HALEY & ALDRICH, INC.
465 Medford St.
Suite 2200
Boston, MA 02129
617.886.7400

20 January 2017
File No. 129630-002

Walker Parking Consultants
20 Park Plaza Suite 1202
Boston, MA 02116

Attention: Mr. Christopher E. Brennan, PE
Director of Operations/Principal

Subject: Geotechnical Data Report
MBTA Commuter Lot
Waterfield Road
Winchester, Massachusetts

Ladies and Gentlemen:

This report presents the results from a geotechnical subsurface exploration program conducted by Haley & Aldrich in connection with the MBTA Commuter Parking Lot off Waterfield Road in Winchester, Massachusetts. These services were performed in general accordance with our proposal dated 9 January 2017.

The purpose of the subsurface exploration program was to obtain preliminary geotechnical information relative to subsurface soil/bedrock conditions at the site.

INTRODUCTION

The existing parking lot site is proposed to be developed with a mixed use building, about 2 to 4 stories in height and no below grade space. The limits and configuration of the development are not known. The development may consist of retail at ground floor with a mix of office and residential space on the upper floors. A site locus is included as Figure 1.

The project structural engineer, Walker Parking Consultants provided the following information on the proposed structure. The interior vertical column loads are planned to be about 500 kip per column and exterior columns would be about 350 kips per column. In addition to the column loads, vertical walls loads of about 15 kips per linear foot of wall are planned.

ELEVATION DATUM AND HORIZONTAL CONTROL

Elevations in this report are given in feet and refer to the North American vertical Datum of 1988 (NAVD88).

The plan location of the test boring completed by Haley & Aldrich was taped to existing features shown on the site plan. The accuracy of boring location should be considered to be consistent with the methods used.

SUBSURFACE INFORMATION

One (1) test boring was completed by Haley & Aldrich at the location shown on the attached Figure 2. The test boring was drilled from ground surface by New England Boring Contractors on 12 January 2017. The test boring was monitored in the field by a Haley & Aldrich geologist. Upon completion of the test boring, a groundwater monitoring well was installed in the completed borehole. A log of the test boring is included in Appendix A. A Groundwater Observation Well Installation Report is included as Appendix B.

Previous test borings were reportedly completed at the site by Jacobs and logs for the borings are included as Appendix C.

SUBSURFACE CONDITIONS

Results of test boring HA17-1 indicate a 3 ft thick layer of fill below ground surface. The fill soils are underlain by Glaciolacustrine deposits consisting of gray to brown silty SAND to SILT with trace sand. Glaciofluvial deposits consisting of very dense well graded SAND with gravel were encountered from a depth of 39 ft to 44 ft below ground surface.

Well graded gravel that may be weathered bedrock was encountered at a depth of 44 ft below ground surface. The top of this unit was sampled with a split spoon sampler at a depth of 50.3 ft.

The water level was recorded at the site in Observation Well HA17-1 on 18 January 2017, 6 days after well installation at a depth of 10.8 ft below ground surface, at El. 11.2.

PRELIMINARY GEOTECHNICAL CONSIDERATIONS

Based on the available test boring information, soil bearing footings are likely feasible provided they bear directly on the undisturbed, naturally deposited soils. We recommend foundations be supported by on naturally-deposited, undisturbed, inorganic glacial soils.

For the purpose of seismic design in accordance with the 8th edition the Massachusetts State Building Code, the site is classified as Site Class D. The site soils are not considered liquefaction susceptible in accordance with criteria in the Building Code.

LIMITATIONS

This report has been prepared for specific application to the MBTA Commuter Parking Lot in Winchester, Massachusetts, as understood by Haley & Aldrich at this time. After the design or location of the facilities is finalized, the conclusions and recommendations contained in this report should be reviewed and modified or verified in writing by Haley & Aldrich. Our recommendations are based in part upon data obtained from the referenced subsurface explorations. The nature and extent of variations between explorations will not become evident until construction. If significant variations then appear, it may be necessary to re-evaluate the recommendations of this report.

CLOSURE

We appreciate the opportunity to undertake this work and look forward to our association with you on the next phases of this project. Please contact the undersigned if you wish to discuss the above information or have additional questions.

Sincerely yours,
HALEY & ALDRICH, INC.

Denis J. Bell, P.E.
Senior Engineer

Bryan P. Sweeney, P.E.
Senior Vice President

Enclosures:

Figure 1	Project Locus
Figure 2	Subsurface Exploration Plan
Appendix A	Test Boring Logs
Appendix B	Groundwater Observation Well Installation Report
Appendix C	Previous Test Borings

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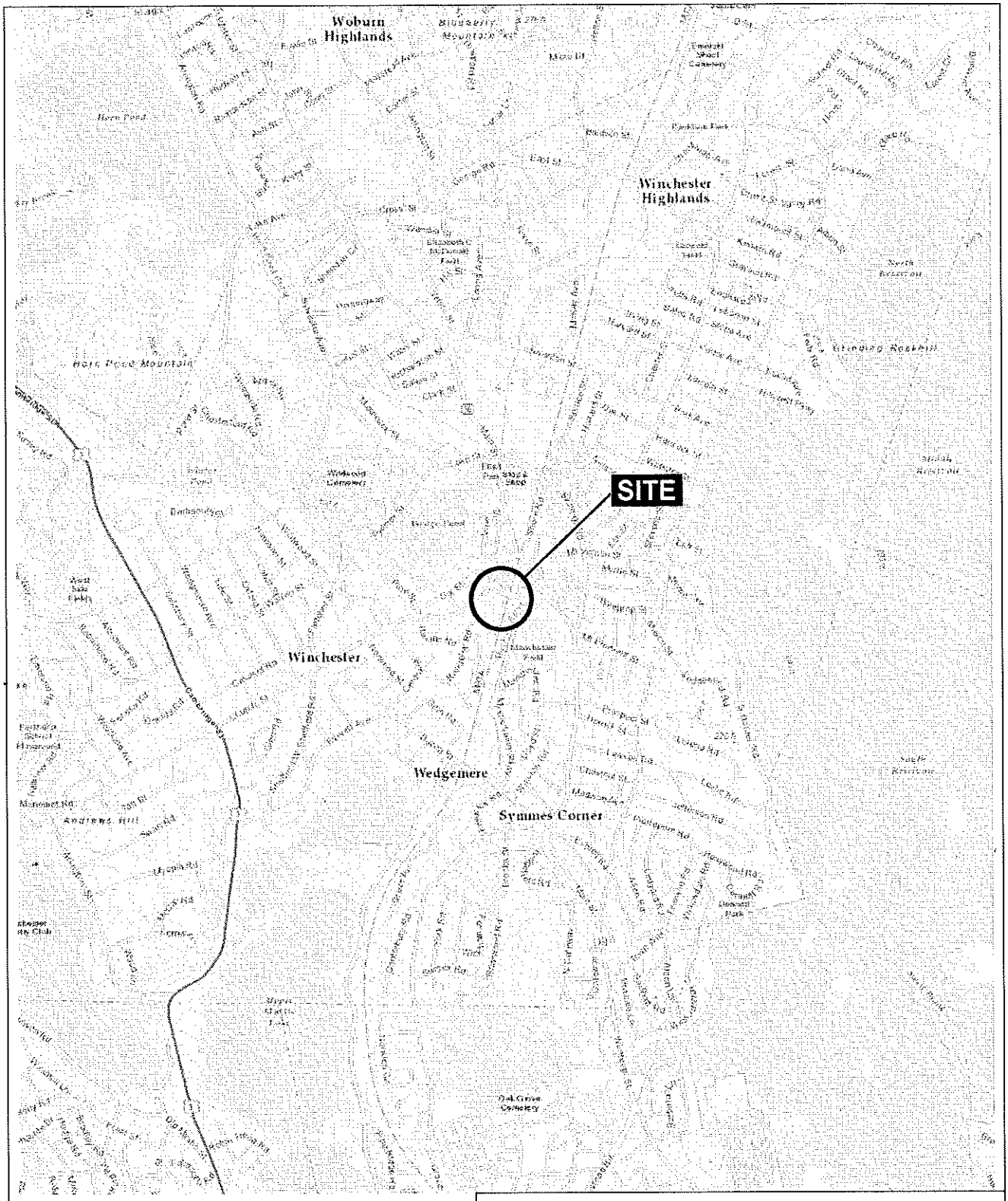
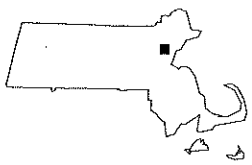


MAP SOURCE: ESRI

SITE COORDINATES: 42°27'5"N, 71°8'17"W



HALEY ALDRICH

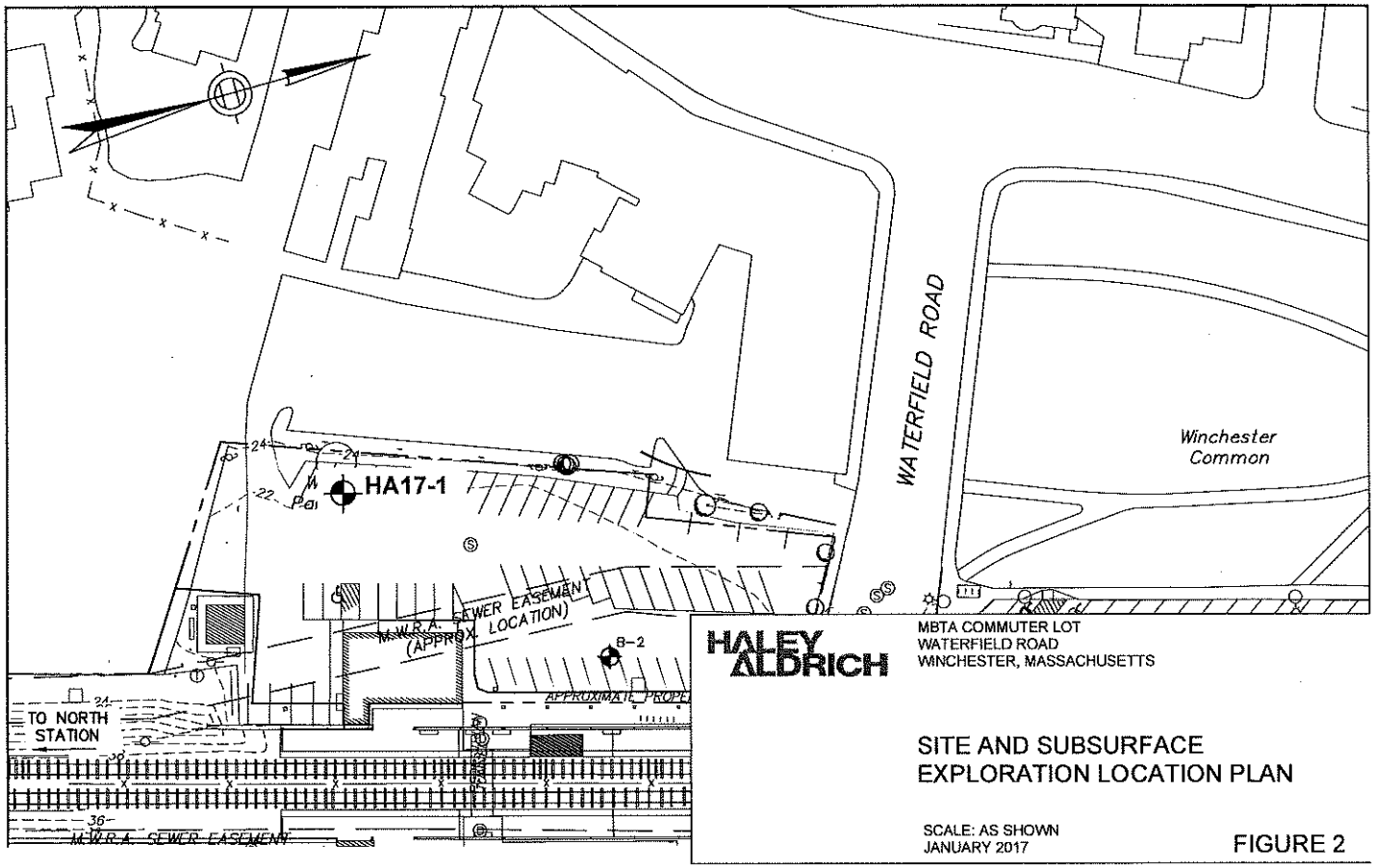
MBTA COMMUTER LOT
WATERFIELD STREET
WINCHESTER, MASSACHUSETTS

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
JANUARY 2017

FIGURE 1

129630-002_1_LOCUS.PDF



HALEY ALDRICH

MBTA COMMUTER LOT
WATERFIELD ROAD
WINCHESTER, MASSACHUSETTS

SITE AND SUBSURFACE EXPLORATION LOCATION PLAN

SCALE: AS SHOWN
JANUARY 2017

FIGURE 2

G:\129630\002\DRAWINGS\FIGURE-2.pdf
djb

APPENDIX A

Test Boring Logs

HALEY ALDRICH — TEST BORING REPORT

Boring No. HA17-1 (OW)

Project	MBTA COMMUTER LOT, WATERFIELD ROAD, WINCHESTER, MA
Client	WALKER PARKING CONSULTANTS
Contractor	NEW ENGLAND BORING CONTRACTORS

File No. 129630-002
Sheet No. 1 of 3
Start 12 January 2017
Finish 12 January 2017
Driller M. D'Ambrosio
H&A Rep. D. Warren
Elevation 22.0
Datum NAVD 88
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	--	Rig Make & Model: Acker AD-11, truck
Inside Diameter (in.)	4	1 3/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: None
Hammer Fall (in.)	24	30	-	Casing: HW Driven 50 ft
				Hoist/Hammer: Cat-Head Safety Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Well Diagram	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size†, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0						21.8	-ASPHALT-										
						0.2											
	11 5	S1 8	1.0 2.0	SW-SM			S1: Medium dense brown well graded SAND with silt and gravel (SW-SM), mps 1 in., no structure, no odor, moist	5	10	15	30	30	10				
						20.0											
	5 7	S1A 12	2.0 3.0	OL/OH-ML		2.0	S1A: Stiff brown ORGANIC SOIL (OL/OH) intermixed with tan sandy SILT (ML)					30	70				
							REWORKED TOPSOIL / LOESS										
						18.5 3.5											
5	8 7 7 8	S2 20	5.0 7.0	SM - SP			Medium dense light gray silty SAND (SM) grading to tan poorly graded SAND (SP), mps < 1 mm, stratified, no odor, dry					85	15				
10	6 4 4 5	S3 20	10.0 12.0	SM			Loose brown silty SAND (SM), mps < 1 mm, stratified, no odor, wet					85	15				
							-GLACIOLACUSTRINE DEPOSITS-										
15	3 3 3 2	S4 19	15.0 17.0	SM			Similar to above, except gray					70	30				
20																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
1/12/17	1505	*Initial OW reading, not stabilized		18	10.6*

Sample ID
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	50.3
Rock Cored (ft)	--
Samples	11S
Boring No.	HA17-1 (OW)

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

†Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-09 REV HA-UB09-BOS.GLB HA-TB+CORE+WELL-09 W FENCE.GDT G:\129630\GINT\129630-002-TBOW.GPJ 20 Jan 17

HALEY ALDRICH

TEST BORING REPORT

Boring No. HA17-1 (OW)
File No. 129630-002
Sheet No. 2 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Well Diagram	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size†, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	5 5 6 6	S5 18	20.0 22.0	SM			Medium dense brown silty SAND (SM), mps < 1 mm, no structure, no odor, wet					80	20				
							-GLACIOLACUSTRINE DEPOSITS-										
25	4 5 7 7	S6 18	25.0 27.0	SM			Similar to above					80	20				
						-6.5 28.5											
30	15 14 12 13	S7 22	30.0 32.0	ML			Medium dense brown SILT (ML), mps < 1 mm, laminated, no odor, wet, trace fine sand					10	90				
							-GLACIOLACUSTRINE DEPOSITS-										
35	14 15 20 28	S8 18	35.0 37.0	ML/ SM			Dense brown SILT (ML) interbedded with seams of silty SAND (SM), mps 1 in., laminated, no odor, wet, trace gravel					25	70				
						-17.0 39.0											
40	17 19 34 21	S9 17	40.0 42.0	SW			Very dense brown well graded SAND with gravel (SW)	10	20	20	35	15					
							-GLACIOFLUVIAL DEPOSITS-										
							Note: Lost drill water at approximately 44 ft.										
						-22.0 44.0											
45	33 21 19 29	S10 18	45.0 47.0	GW			Dense orange brown to purple well graded GRAVEL with sand (GW), mps 1.5 in., no structure, no odor, wet, sample consists of highly fractured weathered igneous rock	35	25	30	5	5					
							-PROBABLE BEDROCK-										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA17-1 (OW)

HALEY ALDRICH

TEST BORING REPORT

Boring No. HA17-1 (OW)
File No. 129630-002
Sheet No. 3 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Well Diagram	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size†, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50	100/4"	S11 3	50.0 50.3	GM		-28.3 50.3	Very dense light gray to purple gray silty GRAVEL with sand (GM), mps 1.5 in., no structure, no odor, wet, sample consists of highly fractured weathered igneous rock										
							BOTTOM OF EXPLORATION 50.3 FT										
							Note: Groundwater Observation Well installed at 18 ft upon completion.										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA17-1 (OW)

H&A-TEST BORING-09 REV HA-LIB09-BOS.GLB HA-TB+CORE+WELL-09 W FENCE.GDT G:\129630\GINT\129630-002-TBOW.GPJ 20 Jan 17

APPENDIX B

Groundwater Observation Well Installation Report

HALEY ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. HA17-1 (OW)

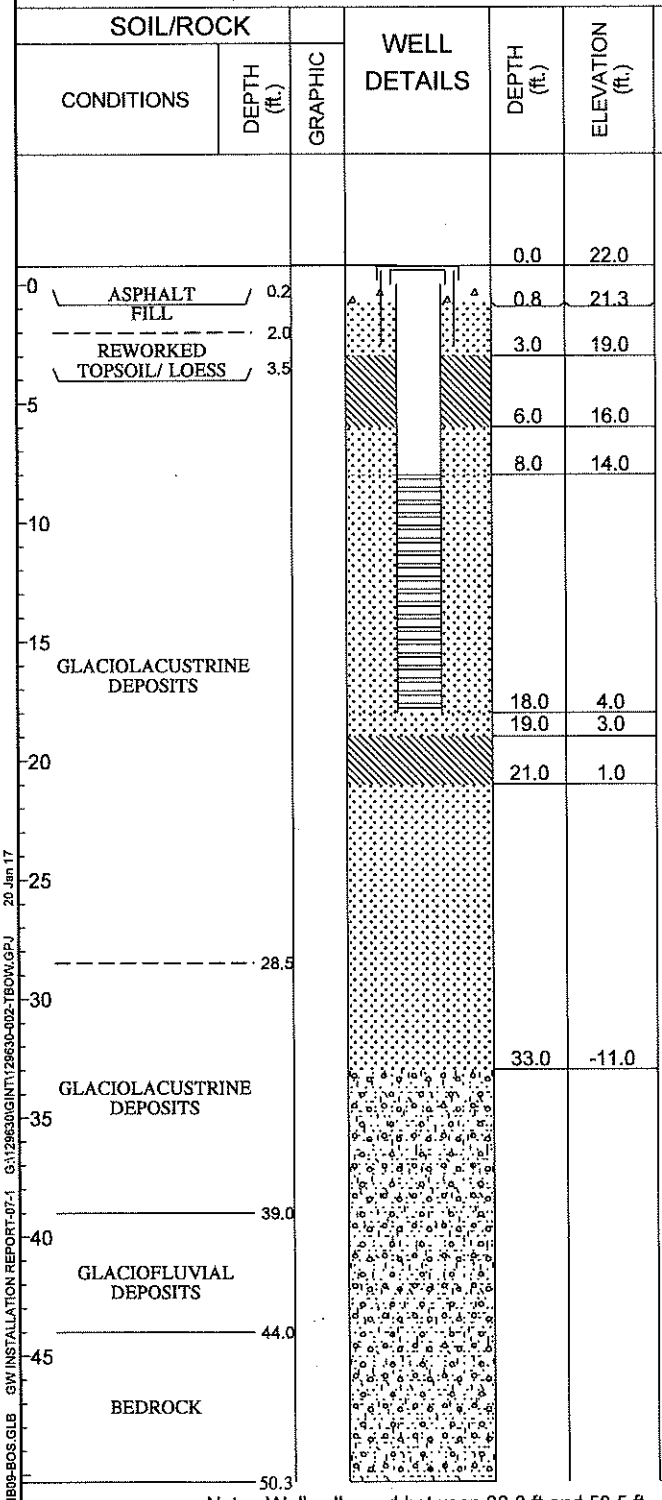
Project MBTA COMMUTER LOT
Location WATERFIELD ROAD, WINCHESTER, MA
Client WALKER PARKING CONSULTANTS
Contractor NEW ENGLAND BORING CONTRACTORS
Driller M. D'Ambrosio

Initial Water Level (depth bgs) 10.6 ft

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No. 129630-002
Date Installed 12 Jan 2017
H&A Rep. D. Warren
Location See Plan

Ground El. 22.0
Datum NAVD 88



WELL CONSTRUCTION DETAILS

Type of protective cover: Compression cover
Depth of Roadway Box below ground surface: 0.0 ft
Depth of top of riser below ground surface: 0.5 ft
Type of protective casing: Roadway Box
- Length: 1.0 ft
- Inside diameter: 6.0 in.
- Depth of bottom of Roadway Box: 1.0 ft

Type of riser pipe: Schedule 40 PVC
- Inside diameter of riser pipe: 2.0 in.
- Depth of bottom of riser pipe: 8.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	0.8
Bentonite	3.0	3.0
Bentonite	19.0	2.0

Diameter of borehole: 4.5 in.
Depth to top of well screen: 8.0 ft
- Type of screen: Machine slotted Sch 40 PVC
- Screen gauge or size of openings: 0.010 in.
- Diameter of screen: 2.0 in.
- Type of Backfill around Screen: Filter Sand
- Depth to bottom of well screen: 18.0 ft

Bottom of silt trap: -
Depth of bottom of borehole: 50.3 ft

COMMENTS: Note: Well collapsed between 33.0 ft and 50.5 ft

APPENDIX C

Previous Test Borings

LOG OF TEST BORING

JACOBS

PROJECT	Winchester Center Commuter Rail Station				BORING NO.	B-2	
LOCATION	Winchester, MA					SHEET 1 OF 2	
OWNER	MBTA						
JOB NUMBER	E2X67200						
INSPECTOR: G. Shay	CONTRACTOR: NEB Contractors		DRILLER: G. Twombly Jr.		ELEVATION	20.8	
METHOD OF DRILLING	GROUNDWATER READINGS		DRILL RIG: Diedrich D-90		DATUM	NAVD 88	
0.0 Vacuum Excavation	DATE/TIME	DEPTH(ft)	REMARKS	SPT HAMMER: 140 lb Safety	GRID	N	2989646
7.0 Wash Boring w/ 4" Casing	03-02-2016 / 7:00 AM	9.5	Before Drilling (In Casing ~ 16 hours stabilized)		COORD	E	753866
51.0 Terminated					DATE START		3/1/16
					DATE END		3/2/16

ELEV. (ft)	DEPTH (ft)	SAMPLE DATA	N-VALUE	SAMPLE NO.	DEPTH INTERVAL (ft)	PEN/REC (in)/(in)	PID (ppm)	LAYER NAME	SOIL AND ROCK DESCRIPTION	NOTES
20								FILL	(0"-2"): ASPHALT (2" - 5'): Dry, brown, fine to coarse GRAVEL, some(+) fine to coarse Sand, some(-) Cobbles, trace Silt.	1
	5							5		
15									(5'- 7'): Dry, light brown, fine SAND, trace Silt.	
		6 6 5 4	11	S1	7 - 9	24/12			S1: Wet, medium dense, light brown, fine SAND, trace Silt.	
	10	8 8 9 7	17	S2	9 - 11	24/0			S2: No recovery.	
10										
	15	5 4 6 7	10	S3	14 - 16	24/12			S3: Wet, medium dense, light brown, fine SAND, little Silt.	
5										
	20	3 3 6 5	9	S4	19 - 21	24/9		FINE SAND	S4: Wet, loose, light brown, fine SAND, trace Silt.	
0										
	25	6 7 8 10	15	S5	24 - 26	24/10			S5: Wet, medium dense, light brown, fine SAND, trace Silt.	
-5										
	30	8 10 9 11	19	S6	29 - 31	24/10			S6: Wet, medium dense, light brown, fine SAND, trace Silt.	
-10								33.5		
	35	16	35	S7	34 - 36	24/0			S7: No recovery (6" of fine to coarse Gravel wash in spoon).	2

Page 1: 0-35 feet. Each subsequent page displays 40 feet.

NOTES

1. Vacuum excavation was conducted on 2/29/2016 to a depth of 7 feet. Sample descriptions for the vacuum excavated layers are based on visual inspections.
2. Rig chatter and slightly harder drilling at 33.5 feet.

Borings are taken for Information purposes only and show conditions at boring points only, but do not necessarily show the nature of the material to be encountered during construction.

LOG OF TEST BORING

JACOBS

PROJECT	Winchester Center Commuter Rail Station
LOCATION	Winchester, MA
OWNER	MBTA
JOB NUMBER	E2X67200

BORING NO. B-2

SHEET 2 OF 2

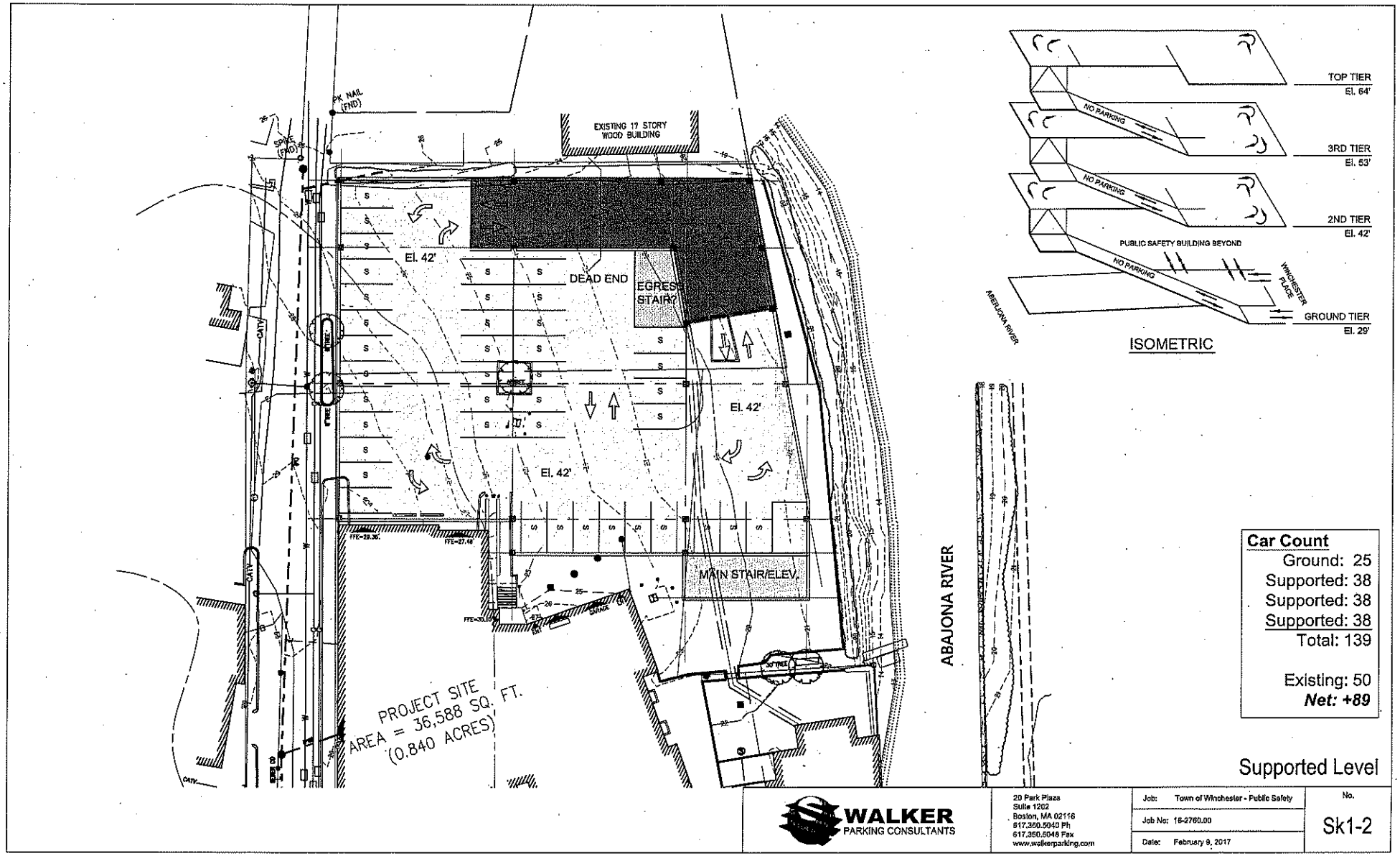
ELEV. (ft)	DEPTH (ft)	SAMPLE DATA	N-VALUE	SAMPLE NO.	DEPTH INTERVAL (ft)	PEN/REC (in)/(in)	PID (ppm)	LAYER NAME	SOIL AND ROCK DESCRIPTION	NOTES
-15		18 17 10								
	40	27 33 12 18	45	S8	39 - 41	24/7		SAND AND GRAVEL	S8: Wet, dense, brown, fine to coarse SAND and fine to coarse Gravel, little Silt.	
-20										
	45	21 14 19 18	33	S9	44 - 46	24/0			S9: No recovery.	3
-25										
	50	15 14 20 30	34	S10	49 - 51	24/14			S10: Wet, dense, brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt.	4
-30								51	Bottom of Borehole at 51 feet.	
	55									
-35										
	60									
-40										
	65									
-45										
	70									
-50										

Page 1: 0-35 feet. Each subsequent page displays 40 feet.

NOTES

3. Redrove 3" spoon to collect sample. Recovered 1" of fine gravel, probable wash.
4. Backfilled hole with soil cuttings. Asphalt cold patch at surface.

Borings are taken for Information purposes only and show conditions at boring points only, but do not necessarily show the nature of the material to be encountered during construction.



Car Count

Ground: 25
Supported: 38
Supported: 38
Supported: 38
Total: 139

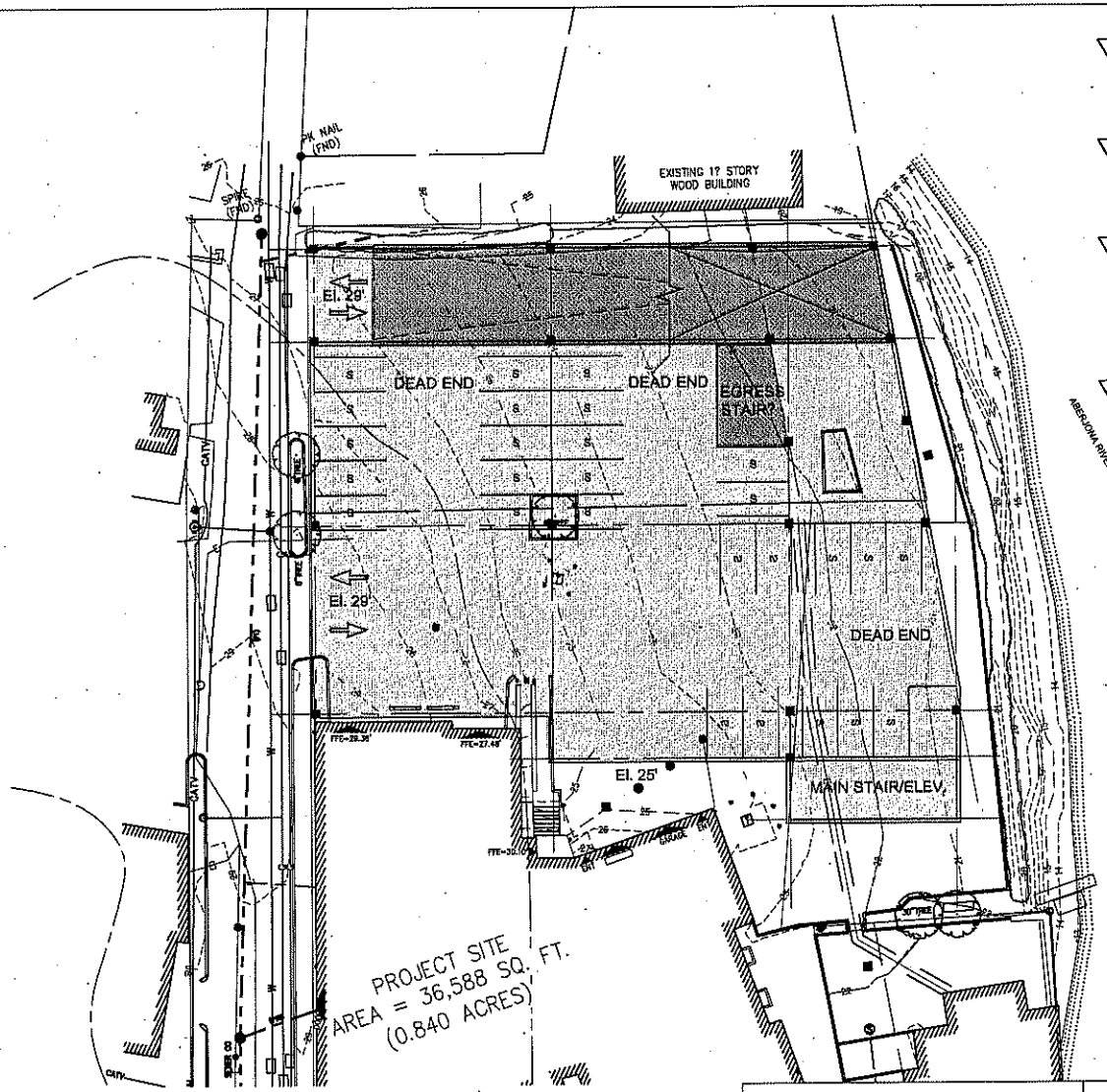
Existing: 50
Net: +89

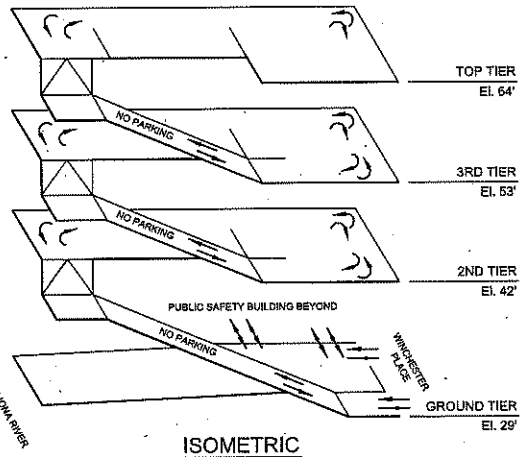
Supported Level

WALKER PARKING CONSULTANTS
20 Park Plaza
Suite 1202
Boston, MA 02116
617.350.5040 Ph
617.350.5046 Fax
www.walkerparking.com

Job:	Town of Winchester - Public Safety
Job No:	16-2760.00
Date:	February 9, 2017

No. Sk1-2





ISOMETRIC

ABAJONA RIVER

Car Count

Ground: 25
Supported: 38
Supported: 38
Supported: 38
Total: 139

Existing: 50
Net: +89

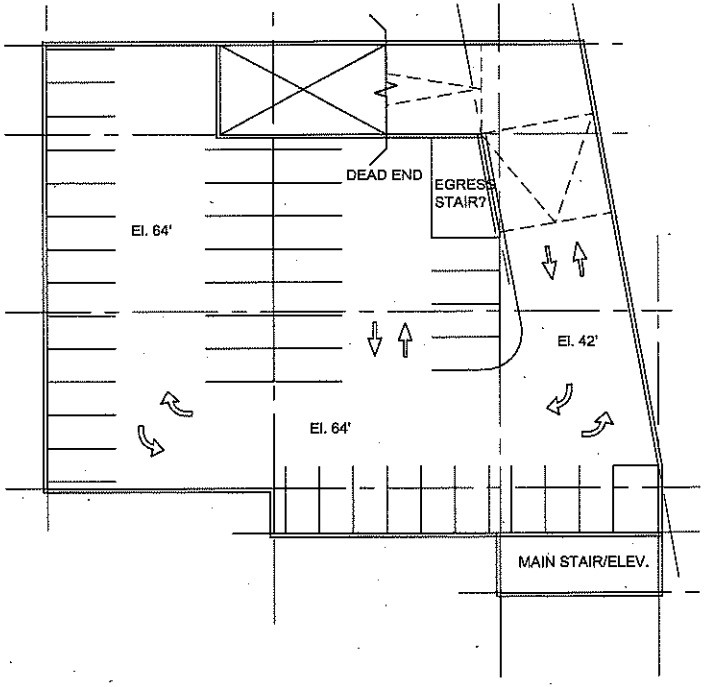
Ground Level

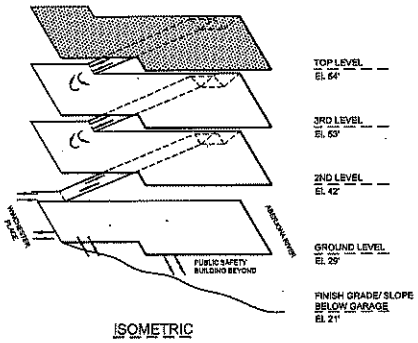
WALKER PARKING CONSULTANTS
20 Park Plaza
Suite 1202
Boston, MA 02116
617.350.5040 Ph
617.350.5048 Fax
www.walkerparking.com

Job: Town of Winchester - Public Safety
Job No: 19-2780.00
Date: February 9, 2017

No. Sk1-1

Public Safety Lot Concept 1: Top Level





ISOMETRIC

WALKER PARKING CONSULTANTS

Concept 1
Public Safety Site

Car Counts

Concept 1:
Ground Level: 25 Spaces
Second Level: 38 Spaces
Third Level: 38 Spaces
Top Level: 38 Spaces
Garage Total* : 139 Spaces

Efficiency (Garage Only)
521 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 1:	139 Spaces
Existing Surface Lot:	(50) Spaces
Total:	89 Spaces

Construction Cost Information

Total:	$7,850,000
Per Space:	$56,500
Per Net Added Space:	$88,000

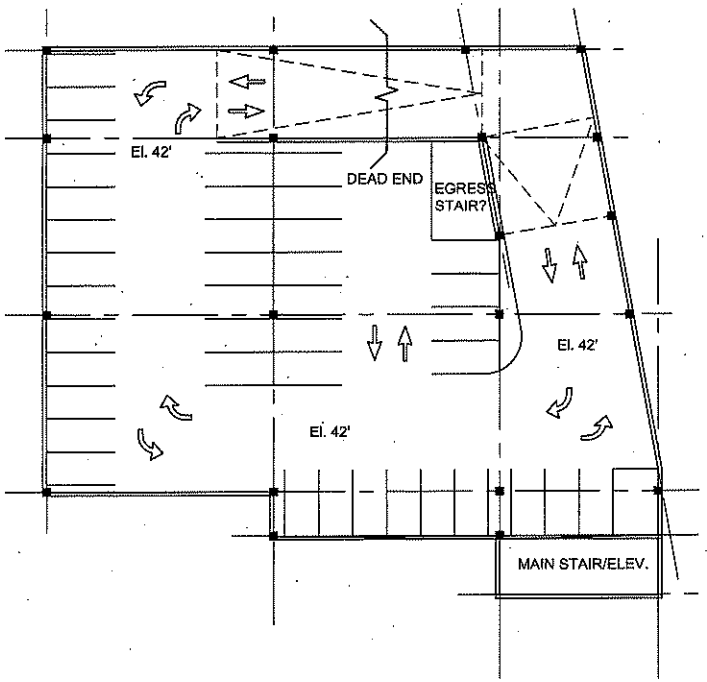
Notes:

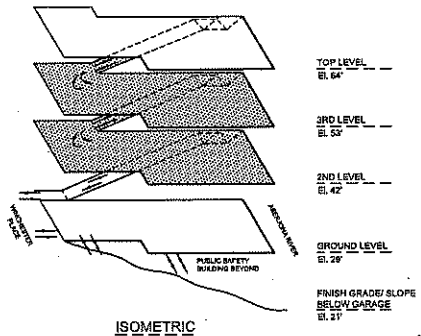
1. Cost are extrapolated values for comparison purposes not formal estimates
2. Based on $108/s.f

Date: 3/06/2017
Project N. 16-2760.00

NORTH

Public Safety Lot Concept 1: Second / Third Level





ISOMETRIC

WALKER PARKING CONSULTANTS

Concept 1

Public Safety Site

Car Counts

Concept 1:

Ground Level:	25 Spaces
Second Level:	38 Spaces
Third Level:	38 Spaces
Top Level:	38 Spaces
Garage Total*	: 139 Spaces

Efficiency (Garage Only)

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Per Space:	$56,500
Per Net Added Space:	$88,000

Notes:

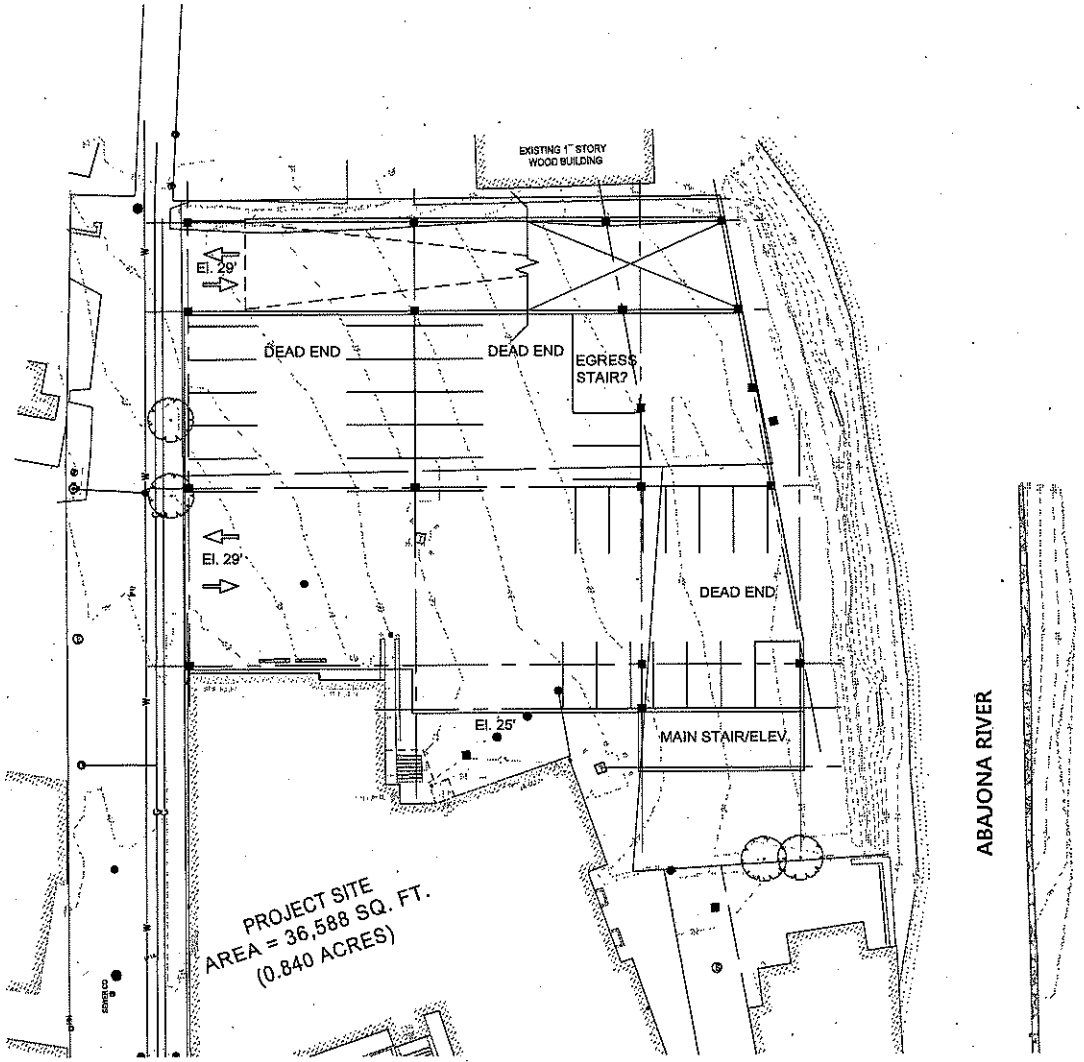
1. Cost are extrapolated values for comparison purposes not formal estimates
2. Based on $108/s.f

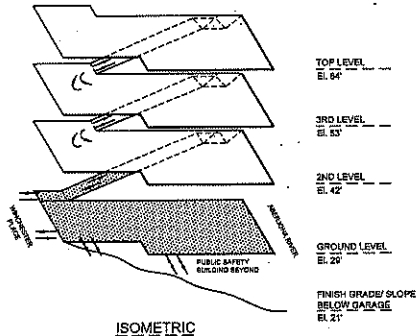
Date: 3/06/2017

Project N. 16-2760.00

NORTH

Public Safety Lot Concept 1: Ground Level





ISOMETRIC

WALKER PARKING CONSULTANTS

Concept 1
Public Safety Site

Car Counts

Concept 1:

Ground Level:	25 Spaces
Second Level:	38 Spaces
Third Level:	38 Spaces
Top Level:	38 Spaces
Garage Total*	: 139 Spaces

Efficiency (Garage Only)
521 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 1:	139 Spaces
Existing Surface Lot:	(50) Spaces
Total:	89 Spaces

Construction Cost Information

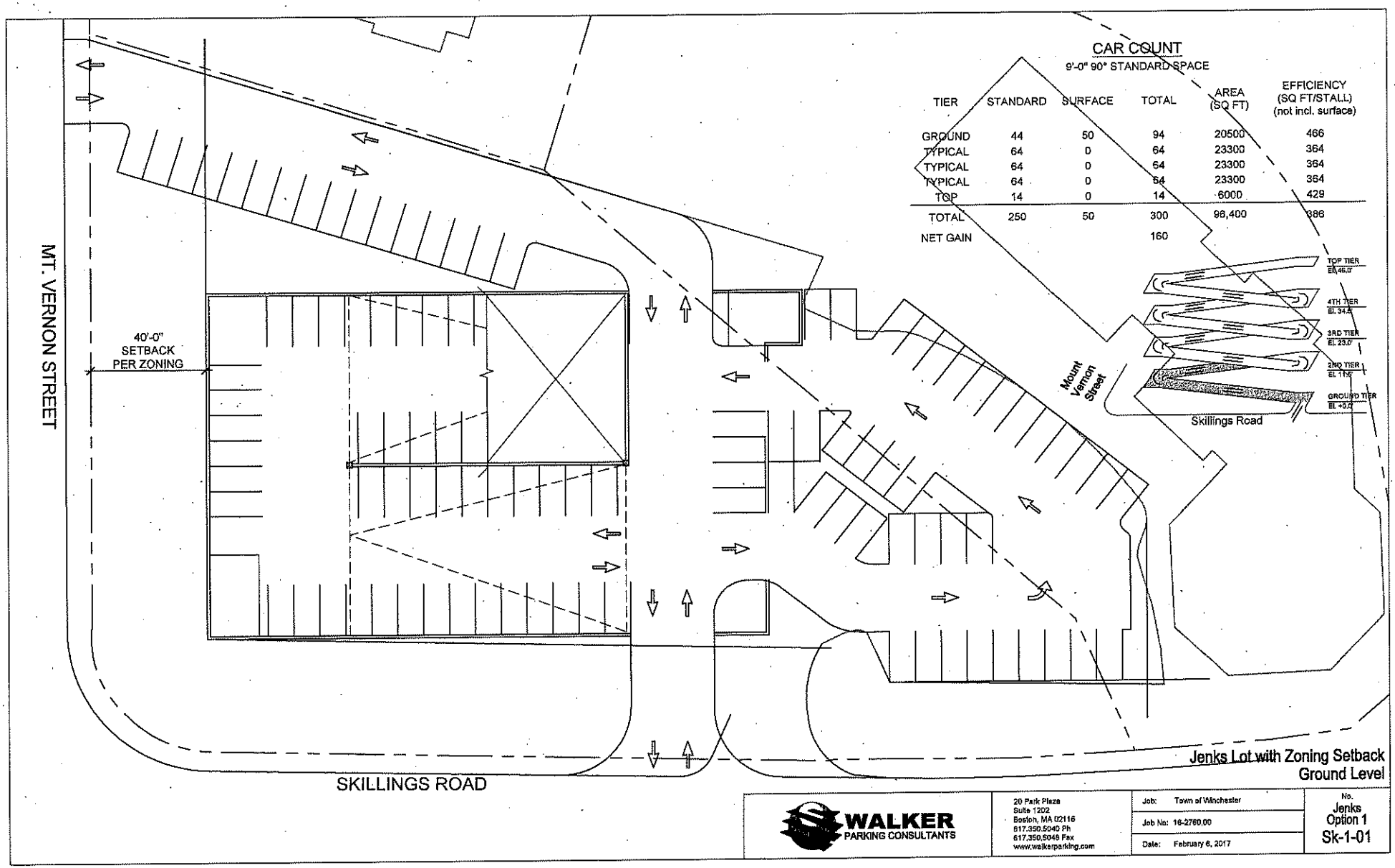
Total:	$7,850,000
Per Space:	$56,500
Per Net Added Space:	$88,000

Notes:

1. Cost are extrapolated values for comparison purposes not formal estimates
2. Based on $108/s.f

Date: 3/06/2017
Project N. 16-2760.00

NORTH



CAR COUNT

9'-0" 90° STANDARD SPACE

TIER	STANDARD	SURFACE	TOTAL	AREA (SQ FT)	EFFICIENCY (SQ FT/STALL) (not incl. surface)
GROUND	44	50	94	20500	466
TYPICAL	64	0	64	23300	364
TYPICAL	64	0	64	23300	364
TYPICAL	64	0	64	23300	364
TOP	14	0	14	6000	429
TOTAL	250	50	300	96,400	386
NET GAIN			160		

Jenks Lot with Zoning Setback
Ground Level

WALKER PARKING CONSULTANTS

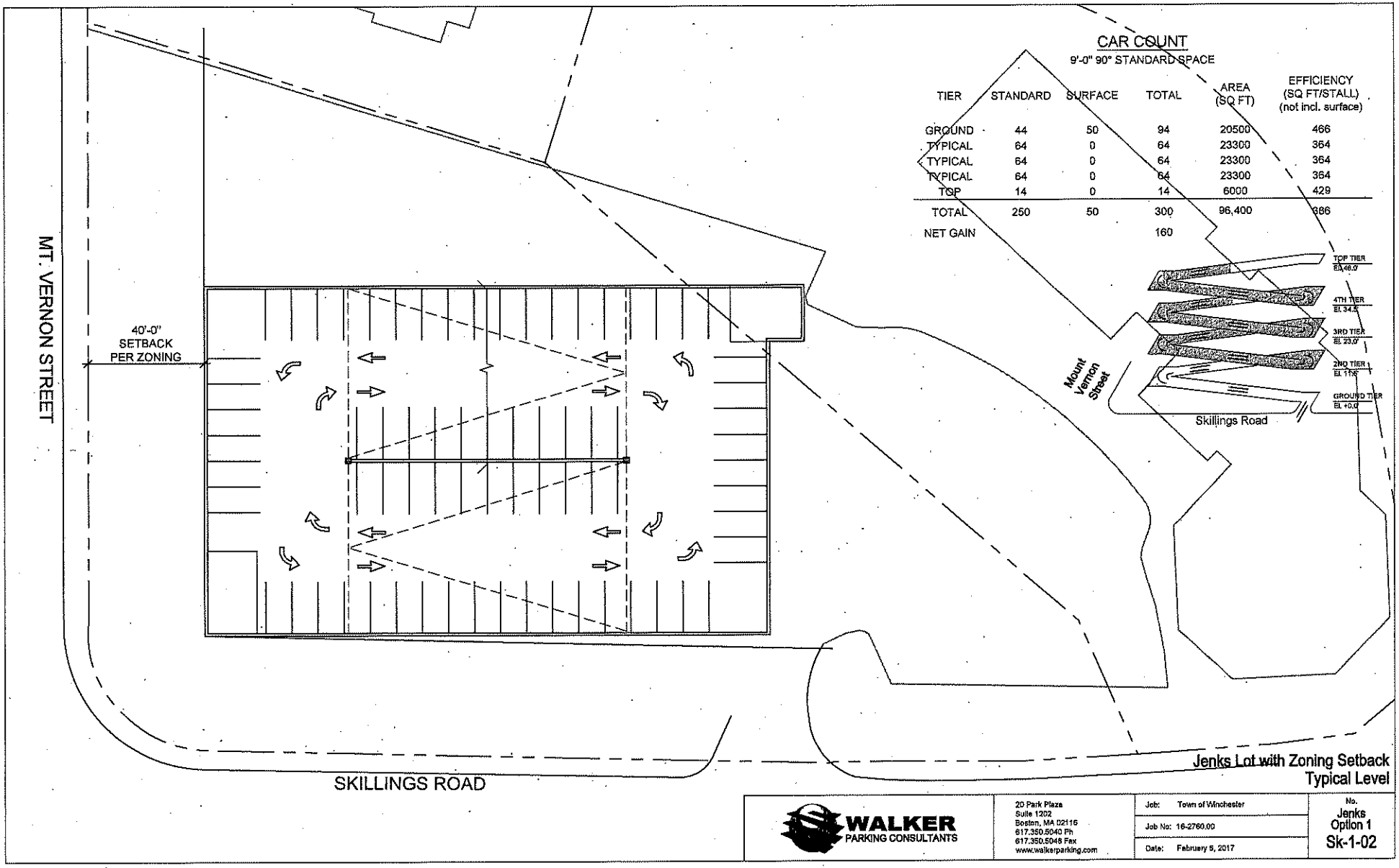
20 Park Plaza
Suite 1202
Boston, MA 02116
617.350.5040 Ph
617.350.5046 Fax
www.walkerparking.com

Job: Town of Winchester

Job No: 16-2760.00

Date: February 6, 2017

No.
Jenks
Option 1
Sk-1-01



CAR COUNT

9'-0" 90° STANDARD SPACE

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GROUND	44	50	94	20500	466
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TYPICAL	64	0	64	23300	364
TOP	14	0	14	6000	429
TOTAL	250	50	300	96,400	386
NET GAIN			160		

Jenks Lot with Zoning Setback
Typical Level

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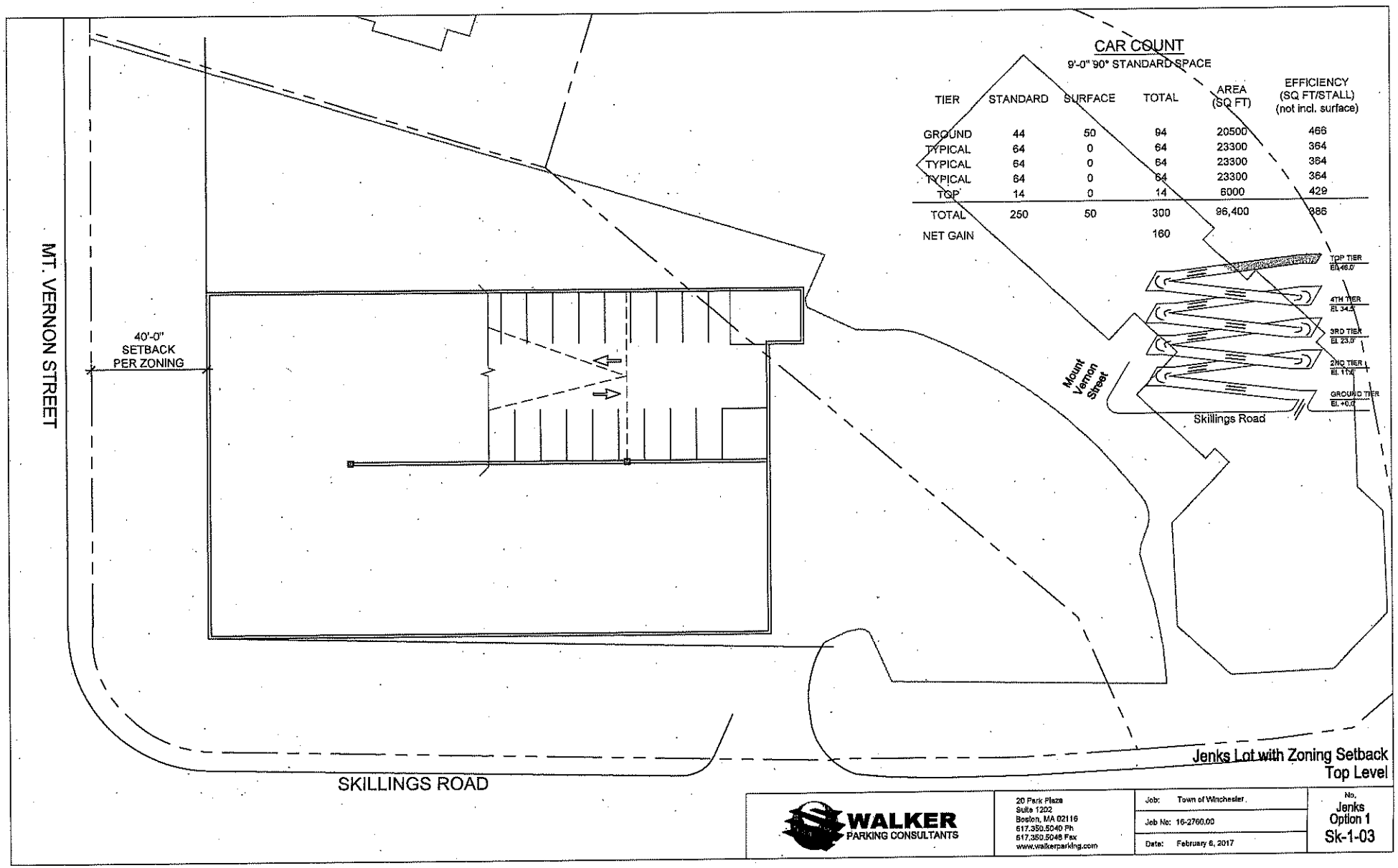
20 Park Plaza
Suite 1202
Boston, MA 02116
617.350.5040 Ph
617.350.5048 Fax
www.walkerparking.com

Job: Town of Winchester

Job No: 16-2760.00

Date: February 5, 2017

No.
Jenks
Option 1
Sk-1-02



CAR COUNT

9'-0" 90° STANDARD SPACE

TIER	STANDARD	SURFACE	TOTAL	AREA (SQ FT)	EFFICIENCY (SQ FT/STALL) (not incl. surface)
GROUND	44	50	94	20500	466
TYPICAL	64	0	64	23300	364
TYPICAL	64	0	64	23300	364
TYPICAL	64	0	64	23300	364
TOP	14	0	14	6000	429
TOTAL	250	50	300	96,400	386
NET GAIN			160		

Jenks Lot with Zoning Setback
Top Level

WALKER PARKING CONSULTANTS

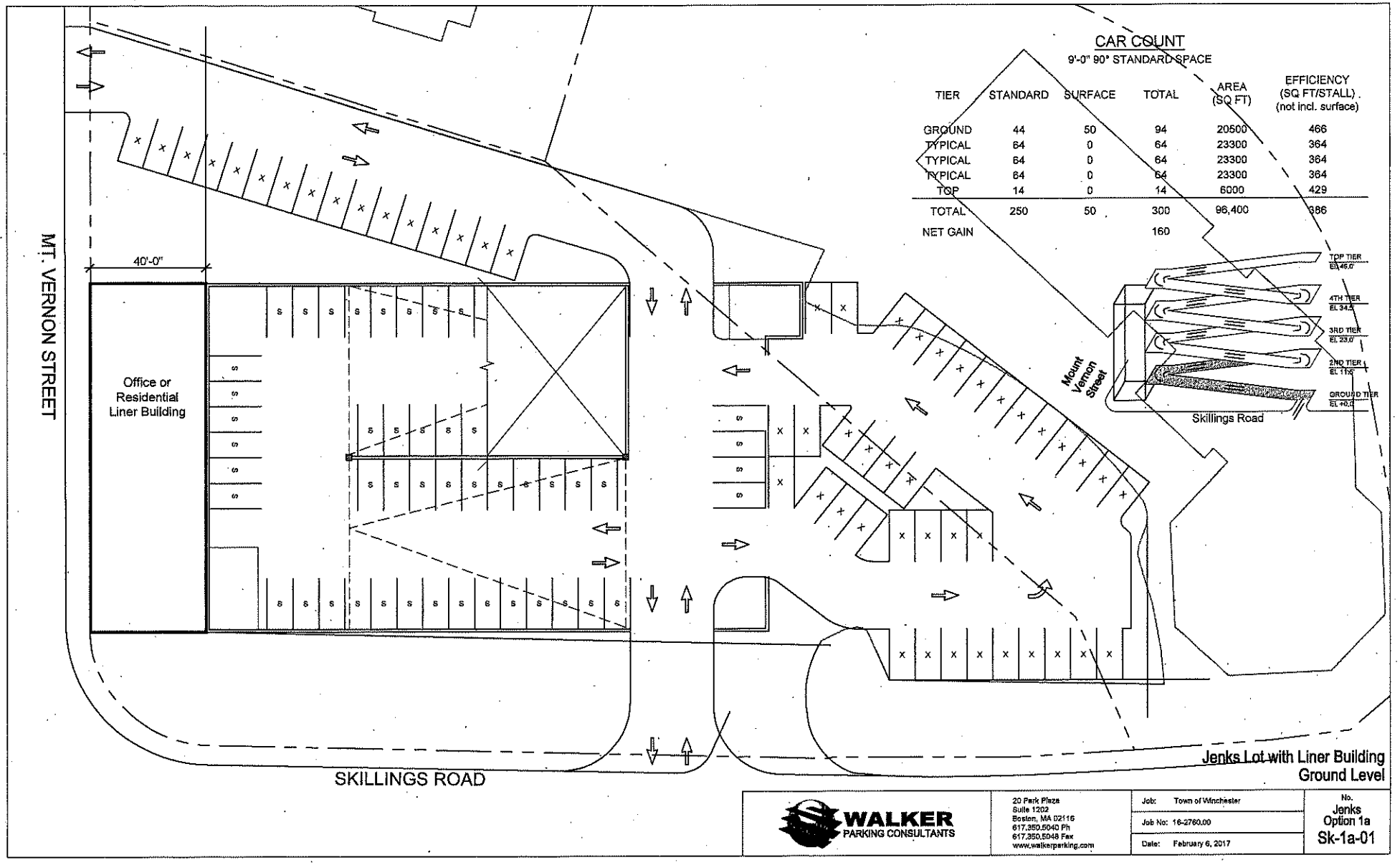
20 Park Plaza
Suite 1202
Boston, MA 02116
617.350.5040 Ph
617.350.5048 Fax
www.walkerparking.com

Job: Town of Winchester

Job No: 16-2760.00

Date: February 6, 2017

No. Jenks Option 1 Sk-1-03



CAR COUNT

9'-0" 90° STANDARD SPACE

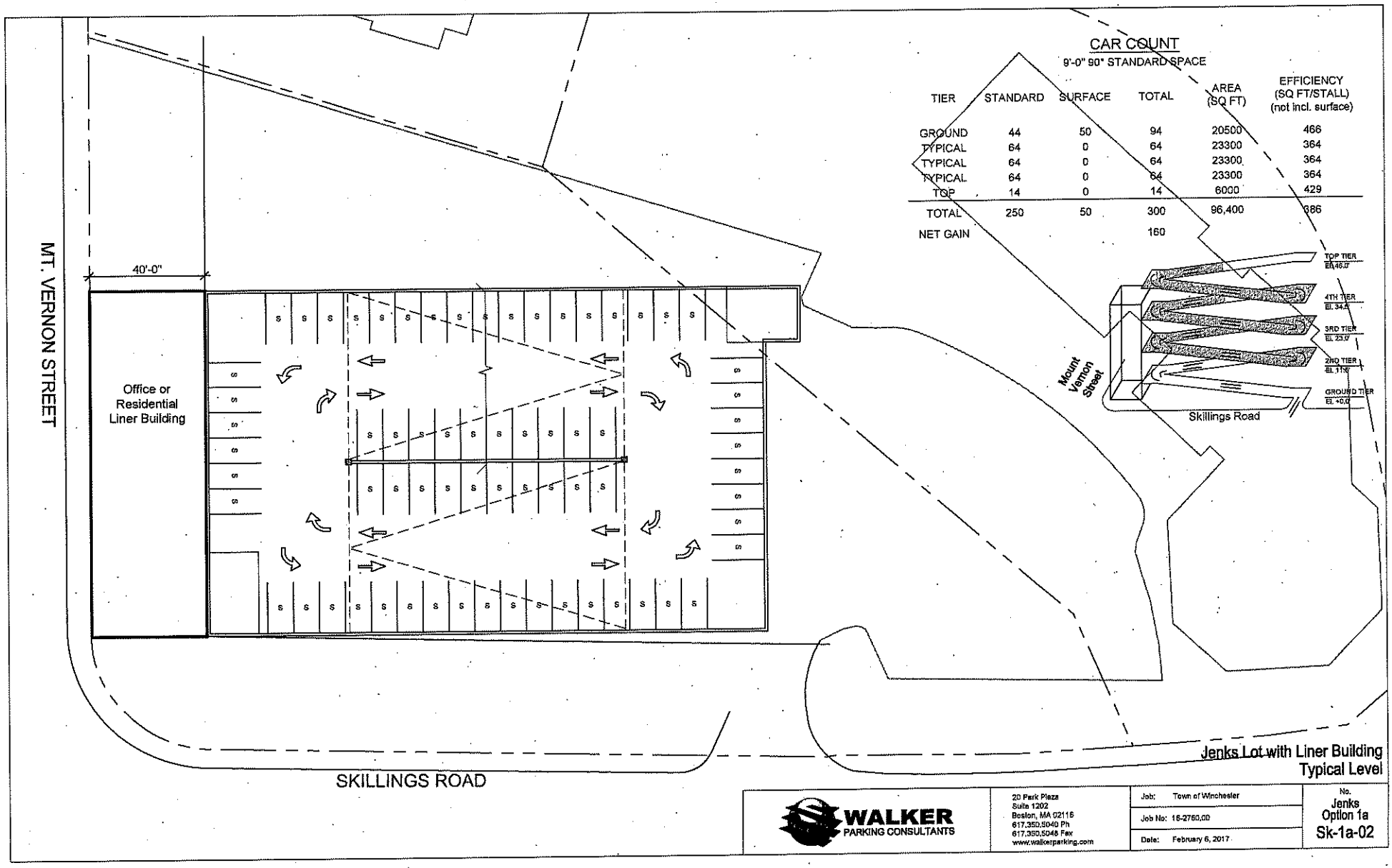
TIER	STANDARD	SURFACE	TOTAL	AREA (SQ FT)	EFFICIENCY (SQ FT/STALL) . (not incl. surface)
GROUND	44	50	94	20500	466
TYPICAL	64	0	64	23300	364
TYPICAL	64	0	64	23300	364
TYPICAL	64	0	64	23300	364
TOP	14	0	14	6000	429
TOTAL	250	50	300	96,400	386
NET GAIN			160		

Jenks Lot with Liner Building
Ground Level

WALKER PARKING CONSULTANTS
20 Park Plaza
Suite 1202
Boston, MA 02116
617.350.5040 Ph
617.350.5048 Fax
www.walkerparking.com

Job: Town of Winchester
Job No: 16-2760.00
Date: February 6, 2017

No. Jenks Option 1a
Sk-1a-01



CAR COUNT

9'-0" 90° STANDARD SPACE

TIER	STANDARD	SURFACE	TOTAL	AREA (SQ FT)	EFFICIENCY (SQ FT/STALL) (not incl. surface)
GROUND	44	50	94	20500	466
TYPICAL	64	0	64	23300	364
TYPICAL	64	0	64	23300	364
TYPICAL	64	0	64	23300	364
TOP	14	0	14	6000	429
TOTAL	250	50	300	96,400	386
NET GAIN			160		

Jenks Lot with Liner Building
Typical Level

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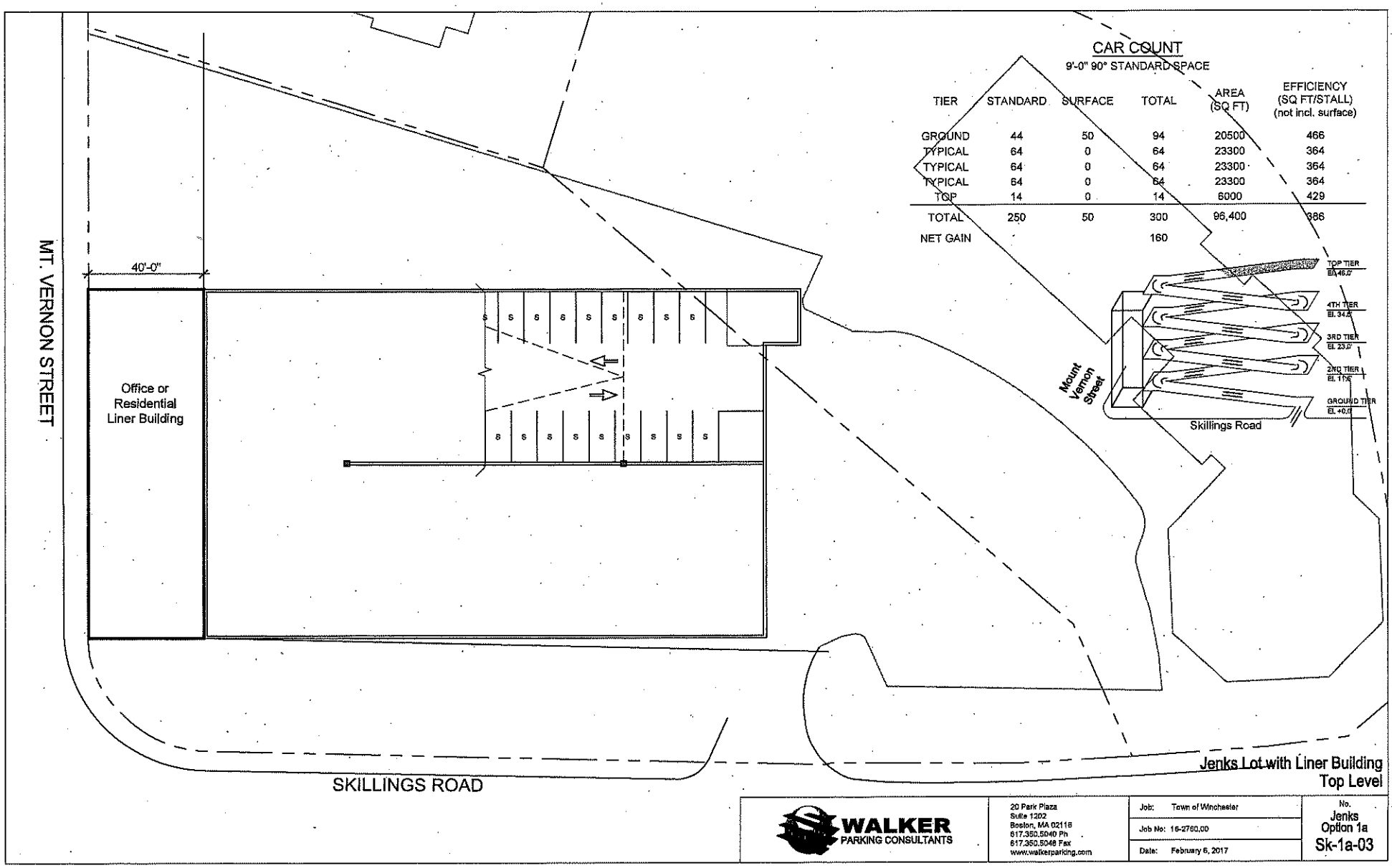
Job: Town of Winchester
Job No: 16-2760.00
Date: February 6, 2017

No.
Jenks
Option 1a
Sk-1a-02



CAR COUNT

9'-0" 90° STANDARD SPACE

TIER	STANDARD	SURFACE	TOTAL	AREA (SQ FT)	EFFICIENCY (SQ FT/STALL) (not incl. surface)
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TYPICAL	64	0	64	23300	364
TOP	14	0	14	6000	429
TOTAL	250	50	300	96,400	386
NET GAIN			160		

Jenks Lot with Liner Building
Top Level

WALKER PARKING CONSULTANTS
20 Park Plaza
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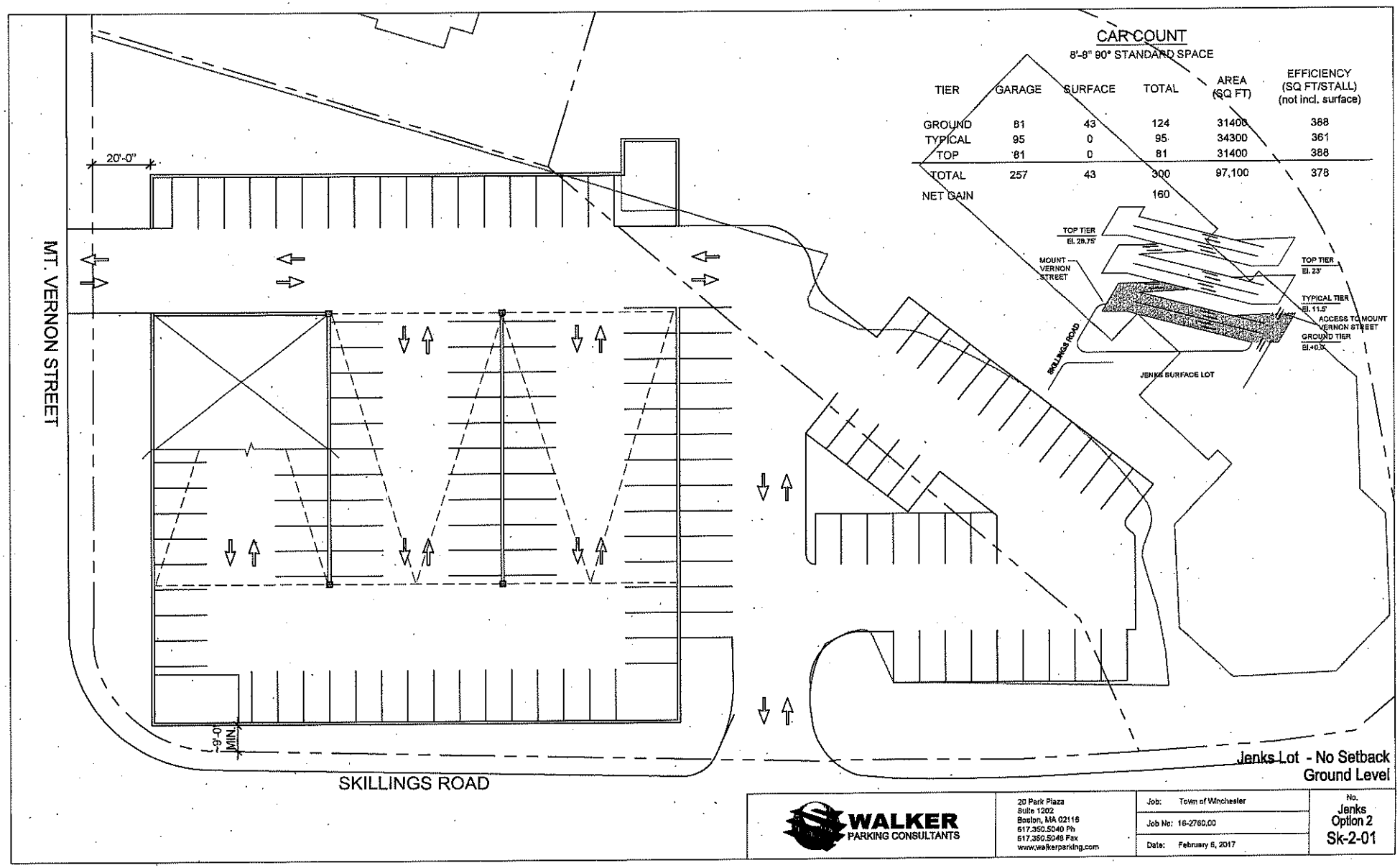
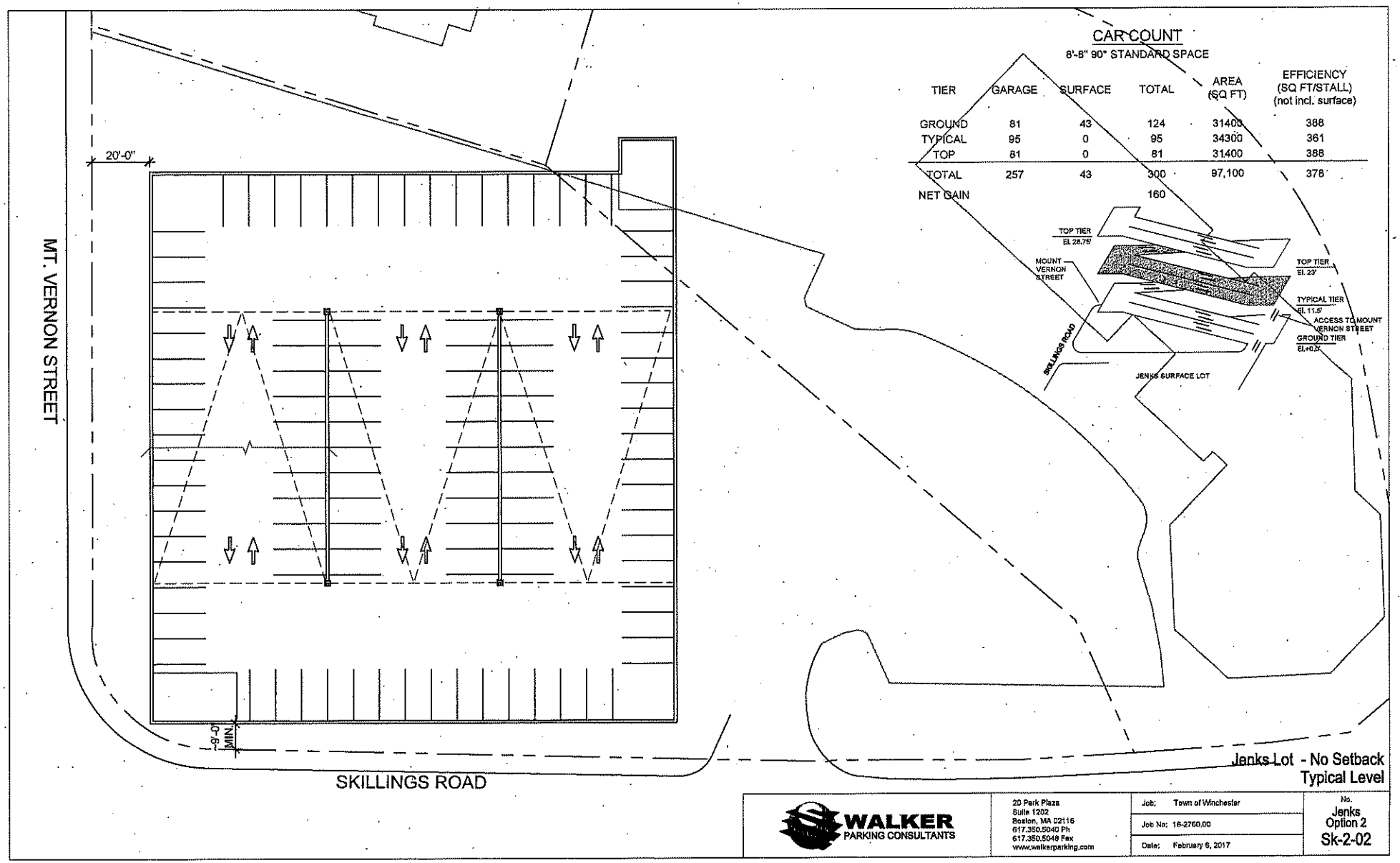
Boston, MA 02116
617.350.5040 Ph
617.350.5046 Fax
www.walkerparking.com

Job: Town of Winchester
Job No: 16-2760.00
Date: February 6, 2017

No.
Jenks
Option 1a
Sk-1a-03


MT. VERNON STREET
20'-0"
SKILLINGS ROAD
0'-6" MIN
CAR COUNT
8'-8" 90° STANDARD SPACE
TIER | GARAGE | SURFACE | TOTAL | AREA (SQ FT) | EFFICIENCY (SQ FT/STALL) (not incl. surface)
GROUND | 81 | 43 | 124 | 31400 | 368
TYPICAL | 95 | 0 | 95 | 34300 | 361
TOP | 81 | 0 | 81 | 31400 | 388
TOTAL | 257 | 43 | 300 | 97,100 | 378
NET GAIN | | | 160 | |
TOP TIER EL 28.75'
MOUNT VERNON STREET
TOP TIER EL 23'
TYPICAL TIER EL 11.5'
ACCESS TO MOUNT VERNON STREET
GROUND TIER EL +0.5'
SKILLINGS ROAD
JENKS SURFACE LOT
Jenks Lot - No Setback
Ground Level
WALKER PARKING CONSULTANTS
20 Park Plaza
Suite 1202
Boston, MA 02116
617.350.5040 Ph
617.350.5048 Fax
www.walkerparking.com
Job: Town of Winchester
Job No: 16-2760.00
Date: February 6, 2017
No.
Jenks
Option 2
Sk-2-01


MT. VERNON STREET
20'-0"
0'-6" MIN.
SKILLINGS ROAD
CAR COUNT
8'-8" 90° STANDARD SPACE
TIER | GARAGE | SURFACE | TOTAL | AREA (SQ FT) | EFFICIENCY (SQ FT/STALL) (not incl. surface)
GROUND | 81 | 43 | 124 | 31400 | 388
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TOTAL | 257 | 43 | 300 | 97,100 | 378
NET GAIN | | | 160 |
TOP TIER El. 28.75'
MOUNT VERNON STREET
TOP TIER El. 23'
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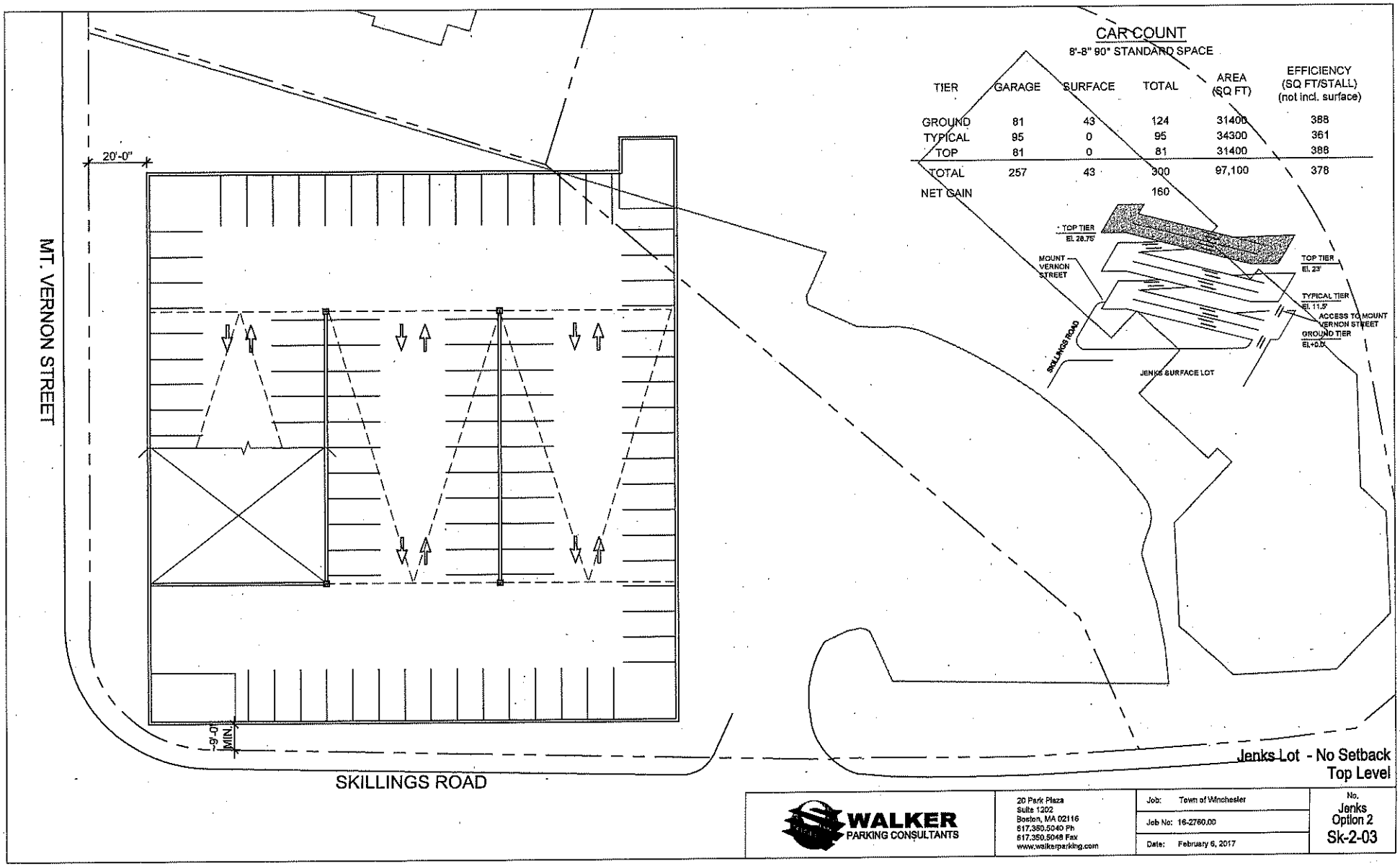
ACCESS TO MOUNT VERNON STREET
GROUND TIER El.+0.0'
SKILLINGS ROAD
JENKS SURFACE LOT
Jenks Lot - No Setback
Typical Level
WALKER PARKING CONSULTANTS
20 Park Plaza
Suite 1202
Boston, MA 02116
617.350.5040 Ph
617.350.5048 Fax
www.walkerparking.com
Job: Town of Winchester
Job No: 16-2760.00
Date: February 6, 2017
No.
Jenks Option 2
Sk-2-02


MT. VERNON STREET
20'-0"
5'-6" MIN
SKILLINGS ROAD
CAR COUNT
8'-8" 90° STANDARD SPACE
TIER | GARAGE | SURFACE | TOTAL | AREA (SQ FT) | EFFICIENCY (SQ FT/STALL) (not incl. surface)
GROUND | 81 | 43 | 124 | 31400 | 388
TYPICAL | 95 | 0 | 95 | 34300 | 361
TOP | 81 | 0 | 81 | 31400 | 388
TOTAL | 257 | 43 | 300 | 97,100 | 378
NET GAIN | | | 160 | | |
TOP TIER El. 26.75'
MOUNT VERNON STREET
TOP TIER El. 23'
TYPICAL TIER El. 11.5'
ACCESS TO MOUNT VERNON STREET
GROUND TIER El.+0.0'
SKILLINGS ROAD
JENKS SURFACE LOT
Jenks Lot - No Setback
Top Level
WALKER
PARKING CONSULTANTS
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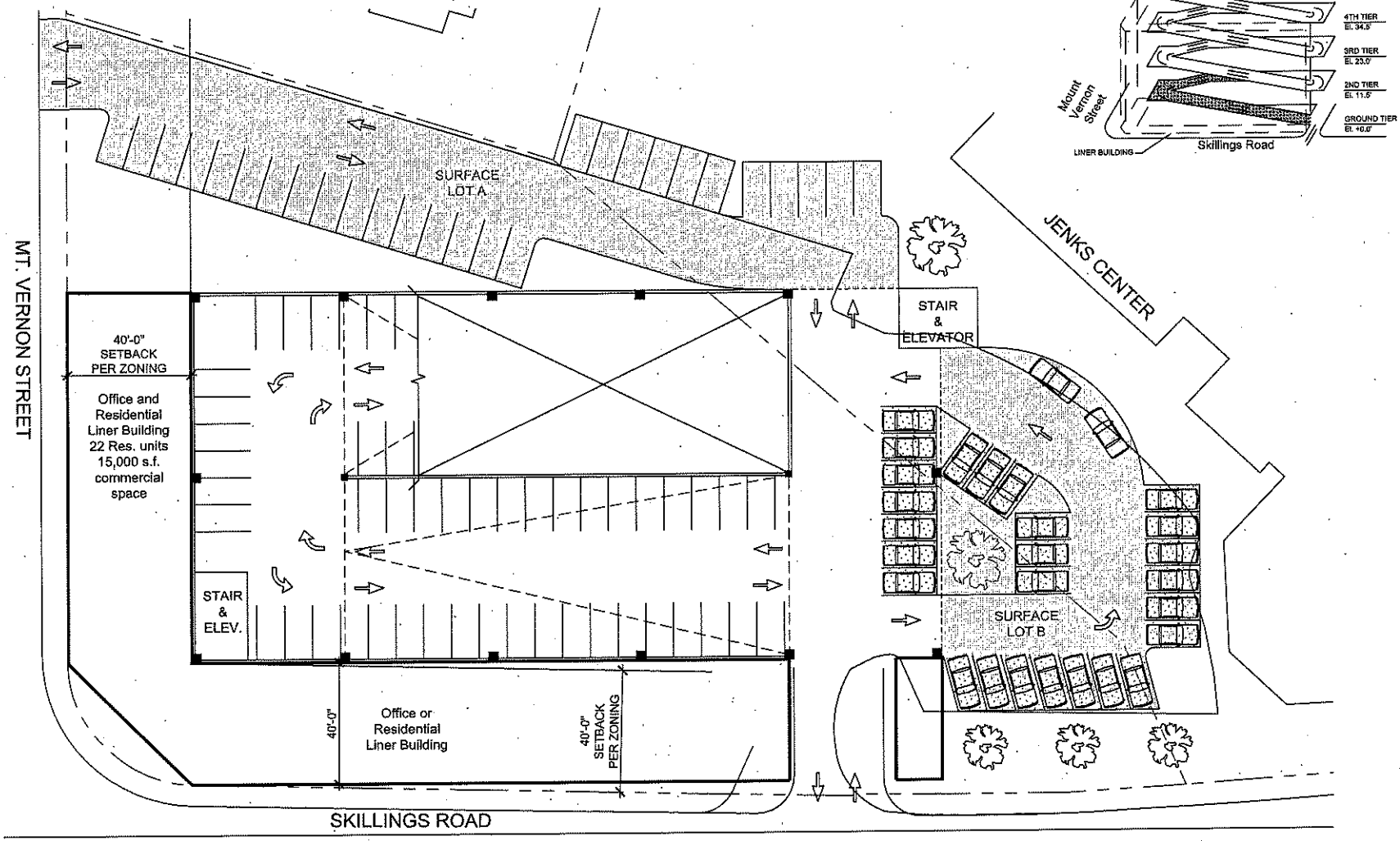
617.350.5040 Ph
617.350.5048 Fax
www.walkerparking.com
Job: Town of Winchester
Job No: 16-2760.00
Date: February 6, 2017
No.
Jenks
Option 2
Sk-2-03

Jenks Lot Site Concept 3: Ground Level



WALKER PARKING CONSULTANTS

Concept 3
Jenks Lot Site

Car Counts

Concept 3:

Surface Lot A and B:	43 Spaces
Ground Level:	52 Spaces
Second Level:	83 Spaces
Third Level:	83 Spaces
Fourth Level:	83 Spaces
Top Level:	32 Spaces
Garage Total*	: 376 Spaces

Efficiency (Garage Only)
309 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.
** The surface spaces are not included in the ground level car count

Net Gain

Concept 3:	376 Spaces
Existing Surface Lot:	(140) Spaces
Liner Bldng Demand:	(50) Spaces
Total:	186 Spaces

Construction Cost Information

Total:	$10,700,000
Per Space:	$28,500
Per Net Added Space:	$57,500

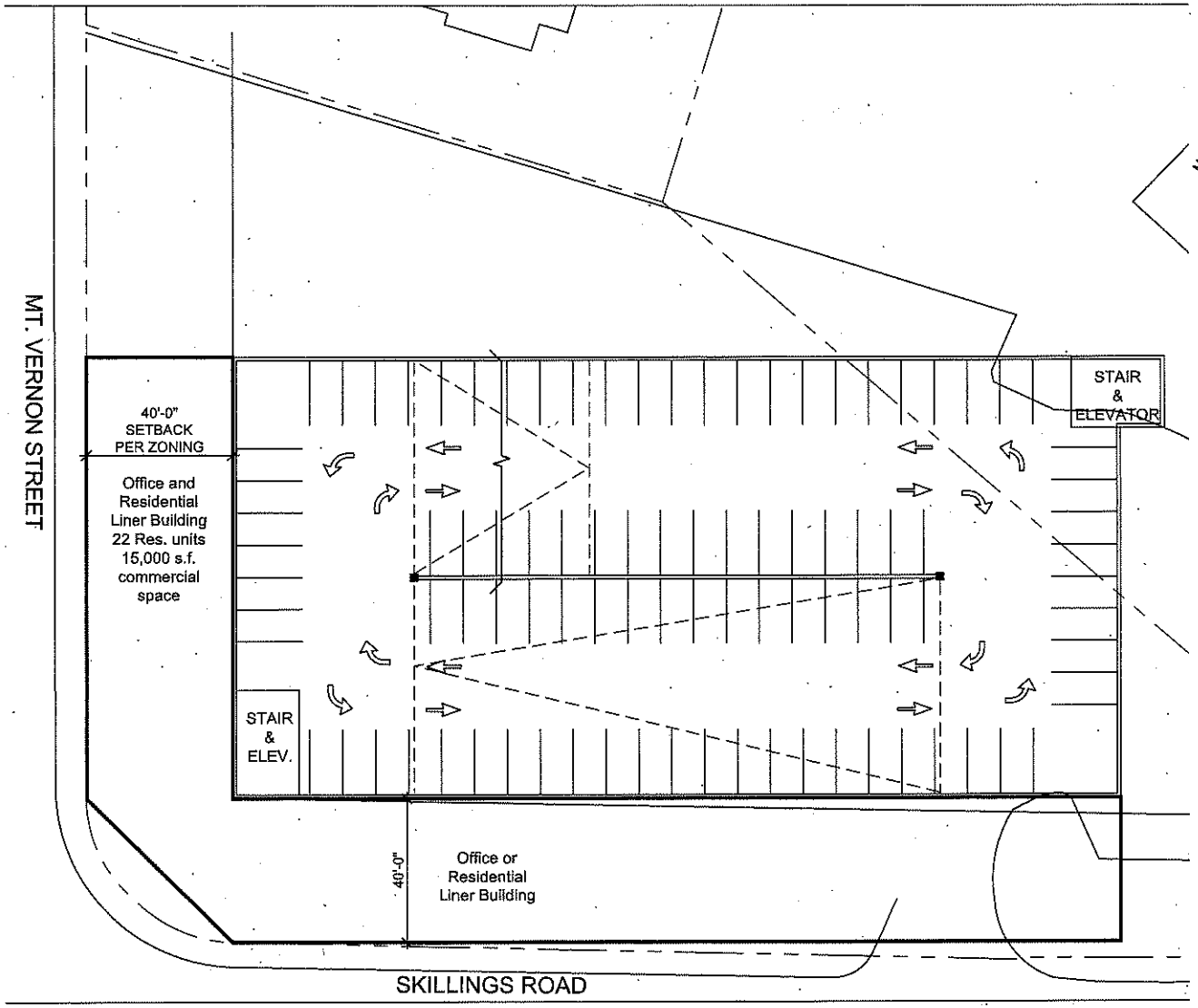
Notes:

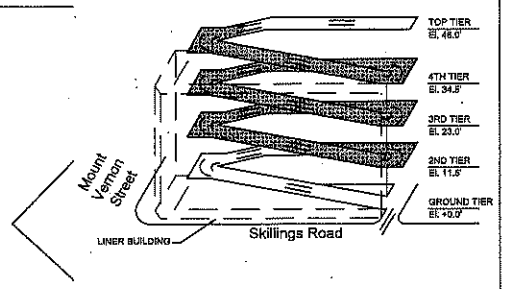
1. Cost are extrapolated values for comparison purposes not formal estimates
2. Based on $92/s.f
3. Excludes cost related to liner building construction

Date: 3/06/2017
Project N. 16-2760.00

NORTH

Jenks Lot Site Concept 3: Second to Fourth Level





WALKER
PARKING CONSULTANTS

Concept 3
Jenks Lot Site

Car Counts

Concept 3:

Surface Lot A and B:	43 Spaces
Ground Level:	52 Spaces
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Per Space:	$28,500
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Notes:

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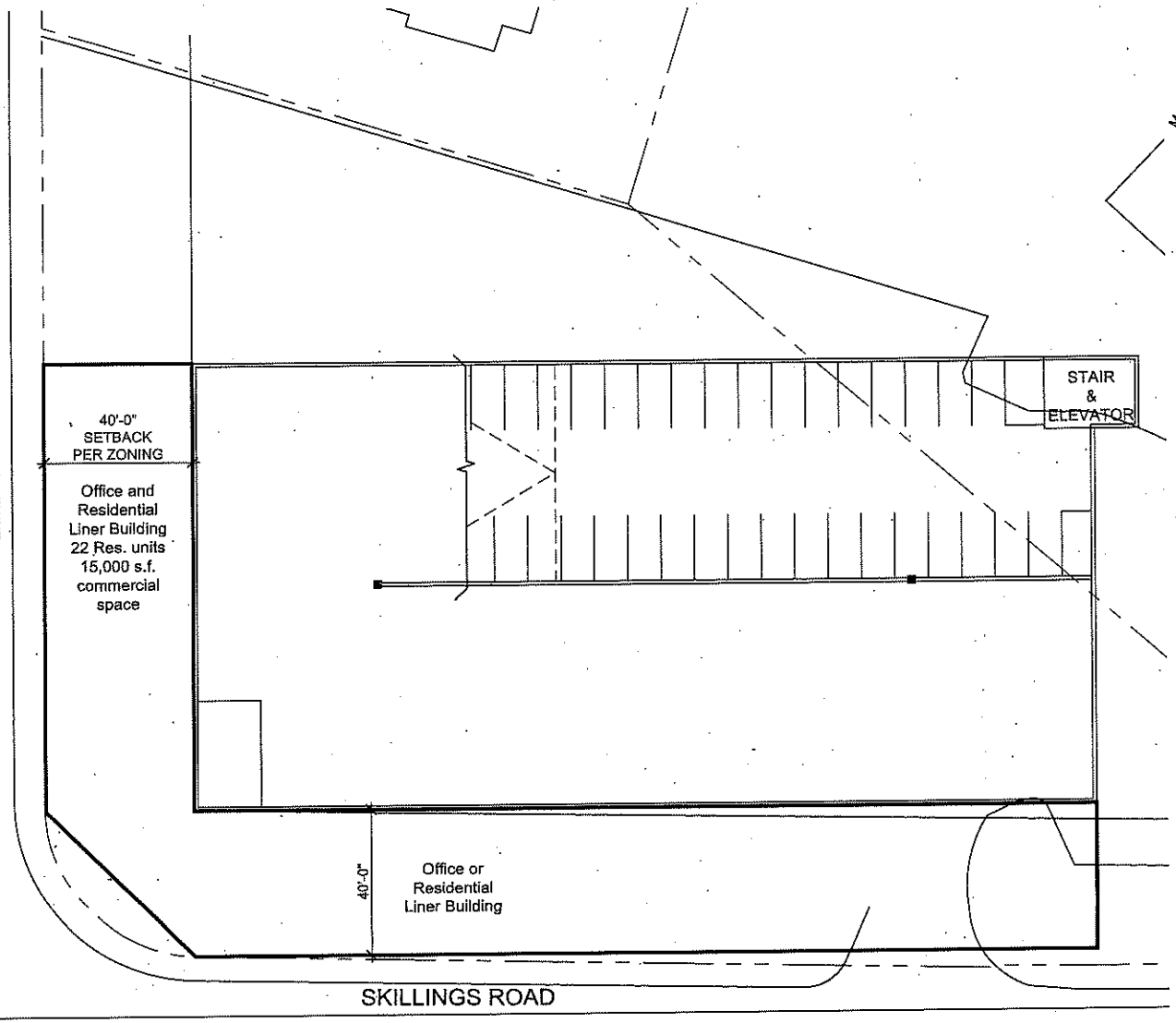
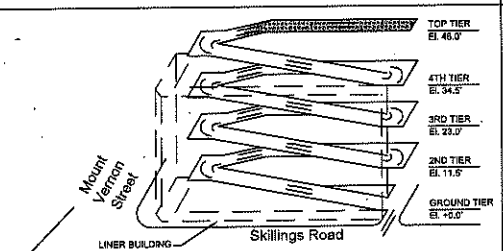
2. Based on $92/s.f
3. Excludes cost related to liner building construction

Date: 3/06/2017
Project N. 16-2760.00

NORTH

Jenks Lot Site Concept 3: Top Level





WALKER PARKING CONSULTANTS

Concept 3
Jenks Lot Site

Car Counts

Concept 3:

Surface Lot A and B:	43 Spaces
Ground Level:	52 Spaces
Second Level:	83 Spaces
Third Level:	83 Spaces
Fourth Level:	83 Spaces
Top Level:	32 Spaces
Garage Total*	: 376 Spaces

Efficiency (Garage Only)
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* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.
** The surface spaces are not included in the ground level car count

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Per Space:	$28,500
Per Net Added Space:	$57,500

Notes:

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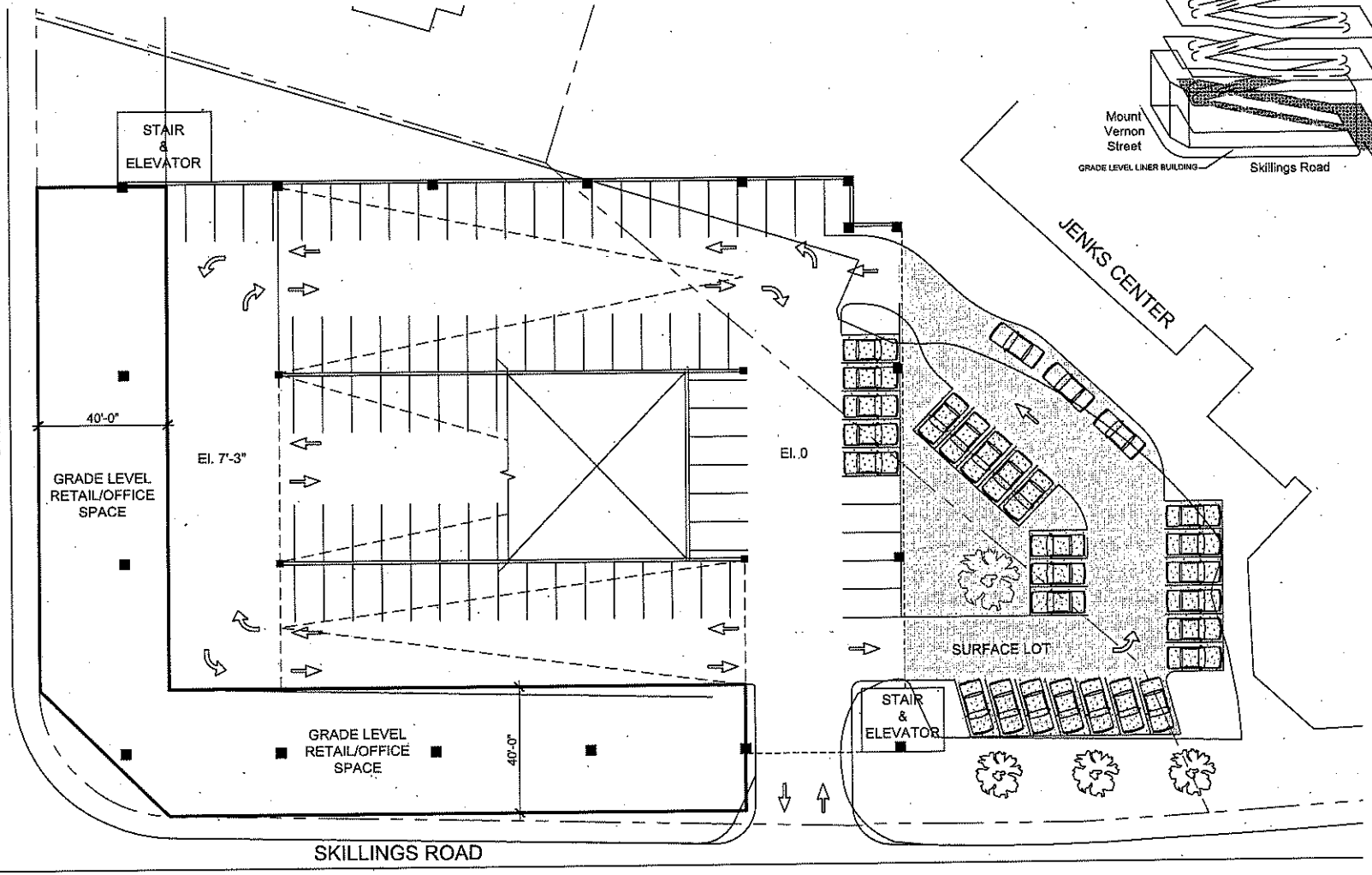
2. Based on $92/s.f
3. Excludes cost related to liner building construction

Date: 3/06/2017
Project N. 16-2760.00

NORTH

Jenks Lot Site Concept 4: Ground Level



WALKER PARKING CONSULTANTS

Concept 4
Jenks Lot Site

Car Counts

Concept 4:

Surface Lot:	19 Spaces
Ground Level:	77 Spaces
Second Level:	127 Spaces
Third Level:	127 Spaces
Top Level:	114 Spaces
Garage Total*	: 464 Spaces

Efficiency (Garage Only)
341 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 4:	464 Spaces
Existing Surface Lot:	(140) Spaces
Retail/Office Demand:	(35) Spaces
Total:	289 Spaces

Construction Cost Information

Total:	$14,000,000
Per Space:	$30,300
Per Net Added Space:	$48,700

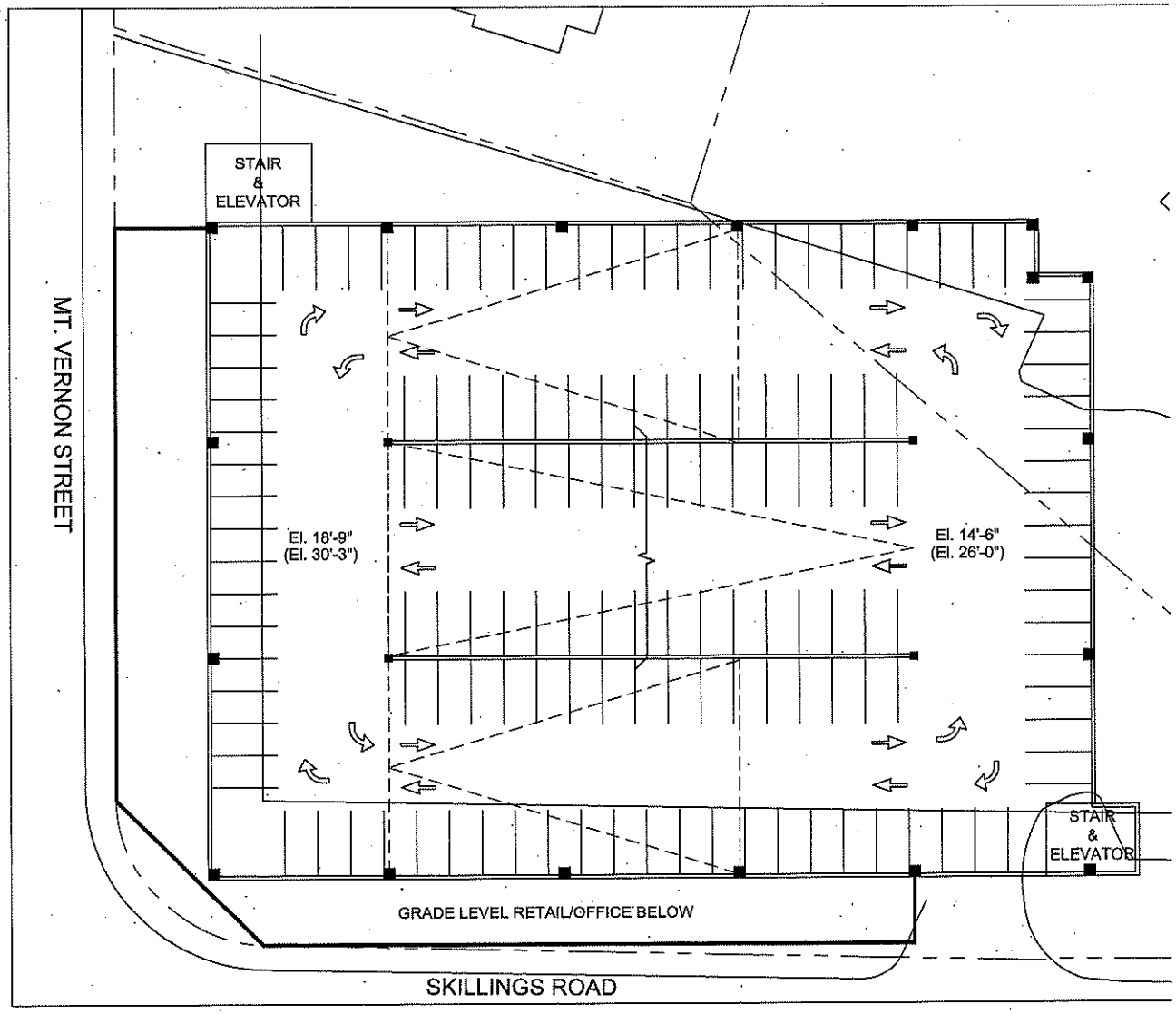
Notes:

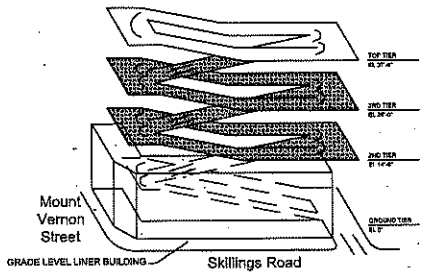
1. Cost are extrapolated values for comparison purposes not formal estimates
2. Based on $89/s.f
3. Excludes cost related to liner building construction

Date: 3/06/2017
Project N. 16-2760.00

NORTH

Jenks Lot Site Concept 4: Second to Fourth Level





WALKER
PARKING CONSULTANTS

Concept 4
Jenks Lot Site

Car Counts

Concept 4:

Surface Lot:	19 Spaces
Ground Level:	77 Spaces
Second Level:	127 Spaces
Third Level:	127 Spaces
Top Level:	114 Spaces
Garage Total*	: 464 Spaces

Efficiency (Garage Only)
341 sf/car

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Net Gain

Concept 4:	464 Spaces
Existing Surface Lot:	(140) Spaces
Retail/Office Demand:	(35) Spaces
Total:	289 Spaces

Construction Cost Information

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Per Space:	$30,300
Per Net Added Space:	$48,700

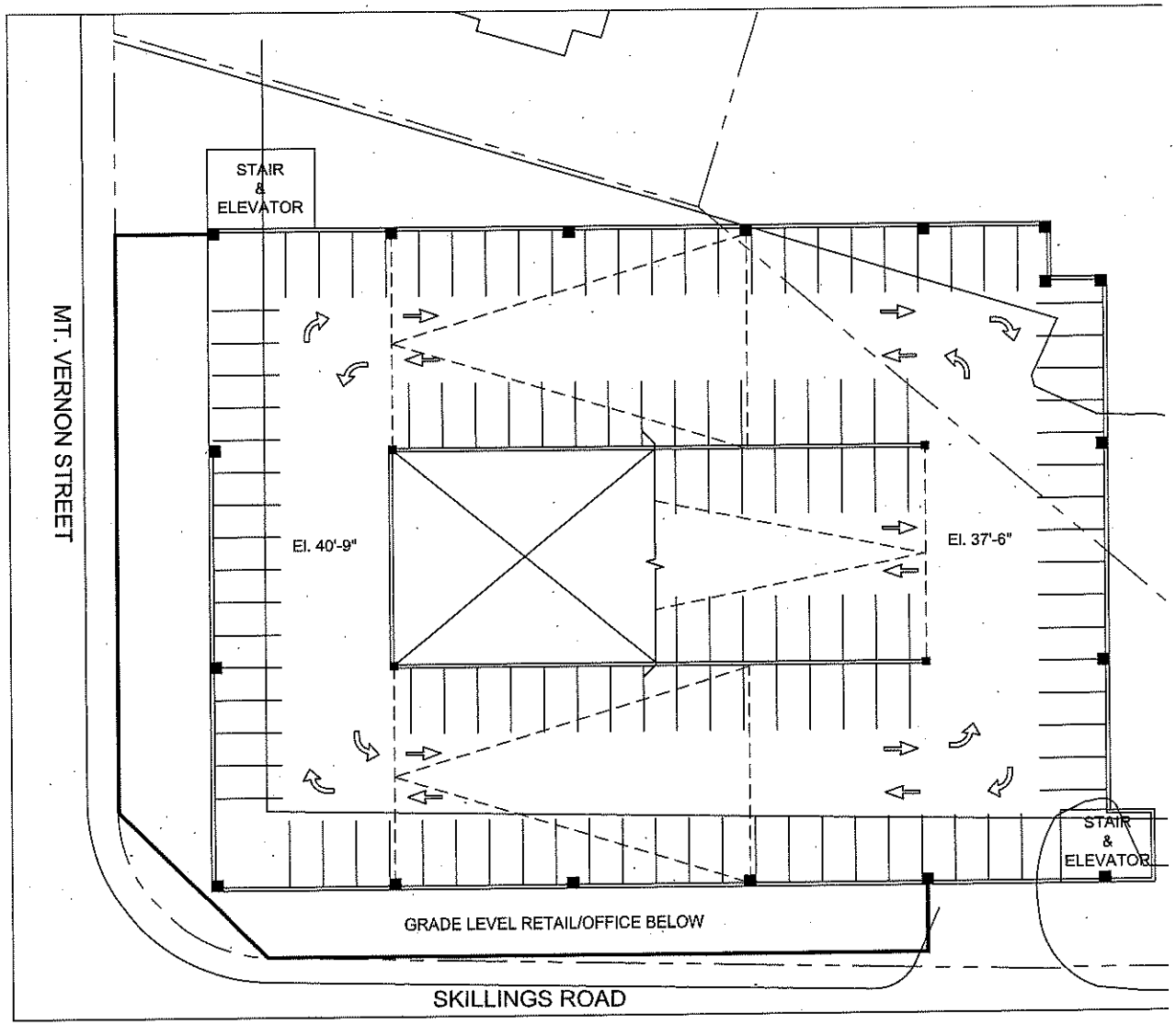
Notes:

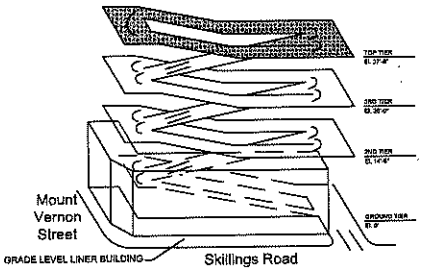
1. Cost are extrapolated values for comparison purposes not formal estimates
2. Based on $89/s.f
3. Excludes cost related to liner building construction

Date: 3/06/2017
Project N. 16-2760.00

NORTH

Jenks Lot Site Concept 4: Top Level





WALKER
PARKING CONSULTANTS

Concept 4
Jenks Lot Site

Car Counts

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Surface Lot:	19 Spaces
Ground Level:	77 Spaces
Second Level:	127 Spaces
Third Level:	127 Spaces
Top Level:	114 Spaces
Garage Total*	: 464 Spaces

Efficiency (Garage Only)
341 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 4:	464 Spaces
Existing Surface Lot:	(140) Spaces
Retail/Office Demand:	(35) Spaces
Total:	289 Spaces

Construction Cost Information

Total:	$14,000,000
Per Space:	$30,300
Per Net Added Space:	$48,700

Notes:

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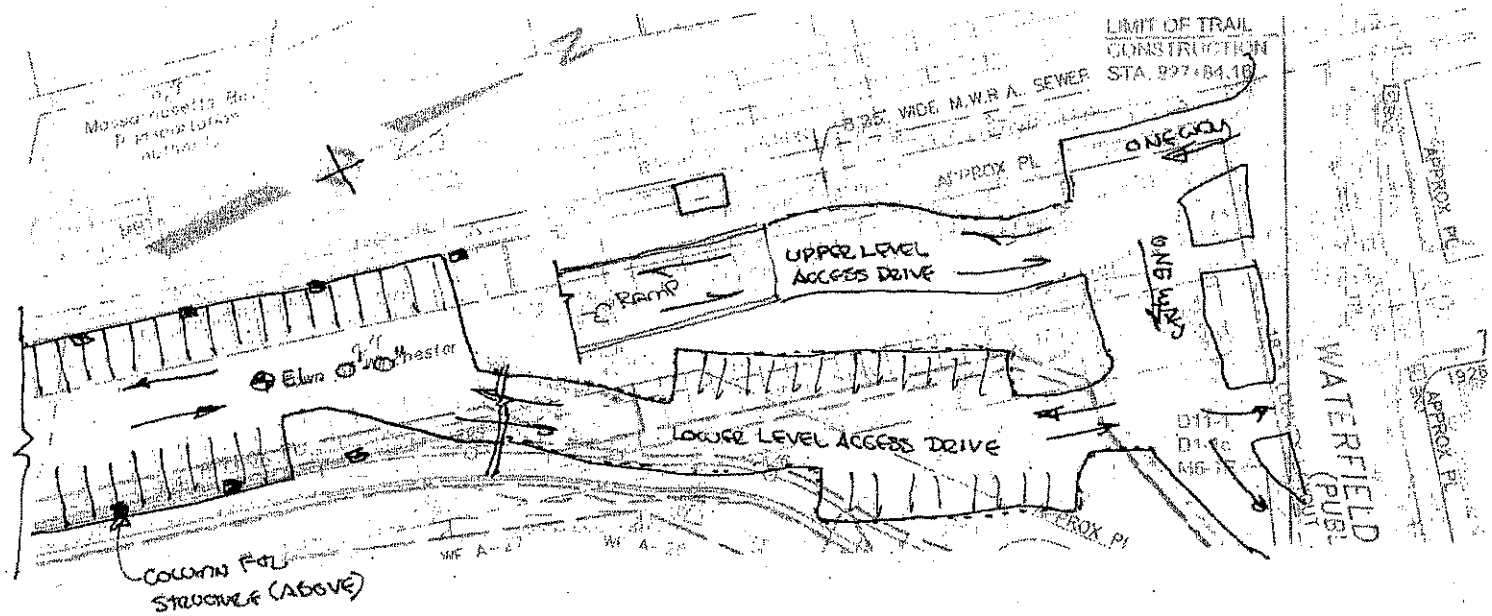
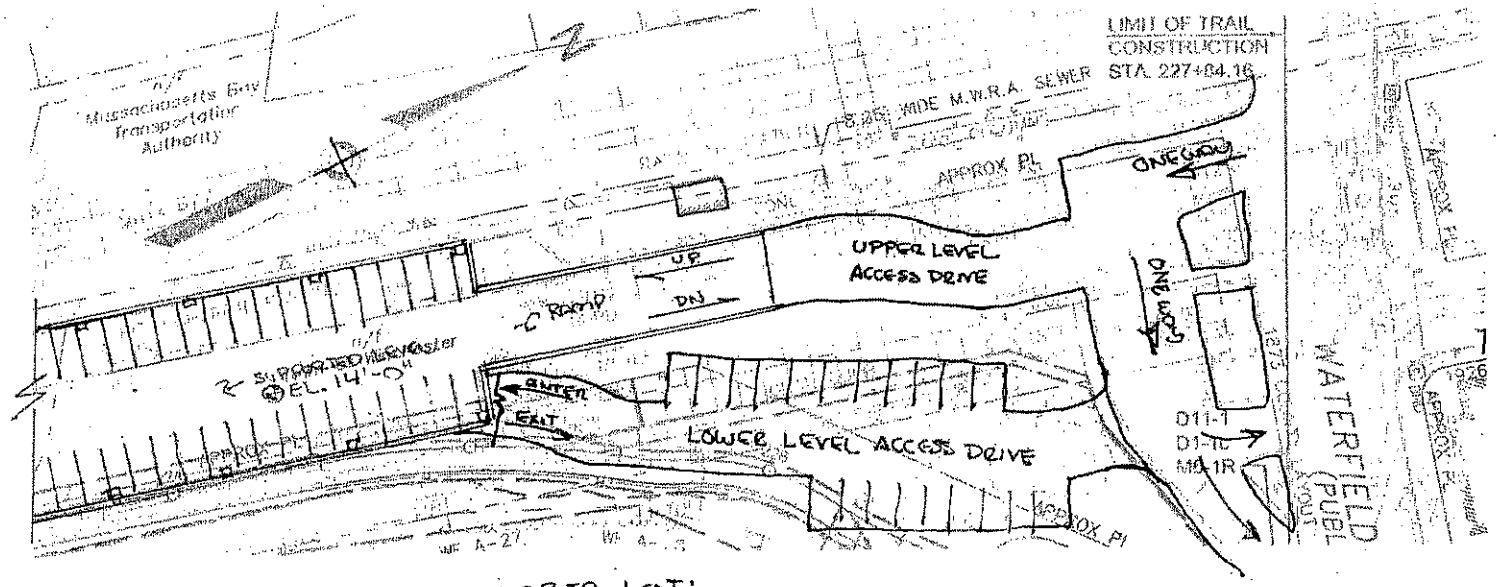
3. Excludes cost related to liner building construction

Date: 3/06/2017
Project N. 16-2760.00

NORTH



ABERJONA MPTA LOT:
LOWER LEVEL PARKING ACCESS PLAN
N.T.S.



ABERJONA MBTA LOT:

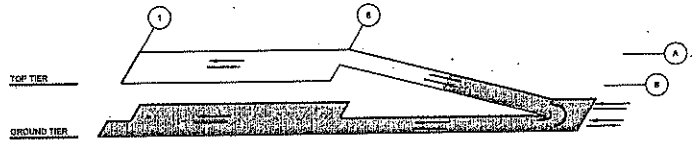
UPPER LEVEL PARKING ACCESS PLAN

N.T.S.

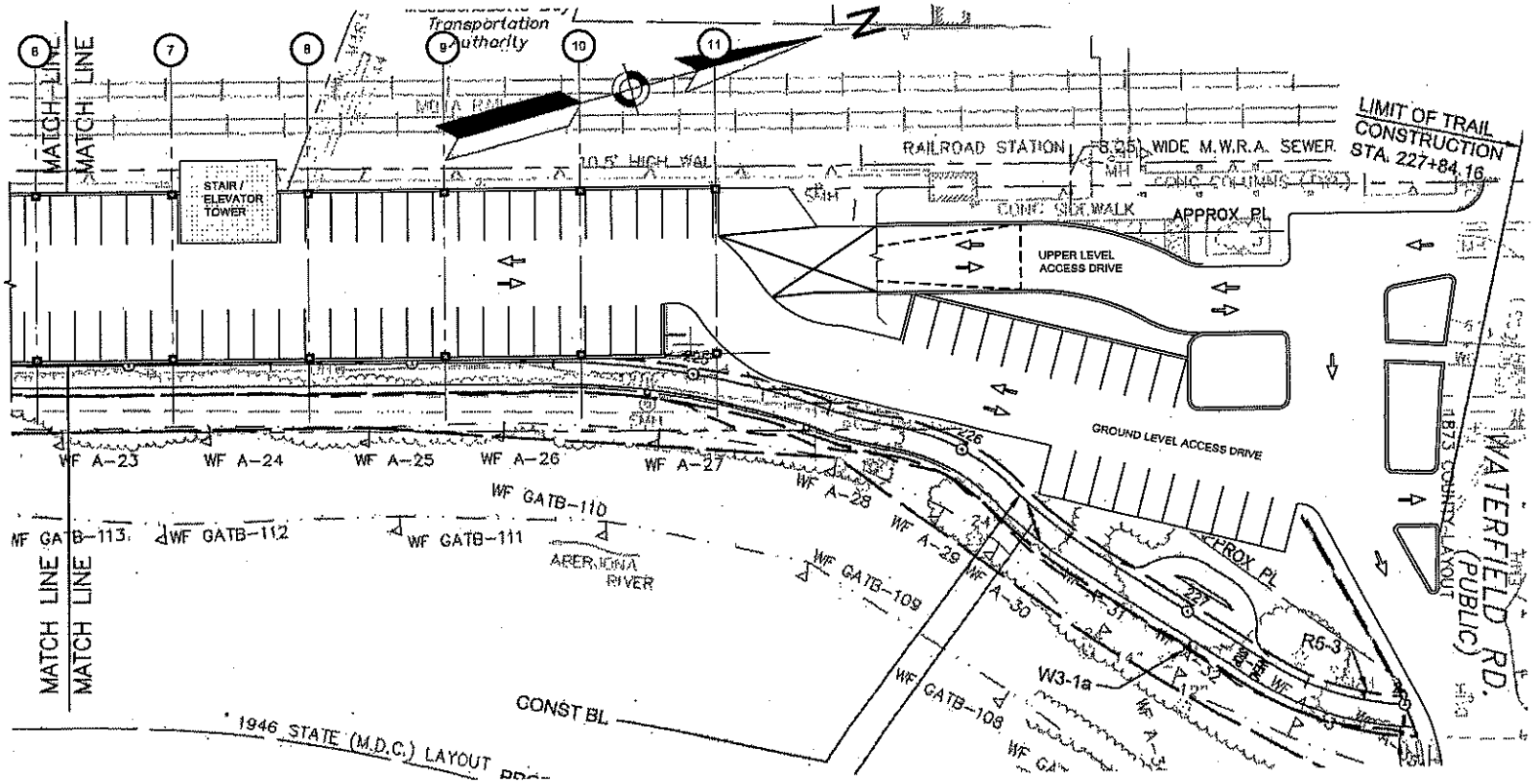
Aberjona Lot Site Concept 1: Ground Level

WALKER PARKING CONSULTANTS

Sheet 1 of 3



ISOMETRIC



Car Counts

Concept 1:
Ground Level: 116 Spaces
Top Level: 95 Spaces
Garage Total* : 211 Spaces

Efficiency (Garage Only)
338 sf/car

* The count has been reduced by 6% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 1:	211 Spaces
Existing Surface Lot:	(125) Spaces
Total:	86 Spaces

Construction Cost Information

Total:	$5,275,000
Per Space:	$25,000
Per Net Added Space:	$61,400

Notes:

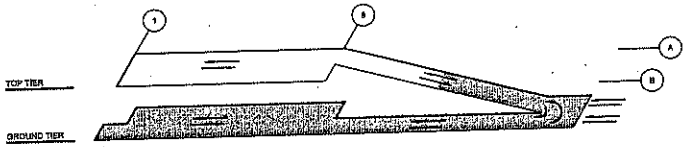
1. Cost estimate information is based on concept level design information and extrapolated s.f. values. Information is for option comparison purposes only.
2. Based on $74/s.f

Date: 05/19/2017
Project N. 16-2760.00

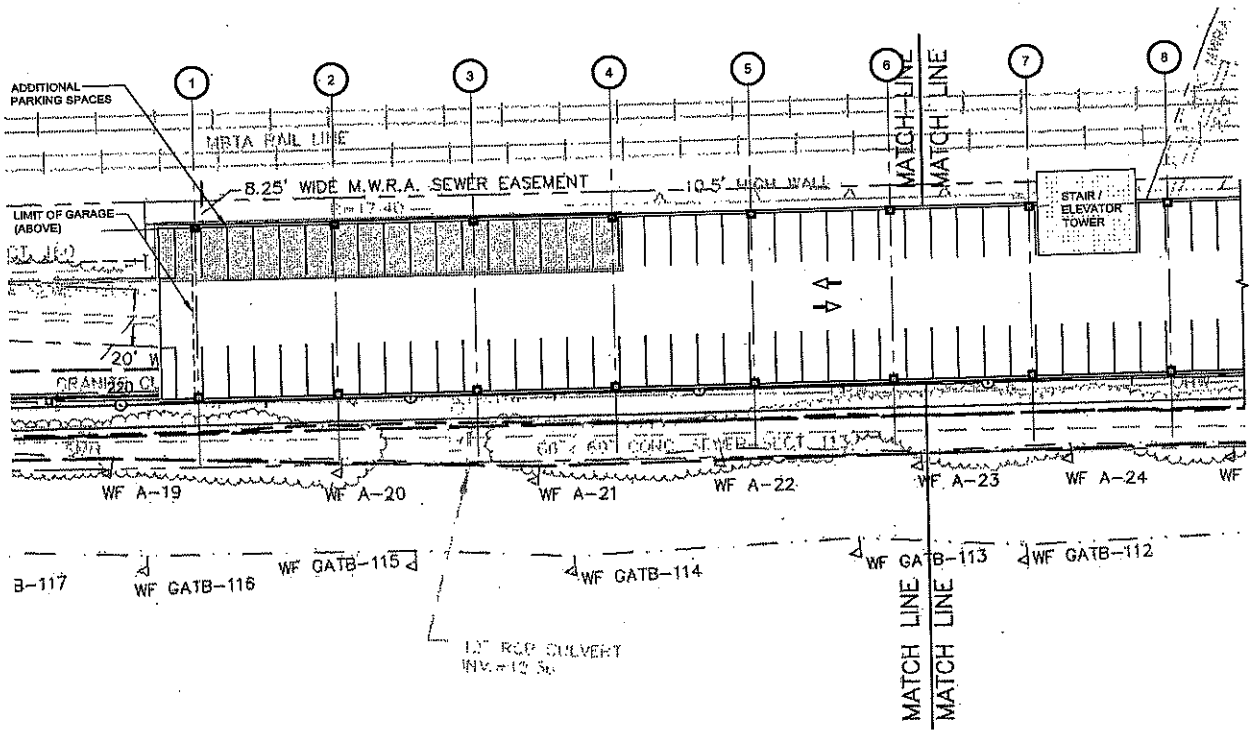
NORTH

Aberjona Lot Site Concept 1: Ground Level

WALKER PARKING CONSULTANTS



ISOMETRIC



Car Counts

Concept 1:
Ground Level: 116 Spaces
Top Level: 95 Spaces
Garage Total* : 211 Spaces

Efficiency (Garage Only)
338 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 1:	211 Spaces
Existing Surface Lot:	(125) Spaces
Total:	86 Spaces

Construction Cost Information

Total:	$5,275,000
Per Space:	$25,000
Per Net Added Space:	$61,400

Notes:

1. Cost estimate information is based on concept level design information and extrapolated s.f. values. Information is for option comparison purposes only.
2. Based on $74/s.f

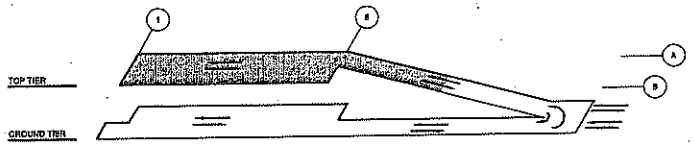
Date: 05/19/2017
Project N. 16-2760.00

NORTH

Aberjona Lot Site Concept 1: Top Level

WALKER PARKING CONSULTANTS

Sheet 3 of 3



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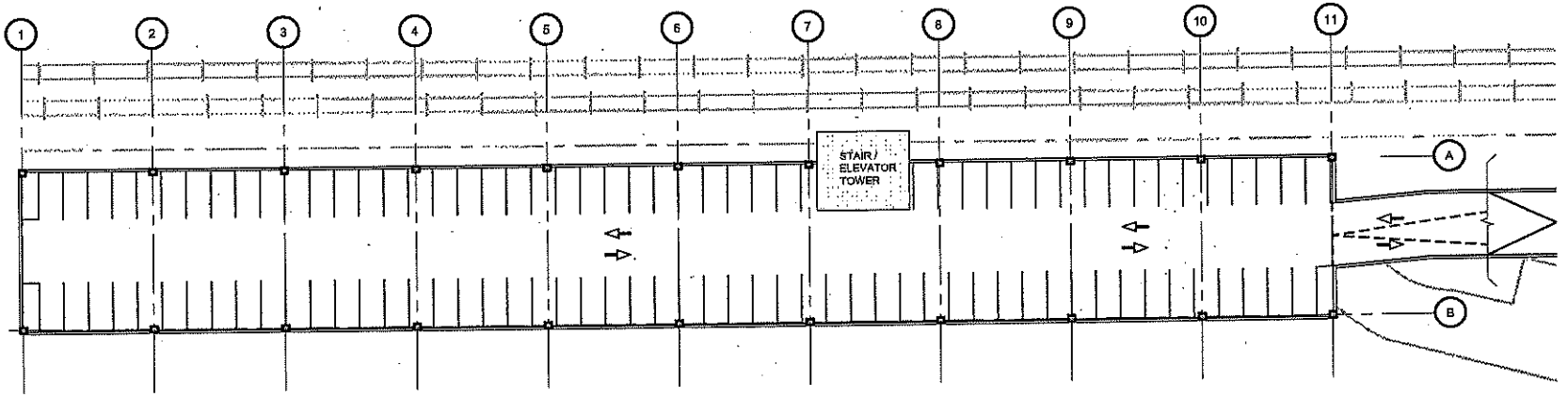


Car Counts

Concept 1:
Ground Level: 116 Spaces
Top Level: 95 Spaces
Garage Total* : 211 Spaces

Efficiency (Garage Only)
338 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 1: 211 Spaces
Existing Surface Lot: (125) Spaces
Total: 86 Spaces

Construction Cost Information

Total: $5,275,000
Per Space: $25,000
Per Net Added Space: $61,400

Notes:

1. Cost estimate information is based on concept level design information and extrapolated s.f. values. Information is for option comparison purposes only.
2. Based on $74/s.f

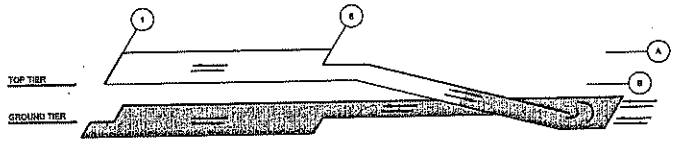
Date: 05/19/2017
Project N. 16-2760.00

NORTH

Aberjona Lot Site Concept 2: Ground Level

WALKER PARKING CONSULTANTS

Sheet 1 of 3



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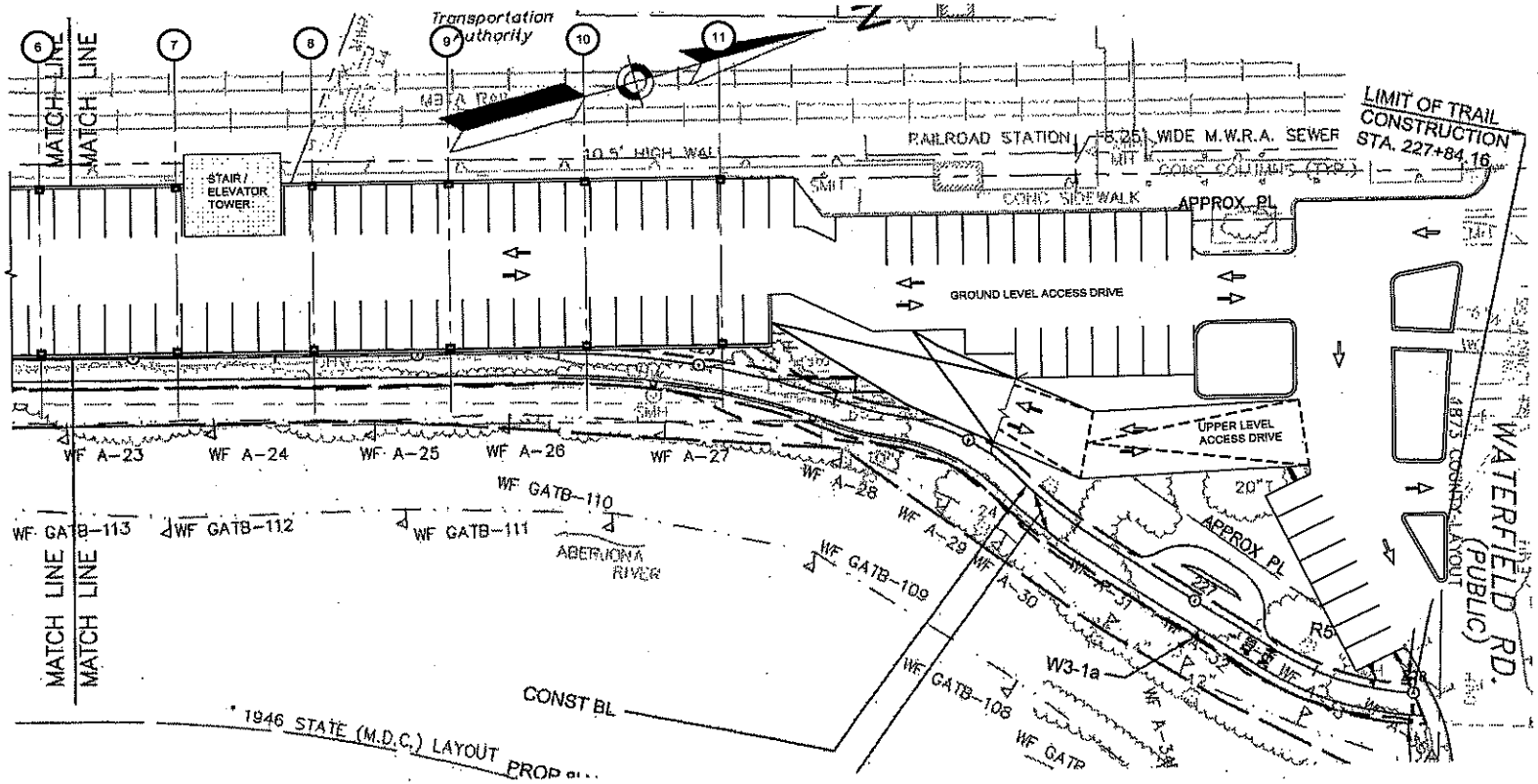


Car Counts

Concept 2:
Ground Level: 114 Spaces
Top Level: 95 Spaces
Garage Total* : 209 Spaces

Efficiency (Garage Only)
338 sf/car

* The count has been reduced by 6% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 2:	209 Spaces
Existing Surface Lot:	(125) Spaces
Total:	84 Spaces

Construction Cost Information

Total:	$5,225,000
Per Space:	$25,000
Per Net Added Space:	$62,200

Notes:

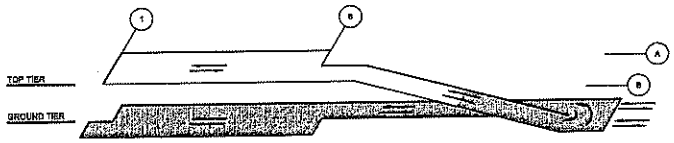
1. Cost estimate information is based on concept level design information and extrapolated s.f. values. Information is for option comparison purposes only.
2. Based on $74/s.f

Date: 05/19/2017
Project N. 16-2760.00

NORTH

Aberjona Lot Site Concept 2: Ground Level

WALKER PARKING CONSULTANTS



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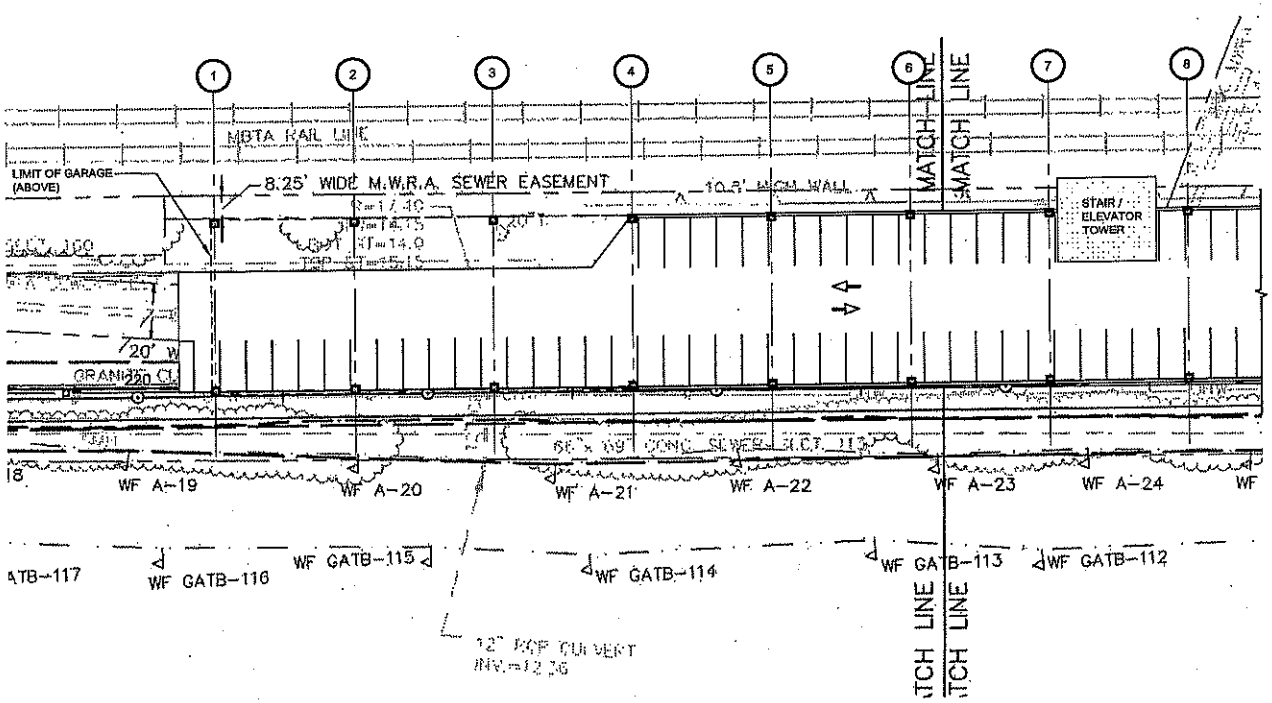


Car Counts

Concept 2:
Ground Level: 114 Spaces
Top Level: 95 Spaces
Garage Total* :209 Spaces

Efficiency (Garage Only)
338 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 2: 209 Spaces
Existing Surface Lot: (125) Spaces
Total: 84 Spaces

Construction Cost Information

Total:	$5,225,000
Per Space:	$25,000
Per Net Added Space:	$62,200

Notes:

1. Cost estimate information is based on concept level design information and extrapolated s.f. values. Information is for option comparison purposes only.
2. Based on $74/s.f

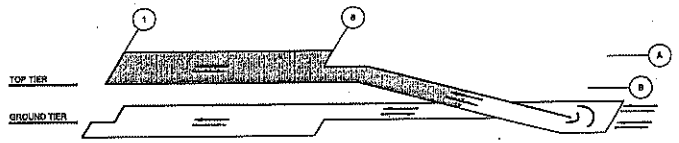
Date: 05/19/2017
Project N. 16-2760.00

NORTH

Aberjona Lot Site Concept 2: Top Level

WALKER PARKING CONSULTANTS

Sheet 3 of 3



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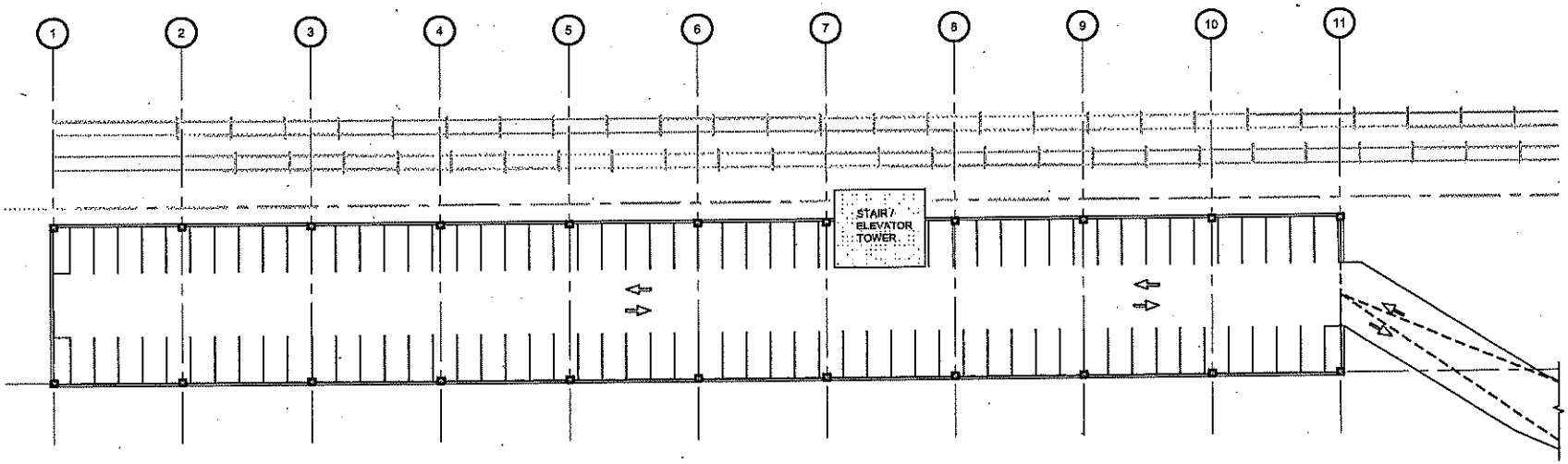


Car Counts

Concept 2:
Ground Level: 114 Spaces
Top Level: 95 Spaces
Garage Total* : 209 Spaces

Efficiency (Garage Only)
338 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 2:	209 Spaces
Existing Surface Lot:	(125) Spaces
Total:	84 Spaces

Construction Cost Information

Total:	$5,225,000
Per Space:	$25,000
Per Net Added Space:	$62,200

Notes:

1. Cost estimate information is based on concept level design information and extrapolated s.f. values. Information is for option comparison purposes only.
2. Based on $74/s.f

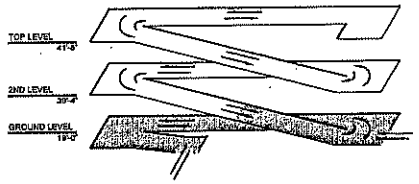
Date: 05/19/2017
Project N. 16-2750.00

NORTH

Wedgemere Lot Site Concept 1: Ground Level

WALKER PARKING CONSULTANTS

Sheet 1 of 3



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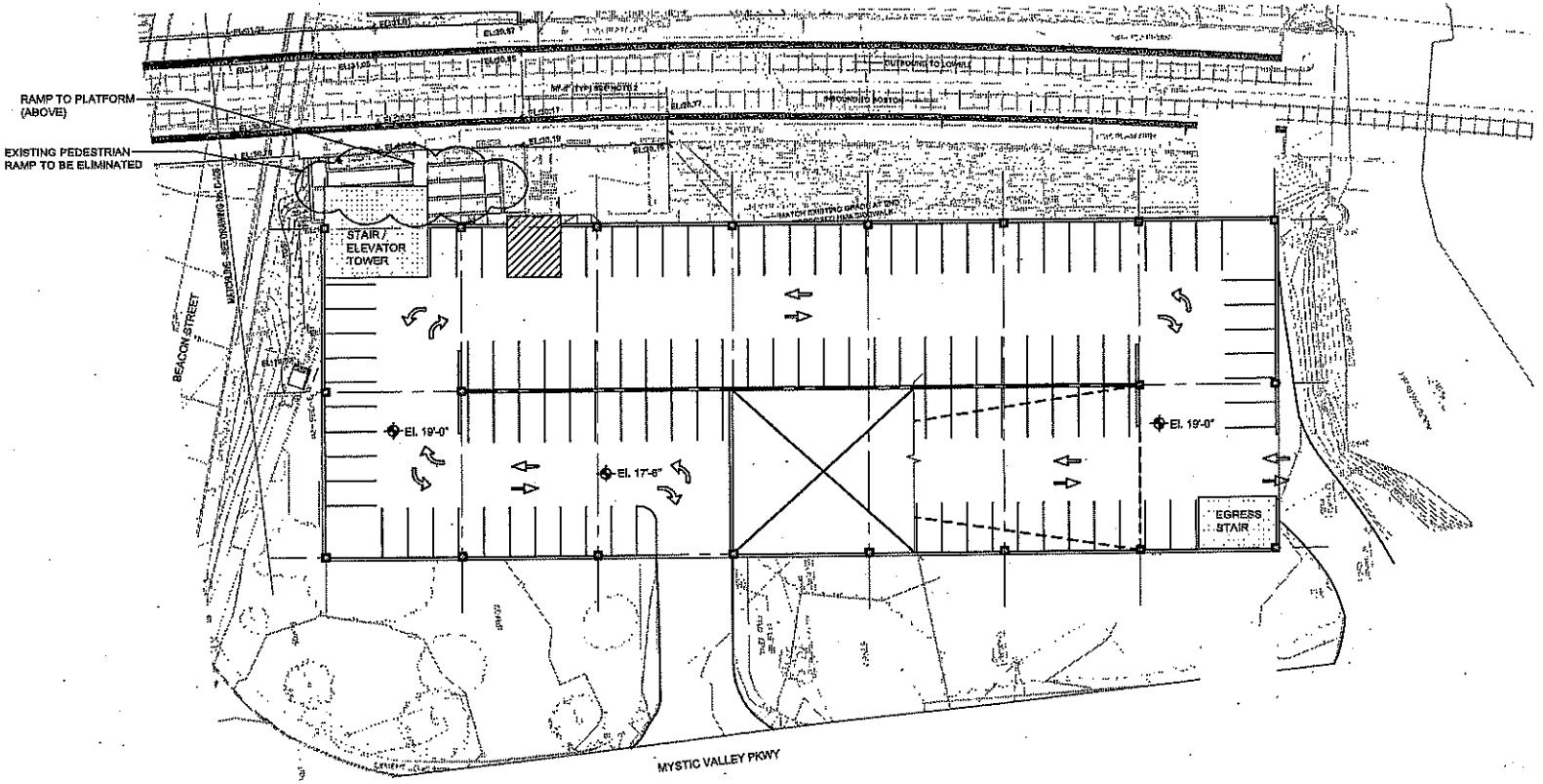


Car Counts

Concept 1:
Ground Level: 103 Spaces
Second Level: 126 Spaces
Top Level: 110 Spaces
Garage Total* : 339 Spaces

Efficiency (Garage Only)
323 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 1: 339 Spaces
Existing Surface Lot: (124) Spaces
Total: 215 Spaces

Construction Cost Information

Total:	$7,850,000
Per Space:	$23,150
Per Net Added Space:	$36,500

Notes:

1. Cost estimate information is based on concept level design information and extrapolated s.f. values. Information is for option comparison purposes only.
2. Based on $68/s.f

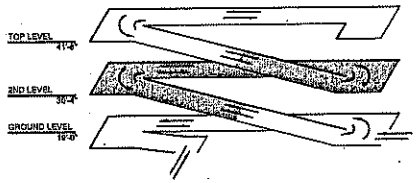
Date: 05/19/2017
Project N. 16-2760.00

NORTH

Wedgemere Lot Site Concept 2: Second Level

WALKER PARKING CONSULTANTS

Sheet 2 of 3



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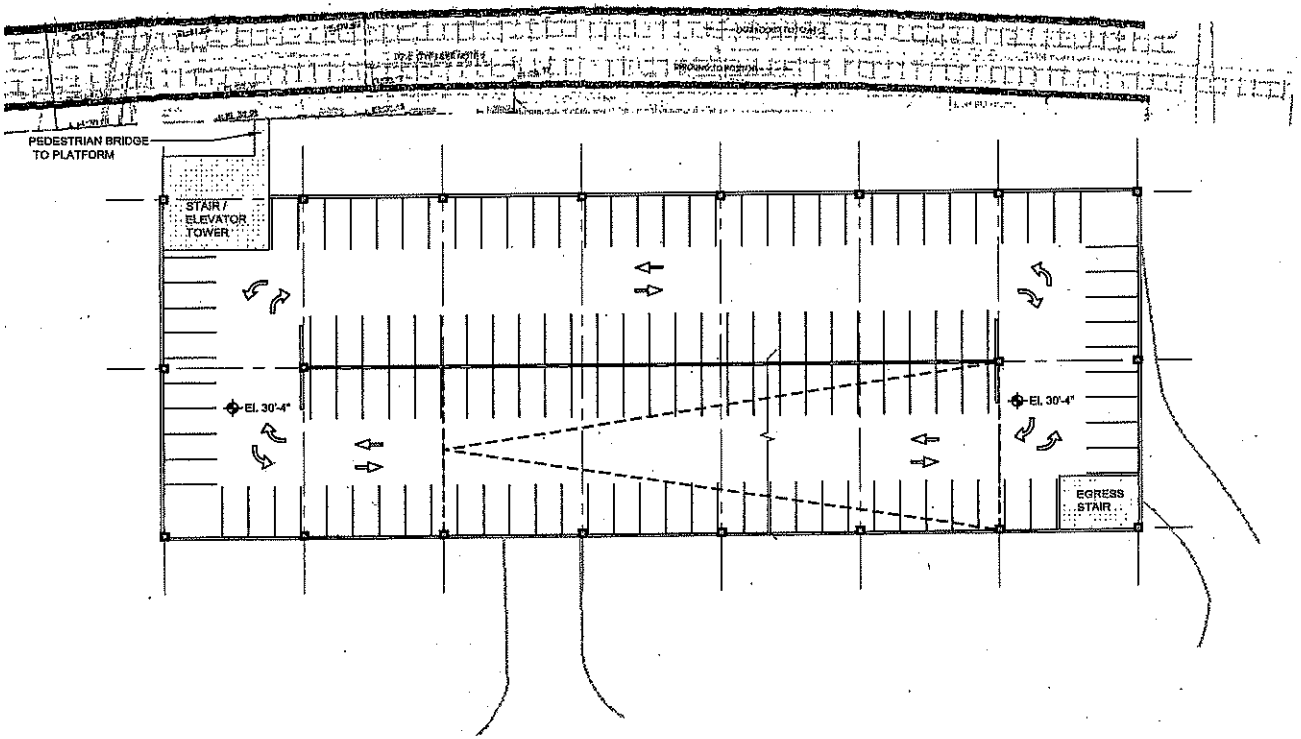


Car Counts

Concept 1:
Ground Level: 103 Spaces
Second Level: 126 Spaces
Top Level: 110 Spaces
Garage Total* : 339 Spaces

Efficiency (Garage Only)
323 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 1: 339 Spaces
Existing Surface Lot: (124) Spaces
Total: 215 Spaces

Construction Cost Information

Total: $7,850,000
Per Space: $23,150
Per Net Added Space: $36,500

Notes:

1. Cost estimate information is based on concept level design information and extrapolated s.f. values. Information is for option comparison purposes only.
2. Based on $68/s.f

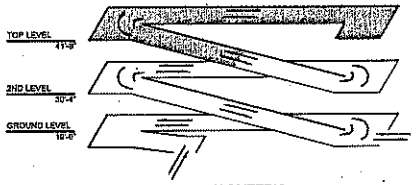
Date: 05/19/2017
Project N. 16-2760.00

NORTH

Wedgemere Lot Site Concept 2: Top Level

WALKER PARKING CONSULTANTS

Sheet 3 of 3



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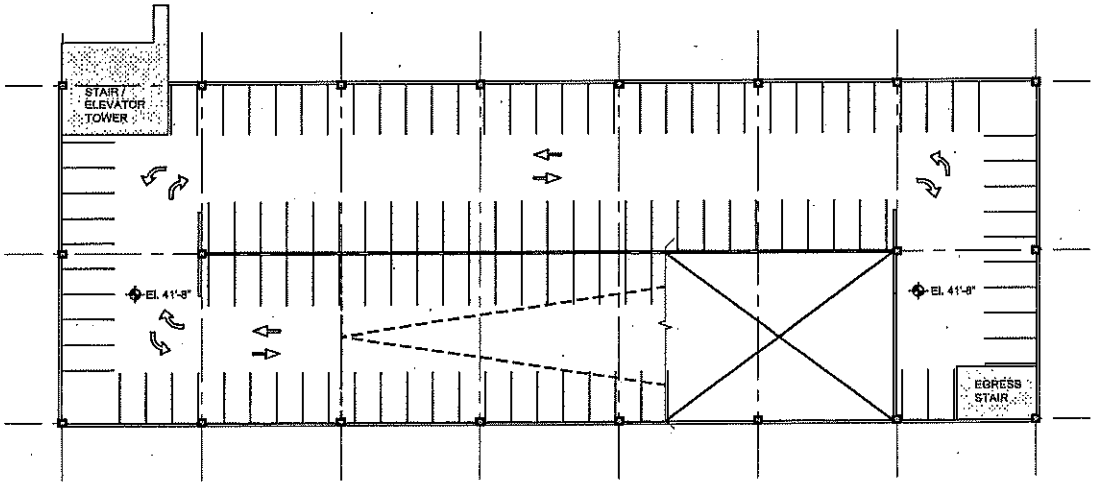

Car Counts

Concept 1:
Ground Level: 103 Spaces
Second Level: 126 Spaces
Top Level: 110 Spaces
Garage Total* : 339 Spaces

Efficiency (Garage Only)
323 sf/car

* The count has been reduced by 5% from what is shown on the plan to accommodate undefined design elements.

Net Gain

Concept 1:	339 Spaces
Existing Surface Lot:	(124) Spaces
Total:	215 Spaces

Construction Cost Information

Total:	$7,850,000
Per Space:	$23,150
Per Net Added Space:	$36,500

Notes:

1. Cost estimate information is based on concept level design information and extrapolated s.f. values. Information is for option comparison purposes only.
2. Based on $68/s.f

Date: 05/19/2017
Project N. 16-2760.00

NORTH