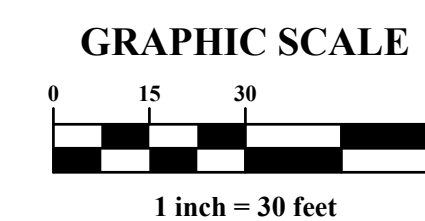
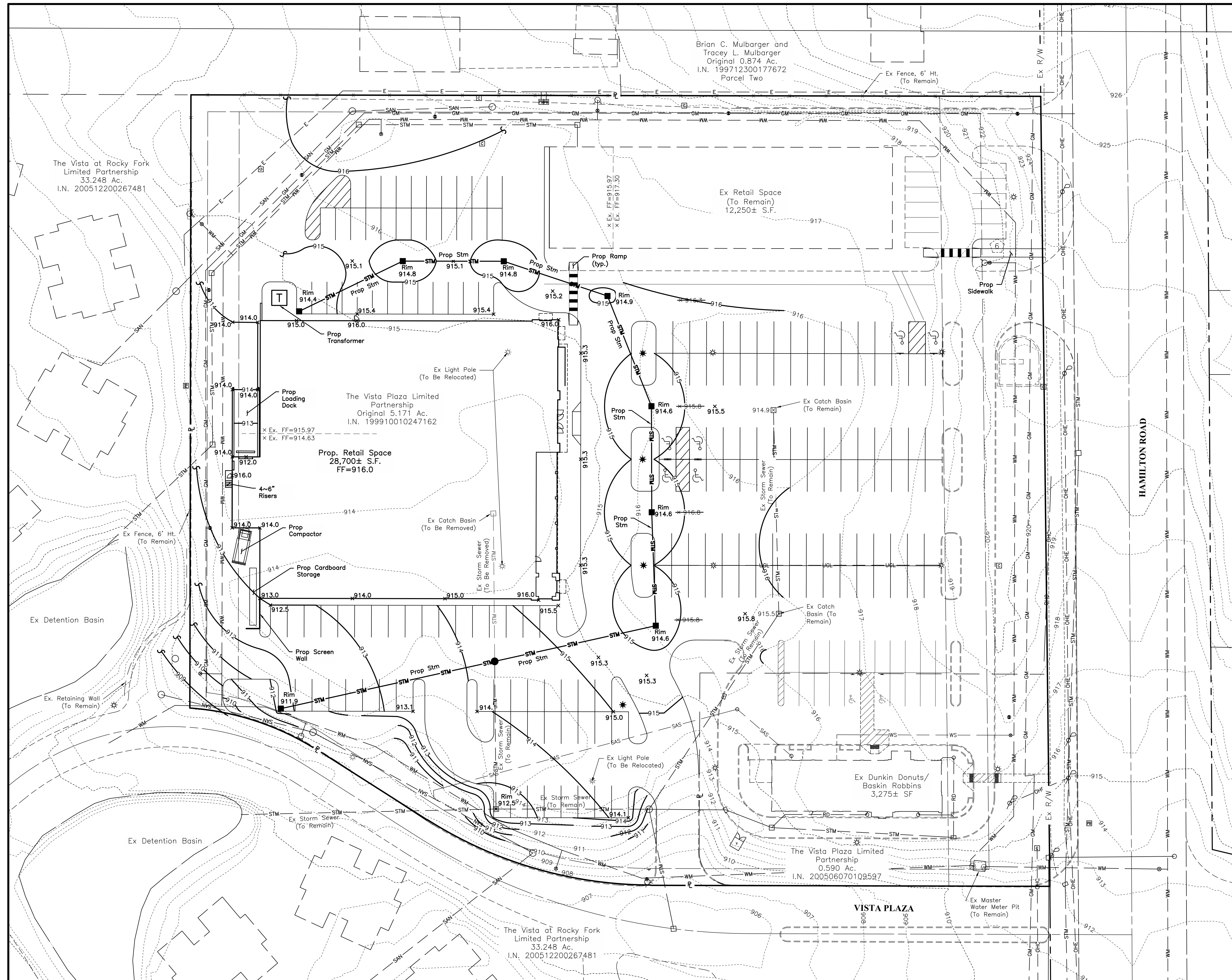


FDP-00001-2015

REVISED MATERIALS

1. SITE PLAN SHEETS 1-4
2. TRAFFIC STUDY



PRELIMINARY
 NOT TO BE USED FOR
 CONSTRUCTION

PLAN SET DATE
 April 2, 2015

MARK	DATE	DESCRIPTION

CASTO

CITY OF GARHANA, FRANKLIN COUNTY, OHIO
 FINAL DEVELOPMENT PLAN
 FOR
VISTA PLAZA
 GRADING PLAN



DATE
 April 2, 2015

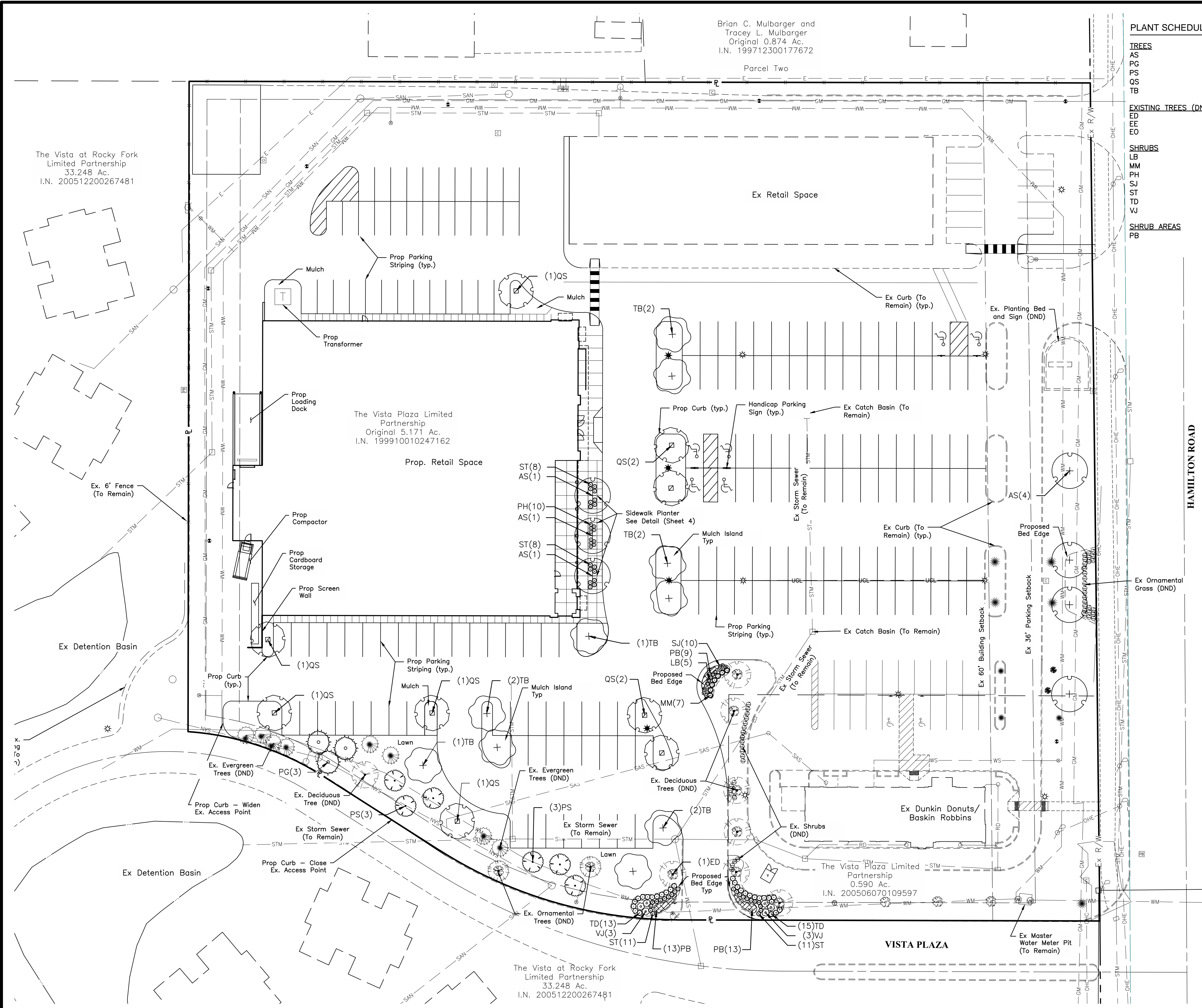
SCALE
 1" = 30'

JOB NO.
 2014-1273

SHEET
 2/4

I:\2014\1273\Draw\04\Sheets\PPP\2014-1273 - Preliminary Utility & Grading Plan.dwg Last Saved By: beamfort, 4/2/2015 12:01 PM
 I:\2014\1273\Draw\04\Sheets\PPP\2014-1273 - Preliminary Utility & Grading Plan.dwg Last Printed By: beamfort, 4/2/2015 12:01 PM

\\CMHDATA01\Project01\2014\12\3\DWG\04\Sheets\PP\14-1273 - Landscape Planning_Last Saved By: oflick, 4/2/2015 11:40 AM Last Printed By: Flick, Andrew, 4/2/2015 11:40 AM (No Xrefs)



Brian C. Mulbarger and
 Tracey L. Mulbarger
 Original 0.874 Ac.
 I.N. 199712300177672
 Parcel Two

The Vista at Rocky Fork
 Limited Partnership
 33.248 Ac.
 I.N. 200512200267481

The Vista Plaza Limited
 Partnership
 Original 5.171 Ac.
 I.N. 199910010247162

The Vista at Rocky Fork
 Limited Partnership
 33.248 Ac.
 I.N. 200512200267481

PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
AS	7	Acer freemanii 'Sienna Glen'	Freeman Maple	3" Cal.	B&B
PG	3	Picea glauca	White Spruce	6" Ht.	B&B
PS	6	Prunus x Snow Goose	Snow Goose Cherry	3" Cal.	B&B
QS	9	Quercus shumardii	Shumard Oak	3" Cal.	B&B
TB	10	Tilia americana 'Boulevard'	Boulevard Linden	3" Cal.	B&B

EXISTING TREES (DND)	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
ED	8	Deciduous Tree		TBD	
EE	8	Evergreen Tree		TBD	
EO	2	Ornamental Tree		TBD	

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
LB	5	Liriope muscari 'Big Blue'	Big Blue Liriope	#1	Cont.
MM	7	Miscanthus sinensis 'Morning Light'	Eulalia Grass	36" Ht.	B&B
PH	10	Pennisetum alopecuroides 'Hameln'	Hameln Dwarf Fountain Grass	24" Ht.	B&B or Cont.
SJ	10	Sedum x 'Autumn Joy'	Autumn Joy Sedum	#2	Cont.
ST	38	Sporobolus heterolepis 'Tara'	Prairie Dropseed	24" Ht.	B&B or Cont.
TD	28	Taxus x media 'Densiflormis'	Dense Yew	24" Ht.	B&B or Cont.
VJ	6	Viburnum x juddii	Judd Viburnum	36" Ht.	B&B or Cont.

SHRUB AREAS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING
PB	35	Pennisetum alopecuroides 'Little Bunny'	Little Bunny Fountain Grass	#2 Cont.		24" o.c.

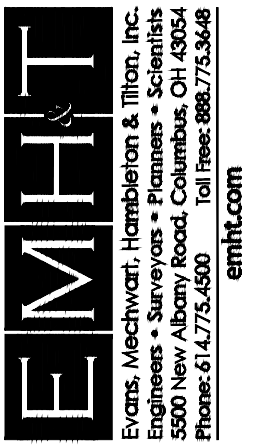
LANDSCAPE CALCULATIONS

±57,687 s.f. Total Pavement
 ±57,687 x 5% = ±2,884 s.f. Landscape Required
 ±3,355 s.f. Landscape Provided
 ±2,884 s.f. x 1% = 29 Trees Required
 31 Trees Provided

MARK	DATE	DESCRIPTION

CASTO

CITY OF GARHANA, FRANKLIN COUNTY, OHIO
 FINAL DEVELOPMENT PLAN
 FOR
VISTA PLAZA
 LANDSCAPE PLAN

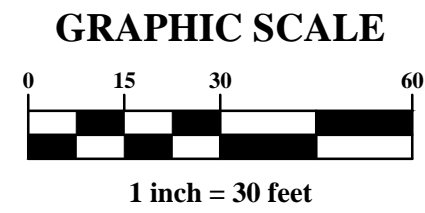


DATE
April 2, 2015

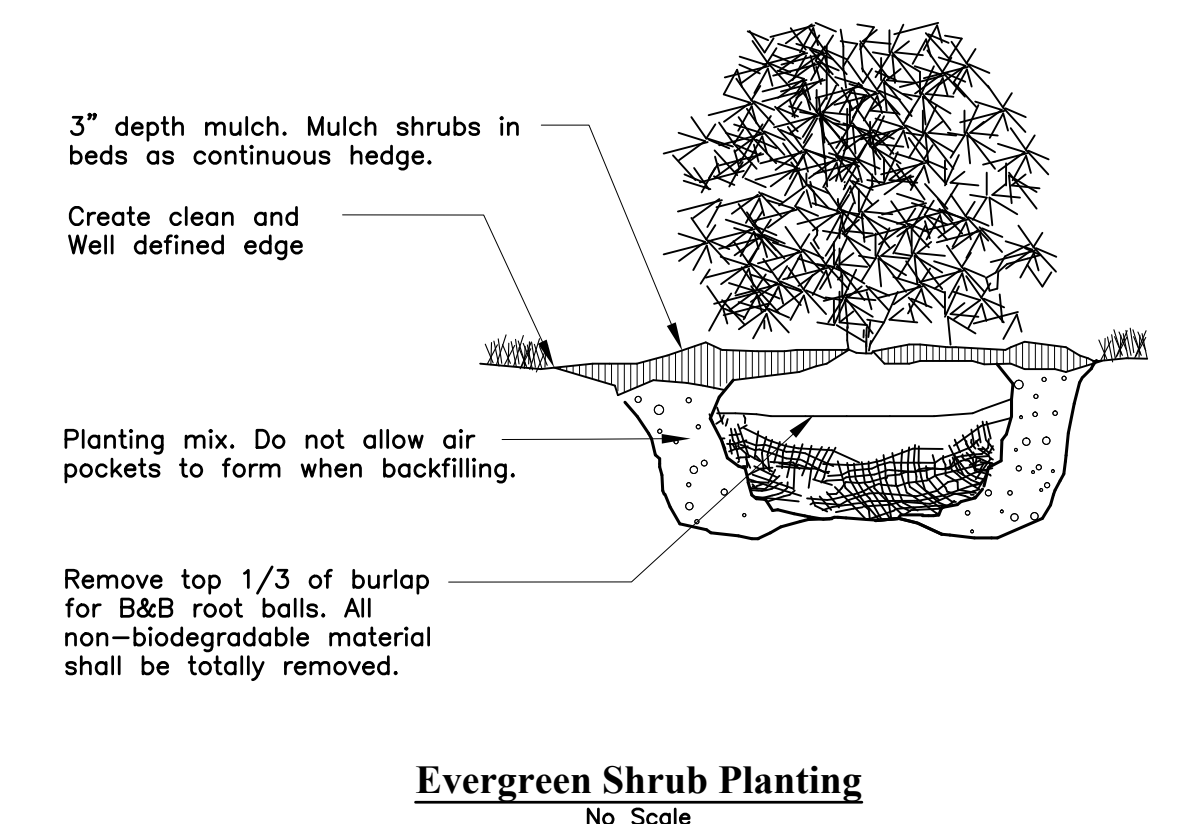
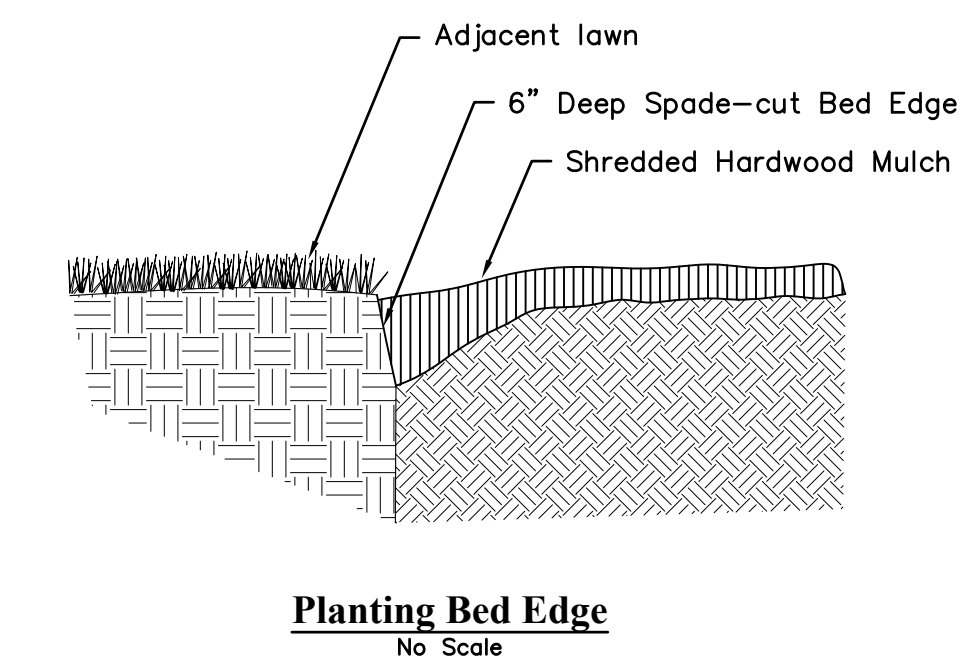
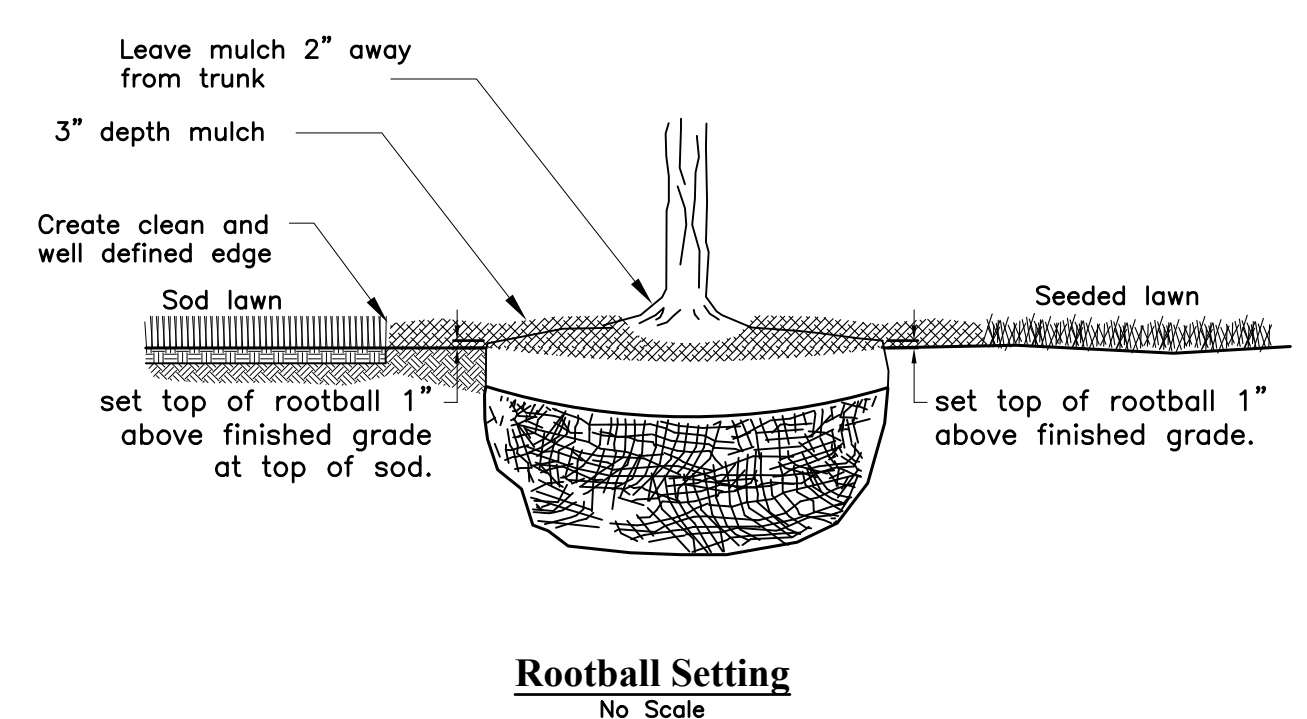
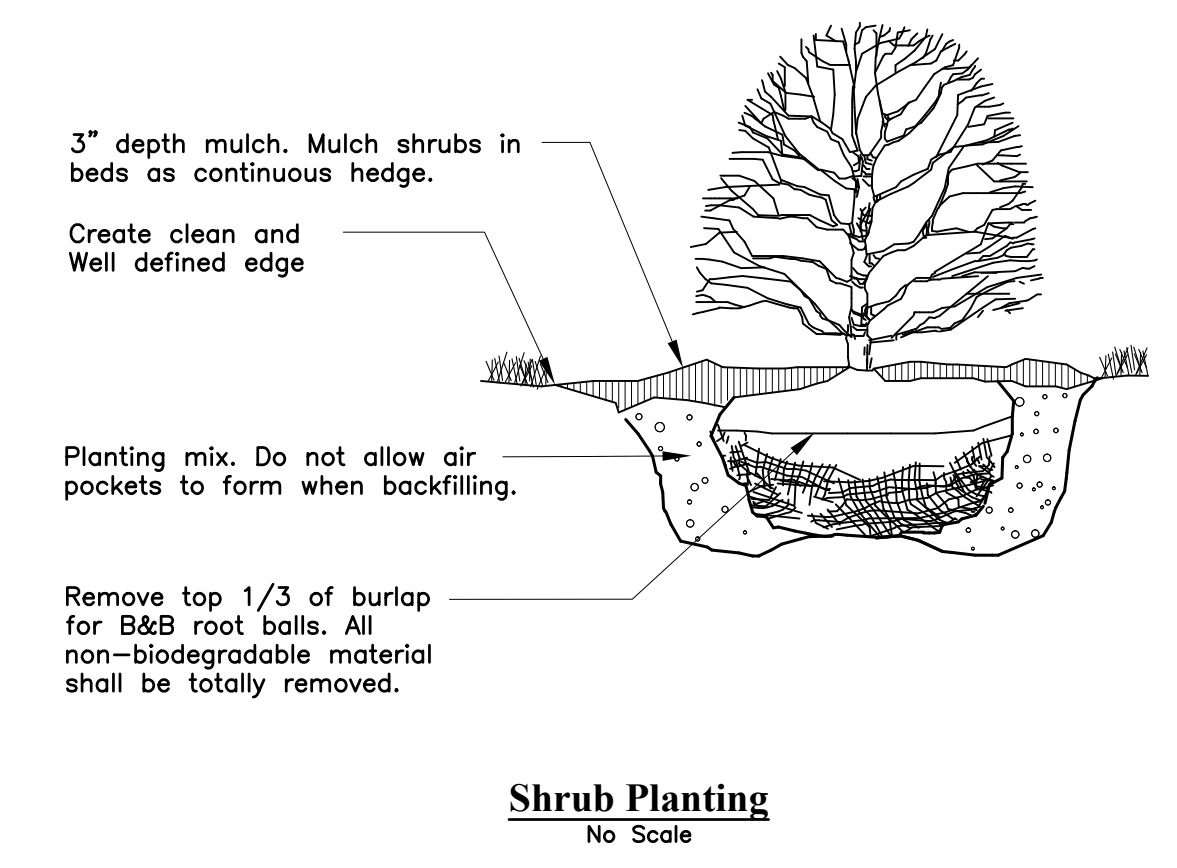
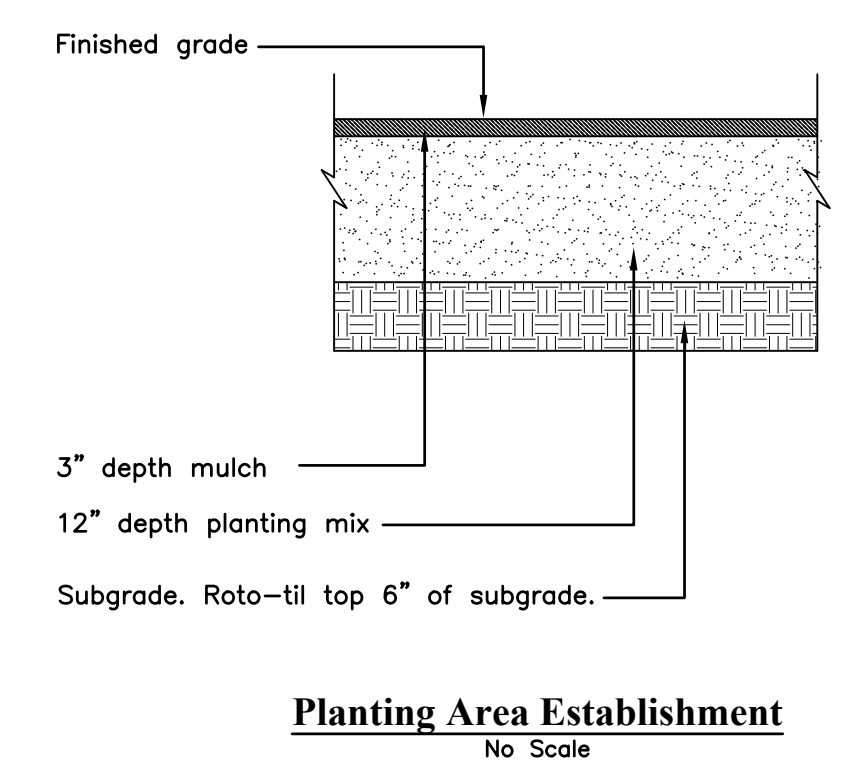
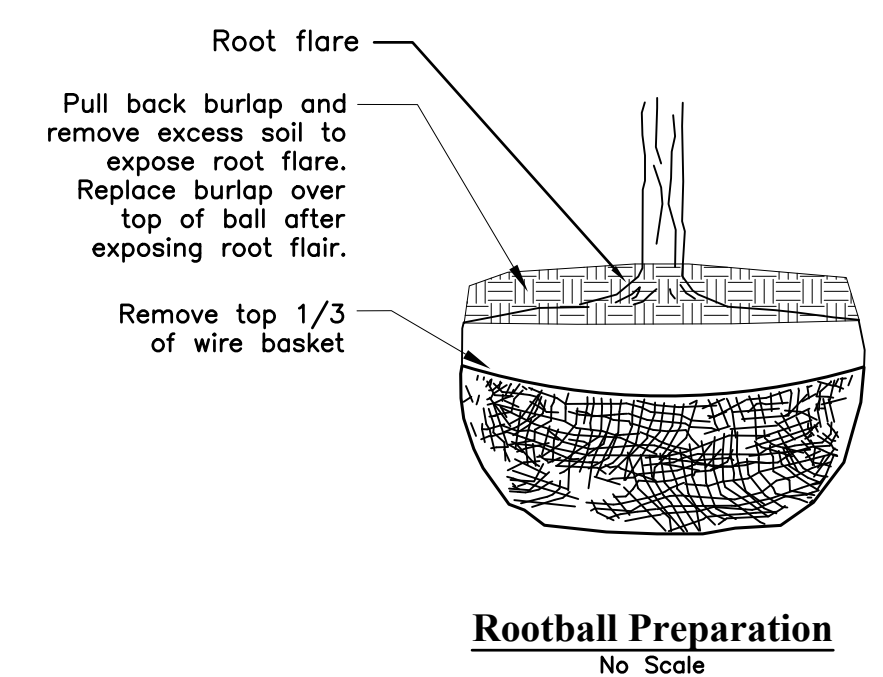
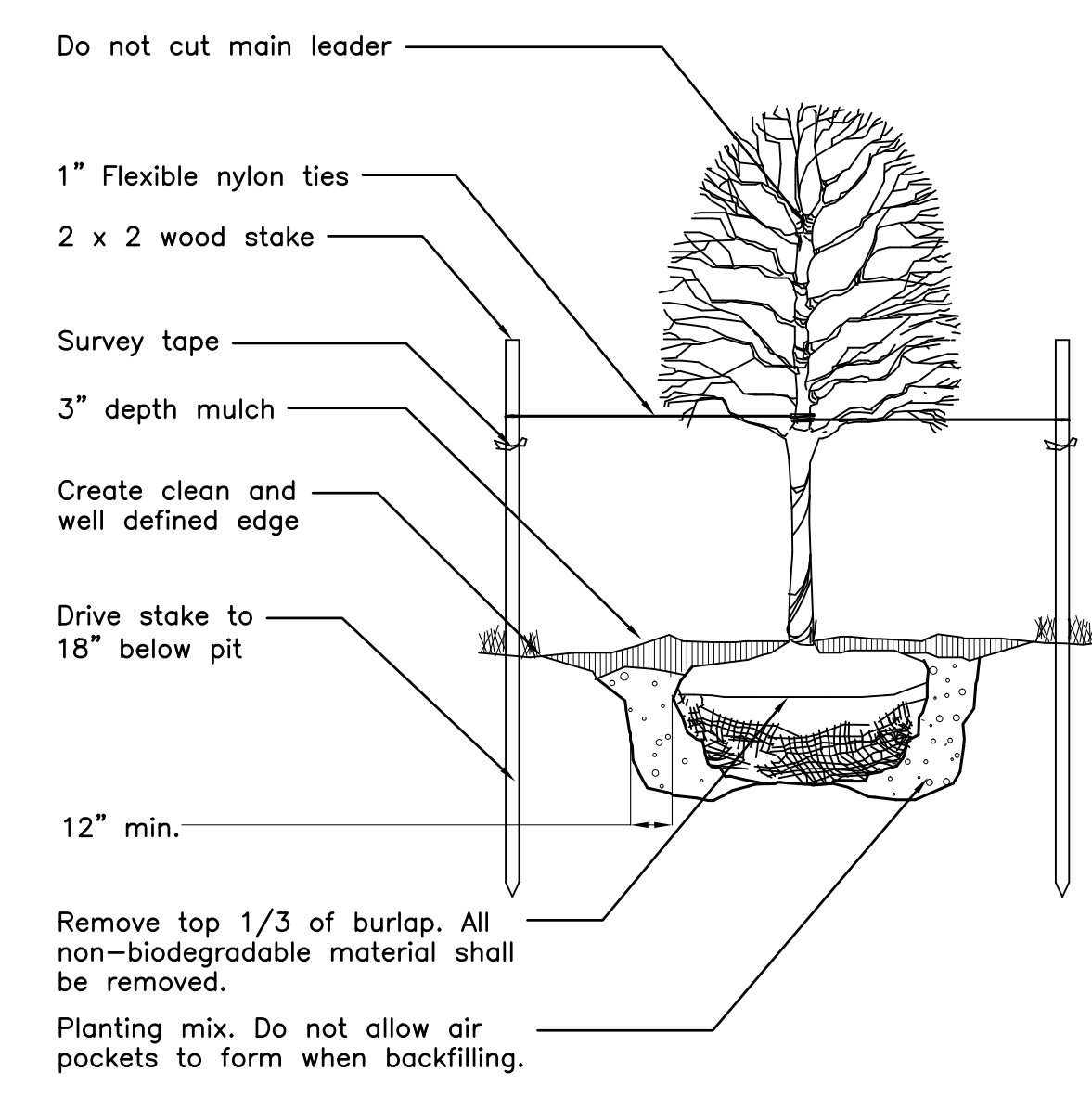
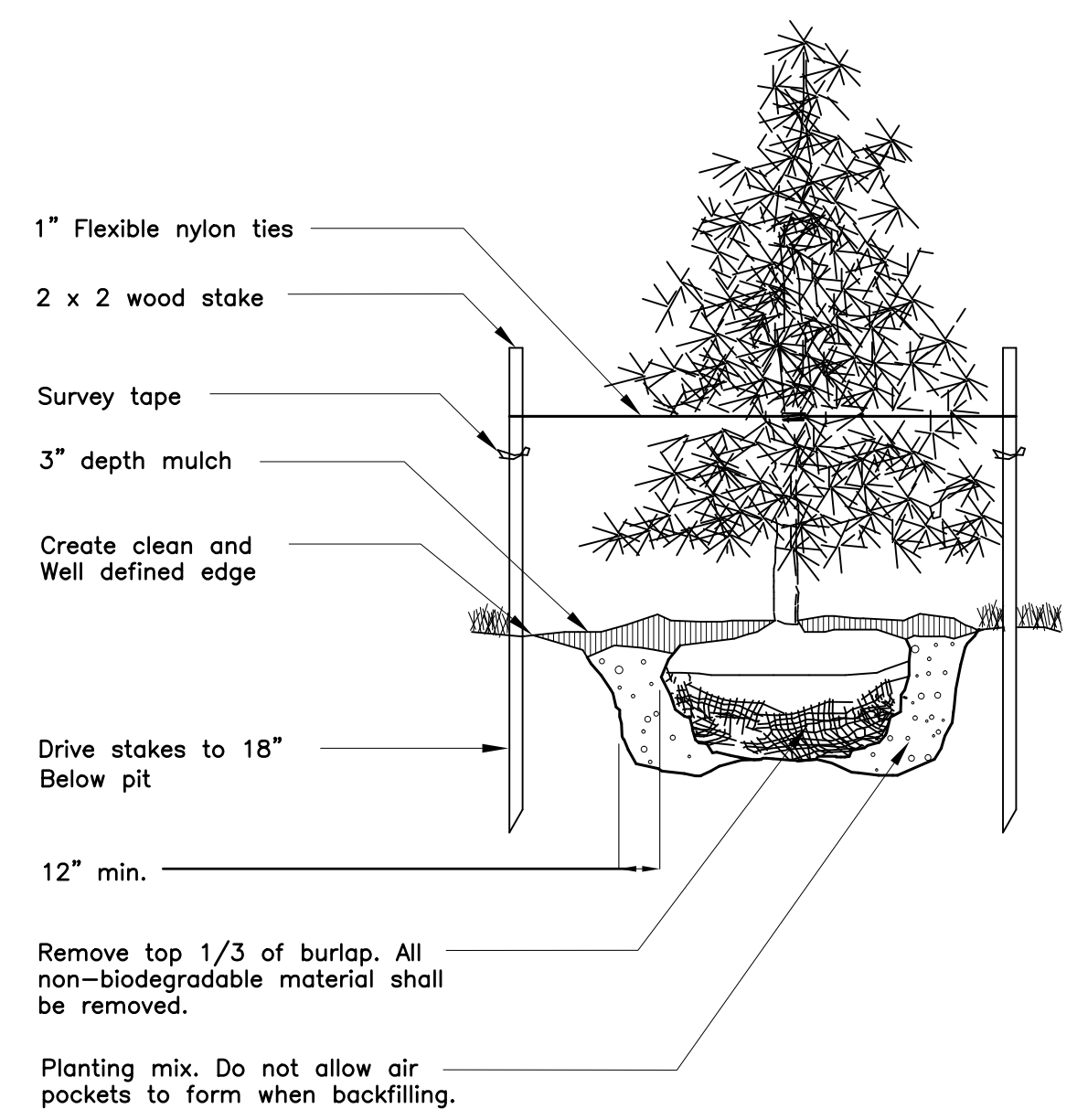
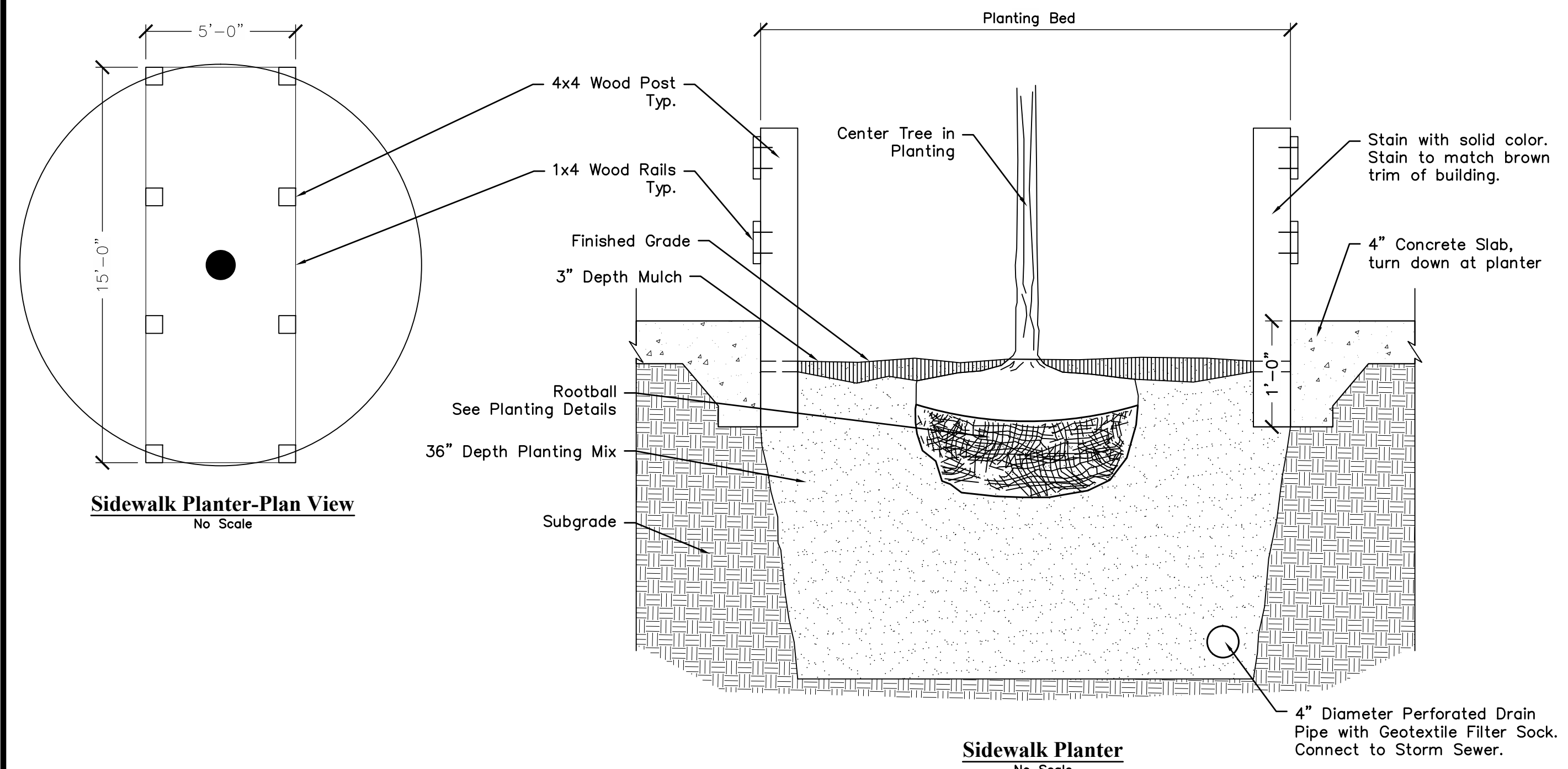
SCALE
1" = 30'

JOB NO.
2014-1273

SHEET
3/4



PRELIMINARY
 NOT TO BE USED FOR
 CONSTRUCTION
 PLAN SET DATE
 April 2, 2015



REVISIONS	MARK	DATE	DESCRIPTION

CASTO

CITY OF GARHANA, FRANKLIN COUNTY, OHIO
 FINAL DEVELOPMENT PLAN
 FOR
VISTA PLAZA
 LANDSCAPE PLAN

EMHT
 Evans, Meecham, Hamilton & Tilton, Inc.
 5500 New Albany Road, Columbus, OH 43254
 Phone: 614.775.4500 Fax: 614.775.3448
 emht.com

DATE
 April 2, 2015

SCALE
 None

JOB NO.
 2014-1273

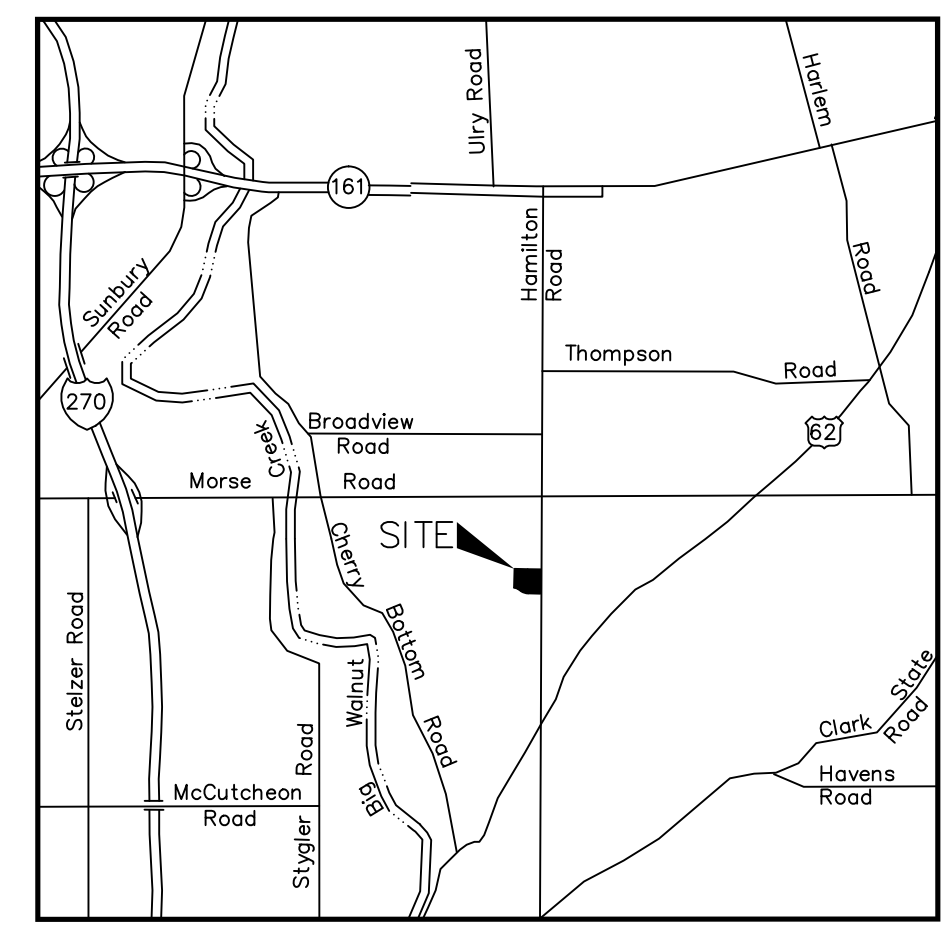
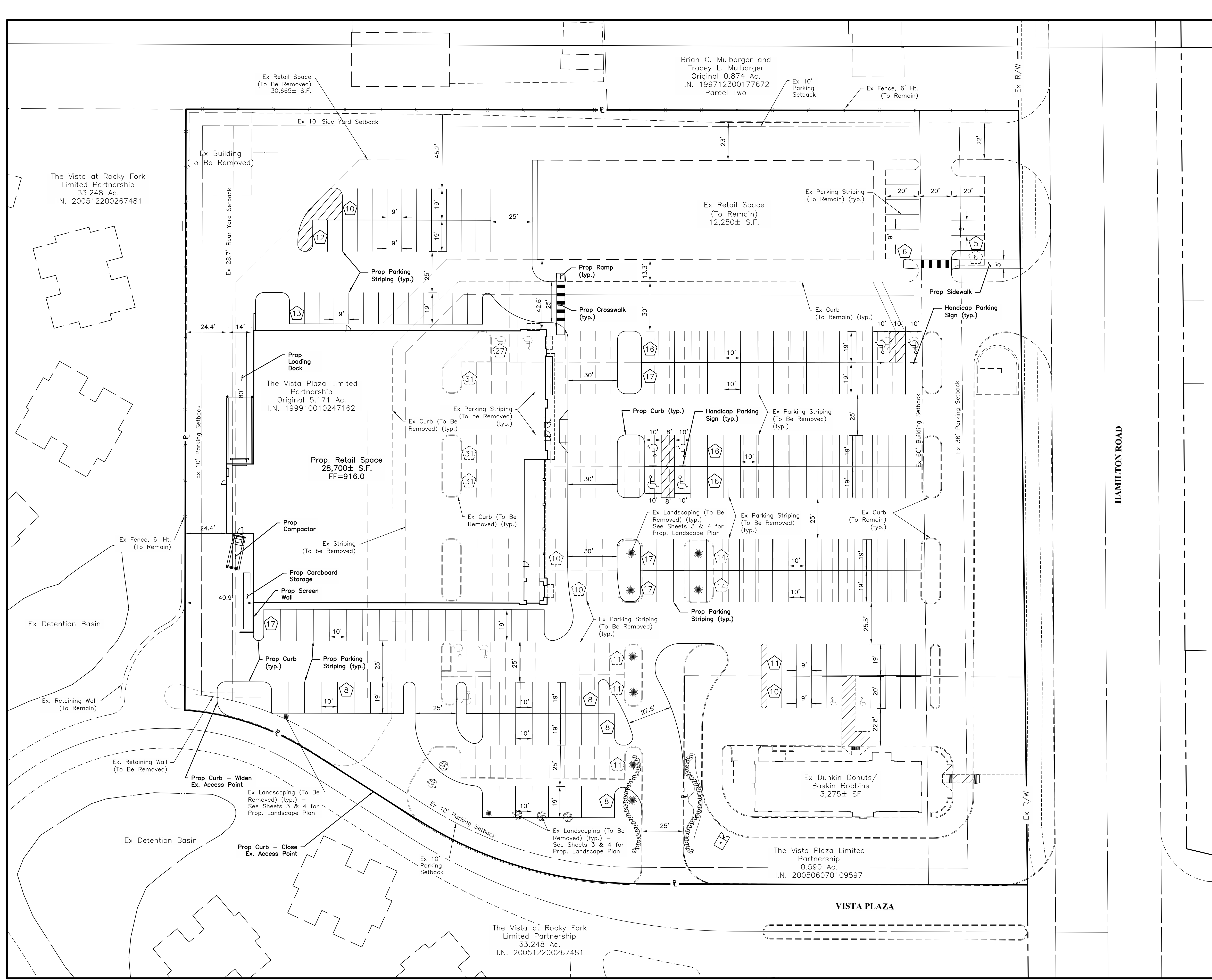
SHEET
 4/4

PRELIMINARY
 NOT TO BE USED FOR
 CONSTRUCTION

PLAN SET DATE
 April 2, 2015

I:\2014\1273\Drawings\2014-1273 - Landscape\Plan\2014-1273 - Landscape_Plan.dwg, Last Saved: 4/2/2015 11:54 AM, Last Printed: 4/2/2015 11:54 AM (No Xrefs)

I:\2014\1273\Drawings\Site Plans\Site Plan.dwg, Last Saved By: bcomford, 4/2/2015, 11:42 AM, (No Xrefs)
 I:\2014\1273\Drawings\Site Plans\Site Plan.dwg, Last Printed By: bcomford, 4/2/2015, 11:42 AM, (No Xrefs)
 I:\2014\1273\Drawings\Site Plans\Site Plan.dwg, Last Saved By: bcomford, 4/2/2015, 11:42 AM, (No Xrefs)



VICINITY MAP
Not to Scale

PROJECT DATA TABLE

Total Acreage	5.17± Ac.
Current Zoning	CC—Community Commercial
Proposed Zoning	CC—Community Commercial
Existing Retail Space	42,915± S.F.
Existing Restaurant Space	3,275± S.F.
Proposed Retail Space	40,950± S.F.
Proposed Restaurant Space	3,275± S.F.

Parking

Retail Space (1/300 S.F.)	137
Restaurant Space (1/150 S.F.)	25
Total Parking Required	162
Proposed Parking	215 Spaces
Existing Parking	234 Spaces

Existing Lot Coverage

Site Area	225,250± S.F.
Building Area	48,090± S.F.
Pavement Area	128,990± S.F.
Existing Coverage	79%±

Proposed Lot Coverage

Site Area	225,250± S.F.
Building Area	44,225± S.F.
Pavement Area	133,245± S.F.
Proposed Coverage	79%±

CART CORRAL NOTE

Shopping cart collection areas to be provided within the designated parking field. Minimum six (6) locations required. Shopping cart corrals to be provided by landlord at each collection area. The landlord shall provide cart corrals purchased from tenant vendor and approved by local regulatory agencies.

STORMWATER NARRATIVE

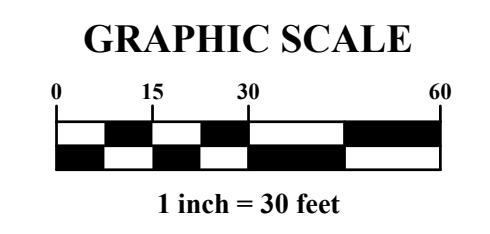
Detention will not be required for the site due to the fact that there is no increase in impervious area. It is simply a re-development of an existing commercial lot. Water quality will be required for this re-development because more than one acre will be disturbed. Water quality requirements will be met by either modifying the existing outlet at the downstream pond or inserting a hydrodynamic device.

UTILITY NARRATIVE

Utilities for the new retail space will be served from existing sanitary, water, gas, electric, and communication lines located at the rear of the building, already within the Vista Plaza Center.

DEVELOPER
CASTO
Charlie Fraas
250 Civic Center Drive, Suite 500
Columbus, Ohio 43215
Tel: (614) 227-3485

ENGINEER
EMHT Inc.
Brian Quackenbush
5500 New Albany Road
Columbus, Ohio 43054
Tel: (614) 775-4390



PRELIMINARY
NOT TO BE USED FOR
CONSTRUCTION

PLAN SET DATE
April 2, 2015

MARK	DATE	DESCRIPTION

CASTO

CITY OF GARHANA, FRANKLIN COUNTY, OHIO
FINAL DEVELOPMENT PLAN
FOR
VISTA PLAZA
SITE PLAN



DATE
April 2, 2015

SCALE
1" = 30'

JOB NO.
2014-1273

SHEET
1/4



March 31, 2015

Ms. Bonnie Gard
 Planning & Zoning Administrator
 200 S. Hamilton Road
 Gahanna, Ohio 43230

Subject: Vista Plaza/Fresh Thyme Market – Signalized Analysis Comparison

Dear Ms. Gard,

We have prepared a comparative analysis of traffic signal operation at the Hamilton Road/Vista Drive intersection to understand the effects of planned modifications to the Vista Plaza. The Plaza will now include a planned Fresh Thyme Market as a new user on the site. This letter serves to document the traffic signal operation there as a result of worst-case site traffic results from the added retail space and new user, which indicates the signal will operate in a similar manner.

Though a specialty goods store and not expected to generate traffic like a supermarket, if the Fresh Thyme Market were to generate traffic at the predicted rate for a Supermarket (Land Use #850), then the 28,700 square foot space would be expected to generate 197 PM Peak trip ends of new traffic and 112 pass-by trip ends during the PM Peak hour. To determine if the signalized Hamilton Road/Vista Drive intersection could handle new trips generated by the Vista Plaza redevelopment, traffic for a new supermarket was conservatively point loaded at that intersection even though other access points to Hamilton Road exist. Current traffic volumes there were analyzed and compared to the same volumes with added supermarket-rate traffic to conservatively account for Fresh Thyme Market. This analysis was assumed to be a conservative ‘Build’ scenario to show the intersection at Hamilton/Vista Drive could still operate acceptably.

Table 1 below illustrates the trip generation if the supermarket category were used, adding 309 PM Peak trip ends (156 entering, 153 exiting). These totals combine newly-generated trip ends added to the adjacent street with trips that currently pass-by the adjacent street.

Table 1: New Retail Space as Supermarket - Trip Generation Calculations

Land Use	Square Feet or Units	ITE Code	Time Period	ITE Formula	Total Trips	Trips	
						Entering	Exiting
<u>Supermarket</u>	28,700	850	ADT	$T=66.95(X)+1391.56$	3,314	1,657	1,657
			PM Peak	$\ln(x)=0.74*\ln(x)+3.25$	309	See Below	
			64%	PM Primary Trips	197	100	97
			36%	PM Pass-By Trips	112	56	56

Signalized capacity analyses were performed at the Hamilton Road/Vista Drive with current levels compared to 'Build' levels to verify the current traffic signal can operate acceptably with added traffic from Fresh Thyme Market. For this analysis, a conservative trip generation/assignment assumption was used to assign higher-than-expected traffic all to the Hamilton Road/Vista Drive intersection. Comparative *Synchro* capacity analyses indicate the added traffic in the worst case/conservative scenario predicts the traffic signal will still operate acceptably with only a slight reduction in overall level of service but similar level of service for the eastbound approach. If those volumes were realized, it is predicted to result in a minor increase in delay for the southbound approach with added traffic, but the two conditions compare favorably in terms of delay overall and for the eastbound approach. The eastbound queue concerns should be minimal since the traffic signal appears to adjust to demand and would account for higher volumes coming from the Plaza. *Synchro* printouts for both conditions are attached for reference.

One note regarding current signal operation is that the westbound (left turn) protected phase is triggered/called often for only one vehicle in the Firestone driveway and is unnecessary since over 75% of this minimal approach traffic is right turn traffic. The signal controller could be programmed to eliminate this lead, westbound-only sidestreet phase and this would leave more sidestreet green time for the eastbound left turn movement. Signalized analysis results suggest that increased site traffic from the redeveloped Vista Plaza can be handled by the current traffic signal at Hamilton Road/Vista Plaza. It appears capable of operating efficiently with the added site traffic if a slight adjustment in signal timing is made for sidestreet green time. This may occur automatically since it appears to have responsive signal timing for sidestreet demand via video detection.

In summary, the increase in traffic resulting from the modification to Vista Plaza retail space is expected to be slight in the PM Peak period. To verify the current traffic signal can handle the added traffic from reconfiguring Vista Plaza to accommodate Fresh Thyme Market, a conservative trip generation/assignment scenario was used to assign higher-than-expected traffic all to the Hamilton Road/Vista Drive intersection. Comparative capacity analyses indicate the traffic signal in the worst case/conservative scenario is still predicted to operate in an acceptable manner with a slight reduction in overall level of service. This result suggests that if an increase in site traffic results from the redeveloped Vista Plaza, the current traffic signal at Hamilton Road/Vista Plaza is capable of operating efficiently with the added site traffic. If you have questions or comments during your review, please contact me directly at (614) 775-4650.

Sincerely,

A handwritten signature in blue ink that reads "Douglas A. Bender". The signature is fluid and cursive, with the first name being the most prominent.

Douglas A. Bender, PE, PTOE
Senior Traffic Engineer

Cc: Charlie Fraas, Casto (w/att)

Attachment – Site plans

EMH&T

5500 New Albany Road
Columbus, OH 43054
emht.com

File Name : hamilton rd - vista dr
Site Code : 00000000
Start Date : 3/25/2015
Page No : 1

Groups Printed- Cars - Trucks

Start Time	HAMILTON RD Southbound					FIRESTONE Westbound					HAMILTON RD Northbound					VISTA DRIVE Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
04:45 PM	0	225	24	1	250	0	0	1	3	4	19	270	1	0	290	28	0	13	0	41	585
Total	0	225	24	1	250	0	0	1	3	4	19	270	1	0	290	28	0	13	0	41	585
05:00 PM	3	267	20	0	290	1	0	3	0	4	29	292	1	0	322	28	0	9	0	37	653
05:15 PM	1	270	20	0	291	0	0	1	0	1	20	305	0	1	326	23	1	9	0	33	651
05:30 PM	1	244	22	0	267	0	0	6	0	6	31	285	3	1	320	27	0	17	1	45	638
Grand Total	5	1006	86	1	1098	1	0	11	3	15	99	1152	5	2	1258	106	1	48	1	156	2527
Apprch %	0.5	91.6	7.8	0.1		6.7	0	73.3	20		7.9	91.6	0.4	0.2		67.9	0.6	30.8	0.6		
Total %	0.2	39.8	3.4	0	43.5	0	0	0.4	0.1	0.6	3.9	45.6	0.2	0.1	49.8	4.2	0	1.9	0	6.2	
Cars	5	1001	86	1	1093	1	0	11	3	15	98	1147	5	2	1252	106	1	47	1	155	2515
% Cars	100	99.5	100	100	99.5	100	0	100	100	100	99	99.6	100	100	99.5	100	100	97.9	100	99.4	99.5
Trucks	0	5	0	0	5	0	0	0	0	0	1	5	0	0	6	0	0	1	0	1	12
% Trucks	0	0.5	0	0	0.5	0	0	0	0	0	1	0.4	0	0	0.5	0	0	2.1	0	0.6	0.5

Lanes, Volumes, Timings
3: Vista Dr/Firestone driveway & Hamilton Road

ExistPM_2015.syn
3/31/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	1	48	1	0	11	99	1152	5	5	1006	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.853			0.875			0.999			0.988	
Flt Protected	0.950				0.996		0.950			0.950		
Satd. Flow (prot)	1770	1589	0	0	1623	0	1770	3536	0	1770	3497	0
Flt Permitted	0.749				0.987		0.181			0.222		
Satd. Flow (perm)	1395	1589	0	0	1609	0	337	3536	0	414	3497	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		52			43			1			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		441			429			693			740	
Travel Time (s)		10.0			9.8			15.8			16.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	1	52	1	0	12	108	1252	5	5	1093	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	53	0	0	13	0	108	1257	0	5	1186	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		8.0	20.0		20.0	20.0	

Lanes, Volumes, Timings
 3: Vista Dr/Firestone driveway & Hamilton Road

ExistPM_2015.syn

3/31/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.0	36.0		12.0	29.0		18.0	80.0		62.0	62.0	
Total Split (%)	28.1%	28.1%		9.4%	22.7%		14.1%	62.5%		48.4%	48.4%	
Maximum Green (s)	32.0	32.0		8.0	25.0		14.0	76.0		58.0	58.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		Max	Max	
Walk Time (s)	5.0	5.0			5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0			0		0	0	
Act Effect Green (s)	13.5	13.5			13.5		78.9	78.9		67.7	67.7	
Actuated g/C Ratio	0.13	0.13			0.13		0.79	0.79		0.67	0.67	
v/c Ratio	0.61	0.21			0.05		0.30	0.45		0.02	0.50	
Control Delay	54.3	12.7			0.4		5.0	4.5		7.4	9.5	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	54.3	12.7			0.4		5.0	4.5		7.4	9.5	
LOS	D	B			A		A	A		A	A	
Approach Delay		41.2			0.4			4.6			9.5	
Approach LOS		D			A			A			A	

Intersection Summary

Area Type:	Other
Cycle Length:	128
Actuated Cycle Length:	100.4
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.61
Intersection Signal Delay:	8.9
Intersection LOS:	A
Intersection Capacity Utilization	58.6%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 3: Vista Dr/Firestone driveway & Hamilton Road

ø2	ø3	ø4
80 s	12 s	36 s
ø5	ø6	ø8
18 s	62 s	29 s

Lanes, Volumes, Timings
 3: Vista Dr/Firestone driveway & Hamilton Road

BUILD_FreshThyme_PM_2015.syn

3/31/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	186	1	121	1	0	11	184	1122	5	5	980	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr't		0.851			0.875			0.999			0.979	
Flt Protected	0.950				0.996		0.950			0.950		
Satd. Flow (prot)	1770	1585	0	0	1623	0	1770	3536	0	1770	3465	0
Flt Permitted	0.749				0.988		0.136			0.229		
Satd. Flow (perm)	1395	1585	0	0	1610	0	253	3536	0	427	3465	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		132			45			1			19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		441			429			693			740	
Travel Time (s)		10.0			9.8			15.8			16.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	202	1	132	1	0	12	200	1220	5	5	1065	171
Shared Lane Traffic (%)												
Lane Group Flow (vph)	202	133	0	0	13	0	200	1225	0	5	1236	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		8.0	20.0		20.0	20.0	

Lanes, Volumes, Timings
 3: Vista Dr/Firestone driveway & Hamilton Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	35.0	35.0		8.0	43.0		22.0	77.0		55.0	55.0	
Total Split (%)	29.2%	29.2%		6.7%	35.8%		18.3%	64.2%		45.8%	45.8%	
Maximum Green (s)	31.0	31.0		4.0	39.0		18.0	73.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		Max	Max	
Walk Time (s)	5.0	5.0			5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0			0		0	0	
Act Effect Green (s)	19.8	19.8			19.8		73.3	73.3		57.5	57.5	
Actuated g/C Ratio	0.20	0.20			0.20		0.73	0.73		0.57	0.57	
v/c Ratio	0.74	0.32			0.04		0.56	0.48		0.02	0.63	
Control Delay	54.5	8.0			0.2		13.2	7.3		14.6	18.1	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	54.5	8.0			0.2		13.2	7.3		14.6	18.1	
LOS	D	A			A		B	A		B	B	
Approach Delay		36.0			0.2			8.2			18.1	
Approach LOS		D			A			A			B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	101.1
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	15.3
Intersection LOS:	B
Intersection Capacity Utilization:	69.3%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 3: Vista Dr/Firestone driveway & Hamilton Road

77 s	8 s	35 s
22 s	55 s	43 s