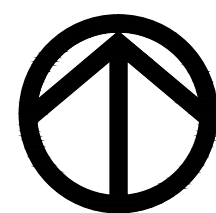
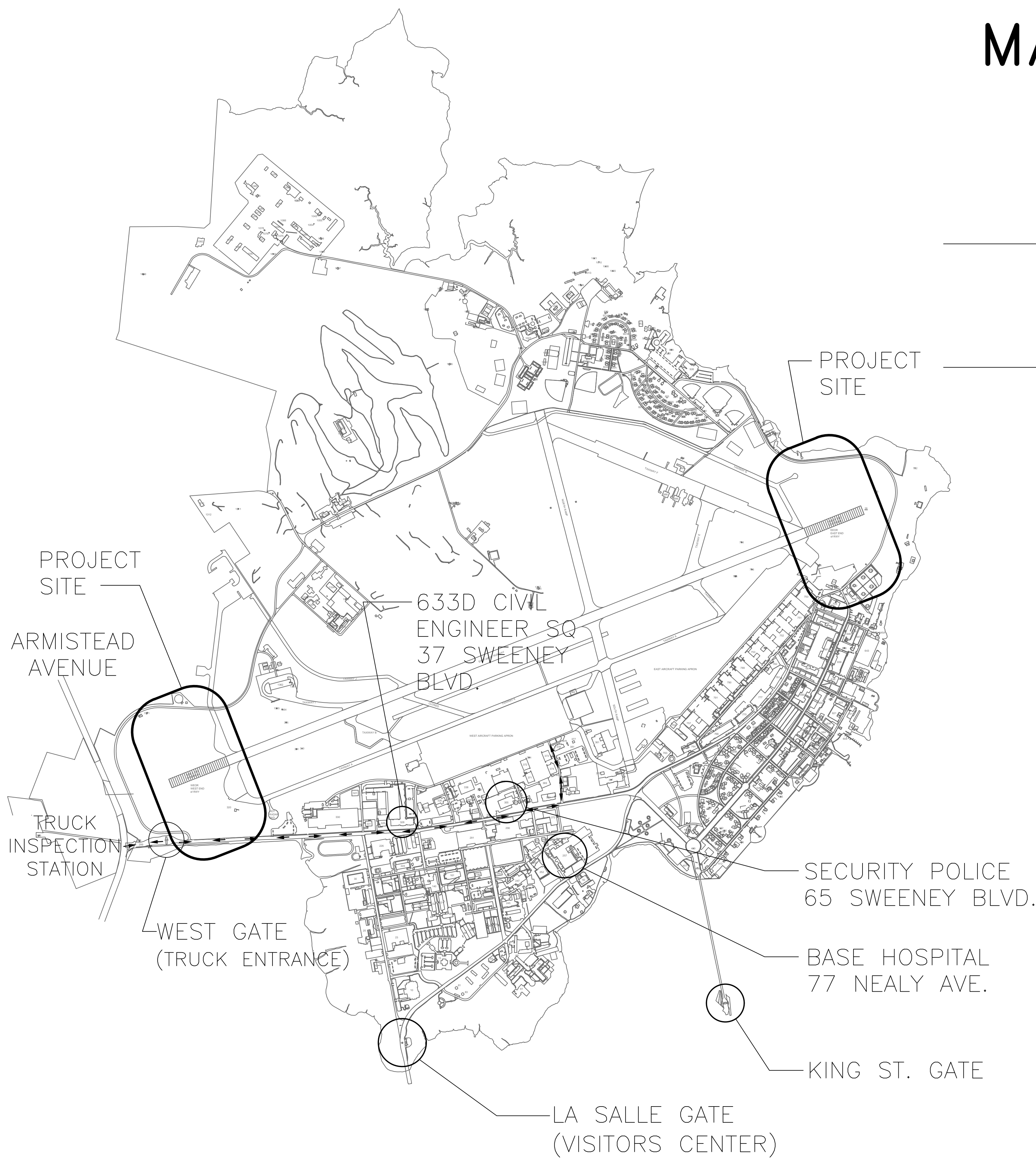


MAINTAIN RUNWAY 08 AND 26 CLEAR ZONE DRAINAGE — DESIGN

JBLE — LANGLEY
HAMPTON, VIRGINIA

DRAWING INDEX

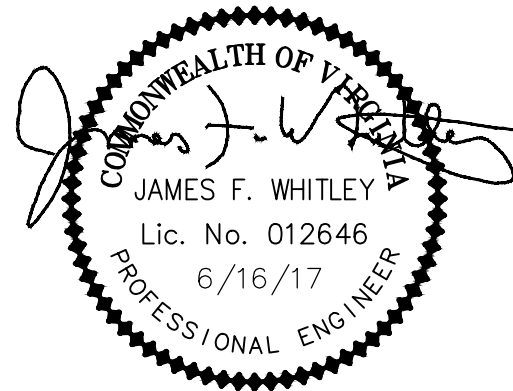
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1	G-001	COVER SHEET AND DRAWING INDEX
2	C-101	VICINITY MAP
3	C-102	EXISTING CONDITIONS PLAN CLEAR ZONE AREA A
4	C-103	EXISTING CONDITIONS PLAN CLEAR ZONE AREA B
5	C-104	EXISTING CONDITIONS PLAN CLEAR ZONE AREA C
6	C-105	EXISTING CONDITIONS PLAN CLEAR ZONE AREA D
7	C-106	PROPOSED GRADING PLAN CLEAR ZONE AREA A
8	C-107	PROPOSED GRADING PLAN CLEAR ZONE AREA B
9	C-108	PROPOSED GRADING PLAN CLEAR ZONE AREA C
10	C-109	PROPOSED GRADING PLAN CLEAR ZONE AREA D
11	C-110	PROPOSED DRAINAGE PLAN CLEAR ZONE AREA A
12	C-111	PROPOSED DRAINAGE PLAN CLEAR ZONE AREA B
13	C-112	PROPOSED DRAINAGE PLAN CLEAR ZONE AREA C
14	C-113	PROPOSED DRAINAGE PLAN CLEAR ZONE AREA D
15	C-114	ENVIRONMENTAL OVERLAY — CONTAMINATED SOILS — CLEAR ZONE AREA D
16	C-115	DETAILS AND UTILITY NOTES
17	C-116	DETAILS
18	C-117	EROSION AND SEDIMENT CONTROL NOTES
19	C-118	EROSION AND SEDIMENT CONTROL DETAILS



JBLE — LANGLEY LOCATION PLAN
NOT TO SCALE

COORDINATION

REVIEWED BY	DATE	REVIEWED BY	DATE
CHIEF, CONTRACTS	DATE	FIRE SAFETY	DATE
REVIEWED BY	DATE	REVIEWED BY	DATE
CONSTRUCTION MANAGEMENT	DATE	WING SAFETY	DATE
CORROSION ENGINEER	DATE	APPROVED BY	DATE
REVIEWED BY	DATE	APPROVED BY	DATE
ENVIRONMENTAL ENGINEER	DATE	CHIEF ENGINEER	DATE
REVIEWED BY	DATE	APPROVED BY	DATE
ANTITERRORISM/FORCE PROTECTION	DATE	BASE CIVIL ENGINEER	DATE
REVIEWED BY	DATE	APPROVED BY	DATE
BASE COMMUNICATIONS		USING AGENCY	

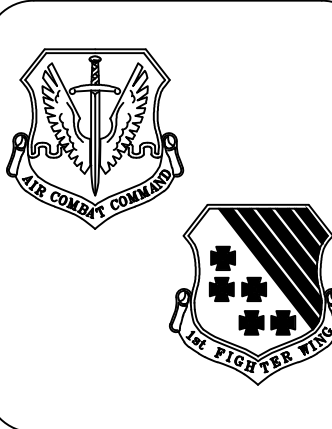


DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND
JBLE - LANGLEY VA
CIVIL ENGINEERING OFFICE

MAINTAIN RUNWAY 08 AND 26
CLEAR ZONE DRAINAGE — DESIGN
JBLE-LANGLEY, VIRGINIA
COVER SHEET

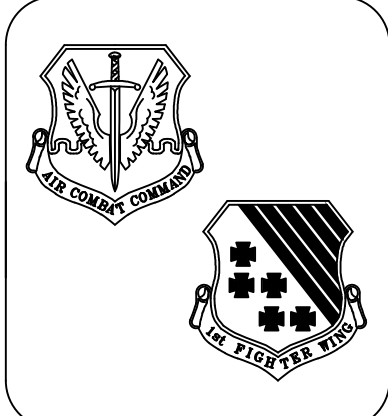
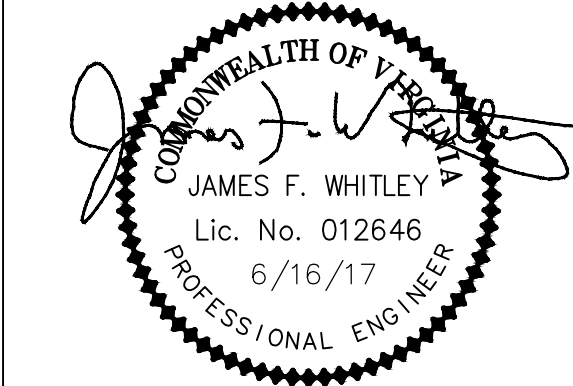
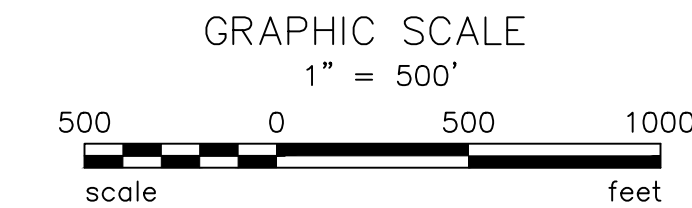
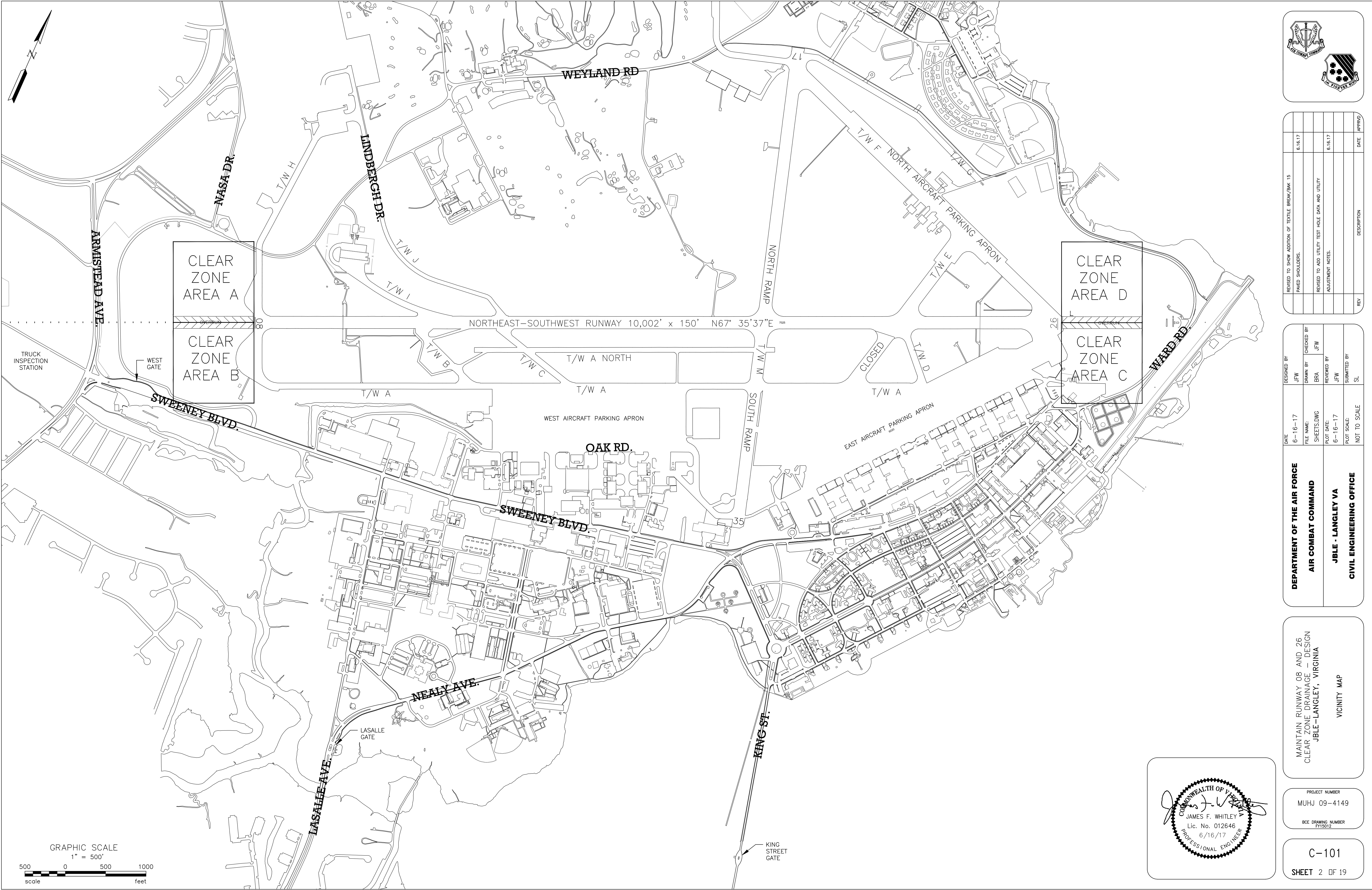
PROJECT NUMBER
MUHJ 09-4149
BCE DRAWING NUMBER
FY15012

G-001
SHEET 1 OF 19



REVISED TO SHOW ADDITION OF TEXTILE BREAK/PARK 15	6.16.17	DATE
PAVED SHOULDERS.		
REVISED TO ADD UTILITY TEST HOLE DATA AND UTILITY	6.16.17	DATE
ADJUSTMENT NOTES.		
DESCRIPTION		
APPROVED		

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CHECKED BY					
JFW					
REVIEWED BY					
JFW					
SUBMITTED BY					
SL					



REV	DESCRIPTION	DATE	APPROD
1	REVISED TO SHOW ADDITION OF TEXTILE BREAK/PAK 15	6/16/17	
2	PAVED SHOULDERS.	6/16/17	
3	REVISED TO ADD UTILITY TEST HOLE DATA AND UTILITY	6/16/17	
4	ADJUSTMENT NOTES.	6/16/17	

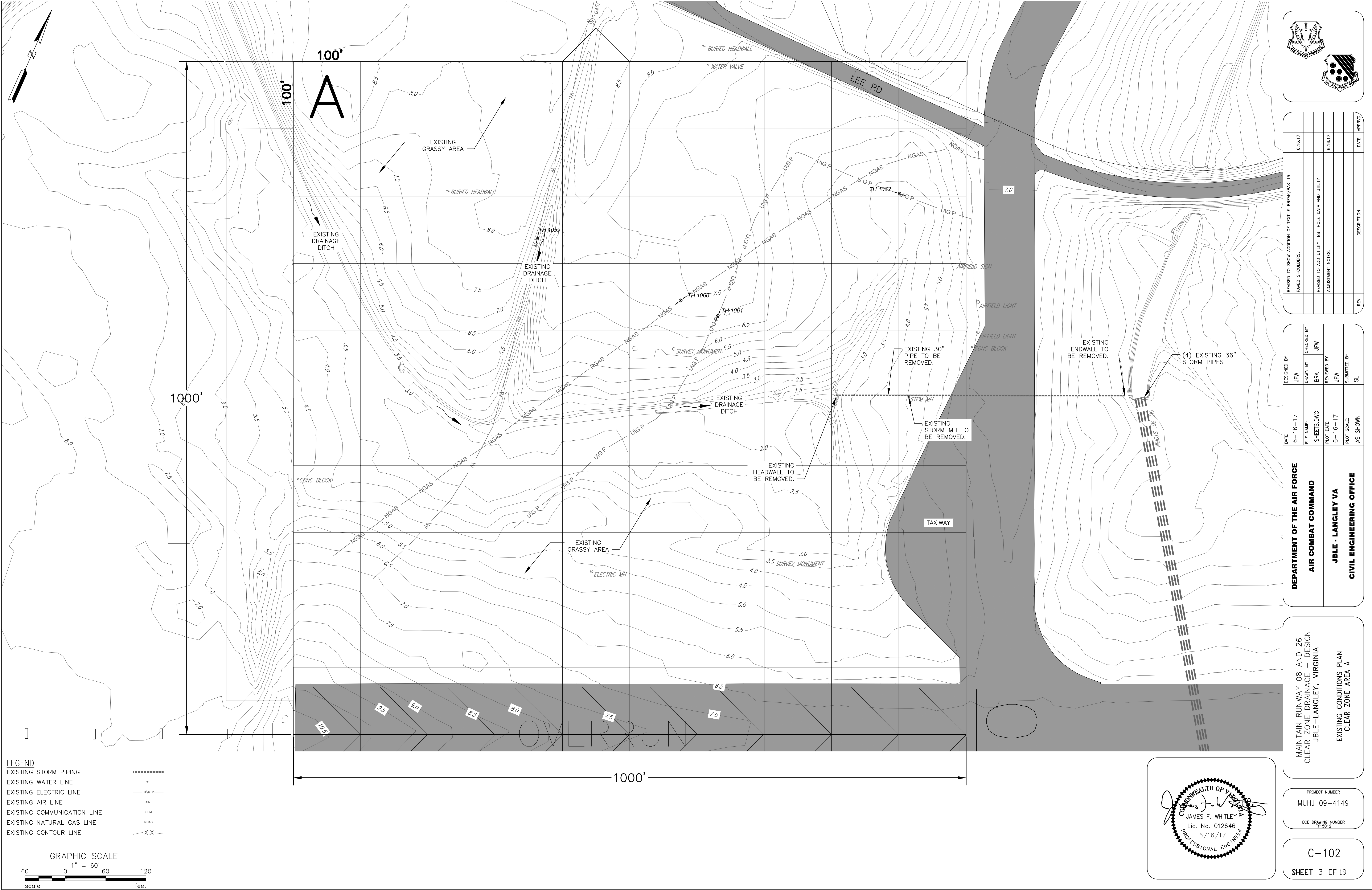
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	BRA		JFW
	JFW		JFW
	SL		SL

DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND
JBLE - LANGLEY VA
CIVIL ENGINEERING OFFICE

MAINTAIN RUNWAY 08 AND 26
CLEAR ZONE DRAINAGE - DESIGN
JBLE-LANGLEY, VIRGINIA
VICINITY MAP

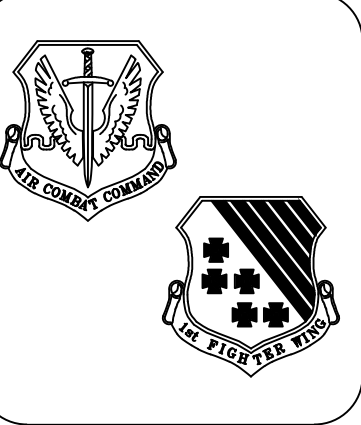
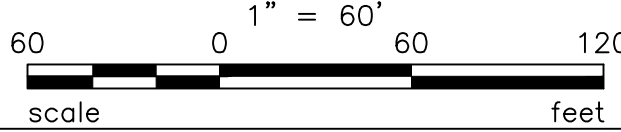
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MUHJ 09-4149
BCE DRAWING NUMBER
FY15012

C-101
SHEET 2 OF 19



- LEGEND**
- EXISTING STORM PIPING
 - EXISTING WATER LINE
 - EXISTING ELECTRIC LINE
 - EXISTING AIR LINE
 - EXISTING COMMUNICATION LINE
 - EXISTING NATURAL GAS LINE
 - EXISTING CONTOUR LINE

GRAPHIC SCALE



REV	DESCRIPTION	DATE	APPROD
1	REVISED TO SHOW ADDITION OF TEXTILE BREAK/PAK 15	8.16.17	
2	PAVED SHOULDERS.	8.16.17	
3	REVISED TO ADD UTILITY TEST HOLE DATA AND UTILITY	8.16.17	
4	ADJUSTMENT NOTES.	8.16.17	

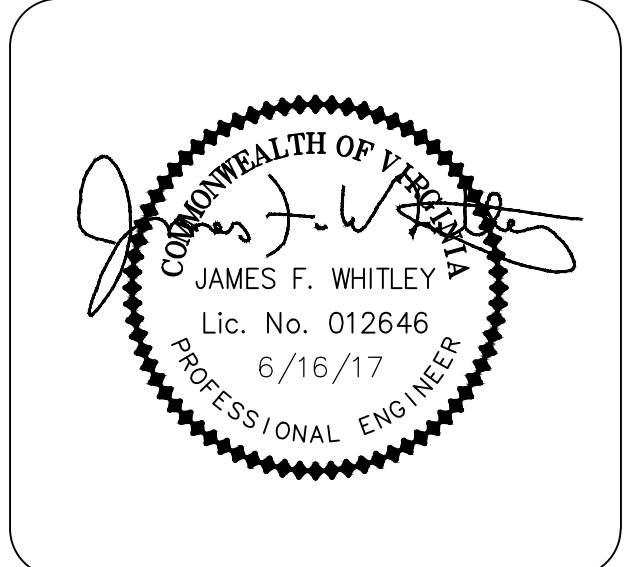
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JBLE - LANGLEY VA	REVIEWED BY	
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CIVIL ENGINEERING OFFICE	6-16-17	JFW
	SUBMITTED BY	
	PLOT SCALE:	
	AS SHOWN	SL

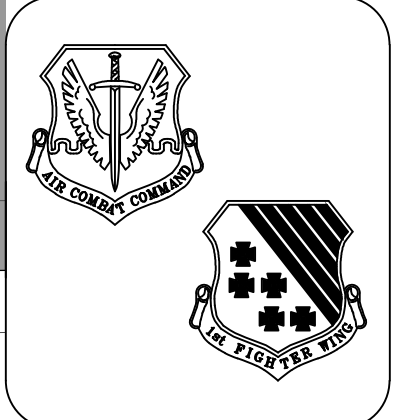
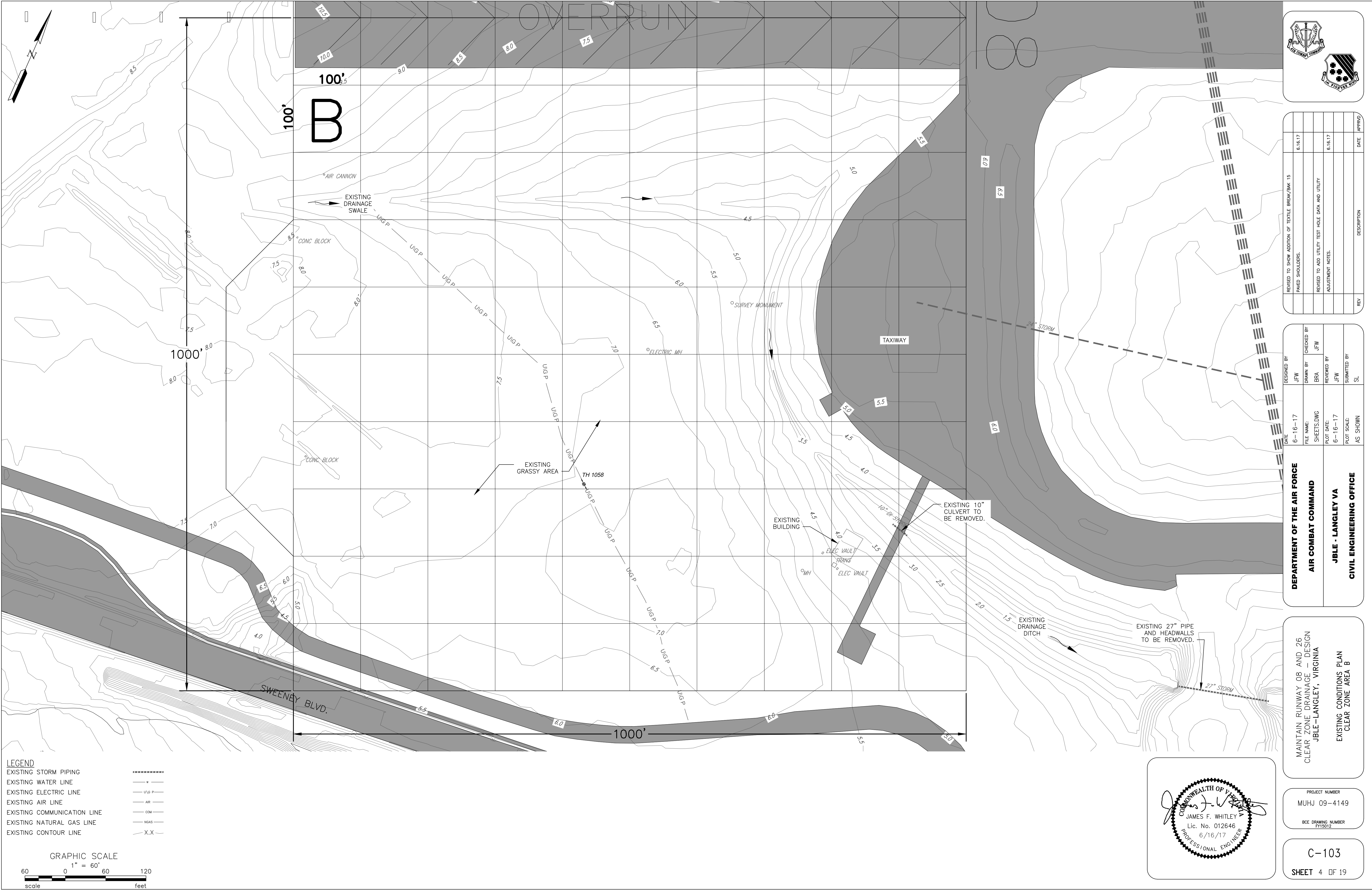
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AIR COMBAT COMMAND
JBLE - LANGLEY VA
CIVIL ENGINEERING OFFICE

PROJECT NUMBER
MUHJ 09-4149

BCE DRAWING NUMBER
FY15012

C-102
SHEET 3 OF 19





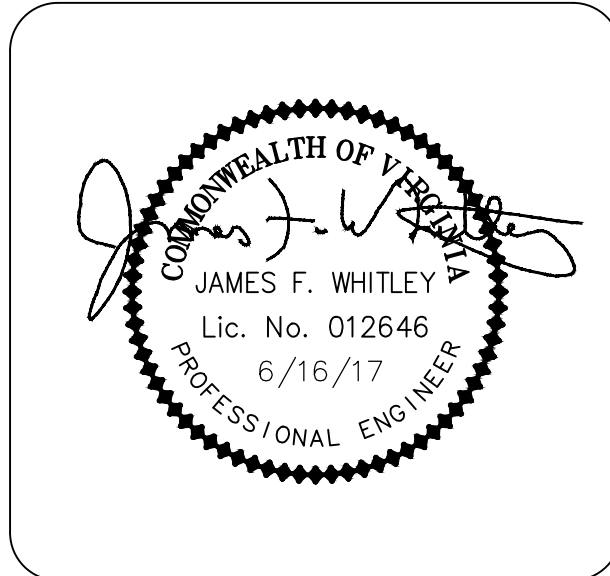
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2	PAVED SHOULDERS.	8.18.17	
3	REVISED TO ADD UTILITY TEST HOLE DATA AND UTILITY	8.18.17	
4	ADJUSTMENT NOTES.	8.18.17	

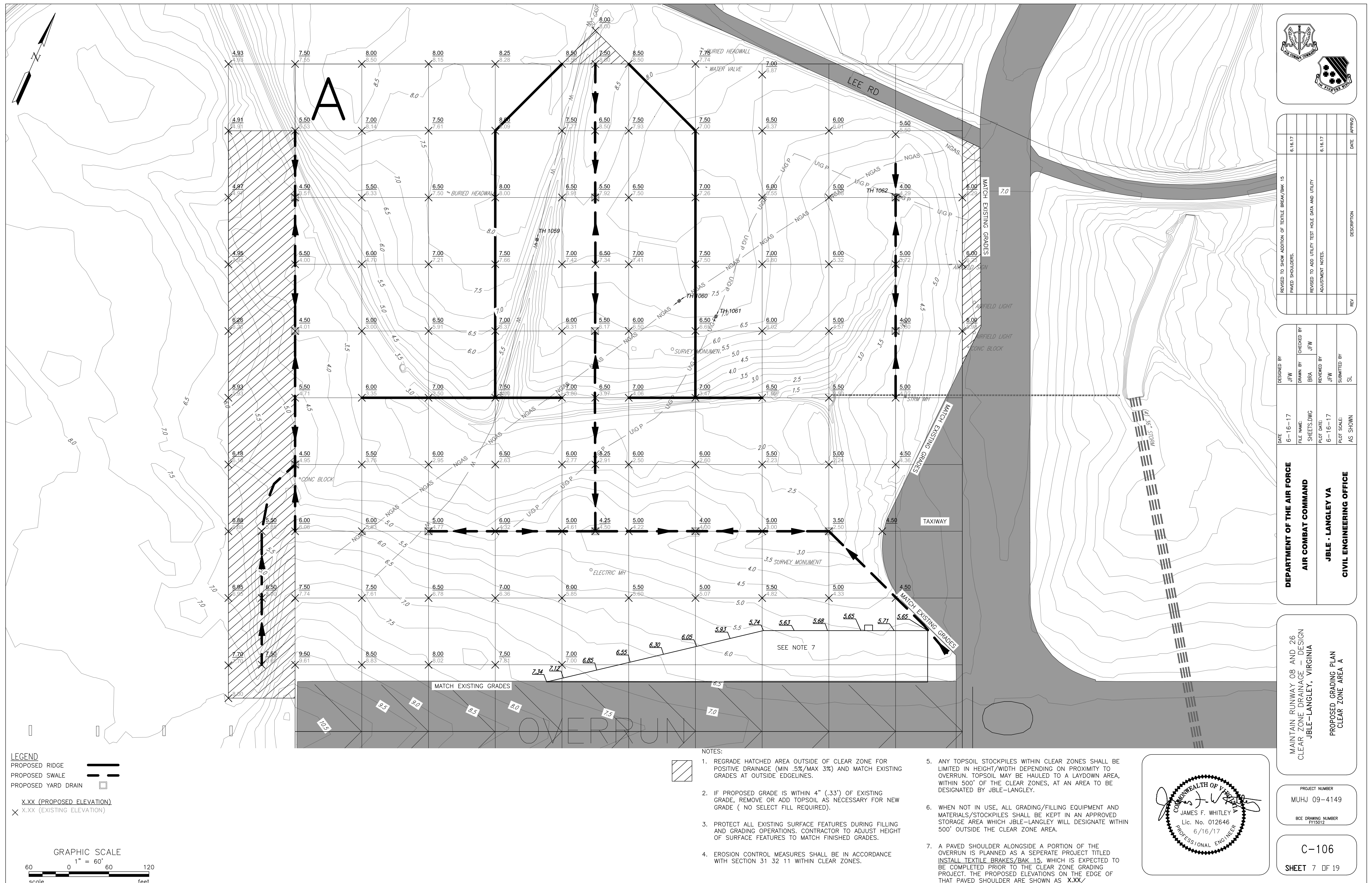
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DESIGNED BY	DATE	FILE NAME	CHECKED BY
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AIR COMBAT COMMAND			
DRAWN BY	REVIEWED BY	PLLOT DATE:	PLotted SCALE
BRA	JFW	6-16-17	AS SHOWN
JBLE - LANGLEY VA			
CIVIL ENGINEERING OFFICE			
SUBMITTED BY	AS SHOWN	DATE	DESCRIPTION
SL			

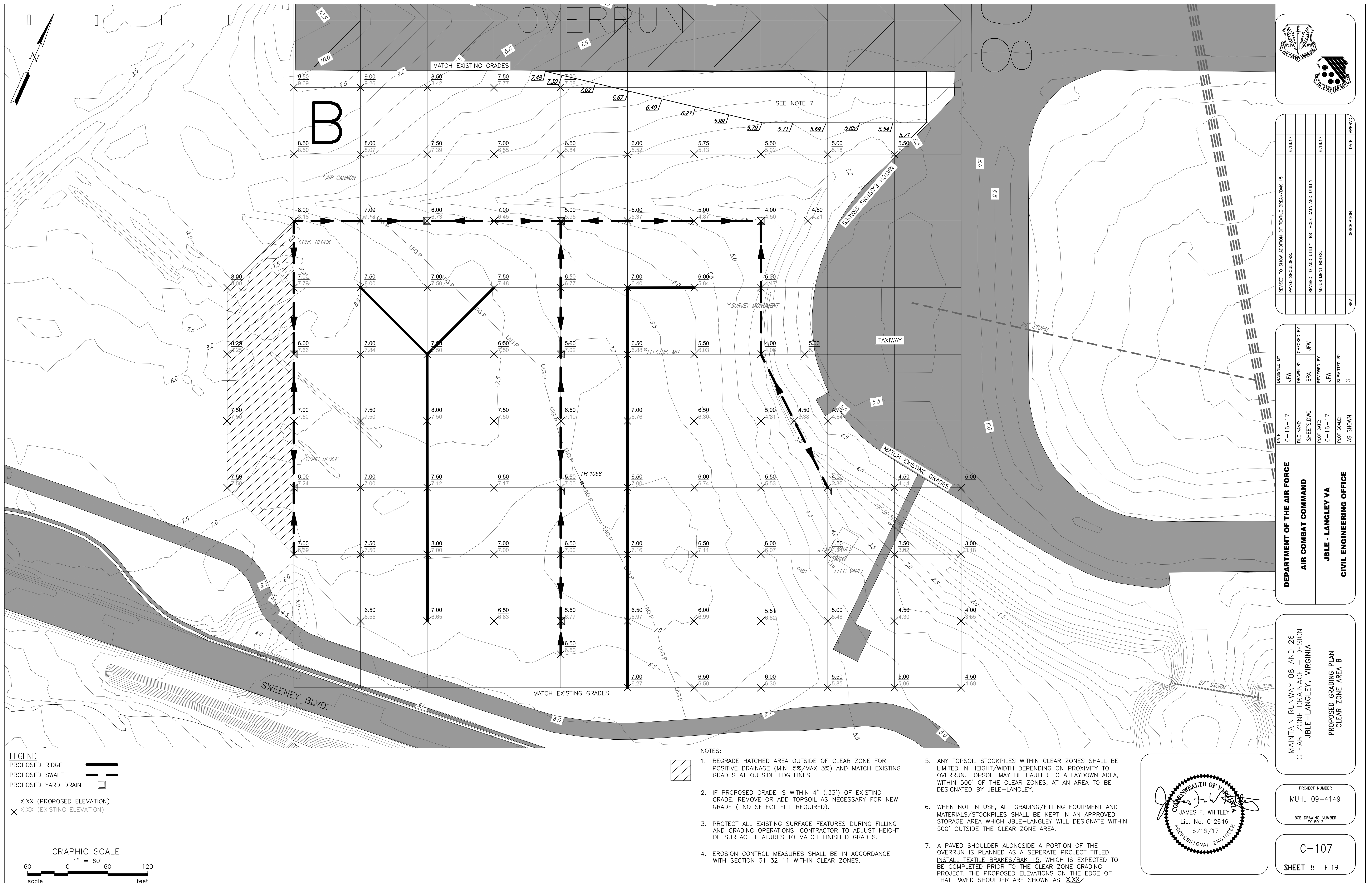
DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND
JBLE - LANGLEY VA
CIVIL ENGINEERING OFFICE

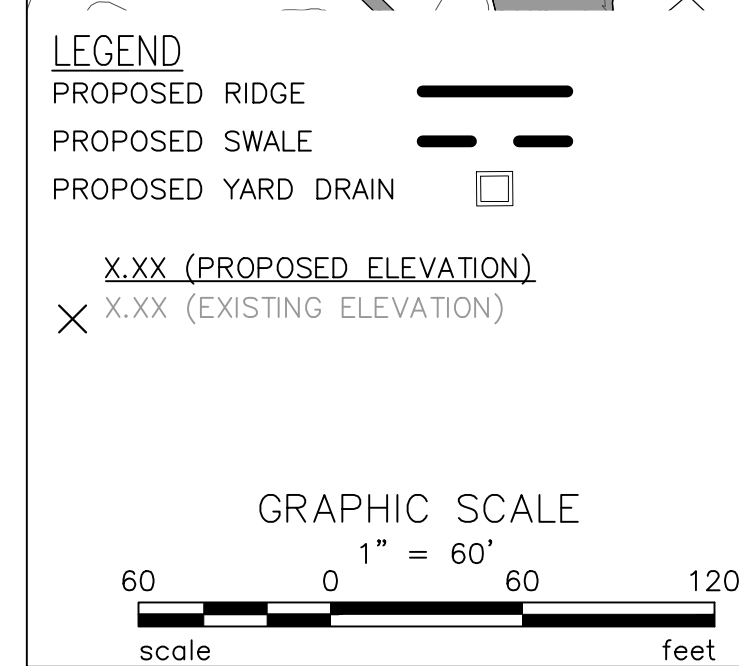
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BCE DRAWING NUMBER
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C-103
SHEET 4 OF 19



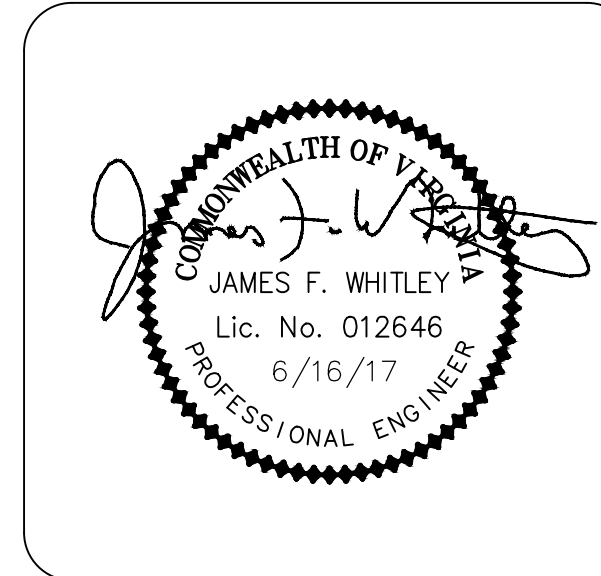
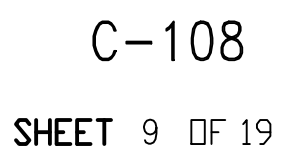


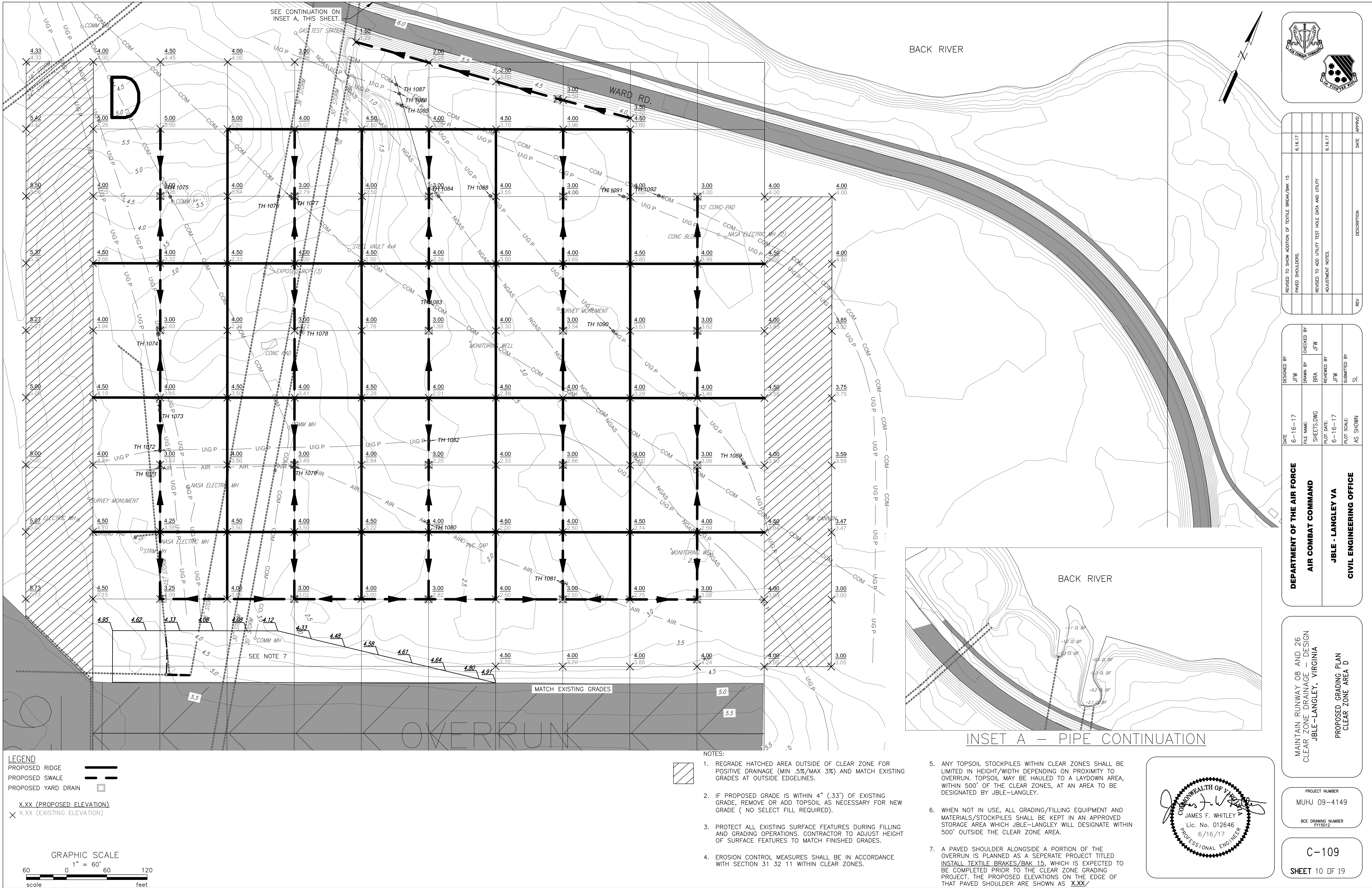


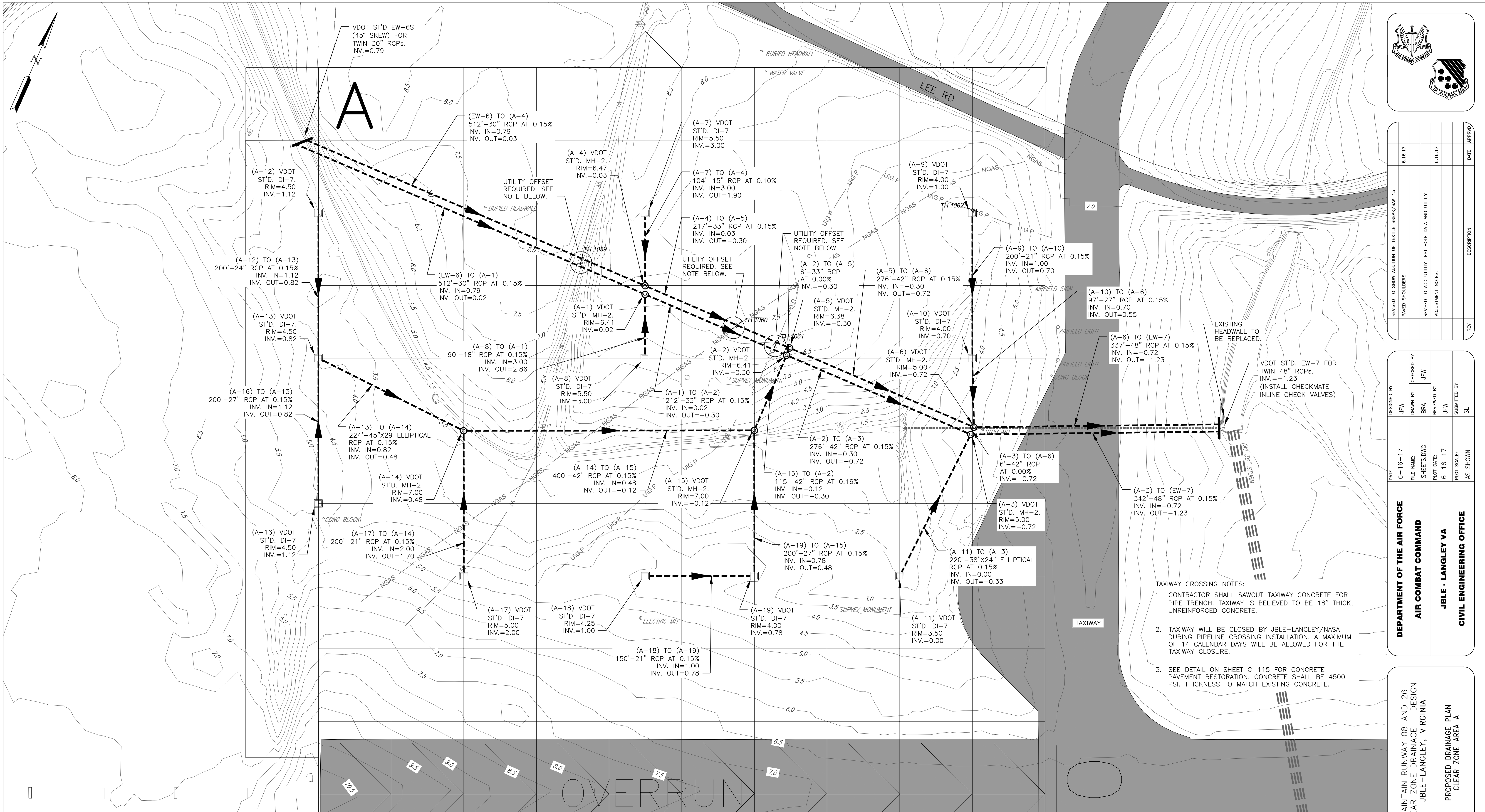


1. REGRADE HATCHED AREA OUTSIDE OF CLEAR ZONE FOR POSITIVE DRAINAGE (MIN .5%/MAX 3%) AND MATCH EXISTING GRADES AT OUTSIDE EDGELINES.
2. IF PROPOSED GRADE IS WITHIN 4" (.33') OF EXISTING GRADE, REMOVE OR ADD TOPSOIL AS NECESSARY FOR NEW GRADE (NO SELECT FILL REQUIRED).
3. PROTECT ALL EXISTING SURFACE FEATURES DURING FILLING AND GRADING OPERATIONS. CONTRACTOR TO ADJUST HEIGHT OF SURFACE FEATURES TO MATCH FINISHED GRADES.
4. EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH SECTION 31 32 11 WITHIN CLEAR ZONES.

5. ANY TOPSOIL STOCKPILES WITHIN CLEAR ZONES SHALL BE LIMITED IN HEIGHT/WIDTH DEPENDING ON PROXIMITY TO OVERRUN. TOPSOIL MAY BE HAULED TO A LAYDOWN AREA, WITHIN 500' OF THE CLEAR ZONES, AT AN AREA TO BE DESIGNATED BY JBLE-LANGLEY.
6. WHEN NOT IN USE, ALL GRADING/FILLING EQUIPMENT AND MATERIALS/STOCKPILES SHALL BE KEPT IN AN APPROVED STORAGE AREA WHICH JBLE-LANGLEY WILL DESIGNATE WITHIN 500' OUTSIDE THE CLEAR ZONE AREA.
7. A PAVED SHOULDER ALONGSIDE A PORTION OF THE OVERRUN IS PLANNED AS A SEPARATE PROJECT TITLED INSTALL TEXTILE BRAKES/BAK 15, WHICH IS EXPECTED TO BE COMPLETED PRIOR TO THE CLEAR ZONE GRADING PROJECT. THE PROPOSED ELEVATIONS ON THE EDGE OF THAT PAVED SHOULDER ARE SHOWN AS X.XX'







LEGEND

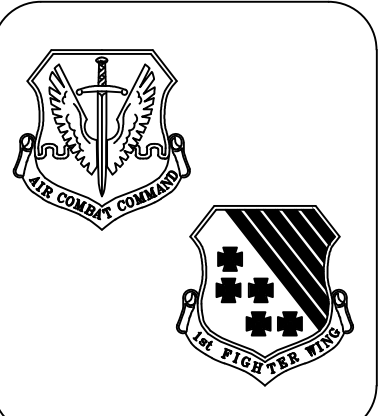
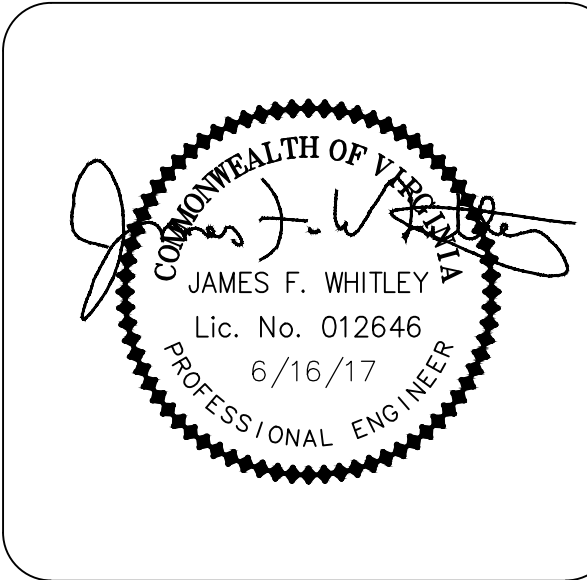
EXISTING STORM PIPING (FROM GIS)
PROPOSED STORM PIPING
PROPOSED OPEN DITCH
PROPOSED YARD DRAIN
PROPOSED MANHOLE
PROPOSED FLARED END SECTION
PROPOSED HEADWALL
PROPOSED (MOD)JB-1 CONFLICT STRUCTURE

GRAPHIC SCALE
1" = 60'
60 0 60 120
scale feet

- UTILITY NOTES:**
1. THE CONTRACTOR SHALL CONTACT "MISS UTILITY OF VIRGINIA" (1-800-552-7001) IN ORDER TO DETERMINE THE EXTENT AND LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. UTILITY COMPANIES SHALL BE NOTIFIED THROUGH "MISS UTILITY OF VIRGINIA" 72 HOURS IN ADVANCE OF ANY EXCAVATION WITHIN THE PROXIMITY OF THEIR UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES, PAVEMENT, CONCRETE ITEMS, PIPES, ETC., THAT ARE DAMAGED DURING CONSTRUCTION TO THEIR PRE-CONSTRUCTION CONDITION.
 2. THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE NECESSARY UTILITY COMPANIES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
 3. THE CONTRACTOR IS TO UNCOVER UTILITIES AT POTENTIAL POINTS OF CONFLICT WITH PROPOSED CONSTRUCTION FOR CLEARANCE VERIFICATION PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
 5. UNFORESEEN EXISTING ABANDONED STRUCTURES OR UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION SHALL NOT BE REMOVED WITHOUT AUTHORIZATION FROM THE UTILITY OWNER.
 6. PRIOR TO CONSTRUCTION OF ANY PROPOSED UTILITIES THE CONTRACTOR SHALL VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITY LINES. IF ANY OF THE EXISTING UTILITIES ARE IN CONFLICT WITH THE PROPOSED DRAINAGE THE CONTRACTOR WILL COORDINATE THE RELOCATION OF THE EXISTING LINES WITH THE APPROPRIATE UTILITY OWNER, WATERMAIN AND FORCEMAIN LINES IN CONFLICT SHALL BE OFFSET, PER THE BID DOCUMENTS.
 7. TEST HOLE INFORMATION WILL BE PROVIDED BY THE OWNER ON A NUMBER OF THE UTILITIES AT PROPOSED STORM CROSSINGS.

- UTILITY ADJUSTMENT NOTES:**
1. DOMINION VIRGINIA POWER (DVP) CABLES TO BE ADJUSTED BY DVP. CONTRACTOR TO CONTACT DVP TO ARRANGE RELOCATION IN ADVANCE OF STORM DRAIN INSTALLATION. AN ALLOWANCE OF \$25,000 SHOULD BE INCLUDED IN THE BID IN THE EVENT DVP CHARGES FOR THE ADJUSTMENT OF ITS CABLE. APPLIES TO TEST HOLE LOCATIONS 1058, 1061, AND 1089. NOTE: AROUND TESTHOLE LOCATION 1058, LOWER CABLE AT ALL 3 CROSSINGS.
 2. VIRGINIA NATURAL GAS (VNG) CABLES TO BE ADJUSTED BY VNG. CONTRACTOR TO CONTACT DVP TO ARRANGE RELOCATION IN ADVANCE OF STORM DRAIN INSTALLATION. APPLIES TO TEST HOLE LOCATIONS 1069 AND 1084.
 3. NEWPORT NEWS WATERWORKS LINE TO BE ADJUSTED BY CONTRACTOR. SEE OFFSET DETAIL, SHEET C-116. THE CONTRACTOR SHOULD COMPLY WITH ALL NNWW REGULATIONS REGARDING THE WATERLINE OFFSET. APPLIES TO TEST HOLE LOCATION 1059.

- SPECIAL NOTES:**
1. PROPOSED STRUCTURES SHALL BE PRECAST. CONTRACTOR SHALL BE ADVISED THAT DUE TO LIMITED DEPTH OF STRUCTURES AND ANGLES OF PROPOSED PIPES SPECIAL ATTENTION WILL BE REQUIRED AT PRECASTING TO MEET DESIGN INVERTS AND PIPE OPENINGS. SHOP DRAWINGS WILL BE REQUIRED FOR GOVERNMENT REVIEW/APPROVAL PRIOR TO THE CONTRACTOR PLACING THE PRECAST ORDER.
 2. PLEASE NOTE THAT THERE MAY BE ABANDONED UTILITIES IN THE PROJECT AREA THAT WERE NOT MARKED AND HAVE NOT BEEN SHOWN ON THE CONSTRUCTION PLANS. CONTRACTOR TO USE CAUTION DURING EXCAVATION.
 3. WHEN NOT IN USE, ALL PIPE LAYING EQUIPMENT, AND MATERIALS/STOCKPILES SHALL BE KEPT IN AN APPROVED STORAGE AREA WHICH JBLE-LANGLEY WILL DESIGNATE WITHIN 500' OUTSIDE THE CLEAR ZONES.

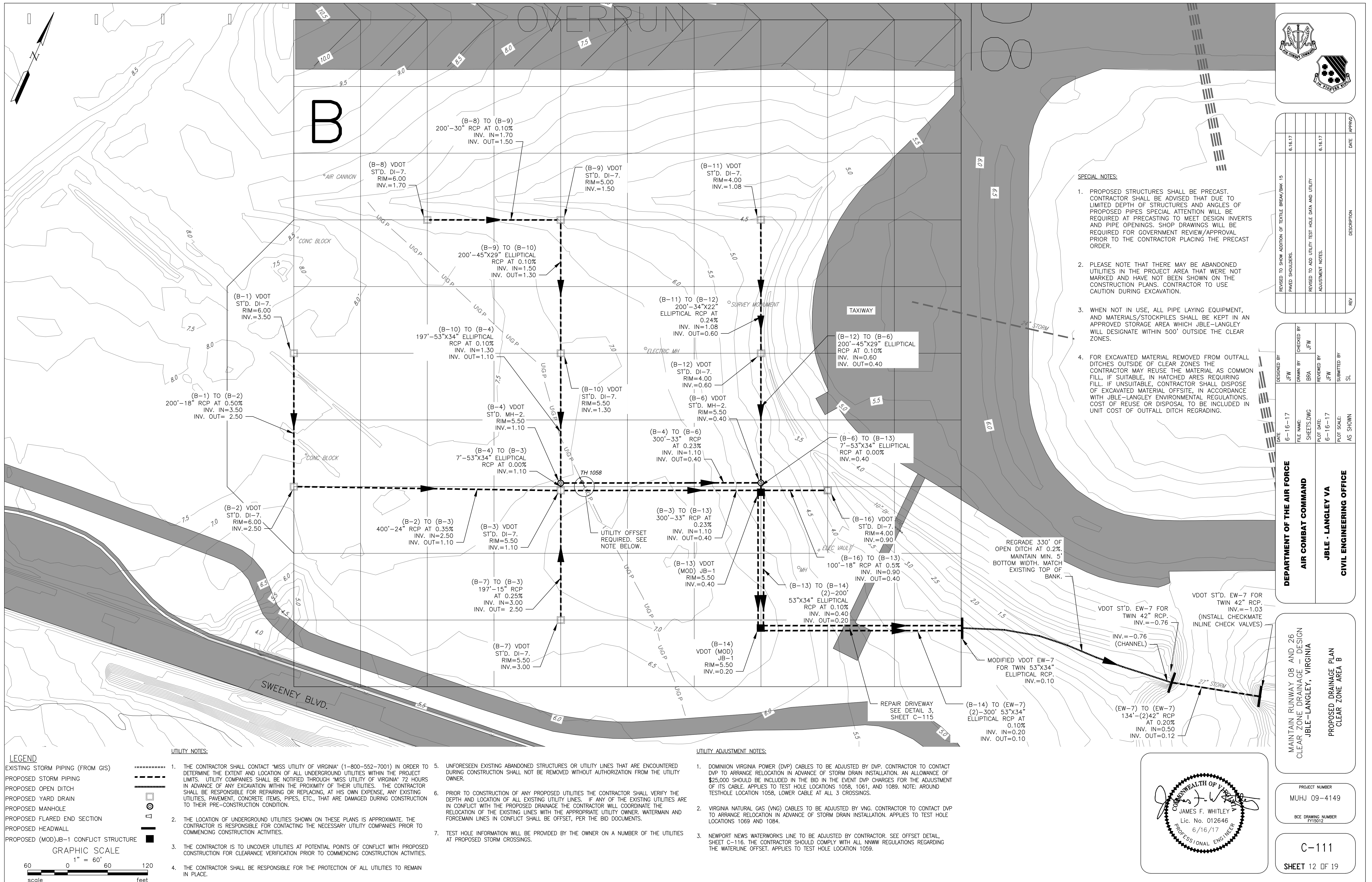


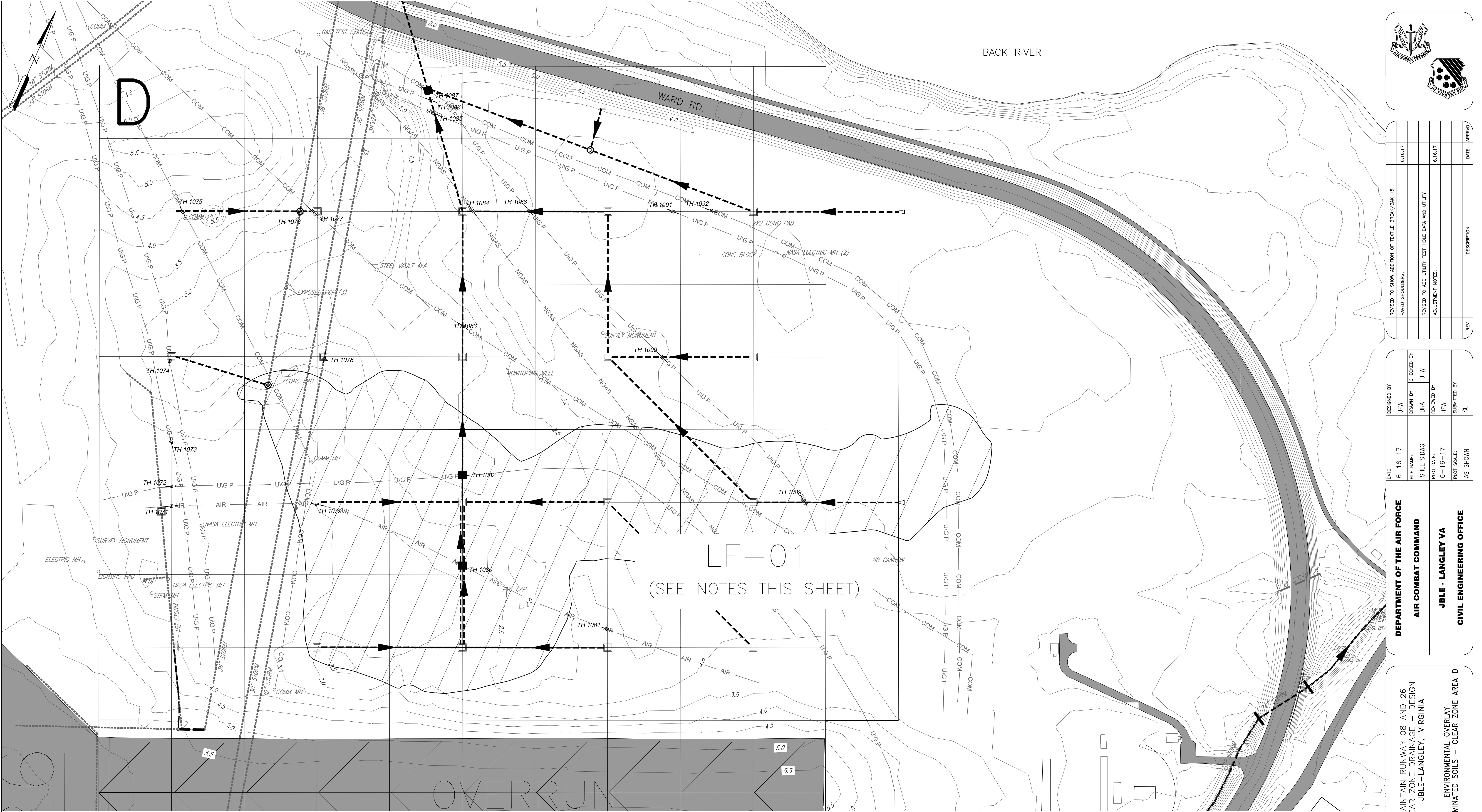
REV	DATE	DESCRIPTION
1	6/16/17	REVISED TO SHOW ADDITION OF TEXTILE BREAK/PAK 15
2	6/16/17	PAVED SHOULDERS.
3	6/16/17	REVISED TO ADD UTILITY TEST HOLE DATA AND UTILITY ADJUSTMENT NOTES.

DEPARTMENT OF THE AIR FORCE AIR COMBAT COMMAND	DATE	DESIGNED BY
	6-16-17	JFW
	FILE NAME	CHECKED BY
	DRAWN BY	JFW
JBLE - LANGLEY VA CIVIL ENGINEERING OFFICE	SHEETS.DWG	BRB
	PLotted DATE	REVIEWED BY
	6-16-17	JFW
	PLotted SCALE	SUBMITTED BY
	AS SHOWN	SL

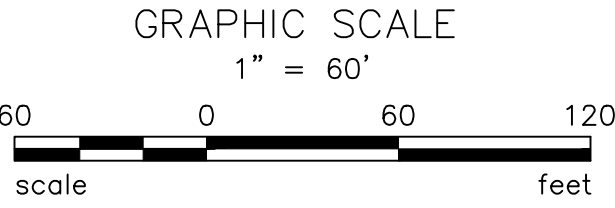
MAINTAIN RUNWAY 08 AND 26 CLEAR ZONE DRAINAGE - DESIGN JBLE-LANGLEY, VIRGINIA

PROPOSED DRAINAGE PLAN CLEAR ZONE AREA A

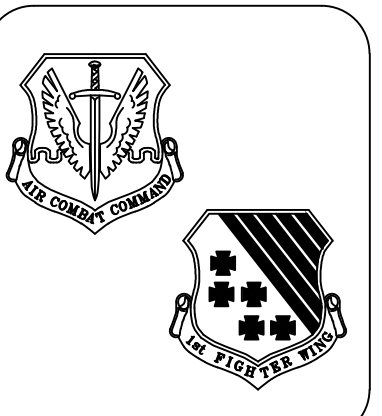




LEGEND
CONTAMINATED SOILS AREA



- NOTES:
1. LF-01 SITE WAS USED FOR DISPOSAL OF MUNICIPAL WASTE AND CONSTRUCTION DEBRIS. THE SITE WAS REMEDIATED IN 2006 BY COVERING THE AREA WITH ADDITIONAL TOPSOIL AND ESTABLISHING GROUND COVER. REMEDIAL ACTIVITIES ARE SUMMARIZED IN THE "REMEDIAL ACTION COMPLETION REPORTS" (SHAW/LAFB, 2008)
 2. POST-REMEDY MANAGEMENT PLAN FOR SITE LF-01 WAS FINALIZED IN 2009. COPIES OF THIS DOCUMENT AND ALL RELATED DOCUMENTS ON THIS SITE ARE AVAILABLE FROM JBLE-LANGLEY STAFF.
 3. SEE SPECIFICATION SECTION 01 12 00 FOR STORM DRAINAGE PIPING INSTALLATION AND GRADING WORK WITHIN AREA OF CONTAMINATED SOILS.



REV	DESCRIPTION	DATE	APPROD
1	REVISED TO SHOW ADDITION OF TEXTILE BREAK/BAK 15	8.16.17	
2	PAVED SHOULDERS.	8.16.17	
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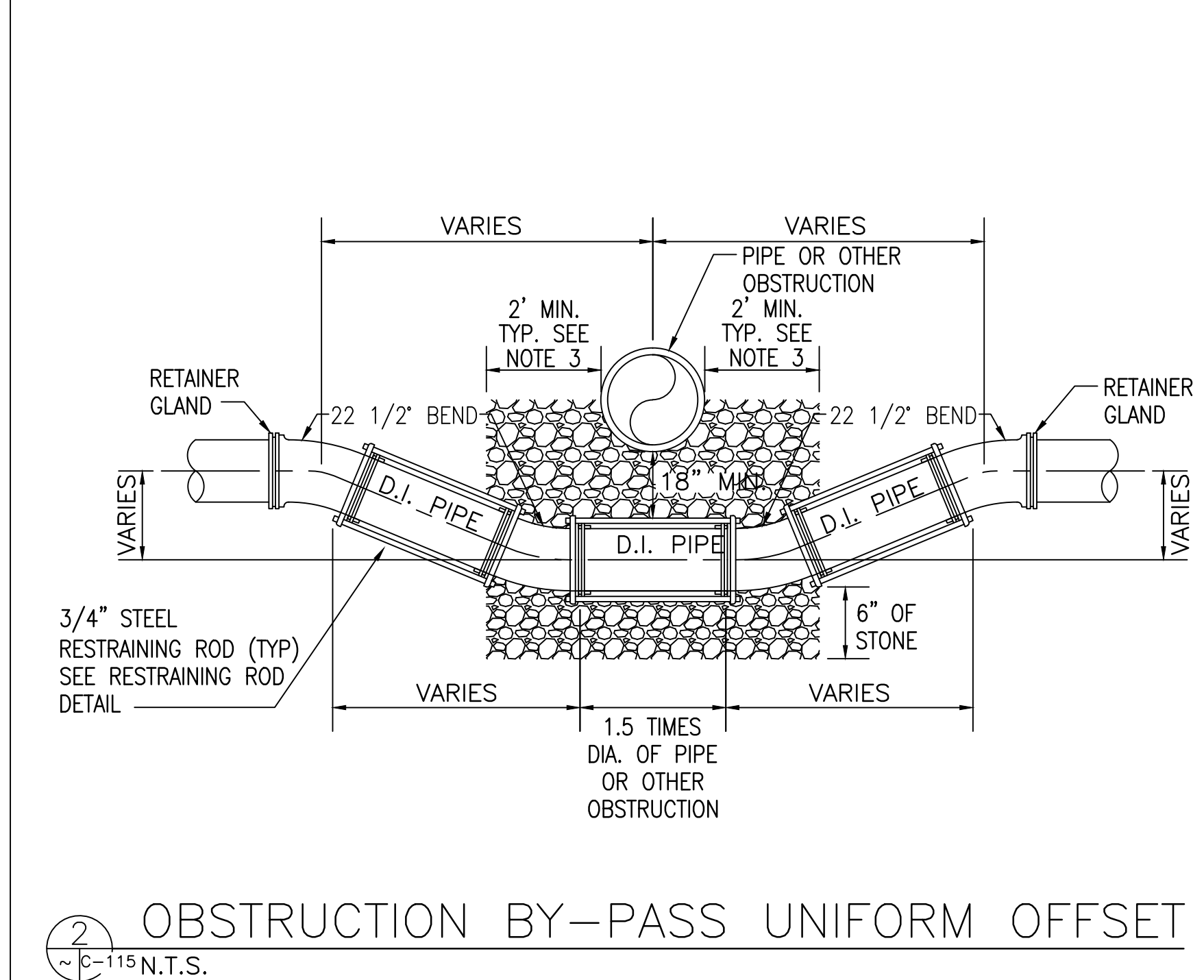
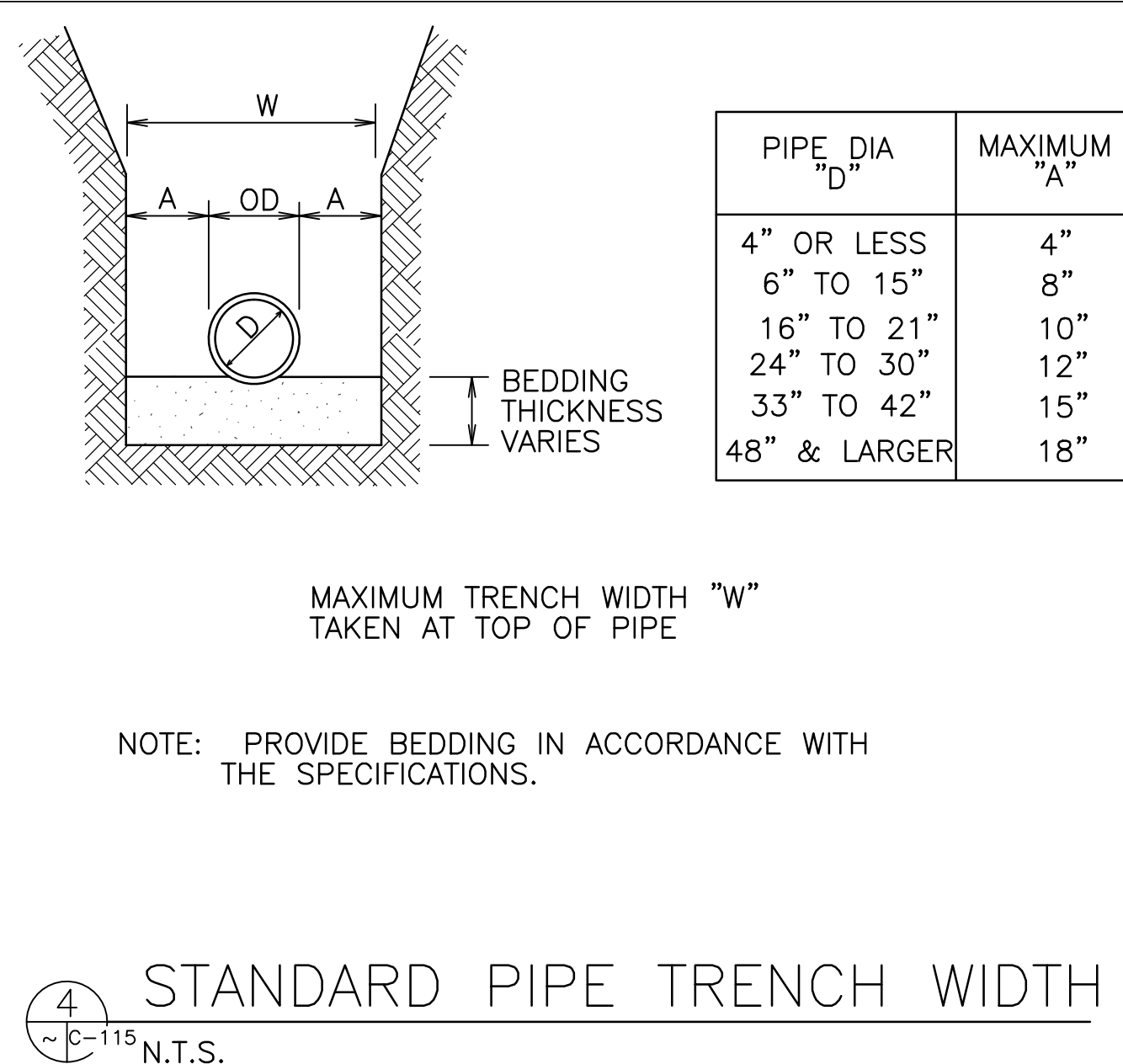
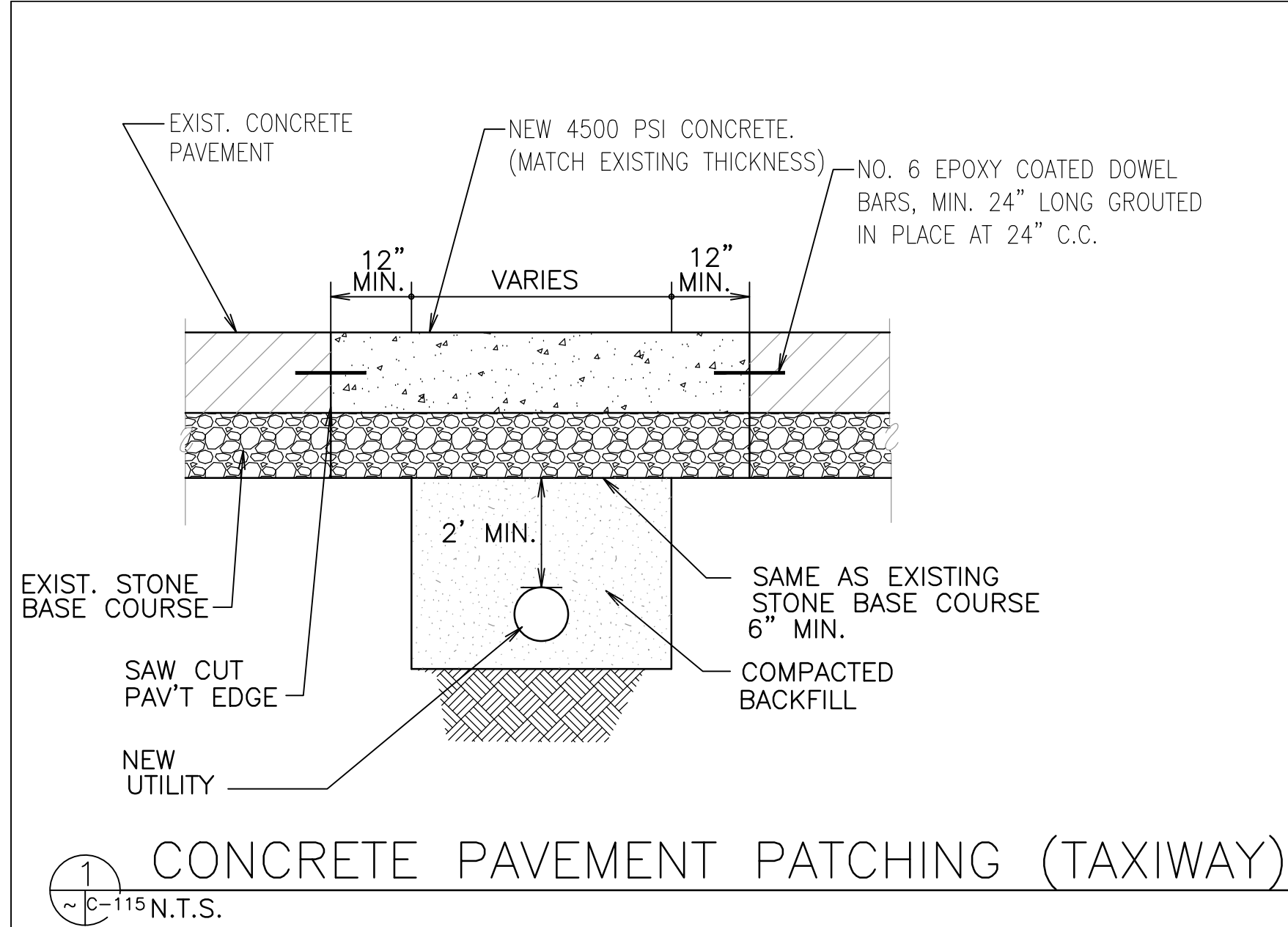
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	BRA	JFW		
	FILE NAME:			
	SHEETS.DWG			
JBLE - LANGLEY VA	REVIEWED BY	DATE		
	JFW	6-16-17		
CIVIL ENGINEERING OFFICE	SUBMITTED BY	DATE		
	SL			
	PLOT SCALE:			
	AS SHOWN			

DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND
JBLE - LANGLEY VA
CIVIL ENGINEERING OFFICE

PROJECT NUMBER
MUHJ 09-4149

BCE DRAWING NUMBER
FY15012

C-114
SHEET 15 OF 19



Tideflex Technologies
A Division of Rod Valve, Inc.

CHECKMATE®
INLINE CHECK VALVES
INSTALLATION, OPERATION AND MAINTENANCE MANUAL

The revolutionary design of the CheckMate® Inline Check Valve provides superior backflow prevention and odor mitigation in stormwater, CSO and SSO outfalls. The CheckMate® is custom-engineered, all-rubber unitbody design eliminates costly backflow from oceans, rivers and interceptors. The valve's unique elastomer fabric and wire reinforced design provides a proven record of maintenance-free performance, cost savings and results that no other inline check valve can match. The CheckMate® is built to suit all your site-specific and flow needs.

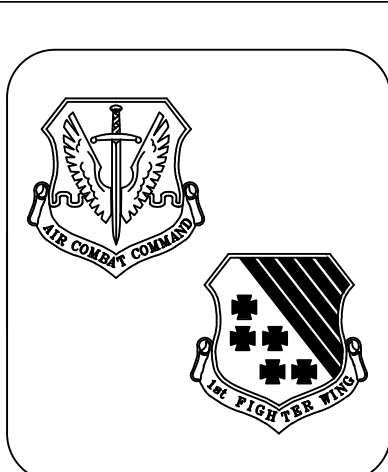
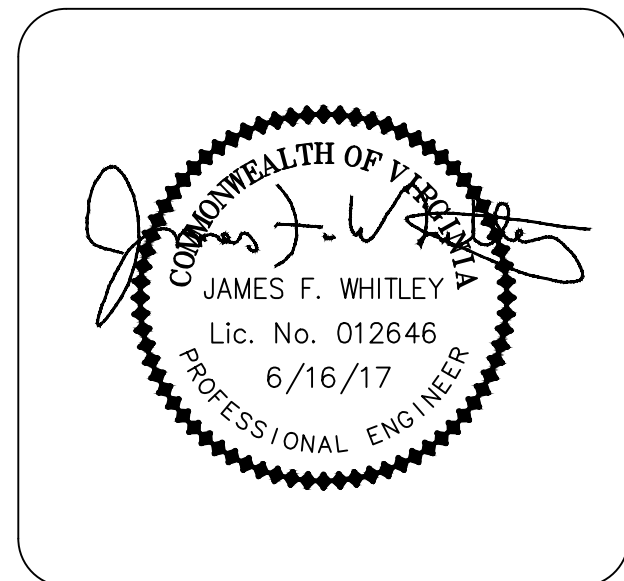
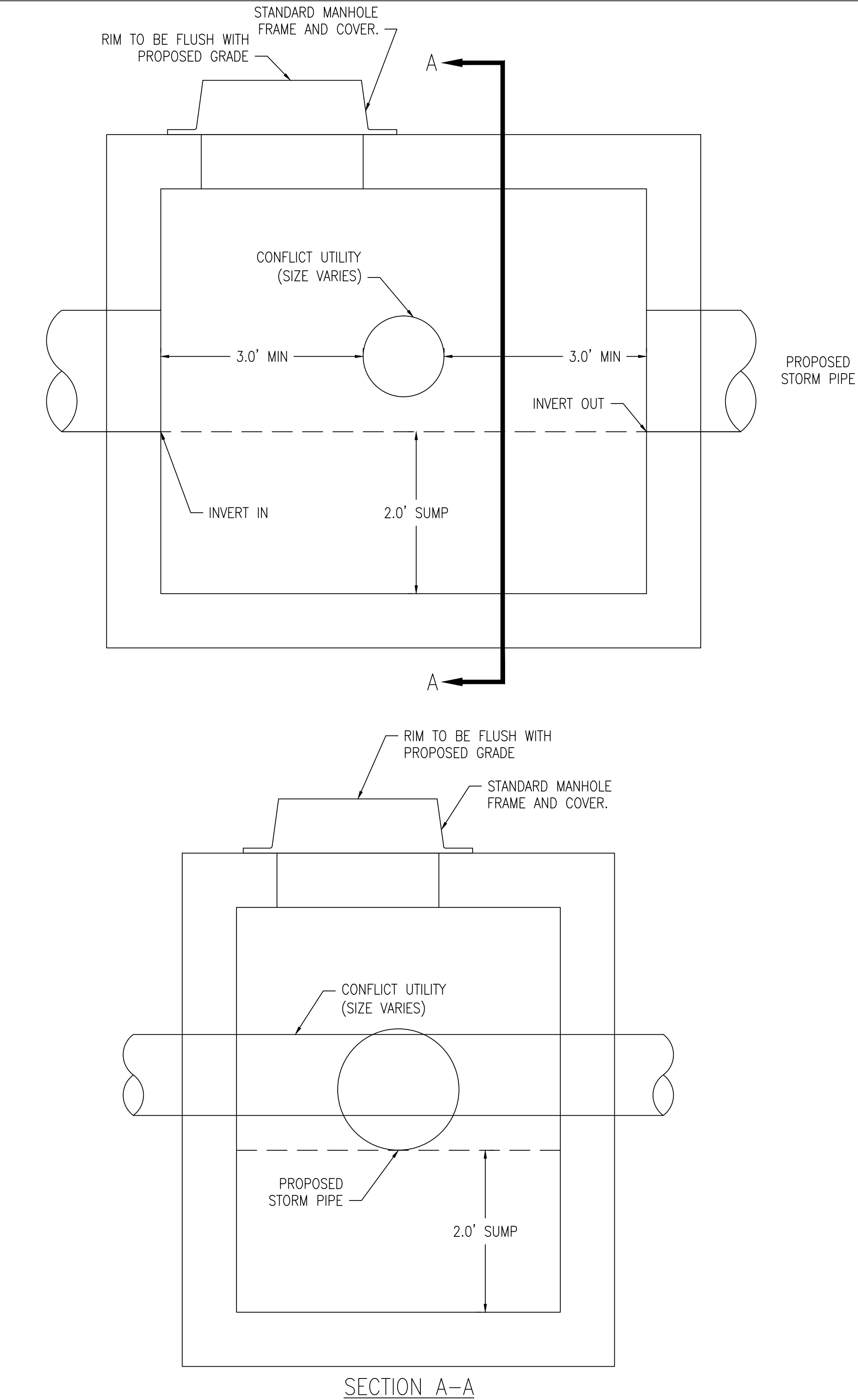
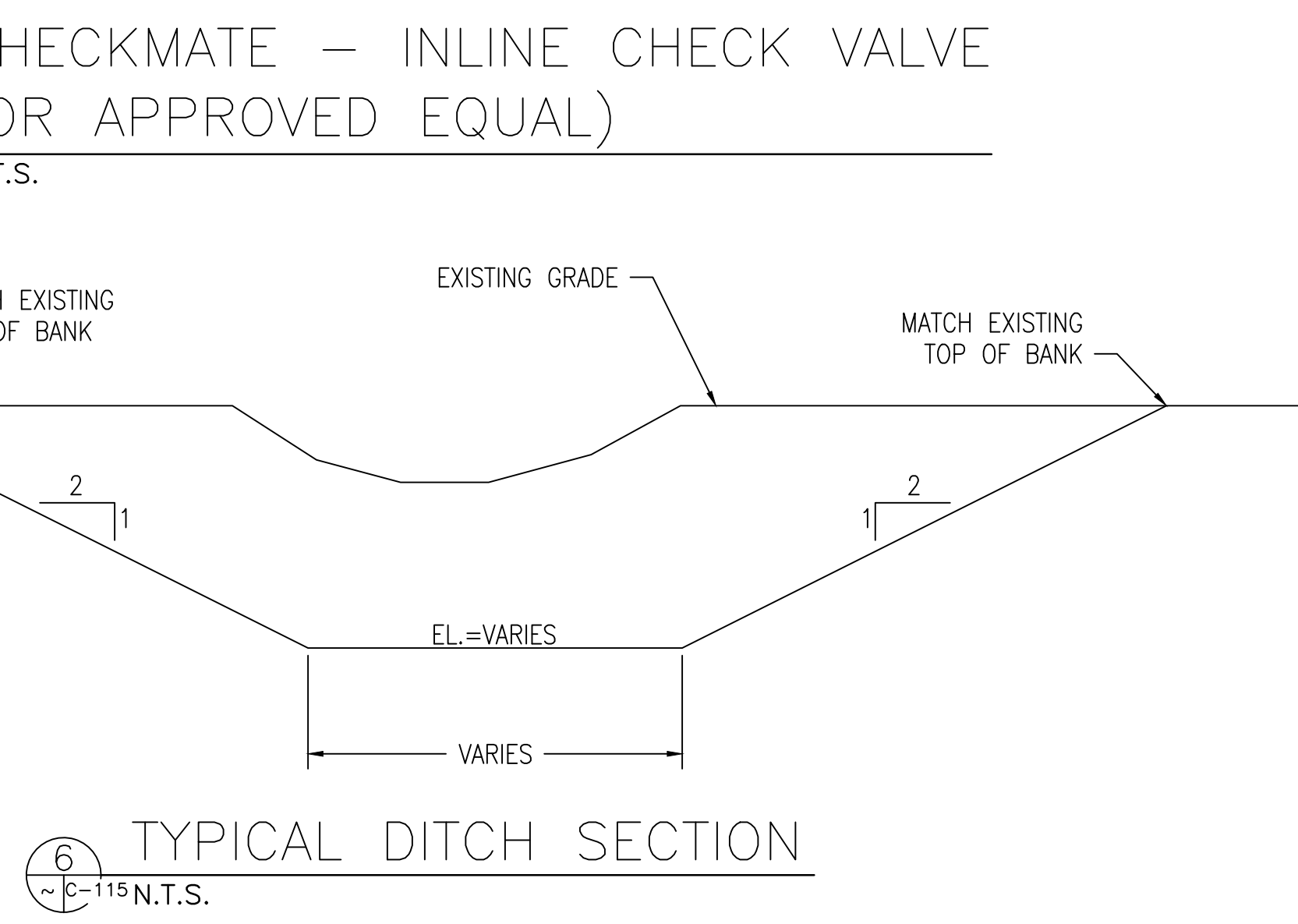
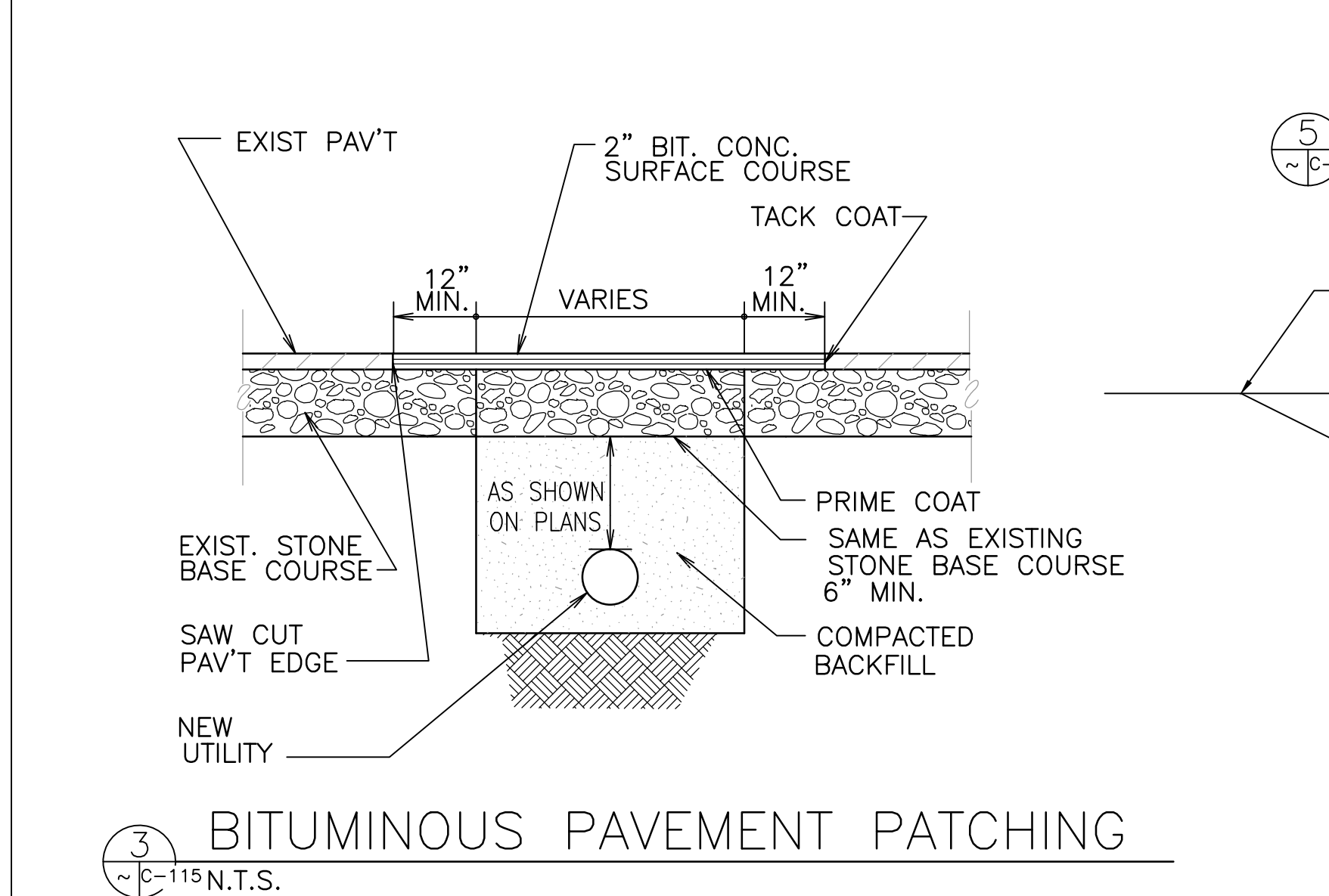
The CheckMate® has a 100% fabric and elastomer construction that eliminates corrosion problems. Because the CheckMate® is made with a unitbody construction, there are no mechanical components that trap debris, corrode or fail.

The CheckMate® Valve's inherent flexibility virtually eliminates seating problems. The CheckMate® remains in the closed position until forward differential pressure opens it. The fabric-reinforced elastomer CheckMate® Valve seals around silt and small debris, preventing unwanted backflow.

The major advantage of the CheckMate® Valve is its extremely low headloss. The CheckMate® can open to a near full pipe diameter. This maximizes flow capacity of the outfall, which is particularly beneficial in low-lying areas where limited driving head is available.

Tideflex® Technologies recommends pinning all CheckMate® Valves for added security and stability. CheckMate® effectively have a zero face-to-face dimension because they fit completely inside of the pipe. No modification of piping is required provided adequate pipe length exists.

IMPORTANT
Please take a moment to review this manual. The improper installation or use of this product may result in personal injury, product failure, or reduced product life. Tideflex® Technologies can accept NO liability resulting from the improper use or installation of this product. If you have any questions or problems, please call the customer service department at (412) 279-0044. We appreciate your comments. Thank you for choosing Tideflex® Technologies.



REV	DATE	DESCRIPTION
1	6/16/17	REVISED TO SHOW ADDITION OF TEXTILE BREAK/BAK 15 PAVED SHOULDERS.
2	6/16/17	REVISED TO ADD UTILITY TEST HOLE DATA AND UTILITY ADJUSTMENT NOTES.

DESIGNED BY	CHECKED BY
JFW	JFW
DRAWN BY	FILE NAME
BRB	DETAILS.DWG
REVIEWED BY	PLOT DATE
JFW	6-16-17
SUBMITTED BY	PLOT SCALE
SL	NOT TO SCALE

DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND
JBLE - LANGLEY VA
CIVIL ENGINEERING OFFICE

MAINTAIN RUNWAY 08 AND 26 CLEAR ZONE DRAINAGE - DESIGN
JBLE-LANGLEY, VIRGINIA
DETAILS

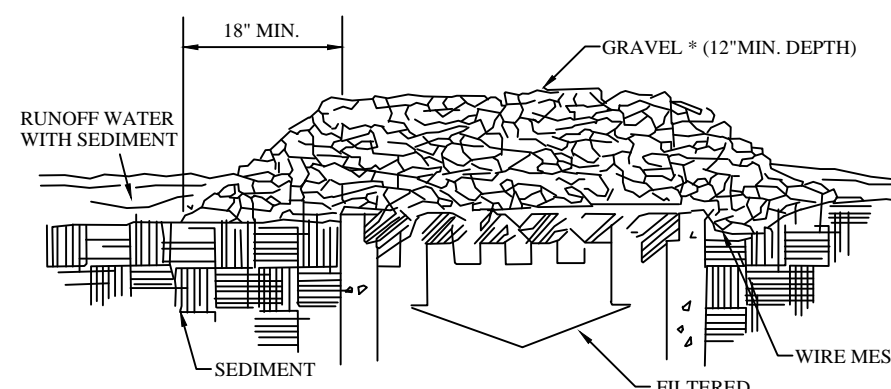
PROJECT NUMBER
MUHJ 09-4149
BCE DRAWING NUMBER
FY15012

C-115
SHEET 16 OF 19

The image contains three technical drawings of a filter cloth system for sediment trapping:

- SIDE ELEVATION:** Shows the system installed between existing ground and existing pavement. It includes a 70 MIN. long filter cloth section, a 6" MIN. gap, and a 5-1 slope. A mountable berm is shown as optional.
- PLAN VIEW:** Shows the layout of the system. It includes a 70 MIN. long section, a 12 MIN. section, and a 10 MIN. section. A washback is shown as optional. A positive drainage to sediment trapping device is indicated. A note states: "MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION".
- SECTION A-A:** A cross-section showing the filter cloth, 6" MIN. gap, and 3 MIN. section.
- SECTION B-B:** A cross-section showing the filter cloth, 6" MIN. gap, and drain space.

GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



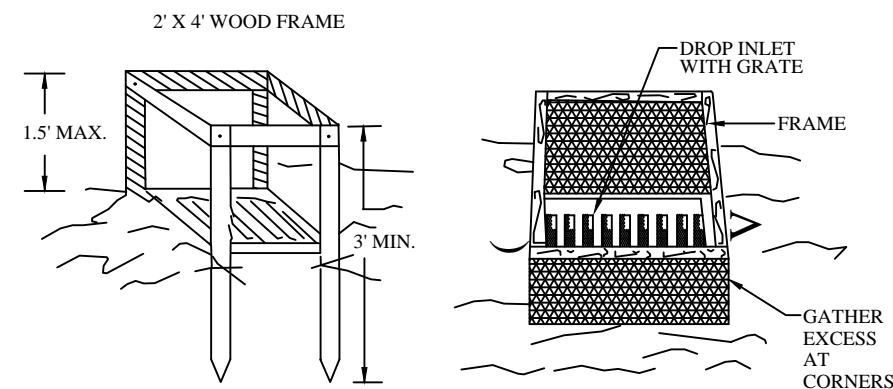
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

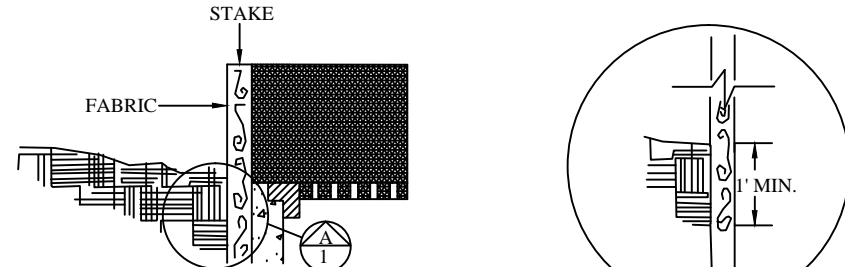
* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE

IP

SILT FENCE DROP INLET PROTECTION



PERSPECTIVE VIEWS

ELEVATION OF STAKE AND
FABRIC ORIENTATION

DETAIL A

SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

IP

TOPSOIL		
FOR APPLICATION TO VARIOUS		
DEPTH	DEPTH	PER
(INCHES)	SQUARE FEET	ACRE
	(CY)	(CY)
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806

(TO

TABLE 3.32-E
(REVISED JUNE 2003)
PERMANENT SEEDING SPECIFICATION FOR COASTAL PLAIN AREA

SEED:		
LAND USE	SPECIES	APPLICATION RATES
<u>MINIMUM CARE LAWN COMMERCIAL OR RESIDENTIAL</u>	TALL FESCUE; or BERMUDAGRASS;	175-200 LBS 75 LBS
<u>HIGH-MAINTENANCE LAWN</u> (CONTRACTOR SHALL CHOOSE GRASS TYPE BASED ON PREDOMINATE TYPE ON EXISTING LAWN)	TALL FESCUE; or BERMUDAGRASS: (seed) or BERMUDAGRASS: (by other vegetative establishment method, see Std. & Spec. 3.34)	200-250 LBS 40 LBS (UNHULLED) 30 LBS (HULLED)
<u>GENERAL SLOPE (3:1 OR LESS)</u>	TALL FESCUE; RED TOP GRASS OR CREEPING RED FESCUE SEASONAL NURSE CROP;	128 LBS 2 LBS 20 LBS TOTAL 150 LBS
<u>LOW-MAINTENANCE SLOPE (STEEPER THAN 3:1)</u>	TALL FESCUE; BERMUDAGRASS; RED TOP GRASS OR CREEPING RED FESCUE SEASONAL NURSE CROP; SERICEA LESPEDEZA;	93-108 LBS 0-15 LBS 2 LBS 20 LBS 20 LBS TOTAL 150 LBS

1- WHEN SELECTING VARIETIES OF TURFGRASS, USE THE VIRGINIA CROF IMPROVEMENT ASSOCIATION (VCIA) RECOMMENDED TURFGRASS VARIETY LIST. QUALITY SEED WILL BEAR A LABEL INDICATING THAT THEY ARE APPROVED BY VCIA. A CURRENT TURFGRASS VARIETY LIST IS AVAILABLE AT THE LOCAL COUNTY EXTENSION OFFICE OR THROUGH VCIA AT 804-746-4884 OR AT [HTTP://SUDAN.CES.VT.EDU/HTML/TURF/TURF/PUBLICATIONS/PUBLICATIONS2.HTML](http://sudan.ces.vt.edu/html/turf/turf/PUBLICATIONS/PUBLICATIONS2.HTML)

2- USE SEASONAL NUTRIENT CROPS IN ACCORDANCE WITH SEEDING DATES STATED BELOW:

FEBRUARY, MARCH-APRIL.....	ANNUAL RYE	FOXTAIL MILLET
MAY 1ST- AUGUST..... <th>ANNUAL RYE</th> <th>WINTER RYE</th>	ANNUAL RYE	WINTER RYE
SEPTEMBER, OCTOBER-NOVEMBER 15TH..... <th>ANNUAL RYE</th> <th>WINTER RYE</th>	ANNUAL RYE	WINTER RYE
NOVEMBER 16TH- JANUARY..... <th>ANNUAL RYE</th> <th>WINTER RYE</th>	ANNUAL RYE	WINTER RYE

3- MAY THROUGH OCTOBER, USE UNHULLED SEED. ON ALL OTHER SEEDING PERIODS, USE UNHULLED SEED. IF WEEPING LOVAGE/GRASS IS USED, INC. IN USE IN ANY SLOPE OR LOW MAINTENANCE MIXTURE DURING WARMER SEEDING PERIODS.

INCREASE TO 30-40 LBS./ACRE.

FERTILIZER & LIME

- APPLY 10-20-10 FERTILIZER AT A RATE OF 500 LBS/ACRE (OR 12 LBS/1,000 SQ. FT.)
- APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/ACRE (OR 90 LBS/1,000 SQ. FT.)

NOTE:

1. A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL PH OF SITE.
2. INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 4-6 INCHES OF THE SOIL BY DISKING OR BY OTHER MEANS.
3. WHEN APPLYING SLOWLY AVAILABLE NITROGEN, USE RATES AVAILABLE IN EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN #4, 2003 NUTRIENT MANAGEMENT FOR DEVELOPMENT SITES AT [HTTP://WWW.DCR.STATE.VA.US/SIW/E&S.HTM#PUBS](http://www.dcr.state.va.us/siw/e&s.htm#pubs)

TABLE 3.31-B
(REVISED JUNE 2003)
TEMPORARY SEEDING SPECIFICATIONS QUICK REFERENCE FOR ALL REGIONS

SEED		
APPLICATION DATES	SPECIES	APPLICATION RATES
SEPT. 1 - FEB. 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) AND CEREAL (WINTER) RYE (SECALE CEREALE)	50-100 (lbs/acre)
FEB. 15 - APR. 30	ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)	60-100 (lbs/acre)
MAY 1 - AUG. 31	GERMAN MILLET	50 (lbs/acre)

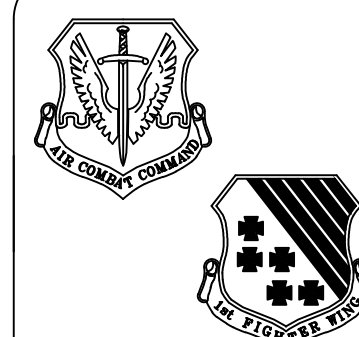
FERTILIZER AND LIME

- APPLY 10-10-10 FERTILIZER AT A RATE OF 450 LBS./ACRE (OR 10 LBS./1,000 SQ. FT.)
- APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/ACRE (OR 90 LBS./1,000 SQ. FT.)

NOTE:

1. A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL PH OF SITE.
2. INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 4-6 INCHES OF THE SOIL BY DISKING OR BY OTHER MEANS.
3. WHEN APPLYING SLOWLY AVAILABLE NITROGEN, USE RATES AVAILABLE IN EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN #4, 2003 NUTRIENT MANAGEMENT FOR DEVELOPMENT SITES AT
[HTTP://WWW.DCR.STATE.VA.US/SW/C&S.HTM#PUBS](http://www.dcr.state.va.us/sw/c&s.htm#pubs)

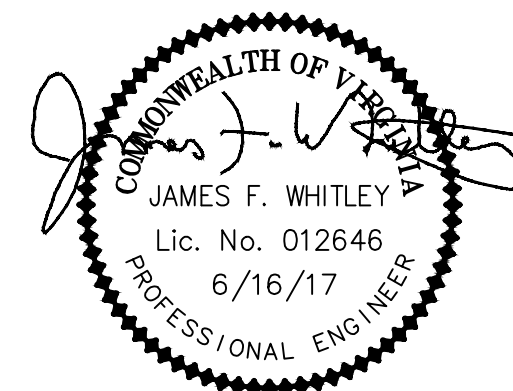
(PS



	REVISED TO SHOW ADDITION OF TEXTILE BRGM/B&K 15 PAKED SHOULDERS.	6.16.17	
	REVISED TO ADD UTILITY TEST HOLE DATA AND UTILITY ADJUSTMENT NOTES.	6.16.17	
REV			DATE
			APPROV

DEPARTMENT OF THE AIR FORCE AIR COMBAT COMMAND JBLE - LANGLEY VA CIVIL ENGINEERING OFFICE	DATE	6-16-17	DESIGNED BY	JFW
	FILE NAME:	DETAILS.DWG	DRAWN BY	CHICKED BY
	PLOT DATE:	6-16-17	REVIEWED BY	JFW
	PLOT SCALE:	NOT TO SCALE	SUBMITTED BY	SL

MAINTAIN RUNWAY 08 AND 26
CLEAR ZONE DRAINAGE – DESIGN
JBLE-LANGLEY, VIRGINIA



PROJECT NUMBER
MUHJ 09-4149

BCE DRAWING NUMBER
FY15012

C-118

SHEET 19 OF 19