

1. Design Building Code

International Building Code, 2012 Edition

2. Geotechnical Report

Firm: Alpha Testing, Inc.
 Report No. G140083 Dated: April 25, 2014
 Allowable Bearing Capacity 1500 psf

3. Geotechnical Criteria

Bearing on Stiff Natural Undisturbed Clayey Soils or Compacted and Tested Soils
 Allowable Bearing = 1500 psf, min.
 Friction Angle between Base of Wall and Soil = 17 deg

Backfill Soil Parameters:
 Backfill Soil - Natural Clays or Fill Soils
 Backfill Angle of Internal Friction PHI = 26 deg

Backfill Soil - Gravel or Stone
 Backfill Angle of Internal Friction PHI = 35 deg

Base Soil Parameters:
 Soil at Toe - Natural, Undisturbed or Fill Soils
 Angle of Internal Friction PHI = 26 deg

The use of heavy equipment within 3'-0" of the wall could damage the wall and should be avoided.

Locate base of walls on undisturbed or properly compacted soil

4. Materials:

Rock for Wall Construction:
 Average density of masonry stone wall varies from 135 pcf to 145 pcf. Size of stone within wall varies from 4" to 18". Crushed concrete is acceptable to be used in the wall construction in place of natural stone. Face stone to be coordinated between contractor and owner/developer.

Drainage Zone Materials:
 Drainage zone materials may be composed of clean gravel or stone ranging from 1" to 5". Crushed concrete is acceptable provided it is clean and generally free of dust or other deleterious materials. Drainage zone shall be wrapped with filter fabric. Filter fabric shall be Mirafi 140N or approved equal.

Portland Cement Mortar for Retaining Wall Construction.
 The portland cement mortar used for construction of the masonry stone retaining walls shall be provided with the following proportions per cubic yard of concrete. The portland cement mortar supplier shall provide "batch tickets" clearly indicating that the appropriate amount of materials are provided in each concrete mixer truck load. The batch tickets shall clearly indicate the amount batched, the date, the project name and shall be provided to Falkofske Engineering, Inc. for review, documentation, and file.

Contents	Amount per cubic yard
Type 1 Portland cement:	414 lbs
Type F Fly Ash	103 lbs
Fine Aggregate (sand):	2987 lbs
Sika-Air	2 oz
Plastiment ES	20.6 oz
Sikament 686	15.5 oz
Potable Water	258 lbs

Concrete retarders may be used at the discretion of the masonry wall contractor. A greater amount of retarder is typically used during hot periods and a less amount of retarder is typically used during cool weather.

Please note that the above proportions will provide a portland cement mortar with a compressive strength of about $f_c = 2000$ psi. Falkofske Engineering, Inc. does not require any concrete testing provided the above proportions are verified by way of the "batch tickets".

5. Construction Reviews

Falkofske Engineering, Inc. shall be called for construction review of masonry wall.

6. Retaining Wall Design Constraints

Retaining walls should not have solid fence placed on top of wall other than that shown on these plans. Retaining walls shall not have additional surcharge placed above wall other than that shown on these plans. Retaining walls shall not have slope at base or top of wall that exceed that which is shown on these plans. The retaining walls noted above require special design.

Minor variations in the construction of the retaining walls from these documents may be accepted at the discretion of the design engineer.

NO.	DATE	BY	REVISION

FALCOFSKE ENGINEERING, INC.
 Structural Engineering Consultants
 Texas Registered Engineering Firm: # F-4038
 722 North Fielder Road
 Arlington, Texas 76012
 (817) 261-8300

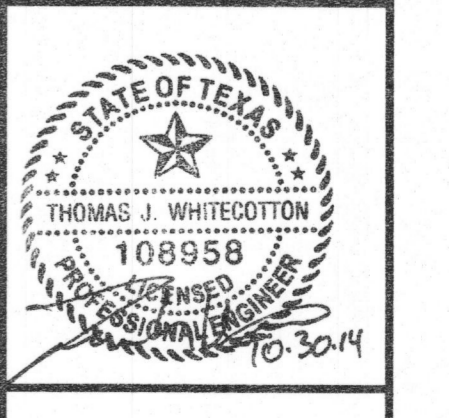
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MASONRY RETAINING WALLS - NOTES & STANDARD DETAILS
 BREZY HILL PHASE 3
 OFF BREZY HILL ROAD
 ROCKWALL, TEXAS

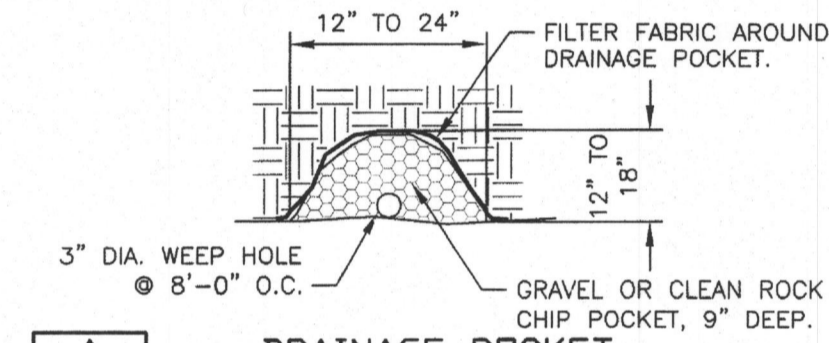
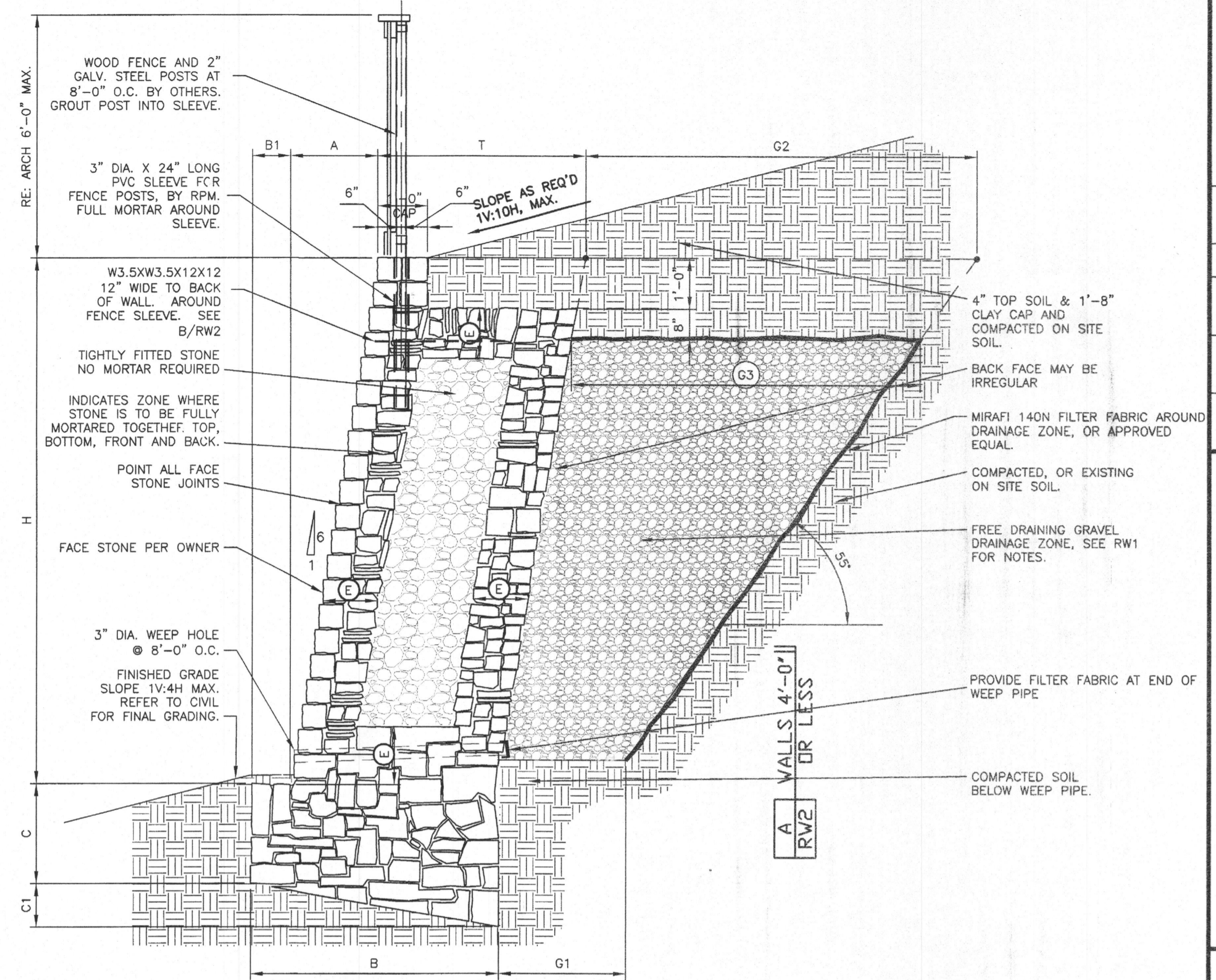
RPM xCONSTRUCTION, LLC
 PLANO, TEXAS

RELEASED FOR CONSTRUCTION
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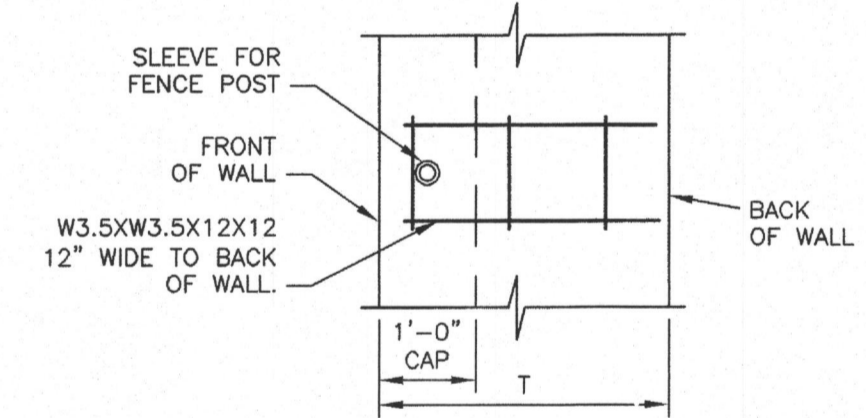
CITY _____ DATE _____



JOB NO. 284.14
 RW1



A DRAINAGE POCKET
RW2 WALLS 4'-0" OR LESS



B ELEVATION OF WELDED WIRE FABRIC FOR FENCE SLEEVE
RW2

MASONRY WALL SCHEDULE
1500 pcf - BEARING CAPACITY (STIFF NATURAL UNDISTURBED SOILS OR COMPACTED AND TESTED SOILS SEE GENERAL NOTES SHEET RW1)

WALL HEIGHT H	BASE WIDTH B	TOE B1	BASE DEPTH (TOE) C1	BASE DEPTH (HEEL) C2	BATTER A	THICKNESS OF WALL T	GRAVEL (TOP) G1	GRAVEL (BOT) G2	GRAVEL G3	BEARING CAPACITY
1'-0"	2'-1"	0'-5"	1'-0"	0'-5"	0'-2"	1'-8"	SEE A/RW2	SEE A/RW2	SEE A/RW2	1500 pcf
2'-0"	2'-1"	0'-5"	1'-0"	0'-5"	0'-4"	1'-8"	SEE A/RW2	SEE A/RW2	SEE A/RW2	
3'-0"	2'-1"	0'-5"	1'-0"	0'-4"	0'-6"	1'-8"	SEE A/RW2	SEE A/RW2	SEE A/RW2	
4'-0"	2'-3"	0'-5"	1'-0"	0'-5"	0'-8"	1'-10"	SEE A/RW2	SEE A/RW2	SEE A/RW2	
5'-0"	2'-3"	0'-5"	1'-3"	0'-6"	0'-10"	1'-10"	1'-8"	3'-11"	3'-0"	
6'-0"	2'-8"	0'-6"	1'-3"	0'-6"	1'-0"	0'-10"	2'-2"	1'-8"	4'-7"	

WALL DESIGN CRITERIA

BEARING C_u	SLOPE TOP β	SLOPE BOT β'	ACTIVE PRESSURE WALLS <4' ϕ_a	ACTIVE PRESSURE WALLS >4' ϕ_a	PASSIVE PRESSURE ϕ_p	FRICITION ANGLE BASE δ	SLOPE OF BACK OF WALL α	SURCHARGE q	WINDLOAD WL
1500PSF	5.71 deg	14 deg	26 deg	35 deg	26 deg	17 deg	99.46 deg	0 paf	15 paf

USE THIS SCHEDULE FOR 1/RW2

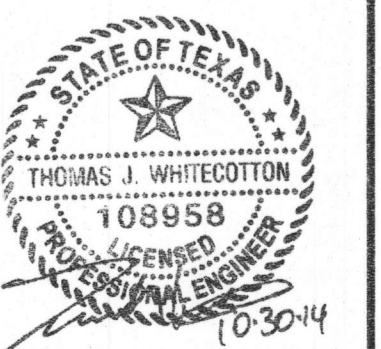
1 TYPICAL WALL SECTION - 1V:10H MAX SLOPE ABOVE WALL
RW2 BEARING IN CLAYEY SOILS - WITH 6'-0" WOOD FENCE IN CAP OF WALL

DATE	BY	DES.	DRN.	CHK.	NO.	DATE	REVISION
10-30-14	TJW						
10-30-14	TJW						
10-30-14	AMB						

FALKOFSKE ENGINEERING, INC.
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MASONRY RETAINING WALLS
BREEZY HILL PHASE 3
OFF BREEZY HILL ROAD
ROCKWALL, TEXAS
RPM xCONSTRUCTION, LLC
PLANO, TEXAS



RELEASED FOR CONSTRUCTION
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JOB NO. 284.14
RW2