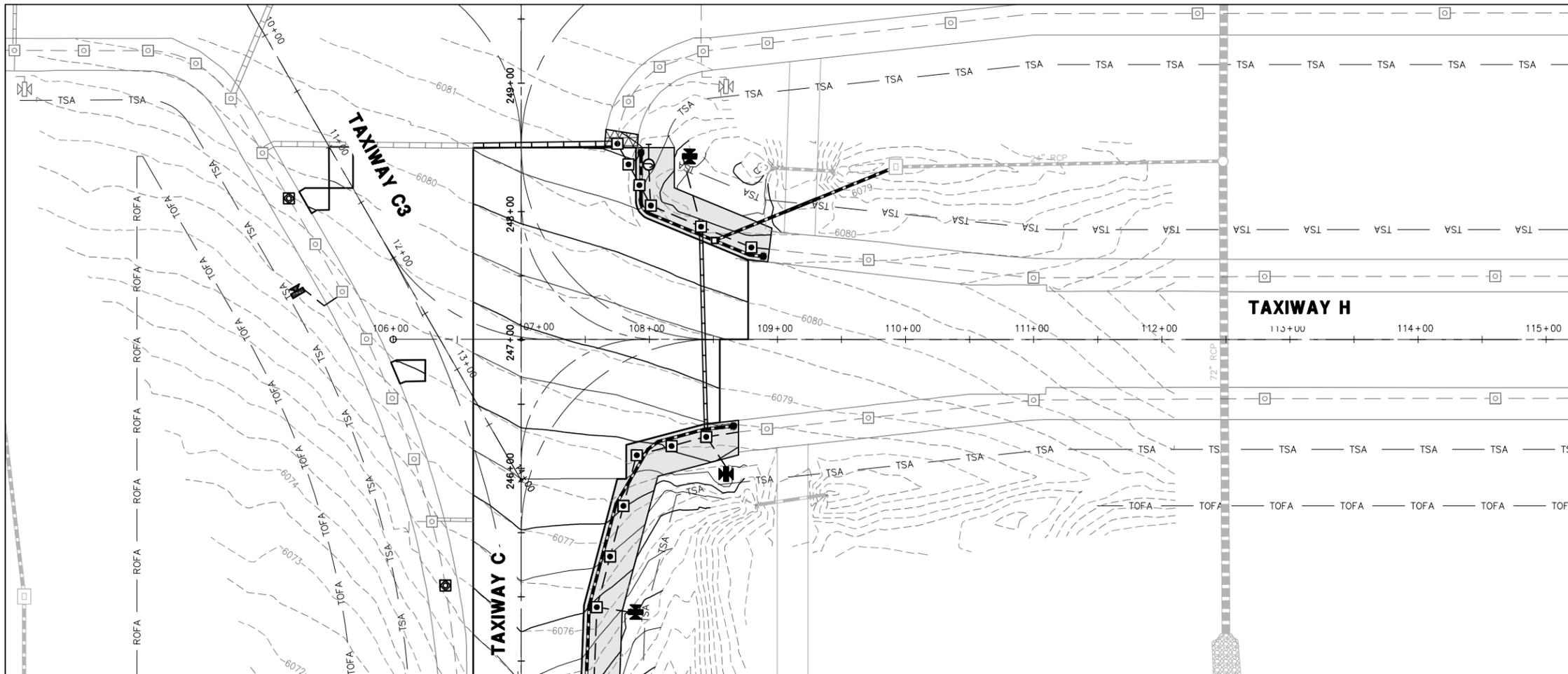
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**TAXIWAY C
PLAN AND PROFILE
(SHEET 4 OF 4)**

DRAWING NUMBER
C304
SHEET 29 OF 75
**BID
DOCUMENTS**



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Plotted by: Fouley, Jeff
Plotted on: 2/22/2016 5:54 PM



LEGEND:

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- EXISTING MINOR CONTOUR
- NEW MAJOR CONTOUR
- NEW MINOR CONTOUR
- EXISTING UNDERDRAIN/STORM DRAIN
- NEW UNDERDRAIN
- 3" PVC DRAIN PIPE
- NEW UNDERDRAIN CLEANOUTS
- NEW UNDERDRAIN INSPECTION PITS
- EXISTING DRAINAGE INLET
- NEW ASPHALT TAXIWAY SHOULDER PAVEMENT (P-403)



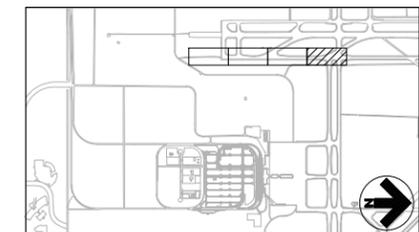
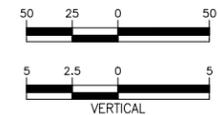
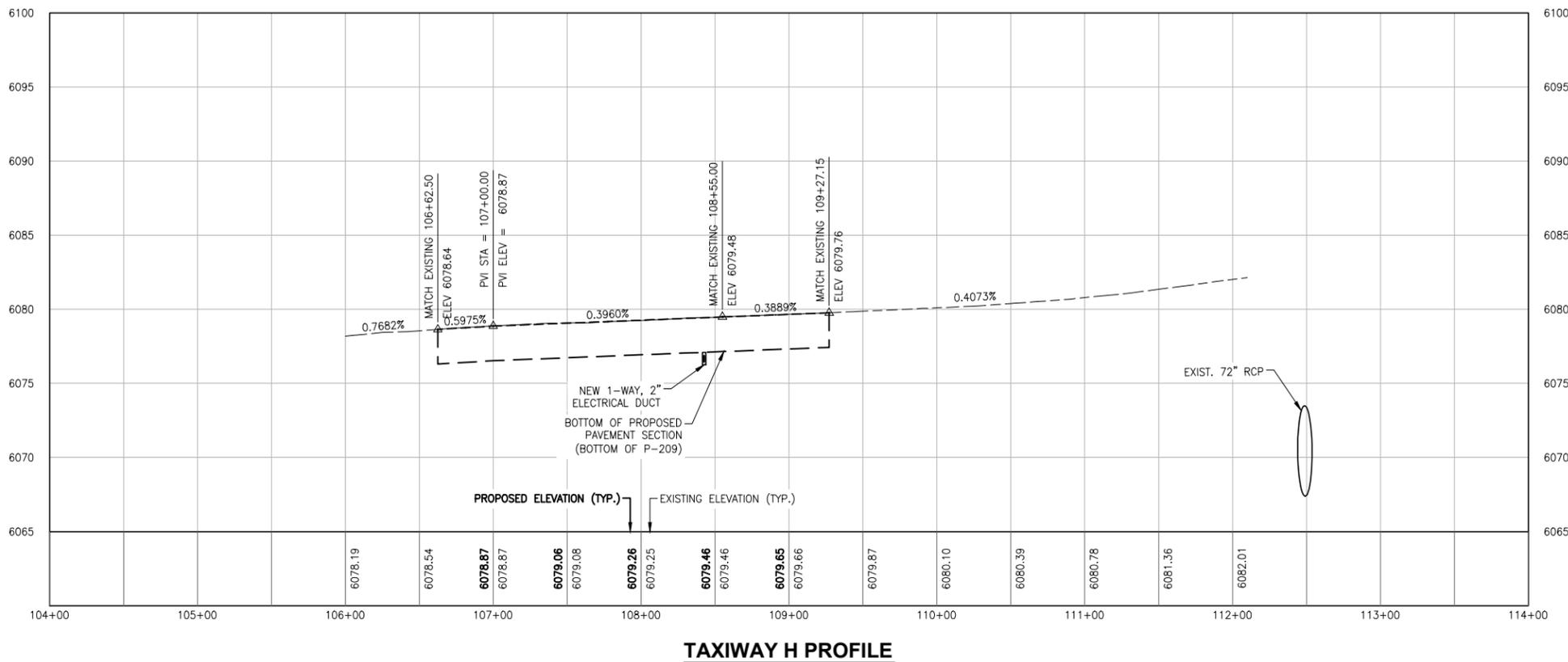
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COLORADO SPRINGS
AIRPORT

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**



KEYMAP

REVISIONS

NO.	DESCRIPTION	DATE

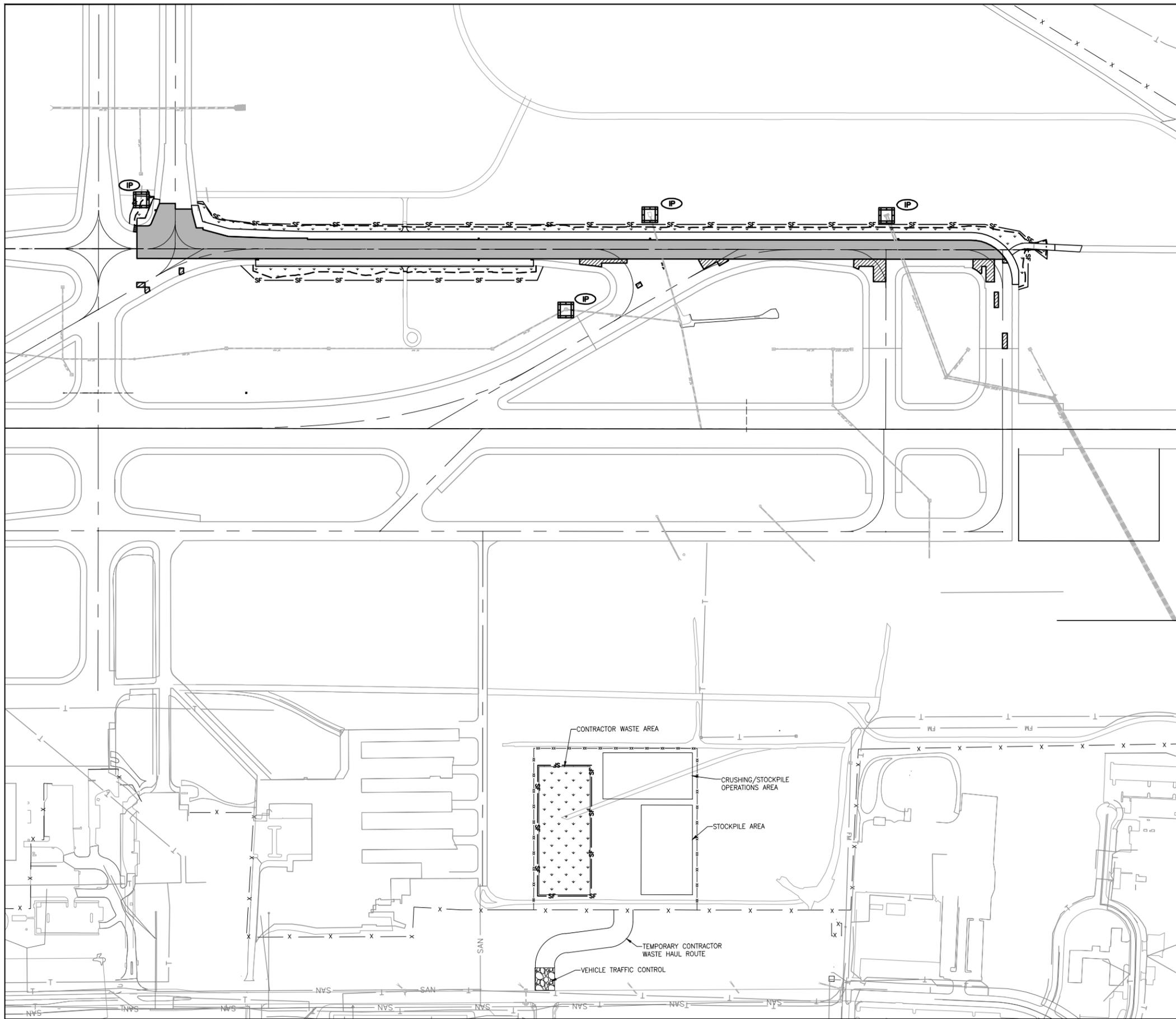
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DRAWN BY: SHC
DESIGNED BY: SHC
RS&H PROJECT NUMBER
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**TAXIWAY H
PLAN AND PROFILE**

DRAWING NUMBER
C305
SHEET 30 OF 75
**BID
DOCUMENTS**

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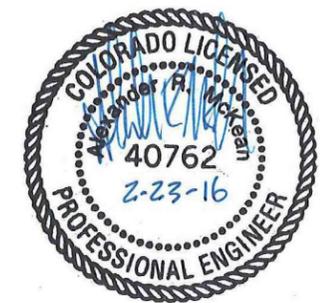
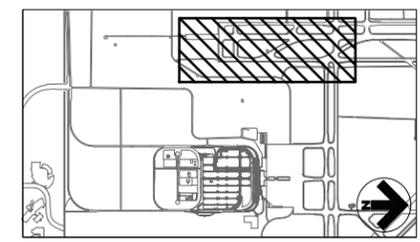


LEGEND

-  SILT FENCE
-  INLET PROTECTION (INFIELD ONLY)
-  GRADING LIMITS
-  FULL DEPTH PAVEMENT RECONSTRUCTION LIMITS
-  SEEDING AND HYDROMULCHING LIMITS (T-901)
-  VEHICLE TRAFFIC CONTROL (VTC)

NOTES:

1. SEE SHEET C452 FOR EROSION CONTROL NOTES AND DETAILS.
2. CONTRACTOR SHALL USE TEMPORARY INLET PROTECTION ON ALL INLETS WITHIN OR ADJACENT TO WORK AREAS.
3. SILT FENCE AND SOIL STABILIZATION MAT SHALL BE PAID UNDER ITEMS P-156. ALL OTHER EROSION CONTROL DEVICES, INCLUDING INLET PROTECTION, SHALL BE INCLUDED IN ITEM P-156-5.1.
4. ALL INLET PROTECTION SHALL BE REPLACED AT PROJECT COMPLETION.



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TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016

REVIEWED BY: ARM

DRAWN BY: JDP

DESIGNED BY: JFF

RS&H PROJECT NUMBER

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EROSION CONTROL PLAN

DRAWING NUMBER

C451

SHEET 31 OF 75

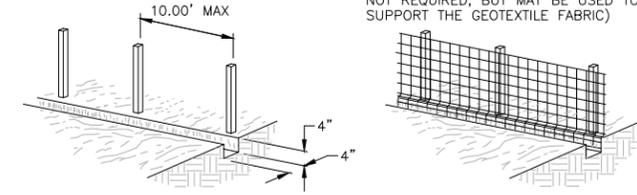
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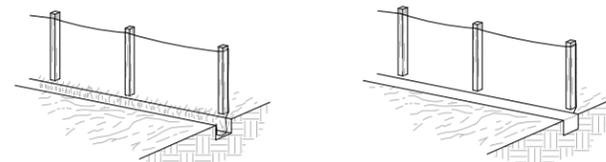
GENERAL EROSION CONTROL NOTES

1. THE PURPOSE OF EROSION CONTROL IS TO PREVENT POLLUTION OF BODIES OF WATER ON OR ADJACENT TO THE PROJECT SITE. IN ADDITION, EROSION CONTROL SHALL PREVENT DAMAGE TO ADJACENT PROPERTY, AIRPORT PROPERTY AND WORK IN PROGRESS. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMPs IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE CITY OF COLORADO SPRINGS EROSION CONTROL MANUAL.
2. CONTRACTOR IS RESPONSIBLE FOR STORM WATER POLLUTION PREVENTION PLAN AND STATE OF COLORADO ENVIRONMENTAL PERMITS.
3. ALL EROSION AND SILTATION MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT ALL EROSION CONTROL DEVICES DAILY AND AFTER EVERY RAINFALL. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
5. ADDITIONAL ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
6. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
7. STRAW BALE BARRIERS SHALL BE INSPECTED PRIOR TO AN ANTICIPATED RAIN FALL EVENT, IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL.
8. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS, AND UNDERCUTTING BENEATH BALES.
9. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
10. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE STRAW BALE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
11. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
12. DURING CONSTRUCTION, ALL STORM DRAIN INLETS WILL BE PROTECTED BY STRAW BALE INLET PROTECTION, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
13. ALL CONSTRUCTION DISCHARGE WATER SHALL BE ADEQUATELY FILTERED TO REMOVE SILT PRIOR TO DISCHARGE INTO WATERWAYS AND WETLANDS.
14. ALL DISTURBED AREAS SHALL BE SEEDED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
15. ALL DEWATERING EROSION, AND SEDIMENT CONTROL TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND REMOVED ONLY WHEN AREAS HAVE STABILIZED.
16. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
17. CONTRACTOR SHOULD SUBMIT A PLAN FOR DUST CONTROL PRIOR TO ANY LAND DISTURBING ACTIVITY.
18. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
19. EROSION CONTROL IS A SUBSIDIARY RESPONSIBILITY OF THE WORK ITEMS IN THIS PROJECT. THERE SHALL BE NO SEPARATE MEASUREMENT OR PAYMENT FOR INSPECTION, MAINTENANCE, REMOVAL AND SITE RESTORATION OF ANY EROSION CONTROL MATERIALS.
20. PAYMENT FOR PLACEMENT OF WASTE MATERIAL, STRIPPING OF THE WASTE AREA TOPSOIL AND RESTORATION OF THE WASTE AREA SITE SHALL BE INCLUDED IN THE UNCLASSIFIED EXCAVATION (P-152-4.1) UNIT PRICE. SEEDING SHALL BE PAID FOR UNDER T-901-5.1.

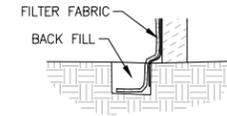
1. SET POSTS A MINIMUM 12" INTO THE GROUND AND EXCAVATE A 4" x 4" TRENCH UPSLOPE ALONG THE BASE OF POSTS.
2. CONNECT FENCING TO THE POSTS. USE HEAVY DUTY STAPLES AT LEAST 1" LONG AND TIE WIRES OR HOG RINGS. EXTEND FENCING INTO TRENCH. (WIRE IS NOT REQUIRED, BUT MAY BE USED TO SUPPORT THE GEOTEXTILE FABRIC)



3. ATTACH THE FILTER FABRIC TO THE FENCE AND EXTEND IT INTO THE TRENCH. (SEE DETAIL BELOW) EXTEND 6"-8" INTO TRENCH.
4. BACK FILL AND COMPACT THE EXCAVATED SOIL.



5. EXTENSION OF FABRIC INTO THE TRENCH.

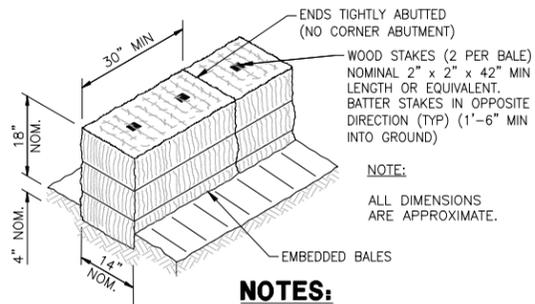


NOTES:

1. WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER SO THAT THE DOWN SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. SILT FENCE SHALL BE SECURELY FASTENED TO EACH WOOD SUPPORT POST.
5. POST FOR SILT FENCES SHALL BE 2" NOMINAL DIAMETER WOOD WITH A MINIMUM LENGTH OF 42-INCHES.
6. HEIGHT OF FENCE SHOULD NOT EXCEED 24".

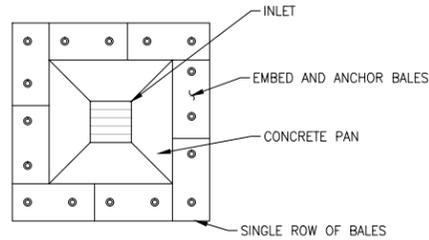
SILT FENCE CONSTRUCTION

NTS



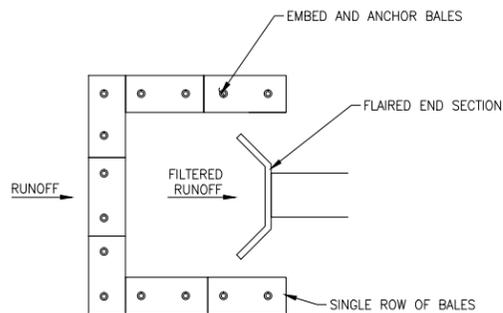
NOTES:

1. EXCAVATE A 4" DEEP TRENCH AROUND THE INLET. MAKE TRENCH AS WIDE AS STRAW BALE.
2. BACKFILL THE EXCAVATED SOIL AND COMPACT IT AGAINST THE BALES.
3. WEDGE LOOSE STRAW BETWEEN BALES TO PREVENT WATER FROM FLOWING BETWEEN BALES.
4. BALES SHOWN MAY NOT REFLECT ACTUAL NUMBER OF BALES REQUIRED TO SURROUND INLET. CONTRACTOR SHALL SUPPLY BALES AS REQUIRED TO MEET INTENT OF DETAIL.



INLET PROTECTION - STRAW BALES (OFF-PAVEMENT)

NTS



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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

SCHEDULE I: RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016

REVIEWED BY: ARM

DRAWN BY: JDP

DESIGNED BY: JFF

RS&H PROJECT NUMBER

224-0124-003

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EROSION CONTROL DETAILS

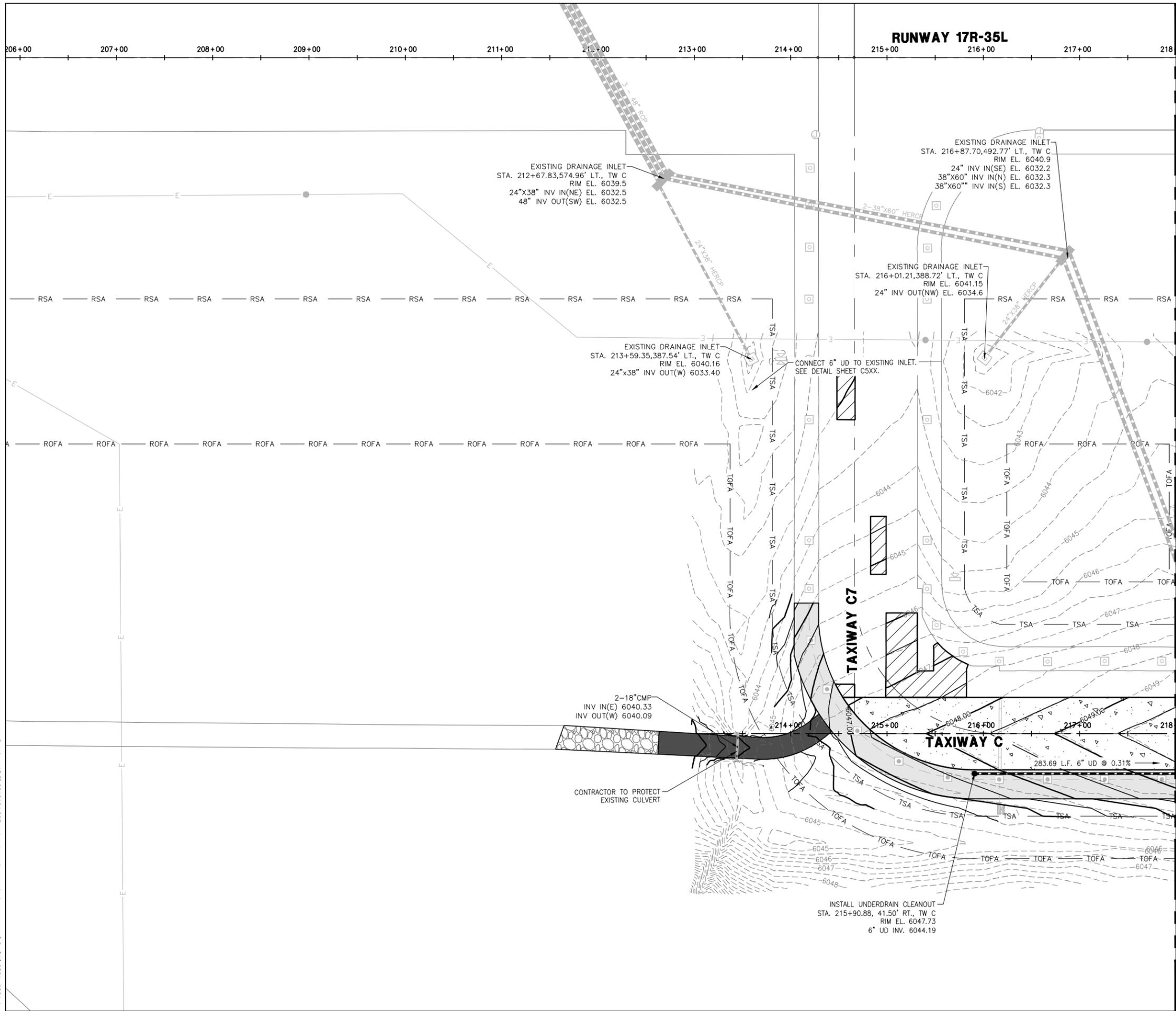
DRAWING NUMBER

C452

SHEET 32 OF 75

BID DOCUMENTS





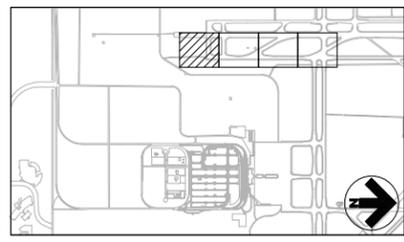
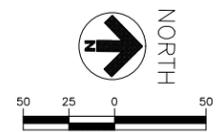
LEGEND:

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- NEW MAJOR CONTOUR
- NEW MINOR CONTOUR
- NEW UNDERDRAIN
- 3" PVC DRAIN PIPE
- NEW UNDERDRAIN CLEANOUTS
- NEW UNDERDRAIN INSPECTION PITS
- EXISTING DRAINAGE MANHOLE
- EXISTING DRAINAGE INLET
- EXISTING UNDERDRAIN
- EXISTING DRAINAGE

NOTES:

1. SEE SHEETS C510-C513 FOR UNDERDRAIN DETAILS.
2. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF ALL UTILITIES.
3. SEE SHEETS C201 - C204 FOR ALL GEOMETRIC LAYOUT AND DIMENSIONS.
4. SEE SHEETS E201 - E204 FOR ELECTRICAL LAYOUT AND DIMENSIONS.

MATCH LINE - SEE SHEET C502



KEYMAP



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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
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RS&H PROJECT NUMBER
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**GRADING AND
DRAINAGE PLANS
(SHEET 1 OF 4)**

DRAWING NUMBER
C501
SHEET 33 OF 75
**BID
DOCUMENTS**

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c04\C501-C504.dwg
Plotted on: 2/23/2016 5:37 PM

00 219+00 220+00 221+00 **RUNWAY 17R-35L** 225+00 226+00 227+00 228+00 229+00 230

MATCH LINE - SEE SHEET C201

MATCH LINE - SEE SHEET C203

LEGEND:

-  EXISTING MAJOR CONTOUR
-  EXISTING MINOR CONTOUR
-  NEW MAJOR CONTOUR
-  NEW MINOR CONTOUR
-  NEW UNDERDRAIN
-  3" PVC DRAIN PIPE
-  NEW UNDERDRAIN CLEANOUTS
-  NEW UNDERDRAIN INSPECTION PITS
-  EXISTING DRAINAGE MANHOLE
-  EXISTING DRAINAGE INLET
-  EXISTING UNDERDRAIN
-  EXISTING DRAINAGE

NOTES:

1. SEE SHEETS C510-C513 FOR UNDERDRAIN DETAILS.
2. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF ALL UTILITIES.
3. SEE SHEETS C201 - C204 FOR ALL GEOMETRIC LAYOUT AND DIMENSIONS.
4. SEE SHEETS E201 - E204 FOR ELECTRICAL LAYOUT AND DIMENSIONS.



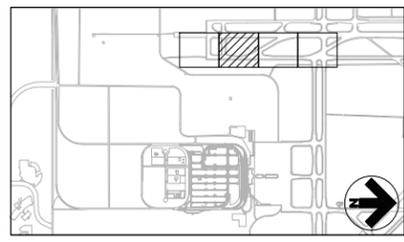
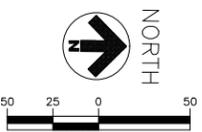
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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
 RECONSTRUCT
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 TAXIWAY C7
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 AND
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 PORTIONS OF
 TAXIWAYS C3, C5,
 C6, AND C7**



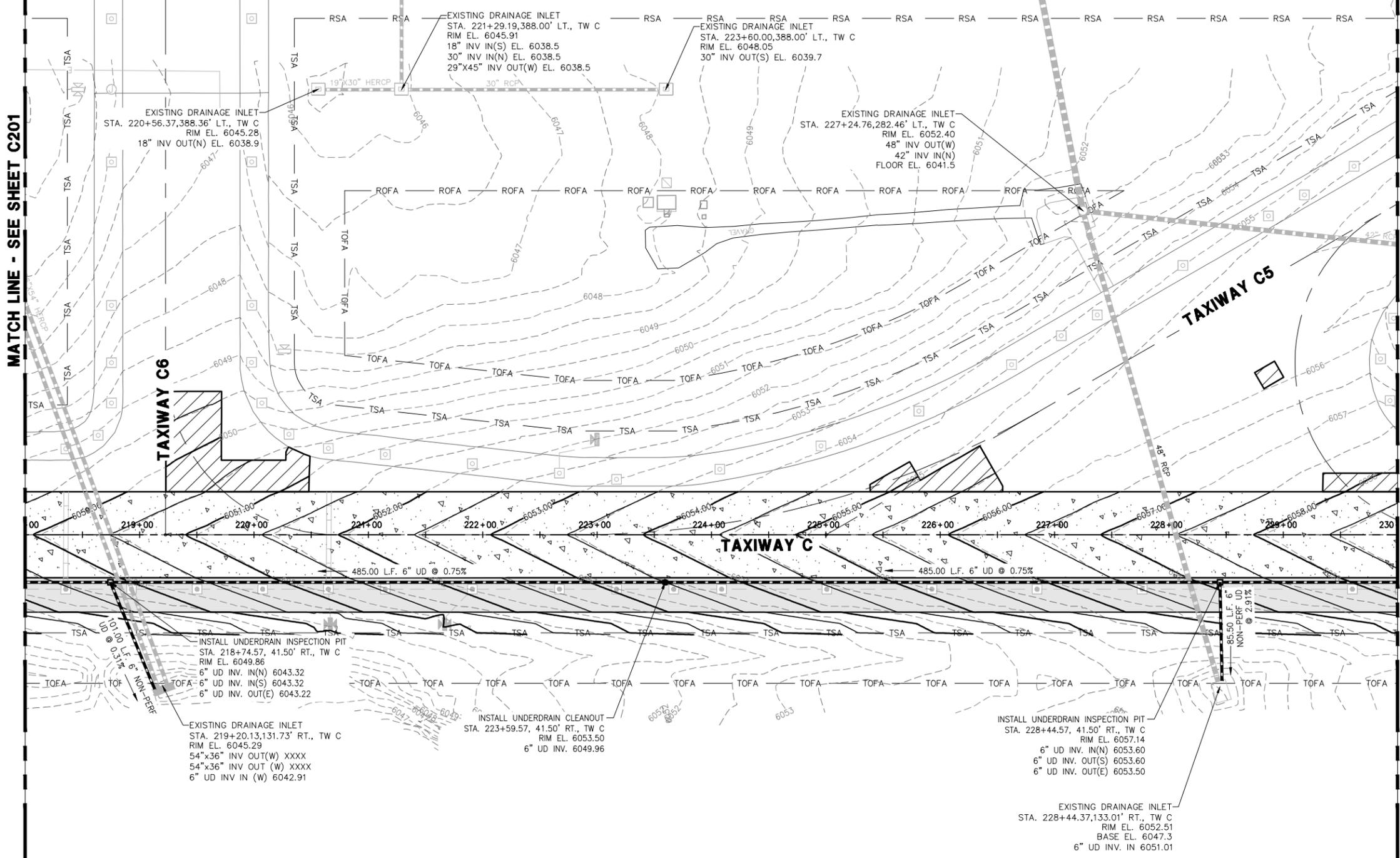
REVISIONS

NO.	DESCRIPTION	DATE

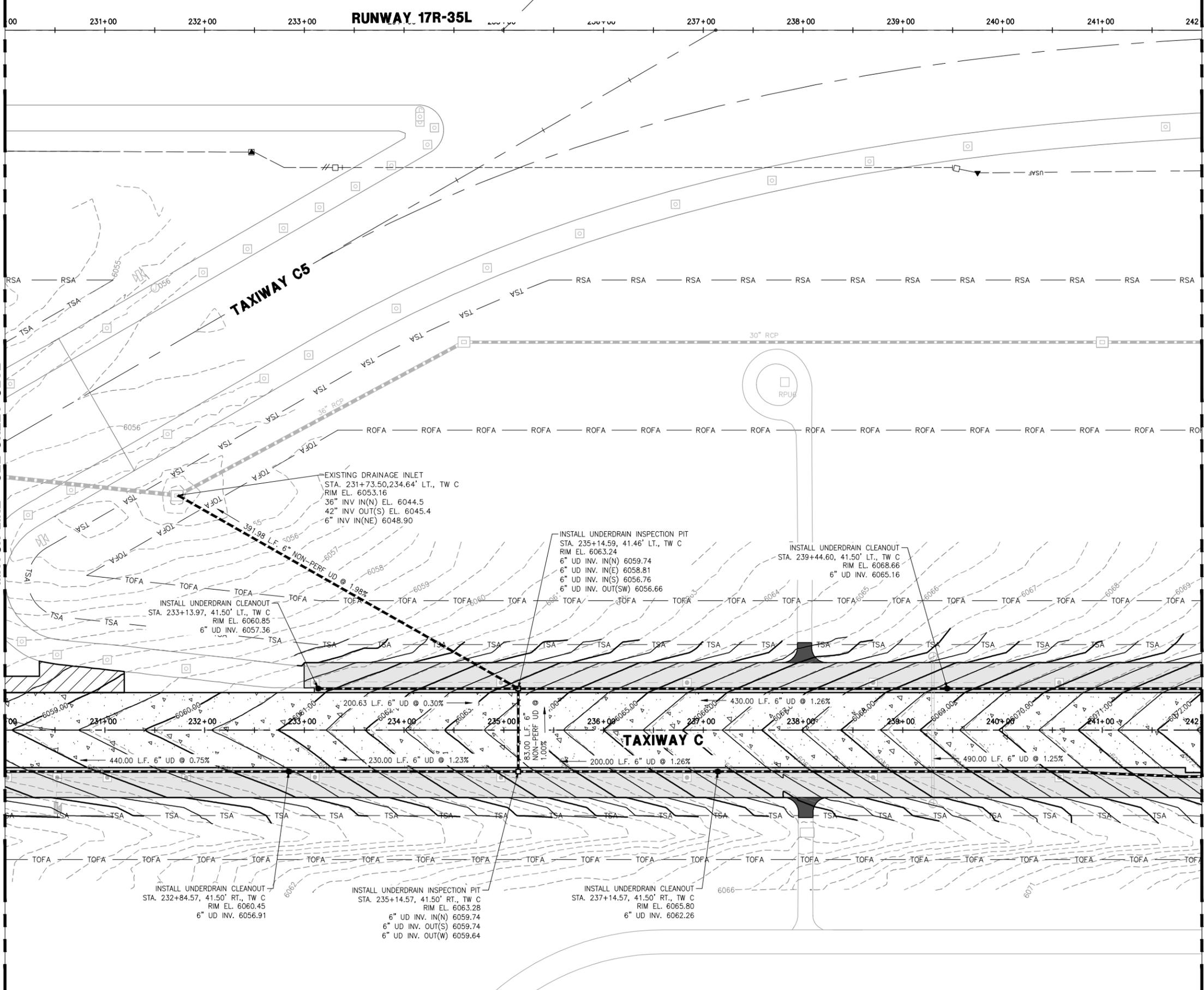
DATE ISSUED: FEBRUARY 23, 2016
 REVIEWED BY: ARM
 DRAWN BY: JDP
 DESIGNED BY: JFF
 RS&H PROJECT NUMBER
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GRADING AND DRAINAGE PLANS (SHEET 2 OF 4)

DRAWING NUMBER
C502
 SHEET 34 OF 75
BID DOCUMENTS



Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c04\c501-C504.dwg
 Plotted on: 2/22/2016 5:37 PM



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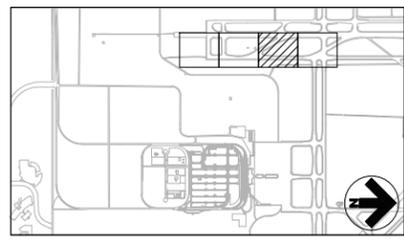
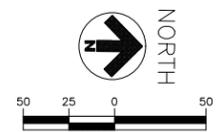
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- NEW MAJOR CONTOUR
- NEW MINOR CONTOUR
- NEW UNDERDRAIN
- 3" PVC DRAIN PIPE
- NEW UNDERDRAIN CLEANOUTS
- NEW UNDERDRAIN INSPECTION PITS
- EXISTING DRAINAGE MANHOLE
- EXISTING DRAINAGE INLET
- EXISTING UNDERDRAIN
- EXISTING DRAINAGE

NOTES:

1. SEE SHEETS C510-C513 FOR UNDERDRAIN DETAILS.
2. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF ALL UTILITIES.
3. SEE SHEETS C201 - C204 FOR ALL GEOMETRIC LAYOUT AND DIMENSIONS.
4. SEE SHEETS E201 - E204 FOR ELECTRICAL LAYOUT AND DIMENSIONS.

MATCH LINE - SEE SHEET C202

MATCH LINE - SEE SHEET C204



KEYMAP



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4700 S. Syracuse Street, Suite 300
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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: XX1
DRAWN BY: XX2
DESIGNED BY: XX3
RS&H PROJECT NUMBER
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**GRADING AND
DRAINAGE PLANS
(SHEET 3 OF 4)**

DRAWING NUMBER
C503
SHEET 35 OF 75
**BID
DOCUMENTS**

Drawing: I:\P\2340124\003 colorado springs - taxiway c reason\cad\VC501-C504.dwg
Plotted on: 2/22/2016 5:38 PM
Printed by: Fouley, Jeff

RUNWAY 17R-35L

00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00 254

LEGEND:

- EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- NEW MAJOR CONTOUR
- - - NEW MINOR CONTOUR
- NEW UNDERDRAIN
- 3" PVC DRAIN PIPE
- NEW UNDERDRAIN CLEANOUTS
- NEW UNDERDRAIN INSPECTION PITS
- EXISTING DRAINAGE MANHOLE
- EXISTING DRAINAGE INLET
- EXISTING UNDERDRAIN
- EXISTING DRAINAGE

NOTES:

1. SEE SHEETS C510-C513 FOR UNDERDRAIN DETAILS.
2. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF ALL UTILITIES.
3. SEE SHEETS C201 - C204 FOR ALL GEOMETRIC LAYOUT AND DIMENSIONS.
4. SEE SHEETS E201 - E204 FOR ELECTRICAL LAYOUT AND DIMENSIONS.



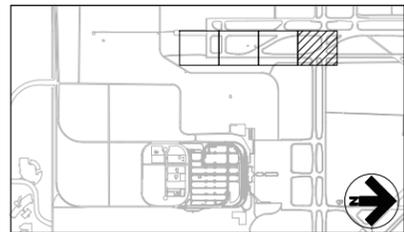
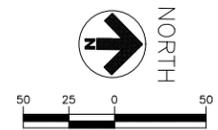
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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**



REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF

RS&H PROJECT NUMBER
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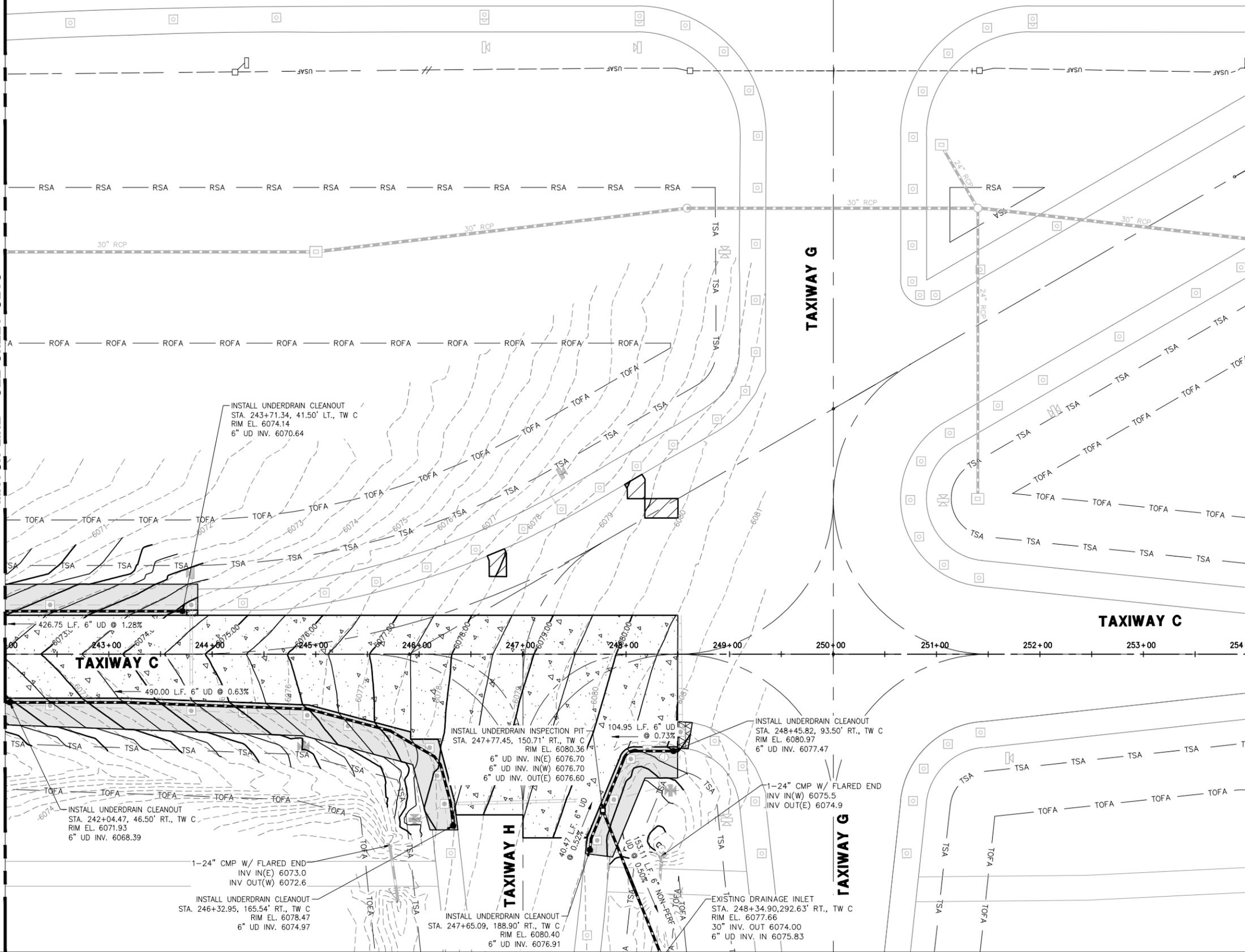
**GRADING AND
DRAINAGE PLANS
(SHEET 4 OF 4)**

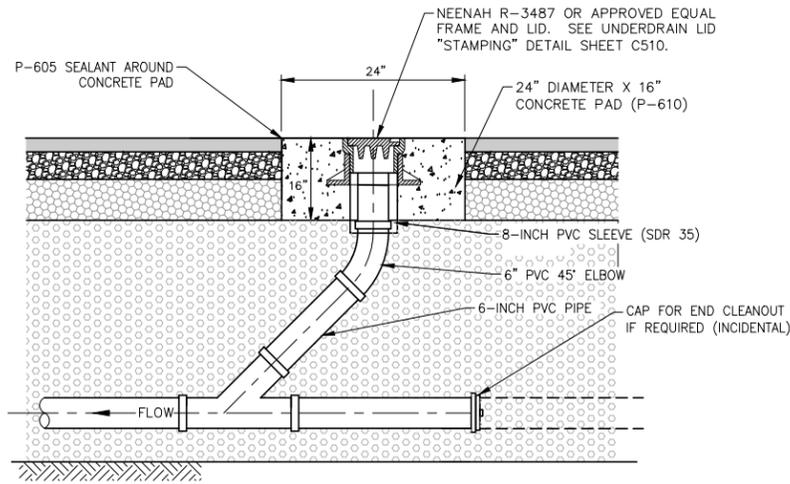
DRAWING NUMBER
C504
SHEET 36 OF 75
**BID
DOCUMENTS**



MATCH LINE - SEE SHEET C203

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Plotted on: 2/22/2016 5:38 PM



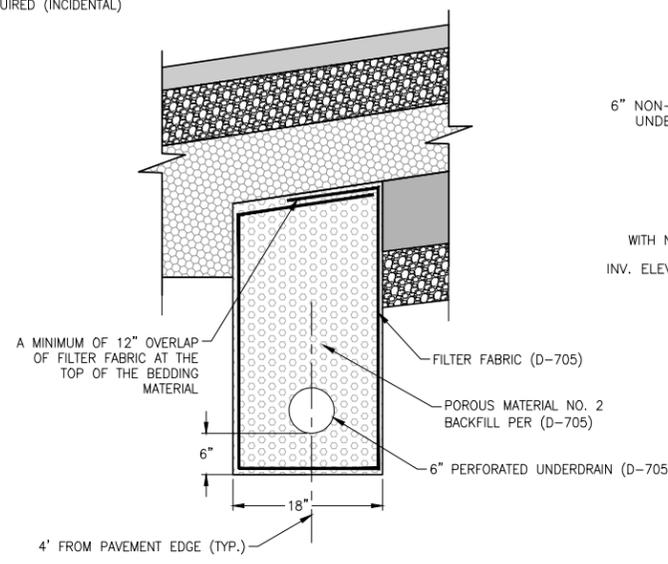


TYPICAL CLEANOUT DETAIL
NTS

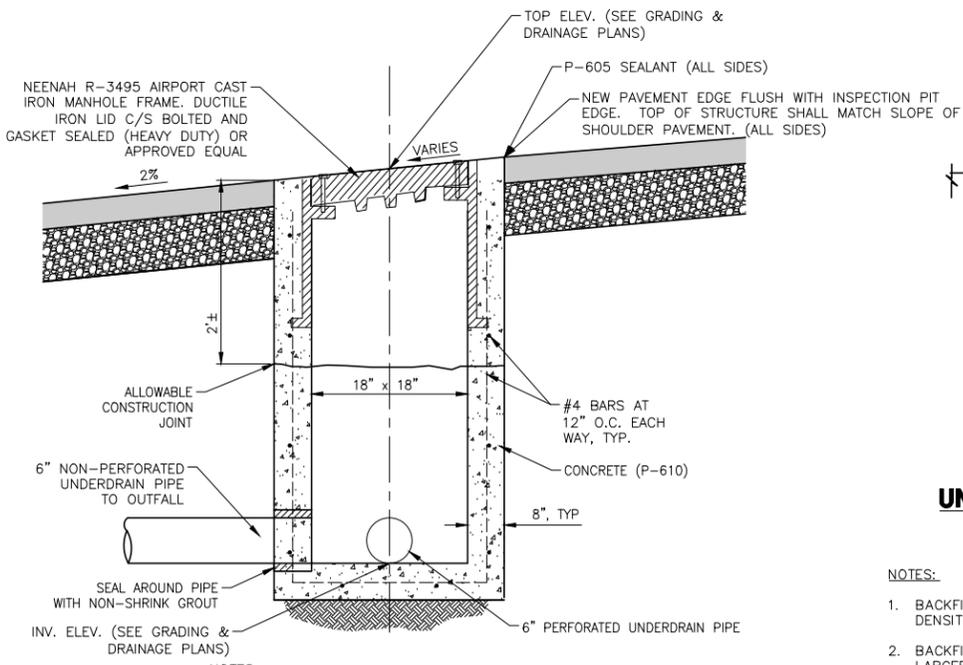
- NOTES:
- ALL UNDERDRAIN CLEANOUT LIDS SHALL BE STAMPED "UNDERDRAIN" WITH 1/2" LETTERS.
 - PVC RISER, CONCRETE, FRAME AND LID AND ALL INCIDENTALS TO CONSTRUCT EACH CLEANOUT SHALL BE INCLUDED IN THE UNIT PRICE TO INSTALL EACH CLEANOUT.
 - ASPHALT SHALL BE CORED WITH DIAMOND TIP CORE BITS FOR INSTALLATION OF CLEANOUT TOP SECTION.



UNDERDRAIN CLEANOUT LID 'STAMPING' DETAIL
NTS

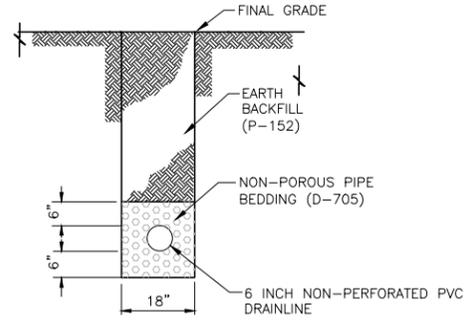


PAVEMENT UNDERDRAIN DETAIL
NTS



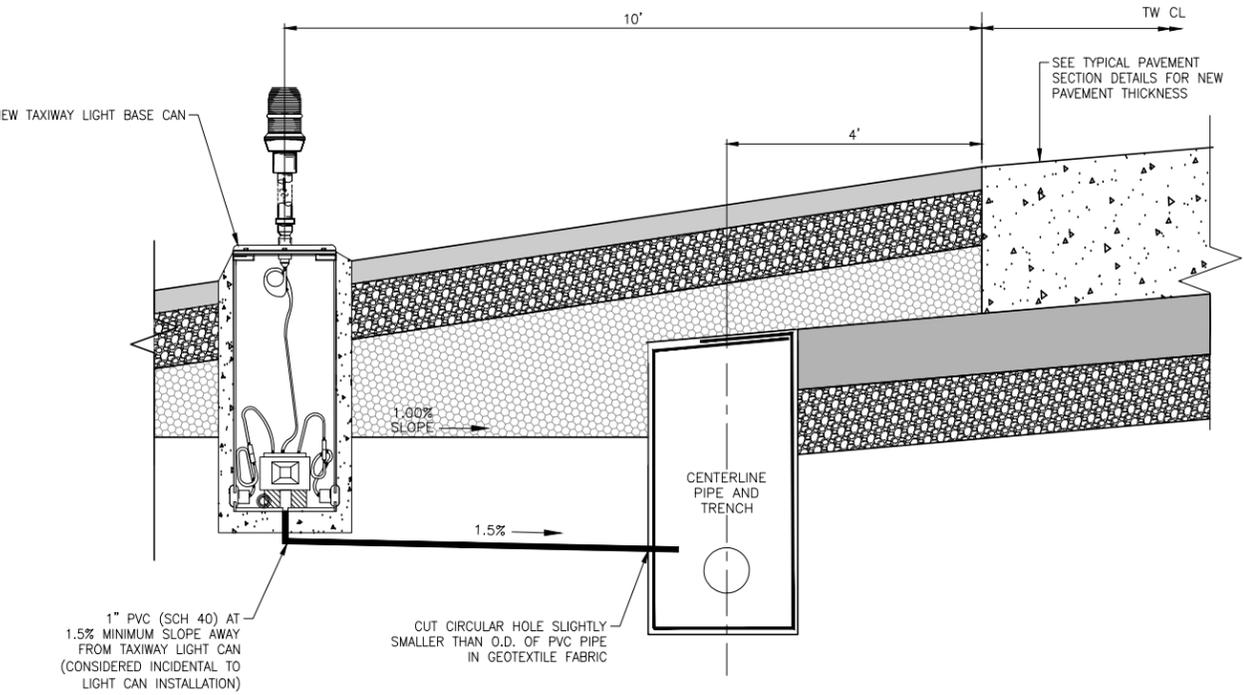
- NOTES:
- ALL UNDERDRAIN INSPECTION PIT LIDS SHALL BE STAMPED "UNDERDRAIN" WITH 2" LETTERS.
 - TOP OF STRUCTURE SHALL BE CONSTRUCTED TO MATCH THE SLOPE OF THE SHOULDER.

UNDERDRAIN INSPECTION PIT DETAIL
NTS

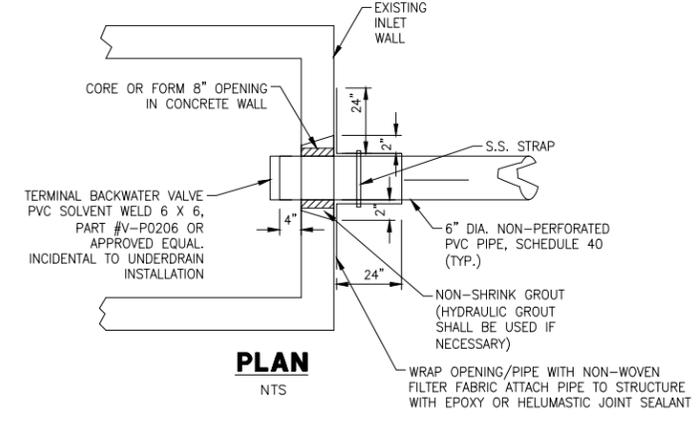


UNDERDRAIN NON-PERF TRENCH DETAIL
NTS

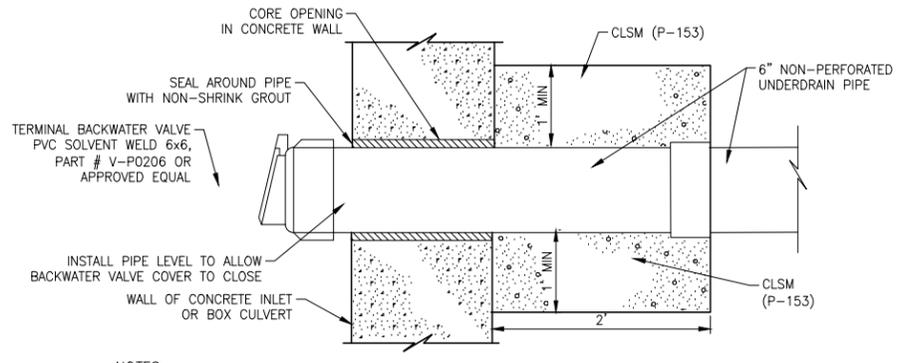
- NOTES:
- BACKFILL WILL MEET REQUIREMENTS OF P-152, ONE DENSITY TEST PER 8 INCH LIFT PER STRUCTURE.
 - BACKFILL PER P-152 SHALL NOT CONTAIN ROCKS LARGER THAN 4 INCHES IN ITS GREATEST DIAMETER.



PVC DRAINAGE CONNECTION TO UNDERDRAIN DETAIL
NTS



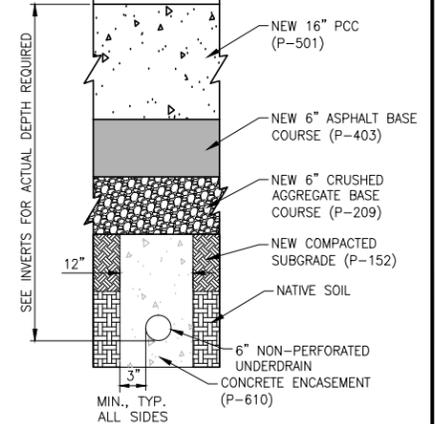
PLAN
NTS



SECTION

UNDERDRAIN CONNECTION OUTLET TO STRUCTURE - TYPICAL
NTS

- NOTES:
- INSTALLATION OF BACKWATER VALVE SHALL BE INCIDENTAL TO ITEM D-751-5.6



UNDERDRAIN CONCRETE ENCASUREMENT UNDER TAXIWAY
NTS

GENERAL NOTES:

- ALL UNDERDRAIN SYSTEM COMPONENTS THAT ARE VISIBLE AT THE PAVEMENT SURFACE SHALL BE MARKED "UNDERDRAIN".



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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF
RS&H PROJECT NUMBER
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UNDERDRAIN DETAILS

DRAWING NUMBER
C510
SHEET 37 OF 75
BID DOCUMENTS

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\Cad\0510-C511.dwg
Plotted by: Paley, Jeff
Plotted on: 2/22/2016 5:38 PM



**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

LEGEND:

- FINISH ELEVATION ADD 6100 FT TO SPOT ELEVATIONS
- METHACRYLATE SEALANT-JOINT AND CORNER (NTS)
- METHACRYLATE SEALANT-PANEL
- SPALL REPAIR JOINT AND CORNER (NTS)
- LINEAR CRACK (NTS)
- LARGE JOINT SILICONE REPAIR (NTS)

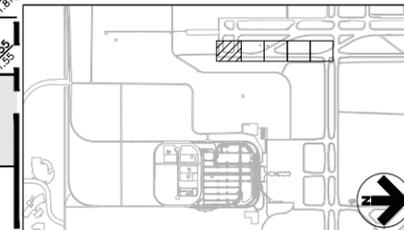
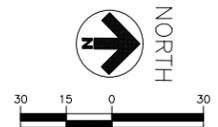
NOTES:

1. ADD 6000' TO EACH PROPOSED SPOT ELEVATION FOR TRUE ELEVATION
2. SEE SHEETS C613-C616 FOR JOINT LAYOUT.
3. SEE SHEETS C201-C204 FOR ALL DIMENSIONS.
4. CONTRACTOR SHALL TRANSITION OVER THE LAST PANEL TO TIE TO EXISTING GRADES, PANEL DIMENSIONS AND MATCH EXISTING JOINT LINES.

REPAIR NOTES:

1. LOCATIONS OF DURABILITY CRACKING, EXISTING PATCHES, OR OTHER DISTRESSES REQUIRING REPAIR ARE SHOWN ON SHEETS C601 - C604. LOCATIONS ARE APPROXIMATE AND EXACT SIZE AND LOCATION OF SPALL REPAIR FOR EACH DISTRESS SHALL BE IDENTIFIED BY THE ENGINEER IN THE FIELD.
2. EXISTING LINEAR CRACKS SHALL BE ROUTED AND SEALED PER DETAIL B, SHEET C623.
3. SEE SHEETS C622-C623 FOR JOINT, CRACK AND SPALL REPAIR AND RESEAL DETAILS.
4. ALL JOINTS IN EXISTING PCC TO REMAIN ON TAXIWAYS C3, C5, C6, AND C7 WITHIN WORK LIMITS SHALL BE REHABILITATED. SEE SHEET C623 FOR DETAILS.
5. SPALL REPAIR AND METHACRYLATE SEALING LOCATIONS ARE APPROXIMATE. EXACT LIMITS TO BE DEFINED IN FIELD BY ENGINEER.

MATCH LINE - SEE SHEET C602



KEYMAP



REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016

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DRAWN BY: JDP

DESIGNED BY: JFF

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**CONCRETE JOINT
ELEVATION &
REHABILITATION
PLAN
(SHEET 1 OF 5)**

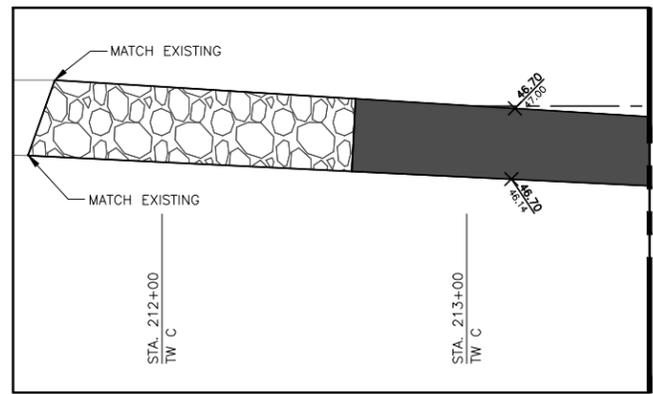
DRAWING NUMBER

C601

SHEET 38 OF 75

BID

DOCUMENTS



MATCH LINE - SEE BELOW

MATCH LINE - SEE ABOVE

STA. 214+00
TW C

STA. 215+00
TW C

STA. 216+00
TW C

STA. 217+00
TW C

STA. 218+00
TW C

STA. 219+00
TW C

STA. 220+00
TW C

STA. 221+00
TW C



**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

LEGEND:

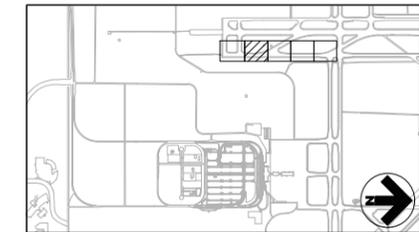
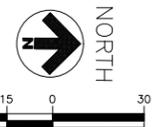
- FINISH ELEVATION ADD 6100 FT TO SPOT ELEVATIONS
- METHACRYLATE SEALANT-JOINT AND CORNER (NTS)
- METHACRYLATE SEALANT-PANEL
- SPALL REPAIR JOINT AND CORNER (NTS)
- LINEAR CRACK (NTS)
- LARGE JOINT SILICONE REPAIR (NTS)

NOTES:

1. ADD 6000' TO EACH PROPOSED SPOT ELEVATION FOR TRUE ELEVATION
2. SEE SHEETS C613-C616 FOR JOINT LAYOUT.
3. SEE SHEETS C201-C204 FOR ALL DIMENSIONS.
4. CONTRACTOR SHALL TRANSITION OVER THE LAST PANEL TO TIE TO EXISTING GRADES, PANEL DIMENSIONS AND MATCH EXISTING JOINT LINES.

REPAIR NOTES:

1. LOCATIONS OF DURABILITY CRACKING, EXISTING PATCHES, OR OTHER DISTRESSES REQUIRING REPAIR ARE SHOWN ON SHEETS C601 - C604. LOCATIONS ARE APPROXIMATE AND EXACT SIZE AND LOCATION OF SPALL REPAIR FOR EACH DISTRESS SHALL BE IDENTIFIED BY THE ENGINEER IN THE FIELD.
2. EXISTING LINEAR CRACKS SHALL BE ROUTED AND SEALED PER DETAIL B, SHEET C623.
3. SEE SHEETS C622-C623 FOR JOINT, CRACK AND SPALL REPAIR AND RESEAL DETAILS.
4. ALL JOINTS IN EXISTING PCC TO REMAIN ON TAXIWAYS C3, C5, C6, AND C7 WITHIN WORK LIMITS SHALL BE REHABILITATED. SEE SHEET C623 FOR DETAILS.
5. SPALL REPAIR AND METHACRYLATE SEALING LOCATIONS ARE APPROXIMATE. EXACT LIMITS TO BE DEFINED IN FIELD BY ENGINEER.



KEYMAP

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF

RS&H PROJECT NUMBER
224-0124-003
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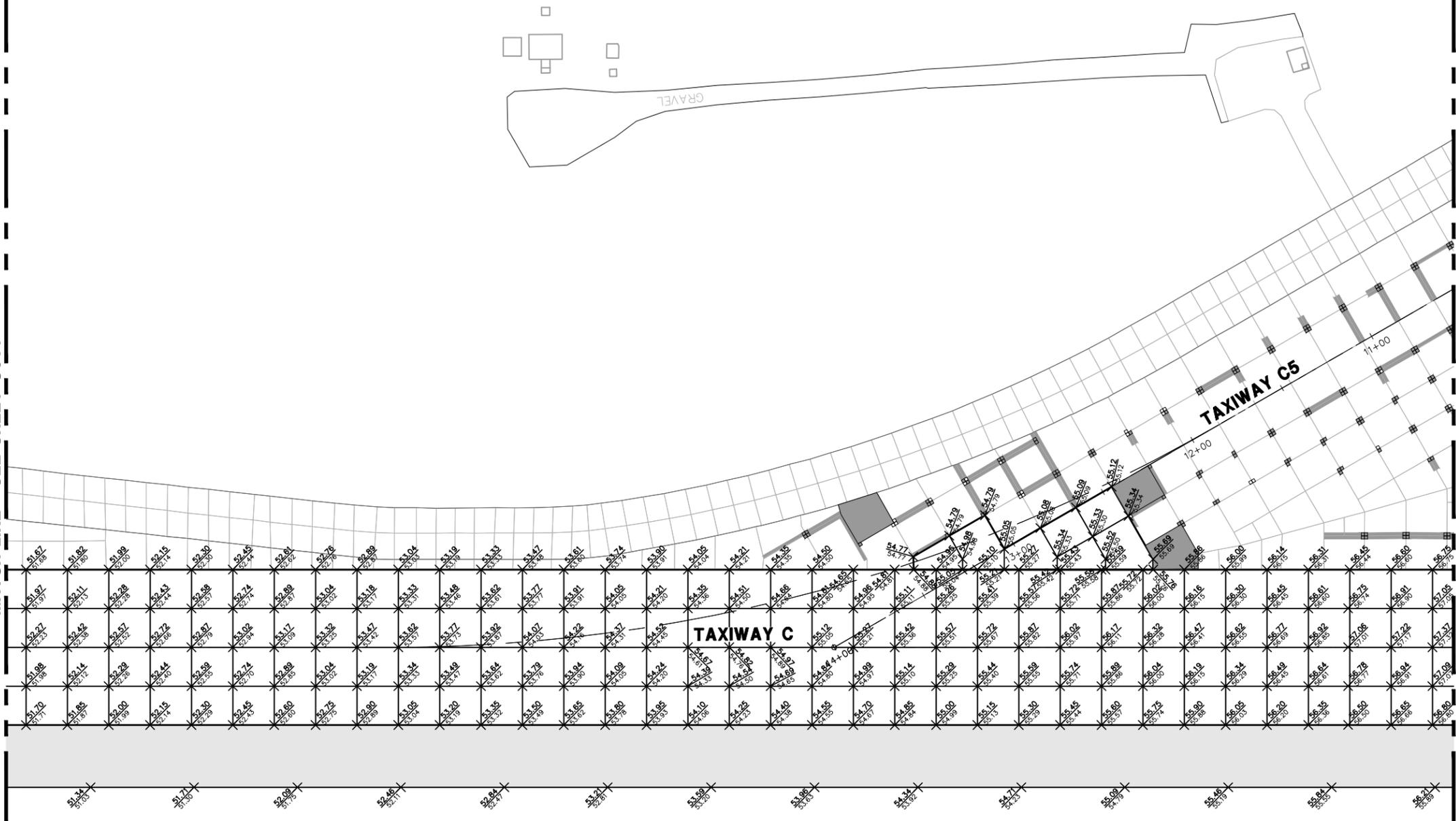
**CONCRETE JOINT
ELEVATION &
REHABILITATION
PLAN
(SHEET 2 OF 5)**

DRAWING NUMBER
C602
SHEET 39 OF 75
**BID
DOCUMENTS**



MATCH LINE - SEE SHEET C601

MATCH LINE - SEE SHEET C603



STA. 221+00 TW C
STA. 222+00 TW C
STA. 223+00 TW C
STA. 224+00 TW C
STA. 225+00 TW C
STA. 226+00 TW C
STA. 227+00 TW C
STA. 228+00 TW C

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

LEGEND:

- FINISH ELEVATION ADD 6100 FT TO SPOT ELEVATIONS
- METHACRYLATE SEALANT-JOINT AND CORNER (NTS)
- METHACRYLATE SEALANT-PANEL
- SPALL REPAIR JOINT AND CORNER (NTS)
- LINEAR CRACK (NTS)
- LARGE JOINT SILICONE REPAIR (NTS)

NOTES:

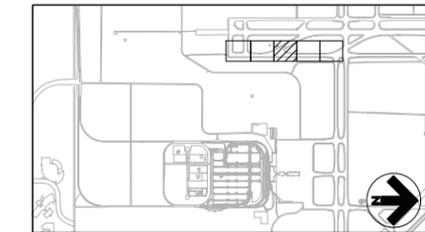
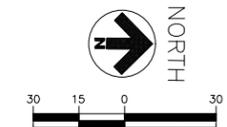
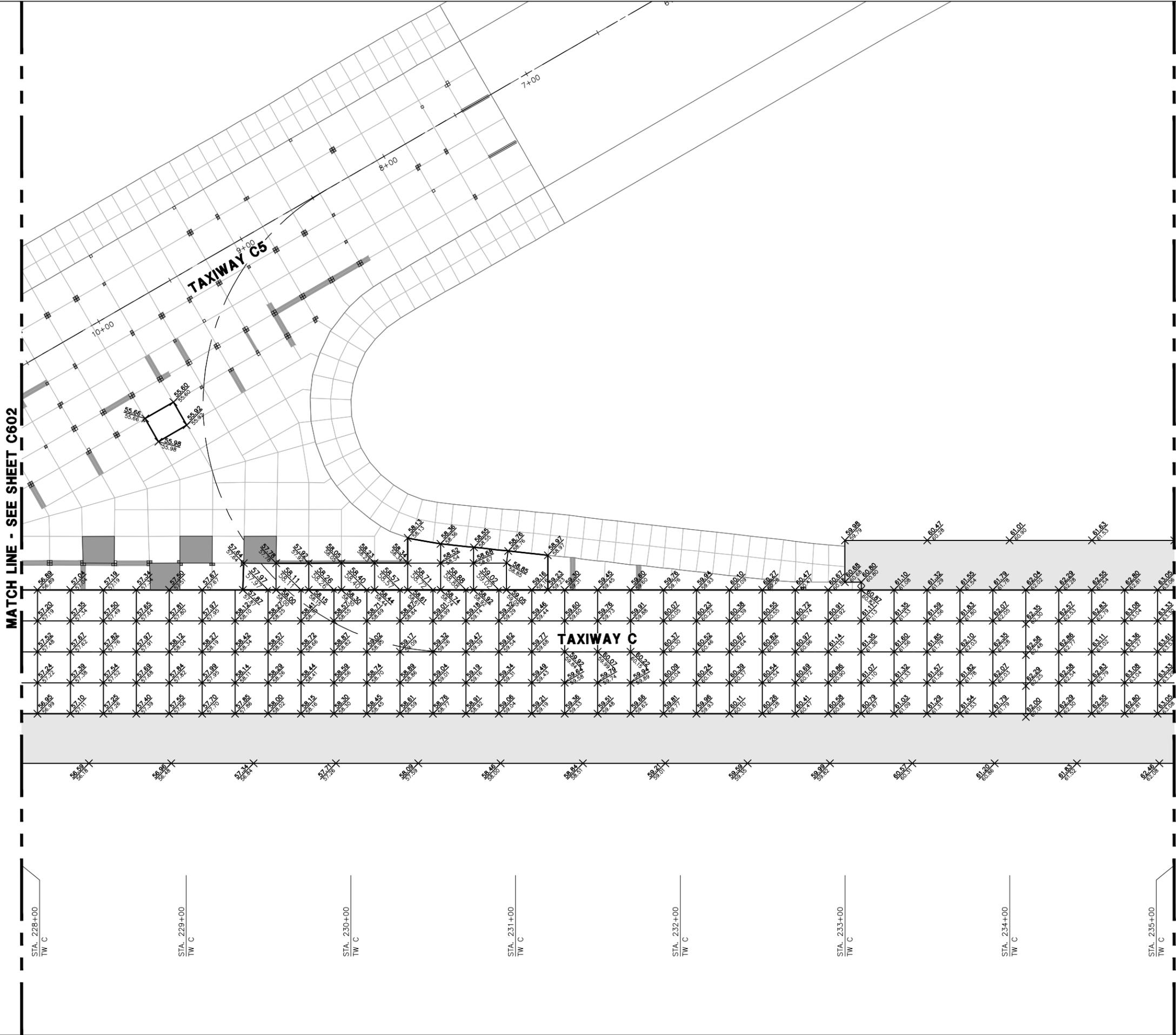
1. ADD 6000' TO EACH PROPOSED SPOT ELEVATION FOR TRUE ELEVATION
2. SEE SHEETS C613-C616 FOR JOINT LAYOUT.
3. SEE SHEETS C201-C204 FOR ALL DIMENSIONS.
4. CONTRACTOR SHALL TRANSITION OVER THE LAST PANEL TO TIE TO EXISTING GRADES, PANEL DIMENSIONS AND MATCH EXISTING JOINT LINES.

REPAIR NOTES:

1. LOCATIONS OF DURABILITY CRACKING, EXISTING PATCHES, OR OTHER DISTRESSES REQUIRING REPAIR ARE SHOWN ON SHEETS C601 - C604. LOCATIONS ARE APPROXIMATE AND EXACT SIZE AND LOCATION OF SPALL REPAIR FOR EACH DISTRESS SHALL BE IDENTIFIED BY THE ENGINEER IN THE FIELD.
2. EXISTING LINEAR CRACKS SHALL BE ROUTED AND SEALED PER DETAIL B, SHEET C623.
3. SEE SHEETS C622-C23 FOR JOINT, CRACK AND SPALL REPAIR AND RESEAL DETAILS.
4. ALL JOINTS IN EXISTING PCC TO REMAIN ON TAXIWAYS C3, C5, C6, AND C7 WITHIN WORK LIMITS SHALL BE REHABILITATED. SEE SHEET C623 FOR DETAILS.
5. SPALL REPAIR AND METHACRYLATE SEALING LOCATIONS ARE APPROXIMATE. EXACT LIMITS TO BE DEFINED IN FIELD BY ENGINEER.

MATCH LINE - SEE SHEET C604

MATCH LINE - SEE SHEET C602



KEYMAP

REVISIONS		
NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
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 DRAWN BY: JDP
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 RS&H PROJECT NUMBER
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**CONCRETE JOINT
ELEVATION &
REHABILITATION
PLAN
(SHEET 3 OF 5)**
 DRAWING NUMBER
C603
 SHEET 40 OF 75
**BID
DOCUMENTS**

Drawing: I:\P\2240124\003 Colorado Springs - Taxiway C Recon\cda\c601-C603.dwg
 Plotted by: Fox, Trpp
 Plotted on: 2/22/2016 6:53 PM

STA. 228+00
TW C

STA. 229+00
TW C

STA. 230+00
TW C

STA. 231+00
TW C

STA. 232+00
TW C

STA. 233+00
TW C

STA. 234+00
TW C

STA. 235+00
TW C

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

LEGEND:

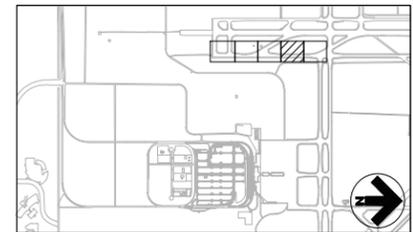
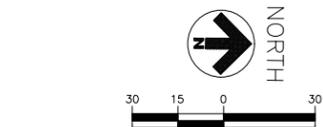
- FINISH ELEVATION ADD 6100 FT TO SPOT ELEVATIONS
- METHACRYLATE SEALANT-JOINT AND CORNER (NTS)
- METHACRYLATE SEALANT-PANEL
- SPALL REPAIR JOINT AND CORNER (NTS)
- LINEAR CRACK (NTS)
- LARGE JOINT SILICONE REPAIR (NTS)

NOTES:

1. ADD 6000' TO EACH PROPOSED SPOT ELEVATION FOR TRUE ELEVATION
2. SEE SHEETS C613-C616 FOR JOINT LAYOUT.
3. SEE SHEETS C201-C204 FOR ALL DIMENSIONS.
4. CONTRACTOR SHALL TRANSITION OVER THE LAST PANEL TO TIE TO EXISTING GRADES, PANEL DIMENSIONS AND MATCH EXISTING JOINT LINES.

REPAIR NOTES:

1. LOCATIONS OF DURABILITY CRACKING, EXISTING PATCHES, OR OTHER DISTRESSES REQUIRING REPAIR ARE SHOWN ON SHEETS C601 - C604. LOCATIONS ARE APPROXIMATE AND EXACT SIZE AND LOCATION OF SPALL REPAIR FOR EACH DISTRESS SHALL BE IDENTIFIED BY THE ENGINEER IN THE FIELD.
2. EXISTING LINEAR CRACKS SHALL BE ROUTED AND SEALED PER DETAIL B, SHEET C623.
3. SEE SHEETS C622-C23 FOR JOINT, CRACK AND SPALL REPAIR AND RESEAL DETAILS.
4. ALL JOINTS IN EXISTING PCC TO REMAIN ON TAXIWAYS C3, C5, C6, AND C7 WITHIN WORK LIMITS SHALL BE REHABILITATED. SEE SHEET C623 FOR DETAILS.
5. SPALL REPAIR AND METHACRYLATE SEALING LOCATIONS ARE APPROXIMATE. EXACT LIMITS TO BE DEFINED IN FIELD BY ENGINEER.



KEYMAP



REVISIONS		
NO.	DESCRIPTION	DATE

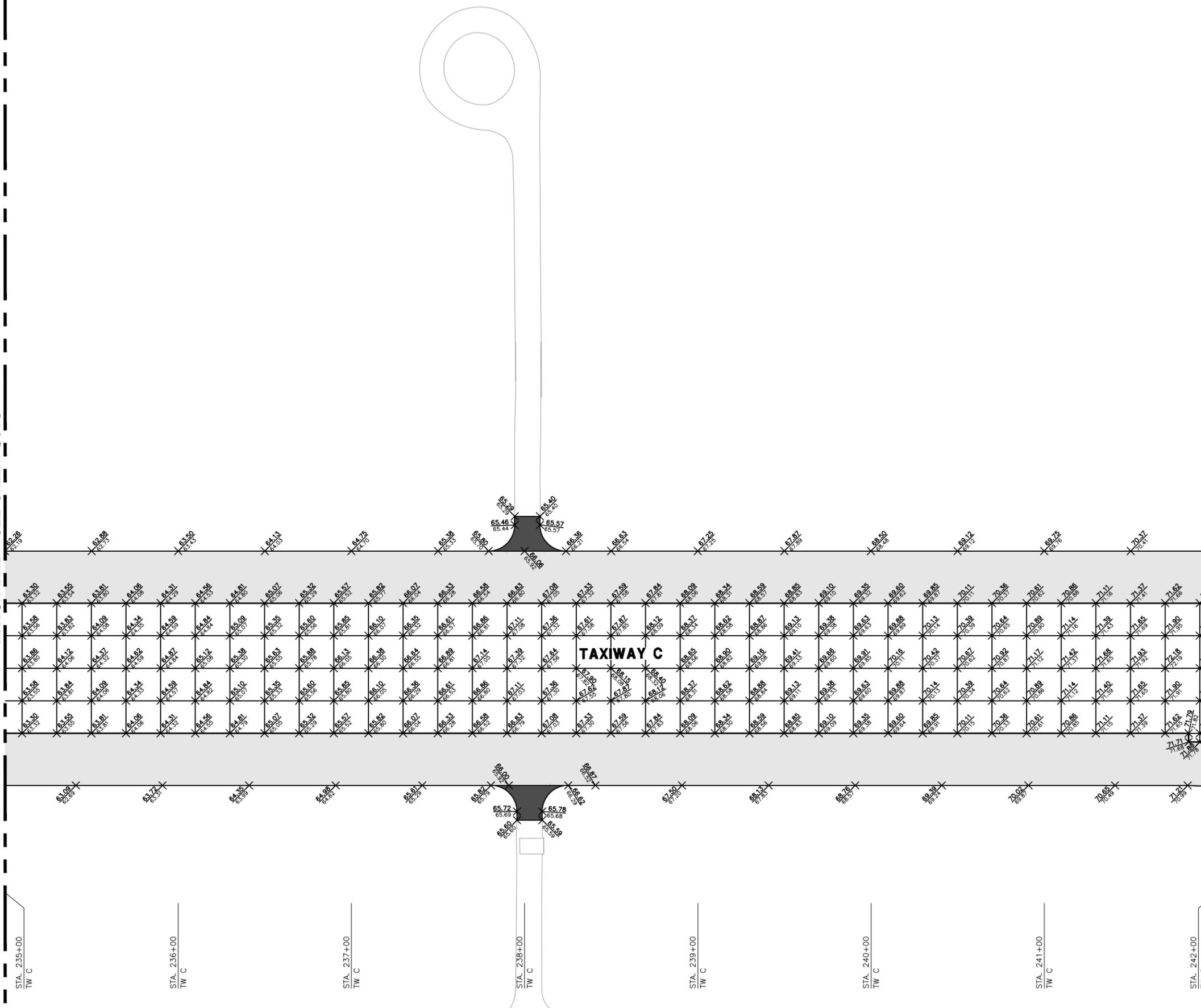
DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF
RS&H PROJECT NUMBER
224-0124-003
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**CONCRETE JOINT
ELEVATION &
REHABILITATION
PLAN
(SHEET 4 OF 5)**

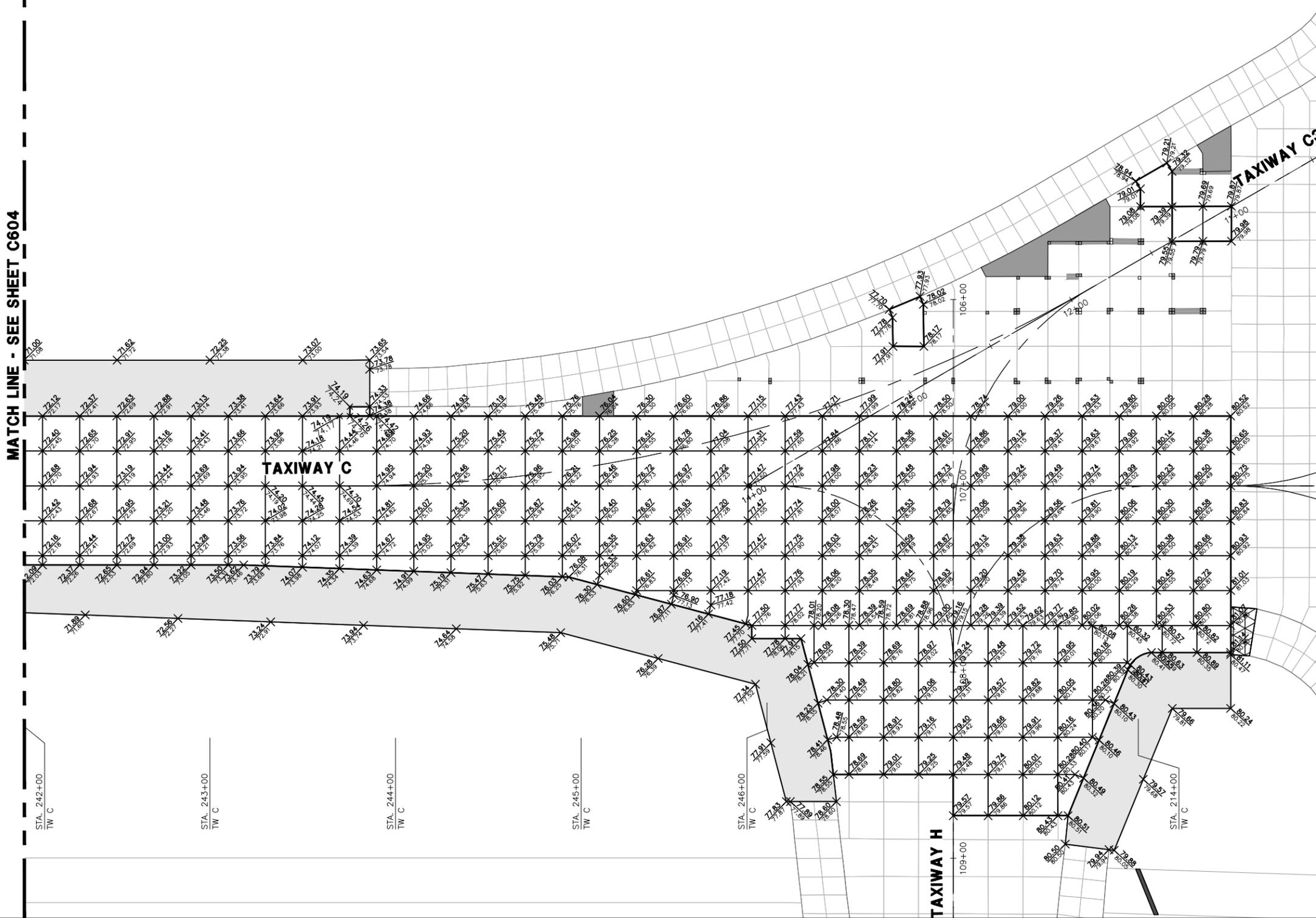
DRAWING NUMBER
C604
SHEET 41 OF 75
**BID
DOCUMENTS**

MATCH LINE - SEE SHEET C603

MATCH LINE - SEE SHEET C605



MATCH LINE - SEE SHEET C604



LEGEND:

- FINISH ELEVATION ADD 6100 FT TO SPOT ELEVATIONS
- METHACRYLATE SEALANT-JOINT AND CORNER (NTS)
- METHACRYLATE SEALANT-PANEL
- SPALL REPAIR JOINT AND CORNER (NTS)
- LINEAR CRACK (NTS)
- LARGE JOINT SILICONE REPAIR (NTS)

NOTES:

1. ADD 6000' TO EACH PROPOSED SPOT ELEVATION FOR TRUE ELEVATION
2. SEE SHEETS C613-C616 FOR JOINT LAYOUT.
3. SEE SHEETS C201-C204 FOR ALL DIMENSIONS.
4. CONTRACTOR SHALL TRANSITION OVER THE LAST PANEL TO TIE TO EXISTING GRADES, PANEL DIMENSIONS AND MATCH EXISTING JOINT LINES.

REPAIR NOTES:

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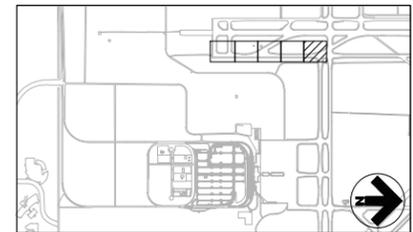
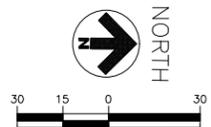
RS&H, Inc.
4700 S. Syracuse Street, Suite 300
Denver, CO. 80237
(303) 409-9700
www.rsandh.com



COLORADO SPRINGS
AIRPORT

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**



KEYMAP

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF

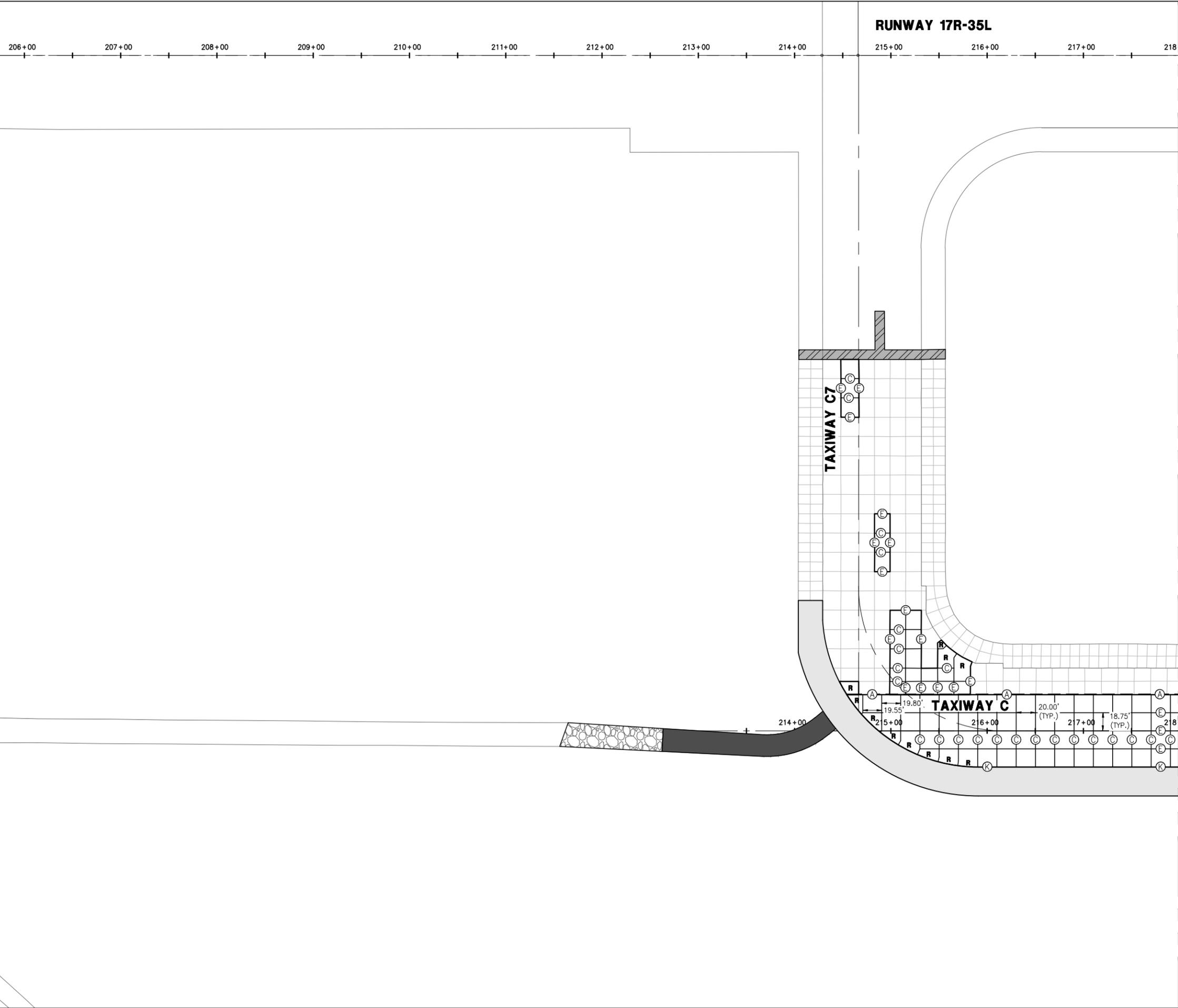
RS&H PROJECT NUMBER
224-0124-003
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**CONCRETE JOINT
ELEVATION &
REHABILITATION
PLAN
(SHEET 5 OF 5)**

DRAWING NUMBER
C605
SHEET 42 OF 75
**BID
DOCUMENTS**



Drawing: I:\P\2240124\003 Colorado Springs - Taxiway C Recon\c04\c601-C605.dwg
 Plotted on: 2/22/2016 6:46 PM
 Printed by: Fox, TRP



RUNWAY 17R-35L

206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00 215+00 216+00 217+00 218

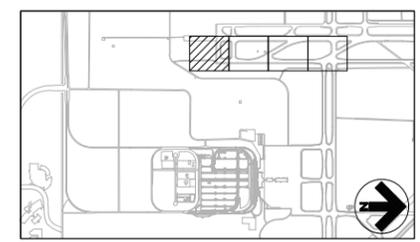
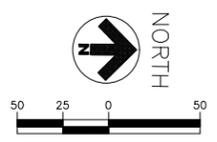
LEGEND:

- ⊙ PROPOSED JOINT TYPE
- EXISTING JOINT TYPE
- R** REINFORCED PCC PAVEMENT PANEL
- - - A JOINT
- FULL PANEL IS 20" THICKENED CONCRETE
- TSA — TAXIWAY SAFETY AREA
- RSA — RUNWAY SAFETY AREA

NOTES:

1. SEE SHEETS C620 - C624 FOR JOINT DETAILS.
2. CONTRACTOR SHALL ALIGN TIE-IN PANELS WITH EXISTING JOINTS WHEN TYING IN WITH CONSTRUCTION AND CONTRACTION JOINTS ONLY.
3. TRANSITION SHALL OCCUR FROM FULLY THICKENED PCC TO 16" PCC OVER 1 PANEL EACH DIRECTION.

MATCH LINE - SEE SHEET C611



KEYMAP

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4700 S. Syracuse Street, Suite 300
Denver, CO. 80237
(303) 409-9700
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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: NT
DESIGNED BY: JFF
RS&H PROJECT NUMBER
224-0124-003
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CONCRETE JOINT LAYOUT PLAN (SHEET 1 OF 4)

DRAWING NUMBER
C610
SHEET 43 OF 75
BID DOCUMENTS

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c610\c610-0613.dwg
Plotted on: 2/23/2016 5:41 PM
Plotted by: Fouley, Jeff

RUNWAY 17R-35L

00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230

LEGEND:

- ⊙ PROPOSED JOINT TYPE
- EXISTING JOINT TYPE
- R REINFORCED PCC PAVEMENT PANEL
- - - A JOINT
- ▨ FULL PANEL IS 20" THICKENED CONCRETE
- TSA — TAXIWAY SAFETY AREA
- RSA — RUNWAY SAFETY AREA

NOTES:

1. SEE SHEETS C620 - C624 FOR JOINT DETAILS.
2. CONTRACTOR SHALL ALIGN TIE-IN PANELS WITH EXISTING JOINTS WHEN TYING IN WITH CONSTRUCTION AND CONTRACTION JOINTS ONLY.
3. TRANSITION SHALL OCCUR FROM FULLY THICKENED PCC TO 16" PCC OVER 1 PANEL EACH DIRECTION.



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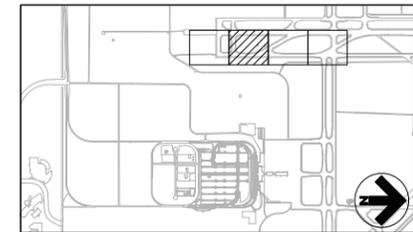
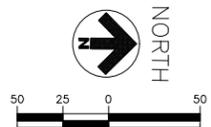
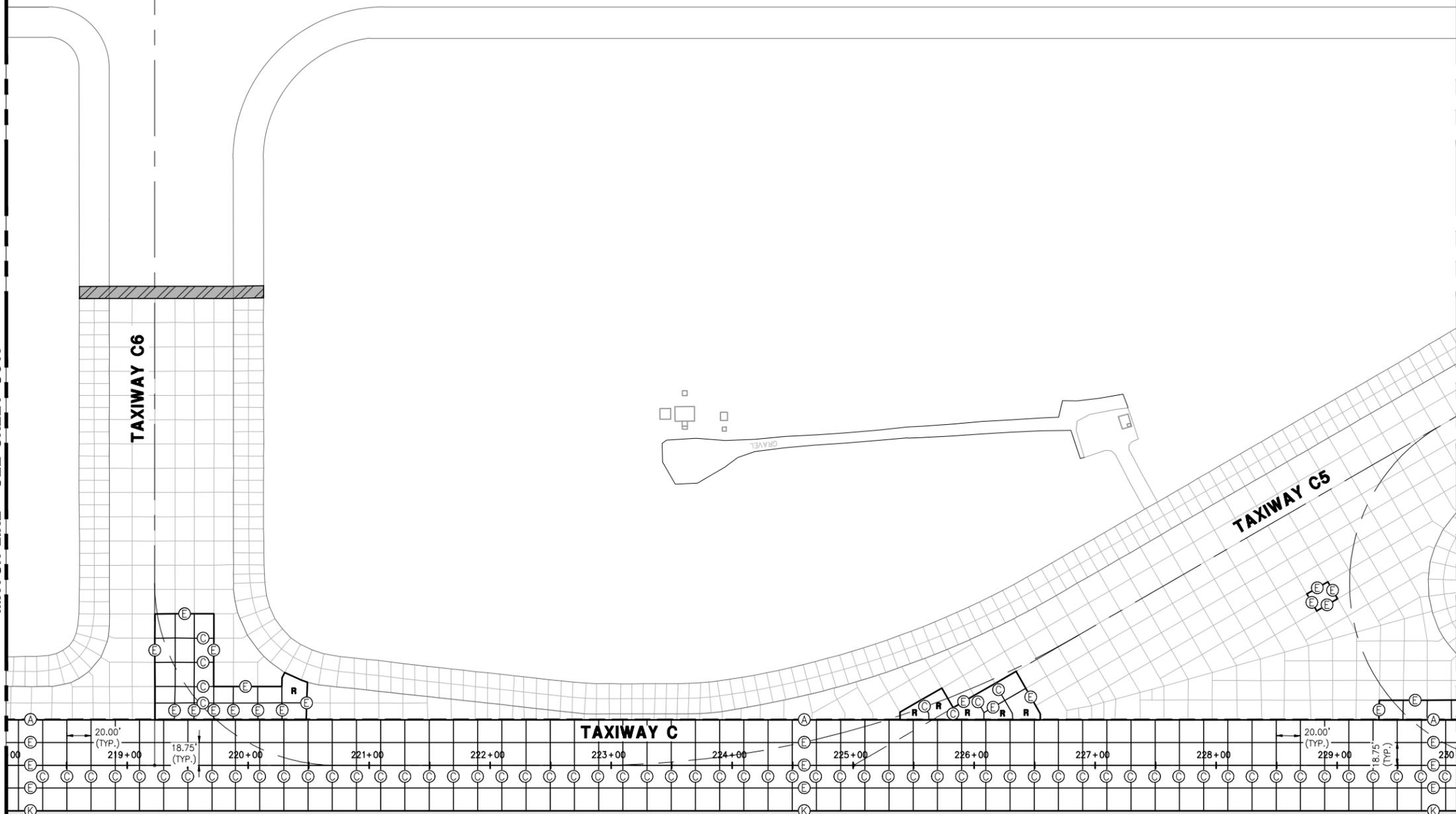
COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

MATCH LINE - SEE SHEET C610

MATCH LINE - SEE SHEET C612



KEYMAP

REVISIONS

NO.	DESCRIPTION	DATE

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DRAWN BY: NT
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**CONCRETE JOINT
LAYOUT PLAN
(SHEET 2 OF 4)**

DRAWING NUMBER

C611

SHEET 44 OF 75

**BID
DOCUMENTS**

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c611\C610-C613.dwg
Plotted by: Fouley, Jeff
Plotted on: 2/23/2016 5:41 PM

RUNWAY 17R-35L

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TAXIWAY C5

TAXIWAY C

00 251+00 252+00 253+00 254+00 255+00 256+00 257+00 258+00 259+00 240+00 241+00 242

LEGEND:

- ⊙ PROPOSED JOINT TYPE
- EXISTING JOINT TYPE
- R REINFORCED PCC PAVEMENT PANEL
- - - A JOINT
- ▨ FULL PANEL IS 20" THICKENED CONCRETE
- TSA — TAXIWAY SAFETY AREA
- RSA — RUNWAY SAFETY AREA

NOTES:

1. SEE SHEETS C620 - C624 FOR JOINT DETAILS.
2. CONTRACTOR SHALL ALIGN TIE-IN PANELS WITH EXISTING JOINTS WHEN TYING IN WITH CONSTRUCTION AND CONTRACTION JOINTS ONLY.
3. TRANSITION SHALL OCCUR FROM FULLY THICKENED PCC TO 16" PCC OVER 1 PANEL EACH DIRECTION.



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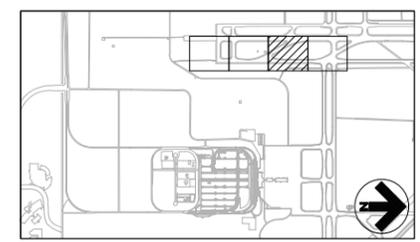
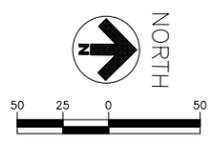
COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

MATCH LINE - SEE SHEET C611

MATCH LINE - SEE SHEET C613



REVISIONS

NO.	DESCRIPTION	DATE

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REVIEWED BY: ARM
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CONCRETE JOINT LAYOUT PLAN (SHEET 3 OF 4)

DRAWING NUMBER
C612
SHEET 45 OF 75
BID DOCUMENTS

Drawing: I:\P\2240124\003 Colorado Springs - Taxiway C\rsandh\c610-C613.dwg
Plotted on: 2/22/2016 5:41 PM
Plotted by: Fouley, Jeff

RUNWAY 17R-35L

00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00 254

MATCH LINE - SEE SHEET C612

TAXIWAY G

TAXIWAY C

TAXIWAY H

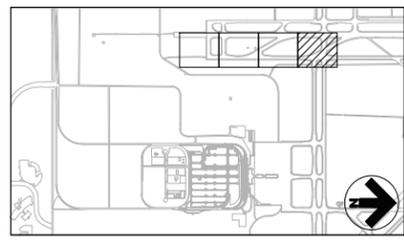
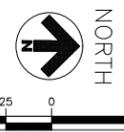
TAXIWAY G

LEGEND:

- ⊙ PROPOSED JOINT TYPE
- EXISTING JOINT TYPE
- R** REINFORCED PCC PAVEMENT PANEL
- - - A JOINT
-  FULL PANEL IS 20" THICKENED CONCRETE
- - - TSA TAXIWAY SAFETY AREA
- - - RSA RUNWAY SAFETY AREA

NOTES:

1. SEE SHEETS C620 - C624 FOR JOINT DETAILS.
2. CONTRACTOR SHALL ALIGN TIE-IN PANELS WITH EXISTING JOINTS WHEN TYING IN WITH CONSTRUCTION AND CONTRACTION JOINTS ONLY.
3. TRANSITION SHALL OCCUR FROM FULLY THICKENED PCC TO 16" PCC OVER 1 PANEL EACH DIRECTION.



KEYMAP



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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
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TAXIWAY C FROM
TAXIWAY C7
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AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

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CONCRETE JOINT LAYOUT PLAN (SHEET 4 OF 4)

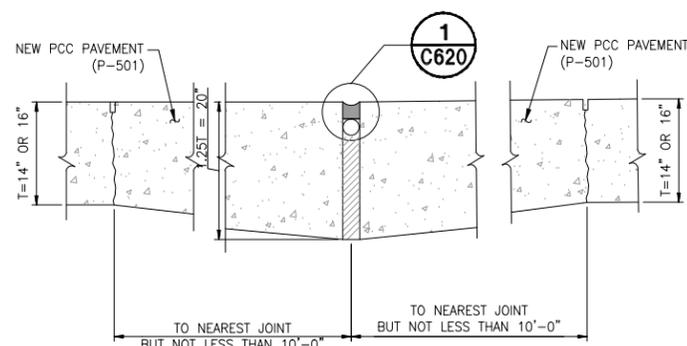
DRAWING NUMBER
C613
SHEET 46 OF 75
BID DOCUMENTS

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Plotted by: Fouley, Jeff

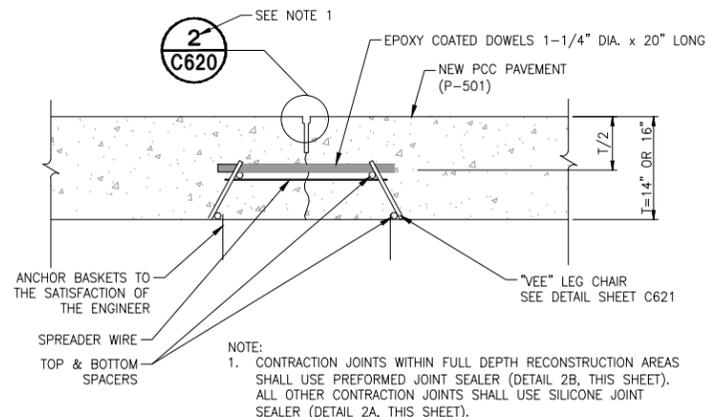


**TAXIWAY C
RECONSTRUCTION**

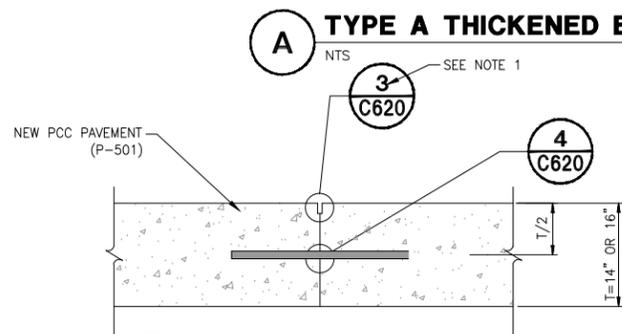
**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**



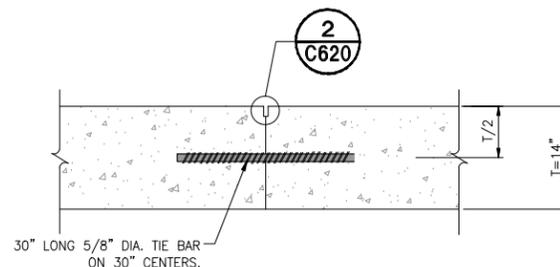
A TYPE A THICKENED EDGE EXPANSION JOINT DETAIL



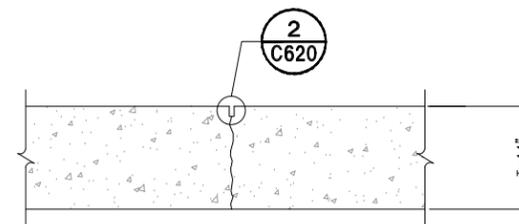
C TYPE C DOWELED CONTRACTION JOINT DETAIL



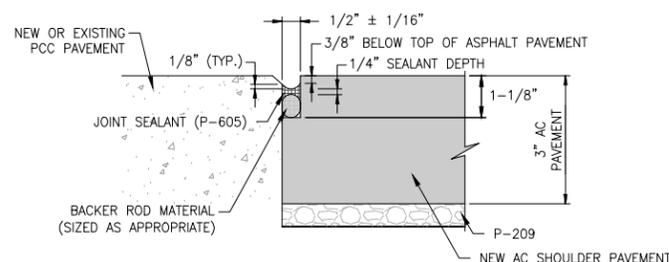
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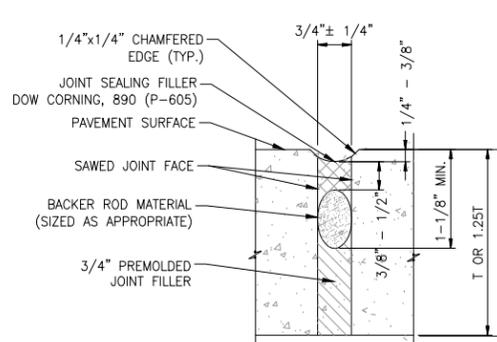
G TYPE G HINGED DUMMY CONTRACTION JOINT EXISTING CONDITION



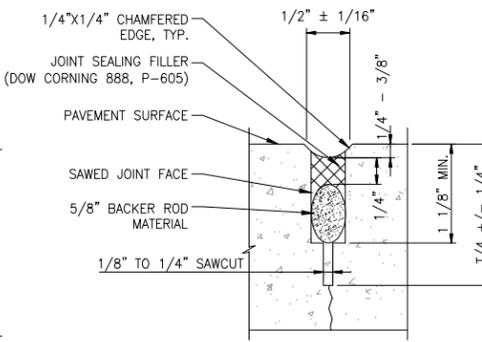
H TYPE H DUMMY CONTRACTION JOINT EXISTING CONDITION



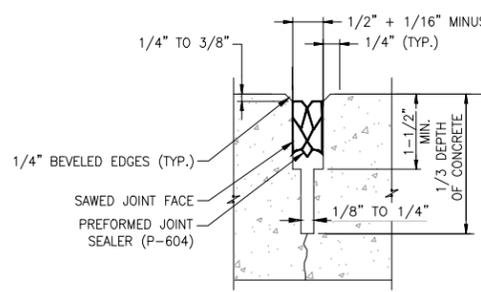
K TYPE K PCC TO AC PAVEMENT DETAIL



1 EXPANSION JOINT



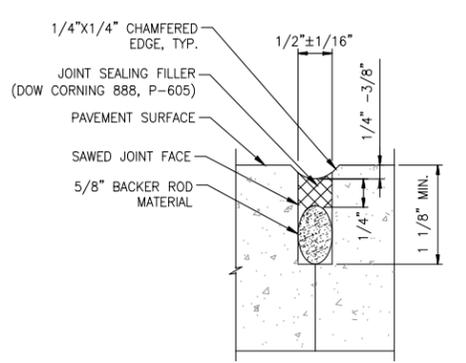
2A CONTRACTION JOINT (SILICONE)



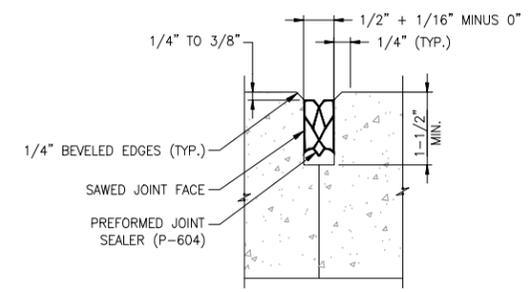
2B CONTRACTION JOINT (PREFORMED)

GENERAL NOTES:

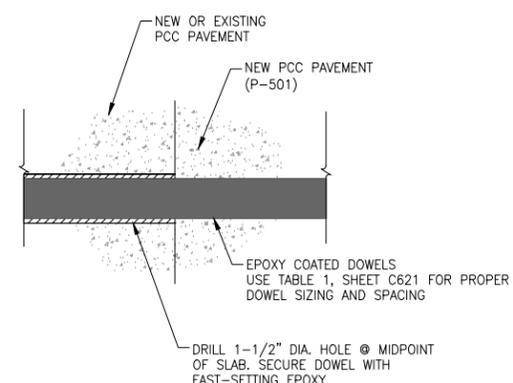
- IF CONTRACTOR ELECTS TO PAVE A 37.5' LANE, TYPE C SHALL BE SUBSTITUTED AT THE 18.75' OFFSET. CONTRACTOR SHALL VERIFY DESIGN GRADES CAN BE MET IF WIDER PAVING LANES ARE CONSTRUCTED.
- ALL DOWELS USED FOR THIS PROJECT SHALL BE EPOXY COATED.
- ALL MATERIALS AND WORK ASSOCIATED WITH NEW PAVEMENT, INCLUDING ASSOCIATED JOINTS, ARE INCIDENTAL TO P-501.
- JOINT RESEALING IN EXISTING PAVEMENT SHALL BE SILICONE SEALANT (DOW CORNING, 888).
- NEW JOINTS IN NEW WORK SHALL BE PREFORMED SEALANT.



3A CONSTRUCTION JOINT (SILICONE)



3B CONSTRUCTION JOINT (PREFORMED)



4 DOWEL DETAIL



REVISIONS

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DATE ISSUED: FEBRUARY 23, 2016
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DRAWN BY: JDP
DESIGNED BY: JFF
RS&H PROJECT NUMBER
224-0124-003
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**JOINT DETAILS
(SHEET 1 OF 2)**

DRAWING NUMBER
C620
SHEET 47 OF 75
**BID
DOCUMENTS**

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c620-c624.dwg
Plotted by: Pauley, Jeff
Plotted on: 2/22/2016 5:41 PM



**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016

REVIEWED BY: ARM

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DESIGNED BY: JFF

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224-0124-003

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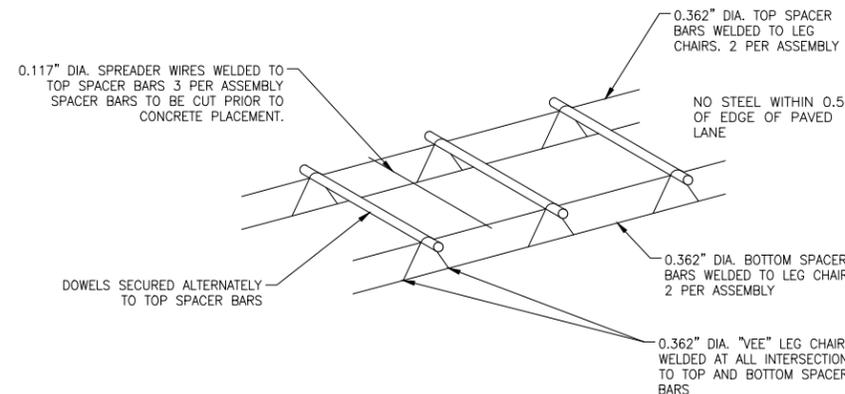
**JOINT DETAILS
(SHEET 2 OF 2)**

DRAWING NUMBER

C621

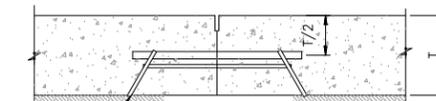
SHEET 48 OF 75

**BID
DOCUMENTS**



NOTES:

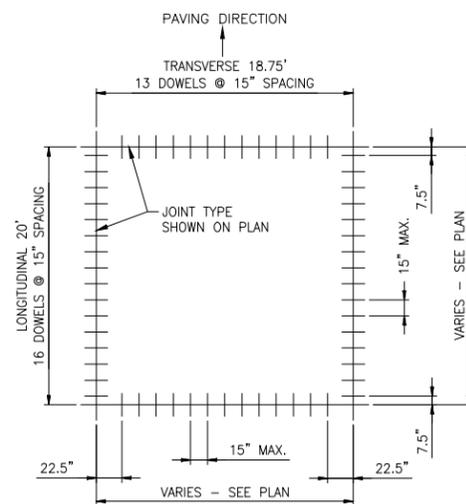
- BASKET MUST BE FIRMLY ATTACHED TO EXISTING OR NEW BASE.
- ALL WIRE SIZES SHOWN ARE MINIMUM SIZE.
- DOWELS SHALL BE HELD FIRMLY IN THE ABOVE WELDED ASSEMBLY.
- ALL DOWELS SHALL BE EPOXY COATED.



NOTES:

- FOR THIS PROJECT T=14" OR T=16"

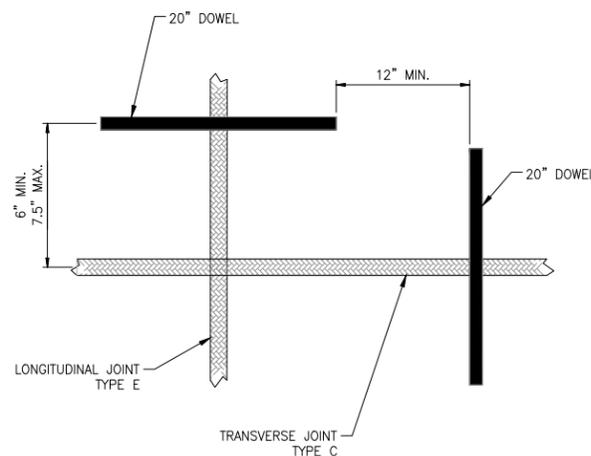
**TYPICAL DOWEL AND TIE BAR
BASKET**
NTS



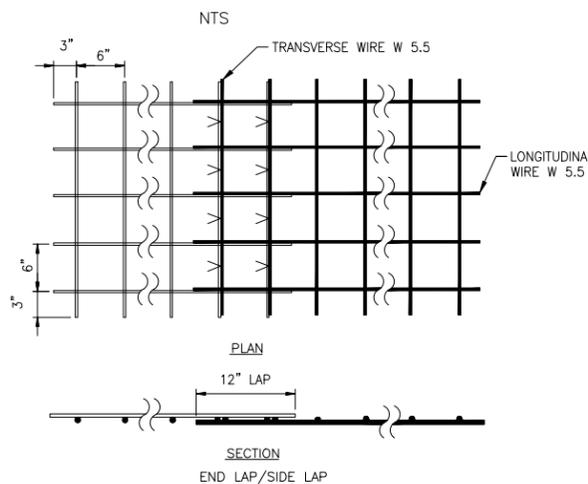
NOTES:

- SEE TABLE 1 ON THIS SHEET FOR THE DIMENSIONS AND SPACING OF STEEL DOWELS.

**TYPICAL DOWEL SPACING FOR
UNREINFORCED SLABS (20' X 18.75' SLABS)**
NTS



**POSITION OF DOWELS AT EDGE OF
JOINT**
NTS



WELDED WIRE FABRIC DETAILS
NTS

NOTES:

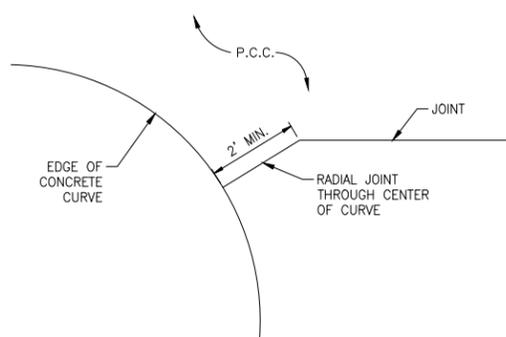
- ALL IRREGULAR SHAPED SLABS SHALL BE REINFORCED.
- ALL REINFORCEMENT SHALL BE INCIDENTAL TO THE INSTALLATION OF PCC PAVEMENT (P-501-8.1)
- REINFORCEMENT SHALL BE PLACED T/3 + 1.5" FROM TOP OF PCC.

DIMENSIONS AND SPACING OF STEEL DOWELS			
SLAB THICKNESS (T)	DIAMETER (d)	LENGTH (L)	SPACING
14"-16"	1 1/4"	20"	15" O.C. MAX.

NOTES:

- ALL DOWELS PLACED TO BE PARALLEL TO TOP OF PAVEMENT GRADES.
- ALL DOWELS PLACED TO HAVE 50% OF LENGTH ACROSS JOINT LINES.
- NO DOWELS SHALL BE PLACED MANUALLY IN PLASTIC CONCRETE.
- ANY WELD ON DOWELS TO HAVE FIELD APPLIED EPOXY COATING APPLIED.
- ALL DOWELS SHALL BE EPOXY COATED.
- CONTRACTOR SHALL MAINTAIN A MINIMUM 2" CLEARANCE BETWEEN LIGHT FIXTURE AND JOINT.

**TABLE 1 - DIMENSIONS AND
SPACING OF STEEL DOWELS**



TYPICAL JOINT AT CURVE
NTS

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

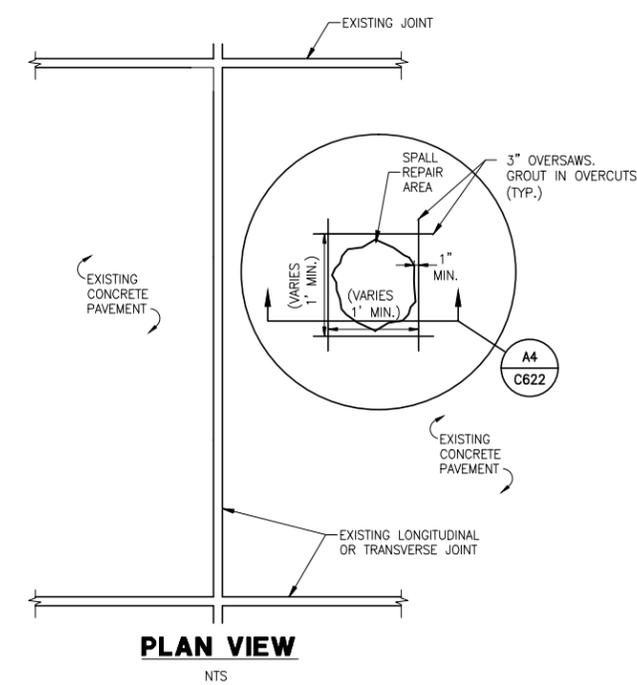
REVISIONS

NO.	DESCRIPTION	DATE

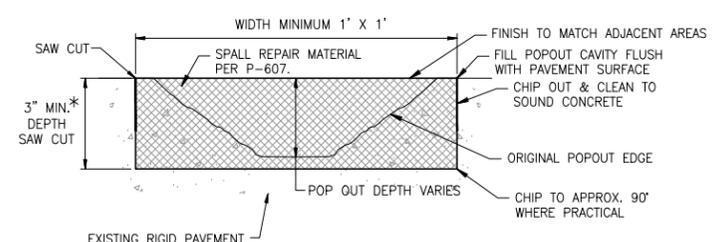
DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF
RS&H PROJECT NUMBER
224-0124-003
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**PCC JOINT
CRACK REPAIR &
RESEAL DETAILS**

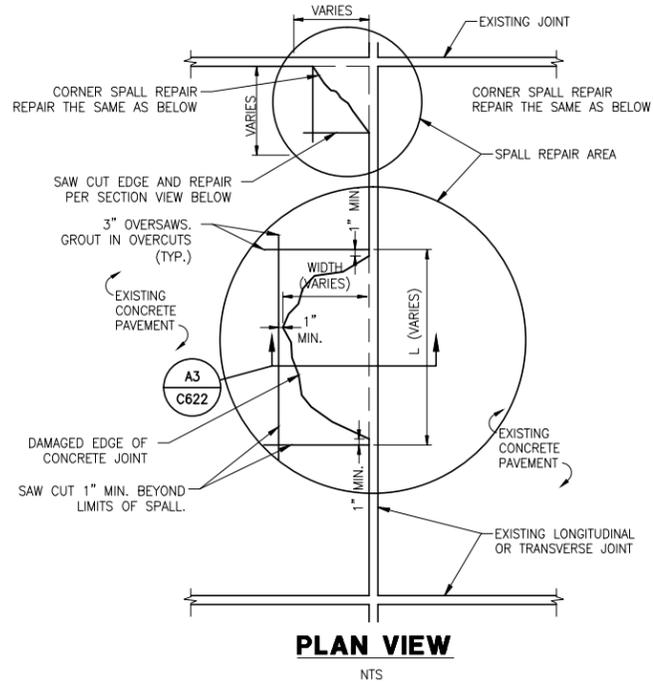
DRAWING NUMBER
C622
SHEET 49 OF 75
**BID
DOCUMENTS**



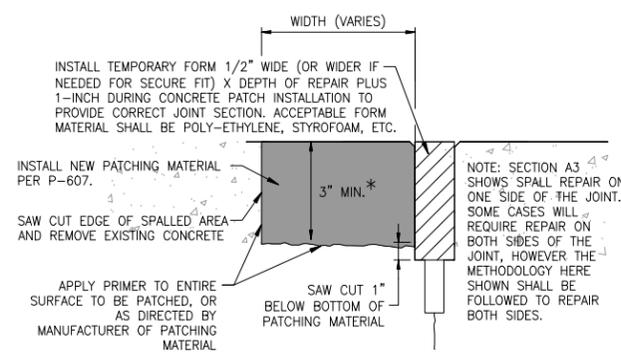
PLAN VIEW
NTS



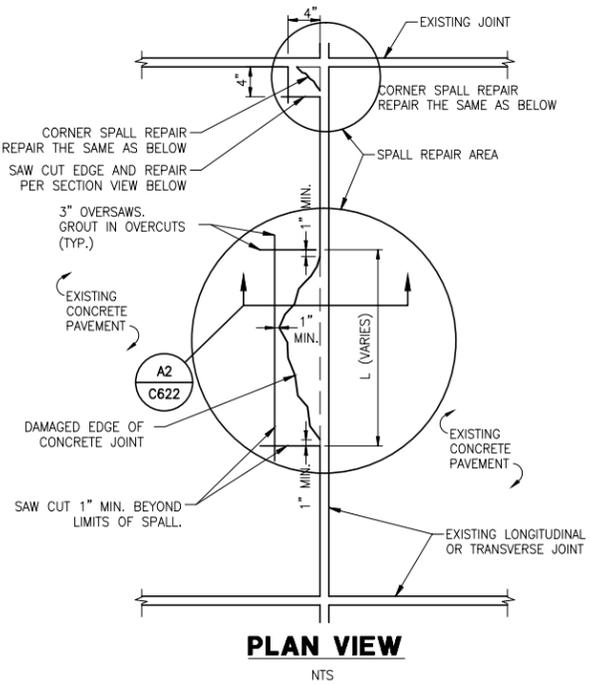
**SECTION A4
TYPICAL POPOUT
SPALL REPAIR**
NTS



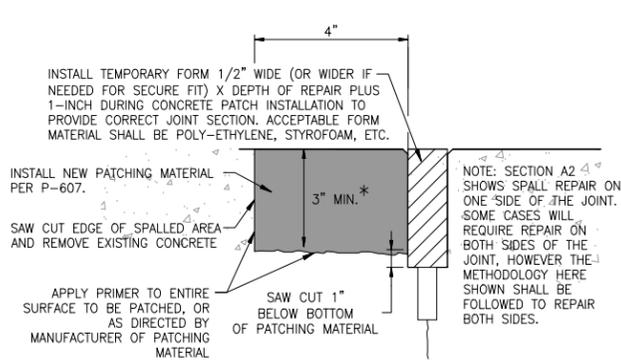
PLAN VIEW
NTS



**SECTION A3
HIGH SPALL REPAIR**
NTS

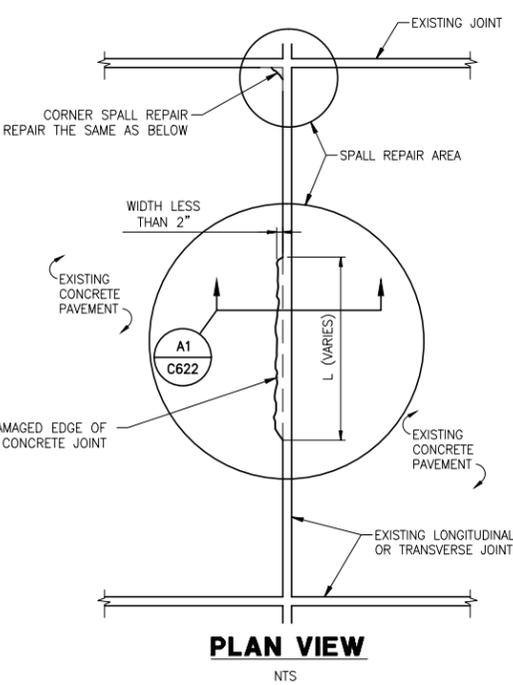


PLAN VIEW
NTS

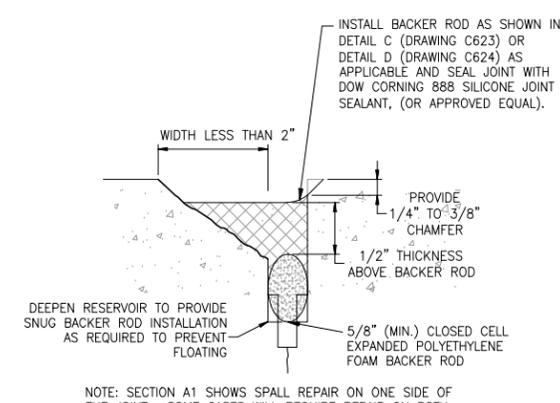


**SECTION A2
MEDIUM SPALL REPAIR**
NTS

- NOTES:**
1. SAW CUT MINIMUM 1" CLEAR OF EXISTING SPALL, 3" MINIMUM DEPTH. REMOVE SPALLED CONCRETE AND EXISTING SEALANT WITHIN PATCH BOUNDARY.
 2. ALL PATCHES SHALL BE RECTANGULAR IN SHAPE.
 3. MAXIMUM ALLOWABLE PNEUMATIC HAMMER SIZE IS 30 POUNDS. MINIMUM PAVEMENT REMOVAL AS INDICATED.
 4. CLEAN AND DRY AREA TO BE PATCHED BY SANDBLASTING AND AIR BLASTING. JOINTS AND EXPOSED CONCRETE SURFACE SHALL BE DUST-FREE PRIOR TO INSTALLATION OF SEALER.
 5. INSTALL NON ABSORBENT BOARD WITHIN THE LIMITS OF THE JOINT SEAL ALONG THE LENGTH OF THE ADJACENT CONCRETE PANEL. PROVIDE SECURE SEAL BETWEEN BOARD AND EXISTING CONCRETE TO ENSURE NEW PATCHING MATERIAL DOES NOT PENETRATE INTO JOINT.
 6. PATCH SHALL BE TROWELED TOWARD THE PATCH PERIMETER, NOT AWAY FROM PATCHED PERIMETER.
 7. AFTER PROPER CURE PERIOD, REMOVE THE NONABSORBENT BOARD AND SAW CUT AND SEAL JOINT PER DETAILS C (DRAWING C623) OR D (DRAWING C624) AS APPLICABLE FOR THE EXISTING JOINT TYPE.



PLAN VIEW
NTS

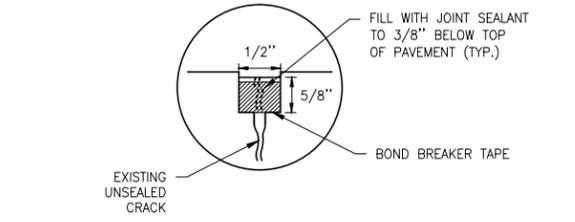
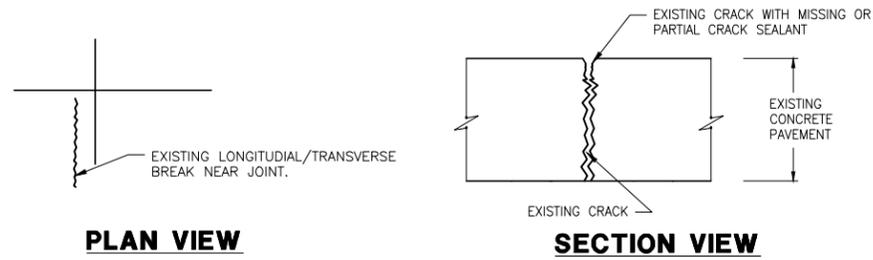


**SECTION A1
LOW SPALL REPAIR**
NTS

- NOTES:**
1. REMOVE SPALLED CONCRETE AND EXISTING SEALANT WITHIN LENGTH OF SPALL. SAW CUT JOINT TO DEEPEN RESERVOIR IN ORDER TO PROVIDE SNUG BACKER ROD FIT TO PREVENT FLOATING.
 2. CLEAN AND DRY AREA TO BE PATCHED BY SANDBLASTING AND AIR BLASTING. JOINTS AND EXPOSED SPALLED SURFACE SHALL BE DUST-FREE PRIOR TO INSTALLATION OF SEALER.
 3. INSTALL BACKER ROD AS SHOWN IN DETAIL C (DRAWING C623) OR DETAIL D (DRAWING C624) AS APPLICABLE AND SEAL JOINT WITH DOW CORNING 888 SILICONE JOINT SEALANT, (OR APPROVED EQUAL).
 4. SEALANT SHALL BE TOOLED SMOOTH AND UNIFORM DEPTH.

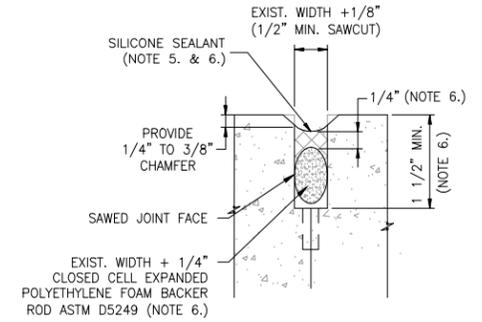
GENERAL NOTES:

1. W INDICATES THE WIDTH OF THE LIMITS OF REPAIR.
2. LOCATION OF REPAIR TO BE DETERMINED IN THE FIELD BY THE ENGINEER OR AS SHOWN ON PLANS.
3. ALL AREAS TO BE CLEAN OF LOOSE DEBRIS AND DUST PRIOR TO APPLICATION OF EPOXY BONDING AGENT, APPLIED PER MANUFACTURER'S RECOMMENDATIONS.
- * 4. ANTICIPATED SPALL REPAIR DEPTH IS 4-INCHES.



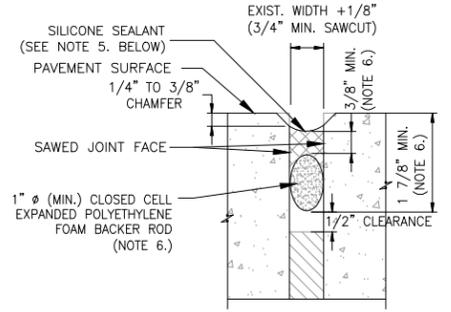
NOTES:

1. ROUTE EXISTING CRACK WITH 1/2" ROUTER TO A DEPTH OF 5/8 INCH.
2. CLEAN AND DRY EXISTING CRACK BY SANDBLASTING AND AIR BLASTING. CRACK SHALL BE DUST-FREE PRIOR TO INSTALLATION OF SEALANT.
3. APPLY BOND BREAKER TAPE TO BOTTOM OF CLEANED AND DUST FREE ROUTED CRACK, PRIOR TO INSTALLATION OF SEALANT.
4. SEAL CRACK WITH DOW CORNING 888 SILICONE JOINT SEALANT, (OR APPROVED EQUAL).



NOTES:

1. THE EXISTING TYPE OF MATERIAL TO BE REMOVED FROM THE JOINTS IS EITHER SILICONE SEALANT, HOT POUR SEALANT, AND/OR PREFORMED SEALANT. THE COST PER LINEAR FOOT FOR REMOVING THE VARIOUS TYPES OF SEALANT IS INCIDENTAL TO THE RESPECTIVE JOINT REPAIR BID ITEM.
2. THE CONTRACTOR SHALL MEASURE A SAMPLE OF JOINT WIDTHS TO ESTABLISH THE AVERAGE EXISTING WIDTH OF JOINTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A BID UNIT COST PER LINEAR FOOT FOR JOINT SEALING THAT WILL PROVIDE FOR ANY VARIATIONS IN ACTUAL JOINT WIDTHS.
3. REMOVE EXISTING SEALANT BY WET SAW CUT WITH CHAMFER AS SHOWN ABOVE TO CLEAN FACE OF EXISTING JOINT.
4. IMMEDIATELY AFTER FINAL SAW CUTTING AND BEVELING IS COMPLETE, THE RESULTING CEMENT SLURRY, LAITANCE, CURING COMPOUND AND OTHER DELTERIOUS MATERIAL SHALL BE COMPLETELY REMOVED FROM THE JOINT BY WATER BLASTING. AFTER CLEANING IS COMPLETE THE JOINT SHALL BE BLOWN OUT WITH COMPRESSED AIR USING 90PSI MINIMUM DRY OIL FREE COMPRESSED AIR. WHEN THE SURFACES ARE CLEAN AND DRY, AND JUST PRIOR TO PLACEMENT OF THE BACKER ROD AND SEALANT, THE JOINT SHALL BE SAND BLASTED WITH TWO PASSES, I.E., ONE PASS ON EACH BOND FACE, THEN COMPRESSED AIR SHALL BE USED TO BLOW OUT THE JOINT AND REMOVE ALL RESIDUAL DUST. JOINT SHALL BE DUST-FREE PRIOR TO INSTALLATION OF SEALANT. SAW CUTS LEFT OPEN FROM ONE WORK DAY TO THE NEXT MUST BE AIRBLASTED AGAIN PRIOR TO PLACEMENT OF JOINT SEALANT MATERIAL.
5. INSTALL BACKER ROD AS SHOWN IN DETAIL ABOVE AND SEAL JOINT PER MANUFACTURER'S RECOMMENDATION WITH DOW CORNING 888 SILICONE JOINT SEALANT, (OR APPROVED EQUAL THAT IS FUEL RESISTANT).
6. FOR CONTRACTION/CONSTRUCTION JOINTS THAT ARE GREATER THAN 1/2-INCH ADJUST SILICONE THICKNESS AND SIZE AND DEPTH OF BACKER ROD PER MANUFACTURER'S RECOMMENDATIONS. DEPTH OF SAWCUT TO BE ADJUSTED ACCORDINGLY.



NOTES:

1. THE EXISTING TYPE OF MATERIAL TO BE REMOVED FROM THE JOINTS IS EITHER SILICONE SEALANT, HOT POUR SEALANT, AND/OR PREFORMED SEALANT. THE COST PER LINEAR FOOT FOR REMOVING THE VARIOUS TYPES OF SEALANT IS INCIDENTAL TO THE RESPECTIVE JOINT REPAIR BID ITEM.
2. THE CONTRACTOR SHALL MEASURE A SAMPLE OF JOINT WIDTHS TO ESTABLISH THE AVERAGE EXISTING WIDTH OF JOINTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COST PER LINEAR FOOT FOR JOINT SEALING THAT WILL PROVIDE FOR ANY VARIATIONS IN ACTUAL JOINT WIDTHS.
3. REMOVE EXISTING SEALANT BY WET SAW CUT WITH CHAMFER AS SHOWN ABOVE TO CLEAN FACE OF EXISTING JOINT.
4. IMMEDIATELY AFTER FINAL SAW CUTTING AND BEVELING IS COMPLETE, THE RESULTING CEMENT SLURRY, LAITANCE, CURING COMPOUND AND OTHER FOREIGN MATERIAL SHALL BE COMPLETELY REMOVED FROM THE JOINT BY WATER BLASTING. AFTER CLEANING IS COMPLETE THE JOINT SHALL BE BLOWN OUT WITH COMPRESSED AIR USING 90PSI MINIMUM DRY OIL FREE COMPRESSED AIR. WHEN THE SURFACES ARE CLEAN AND DRY, AND JUST PRIOR TO PLACEMENT OF THE BACKER ROD AND SEALANT, THE JOINT SHALL BE SAND BLASTED WITH TWO PASSES, I.E., ONE PASS ON EACH BOND FACE, THEN COMPRESSED AIR SHALL BE USED TO BLOW OUT THE JOINT AND REMOVE ALL RESIDUAL DUST. JOINT SHALL BE DUST-FREE PRIOR TO INSTALLATION OF SEALANT. SAW CUTS LEFT OPEN FROM ONE WORK DAY TO THE NEXT MUST BE AIRBLASTED AGAIN PRIOR TO PLACEMENT OF JOINT SEALANT MATERIAL.
5. INSTALL BACKER ROD AS SHOWN IN DETAIL ABOVE AND SEAL JOINT PER MANUFACTURER'S RECOMMENDATION WITH DOW CORNING 888 SILICONE JOINT SEALANT, (OR APPROVED EQUAL THAT IS FUEL RESISTANT).
6. FOR CONTRACTION/CONSTRUCTION JOINTS THAT ARE GREATER THAN 3/4-INCH ADJUST SILICONE THICKNESS AND SIZE AND DEPTH OF BACKER ROD PER MANUFACTURER'S RECOMMENDATIONS. DEPTH OF SAWCUT TO BE ADJUSTED ACCORDINGLY.
7. CONTRACTOR SHALL PROTECT EXISTING ELECTRICAL CONDUCTORS FOR CENTERLINE LIGHTING THAT ARE BURIED IN EXISTING PATCH MATERIAL WHEN SAW CUTTING JOINTS OR REPLACING PREVIOUS FAILED SPALL REPAIRS.



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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF
RS&H PROJECT NUMBER
224-0124-003
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PCC JOINT SPALL REPAIR DETAILS

DRAWING NUMBER
C623
SHEET 50 OF 75
BID DOCUMENTS

Drawing: I:\P\2240124.003 colorado springs - taxiway c recon\Cad\0620-0624.dwg
 Plotted by: Pauley, Jeff
 Plotted on: 2/22/2016 5:42 PM



**TAXIWAY C
RECONSTRUCTION**

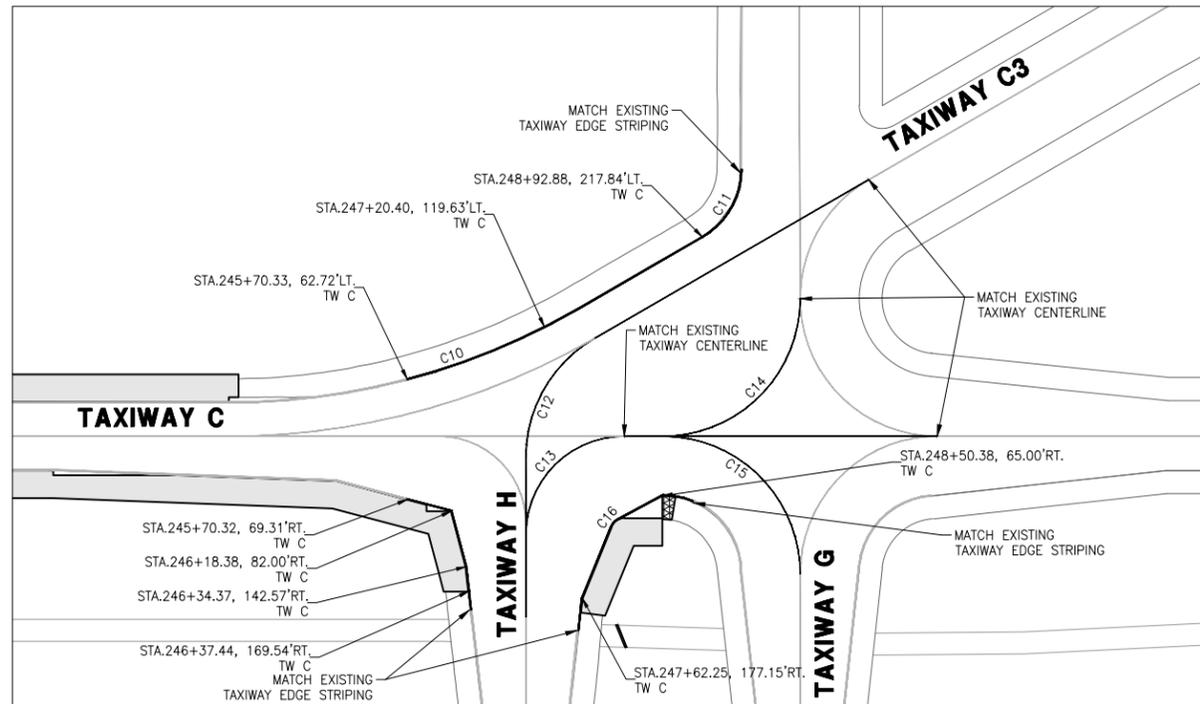
**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

LEGEND:

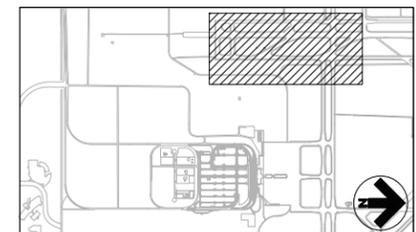
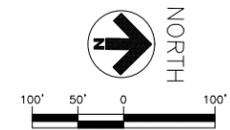
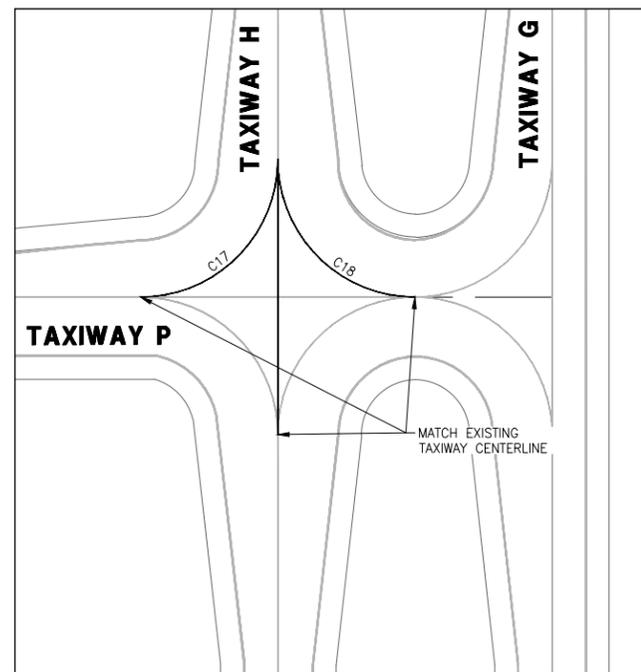
- EXISTING/FUTURE AIRFIELD MARKINGS
- NEW AIRFIELD MARKINGS

NOTES:

1. SEE TYPICAL PAVEMENT MARKING DETAILS SHEET C711.
2. CONTRACTOR SHALL REPAINT AT A MINIMUM 25' BEYOND CONSTRUCTION LIMITS.



CURVE TABLE			
Curve #	Radius	Station	Offset
C10	765.00'	243+75.54	802.50' RT. TW C
C11	85.00'	248+50.32	291.47' RT. TW C
C12	150.00'	248+50.32	23.20' RT. TW C
C13	107.50'	248+07.88	107.50' RT. TW C
C14	150.00'	248+50.38	150.00' LT. TW C
C15	150.00'	248+50.38	150.00' RT. TW C
C16	15.00'	248+08.34	104.50' RT. TW C
C17	150.00'	131+49.64	150.00' RT. TW H
C18	150.00'	131+49.64	150.00' LT. TW H



REVISIONS

NO.	DESCRIPTION	DATE

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DRAWN BY: JDP
DESIGNED BY: JFF

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**PAVEMENT
MARKING
PLAN
PHASE 1A**

DRAWING NUMBER

C701

SHEET 51 OF 75

**BID
DOCUMENTS**





**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

LEGEND:

- EXISTING/FUTURE AIRFIELD MARKINGS
- NEW AIRFIELD MARKINGS

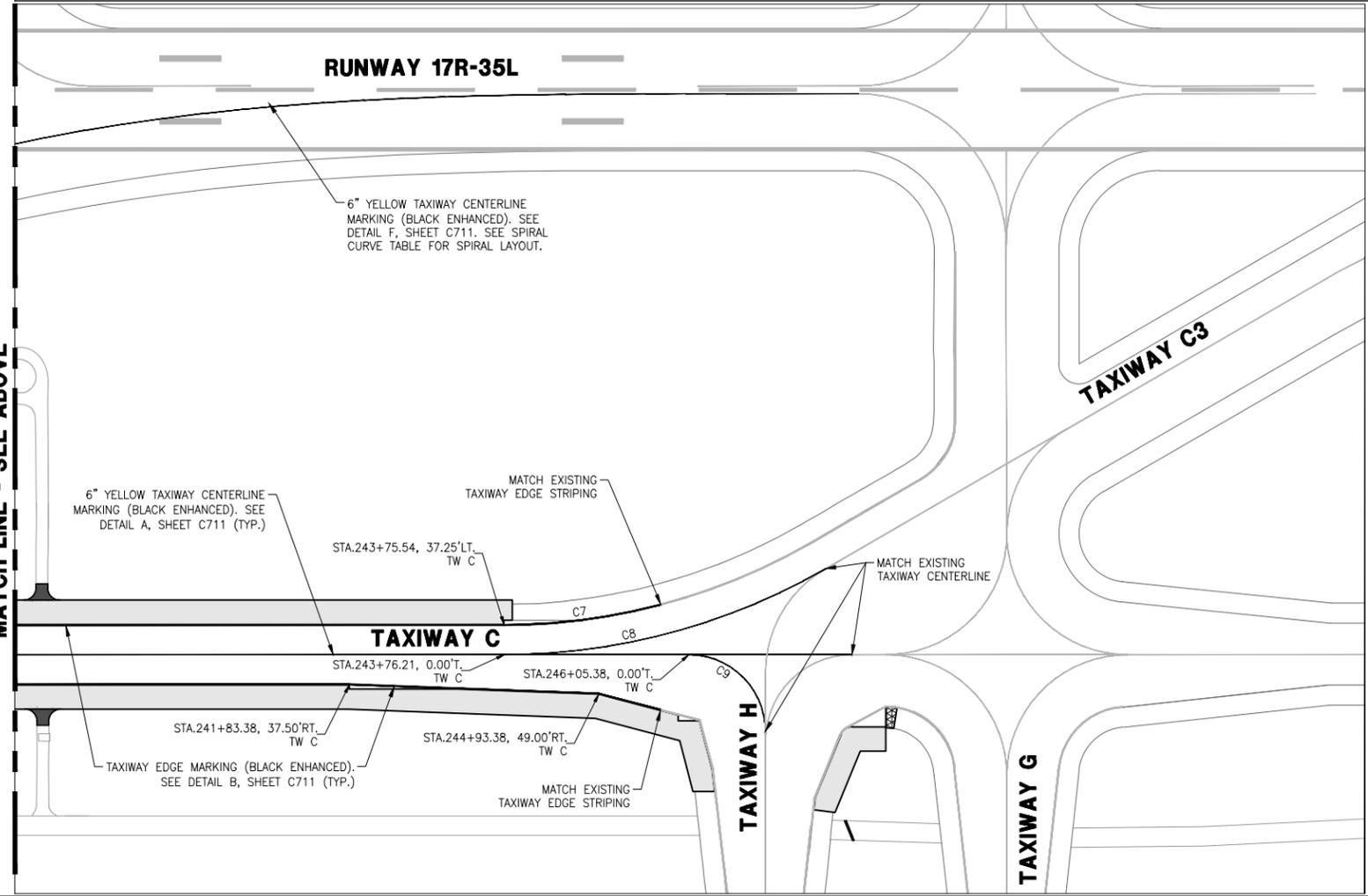
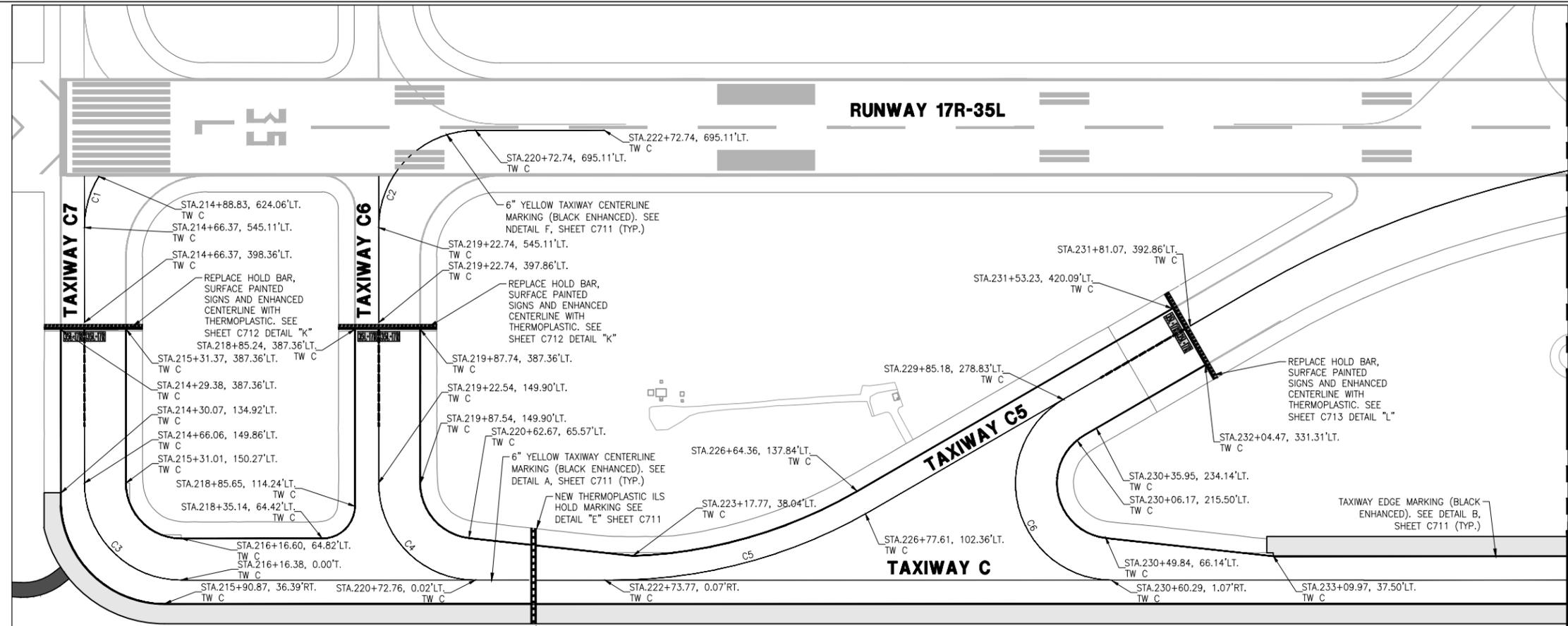
NOTES:

1. SEE TYPICAL PAVEMENT MARKING DETAILS SHEET C711.
2. CONTRACTOR SHALL REPAINT AT A MINIMUM 25' BEYOND CONSTRUCTION LIMITS.

CURVE TABLE

Curve #	Radius	Station	Offset
C1	150.00	216+16.38	545.25' LT. TW C
C2	150.00	220+72.75	545.25' LT. TW C
C3	150.00	216+16.38	150.00' LT. TW C
C4	150.00	220+72.75	150.00' LT. TW C
C5	800.00'	222+86.03	800.00' LT. TW C
C6	150.00'	230+60.03	150.00' LT. TW C
C7	765.00'	243+75.54	802.50' LT. TW C
C8	800.00'	243+76.21	800.00' LT. TW C
C9	95.00'	246+05.38	95.00' RT. TW C

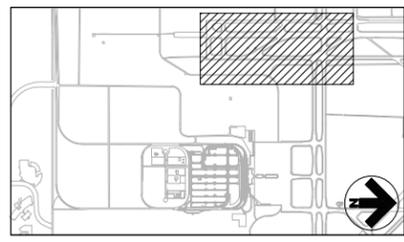
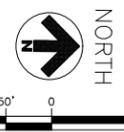
MATCH LINE - SEE BELOW



MATCH LINE - SEE ABOVE

TAXIWAY C SPIRAL TABLE

STATION	OFFSET	RUNWAY/TAXIWAY
232+98.58	455.50'	TW C
233+33.33	479.70'	TW C
233+77.93	502.30'	TW C
234+23.28	523.34'	TW C
234+69.32	542.85'	TW C
235+15.95	560.88'	TW C
235+63.12	577.47'	TW C
236+10.75	592.66'	TW C
236+58.79	606.51'	TW C
237+07.19	619.08'	TW C
237+55.88	630.41'	TW C
238+04.84	640.57'	TW C
238+54.01	649.61'	TW C
239+54.01	657.60'	TW C
239+52.28	664.60'	TW C
240+02.51	670.68'	TW C
240+52.23	675.89'	TW C
241+02.04	680.30'	TW C
241+51.90	683.98'	TW C
242+01.81	686.99'	TW C
242+51.75	689.41'	TW C
243+51.70	692.29'	TW C
243+51.70	692.70'	TW C
244+01.69	693.72'	TW C
244+51.68	694.40'	TW C
245+01.68	694.81'	TW C
245+51.68	695.02'	TW C
246+01.68	695.10'	TW C
246+51.68	695.11'	TW C
248+16.10	695.11'	TW C



REVISIONS

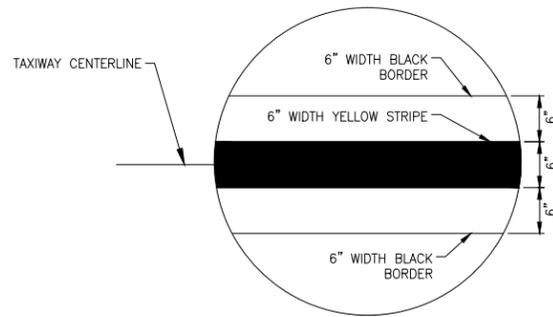
NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
REVIEWED BY: ARM
DRAWN BY: JDP
DESIGNED BY: JFF
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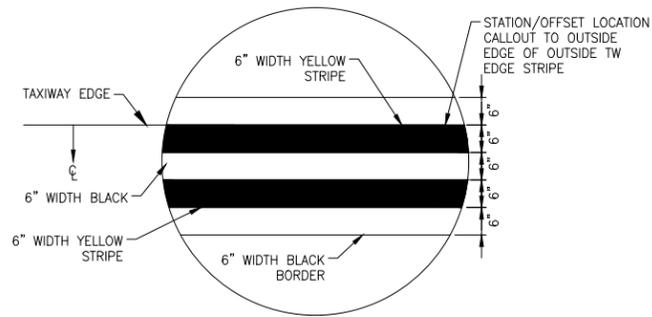


**PAVEMENT
MARKING
PLAN
PHASE 1**

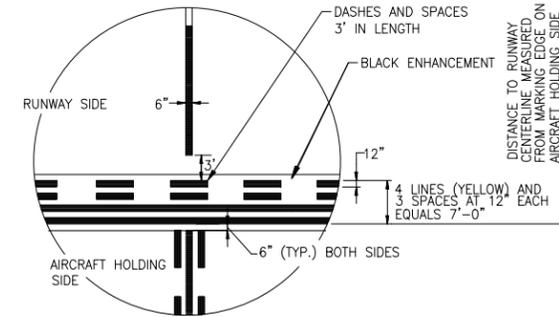
DRAWING NUMBER
C702
SHEET 52 OF 75
**BID
DOCUMENTS**



DETAIL 'A'
TAXIWAY CENTERLINE MARKING
NTS

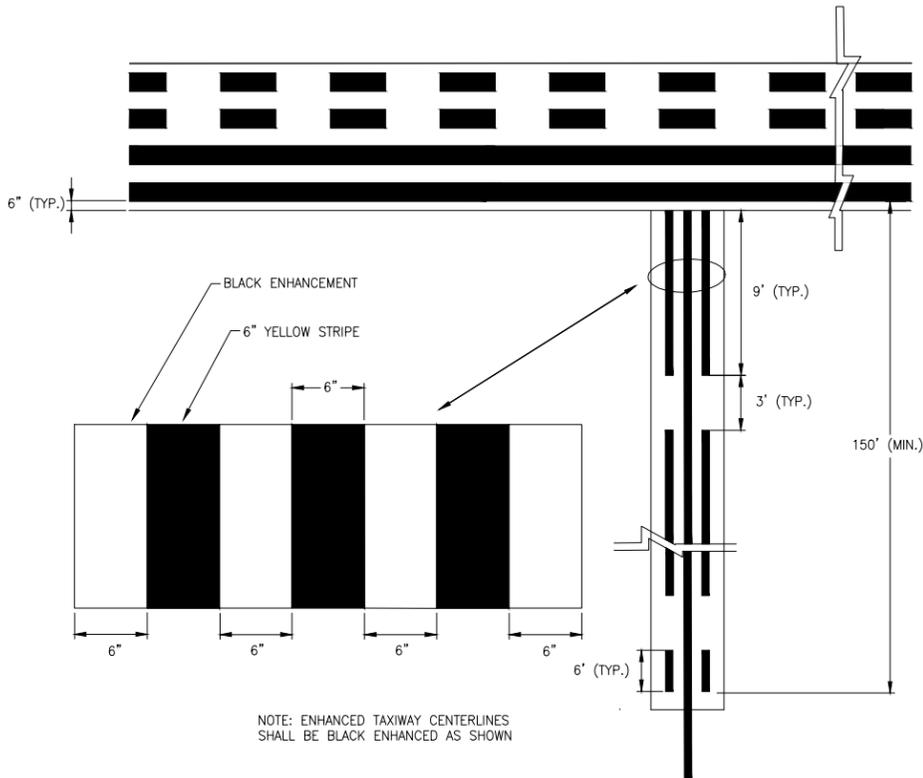


DETAIL 'B'
TAXIWAY EDGE MARKING
NTS



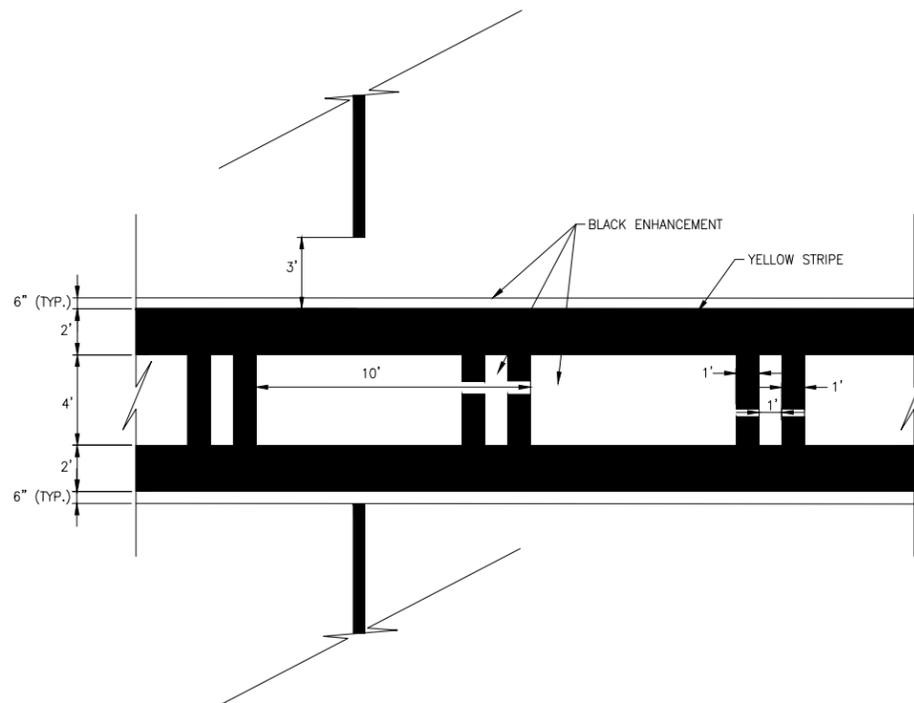
DETAIL 'C'
RUNWAY HOLDING POSITION MARKING
NTS

NOTE: TAXIWAY EDGE MARKINGS TERMINATE AT HOLD POSITION MARKINGS. HOLD POSITION MARKINGS ARE LOCATED AS SHOWN ON SHEET C712.



NOTE: ENHANCED TAXIWAY CENTERLINES SHALL BE BLACK ENHANCED AS SHOWN

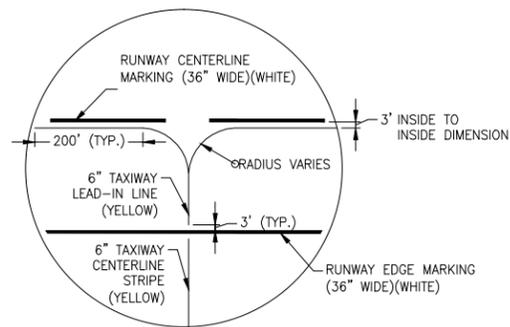
DETAIL 'D'
ENHANCED TAXIWAY CENTERLINE MARKING DETAIL
NTS



DETAIL 'E'
ENHANCED ILS HOLD BAR MARKING DETAIL
NTS

NOTES:

1. DIMENSIONS SHOWN ARE TO EDGE OF WHITE OR YELLOW PAINT.
2. WHITE MARKINGS ON RUNWAY SHALL HAVE TYPE I, GRADATION A REFLECTIVE BEADS. ALL OTHER PAINT SHALL HAVE TYPE III REFLECTIVE BEADS. BLACK PAINT SHALL NOT HAVE BEADS.



DETAIL 'F' - TAXIWAY TO RUNWAY CENTER LINE INTERSECTION DETAIL
NTS

NOTE: TAXIWAY LEAD-IN MARKING SHALL NOT CROSS AND SHALL STOP 6" SHORT OF ALL RUNWAY MARKINGS. BLACK OUTLINE ALREADY EXISTS, ONLY YELLOW TAXIWAY CENTERLINE STRIPE SHALL BE PAINTED.



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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

REVISIONS		
NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
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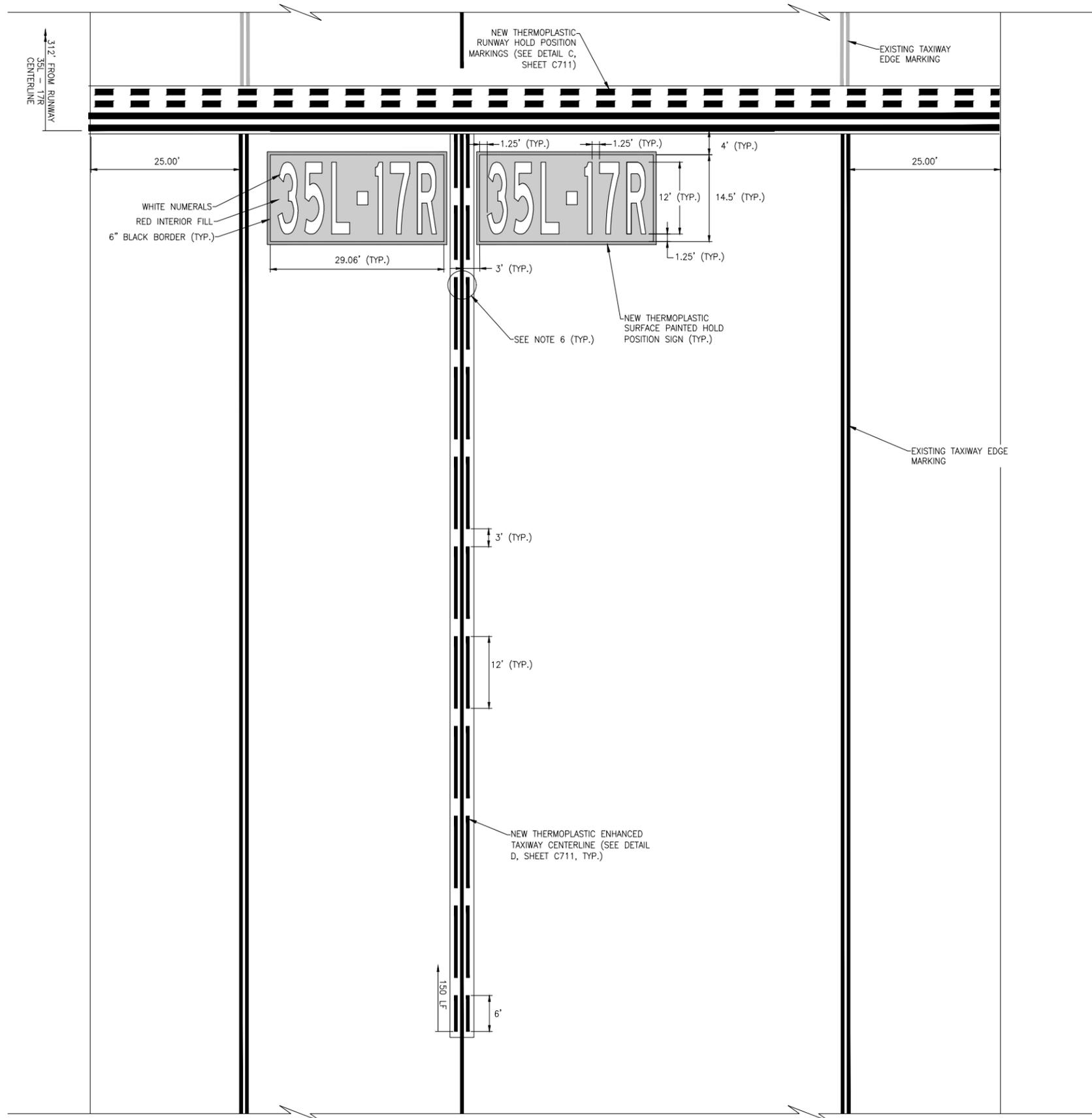


PAVEMENT MARKING DETAILS (SHEET 1 OF 3)

DRAWING NUMBER
C711
SHEET 53 OF 75
BID DOCUMENTS

NOTES:

1. SURFACE PAINTED HOLD SIGNS SHALL HAVE RED BACKGROUND WITH WHITE INSCRIPTIONS, GLASS BEADS, AND A 6" BLACK BORDER.
2. THE WIDTH OF THE INSCRIPTIONS SHALL BE PROPORTIONAL TO INSCRIPTIONS PER AC 150/5340-1L, APPENDIX B.
3. ALL INSCRIPTIONS ARE 12' IN HEIGHT UNLESS SPECIFIED OTHERWISE.
4. ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PARALLEL TO THE RUNWAY HOLDING POSITION MARKING AND PLACED ON THE TAXIWAY AS SHOWN.
5. THE NEAREST EDGE OF THE SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PLACED 4' (FEET) PRIOR TO THE HOLDING POSITION MARKING.
6. THE NEAREST EDGE OF THE SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PLACED 3' (FEET) FROM THE CENTER OF THE TAXIWAY CENTERLINE.
7. SEE PAVEMENT MARKING PLAN SHEETS FOR LOCATIONS AND INSCRIPTIONS



DETAIL 'K'
TAXIWAY C6 AND C7 HOLD POSITION MARKING
 NTS



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**COLORADO SPRINGS
 AIRPORT**

**TAXIWAY C
 RECONSTRUCTION**

**SCHEDULE I:
 RECONSTRUCT
 TAXIWAY C FROM
 TAXIWAY C7
 THROUGH TAXIWAY H
 AND
 REHABILITATE
 PORTIONS OF
 TAXIWAYS C3, C5,
 C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

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DRAWN BY: JDP

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**PAVEMENT
 MARKING
 DETAILS
 (SHEET 2 OF 3)**

DRAWING NUMBER

C712

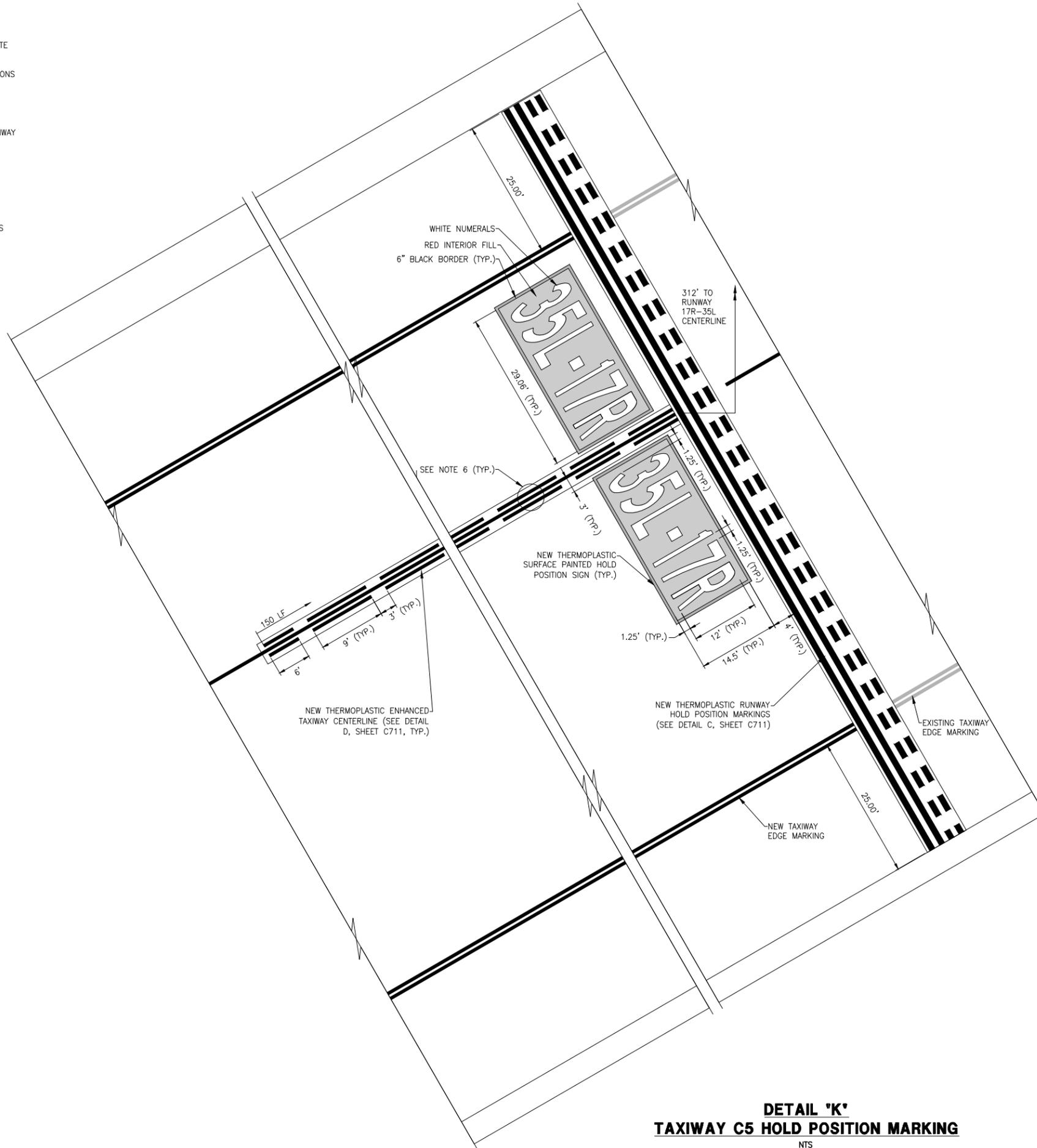
SHEET 54 OF 75

**BID
 DOCUMENTS**

Drawing: I:\P\2240124-003 colorado springs - taxiway c recon\Cad\VC712.dwg
 Plotted by: Paulay, Jeff
 Plotted on: 2/22/2016 6:05 PM

NOTES:

1. SURFACE PAINTED HOLD SIGNS SHALL HAVE RED BACKGROUND WITH WHITE INSCRIPTIONS, GLASS BEADS, AND A 6" BLACK BORDER.
2. THE WIDTH OF THE INSCRIPTIONS SHALL BE PROPORTIONAL TO INSCRIPTIONS PER AC 150/5340-1L, APPENDIX B.
3. ALL INSCRIPTIONS ARE 12' IN HEIGHT UNLESS SPECIFIED OTHERWISE.
4. ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PARALLEL TO THE RUNWAY HOLDING POSITION MARKING AND PLACED ON THE TAXIWAY AS SHOWN.
5. THE NEAREST EDGE OF THE SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PLACED 4' (FEET) PRIOR TO THE HOLDING POSITION MARKING.
6. THE NEAREST EDGE OF THE SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PLACED 3' (FEET) FROM THE CENTER OF THE TAXIWAY CENTERLINE.
7. SEE PAVEMENT MARKING PLAN SHEETS FOR LOCATIONS AND INSCRIPTIONS



DETAIL 'K'
TAXIWAY C5 HOLD POSITION MARKING

NTS



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**COLORADO SPRINGS
AIRPORT**

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016

REVIEWED BY: ARM

DRAWN BY: JDP

DESIGNED BY: JFF

RS&H PROJECT NUMBER

224-0124-003

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**PAVEMENT
MARKING
DETAILS
(SHEET 3 OF 3)**

DRAWING NUMBER

C713

SHEET 55 OF 75

**BID
DOCUMENTS**

Drawing: I:\P\2240124-003 colorado springs - taxiway c recon\Cad\VC712.dwg
 Plotted by: Paulay, Jeff
 Plotted on: 2/22/2016 6:05 PM



**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
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REVISIONS

NO.	DESCRIPTION	DATE

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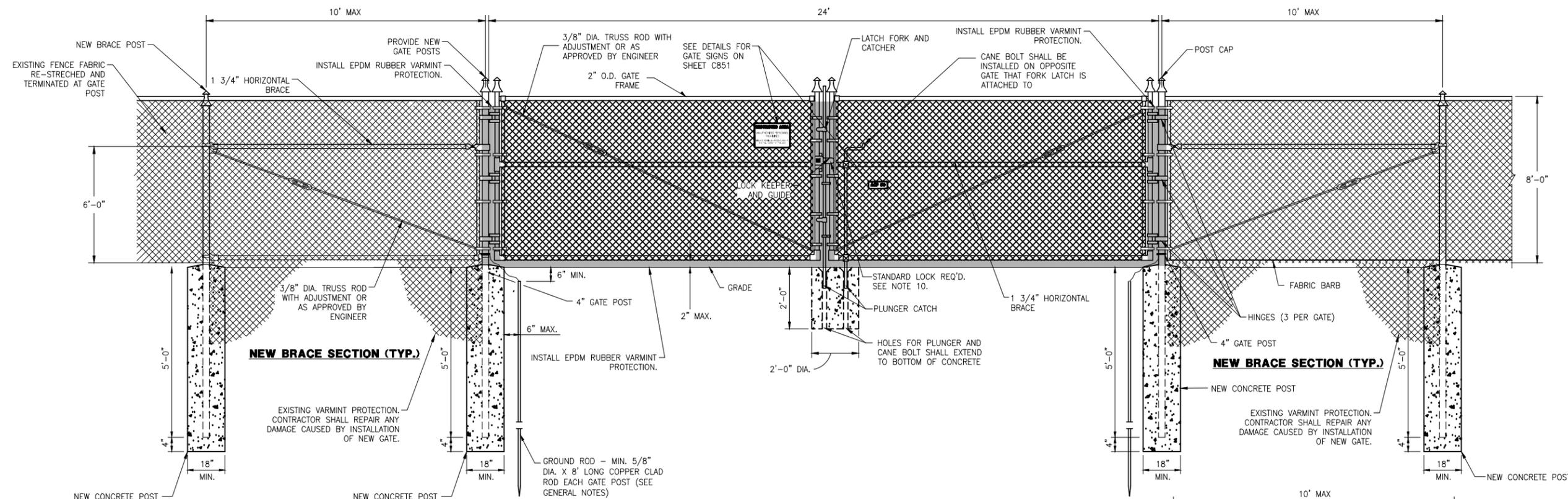
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**TEMPORARY
FENCE AND
SECURITY
BRACING DETAILS**

DRAWING NUMBER

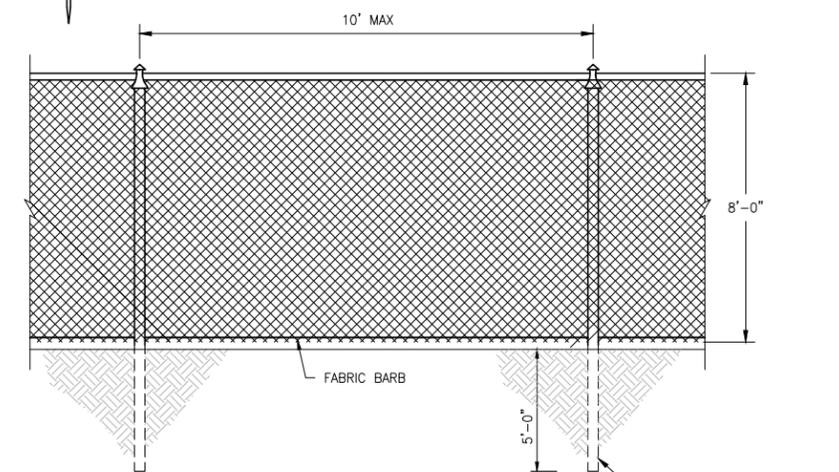
C850
SHEET 56 OF 75

**BID
DOCUMENTS**



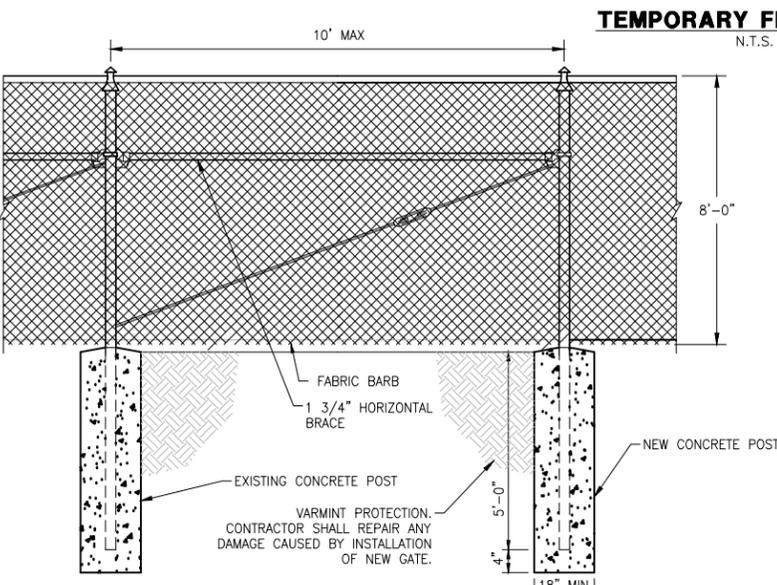
NEW CHAINLINK DOUBLE SWING GATE IN EXISTING FENCE DETAIL

N.T.S.



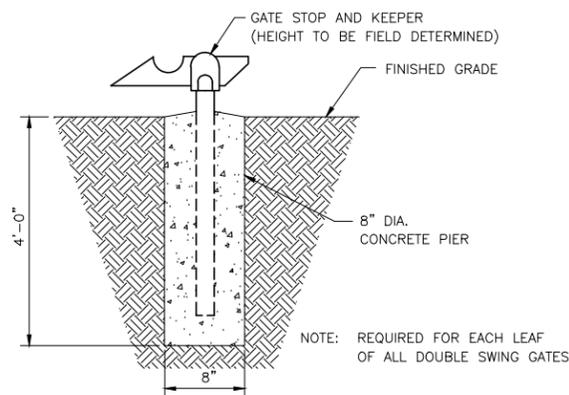
TEMPORARY FENCE DETAIL

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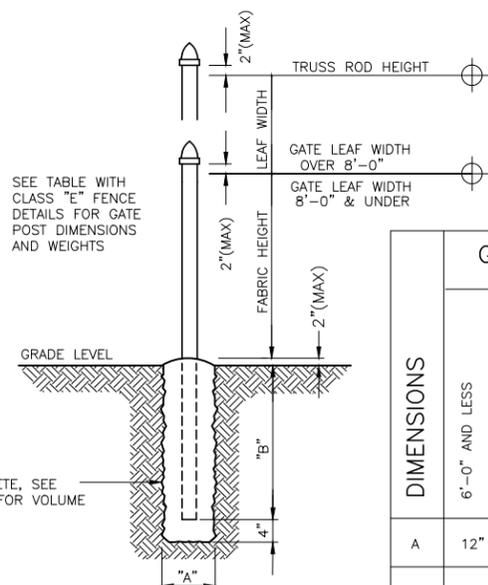
TEMPORARY BRACED FENCE DETAIL

N.T.S.



GATE STOP AND KEEPER

N.T.S.



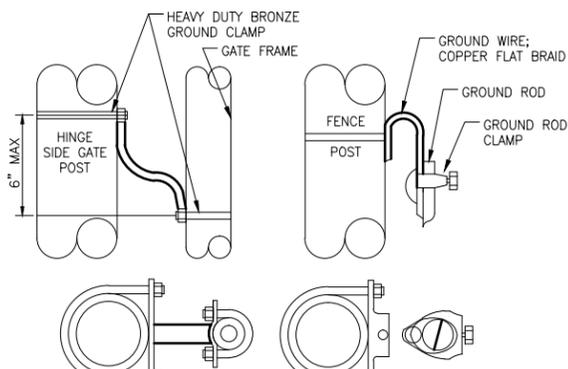
DETAIL (TYP)

GATE POST & CONCRETE BASE

N.T.S.

DIMENSIONS	GATE WIDTH (ONE LEAF)			
	6'-0" AND LESS	OVER 6'-0" TO 10'-0"	OVER 10'-0" TO 15'-0"	OVER 15'-0" TO 18'-0"
A	12"	18"	20"	24"
B	48"	60"	60"	60"

SCHEDULE



GATE GROUND STRAP CONNECTION

N.T.S.

NOTES:

- CONTRACTOR SHALL CONCRETE ENCASE INTERIM POSTS FOR STABILITY OF TEMP FENCE IF REQUIRED
- BRACED FENCE SECTIONS SHALL BE INST/ TEMP



GENERAL NOTES:

1. **DIMENSIONS**

ALL DIMENSIONS, SIZES, GAUGES, WEIGHTS, OR THICKNESSES SHOWN ARE THE MINIMUM ACCEPTABLE, UNLESS OTHERWISE INDICATED.

2. **SPECIFICATIONS**

THE FEDERAL SPECIFICATIONS SHOWN SHALL BE INTERPRETED TO MEAN THE LATEST ISSUE OR AMENDMENT OF SUCH SPECIFICATION, IN EFFECT ON THE DATE OF PLAN APPROVAL FAA SPECIFICATIONS SHOWN ARE FROM THE FEDERAL AVIATION ADMINISTRATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS" MATERIALS AND CONSTRUCTION METHODS NOT DETAILED HEREIN, SHALL BE IN ACCORDANCE WITH THE FAA SPECIFICATION LISTED FOR EACH CLASS OF FENCE, UNLESS OTHERWISE NOTED ON THE CONTRACT PLANS. GATES ARE MEASURED IN UNITS FOR EACH TYPE AND SIZE INSTALLED.

3. **FABRIC INSTALLATION**

WIRE OR FABRIC ON FENCES SHALL BE ON THE SIDE OF POSTS AWAY FROM THE AIRFIELD.

FENCES BETWEEN TERMINAL BUILDINGS AND APRONS, OR ADJACENT TO SIDEWALKS, SHALL HAVE FABRIC ON THE BUILDING OR SIDEWALK SIDE OF POSTS. ALL OTHER BUILDING AREA FENCES SHALL HAVE FABRIC ON SIDE OF POSTS AWAY FROM BUILDINGS OR INSTALLATION BEING FENCED, UNLESS OTHERWISE NOTED.

4. **CONCRETE**

CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,500 PSI. FOOTING TOPS SHALL BE 1" MINIMUM ABOVE GROUND AT THE POST, AND TROWEL FINISHED TO SLOPE AWAY FROM POST.

5. **OPENINGS UNDER FENCE**

ANY OPENING UNDER FENCES, WHEREIN THE BOTTOM FENCE WIRE IS MORE THAN 2" ABOVE GROUND AND THE TOTAL AREA OF OPENING IS 96 SQ. INCHES OR MORE, SHALL BE CLOSED.

OPENINGS LESS THAN 18" HIGH SHALL BE CLOSED BY INSTALLING ONE OR MORE ADDITIONAL LINE POSTS NEAR THE OPENING CENTER AND STRETCHING STRANDS OF BARBED WIRE BETWEEN THE EXTRA POSTS AND ADJACENT LINE POSTS AT 6" MAXIMUM VERTICAL SPACING, VERTICAL STRANDS OF BARBED WIRE SHALL BE INSTALLED AT 12" MAXIMUM HORIZONTAL SPACING AND TIED TO ALL HORIZONTAL STRANDS AND THE FABRIC BOTTOM WIRE. THIS WORK SHALL BE INCIDENTAL TO FENCE INSTALLATION COSTS.

6. **GROUND RODS**

EACH GATE LEAF FRAME SHALL BE CONNECTED TO THE GATE POST BY A BRAIDED, FLEXIBLE, COPPER STRAP. EACH GATE POST SHALL BE GROUNDED AS DETAILED ON FENCE DETAILS. GROUND WIRE SHOULD BE TIED TO STEEL FENCE POSTS AT 2 FEET INTERVALS. BONDING WIRE BETWEEN GATE POST NEED NOT BE INSTALLED WHERE EXISTING ROAD PAVING WOULD MAKE INSTALLATION IMPRACTICAL. GROUND CLAMP SIMILAR TO BORNDY TYPE "GAR" PLACED AROUND POST END ONE OR MORE STRANDS OF FENCE. CONCRETE BASE—NO GROUND CONNECTION NECESSARY WHERE POST IS NOT SET IN CONCRETE. WIRE TO SIMILAR INSTALLATION ON OTHER SIDE OF GATE WHERE EVER GATE OCCURS. GROUND RODS SHALL BE 5/8" x 8" MIN. SIZE, COPPER CLAD. ALL GROUND RODS TO BE TESTED WITH MAXIMUM RESISTANCE TO GROUND OF 10 OHMS. GROUND CABLE SHALL BE NO. 6 AWG. MIN., BARE STRANDED COPPER WIRE. FOR FENCES GROUNDING SHALL BE AS DETAILED..

7. **FENCE LINE AND ALIGNMENT**

FENCE LINES SHALL BE CLEARED AND MOWED OF ALL OBSTRUCTIONS AND SMOOTH GRADED TO THE GENERAL CONTOUR OF THE ADJACENT GROUND FOR 5' MAX WIDTH. STUMPS AND ROOTS NOT INTERFERING WITH FENCE CONSTRUCTION, MAY BE CHIPPED TO GROUND LEVEL.

THE FENCE SHALL BE CONSTRUCTED VERTICAL, STRAIGHT AND TRUE TO LINE. THE LONGITUDINAL GRADIENT SHALL PARALLEL THE GENERAL SLOPE OF THE GROUND.

8. **UTILITY LOCATIONS**

CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO DIGGING.

MATERIAL NOTES: CHAIN LINK FENCE

- FABRIC:** 2"x2" No. 9 GAUGE WIRE MESH WITH GALVANIZED STEEL WIRE PER ASTM A 392, CLASS 2.
- TOP RAILS:** FENCES SHALL HAVE TOP RAILS AND 7 GAUGE COILED SPRING TENSION WIRES PROVIDED, BOTTOM.
- POSTS:** SEE TECHNICAL SPECIFICATIONS ITEM F-162
- FABRIC FASTENERS:** MINIMUM 3/16" x 3/4" STRETCHER BAR, BANDED TO TERMINAL POSTS; OR INTEGRAL FABRIC FITTINGS ON TERMINAL POSTS. USE NO. 6 WIRE CLIPS FOR LINE POSTS AND NO. 9 WIRE CLIPS FOR BRACES, RAILS, AND TENSION WIRES. ALL FASTENERS SPACED 14" MAX. VERTICALLY, 24" MAX. HORIZONTALLY. ALL FABRIC FASTENERS SHALL BE SAME MATERIAL AS FENCE FABRIC.
- COATINGS:** SEE TECHNICAL SPECIFICATIONS ITEM F-162
- FENCE HEIGHT:** THE FABRIC HEIGHT SHALL BE EIGHT FEET.

GATE NOTES:

- GATE HINGES AND FITTINGS SHALL BE HEAVY PATTERN AND EASILY OPERATED BY ONE PERSON. BOTTOM HINGE SHALL BE BALL AND SOCKET, OR EQUAL, CAPABLE OF SUPPORTING ENTIRE WEIGHT OF GATE LEAF.
- GATES SHALL HAVE A SELF LATCHING DEVICE WITH PROVISIONS FOR LOCKING.
- GATE KEEPERS SHALL BE PROVIDED FOR ANY LEAF MORE THAN 5' WIDE TO HOLD IT IN AN OPEN POSITION.
- DOUBLE GATES WITH LEAFS MORE THAN 4' WIDE SHALL BE PROVIDED WITH LOCKABLE CANE BOLTS AND SOCKETS.
- WELDS ON STEEL FRAMES SHALL BE GROUND SMOOTH, THOROUGHLY CLEANED AND GALVANIZED.
- GATES AND FITTINGS SHALL BE PER REQUIREMENTS FOR POSTS, RAILS & BRACES, ITEM F-162.
- SWING GATES — GATE FRAMES SHALL BE CONSTRUCTED 2" O.D. GALVANIZED STEEL PIPE. GATE FRAME SHALL BE WELDED AT ALL CORNERS TO FORM RIGID PANEL, AND FILLED WITH FABRIC TO MATCH THE FENCE. THE HINGES SHALL ALLOW THE GATE TO SWING 180 DEGREES. THE LATCHES FOR THE DOUBLE GATES SHALL BE HEAVY DUTY AND HAVE A PROVISION FOR PADLOCKING.
- STAINLESS STEEL CHAIN WITH COMMERCIAL GRADE KEYED LOCKS SHALL BE PROVIDED AT EACH GATE LOCATION. CHAINS AND LOCKS SHALL MATCH EXISTING AIRPORT STANDARDS. THE COST IS INCLUDED IN GATE UNIT PRICE.
- CONTRACTOR SHALL REMOVE EXISTING VARMINT PROTECTION (BURIED 5' CHAINLINK FENCE) AT THE GATE OPENING.
- CONTRACTOR SHALL INSTALL EPDM RUBBER MAT (OR APPROVED EQUAL) ON ALL OPENINGS. THIS IS REQUIRED AT BOTH ENDS OF THE GATE, AT THE CENTER OF THE GATE WHERE THE TWO SIDES COME TOGETHER AND ALONG THE BOTTOM OF THE GATE. THE EPDM RUBBER SHALL BE AFFIXED TO ONE SIDE OF THE OPENING ONLY AND BE OF SUCH RIGIDITY THAT IT COVERS THE GAP AND PREVENTS ENTRY BY VARMINTS. THE EPDM VARMINT PROTECTION SHALL BE AFFIXED BY USE OF STEEL BARS AND STAINLESS STEEL BOLTS TO SANDWICH THE EPDM TO THE FENCE. INSTALLATION SHALL BE INCIDENTAL TO THE GATE INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE ITEMS FOR USE BY COS TO ESTABLISH CARD READER SECURITY ACCESS AT THE NEWLY INSTALLED GATE. SEE TABLE THIS SHEET FOR ITEMS TO BE SUPPLIED BY THE CONTRACTOR. THESE ITEMS SHALL BE SUPPLIED PRIOR TO THE CONSTRUCTION TIME COMMENCING AND SHALL BE INCIDENTAL TO SPECIFICATION P-102.

DESCRIPTION	SECTION	STEEL FRAME	
		OUTSIDE DIMENSION (INCHES)	WEIGHT (LBS./FT.)
CORNER, BRACE, END AND PULL POSTS FABRIC HEIGHTS 6 ft AND LESS	○	2.375	3.65
	□	2.00	3.60
FABRIC HEIGHTS OVER 6 ft	○	2.875	5.79
	□	2.5	5.70
ALL HEIGHTS	ROLL FORM	3.5x3.5	5.10
GATE POSTS GATE LEAF WIDTH 6 ft AND LESS	○	3 OR 4	5.79
	□	2.5	5.70
	ROLL FORM	3.5x3.5	5.10
GATE WIDTH OVER 6 ft THRU 13 ft GATE LEAF WIDTH OVER 13 ft THRU 18 ft GATE LEAF WIDTH OVER 18 ft THRU 23 ft	○	4.0	9.11
	○	6.625	18.97
	○	8.625	24.70
LINE POSTS FABRIC HEIGHTS 6 ft AND LESS FABRIC HEIGHTS OVER 6 ft	○	1.90	2.72
	○	2.375	3.65
RAILS & BRACES	○	1.660	1.806
	ROLL FORM	1.625x1.250	1.35

CONTRACTOR SUPPLIED GATE SECURITY ITEMS *

ITEM	DESCRIPTION	PART NUMBER	QUANTITY
CARD READER	AMAG KEYPAD AND CARD READER	843-KP-AG	1 EA.
CARD READER CABLE	18/6 STRANDED BARE COPPER WIRE CONDUCTORS, WITH AQUASEAL TAPE AND OVERALL JACKET	ACQ3186 (WEST PENN WIRE)	300 L.F.
HORN/STROBE CABLE	18/2 STRANDED BARE COPPER CONDUCTORS, UNSHIELDED WITH AQUASEAL TAPE AND OVERALL JACKET	ACQ244 (WEST PENN WIRE)	300 L.F.
STROBE	TOMAR ELECTRONICS GREEN STROBE LIGHT	470S-1280-GREEN	1 EA.
HORN	EXTERIOR SIREN DUAL TONE (STEADY AND YELP), 12V DC, 1A, 122DB	EK-SS30	1 EA.

* THE ITEMS SHOWN IN THIS TABLE SHALL BE INCIDENTAL TO G-105. CONTRACTOR SHALL SUPPLY AND INSTALL THESE ITEMS. COS TO MAKE FINAL TERMINATIONS AND CONNECTIONS TO EXISTING CONTROL BOX.



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COLORADO SPRINGS
AIRPORT

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE I:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016

REVIEWED BY: ARM

DRAWN BY: JDP

DESIGNED BY: JFF

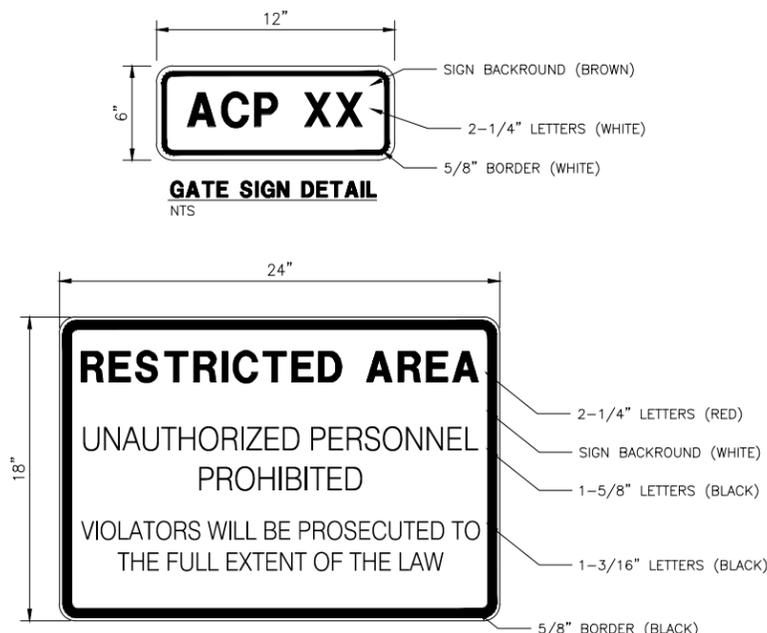
RS&H PROJECT NUMBER
224-0124-003
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**CHAIN LINK
GATE NOTES**

DRAWING NUMBER

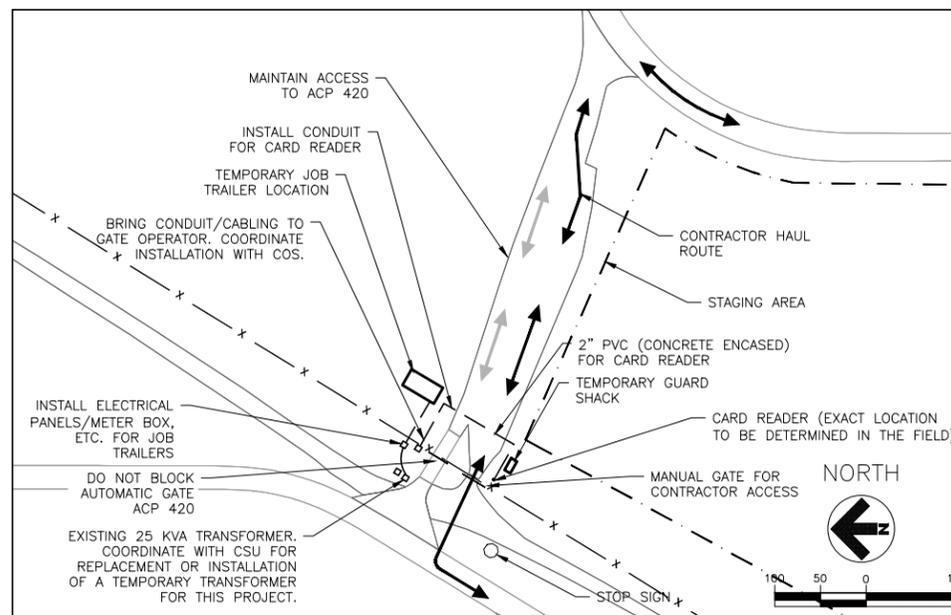
**C851
SHEET 57 OF 75**

**BID
DOCUMENTS**



RESTRICTED AREA SIGN DETAIL

NOTE:
1. SUPPLY AND INSTALLATION OF SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE GATE INSTALLATION.



CONDUIT FOR GATE SECURITY

- NOTES:
- JUNCTION BOX TO BE 12" X 24", HS-20 TRAFFIC RATED.
 - CONDUIT SHALL BE STUBBED UP OUT OF THE JUNCTION BOX'S AT END OF CONDUIT RUN, 12" ABOVE THE GROUND. COORDINATE EXACT LOCATION WITH ENGINEER.
 - DEB CONDUIT SHALL BE INSTALLED 24" DEEP



ELECTRICAL LEGEND

	EXISTING L-861T TAXIWAY ELEVATED EDGE LIGHT, ISOLATION TRANSFORMER AND L-867 BASE CAN.
	EXISTING L-861T TAXIWAY ELEVATED EDGE LIGHT, ISOLATION TRANSFORMER AND L-867 BASE CAN, TO BE REMOVED.
	EXISTING L-861T TAXIWAY ELEVATED EDGE LIGHT, REMOVE AND REPLACE CONCRETE COLLAR SURROUNDING FIXTURE, SEE SHEET E405 FOR DETAILS
	EXISTING L-861T TAXIWAY ELEVATED EDGE LIGHT, ISOLATION TRANSFORMER AND L-867 BASE CAN, LOCATED IN EXISTING SHOULDER PAVEMENT, TO BE REMOVED AND REPLACED, SEE SHEET E407 FOR DETAILS.
	PROPOSED L-861T TAXIWAY ELEVATED EDGE LIGHT, ISOLATION TRANSFORMER AND L-867B 24" DEEP BASE CAN.
	PROPOSED L-861T TAXIWAY ELEVATED EDGE LIGHT, ISOLATION TRANSFORMER, LIGHTNING ARRESTOR AND L-867D BASE CAN.
	PROPOSED L-861T TAXIWAY ELEVATED EDGE LIGHT, ISOLATION TRANSFORMER AND L-867B 30" DEEP BASE CAN.
	PROPOSED L-861T TAXIWAY ELEVATED EDGE LIGHT, ISOLATION TRANSFORMER AND L-868B BASE CAN.
	PROPOSED L-861T TAXIWAY ELEVATED EDGE LIGHT, ISOLATION TRANSFORMER AND L-867B 30" DEEP BASE CAN, INSTALLED IN PROPOSED CONCRETE SHOULDER, SEE SHEET E407 FOR DETAILS.
	PROPOSED L-867E BASE CAN AND BLANK COVER PLATE
	PROPOSED L-867B BASE CAN AND BLANK COVER PLATE
	EXISTING JUNCTION BOX, 'RM' INDICATES TO BE REMOVED.
	EXISTING POWER HANDHOLE
	EXISTING SINGLE FACE OR DOUBLE FACE INTERNALLY ILLUMINATED GUIDANCE SIGN, 'RM' INDICATES REMOVE SIGN, 'RR' INDICATES REMOVE AND REPLACE EXISTING SIGN PANELS.
	PROPOSED L-858 SINGLE FACE OR DOUBLE FACE, INTERNALLY ILLUMINATED, GUIDANCE SIGN.
	EXISTING CONDUIT WITH #6 OR #8 L-824, 5kV, TYPE B CABLE. '11' INDICATES CIRCUIT DESIGNATION. LIGHT TEXT INDICATES EXISTING CABLE. HEAVY TEXT INDICATES FURNISH AND INSTALL NEW CABLE. '/' INDICATES THE NUMBER OF CABLES. SEE SHEET E408 FOR CABLE SIZES.
	PROPOSED 2" PVC CONDUIT, WITH #6 OR #8 L-824, 5kV TYPE B CABLE. '11' INDICATES CIRCUIT DESIGNATION. '/' INDICATES THE NUMBER OF CABLES. SEE SHEET E408 FOR CABLE SIZES.
	EXISTING CONDUIT AND CABLE TO BE REMOVED.
	EXISTING DUCT BANK, QUANTITY AND SIZE OF DUCTS AS INDICATED. '11' INDICATES CIRCUIT DESIGNATION. LIGHT TEXT INDICATES EXISTING CABLE. HEAVY TEXT INDICATES FURNISH AND INSTALL NEW CABLE. '/' INDICATES THE NUMBER OF #6 OR #8 L-824, 5kV TYPE B CABLES. '4W' INDICATES 4-WAY DUCT BANK. '3' INDICATES 3" CONDUIT. SEE SHEET E408 FOR CABLE SIZES.
	ON ELECTRICAL DEMOLITION SHEETS: EXISTING DUCT BANK TO BE REMOVED, QUANTITY AND SIZE OF DUCTS AS INDICATED. '11' INDICATES CIRCUIT DESIGNATION. '/' INDICATES THE NUMBER OF #6 OR #8 L-824, 5kV TYPE B CABLES. '4W' INDICATES 4-WAY DUCT BANK. '3' INDICATES 3" CONDUIT. SEE SHEET E408 FOR CABLE SIZES.
	ON PROPOSED LIGHTING AND SIGNAGE SHEETS: PROPOSED DUCT BANK TO BE INSTALLED, QUANTITY AND SIZE OF DUCTS AS INDICATED. '11' INDICATES CIRCUIT DESIGNATION. '/' INDICATES THE NUMBER OF #6 OR #8 L-824, 5kV TYPE B CABLES. '4W' INDICATES 4-WAY DUCT BANK. '3' INDICATES 3" CONDUIT. SEE SHEET E408 FOR CABLE SIZES.

ABBREVIATIONS

AOA - AIRCRAFT OPERATIONS AREA	NTS - NOT TO SCALE
AWG - AMERICAN WIRE GAUGE	OC - ON CENTER
B - BASELINE	OFA - OBJECT FREE AREA
BSD - BARE SOFT DRAWN SOLID COPPER	PAPI - PRECISION APPROACH PATH INDICATOR
Q - CENTERLINE	PC - POINT OF CURVATURE
C - CONDUIT	PCC - PORTLAND CEMENT CONCRETE
CONC - CONCRETE	PG - PROPOSED GRADE
COS - COLORADO SPRINGS AIRPORT	PT - POINT OF TANGENCY
CP - COUNTERPOISE	PVC - POLYVINYL CHLORIDE
ø, DIA - DIAMETER	RPR - RESIDENT PROJECT REPRESENTATIVE
DEB - DIRECT EARTH BURIED	RW - RUNWAY
DWG - DRAWING	RPZ - RUNWAY PROTECTION ZONE
E - EASTING	RSA - RUNWAY SAFETY AREA
EL/ELEV - ELEVATION	RT - RIGHT
EOP - EDGE OF PAVEMENT	SCH - SCHEDULE
ES - EQUAL SPACES	SGN - SIGN
EX/EXST/EXIST - EXISTING	SIDA - SECURITY IDENTIFICATION DISPLAY AREA
FAA - FEDERAL AVIATION ADMINISTRATION	SS - STAINLESS STEEL
FOC - FIBER OPTIC CABLE	STA - STATION
FOD - FOREIGN OBJECT DEBRIS	STD - STANDARD
GND - GROUND	SW - SWITCH
GRS - GALVANIZED RIGID STEEL CONDUIT	T/L - TAXILANE
GS - GLIDE SLOPE ANTENNA	TW - TAXIWAY
I/C - NUMBER OF CONDUCTORS/CONDUCTOR	TBR - TO BE REMOVED
IE/INV - INVERT ELEVATION / INVERT	TDZ - TOUCHDOWN ZONE
ILS - INSTRUMENT LANDING SYSTEM	TSA - TAXIWAY SAFETY AREA
kV - KILOVOLT	TYP., (TYP) - TYPICAL
LF - LINEAR FEET	UE - UNDERGROUND ELECTRICAL UTILITY FEEDER
LT - LEFT	UG - UNDERGROUND ELECTRICAL DUCT
MAX - MAXIMUM	W - WATER
MCB - MAIN CIRCUIT BREAKER	XFMR - TRANSFORMER
MIN - MINIMUM	
N - NORTHING NAD - NORTH AMERICAN DATUM	
NGVD - NATIONAL GEODETIC VERTICAL DATUM	
NOTAM - NOTICE TO AIRMEN	

GENERAL NOTES

- THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR TO RELOCATE, MODIFY AND INSTALL THE AIRFIELD ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS. ITEMS NOT SHOWN BUT NECESSARY FOR COMPLETION OF THE WORK SHALL BE INCLUDED.
- THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL SAFETY CODE, NATIONAL ELECTRICAL CODE, FEDERAL AVIATION ADMINISTRATION SPECIFICATIONS/ ADVISORY CIRCULARS AND APPLICABLE LOCAL CODES.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS AND APPROVALS.
- ALL MATERIALS SCHEDULED FOR REMOVAL SUCH AS EXISTING RUNWAY AND TAXIWAY LIGHTS, MANHOLES, HANDHOLES, CONCRETE FOUNDATIONS, CONDUIT, LIGHT BASES, CONDUCTORS, ISOLATION TRANSFORMERS ETC. SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR.
- EXISTING CONDUIT, DUCTBANK, CIRCUITING AND UTILITY INFORMATION IS BASED ON AIRPORT "AS BUILT" AND "RECORD" DRAWINGS AND SITE VISITS BY THE UTILITIES AND THE ENGINEER. THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL NOT BE SCALED FOR EXACT LOCATIONS. NOT ALL UTILITIES MAY BE SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE APPROPRIATE UTILITY/AGENCY PRIOR TO STARTING WORK, FOR THE LOCATION OF EXISTING UTILITIES, ANY INTERPRETATION OF AN EXISTING SYSTEM OR UTILITY SERVICE SHALL BE COORDINATED AND APPROVED BY THE AUTHORITY, AGENCY OR UTILITY HAVING JURISDICTION. PRIOR TO STARTING WORK, THE CONTRACTOR SHALL CONTACT ALL LOCAL UTILITIES TO ALLOW THEM TIME TO PROPERLY LOCATE ALL UTILITIES.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE AIRPORT, FEDERAL AVIATION ADMINISTRATION AND RESIDENT PROJECT REPRESENTATIVE (RPR) PRIOR TO AND DURING CONSTRUCTION TO ENSURE THAT ALL ELECTRICAL CIRCUITS AND FACILITIES HAVE BEEN LOCATED, FLAGGED AND ACCOUNTED FOR AND THAT ALL NECESSARY CIRCUITS HAVE BEEN DETERMINED PRIOR TO INITIATING CONSTRUCTION IN ANY LOCATION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THAT ALL AIRFIELD LIGHTING CIRCUITS, EXCEPT THOSE THAT ARE SERVING CLOSED TAXIWAYS OR RUNWAYS ARE COMPLETELY OPERATIONAL USING VAULT CONTROL AT THE END OF EACH WORK DAY AND SHALL SO CERTIFY TO THE ENGINEER BEFORE LEAVING THE SITE EACH DAY.
- ALL UTILITIES TO REMAIN SHALL BE PROTECTED FROM DAMAGE. REPLACEMENT OF ANY DAMAGED EXISTING SYSTEMS/UTILITIES SHALL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGED ELECTRICAL SYSTEMS AND SHALL MAKE REPAIRS IMMEDIATELY, AT THEIR OWN COST, IN ACCORDANCE WITH APPLICABLE FAA SPECIFICATIONS. DAMAGED ELECTRICAL SYSTEMS SHALL BE IMMEDIATELY REPORTED TO THE RPR.
- THE DUCT BANKS AND CONDUITS BETWEEN DEMOLISHED MANHOLES, HANDHOLES, BASE CANS ETC. SHALL BE REMOVED EXCEPT WHERE LOCATED UNDER EXISTING PAVEMENT TO REMAIN OR WHERE THE DUCT OR CONDUIT IS TO BE EXTENDED IN THE NEW WORK.
- ALL EXCAVATION WITHIN 4 FEET OF ANY UNDERGROUND UTILITY SHALL BE PERFORMED BY HAND EXCAVATION METHODS.
- ALL WORK SHOWN TO BE DEMOLISHED ON THE DRAWINGS IS BASED ON FIELD OBSERVATION OF THE ACTUAL EXISTING CONDITIONS AND ON EXISTING "AS-BUILT" DRAWINGS OF THE AREAS AFFECTED. THESE DRAWINGS ARE THEREFORE CONSIDERED TO BE SCHEMATIC. IT IS THE INTENT OF THE DEMOLITION DRAWINGS THAT ALL EQUIPMENT, DEVICES, FIXTURES, WIRING MATERIALS, SYSTEMS AND APPURTENANCES, ETC. WHICH ARE NO LONGER REQUIRED AS A RESULT OF THE PROJECT BE REMOVED.
- ELECTRICAL DEMOLITION WORK SHALL BE LIMITED TO THE AREAS AND SCHEDULES IDENTIFIED IN THE PLANS.
- ALL GROUND RODS AND OTHER UNDERGROUND GROUNDING CONNECTIONS SHALL BE CADWELDED OR APPROVED EQUIVALENT. CADWELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. THE PROPOSED COUNTERPOISE SYSTEM SHALL BE CONNECTED WITH THE EXISTING SYSTEM AT ALL CROSSING POINTS.
- CIVIL DATA IS SHOWN ON ELECTRICAL DRAWINGS FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR DRAINAGE, PAVING DETAILS, PAVEMENT MARKING PLANS, ETC.
- THE CONTRACTOR SHALL UTILIZE A LOCATE SERVICE AS WELL HAVE A CABLE TRACER AVAILABLE TO LOCATE THE EXISTING CABLES AND HAND DIGGING SHALL BE UNDERTAKEN WITHIN FOUR (4) FEET OF ANY KNOWN OR SUSPECTED EXISTING UNDERGROUND CABLES AND UTILITIES WHICH ARE NOT TO BE DISTURBED.
- CONTRACTOR SHALL COORDINATE WITH THE AIRPORT TO ASSURE THAT ALL LIGHTING THAT IS REQUIRED FOR THE OPERATION OF THE AIRPORT IS FUNCTIONAL BY NIGHTFALL. SHOULD ANY REQUIRED RUNWAY OR TAXIWAY LIGHTING SYSTEM BE INOPERABLE DUE TO CONTRACTORS WORK, AND THE CONTRACTOR IS UNABLE TO RESTORE THE SYSTEM BY NIGHTFALL WITH PERMANENT REPAIRS, THE CONTRACTOR SHALL AT HIS OWN EXPENSE TAKE THE NECESSARY MEASURES TO ENSURE THE OPERATION OF THE SYSTEM DURING NIGHT HOURS. TEMPORARY WORK SHALL BE SUBJECT TO THE RPR'S APPROVAL. IF THE SYSTEM CANNOT BE RESTORED BY NIGHTFALL, THE CONTRACTOR SHALL CONTACT THE RPR AS EARLY AS POSSIBLE. AIRPORT PERSONNEL MAY BE CALLED IN TO MAKE REPAIRS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REPAIRS MADE BY AIRPORT PERSONNEL.
- ALL MANHOLES, HANDHOLES, ETC., SHALL BE INSTALLED 15 FEET MINIMUM FROM THE EDGE OF THE FULL STRENGTH PAVEMENT UNLESS SHOWN OTHERWISE ON THE PLANS. COORDINATE FINAL LOCATION WITH GRADING AND DRAINAGE PLANS. WHEN EXTENDING EXISTING DUCT TO NEW MANHOLE, HANDHOLE, ETC., PUT STRUCTURE IN LINE WITH EXISTING DUCT. WHEN POSSIBLE DO NOT INSTALL STRUCTURES IN DITCHES OR SWALES OR WHERE WATER WILL POND ON TOP OF THE STRUCTURES.
- DEWATERING FOR THE INSTALLATION OF STRUCTURES AND/OR DUCTBANKS IS INCIDENTAL TO THE RESPECTIVE PAY ITEM. THE CONTRACTOR SHALL BE RESPONSIBLE TO PAY FOR AND OBTAIN ANY AND ALL PERMITS REQUIRED FOR DEWATERING.
- A "LOCK/TAG/TRY" PROCEDURE SHALL BE COMPLIED WITH BY THIS CONTRACTOR. CONTRACTOR SHALL PROVIDE HIS OWN PROCEDURE FOR REVIEW AND APPROVAL BY ENGINEER PRIOR TO WORK ON ANY ELECTRICAL CIRCUITS.
- IF A LIGHT CAN IS INSTALLED INCORRECTLY, OR THE DUCT/CONDUIT IS PLUGGED/BROKEN, ASPHALT PAVEMENT ON BOTH SIDES OF THE LIGHT CAN AND THE LIGHT SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS' EXPENSE.
- ALL DUCT LOCATED IN OR UNDER THE FULL STRENGTH PAVEMENT SHALL BE CONCRETE ENCASED. ALL DUCT LOCATED IN OR UNDER THE SHOULDER PAVEMENT SHALL BE CLSM ENCASED. ALL OTHER 2" DUCT SHALL BE DIRECT BURIED.
- DIMENSIONS BETWEEN LIGHTS SHOWN ON A RADIUS ARE DEFINED AS CURVE LENGTHS.
- ITEMS SHOWN IN SCREEN (GHOST) ARE EXISTING ITEMS AND ITEMS SHOWN IN SOLID (BOLD) ARE NEW AND TO BE INSTALLED UNDER THIS CONTRACT UNLESS OTHERWISE NOTED.
- PROJECT PAY ITEMS: THE PROJECT PAY ITEMS ARE PROVIDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL WORK TO BE IDENTIFIED WITH A SPECIFIC PAY ITEM IS TO BE CONSIDERED REQUIRED WORK TO COMPLETE THE PROJECT AND IS TO BE SUBSIDIARY TO THE COST OF PROJECT PAY ITEMS PROVIDED.
- THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING WORK.
- THE CONTRACTOR SHALL CONDUCT GROUND RESISTANCE TESTS (MEGGER) ON EACH CIRCUIT AFFECTED BY THIS WORK BEFORE COMMENCING WORK ON THAT CIRCUIT. CONTRACTOR SHALL PREPARE AND FORWARD TO THE ENGINEER A WRITTEN REPORT, BY CIRCUIT, OF THESE RESULTS. THE CONTRACTOR SHALL REPEAT THIS TEST ON EACH AFFECTED CIRCUIT AFTER COMPLETION OF THE WORK. RESULTS OF BOTH TESTS SHALL BE PROVIDED TO THE ENGINEER.
- THE IDENTITY AND ROUTING OF ALL CABLES SHOWN ON THE PLANS SHALL BE VERIFIED IN THE FIELD. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE RPR AND RECORDED IN THE AS-BUILT DRAWINGS TO PROVIDE AN ACCURATE RECORD OF CONDITIONS. THE CONTRACTOR SHALL COORDINATE INFORMATION SHOWN ON THE PLAN SHEETS WITH EXISTING RECORD INFORMATION AVAILABLE THROUGH THE RPR. THESE PLANS DO NOT PURPORT TO SHOW ALL EXISTING CABLES AND CONCEALED UTILITIES WHICH WILL REQUIRE STAKE OUT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY EXISTING CIRCUIT ROUTING PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH THE SAFETY, SECURITY AND PHASING PLANS.
- THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRaversing THE AIRFIELD. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED AND IDENTIFIED PRIOR TO START OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.
- FAA L-824 TYPE B CABLE AS SPECIFIED FOR USE ON THIS PROJECT CAN BE A LONG LEAD DELIVERY ITEM FOR THIS PROJECT. CONTRACTOR SHALL COORDINATE THE DELIVERY OF THE CABLE TO ASSURE THAT THE CABLE DELIVERY WILL NOT CAUSE DELAYS IN THE PROJECT. NO EXTRA COST WILL BE ALLOWED, BEYOND THE BID PRICE, FOR THE CABLE DELIVERY.

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TAXIWAY C RECONSTRUCTION

SCHEDULE 1:
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REVISIONS

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RS&H PROJECT NUMBER

224-0124-003

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AIRFIELD
ELECTRICAL
LEGEND, NOTES
AND
ABBREVIATIONS

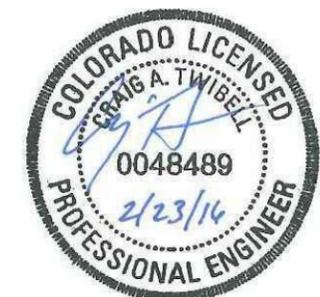
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SHEET 58 OF 75

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DOCUMENTS



GENERAL

1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 – NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
2. THE CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.
3. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES AND/OR SHUT DOWN OF SYSTEMS WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER/DIRECTOR. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
4. THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED, INCLUDING FAA APPROVED EQUIPMENT, ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND THE REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NON-COMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OR DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.
5. IN CASE THE CONTRACTOR ELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTERS, MOUNTINGS, ETC. TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATIONS, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.
6. THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.
7. WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED, ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES, STYLES, CLASSES, ETC. MAY BE FAA APPROVED.
8. ANY AND ALL INSTRUCTIONS FROM THE ENGINEER TO THE CONTRACTOR REGARDING CHANGES IN, OR DEVIATIONS FROM, THE PLANS AND SPECIFICATIONS SHALL BE IN WRITING WITH COPIES SENT TO THE AIRPORT SPONSOR AND THE FAA FIELD OFFICE (ADO/AFO). THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE ENGINEER REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.
9. A MINIMUM OF THREE COPIES OF THE INSTRUCTION BOOK SHALL BE SUPPLIED WITH EACH DIFFERENT TYPE OF EQUIPMENT. THE BOOKS DESCRIBING A MORE SOPHISTICATED TYPE OF EQUIPMENT, SUCH AS REGULATORS, PAPI, REIL, ETC. AS A MINIMUM SHALL CONTAIN THE FOLLOWING:
 - A. A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.
 - B. THEORY OF OPERATION, INCLUDING THE FUNCTION OF EACH COMPONENT.
 - C. INSTALLATION INSTRUCTIONS.
 - D. START-UP INSTRUCTIONS.
 - E. PREVENTATIVE MAINTENANCE REQUIREMENTS.
 - F. CHART FOR TROUBLESHOOTING.
 - G. COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT – "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OR THE NARRATIVE SHALL SHOW VOLTAGES/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE-SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL THE DIFFERENT MODES.
 - H. PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS, SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.
 - I. SAFETY INSTRUCTIONS.

AIRFIELD LIGHTING

1. UNLESS OTHERWISE NOTED, ALL UNDERGROUND AIRFIELD LIGHTING SERIES CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE FAA APPROVED 5000 VOLT L-824 TYPE B. INSULATION VOLTAGE AND SIZE SHALL BE AS SPECIFIED.
2. NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, ETC.
3. THERE SHALL BE NO EXPOSED POWER/CONTROL CABLES BETWEEN THE POINT WHERE THEY LEAVE THE UNDERGROUND (DEB OR L-867 BASES) AND WHERE THEY ENTER THE EQUIPMENT (SUCH AS TAXIWAY SIGNS, PAPI, REIL, ETC.) ENCLOSURES. THESE CABLES SHALL BE ENCLOSED IN RIGID CONDUIT OR IN FLEXIBLE, WATERTIGHT CONDUIT WITH BREAKABLE COUPLING(S) AT THE GRADE OR THE HOUSING COVER, AS SHOWN IN APPLICABLE DETAILS.
4. THE JOINTS OF THE L-823 PRIMARY CONNECTORS SHALL BE WRAPPED WITH AT LEAST ONE LAYER OF RUBBER OR SYNTHETIC RUBBER TAPE AND ONE LAYER OF PLASTIC TAPE, ONE-HALF LAPPED, EXTENDING AT LEAST 1-1/2 INCHES ON EACH SIDE OF THE JOINT, AS SHOWN IN APPLICABLE DETAILS.
5. THE CABLE ENTRANCE INTO THE FIELD-ATTACHED L-823 CONNECTORS SHALL BE ENCLOSED BY HEAT-SHRINKABLE TUBING WITH CONTINUOUS INTERNAL ADHESIVE, AS SHOWN IN APPLICABLE DETAILS.
6. L-823 TYPE II, TWO-CONDUCTOR SECONDARY SHALL BE CLASS 'A' (FACTORY MOLDED)
7. THERE SHALL BE NO SPLICES IN THE SECONDARY CABLE(S) WITHIN THE STEMS OF A RUNWAY/TAXIWAY EDGE/THRESHOLD LIGHTING FIXTURE AND THE WIREWAYS LEADING TO TAXIWAY SIGNS AND PAPI/REIL EQUIPMENT.
8. ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THESE CONNECTORS SHALL NOT BE TAPED.
9. A SLACK OF THREE (3') FEET, MINIMUM, SHALL BE PROVIDED IN THE PRIMARY CABLE AT EACH TRANSFORMER/CONNECTOR TERMINATION. AT STAKE-MOUNTED LIGHTS, THE SLACK SHALL BE LOOSELY COILED IMMEDIATELY BELOW THE ISOLATION TRANSFORMER.
10. DIRECTION OF PRIMARY CABLES SHALL BE IDENTIFIED BY COLOR CODING AS FOLLOWS: WHEN FACING LIGHT WITH BACK OF PAVEMENT, CABLE TO THE LEFT IS CODED RED AND CABLE TO THE RIGHT IS CODED BLUE. THIS APPLIES TO STAKE MOUNTED LIGHTS AND BASE MOUNTED LIGHTS WHERE THE BASE HAS ONLY ONE ENTRANCE.
11. L-867 BASES SHALL BE SIZE B, 24" DEEP, CLASS I, UNLESS OTHERWISE NOTED.
12. BASE MOUNTED FRANGIBLE COUPLINGS SHALL NOT HAVE WEEP HOLES TO THE OUTSIDE. PLUGGED UP HOLES SHALL NOT BE ACCEPTABLE. IT SHALL BE A 1/4" DIAMETER, MINIMUM, OR EQUIVALENT OPENING FOR DRAINAGE FROM THE SPACE AROUND THE SECONDARY CONNECTOR INTO THE L-867 BASE.
13. THE ELEVATION OF THE FRANGIBLE COUPLING GROOVE SHALL NOT EXCEED 1-1/2" ABOVE THE EDGE OF THE COVER IN CASE OF BASE MOUNTED COUPLINGS, OR THE TOP OF THE STAKE IN CASE OF STAKE MOUNTED COUPLINGS.
14. WHERE THE FRANGIBLE COUPLING IS NOT AN INTEGRAL PART OF THE LIGHT FIXTURE STEM OR MOUNTING LEG, A BEAD OF SILICON SEAL SHALL BE APPLIED COMPLETELY AROUND LIGHT STEM OR WIREWAY AT FRANGIBLE COUPLING TO PROVIDE A WATERTIGHT SEAL.
15. PLASTIC LIGHTING FIXTURE COMPONENTS, SUCH AS LAMP HEADS, STEMS, FRANGIBLE COUPLINGS, BASE COVERS, BRACKETS, STAKES, SHALL NOT BE ACCEPTABLE.

16. THE TOLERANCE FOR THE HEIGHT OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE: ±1 INCH. IN CASE OF STAKE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE STAKE AND THE TOP OF THE LENS. IN CASE OF BASE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF BASE FLANGE AND THE TOP OF THE LENS, THUS INCLUDING THE BASE COVER, THE FRANGIBLE COUPLING, THE STEM, THE LAMP HOUSING AND THE LENS.
17. THE TOLERANCE FOR THE LATERAL SPACING (LIGHT LANE TO RUNWAY/TAXIWAY CENTERLINE) OF RUNWAY/TAXIWAY EDGE LIGHT SHALL BE ±1 INCH. THIS ALSO APPLIES AT INTERSECTIONS TO LATERAL SPACING BETWEEN LIGHTS OF A RUNWAY/TAXIWAY AND THE INTERSECTING RUNWAY/TAXIWAY.
18. ENTRANCES INTO L-867 BASES SHALL HAVE CONDUIT TO INTERFACE TO L-867 BASE HUBS, AND SHALL BE PLUGGED FROM THE INSIDE WITH DUCT SEAL.
19. GALVANIZED/PAINTED EQUIPMENT/COMPONENT SURFACES SHALL NOT BE DAMAGED BY DRILLING, FILING, ETC. DRAIN HOLES IN METAL TRANSFORMER HOUSINGS SHALL BE MADE BEFORE GALVANIZING.
20. CABLE/SPLICE/DUCT MARKERS SHALL BE PRECAST CONCRETE OF THE SIZE SHOWN. LETTERS/NUMBERS/ARROWS FOR THE LEGEND TO BE IMPRESSED INTO THE TOPS OF THE MARKERS SHALL BE PRE-ASSEMBLED AND SECURED IN THE MOLD BEFORE THE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.
21. ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT EACH CHANGE OF DIRECTION OF THE CABLE RUN. CABLE MARKERS SHALL BE INSTALLED ABOVE THE CABLE.
22. LOCATIONS OF ALL DEB UNDERGROUND CABLE SPLICE/CONNECTIONS, EXCEPT THOSE AT ISOLATION TRANSFORMERS, SHALL BE IDENTIFIED BY SPLICE MARKER. SPLICE MARKERS SHALL BE INSTALLED ABOVE THE CABLE.
23. THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.
24. APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND FRANGIBLE COUPLING THREADS.
25. CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKERS, ETC. SHALL BE 3500 PSI, AIR-ENTRAINED.
26. ALL POWER AND CONTROL CABLES IN MAN/HAND HOLES SHALL BE TAGGED. CABLE ID TAG TO BE ATTACHED AT BOTH ENDS TO THE CABLE BY THE USE OF UV RESISTANT PLASTIC STRAPS. MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MAN/HAND HOLE-ONE AT THE CABLE ENTRANCE AND ONE AT THE CABLE EXIT.
27. THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE EITHER EXPRESSED OR IMPLIED, THAT THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVE GROUND UTILITIES.
28. WHEN PREPARING CABLE FOR SPLICES, THE CONTRACTOR SHALL USE A CABLE STRIPPER/PENCLLIER WHENEVER CABLE CONNECTIONS ARE MADE.
29. DIRECT EARTH BURIED ISOLATION TRANSFORMERS MUST BE BURIED AT A DEPTH OF 10" ON A LINE CROSSING THE LIGHT AND PERPENDICULAR TO THE TAXIWAY CENTERLINE AT A LOCATION 12" FROM THE LIGHT OPPOSITE FROM THE TAXIWAY.
30. DIRECT EARTH BURIED PRIMARY CONNECTORS MUST BE BURIED AT A DEPTH OF 10" NEAR THE ISOLATION TRANSFORMER. THEY MUST BE ORIENTATED PARALLEL WITH THE TAXIWAY CENTERLINE. THERE MUST BE NO BENDS IN THE PRIMARY CABLE 6", MINIMUM, FROM THE ENTRANCE INTO THE FIELD-ATTACHED PRIMARY CONNECTION.
31. TOPS OF THE STAKES SUPPORTING LIGHT FIXTURES MUST BE FLUSH WITH THE SURROUNDING GRADE.

GROUNDING

1. GROUND ALL NON-CURRENT-CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT BY USING CONDUCTORS SIZED AND ROUTED PER NFPA 70 (NEC) 2008, ARTICLE 250.
2. ALL GROUND CONNECTIONS TO GROUND RODS, BUSSES, PANELS, ETC., SHALL BE MADE WITH PRESSURE TYPE SOLDERLESS LUGS AND GROUND CLAMPS. SOLDERED OR BOLT AND WASHER TYPE CONNECTIONS ARE NOT ACCEPTABLE. CLEAN ALL METAL SURFACES BEFORE MAKING GROUND CONNECTIONS. EXOTHERMIC WELDS ARE THE PREFERRED METHOD OF CONNECTION TO A GROUND ROD.
3. TOPS OF GROUND RODS SHALL BE 6 INCHES BELOW GRADE.
4. THE RESISTANCE TO GROUND OF THE VAULT GROUNDING SYSTEM WITH THE COMMERCIAL POWER LINE NEUTRAL DISCONNECTED SHALL NOT EXCEED 10 OHMS.
5. THE RESISTANCE TO GROUND OF THE COUNTERPOISE SYSTEM, OR AT ISOLATION LOCATIONS, SUCH AS AIRPORT BEACON SHALL NOT EXCEED 25 OHMS.



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**COLORADO SPRINGS
 AIRPORT**

**TAXIWAY C
 RECONSTRUCTION**

**SCHEDULE I:
 RECONSTRUCT
 TAXIWAY C FROM
 TAXIWAY C7
 THROUGH TAXIWAY H
 AND
 REHABILITATE
 PORTIONS OF
 TAXIWAYS C3, C5,
 C6, AND C7**

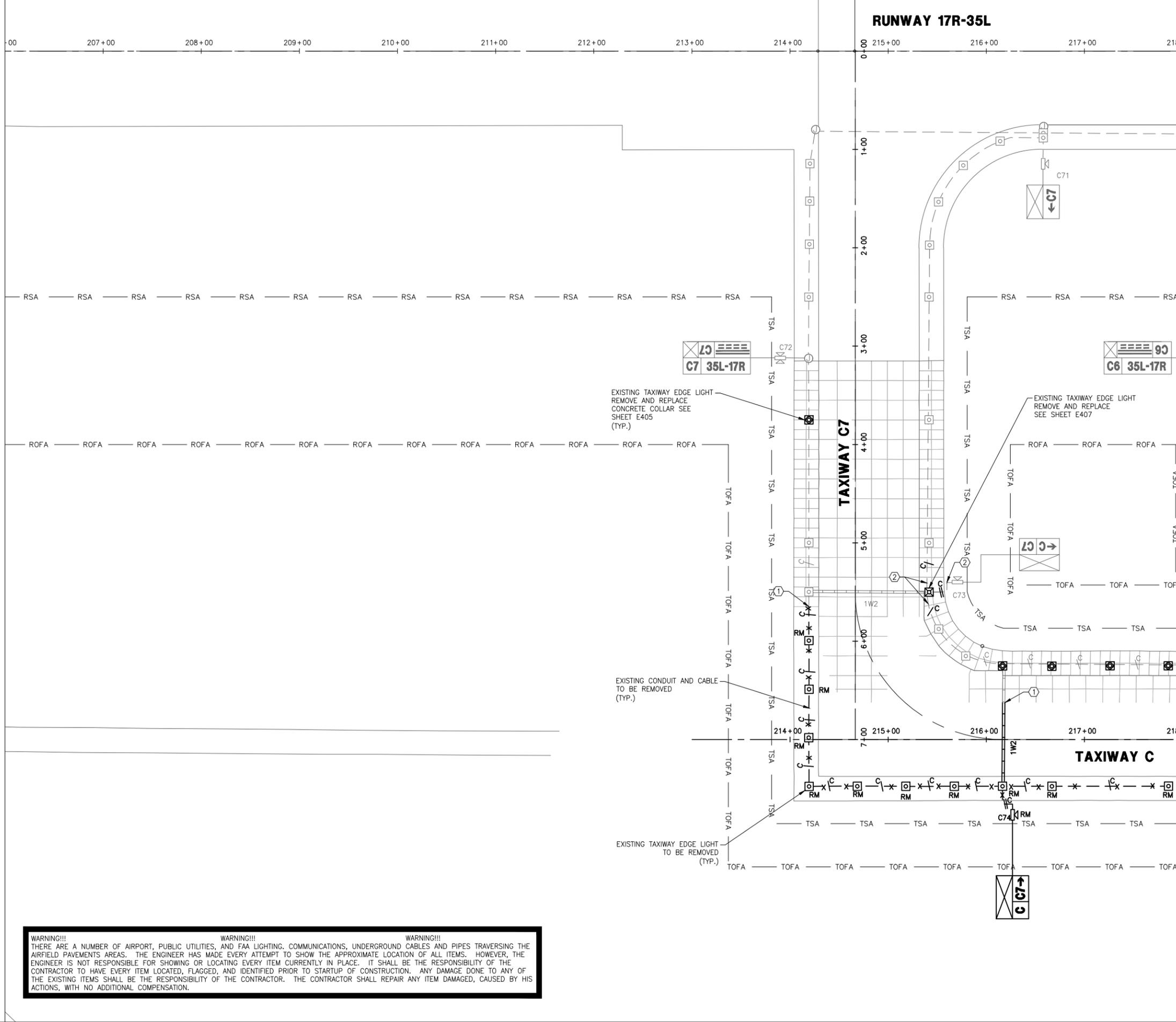
REVISIONS		
NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
 REVIEWED BY: CAT
 DRAWN BY: RMG
 DESIGNED BY: RMG
 RS&H PROJECT NUMBER
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**ADDITIONAL
 ELECTRICAL
 NOTES**

DRAWING NUMBER
E001
 SHEET 59 OF 75
**BID
 DOCUMENTS**



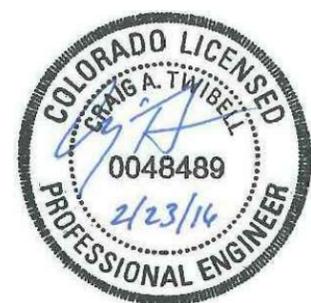
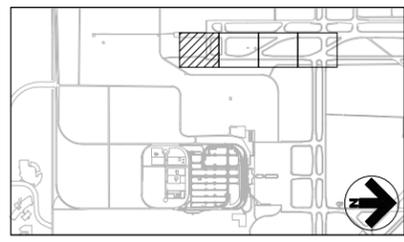
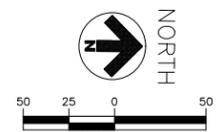
SHEET NOTES:

- A. SEE SHEETS E000 AND E001, FOR ELECTRICAL LEGEND, ABBREVIATIONS, AND ELECTRICAL NOTES.
- B. SEE SHEETS C006 THRU C008, FOR PROJECT SAFETY AND PHASING PLANS. COORDINATE EQUIPMENT REMOVAL AND DEMOLITION WITH THE SAFETY AND PHASING PLANS.
- C. PRIOR TO DEMOLITION/MODIFICATION OF CIRCUITS AND EQUIPMENT, CONTRACTOR SHALL FIELD VERIFY ROUTING OF EXISTING CABLES WITH THE ENGINEER TO MAINTAIN CIRCUIT CONTINUITY FOR ACTIVE TAXIWAYS AND RUNWAYS OUTSIDE THE CONSTRUCTION AREA AT ALL TIMES.
- D. REFER TO THE C-SERIES DRAWINGS FOR UNDERGROUND UTILITIES OTHER THAN ELECTRICAL UTILITIES SHOWN ON THE ELECTRICAL AREA PLANS.

KEYED NOTES:

- 1. REMOVE EXISTING CONDUIT/DUCT BACK TO LOCATION SHOWN FOR TIE-IN OF NEW PVC CONDUIT/DUCT AS SHOWN ON DRAWINGS E201-E204. REMOVE SERIES LIGHTING CABLES BACK TO THE NEAREST LIGHT BASE/JUNCTION BOX OUTSIDE OF WORK LIMITS.
- 2. DISCONNECT AND REMOVE EXISTING SERIES LIGHTING CABLES BACK TO THE NEAREST LIGHT BASE/JUNCTION BOX.

MATCH LINE - SEE SHEET E102



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TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
 RECONSTRUCT
 TAXIWAY C FROM
 TAXIWAY C7
 THROUGH TAXIWAY H
 AND
 REHABILITATE
 PORTIONS OF
 TAXIWAYS C3, C5,
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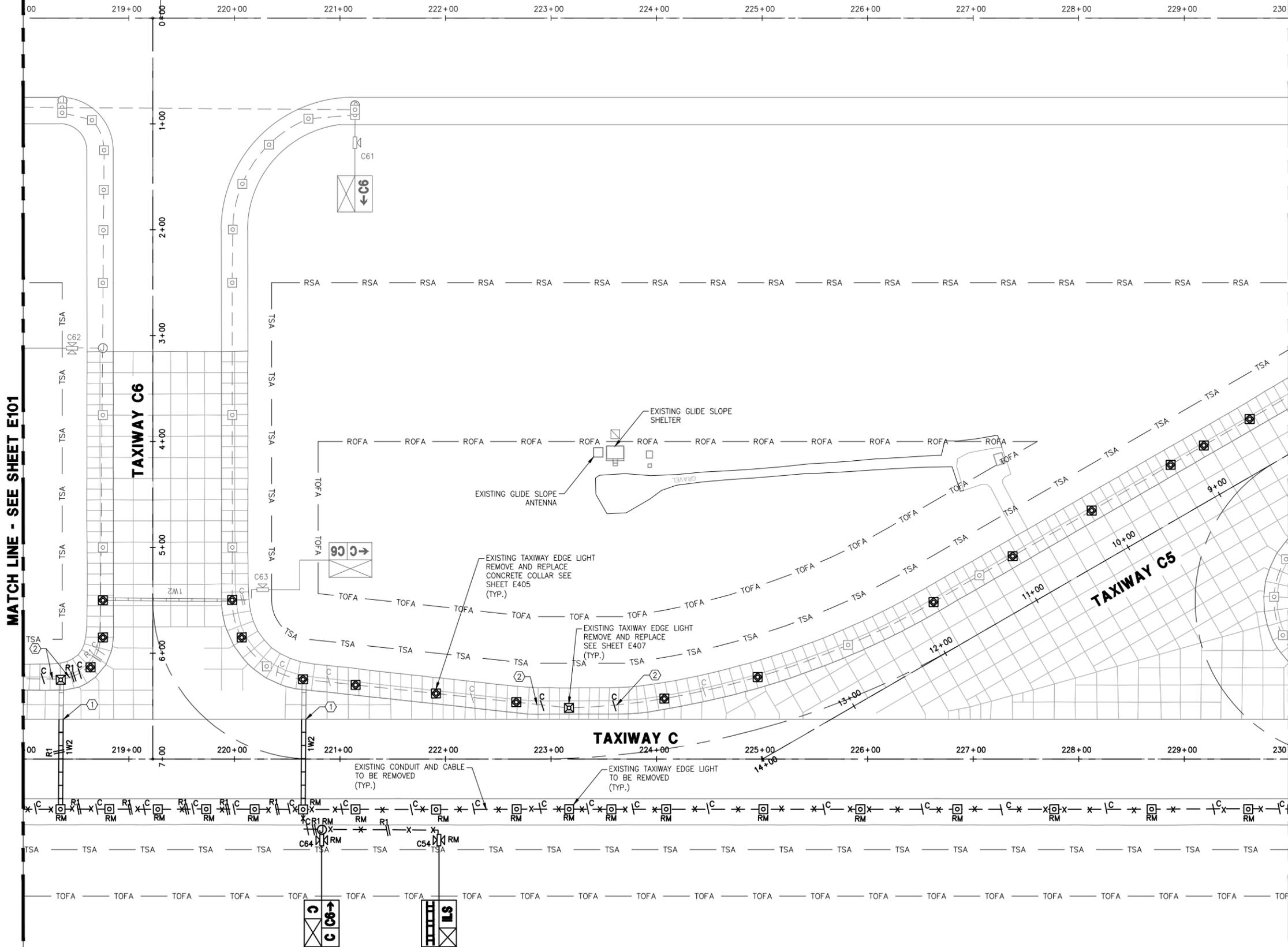
**EXISTING
 CONDITIONS &
 ELECTRICAL
 DEMOLITION
 (SHEET 1 OF 4)**

DRAWING NUMBER
E101
 SHEET 60 OF 75
**BID
 DOCUMENTS**

WARNING!!!
 THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\cadd\E101-E104.dwg
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RUNWAY 17R-35L



SHEET NOTES:

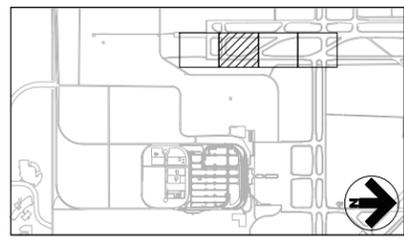
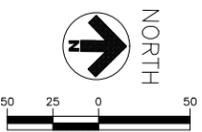
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- 1. REMOVE EXISTING CONDUIT/DUCT BACK TO LOCATION SHOWN FOR TIE-IN OF NEW PVC CONDUIT/DUCT AS SHOWN ON DRAWINGS E201-E204. REMOVE SERIES LIGHTING CABLES BACK TO THE NEAREST LIGHT BASE/JUNCTION BOX OUTSIDE OF WORK LIMITS.
- 2. DISCONNECT AND REMOVE EXISTING SERIES LIGHTING CABLES BACK TO THE NEAREST LIGHT BASE/JUNCTION BOX. FURNISH AND INSTALL L-823 CONNECTOR KITS AS REQUIRED TO MAINTAIN CIRCUIT R1 CONTINUITY.

MATCH LINE - SEE SHEET E101

MATCH LINE - SEE SHEET E103



KEYMAP



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TAXIWAY C RECONSTRUCTION

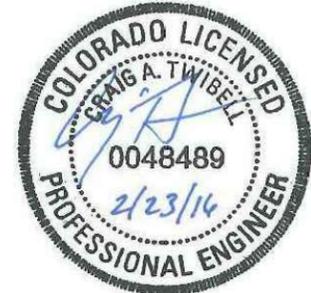
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TAXIWAY C7
THROUGH TAXIWAY H
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TAXIWAYS C3, C5,
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**EXISTING
CONDITIONS &
ELECTRICAL
DEMOLITION
(SHEET 2 OF 4)**

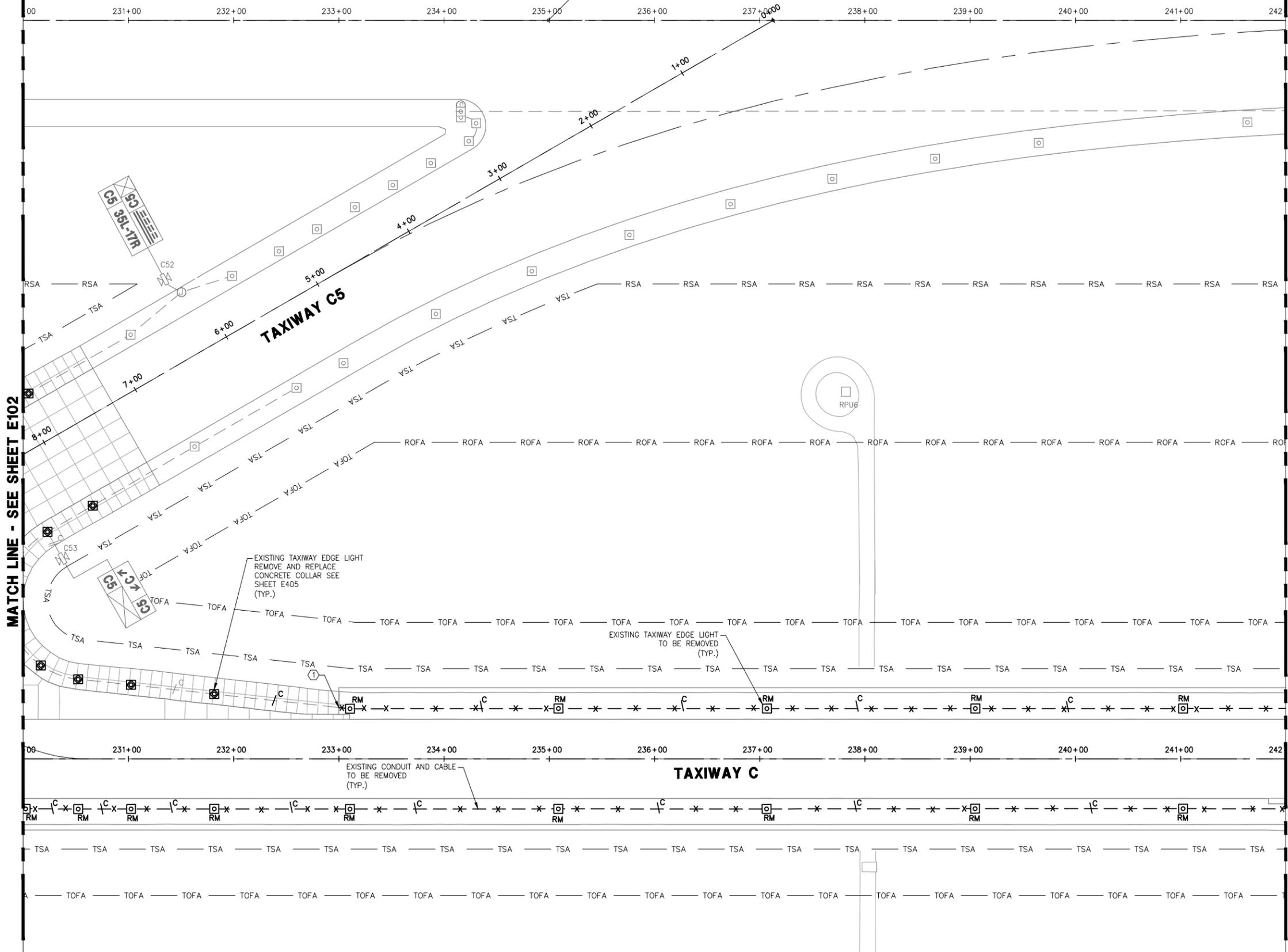
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Plotted on: 2/22/2016 6:11 PM
Printed by: Fouley, Jeff

RUNWAY 17R-35L



MATCH LINE - SEE SHEET E102

MATCH LINE - SEE SHEET E104

SHEET NOTES:

- A. SEE SHEETS E000 AND E001, FOR ELECTRICAL LEGEND, ABBREVIATIONS, AND ELECTRICAL GENERAL NOTES.
- B. SEE SHEETS C006 THRU C008, FOR PROJECT SAFETY AND PHASING PLANS. COORDINATE EQUIPMENT REMOVAL AND DEMOLITION WITH THE SAFETY AND PHASING PLANS.
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- D. REFER TO THE C-SERIES DRAWINGS FOR UNDERGROUND UTILITIES OTHER THAN ELECTRICAL UTILITIES SHOWN ON THE ELECTRICAL AREA PLANS.

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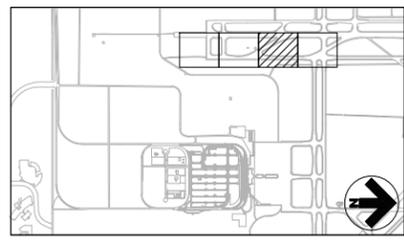
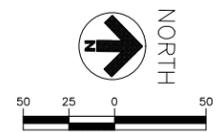


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TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
 RECONSTRUCT
 TAXIWAY C FROM
 TAXIWAY C7
 THROUGH TAXIWAY H
 AND
 REHABILITATE
 PORTIONS OF
 TAXIWAYS C3, C5,
 C6, AND C7**



KEYMAP

REVISIONS		
NO.	DESCRIPTION	DATE

DATE ISSUED: FEBRUARY 23, 2016
 REVIEWED BY: CAT
 DRAWN BY: RMG
 DESIGNED BY: RMG
 RS&H PROJECT NUMBER
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**EXISTING
 CONDITIONS &
 ELECTRICAL
 DEMOLITION
 (SHEET 3 OF 4)**

DRAWING NUMBER
E103
 SHEET 62 OF 75
**BID
 DOCUMENTS**



WARNING!!!
 THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

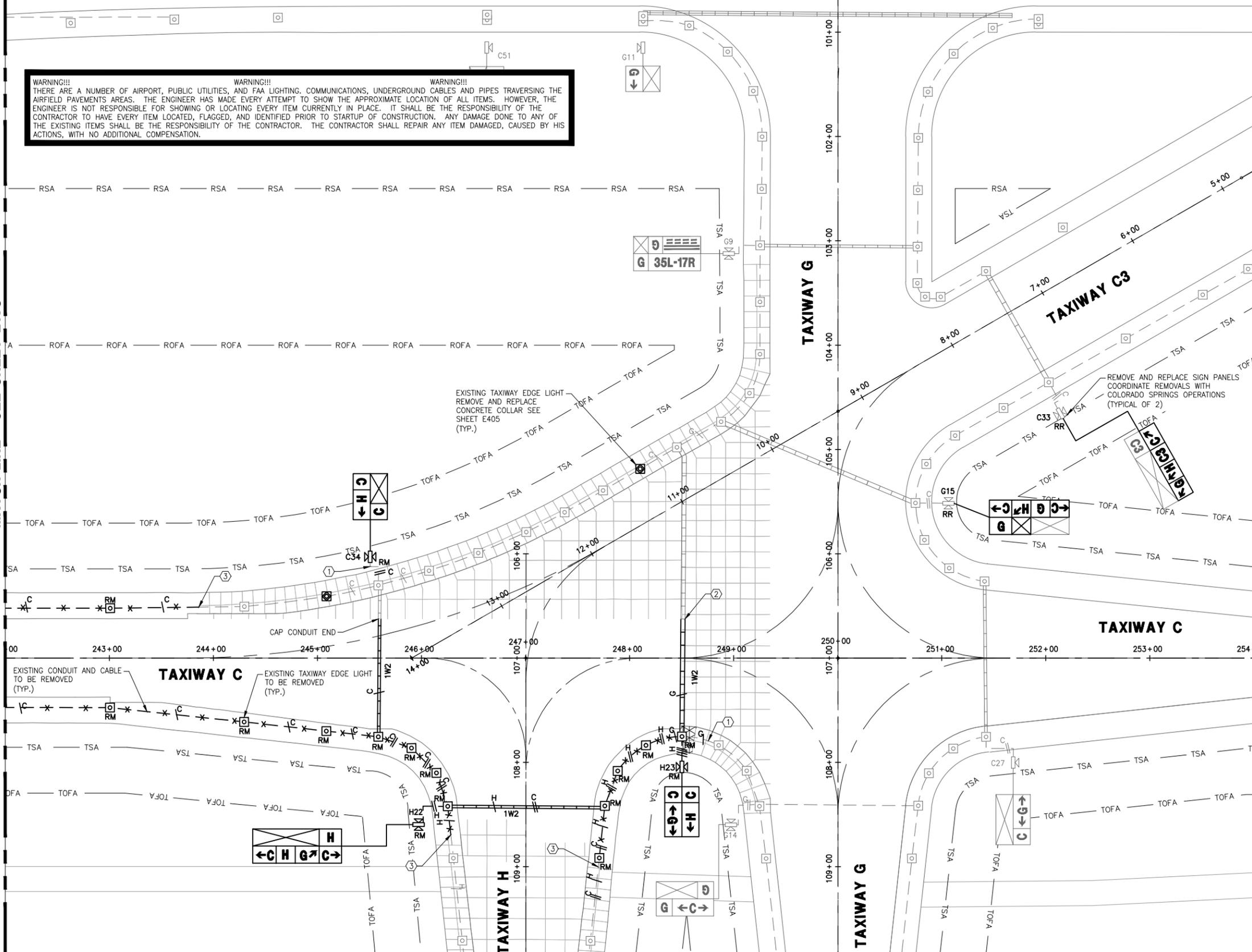
Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c04\E101-E104.dwg
 Plotted on: 2/22/2016 6:11 PM

RUNWAY 17R-35L

00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00 254

WARNING!!!
 THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

MATCH LINE - SEE SHEET E103



SHEET NOTES:

- A. SEE SHEETS E000 AND E001, FOR ELECTRICAL LEGEND, ABBREVIATIONS, AND ELECTRICAL NOTES.
- B. SEE SHEETS C006 THRU C008, FOR PROJECT SAFETY AND PHASING PLANS. COORDINATE EQUIPMENT REMOVAL AND DEMOLITION WITH THE SAFETY AND PHASING PLANS.
- C. PRIOR TO DEMOLITION/MODIFICATION OF CIRCUITS AND EQUIPMENT, CONTRACTOR SHALL FIELD VERIFY ROUTING OF EXISTING CABLES WITH THE ENGINEER TO MAINTAIN CIRCUIT CONTINUITY FOR ACTIVE TAXIWAYS AND RUNWAYS OUTSIDE THE CONSTRUCTION AREA AT ALL TIMES.
- D. REFER TO THE C-SERIES DRAWINGS FOR UNDERGROUND UTILITIES OTHER THAN ELECTRICAL UTILITIES SHOWN ON THE ELECTRICAL AREA PLANS.

KEYED NOTES:

- 1. DISCONNECT AND REMOVE EXISTING SERIES LIGHTING CABLES BACK TO THE NEAREST LIGHT BASE/JUNCTION BOX.
- 2. PRIOR TO DEMOLITION THE CONTRACTOR SHALL VERIFY THE LOCATION OF THIS CONDUIT/DUCT BANK. IF THE CONDUIT LIES BENEATH EXISTING TO REMAIN CONCRETE PAVEMENT THE CONTRACTOR SHALL CONTACT THE ENGINEER.
- 3. REMOVE EXISTING CONDUIT/DUCTBANK BACK TO LOCATION SHOWN FOR TIE-IN OF NEW PVC CONDUIT/DUCT AS SHOWN ON DRAWINGS E201-E204. REMOVE SERIES LIGHTING CABLE BACK TO THE NEAREST LIGHT BASE/JUNCTION BOX OUTSIDE OF WORK LIMITS.

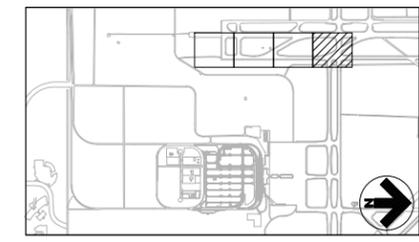
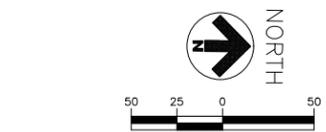


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TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
 RECONSTRUCT
 TAXIWAY C FROM
 TAXIWAY C7
 THROUGH TAXIWAY H
 AND
 REHABILITATE
 PORTIONS OF
 TAXIWAYS C3, C5,
 C6, AND C7**



REVISIONS

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**EXISTING
 CONDITIONS &
 ELECTRICAL
 DEMOLITION
 (SHEET 4 OF 4)**
 DRAWING NUMBER
E104
 SHEET 63 OF 75
**BID
 DOCUMENTS**

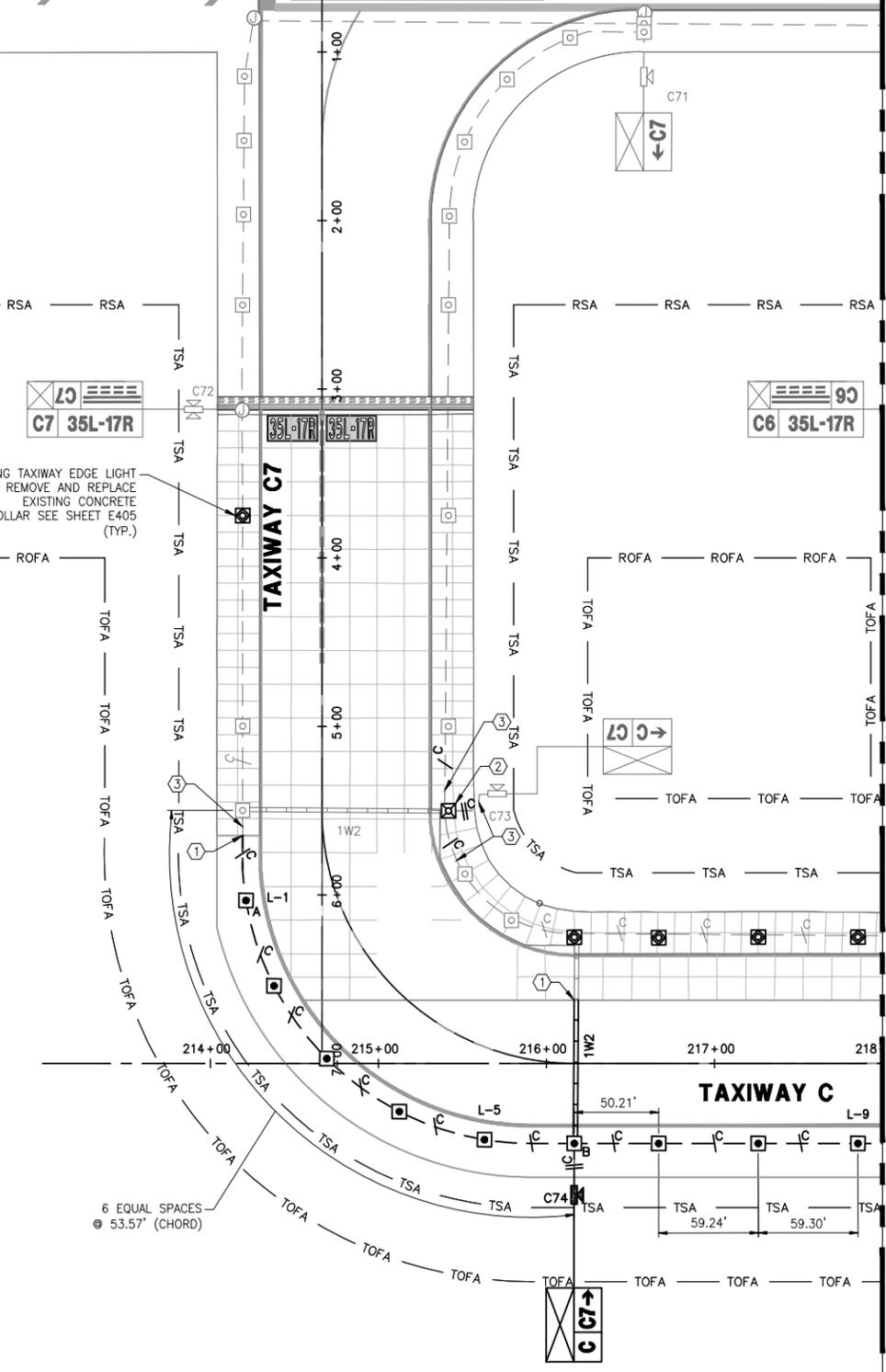
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 Plotted by: Fouley, Jeff
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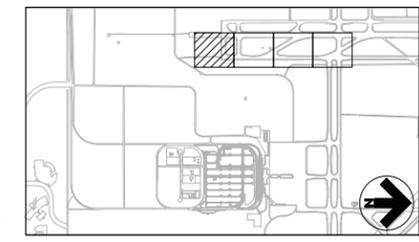
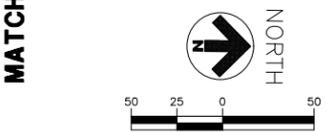
RUNWAY 17R-35L

FIXTURE AND BASE CAN LOCATION TABLE		
POINT NAME	NORTHING	EASTING
B-1	73929.16	30625.29
B-2	73928.99	30772.29
B-3	74835.23	30799.33
L-1	71420.08	30599.25
L-2	71436.72	30649.95
L-3	71468.09	30693.11
L-4	71511.18	30724.57
L-5	71561.84	30741.32
L-6	71615.29	30743.64
L-7	71665.51	30743.70
L-8	71724.75	30743.77
L-9	71784.06	30743.84
L-10	71834.30	30743.89
L-11	71891.69	30743.96
L-12	71949.07	30744.02
L-13	72006.46	30744.09
L-14	72063.84	30744.15
L-15	72113.66	30744.21
L-16	72189.79	30744.30
L-17	72265.87	30744.38
L-18	72315.80	30744.44
L-19	72365.80	30744.50
L-20	72407.70	30744.55
L-21	72499.61	30744.65
L-22	72591.51	30744.76
L-23	72683.42	30744.86
L-24	72775.32	30744.97
L-25	72867.22	30745.07
L-26	72959.13	30745.17
L-27	73001.03	30745.22

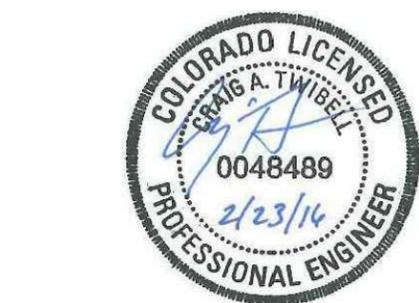
FIXTURE AND BASE CAN LOCATION TABLE		
POINT NAME	NORTHING	EASTING
L-28	73051.03	30745.28
L-29	73101.28	30745.34
L-30	73180.36	30745.43
L-31	73309.35	30745.26
L-32	73495.92	30745.79
L-33	73682.48	30746.00
L-34	73869.04	30746.21
L-35	74055.61	30746.42
L-36	74242.13	30748.87
L-37	74378.56	30753.84
L-38	74428.56	30756.00
L-39	74490.66	30758.37
L-40	74530.08	30768.83
L-41	74569.50	30779.28
L-42	74608.92	30789.74
L-43	74616.04	30816.86
L-44	74623.17	30843.98
L-45	73309.46	30650.57
L-46	73496.02	30650.84
L-47	73682.59	30651.00
L-48	73869.15	30651.21
L-49	74055.72	30651.42
L-50	74242.24	30651.64
L-51	74378.67	30651.80
L-52	74770.67	30879.35
L-53	74786.87	30840.07
L-54	74803.32	30800.94
L-55	74819.28	30792.08
L-56	74835.42	30783.48
L-57	74851.55	30774.87



MATCH LINE - SEE SHEET E202



KEYMAP



- SHEET NOTES:**
- SEE SHEETS E000 AND E001, FOR ELECTRICAL LEGEND, ABBREVIATIONS, AND ELECTRICAL NOTES.
 - REFER TO THE C-SERIES DRAWINGS FOR UNDERGROUND UTILITIES OTHER THAN ELECTRICAL UTILITIES SHOWN ON THE ELECTRICAL AREA PLANS.
 - ALL TAXIWAY EDGE LIGHTS SHALL BE INSTALLED 10 FEET FROM THE EDGE OF PAVEMENT MARKING; OR THE FULL STRENGTH EDGE OF PAVEMENT WHEN PAVEMENT MARKING IS NOT PRESENT.
 - ALL TAXIWAY EDGE LIGHTS LOCATED ON STRAIGHT SECTIONS OF THE TAXIWAY SHALL BE LOCATED SUCH THAT A LINE BETWEEN LIGHTS ON OPPOSITE SIDES IS PERPENDICULAR TO THE CENTERLINE.

- KEYED NOTES:**
- CONNECT EXISTING CONDUIT TO NEW CONDUIT. PROVIDE CONDUIT ADAPTORS/COUPLINGS AS NEEDED. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE CONDUIT.
 - CONNECT NEW CABLE TO EXISTING FIXTURE ON NEW BASE CAN WITH L-823 CONNECTORS.
 - FURNISH AND INSTALL NEW AIRFIELD LIGHTING CABLE IN EXISTING CONDUIT. CONNECT NEW CABLE TO EXISTING FIXTURE/SIGN WITH NEW L-823 CONNECTORS.

WARNING!!!
 THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.



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TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
 RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

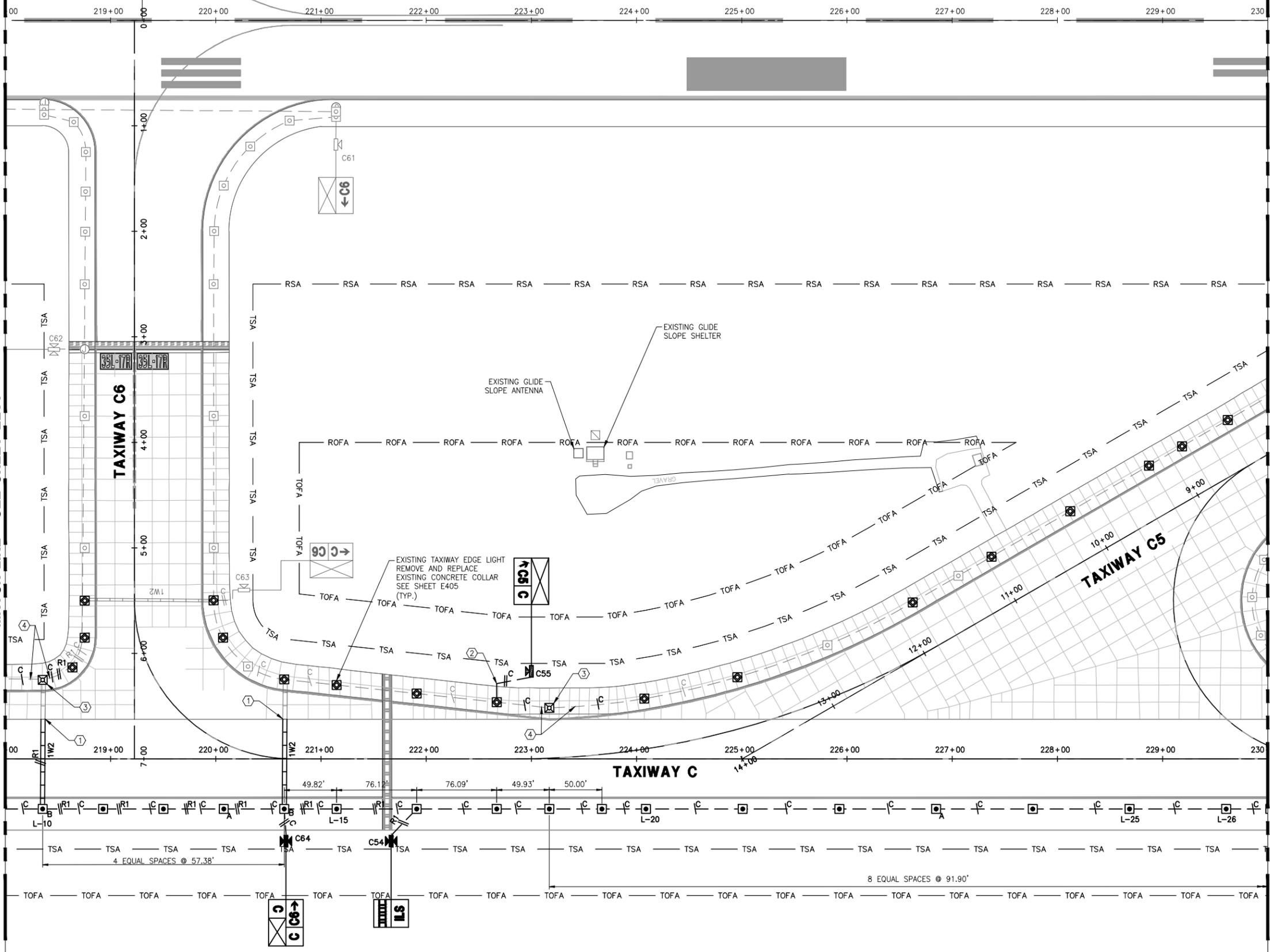
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LIGHTING & SIGNAGE PLAN (SHEET 1 OF 4)

DRAWING NUMBER
E201
 SHEET 64 OF 75
BID DOCUMENTS

Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c04\1\E201-E204.dwg
 Plotted on: 2/22/2016 6:12 PM
 Printed by: Fouley, Jeff

RUNWAY 17R-35L



SHEET NOTES:

- A. SEE SHEETS E000 AND E001, FOR ELECTRICAL LEGEND, ABBREVIATIONS, AND ELECTRICAL NOTES.
- B. REFER TO THE C-SERIES DRAWINGS FOR UNDERGROUND UTILITIES OTHER THAN ELECTRICAL UTILITIES SHOWN ON THE ELECTRICAL AREA PLANS.
- C. ALL TAXIWAY EDGE LIGHTS SHALL BE INSTALLED 10 FEET FROM THE EDGE OF PAVEMENT MARKING, OR THE FULL STRENGTH EDGE OF PAVEMENT WHEN PAVEMENT MARKING IS NOT PRESENT.
- D. ALL TAXIWAY EDGE LIGHTS LOCATED ON STRAIGHT SECTIONS OF THE TAXIWAY SHALL BE LOCATED SUCH THAT A LINE BETWEEN LIGHTS ON OPPOSITE SIDES IS PERPENDICULAR TO THE CENTERLINE.

KEYED NOTES:

- 1. CONNECT EXISTING CONDUIT TO NEW CONDUIT. PROVIDE CONDUIT ADAPTORS/COUPLINGS AS NEEDED. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE CONDUIT.
- 2. SAWCUT EXISTING SHOULDER PAVEMENT TO INSTALL PROPOSED CONDUIT, THEN CONNECT PROPOSED CONDUIT TO EXISTING LIGHT BASE CONDUIT HUB. IF NO HUB IS PRESENT, CORE DRILL THE EXISTING STRUCTURE AND SEAL WITH NON-SHRINK GROUT. FURNISH AND INSTALL COUPLINGS AND/OR ADAPTERS AS REQUIRED. THIS WORK IS CONSIDERED INCIDENTAL TO THE CONDUIT INSTALLATION.
- 3. CONNECT NEW CABLE TO EXISTING FIXTURE ON NEW BASE CAN WITH NEW L-823 CONNECTORS.
- 4. FURNISH AND INSTALL NEW AIRFIELD LIGHTING CABLE IN EXISTING CONDUIT. CONNECT NEW CABLE TO EXISTING FIXTURE/SIGN WITH NEW L-823 CONNECTORS.

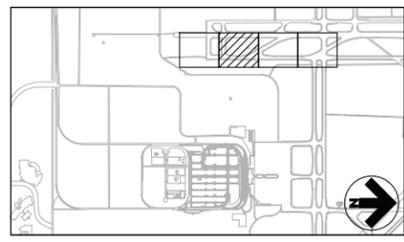
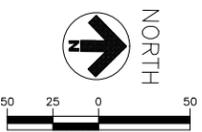


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TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
 RECONSTRUCT
 TAXIWAY C FROM
 TAXIWAY C7
 THROUGH TAXIWAY H
 AND
 REHABILITATE
 PORTIONS OF
 TAXIWAYS C3, C5,
 C6, AND C7**

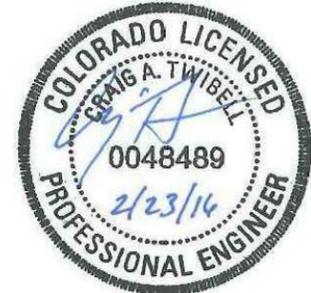


KEYMAP

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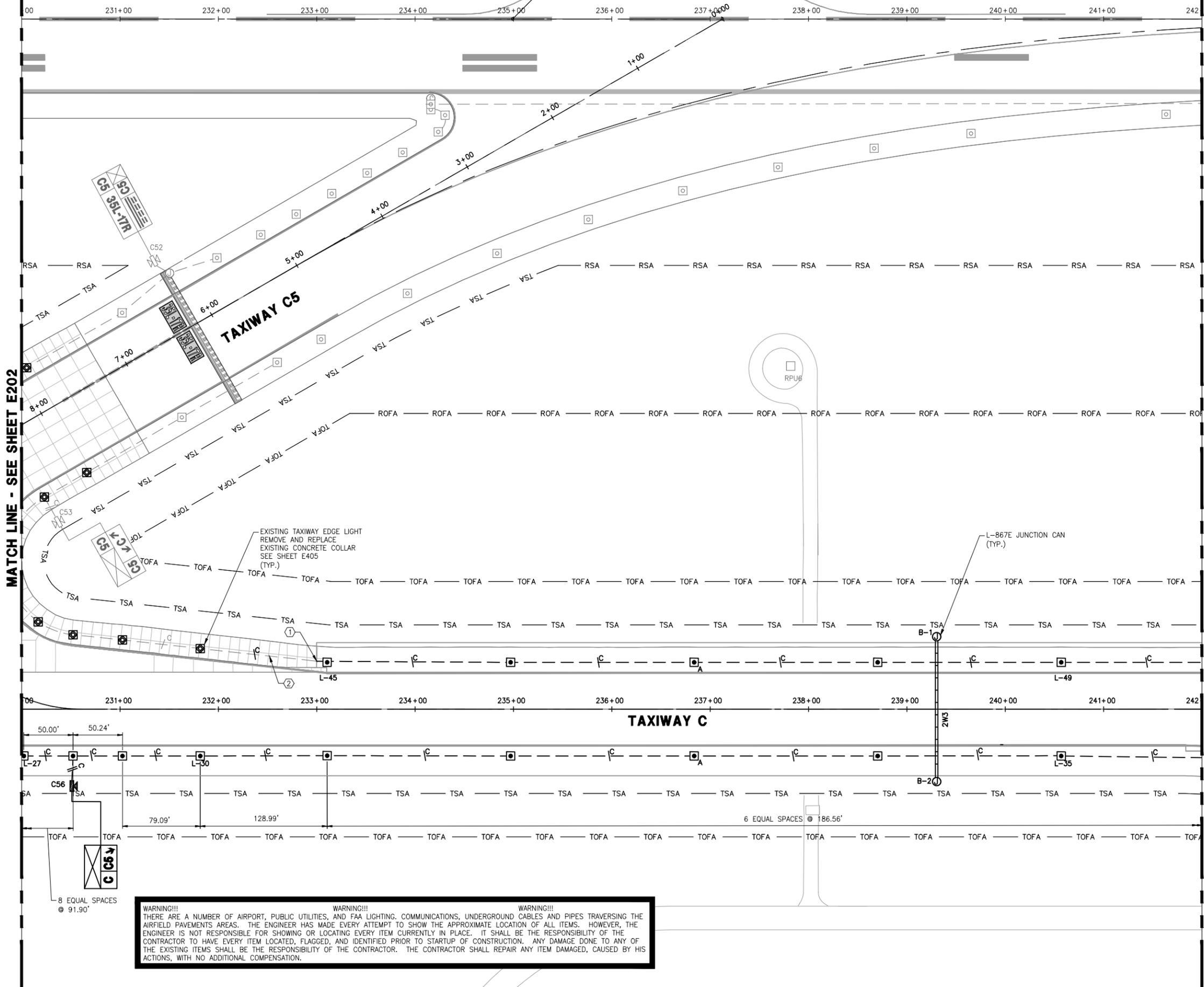
**LIGHTING & SIGNAGE PLAN
 (SHEET 2 OF 4)**

DRAWING NUMBER
E202
 SHEET 65 OF 75
BID DOCUMENTS

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Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c04\c201-e204.dwg
 Plotted on: 2/22/2016 6:13 PM
 Printed by: Fouley, Jeff

RUNWAY 17R-35L



MATCH LINE - SEE SHEET E202

MATCH LINE - SEE SHEET E204

SHEET NOTES:

- A. SEE SHEETS E000 AND E001, FOR ELECTRICAL LEGEND, ABBREVIATIONS, AND ELECTRICAL NOTES.
- B. REFER TO THE C-SERIES DRAWINGS FOR UNDERGROUND UTILITIES OTHER THAN ELECTRICAL UTILITIES SHOWN ON THE ELECTRICAL AREA PLANS.
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KEYED NOTES:

- 1. CONNECT EXISTING CONDUIT TO NEW CONDUIT. PROVIDE CONDUIT ADAPTORS/COUPLINGS AS NEEDED. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE CONDUIT.
- 2. FURNISH AND INSTALL NEW AIRFIELD LIGHTING CABLE IN EXISTING CONDUIT. CONNECT NEW CABLE TO EXISTING FIXTURE/SIGN WITH NEW L-823 CONNECTORS.

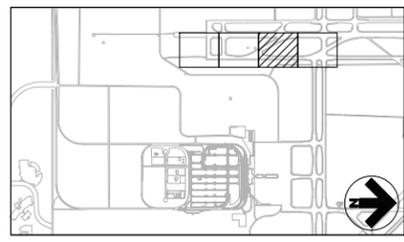
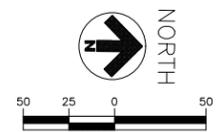


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TAXIWAY C RECONSTRUCTION

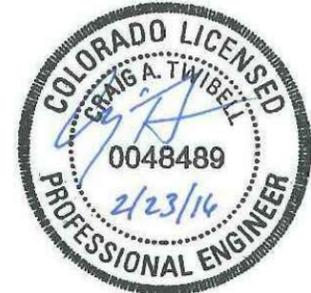
**SCHEDULE I:
 RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**



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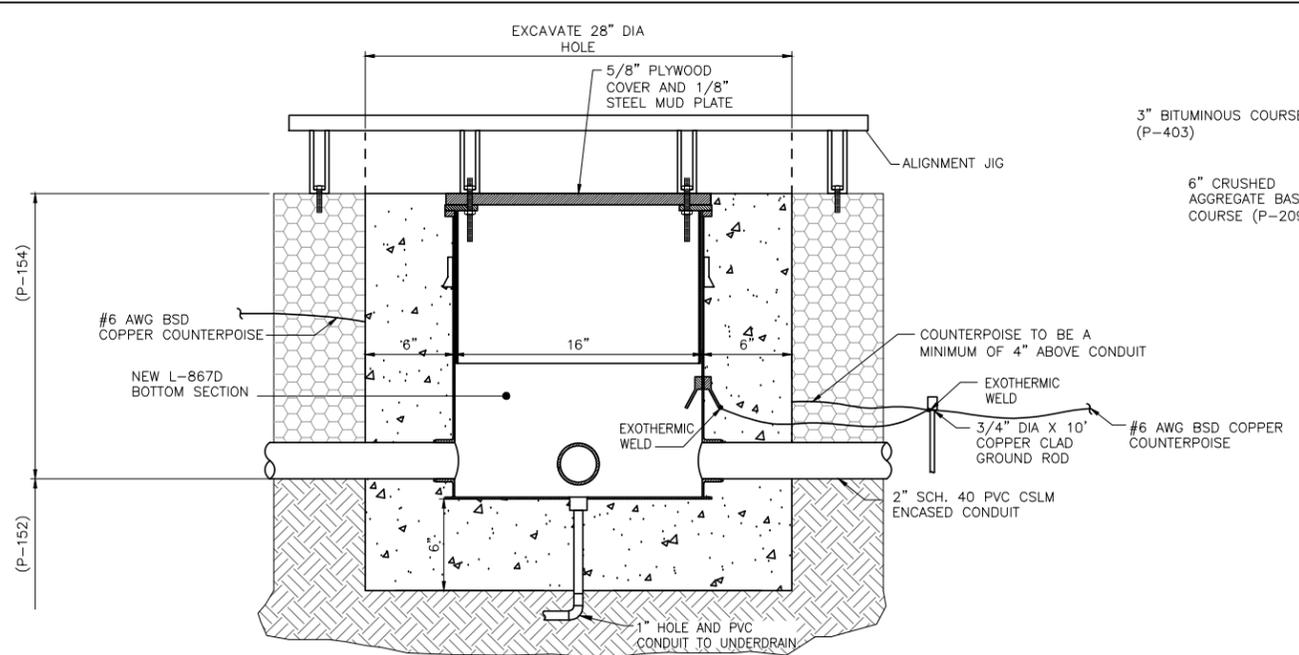


LIGHTING & SIGNAGE PLAN (SHEET 3 OF 4)

DRAWING NUMBER
E203
 SHEET 66 OF 75
BID DOCUMENTS

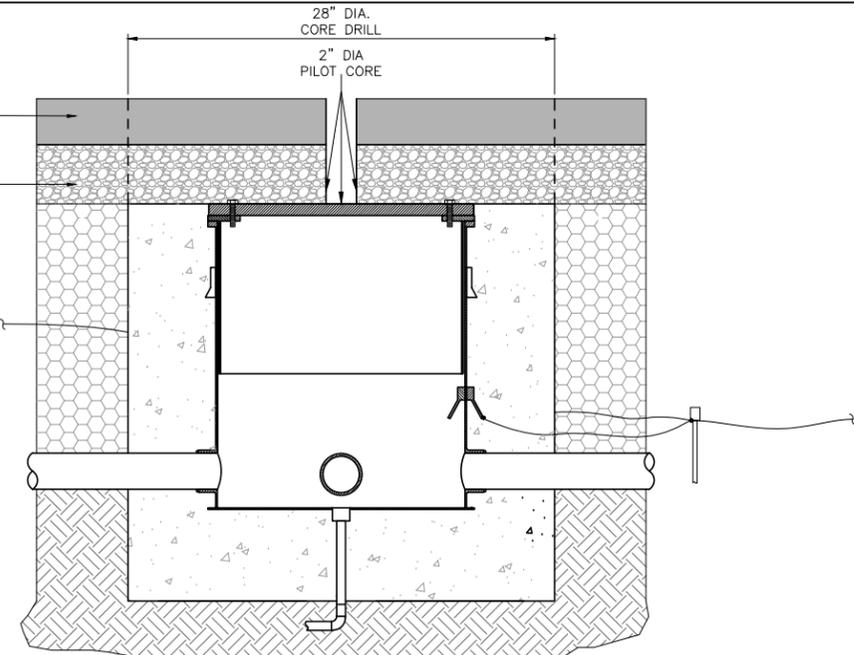
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Drawing: I:\P\2240124\003 colorado springs - taxiway c recon\c04\c201-e204.dwg
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STEP 1

1. LOCATE BY SURVEY AND MARK THE LIGHT BASE PROPOSED LOCATIONS AND RECORD EXISTING ELEVATION AT EACH LOCATION. CONFIRM LOCATIONS WITH CONSTRUCTION MANAGER PRIOR TO EXCAVATION FOR L-867 BASE CAN INSTALLATION.
2. COMPACT EXISTING SUBGRADE. ANY DEBRIS OR MATERIAL THAT FALLS IN CORE AND TRENCH SHALL BE REMOVED PRIOR TO INSTALLING BOTTOM SECTION BASE CAN AND INTERCONNECTING CONDUIT.
3. PRIOR TO POURING CONCRETE, LIGHT BASE SHALL BE INSPECTED. ANY BASE CAN INSTALLED INCORRECTLY SHALL BE REMOVED AND REINSTALLED. POUR THE CONCRETE FOUNDATION TO FILL THE HOLE UNDER AND AROUND THE BASE CAN. VIBRATE CONCRETE SURFACE TO ENSURE ADEQUATE CONCRETE UNDER BASE CAN.



STEP 2

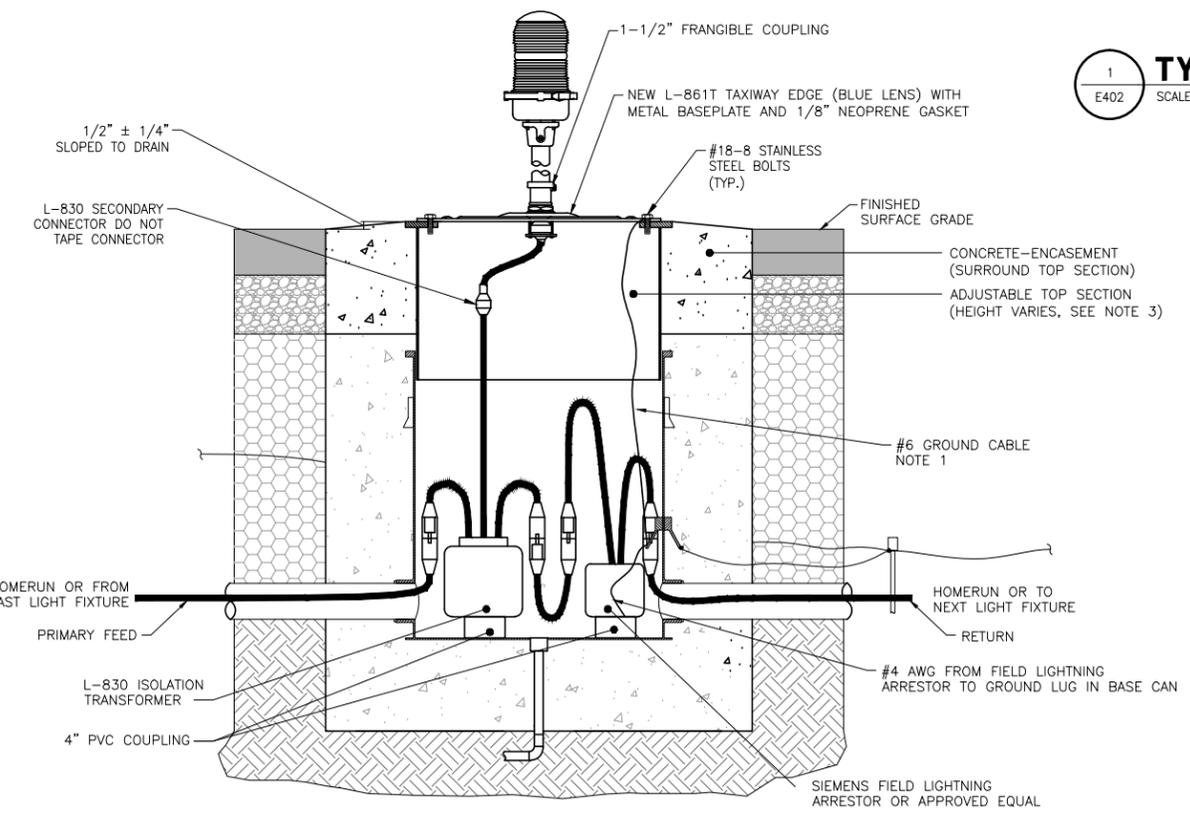
1. FOLLOWING THE INSTALLATION OF P-209 BASE COURSE AND P-403 SURFACE COURSE, LOCATE CENTER OF BASE CAN FROM SURVEY.
2. PERFORM 2" DIAMETER PILOT CORE THROUGH SURFACE COURSE TO EXPOSE AND LOCATE THE EXACT CENTER OF BASE CAN.
3. CONFIRM THAT 28" DIAMETER CORE IS CENTERED AND CORE DRILL AROUND BASE CAN TO THE STEEL COVER PLATE.
4. REMOVE THE STEEL COVER PLATE, ALONG WITH ANY DIRT, GRIT AND ANY OTHER MATERIAL WHICH MAY HAVE SEEPED INTO THE BOTTOM SECTION BASE CAN, FLANGE OR COVERS.

NOTES:

1. PROVIDE EXTERNAL GROUND LUG TO TERMINATION OF 1-1/C, #6 BARE COPPER COUNTERPOISE GROUND TO LIGHT BASE. PROVIDE 3/4" X 10' GROUND ROD AT EACH LIGHT BASE. GROUND ROD SHALL BE BURIED A MINIMUM OF 12" BELOW GRADE. CONNECT 1-1/C, #6 BARE COPPER CABLE TO GROUND ROD WITH EXOTHERMIC WELD AND TO LIGHT BASE EXTERNAL LUG. PROVIDE PROPER CABLE CONNECTORS TO ALLOW CONNECTION OF MULTIPLE GROUNDING CABLES OR PROVIDE ADDITIONAL GROUND LUGS TO ASSURE ALL GROUNDING CABLES ARE CONNECTED PROPERLY. COUNTERPOISE SHALL BE BURIED IN SAME TRENCH AS CONDUIT AND SHALL BE A MINIMUM OF 4" ABOVE THE CONDUIT.
2. THE LIGHT BASE DRAIN INSTALLATION SHALL BE INCIDENTAL TO THE LIGHT BASE INSTALLATION AND SHALL BE INCLUDED IN THE PRICE OF THE LIGHT BASE.
3. TAXIWAY EDGE LIGHT BASE CAN SHALL BE TYPE L-867D CLASS 1A ADJUSTABLE. TYPICAL TAXIWAY EDGE LIGHT BASE CAN SHALL HAVE AN OVERALL HEIGHT OF 24".

TYPE 'D', 24" DEEP EDGE LIGHT WITH LIGHTNING ARRESTOR DETAIL

1
E402 SCALE: NTS APPLICABLE FOR: A



STEP 3

1. PRIOR TO POURING CONCRETE, LIGHT BASE AND TOP SECTION SHALL BE INSPECTED. ANY BASE CAN INSTALLED INCORRECTLY SHALL BE REMOVED AND REINSTALLED. POUR THE CONCRETE TO FILL CORE AROUND THE TOP SECTION. VIBRATE AND SMOOTH SURFACE TO ENSURE THERE IS ADEQUATE CONCRETE.
2. SMOOTH CONCRETE PRIOR TO CURING AND CONFIRM CONCRETE FINISHED TO MATCH THE SURFACE COURSE ELEVATION.
3. FURNISH AND INSTALL #6 GROUND CABLE AND CONNECT FROM THE INTERIOR GROUND LUG WITHIN THE BASE CAN TO LIGHT FIXTURE LUG. PROVIDE 3' OF CABLE SLACK WITHIN BASE CAN.
4. FURNISH AND INSTALL SERIES LIGHTING CABLES THROUGH THE CONDUIT SYSTEM TO BASE CAN. (PROVIDE 3 FEET OF CABLE SLACK WITHIN BASE CAN, EACH SIDE)
5. FURNISH AND INSTALL ISOLATION TRANSFORMER AND CONNECT SERIES LIGHTING CABLE TO THE PRIMARY LEADS OF THE ISOLATION TRANSFORMER. MAKE SECONDARY CONNECTIONS TO THE FIXTURE LEADS AND CONNECTOR KITS OF THE SERIES LIGHTING CABLE. CONNECT THE GROUND CABLE TO THE GROUND PLUG.
6. FURNISH AND INSTALL LIGHT FIXTURE AND SECURE TO THE BASE CAN WITH STAINLESS STEEL BOLTS AND ANTI-ROTATIONAL WASHERS. INSTALL THE LIGHT FIXTURE TO THE LIGHT BASE WITH A MINIMUM OF SIX (6) 18-8 STAINLESS BOLTS AND TWO PIECE SS ANTI-ROTATION LOCK WASHER. USING A CALIBRATED TORQUE WRENCH, HAND-TIGHTEN BOLTS TO MANUFACTURER'S RECOMMENDED TORQUE.



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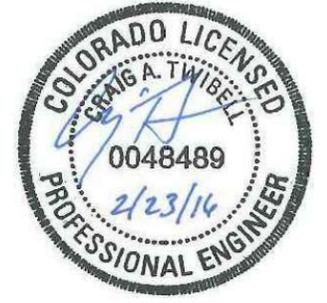
TAXIWAY C RECONSTRUCTION

**SCHEDULE I
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

REVISIONS

NO.	DESCRIPTION	DATE

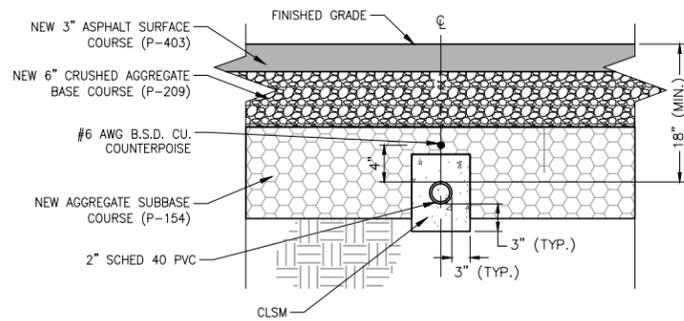
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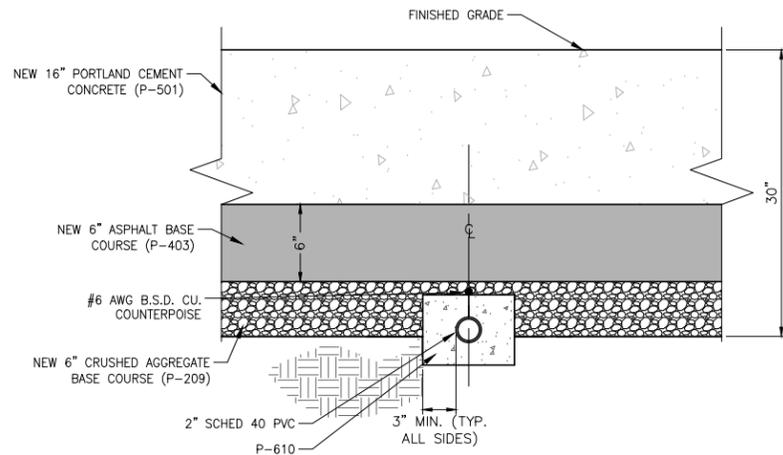
**ELECTRICAL
DETAILS
(SHEET 2 OF 8)**

DRAWING NUMBER
E402
SHEET 69 OF 75
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DOCUMENTS**

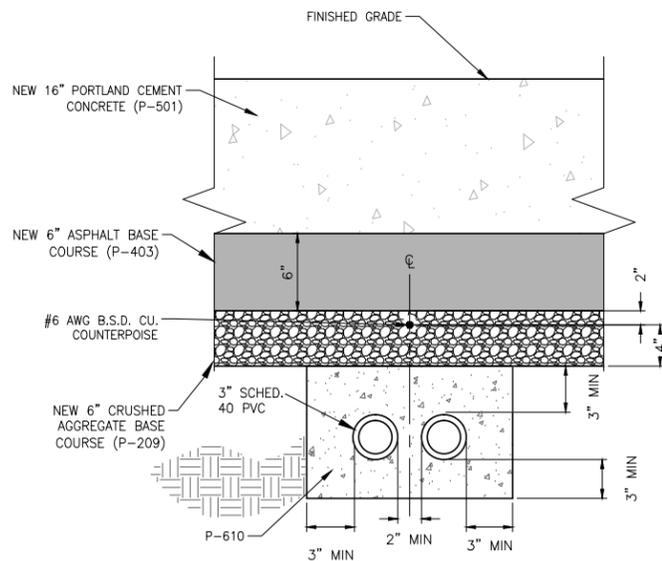
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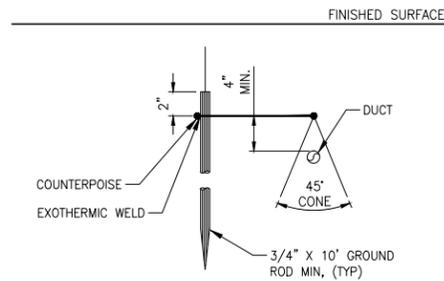
1 1-WAY, 2" CONDUIT DETAIL (CLSM ENCASED)
E403 SCALE: NTS



2 1-WAY, 2" CONCRETE ENCASED DUCT SECTION
E403 SCALE: NTS



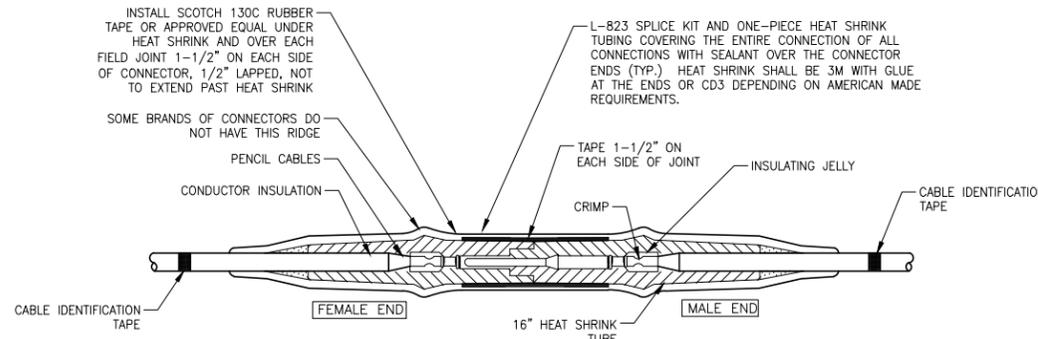
3 2-WAY, 3" CONCRETE ENCASED DUCT SECTION
E403 SCALE: NTS



NOTES FOR CONDUIT NOT PARALLEL TO PAVEMENT:

1. CONNECTION TO GROUND RODS SHALL BE MADE USING EXOTHERMIC WELDS.
2. COUNTERPOISE SHALL BE INSTALLED 4" MINIMUM ABOVE THE CABLE OR CONDUIT AND AS REQUIRED BY BELOW.
3. LOCATION OF THE COUNTERPOISE SHALL BE CALCULATED TO ENSURE THAT THE CABLES AND/OR CONDUITS TO BE PROTECTED ARE WITHIN A 45° ZONE OF PROTECTION BELOW THE COUNTERPOISE.

4 COUNTERPOISE / GROUND ROD INSTALLATION
E403 SCALE: NTS



SUPPLEMENTAL INSTALLATION INSTRUCTIONS

1. CLEAN THE CABLE THOROUGHLY 12" MIN. FROM THE END.
2. REMOVE INSULATION WITH A CABLE END PENCILLER TOOL (SIEMENS # WS 49, CROUSE-HINDS # 10036-36 OR ENGINEER APPROVED EQUAL). DO NOT NICK THE CONDUCTOR.
3. CAREFULLY INSERT CABLE INTO CONNECTOR TO THE PROPER DEPTH. INSTALL PIN AND / OR RECEPTACLE WITH A CRIMPING TOOL WHICH MUST BE COMPLETELY CLOSED BEFORE THE TOOL MAY BE REMOVED. (SIEMENS #TMB25S, CROUSE-HINDS #33228 OR ENGINEER APPROVED EQUAL). CRIMPING DIES SHALL BE PROPER SIZED FOR THE CABLE AND CONNECTOR USED.
4. BE SURE CABLE AND CONNECTOR FITTINGS ARE CLEAN. COAT THE CABLE INSULATION WITH INSULATING JELLY FROM THE CONNECTOR.
5. CLEAN CONNECTOR AND CABLE INSULATION WITH WAX OR GREASE SOLVENT TO REMOVE SURFACE SILICONE JELLY.
6. SLIP 16 INCH LENGTH OF HEAT SHRINK TUBING ON TRANSFORMER LEAD.
7. COMPLETE CONNECTION BY MATING THE PLUG AND RECEPTACLE. CAUTION: BE SURE THE CABLE DOES NOT SLIP OUT WHEN THE CONNECTION IS MADE.
8. APPLY RUBBER TAPE AND VINYL TAPE ONE HALF LAPPED, 1-1/2 INCHES ON EACH SIDE OF JOINT.
9. ANY CONNECTOR WHICH IS CONTAMINATED BY DIRT OR OTHER DAMAGING MATERIAL SHALL BE REMOVED AND NOT REINSTALLED.
10. WRAP SEALANT SECURELY AROUND THE CABLE INSULATION TO EXTEND MIN 1-1/2" BEYOND BOTH ENDS OF CONNECTORS.
11. CENTER HEAT SHRINK OVER THE CONNECTOR. APPLY HEAT EVENLY BEGINNING AT THE CENTER AND WORKING AROUND CABLE TO ENDS. **DO NOT OVER HEAT.**
12. THE HEAT SOURCE SHALL BE ELECTRIC HEAT GUN OR A PROPANE TORCH WITH A FLAME SPREADER. FLAME SPREADER SHALL BE APPROVED BY THE ENGINEER.

5 L-823 CONNECTOR INSTALLATION DETAIL
E403 SCALE: NTS

GENERAL NOTES:

1. THE #6 AWG COPPER COUNTERPOISE WIRE SHALL BE CENTERED ON THE DUCT BANK. WHERE DUCT BANKS INCLUDE MORE THAN (2) CONDUITS, MULTIPLE COUNTERPOISE WIRES SHALL BE INSTALLED TO MAINTAIN ALL CONDUITS WITHIN THE 45° CONE AS DENOTED ON DETAIL 4 OF THIS DRAWING. THE MINIMUM DISTANCE BETWEEN TOP OF CONDUIT IN DUCT BANK AND COUNTERPOISE SHALL BE 3".
2. THE CONTRACTOR SHALL INSTALL A NYLON PULL WIRE IN EACH UNUSED DUCT OR CONDUIT INSTALLED AND PLUG OR CAP THE DUCT. THE WIRE SHALL BE SECURELY ATTACHED TO THE PLUG/CAP AT EACH END OF THE DUCT OR CONDUIT. NEW PULL WIRES SHALL BE INSTALLED IN EACH UNUSED DUCT OR CONDUIT IN DUCT BANK EXTENSIONS.
3. DUCT BANKS SHALL DRAIN TOWARD THE MANHOLES WITH THE CROWN OF THE DUCT BANK MIDWAY BETWEEN MANHOLES. THE DUCT SLOPE SHALL BE 3" PER 100'.
4. ALL CONDUITS, DUCT AND DUCT BANKS SHOWN AS CONCRETE ENCASED SHALL BE ENCASED IN P-610 CONCRETE COMPRESSIVE STRENGTH, WITH NOT LESS THAN 3" OF COVER AT TOP AND SIDES.
5. GRADING, SODDING, AREA RESTORATION, AND DEWATERING FOR THE INSTALLATION OF BASE CANS, HANDHOLES, DUCT BANKS OR CONDUITS IS INCIDENTAL TO THE RESPECTIVE PAY ITEM. THE CONTRACTOR SHALL BE RESPONSIBLE TO PAY FOR AND OBTAIN ANY AND ALL PERMITS REQUIRED FOR DEWATERING.
6. THE P-610 CONCRETE AROUND CONDUITS, DUCTS, JUNCTION BOXES AND BASE CANS SHALL BE COMPLETELY CONSOLIDATED BY MECHANICAL MEANS AND SHALL BE FREE OF ANY VOIDS.
7. ALL DUCTS SHALL BE SECURELY FASTENED IN PLACE DURING CONSTRUCTION AND PROGRESS OF THE WORK AND SHALL BE PLUGGED TO PREVENT SEEPAGE OF GROUT, WATER OR DIRT. ANY DUCT SECTION HAVING A DEFECTIVE JOINT SHALL NOT BE INSTALLED. DUCTS SHALL BE SUPPORTED AND SPACED APART USING APPROVED SPACERS AT INTERVALS NOT TO EXCEED 5 FEET.
8. ALL CONSTRUCTION JOINTS IN CONCRETE ENCASED DUCTS SHALL HAVE A MINIMUM OF 4 STEEL DOWELS, EVENLY SPACED AND INSTALLED AT THE JOINT. THE DOWELS SHALL BE #4 DEFORMED STEEL REINFORCING BARS, 24" LONG, WITH 1/2 OF THE LENGTH EMBEDDED IN THE PLASTIC CONCRETE THAT IS CONSTRUCTED INITIALLY.
9. ALL CONDUITS AND DUCTS INSTALLED UNDER FULL STRENGTH (STRUCTURAL) PAVEMENT SHALL BE CONCRETE ENCASED. EXTEND CONCRETE ENCASEMENT 5' BEYOND EDGE OF STRUCTURAL PAVEMENT.
10. TRENCHING, BACKFILL, ASPHALT, LIME ROCK, COMPACTED SUBGRADE AND SAW-CUTTING IS INCLUSIVE OF THE CONDUIT/DUCT BANK PAY ITEM



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COLORADO SPRINGS
AIRPORT

**TAXIWAY C
RECONSTRUCTION**

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
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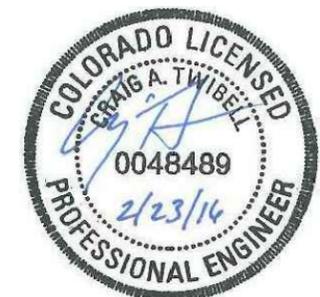
**ELECTRICAL
DETAILS
(SHEET 3 OF 8)**

DRAWING NUMBER

E403

SHEET 70 OF 75

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TAXIWAY C RECONSTRUCTION

**SCHEDULE I:
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

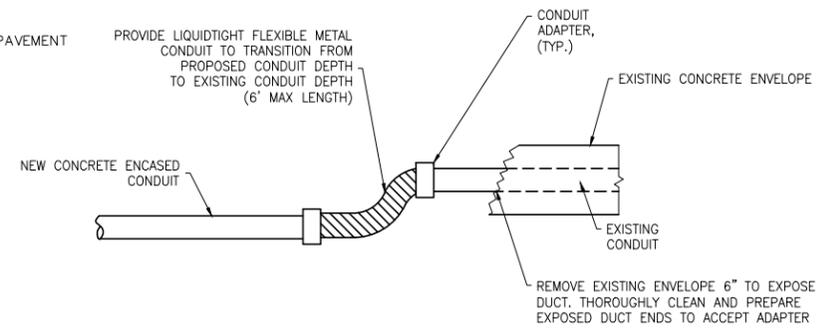
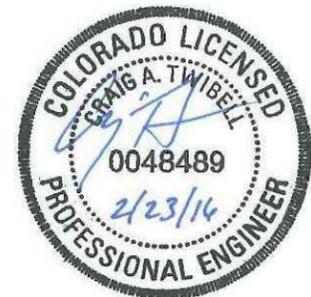
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NO.	DESCRIPTION	DATE

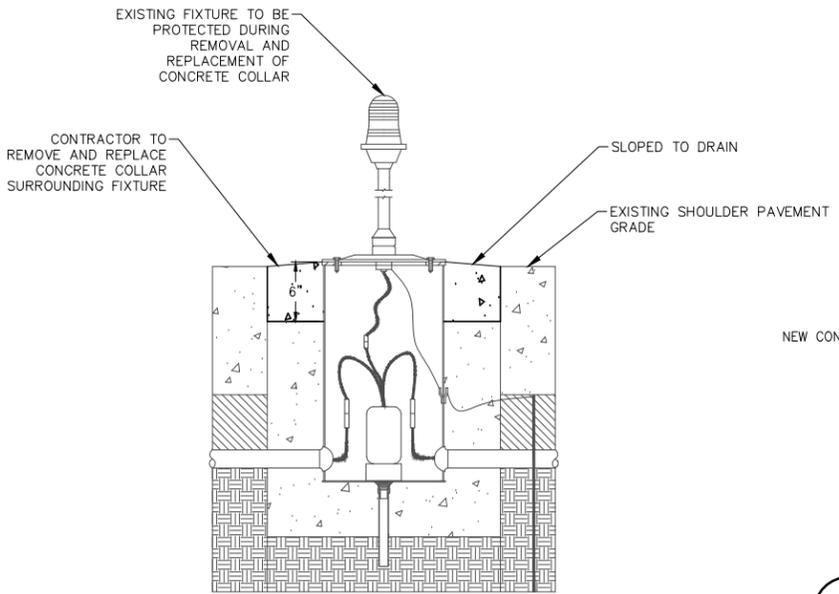
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ELECTRICAL DETAILS (SHEET 5 OF 8)

DRAWING NUMBER
E405
SHEET 72 OF 75
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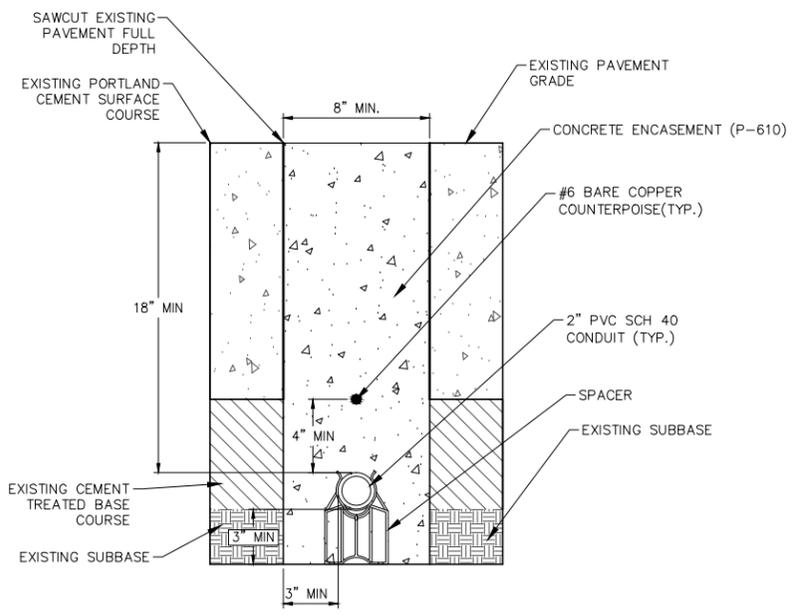
4 NEW CONCRETE ENCASED CONDUIT TIE-IN
E405 SCALE: NTS



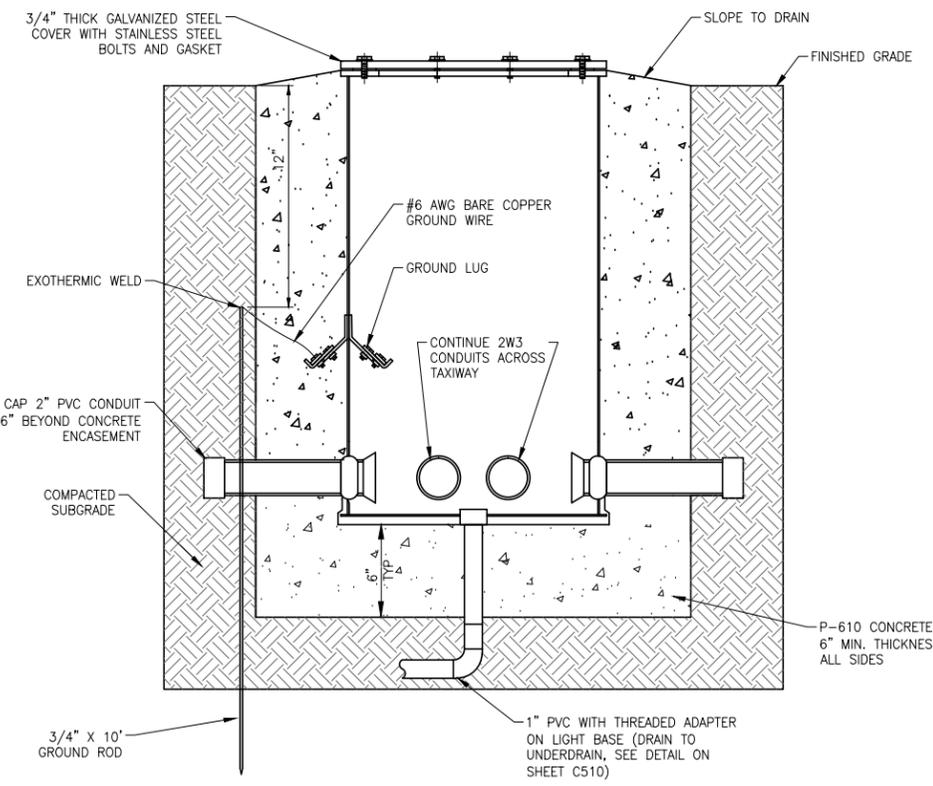
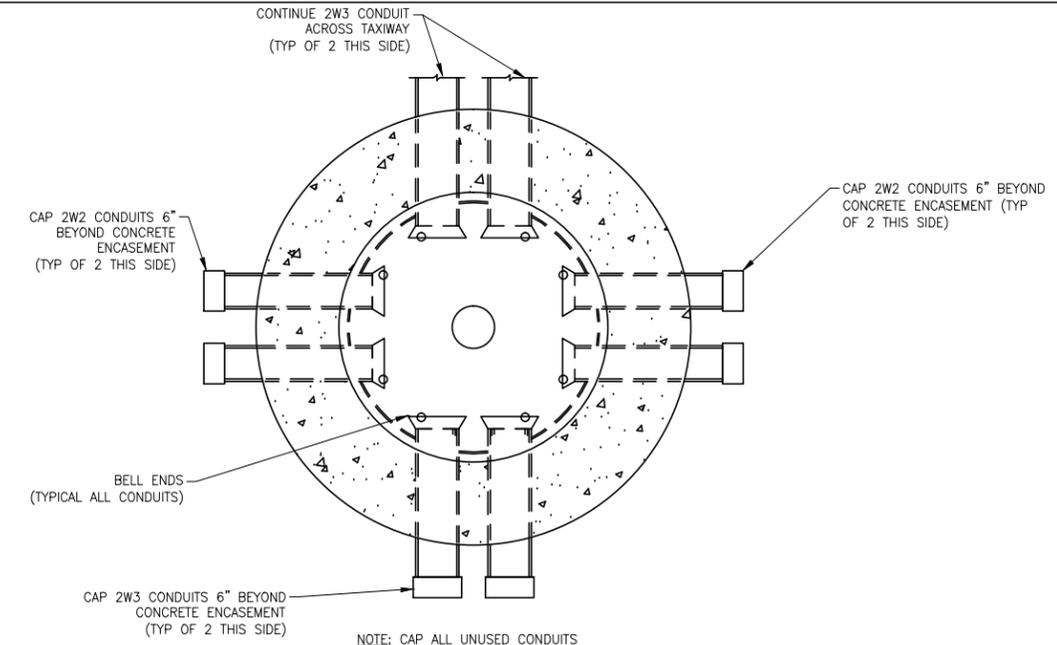
REMOVAL AND REPLACEMENT NOTES

1. THE CONTRACTOR SHALL REMOVE THE TOP 6" OF THE EXISTING CONCRETE COLLAR SURROUNDING THE FIXTURE. DURING THIS PROCESS THE CONTRACTOR MUST PROTECT THE EXISTING BASE CAN, LIGHT FIXTURE, AND SHOULDER PAVEMENT. AFTER THE PROCESS IS COMPLETE, THE CONTRACTOR SHALL VACUUM AND BROOM THE SURROUNDING AREAS TO ENSURE THAT ALL DEBRIS HAVE BEEN REMOVED.
2. THE CONTRACTOR SHALL THEN POUR THE NEW CONCRETE COLLAR AS SHOWN ABOVE. THE CONCRETE COLLAR MUST BE SLOPED TO DRAIN AWAY FROM THE FIXTURE.

2 REMOVE AND REPLACE CONCRETE COLLAR
E405 SCALE: NTS APPLICABLE FOR: ☒

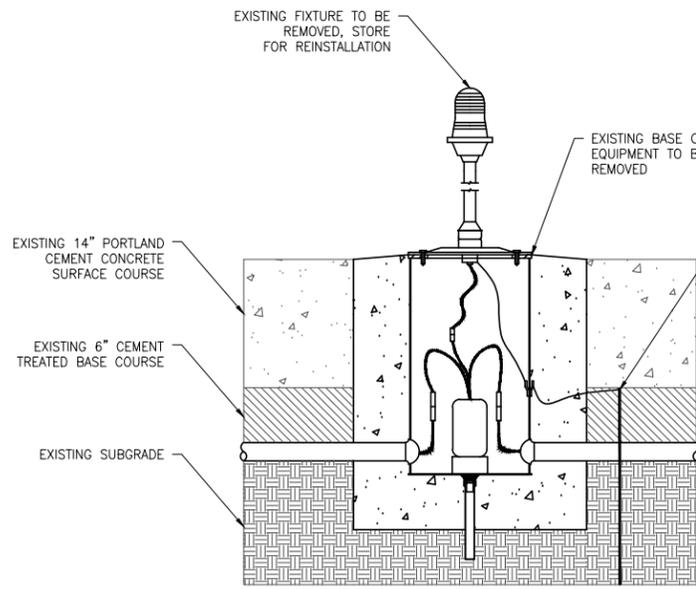


3 1-WAY, 2' CONCRETE ENCASED CONDUIT IN EXISTING SHOULDER
E405 SCALE: NTS

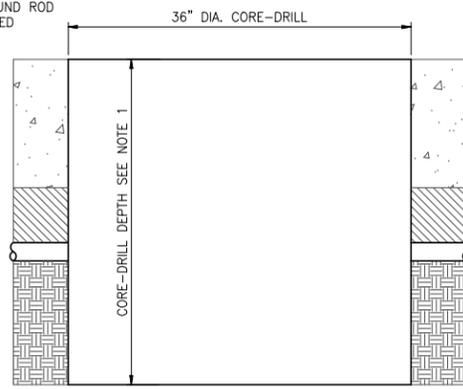


1 L-867E JUNCTION CAN DETAIL
E405 SCALE: NTS APPLICABLE FOR: ⓐ

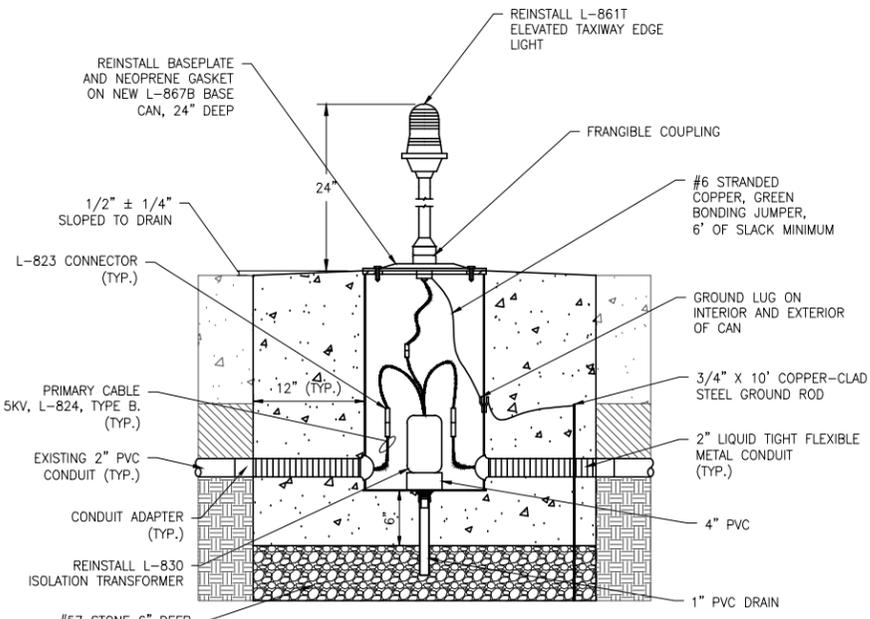
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ELEVATION



ELEVATION



ELEVATION

STEP 1

1. REVIEW AREA PLANS AND LOCATE LIGHT LOCATIONS BY SURVEY. CONFIRM LOCATIONS WITH THE ENGINEER PRIOR TO CORING EXISTING PAVEMENT.
2. EXISTING GROUND ROD SHOWN IS PRESUMED. LOCATION AND EXISTENCE SHALL BE CONFIRMED BY THE CONTRACTOR AND REMOVAL SHALL BE INCIDENTAL TO REMOVAL OF THE BASE CAN.
3. REMOVE AND STORE EXISTING FIXTURE, ISOLATION TRANSFORMER, BASE PLATE, AND GASKET FOR REINSTALLATION.

STEP 2

1. CORE DRILL A 36" DIAMETER HOLE AT A DETERMINED DEPTH THAT ALLOWS A MINIMUM OF 6" OF CONCRETE BENEATH THE BASE CAN AND 6" OF #57 STONE BENEATH THE CONCRETE. REMOVE AND DISPOSE OF THE CORE.
2. IF REQUIRED, COMPACT EXISTING SUBGRADE. ANY DEBRIS OR MATERIAL THAT FALLS INTO THE CORE SHALL BE REMOVED PRIOR TO INSTALLATION OF THE BASE CAN.

STEP 3

1. UTILIZE AN ALIGNMENT JIG TO POSITION THE BASE CAN WITHIN THE CORED HOLE.
2. CONNECT EXISTING CONDUIT TO BASE CAN VIA 2" LIQUID TIGHT FLEXIBLE METAL CONDUIT. FURNISH AND INSTALL NEW 3/4" X 10' COPPER-CLAD GROUND ROD AND CONNECT TO BASE CAN EXTERNAL GROUND LUG WITH NEW #6 BARE COPPER COUNTERPOISE WIRE. RECONNECT EXISTING COUNTERPOISE TO NEW GROUND ROD USING AN EXOTHERMIC WELD.
3. POUR CONCRETE AROUND NEW BASE CAN AND CONDUIT. VIBRATE CONCRETE TO ELIMINATE ANY VOIDS.
4. REMOVE ALIGNMENT JIG AND REINSTALL EXISTING FIXTURE, ISOLATION TRANSFORMER, BASE PLATE, AND GASKET.

NOTES:

1. PROVIDE EXTERNAL GROUND LUG TO TERMINATION OF 1-1/C, #6 BARE COPPER COUNTERPOISE GROUND TO LIGHT BASE. PROVIDE 3/4" X 10' GROUND ROD AT EACH LIGHT BASE. GROUND ROD SHALL BE BURIED A MINIMUM OF 12" BELOW GRADE. CONNECT 1-1/C, #6 BARE COPPER CABLE TO GROUND ROD WITH EXOTHERMIC WELD AND TO LIGHT BASE EXTERNAL LUG. PROVIDE PROPER CABLE CONNECTORS TO ALLOW CONNECTION OF MULTIPLE GROUNDING CABLES OR PROVIDE ADDITIONAL GROUND LUGS TO ASSURE ALL GROUNDING CABLES ARE CONNECTED PROPERLY. COUNTERPOISE SHALL BE BURIED IN SAME TRENCH AS CONDUIT.
2. THE LIGHT BASE DRAIN INSTALLATION SHALL BE INCIDENTAL TO THE LIGHT BASE INSTALLATION AND SHALL BE INCLUDED IN THE PRICE OF THE LIGHT BASE.
3. TAXIWAY EDGE LIGHT FIXTURE SHALL HAVE AN OVERALL HEIGHT OF 24" ABOVE GRADE.



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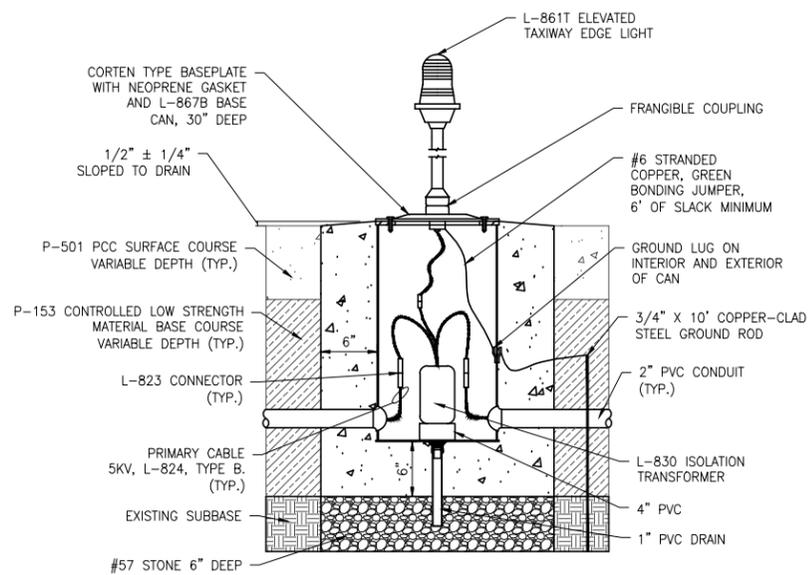
COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
RECONSTRUCT
TAXIWAY C FROM
TAXIWAY C7
THROUGH TAXIWAY H
AND
REHABILITATE
PORTIONS OF
TAXIWAYS C3, C5,
C6, AND C7**

1 EXISTING L-861T TAXIWAY EDGE LIGHT, REMOVE AND REPLACE

E407 SCALE: NTS APPLICABLE FOR:



ELEVATION

INSTALLATION NOTES

1. UTILIZE AN ALIGNMENT JIG TO POSITION THE BASE CAN WITHIN THE SURVEYED AREA.
2. CONNECT PROPOSED CONDUIT TO BASE CAN VIA 2" PVC CONDUIT. FURNISH AND INSTALL NEW 3/4" X 10' COPPER-CLAD GROUND ROD AND CONNECT TO BASE CAN EXTERNAL GROUND LUG WITH NEW #6 BARE COPPER COUNTERPOISE WIRE. RECONNECT EXISTING COUNTERPOISE TO NEW GROUND ROD USING AN EXOTHERMIC WELD.
3. POUR CONCRETE AROUND NEW BASE CAN AND CONDUIT. VIBRATE CONCRETE TO ELIMINATE ANY VOIDS.
4. REMOVE ALIGNMENT JIG AND INSTALL FIXTURE, ISOLATION TRANSFORMER, BASE PLATE, AND GASKET.

2 TAXIWAY EDGE LIGHT, IN PROPOSED CONCRETE SHOULDER

E407 SCALE: NTS APPLICABLE FOR:

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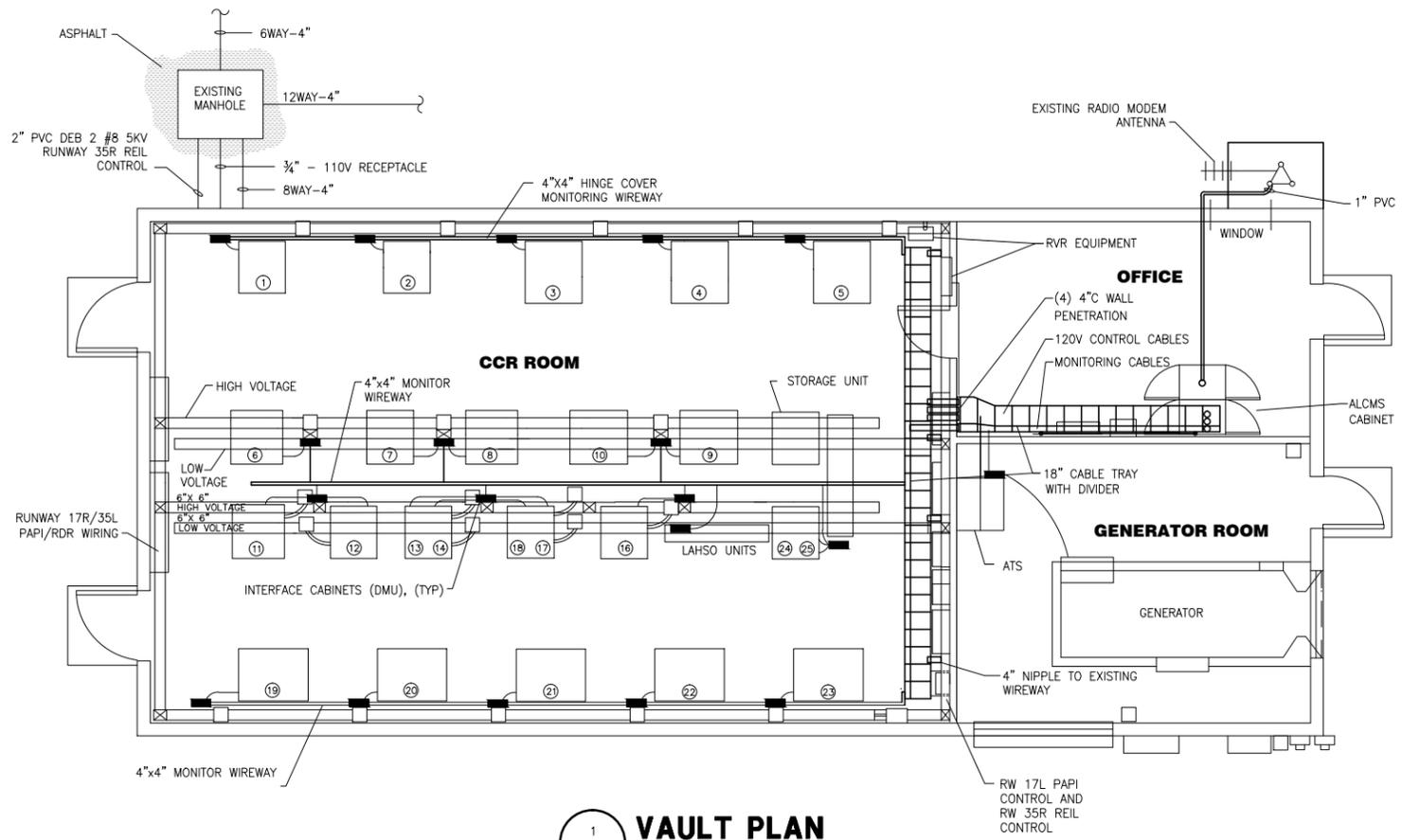
E407

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1 VAULT PLAN
E408 SCALE: NTS

CONSTANT CURRENT REGULATOR SCHEDULE

ITEM NO.	CIRCUIT NAME	CIRCUIT REFERENCE	COLOR DESIGNATION	VENDOR	SIZE	TYPE	CONDUCTOR SIZE	NO. OF STEPS	CURRENT	INPUT VOLTAGE	CONTROL VOLTAGE
1	T/W B	CIRCUIT B	BLUE/WHITE	CROUSE HINDS	20 kW	DRY	#8	3	6.6A	480	120VAC
2	R/W 13/31	CIRCUIT R11	RED/BLUE	CROUSE HINDS	20 kW	DRY	#8	3	6.6A	480	120VAC
3	SPARE			CROUSE HINDS	50 kW	OIL-FILLED	#6	5	20A	480	120VAC
4	R/W 17R/35L	CIRCUIT R1	RED/GREEN	CROUSE HINDS	50 kW	OIL-FILLED	#6	5	20A	480	120VAC
5	R/W 17L/35R EDGE	CIRCUIT 1	RED	CROUSE HINDS	50 kW	OIL-FILLED	#6	5	20A	480	120VAC
6	R/W 35R TDZ	CIRCUIT 13	PURPLE/BLUE	ADB	20 kW	DRY	#8	5	6.6A	480	120VAC
7	T/W G	CIRCUIT G	YELLOW	CROUSE HINDS	20 kW	DRY	#8	3	6.6A	480	120VAC
8	R/W 17L TDZ	CIRCUIT 12	PURPLE/YELLOW	ADB	20 kW	DRY	#8	5	6.6A	480	120VAC
9	SPARE R/W 70kW	CIRCUIT 11	GREY	ADB	70 kW	OIL-FILLED	#6	5	20A	480	120VAC
10	R/W 17L/35R CL (SPARE)		GREY	ADB	70 kW	OIL-FILLED	#6	5	20A	480	120VAC
11	WINDCONES, RDR, MANDATORY SIGNS	CIRCUIT 4	GREEN/YELLOW	CROUSE HINDS	20 kW	DRY	#8	3	6.6A	480	120VAC
12	MIL			SIEMENS	10 kW	DRY	#8	3	6.6A	480	120VAC
13	R/W 13/31 PAPI (TOP)	PAPI 31	PURPLE/BROWN	CROUSE HINDS	4 kW	DRY	#8	3	6.6A	480	120VAC
14	T/W M (BOTTOM)	CIRCUIT 7	ORANGE/WHITE	CROUSE HINDS	10 kW	DRY	#8	3	6.6A	480	120VAC
15	T/W E-SOUTH (OLD)			CROUSE HINDS	20 kW	DRY	#8	3	6.6A	480	120VAC
16	T/W A SOUTH	CIRCUIT AS	PURPLE/WHITE	ADB	20 kW	DRY	#8	3	6.6A	480	120VAC
17	T/W C-SIGNS (BOTTOM)	CIRCUIT C-SIGNS	YELLOW/BLUE	ADB	7.5 kW	DRY	#8	3	6.6A	480	120VAC
18	T/W A NORTH (TOP)	CIRCUIT AN	PURPLE	ADB	10 kW	DRY	#8	3	6.6A	480	120VAC
19	T/W H	CIRCUIT H	ORANGE	CROUSE HINDS	20 kW	DRY	#8	3	6.6A	480	120VAC
20	T/W C	CIRCUIT C	BROWN	ADB	30 kW	DRY	#8	3	6.6A	480	120VAC
21	SPARE			SIEMENS	20 kW	DRY	#8	3	6.6A	480	120VAC
22	T/W E SOUTH E-5 THRU E-8	CIRCUIT 3	BLUE/ORANGE	SIEMENS	30 kW	DRY	#8	3	6.6A	480	120VAC
23	T/W E NORTH E-1, E-2, E-3, E-4	CIRCUIT 2	BLUE	CROUSE HINDS	20 kW	DRY	#8	3	6.6A	480	120VAC
24	35L PAPI (BOTTOM)		PURPLE/GREEN	CROUSE HINDS	10 kW	DRY	#8	3	6.6A	240	120VAC
25	17R/35L RDR SIGNS (TOP)		RED/ORANGE	CROUSE HINDS	7.5 kW	DRY	#8	3	6.6A	240	120VAC

ADDITIONAL VAULT EQUIPMENT CABLE IDENTIFICATION

CIRCUIT	DESCRIPTION	COLOR DESIGNATION
-	TW MIL 7 IMOS	GREEN
-	LAHSO 13 PRIMARY	BROWN/BLUE
-	LAHSO 13 SECONDARY	BROWN/WHITE
-	LAHSO 17R PRIMARY	GREEN/BLUE
-	LAHSO 17R SECONDARY	GREEN/WHITE
-	RW 17R REIL	ORANGE/BLUE/ORANGE
18	RW 35R REIL	PURPLE/ORANGE
-	RW 13 REIL	WHITE/WHITE
-	RW 31 REIL	BLUE/BLUE
-	FIBER OPTIC	
8	RW 17L PAPI	RED/YELLOW
10	REMOTE PROCESSING UNIT (RPU) POWER	
S	RPU COM SENSOR CABLE - TYPE V	
9	RW 35R PAPI	



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COLORADO SPRINGS AIRPORT

TAXIWAY C RECONSTRUCTION

**SCHEDULE 1:
RECONSTRUCT TAXIWAY C FROM TAXIWAY C7 THROUGH TAXIWAY H AND REHABILITATE PORTIONS OF TAXIWAYS C3, C5, C6, AND C7**

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