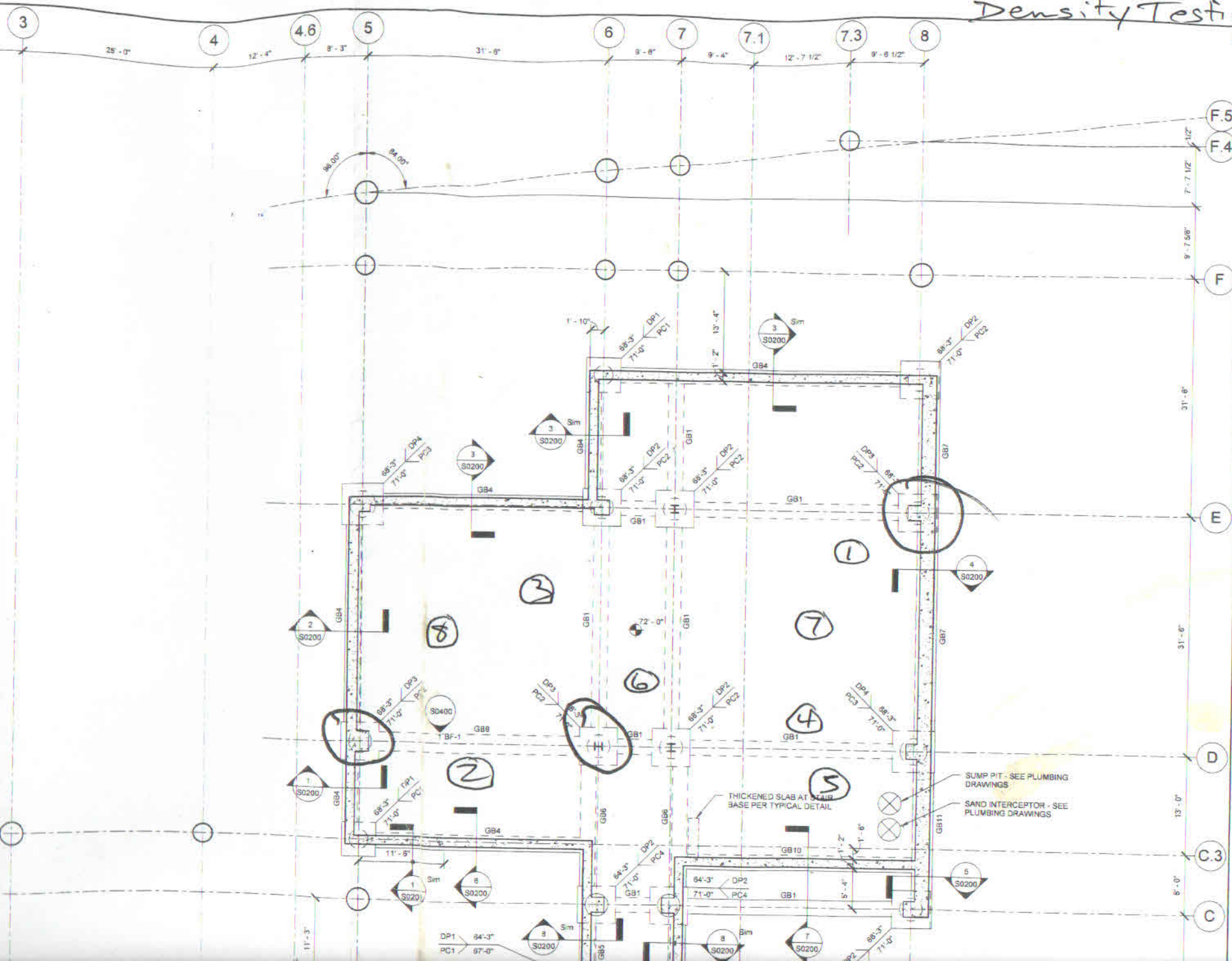


7-23-16
Density Testing

Webster
UNIVERSITY

Webster Unive
Interdisciplinary Scie
Building

CANNONDESI

1100 Clark Avenue
St. Louis, Missouri 63102
T: 314.241.6250
F: 314.241.2570

William Tao & Associates, Inc
MEP/FP Engineer
7955 Manchester Road, Suite 125
St. Louis, MO 63143
314-884-7600

David Mason & Associates, Inc.
Structural & Civil Engineer
800 South Vandeventer Avenue
St. Louis, MO 63110
314.534.1053

**Faith Group
Technology**
3101 S. Hanley Rd, Suite 100
St. Louis, MO 63143
314.991.2228

Kuhlmann Leavitt, Inc.
Environmental Graphics & Signage
7400 Pershing Ave
St. Louis, MO 63130
314.725.6616

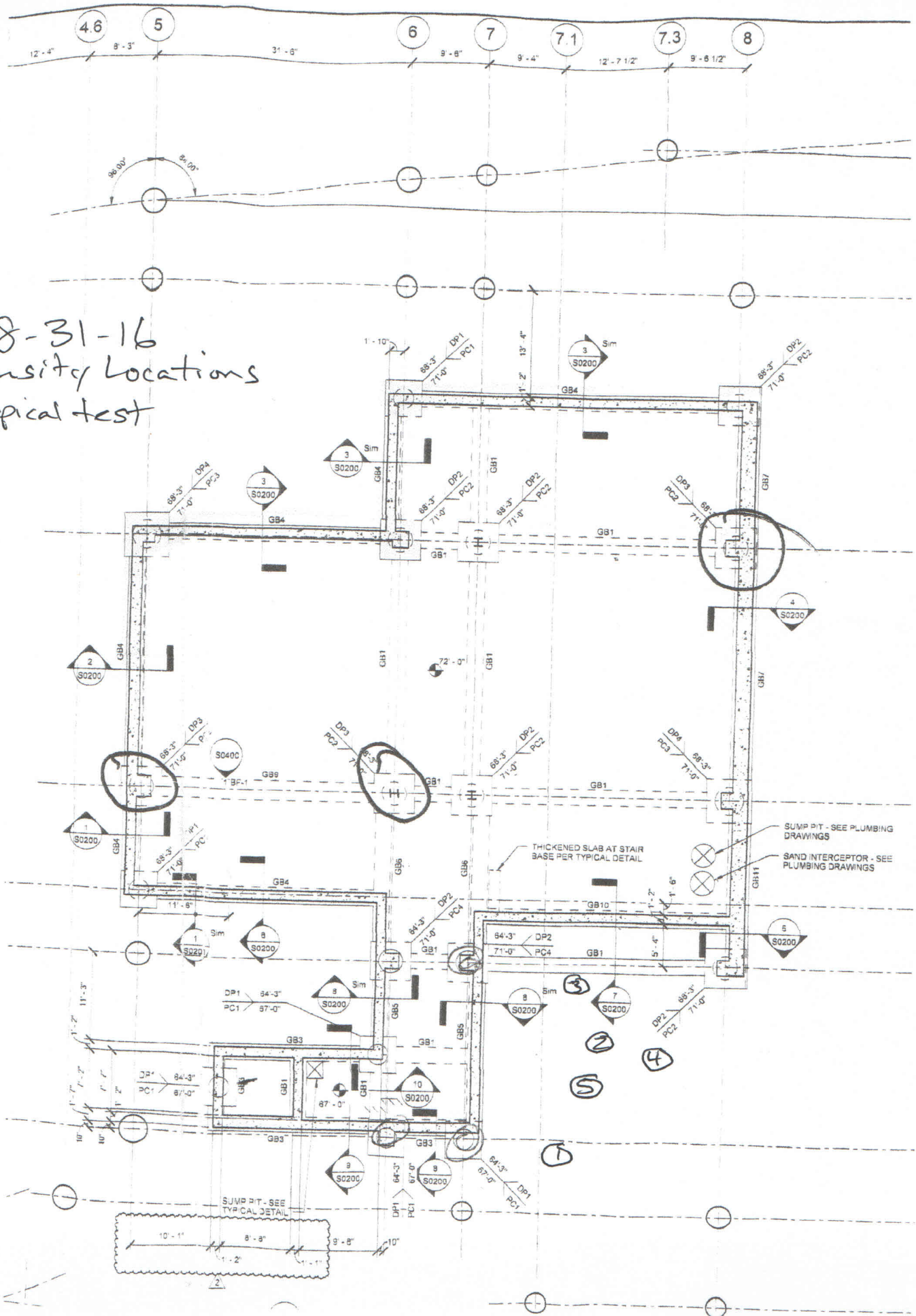
KWA Architects
Architecture
9721 Litzinger Road
St. Louis, MO 63124
314.962.2560

Spillman Brady & Company
Interior Designer
8251 Maryland Avenue, Suite 300
St. Louis, MO 63105
314.862.0070

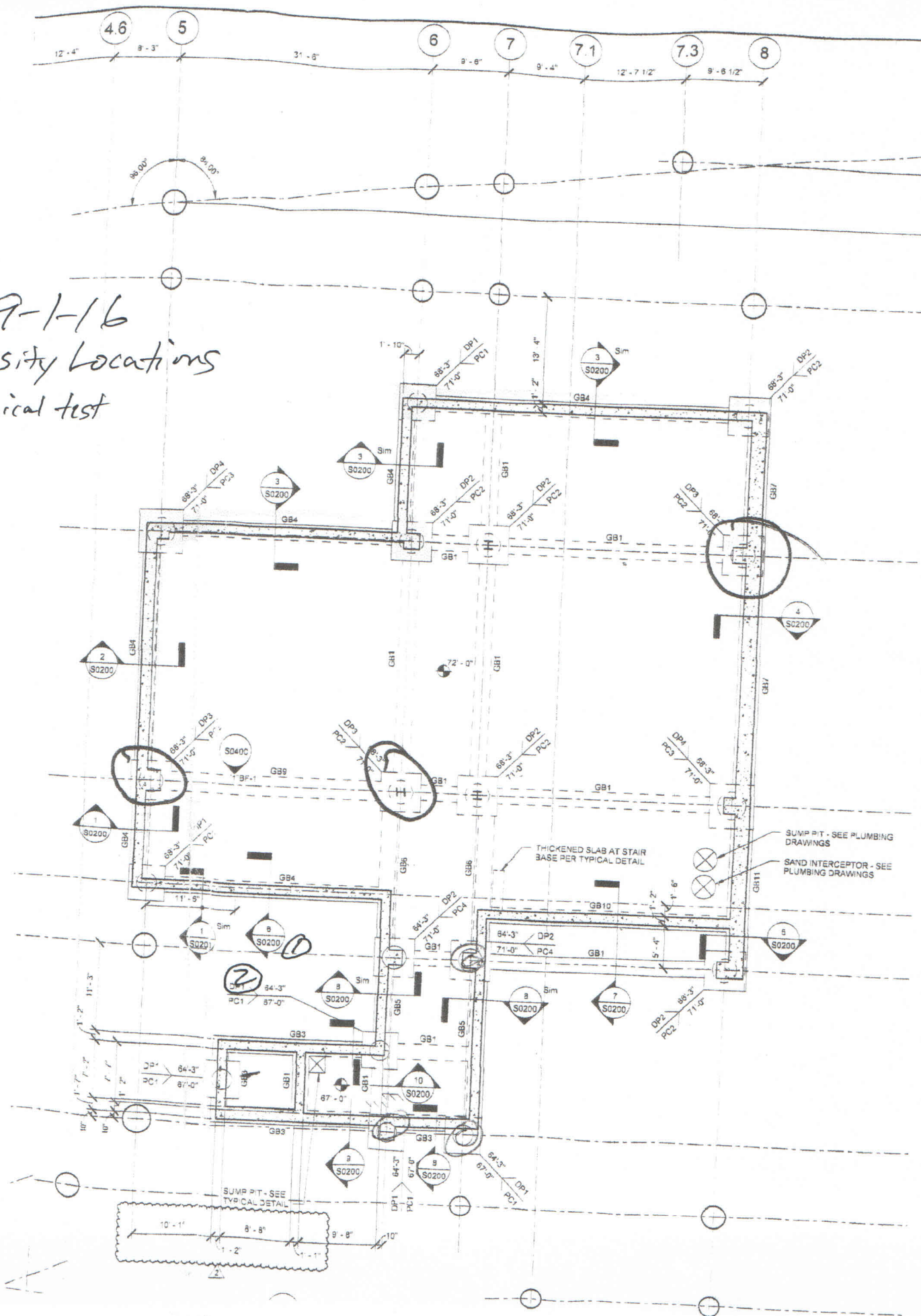
SWT Design
Landscape Architect
7722 Big Bend Blvd
St. Louis, MO 63119
314.644.5700

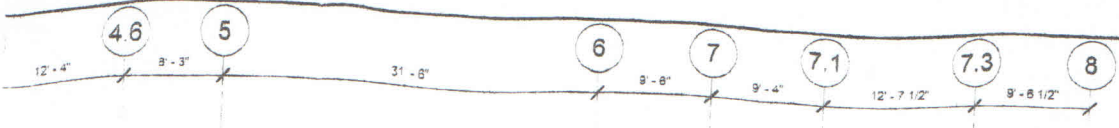
Webb Engineering Services, Inc.
Plumbing & Fire Protection
1400 S. 3rd Street, Suite 201
St. Louis, MO 63104
314.588.0600

8-31-16
Density Locations
① = typical test



9-1-16
Density Locations
⊙ = typical test

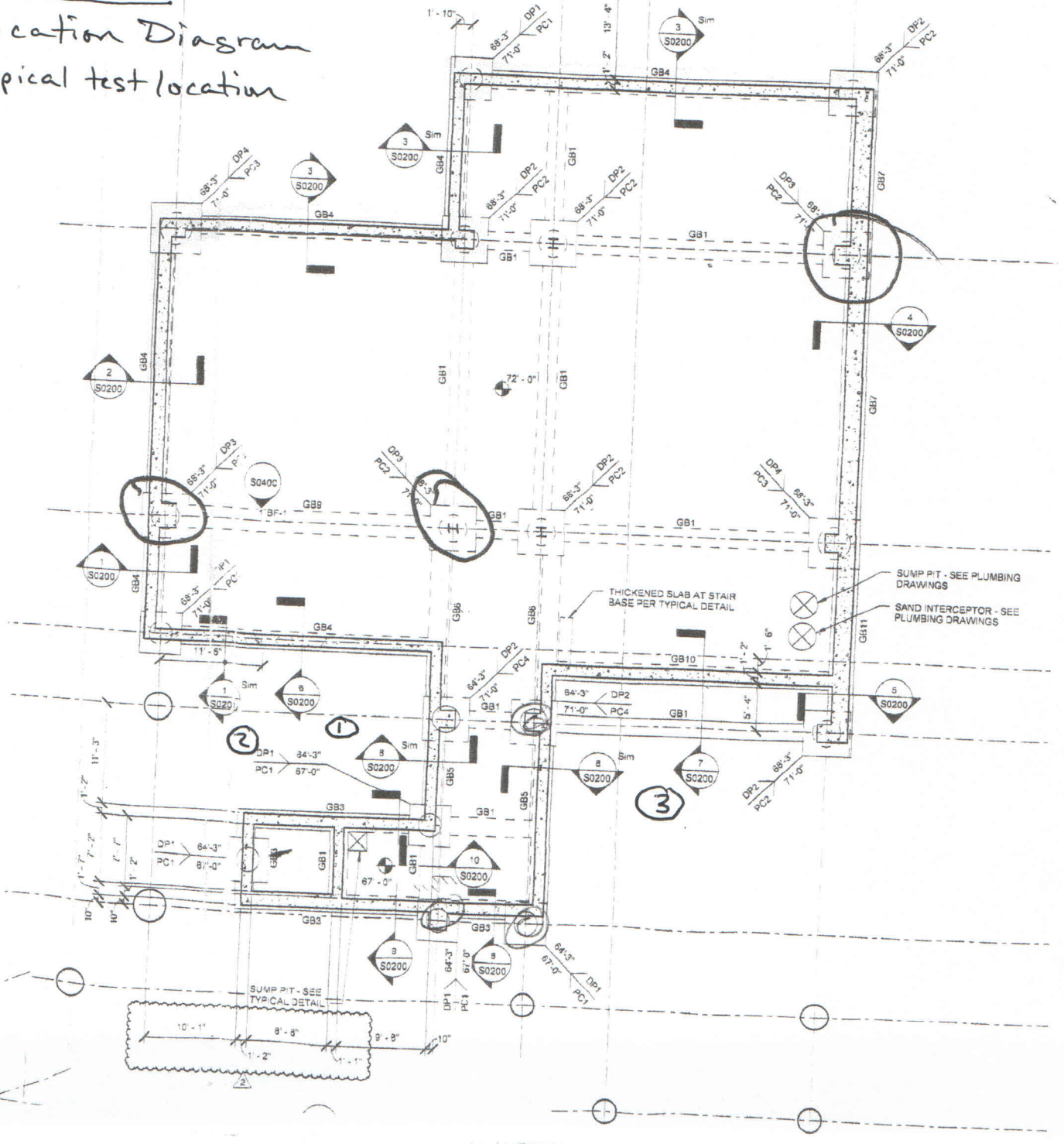




9-6-16

Location Diagram

O = typical test location



City Design Group, Inc.

1204 Washington Ave. suite 405

St. Louis, MO 63103

O 314.241.9072

esimington@citydesigngroupinc.com**Daily Field Report**

Client:	Geotechnology	Att:	Tom Coleman
Address:	11816 Lackland Road, Saint Louis, MO 63146		
Project Name:	Webster IB	CDG Project No.:	13250
CDG Rep.:	Mark Arnold	Report Date:	7/23/2016
Contractor:		Weather Condition:	Sunny, Hot

City Design Group, Inc. representative, Mark Arnold, was present at the referenced project and observed and tested placement of fill aggregate for basement level.

Respectfully Submitted:*BS***City Design Group, Inc.**

CC

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	August 27, 2016	Nuclear Density Equip. Serial/CDG	
Project Name:	Webster ISB	Density Standard:	3732.4
Client Name:	Geotechnology	Moisture Standard:	506.1
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone "screenings"	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L1	8.9	146.6	134.6	103.5	P
2	130.0	L2	9.1	141.7	129.5	99.6	P
3	130.0	L3	8.8	145.5	134.1	103.2	P
4	130.0	L4	9.0	140.1	131.2	100.9	P
5	130.0	L5	9.2	145.1	133.1	102.4	P
6	130.0	L6	9.1	144.9	132.6	102.0	P

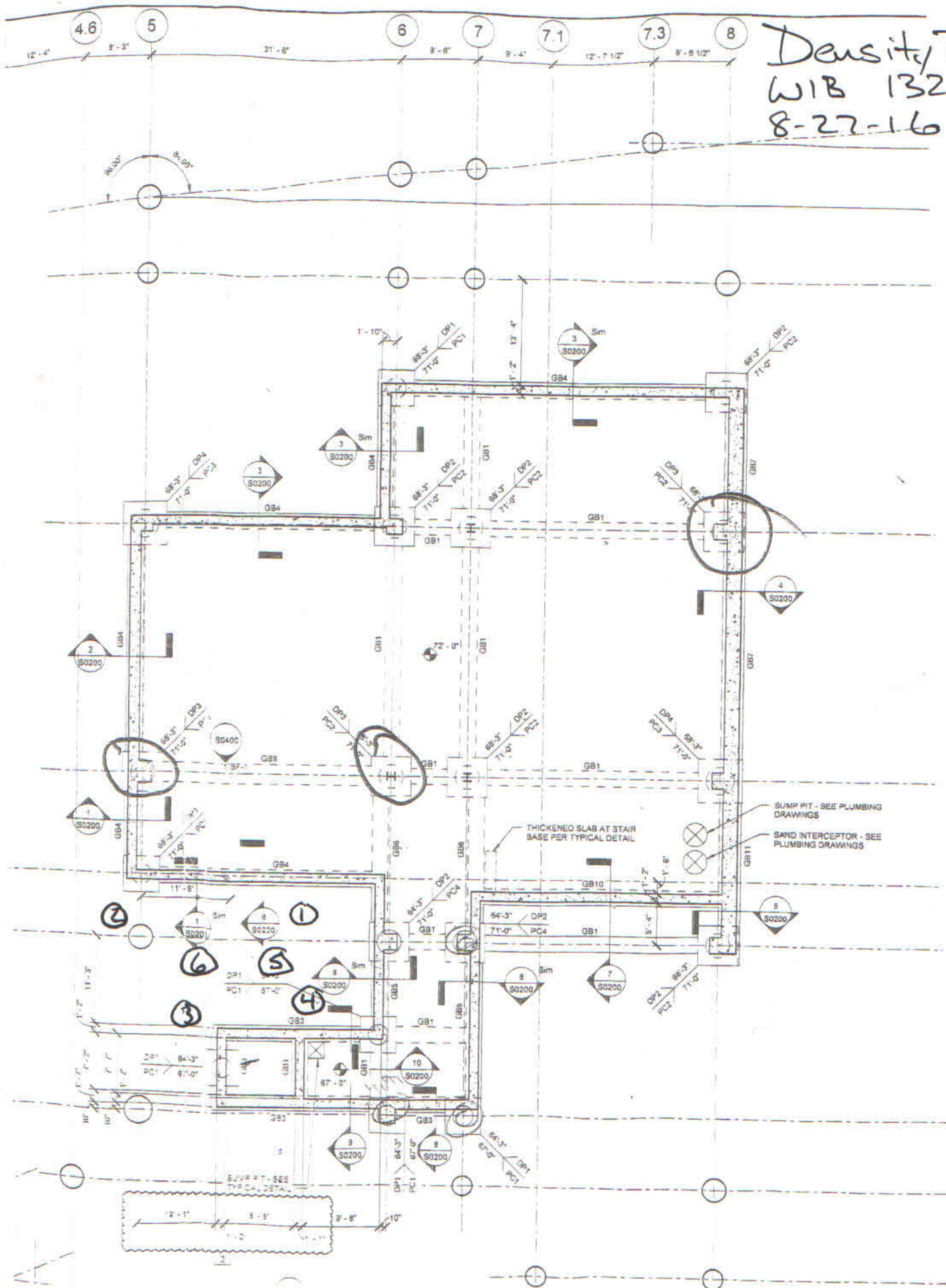
Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See attached location diagram	I
2	See attached location diagram	I
3	See attached location diagram	I
4	See attached location diagram	I
5	See attached location diagram	I
6	See attached location diagram	I

Respectfully Submitted:

City Design Group, Inc.

Density Tests
 W1B 13250
 8-27-16



City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 12, 2016	Nuclear Density Equip. Serial/CDG	5142
Project Name:	Webster IB	Density Standard:	2799.6
Client Name:	Geotechnology	Moisture Standard:	307.2
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone "screening"	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	1	8.5	142.1	130.9	100.7	P
2	130.0	1	8.5	143.1	131.9	101.5	P
3	130.0	2	9.3	142.3	130.2	100.2	P
4	130.0	2	8.9	147.0	135.0	103.8	P
5	130.0	3	8.6	147.0	135.5	104.2	P
6	130.0	3	8.2	147.3	136.2	104.8	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I
4	See location diagram	I
5	See location diagram	I
6	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

1204 Washington Avenue Suite 400
St. Louis, MO 63103

Page 1 of 1

Office: (314) 241-9072
Fax: (314) 3870

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 13, 2016	Nuclear Density Equip. Serial/CDG	5142
Project Name:	Webster IB	Density Standard:	2799.6
Client Name:	Geotechnology	Moisture Standard:	307.2
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone "Screening"	130.0	9.0

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L11	9.3	144.7	132.4	101.8	P
2	130.0	L12	8.6	145.5	134.0	103.1	P
3	130.0	L13	10.4	147.3	133.4	102.6	P

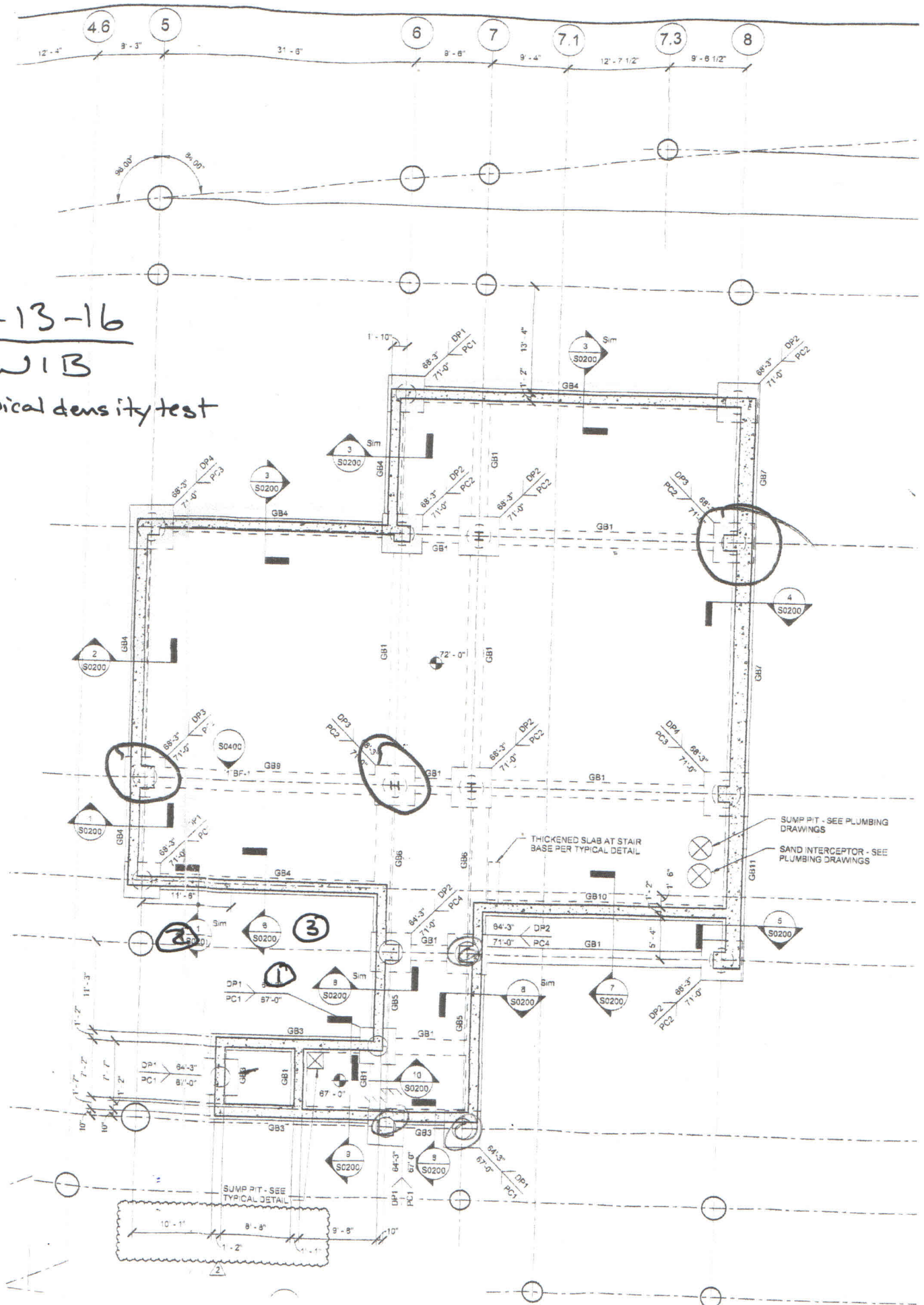
Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

9-13-16
 WIB
 O = typical density test



City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 14, 2016	Nuclear Density Equip. Serial/CDG	5142
Project Name:	Webster IB	Density Standard:	2810.3
Client Name:	Geotechnology	Moisture Standard:	311.5
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone "Screening"	130.0	9.0

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L4	9.3	142.3	130.4	100.3	P
2	130.0	L4	8.9	142.7	130.8	100.6	P
3	130.0	L11	9.0	143.8	131.9	101.5	P
4	130.0	L5	3.2	159.2	154.4	118.8	P
5	130.0	L1	6.0	145.7	133.1	102.4	P
6	130.0	L6	6.5	143.0	131.2	100.9	P
7	130.0	L2	8.0	143.2	131.0	100.8	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I
4	See location diagram	I
5	See location diagram	I
6	See location diagram	I
7	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 15, 2016	Nuclear Density Equip. Serial/CDG	5142
Project Name:	Webster IB	Density Standard:	2810.3
Client Name:	Geotechnology	Moisture Standard:	311.5
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone "Screening"	130.0	9.0

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L7	9.5	144.7	132.4	101.8	P
2	130.0	L12	5.0	139.4	131.5	101.2	P
3	130.0	L8	6.2	139.0	130.9	100.7	P
4	130.0	L13	7.5	144.4	134.5	103.5	P
5	130.0	L3	7.0	140.2	131.6	101.2	P
6	130.0	L4	7.3	141.9	130.9	100.7	P
7	130.0	L14	8.0	139.2	131.3	101.0	P
8	130.0	L9	9.1	142.0	131.9	101.5	P
9	130.0	L5	7.2	141.9	131.3	101.0	P
10	130.0	L1	6.2	139.6	131.6	101.2	P
11	130.0	L2	5.2	140.1	131.0	100.8	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I
4	See location diagram	I
5	See location diagram	I
6	See location diagram	I
7	See location diagram	I
8	See location diagram	I
9	See location diagram	I
10	See location diagram	I
11	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	August 18, 2016	Nuclear Density Equip. Serial/CDG	
Project Name:	Webster ISB	Density Standard:	2802.2
Client Name:	Geotechnology	Moisture Standard:	304.6
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	limestone Screenings	135.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	135.0	L #2	9.0	145.1	133.1	102.4	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	SS run 24-23	I

Respectfully Submitted:

City Design Group, Inc.

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 19, 2016	Nuclear Density Equip. Serial/CDG	5142
Project Name:	Webster IB	Density Standard:	2810.0
Client Name:	Geotechnology	Moisture Standard:	311.5
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone "Screening"	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L3	7.6	141.9	131.0	100.8	P
2	130.0	L4	8.9	143.7	133.2	102.5	P
3	130.0	L5	9.2	144.8	133.1	102.4	P
4	130.0	L6	8.1	143.5	132.2	101.7	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I
4	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 21, 2016	Nuclear Density Equip. Serial/CDG	5142
Project Name:	Webster IB	Density Standard:	2802.0
Client Name:	Geotechnology	Moisture Standard:	311.1
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone Screenings	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L15	6.0	141.2	131.6	101.2	P
2	130.0	L7	7.2	142.0	132.0	101.5	P
3	130.0	L7	8.0	143.7	130.9	100.7	P
4	130.0	L8	8.5	144.1	132.3	101.8	P
5	130.0	L9	7.8	143.2	131.9	101.5	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I
4	See location diagram	I
5	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 22, 2016	Nuclear Density Equip. Serial/CDG	5142
Project Name:	Webster IB	Density Standard:	2803.0
Client Name:	Geotechnology	Moisture Standard:	311.8
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone Screenings	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L9	8.7	144.3	133.1	102.4	P
2	130.0	L10	7.1	140.0	130.8	100.6	P
3	130.0	L11	8.0	142.1	132.3	101.8	P
4	130.0	L8	9.2	144.8	130.7	100.5	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I
4	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 23, 2016	Nuclear Density Equip. Serial/CDG	5142
Project Name:	Webster IB	Density Standard:	2803.0
Client Name:	Geotechnology	Moisture Standard:	311.8
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L12	8.7	144.7	137.3	105.6	P
2	130.0	L9	7.8	143.1	131.9	101.5	P
3	130.0	L10	8.7	144.2	133.0	102.3	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 27, 2016	Nuclear Density Equip. Serial/CDG	5142
Project Name:	Webster IB	Density Standard:	2803.0
Client Name:	Geotechnology	Moisture Standard:	311.8
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limeston "Screening"	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L1	8.2	144.1	133.1	102.4	P
2	130.0	L2	9.1	145.0	132.7	102.1	P
3	130.0	L3	7.7	143.7	131.8	101.4	P
4	130.0	L4	8.0	144.2	132.3	101.8	P
5	130.0	L5	8.5	141.7	130.8	100.6	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I
4	See location diagram	I
5	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 29, 2016	Nuclear Density Equip. Serial/CDG	5142
Project Name:	Webster IB	Density Standard:	2803.0
Client Name:	Geotechnology	Moisture Standard:	311.8
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone "Screenings"	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L1	9.2	144.9	132.3	101.8	P
2	130.0	L2	8.8	145.0	133.2	102.5	P
3	130.0	L3	7.7	143.1	132.8	102.2	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	September 30, 2016	Nuclear Density Equip. Serial/CDG	5665
Project Name:	Webster IB	Density Standard:	3690.9
Client Name:	Geotechnology	Moisture Standard:	504.3
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone "Screenings"	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L1	8.1	143.1	132.7	102.1	P
2	130.0	L2	8.9	144.0	133.2	102.5	P
3	130.0	L1	9.1	144.6	133.1	102.4	P
4	130.0	L4	7.7	142.0	131.0	100.8	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	See location diagram	I
2	See location diagram	I
3	See location diagram	I
4	See location diagram	I

Respectfully Submitted:

City Design Group, Inc.

City Design Group, Inc.
Report of Field Density Tests

Date of Report:	July 23, 2016	Nuclear Density Equip. Serial/CDG	
Project Name:	Webster ISB	Density Standard:	2808.2
Client Name:	Geotechnology	Moisture Standard:	304.9
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone Screening	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
1	130.0	L1	7.2	139.4	130.0	100.0	P
2	130.0	L1	9.0	145.1	133.1	102.4	P
3	130.0	L2	8.5	145.5	134.1	103.2	P
4	130.0	L2	8.9	146.6	134.6	103.5	P
5	130.0	L3	9.2	147.2	134.8	103.7	P
6	130.0	L3	9.2	141.7	129.5	100.0	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
1	*See Diagram	I=Initial
2	*See Diagram	I=Initial
3	*See Diagram	I=Initial
4	*See Diagram	I=Initial
5	*See Diagram	I=Initial
6	*See Diagram	I=Initial

Respectfully Submitted *BS*

City Design Group, Inc.

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Page 1 of 1

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City Design Group, Inc.
Report of Field Density Tests

Date of Report:	July 23, 2016	Nuclear Density Equip. Serial/CDG	
Project Name:	Webster ISB	Density Standard:	2808.2
Client Name:	Geotechnology	Moisture Standard:	304.9
Technician Name:	Mark Arnold	CDG Project Number:	13250

Soil Information:

Proctor Density:	Visual Description:	Dry Density (lbs./ft. ³):	Optimum Moisture (%):
1) Soil Description:	Limestone Screenings	130.0	9.0
2) Soil Description:			
3) Soil Description:			

Field Test Information:

Test No.	Proctor Use (above)	Elevation (or lift #):	% Moisture:	Wet Density (lbs./ft. ³)	Dry Density (lbs./ft. ³):	% Dry Density:	Pass/Fail:
7	130.0	L4	10.7	146.9	137.8	102.2	P
8	130.0	L4	9.0	145.9	133.9	103.0	P

Test Location Information:

Test No.	Location: (Station#, Column/Wall Line, Physical Coordinates)	R=Retest I=Initial
7	*See Diagram	I=Initial
8	*See Diagram	I=Initial

Respectfully Submitted, *BS*

City Design Group, Inc.

1204 Washington Avenue Suite 400
St. Louis, MO 63103

Page 1 of 1

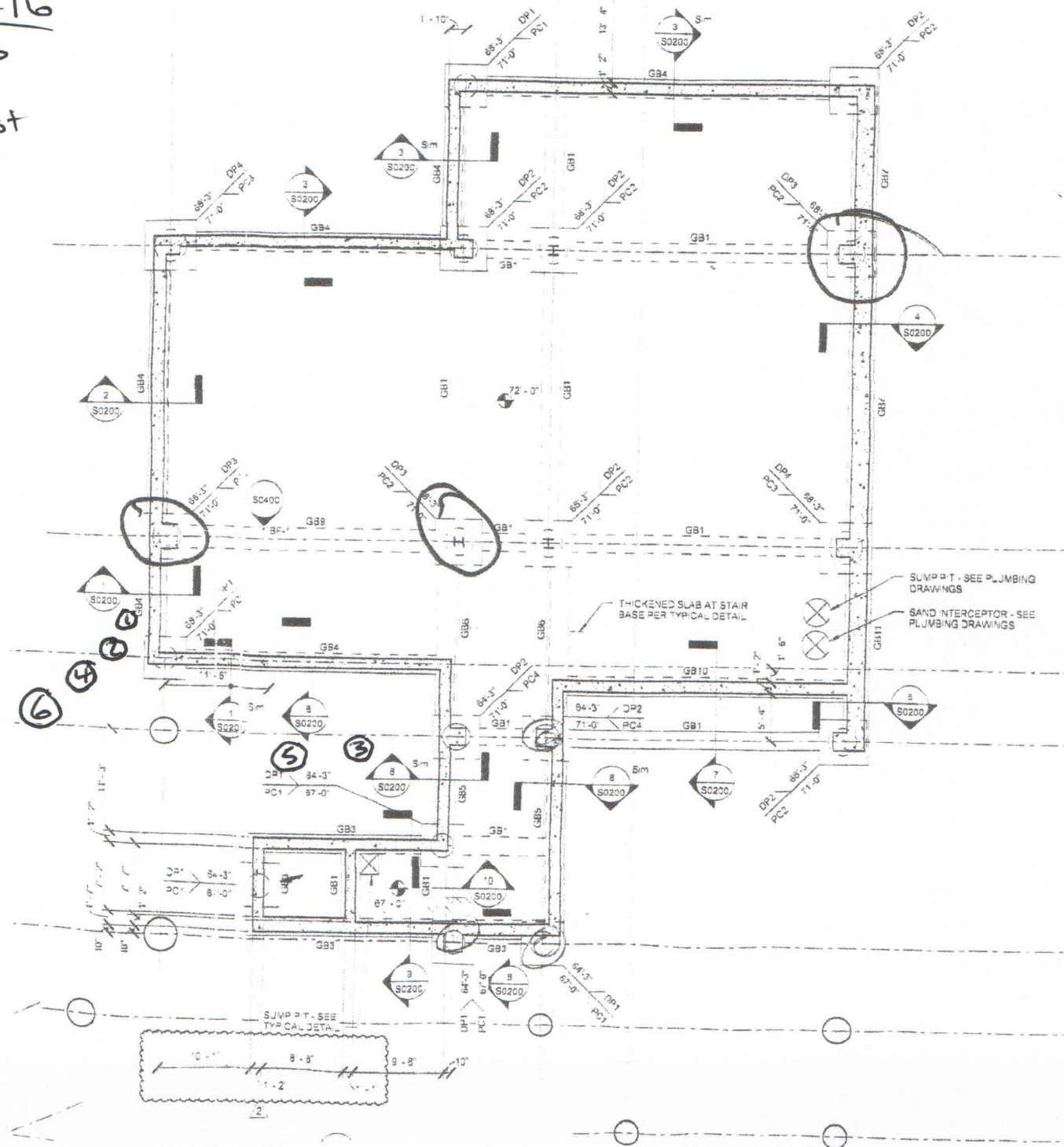
Office: (314) 241-9072
Fax: (314) 3870

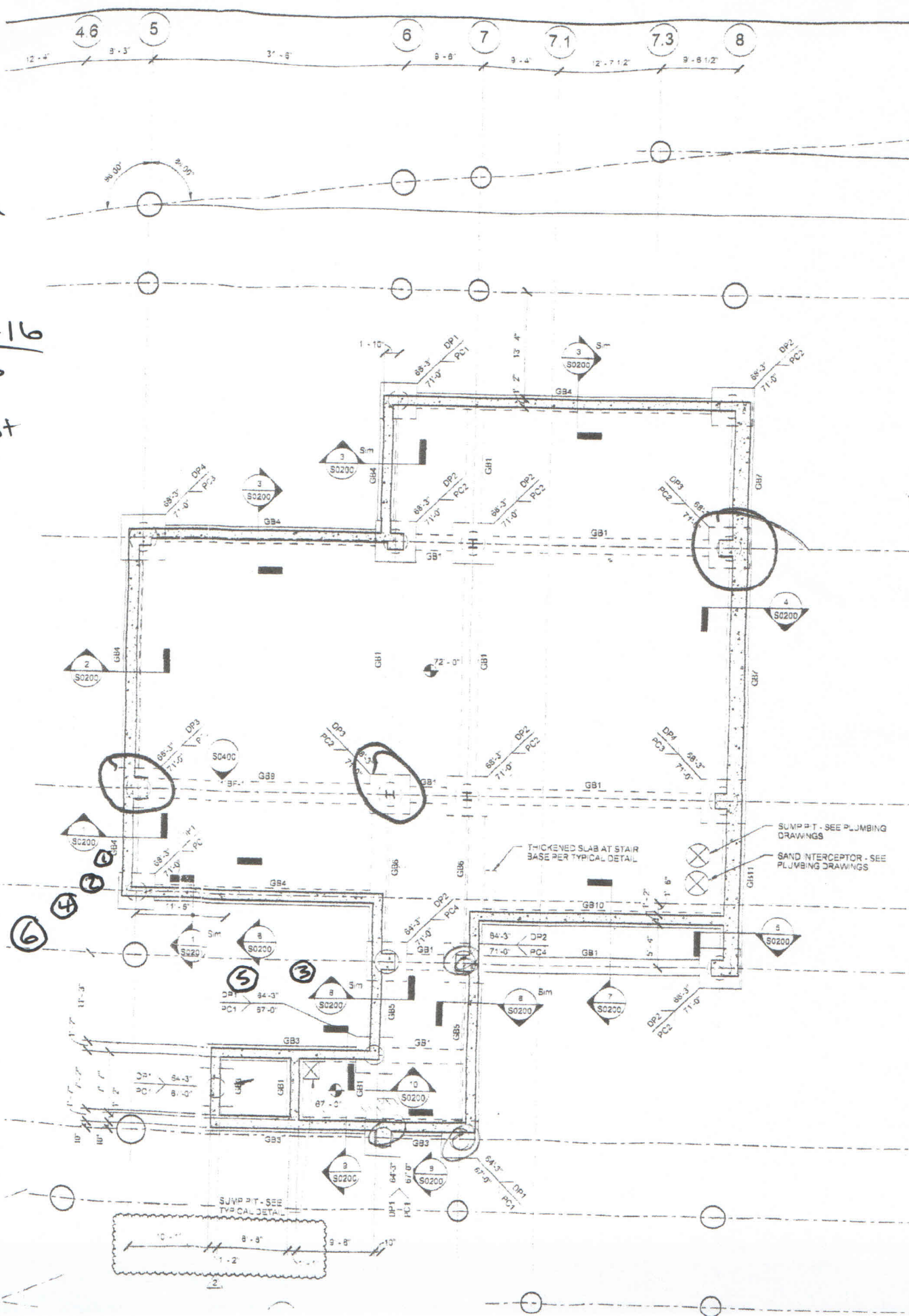


9-20-16

WIB

0 = typical density test





9-20-16

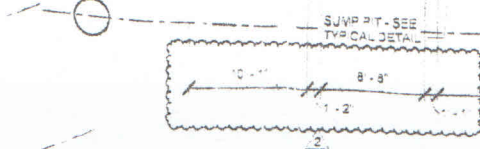
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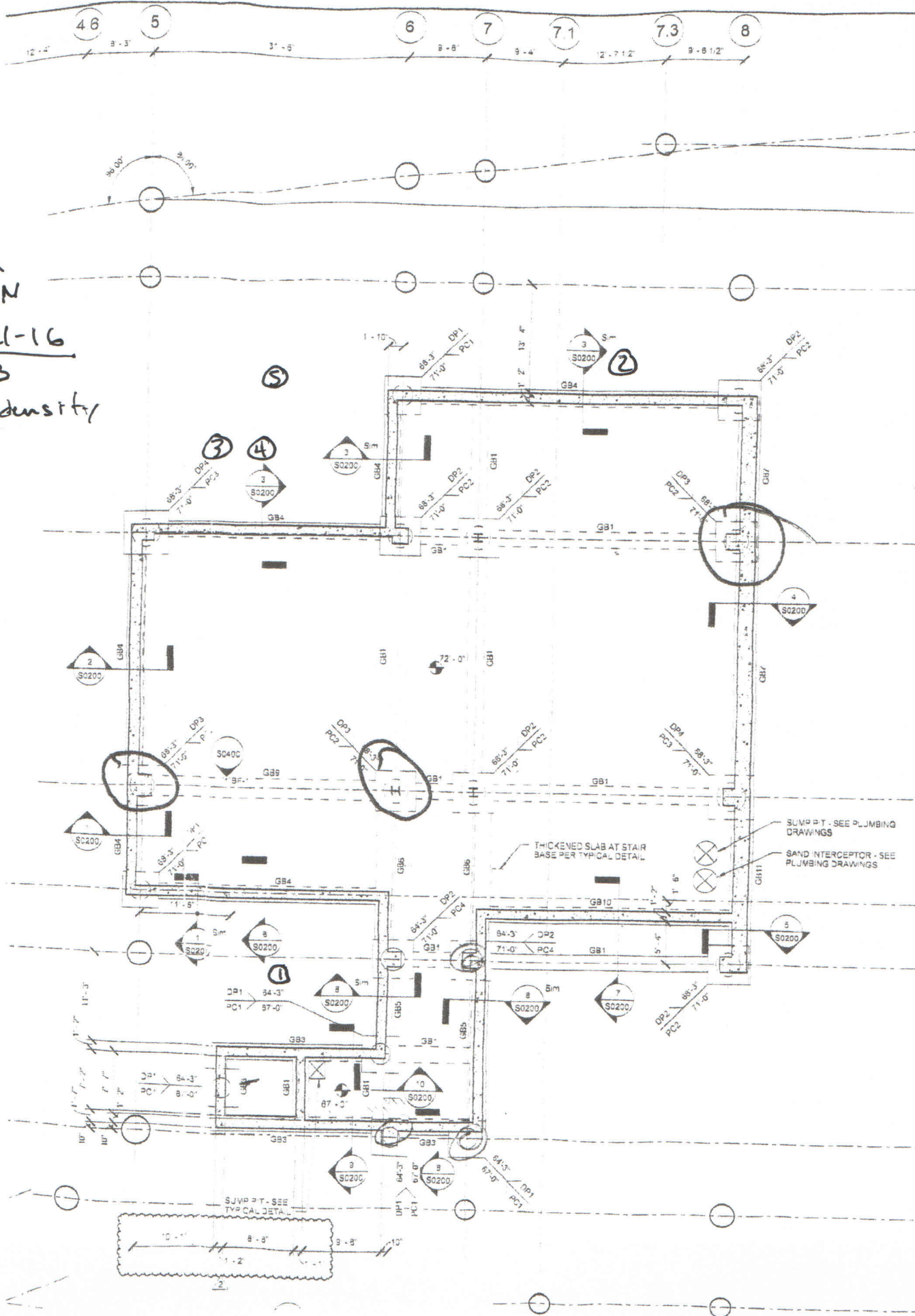
O: typical density test

THICKENED SLAB AT STAIR BASE PER TYPICAL DETAIL

SUMP PIT - SEE PLUMBING DRAWINGS

SAND INTERCEPTOR - SEE PLUMBING DRAWINGS



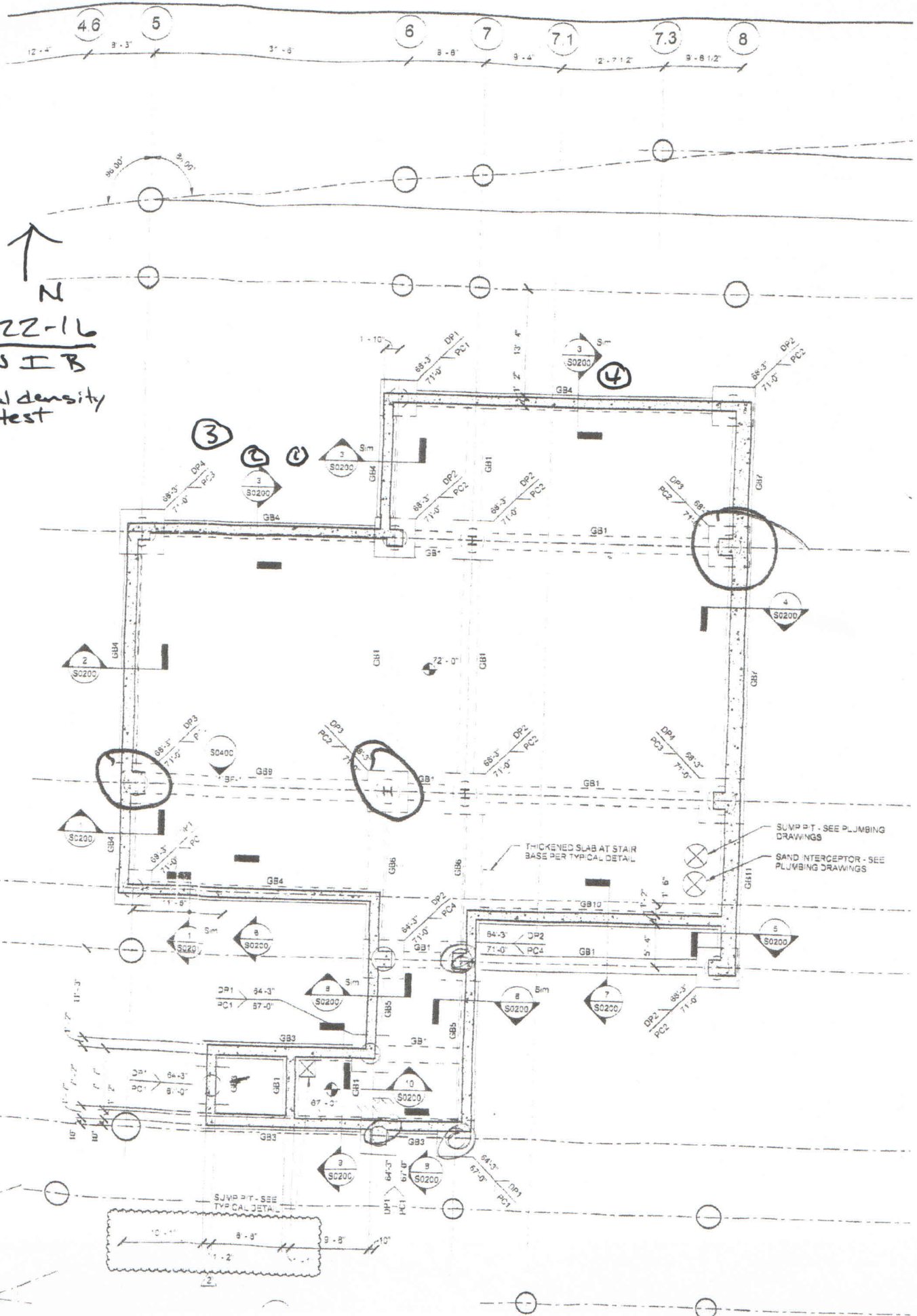


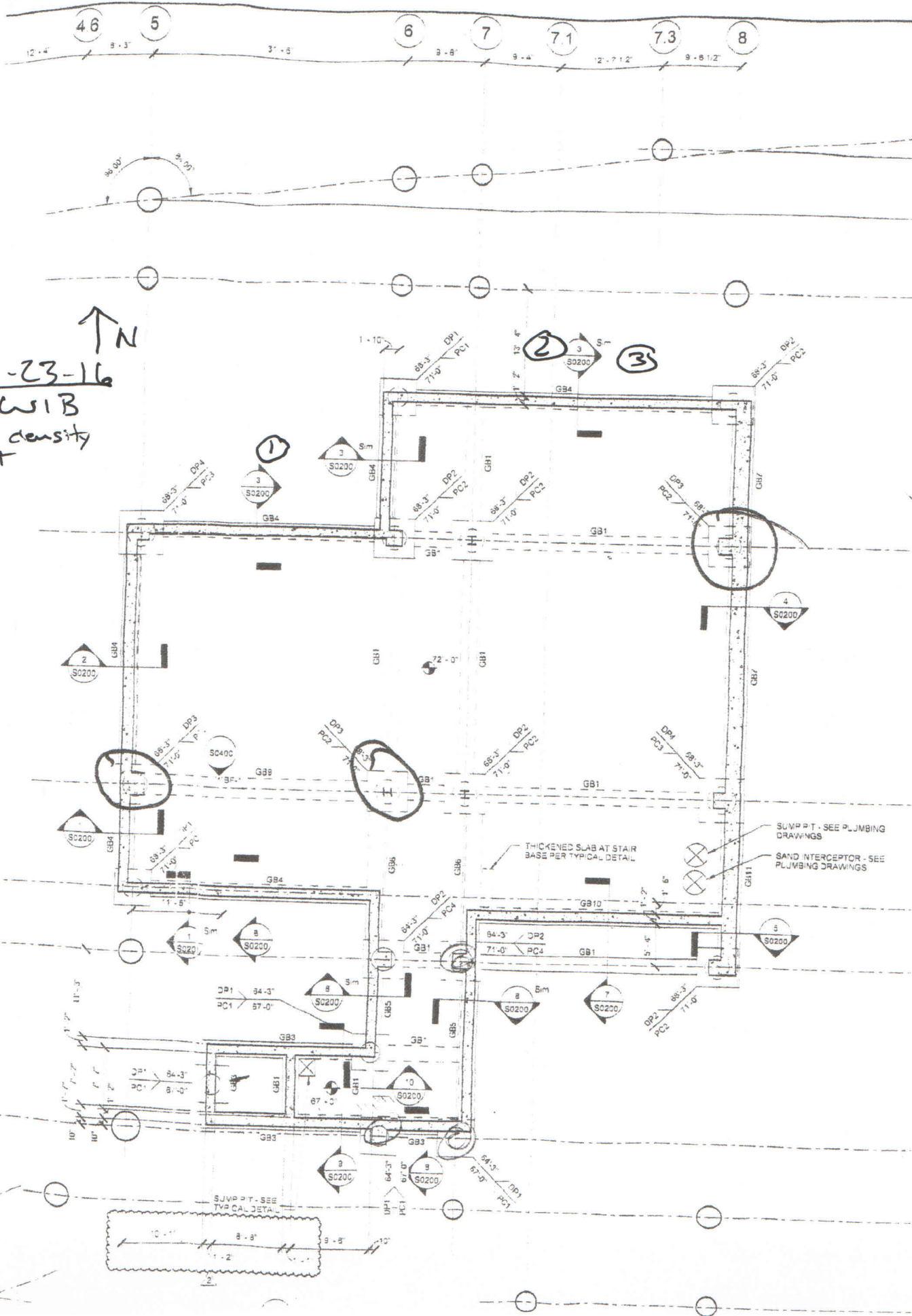
↑ N
 9-21-16
 WLB
 O = typical density
 test

SUMP P.T. - SEE PLUMBING
 DRAWINGS
 SAND INTERCEPTOR - SEE
 PLUMBING DRAWINGS

THICKENED SLAB AT STAIR
BASE PER TYPICAL DETAIL

SUMP P.T. - SEE
TYPICAL DETAIL





9-23-16
WIB

○ = typical density test