CONTROL REPORT

PIN SABP08 – ACCELERATED BRIDGES
BIN 1024270
NY ROUTE 38 OVER DRY CREEK
TOWN OF MORAVIA – CAYUGA COUNTY

PREPARED BY
SURVEY UNIT/DESIGN GROUP
REGION 3 – N.Y.S.D.O.T.
SYRACUSE, N.Y. 13202
2012

SURVEY SUPERVISOR: J.V. SALLIN
SURVEY COORDINATOR: P.J. OLSZEWSKI
SURVEY CREWCHIEF: R.C. KOKOSENSKI
COMPILED BY: R.C. KOKOSENSKI
T.E. SALLIN
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INTRODUCTION

PIN SABP08 – ACCELERATED BRIDGES
BIN 1024270
NY ROUTE 38 OVER DRY CREEK
TOWN OF MORAVIA – CAYUGA COUNTY

THE CONTROL SURVEY FOR THE FOLLOWING PROJECT WAS CONDUCTED BY THE NYSDOT, REGION THREE DESIGN - SURVEY UNIT. THE PURPOSE OF THIS SURVEY IS TO PROVIDE HORIZONTAL AND VERTICAL CONTROL DATA FOR MAPPING AND FUTURE CONSTRUCTION ACTIVITIES AT THIS LOCATION.

THE HORIZONTAL DATUM IS REFERENCED TO NAD 83(CORS 96), CENTRAL ZONE, NEW YORK STATE PLANE COORDINATE SYSTEM.

THE VERTICAL DATUM IS REFERENCED TO NAVD88.

ALL UNITS OF MEASURE FOR THE SURVEY ARE IN U.S. SURVEY FEET.

EQUIPMENT UTILIZED:

TOTAL STATION
MAKE: LEICA
MODEL: TS15 P
SERIAL # 1610444

DATA COLLECTOR
(MIeld CONTROLLER)
MAKE: LEICA
MODEL: CS15
SERIAL# 1593317

DIGITAL LEVEL
MAKE: LEICA
MODEL: DNA03
SERIAL# 341729

GPS EQUIPMENT
RECEIVER
MAKE: LEICA
MODEL: GS15
SERIAL# 1505324

CONTROLLER
MAKE: LEICA
MODEL: CS15
SERIAL# 1593321
A NEW PROJECT BASELINE WAS ESTABLISHED FOR THIS PROJECT AND CONSISTS OF NEW PROJECT BASELINE POINTS 325 AND 326.

THE AZIMUTH OF THE BASELINE WAS DERIVED FROM RTK ROVER CELL OBSERVATIONS OF BASELINE POINTS 325 AND 326.

THE RTK ROVER CELL COORDINATES OF BASELINE POINT 325 WERE HELD.

THE PROCEDURE FOR ESTABLISHING COORDINATES FOR BASELINE POINT 326 ARE AS FOLLOWS:

1. A TOTAL STATION INSTRUMENT WAS SET UP ON BASELINE POINT 325.

2. THE GPS DERIVED AZIMUTH FROM BASELINE POINT 325 TO BASELINE POINT 326 WAS HELD.

3. A TPS MEASURED DISTANCE FROM BASELINE POINT 325 TO BASELINE POINT 326 WAS THEN RECORDED TO ESTABLISH THE FINAL COORDINATES OF BASELINE POINT 326.

A TRAVERSE WAS NOT UTILIZED FOR THIS PROJECT LOCATION.

ALL COORDINATES ARE REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE BASED ON NAD 83 (CORS 96).

ALL AZIMUTHS AND BEARINGS ARE REFERRED TO GRID NORTH.
Points of Project: SABP08 NY38 OVER DRY CREEK CONTROL (Coordinate System: NY CENTRAL NAD83 G09 (2), Units: fts)

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Point Id</th>
<th>Northing</th>
<th>Easting</th>
<th>Ortho. Hgt</th>
<th>Posn. + Hgt. Qlty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>333 MORAVIA RM1</td>
<td>985060.944</td>
<td>863920.777</td>
<td>759.018</td>
<td>0.000</td>
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<tr>
<td></td>
<td>CBP325</td>
<td>984717.389</td>
<td>863944.450</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>CBP326</td>
<td>985209.383</td>
<td>863910.022</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

PIN SABP08
APPLIED PROJECT COMBINED SCALE FACTOR
EQUALS 1.000000000000
PIN SABP08
ACCELERATED BRIDGES
BIN 1024270
NY 38 OVER DRY CREEK
TOWN OF MORAVIA - CAYUGA COUNTY
BASELINE DIAGRAM
PIN SABP08-ACCELERATED BRIDGES
B.1N 1024270
NY ROUTE 38 OVER DRY CREEK
TOWN OF MORAVIA — CAYUGA COUNTY

List Coordinates Report

Project: SABP08_BIN_1024270_MAP_SUR_S
Alignment Name: SABP08_BIN_1024270_BL

<table>
<thead>
<tr>
<th>Point</th>
<th>Northing</th>
<th>Easting</th>
<th>Elevation</th>
<th>Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>325</td>
<td>984717.3743</td>
<td>863944.4506</td>
<td>761.070</td>
<td>CB</td>
<td></td>
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<tr>
<td>326</td>
<td>985209.3830</td>
<td>863910.0220</td>
<td>754.617</td>
<td>CB</td>
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</tbody>
</table>

Table of Clearances – Control Line Data

CONTROL LINE DATA - SABP08_BIN_1024270_BL

<table>
<thead>
<tr>
<th>POINT ID</th>
<th>STATIONING</th>
<th>DISTANCE (FEET)</th>
<th>NORTHING (Y)</th>
<th>EASTING (X)</th>
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</thead>
<tbody>
<tr>
<td>325</td>
<td>10+00.000</td>
<td>493.212</td>
<td>984717.3743</td>
<td>863944.4506</td>
</tr>
<tr>
<td>326</td>
<td>14+93.212</td>
<td>985209.3830</td>
<td>863910.0220</td>
<td></td>
</tr>
</tbody>
</table>

Horizontal Alignment Review Report

Project: SABP08_BIN_1024270_MAP_SUR_S
Alignment Name: SABP08_BIN_1024270_BL
Alignment Description: 2012 SURVEY BASELINE
Alignment Style: CB

Element: Linear

<table>
<thead>
<tr>
<th>Station</th>
<th>Northing</th>
<th>Easting</th>
</tr>
</thead>
<tbody>
<tr>
<td>POB</td>
<td>(325)</td>
<td>10+00.000</td>
</tr>
<tr>
<td>POE</td>
<td>(326)</td>
<td>14+93.212</td>
</tr>
</tbody>
</table>

Tangential Direction: N 4°00'10" W
Tangential Length: 493.212
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION
CONTROL SURVEY DATA
BASED ON THE
NEW YORK STATE PLANE COORDINATE SYSTEM
VALUES IN SURVEY FEET

CITY, VILLAGE OR TOWN  COUNTY  S.H. No.  STATION NAME  @ STATION  MONUMENT TYPE
MORAVIA  CAYUGA  1016  325  10+00.000  2 FOOT LONG REBAR W/ CAP

NORTHING: 984717.374 FT  EASTING: 863944.451 FT
HORIZONTAL DATUM: NAD 83/CORS 96  SURVEYING METHOD: GPS
VERTICAL DATUM: NAVD 88

COMBINED FACTOR: 1.0000  GRID SCALE FACTOR: 1  ELLIPS. REDUCTION FACTOR: 1

DISTANCES & DIRECTIONS TO BACKSIGHTS AND FORESIGHTS
OBJECT  GRID BEARING  GRID DISTANCE
326  NO4-00-10W  493.21 FT

ESTABLISHED BY  YEAR
NYS DOT  2012

DETAILED DESCRIPTION AT STATION: BASELINE POINT 325 IS A TWO FOOT LONG REBAR WITH CAP AND IS LOCATED ON THE WEST SIDE OF NEW YORK STATE ROUTE 38, 270 FT SOUTH OF THE INTERSECTION OF VAN PELT ST. AND NEW YORK STATE ROUTE 38.
BASELINE POINT 326 IS A TWO FOOT LONG REBAR WITH CAP AND IS LOCATED ON THE WEST SIDE OF NEW YORK STATE ROUTE 38, 222 FT N OF THE INTERSECTION OF VAN PELT ST AND NEW YORK STATE ROUTE 38.
RTK ROVER CELL SOLUTIONS WERE USED TO ESTABLISH THE ELEVATION OF A RECOVERED NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION FLOOD PLAIN ELEVATION MARK MORAVIA RM1.

INFORMATION PERTAINING TO FLOOD PLAIN ELEVATION MARK MORAVIA RM1 WAS NOT MADE AVAILABLE BY THE NYSDEC.

THE REMAINING VERTICAL CONTROL FOR THIS PROJECT LOCATION WAS ESTABLISHED BY PERFORMING A LEVEL RUN WHICH UTILIZED A DIGITAL LEVEL AND BAR CODED STAFF.

THIS LEVEL RUN BEGAN AT FLOOD PLAIN ELEVATION MARK MORAVIA RM1 AND PASSED THROUGH NEW PROJECT BASELINE POINTS; 325 AND 326, NEW PROJECT BENCHMARKS; 1 AND 2, AND CLOSED BACK ON FLOOD PLAIN ELEVATION MARK MORAVIA RM1

THIS LEVEL RUN CLOSED WITH AN ERROR OF 0.003 FEET, WITH AN ALLOWABLE ERROR OF 0.021 FEET AND MEASURED 1062± FEET IN LENGTH.

THE LEVEL RUN WAS ADJUSTED UTILIZING “LEICA GEO OFFICE” PROCESSING SOFTWARE.
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION
CONTROL SURVEY DATA
BASED ON THE
NEW YORK STATE PLANE COORDINATE SYSTEM
VALUES IN SURVEY FEET

CITY, VILLAGE OR TOWN | COUNTY | S.H. No. | STATION NAME | 8 STATION | MONUMENT TYPE
------------------------|--------|----------|--------------|-----------|-----------------
MORAVIA                | CAYUGA | 1016     | MORAVIA RMI  | RM        | ALUMINUM CAP IN CONCRETE

NORTHING:              
EASTING:               
ELEVATION: 759.02 FT

DIRECTIONS & DISTANCES TO BACKSIGHTS AND FORESIGHTS
GRID SCALE FACTOR:
ELLIPS. REDUCTION FACTOR:
ESTABLISHED BY: NYS DOT 2012

BENCHMARK MORAVIA RMI IS AN ALUMINUM CAP SET IN CONCRETE AND IS STAMPED "NY DEC FLOOD PLAIN ELEVATION MARK: MORAVIA RMI" AND IS LOCATED IN THE TOP OF NORTHWEST WINGWALL OF THE NEW YORK STATE ROUTE 38 BRIDGE OVER DRY CREEK, 73 FT NORTH OF THE INTERSECTION OF VAN PELT ST. AND NEW YORK STATE ROUTE 38.
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION
CONTROL SURVEY DATA
BASED ON THE
NEW YORK STATE PLANE COORDINATE SYSTEM
VALUES IN SURVEY FEET

<table>
<thead>
<tr>
<th>CITY, VILLAGE OR TOWN</th>
<th>COUNTY</th>
<th>S.H. No.</th>
<th>STATION NAME</th>
<th>@ STATION</th>
<th>MONUMENT TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MORAVIA</td>
<td>CAYUGA</td>
<td>1016</td>
<td>BMI</td>
<td></td>
<td>CHISELED &quot;X&quot; IN BOLT</td>
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</table>

NORTHING: MORAVIA CAYUGA 1016

EASTING:

ELEVATION:

VERTICAL DATUM: NAVD 88

SURVEYING METHOD: GPS

COMBINED FACTOR: DISTANCES & DIRECTIONS TO BACKSIGHTS AND FORESIGHTS

GRID SCALE FACTOR: OBJECT GRID BEARING GRID DISTANCE

ELLIPS. REDUCTION FACTOR:

<table>
<thead>
<tr>
<th>ESTABLISHED BY</th>
<th>YEAR</th>
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<tbody>
<tr>
<td>NYSNIT</td>
<td>2012</td>
</tr>
</tbody>
</table>

DETAILED DESCRIPTION AT STATION: BMI IS A CHISELED "X" IN THE EAST FLANGE BOLT OF A FIREHYDRANT AND IS LOCATED ON THE WEST SIDE OF NEW YORK STATE ROUTE 38, 118 FT SOUTH OF THE INTERSECTION OF VAN PELT ST. AND NEW YORK STATE ROUTE 38.

![Diagram of the area showing BMI, a fire hydrant, and nearby streets and landmarks.]
## New York State Department of Transportation
### Control Survey Data
Based on the New York State Plane Coordinate System

**Values in Survey Feet**

<table>
<thead>
<tr>
<th>City, Village or Town</th>
<th>County</th>
<th>S.H. No.</th>
<th>Station Name</th>
<th>@ Station</th>
<th>Monument Type</th>
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</thead>
<tbody>
<tr>
<td>Moravia</td>
<td>Cayuga</td>
<td>1016</td>
<td>BM2</td>
<td></td>
<td>Mag Nail in Concrete</td>
</tr>
</tbody>
</table>

### Northing:
- Horizontal Datum: NAD 83 CORS 96
- Surveying Method: GPS
- Conventional

### Easting:
- Elevation: 756.20 ft
- Vertical Datum: NAVD 88
- Surveying Method: GPS
- Conventional

### Combined Factor
- Distances & Directions to Backsights and Foresights

### Grid Scale Factor
- **Object Grid Bearing Grid Distance**

**Ellips. Reduction Factor:**

**Established By:**
- **Nysdot**

**Year:**
- 2012

**Detailed Description at Station:** BM2 is a Mag Nail set in the top of a concrete light pole foundation and is located on the east side of New York State Route 38, 142 ft N of the intersection of New York State Route 38 and Van Pelt St.

---

**Map Diagram:**
- Millord Fillmore Elementary School
- BM2 Light Pole
- South Entrance to School
- Dry Creek
- New York State Route 38
<table>
<thead>
<tr>
<th>Comment</th>
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<th>Fore</th>
<th>Distance</th>
<th>Total Dist.</th>
<th>Height</th>
<th>Point Class</th>
<th>Point Subclass</th>
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<tbody>
<tr>
<td>✓</td>
<td>MORAVIA RM1</td>
<td>5.662</td>
<td>107.93</td>
<td></td>
<td>759.018</td>
<td></td>
<td>Control</td>
<td>Fixed in Height</td>
</tr>
<tr>
<td>✓</td>
<td>BM1</td>
<td>1.844</td>
<td>84.31</td>
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<td></td>
<td>192.25</td>
<td>Measured</td>
<td>None</td>
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<tr>
<td>✓</td>
<td>BM1</td>
<td>2.792</td>
<td>81.72</td>
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<td></td>
<td>344.86</td>
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<td>✓</td>
<td>CBP325</td>
<td>4.557</td>
<td>70.90</td>
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<td></td>
<td>361.10</td>
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<td>✓</td>
<td>BM2</td>
<td>8.488</td>
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<td>513.11</td>
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<tr>
<td>✓</td>
<td>CBP326</td>
<td>6.758</td>
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<td>913.11</td>
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<td>1061.74</td>
<td>759.018</td>
<td>Control</td>
<td>Fixed in Height</td>
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</tbody>
</table>
Level Summary
SABP.08_NY38 OVER DRY CREEK_LEVEL RUN
04/03/2012 07:18:08

Project Information

Project name: SABP.08_NY38 OVER DRY CREEK_LEVEL RUN
Date created: 04/03/2012 07:18:08
Application software: LEICA Geo Office 8.0

Line 001

Line length: 1061.745 fts
Method: BF
Start point id: MORAVIA RM1
Number of stations: 5
Date/time: 04/03/2012 01:46:30
Number of observations: 10

Processing Parameters
Adjustment method: by distance
Processed with Staff Corrections: No
Height difference: 0.003 fts

Tolerance
Permitted [fts]
Actual [fts]
Accepted

Points

<table>
<thead>
<tr>
<th>Point Id</th>
<th>Epoch</th>
<th>Height [fts]</th>
<th>Corr [fts]</th>
<th>Delta Hgt. [fts]</th>
<th>Point Class</th>
<th>Sd. Hgt. [fts]</th>
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<tbody>
<tr>
<td>MORAVIA RM1</td>
<td>04/03/2012 01:46:31</td>
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<td>Control</td>
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<tr>
<td>BM1</td>
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<td>762.835</td>
<td>-0.001</td>
<td>3.817</td>
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<td>CBP325</td>
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<td>761.070</td>
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<td>BM2</td>
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<td>4.401</td>
<td>Control</td>
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