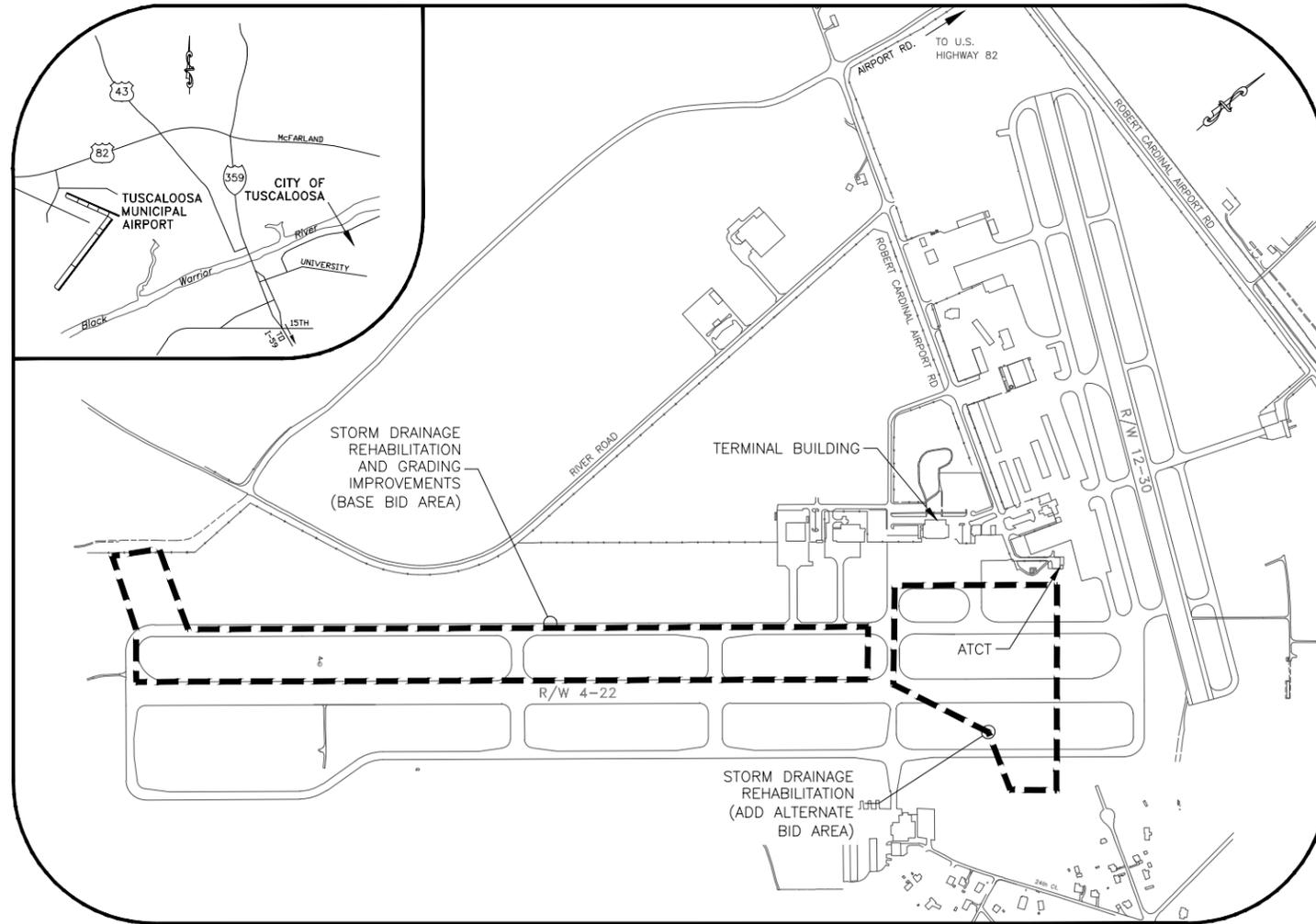


STORM DRAINAGE SYSTEM REHABILITATION PHASE 1

TUSCALOOSA REGIONAL AIRPORT TUSCALOOSA, ALABAMA

AIP No. 3-01-0072-30-2016

JULY 2016



AIRPORT VICINITY MAP

STATE OF ALABAMA
ROBERT BENTLEY
GOVERNOR

ALABAMA DEPT. OF TRANSPORTATION
JOHN COOPER
DIRECTOR

ALDOT, AERONAUTICS BUREAU
JOHN C. EAGERTON IV, DPA
BUREAU CHIEF

FEDERAL AVIATION ADMINISTRATION
RANS BLACK
MANAGER, JACKSON, MS - A.D.O.

CITY OF TUSCALOOSA
WALTER MADDOX
MAYOR

ATKINS

404 BNA Drive, Suite 600
Nashville, Tennessee 37217
Phone: 615.399.0298



TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

TITLE SHEET

Project No. 100050806
Date JULY, 15 2016
Drawn by RDS
Checked by CDD
Revised



SHEET

G1-01

Sheet 1 of 16

ISSUED FOR BID - NOT FOR CONSTRUCTION

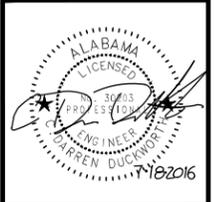
S:\10-TCL\100050806 Storm Dr Rehab and ERSA Grading\DWG Drainage\G1-01 COVER.dwg 7/21/2016 8:57 AM Plotted By: shaw3915 Pen Table: -----



TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

DRAWING INDEX AND
SCHEDULE OF QUANTITIES

Project No. 100050806
Date JULY, 15 2016
Drawn by RDS
Checked by CDD
Revised



SHEET
G1-02

Sheet 2 of 16

ISSUED FOR BID - NOT FOR CONSTRUCTION

**TUSCALOOSA REGIONAL AIRPORT
STORM DRAINAGE SYSTEM REHABILITATION PHASE 1**

SCHEDULE of QUANTITIES

ITEM NO	SPEC.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	AS-CONSTUCTED QUANTITY
Schedule 1 - Base Bid: Drainage System Serving Northwest Side of Runway 4-22 Safety Area from Taxiway A2 to A5					
1	M-100-3.1a	Schedule 1 Mobilization	L.S.	1	
2	M-100-3.2a	Schedule 1 Contractor's Quality Control Program	L.S.	1	
3	M-100-3.3a	Schedule 1 Construction Layout	L.S.	1	
4	M-100-3.4a	Schedule 1 As-Built Drawings	L.S.	1	
5	M-101-4.1a	Maintenance of Traffic for Schedule 1 Work	L.S.	1	
6	P-150-4.1a	Miscellaneous Demolition for Schedule 1 Work Areas	L.S.	1	
7	P-152-4.1	Grading and Reshaping of Existing Storm Drainage System Outfall Channel	L.F.	372	
8	P-156-5.1	Prepare NPDES Permit Application and Submit to ADEM	L.S.	1	
9	P-156-5.2	NPDES Permit Fees	L.S.	1	
10	P-156-5.3	Install and Maintain Ditch Wattle, and Remove upon Completion of Project	Ea.	35	
11	P-156-5.4	Install and Maintain Inlet Protection, and Remove upon Completion of Project	Ea.	12	
12	P-156-5.5	Install Double Net Straw/Coconut Matting	S.Y.	995	
13	P-156-5.6	Install Double Net Straw Matting	S.Y.	4,700	
14	P-156-5.7	Temporary Seeding with Mulch	Ac.	3	
15	D-709-12.1	Install Cured-In-Place-Pipe (CIPP) Lining for 48-inch dia. Pipe A	L.F.	377	
16	D-701-5.1	Remove and Replace Existing 48-inch dia. Pipe B			
	- OR -	- OR -	L.F.	401	
	D-709-12.2	Install Cured-In-Place-Pipe (CIPP) Lining for 48-inch dia. Pipe B			
	D-701-5.2	Remove and Replace Existing 42-inch dia. Pipe C			
17	- OR -	- OR -	L.F.	402	
	D-709-12.3	Install Cured-In-Place-Pipe (CIPP) Lining for 42-inch dia. Pipe C			
	D-701-5.3	Remove and Replace Existing 42-inch dia. Pipe D			
18	- OR -	- OR -	L.F.	401	
	D-709-12.4	Install Cured-In-Place-Pipe (CIPP) Lining for 42-inch dia. Pipe D			
	D-701-5.4	Remove and Replace Existing 42-inch dia. Pipe E			
19	- OR -	- OR -	L.F.	401	
	D-709-12.5	Install Cured-In-Place-Pipe (CIPP) Lining for 42-inch dia. Pipe E			
	D-701-5.5	Remove and Replace Existing 42-inch dia. Pipe F			
20	- OR -	- OR -	L.F.	398	
	D-709-12.6	Install Cured-In-Place-Pipe (CIPP) Lining for 42-inch dia. Pipe F			
21	D-709-12.7	Install Cured-In-Place-Pipe (CIPP) Lining for 36-inch dia. Pipe G	L.F.	401	
	D-701-5.6	Remove and Replace Existing 36-inch dia. Pipe H			
22	- OR -	- OR -	L.F.	299	
	D-709-12.8	Install Cured-In-Place-Pipe (CIPP) Lining for 36-inch dia. Pipe H			
	D-701-5.7	Remove and Replace Existing 36-inch dia. Pipe J			
23	- OR -	- OR -	L.F.	399	
	D-709-12.9	Install Cured-In-Place-Pipe (CIPP) Lining for 36-inch dia. Pipe J			
24	D-709-12.10	Install Cured-In-Place-Pipe (CIPP) Lining for 30-inch dia. Pipe K	L.F.	488	
	D-701-5.8	Remove and Replace Existing 30-inch dia. Pipe L			
25	- OR -	- OR -	L.F.	312	
	D-709-12.11	Install Cured-In-Place-Pipe (CIPP) Lining for 30-inch dia. Pipe L			
	D-701-5.9	Remove and Replace Existing 24-inch dia. Pipe M			
26	- OR -	- OR -	L.F.	405	
	D-709-12.12	Install Cured-In-Place-Pipe (CIPP) Lining for 24-inch dia. Pipe M			
27	D-751-5.1	Remove and Replace Inlet 2	Ea.	1	
28	D-751-5.2	Remove and Replace Inlet 3	Ea.	1	
29	D-751-5.3	Remove and Replace Inlet 4	Ea.	1	
30	D-751-5.4	Remove and Replace Inlet 5	Ea.	1	
31	D-751-5.5	Remove and Replace Inlet 6	Ea.	1	
32	D-751-5.6	Remove and Replace Inlet 7	Ea.	1	
33	D-751-5.7	Remove and Replace Inlet 8	Ea.	1	
34	D-751-5.8	Remove and Replace Inlet 9	Ea.	1	
35	D-751-5.9	Remove and Replace Inlet 10	Ea.	1	
36	D-751-5.10	Remove and Replace Inlet 12	Ea.	1	

ITEM NO	SPEC.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	AS-CONSTUCTED QUANTITY
Schedule 2A - Add Alternate 1: Drainage System Serving Northeast Portion of Runway 4-22 (Taxiways A1 and B1 to A2 and B2)					
1	M-100-3.1b	Schedule 2 Mobilization	L.S.	1	
2	M-100-3.2b	Schedule 2 Contractor's Quality Control Program	L.S.	1	
3	M-100-3.3b	Schedule 2 Construction Layout	L.S.	1	
4	M-100-3.4b	Schedule 2 As-Built Drawings	L.S.	1	
5	M-101-4.1b	Maintenance of Traffic for Schedule 2 Work	L.S.	1	
6	P-150-4.1a	Miscellaneous Demolition for Schedule 1 Work Areas	L.S.	1	
7	P-156-5.3	Install and Maintain Ditch Wattle, and Remove upon Completion of Project	Ea.	4	
8	P-156-5.4	Install and Maintain Inlet Protection, and Remove upon Completion of Project	Ea.	4	
9	P-156-5.6	Install Double Net Straw Matting	S.Y.	600	
10	P-156-5.7	Temporary Seeding with Mulch	Ac.	1	
	D-701-5.10	Remove and Replace Existing 36-inch dia. Pipe Q			
11	- OR -	- OR -	L.F.	405	
	D-709-12.16	Install Cured-In-Place-Pipe (CIPP) Lining for 36-inch dia. Pipe Q			
12	D-709-12.17	Install Cured-In-Place-Pipe (CIPP) Lining for 30-inch dia. Pipe R	L.F.	307	
13	D-751-5.12	Remove and Replace Inlet 16	Ea.	1	
14	D-751-5.13	Remove and Replace Inlet 17	Ea.	1	
15	D-751-5.14	Remove and Replace Inlet 18	Ea.	1	
16	D-751-5.15	Remove and Replace Inlet 19	Ea.	1	
17	T-901-5.1	Seeding	Ac.	1	
18	T-908-5.1	Mulching	Ac.	1	

ITEM NO	SPEC.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	AS-CONSTUCTED QUANTITY
Schedule 2B - Add Alternate 2: Additional Cured-In-Place-Pipe Installations					
1	D-709-12.13	Install Cured-In-Place-Pipe (CIPP) Lining for 48-inch dia. Pipe N	L.F.	116	
2	D-709-12.14	Install Cured-In-Place-Pipe (CIPP) Lining for 42-inch dia. Pipe O	L.F.	658	
3	D-709-12.15	Install Cured-In-Place-Pipe (CIPP) Lining for 36-inch dia. Pipe P	L.F.	291	

No.	Title	Desc.
GENERAL SHEETS		
1	G1-01	TITLE SHEET
2	G1-02	DRAWING INDEX AND SCHEDULE OF QUANTITIES
3	G1-03	GENERAL NOTES
4	G1-04	PROJECT LAYOUT PLAN
5	G2-01	SAFETY NOTES
6	G2-02	SAFETY PLAN
7	G2-03	SAFETY DETAILS
CIVIL SHEETS		
8	C1-01	DRAINAGE PLAN AND PROFILE - SHEET 1
9	C1-02	DRAINAGE PLAN AND PROFILE - SHEET 2
10	C1-03	DRAINAGE PLAN AND PROFILE - SHEET 3
11	C1-04	DRAINAGE PLAN AND PROFILE - SHEET 4
12	C1-05	DRAINAGE PLAN AND PROFILE - SHEET 5
13	C2-01	DRAINAGE PLAN AND PROFILE - SHEET 6
14	C2-02	DRAINAGE PLAN AND PROFILE - SHEET 7
15	C3-01	DRAINAGE DETAILS - SHEET 1
16	C3-02	DRAINAGE DETAILS - SHEET 2

GENERAL NOTES

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FOLLOWING STIPULATIONS WHICH SHALL BE STRICTLY ADHERED TO:

1. SCHEDULE OF WORK

- A. IT IS THE INTENT OF THE OWNER AND THESE SPECIFICATIONS THAT THE TUSCALOOSA REGIONAL AIRPORT WILL REMAIN OPEN TO AIR TRAFFIC DURING THE CONSTRUCTION WORK ACCOMPLISHED UNDER THIS PROJECT.
- B. TO THE EXTENT FEASIBLE AND CONVENIENT TO THE OWNER, THE USE BY AIRCRAFT OF RUNWAYS AND TAXIWAYS ADJACENT TO AREAS WHERE THE CONTRACTOR IS WORKING WILL BE SO SCHEDULED TO REDUCE DISTURBANCE TO THE CONTRACTOR'S OPERATIONS. IN ORDER TO ALLOW THE AIRPORT SUFFICIENT TIME TO COORDINATE WITH THEIR TENANTS, THE CONTRACTOR SHALL BE REQUIRED TO GIVE THE OWNER A MINIMUM OF 48 HOUR NOTICE PRIOR TO BEGINNING A NEW WORK AREA. ALL PROPOSED WORK CHANGES IN WORK AREAS MUST HAVE THE PRIOR APPROVAL OF THE ENGINEER. THESE RESTRICTIONS WILL BE DISCUSSED AT THE PRE-CONSTRUCTION CONFERENCE WITH ALL AFFECTED PARTIES SO THAT A COORDINATED AND SAFE CONSTRUCTION PROGRAM AND SCHEDULE CAN BE FORMULATED.
- C. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FOR APPROVAL A DETAILED SCHEDULE OF WORK TO THE ENGINEER AT THE PRE-CONSTRUCTION CONFERENCE, WHICH WILL BE SCHEDULED APPROXIMATELY TWO WEEKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE SCHEDULE WILL BE REVIEWED BY ALL AFFECTED PARTIES AND POSSIBLY MODIFIED AT THIS MEETING AS NEEDED. THE SCHEDULE SHOULD BE DEVELOPED TO ASSURE COMPLETION OF THE PROJECT IN THE TIME ALLOTTED FOR THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FOLLOW THE APPROVED SCHEDULE OF WORK UNLESS DEVIATIONS THEREFROM ARE APPROVED BY THE ENGINEER.
- D. THE CONTRACTOR SHOULD CONTROL HIS/HER WORK FORCE IN A MANNER CONSISTENT WITH THE SCHEDULE, BUT WHEN EVENTS REQUIRE THE SCHEDULE TO BE MODIFIED, THE CONTRACTOR WILL REACT PROMPTLY AND PROVIDE A REVISED SCHEDULE TO THE ENGINEER FOR APPROVAL. WHEN, IN THE OPINION OF THE ENGINEER, THE CONTRACTOR IS DEVIATING FROM THE SCHEDULE, THE ENGINEER MAY REQUIRE THE CONTRACTOR TO SUBMIT A RECOVERY SCHEDULE. THE SCHEDULE SHOULD BE REVIEWED AT LEAST WEEKLY WITH THE ENGINEER TO ASSURE THAT IT IS CURRENT.
- E. THE OWNER MAY REQUIRE THE CONTRACTOR TO ADD TO THEIR PLANT, EQUIPMENT, OR CONSTRUCTION FORCES, AS WELL AS INCREASE THE WORKING HOURS, IF OPERATIONS FALL BEHIND SCHEDULE AT ANY TIME DURING THE CONSTRUCTION PERIOD. IF THE CONTRACTOR PERSISTENTLY REFUSES OR FAILS TO RECOVER LOST TIME, TO THE EXTENT THAT IT BECOMES APPARENT THAT THE PROJECT WILL NOT BE COMPLETED WITHIN THE CONTRACT TIME, THE OWNER MAY TAKE SUCH ACTIONS TO TERMINATE THE CONTRACT FOR DEFAULT ON THE PART OF THE CONTRACTOR, OR TO ASSIGN PORTIONS OF THE WORK TO OTHER CONTRACTORS. ANY ADDITIONAL COSTS ASSOCIATED WITH THIS WILL BE BORNE BY ORIGINAL CONTRACTOR.
- F. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SUPERVISION FOR THE PROPER EXECUTION AND CONTROL OF ALL WORK REQUIRED. NIGHT WORK WILL BE UNDERTAKEN ONLY WITH THE ADVANCE WRITTEN PERMISSION OF THE ENGINEER.

2. STAGING/STORAGE AREAS:

- A. THE EXACT LIMITS OF THE CONTRACTOR'S STAGING AND STORAGE AREA SHALL BE ESTABLISHED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER WITHIN THE GENERAL PROJECT AREA. ANY AND ALL REQUIRED UTILITIES FOR THE CONTRACTOR'S OPERATIONS SHALL BE ARRANGED AND PAID FOR BY THE CONTRACTOR DIRECTLY WITH THE APPROPRIATE UTILITY AGENCIES. UTILITY ARRANGEMENTS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL PROVIDE FOR HIS/HER EMPLOYEES PROPER AND SANITARY TOILET FACILITIES. THE OWNER'S FACILITIES WILL NOT BE AVAILABLE FOR THE CONTRACTOR'S USE AT ANY TIME.
- B. THE CONTRACTOR SHALL RESTORE ALL GRASSED AND PAVED AREAS USED FOR STAGING AND STORAGE AREAS TO THEIR ORIGINAL CONDITION, INCLUDING THE ESTABLISHMENT OF TURF WHERE REQUIRED. NO DIRECT MEASUREMENT OR PAYMENT WILL BE MADE FOR THE CONSTRUCTION, MAINTENANCE, RESTORATION, OR REPAIR TO STAGING AND STORAGE AREAS.

3. HAUL AND ACCESS ROADS:

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTAINING HAUL AND ACCESS ROADS WITHIN THE LIMITS OF CONSTRUCTION, STAGING AREA, AND BETWEEN CONSTRUCTION AREAS; AND FOR THE DUST CONTROL OF THESE ROADS. THE CONTRACTOR SHALL CONDUCT HIS HAULING OPERATIONS BETWEEN THE WORK SITES ALONG THE HAUL ROUTES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- B. ANY ADDITIONAL HAUL OR ACCESS ROADS REQUESTED BY THE CONTRACTOR FOR HIS/HER OPERATIONS OUTSIDE THE LIMITS OF CONSTRUCTION SHALL BE CONSTRUCTED BY THE CONTRACTOR AT LOCATIONS WHERE AND IF APPROVED BY THE ENGINEER AT NO ADDITIONAL COMPENSATION.
- C. WHERE HAUL ROADS POSSIBLY CROSS UTILITY, AIRFIELD OR FAA CABLES THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE AGENCY TO HAVE THE CABLES LOCATED AND FLAGGED. THE CONTRACTOR SHALL BE REQUIRED TO PROTECT THE FACILITIES BY A METHOD APPROVED BY THE ENGINEER WITH NO ADDITIONAL COMPENSATION. CROSSING FACILITIES WITH CONSTRUCTION EQUIPMENT SHALL BE KEPT TO AN ABSOLUTE MINIMUM.
- D. ANY DAMAGE TO EXISTING PAVEMENTS USED AS A HAUL OR ACCESS ROUTE, WHETHER WITHIN THE CONSTRUCTION LIMITS OR NOT, SHALL BE CONSIDERED THE RESPONSIBILITY OF THE CONTRACTOR AND HE/SHE SHALL PROMPTLY REPAIR ANY DAMAGED PAVEMENT TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER WITH NO ADDITIONAL COMPENSATION.
- E. THE CONTRACTOR SHALL RESTORE ALL GRASSED AND PAVED AREAS USED FOR HAUL AND ACCESS ROADS TO THEIR ORIGINAL CONDITION, INCLUDING THE ESTABLISHMENT OF TURF WHERE REQUIRED. NO DIRECT MEASUREMENT OR PAYMENT WILL BE MADE FOR THE CONSTRUCTION, MAINTENANCE, RESTORATION, OR REPAIR TO HAUL ROADS.

4. AOA ACCESS AND CONTROL OF PERSONNEL:

- A. THE CONTRACTOR'S ACCESS AND HAUL ROUTE TO THE PROJECT WORK SITE SHALL BE AS SHOWN ON THE PLANS. THE PROJECT ACCESS GATES INTO THE AIR OPERATIONS AREA (AOA) SHALL BE PHYSICALLY LOCKED AT ALL TIMES WHENEVER THE GATES ARE NOT IN USE.
- B. ALL LOCKS, KEYS AND ACCESS CARDS ISSUED FOR ACCESS TO SECURITY AREAS BY AIRPORT SECURITY SHALL BE RETURNED TO THE AIRPORT IMMEDIATELY UPON COMPLETION OF THE PROJECT
- C. THE CONTRACTOR SHALL PROVIDE SUFFICIENT PERSONNEL TO MAINTAIN VISUAL AND PHYSICAL CONTROL OF THE CONTRACTOR'S OPERATIONS WHILE WORKING WITHIN THE SECURED AIRPORT AREAS.
- D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL ESCORTS INTO THE AOA AS REQUIRED BY HIS/HER WORK OPERATIONS. PRIOR TO BEGINNING ESCORTING OPERATIONS, THE CONTRACTOR SHALL OBTAIN APPROVAL FROM AIRPORT OPERATIONS FOR ALL PROPOSED ESCORTING OPERATIONS AND PROCEDURES.
- E. THE CONTRACTOR SHALL PROVIDE PERSONNEL, AND THEIR EMERGENCY PHONE NUMBERS, ON CALL 24 HOURS A DAY TO RESPOND IN CASE OF EMERGENCIES OR SECURITY VIOLATIONS.
- F. THE CONTRACTOR SHALL CLOSELY ABIDE BY THE ABOVE NOTED RESTRICTIONS. ANY FINES OR PENALTIES ASSESSED TO THE AIRPORT BY THE FAA OR OTHER AGENCIES DUE TO NEGLIGENCE OR OTHER FAULT OF THE CONTRACTOR SHALL BE SUBSEQUENTLY ASSESSED TO THE CONTRACTOR. PAYMENT OF SUCH FINES OR PENALTIES SHALL BE WITHHELD FROM MONIES DUE TO THE CONTRACTOR AS PART OF THE PROJECT.

5. TESTING - GENERAL

- A. ALL TESTING REQUIRED BY THE CONTRACT SPECIFICATIONS (EXCEPT AS NOTED IN THE INDIVIDUAL SPECIFICATION SECTIONS AND AS EXPLAINED BELOW), WILL BE INITIATED BY THE ENGINEER WITH THE FULL COOPERATION OF THE CONTRACTOR. IF REQUIRED BY THE PROJECT, AN INDEPENDENT TESTING LABORATORY WILL BE USED, WHICH LABORATORY TECHNICIANS WILL BE UNDER THE DIRECTION OF THE ENGINEER. THERE IS NO COST TO THE CONTRACTOR FOR THE TESTING UNDER THIS HEADING EXCEPT AS NOTED IN THE INDIVIDUAL SPECIFICATION SECTIONS AND AS EXPLAINED BELOW.

- B. THE CONTRACTOR WILL BE REQUIRED TO PAY FOR ALL FAILING QUALITY CONTROL TESTS TAKEN THROUGHOUT THE PROJECT WHICH ARE PERFORMED BY THE ENGINEER AFTER THE ENGINEER HAS BEEN NOTIFIED BY THE CONTRACTOR THAT THE ITEM IS READY FOR TESTING. TESTING TO BE DONE DURING CONSTRUCTION IS INDICATED FOR EACH BID ITEM IN THE INDIVIDUAL SPECIFICATION SECTIONS.

6. MISCELLANEOUS

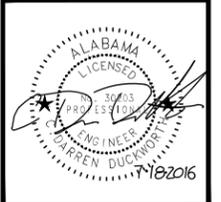
- C. THE PROJECT PAY ITEMS ARE ESTABLISHED TO PROVIDE A MEASURE OF THE COST OF CERTAIN PARTICULAR ITEMS OF WORK AND ESTABLISH A QUANTIFIED METHOD OF PAY TO THE CONTRACTOR. ANY AND ALL ITEMS NOT SPECIFICALLY LISTED ARE TO BE CONSIDERED INCIDENTAL TO THE LISTED PAY ITEMS AND THEIR ASSOCIATED COST INCLUDED IN THE UNIT PRICE FOR ITEMS THAT ARE BID. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL WORK NECESSARY TO PROVIDE THE COMPLETE PRODUCT AS SPECIFIED IN THE PLANS AND SPECIFICATIONS.
- D. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED. CONTRACT PAY ITEMS COVER PAYMENT FOR SEEDING AND MULCHING OF THE MINIMUM AREAS TO BE DISTURBED FOR UTILITY TRENCHING AND GRADING ACTIVITIES. BECAUSE THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION WILL DICTATE THE EXACT LIMITS OF AREAS WHERE TURF COVER IS DESTROYED, THE COST FOR SEEDING AND MULCHING FOR THE RESTORATION OF SUCH TURF SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT PRICE FOR THE PAY ITEMS WHOSE CONSTRUCTION NECESSITATED THE DISTURBANCE.
- E. THE PLANS SHOWING EXISTING CONDITIONS ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL UNDERGROUND UTILITIES, DRAINAGE, AND STRUCTURES PRIOR TO ANY EXCAVATIONS. ADDITIONAL BURIED UTILITIES, CABLING, STORM DRAINS AND DRAINAGE STRUCTURES ENCOUNTERED BY THE CONTRACTOR WHICH ARE NOT SHOWN ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR DIRECTION AND DISPOSITION.



TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

GENERAL NOTES

Project No. 100050806
Date JULY, 15 2016
Drawn by RDS
Checked by CDD
Revised



SHEET

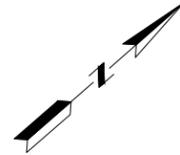
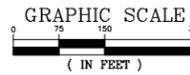
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Sheet 3 of 16

ISSUED FOR BID - NOT FOR CONSTRUCTION

MAJOR PROJECT ELEMENTS

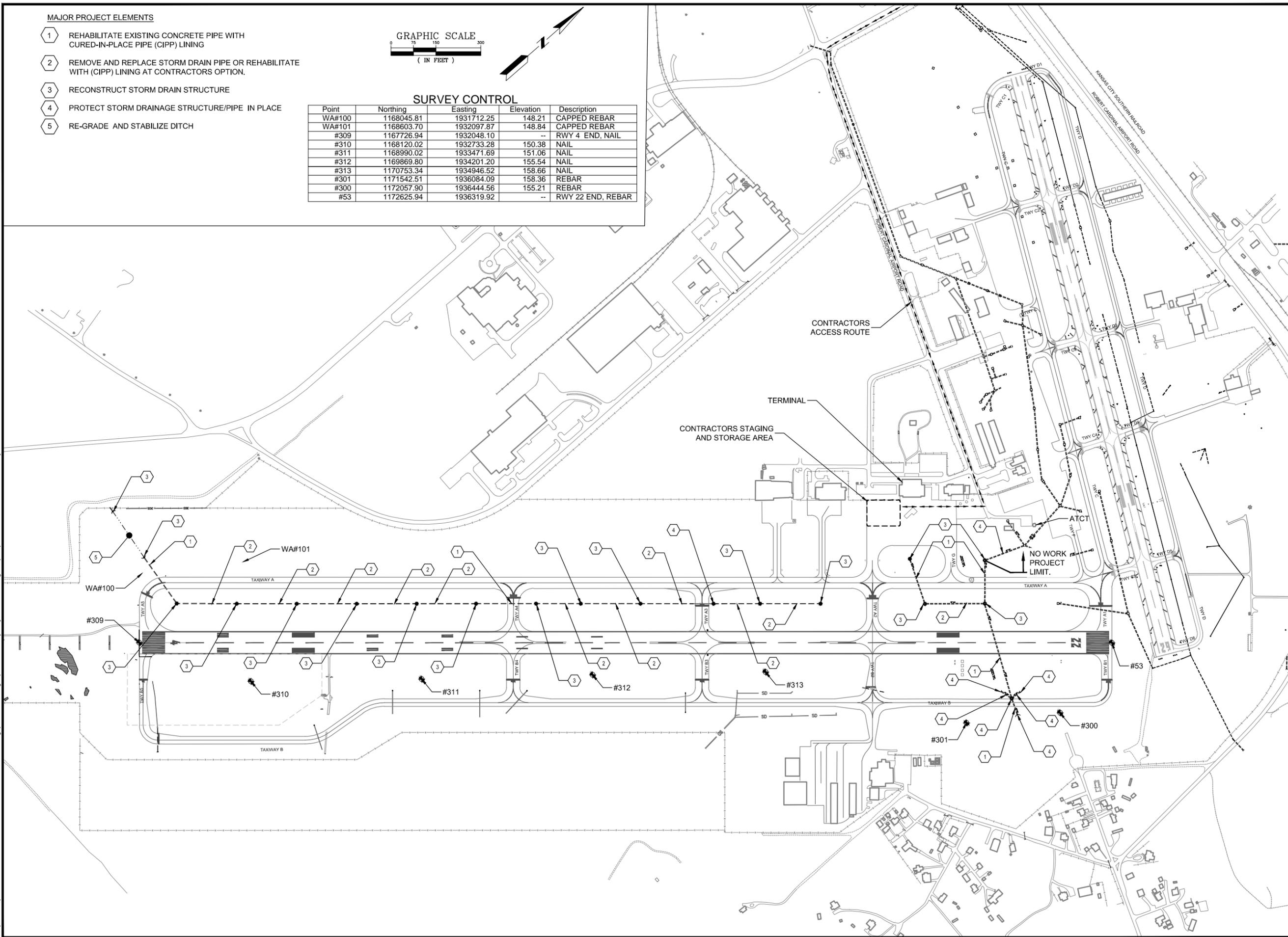
- 1 REHABILITATE EXISTING CONCRETE PIPE WITH CURED-IN-PLACE PIPE (CIPP) LINING
- 2 REMOVE AND REPLACE STORM DRAIN PIPE OR REHABILITATE WITH (CIPP) LINING AT CONTRACTORS OPTION.
- 3 RECONSTRUCT STORM DRAIN STRUCTURE
- 4 PROTECT STORM DRAINAGE STRUCTURE/PIPE IN PLACE
- 5 RE-GRADE AND STABILIZE DITCH



SURVEY CONTROL

Point	Northing	Easting	Elevation	Description
WA#100	1168045.81	1931712.25	148.21	CAPPED REBAR
WA#101	1168603.70	1932097.87	148.84	CAPPED REBAR
#309	1167726.94	1932048.10	--	RWY 4 END, NAIL
#310	1168120.02	1932733.28	150.38	NAIL
#311	1168990.02	1933471.69	151.06	NAIL
#312	1169869.80	1934201.20	155.54	NAIL
#313	1170753.34	1934946.52	158.66	NAIL
#301	1171542.51	1936084.09	158.36	REBAR
#300	1172057.90	1936444.56	155.21	REBAR
#53	1172625.94	1936319.92	--	RWY 22 END, REBAR

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ATKINS

404 BNA Drive, Suite 600
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TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

PROJECT LAYOUT PLAN

Project No. 100050806
Date JULY, 15 2016
Drawn by _____
Checked by CDD
Revised _____



SHEET

G1-04

Sheet 4 of 16

ISSUED FOR BID - NOT FOR CONSTRUCTION

GENERAL NOTES

SAFETY PLAN AND REQUIREMENTS

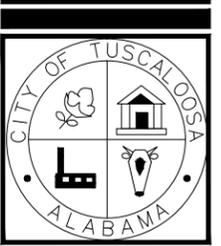
GENERAL

THE INTENT OF THIS PLAN IS TO ESTABLISH CERTAIN SAFETY REQUIREMENTS THAT MUST BE STRICTLY ADHERED TO BY THE CONTRACTOR DURING THE CONSTRUCTION OF THIS PROJECT. ADDITIONAL SAFETY PROVISIONS THAT THE CONTRACTOR SHALL ABIDE BY ARE CONTAINED IN APPENDIX 3 OF FAA ADVISORY CIRCULAR 150/5370-2E, A COPY OF WHICH IS INCLUDED FOLLOWING THE SAFETY PLAN SECTION OF THE SPECIFICATIONS. ADDITIONAL COPIES OF THIS AC CAN BE OBTAINED AT THE FAA WEB SITE: WWW.FAA.GOV

1. AIRCRAFT OPERATIONS SHALL ALWAYS HAVE PRIORITY OVER ANY AND ALL OF THE CONTRACTOR'S OPERATIONS, AND THE CONTRACTOR SHALL NOT ALLOW HIS EMPLOYEES, SUBCONTRACTORS, MATERIAL MEN OR ANY OTHER PERSONS OVER WHOM HE/SHE HAS CONTROL, TO ENTER OR REMAIN UPON OR ALLOW ANY PLANT OR MATERIALS TO BE BROUGHT OR TO REMAIN UPON ANY PART OF THE AIRPORT WHICH, IN THE OPINION OF THE ENGINEER, WOULD BE A POTENTIAL HAZARD TO AIRCRAFT. SHOULD APRONS, RUNWAYS, OR TAXIWAYS BE REQUIRED FOR USE BY AIRCRAFT, AND SHOULD THE ENGINEER DEEM THE CONTRACTOR TO BE TOO CLOSE TO THE PORTION OF THE PAVEMENT USED BY AIRCRAFT FOR SAFETY, THE ENGINEER MAY, IN HIS SOLE DISCRETION, ORDER THE CONTRACTOR TO SUSPEND HIS/HER OPERATIONS, REMOVE HIS/HER PERSONNEL, PLANT, EQUIPMENT, AND MATERIALS TO A SAFE DISTANCE AND STAND BY UNTIL THE RUNWAY, TAXIWAY OR APRON IS NO LONGER REQUIRED FOR USE BY THE AIRCRAFT.
2. LIMITS ON CONSTRUCTION:
 - a. **RUNWAY SAFETY AREAS.** NO WORK IS PERMITTED WITHIN THE RUNWAY SAFETY AREAS OF RUNWAYS 4-22 AND 12-30, WHICH WILL REMAIN IN ACTIVE USE DURING CONSTRUCTION.
 - b. **TAXIWAY SAFETY AREA.** THE JOBSITE SUPERINTENDENT WILL BE RESPONSIBLE FOR REMOVING HIS/HER WORKFORCE FROM ANY AREA AS DIRECTED BY THE AIR TRAFFIC CONTROL TOWER (ATCT). TAXIWAYS SHALL REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OPERATIONS. IN THE INSTANCE THAT THE ATCT CANNOT RE-ROUTE AIR TRAFFIC AROUND THE ACTIVE CONSTRUCTION AREA, THE CONTRACTOR, HIS/HER PERSONNEL, SUBS MATERIALMEN, ETC. WILL BE REQUIRED TO STOP WORK AND VACATE THE AREA, AND STAY OUTSIDE THE ASSOCIATED SAFETY AREA UNTIL THE ATCT GIVES CLEARANCE TO RETURN TO THE WORK AREA.
 - c. **TRAVEL ON ACTIVE AIRFIELD PAVEMENTS.** AT TIMES, THE WORK WILL REQUIRE TRAVEL ALONG ACTIVE TAXIWAYS OR ACROSS ACTIVE RUNWAYS TO MOVE PERSONNEL AND MATERIAL TO THE WORK AREAS. THIS SHALL BE ACCOMPLISHED IN CLOSE COORDINATION WITH INSTRUCTIONS FROM AIR TRAFFIC CONTROL. CONTRACTOR WILL BE REQUIRED TO HAVE AN ADEQUATE NUMBER OF MEMBERS OF HIS WORKFORCE TRAINED AND CERTIFIED IN THE AIRPORT'S PROCEDURES FOR NAVIGATING SAFELY AROUND THE AIRFIELD MOVEMENT AREA (AMA). THESE PERSONNEL SHALL HAVE THE NECESSARY RADIO COMMUNICATIONS SKILLS TO FOLLOW THE PROCEDURES. THE TRAINING COURSE WILL BE SPECIALLY SCHEDULED BY THE OWNER PRIOR TO THE BEGINNING OF THE PROJECT, AND PROVIDED FREE OF CHARGE. CONTRACTOR SHALL DESIGNATE THE APPROPRIATE NUMBER OF PERSONNEL FOR ESCORTING ALL TRUCKS AND CONSTRUCTION EQUIPMENT THAT WILL BE CARRYING MATERIAL AND ANY NON-BADGED PERSONNEL TO AND FROM THE WORK SITES.

- d. **WORK OUTSIDE THE RSA'S OF RUNWAYS 4-22 AND 12-30** MAY BE ACCOMPLISHED WITHOUT CLOSURES OF AIRFIELD PAVEMENT AREAS PROVIDED THAT PERSONNEL AND EQUIPMENT REMAIN CLEAR OF THE ADJACENT TAXIWAY PAVEMENT AND TAXIWAY OBJECT FREE AREAS (TOFA). NO MATERIAL, EQUIPMENT, SPOIL PILES, OR VEHICLES OF ANY KIND MAY BE STORED OR PARKED WITHIN THE LIMITS OF THE RSA'S OR TOFA'S. WITHIN THE WORK AREAS, NO MATERIAL MAY BE STOCKPILED TO AN ELEVATION HIGHER THAN THE ADJACENT RUNWAY CENTERLINE. A FURTHER PROVISION FOR WORK ADJACENT TO TOFA AND RSA AREAS WILL BE THAT ALL CREWS SHALL HAVE A FOREMAN, BADGED AND TRAINED IN AMA PROCEDURES IN CONTINUOUS RADIO CONTACT WITH THE AIR TRAFFIC CONTROL TOWER (ATCT) AND SHALL BE PREPARED TO PULL BACK OR RELOCATE ANY PERSONNEL, EQUIPMENT, OR MATERIAL WHICH MIGHT INADVERTENTLY MAKE ITS WAY INTO THESE PROTECTED AREAS.
- e. NO WORK WITHIN THE APPROACH OR DEPARTURE ZONES OF ACTIVE RUNWAYS WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE AIRPORT MANAGER.
3. THE USE OF CRANES AND OTHER ELEVATED EQUIPMENT WILL BE CLOSELY REGULATED BY THE FAA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILING ALL NECESSARY FORMS REQUESTING THE ALLOWABLE USE OF ELEVATED EQUIPMENT. WORK ADJACENT TO THE RSA WILL REQUIRE EQUIPMENT OF SUFFICIENT HEIGHT TO PENETRATE THE 7H:1V TRANSITIONAL SURFACE THAT EXTENDS UPWARD AWAY FROM THE RUNWAY AT THE RSA BOUNDARY. SUCH EQUIPMENT SHALL BE PROPERLY MARKED WITH FLAGS AND/OR FLASHING LIGHTS IN ACCORDANCE FAA ADVISORY CIRCULAR 150/5370-2E.
4. THE CONTRACTOR SHALL NOT BEGIN WORK WITHIN ANY AIR OPERATIONS AREA UNLESS AND UNTIL 48 HOURS PRIOR NOTICE HAS BEEN GIVEN TO THE ENGINEER AND THE AIRPORT MANAGER.
5. THE CONTRACTOR SHALL NOT CLOSE AN AIR OPERATIONS AREA UNTIL SO AUTHORIZED BY THE ENGINEER AND UNTIL THE NECESSARY TEMPORARY CLOSED MARKINGS AND BARRICADES ARE IN PLACE AS OUTLINED IN SECTION 70 OR AS DIRECTED BY THE ENGINEER.
6. WHEN WORKING WITHIN THE AIR OPERATIONS AREA (WHETHER CLOSED OR NOT), THE CONTRACTOR SHALL MAINTAIN COMMUNICATIONS BY 2-WAY RADIO (ICOM IC-A4 OR APPROVED EQUAL) WITH THE AIR TRAFFIC CONTROL TOWER ON GROUND CONTROL FREQUENCY 121.800 MHZ (TO BE VERIFIED AT THE PRE-CONSTRUCTION CONFERENCE). CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND MAINTAINING THROUGHOUT CONSTRUCTION AT LEAST ONE RADIO FOR EACH CREW THAT MAY BE OPERATING INDEPENDENTLY WITHIN THE PROJECT AREA, AND SHALL TURN OVER TO THE OWNER AT LEAST TWO RADIOS UPON COMPLETION OF THE PROJECT. EACH INDEPENDENTLY OPERATING CREW SHALL HAVE A SUPERVISOR WHOSE RESPONSIBILITY WILL BE MAINTAINING CONSTANT RADIO CONTACT WITH THE ATCT AND THE CREW MEMBERS. THIS SUPERVISOR SHALL NOT OPERATE EQUIPMENT OR BE OTHERWISE ENGAGED IN CONSTRUCTION ACTIVITIES THAT MIGHT PRECLUDE HIS/HER ABILITY TO CLOSELY MONITOR ATCT COMMUNICATIONS.
7. PRIOR TO MOVING ACROSS OR IN CLOSE PROXIMITY TO AN ACTIVE RUNWAY, TAXIWAY, OR APRON AREA, THE CONTRACTOR MUST ADVISE THE CONTROL TOWER WHO WILL THEN ISSUE THE APPROPRIATE ADVISORIES TO AIRCRAFT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL ESCORTS WHILE IN THE AOA AS REQUIRED BY HIS/HER WORK OPERATIONS. PRIOR TO BEGINNING ESCORTING OPERATIONS, THE CONTRACTOR SHALL OBTAIN APPROVAL FROM AIRPORT OPERATIONS FOR ALL PROPOSED ESCORTING OPERATIONS AND PROCEDURES.
8. ALL CONSTRUCTION VEHICLES INCLUDING PERSONAL CARS MUST BE CLEARED FOR ACCESS BY THE AIRPORT MANAGER AND RESIDENT ENGINEER.

9. A DAILY START-UP AND SHUT-DOWN CHECKLIST WILL BE JOINTLY PREPARED BY THE CONTRACTOR, RESIDENT ENGINEER, AND AIRPORT MANAGER WHICH WILL BE FOLLOWED THROUGHOUT THE PROJECT. THIS CHECKLIST SHALL INCLUDE, BUT NOT BE LIMITED TO, 2-WAY RADIO COMMUNICATIONS, BARRICADES, FLAGS, HAUL AND ACCESS ROUTES, CLEAN-UP, ETC.
10. EQUIPMENT AND MATERIALS SHALL NOT BE LEFT ON OR WITHIN 400 FEET OF THE ACTIVE RUNWAY EDGES AFTER WORK OPERATIONS ARE CEASED FOR THE DAY.
11. **NOTAMS:** THE AIRPORT MANAGER WILL ISSUE THE NECESSARY NOTAMS (NOTICE TO AIRMEN) TO REFLECT HAZARDOUS CONDITIONS AND/OR RUNWAY CLOSURE PERIODS, WITH INFORMATION SUPPLIED BY THE CONTRACTOR. IT IS IMPERATIVE THAT NOTAMS BE KEPT CURRENT AND THAT THEY REFLECT THE ACTUAL CONDITIONS REGARDING CONSTRUCTION SITUATIONS. ACTIVE NOTAMS WILL BE REVIEWED PERIODICALLY AND REVISED TO REFLECT THE CURRENT CONDITIONS. A MINIMUM 24 HOUR NOTICE IS REQUIRED IN ISSUING NOTAMS.
12. **INSPECTION:** FREQUENT INSPECTIONS WILL BE MADE BY THE AIRPORT OWNER'S REPRESENTATIVE DURING CRITICAL PHASES OF THE WORK TO INSURE THAT THE CONTRACTOR IS FOLLOWING THE RECOMMENDED SAFETY PROCEDURES.
13. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS IN REGARD TO NOISE CONTROL, EROSION CONTROL, AND OPEN-AIR BURNING DURING CONSTRUCTION.



TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

SAFETY NOTES

Project No. 100050806
Date JULY, 15 2016
Drawn by RDS
Checked by CDD
Revised _____



SHEET
G2-01

Sheet 5 of 16

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TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

SAFETY PLAN

Project No. 100050806
Date JULY, 15 2016
Drawn by _____
Checked by CDD
Revised _____



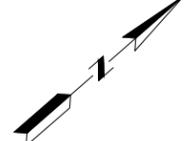
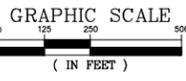
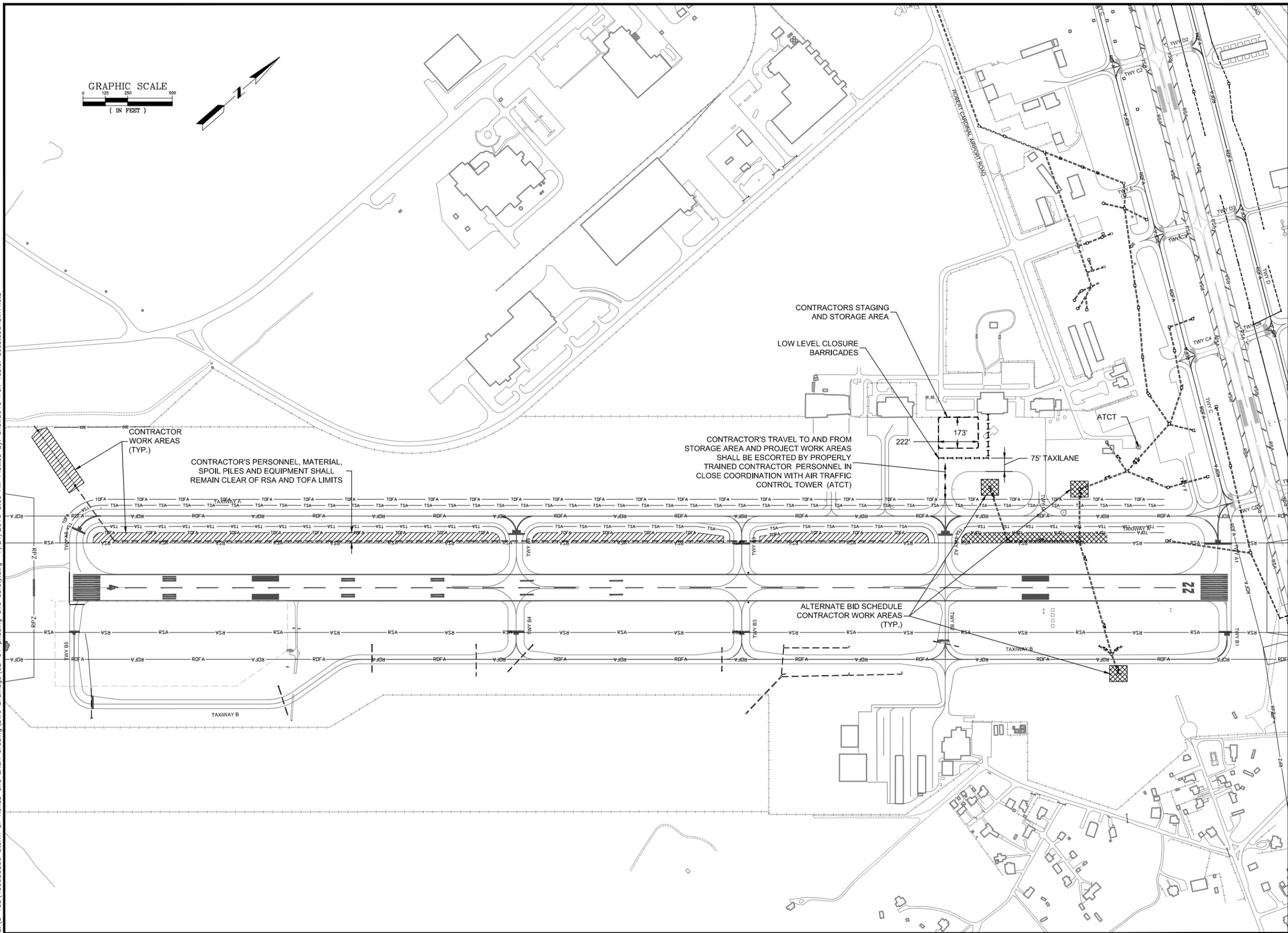
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G2-02

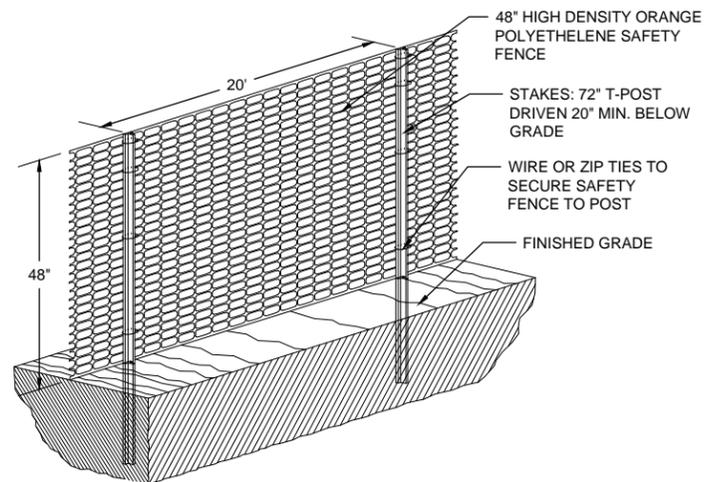
Sheet 6 of 16

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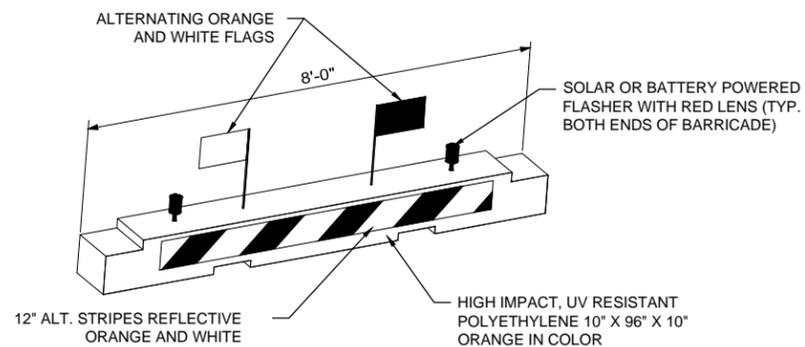
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1 ORANGE CONSTRUCTION FENCE DETAIL *
G2-03 NO SCALE

NOTE:

* MATERIALS, WORK AND EQUIPMENT ASSOCIATED WITH THIS ITEM WILL BE PAID FOR UNDER CONSTRUCTION LAYOUT CONTRACT ITEM.



2 TYPE 2 - MULTI-BARRIER LOW PROFILE ORANGE WATER FILLED AIRCRAFT BARRICADE DETAIL
G2-03 NO SCALE

NOTES:

- 1.) INTENDED USE FOR THE FOLLOWING:
-MARKING/LIGHTING OF TEMPORARY HAZARDS WITHIN THE AOA.
-LONGTERM CLOSURE OF AIRCRAFT ROUTES.
- 2.) INSTALL AT 12' C/C SPACING ALONG FULL WIDTH OF PAVEMENT.
- 3.) USE TYPE 2 AIRCRAFT BARRICADES IN AREA SUBJECT TO JET BLAST.
- 4.) BARRICADE SHALL BE EQUIPPED WITH ALTERNATING ORANGE AND WHITE 20"X20" FLAGS.
- 5.) BARRICADES SHALL BE WATER-FILLED AND MODULAR TO ASSEMBLE/DISASSEMBLE AND NEST FOR COMPACT STORAGE.
- 6.) INITIAL CONFIGURATION OF BARRICADES, OR ANY RECONFIGURATIONS FOR CHANGES BETWEEN PHASES OF THE WORK SHALL BE IN PLACE, INSPECTED, AND APPROVED BY THE OWNER'S DESIGNATED REPRESENTATIVE PRIOR TO BEGINNING WORK.

ATKINS

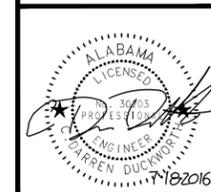
404 BNA Drive, Suite 600
Nashville, Tennessee 37217
Phone: 615.399.0298



TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

SAFETY DETAILS

Project No. 100050806
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SHEET
G2-03

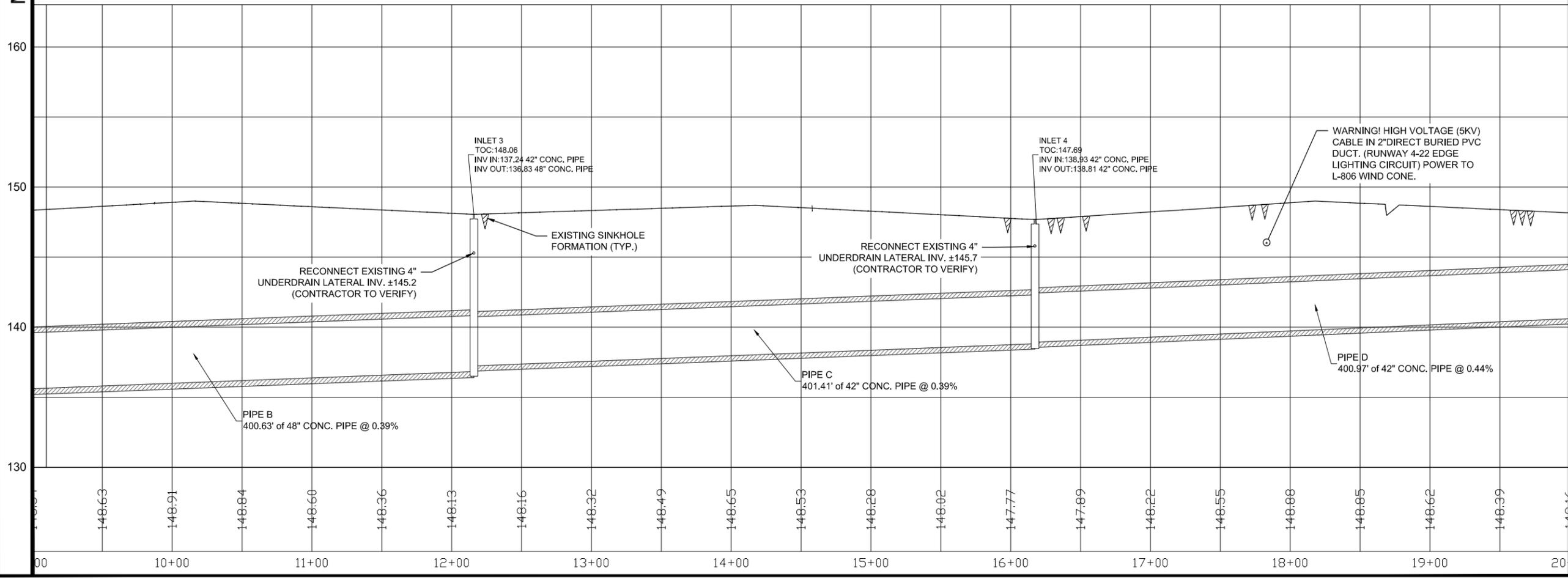
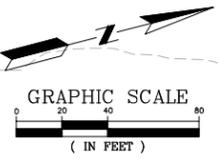
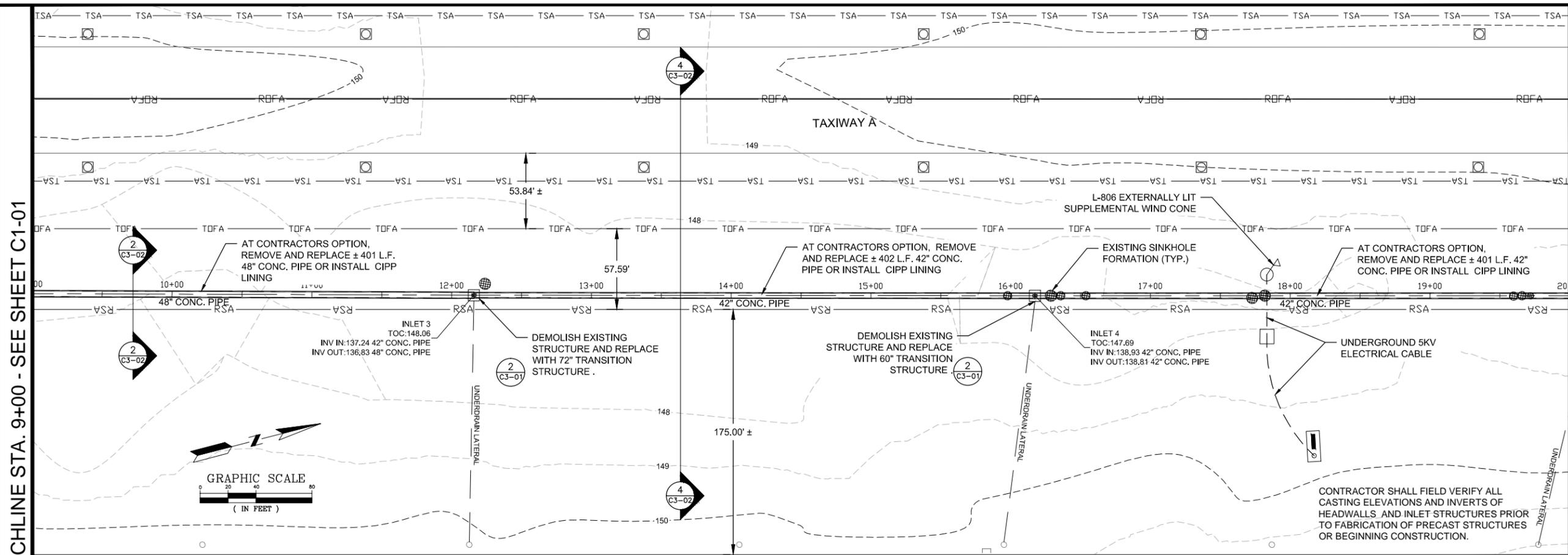
Sheet 7 of 16

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MATCHLINE STA. 9+00 - SEE SHEET C1-01

MATCHLINE STA. 20+00 - SEE SHEET C1-03



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TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

DRAINAGE PLAN AND PROFILE - SHEET 2

Project No. 100050806
Date JULY, 15 2016
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SHEET
C1-02

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TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

DRAINAGE PLAN AND PROFILE - SHEET 9

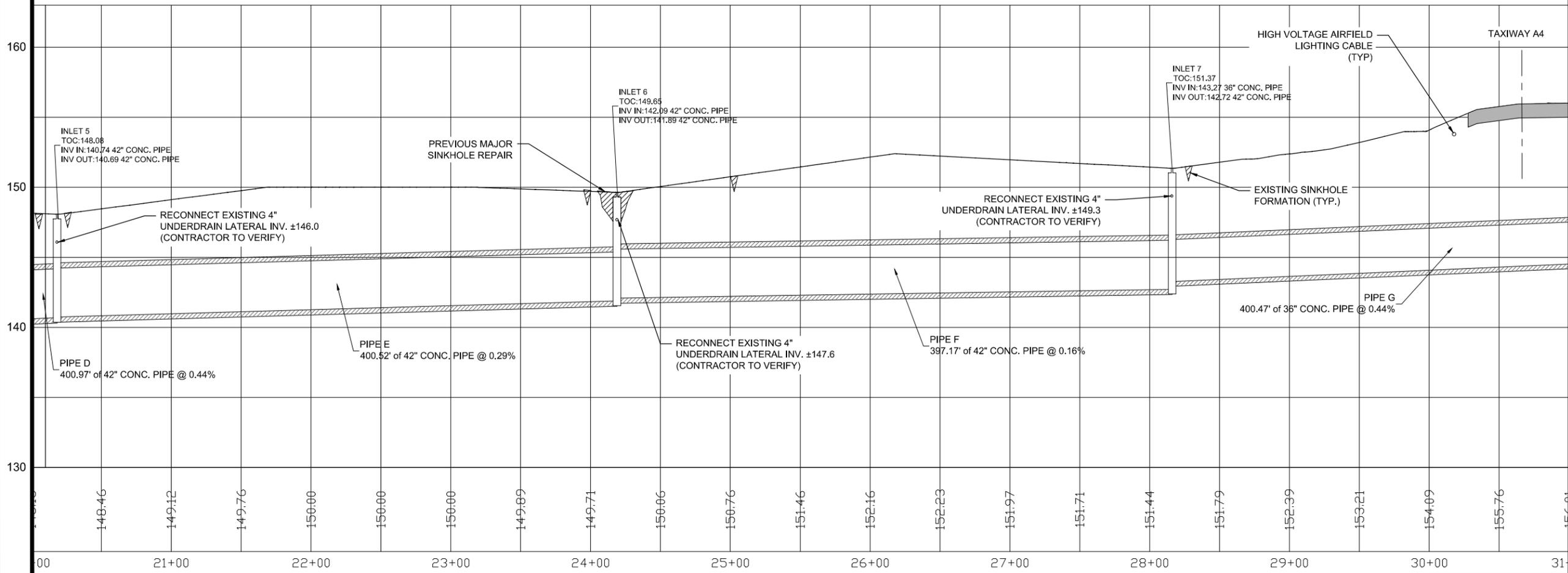
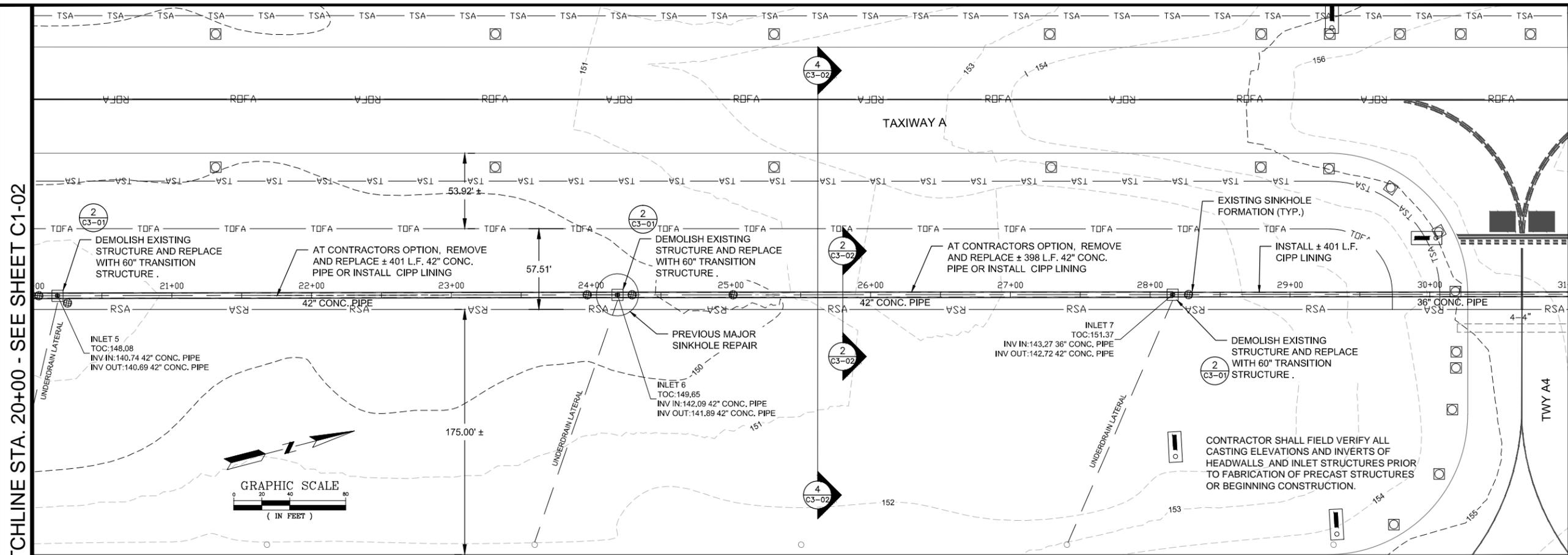
Project No. 100050806
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Revised _____



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C1-03

MATCHLINE STA. 20+00 - SEE SHEET C1-02

MATCHLINE STA. 31+00 - SEE SHEET C1-04



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STORM DRAINAGE REHABILITATION PHASE 1

DRAINAGE PLAN AND PROFILE - SHEET 4

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Date JULY, 15 2016
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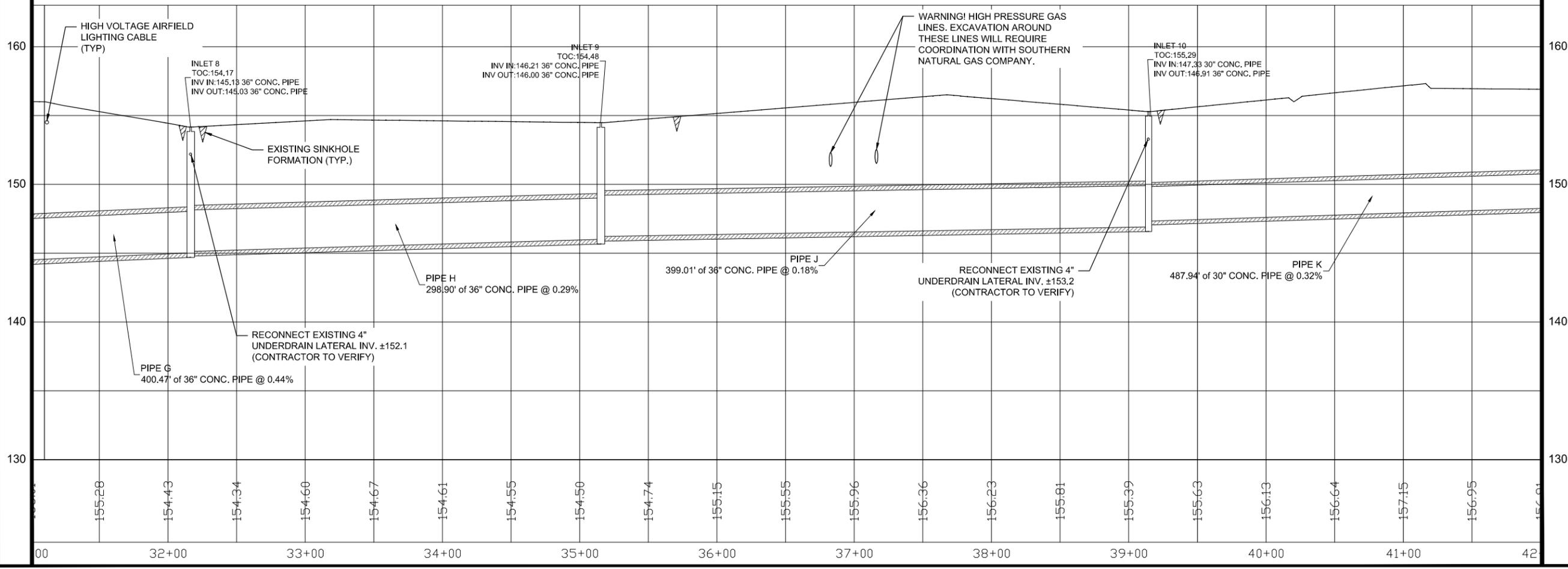
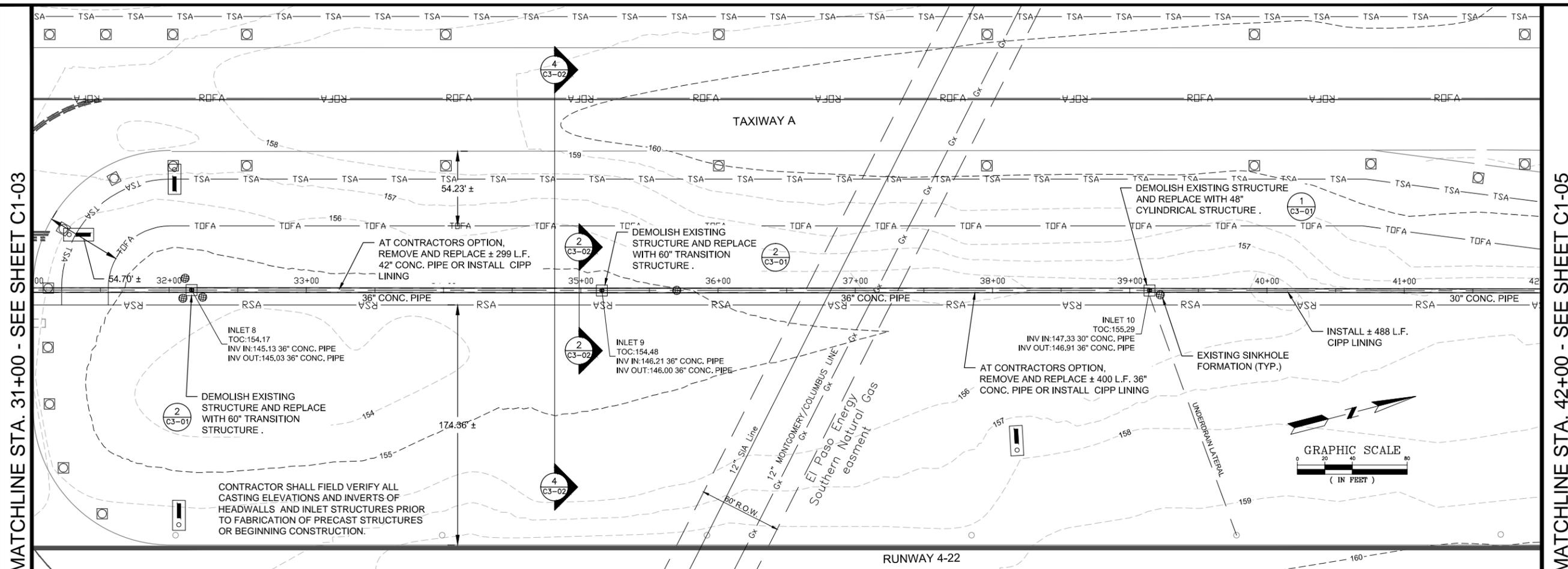
C1-04

Sheet 11 of 16

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MATCHLINE STA. 31+00 - SEE SHEET C1-03

MATCHLINE STA. 42+00 - SEE SHEET C1-05



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TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

DRAINAGE PLAN AND PROFILE - SHEET 6

Project No. 100050806
Date JULY 15 2016
Drawn by _____
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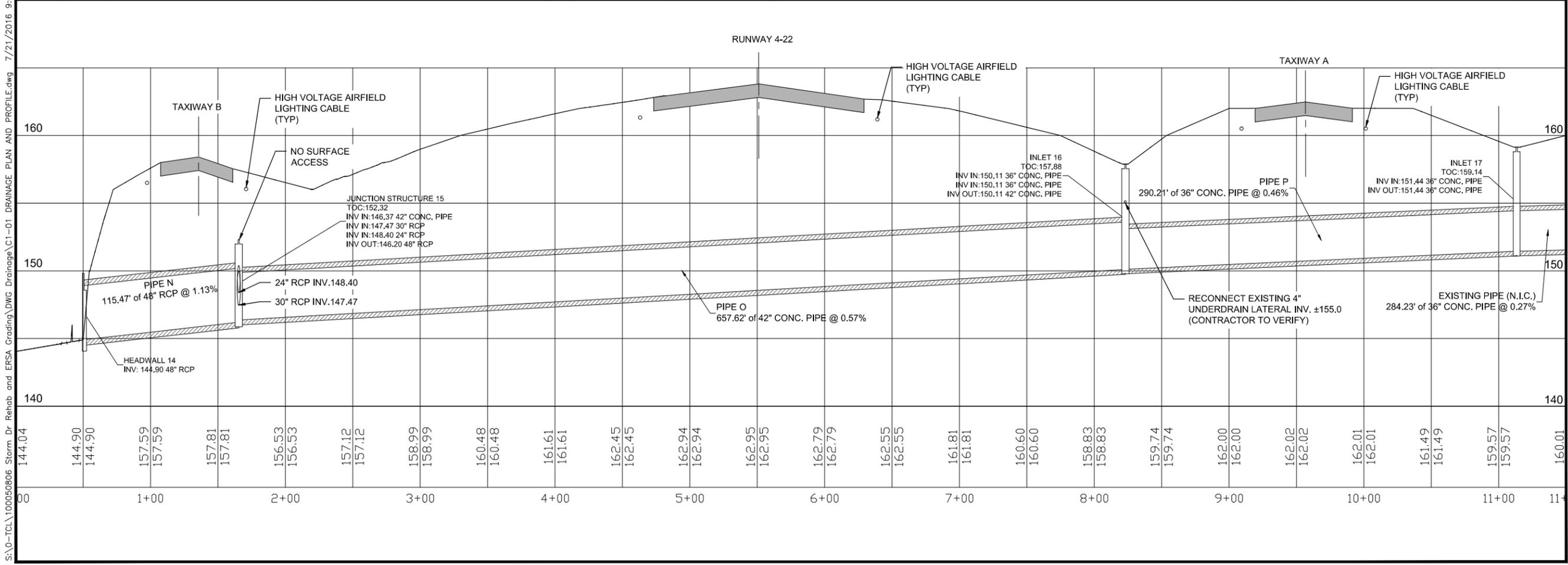
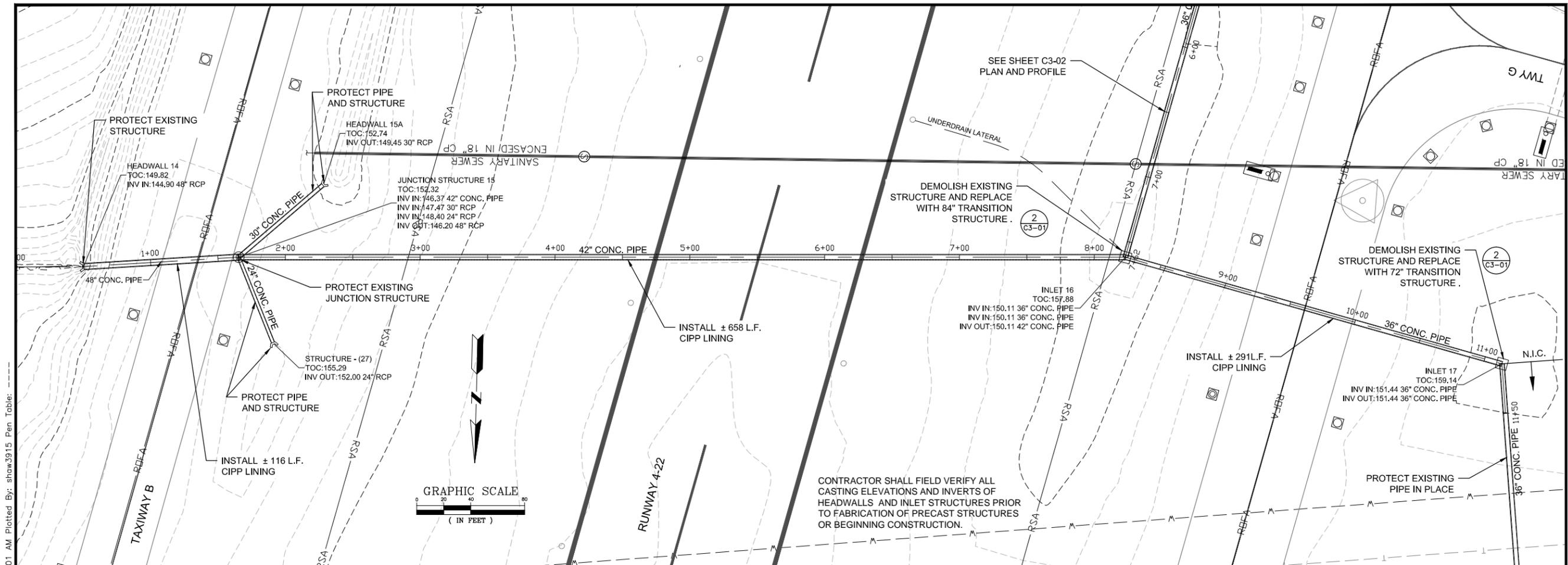


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C2-01

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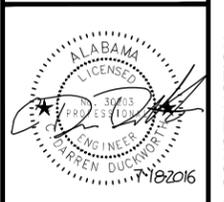
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TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

DRAINAGE DETAILS - SHEET 1

Project No. 100050806
Date JULY, 15 2016
Drawn by RDS
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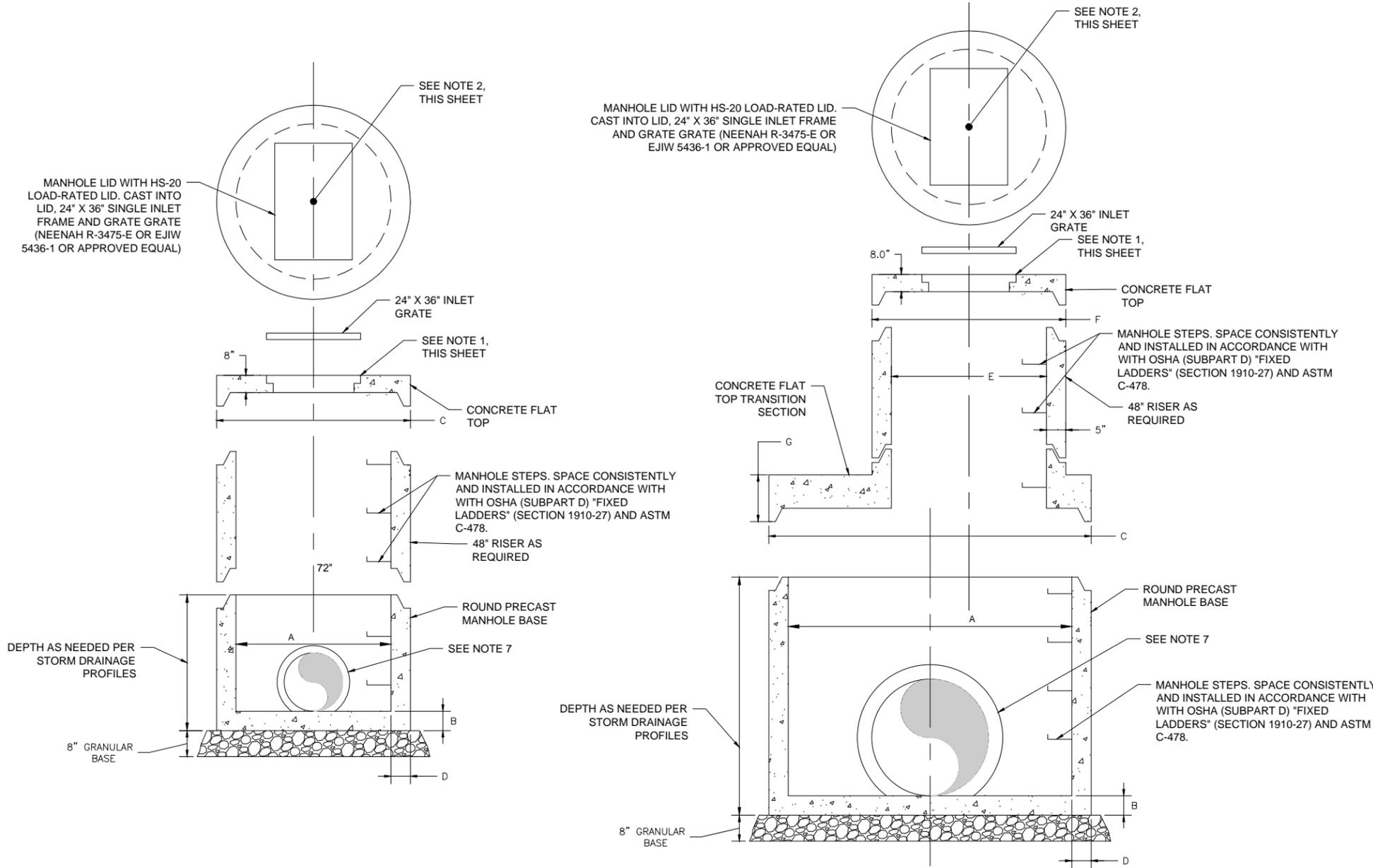
SHEET

C3-01

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MANHOLE DIMENSIONS (SEE NOTE 3)

NOM. MH SIZE	4FT	5FT
A=	48"	60"
B=	6"	8"
C=	58"	72"
D=	5"	6"

1
C3-01 48" AND 60" CYLINDRICAL MANHOLE DETAIL
N.T.S.

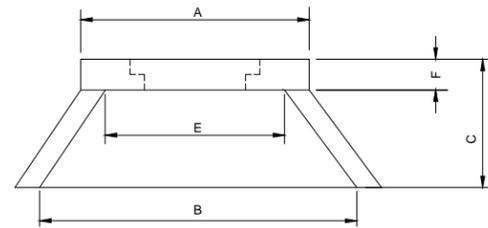
MANHOLE DIMENSIONS (SEE NOTE 3)

NOM. BASE SIZE	5FT	6FT	7FT
A=	60"	72"	84"
B=	8"	8"	8"
C=	72"	86"	100"
D=	6"	7"	8"
E=	48"	48"	48"
F=	58"	58"	58"
G=	13"	14"	14"

1
C3-01 TRANSITION MANHOLE WITH 48" RISER DETAIL
N.T.S.

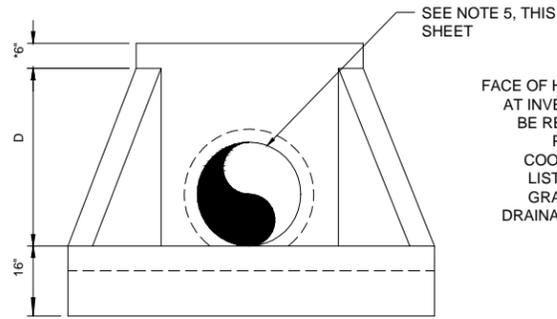
- NOTES:
- TOP OF CASTING. ELEVATION AS LISTED IN STORM DRAIN PROFILES.
 - CENTER OF STRUCTURE SHALL BE REFERENCE POINT FOR COORDINATES LISTED IN GRADING AND DRAINAGE PLANS.
 - TABULATED DIMENSIONS ARE TYPICAL OF ONE PRECAST MANUFACTURER. STRUCTURES OF SIMILAR DIMENSIONS AND LOAD RATINGS WILL BE ALLOWED.
 - WHERE TRANSITION FROM LARGER DIAMETER BASE TO 48" RISER IS CALLED FOR ON THE PLANS, USE OF LARGER DIAMETER CONTINUOUSLY TO THE TOP OF THE STRUCTURE AT THE CONTRACTORS OPTION WILL BE ALLOWED.
 - RECTANGULAR STRUCTURES WILL BE ALLOWED. IF ELECTED, CONTRACTOR MAY SUBMIT SHOP DRAWINGS FOR ENGINEER APPROVAL.
 - CAST-IN-PLACE STRUCTURES MAY BE ALLOWED. IF ELECTED, CONTRACTOR MAY SUBMIT SHOP DRAWINGS FOR ENGINEER APPROVAL.
 - PROVIDE GASKETED OR BOOTED WATERTIGHT CONNECTION FOR ALL PIPE CONNECTION OPENINGS.

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TOP VIEW

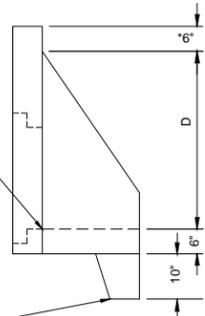
TABLE OF DIMENSIONS (SEE NOTE 6)	
DIM.	48" HEADWALL
A	97.25"
B	120"
C	56"
D	60"
E	83"
F	8"



FRONT VIEW

SEE NOTE 5, THIS SHEET

FACE OF HEADWALL AT INVERT SHALL BE REFERENCE POINT FOR COORDINATES LISTED IN THE GRADING AND DRAINAGE PLANS



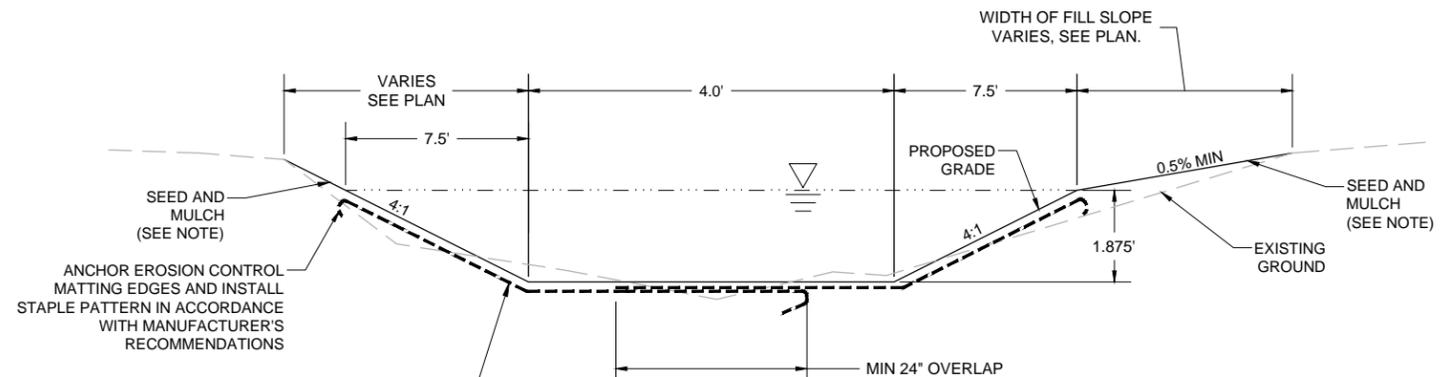
SIDE VIEW

TOE SHALL BE ADDED

1 STANDARD HEADWALL
C3-02 N.T.S.

HEADWALL NOTES:

1. CONCRETE SHALL BE 4,000 PSI MIN.
2. REINFORCING STEEL SHALL BE 60 KSI
3. MIN STEEL REINFORCEMENT SHALL BE W7 X W7 WELDED WIRE FABRIC 4X4 GRID
4. WINGS AND TOE SHALL BE DOWELED
5. PIPE OPENING IN FACE OF WALL WILL EQUAL PIPE I.D. FOR 12" - 36" DIA. PIPE
6. TABULATED DIMENSIONS ARE TYPICAL OF ONE PRECAST MANUFACTURER. STRUCTURES OF SIMILAR DIMENSIONS AND LOAD RATINGS WILL BE ALLOWED.
7. CAST-IN-PLACE STRUCTURES MAY BE ALLOWED. IF ELECTED, CONTRACTOR MAY SUBMIT SHOP DRAWINGS FOR ENGINEER APPROVAL.

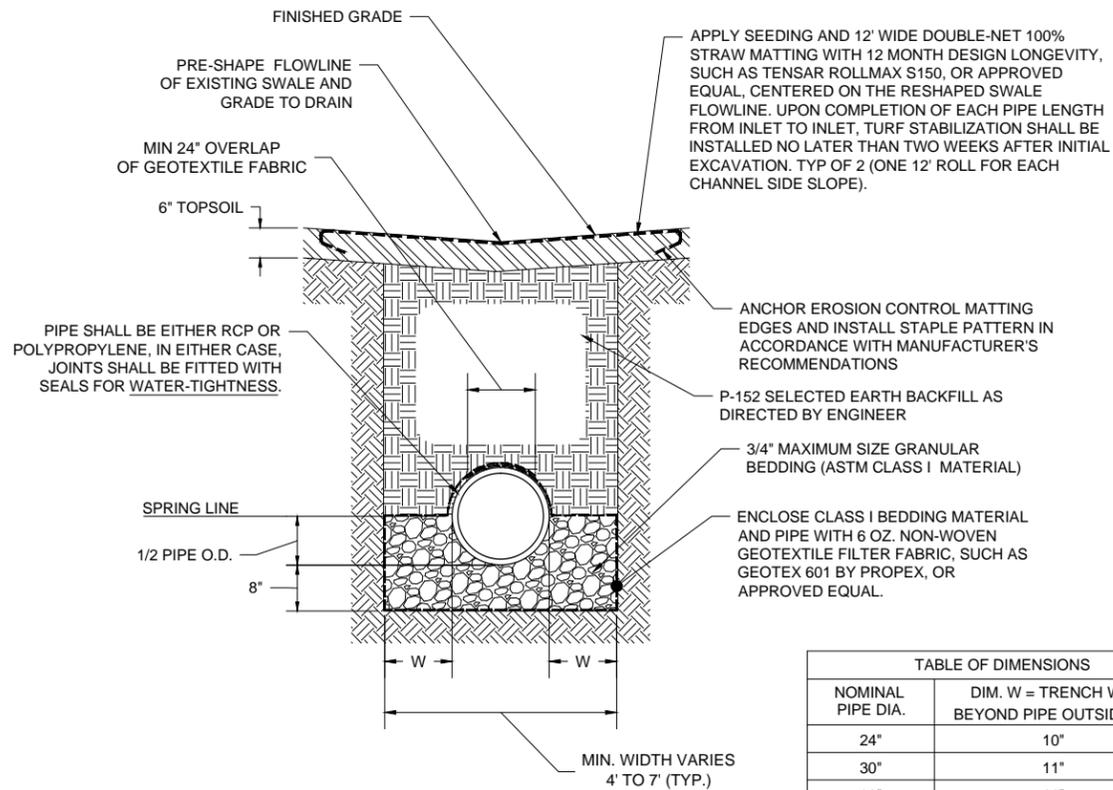


3 TURF DITCH DETAIL
C3-02 N.T.S.

NOTE:

1. DISTURBED AREAS BEYOND CHANNEL LINING LIMITS TO RECEIVE SEED AND MULCHING

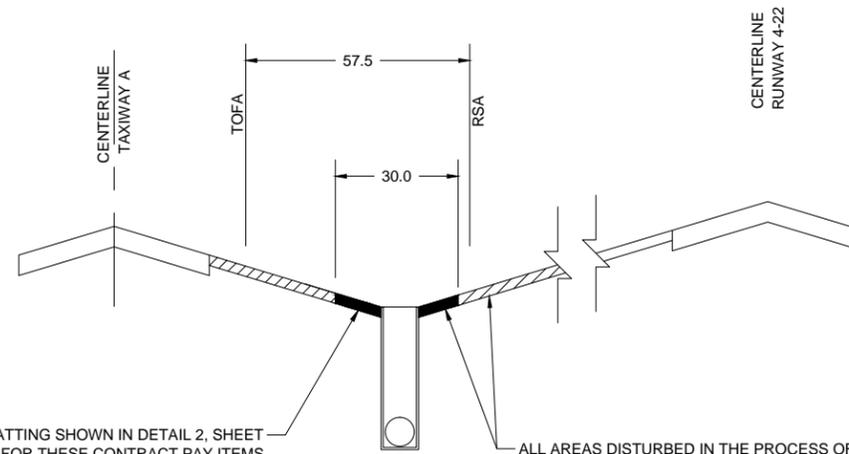
APPLY SEEDING AND 12' WIDE DOUBLE-NET 70% STRAW/ 30% COCONUT FIBER MATTING WITH 24 MONTH DESIGN LONGEVITY, SUCH AS TENSAR ROLLMAX SC150, OR APPROVED EQUAL. TYP OF 2 (ONE 12' ROLL FOR EACH CHANNEL SIDE SLOPE).



2 DRAINAGE PIPE TRENCH AND BEDDING - TURF AREAS
C3-02 N.T.S.

TABLE OF DIMENSIONS	
NOMINAL PIPE DIA.	DIM. W = TRENCH WIDTH BEYOND PIPE OUTSIDE WALL
24"	10"
30"	11"
36"	12"
42"	13"
48"	14"

MIN. WIDTH VARIES 4' TO 7' (TYP.)



4 TURF STABILIZATION DETAIL
C3-02 N.T.S.

SEED AND STRAW MATTING SHOWN IN DETAIL 2, SHEET C3-02. QUANTITIES FOR THESE CONTRACT PAY ITEMS ARE BASED ON A 30' WIDTH ALONG ALL OFF THE LENGTH OF PIPE TO BE REPLACED, WHICH REPRESENTS MINIMUM STABILIZATION OF TURF IN ACCORDANCE WITH NOTE 6.B. OF THE GENERAL NOTES (SHEET GN1-03). NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR SEEDING AND MULCHING OF ANY AREAS ABOVE AND BEYOND THESE LIMITS.

ALL AREAS DISTURBED IN THE PROCESS OF CONSTRUCTING THE STORM SHALL BE SEEDED AND MULCHED



TUSCALOOSA REGIONAL AIRPORT, TUSCALOOSA, AL
STORM DRAINAGE REHABILITATION PHASE 1

DRAINAGE DETAILS - SHEET 2

Project No. 100050806

Date JULY, 15 2016

Drawn by RDS

Checked by CDD

Revised



SHEET

C3-02

Sheet 16 of 16

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