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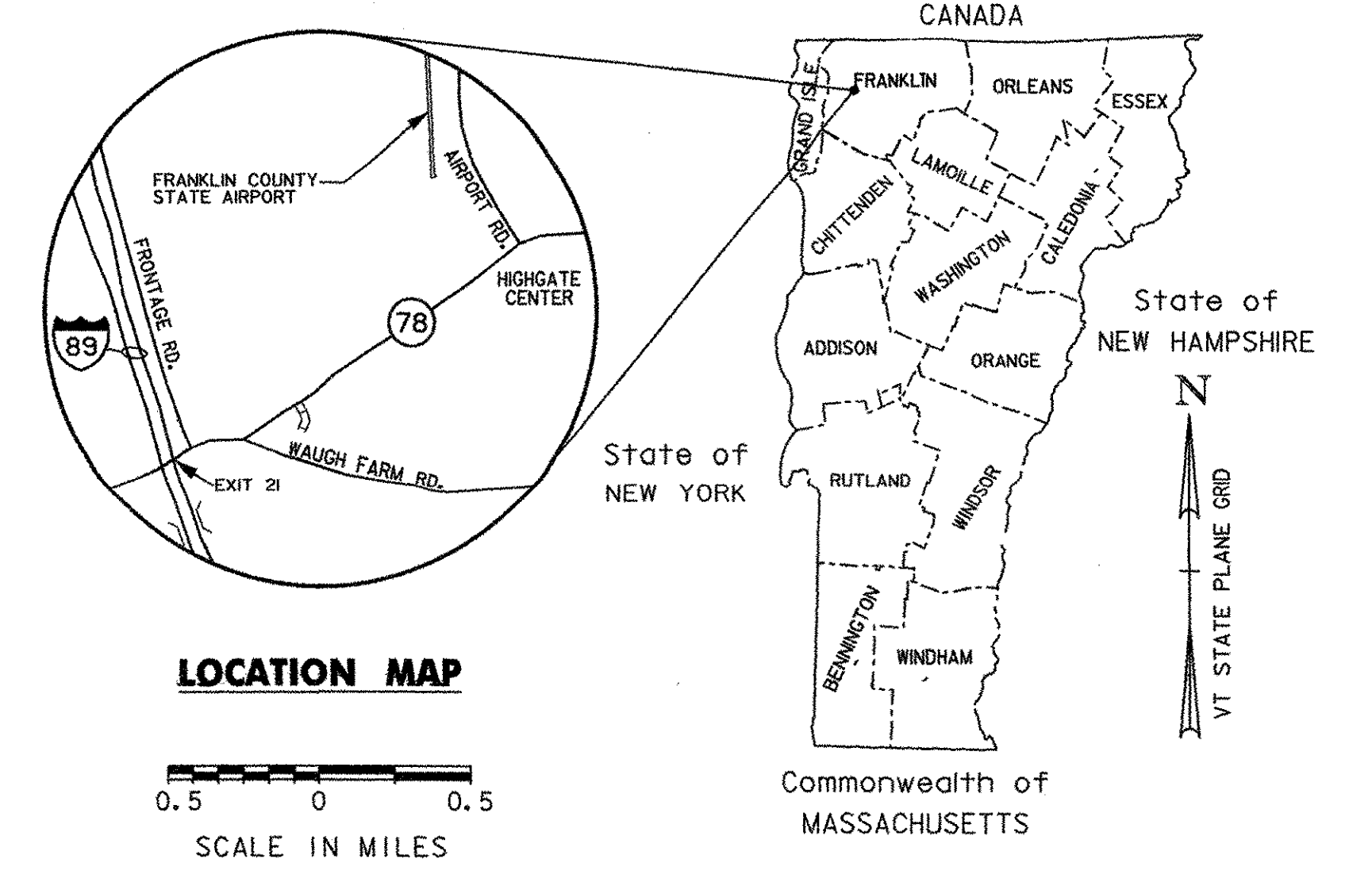
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F-2	CHAIN-LINK FENCE (TYPE I), DRIVE GATE FOR CHAIN-LINK FENCE (TYPE I), WALK GATE FOR CHAIN-LINK FENCE (TYPE I)	06-01-94
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STATE OF VERMONT  
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENTS  
TOWN OF HIGHGATE  
COUNTY OF FRANKLIN  
FRANKLIN COUNTY STATE AIRPORT  
RUNWAY 19 SAFETY AREA IMPROVEMENTS



THIS PROJECT IS LOCATED AT FRANKLIN COUNTY STATE AIRPORT IN THE TOWN OF HIGHGATE, WITHIN THE RUNWAY SAFETY AREA OF RUNWAY END 19.

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES EMBANKMENT CONSTRUCTION, A RETAINING WALL, CLEARING & GRUBBING, EXCAVATION AND MINOR LIGHTING MODIFICATIONS.

**RECORD PLANS**

CONTRACTOR: CAPITOL EARTHMOVING, INC. - BARRE, VT

RESIDENT ENGINEER: DELVIN WARNER

CONSTRUCTION BEGAN: AUGUST 13, 2008

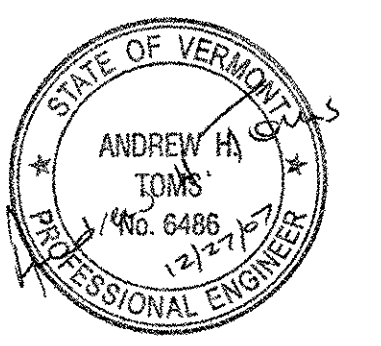
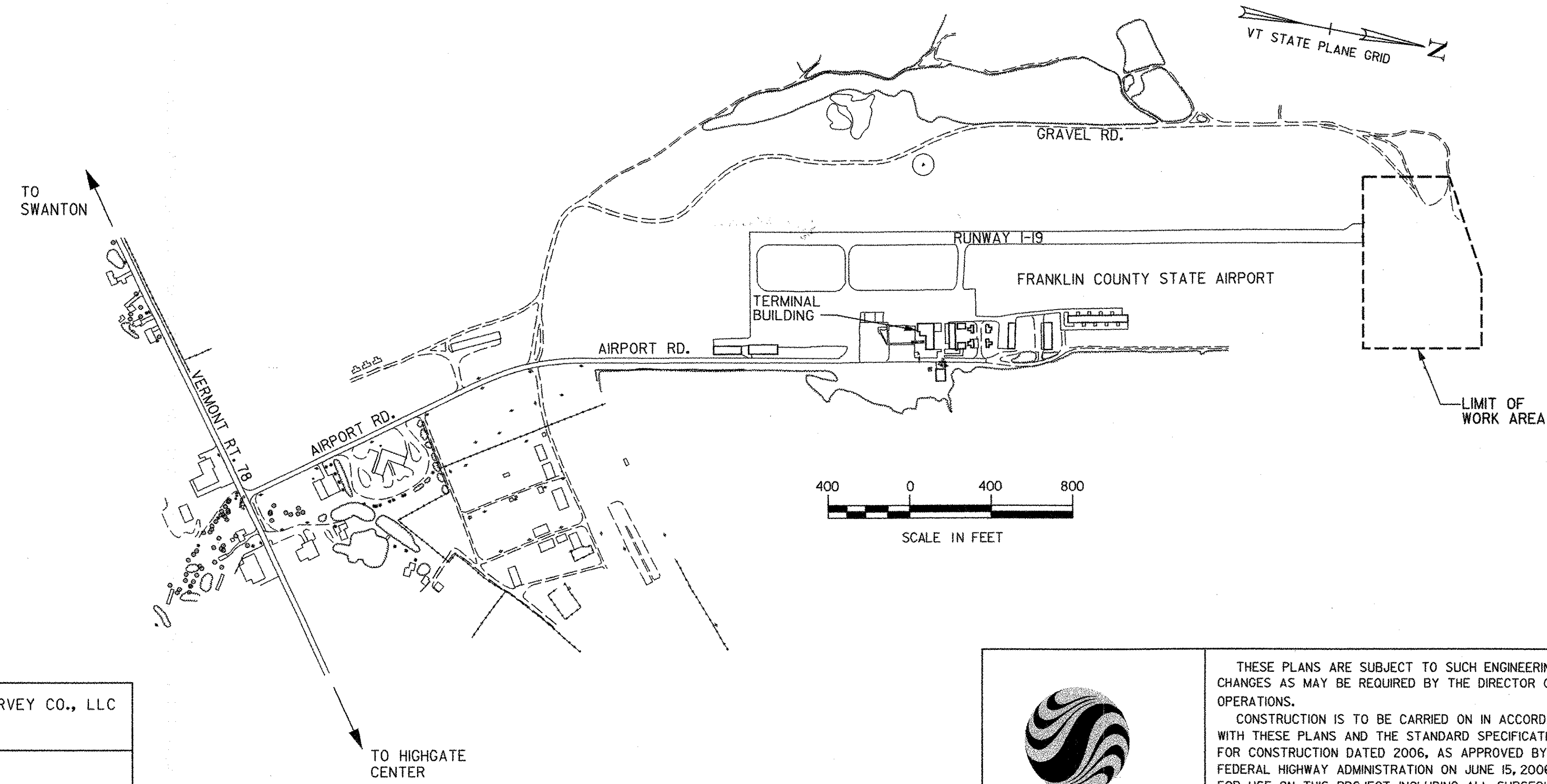
CONSTRUCTION COMPLETE: OCTOBER 23, 2008

RECORD PLANS BY: DELVIN WARNER, BEN LOGAN

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

By *Delvin Warner* RESIDENT ENGINEER  
DATE *10/6/09*

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.



**CONVENTIONAL SYMBOLS**

COUNTY LINE	— — — — —
TOWN LINE	— — — — —
LIMITS OF ACCESS	— o — o — o — o —
POINT OF ACCESS	X
FENCE LINE	X — X — X — X —
STONE WALL	o — o — o — o — o — o — o — o —
TRAVELED WAY	— — — — —
GUARD RAIL	o — o — o — o — o — o — o — o —
RAILROAD	— — — — —
SURVEY LINE	— — — — —
CL. VERT	— — — — —
POWER POLE	□
TELEPHONE POLE	○
TREES	●
CONTROL OF ACCESS	— // — // — // —
PROPERTY LINE	— — — — —
R.O.W. TAKING LINE	— SR — SR — SR —
SLOPE RIGHTS	— △ — △ — △ —
TOP OF CUT	— △ — △ — △ —
TOE OF SLOPE	— ○ — ○ — ○ —

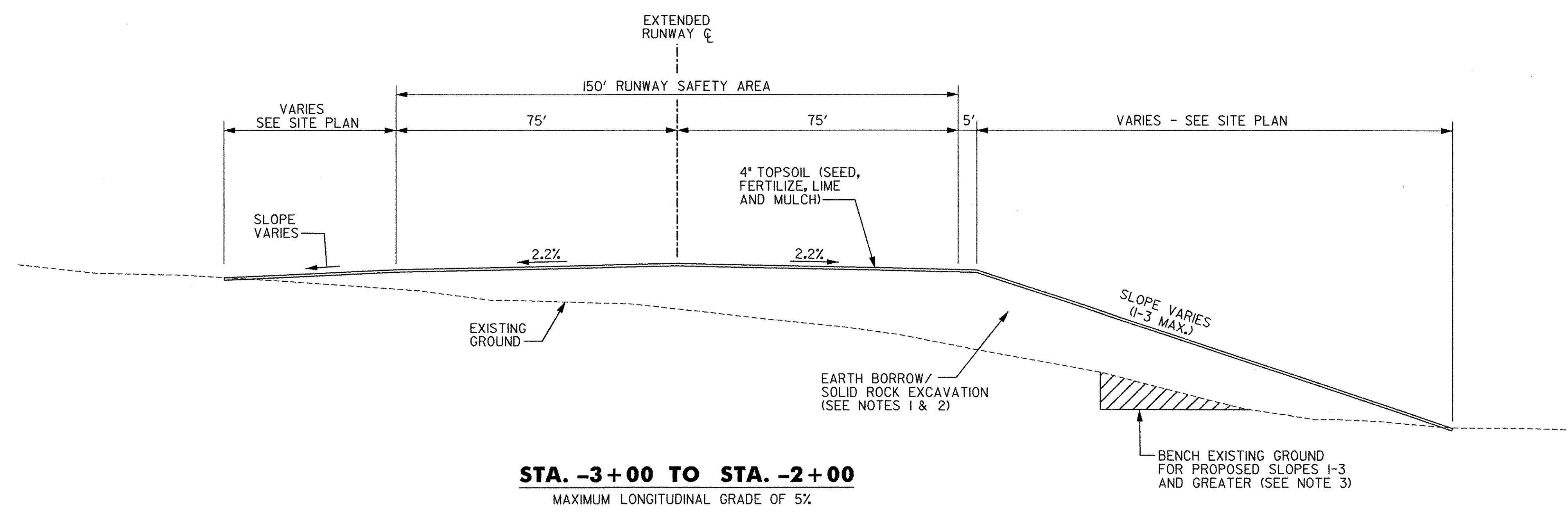
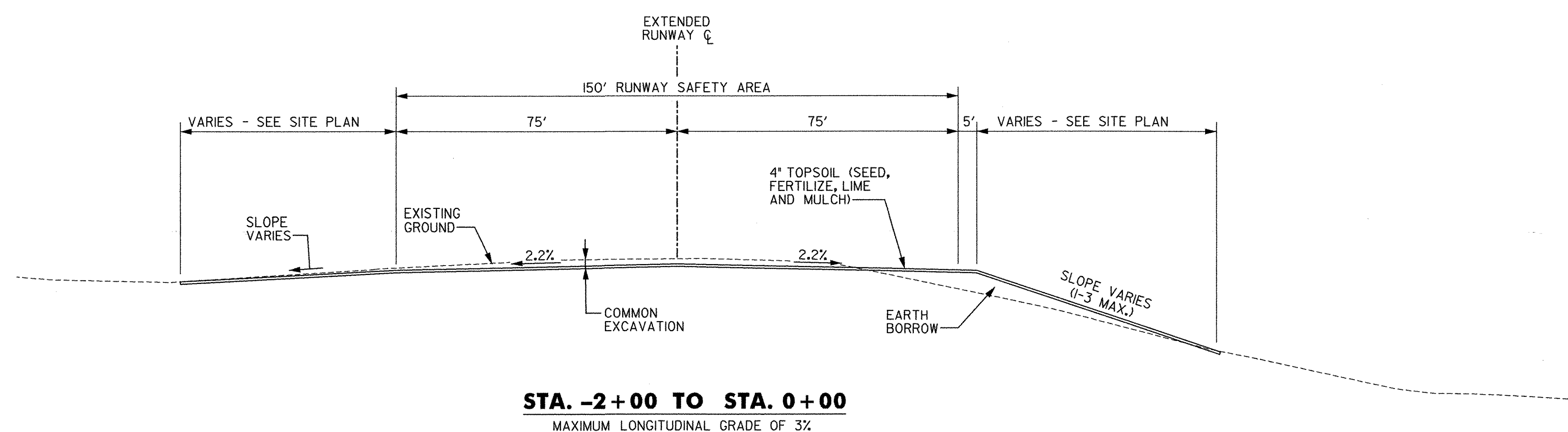
SURVEYED BY : LITTLE RIVER SURVEY CO., LLC  
SURVEYED DATE : 10/05

DATUM  
VERTICAL NAVD88  
HORIZONTAL NAD83 (1996)

	THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE DIRECTOR OF OPERATIONS.	DIRECTOR OF OPERATIONS
	CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.	APPROVED <i>Jason Owen</i> DATE <i>Jan 4, 2008</i>
		PROJECT MANAGER : JASON OWEN
		PROJECT NAME : HIGHGATE PROJECT NUMBER : AIR 04-3183 SHEET 1 OF 27 SHEETS

Project Parameters: 11/15/08  
 Design File: 11/15/08  
 Plot Date: 2/21/08  
 Project Name: HIGHGATE  
 Project Number: AIR 04-3183

## TYPICAL SECTIONS RUNWAY 19 SAFETY AREA



### SEEDING FORMULA - RURAL AREAS

% WT.	LBS./AC.		NAME	GERM %
	BROADCAST	HYDROSEED		
37.6	75.2	94.0	CREeping RED FESCUE/DEN	90
28.4	56.8	71.0	SPARTAN HARD FESCUE	85
14.4	28.8	36.0	AZAY SHEEPS FESCUE	87
14.2	28.4	35.5	ANNUAL RYEGRASS	90
1.0	2.0	2.5	CROP	
4.3	8.6	10.8	INERT	
0.1	0.2	0.2	WEED	
	200.0	250.0		

### SEEDING NOTES

- SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- SEED: TO BE APPLIED PER SEEDING FORMULA OR AS DIRECTED BY THE ENGINEER. HYDROSEED MAY BE USED BUT NOTE THAT QUANTITIES WERE CALCULATED USING BROADCAST APPLICATION RATE.
- FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).
- AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.
- HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.
- TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

### NOTES

- EXCAVATED ROCK MATERIAL SHALL CONSIST OF BLASTED ROCK BROKEN INTO VARIOUS SIZES THAT WILL FORM A COMPACT EMBANKMENT WITH A MINIMUM OF VOIDS. THE MAXIMUM SIZE SHALL BE 36 INCHES IN ITS WIDEST DIMENSION AND THAT SIZE WHICH MAY BE INCORPORATED IN A 24 INCH LAYER OF ROCK EMBANKMENT. INDIVIDUAL PIECES OF ROCK OR BOULDERS WITH THEIR LEAST DIMENSION EXCEEDING THE THICKNESS OF THE LAYER BEING PLACED SHALL EITHER BE REDUCED TO AN ACCEPTABLE SIZE OR REMOVED FROM THE EMBANKMENT IN SUCH A MANNER THAT ALL VOIDS ARE FILLED. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID UNDER ITEM 613.11-STONE FILL, TYPE 11.
- EXCAVATED ROCK MATERIAL WILL NOT BE PERMITTED WITHIN 24 INCHES OF FINISHED GRADE, WITHIN 24 INCHES OF THE CRUSHED STONE LEVELING PAD FOR THE PRECAST CONCRETE GEOGRID RETAINING WALL, AND WITHIN 24 INCHES OF THE EMBEDDED END OF THE GEOSYNTHETIC REINFORCEMENT.
- FOR BENCHING DETAILS REFER TO VTRANS DESIGN STANDARD SHEET B-5.
- NO AREAS OF MUCK EXCAVATION HAVE BEEN IDENTIFIED AT THIS SITE. ITEM 203.20 - MUCK EXCAVATION HAS BEEN INCLUDED IN THIS CONTRACT, TO PROVIDE A MECHANISM FOR PAYMENT, IN THE EVENT UNSUITABLE MATERIALS ARE ENCOUNTERED BELOW THE ORIGINAL GROUND LINE IN EMBANKMENT AREAS.
- ALL EXCESS ROCK AND EARTH MATERIAL RESULTING FROM THIS PROJECT WILL NEED TO BE PLACED IN AN APPROVED WASTE AREA. THE WASTE AREA APPROVAL PROCESS SHALL BE COORDINATED WITH THE VTRANS ENVIRONMENTAL UNIT.

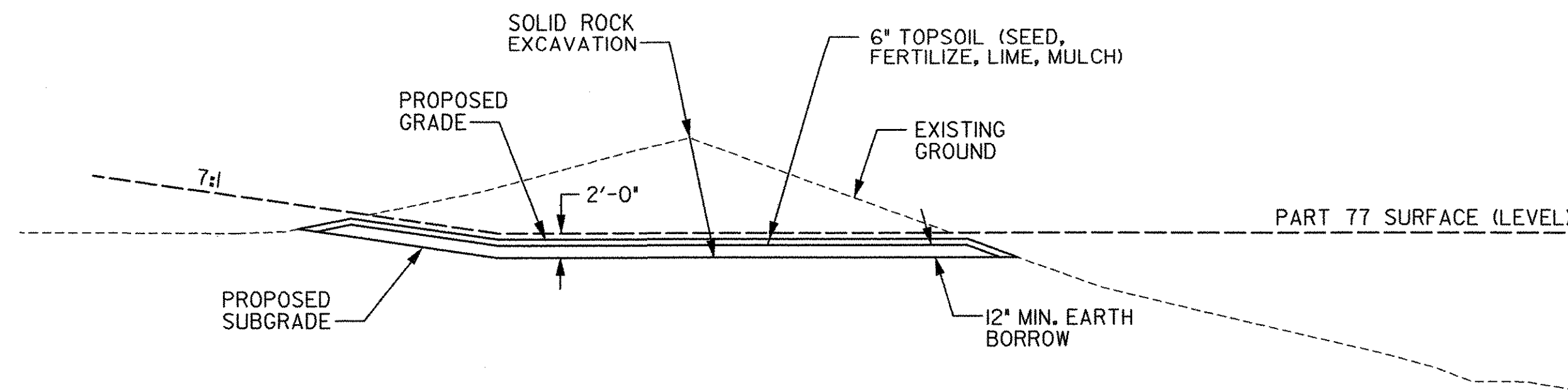
REV	DATE	BY
△	02/21/08	CKF



PROJECT NAME: HIGHGATE	PLOT DATE: 2/21/2008
PROJECT NUMBER: AIR 04-3183	DRAWN BY: J. OAKMAN
FILE NAME: TYPICALS.DGN	CHECKED BY: P. ENZIE
PROJECT LEADER: M. CHURCHILL	SHEET 2 OF 27
DESIGNED BY: P. ENZIE	
<b>TYPICAL SECTION SHEET 1</b>	

# TYPICAL SECTIONS ROCK REMOVAL DETAILS

**SEEDING FORMULA - RURAL AREAS**  
(SEE TYPICAL SECTION SHEET 1)



**STA. -4+60 LT. TO STA. -0+81 LT.**



PROJECT NAME: HIGHGATE  
PROJECT NUMBER: AIR 04-3183

FILE NAME: TYPICALS.DGN  
PROJECT LEADER: M. CHURCHILL  
DESIGNED BY: P. ENZIEN  
**TYPICAL SECTION SHEET 2**

PLOT DATE: 12/20/2007  
DRAWN BY: J. OAKMAN  
CHECKED BY: P. ENZIEN  
SHEET 3 OF 27

PROJECT NUMBER: AIR 04-3183  
 SHEET NUMBER: 3 OF 27  
 DATE: 12/20/2007  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 PROJECT LEADER: M. CHURCHILL  
 FILE NAME: TYPICALS.DGN

STATE OF VERMONT  
AGENCY OF TRANSPORTATION

# QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

TOTALS

DESCRIPTIONS

DETAILED SUMMARY OF QUANTITIES

SUMMARY OF ESTIMATED QUANTITIES													TOTALS				DESCRIPTIONS		DETAILED SUMMARY OF QUANTITIES						
													FULL E&C	EROSION CONTROL	AIRPORT	BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
															1			1	LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				
															600			600	CY	COMMON EXCAVATION	203.15				
															6500			6500	CY	SOLID ROCK EXCAVATION	203.16				
															500	EST.	500		CY	MUCK EXCAVATION	203.20				
															3500			3500	CY	EARTH BORROW	203.30				
															75			75	CY	TRENCH EXCAVATION OF EARTH	204.20				
															1200			1200	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
															250			250	LF	6 INCH UNDERDRAIN PIPE	605.10				
															100			100	LF	6 INCH UNDERDRAIN CARRIER PIPE	605.20				
															2			2	EACH	UNDERDRAIN FLUSHING BASIN	605.95				
															10			10	HR	BULLDOZER RENTAL, TYPE I	608.10				
															10			10	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25				
															10			10	HR	TRUCK RENTAL	608.37				
															10			10	HR	LOADER RENTAL, TYPE I	608.40				
															100			100	MGAL	DUST CONTROL WITH WATER	609.10				
															800			800	CY	STONE FILL, TYPE II	613.11				
															1600			1600	LF	CHAIN - LINK FENCE, 6 FEET	620.12				
															24			24	LF	GATE FOR CHAIN - LINK FENCE, 6 FEET	620.16				
															14			14	EACH	BRACING ASSEMBLY FOR CHAIN - LINK FENCE, 6 FEET	620.21				
															950			950	LF	REMOVAL OF EXISTING FENCE	620.55				
															180			180	LF	PLANK RAIL	621.15				
															110			110	TON	CRUSHED STONE BEDDING	629.54				
															1			1	LS	FIELD OFFICE, ENGINEERS	631.10				
															1			1	LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25				
															1			1	LS	MOBILIZATION / DEMOBILIZATION	635.11				
															1			1	LS	TRAFFIC CONTROL	641.10				
															300			300	SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85				
															1000			1000	SY	GEOTEXTILE UNDER STONE FILL	649.31				
															110			110	SY	GEOTEXTILE FOR UNDERDRAIN TRENCH LINING	649.41				
															1200			1200	SY	GEOTEXTILE FOR SILT FENCE	649.51				
															920			920	LB	SEED	651.15				
															2300			2300	LB	FERTILIZER	651.18				
															9			9	TON	AGRICULTURAL LIMESTONE	651.20				
															9			9	TON	HAY MULCH	651.25				
															1750			1750	CY	TOPSOIL	651.35				
															1			1	LS	EPSC	652.10				
															60			60	HR	MONITORING EPSC	652.20				
															1			1	LU	MAINTENANCE OF EPSC (N.A.B.I.)	652.30				
															6000			6000	SY	TEMPORARY EROSION MATTING	653.20				
															60			60	CY	VEHICLE TRACKING PAD	653.35				
															3500			3500	LF	BARRIER FENCE	653.50				

PRINTING PARAMETERS: AUSTIN J. WARDEN  
 PRINTED BY: AUSTIN J. WARDEN  
 PRINT DATE: 2/21/2008  
 PRINT TIME: 10:58 AM  
 FOR CONTACT: 303.248.3000

PROJECT NUMBER: 04-3183  
 SHEET NUMBER: 4 OF 27  
 SHEET TITLE: QUANTITY SHEET 1

REV	DATE	BY
△	02/21/08	CKF



PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183  
 FILE NAME: QUANTITY SHEET.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIEN  
**QUANTITY SHEET 1**  
 PLOT DATE: 2/21/2008  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 SHEET 4 OF 27

# QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES

TOTALS

DESCRIPTIONS

DETAILED SUMMARY OF QUANTITIES

SUMMARY OF ESTIMATED QUANTITIES													TOTALS				DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES					
													FULL E&C	EROSION CONTROL	AIRPORT	BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
															400			400		LF	ELECTRICAL CONDUIT (2") (PVC)	678.21			
															2			2		EACH	SPECIAL PROVISION (RUNWAY END IDENTIFIER LIGHTS, MODIFY)	900.620			
															8			8		EACH	SPECIAL PROVISION ( TEMPORARY THRESHOLD LIGHTS)	900.620			
															400			400		LF	SPECIAL PROVISION ( UNDERGROUND CABLE FOR AIRPORTS)	900.640			
															2800			2800		SF	SPECIAL PROVISION (RUNWAY AND TAXIWAY PAINTING)	900.670			
															280			280		SY	SPECIAL PROVISION (PRECAST CONCRETE GEOGRID RETAINING WALL)	900.675			

PROJECT: VERMONT STATE ROUTE 100 AIRPORT IMPROVEMENTS  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 DATE: 2/21/08  
 SHEET: 5 OF 27

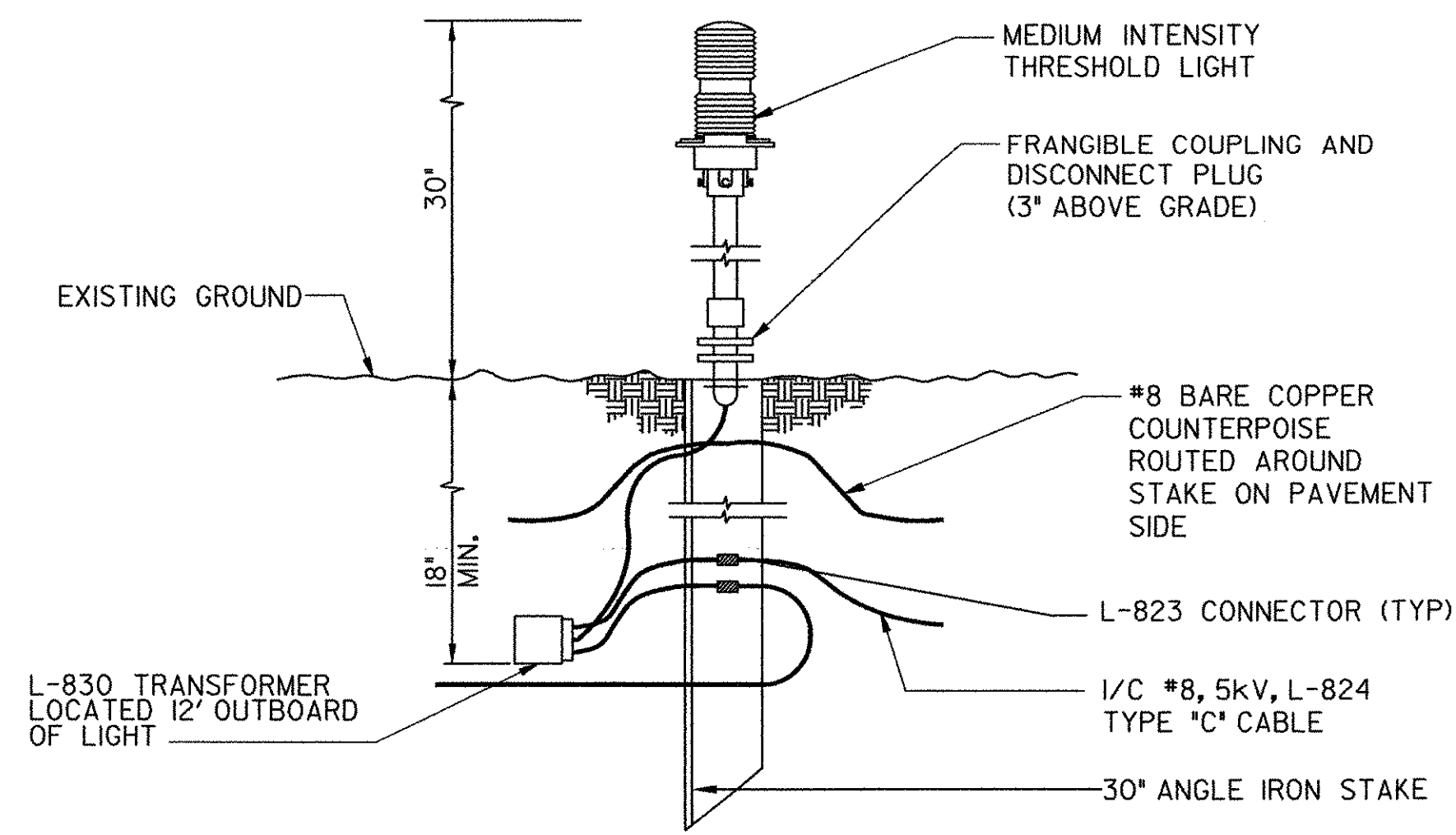
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△	02/21/08	CKF



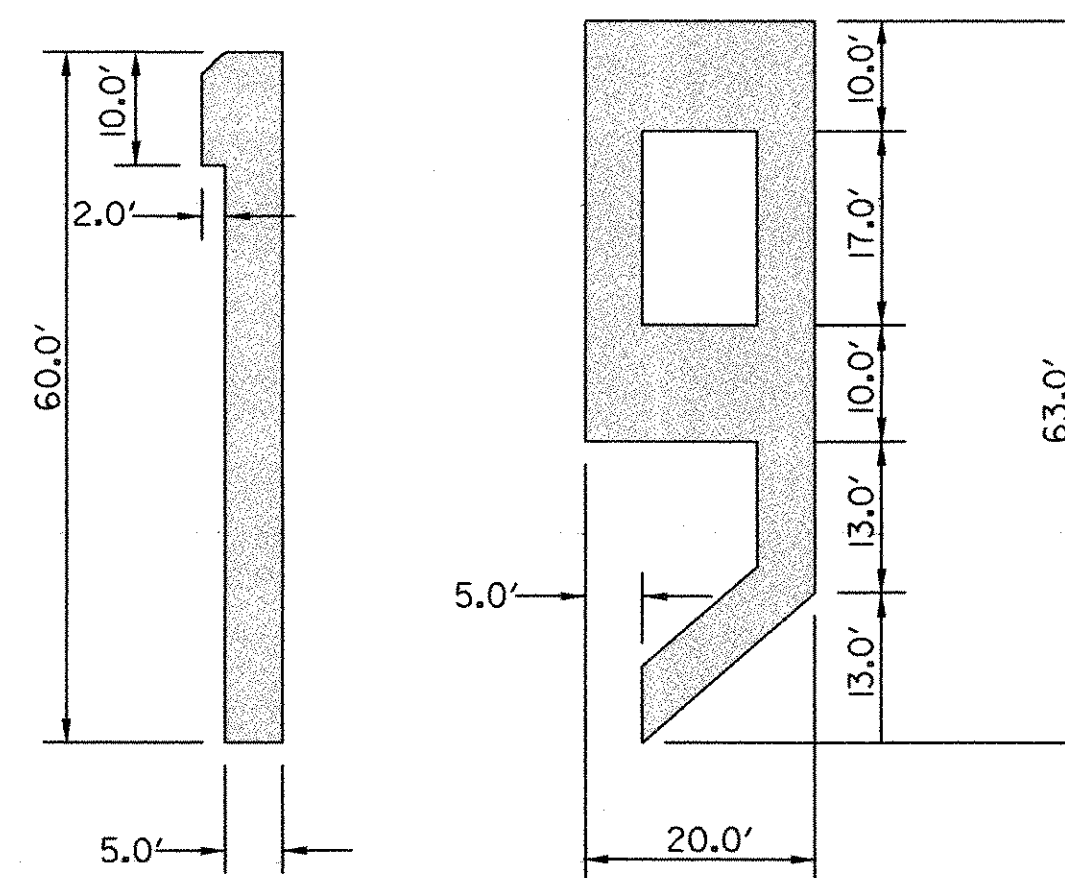
PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183  
 FILE NAME: QUANTITY SHEET 2.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIEN  
**QUANTITY SHEET 2**  
 PLOT DATE: 2/21/2008  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 SHEET 5 OF 27



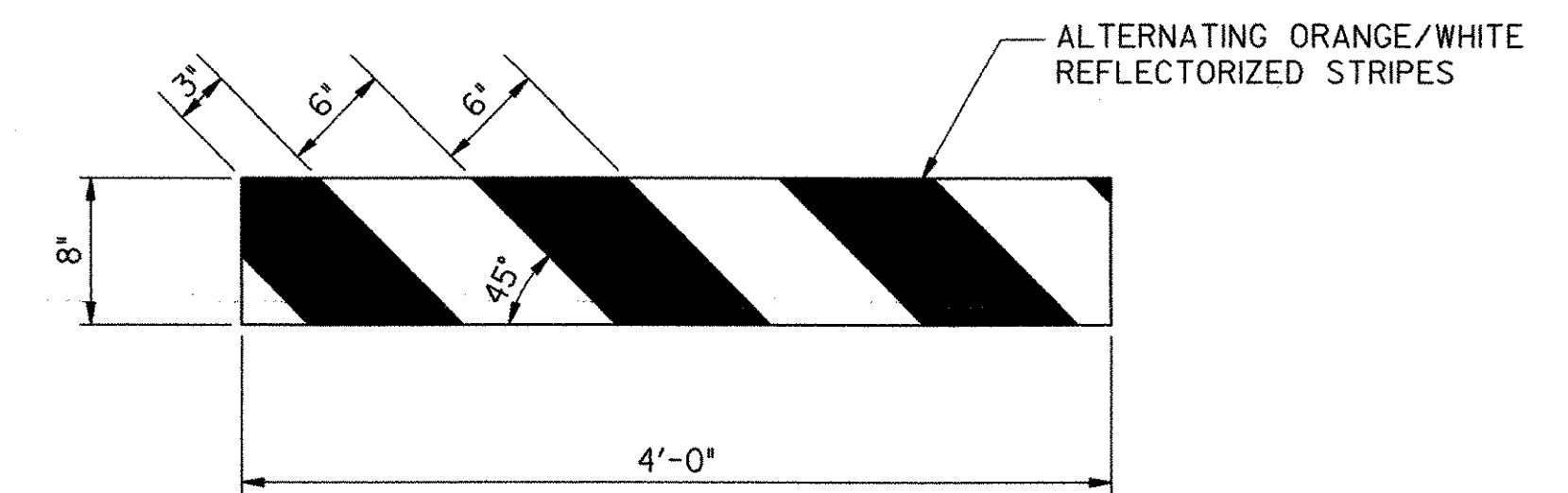
Project: Highgate  
 Revision: 02/20/2007  
 Date: 02/20/2007  
 Project: Highgate  
 Revision: 02/20/2007  
 Date: 02/20/2007



**STAKE MOUNTED THRESHOLD LIGHT DETAIL (ITEM 900.620)**  
NOT TO SCALE



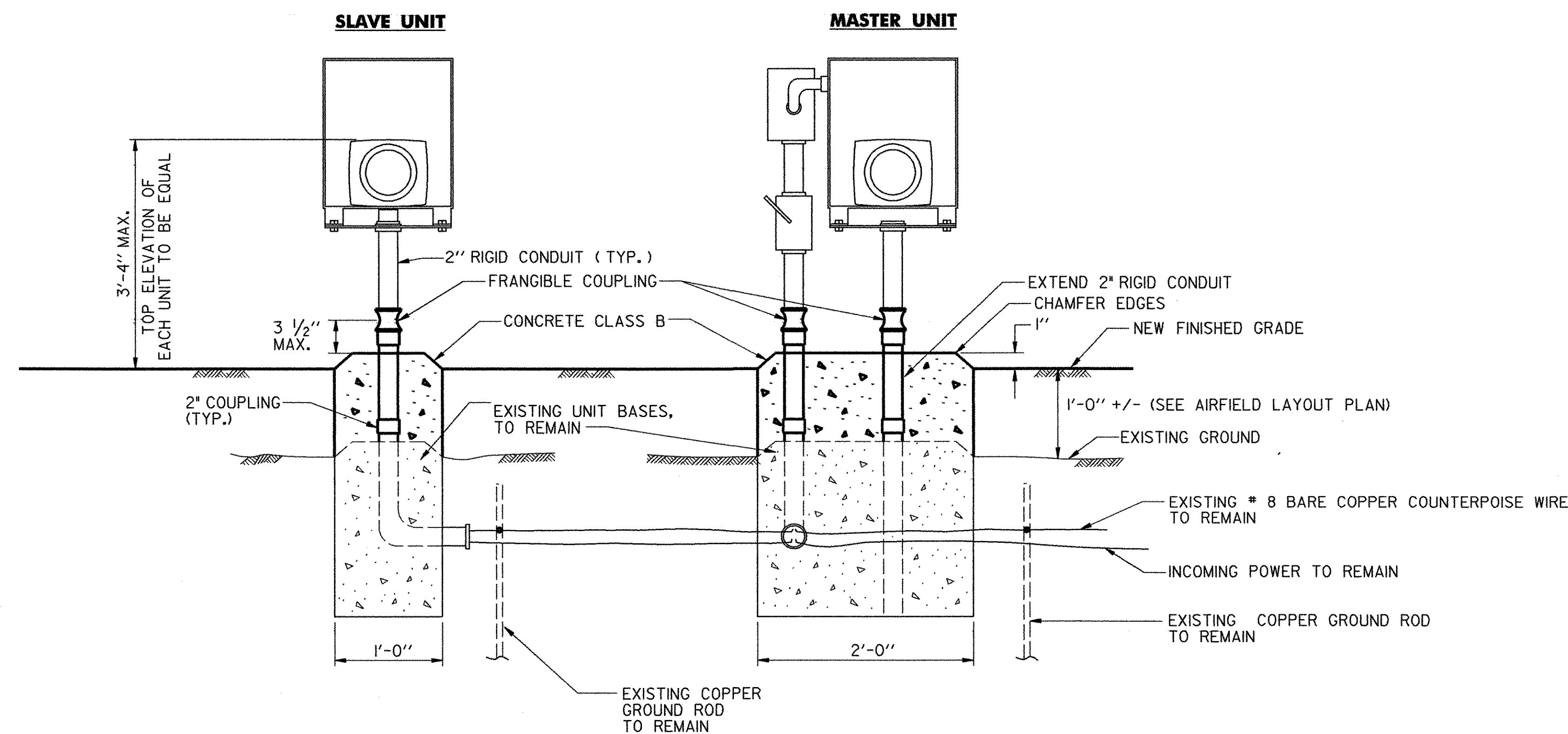
**RUNWAY NUMERAL DETAILS**  
NOT TO SCALE



**NOTES:**

1. SPACING OF PANELS ALONG FACE OF WOOD PLANK RAILING SHALL BE 8'-0" O.C.
2. FOR PANEL MATERIAL AND FABRICATION REQUIREMENTS REFER TO MATERIALS SPECIFICATION SECTION 750 - TRAFFIC SIGNS.

**ORANGE \ WHITE REFLECTIVE PANEL DETAIL**  
NOT TO SCALE



**RUNWAY END IDENTIFIER LIGHTS (REILS) MODIFICATION DETAIL (ITEM 900.620)**  
NOT TO SCALE

**NOTES:**

1. REMOVE AND STORE EXISTING REILS EQUIPMENT FROM THE FRANGIBLE COUPLINGS UP.
2. EXTEND 2" RIGID CONDUIT AND CONDUCTORS TO REQUIRED HEIGHT.
3. DRILL & EPOXY #4 UNCOATED REINFORCING BARS A MINIMUM OF 8" INTO EXISTING REILS CONCRETE BASES (4 ANCHORS IN SLAVE UNIT, 8 ANCHORS IN MASTER UNIT).
4. FORM & POUR CONCRETE EXTENSIONS.
5. RE-INSTALL REIL EQUIPMENT ACCORDING TO MANUFACTURER'S ORIGINAL RECOMMENDATIONS.
6. TERMINATE GROUND WIRE INSIDE EQUIPMENT HOUSING.
7. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID UNDER ITEM 900.620 - SPECIAL PROVISION (RUNWAY END IDENTIFIER LIGHTS, MODIFY).

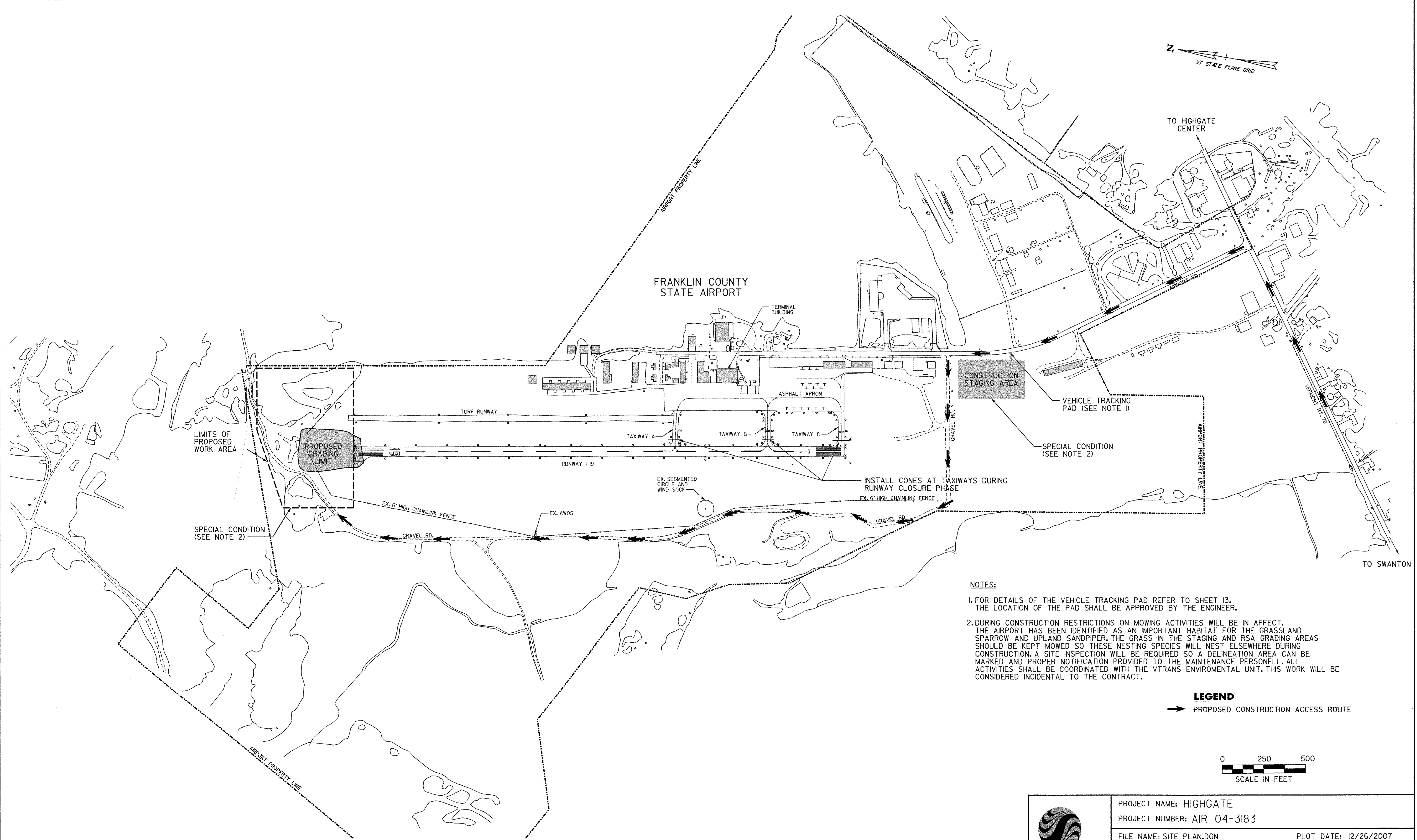


PROJECT NAME: HIGHGATE  
PROJECT NUMBER: AIR 04-3183

FILE NAME: MISC DETAILS.DGN  
PROJECT LEADER: M. CHURCHILL  
DESIGNED BY: P. ENZIEN  
**MISCELLANEOUS DETAILS**

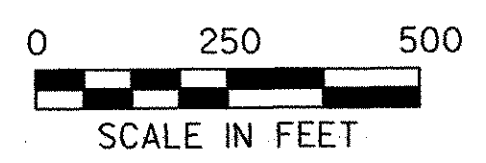
PLOT DATE: 12/20/2007  
DRAWN BY: J. OAKMAN  
CHECKED BY: P. ENZIEN  
SHEET 7 OF 27


PLOTTING PARAMETERS:  
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 Plot Scale: 1:1  
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 Plot Size: 36" x 48"

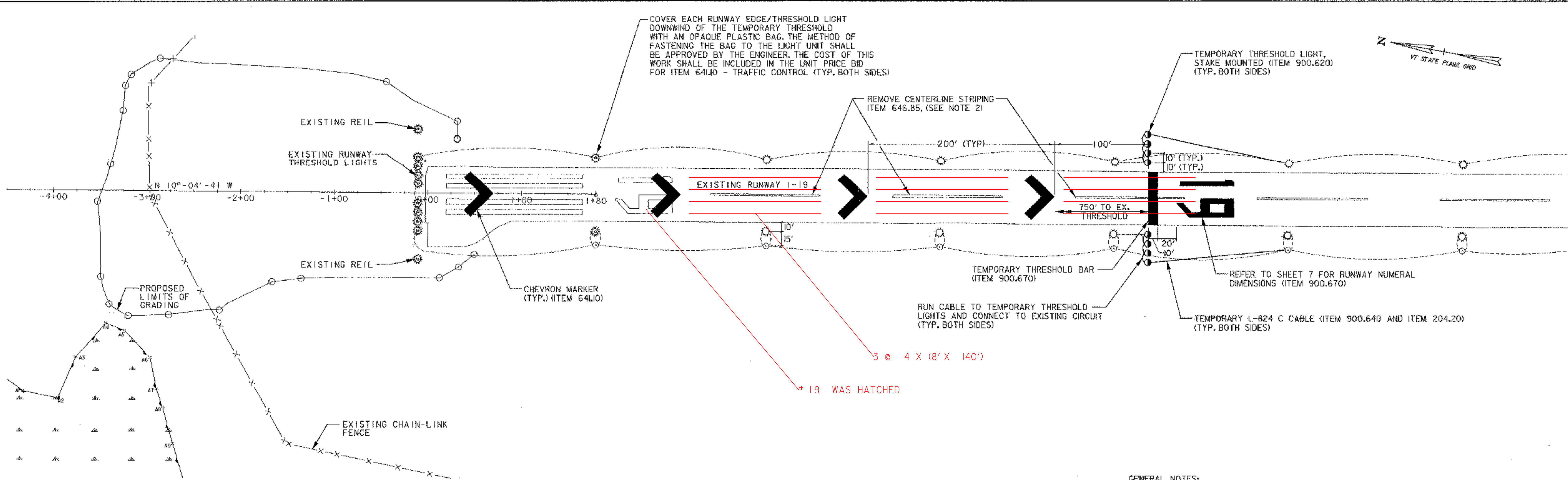


- NOTES:**
- FOR DETAILS OF THE VEHICLE TRACKING PAD REFER TO SHEET 13. THE LOCATION OF THE PAD SHALL BE APPROVED BY THE ENGINEER.
  - DURING CONSTRUCTION RESTRICTIONS ON MOWING ACTIVITIES WILL BE IN AFFECT. THE AIRPORT HAS BEEN IDENTIFIED AS AN IMPORTANT HABITAT FOR THE GRASSLAND SPARROW AND UPLAND SANDPIPER. THE GRASS IN THE STAGING AND RSA GRADING AREAS SHOULD BE KEPT MOWED SO THESE NESTING SPECIES WILL NEST ELSEWHERE DURING CONSTRUCTION. A SITE INSPECTION WILL BE REQUIRED SO A DELINEATION AREA CAN BE MARKED AND PROPER NOTIFICATION PROVIDED TO THE MAINTENANCE PERSONNEL. ALL ACTIVITIES SHALL BE COORDINATED WITH THE VTRANS ENVIRONMENTAL UNIT. THIS WORK WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

**LEGEND**  
 → PROPOSED CONSTRUCTION ACCESS ROUTE

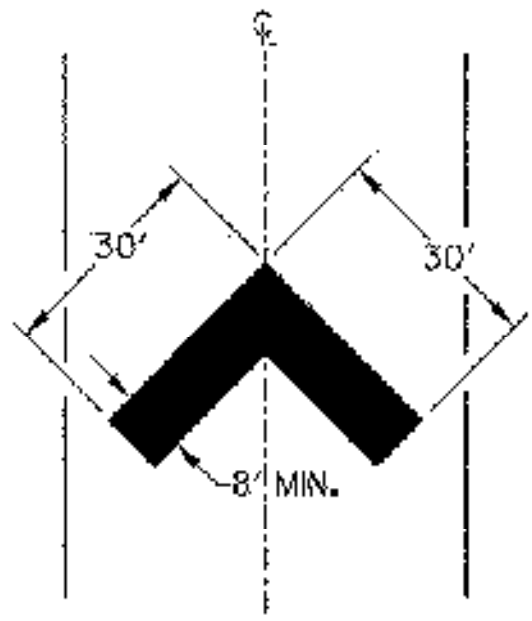


 <b>Stantec</b>	PROJECT NAME: HIGHGATE	PLOT DATE: 12/26/2007
	PROJECT NUMBER: AIR 04-3183	DRAWN BY: J. OAKMAN
	FILE NAME: SITE PLAN.DGN	CHECKED BY: P. ENZIEN
	PROJECT LEADER: M. CHURCHILL	SHEET 8 OF 27
DESIGNED BY: P. ENZIEN	<b>SITE PLAN</b>	

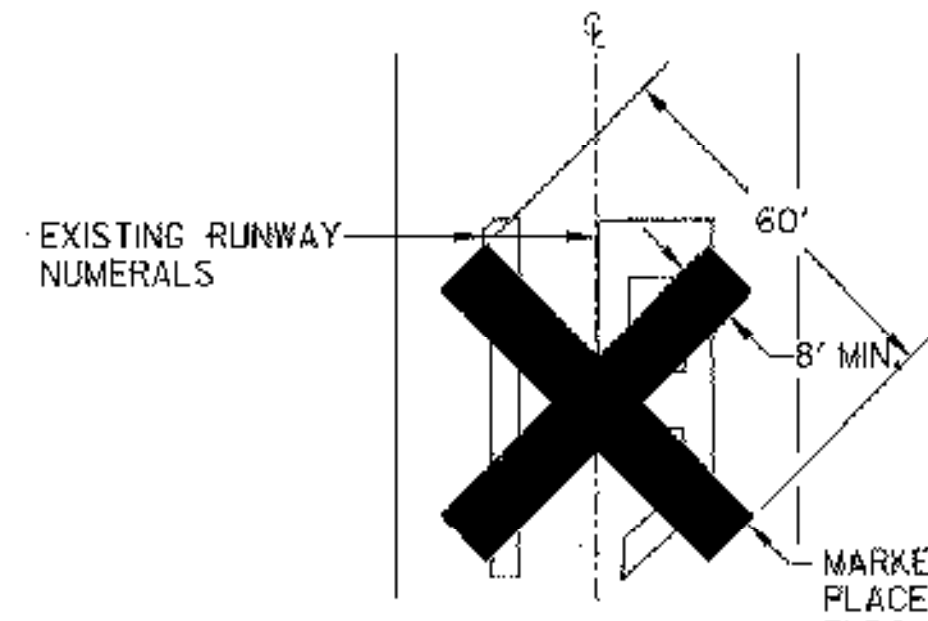


**PHASING NOTES / TABLE**

PHASE	RUNWAY CLOSURE TYPE	DESCRIPTION OF WORK	DURATION (DAYS)	COMMENTS
1	NONE (FULL LENGTH)	<b>WORK OUTSIDE THE RUNWAY 19 SAFETY AREA</b> 1. SETUP BARRIER FENCING AND ALL EROSION PREVENTION AND SEDIMENT CONTROL DEVICES. 2. PERFORM CLEARING AND GRUBBING OPERATIONS. 3. PERFORM ROCK EXCAVATION ACTIVITIES. 4. TOPSOIL AND SEED DISTURBED AREAS.	30	
2	CLOSED	1. PLACE RUNWAY CLOSED MARKERS AT BOTH ENDS OF THE RUNWAY. 2. REMOVE CENTERLINE STRIPING. 3. INSTALL TEMPORARY RELOCATED THRESHOLD PATTERN. 4. OPEN RUNWAY WITH RELOCATED THRESHOLD.	1	PLACE ORANGE TRAFFIC CONES ACROSS TAXIWAYS A, B & C DURING THE RUNWAY CLOSURE.
3	RELOCATED THRESHOLD	<b>WORK WITHIN THE RUNWAY 19 SAFETY AREA</b> 1. STRIP TOPSOIL WITHIN LIMITS OF RSA GRADING. 2. BEGIN PLACING EMBANKMENT MATERIAL (EARTH BORROW AND EXCAVATED ROCK). 3. CONSTRUCT PRECAST CONCRETE GEOGRID RETAINING WALL. 4. COMPLETE THE PLACEMENT OF THE EMBANKMENT MATERIAL. 5. INSTALL EROSION MATTING AND SEED DISTURBED AREAS. 6. MODIFY EXISTING REILS.	60	
4	CLOSED	1. PLACE RUNWAY CLOSED MARKERS AT BOTH ENDS OF THE RUNWAY. 2. REMOVE TEMPORARY RELOCATED THRESHOLD PATTERN. 3. REPAINT CENTERLINE STRIPING. 4. OPEN FULL LENGTH RUNWAY.	1	PLACE ORANGE TRAFFIC CONES ACROSS TAXIWAYS A, B & C DURING THE RUNWAY CLOSURE.
5	NONE (FULL LENGTH)	<b>CONSTRUCT REMAINING MISCELLANEOUS APPURTENANCES</b> 1. INSTALL SECURITY FENCING. 2. REMOVE BARRIER FENCING AND EROSION CONTROL DEVICES.	10	



**CHEVRON MARKER**  
NOT TO SCALE



**CLOSED RUNWAY MARKER**  
NOT TO SCALE

**RUNWAY MARKER NOTES:**

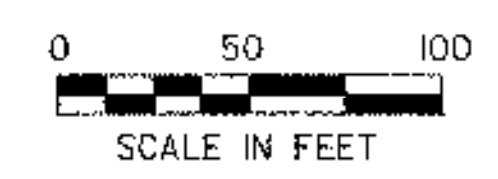
- CLOSED RUNWAY MARKERS (X'S) SHALL BE IN PLACE DURING SETUP AND REMOVAL OF THE TEMPORARY RELOCATED THRESHOLD MARKINGS AND LIGHTING OR AS DIRECTED BY THE ENGINEER. MARKERS SHALL BE PLACED OVER THE RUNWAY NUMERAL ALONG THE RUNWAY CENTERLINE.
- MARKERS SHALL BE HIGH STRENGTH, YELLOW LIGHTWEIGHT VINYL COATED WINDSCREEN MATERIAL DESIGNED TO FAA SPECIFICATIONS. MARKERS SHALL BE FASTENED TO THE RUNWAY PAVEMENT WITH STEEL ANCHORS PROVIDED BY THE MANUFACTURER. MARKERS AND FASTENERS SHALL BE APPROVED BY THE ENGINEER.
- MARKERS SHALL BECOME PROPERTY OF THE AIRPORT AT THE END OF THE PROJECT.
- THE COST TO FURNISH AND INSTALL THE CLOSED RUNWAY MARKERS AND CHEVRONS SHALL BE INCLUDED IN THE UNIT PRICE BID UNDER ITEM 641.0 - TRAFFIC CONTROL.
- NO WEEKEND CLOSURES OF THE RUNWAY WILL BE PERMITTED.

**GENERAL NOTES:**

- ALL TEMPORARY AND PERMANENT RUNWAY MARKINGS SHALL BE WHITE.
- THE RUNWAY CENTERLINE MARKINGS SHALL BE REPAINTED (WHITE) UPON REMOVAL OF THE TEMPORARY RELOCATED THRESHOLD SETUP AND SHALL MATCH THE ORIGINAL MARKINGS, DIMENSIONALLY. THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID UNDER ITEM 900.670 - SPECIAL PROVISION (RUNWAY AND TAXIWAY PAINTING).
- THE CONTRACTOR SHALL PLACE ORANGE TRAFFIC CONES ACROSS TAXIWAYS A, B AND C WHILE THE RUNWAY IS CLOSED.
- THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER A MINIMUM OF 2 WEEKS PRIOR TO ANY RUNWAY CLOSURE. THE CONTRACTOR SHALL ALSO PROVIDE THE RESIDENT ENGINEER WITH THE NAME AND CONTACT INFORMATION FOR A 24 HOUR EMERGENCY SERVICE COMPANY THAT WILL MAINTAIN THE FUNCTIONALITY OF THE RUNWAY LIGHTING SYSTEM DURING THE TEMPORARY RELOCATED THRESHOLD PHASE.

**LEGEND**

- EXISTING PAVEMENT MARKING
- PROPOSED TEMPORARY PAVEMENT MARKING
- EXISTING EDGE/THRESHOLD LIGHT
- TEMPORARY THRESHOLD LIGHT, STAKE MOUNTED (SEE SHEET 7)



PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183  
 FILE NAME: CONST PHASING PLAN.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIE  
**CONSTRUCTION PHASING PLAN**

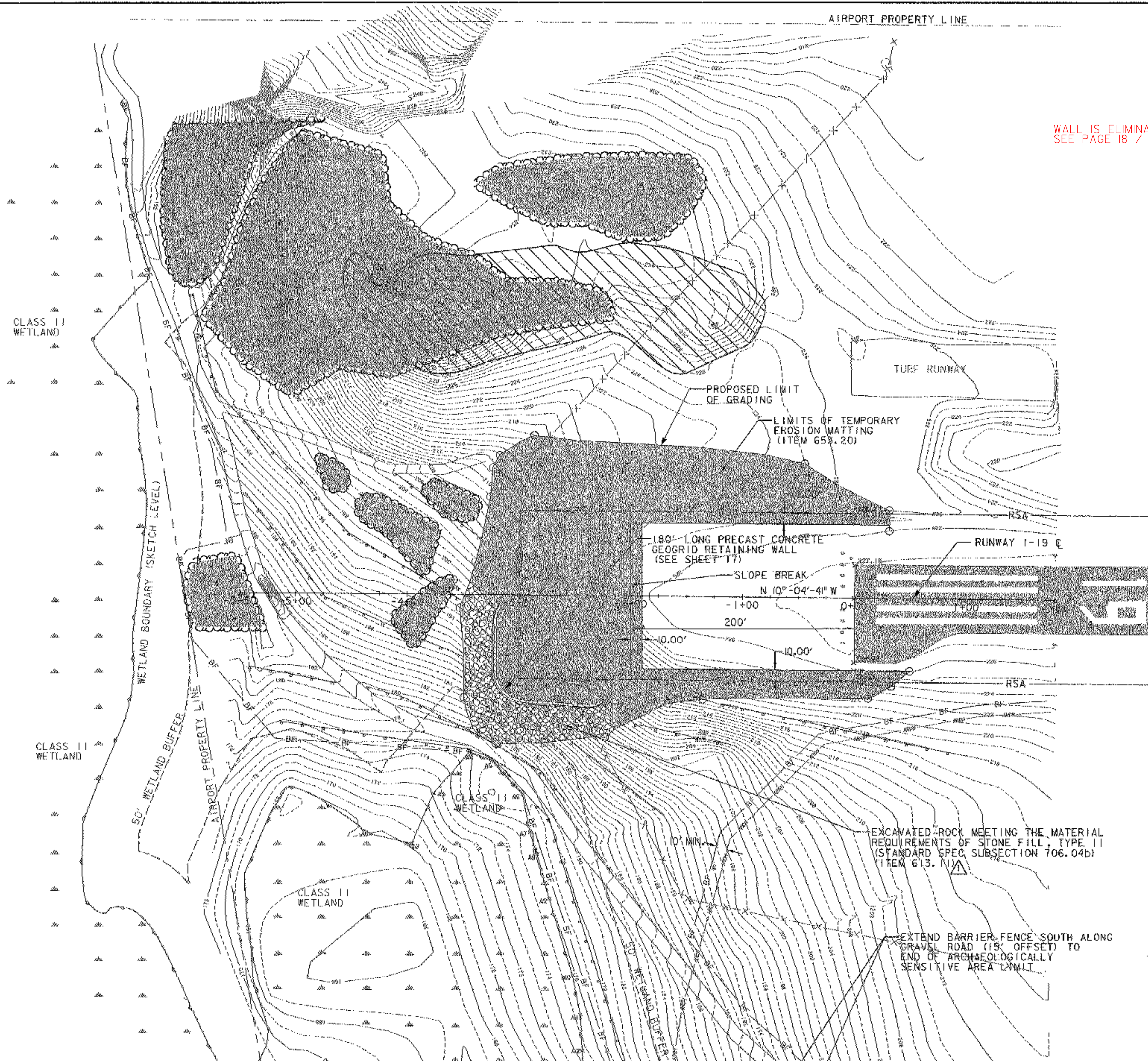
PLOT DATE: 12/27/2007  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIE  
 SHEET 9 OF 27



AIRPORT PROPERTY LINE

CONSTRUCTION PHASING  
REFER TO THE CONSTRUCTION PHASING PLAN ON SHEET 9.

WALL IS ELIMINATED  
SEE PAGE 18 / 27



180' LONG PRECAST CONCRETE  
GEGRID RETAINING WALL  
(SEE SHEET 17)

SLOPE BREAK  
N 10°-04'-41" W

-1+00  
200'

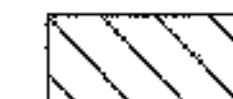

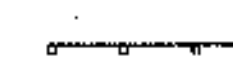
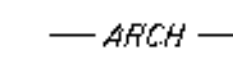
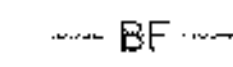
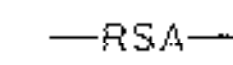
10.00'

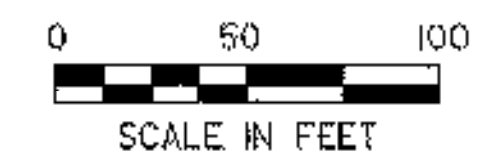
RUNWAY 1-19

EXCAVATED ROCK MEETING THE MATERIAL  
REQUIREMENTS OF STONE FILL, TYPE II  
(STANDARD SPEC. SUBSECTION 706.04b)  
(ITEM 613.11)

EXTEND BARRIER FENCE SOUTH ALONG  
GRAVEL ROAD (15' OFFSET) TO  
END OF ARCHAEOLOGICALLY  
SENSITIVE AREA LIMIT

**LEGEND**

-  GROUND PENETRATION AREA  
(ITEM 203.16 - SOLID ROCK EXCAVATION)
-  TREE PENETRATION AREAS  
(ITEM 201.10 - CLEARING AND GRUBBING,  
INCLUDING INDIVIDUAL TREES & STUMPS)
-  SILT FENCE (ITEM 649.51)
-  ARCH — ARCHAEOLOGICALLY SENSITIVE AREA LIMIT
-  BF — BARRIER FENCE (ITEM 653.50)
-  RSA — RUNWAY SAFETY AREA



REV	DATE	BY
△	02/21/08	CKF



PROJECT NAME: HIGHGATE  
PROJECT NUMBER: AIR 04-3183  
FILE NAME: EROSION CONTROL PLAN.DGN PLOT DATE: 2/21/2008  
PROJECT LEADER: M. CHURCHILL DRAWN BY: J. OAKMAN  
DESIGNED BY: P. ENZIEN CHECKED BY: P. ENZIEN  
**EROSION PREV. & SED. CONTROL PLAN** SHEET 10 OF 27

## EROSION PREVENTION AND SEDIMENT CONTROL PLAN GENERAL NOTES

### 1. CONTRACTOR'S RESPONSIBILITIES FOR EROSION PREVENTION AND SEDIMENT CONTROL

- A. PREVENT OR MINIMIZE SOIL EROSION OF DISTURBED LAND AND PREVENT THE DISCHARGE OF SEDIMENT AND OTHER CONSTRUCTION RELATED POLLUTANTS TO WATERS OF THE STATE.
- B. FURNISH, INSTALL, INSPECT AND MAINTAIN EROSION AND SEDIMENT CONTROL MATERIALS IN CONJUNCTION WITH THE GENERAL CLEARING, GRADING AND EXCAVATION OF THE SITE.
- C. ESTABLISH LIMITS OF SOIL DISTURBANCE; LOCATION(S) OF TOPSOIL STOCKPILES; CONSTRUCTION STAGING AREAS; STORAGE AREAS; REFUELING AND MAINTENANCE AREAS.
- D. ESTABLISH AND MARK BOUNDARIES FOR ANY UNDISTURBED RIPARIAN BUFFER ZONES AND MAINTAIN ALL EXISTING STREAMS AND RIPARIAN BUFFER ZONES IN THEIR NATURAL CONDITION.
- E. LOCATE AREAS FOR DISPOSAL OF STUMPS, EXCESS SOILS AND COLLECTED SEDIMENT AND OTHER POLLUTANTS, AND DISPOSE OF THESE MATERIALS IN A MANNER THAT WILL NOT RESULT IN SEDIMENTS AND POLLUTANTS ENTERING WATERS OF THE STATE.
- F. SEQUENCE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXTENT OF DISTURBED SOILS LEFT OPEN TO EROSION AT ANY GIVEN TIME AS DETAILED IN THE CONSTRUCTION PHASING AND EROSION AND SEDIMENT CONTROL PLANS.
- G. AVOID ALL LAND DISTURBANCES WITHIN 50 FEET OF ALL WATER BODIES, MEASURED FROM THE TOP OF BANK, AND WETLANDS, EXCEPT WHERE NECESSARY FOR THE RECONSTRUCTION OF EXISTING ROADS AND THE CONSTRUCTION OF BRIDGES, STREAM CROSSINGS, AND COMPONENTS OF STORMWATER MANAGEMENT SYSTEMS WHICH BY NECESSITY MUST BE LOCATED IN THIS ZONE.
- H. MAINTAIN AND PRESERVE TO THE EXTENT POSSIBLE THE SITE'S NATURAL DRAINAGE WAYS THAT CONVEY STORMWATER TO STREAMS, RIVERS, LAKES, PONDS AND WETLANDS.
  1. PREVENT OFF-SITE STORMWATER FROM ENTERING AREAS OF DISTURBED SOIL ON-SITE.
- J. PREVENT THE OFF-SITE DISCHARGE OF SEDIMENT MOBILIZED ON THE CONSTRUCTION SITE, INCLUDING OFF-SITE TRACKING OF SEDIMENT ONTO PAVED PUBLIC OR PRIVATE ROADWAYS BY CONSTRUCTION VEHICLES.
- K. DISPOSE OF SEDIMENTS AND OTHER POLLUTANTS WHICH HAVE BEEN COLLECTED AND REMOVED IN THE COURSES OF STORMWATER TREATMENT IN A MANNER THAT WILL NOT RESULT IN THE SEDIMENTS AND POLLUTANTS ENTERING WATERS OF THE STATE. DISPOSAL SITES REQUIRE RELATIVELY LEVEL TERRAIN WITH AN ISOLATION DISTANCE OF AT LEAST 100 FEET FROM ANY SURFACE WATERS, INCLUDING WETLANDS.

### 2. LIMITATIONS AND PROHIBITIONS

- A. THE CONTRACTOR SHALL SCHEDULE EARTHWORK COMPLETION, SITE STABILIZATION, ESTABLISHMENT OF PERENNIAL COVER AND INSTALLATION OF NON -VEGETATIVE PROTECTION MEASURES NO LATER THAN OCTOBER 15. TO ASSURE ESTABLISHMENT OF VEGETATED COVER, SEEDING AND MULCHING ACTIVITIES SHALL BE COMPLETED BY SEPTEMBER 15.

FOR PROJECTS EXTENDING BEYOND OCTOBER 15, LIMIT EXPOSURE OF SOILS AND MINIMIZE ADDITIONAL EARTHWORKS. ANY PROPOSED SOIL DISTURBANCE AND EARTHWORKS BETWEEN OCTOBER 15 AND APRIL 15 WILL REQUIRE DEVELOPMENT OF A SPECIAL WINTER EROSION AND SEDIMENT CONTROL PLAN ADDRESSING THE SPECIFIC CONCERNS OF WINTER CONSTRUCTION. THIS PLAN MUST BE FILED WITH, AND APPROVED BY, THE PERMITTING AUTHORITY BY SEPTEMBER 15. IF IT IS DETERMINED BY THE ENGINEER OR THE PERMITTING AUTHORITY THAT WINTER CONSTRUCTION WOULD PRESENT A SIGNIFICANT RISK TO WATER QUALITY, THE CONTRACTOR WILL NEED TO REQUEST A WINTER SHUTDOWN IN ACCORDANCE WITH THE PROVISIONS OF THE CONTRACT DOCUMENTS.

- B. DISCHARGES OF ANY MATERIAL OTHER THAN STORMWATER, SUCH AS VEHICLE AND EQUIPMENT MAINTENANCE SPILLS, FUELS, WASH WATER, CONSTRUCTION DEBRIS, OIL, WET CONCRETE (INCLUDING WASHOUT WATER FROM CONCRETE BATCH TRUCKS OR EQUIPMENT USED TO MIX CONCRETE), AND OTHER SUBSTANCES, ARE PROHIBITED.
- C. NO SILT FENCE SHALL BE UTILIZED IN AREAS OF CONCENTRATED FLOWS, SUCH AS CHANNELS OR DITCHES.
- D. DISPOSAL OF SEDIMENT IN A WETLAND OR ANY CORRECTIVE ACTION UNDERTAKEN TO REMOVE SEDIMENT FROM A WETLAND IS PROHIBITED.
- E. THE FAILURE TO PROMPTLY ABATE THE DISCHARGE OF SEDIMENT OR ANY OTHER WASTE WHICH CAUSES A VISIBLE DISCOLORATION OF SURFACE WATERS (INCLUDING WETLANDS), OR IS FOUND TO BE EXCEEDING WATER QUALITY STANDARDS BASED ON MONITORING, IS PROHIBITED.

### 3. GENERAL CONSTRUCTION NOTES

- A. SEE EROSION CONTROL PLANS FOR CONSTRUCTION NOTES AND PHASING.
- B. VEHICLE AND EQUIPMENT STORAGE AREAS OR AREAS ADJACENT TO CONSTRUCTION TRAILER OR OTHER HIGH TRAFFIC AREAS SHALL BE COVERED WITH GEOTEXTILE FABRIC (ITEM 649.31) AND 12 INCHES OF GRAVEL (ITEM 629.54). FOLLOWING COMPLETION OF CONSTRUCTION, ALL NON-NATIVE MATERIALS SHALL BE REMOVED FROM THE STAGING AREA. COMPACTED, RUTTED, OR OTHERWISE DISTURBED SOILS SHALL BE TILLED, RAKED, SEEDED AND MULCHED.
- C. ERODIBLE MATERIALS STOCKPILED WITHIN THE MATERIAL STORAGE AREAS SHALL BE ISOLATED WITH FILTER FABRIC. SOIL STOCKPILED ON THE SITE SHALL BE SEEDED AND MULCHED.
- D. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED WITHIN 48 HOURS OF BEING STRIPPED OR BACKFILLED AND GRADED.
- E. STOCKPILES SHALL BE MULCHED IF THEY WILL BE UNDISTURBED FOR MORE THAN 48 HOURS.

### 4. INSPECTION

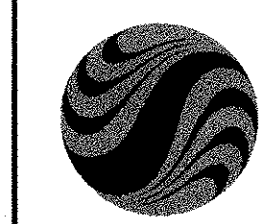
- A. THE ONSITE COORDINATOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL STRUCTURES AND MEASURES, AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND NO LATER THAN 24 HOURS AFTER ANY STORM EVENT WHICH GENERATES A DISCHARGE OF STORMWATER RUNOFF FROM THE CONSTRUCTION SITE, TO ENSURE THEY ARE OPERATING CORRECTLY.
- B. THE ONSITE COORDINATOR SHALL INSPECT A MINIMUM OF ONCE A MONTH ANY SITES THAT HAVE BEEN TEMPORARILY OR FINALLY STABILIZED.
- C. THE CONTRACTOR SHALL INSPECT CHANNEL LININGS, EMBANKMENTS AND CHANNEL BEDS DAILY FOR ANY SIGN OF EROSION.
- D. THE CONTRACTOR SHALL INSPECT DISCHARGE POINTS DAILY TO VISUALLY ASSESS WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO RECEIVING WATERS.
- E. IN THE CASE OF SOIL DISTURBANCE OR EARTHWORK OCCURRING OVER THE WINTER PERIOD (OCT. 15 TO APRIL 15), DAILY MONITORING OF ALL EROSION PREVENTION, SEDIMENT CONTROL AND CONSTRUCTION ACTIVITIES SHALL BE REQUIRED IN AREAS WHERE SUCH SOIL DISTURBANCES, EARTHWORK OR ACTIVITIES ARE ONGOING. IN AREAS THAT HAVE BEEN SHUT DOWN FOR THE WINTER, THE ONSITE COORDINATOR SHALL INSPECT EROSION PREVENTION AND SEDIMENT CONTROL DEVICES IN THE FIELD MONTHLY, NO LATER THAN 24 HOURS AFTER ANY STORM EVENT WHICH GENERATES A DISCHARGE OF STORMWATER RUNOFF FROM THE CONSTRUCTION SITE, OR DURING A THAW.
- F. THE ONSITE COORDINATOR AND THE CONTRACTOR SHALL INSPECT FOR THE EVIDENCE OF, OR THE POTENTIAL FOR, SEDIMENT LEAVING FROM ALL DISTURBED AREAS OR MATERIAL STORAGE AREAS.
- G. AN EROSION AND SEDIMENT CONTROL MONITORING REPORT FORM COMPLETED BY THE ONSITE COORDINATOR STATING THE DATE OF REVIEW AND DESCRIBING THE EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT MEASURES REVIEWED, THE EFFECTIVENESS OF THEIR OPERATION, ANY DEFICIENCIES, AND CORRECTIVE ACTION TO BE UNDERTAKEN SHALL BE PREPARED AFTER EACH REVIEW. A COPY SHALL BE PROVIDED TO THE ENGINEER AND MAINTAINED ON FILE AT THE PROJECT SITE.

### 5. MAINTENANCE

- A. THE CONTRACTOR SHALL KEEP ALL SEEDED AREAS WATERED AND IN GOOD CONDITION, RE-SEEDING IF AND WHEN NECESSARY UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA SEEDED.
- B. THE CONTRACTOR SHALL REPAIR ALL EROSION AND SEDIMENT CONTROL STRUCTURES AND MEASURES THAT ARE DETERMINED TO BE FAILING, OR NOT FUNCTIONING AS DESIGNED, WITHIN 24 HOURS OF INSPECTION.
- C. THE CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENT FROM CONTAINMENT SYSTEMS AND OTHER SEDIMENT CONTROL STRUCTURES AS REQUIRED, SUCH THAT PERFORMANCE OF THESE SYSTEMS IS NOT COMPROMISED OR IN ANY WAY IMPAIRED.
- D. THE CONTRACTOR SHALL REMOVE ALL DEBRIS AND REPAIR ALL DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH WORKING DAY.

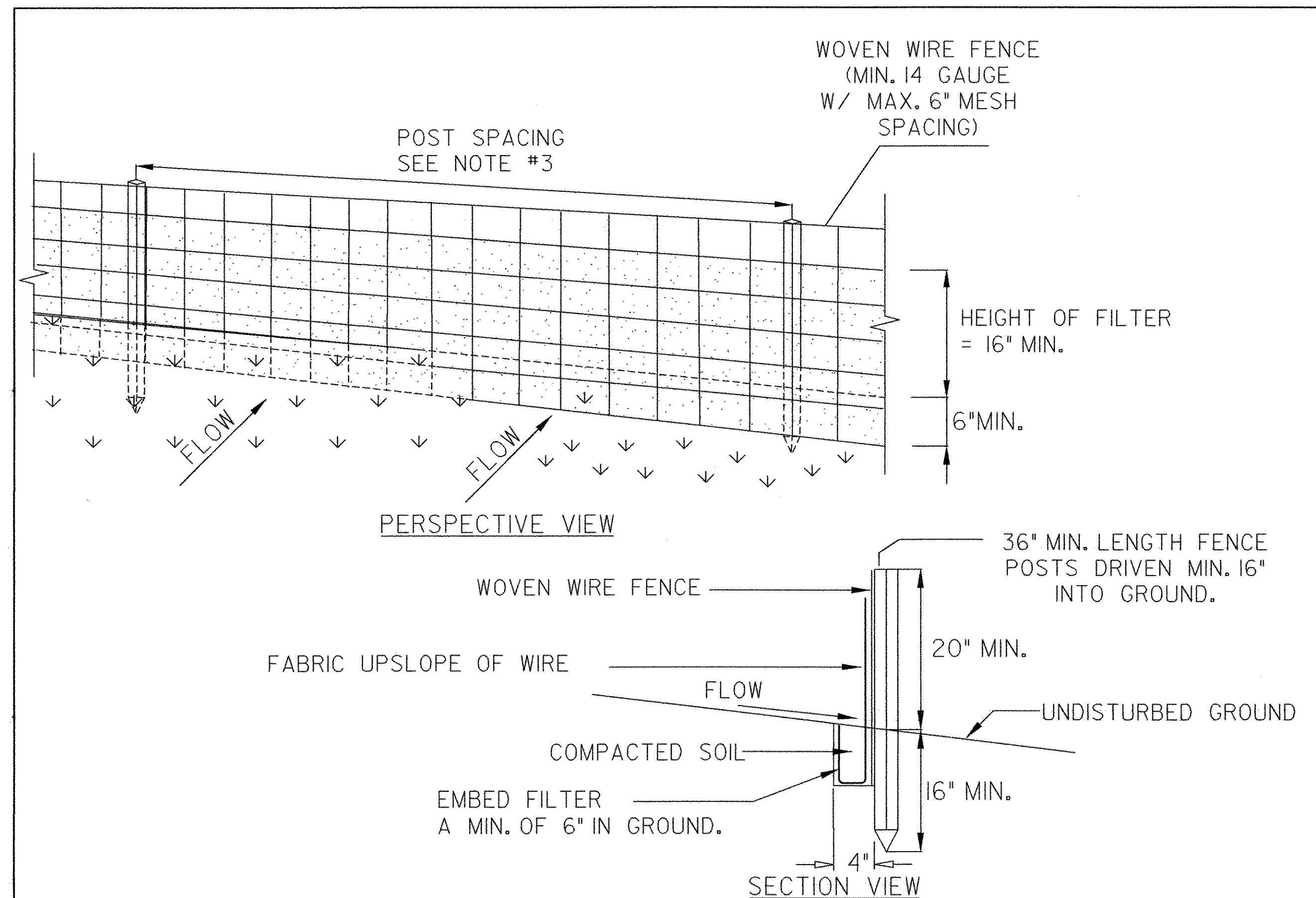
### 6. CORRECTIVE ACTION

- A. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AS SOON AS POSSIBLE, BUT WITHIN 24 HOURS, OF ANY EVIDENCE OF MEASURABLE AMOUNTS OF SEDIMENT OR SEDIMENT-LADEN WATER LEAVING THE CONSTRUCTION SITE OR ANY VISIBLE DISCOLORATION OF SURFACE WATERS (INCLUDING WETLANDS).
- B. THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION TO CORRECT THE DISCHARGE, INCLUDING HALTING OR REDUCING CONSTRUCTION ACTIVITIES AS NECESSARY UNTIL THE DISCHARGE AND/OR THE CONDITION IS FULLY CORRECTED.



PROJECT NAME: HIGHGATE  
PROJECT NUMBER: AIR 04-3183

FILE NAME: EROSIONCONTROLNOTES.DGN PLOT DATE: 12/20/2007  
PROJECT LEADER: M. CHURCHILL DRAWN BY: J. OAKMAN  
DESIGNED BY: P. ENZIEN CHECKED BY: P. ENZIEN  
EROSION PREV. & SED. CONTROL NOTES SHEET 11 OF 27



### CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.
2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4'. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

SILT FENCE

NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM STANDARD SPECIFICATION 649.51 GEOTEXTILE FOR SILT FENCE.



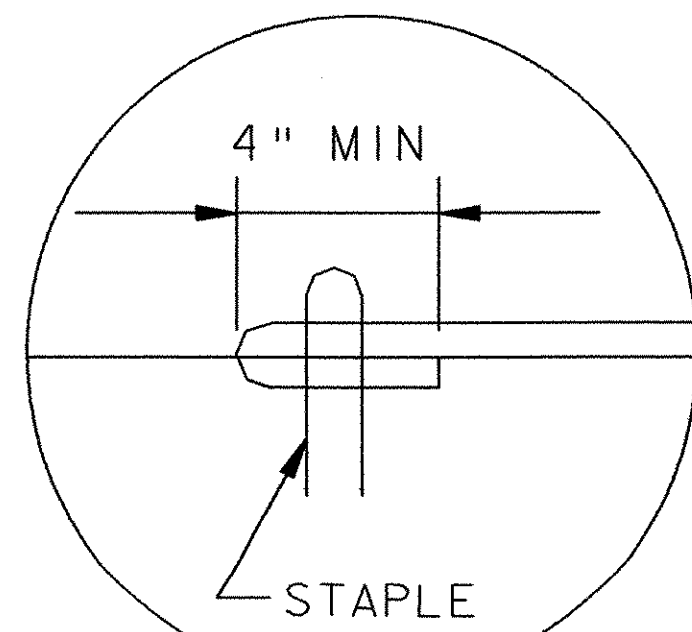
Stantec

PROJECT NAME: HIGHGATE  
PROJECT NUMBER: AIR 04-3183

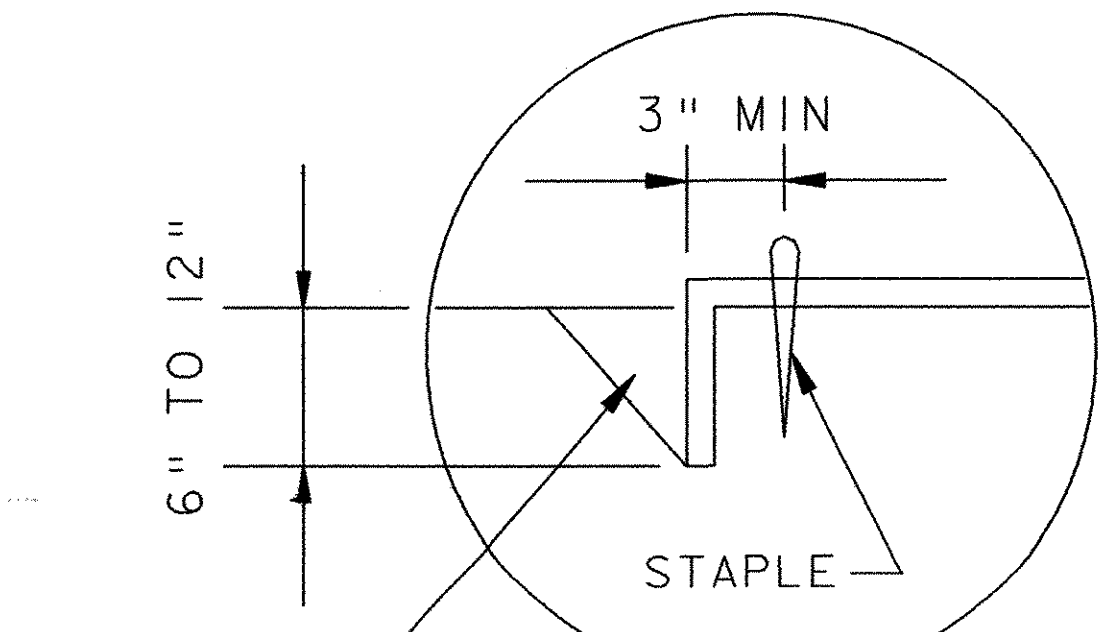
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PROJECT LEADER: M. CHURCHILL DRAWN BY: J. OAKMAN  
DESIGNED BY: P. ENZIEN CHECKED BY: P. ENZIEN  
EROSION PREV. & SED. CONTROL DETAILS SHEET 12 OF 27



PLANNING FOR THE FUTURE  
 CONSULTING ENGINEERS  
 100 WATER STREET  
 SUITE 200  
 BURLINGTON, VT 05401  
 TEL: 802-249-1234  
 FAX: 802-249-1235  
 WWW.STANTEC.COM

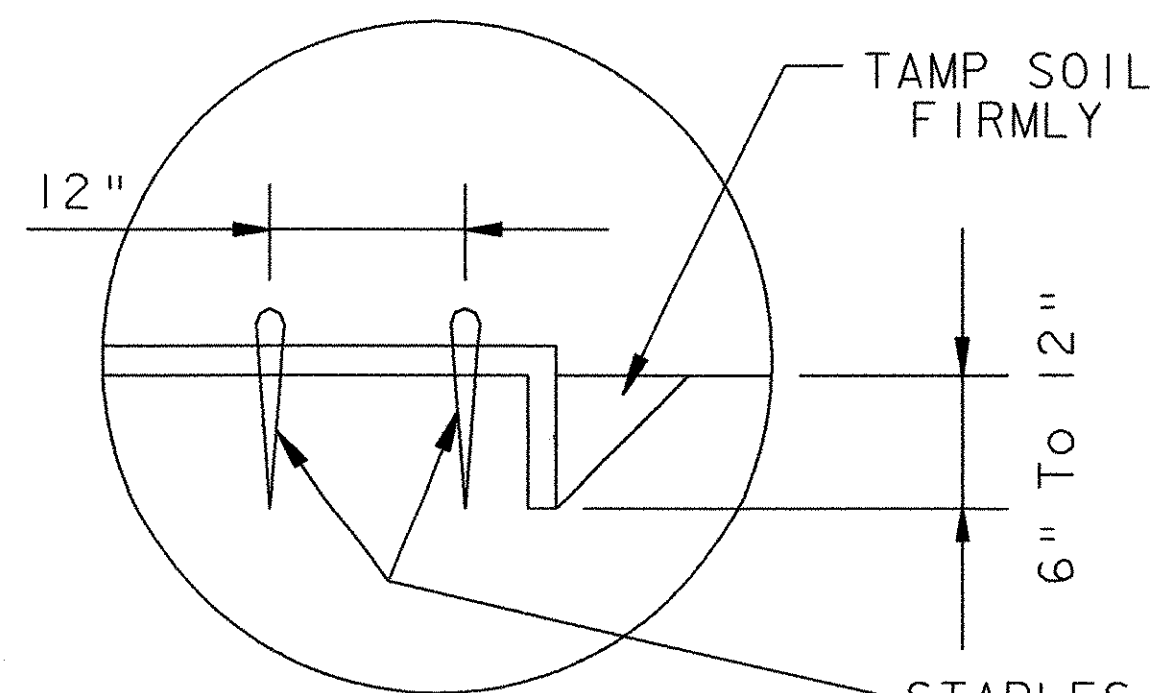


TERMINAL FOLD  
JUTE MESH ONLY

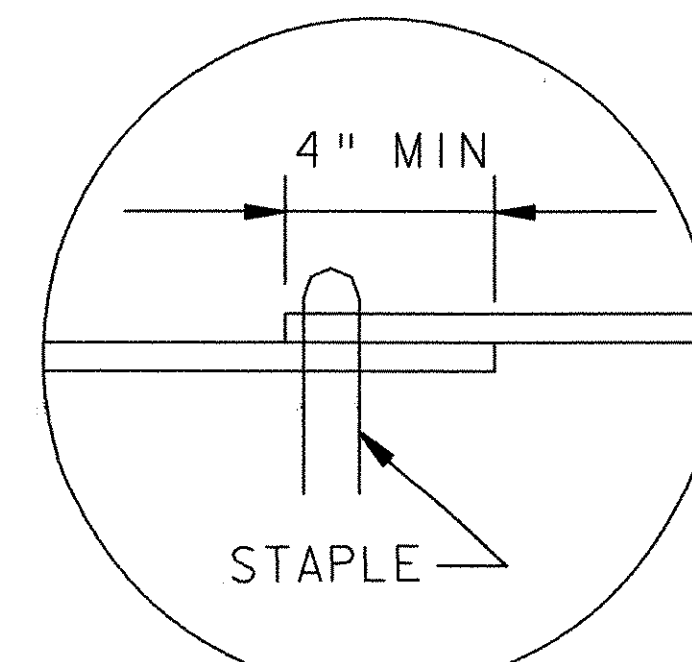


TERMINAL FOLD  
EXCELSIOR BLANKET  
EROSION CONTROL PAPER

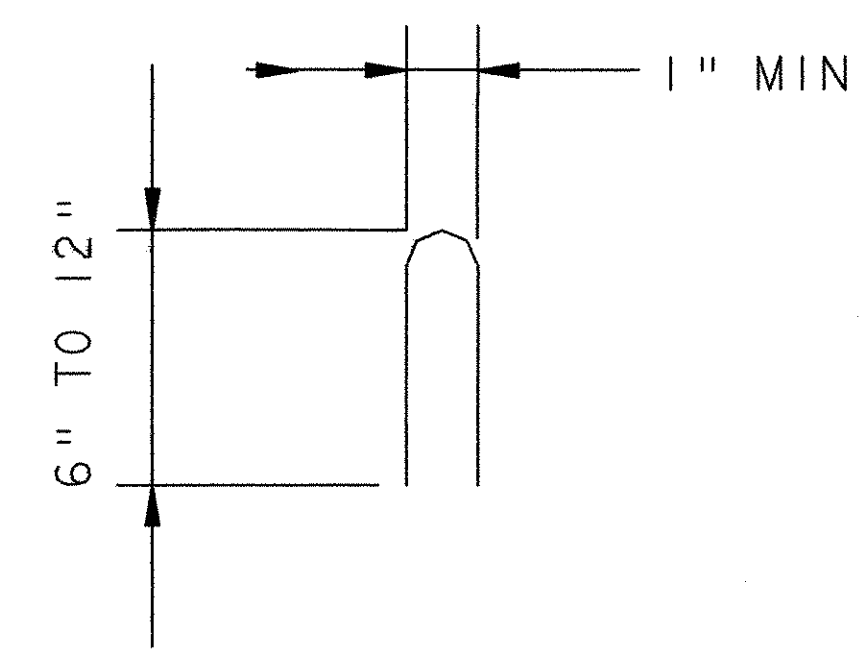
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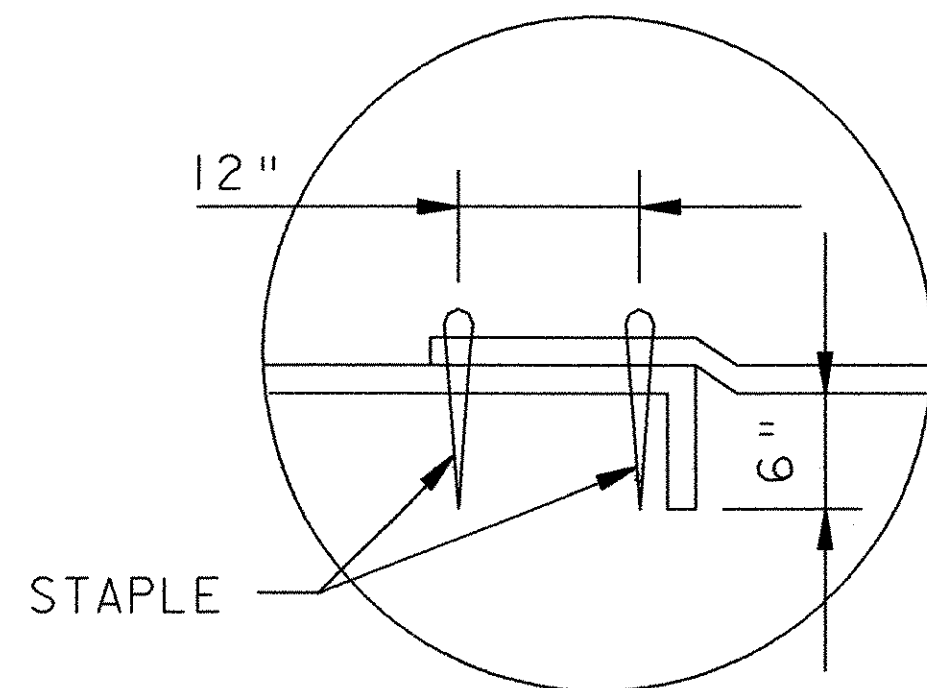
ANCHOR SLOT  
JUTE MESH  
EXCELSIOR BLANKET  
EROSION CONTROL PAPER  
DETAIL 3



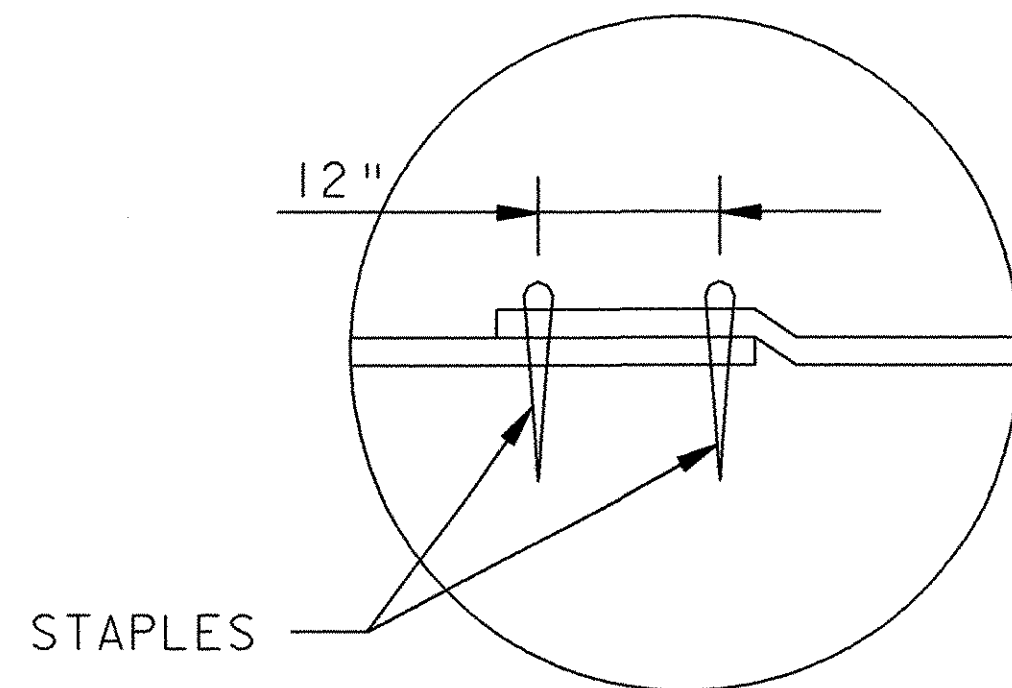
LAP JOINT  
JUTE MESH, EXCELSIOR BLANKET  
EROSION CONTROL PAPER  
SHALL BE BUTTED TOGETHER  
DETAIL 4



STAPLE DETAIL



JUNCTION SLOT  
JUTE MESH  
EROSION CONTROL PAPER

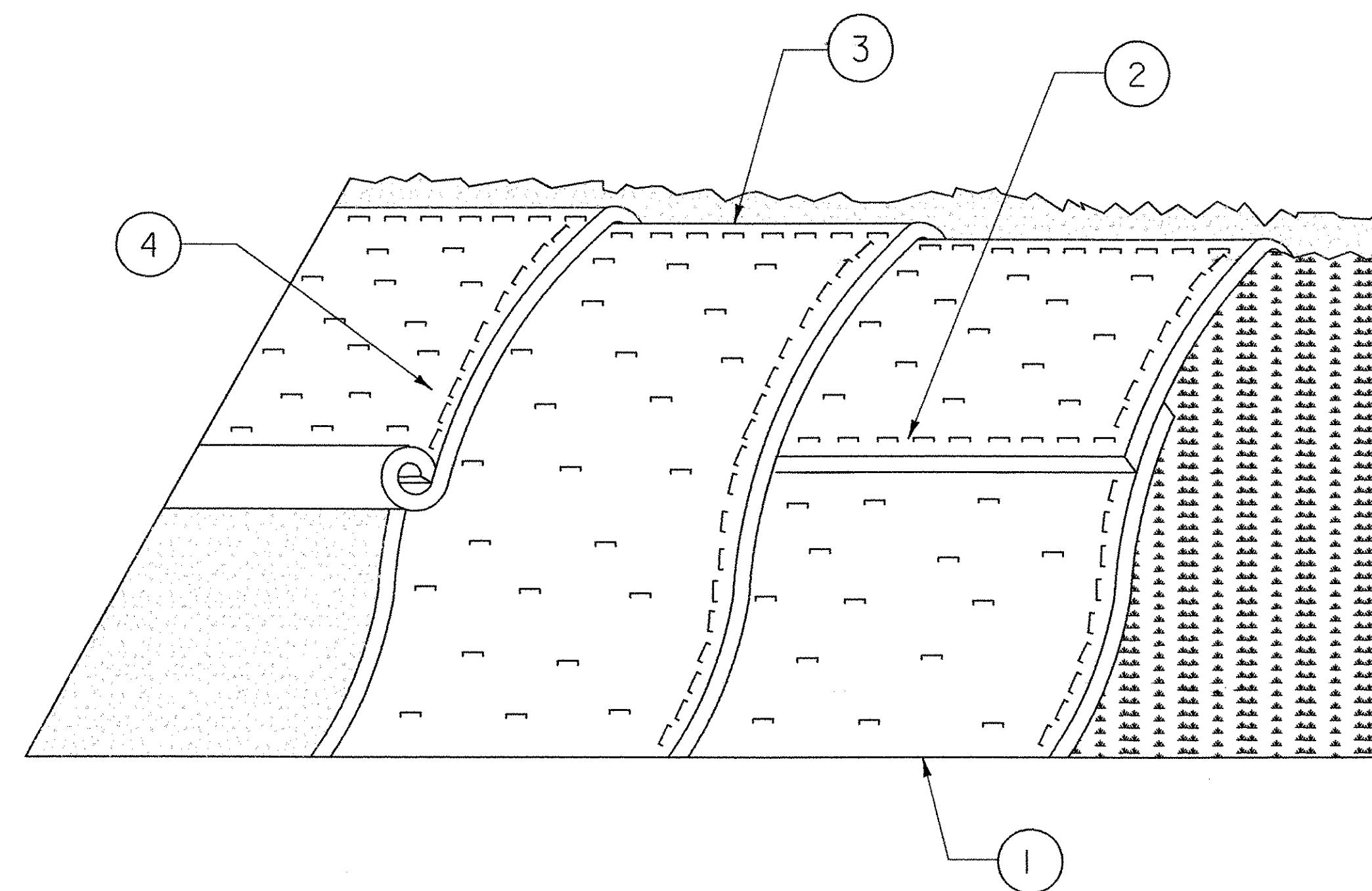


JUNCTION SLOT  
EXCELSIOR BLANKET

DETAIL 2

## CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:IV OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATIVELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
4. DISTURBED AREA SHALL BE SMOOTHLY GRADED TO ENSURE CLOSE CONTACT BETWEEN RECP AND GROUND.
5. ALL TERMINAL ENDS AND TRANVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12".



ROLLED EROSION  
CONTROL PRODUCT  
(RECP) SIDE SLOPE

**NOTES:**

REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.20 TEMPORARY EROSION MATTING

REVISIONS		
FEBRUARY 9, 2007	WHF	
MARCH 8, 2007	JMF	

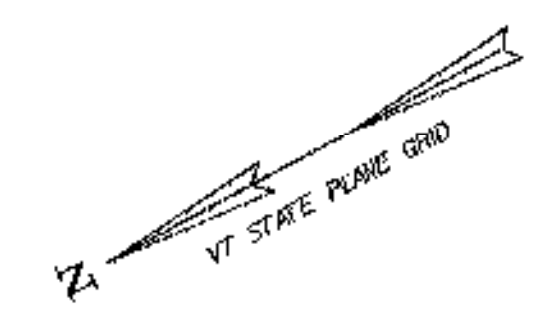
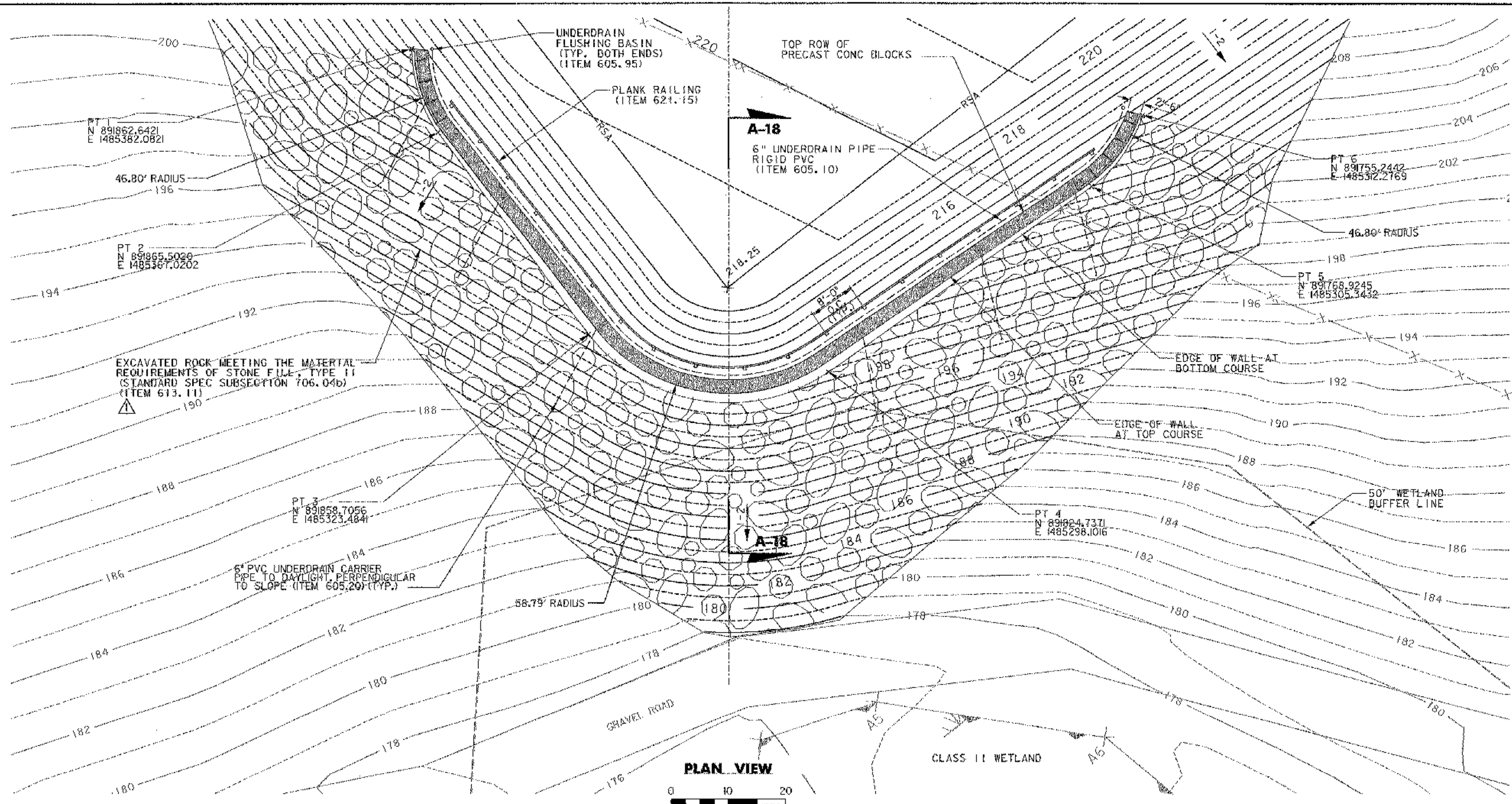


PROJECT NAME: HIGHGATE  
PROJECT NUMBER: AIR 04-3183

FILE NAME: EROSIONCONTROLDETAILS-3.DGN PLOT DATE: 12/27/2007  
PROJECT LEADER: M. CHURCHILL DRAWN BY: J. OAKMAN  
DESIGNED BY: P. ENZIEN CHECKED BY: P. ENZIEN  
EROSION PREV. & SED. CONTROL DETAILS SHEET 14 OF 27

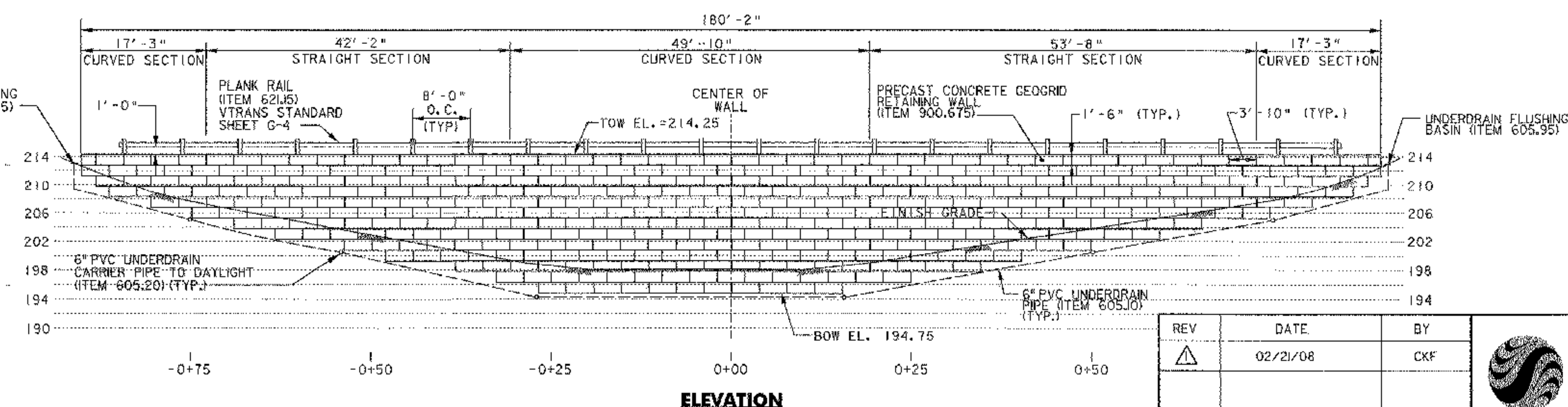






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**PLAN VIEW**  
 0 10 20  
 SCALE IN FEET



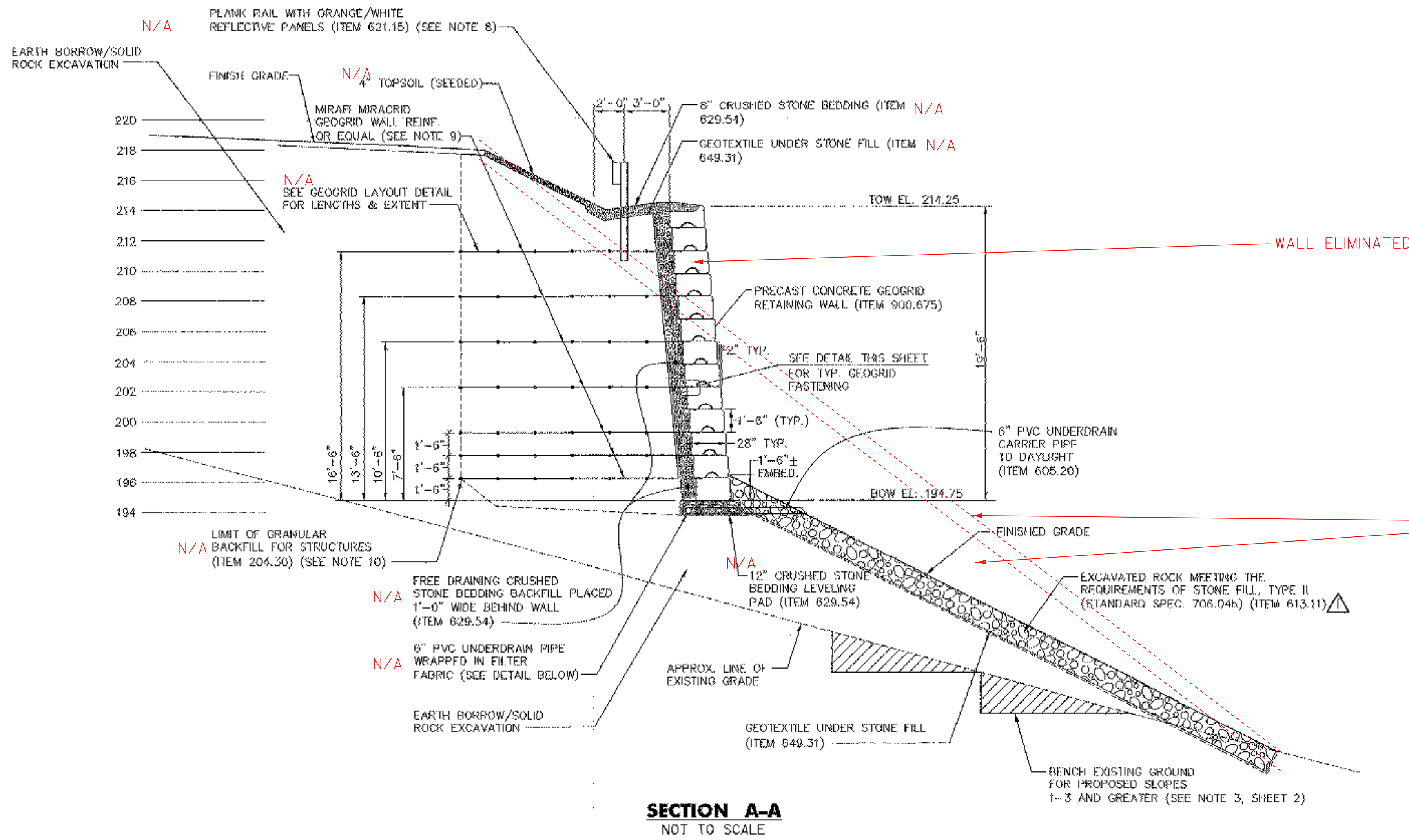
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 SCALE IN FEET

**ELEVATION**

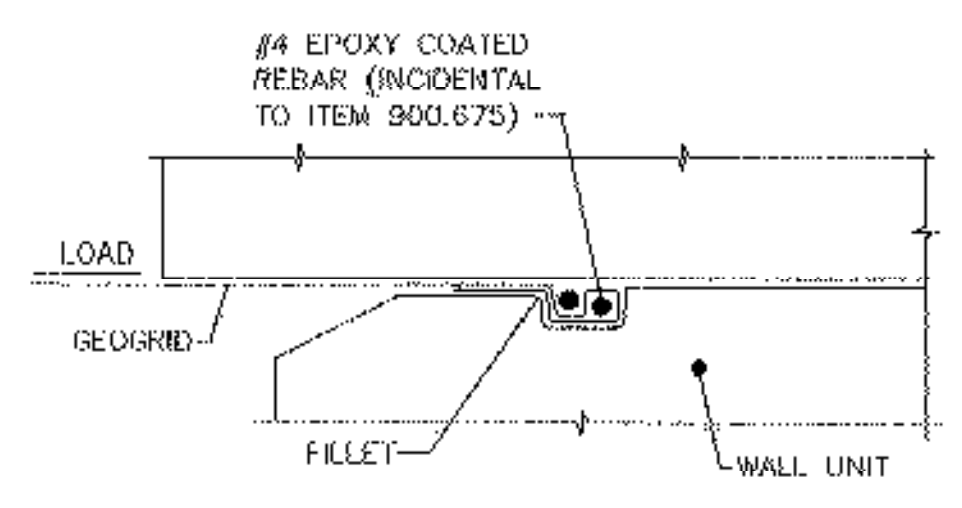
REV	DATE	BY
△	02/21/08	CKF



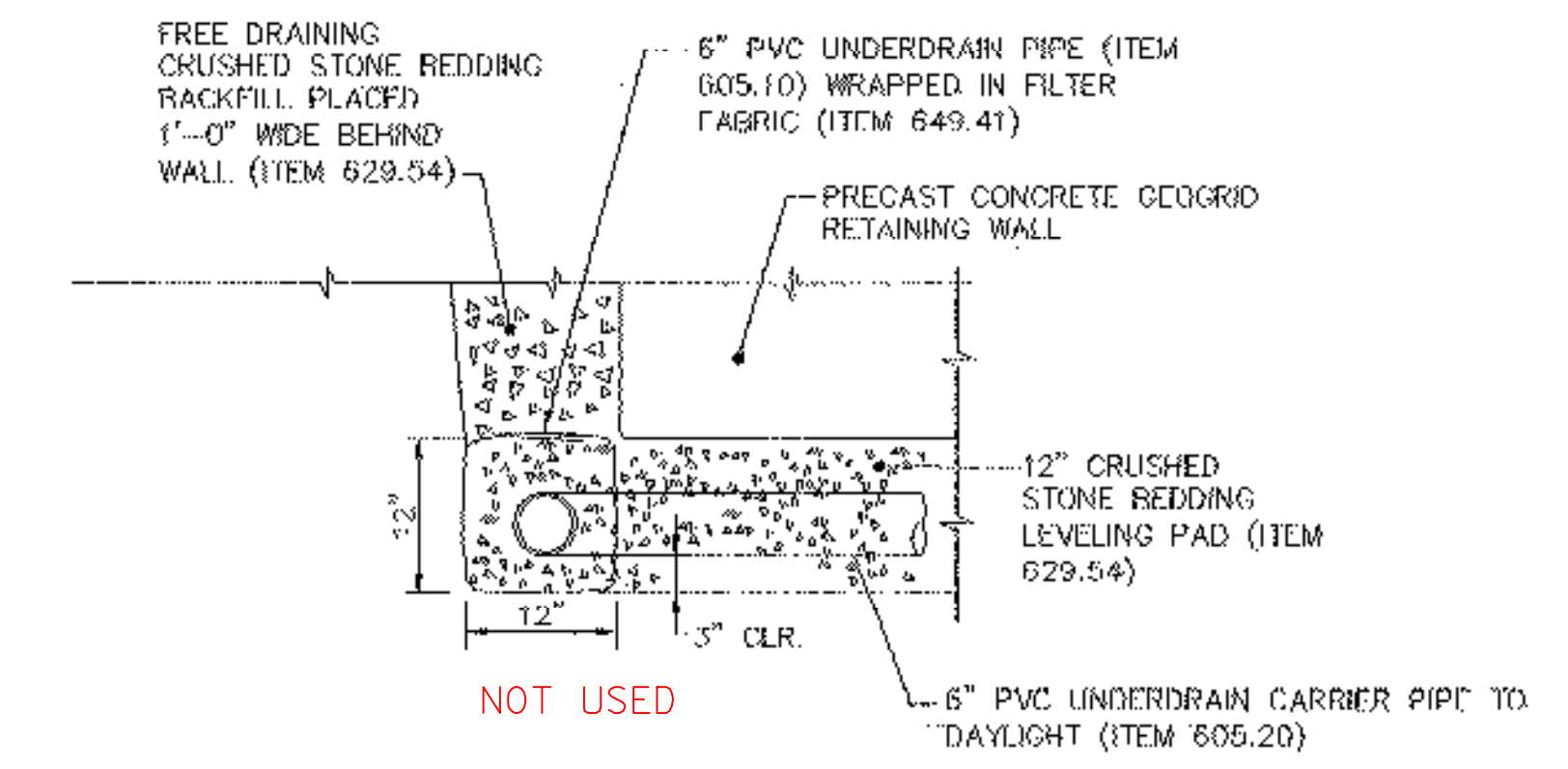
PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183  
 FILE NAME: WALL PLAN.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIEN  
 RETAINING WALL PLAN & ELEVATION SHEET 17 OF 27  
 PLOT DATE: 2/21/2008  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN



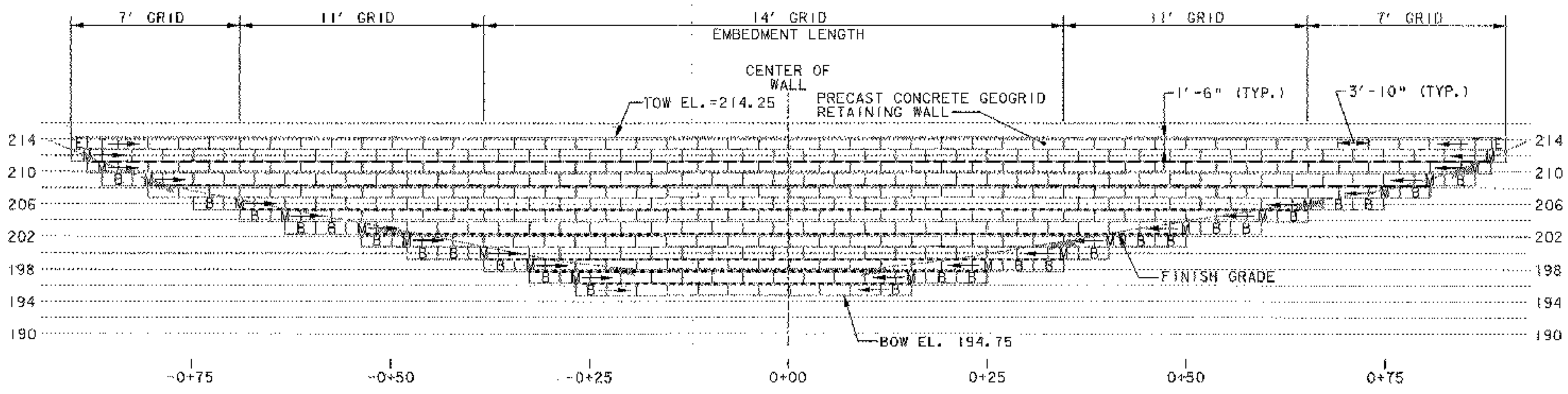
- GENERAL NOTES:** THESE NOTES, ALL NO LONGER APPLICABLE
- LEVELING PAD SHALL CONSIST OF COMPACTED, 3/4" CRUSHED STONE, (2" THICK AND EXTENDING AT LEAST 12" TO EITHER SIDE OF THE BASE BLOCK. A SMOOTHING SURFACE LAYER OF 3/8" CRUSHED STONE MAY BE UTILIZED.
  - MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE AS INDICATED ON THE WALL ELEVATION VIEW.
  - FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS, ESPECIALLY WITH REGARDS TO LEVELING OF BLOCKS AND BASE.
  - INSTALL 6" PVC UNDERDRAIN PIPING AND 6" PVC UNDERDRAIN CARRIER PIPING AS SHOWN.
  - BACKFILL AND COMPACT THE FILL MATERIAL BEHIND THE WALL AS THE WALL IS INSTALLED.
  - COMPACTION SHALL BE TO 92% (MODIFIED PROCTOR) OR 95% (STANDARD PROCTOR).
  - RECOMMENDED COMPACTION EQUIPMENT WITHIN 15 FEET OF THE BACK OF THE WALL IS AS FOLLOWS:  
 0-4 FEET..... HAND TAMP OR VIBRATORY PLATE COMPACTOR  
 4-15 FEET..... NOTHING LARGER THAN TWO-DRUM, WALK-BEHIND VIBRATORY ROLLER  
 (LARGER ROLLERS CAN BE USED STATICALLY, PROVIDED LIFT SIZE DOES NOT COMPROMISE ACHIEVEMENT OF NECESSARY COMPACTION RATES.)
  - FOR REFLECTIVE PANEL DETAILS REFER TO SHEET 7, THE COST TO FURNISH AND INSTALL THE REFLECTIVE PANELS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 621.15-PLANK RAIL.
  - THE COST TO FURNISH AND INSTALL THE MIRAFIR MIRAGRID GEOGRID WALL REINFORCEMENT SHALL BE INCLUDED IN THE UNIT PRICE BID UNDER ITEM 900.675 - SPECIAL PROVISION (PRECAST CONCRETE GEOGRID RETAINING WALL).
  - GRANULAR BACKFILL FOR STRUCTURES SHALL BE PLACED BETWEEN THE CRUSHED STONE ALONG THE BACK OF THE WALL AND THE OUTER LIMITS OF THE GEOGRID REINFORCEMENT.



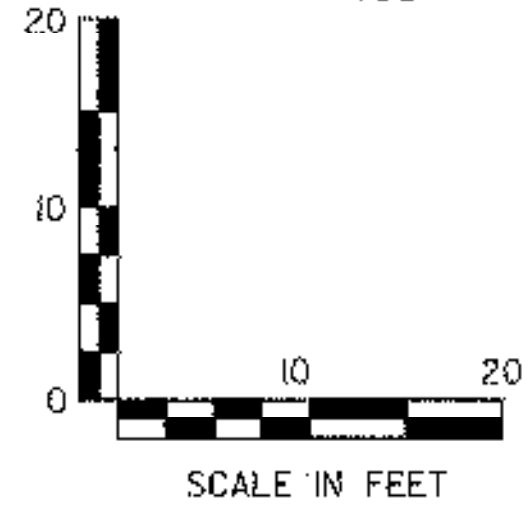
**TYPICAL GEOGRID FASTENING DETAIL**  
NOT TO SCALE



**PVC UNDERDRAIN PIPE DETAIL**  
NOT TO SCALE



**GEOGRID LAYOUT DETAIL (ELEVATION VIEW)**



**LEGEND**

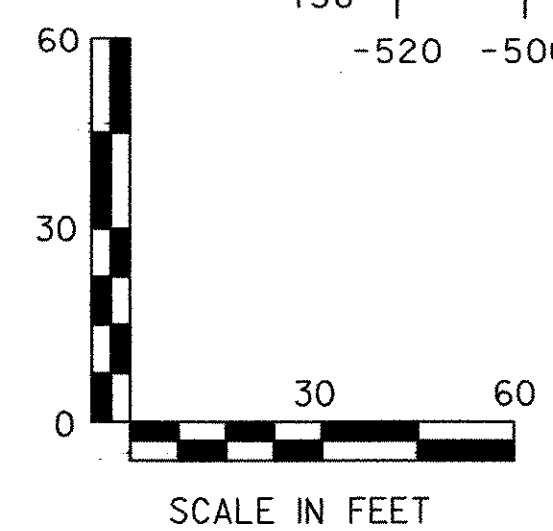
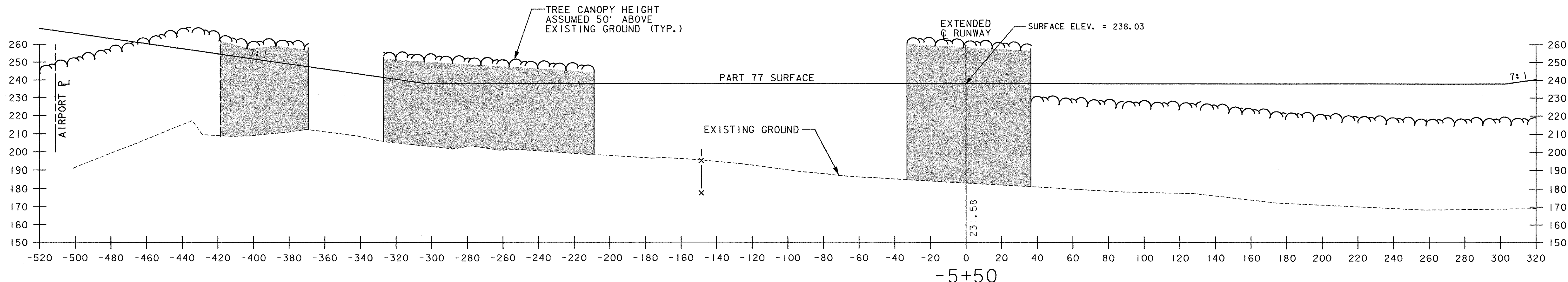
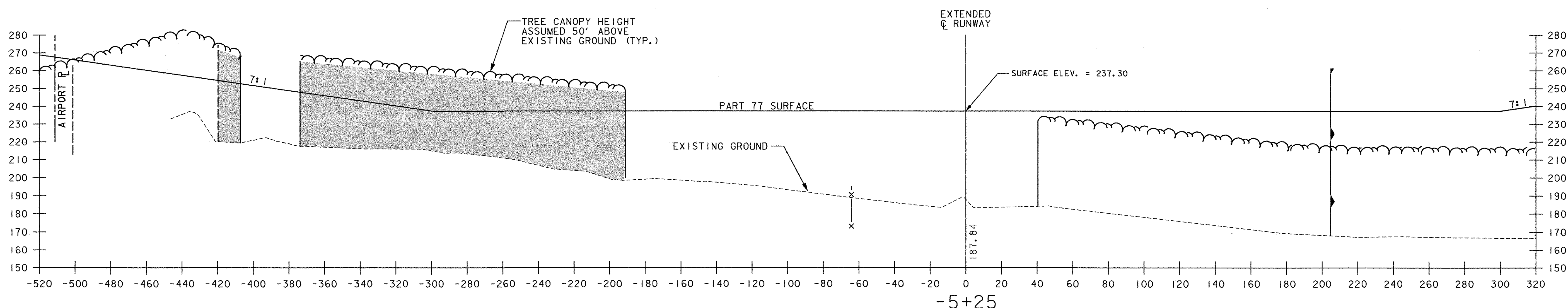
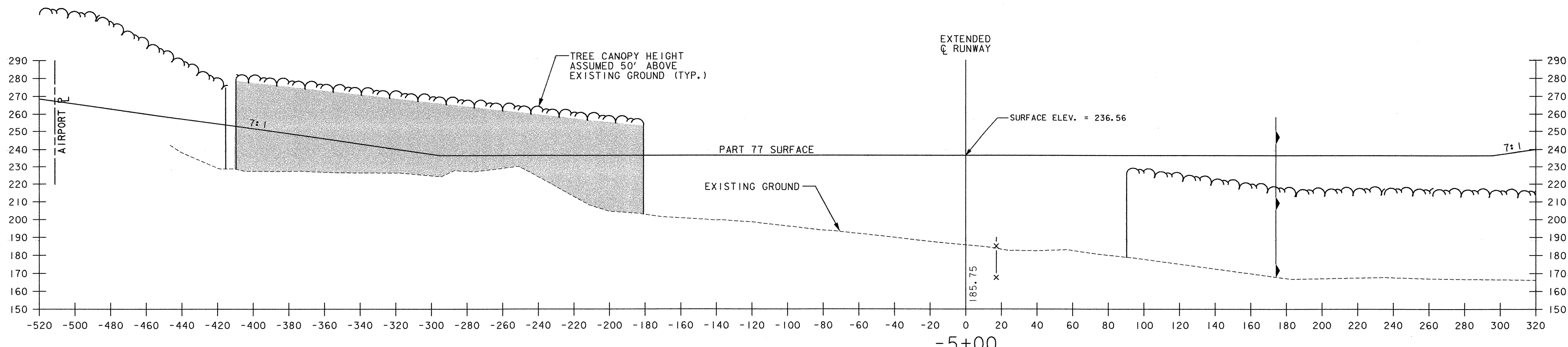
- SYNTEN SF 55 GEOGRID (MIRAGRID 5XT) OR EQUAL
- SYNTEN SF 80 GEOGRID (MIRAGRID 7XT) OR EQUAL
- T TOP BLOCK
- M MIDDLE BLOCK
- B BOTTOM BLOCK
- E END BLOCK
- TOW TOP OF WALL
- BOW BOTTOM OF WALL

REV	DATE	BY
△	02/21/08	CKF



PROJECT NAME: HIGHGATE	PLOT DATE: 2/21/2008
PROJECT NUMBER: AIR 04-3183	DRAWN BY: J. OAKMAN
FILE NAME: WALL SECTION.DGN	CHECKED BY: P. ENZIE
PROJECT LEADER: M. CHURCHILL	SHEET 18 OF 27
DESIGNED BY: P. ENZIE	
<b>RET. WALL SECTIONS &amp; MISC. DETAILS</b>	

PROJECT: AIRPORT  
 DRAWN BY: J. OAKMAN  
 DATE: 12/20/2007  
 SHEET: AIR 04-3183



LEGEND	
	GROUND PENETRATION AREA (SOLID ROCK EXCAVATION)
	TREE PENETRATION AREAS (CLEARING AND GRUBBING)
	LIMIT OF CLEARING AND GRUBBING
	LOCATION OF PROPOSED 6' HIGH CHAIN LINK FENCE
	EXISTING CHAIN LINK FENCE
	CLASS II WETLAND BOUNDARY
	ARCHAEOLOGICALLY SENSITIVE AREA LIMIT

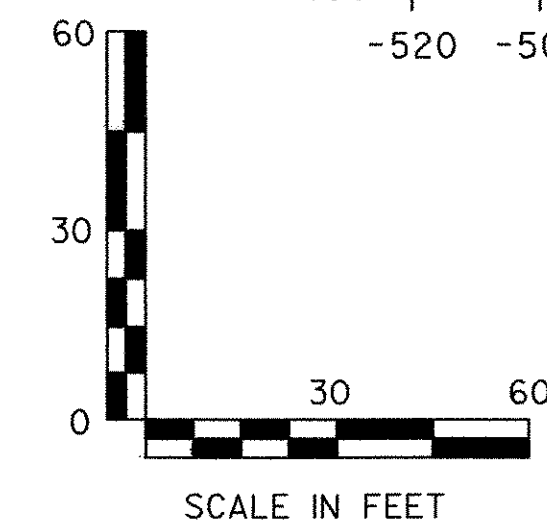
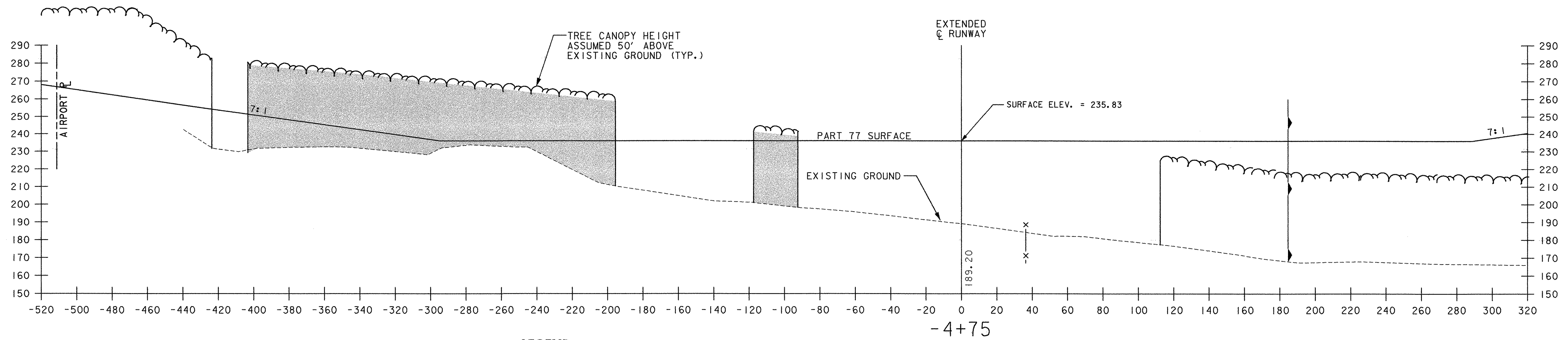
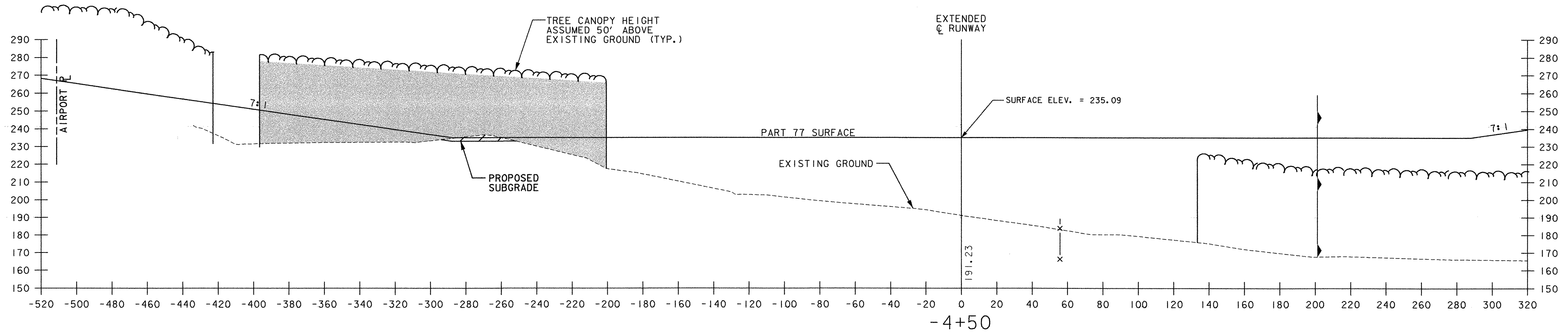


PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183  
 FILE NAME: CROSS SECTIONS.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIEN  
**CROSS SECTION SHEET 1**

PLOT DATE: 12/20/2007  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 SHEET 19 OF 27

PROJECT INFORMATION  
 Project No. 04-3183  
 Project Name: HIGHGATE  
 Project Location: 12/20/2007  
 Project Status: DESIGN

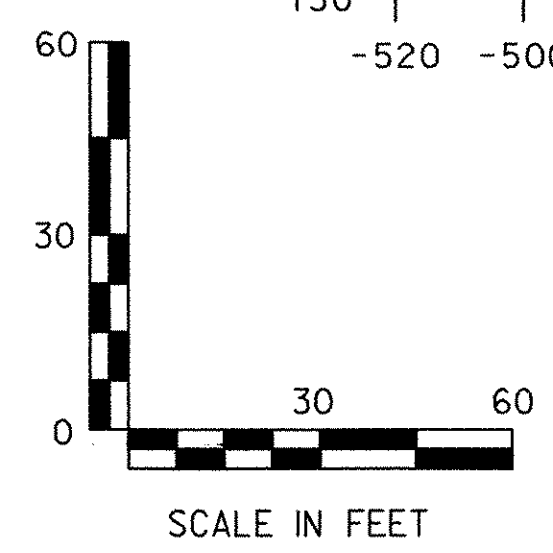
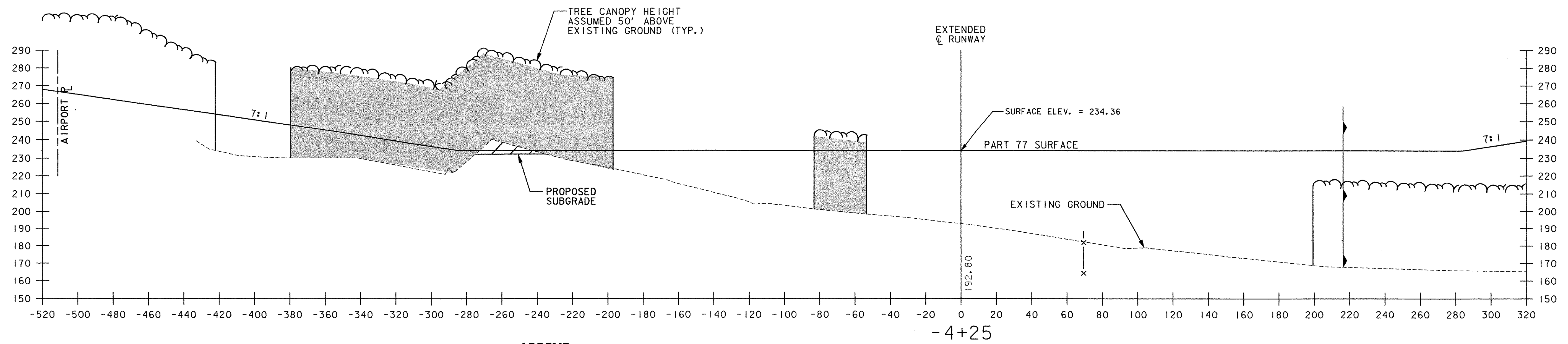
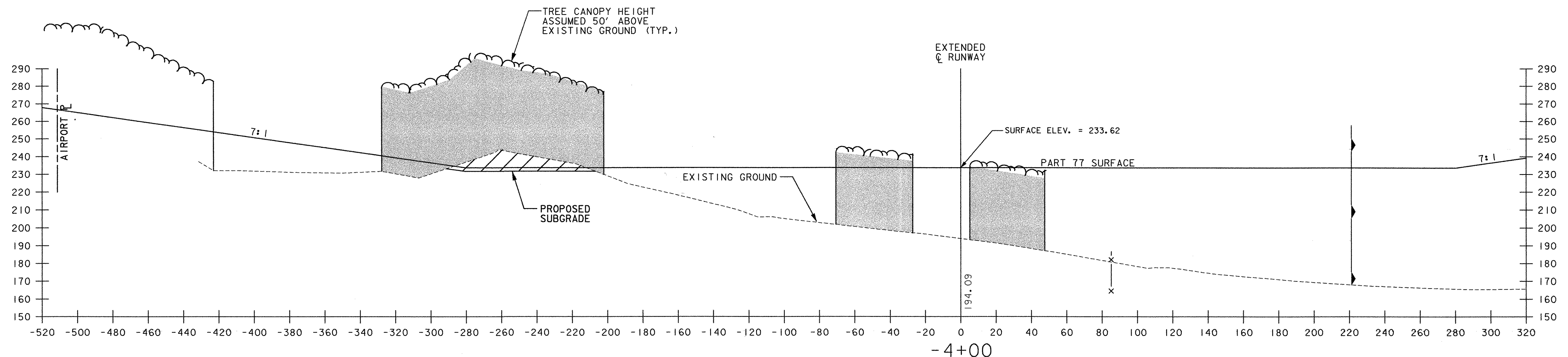
DESIGNER INFORMATION  
 Designer: Stantec  
 Designer Address: 1000  
 Designer City: St. Louis, MO  
 Designer State: MO  
 Designer Zip: 63102



LEGEND	
	GROUND PENETRATION AREA (SOLID ROCK EXCAVATION)
	TREE PENETRATION AREAS (CLEARING AND GRUBBING)
	LIMIT OF CLEARING AND GRUBBING
	LOCATION OF PROPOSED 6' HIGH CHAIN LINK FENCE
	EXISTING CHAIN LINK FENCE
	CLASS II WETLAND BOUNDARY
	ARCHAEOLOGICALLY SENSITIVE AREA LIMIT

	PROJECT NAME: HIGHGATE	PLOT DATE: 12/20/2007
	PROJECT NUMBER: AIR 04-3183	DRAWN BY: J. OAKMAN
	FILE NAME: CROSS SECTIONS.DGN	CHECKED BY: P. ENZIEN
	DESIGNED BY: P. ENZIEN	SHEET 20 OF 27
<b>CROSS SECTION SHEET 2</b>		

PROJECT: HIGHGATE  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 DATE: 1/18/2008  
 SHEET: 21 OF 27



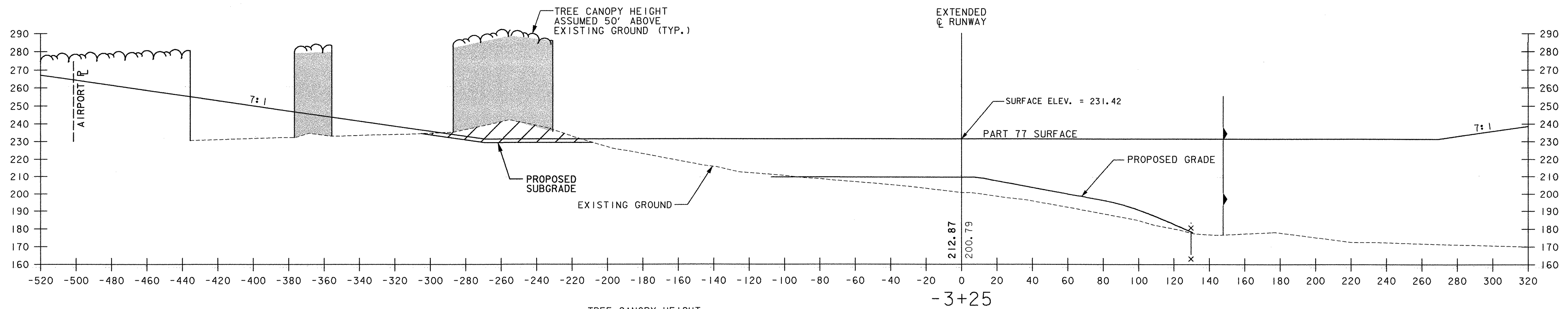
LEGEND	
	GROUND PENETRATION AREA (SOLID ROCK EXCAVATION)
	TREE CANOPY HEIGHT ASSUMED 50' ABOVE EXISTING GROUND (TYP.)
	TREE PENETRATION AREAS (CLEARING AND GRUBBING)
	LIMIT OF CLEARING AND GRUBBING
	LOCATION OF PROPOSED 6' HIGH CHAIN LINK FENCE
	EXISTING CHAIN LINK FENCE
	CLASS II WETLAND BOUNDARY
	ARCHAEOLOGICALLY SENSITIVE AREA LIMIT



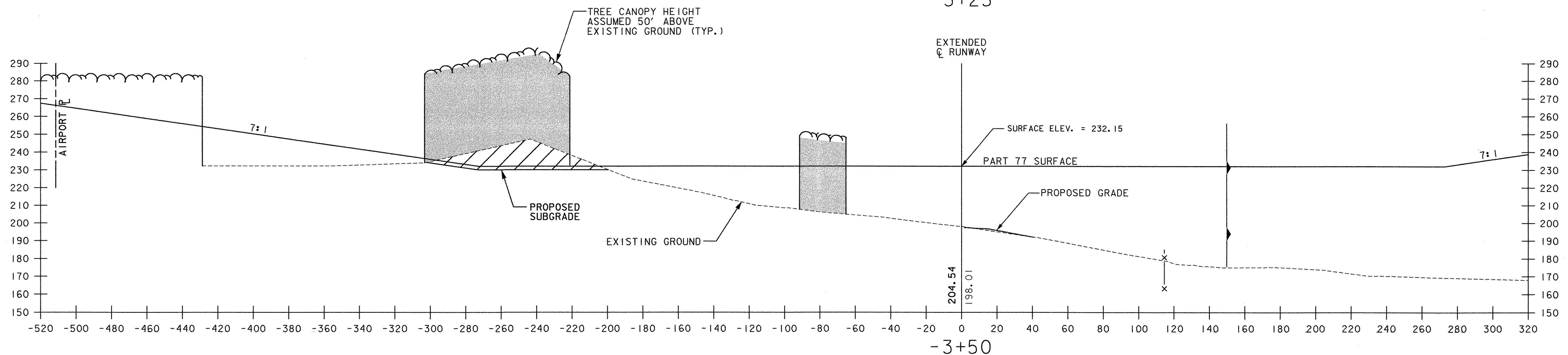
PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183  
 FILE NAME: CROSS SECTIONS.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIEN  
**CROSS SECTION SHEET 3**

PLOT DATE: 1/18/2008  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 SHEET 21 OF 27

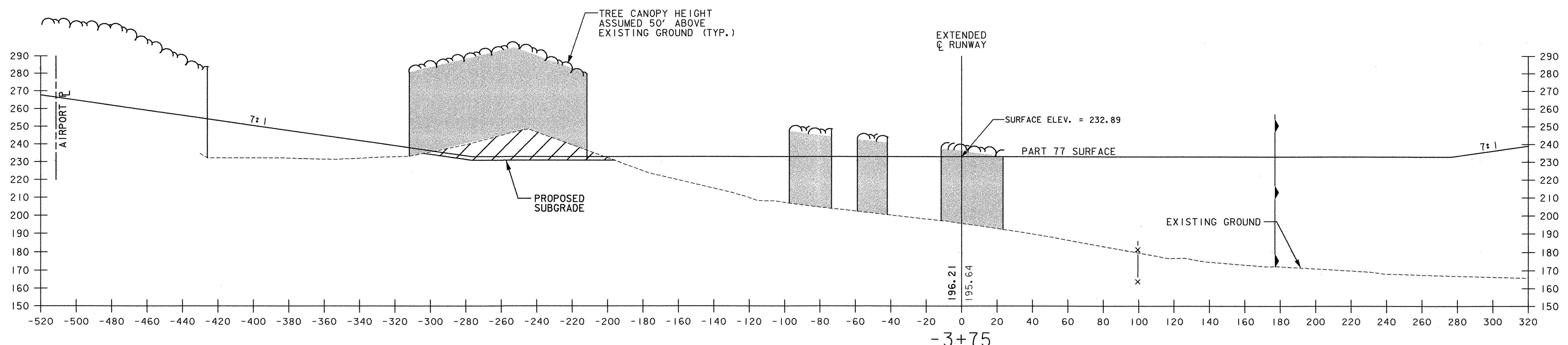
PROJECT INFORMATION:  
 PROJECT: AIRPORT RUNWAY EXTENSION  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 DATE: 12/20/2007



-3+25

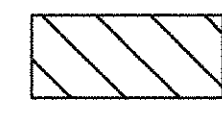
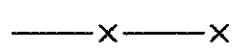

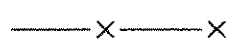
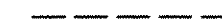




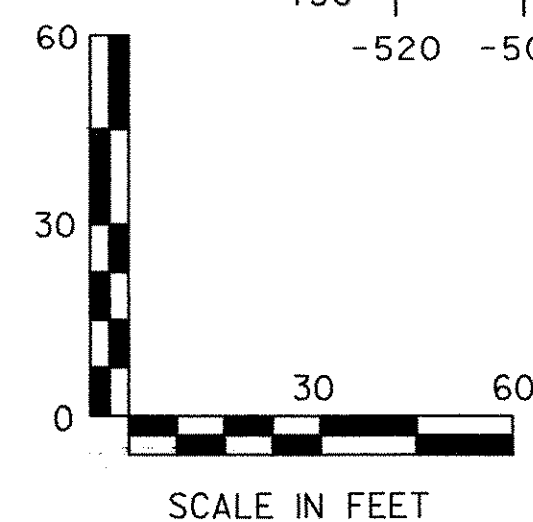
-3+50



-3+75

**LEGEND**

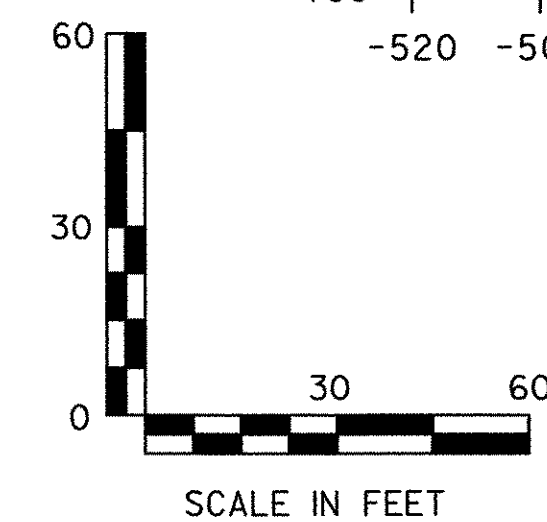
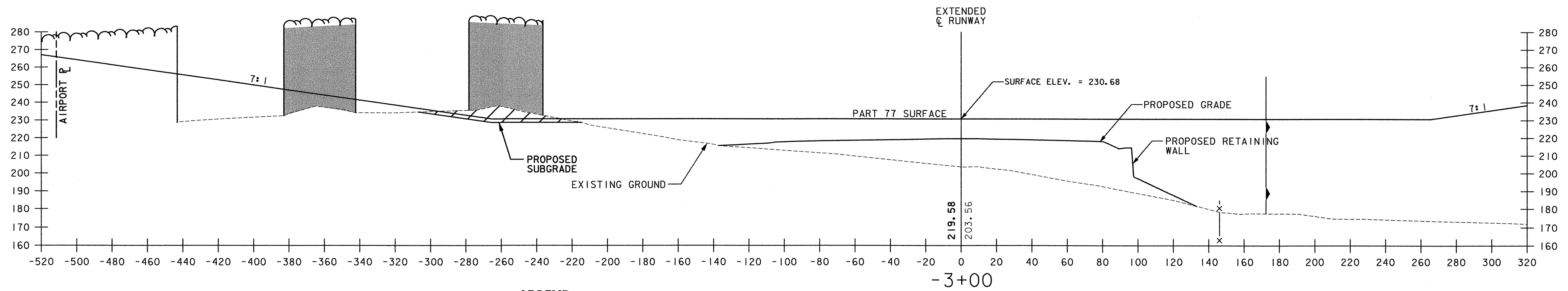
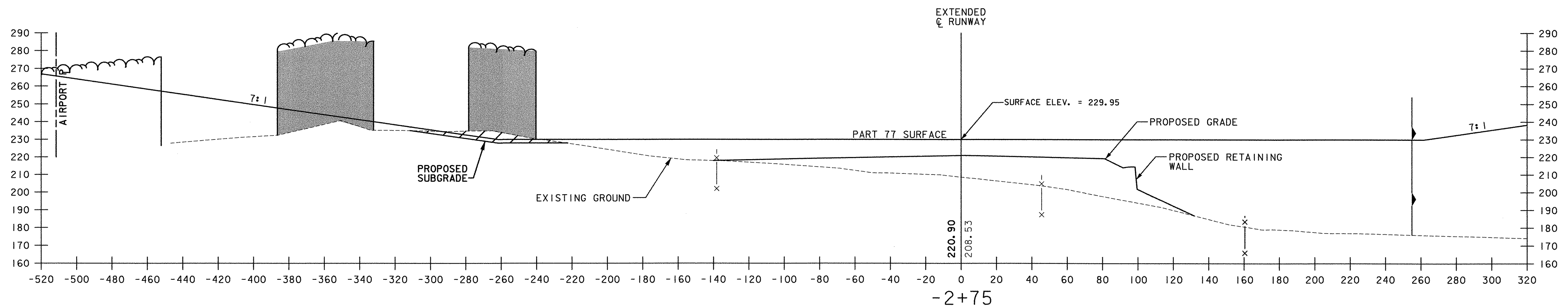
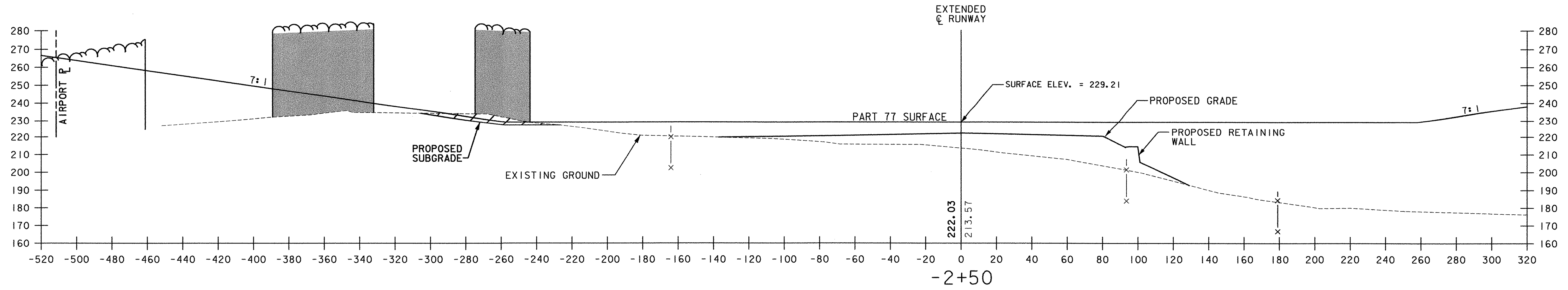
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|---|---|---|---|
|  | GROUND PENETRATION AREA (SOLID ROCK EXCAVATION) |  | LOCATION OF PROPOSED 6' HIGH CHAIN LINK FENCE |
|  | TREE PENETRATION AREAS (CLEARING AND GRUBBING)  |  | EXISTING CHAIN LINK FENCE                     |
|  | LIMIT OF CLEARING AND GRUBBING                  |  | CLASS II WETLAND BOUNDARY                     |
|   |   |  | ARCHAEOLOGICALLY SENSITIVE AREA LIMIT         |



PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183  
 FILE NAME: CROSS SECTIONS.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIEN  
**CROSS SECTION SHEET 4**

PLOT DATE: 12/20/2007  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 SHEET 22 OF 27

PROJECT: HIGHGATE AIRPORT  
 DRAWN BY: J. OAKMAN  
 DATE: 12/20/2007  
 SHEET: 23 OF 27



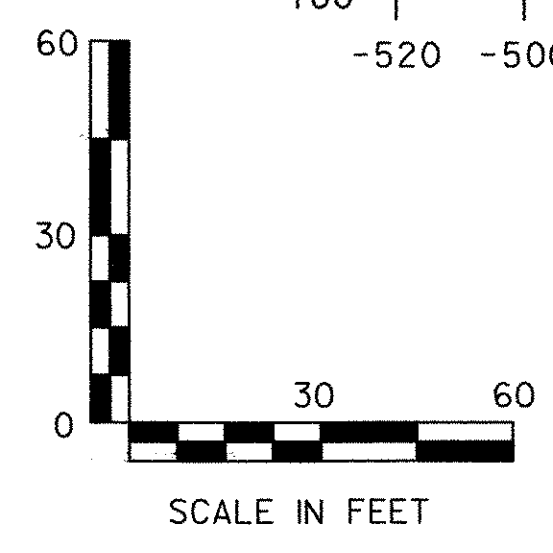
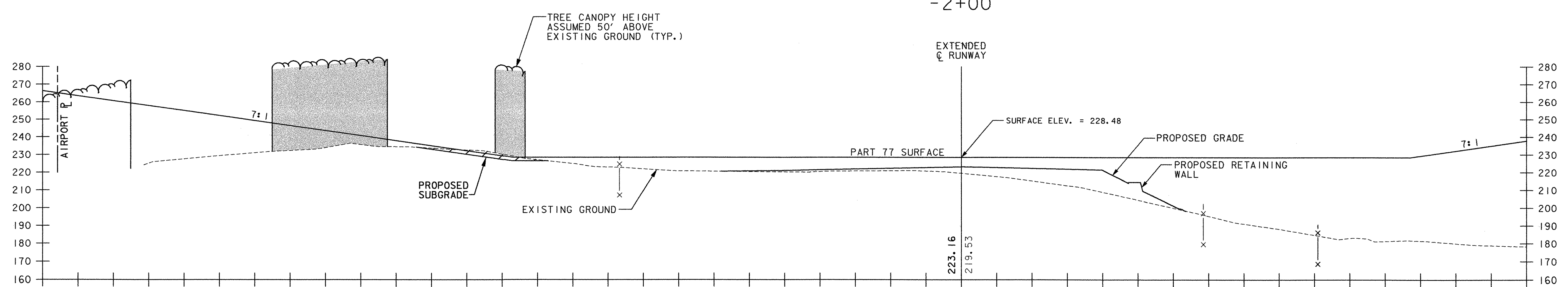
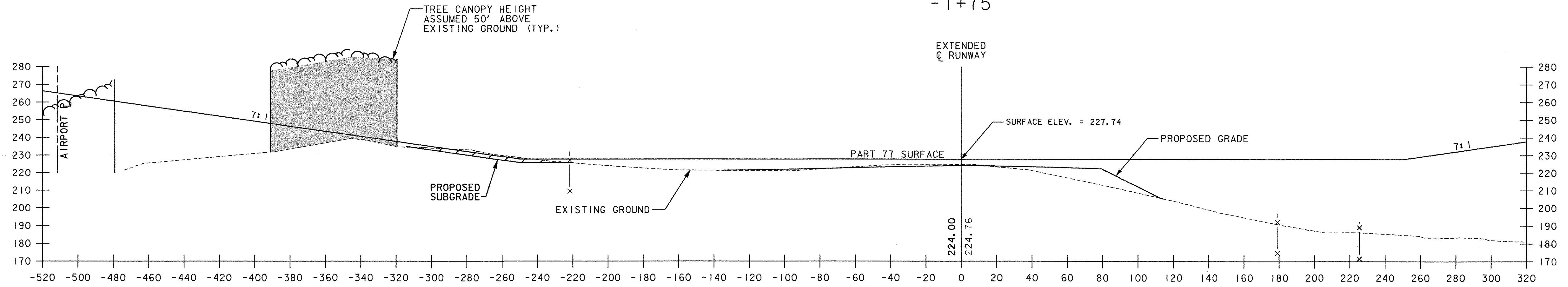
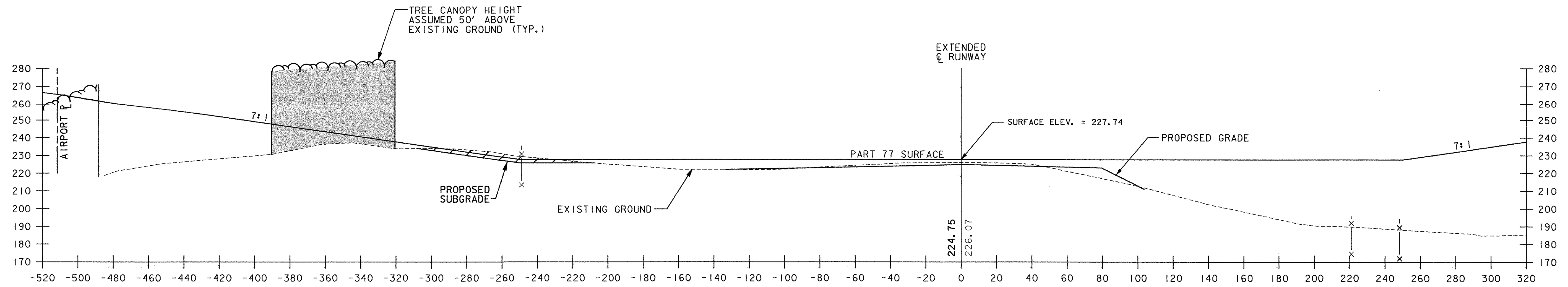
LEGEND	
	GROUND PENETRATION AREA (SOLID ROCK EXCAVATION)
	TREE PENETRATION AREAS (CLEARING AND GRUBBING)
	LIMIT OF CLEARING AND GRUBBING
	LOCATION OF PROPOSED 6' HIGH CHAIN LINK FENCE
	EXISTING CHAIN LINK FENCE
	CLASS II WETLAND BOUNDARY
	ARCHAEOLOGICALLY SENSITIVE AREA LIMIT



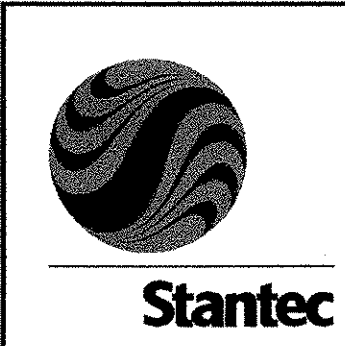
PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183  
 FILE NAME: CROSS SECTIONS.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIAN  
**CROSS SECTION SHEET 5**

PLOT DATE: 12/20/2007  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIAN  
 SHEET 23 OF 27

Project Name: HIGHGATE  
 Project Number: AIR 04-3183  
 File Name: CROSS SECTIONS.DGN  
 Plot Date: 12/20/2007  
 Project Leader: M. CHURCHILL  
 Designer: P. ENZIE  
 Drawn By: J. OAKMAN  
 Checked By: P. ENZIE  
 Sheet 24 of 27



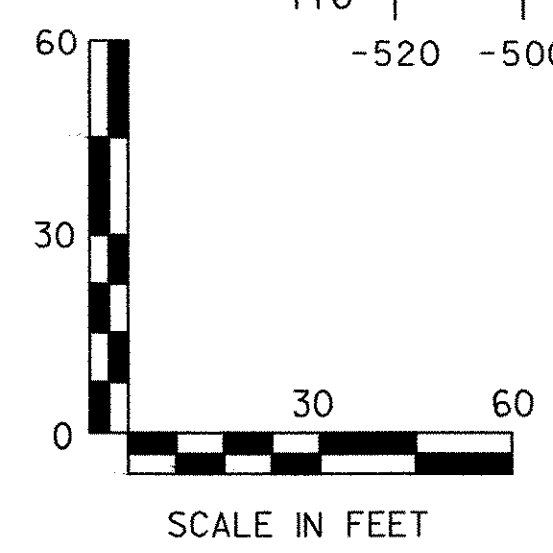
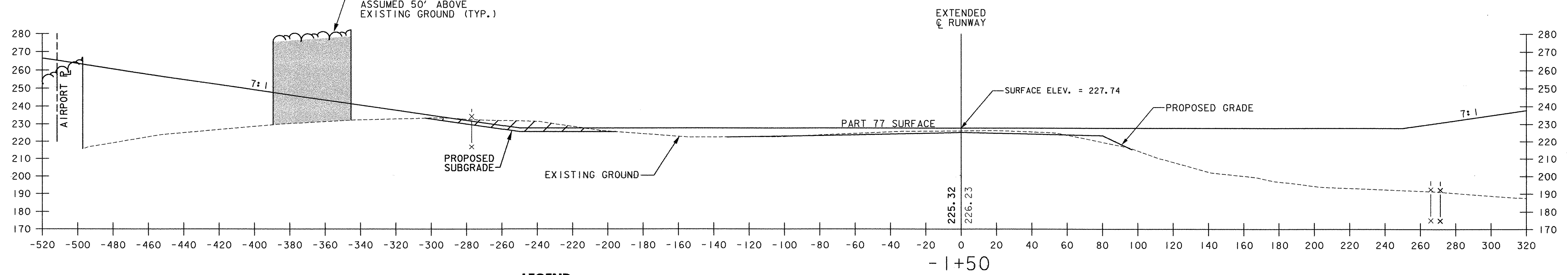
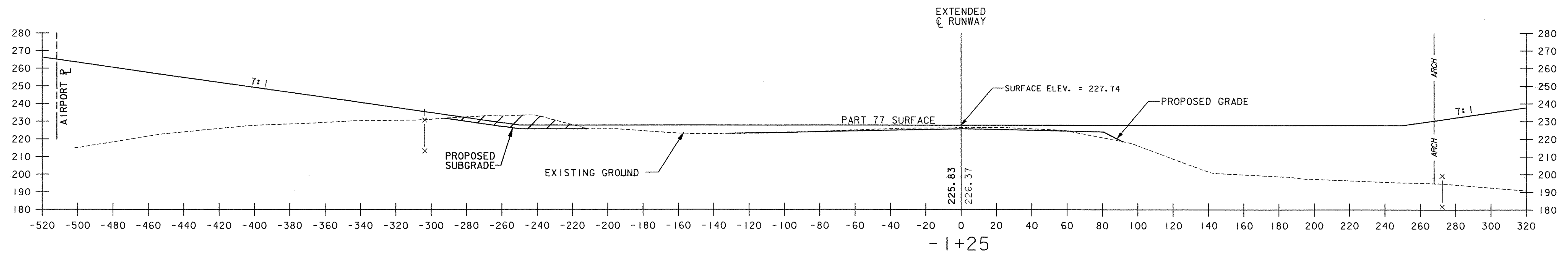
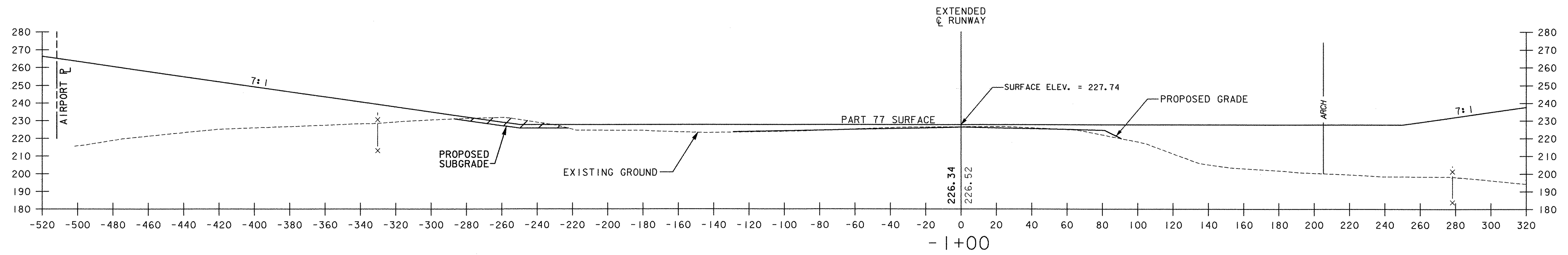
LEGEND	
	GROUND PENETRATION AREA (SOLID ROCK EXCAVATION)
	TREE PENETRATION AREAS (CLEARING AND GRUBBING)
	LIMIT OF CLEARING AND GRUBBING
	LOCATION OF PROPOSED 6' HIGH CHAIN LINK FENCE
	EXISTING CHAIN LINK FENCE
	CLASS II WETLAND BOUNDARY
	ARCHAEOLOGICALLY SENSITIVE AREA LIMIT



PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183  
 FILE NAME: CROSS SECTIONS.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIE  
**CROSS SECTION SHEET 6**

PLOT DATE: 12/20/2007  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIE  
 SHEET 24 OF 27

PROJECT: HIGHGATE  
 SHEET: AIR 04-3183  
 DATE: 12/20/2007  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 DESIGNED BY: P. ENZIEN  
 FILE NAME: CROSS SECTIONS.DGN



**LEGEND**

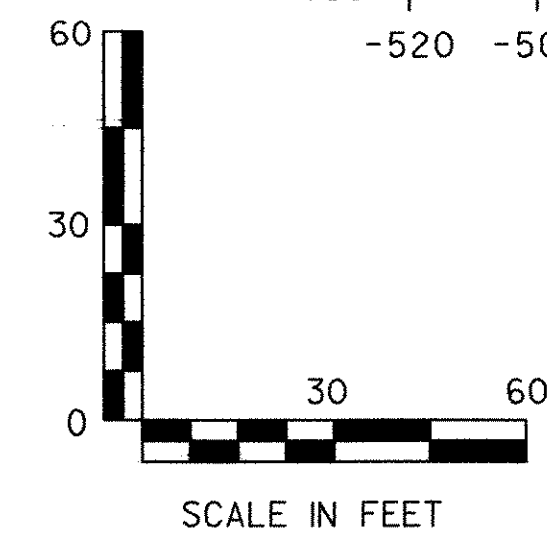
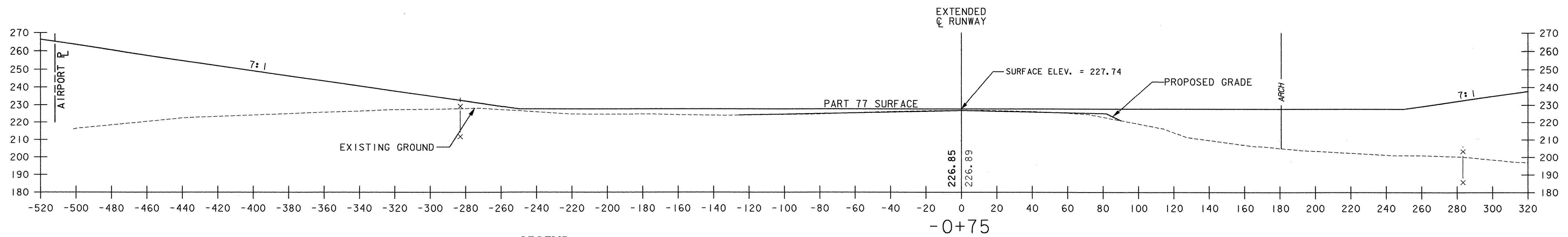
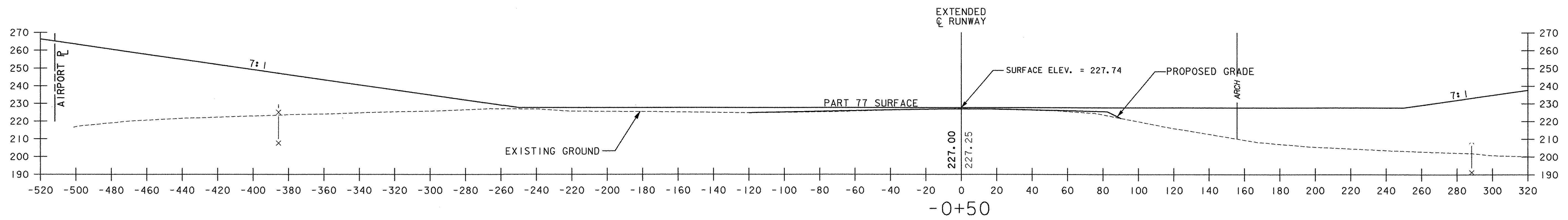
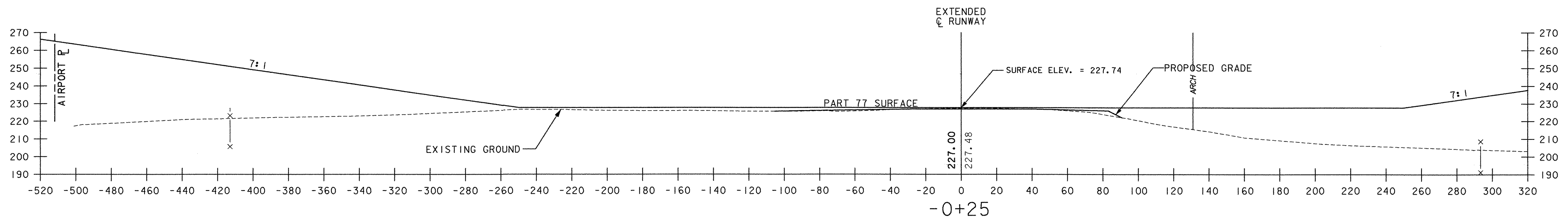
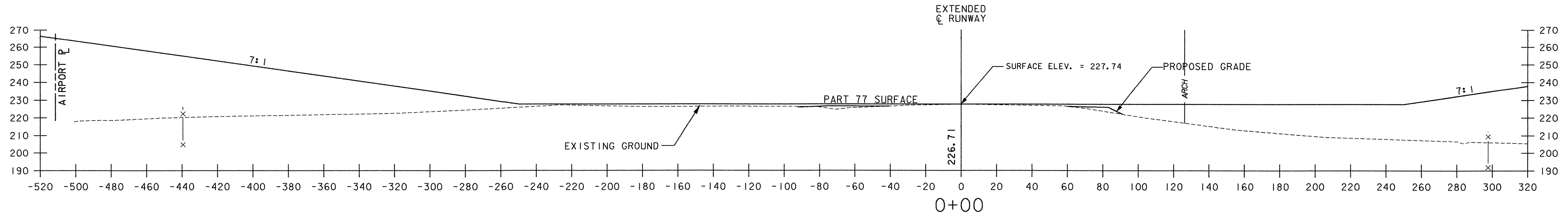
	GROUND PENETRATION AREA (SOLID ROCK EXCAVATION)		LOCATION OF PROPOSED 6' HIGH CHAIN LINK FENCE
	TREE PENETRATION AREAS (CLEARING AND GRUBBING)		EXISTING CHAIN LINK FENCE
	LIMIT OF CLEARING AND GRUBBING		CLASS II WETLAND BOUNDARY
			ARCHAEOLOGICALLY SENSITIVE AREA LIMIT



PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183  
 FILE NAME: CROSS SECTIONS.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIEN  
**CROSS SECTION SHEET 7**  
 PLOT DATE: 12/20/2007  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 SHEET 25 OF 27

Project: Highgate  
 Date: 12/20/2007  
 Drawn by: J. Oakman  
 Checked by: P. Enzien  
 Scale: 1" = 30'

Project: Highgate  
 Date: 12/20/2007  
 Drawn by: J. Oakman  
 Checked by: P. Enzien  
 Scale: 1" = 30'



LEGEND	
	GROUND PENETRATION AREA (SOLID ROCK EXCAVATION)
	TREE PENETRATION AREAS (CLEARING AND GRUBBING)
	LIMIT OF CLEARING AND GRUBBING
	LOCATION OF PROPOSED 6' HIGH CHAIN LINK FENCE
	EXISTING CHAIN LINK FENCE
	CLASS II WETLAND BOUNDARY
	ARCHAEOLOGICALLY SENSITIVE AREA LIMIT



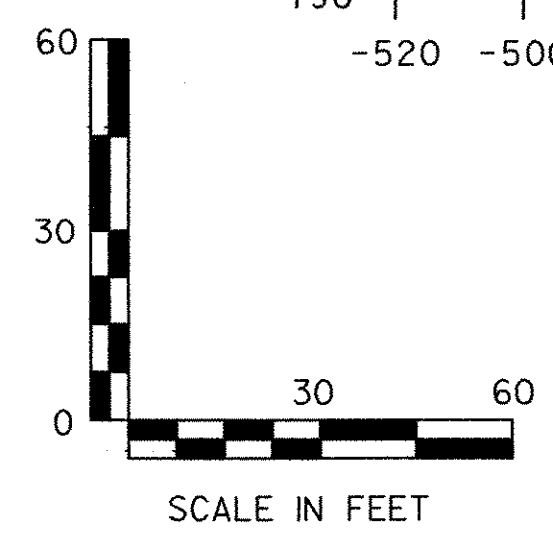
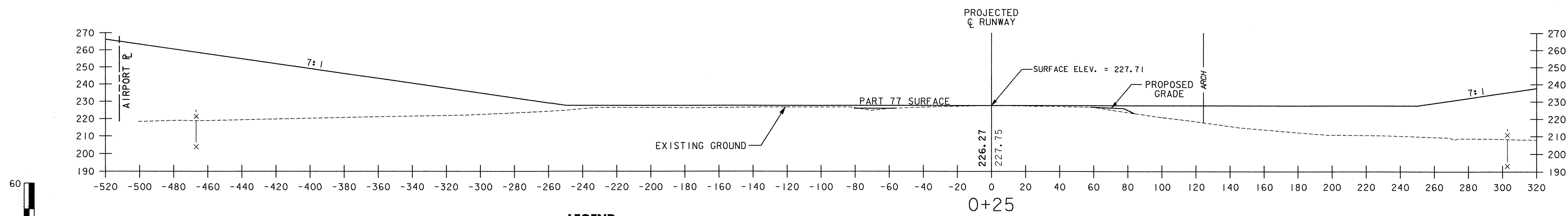
PROJECT NAME: HIGHGATE  
 PROJECT NUMBER: AIR 04-3183

FILE NAME: CROSS SECTIONS.DGN  
 PROJECT LEADER: M. CHURCHILL  
 DESIGNED BY: P. ENZIEN  
**CROSS SECTION SHEET 8**

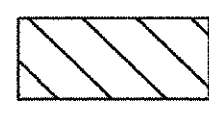
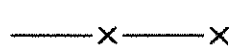
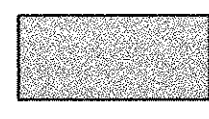
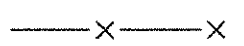
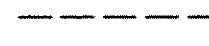


PLOT DATE: 12/20/2007  
 DRAWN BY: J. OAKMAN  
 CHECKED BY: P. ENZIEN  
 SHEET 26 OF 27

NOTED: REVISIONS  
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REVISIONS  
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**LEGEND**

	GROUND PENETRATION AREA (SOLID ROCK EXCAVATION)		LOCATION OF PROPOSED 6' HIGH CHAIN LINK FENCE
	TREE PENETRATION AREAS (CLEARING AND GRUBBING)		EXISTING CHAIN LINK FENCE
	LIMIT OF CLEARING AND GRUBBING		CLASS II WETLAND BOUNDARY
			ARCHAEOLOGICALLY SENSITIVE AREA LIMIT



PROJECT NAME: HIGHGATE		PLOT DATE: 12/20/2007	
PROJECT NUMBER: AIR 04-3183		DRAWN BY: J. OAKMAN	
FILE NAME: CROSS SECTIONS.DGN	PROJECT LEADER: M. CHURCHILL	DESIGNED BY: P. ENZIEN	CHECKED BY: P. ENZIEN
<b>CROSS SECTION SHEET 9</b>		SHEET 27 OF 27	