



Survey Control

Reference and Recovery Data

George Mason University

Fairfax East Campus

Fairfax, Virginia



Prepared For:

George Mason University

4400 University Drive
Fairfax, Virginia 22030

Prepared By:

christopher consultants, ltd.

engineering surveying land planning
9417 innovation drive
manassas, virginia 20110



Synopsis

Provide the initial thirty-two (32) inter-visible control points surrounding the George Mason University Fairfax's East Campus. Control Points to be set around the exterior limits of the campus and include a cross loop through the center of the campus. Each monument is to be inter-visible with two adjacent monuments.

ccl was contracted in April 2012 provided control points as described. Each point consisted of a 3" aluminum rounded disk with a machined graphic of the GMU brand logo and a punch-scribed identification name on each. Each aluminum disk was molded into a 4" x 4" x 2' long concrete encasement and each was placed by hand into hand-dug holes and were compacted flush to the finished grade. The control network was established using convention traverse methods with a Leica TCR 405 series total station for the horizontal positional qualities. Each station was traversed through with a mean angle and distance collected through four sets of angle turns to form a closed loop. Elevations were established on each monument through a closed bench loop using a Leica DNA 03 Digital Level to establish elevations. On GPS selected monuments, four Leica GPS 1200 systems in static sessions over a one day period. Session times ranged between twenty to twenty five minutes depending on vector distance and each GPS unit was set to a 15° mask angle and to record on a 15 second interval.

Control network was referenced to the National Geodetic Control Network utilizing four (4) First Order Horizontal and Third Order Vertical Monuments. Control network was further referenced to the Project control network specific to George Mason University utilizing eight (8) onsite christopher consultants control points.

Adhering to FGDC-STD-007.4-2002, Standards for Architecture, Engineering, Construction (A/E/C) and Facility Management of the Geospatial Position Accuracy Standards, as published by the Federal Geographic Data Committee of the U.S. Geological Survey, the network quality able to achieved was:

- Horizontal | Second-Order, Class I (1:50,000)
- Vertical | First-Order, Class I

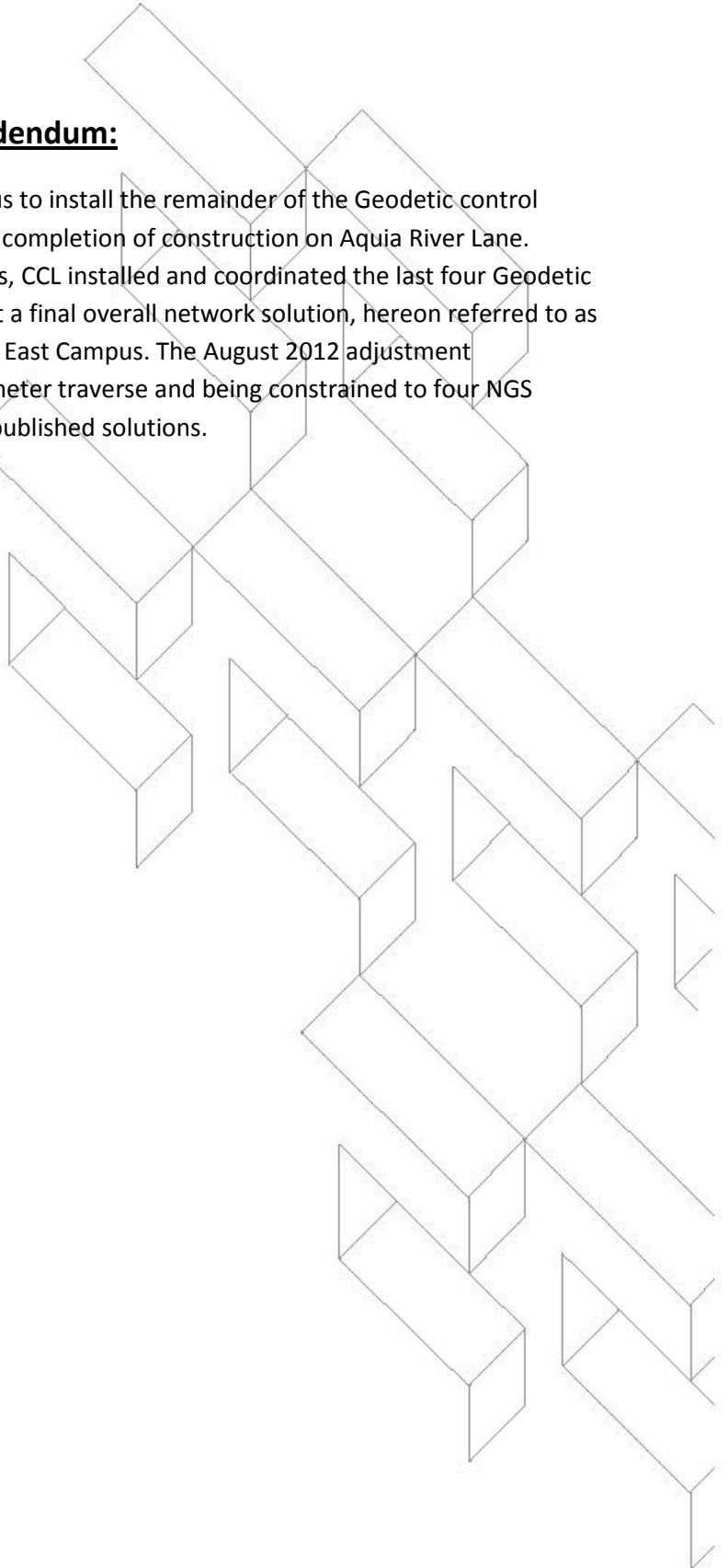
Contents of Report

- 1.) Overall Site Map
Delineates the location of each control point set in relation to the site limits.
Vector delineation shown to show overall geometry of network.
- 2.) Recovery Datasheets
FX Points 1 through 36. Denotes adjusted horizontal and vertical data of each point within the GPS Network. Data shown includes GRID Coordinates, WORLD Coordinates and PROJECT Coordinates. Datasheets also provide Location Sketch of each point to physical features adjacent to set points.



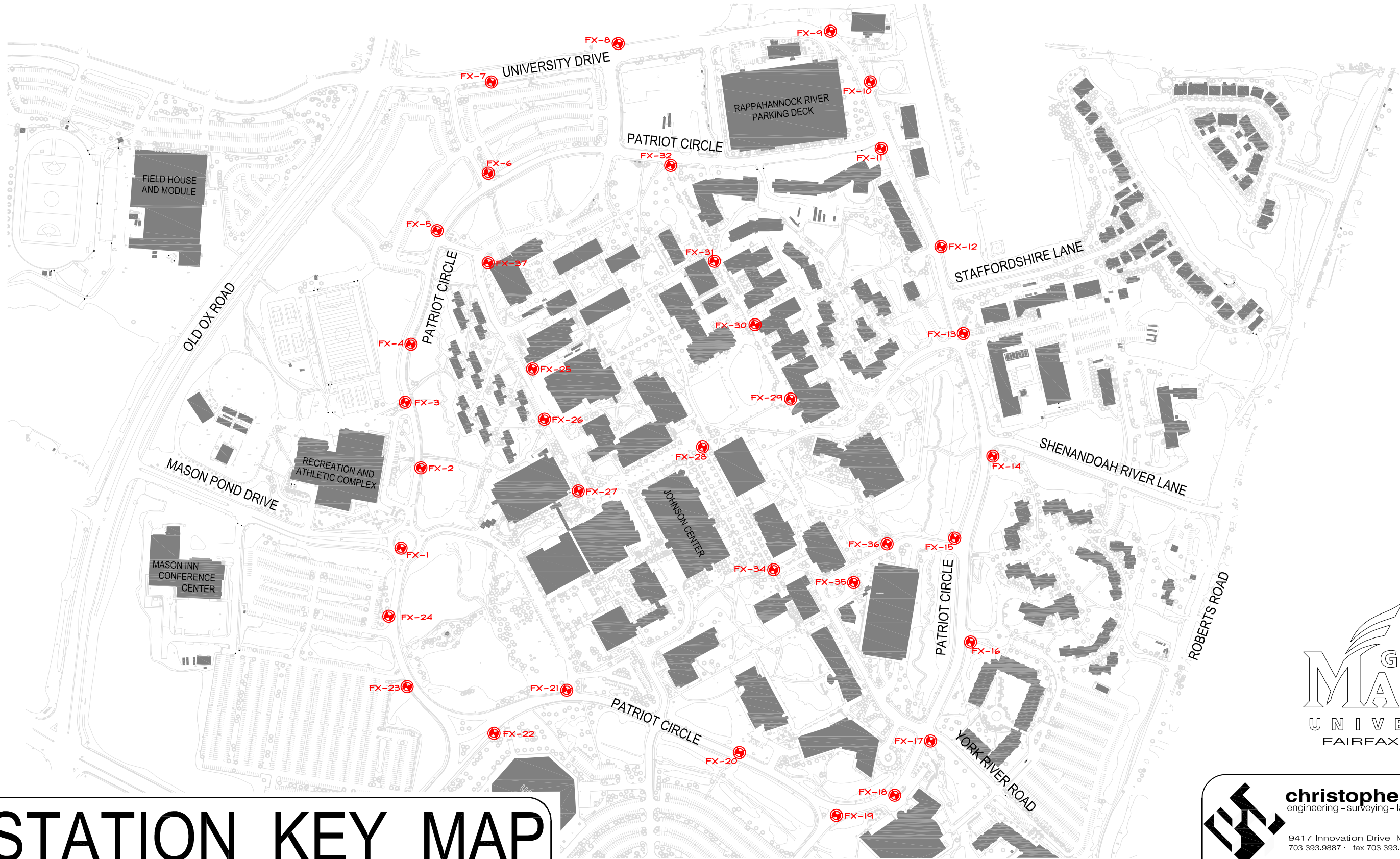
Addendum:

In August of 2012 CCL revisited the Fairfax campus to install the remainder of the Geodetic control monuments that were now accessible due to the completion of construction on Aquia River Lane. Adhering to all in place control network standards, CCL installed and coordinated the last four Geodetic monuments in the control network and arrived at a final overall network solution, hereon referred to as the August 2012 adjustment, for the Gmu Fairfax East Campus. The August 2012 adjustment incorporating ; two interior cross loops, the perimeter traverse and being constrained to four NGS passive monuments is to supersede all previous published solutions.



GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL



STATION KEY MAP



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engineering - surveying - land planning

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GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,987,413.234	11,821460.787
LATITUDE:	LONGITUDE:
38°49'47.03713" N	77°18'41.64133" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,987,413.353	11,821,460.721
CONVERGENCE ('): \ominus 00°44'30.2"	
COMBINED FACTOR: 0.999939933	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 423.90

PHOTO AT STATION:



FX-01

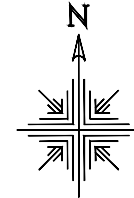
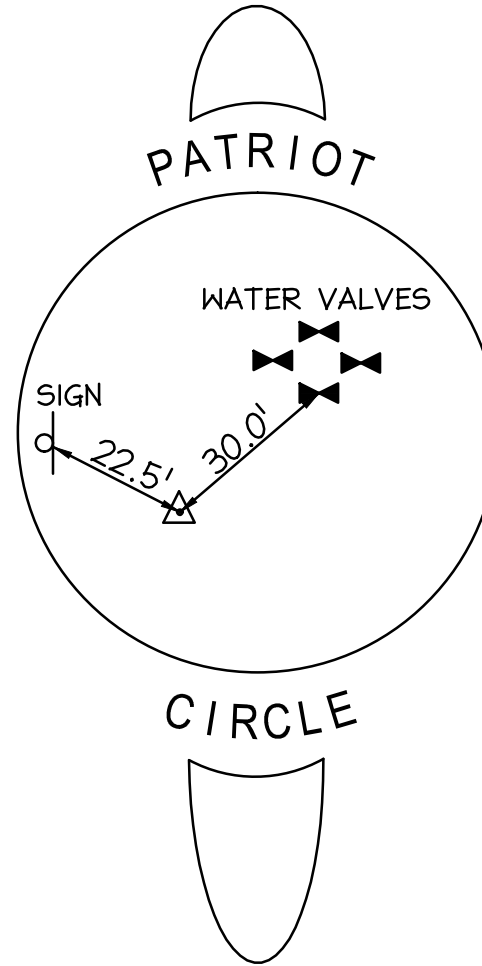
STATION DESIGNATION

FX-01

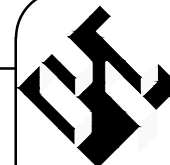
UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
**4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP**
 DATE SET: **APRIL 2012**



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9417 Innovation Drive · Manassas, VA 20110
 703.393.9887 · fax 703.393.9076

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING: 6,987,746.343	GRID EASTING: 11,821,543.104
LATITUDE: 38°49'50.31903" N	LONGITUDE: 77°18'40.54666" W
GMU PROJECT NORTHING: 6,987,746.482	GMU PROJECT EASTING: 11,821,543.043

CONVERGENCE ('): \ominus **00°44'30.9"**
 COMBINED FACTOR: **0.999940012**
 AVG. COMBINED FACTOR: **0.999939714** (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION:
423.49

PHOTO AT STATION:



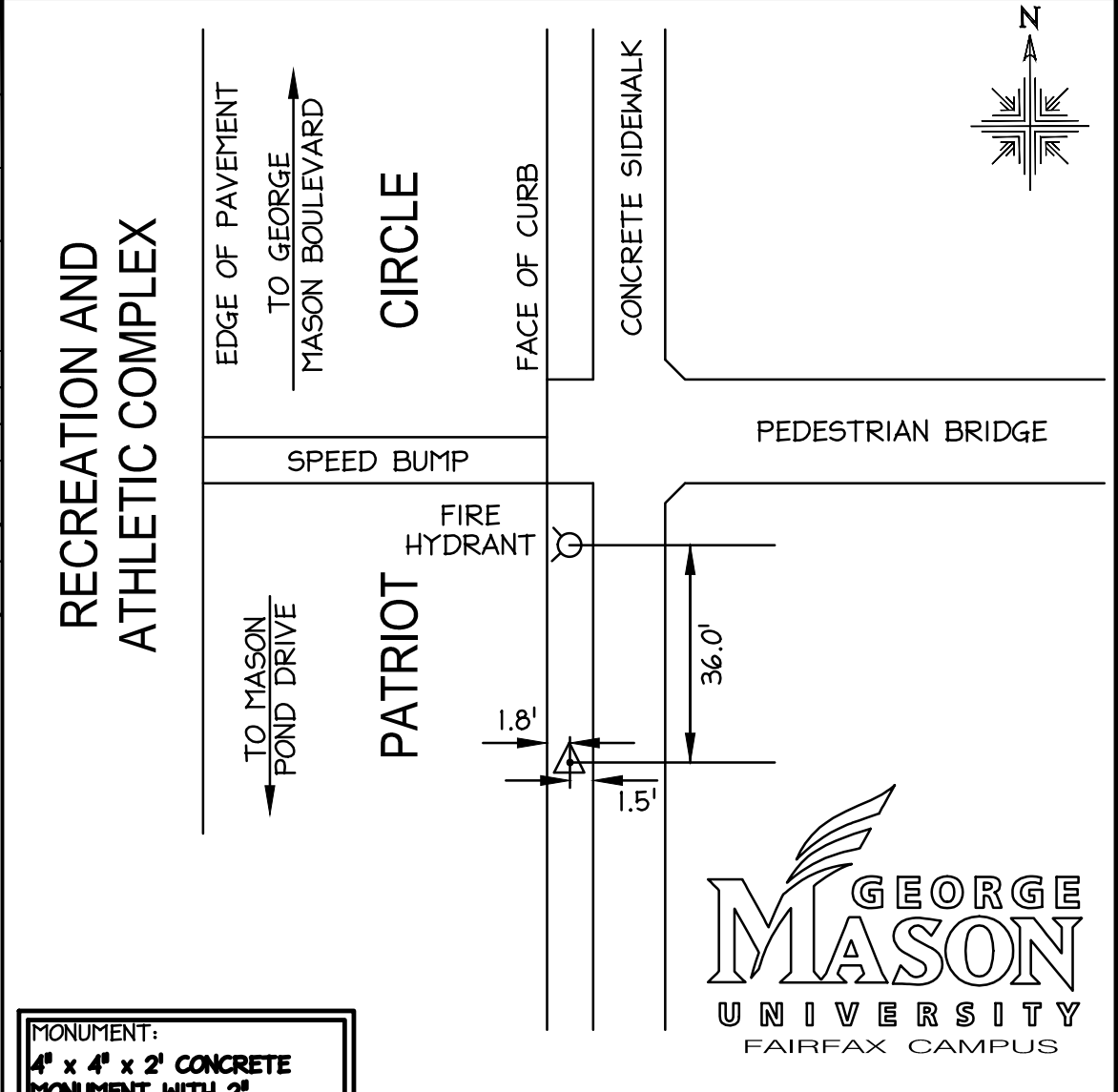
FX-02

STATION DESIGNATION

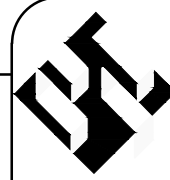
FX-02

UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH (NOT TO SCALE)



MONUMENT:
4' x 4' x 2' CONCRETE
MONUMENT WITH 2"
STAMPED ALUMINUM CAP
DATE SET: APRIL 2012



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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,988,018.263	11,821,477.976
LATITUDE:	LONGITUDE:
38°49'53.01501" N	77°18'41.32514" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988,018.419	11,821,477.911
CONVERGENCE (): \ominus 00°44'30.4"	
COMBINED FACTOR: 0.999939954	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 425.71

PHOTO AT STATION:



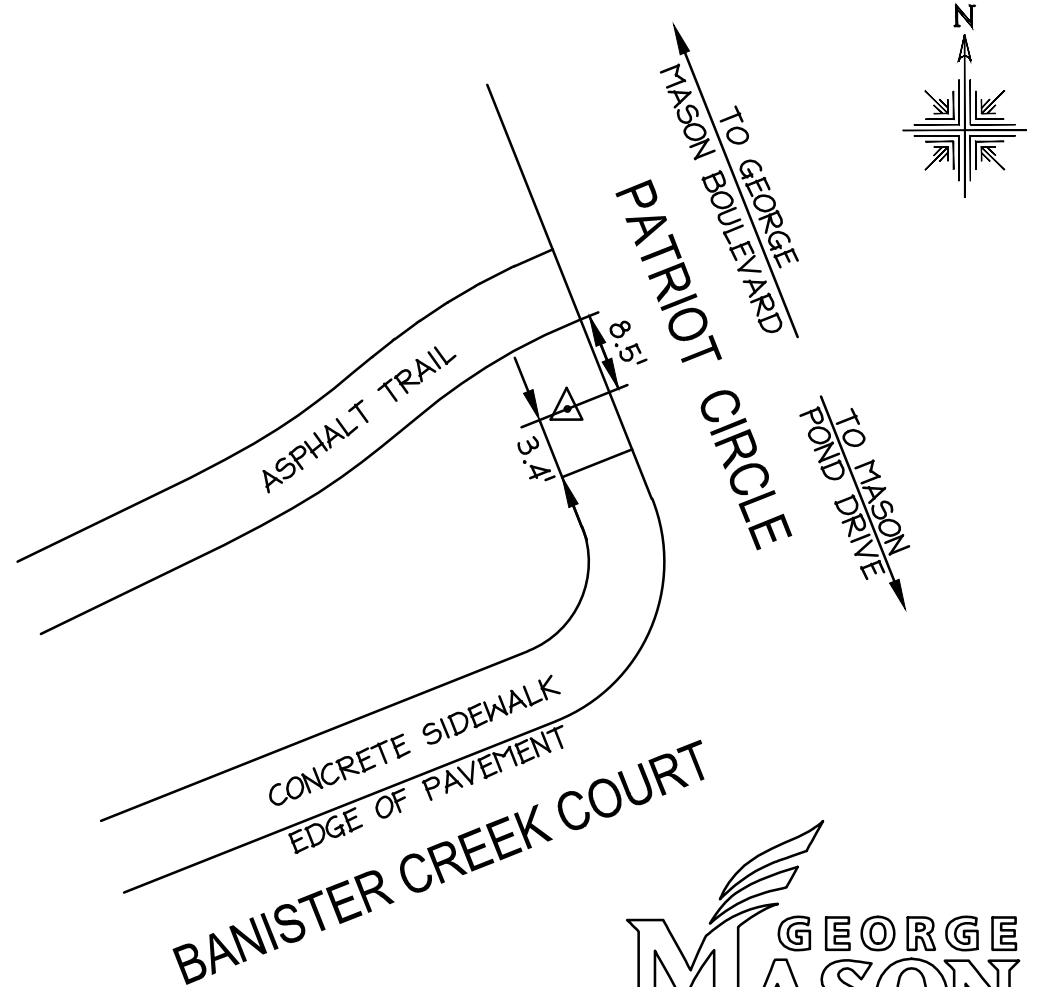
STATION DESIGNATION

FX-03

UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

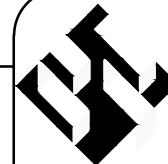
LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:

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STAMPED ALUMINUM CAP
DATE SET: APRIL 2012**



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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,988,258.889	11,821,501.997
LATITUDE:	LONGITUDE:
38°49'55.39027" N	77°18'40.98223" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988,259.059	11,821,501.933
CONVERGENCE ('): \ominus 00°44'30.6"	
COMBINED FACTOR: 0.999940187	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 421.72

PHOTO AT STATION:



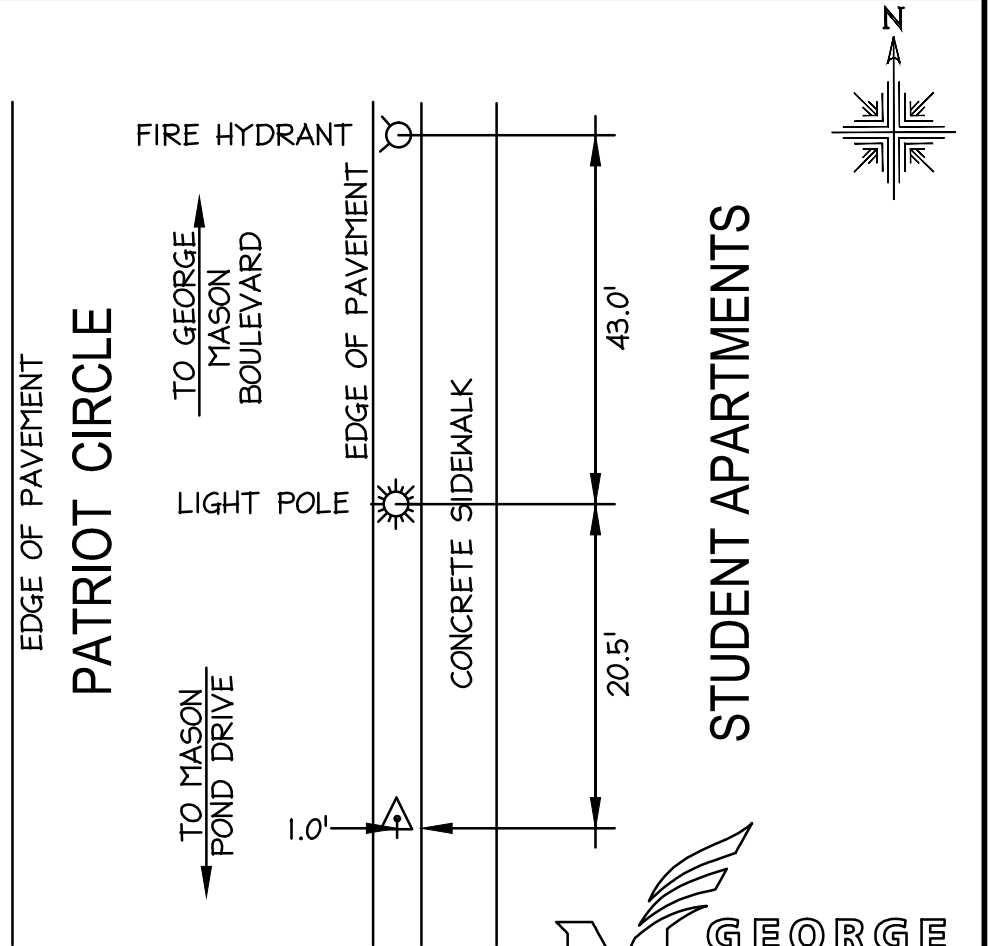
STATION DESIGNATION

FX-04

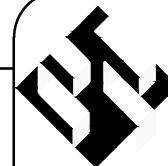
UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
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MONUMENT WITH 2"
STAMPED ALUMINUM CAP
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GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,988,730.167	11,821,610.599

LATITUDE:	LONGITUDE:
38°50'00.03445" N	77°18'39.53275" W

GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988,730.366	11,821,610.543

CONVERGENCE ('): \ominus 00°44'31.5"

COMBINED FACTOR: 0.999939857

AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

ELEVATION: 430.39

PHOTO AT STATION:



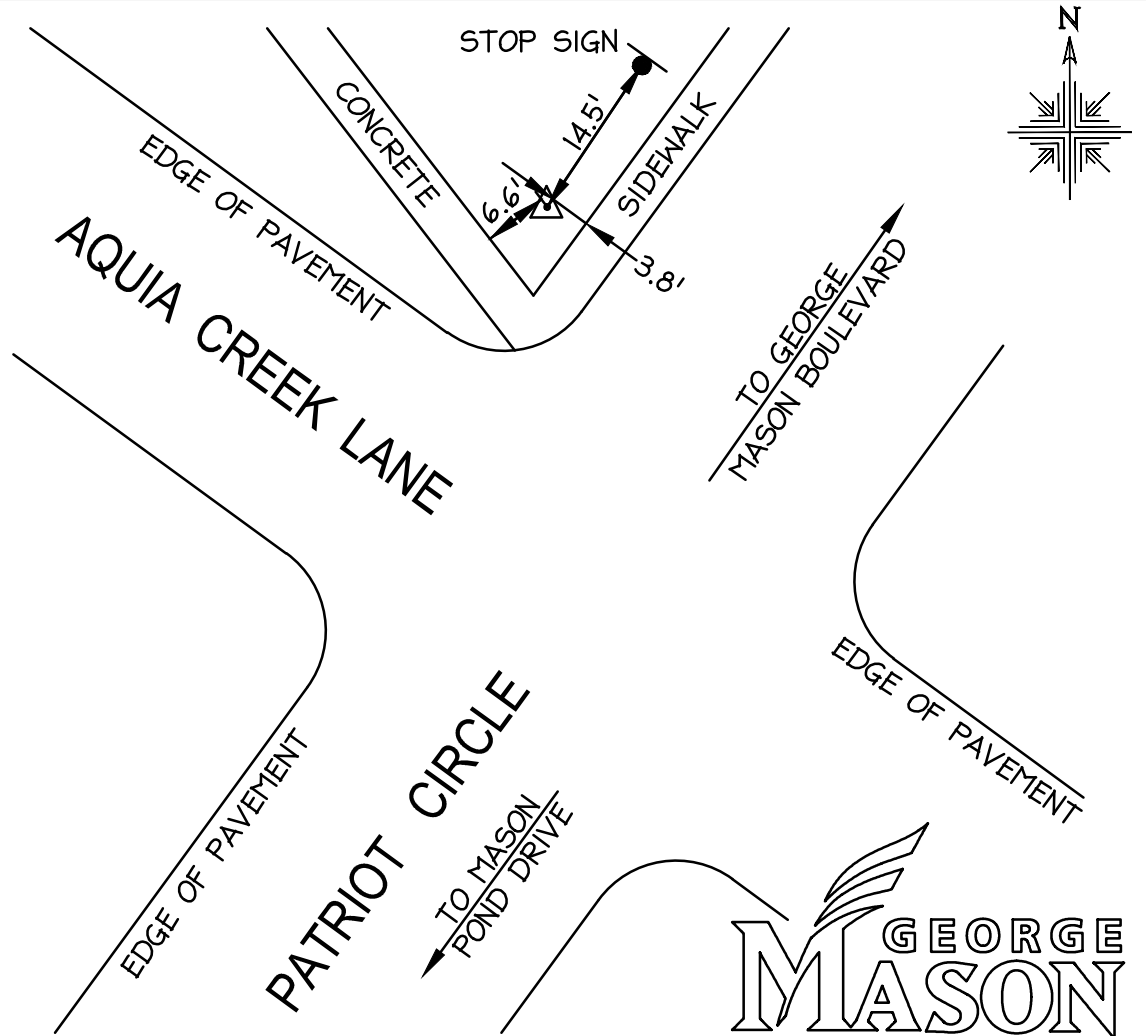
STATION DESIGNATION

FX-05

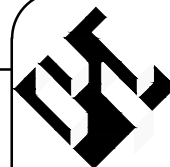
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
4' x 4' x 2' CONCRETE
MONUMENT WITH 2"
STAMPED ALUMINUM CAP
 DATE SET: **APRIL 2012**



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GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,988,968.268	11,821,822.586
LATITUDE:	LONGITUDE:
38°50'02.36068" N	77°18'36.81492" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988,968.481	11,821,822.542

CONVERGENCE (): \ominus 00°44'33.2"
 COMBINED FACTOR: 0.999939545
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 437.80

PHOTO AT STATION:



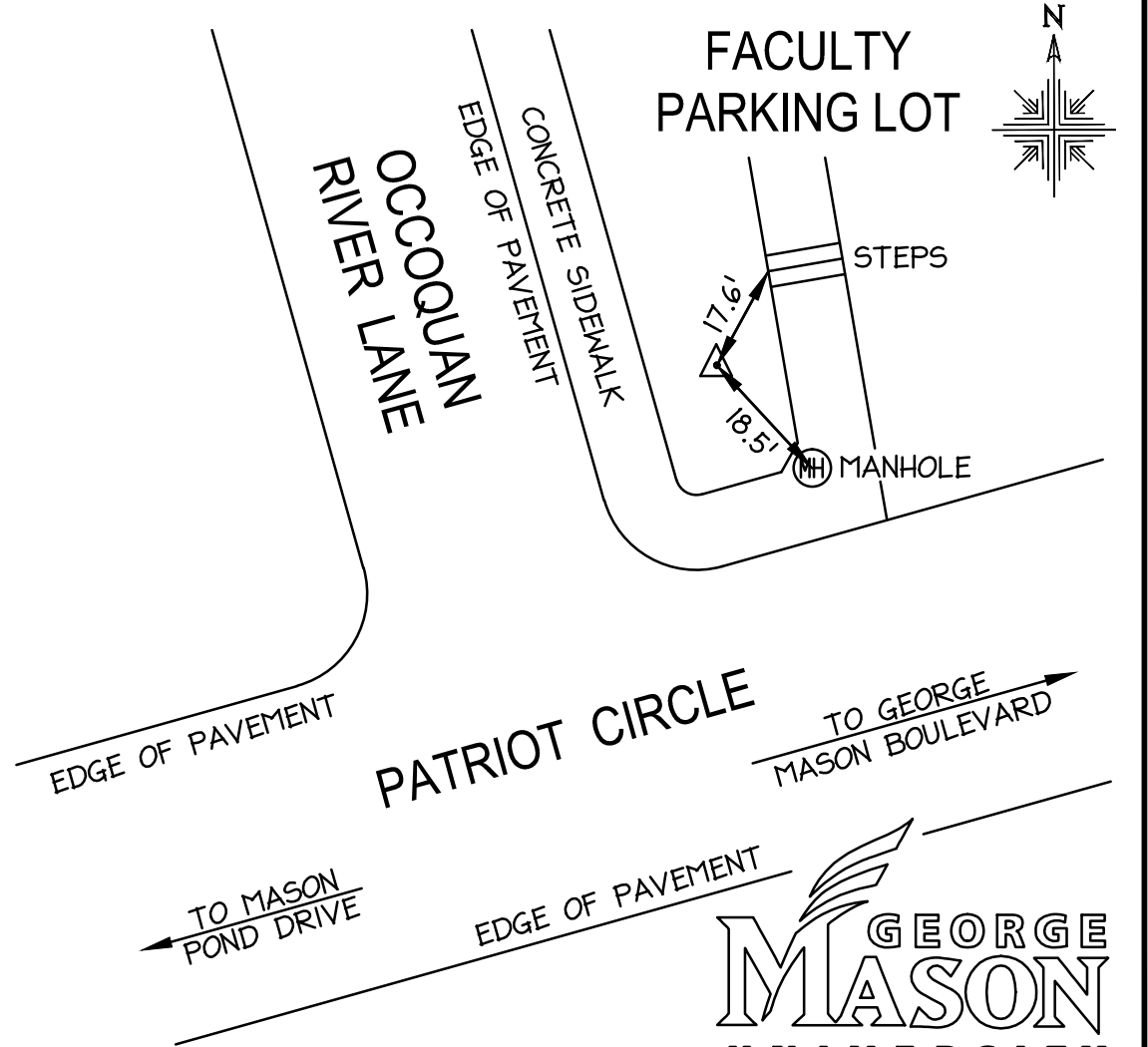
STATION DESIGNATION

FX-06

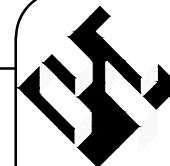
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
 4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,989,346.774	11,821,835.144
LATITUDE:	LONGITUDE:
38°50'06.10020" N	77°18'36.59423" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,989,347.010	11,821,835.101
CONVERGENCE ('): \ominus 00°44'33.4"	
COMBINED FACTOR: 0.999939051	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)	
ELEVATION: 449.56	

PHOTO AT STATION:

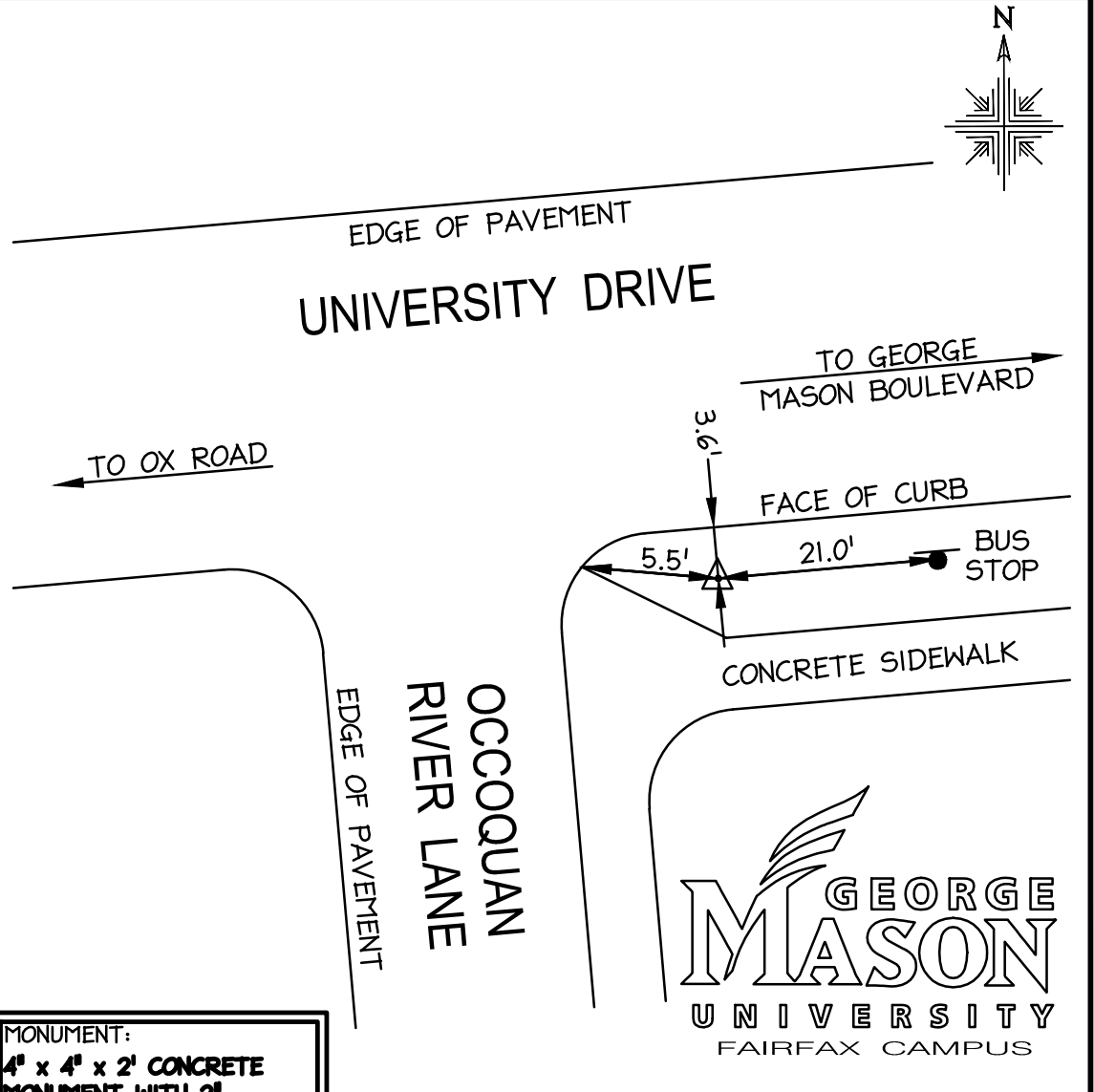


STATION DESIGNATION

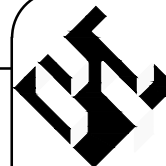
FX-07

UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH (NOT TO SCALE)



MONUMENT:
**4' x 4' x 2' CONCRETE
 MONUMENT WITH 2" STAMPED ALUMINUM CAP**
 DATE SET: **APRIL 2012**



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PROJECT NO. : 83026.043.13
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 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,989,506.033	11,822,361.555

LATITUDE:	LONGITUDE:
38°50'07.60682" N	77°18'29.91583" W

GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,989,506.278	11,822,361.543

CONVERGENCE ('): \ominus 00°44'37.5"
COMBINED FACTOR: 0.999938672
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 458.06

PHOTO AT STATION:



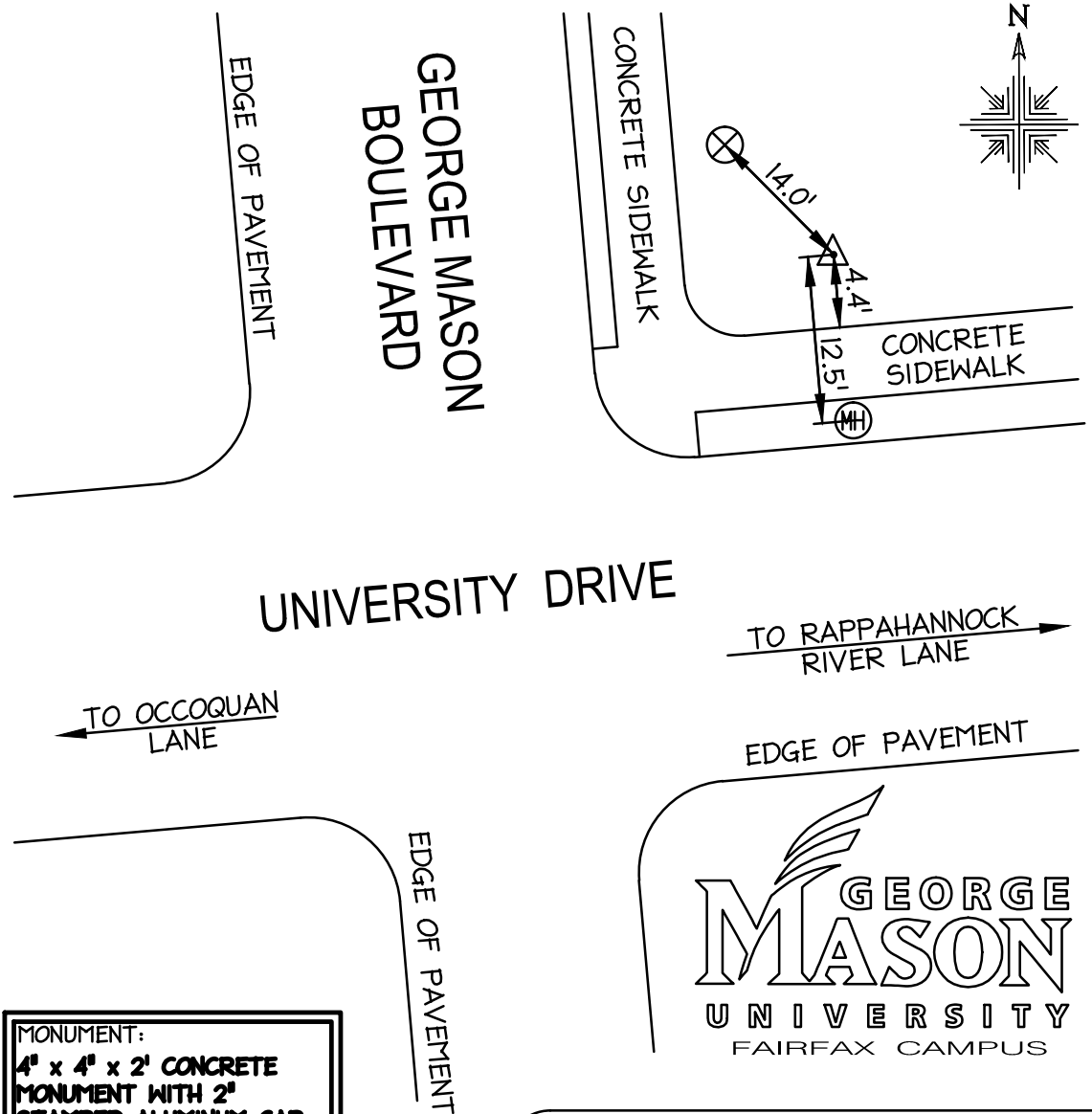
STATION DESIGNATION

FX-08

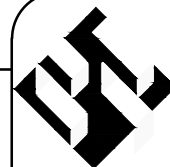
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
**4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP**
 DATE SET: **APRIL 2012**



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GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,989,557.165	11,823,241.529
LATITUDE:	LONGITUDE:
38°50'07.99914" N	77°18'18.78710" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,989,557.413	11,823241.571

CONVERGENCE (): \ominus 00°44'44.5"
 COMBINED FACTOR: 0.999938446
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 462.94

PHOTO AT STATION:



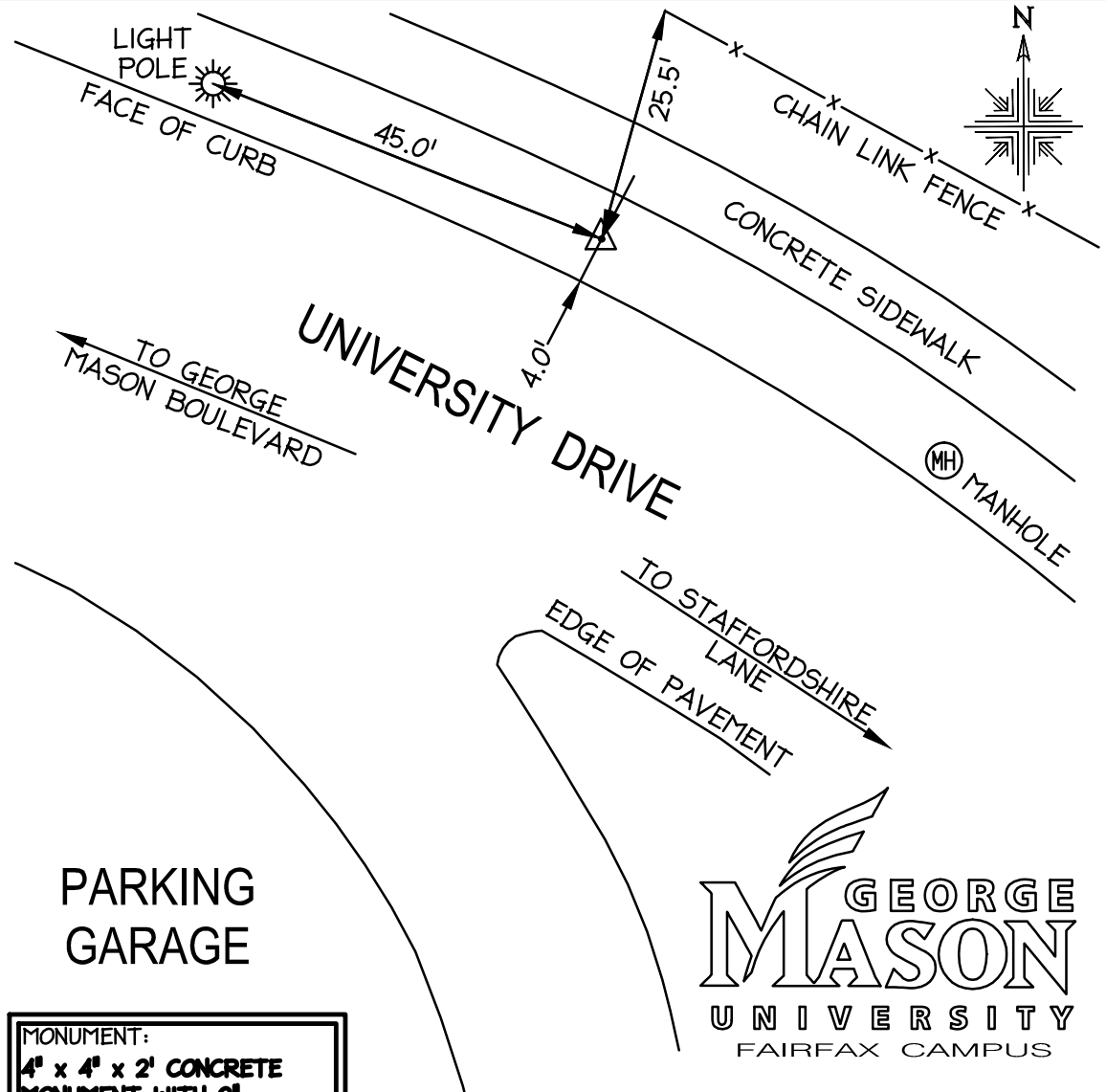
STATION DESIGNATION

FX-09

UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

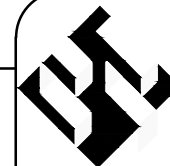
LOCATION SKETCH

(NOT TO SCALE)



PARKING
GARAGE

MONUMENT:
**4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP**
 DATE SET: **APRIL 2012**



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GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,989,347.439	11,823,407.078
LATITUDE:	LONGITUDE:
38°50'05.90493" N	77°18'16.72955" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,989,347.675	11,823,407.129

CONVERGENCE (): \ominus 00°44'45.7"
 COMBINED FACTOR: 0.999938457
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 461.90

PHOTO AT STATION:



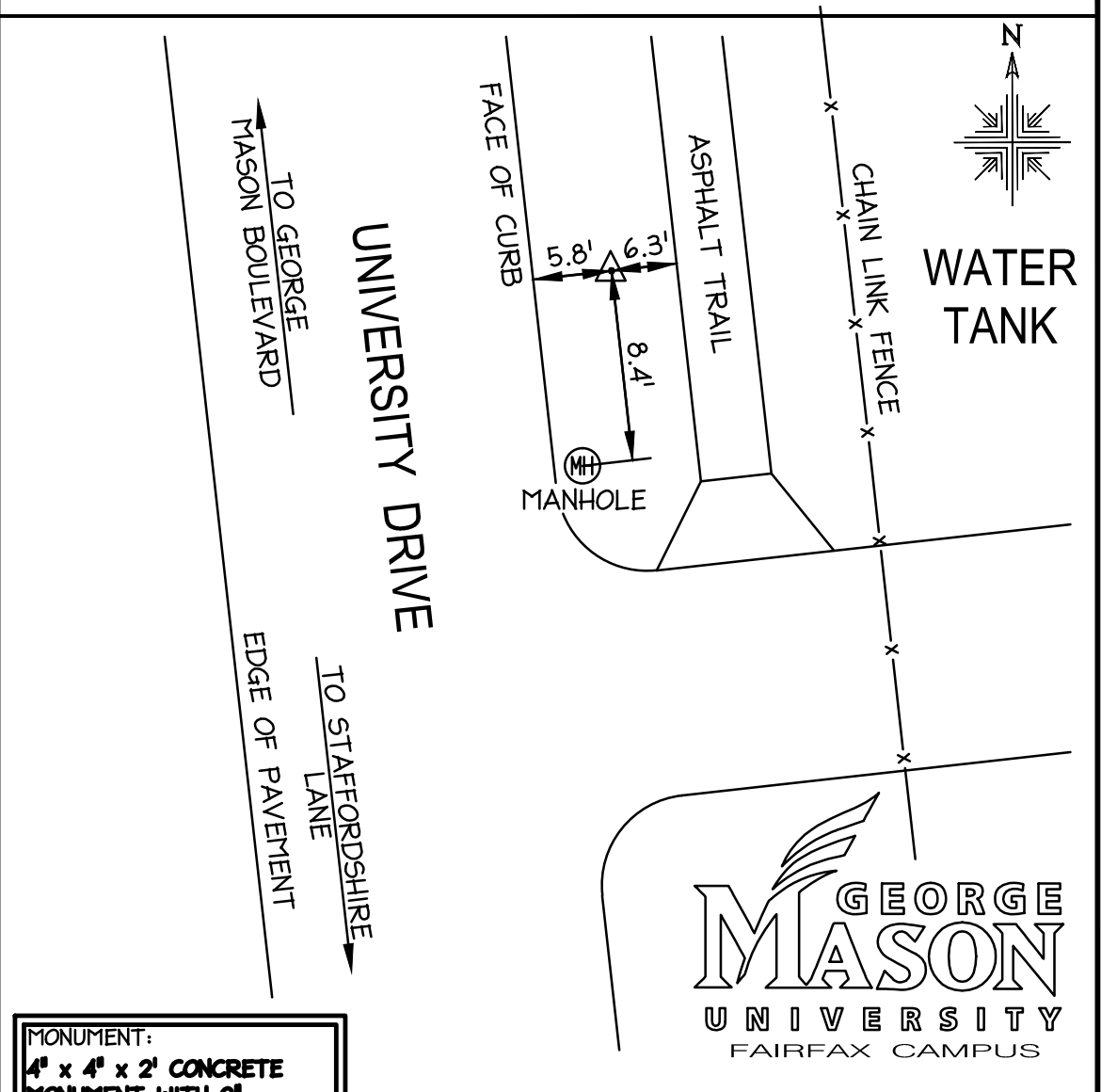
STATION DESIGNATION

FX-10

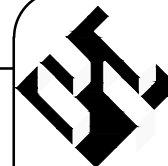
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
 4" x 4" x 2' CONCRETE
 MONUMENT WITH 2"
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 DATE SET: APRIL 2012



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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,989,070.988	11,823,452.037
LATITUDE:	LONGITUDE:
38°50'03.16672" N	77°18'16.20690" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,989,071.207	11,823,452.091
CONVERGENCE (): \ominus 00°44'46.1"	
COMBINED FACTOR: 0.999938932	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 450.94

PHOTO AT STATION:



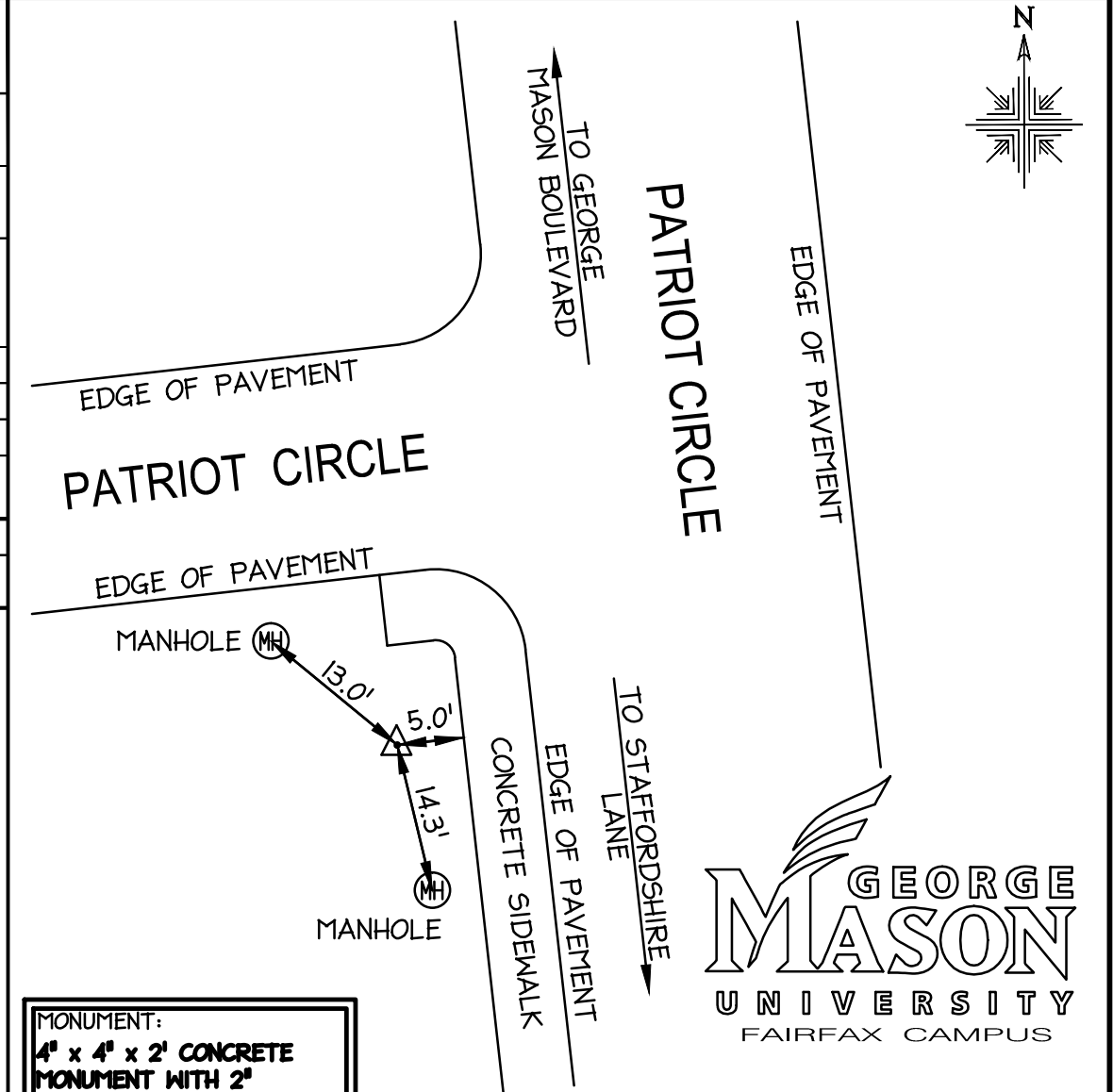
STATION DESIGNATION

FX-11

UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

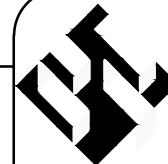
(NOT TO SCALE)



MONUMENT:

**4' x 4' x 2' CONCRETE
MONUMENT WITH 2"
STAMPED ALUMINUM CAP
DATE SET: APRIL 2012**

PROJECT NO. : 83026.043.13
SET BY : M. LOVELAND
PREPARED BY : C. FILLMORE
FIELD BOOK(S) : FB. 245 PG. 1-40



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GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,988,663.687	11,823,700.134
LATITUDE:	LONGITUDE:
38°49'59.10904" N	77°18'13.13880" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988,663.881	11,823,700.203
CONVERGENCE (): \ominus 00°44'48.0"	
COMBINED FACTOR: 0.999939859	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 430.00

PHOTO AT STATION:



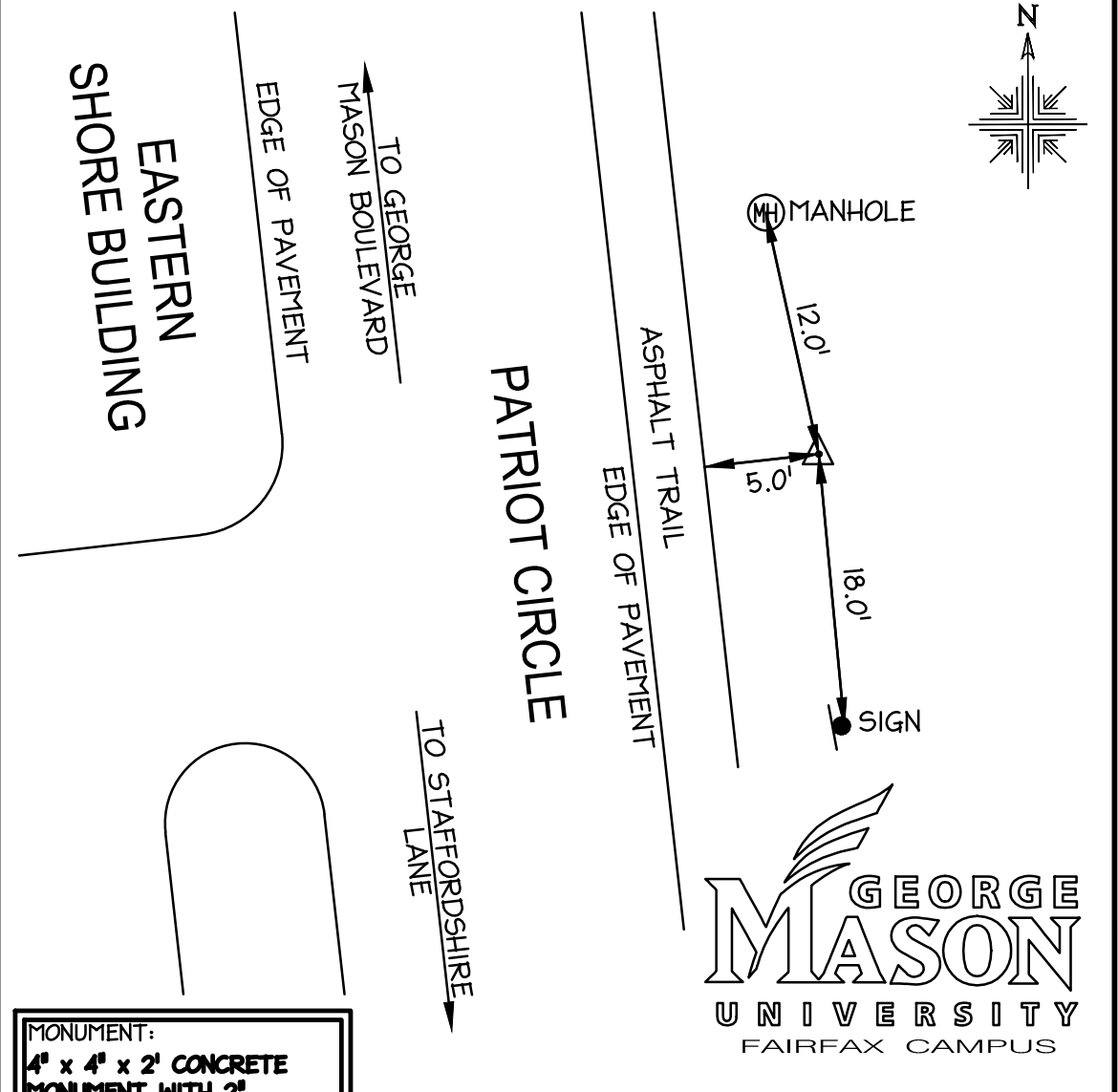
STATION DESIGNATION

FX-12

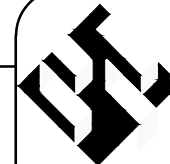
UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
**4" x 4" x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP**
 DATE SET: **APRIL 2012**



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,988,303.556	11,823,792.828
LATITUDE:	LONGITUDE:
38°49'55.53758" N	77°18'12.02678" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988,303.729	11,823,792.902
CONVERGENCE ('): \ominus 00°44'48.7"	
COMBINED FACTOR: 0.999940426	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 416.81

PHOTO AT STATION:



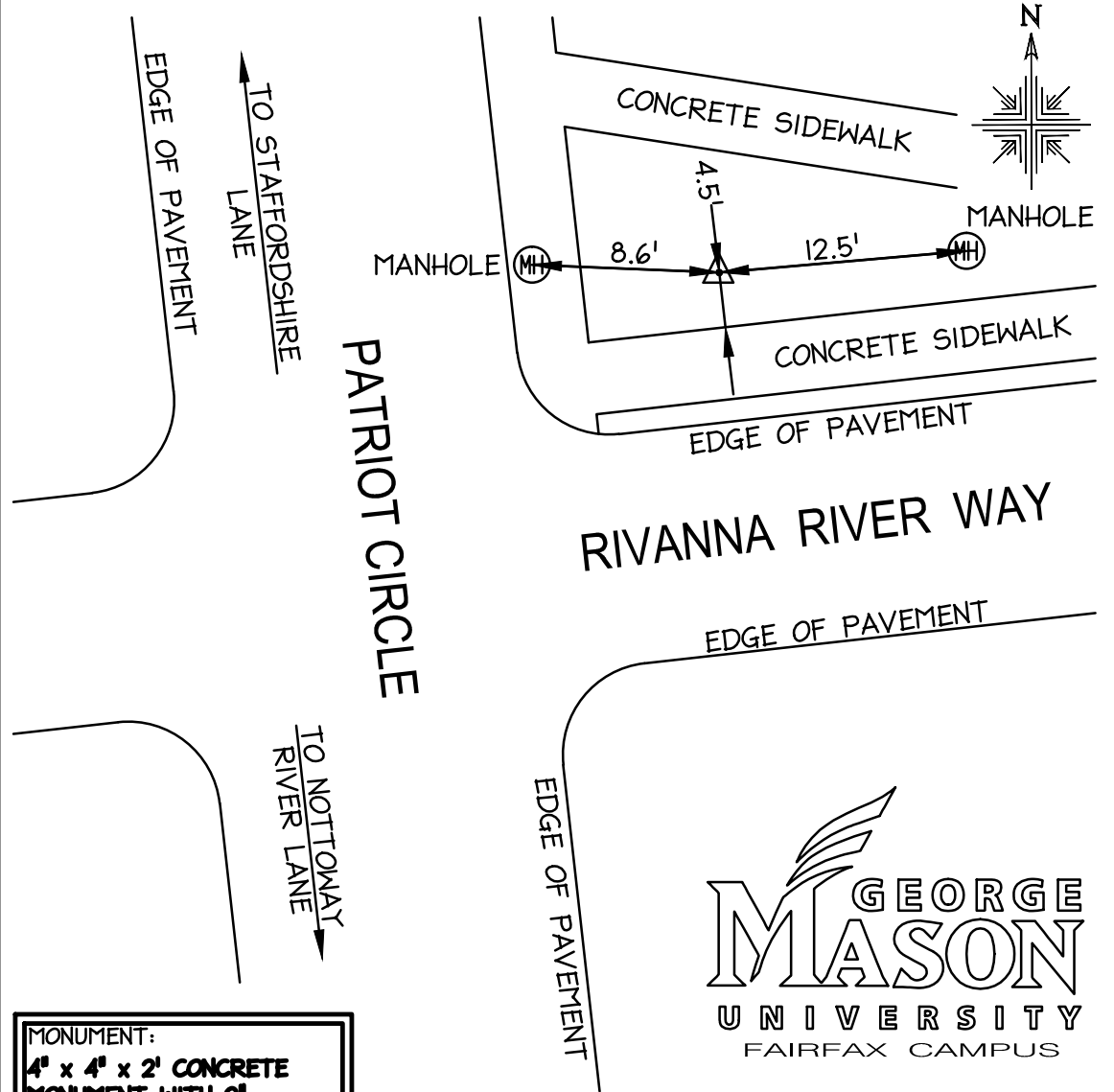
STATION DESIGNATION

FX-13

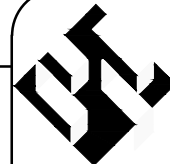
UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
4' x 4' x 2' CONCRETE
MONUMENT WITH 2"
STAMPED ALUMINUM CAP
DATE SET: APRIL 2012



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,987,795.178	11,823,914.965
LATITUDE:	LONGITUDE:
38°49'50.49707" N	77°18'10.56717" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,987,795.321	11,823,915.047
CONVERGENCE ('): \ominus 00°44'49.6"	
COMBINED FACTOR: 0.999940682	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 409.56

PHOTO AT STATION:



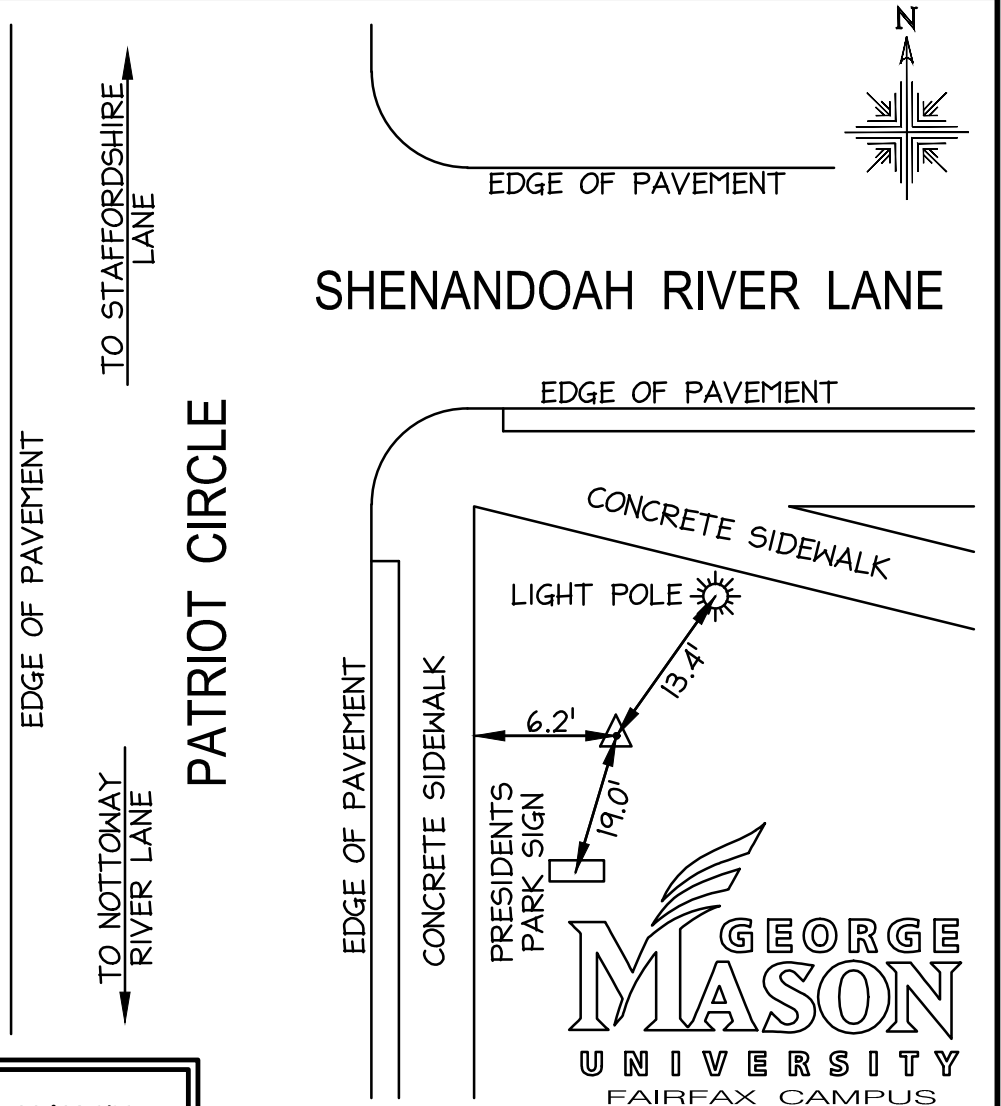
FX-14

STATION DESIGNATION

FX-14

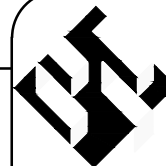
UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH (NOT TO SCALE)



MONUMENT:
4' x 4' x 2' CONCRETE MONUMENT WITH 2" STAMPED ALUMINUM CAP
 DATE SET: **APRIL 2012**

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,987,455.045	11,823,756.777
LATITUDE:	LONGITUDE:
38°49'47.15560" N	77°18'12.62210" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,987,455.167	11,823,756.849
CONVERGENCE ('): \ominus	00°44'48.3"
COMBINED FACTOR:	0.999941012
AVG. COMBINED FACTOR:	0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 401.42

PHOTO AT STATION:



FX-15

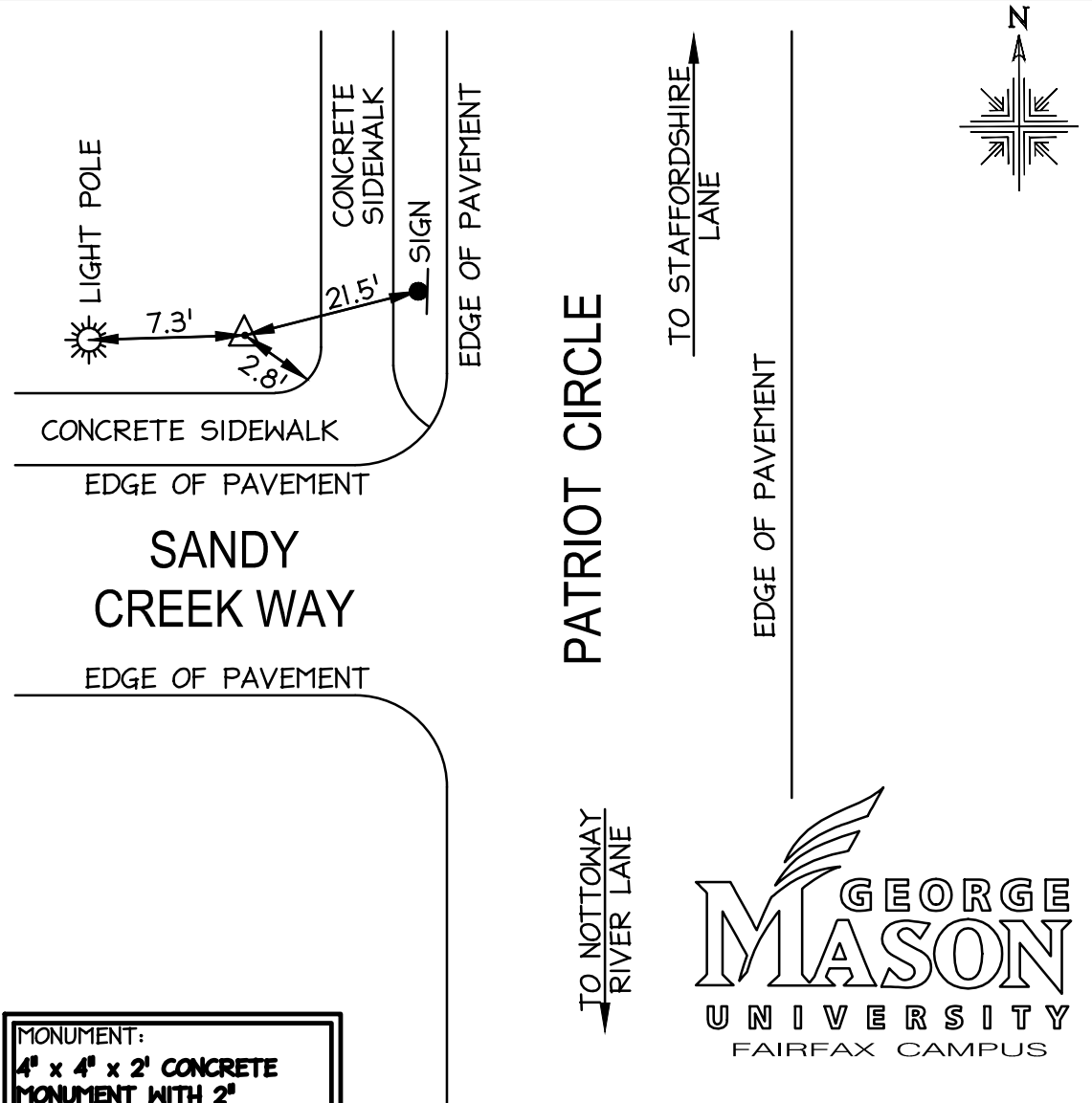
STATION DESIGNATION

FX-15

UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

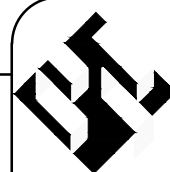
LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
**4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012**

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING: 6,987,024.096	GRID EASTING: 11,823,822.461
--	--

LATITUDE: 38°49'42.88766" N	LONGITUDE: 77°18'11.86309" W
---------------------------------------	--

GMU PROJECT NORTHING: 6,987,024.193	GMU PROJECT EASTING: 11,823,822.537
---	---

CONVERGENCE (): \ominus **00°44'48.8"**

COMBINED FACTOR: **0.999941362**

AVG. COMBINED FACTOR: **0.999939714** (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

ELEVATION:
392.50

PHOTO AT STATION:



STATION DESIGNATION

FX-16

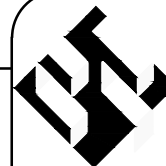
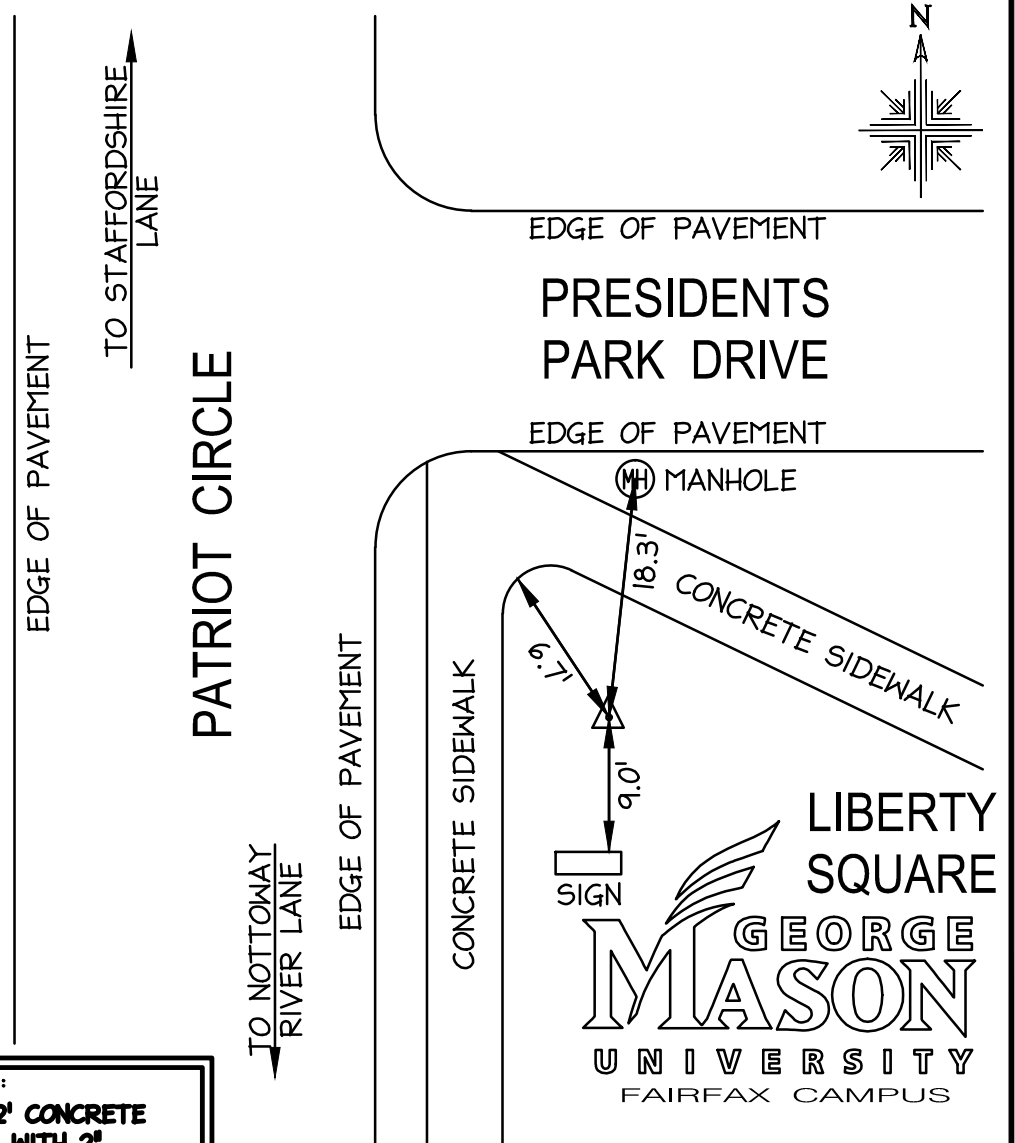
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

MONUMENT:
**4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP**
 DATE SET: **APRIL 2012**

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

LOCATION SKETCH

(NOT TO SCALE)



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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,986,613.758	11,823,656.422
LATITUDE:	LONGITUDE:
38°49'38.85330" N	77°18'14.02871" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,986,613.830	11,823,656.488

CONVERGENCE (): \ominus 00°44'47.4"
 COMBINED FACTOR: 0.999941702
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 383.90

PHOTO AT STATION:



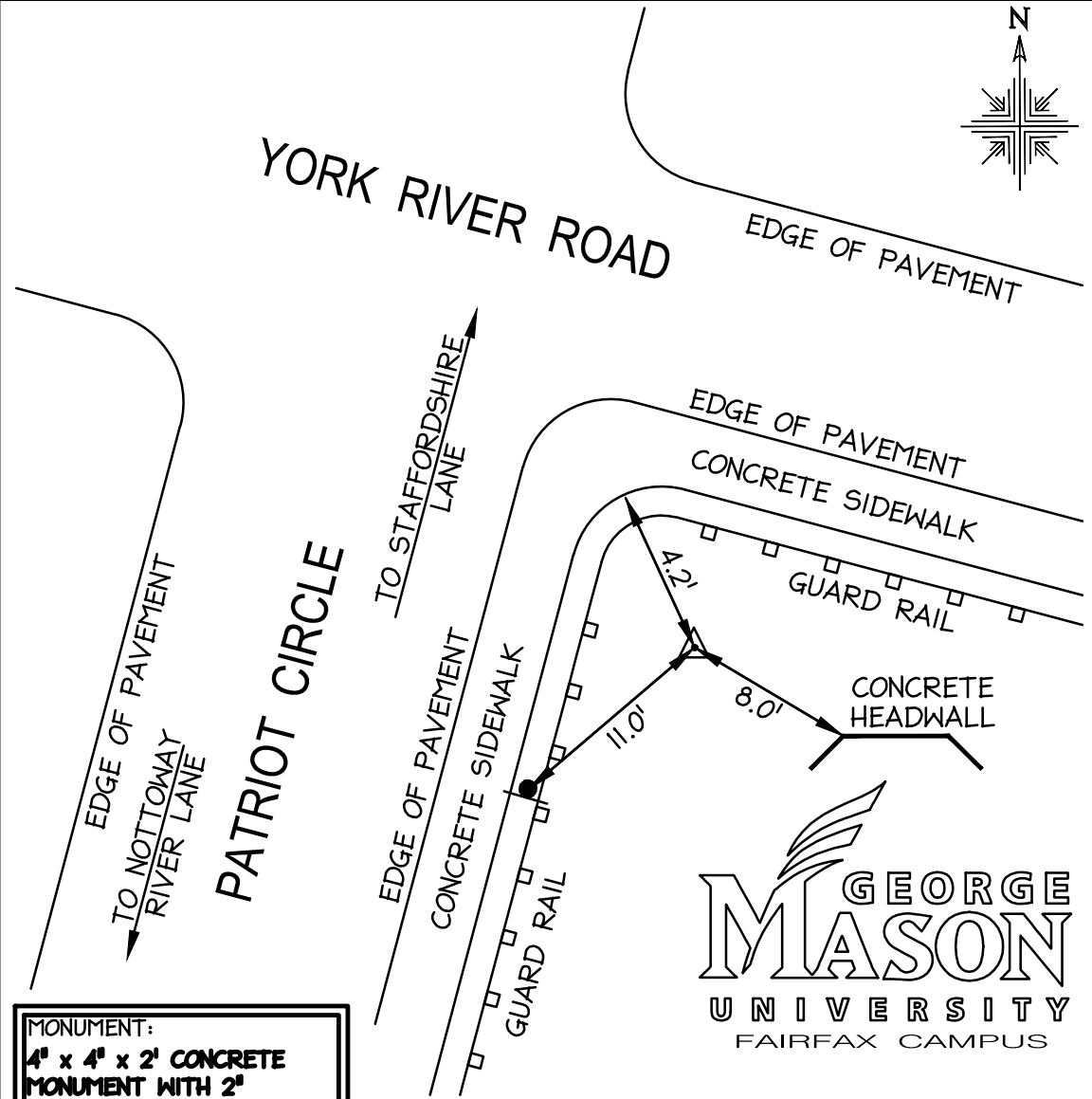
STATION DESIGNATION

FX-17

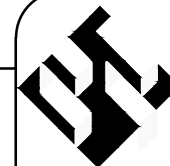
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
**4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP**
 DATE SET: **APRIL 2012**



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,986,388.463	11,823,508.009

LATITUDE:	LONGITUDE:
38°49'36.64560" N	77°18'15.94108" W

GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,986,388.522	11,823,508.066

CONVERGENCE (): \ominus 00°44'46.2"

COMBINED FACTOR: 0.999941440

AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

ELEVATION:
388.56

PHOTO AT STATION:



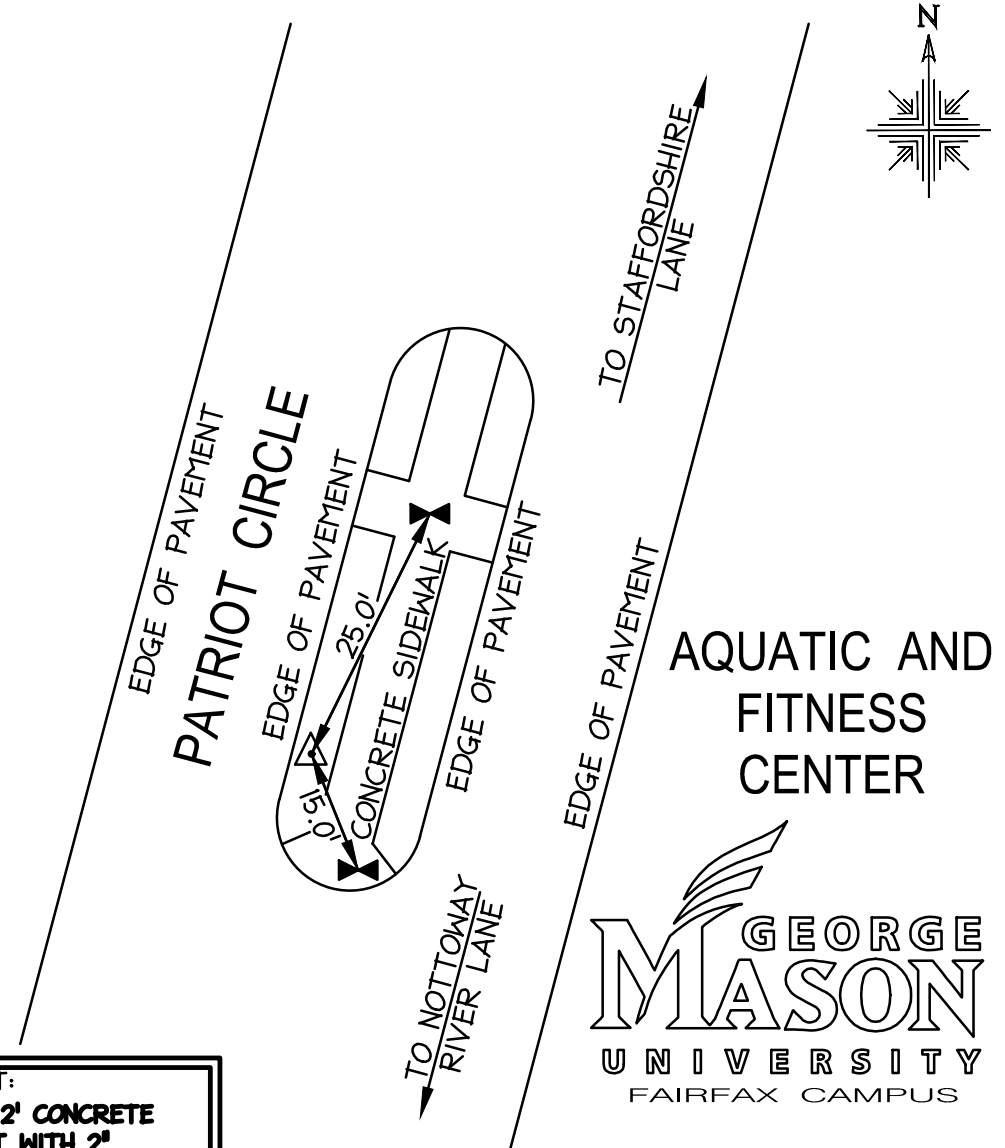
STATION DESIGNATION

FX-18

UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

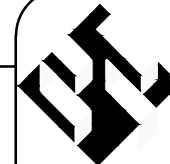
LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
**4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP**
 DATE SET: **APRIL 2012**

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,986,305.022	11,823,266.136

LATITUDE:	LONGITUDE:
38°49'35.85200" N	77°18'19.01101" W

GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,986,305.075	11,823,266.179

CONVERGENCE ('): \ominus 00°44'44.3"

COMBINED FACTOR: 0.999941461

AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

ELEVATION: 387.82

PHOTO AT STATION:



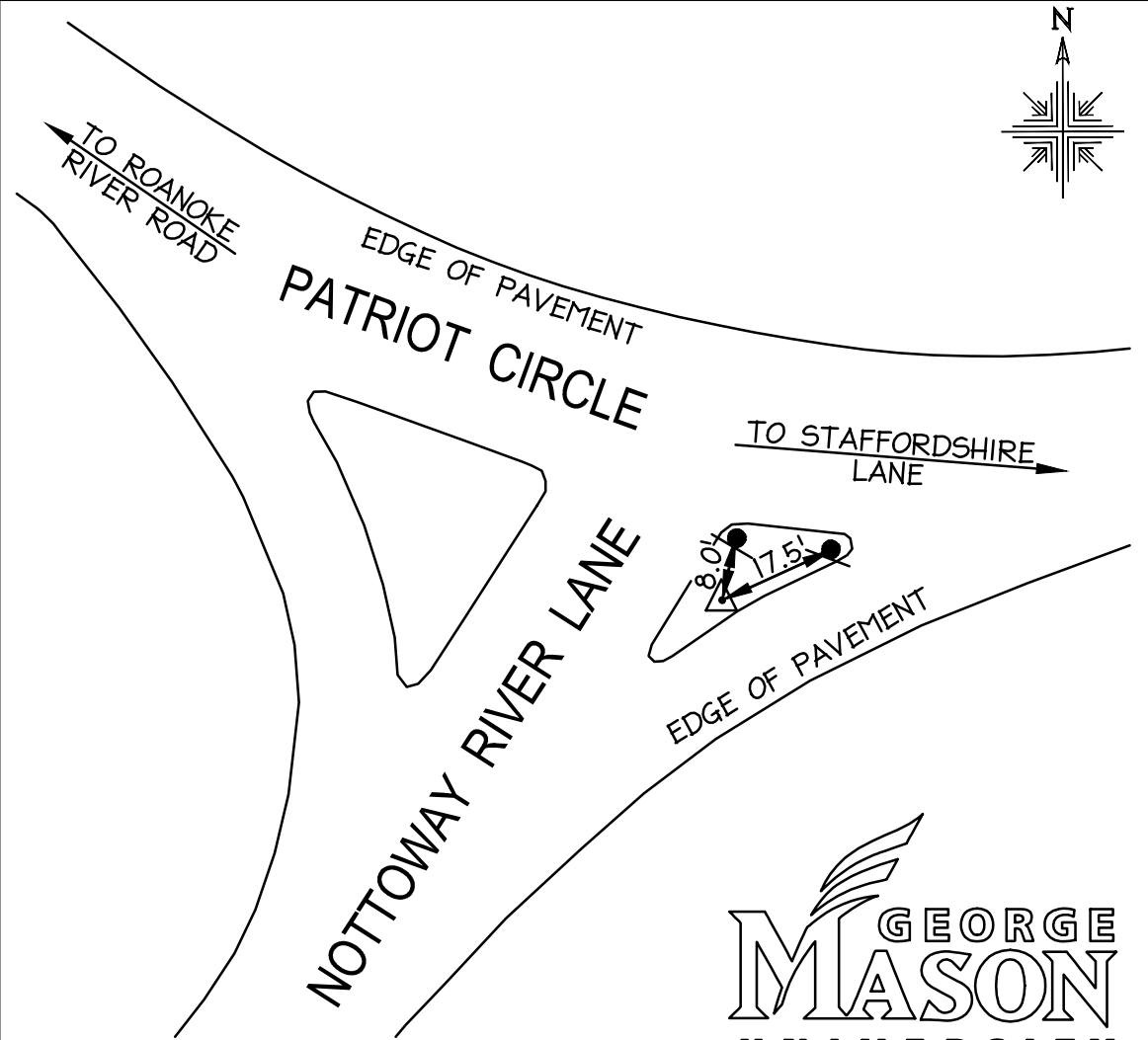
STATION DESIGNATION

FX-19

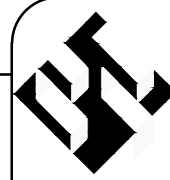
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
 4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,986,565.553	11,822,863.878
LATITUDE:	LONGITUDE:
38°49'38.47879" N	77°18'24.05097" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,986,565.621	11,822,863.896

CONVERGENCE (): \ominus 00°44'41.2"
 COMBINED FACTOR: 0.999941878
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 380.07

PHOTO AT STATION:



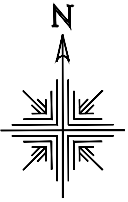
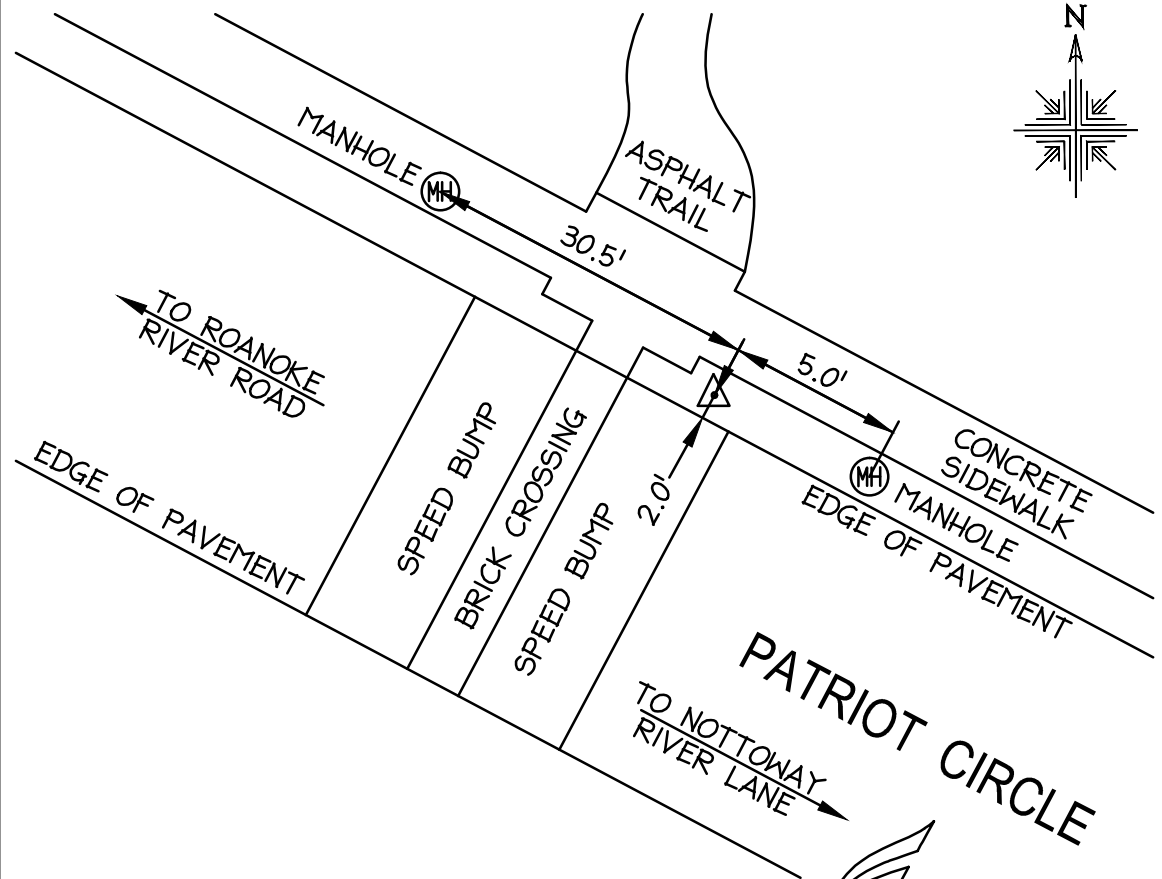
STATION DESIGNATION

FX-20

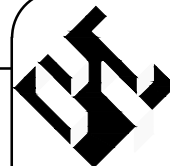
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
**4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP**
 DATE SET: **APRIL 2012**



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,986,823.929	11,822,147.812
LATITUDE:	LONGITUDE:
38°49'41.12447" N	77°18'33.05661" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,986,824.014	11,822,147.788
CONVERGENCE (): \ominus 00°44'35.6"	
COMBINED FACTOR: 0.999941293	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 393.28

PHOTO AT STATION:



FX-21

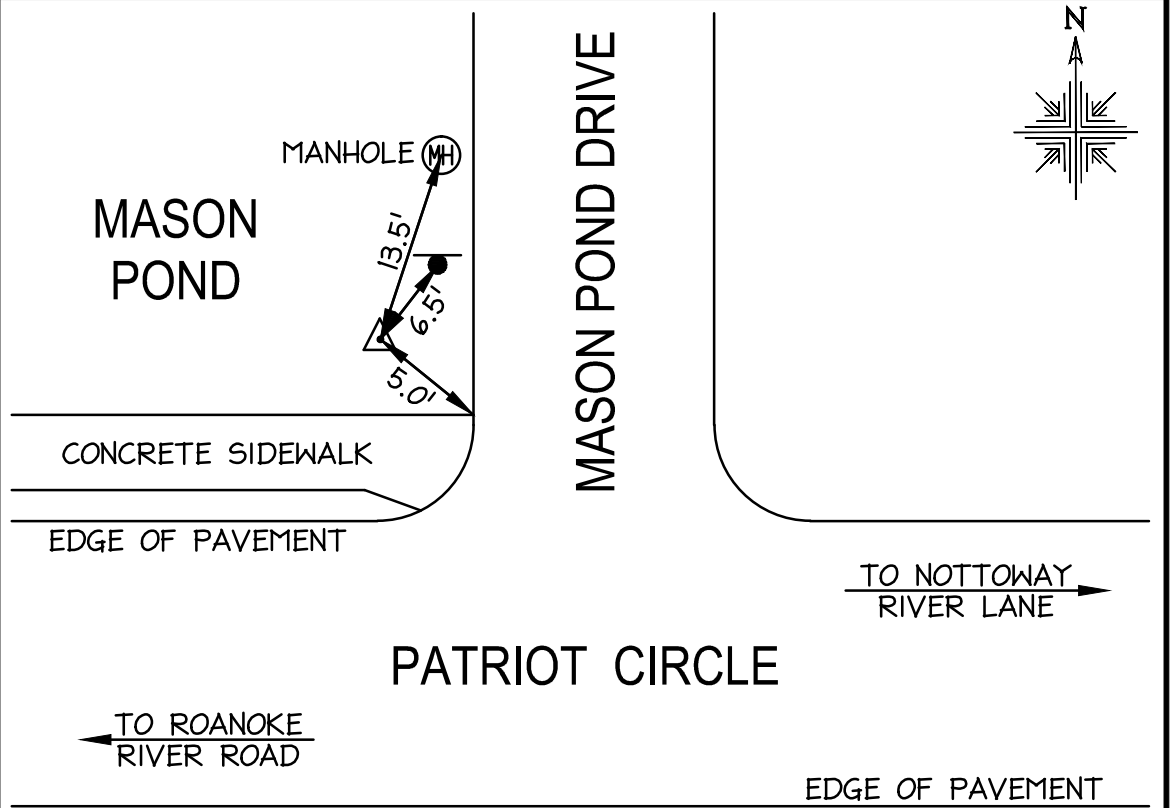
STATION DESIGNATION

FX-21

UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)

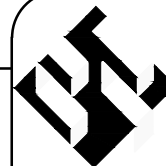


PATRIOT CENTER



MONUMENT:
**4" x 4" x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012**

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,986,645.227	11,821,846.396
LATITUDE:	LONGITUDE:
38°49'39.39682" N	77°18'36.89451" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,986,645.300	11,821,846.354
CONVERGENCE (): \ominus 00°44'33.2"	
COMBINED FACTOR: 0.999940766	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)	
ELEVATION: 403.65	

PHOTO AT STATION:



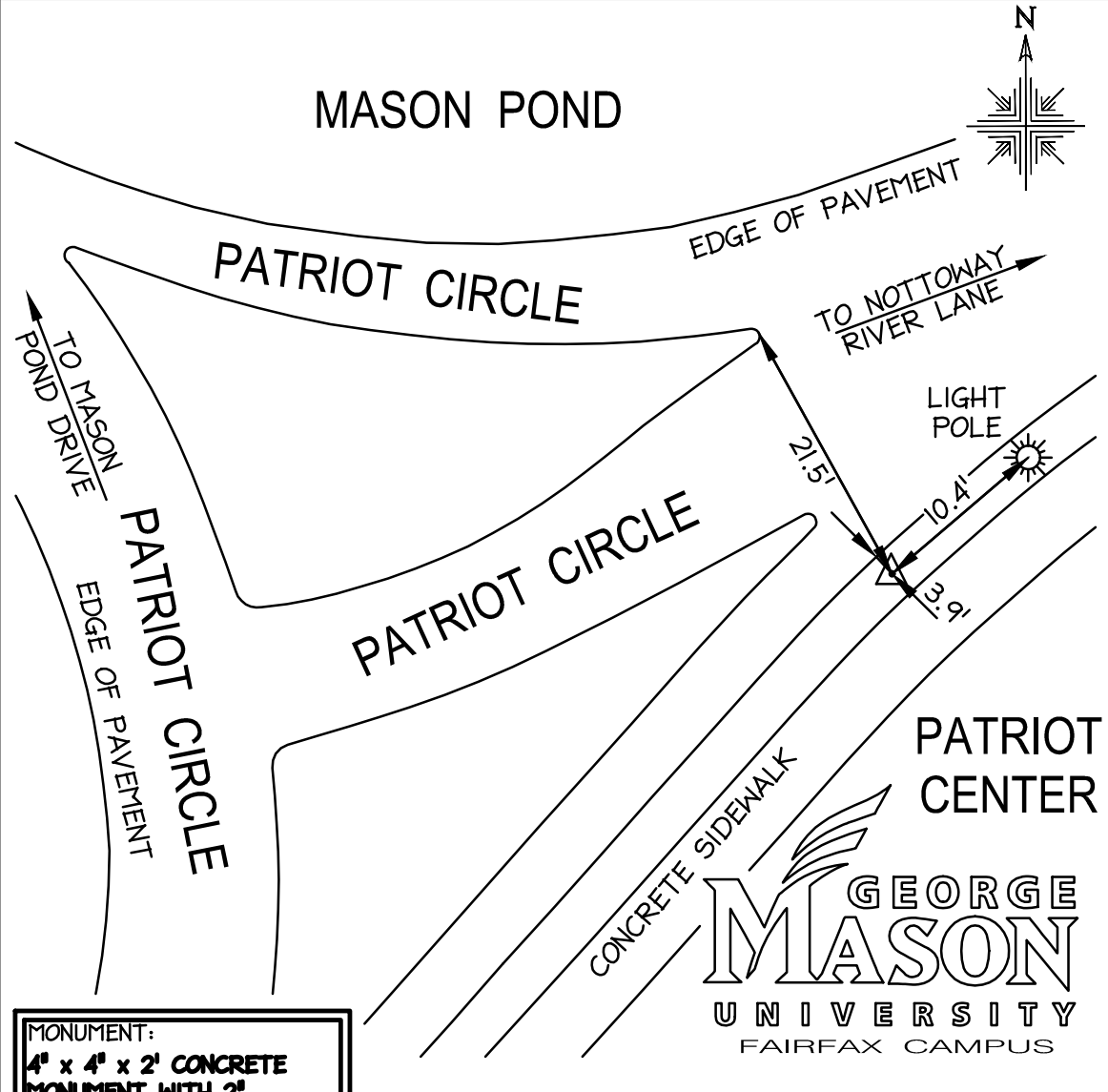
STATION DESIGNATION

FX-22

UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

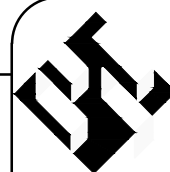
LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
4' x 4' x 2' CONCRETE
MONUMENT WITH 2"
STAMPED ALUMINUM CAP
DATE SET: APRIL 2012

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



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GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,986,839.095	11,821,486.090
LATITUDE:	LONGITUDE:
38°49'41.35913" N	77°18'41.41553" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,986,839.180	11,821,486.025
CONVERGENCE ('): \ominus 00°44'30.3"	
COMBINED FACTOR: 0.999940655	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 406.71

PHOTO AT STATION:



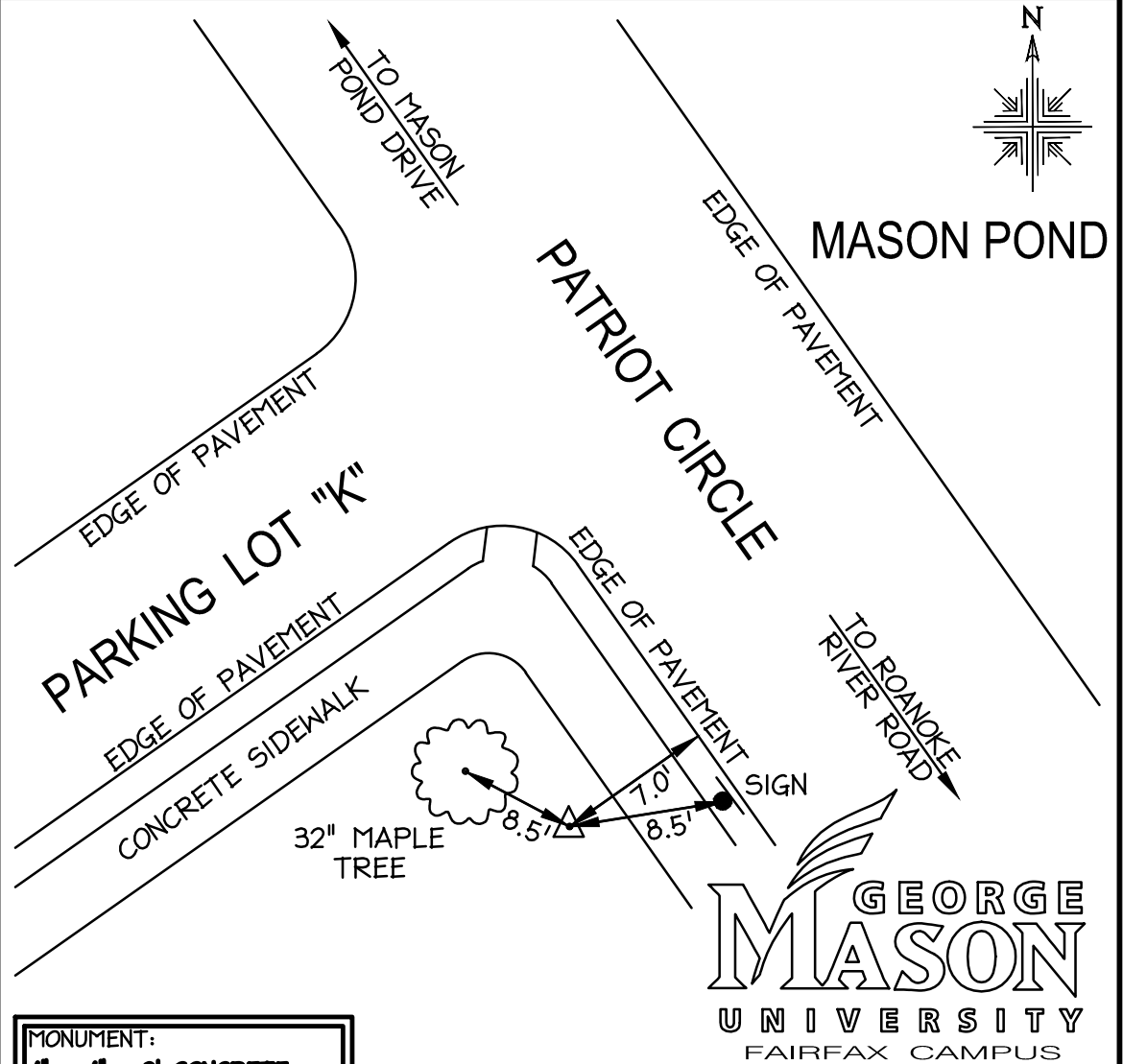
STATION DESIGNATION

FX-23

UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
4' x 4' x 2' CONCRETE
MONUMENT WITH 2"
STAMPED ALUMINUM CAP
DATE SET: APRIL 2012

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



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GEODETIC SURVEY CONTROL

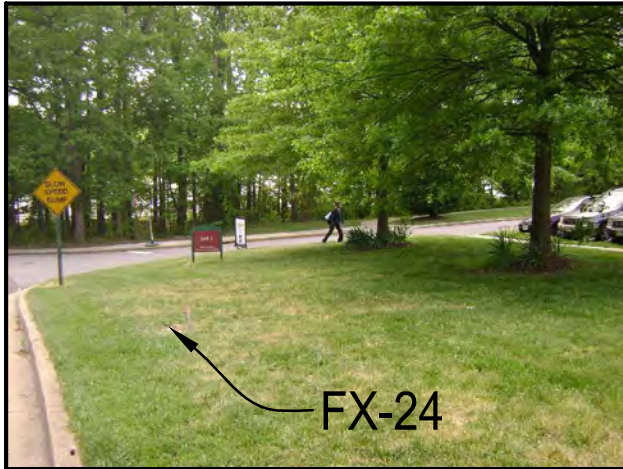
HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,987,130.791	11,821,410.020
LATITUDE:	LONGITUDE:
38°49'44.25198" N	77°18'42.32902" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,987,130.893	11,821,409.951
CONVERGENCE (): \ominus 00°44'29.8"	
COMBINED FACTOR: 0.999940368	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)	
ELEVATION: 413.77	

PHOTO AT STATION:

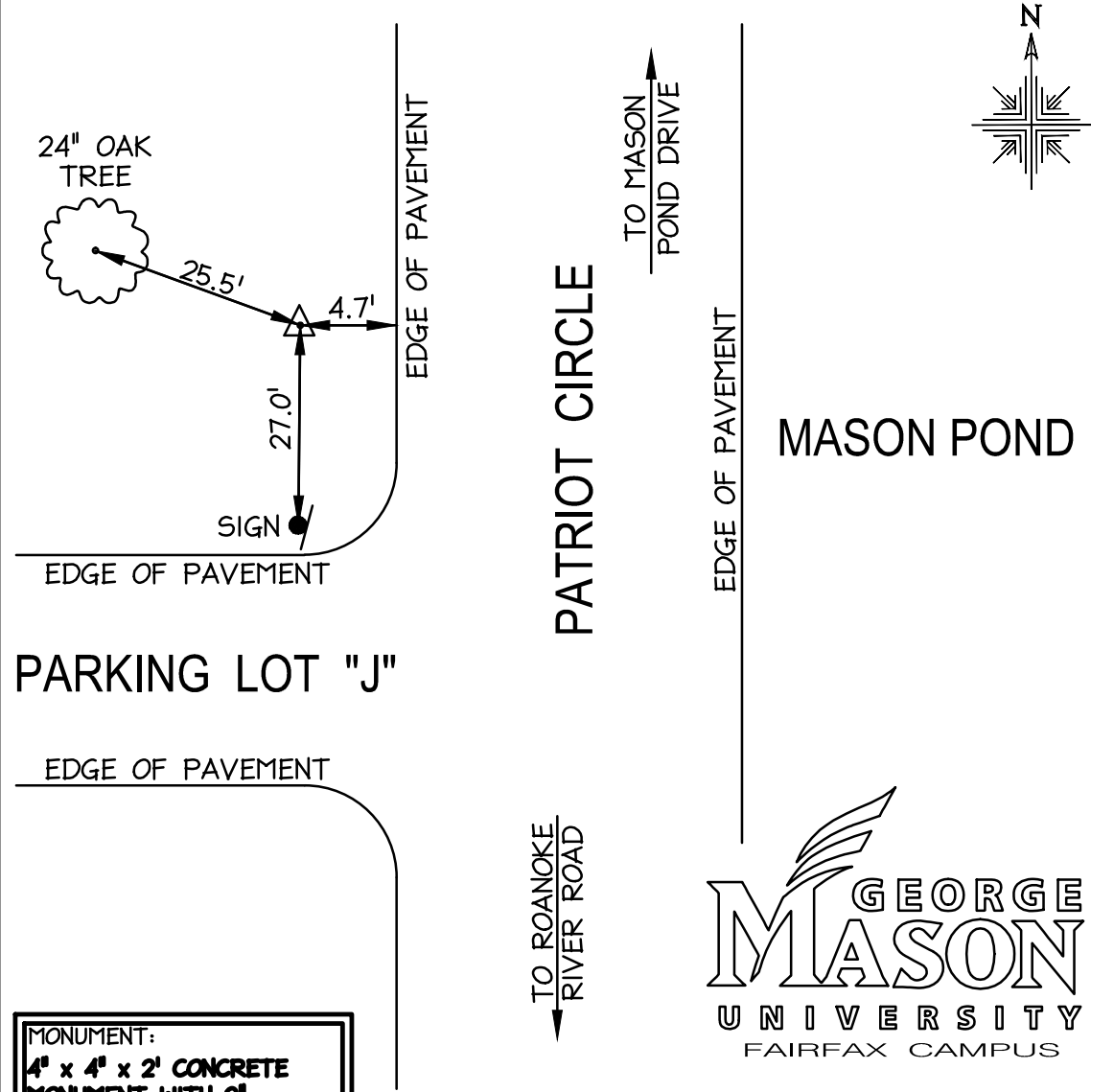


STATION DESIGNATION

FX-24

UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

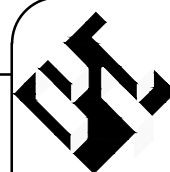
LOCATION SKETCH (NOT TO SCALE)



PARKING LOT "J"

MONUMENT:
4' x 4' x 2' CONCRETE
MONUMENT WITH 2"
STAMPED ALUMINUM CAP
DATE SET: APRIL 2012

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



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HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,988,392.482	11,821,895.752

LATITUDE:	LONGITUDE:
38°49'56.66027" N	77°18'35.98466" W

GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988392.681	11821895.696

CONVERGENCE (): \ominus 00°44'33.7"

COMBINED FACTOR: 0.999939411

AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

ELEVATION:
438.70

PHOTO AT STATION:



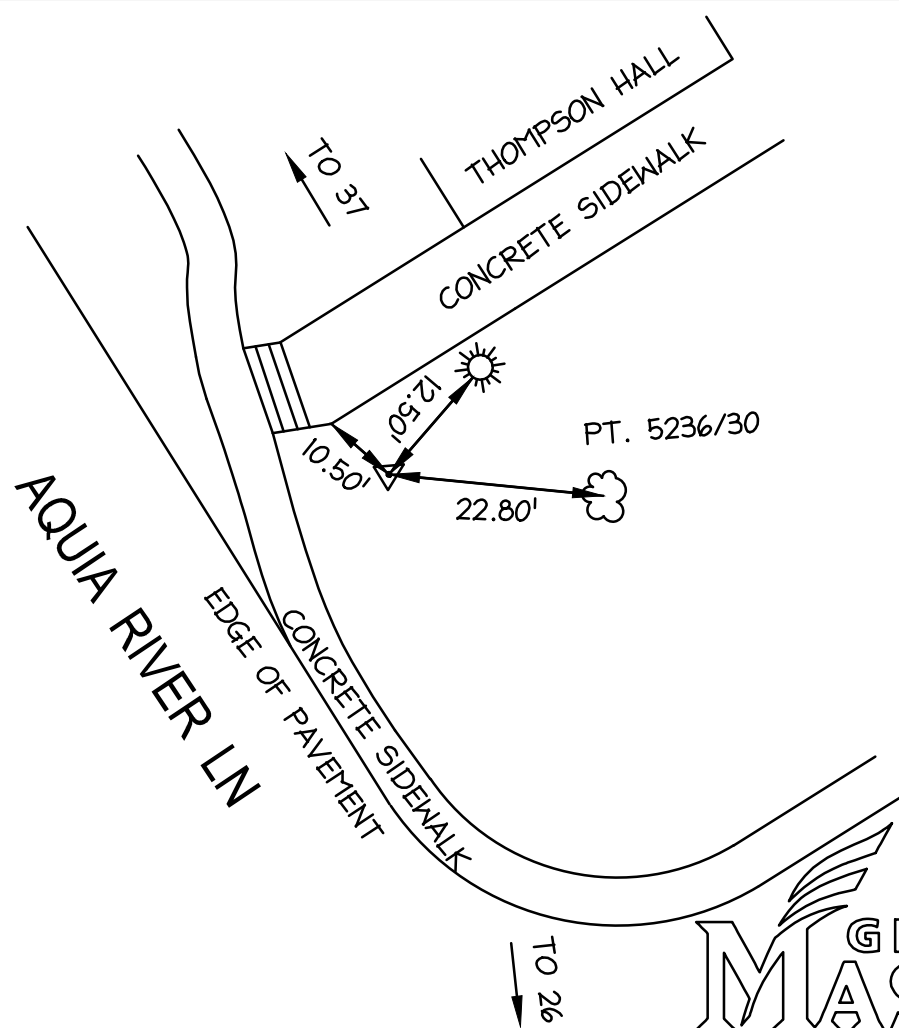
STATION DESIGNATION

FX-25

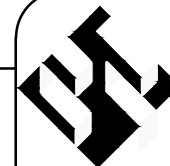
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
 4" x 4" x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

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GEODETIC SURVEY CONTROL

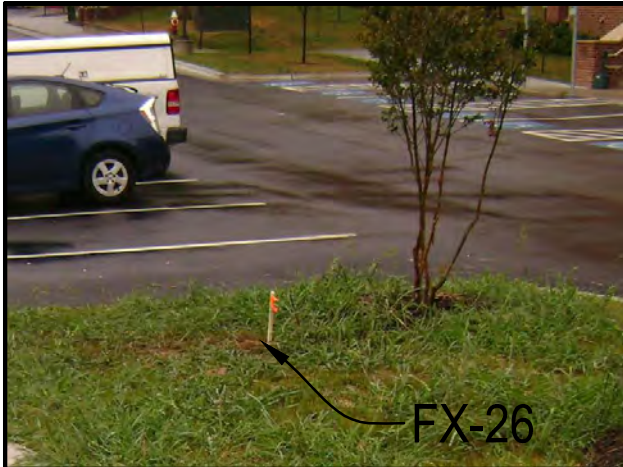
HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,987,954.427	11,822,047.557
LATITUDE:	LONGITUDE:
38°49'52.31111" N	77°18'34.13815" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,987,954.626	11,822,047.501
CONVERGENCE (): \ominus 00°44'34.9"	
COMBINED FACTOR: 0.999940290	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 418.68

PHOTO AT STATION:



STATION DESIGNATION

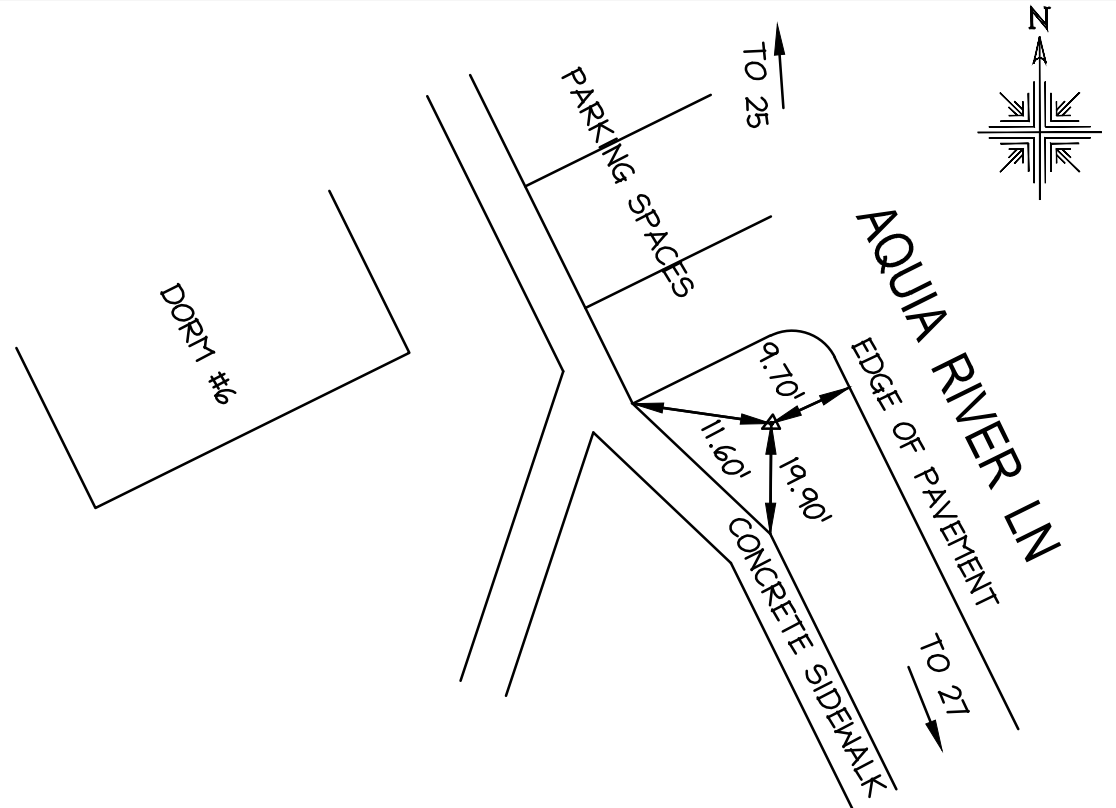
FX-26

UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

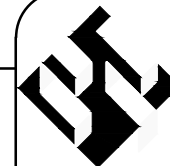
PROJECT NO. : 83026.043.13
SET BY : M. LOVELAND
PREPARED BY : C. FILLMORE
FIELD BOOK(S) : FB. 245 PG. 1-40

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
4' x 4' x 2' CONCRETE
MONUMENT WITH 2"
STAMPED ALUMINUM CAP
DATE SET: APRIL 2012



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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,987,634.008	11,822,205.523
LATITUDE:	LONGITUDE:
38°49'49.12385" N	77°18'32.19457" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,987,634.207	11,822,205.466

CONVERGENCE ('): \ominus 00°44'36.1"
 COMBINED FACTOR: 0.999939478
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 434.46

PHOTO AT STATION:



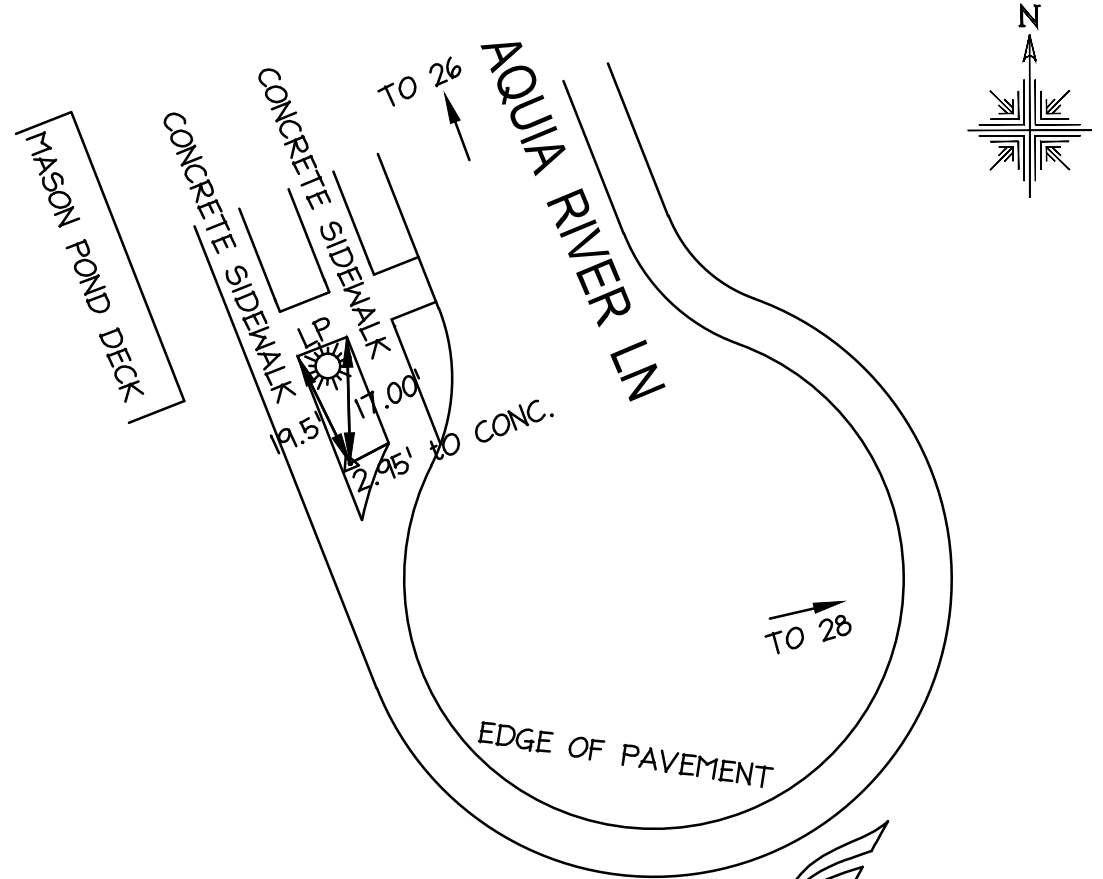
STATION DESIGNATION

FX-27

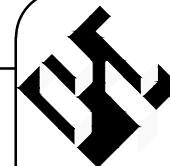
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
 4" x 4" x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,987,832.812	11,822,711.399
LATITUDE:	LONGITUDE:
38°49'51.02389" N	77°18'25.76958" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,987,832.957	11,822,711.409

CONVERGENCE ('): \ominus 00°44'40.1"
 COMBINED FACTOR: 0.999938983
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 445.27

PHOTO AT STATION:



FX-28

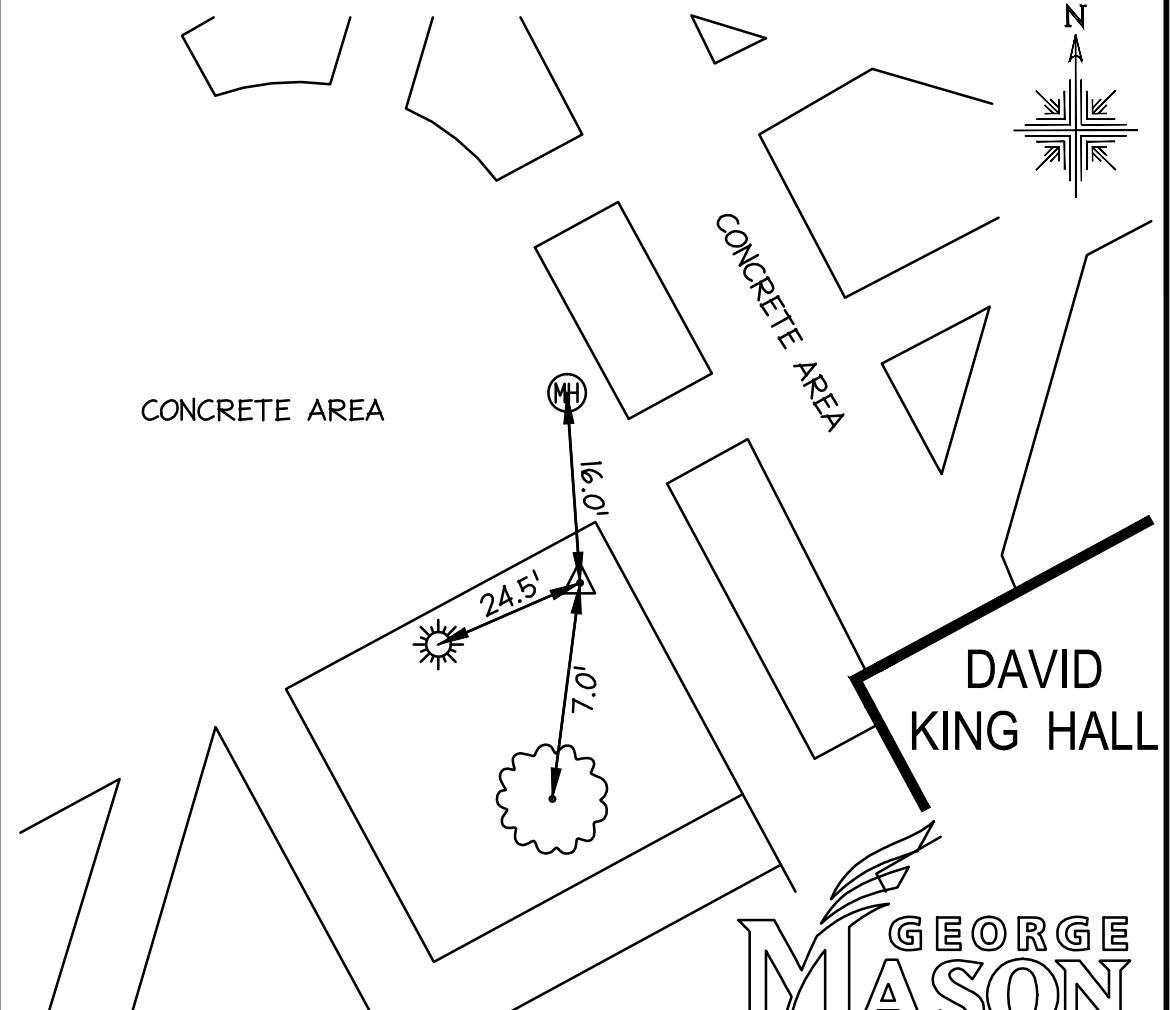
STATION DESIGNATION

FX-28

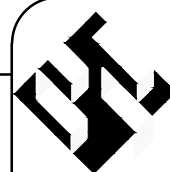
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
 4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,988,032.005	11,823,076.440

LATITUDE:	LONGITUDE:
38°49'52.94580" N	77°18'21.12407" W

GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988,032.162	11,823,076.471

CONVERGENCE ('): \ominus 00°44'43.0"

COMBINED FACTOR: 0.999939370

AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

ELEVATION: 437.91

PHOTO AT STATION:



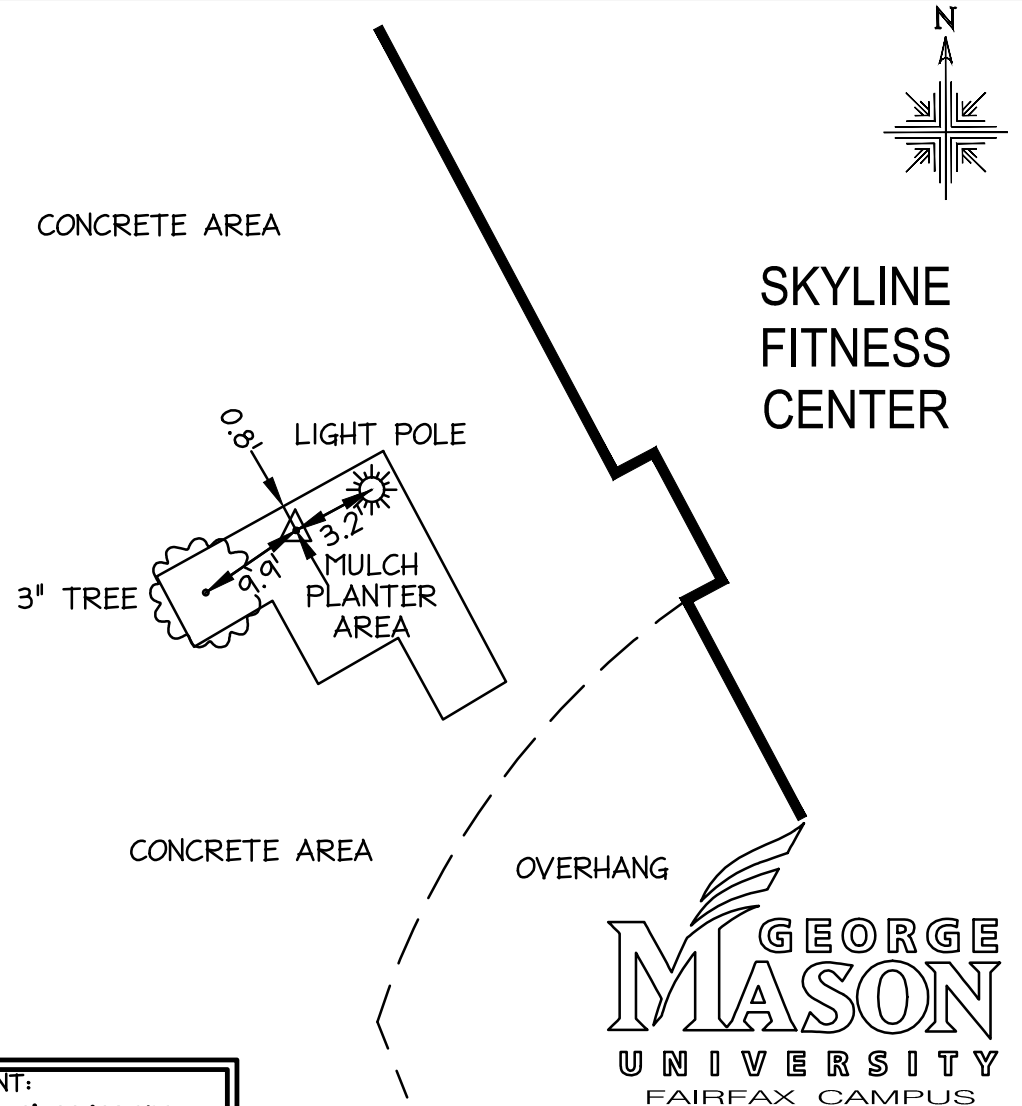
STATION DESIGNATION

FX-29

UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

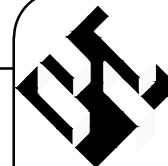
LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
 4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



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GEODETIC SURVEY CONTROL

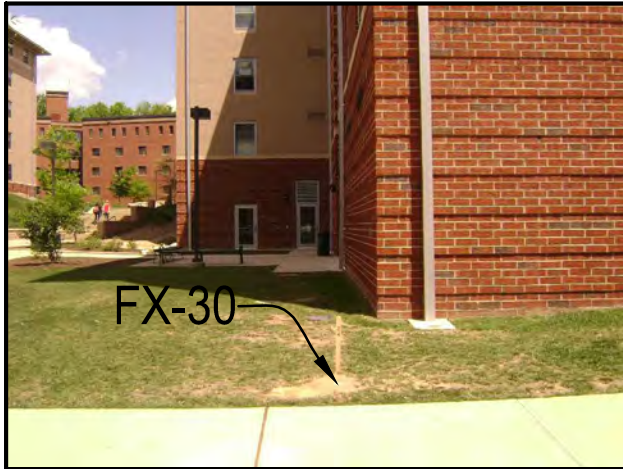
HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,988,340.204	11,822,929.052
LATITUDE:	LONGITUDE:
38°49'56.01096" N	77°18'22.93588" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988,340.379	11,822,929.075
CONVERGENCE ('): \ominus 00°44'41.9"	
COMBINED FACTOR: 0.999939253	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 441.50

PHOTO AT STATION:



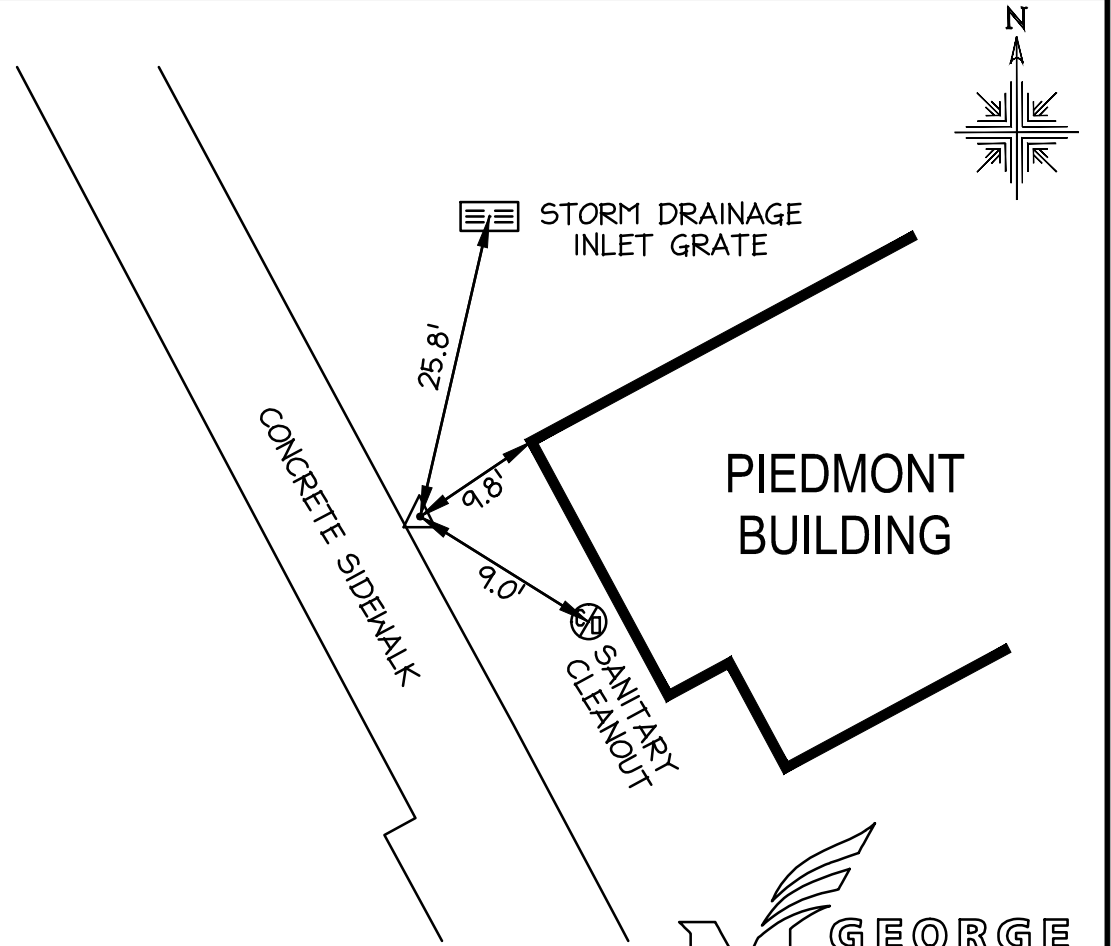
STATION DESIGNATION

FX-30

UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

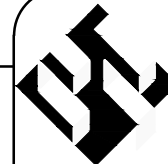
LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
4' x 4' x 2' CONCRETE
MONUMENT WITH 2"
STAMPED ALUMINUM CAP
DATE SET: APRIL 2012

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,988,602.918	11,822,760.178
LATITUDE:	LONGITUDE:
38°49'58.62931" N	77°18'25.02672" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988,603.108	11,822,760.187

CONVERGENCE (): \ominus 00°44'40.6"
 COMBINED FACTOR: 0.999960430
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 445.61

PHOTO AT STATION:



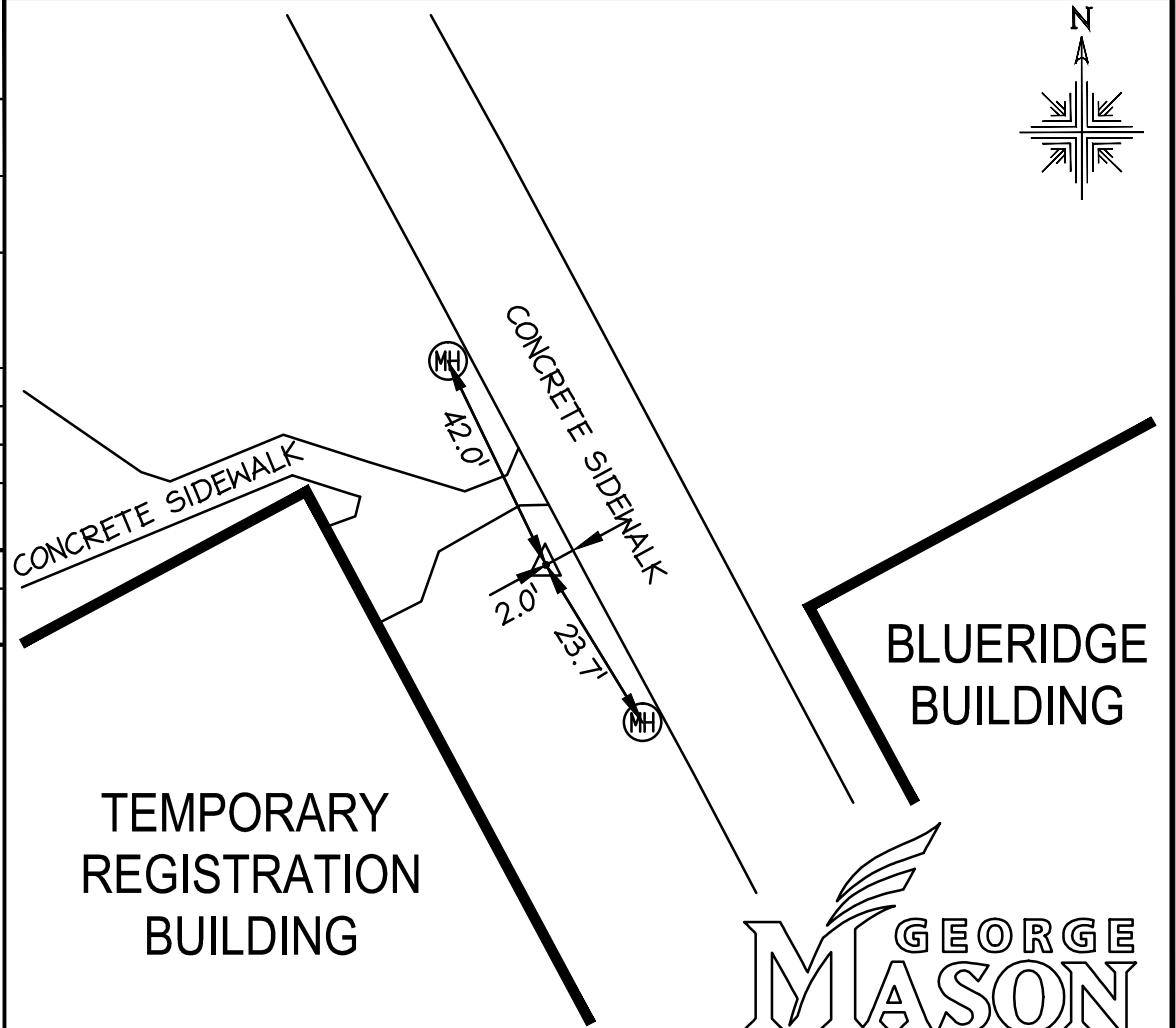
STATION DESIGNATION

FX-31

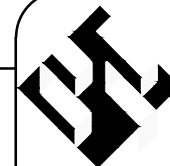
UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
**4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP**
 DATE SET: **APRIL 2012**



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

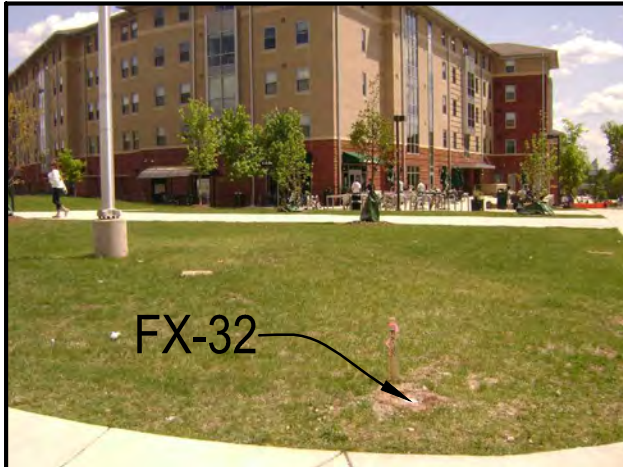
HORIZONTAL DATA

MAP PROJECTION: LAMBERT	
HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)	
COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)	
GRID NORTHING:	GRID EASTING:
6,989,000.557	11,822,579.141
LATITUDE:	LONGITUDE:
38°50'02.58280" N	77°18'27.24915" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,989,000.772	11,822,579.142
CONVERGENCE ('): \ominus 00°44'39.2"	
COMBINED FACTOR: 0.999938450	
AVG. COMBINED FACTOR: 0.999939714 (PROJECT)	

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
ELEVATION: 460.77

PHOTO AT STATION:



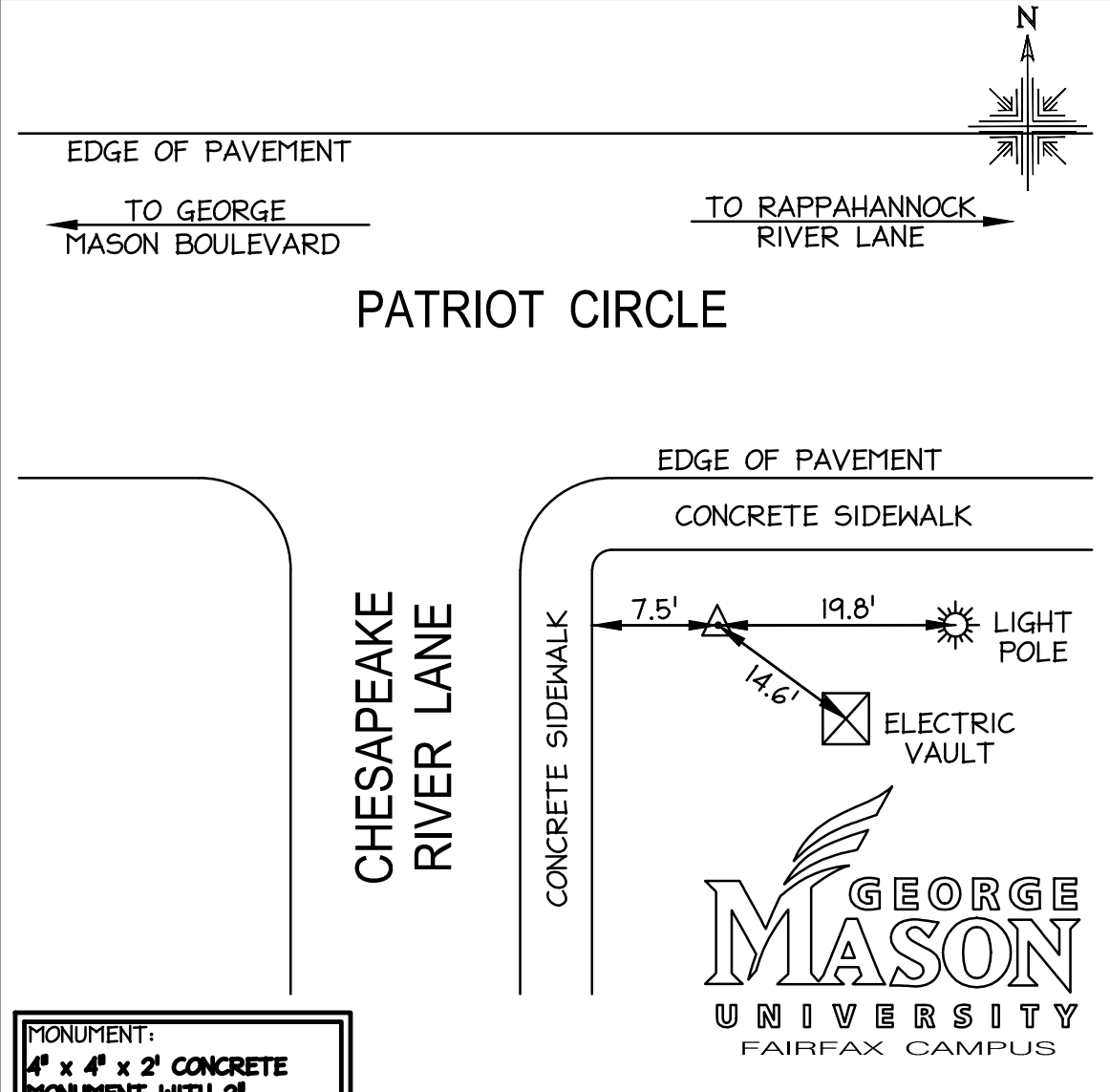
FX-32

STATION DESIGNATION

FX-32

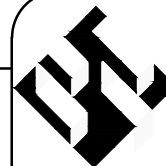
UNITS: U.S. SURVEY FOOT
CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH (NOT TO SCALE)



MONUMENT:
4' x 4' x 2' CONCRETE
MONUMENT WITH 2"
STAMPED ALUMINUM CAP
DATE SET: APRIL 2012

PROJECT NO. : 83026.043.13
SET BY : M. LOVELAND
PREPARED BY : C. FILLMORE
FIELD BOOK(S) : FB. 245 PG. 1-40



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HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,987,323.913	11,823,006.258
LATITUDE:	LONGITUDE:
38°49'45.95608" N	77°18'22.12728" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,987,324.027	11,823,006.285

CONVERGENCE (): \ominus 00°44'42.4"
 COMBINED FACTOR: 0.999939473
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 433.14

PHOTO AT STATION:



FX-34 →

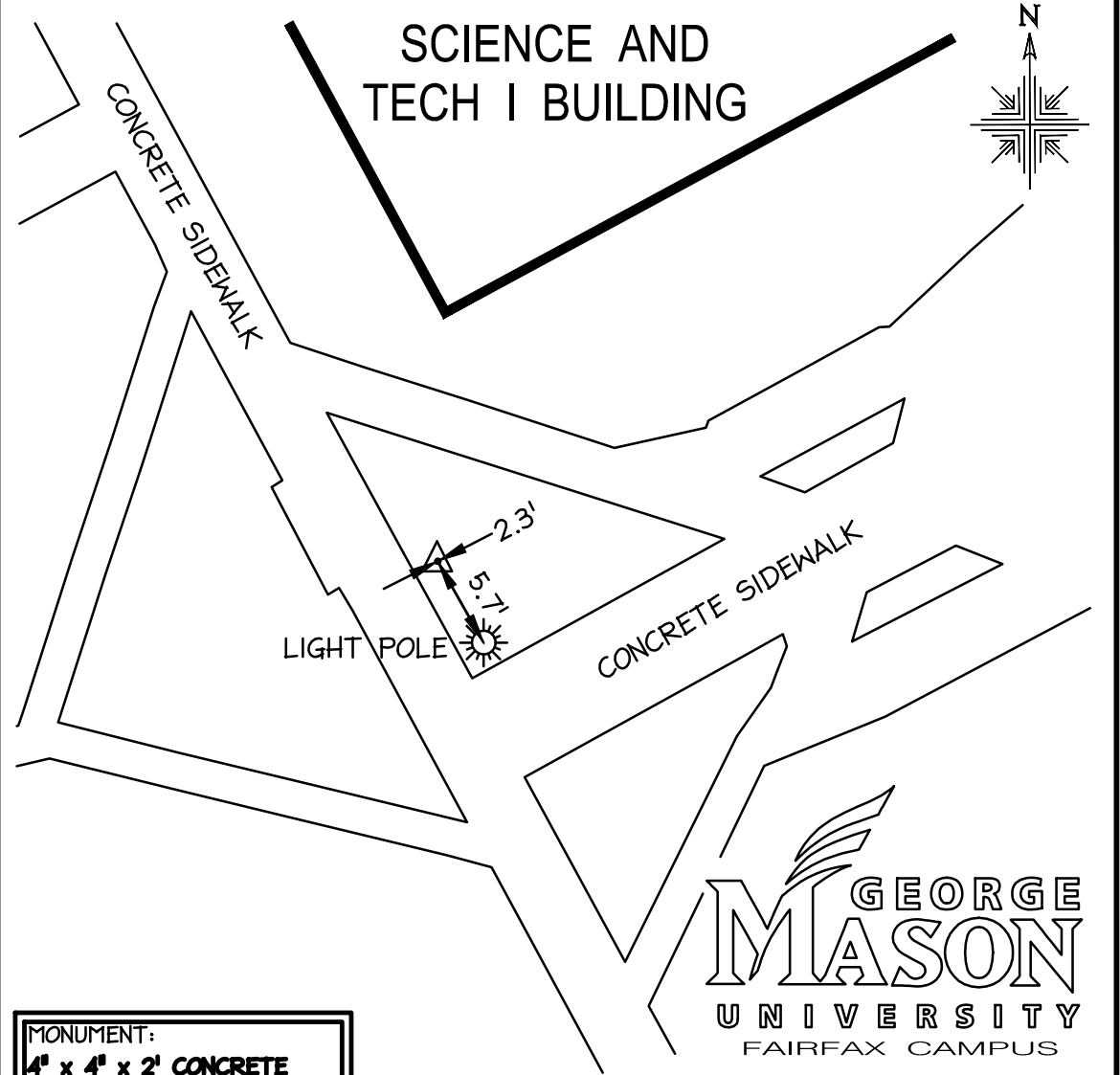
STATION DESIGNATION

FX-34

UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

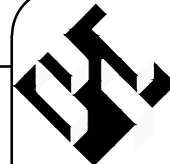
LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
 4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



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HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,987,270.839	11,823,337.625
LATITUDE:	LONGITUDE:
38°49'45.38888" N	77°18'17.94884" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,987,270.950	11,823,337.672

CONVERGENCE ('): \ominus 00°44'45.0"
 COMBINED FACTOR: 0.999940264
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 416.39

PHOTO AT STATION:



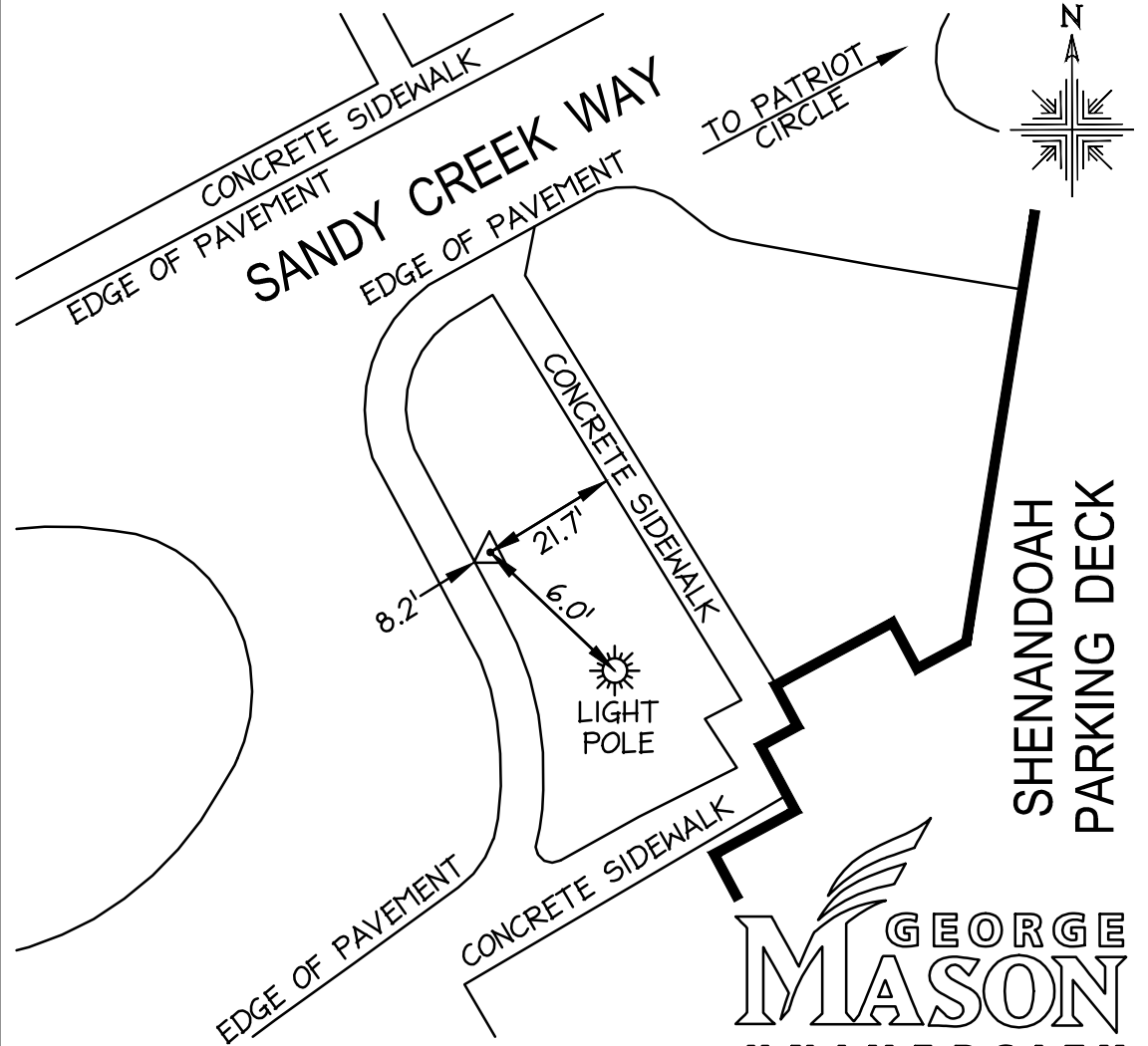
STATION DESIGNATION

FX-35

UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
 4' x 4' x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012



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PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40

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GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,987,431.202	11,823,476.409
LATITUDE:	LONGITUDE:
38°49'46.95604" N	77°18'16.16878" W
GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,987,431.322	11,823,476.465

CONVERGENCE (): \ominus 00°44'46.1"
 COMBINED FACTOR: 0.999940837
 AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 ELEVATION: 405.00

PHOTO AT STATION:



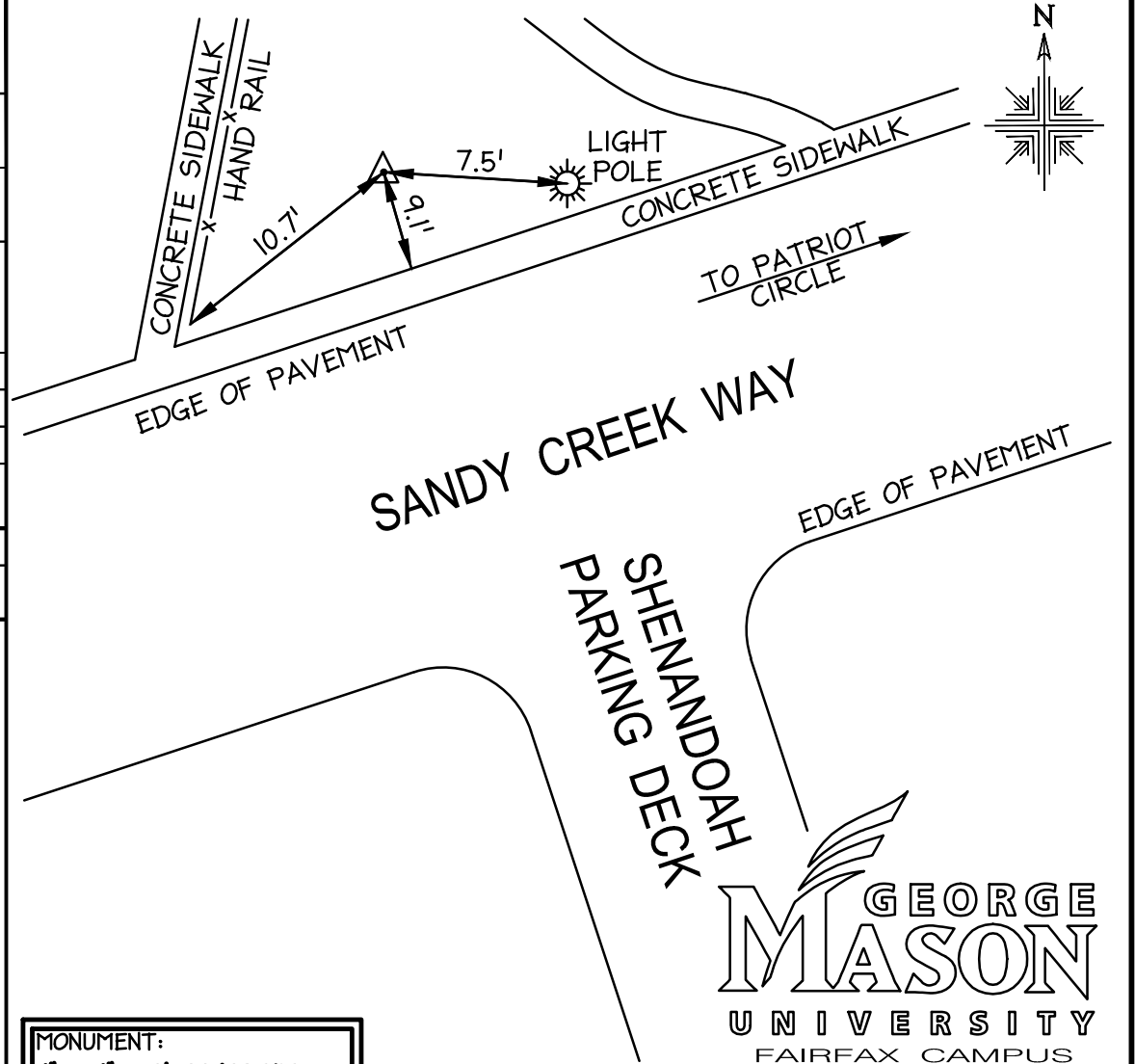
STATION DESIGNATION

FX-36

UNITS: U.S. SURVEY FOOT
 CONVERSION: 1 FOOT = 0.3048 M

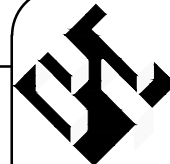
LOCATION SKETCH

(NOT TO SCALE)



MONUMENT:
 4" x 4" x 2' CONCRETE
 MONUMENT WITH 2"
 STAMPED ALUMINUM CAP
 DATE SET: APRIL 2012

PROJECT NO. : 83026.043.13
 SET BY : M. LOVELAND
 PREPARED BY : C. FILLMORE
 FIELD BOOK(S) : FB. 245 PG. 1-40



christopher consultants
 engineering - surveying - land planning

9417 Innovation Drive Manassas, VA 20110
 703.393.9887 · fax 703.393.9076

GEORGE MASON UNIVERSITY

GEODETIC SURVEY CONTROL

HORIZONTAL DATA

MAP PROJECTION: LAMBERT
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (GEOID 03)
 COORDINATE SYSTEM: VIRGINIA COORDINATE SYSTEM - NORTH (4501)

GRID NORTHING:	GRID EASTING:
6,988,591.807	11,821,810.498

LATITUDE:	LONGITUDE:
38°49'58.64131" N	77°18'37.02933" W

GMU PROJECT NORTHING:	GMU PROJECT EASTING:
6,988,592.006	11,821,810.442

CONVERGENCE ('): \ominus 00°44'33.1"

COMBINED FACTOR: 0.999939684

AVG. COMBINED FACTOR: 0.999939714 (PROJECT)

VERTICAL DATA

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

ELEVATION: 433.74

PHOTO AT STATION:



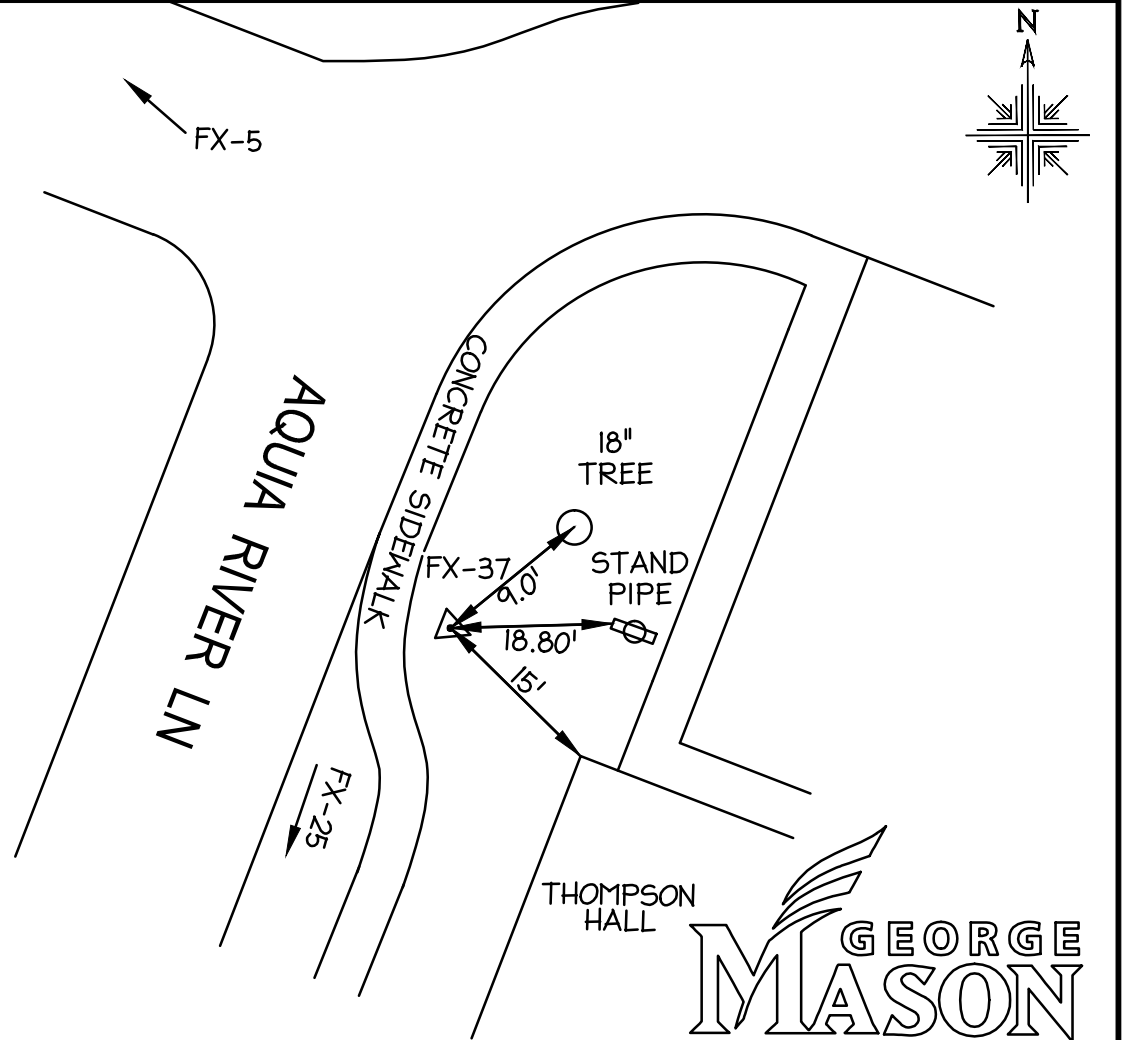
STATION DESIGNATION

FX-37

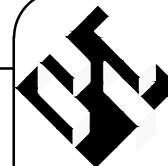
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