LANGAN

Memorandum

300 Kimball Drive Fourth Floor Parsippany, NJ 07054 T: 973.560.4900 F: 973.560.4901

To: Vincent Griffith / Elion

From: Victoria Rhodes
Ronald Boyer, P.E.

Info: Michael Stellino / Elion
Kevin Rooney / Alston
Chris Crane / Dynamic
Gregg Woodruff, Maaz Mansoor / Langan

Date: 20 May 2020

Re: Basin Flood Testing Results
Proposed Warehouse Development
Franklin Township, Somerset County, New Jersey
Langan Project No.: 100781401

This memorandum presents the results from our basin flood testing performed within the two proposed stormwater management basin locations and at accessible locations throughout the site for the Proposed Warehouse Development on Veronica Avenue in Somerset, New Jersey. A site location map is provided as Figure 1. The basin flood testing was performed following procedures provided in the NJ Stormwater BMP Manual (September 2009).

All elevations given in this memorandum are referenced to the North American Vertical Datum of 1988 (NAVD88), unless otherwise noted.

Basin Flooding Tests

Thirty-one basin flood tests, identified as TP-102 through TP-114 and TP-201 through TP-218, were performed at the site between 4 May and 15 May 2020. Tests were performed within the two proposed stormwater management basin areas and then within accessible areas throughout the site.

The test pits were excavated by Kelly Construction using a John Deere 330C LC track-mounted backhoe. The locations of the test pit excavations were selected by the project civil engineer. A profile test pit was excavated at each test location prior to performing each basin flood test. The depths of the profile pits generally ranged from approximately 7 feet to 15 feet, which was about 8 feet below the bottom of basin in proposed stormwater management basin areas, or at refusal in rock if encountered at a higher elevation. Our field engineer performed full-time engineering observation of each test pit and maintained a log for each investigation location, noting the soil and rock classifications and depths, observed mottling, and groundwater including any localized seepage. A second test pit was excavated adjacent to the initial profile pit at each location for the purpose of basin flood testing. The depths at which the basin flood tests were performed were determined by the project civil engineer after reviewing conditions in the corresponding profile test pits. Upon completion of each profile test pit and basin flood test, all excavations were backfilled with excavated soils, lightly compacted using the backhoe bucket.

The locations of the tests are shown in Figure 2. The logs of the profile test pits and selected photographs are provided in Appendix A and Appendix B, respectively. The detailed results of the basin flood tests are provided in Tables 1 through 3 and a brief summary of the tests and results is provided below.

Stormwater Management Basin 1 Flood Tests

Basin 1 is located at the southern portion of the site. The proposed bottom of the basin is at approximate el 98.9 (or el 100 NGVD29) in the eastern and western portions and el 100.9 (or el 102 NGVD29) in the center. Basin flood tests TP-102 through TP-111 were performed within the proposed Basin 1 location. The basin flood tests were performed at excavated depths ranging from approximately 4.5 ft to 9 ft below surface grade, corresponding to test elevations of approximately el 98.9 to el 102.9, and were typically performed in the weathered shale rock or more competent shale rock.

A profile test pit and several shallower test pits were excavated near the proposed TP-101 location. Perched water between 3 ft and 5 ft below surface grade was encountered in all excavations. No basin flood test was conducted at this location.

The majority of the tests determined the limiting zone to be massive rock substratum. Two tests in the center of the basin determined the limiting stratum to be fractured rock. Detailed results are provided in Table 1.

Stormwater Management Basin 2 Flood Tests

Basin 2 is located at the southeastern portion of the site. The proposed bottom of the basin is at el 97.9 (or el 99 NGVD29). Basin flood tests TP-112 through TP-114 were performed within Basin 2 location. The basin flood tests were performed at excavated depths ranging from approximately 2.5 to 3 ft below surface grade, corresponding to test elevations of approximately el 94.4 and el 96.4, and were typically performed in the weathered shale rock or more competent shale rock.

One test determined the limiting zone to be massive rock substratum. Two tests determined the limiting stratum to be fractured rock. Detailed results are provided in Table 2.

Additional Site Basin Flood Tests

Eighteen additional basin flood tests identified as TP-201 through TP-218 were performed at accessible locations throughout the site. The tests were performed at excavated depths ranging from approximately 4 to 10.5 ft below surface grade, corresponding to test elevations of approximately el 94.9 and el 108.4, and were typically performed in the weathered shale rock or more competent shale rock.

All tests in site areas determined the limiting zone to be massive rock substratum. Detailed results are provided in Table 3.

Hydraulic Soil Group

Based on the information provided in the NRCS Soil Survey, the default hydraulic soil group (HSG) for the site is HSG C. Based on the proposed bottom of basin elevations, the typically shallow depth of restrictive features (rock and seasonal high water table as determined by observation of mottling), and the results of the basin flood tests, we recommend a HSG classification for this site of HSG D, per Table 1 of the NJ Stormwater BMP Manual Appendix E.

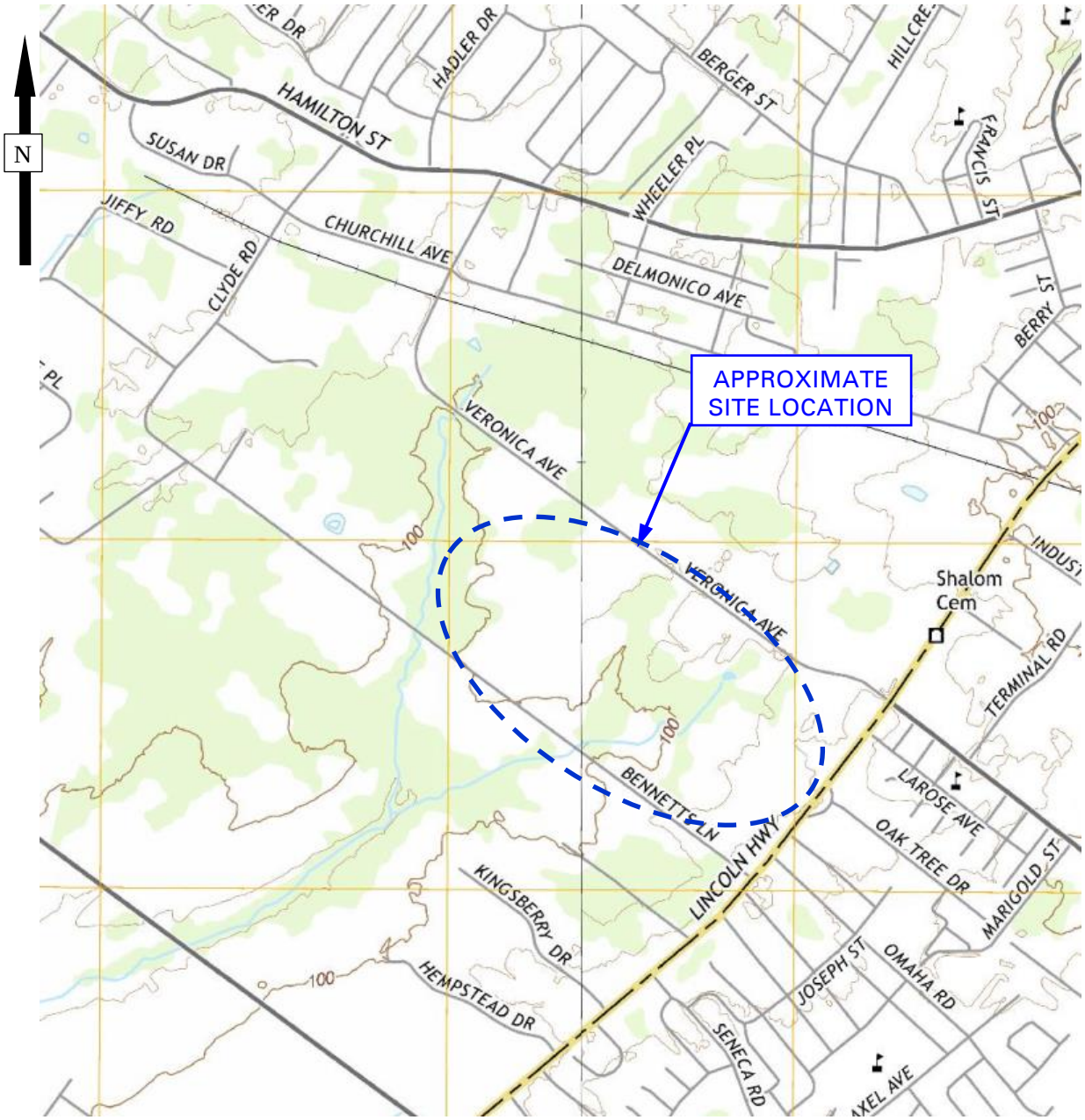
Closure

This memorandum provided the results from our basin flood testing performed within the two proposed stormwater management basin locations and at accessible site locations for the Proposed Warehouse Development. The information provided herein should be evaluated and utilized by the civil engineer for the proposed development as a component of the stormwater management design for the site.

If you have any questions, please call.

\\langan.com\data\PAR\data4\100781401\Project Data_Discipline\Geotechnical\Reports\2020 Basin Flood Testing\2020-05-06 Basin Flood Memo.docx

FIGURES



Sources: New Brunswick 2014 Topographic Map and Monmouth Junction 2014 Topographic Map

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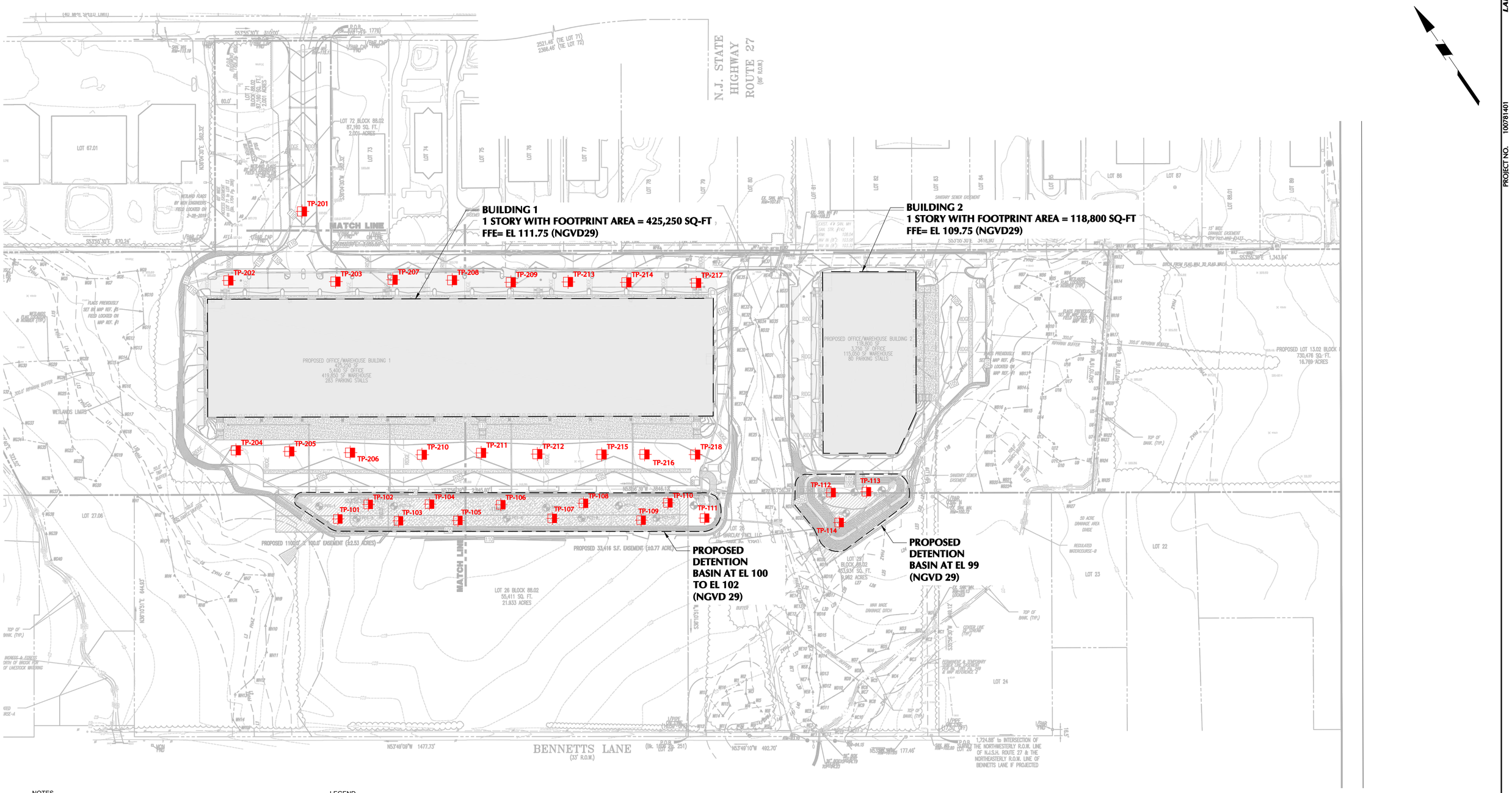
PROPOSED WAREHOUSE DEVELOPMENT

SITE LOCATION MAP

FRANKLIN TOWNSHIP **NEW JERSEY**

PROJECT NO.	SCALE	DATE	FIGURE
100781401	N.T.S.	05/15/2020	1

\\langan.com\data\PAR\data4\100781401\Project Data_Discipline\Geotechnical\Reports\2020 Basin Flood Testing\Figures\Figure 1 - Site Location Map.docx



NOTES

1. BASE PLAN TAKEN FROM DRAWING TITLED "OVERALL GRADING PLAN" DATED 3/10/2020 PREPARED BY DYNAMIC ENGINEERING.
2. PROPOSED BUILDING AND DETENTION BASIN INFORMATION AND LIMITS TAKEN FROM DRAWING TITLED "OVERALL GRADING PLAN" DATED 3/10/2020 PREPARED BY DYNAMIC ENGINEERING.
3. ELEVATIONS ARE REFERENCED TO THE ABOVE-REFERENCED DRAWING, WHICH REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29)
4. BASIN FLOODING TESTS TP-101 THROUGH TP-114 AND TP-201 THROUGH TP-218 WERE PERFORMED BY A LANGAN REPRESENTATIVE BETWEEN 4 MAY AND 15 MAY 2020.
5. ALL LOCATIONS, ELEVATIONS, DIMENSIONS AND LIMITS ARE APPROXIMATE AND SHOULD BE VERIFIED IN FIELD.

LEGEND

TP-101 — APPROXIMATE LOCATION OF MAY 2020 BASIN FLOODING TEST

100 0 50 100
SCALE IN FEET

LANGAN
Langan Engineering and Environmental Services, Inc.
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project: PROPOSED WAREHOUSE DEVELOPMENT
FRANKLIN TOWNSHIP
SOMERSET COUNTY NEW JERSEY

Drawing Title: LOCATION PLAN

Project No. 100781401
Date 5/18/2020
Drawn By AC
Checked By LY

Figure 2

Sheet 2 of 9

LANGAN PROJECT NO. 100781401

Filename: \\langan.com\data\PAR\data4\100781401\Project Data\CAD\01\SheetFiles\GEOTECH\100781401-BL101-0105-2020-05-18 BFTs.dwg Date: 5/20/2020 Time: 12:57 User: vrhodes Style Table: Langan.stb Layout: ARCHF-SITE PLAN

TABLES

Basin Flood Testing
5/4/2020 to 5/15/2020
Franklin Township
Somerset, NJ
Langan Project No.: 100781401

TABLE 1 - BASIN 1

	Approx. Test Elevation (NGVD29)	Date	Filled	Time	Duration (hrs)	Water Level Reading (inches)	Difference Between Readings (inches)	Determined Limiting Zone
TP-102	el 101	5/4/2020	x	11:00 AM	0	12	-	
		5/5/2020		7:30 AM	20.5	7.5	4.5	
		5/5/2020		11:00 AM	24	7	1	Massive Rock
TP-103	el 100	5/4/2020	x	11:45 AM	0	12	-	
		5/5/2020		7:30 AM	19.75	12	0	
		5/5/2020		11:45 AM	24	12	0	Massive Rock
TP-104	el 104	5/5/2020	x	12:30 PM	0	12		
		5/6/2020		7:30 AM	19	2	10	
		5/6/2020		12:30 PM	24	0	12	
		5/6/2020	x	2:30 PM	0	12		
		5/7/2020		2:30 PM	24	5	7	Massive Rock
TP-105	el 103.5	5/5/2020	x	11:30 AM	0	12		
		5/6/2020		7:30 AM	20	1	11	
		5/6/2020		11:30 AM	24	1	11	Massive Rock
TP-106	104.5	5/5/2020	x	3:45 PM	0	12		
		5/6/2020		7:30 AM	15.75	0	12	
		5/6/2020	x	8:00 AM	0	12		
		5/6/2020		12:30 PM	4.5	0	12	Fractured Rock
TP-107	el 102	5/5/2020	x	3:30 PM	0	12		
		5/5/2020		4:00 PM	2	0	12	
		5/5/2020	x	4:15 PM	0	12		
		5/6/2020		7:30 AM	15	0	12	Fractured Rock
TP-108	el 102	5/4/2020	x	4:45 PM	0	12	-	
		5/5/2020		7:30 AM	14.75	9	3	
		5/5/2020		4:45 PM	24.0	7	5	Massive Rock
TP-109	el 100	5/4/2020	x	2:45 PM	0	12	-	
		5/5/2020		7:30 AM	16.75	12	0	
		5/5/2020		2:45 PM	24	12	0	Massive Rock
TP-110	el 101	5/4/2020	x	3:45 PM	0	12	-	
		5/5/2020		7:30 AM	15.75	6	6	
		5/5/2020		3:45 PM	24	5	7	Massive Rock
TP-111	el 100	5/4/2020	x	4:15 PM	0.0	12	-	
		5/5/2020		7:30 AM	14.25	11.5	0.5	
		5/5/2020		4:15 PM	24	11.5	0.5	Massive Rock

Basin Flood Testing
5/4/2020 to 5/15/2020
Franklin Township
Somerset, NJ
Langan Project No.: 100781401

TABLE 2 - BASIN 2

	Approx. Test Elevation (NGVD29)	Date	Filled	Time	Duration (hrs)	Water Level Reading (inches)	Difference Between Readings (inches)	Determined Limiting Zone
TP-112	el 97	5/6/2020	x	1:30 PM	0	12		
		5/7/2020		1:30 PM	24	1	11	Massive Rock
TP-113	el 97.5	5/6/2020	x	2:00 PM	0	12		
		5/7/2020		10:00 AM	20	0	12	
		5/7/2020	x	1:00 PM	0	12		
		5/7/2020		5:00 PM	4	4	8	
		5/8/2020		7:00 AM	18	0	12	Fractured Rock
TP-114	el 95.5	5/6/2020	x	1:00 PM	0	12		
		5/7/2020		10:00 AM	21	0	12	
		5/7/2020	x	1:00 PM	0	12		
		5/7/2020		5:00 PM	4	0	12	Fractured Rock

Basin Flood Testing
5/4/2020 to 5/15/2020
Franklin Township
Somerset, NJ
Langan Project No.: 100781401

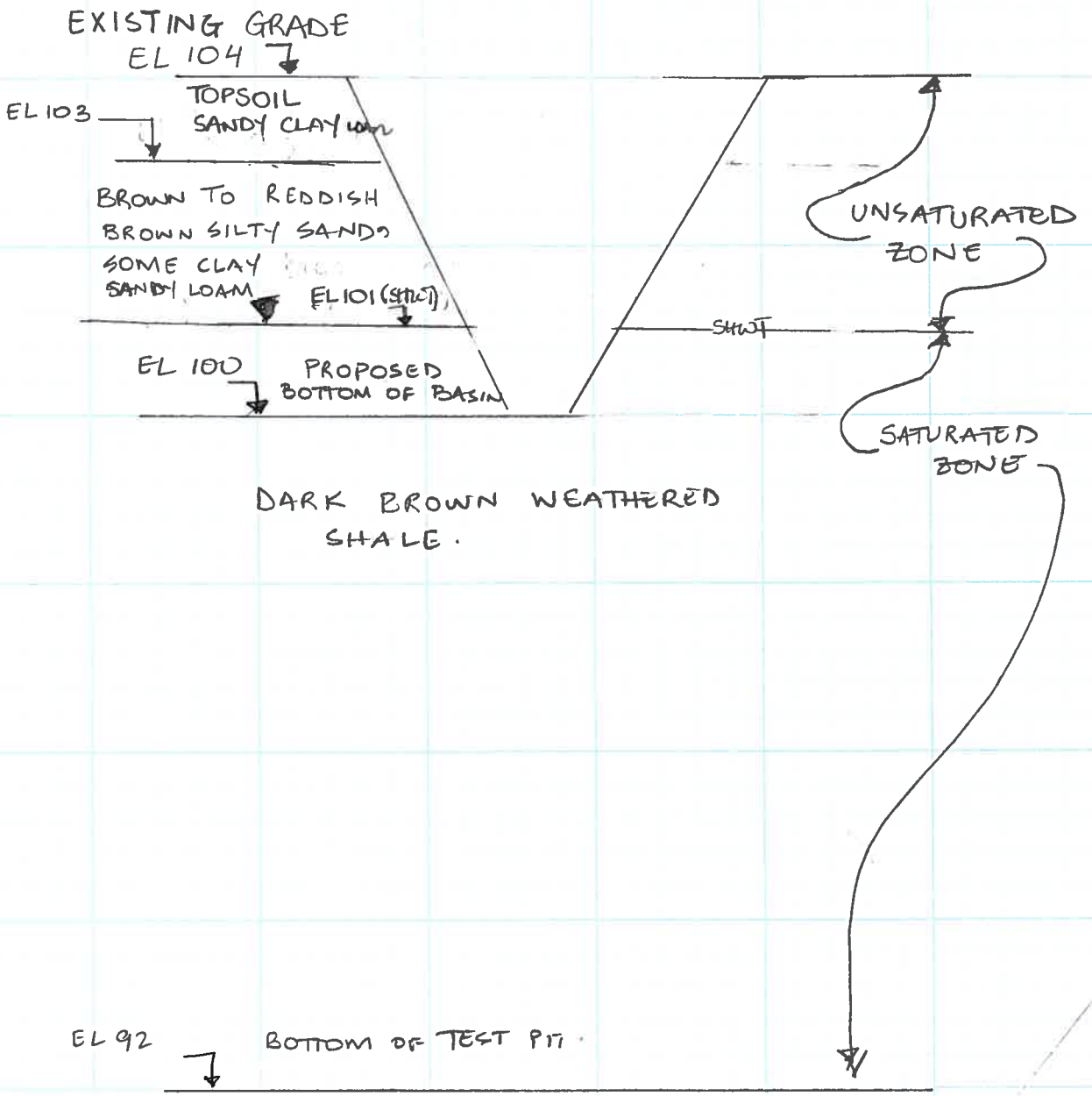
TABLE 3 - SITE BASIN FLOOD TESTS

	Approx. Test Elevation (NGVD29)	Date	Filled	Time	Duration (hrs)	Water Level Reading (inches)	Difference Between Readings (inches)	Determined Limiting Zone
TP-201	el 105.5	5/11/2020	x	11:30 AM	0	12		
		5/12/2020		11:30 AM	24	6	6	Massive Rock
TP-202	el 103.5	5/12/2020	x	9:15 AM	0	12		
		5/13/2020		9:15 AM	24	0	12	
		5/13/2020	x	9:30 AM	0	12		
		5/14/2020		9:30 AM	24	4	8	Massive Rock
TP-203	el 103	5/11/2020	x	11:00 AM	0	12		
		5/12/2020		11:00 AM	24	8	4	Massive Rock
TP-204	el 96	5/12/2020	x	10:00 AM	0	12		
		5/13/2020		10:00 AM	24	0	12	
		5/13/2020	x	10:30 AM	24	12		
		5/14/2020		8:30 AM	22	0	12	Massive Rock
TP-205	el 99	5/7/2020	x	10:00 AM	0	12		
		5/8/2020		10:00 AM	24	7	5	Massive Rock
TP-206	el 99	5/7/2020	x	11:30 AM	0	12		
		5/8/2020		11:30 AM	24	7	5	Massive Rock
TP-207	el 109.5	5/11/2020	x	10:15 AM	0	12		
		5/12/2020		10:15 AM	24	7	5	Massive Rock
TP-208	el 109.5	5/9/2020	x	3:30 PM	0	12		
		5/10/2020		3:30 PM	24	4	8	Massive Rock
TP-209	el 108.5	5/9/2020	x	12:30 PM	0	12		
		5/10/2020		12:30 PM	24	6.5	6	Massive Rock
TP-210	el 101.7	5/12/2020	x	11:00 AM	0	12		
		5/13/2020		11:00 AM	24	7	5	Massive Rock
TP-211	el 103	5/7/2020	x	2:00 PM	0	12		
		5/8/2020		2:00 PM	24	2	10	Massive Rock
TP-212	el 101.5	5/14/2020	x	12:30 PM	0	12		
		5/15/2020		12:30 PM	24	3	9	Massive Rock
TP-213	el 107	5/12/2020	x	2:00 PM	0	12		
		5/13/2020		11:00 AM	21	0	12	
		5/13/2020	x	11:30 AM	0	12		
		5/14/2020		11:30 AM	24	3	9	Massive Rock
TP-214	el 104	5/12/2020	x	1:30 PM	0	12		
		5/13/2020		1:30 PM	24	4	8	Massive Rock
TP-215	el 100	5/7/2020	x	3:00 PM	0	12		
		5/8/2020		3:00 PM	24	6	6	Massive Rock
TP-216	el 99	5/12/2020	x	12:00 PM	0	12		
		5/13/2020		12:00 PM	24	4	8	Massive Rock
TP-217	el 102	5/12/2020	x	1:00 PM	0	12		
		5/13/2020		1:00 PM	24	10	2	Massive Rock
TP-218	el 97	5/12/2020	x	12:30 PM	0	12		
		5/13/2020		12:30 PM	24	11	1	Massive Rock

APPENDIX A

TEST PIT LOGS

TP-101



NOTES:

1) Basin Flood test was not conducted at this location.

2) All elevations are referenced to NGVD29.

3) Proposed bottom of basin is at el 100.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/12/20 CKD. ____ DATE ____	PROJ. NO. 100291401 SHEET ____ OF ____

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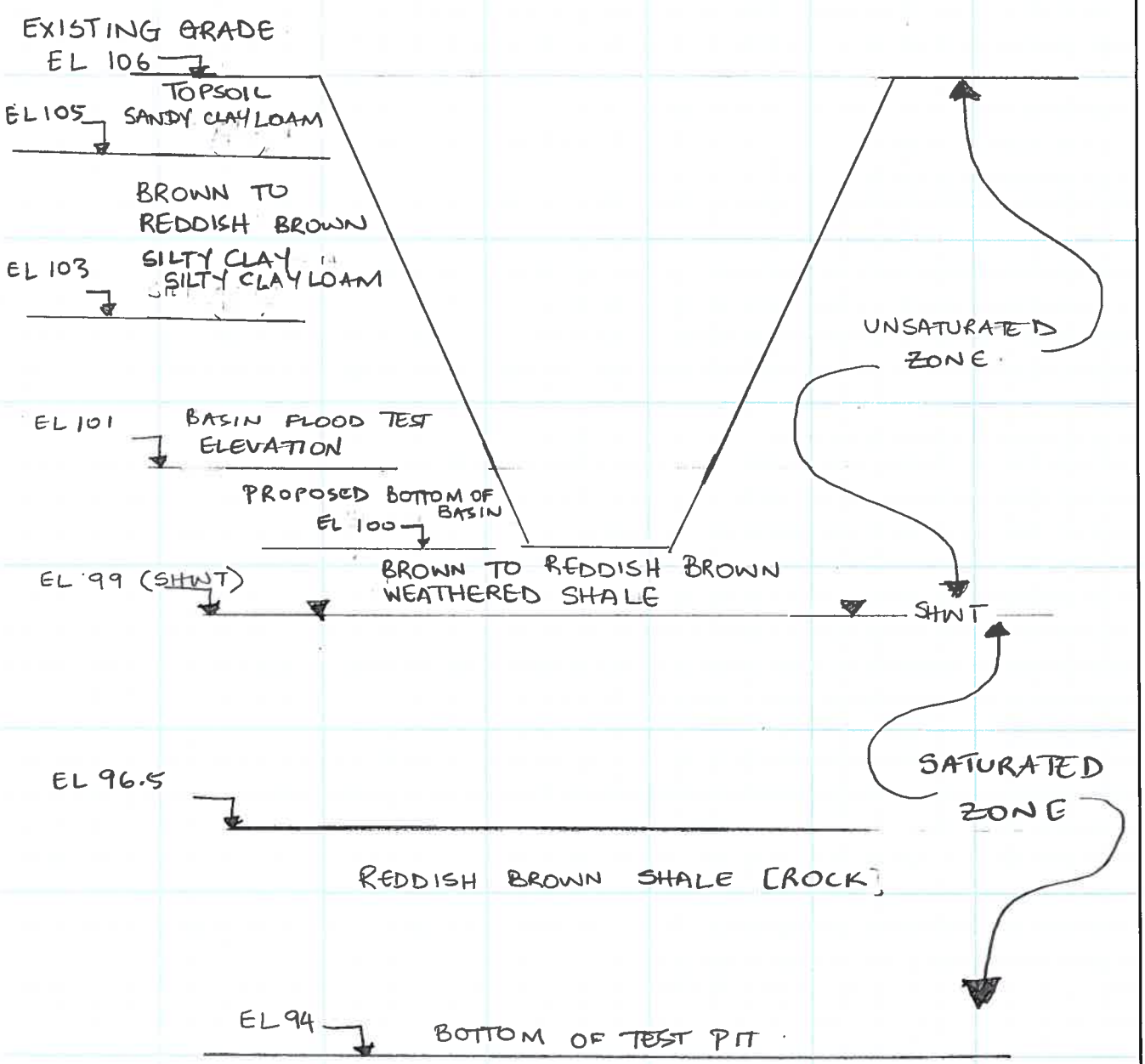
TP-102



NOTES:

1) Basin Flood Test executed at el 101.
2) Elevations are referenced to NGVD29.
3) Proposed bottom of basin is at el 100.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/14/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

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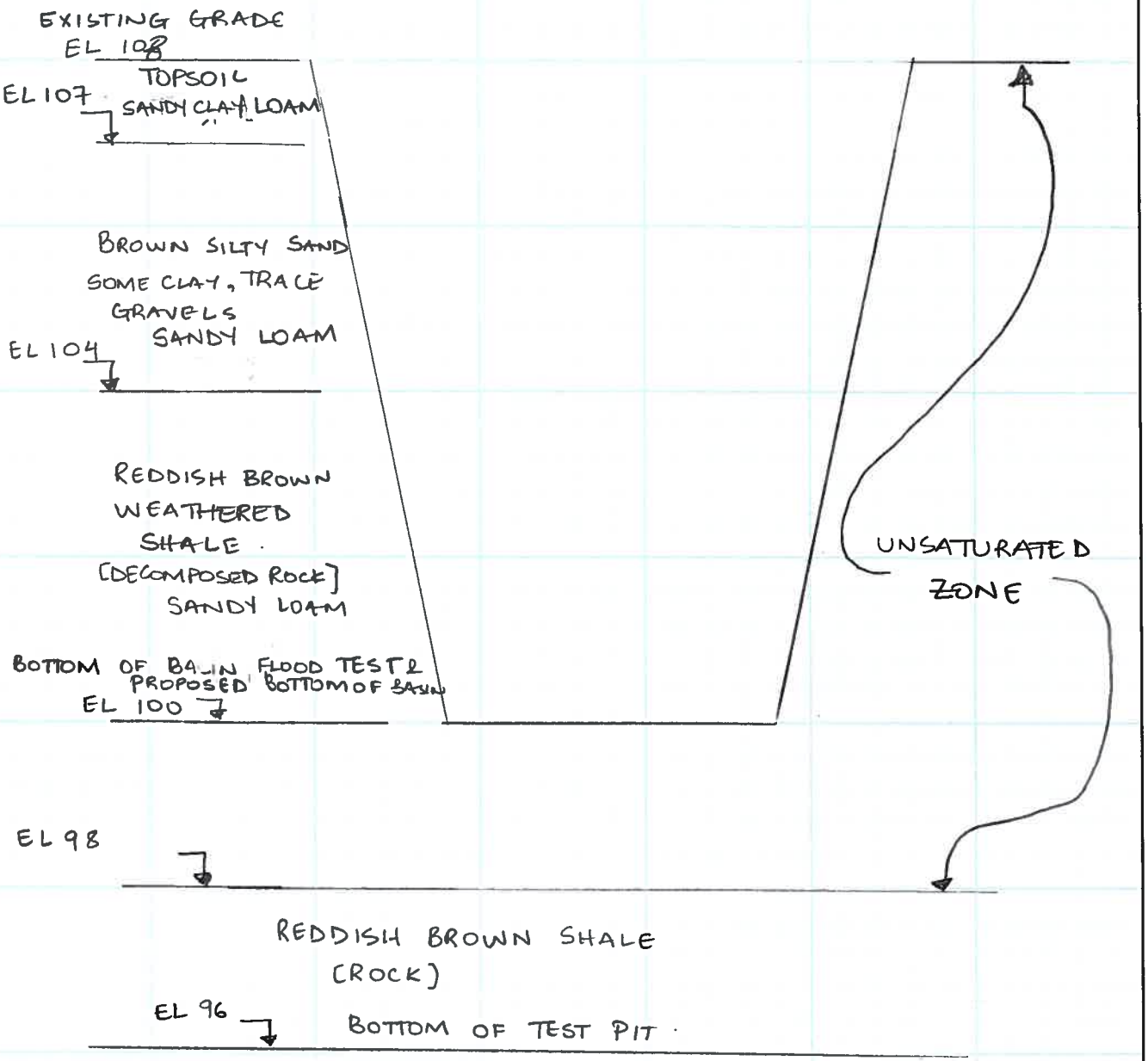
TP- 103



NOTES:-

1) Basin Flood Test executed at el 100.
2) Elevations are referenced to NGVD 29.
3) Proposed bottom of basin is at el 100

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/13/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

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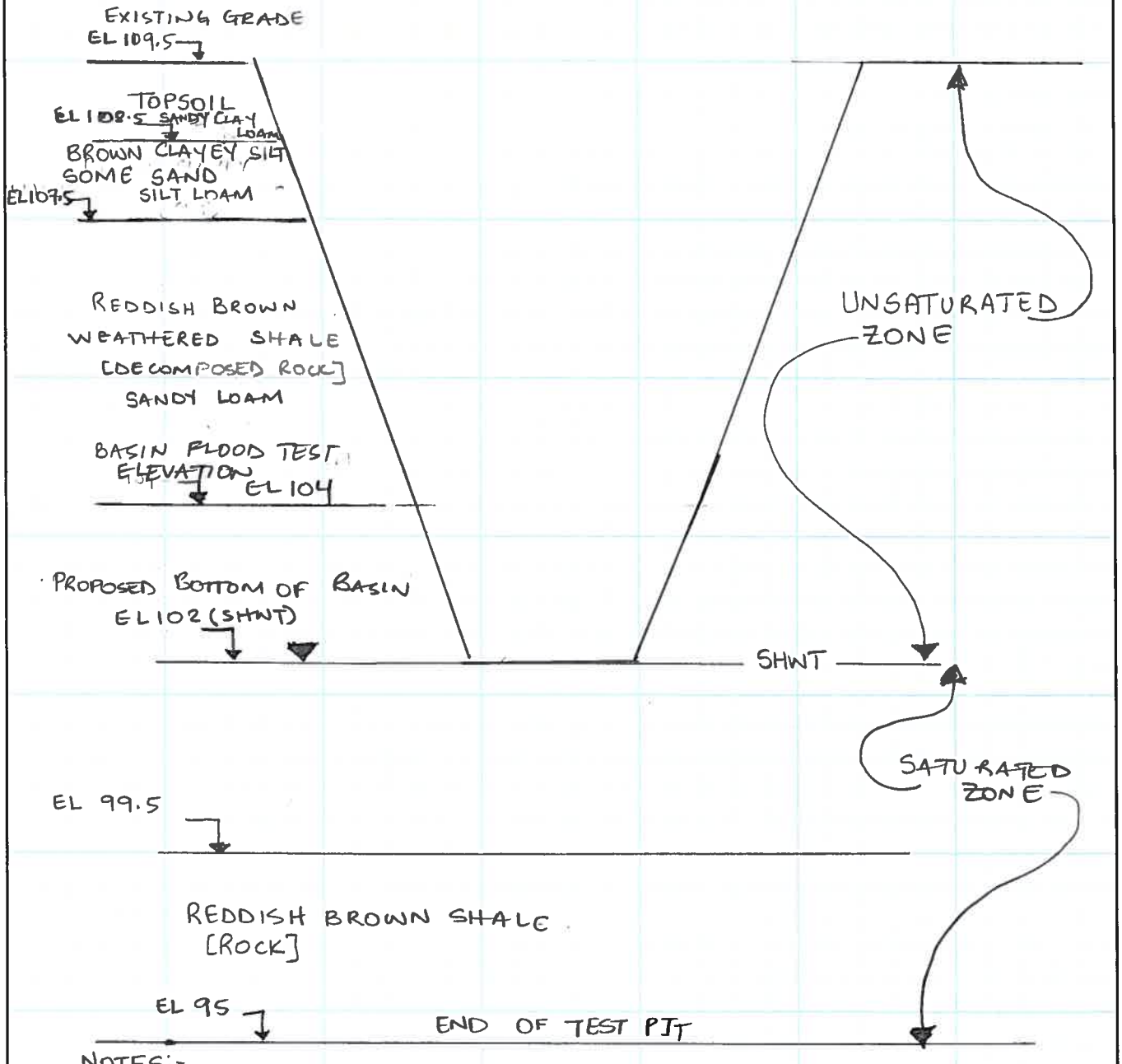
TP-104



NOTES:-

1) Basin Flood test executed at el 104

2) All elevations are referenced to NGVD 29.

3) Proposed bottom of basin elevation is at el 102

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY mm DATE 05/12/20 CKD. _____ DATE _____	PROJ. NO. 100781401 SHEET _____ OF _____

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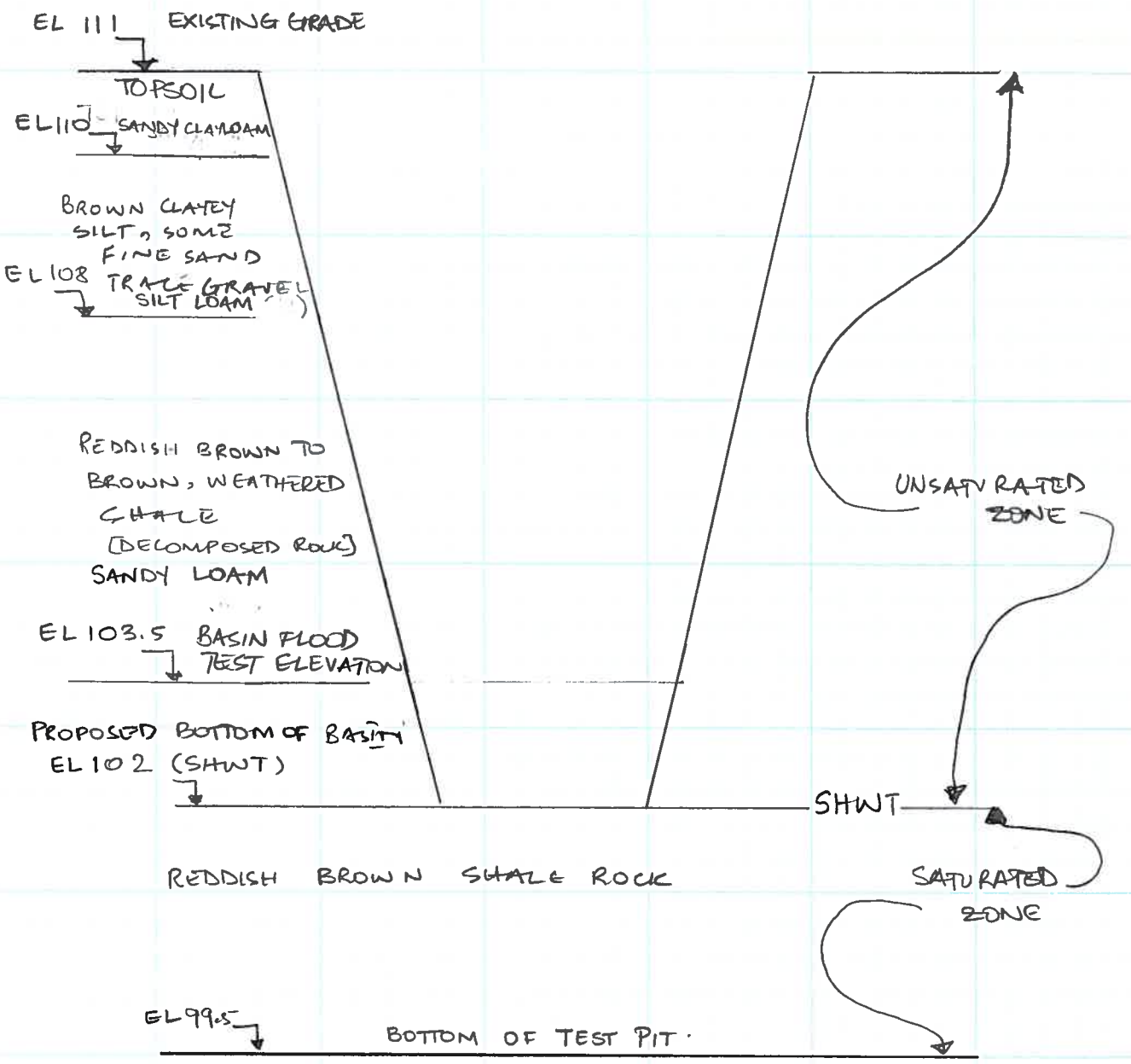
TP-105



NOTES:

1) Test executed at el 103.5

2) All elevations are referenced to NGVD 29.

3) Proposed bottom of basin is at el 102.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP, NJ	BY NM DATE 05/12/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

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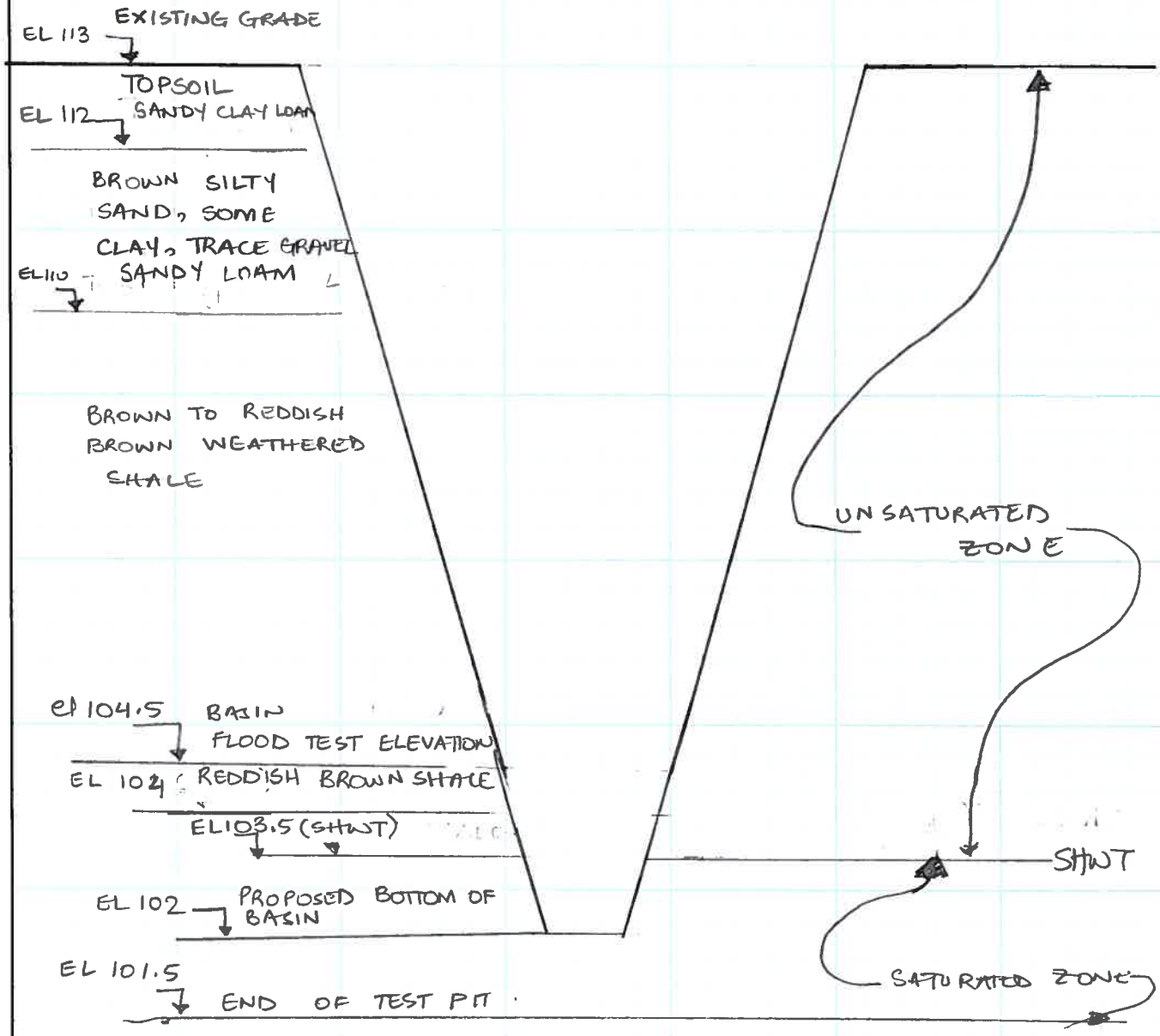
TP-106



NOTES:

1) Basin Flood test executed at el 104.5
2) Proposed bottom of basin is at el 102.
3) Elevations are referenced to NGVD29

	BY MM DATE 05/11/20	PROJ. NO. 100781401
	CKD. ____ DATE ____	SHEET ____ OF ____

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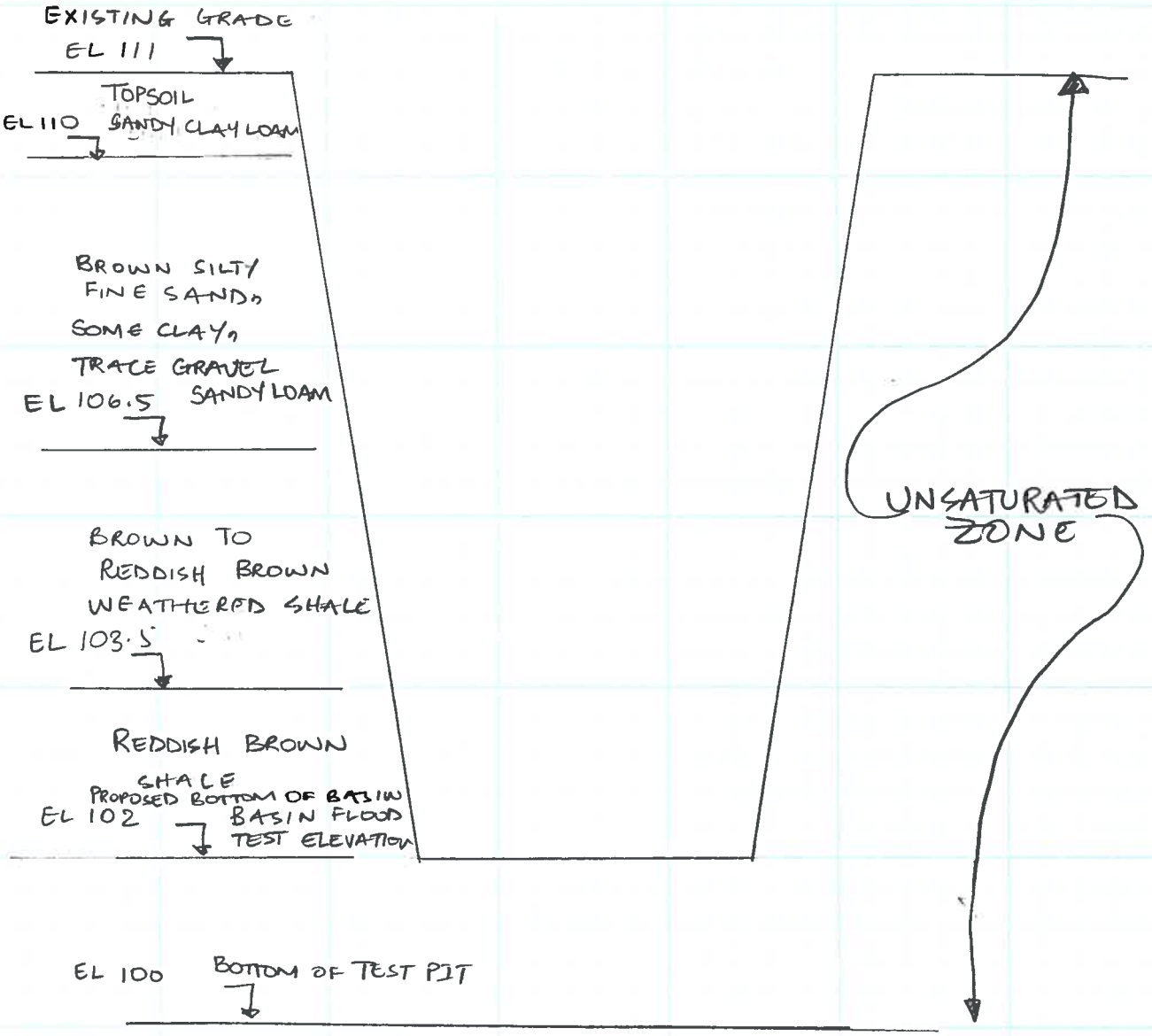
TP-107



NOTES:

1) Basin Flood Test executed at el 102.
2) Proposed bottom of basin is at el 102
3) All elevations are referenced to NGVD 29.

Proposed Warehouse Development Franklin Township	BY MM DATE 05/12/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

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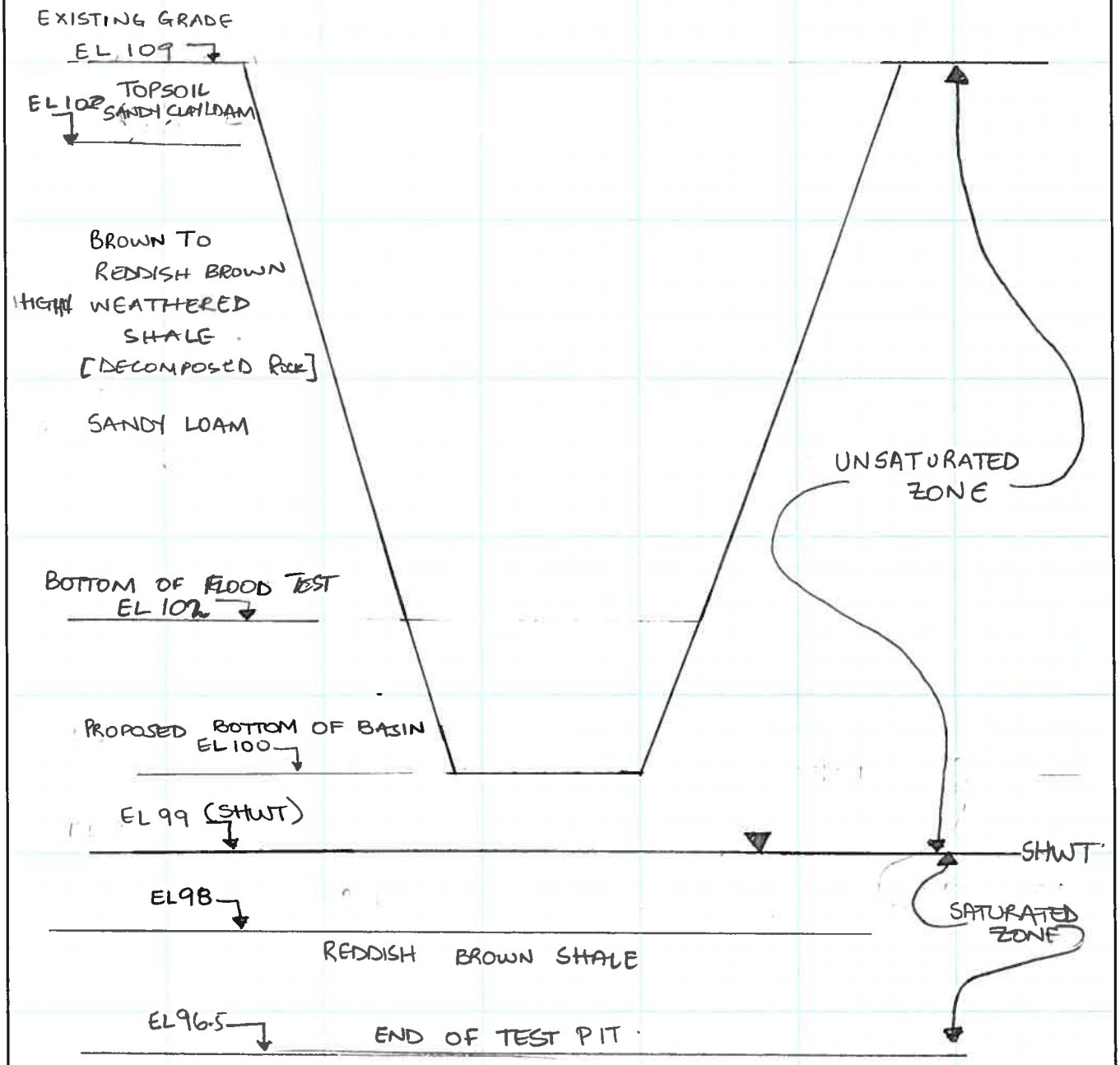
TP-108



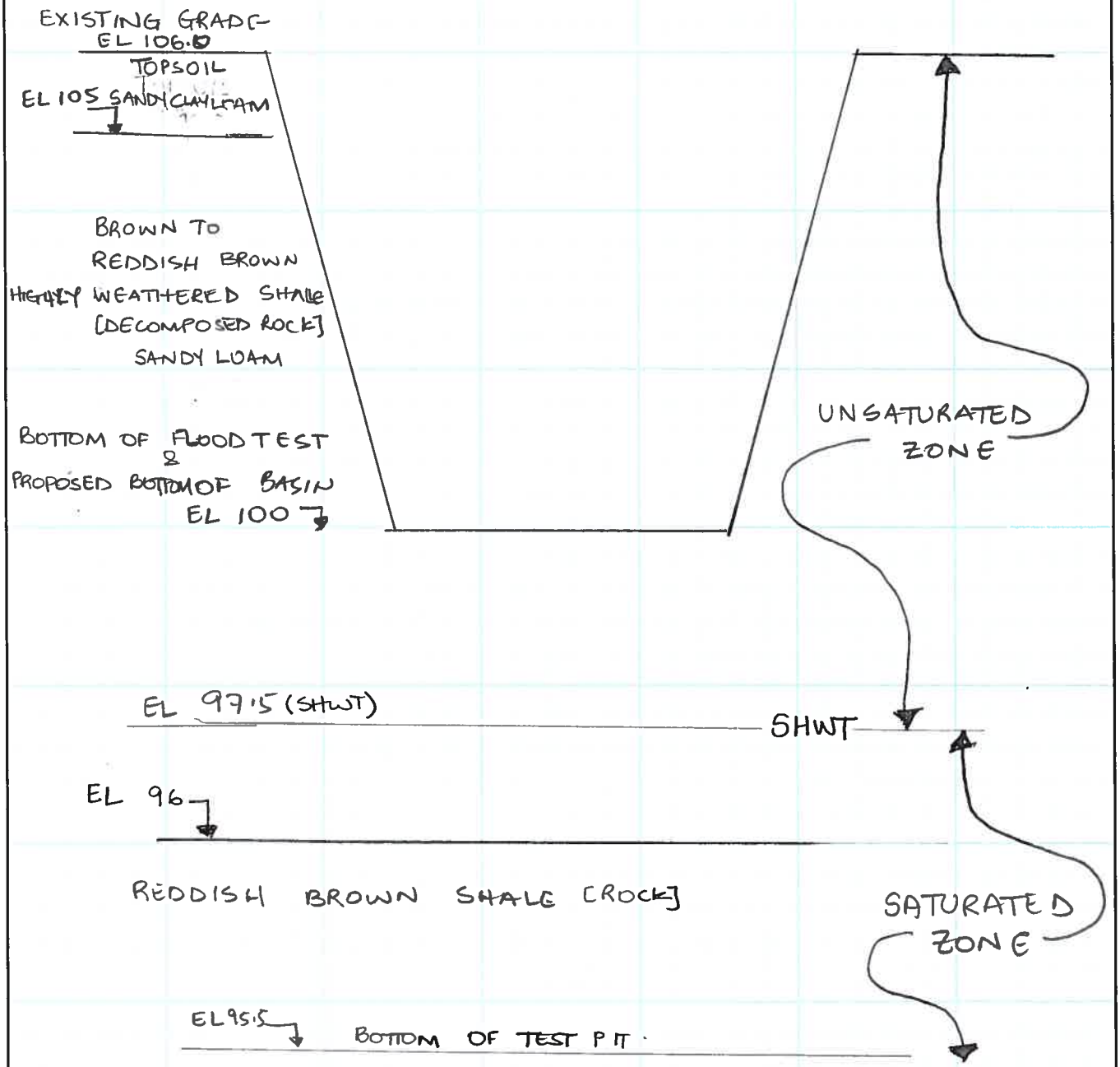
NOTES:-

1) Basin Flood Test executed at el 102
2) Elevations are referenced to NGVD 29.
3) Proposed bottom of basin is at el 100

PROPOSED WAREHOUSE DEVELOPMENT	BY MM DATE 05/15/20	PROJ. NO. 100781401
FRANKLIN TOWNSHIP	CKD. DATE	SHEET OF

LANGAN

TP- 109



NOTES:-

1) Basin Flood Test executed at el 100.
2) Elevations are referenced to NGVD 29.
3) Proposed bottom of basin is at el 100.

PROPOSED WAREHOUSE DEVELOPMENT	BY MM DATE 05/13/20	PROJ. NO. 100781401
FRANKLIN TOWNSHIP	CKD. ____ DATE ____	SHEET ____ OF ____

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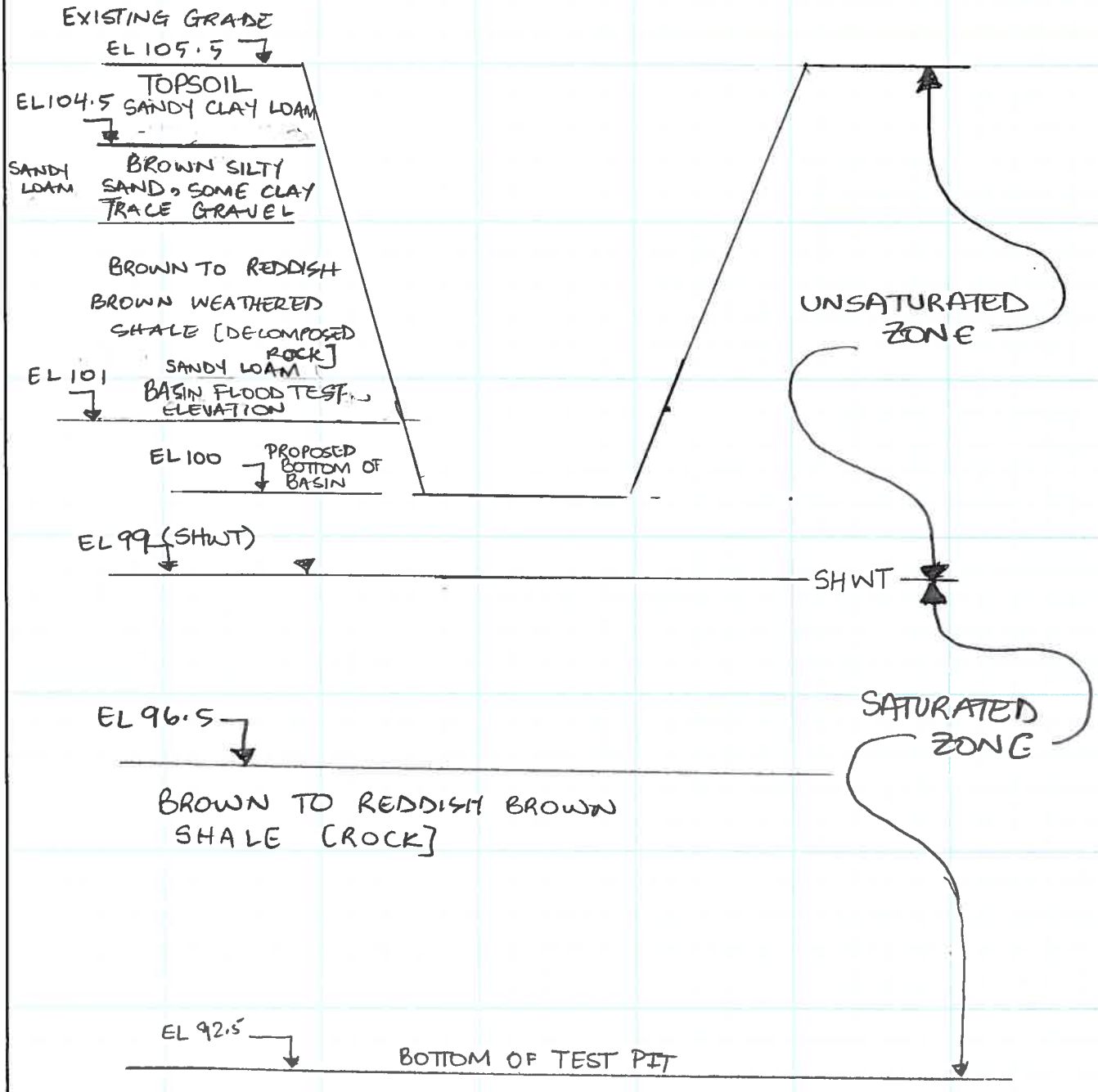
TP-110



NOTES:-

1) Basin Flood test executed at el 101.
2) Proposed bottom of basin is at el 100
3) Elevations are referenced to NGVD29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/14/20 CKD. _____ DATE _____	PROJ. NO. 100781401 SHEET _____ OF _____

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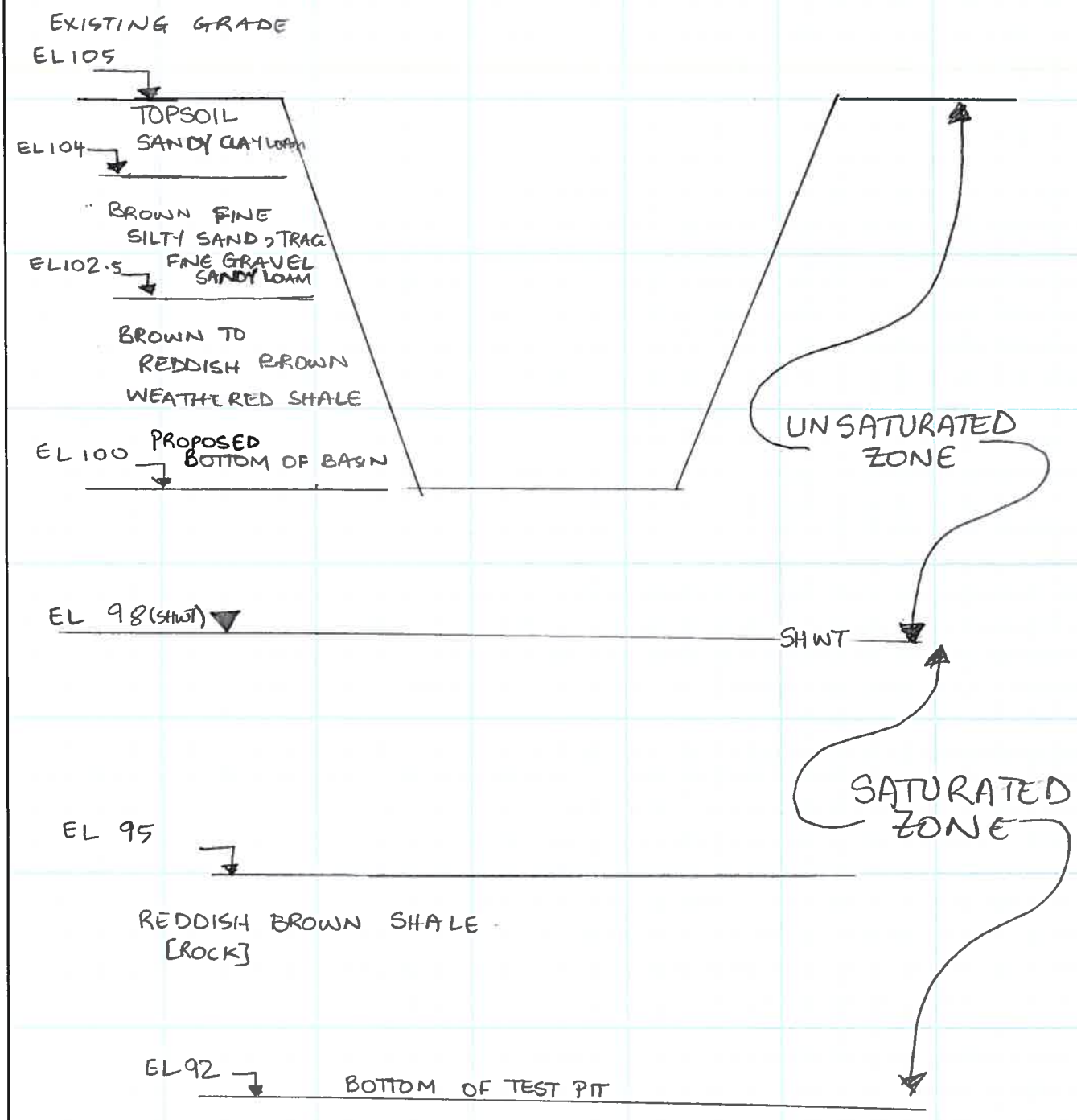
TP-111



NOTES:
1) Basin Flood Test executed at el 100.
2) Elevations are referenced to NGVD 29.
3) Proposed bottom of basin is at el 100

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/13/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

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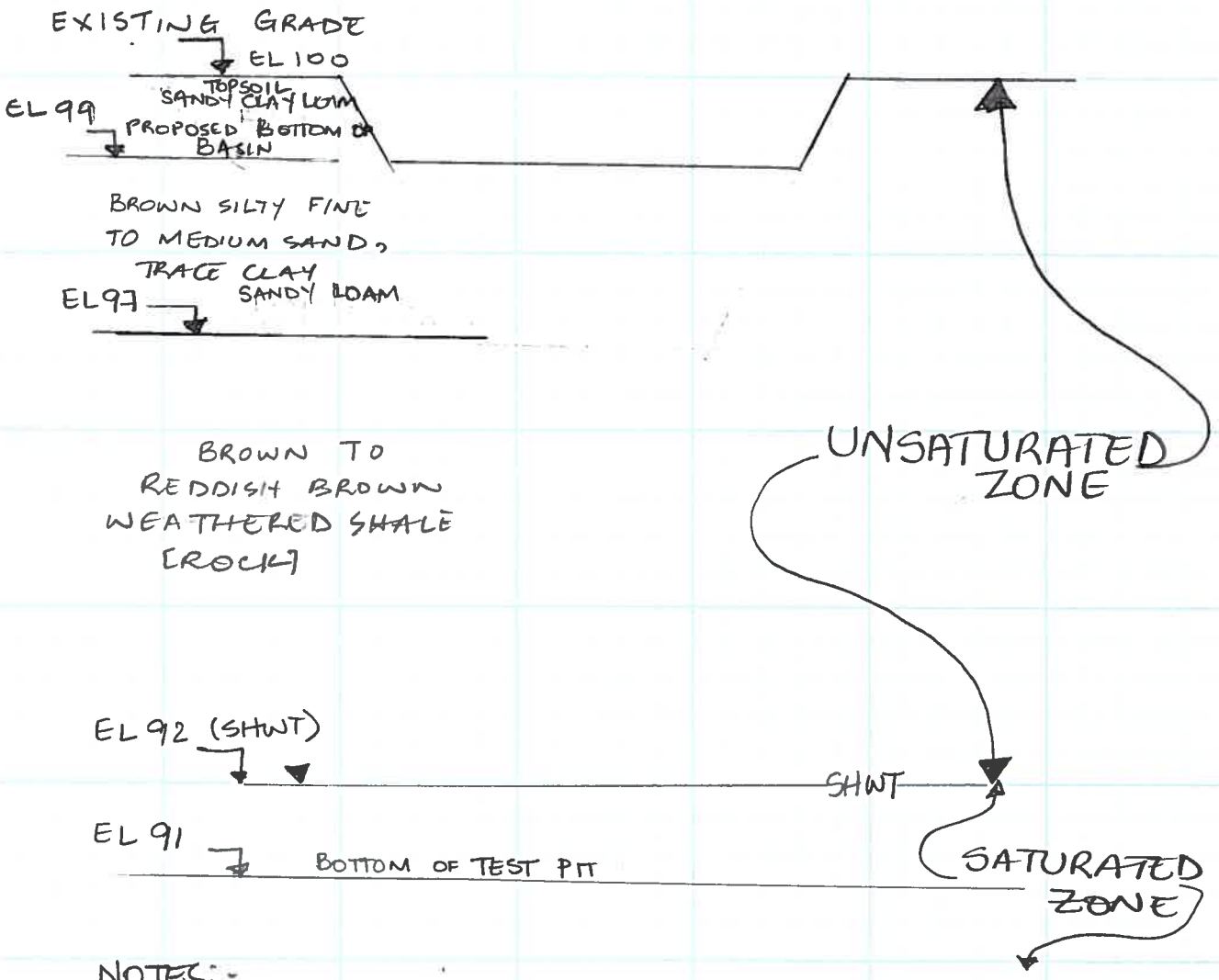
TP-112



NOTES:

1) Basin Flood test executed at el 97.
2) Elevations are referenced to NGVD29.
3) Proposed bottom of basin is at el 99

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY NMM DATE 05/13/20 CKD. _____ DATE _____	PROJ. NO. 100781401 SHEET _____ OF _____

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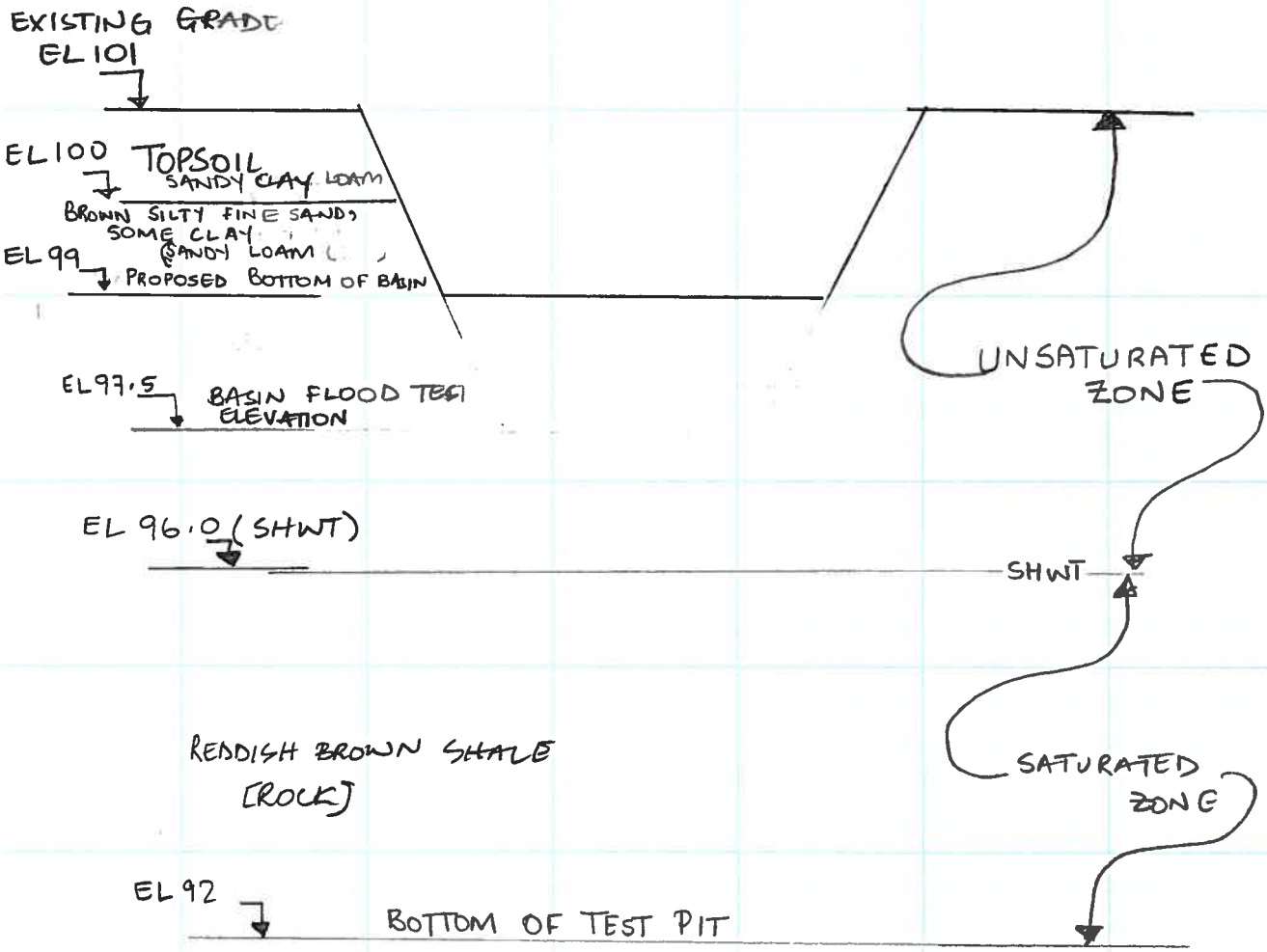
TP-113



NOTES;-

1) Basin Flood Test executed at el 97.5
2) Elevations are referenced to NGVD 29.
3) Proposed bottom of basin is at el 99.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/14/20 CKD. _____ DATE _____	PROJ. NO. 100881401 SHEET _____ OF _____

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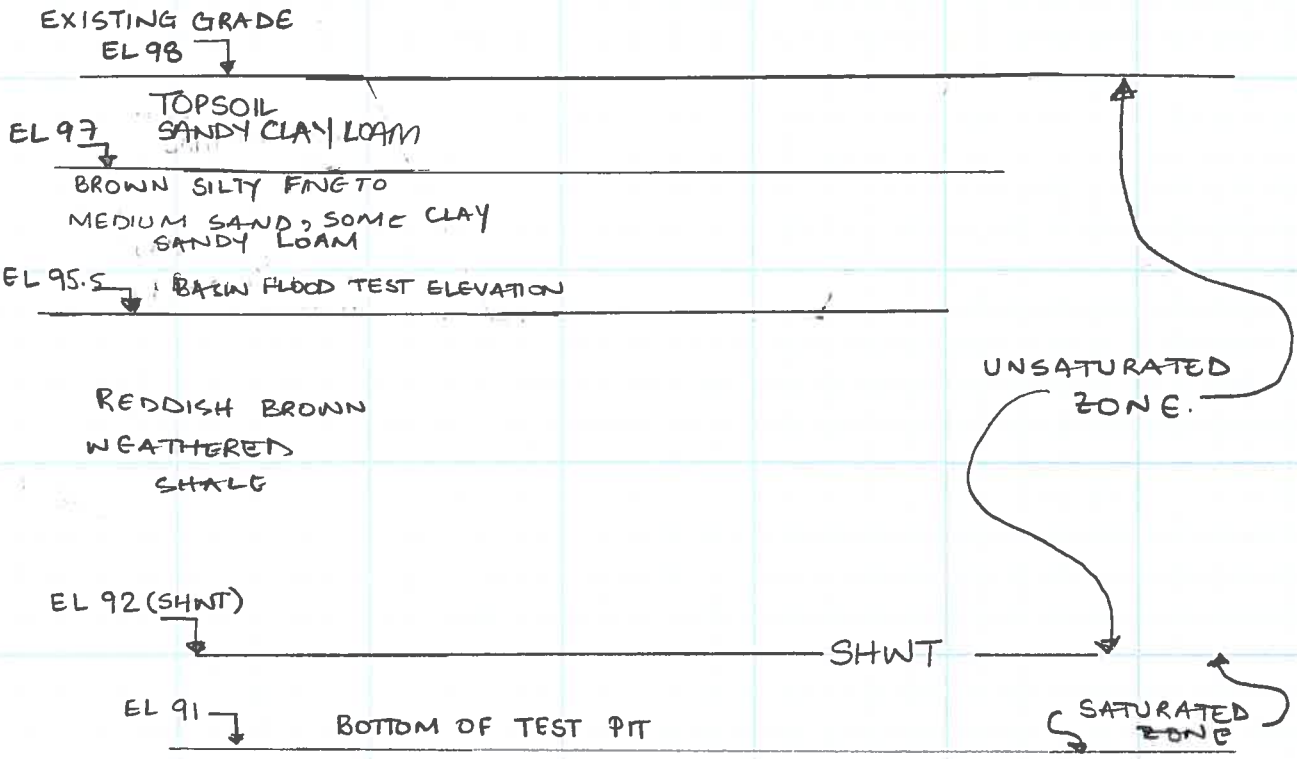
TP-114



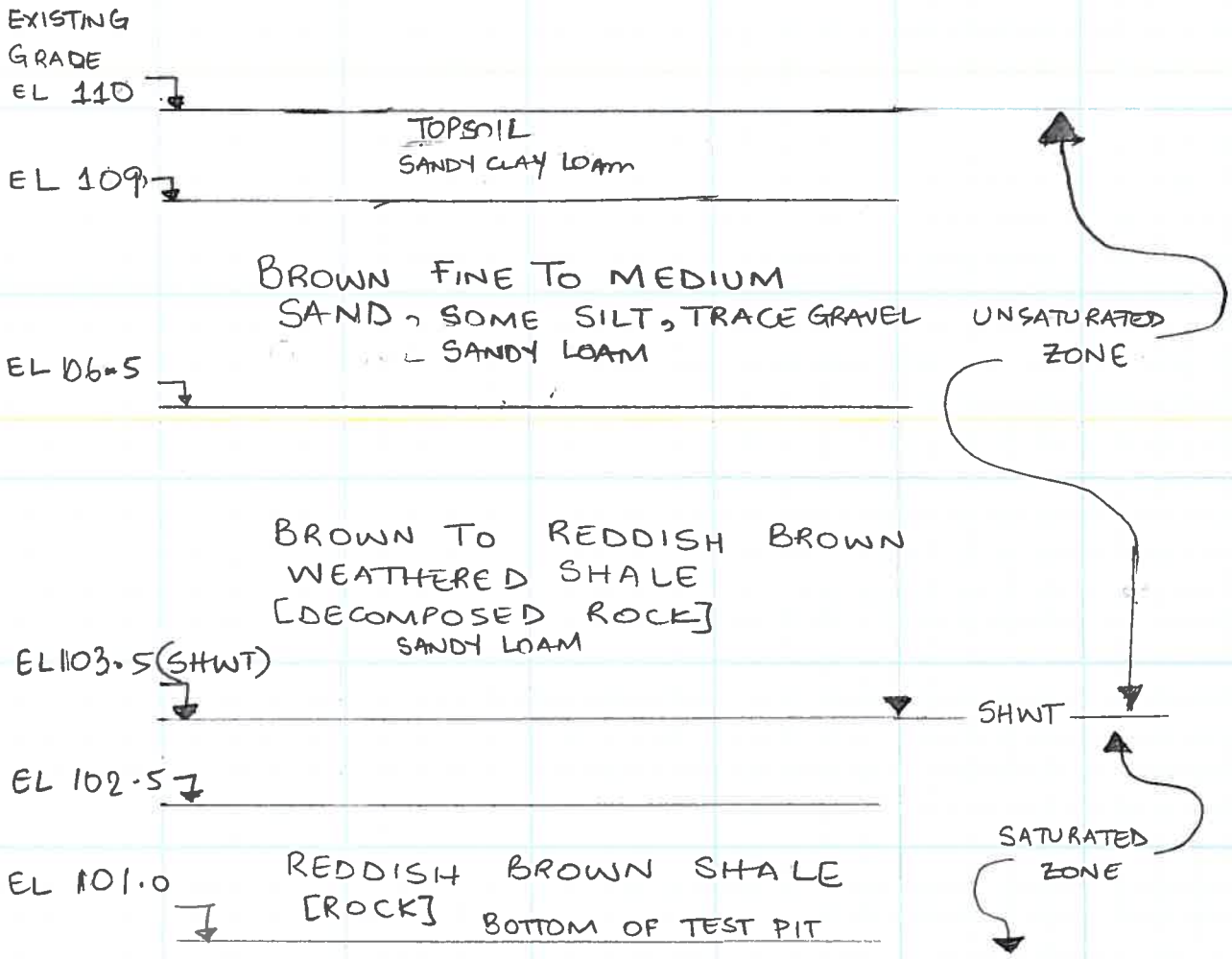
NOTES:

1) Basin Flood Test executed at el 95.5
2) All elevations are referenced to NGVD 29
3) Proposed bottom of basin is at el 99

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/14/20 CKD. _____ DATE _____	PROJ. NO. 100991401 SHEET _____ OF _____

LANGAN

TP-201



NOTES:-

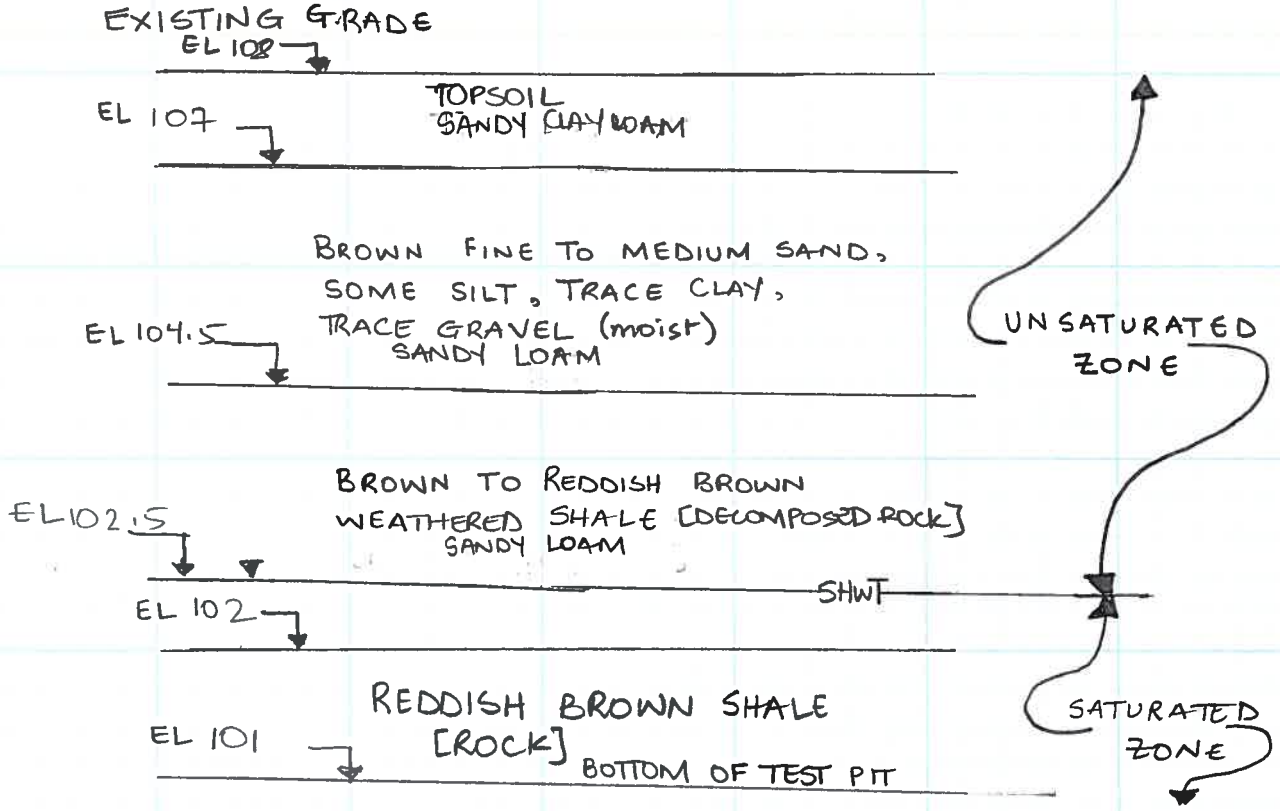
1) Basin Flood test executed at el 105.5

2) Elevations are referenced to NGVD 29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/14/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-202



NOTES:-

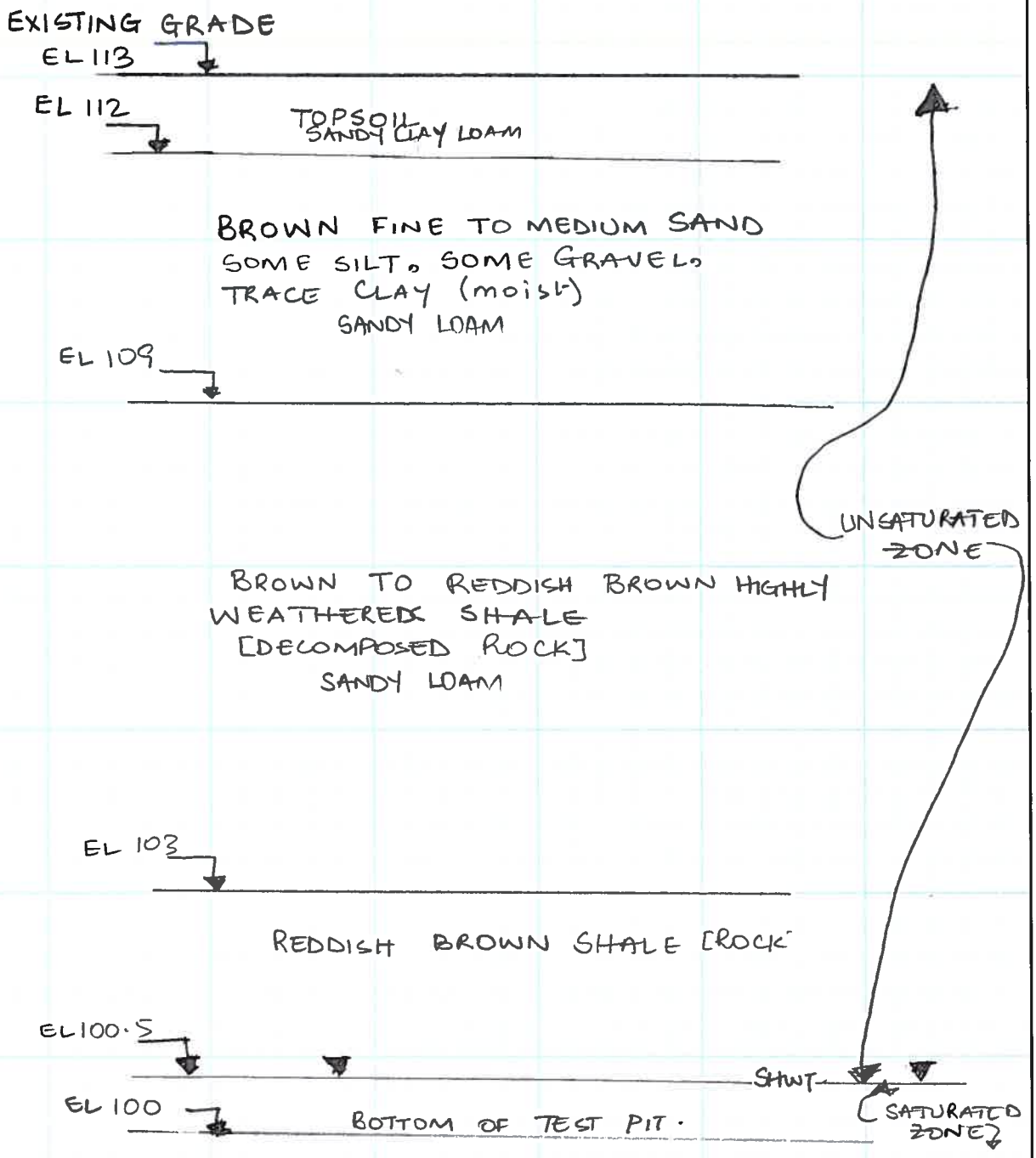
1) Basin flood test conducted at el 103.5

2) All elevations are referenced to NGVD 29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/14/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP- 203



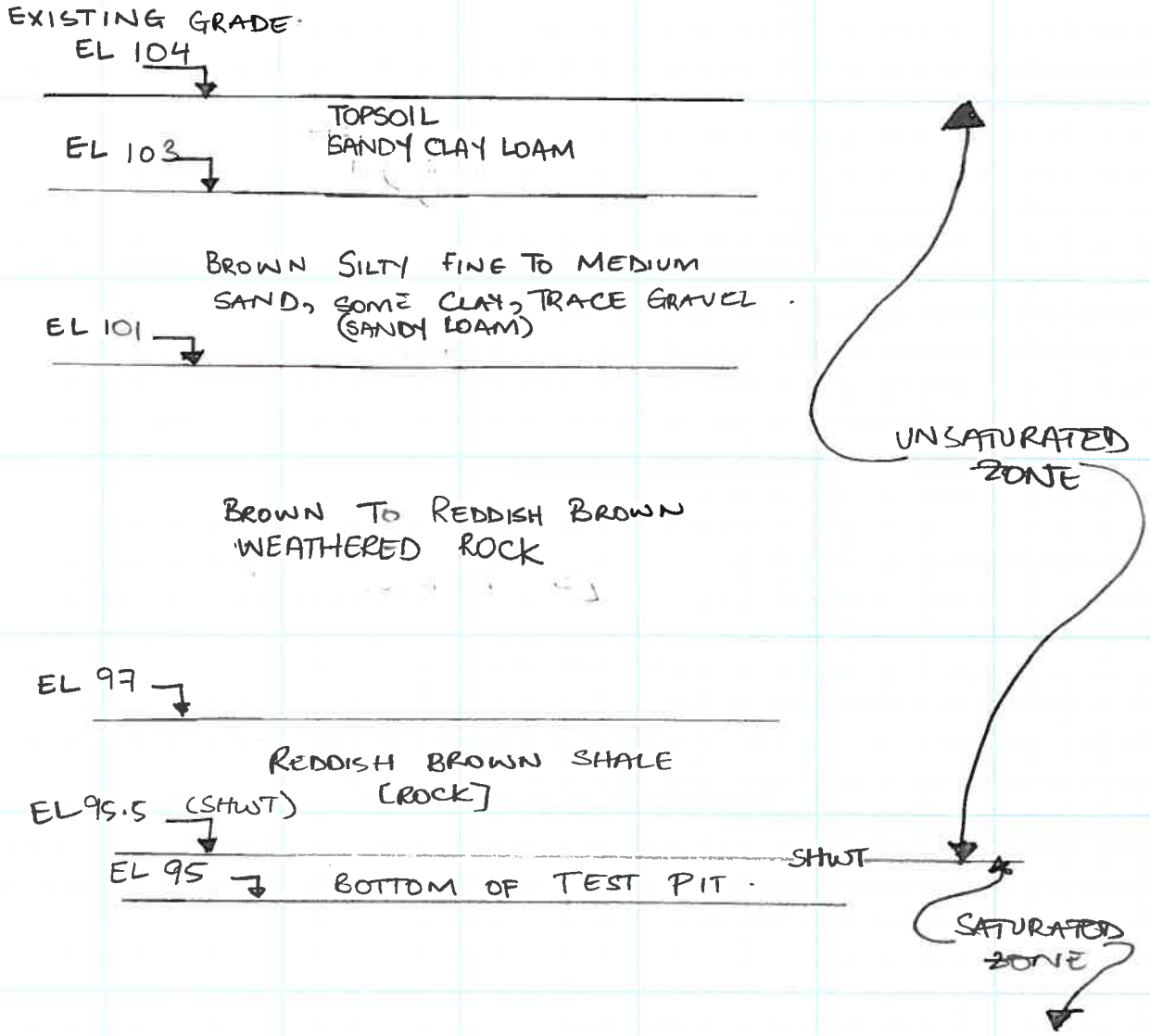
NOTES:

1) Basin flood test conducted at el 103
2) All elevations are referenced to NGVD29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/14/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP - 204



NOTES:

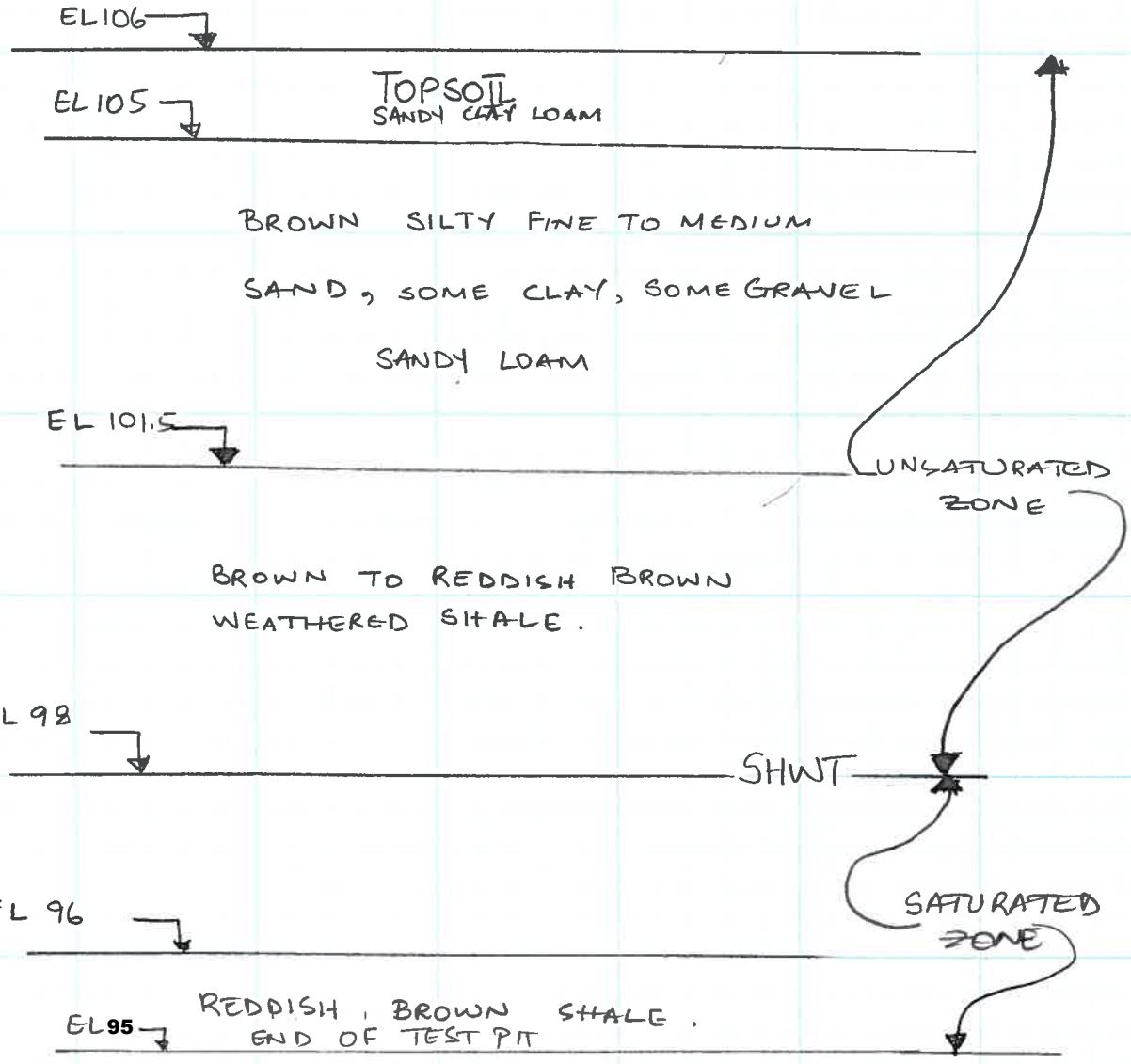
1) Basin flood test conducted at el. 96

2) All elevations are referenced to NGVD 29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/15/20 CKD. _____ DATE _____	PROJ. NO. 100761401 SHEET _____ OF _____

LANGAN

TP - 205



NOTES:-

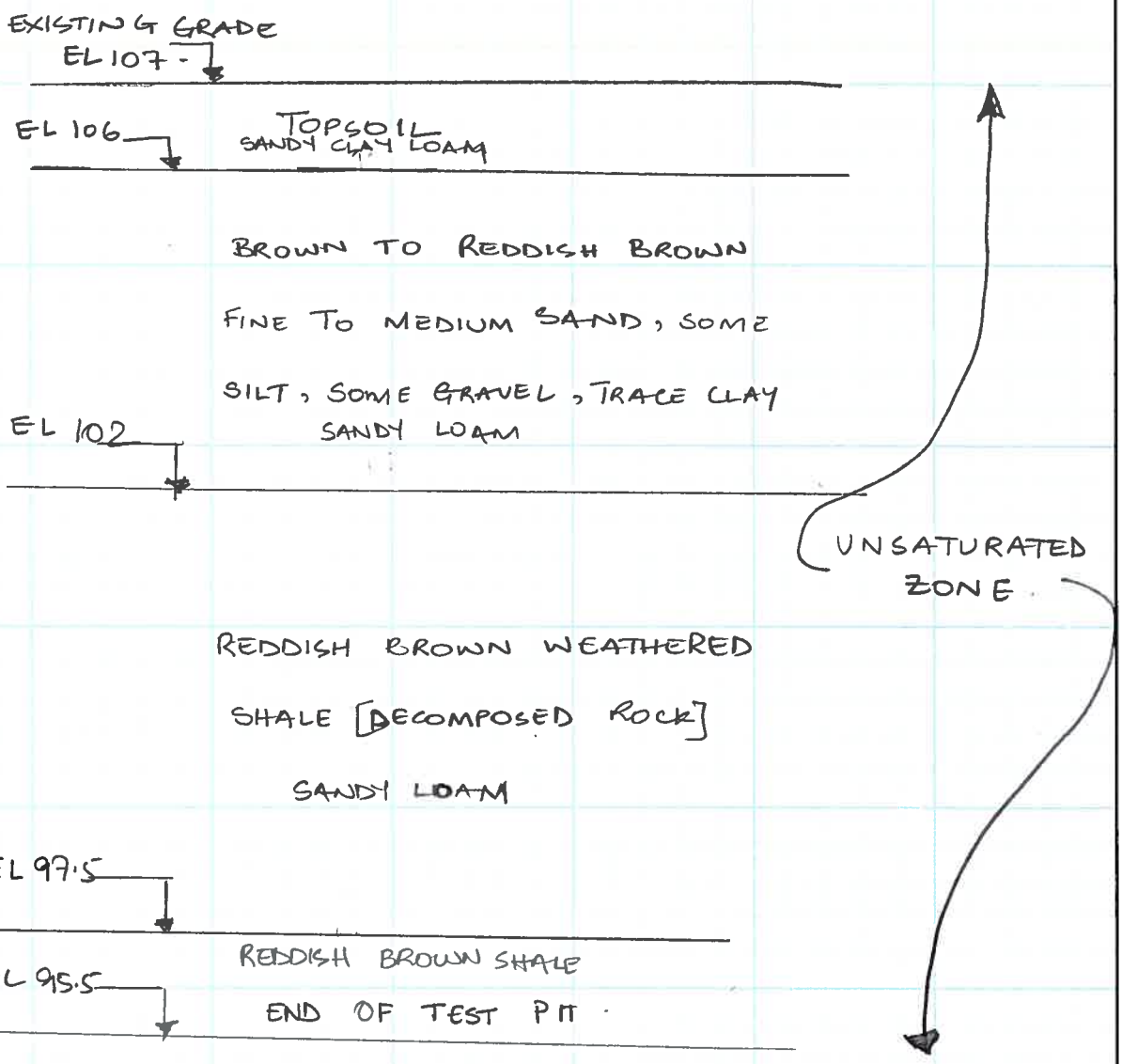
1) Basin flood test conducted at el 99

2) All elevations are referenced to NGVD29

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/20/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-206



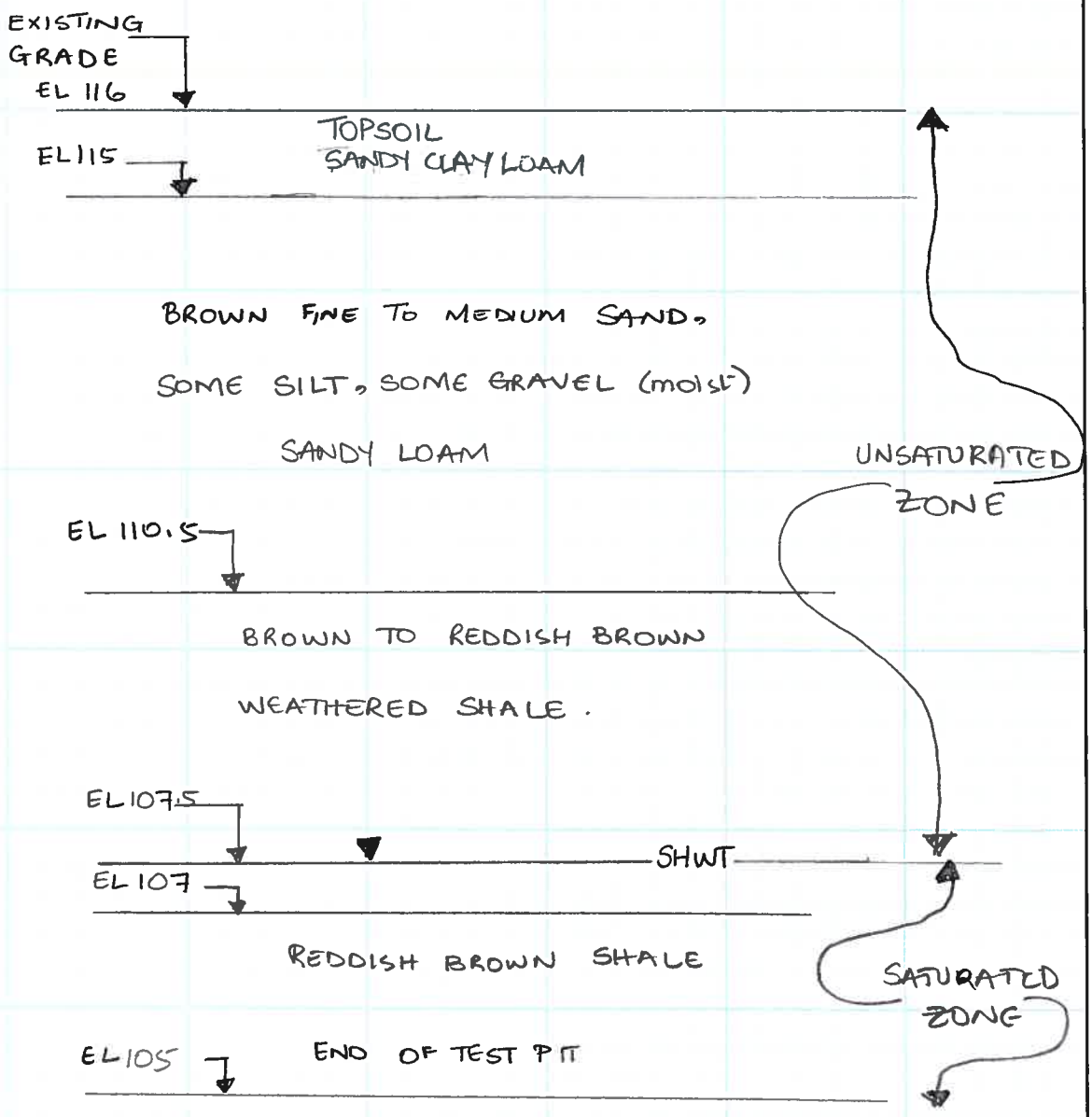
NOTES:

1) Basin flood test conducted at el 99
2) All elevations are referenced to NGVD29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/19/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-207



NOTES:-

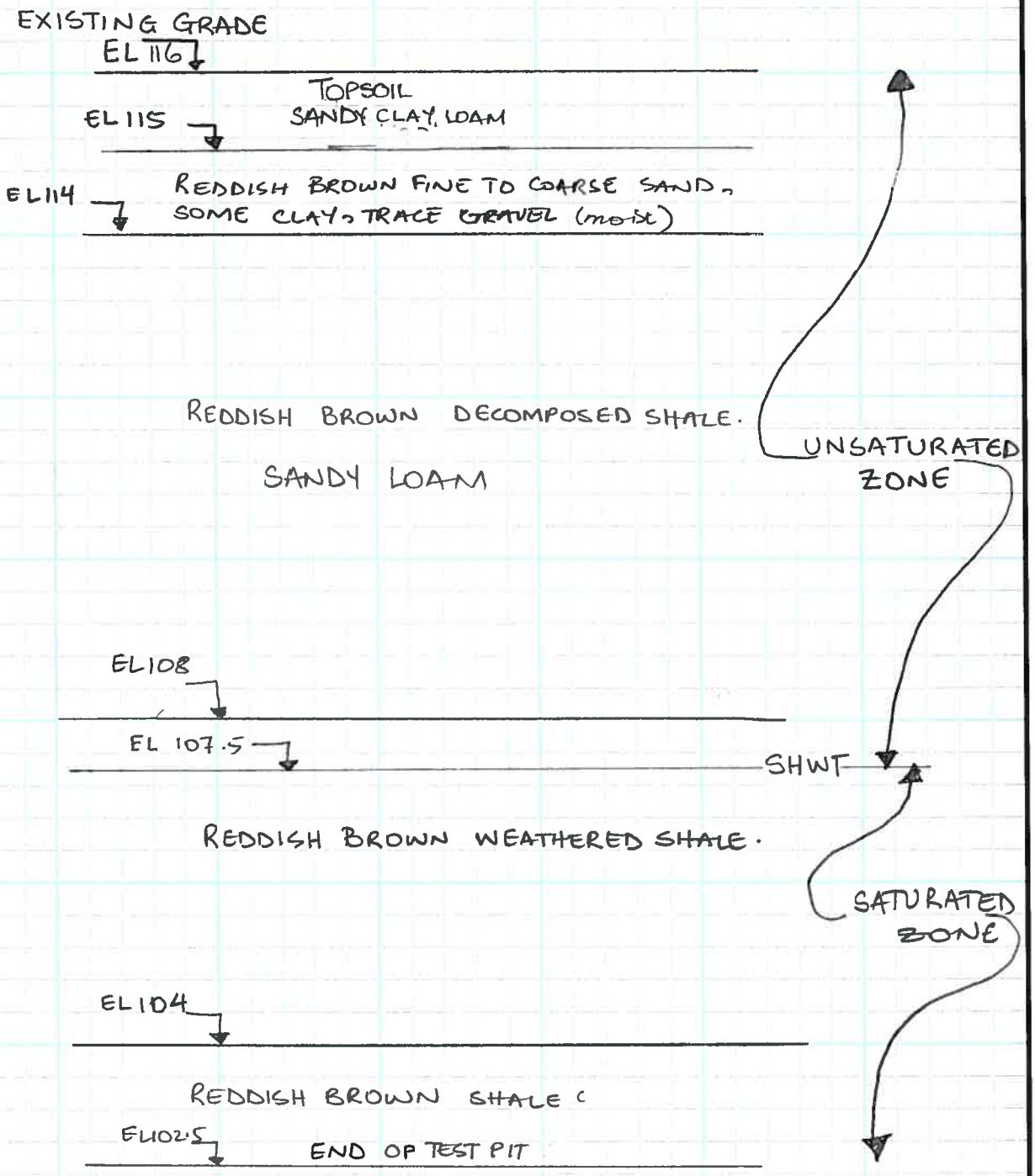
1) Basin flood test conducted at el 109.5

2) All elevations are referenced to NGVD 29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/15/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-208



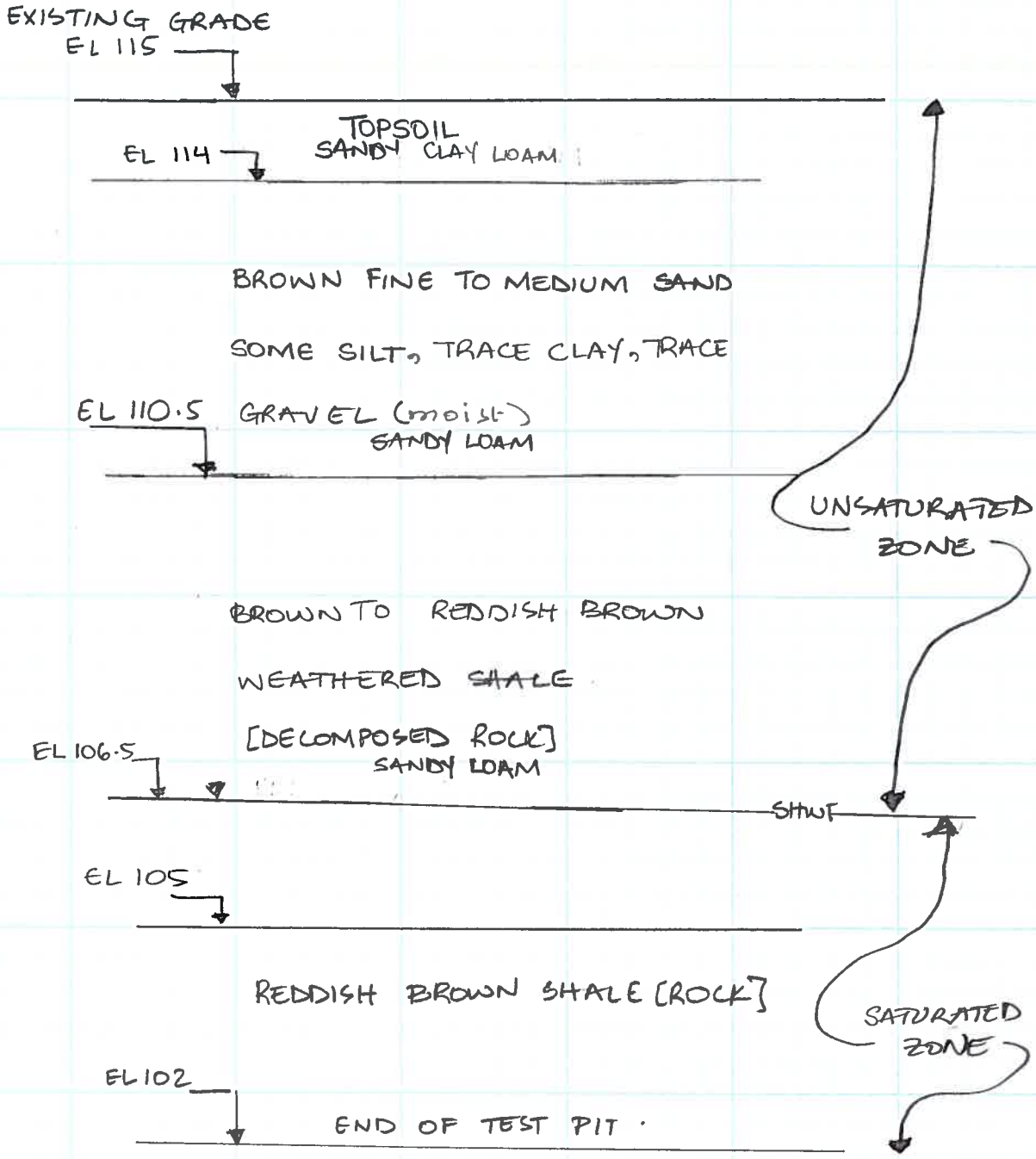
NOTES:

1) Basin flood test conducted at el 109.5
2) All elevations are referenced to NGVD 29

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP, NJ	BY MM DATE 05/17/20 CKD. ____ DATE ____	PROJ. NO. 100701401 SHEET ____ OF ____

LANGAN

TP-209

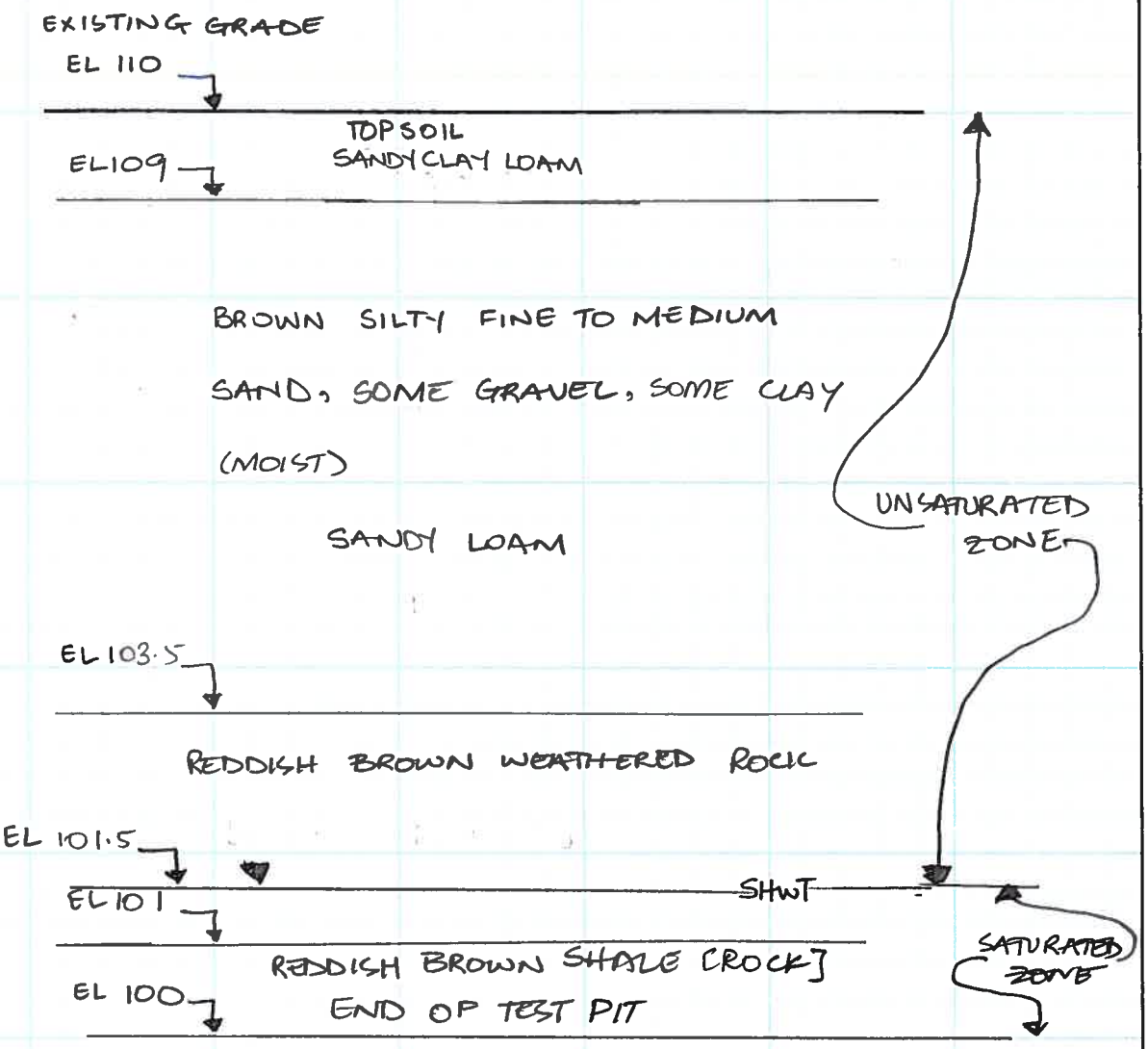


NOTES:
1) Basin Flood test conducted at el 108.5.
2) All elevations are referenced to NGVD 29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/17/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

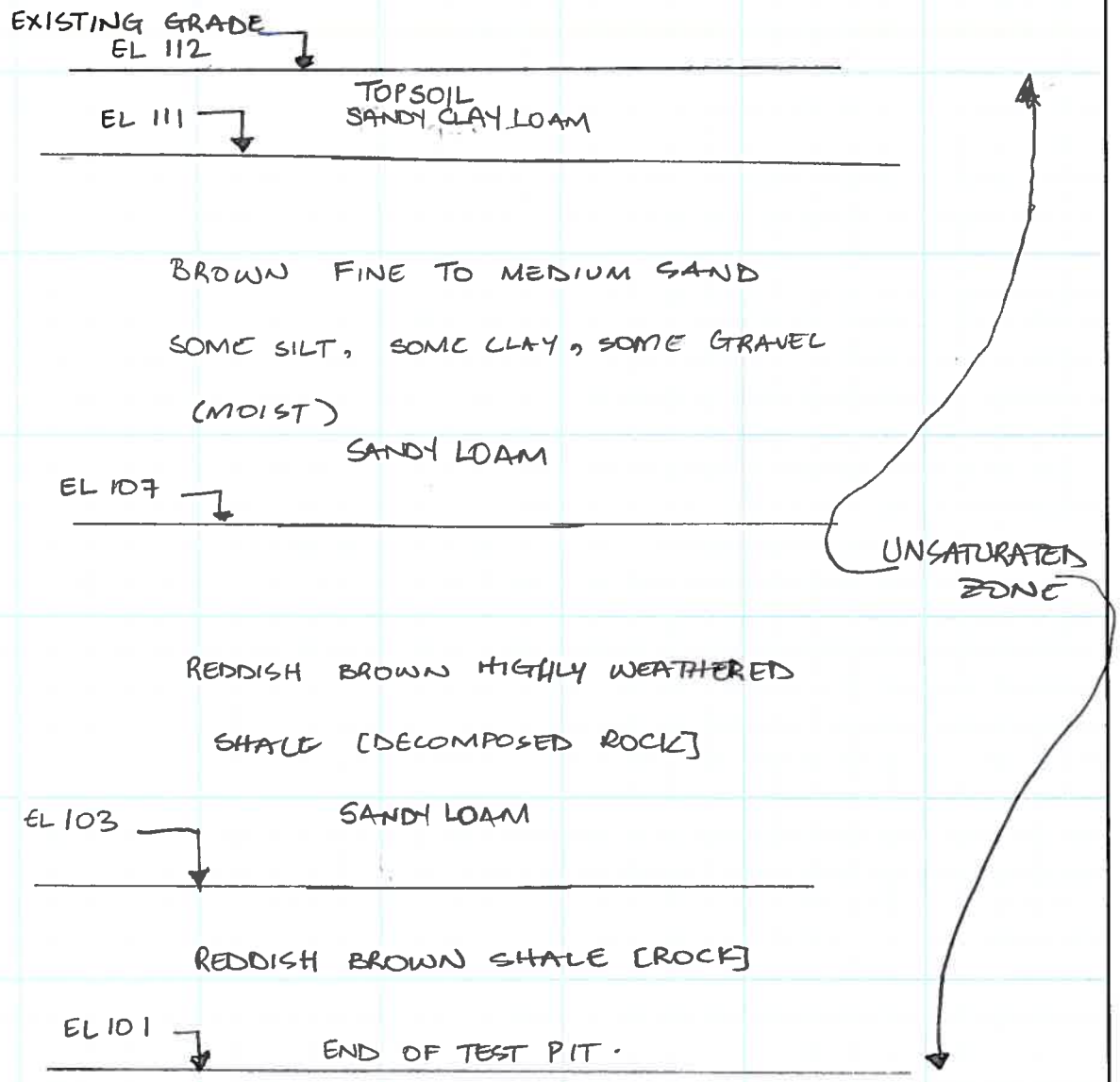
TP-210



PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP, NJ	BY MM DATE 05/15/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-211



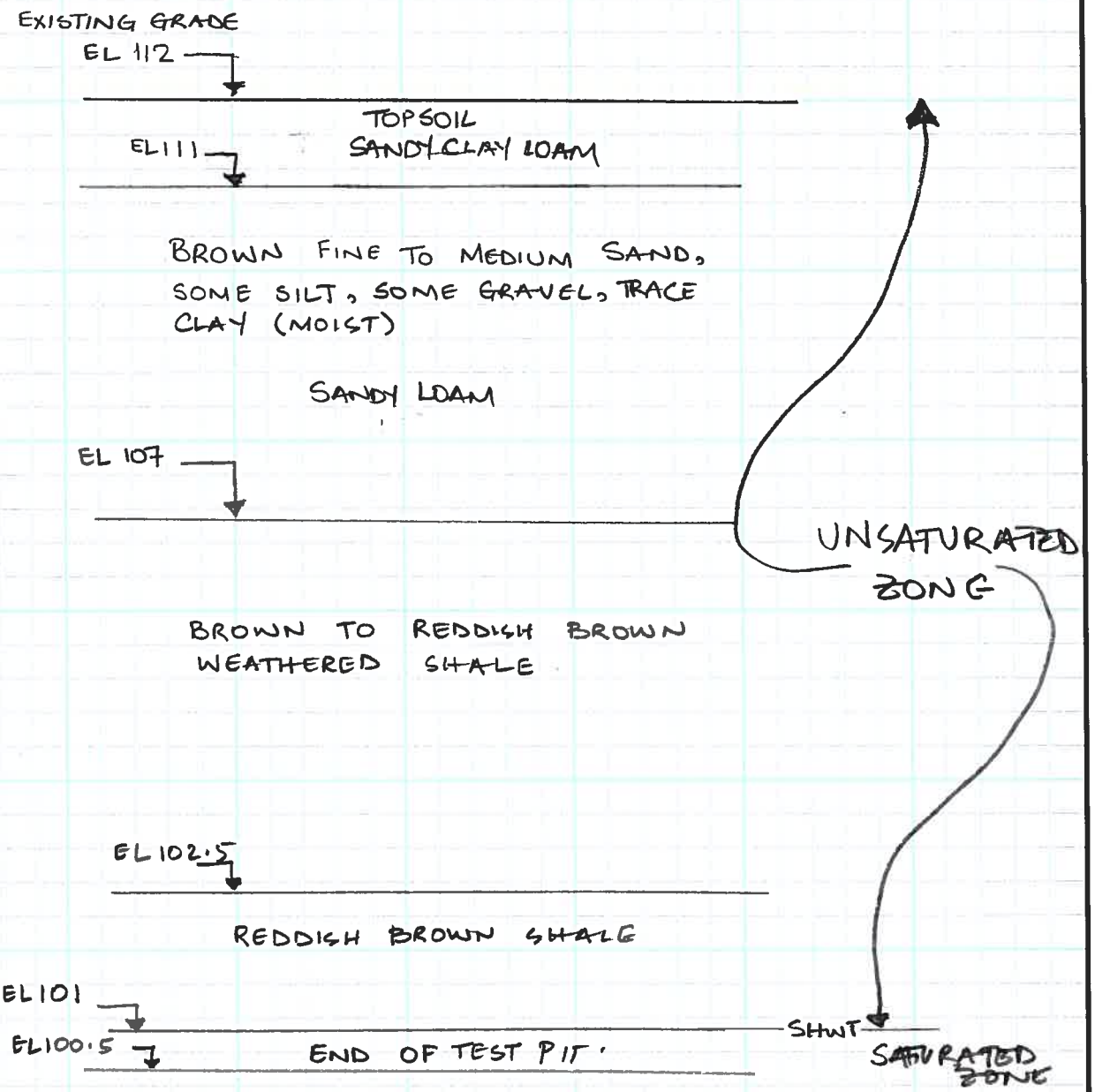
NOTES:

1) Basin flood test conducted at el 103
2) All elevations are referenced to NGVD29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP, NJ	BY MM DATE 05/15/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-212



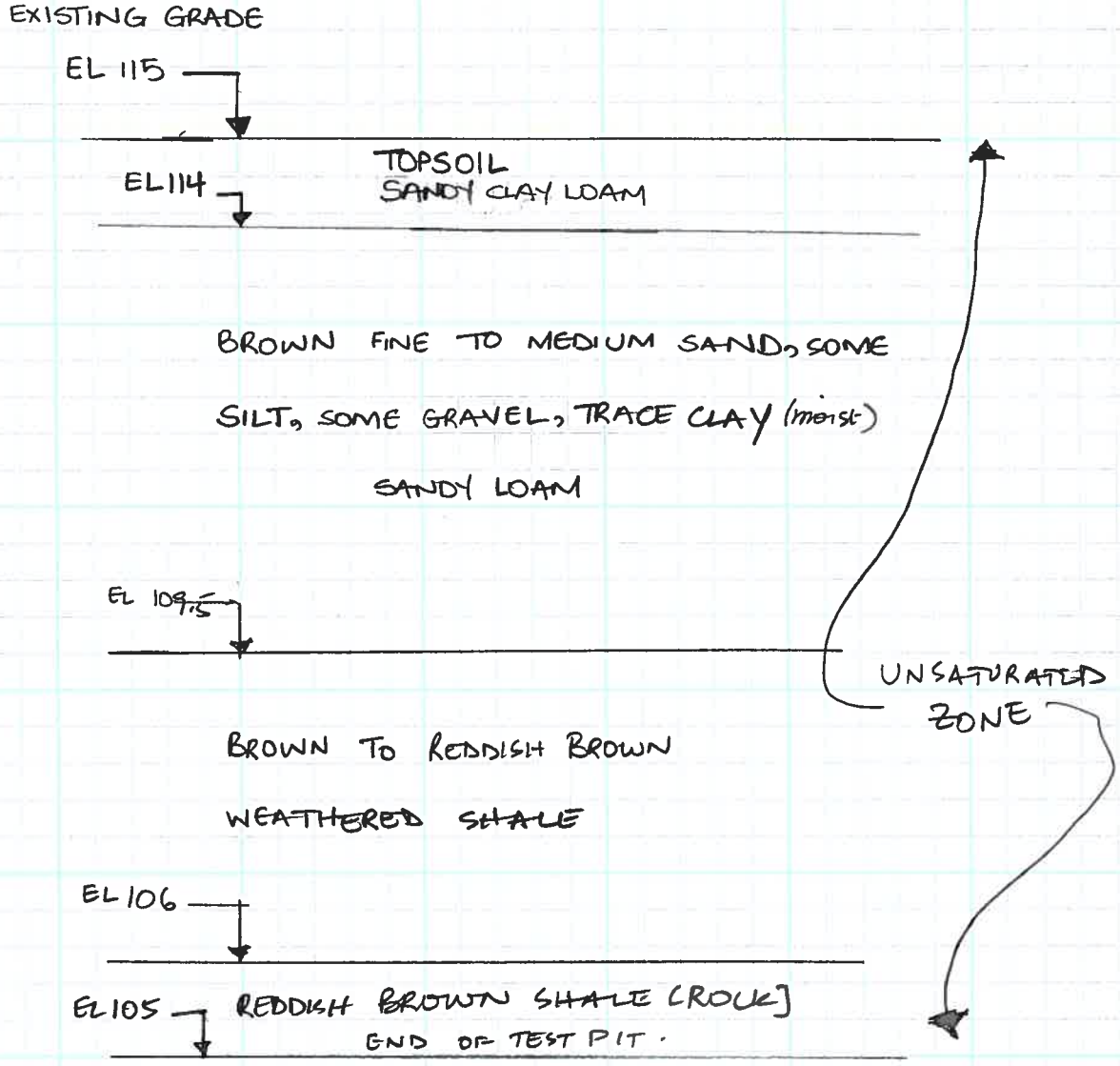
NOTES:-

1) Basin flood test conducted at el 101.5
2) All elevations are referenced to NGVD

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/18/20 CKD. ____ DATE ____	PROJ. NO. 100721401 SHEET ____ OF ____

LANGAN

TP-213



NOTES:

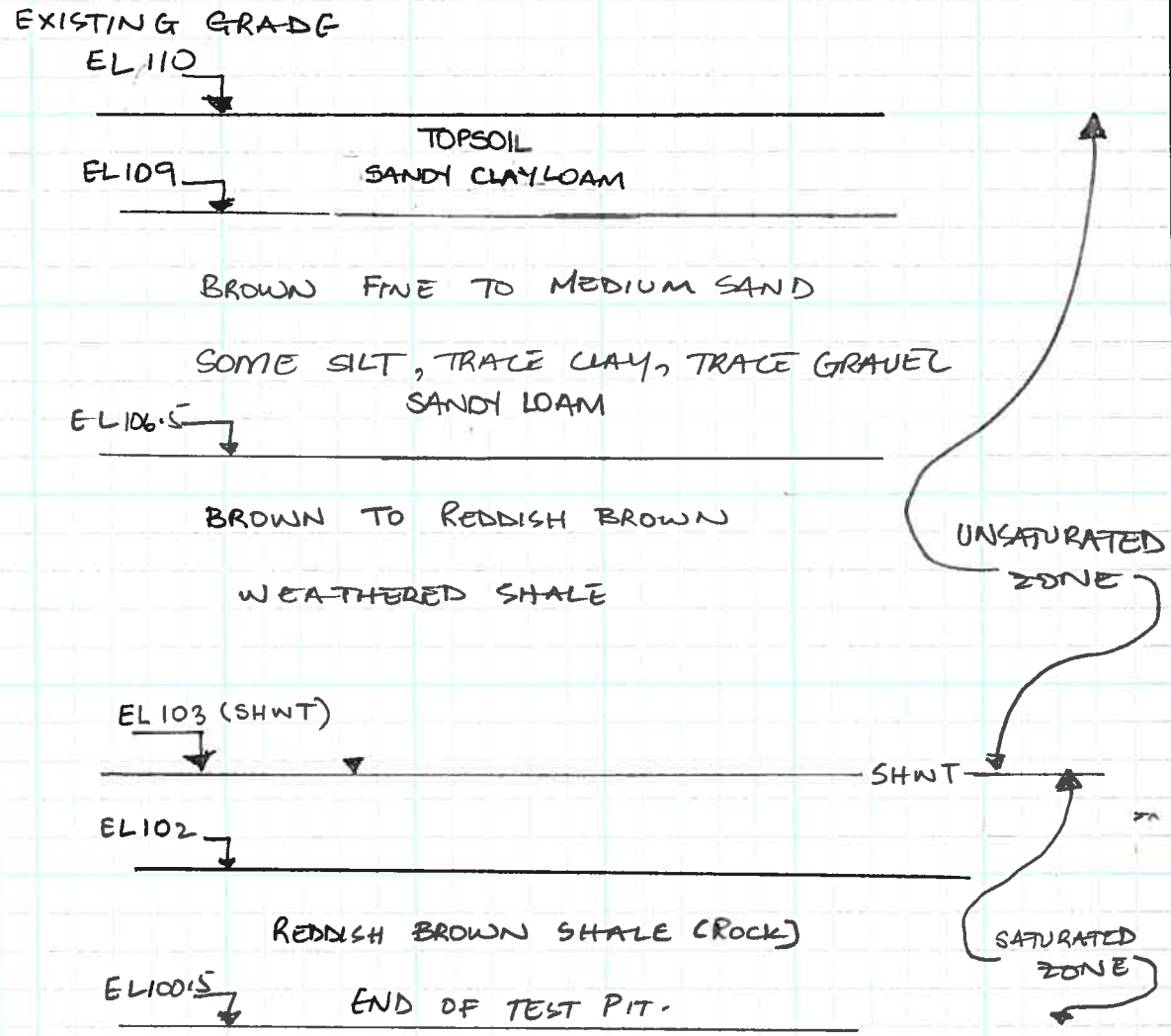
1) Basen flood test conducted at el 107

2) All elevations referenced to NGVD 29

PROPOSED WAREHOUSE DEVELOPMENT. FRANKLIN TOWNSHIP	BY MM DATE 05/16/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-214



NOTES:

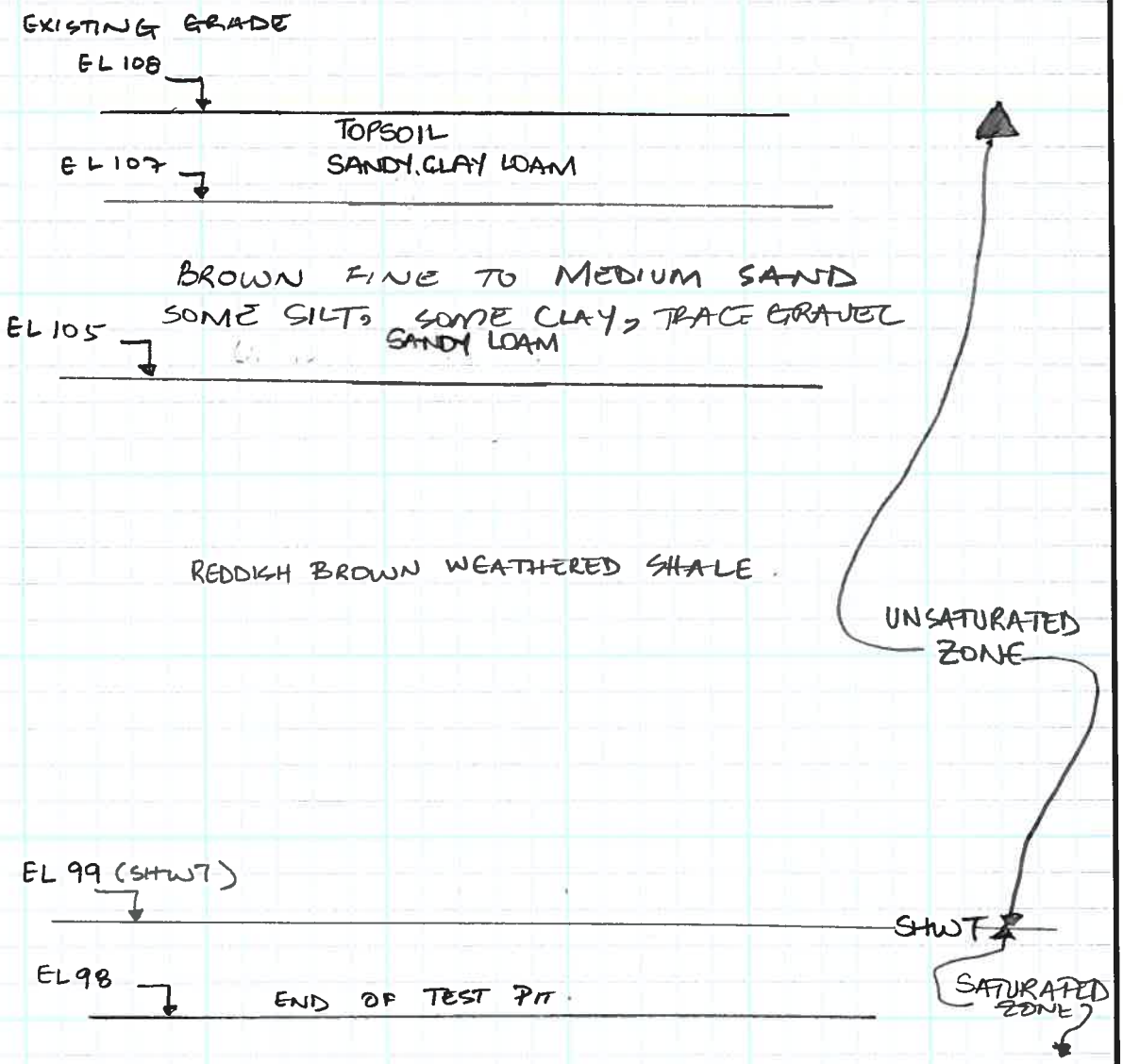
1) Basin flood test conducted at el 104

2) All elevations are referenced to NGVD29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP, NJ	BY MM DATE 05/17/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-215



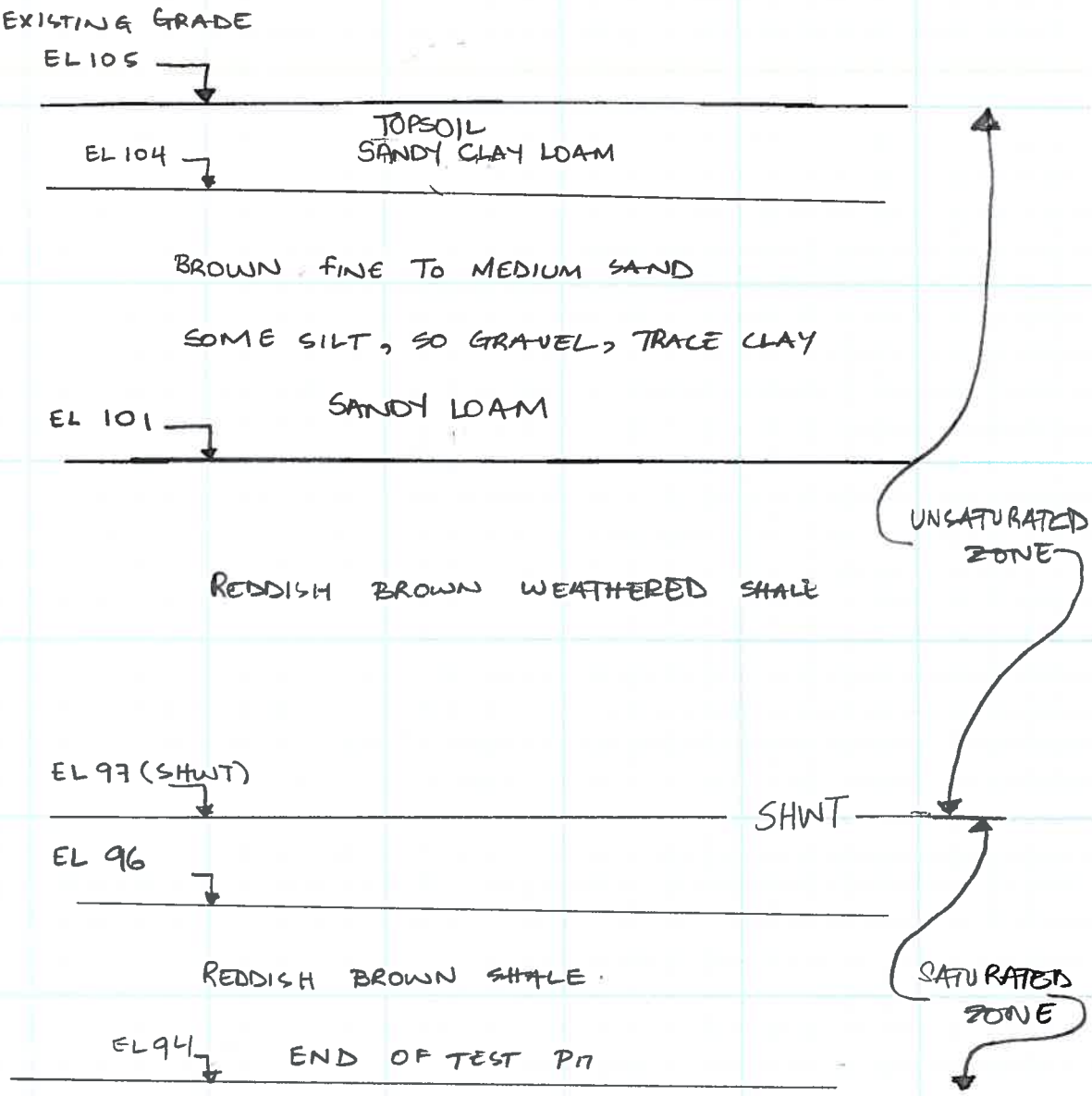
NOTES

1) Basin flood test conducted at el 100
2) All elevations are referenced to NGVD 29.

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/18/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-216



NOTES

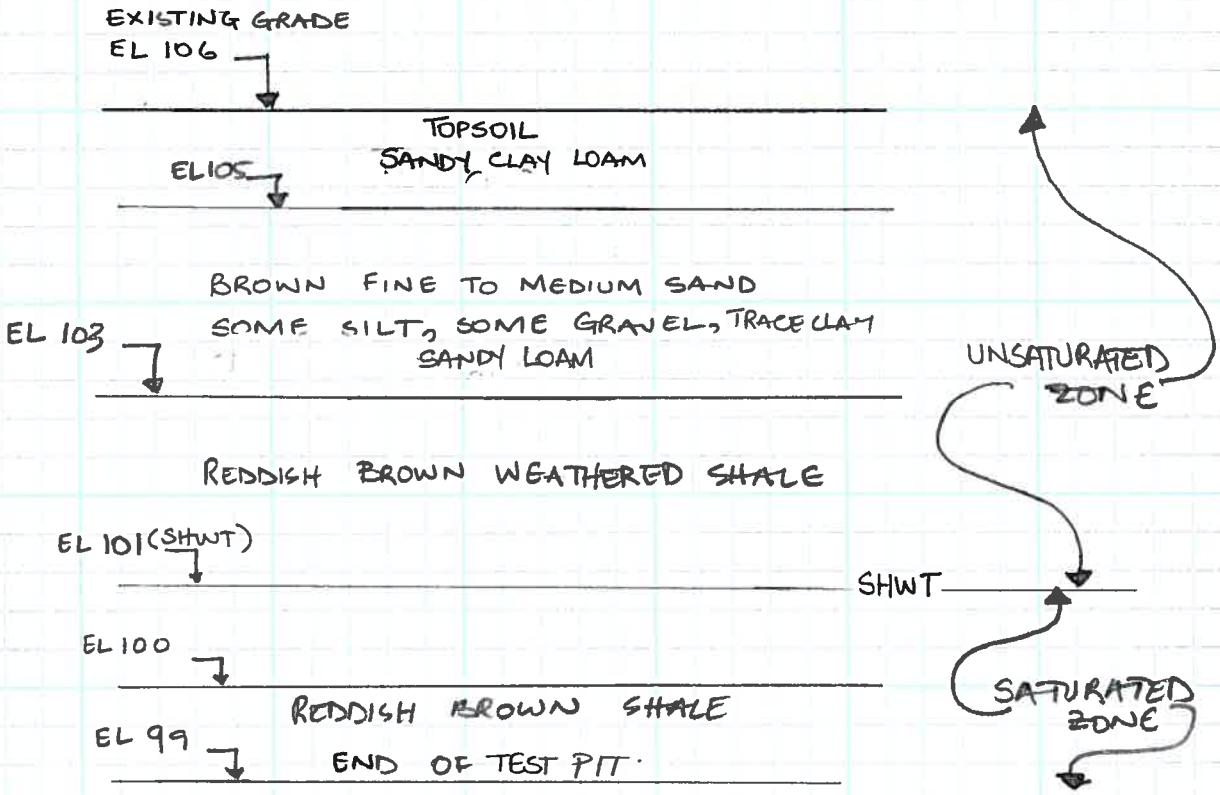
1) Basin flood test conducted at el 99

2) All elevations referenced to NGVD 29

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/21/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-217



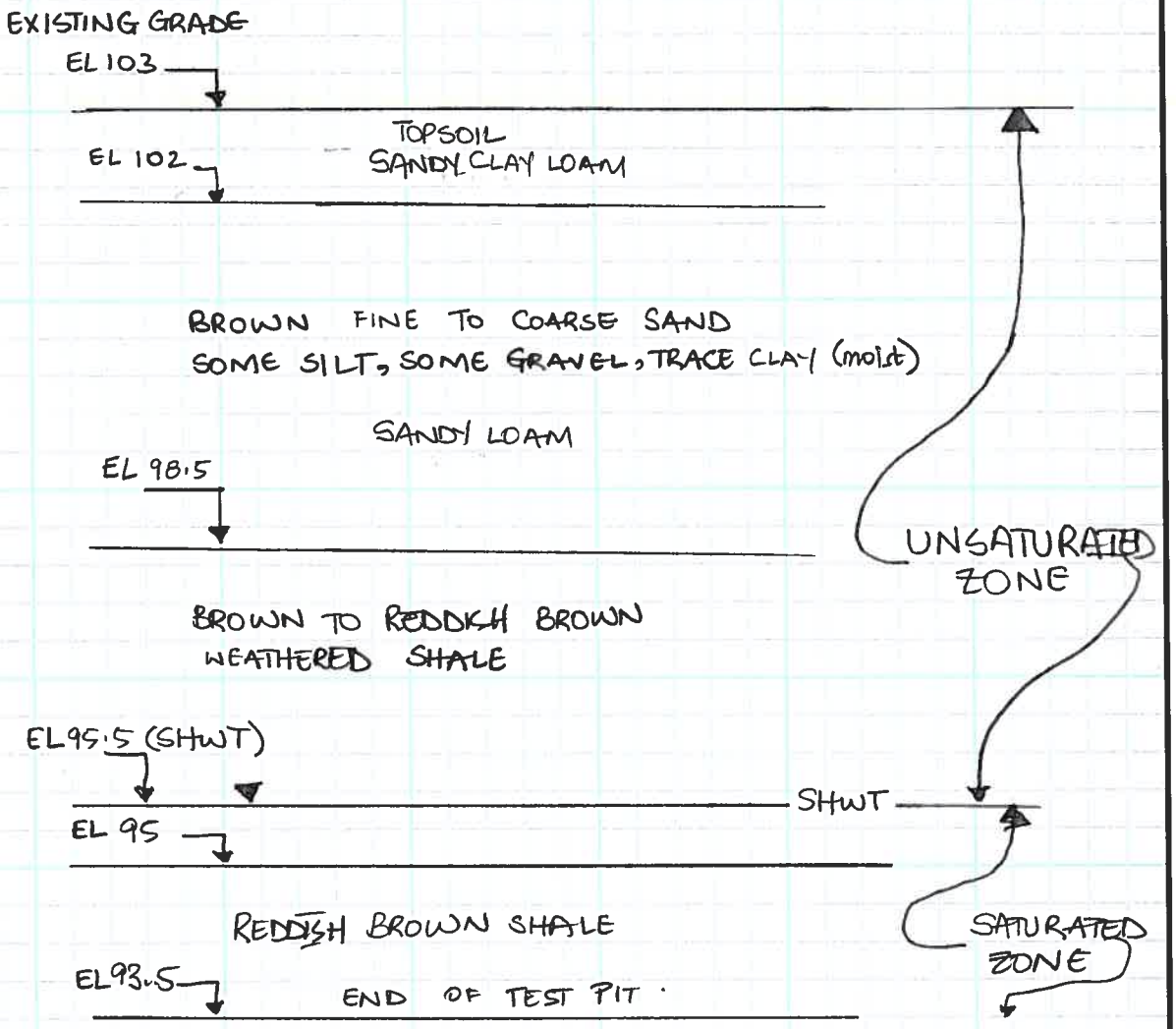
NOTES:

1) Basin flood test conducted at el 102
2) All elevations are referenced to NGVD 29

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MMM DATE 05/18/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

TP-218



NOTES:-

1) Basin flood test conducted at el 97.

2) All elevation are referenced to NGVD29

PROPOSED WAREHOUSE DEVELOPMENT FRANKLIN TOWNSHIP	BY MM DATE 05/19/20 CKD. ____ DATE ____	PROJ. NO. 100781401 SHEET ____ OF ____

LANGAN

APPENDIX B

SELECT TEST PIT PHOTOGRAPHS

Photo 1: TP-101 Profile pit

Photo 2: TP-101 Basin Flood Test excavation and water seepage

Photo 3: TP-102 Profile pit

Photo 4: TP-102 Basin Flood Test set up

Photo 5: TP-103 Profile pit

Photo 6: TP-103 Basin Flood Test set up

Photo 7: TP-104 Profile pit

Photo 8: TP-105 Profile pit

Photo 9: TP-106 Profile pit

Photo 10: TP-107 Profile pit

Photo 11: TP-108 Profile pit

Photo 12: TP-108 Basin Flood Test set up

Photo 13: TP-109 Profile pit

Photo 14: TP-110 Profile pit

Photo 15: TP-111 Profile pit

Photo 16: TP-112 Profile pit

Photo 17: TP-113 Profile pit

Photo 18: TP-114 Profile pit

Photo 19: TP-201 Profile pit

Photo 20: TP-201 Excavated material

Photo 21: TP-202 Profile pit

Photo 22: TP-202 Basin Flood Test set up

Photo 23: TP-203 Profile pit

Photo 24: TP-204 Profile pit

Photo 25: TP-205 Profile pit

Photo 26: TP-206 Profile pit

Photo 27: TP-207 Profile pit

Photo 28: TP-208 Profile pit

Photo 29: TP-209 Profile pit

Photo 30: TP-209 Excavated material

Photo 31: TP-210 Profile pit

Photo 32: TP-211 Profile pit

Photo 33: TP-212 Profile pit

Photo 34: TP-213 Profile pit

Photo 35: TP-214 Profile pit

Photo 36: TP-215 Profile pit

Photo 37: TP-216 Profile pit

Photo 38: TP-217 Profile pit

Photo 39: TP-218 Profile pit

Photo 40: TP-218 Excavated material