REPORT

FA Project #151021.09
March 2017

SURVEY
CONTROL REPORT

NEW YORK STATE THRUWAY AUTHORITY
I-90 BRIDGE OVER ORISKANY BLVD. (NYS ROUTE 69)
BIN 5009929
MP 238.22
THE MOKAWK SECTION
COUNTY OF ONEIDA
D214386
ASSIGNMENT #9

Prepared for:

NEW YORK STATE THRUWAY AUTHORITY

Surveyed By:
M. Eltz, L.S.....Project Manager
C. Pascuzzo, L.S.....Project Surveyor
M. Miller.....CADD
S. Michaloski ..... Crew Chief
J. Scuderi .... Instrument Person

FISHER ASSOCIATES

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New York State
Thruway Authority

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FISHER ASSOCIATES

New York State Thruway Authority

Project Narrative

The survey described herein was performed for the following purposes:

Providing detailed boundary and topographic survey and mapping services for the design of replacing the mainline bridge over Oriskany Boulevard, (BIN 5009929). The survey limits of the project were as follows;

- 1500 feet beyond each abutment of the bridge along the mainline,
  - Bandwidth along the mainline is the full width from ROW to ROW.
- And, 300 feet north and south from the mainline bridge fascia along Oriskany Boulevard.
  - Bandwidth along Mohawk Street is ROW to ROW plus 20-feet on each side.

The project is located at MP 238.22 along I-90 in the Town of Whitesboro, Oneida County.

Fisher Associates provided conventional base mapping and topography (DTM) in Microstation V8i and InRoads as per NYSDOT CADD Standards and Procedures.

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Horizontal and Vertical Narrative

Primary control points CP 10, CP 20 were established by Fisher Associates using Static GPS methods from the NYS CORS Network. All horizontal values are English units in US Survey Feet and refer to the New York State Plane Coordinate System Central Zone, NAD 83 (2011) Epoch 2010.00. CP 10 and CP 20 are located under Interstate 90 (NYS Thruway) along Oriskany Boulevard (NYS Route 69) with the project having Contract No. D214386 (Assignment 9).

Conventional traversing was run utilizing a Leica TCRP 1203 Robotic Total Station, which measures angles to 3 seconds of arc. Fisher Associates set on CP 10 and back sighted CP 20 for a distance check and held the measured azimuth. Fisher then continued to set secondary control points throughout the project limits.

The control network was then adjusted using the Star-Net Least Squares adjustment program.

Elevations are referenced to the North American Vertical Datum of 1988 (Geoid 12A) using Static GPS methods from the NYS CORS Network.

The primary vertical benchmarks BM 1 and BM 2 were established by Fisher Associates. Holding the static elevation for CP 10, Fisher Associates ran a differential level run through the horizontal control point CP 20, BM 1 and BM 2 and back to CP 10. The differential level run closed on CP 10 with 0.00 feet of misclosure. No elevation adjustments were made.

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SURVEY REPORT

I-90 OVER ORISKANY BLVD. (NYS ROUTE 69)
MP 238.22
THE MOHAWK SECTION
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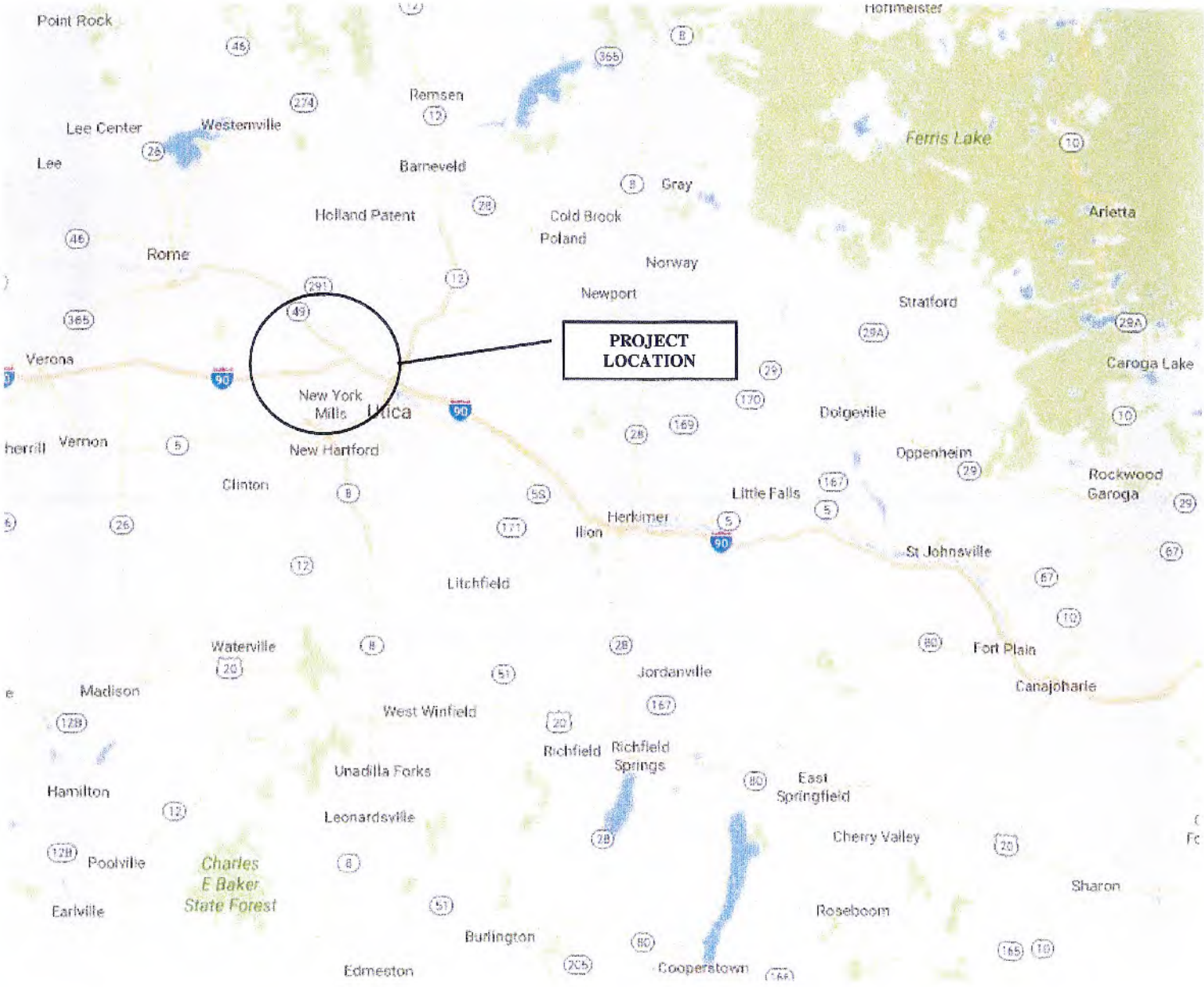
GENERAL LOCATION MAP

Not to scale



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Boundary Procedures

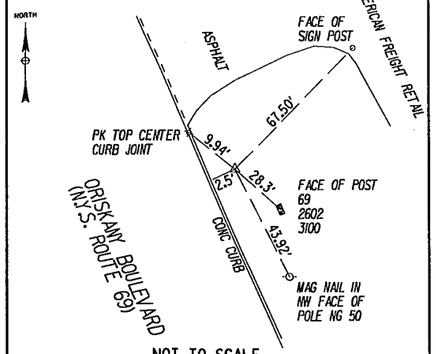
Highway boundaries shown in the mapping for this project were plotted based on existing Record Plans MT 53-7 and acquisition maps for the New York State Thruway - The Mohawk Section, County of Oneida, Subdivision No. 8, District No. 2 and acquisition maps for the Whitesboro-Yorkville PT. 1, S.H. No. 8510. Fisher associates located existing monumentation along Interstate 90 and N.Y. Route 69 (S.H. 8510) to establish the highway boundaries.

The highway boundaries were determined through the analysis of record mapping and existing monumentation. Numerous monuments were located throughout the limits of the project and beyond. After an exhaustive analysis, it was determined to hold the geometry of the computed acquisition maps and place the highway boundaries by holding the monument located at the Southwest corner of Parcel 543, Map 462R-1, at station 1818+93±, 230 feet right and rotating the highway boundary geometry to the monument located at Southeast corner of Parcel 340, Map 292, at station 1847+21, 155± feet right.

CB 10 **10+00.00**

CB 10 IS A 5/8" REBAR WITH ALUMINUM CAP
STAMPED FISHER ASSOCIATES

N 30°06'05" W 811.39' TO CB 20



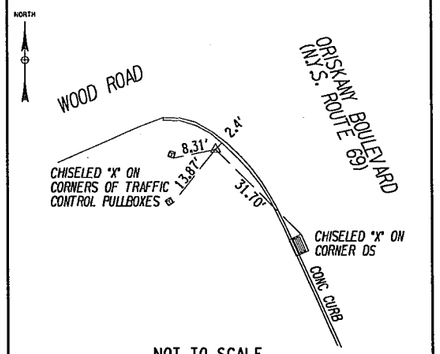
NOT TO SCALE

GRID COORDINATES
N = 1142646.56 E = 1162789.46 ELEV = 431.82'

CB 20 **18+11.39**

CB 20 IS A 5/8" REBAR WITH ALUMINUM CAP
STAMPED FISHER ASSOCIATES

S 30°06'05" E 811.39' TO CB 10



NOT TO SCALE

GRID COORDINATES
N = 1143348.53 E = 1162382.52 ELEV = 430.47'

BENCH MARK TABLE		
BENCHMARK NO.	ELEVATION	DESCRIPTION
1	431.01'	CHISELED "X" ON THE SOUTHERLY CORNER OF A TRAFFIC CONTROL PULL BOX, EAST SIDE OF ORISKANY BLVD, NORTH OF THE THRUWAY
2	430.35'	CHISELED "X" ON THE NORTHWESTERLY RIM OF WATER MANHOLE, EAST SIDE OF ORISKANY BLVD, SOUTH OF THE THRUWAY

SURVEY NOTES:

1. PRIOR TO INITIATION OF THE PROJECT, THE CONTRACTOR SHALL VERIFY BENCHMARK ELEVATIONS AND RE-ESTABLISH THE SURVEY CONTROL BASELINE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE E.I.C.

2. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD AND PRESERVE ALL SURVEY CONTROL MONUMENTS AND R.O.W. MONUMENTS IN THE AREA OF CONSTRUCTION. EXISTING SURVEY MONUMENTS DISTURBED OR DESTROYED BY THE CONTRACTOR SHALL BE REPAIRED OR RESTORED AT THE CONTRACTOR'S EXPENSE.

3. THE HORIZONTAL DATUM SHOWN HEREON IS REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, TRANSVERSE MERCATOR PROJECTION, NAD 83 (2011) EPOCH 2010.00 USING GPS PROCEDURES AND THE NEW YORK STATE DOT CORS NETWORK, IN US SURVEY FEET. BEARINGS AND DISTANCES SHOWN HEREON ARE GRID. THE AVERAGE PROJECT COMBINED GRID AND ELEVATION FACTOR IS 1.0000SS20.

4. THE VERTICAL DATUM SHOWN HEREON IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID 12A) IN US SURVEY FEET, USING GPS PROCEDURES.

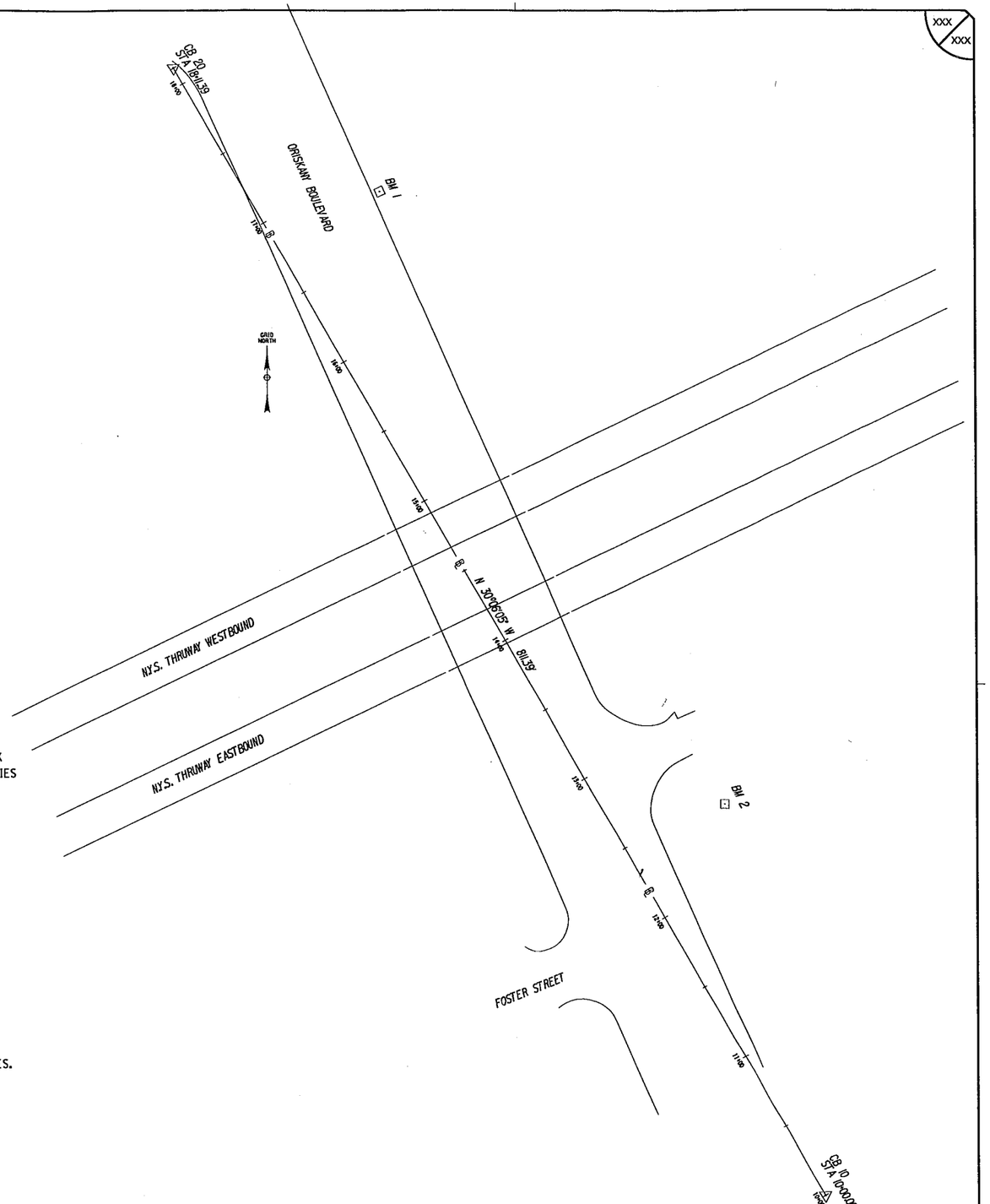
5. THE HORIZONTAL CONTROL FOR THIS PROJECT CONSISTS OF ONE PRIMARY CONTROL NETWORK FROM SOUTH TO NORTH ALONG ORISKANY BOULEVARD. THE PRIMARY CONTROL BEGINS ON FISHER CONTROL POINT 10 SOUTH OF THE THRUWAY AND CLOSES ON FISHER CONTROL POINT 20 NORTH OF THE THRUWAY. UNDER THIS CONTRACT D214386, THE PROJECT LIMITS ARE WITHIN THE LIMITS OF THE PRIMARY CONTROL.

GENERAL NOTES:

1. BASELINE DATA FOR CB 10 AND CB 20 ON THIS SHEET.
2. BENCHMARK DESCRIPTIONS ARE SHOWN ON ON THIS SHEET.

ABBREVIATIONS

MH MANHOLE
GV GAS VALVE
WV WATER VALVE



ALTERED ON:	AFFIXED ON:
SIGNATURE: STAMP:	SIGNATURE: STAMP:

IT IS A VIDLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYDR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, DR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE. THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIDNS			
DATE	DESCRIPTION	BY	SYM.

NEW YORK STATE OF OPPORTUNITY. Thruway Authority | Canal Corporation

TITLE OF PROJECT: I-90 BRIDGE OVER ORISKANY BOULEVARD
LOCATION OF PROJECT: M.P. 238.22 SYRACUSE DIVISION
TITLE OF DRAWING: SURVEY CONTROL BASELINE CONTROL POINT TIES

CONTRACT NUMBER: D214386
DATE: 03/17/17
DRAWING NUMBER: SCP-1

File
CHECKED BY: ME
DRAFTED BY: MM
DESIGNED BY: TA
DESIGN SUPERVISOR: TA

STAR*NET-PRO Version 6.0.32
Copyright 1988-2005 Starplus Software, Inc.
Licensed for Use by Fisher Associates PC
Run Date: Mon Dec 19 2016 13:27:37

Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name WHITESBORO
Project Folder H:\PROJECTS\...\SUR\STARNET\WHITESBORO
Data File List 1. 21061123 edit.dat

Project Option Settings

STAR*NET Run Mode	: Adjust with Error Propagation
Type of Adjustment	: 3D
Project Units	: FeetUS; DMS
Coordinate System	: Mercator NAD83; NY Central 3102
Geoid Height Model	: H:\PROJECTS\...\NYGEOID12A.GHT
Longitude Sign Convention	: Positive West
Input/Output Coordinate Order	: North-East
Angle Data Station Order	: At-From-To
Distance/Vertical Data Type	: Slope/Zenith
Convergence Limit; Max Iterations	: 0.001000; 10
Default Coefficient of Refraction	: 0.070000
Create Coordinate File	: Yes
Create Geodetic Position File	: No
Create Ground Scale Coordinate File	: No
Create Dump File	: No

Instrument Standard Error Settings

Project Default Instrument

Distances (Constant)	:	0.030000 FeetUS
Distances (PPM)	:	0.000000
Angles	:	4.000000 Seconds
Directions	:	3.000000 Seconds
Azimuths & Bearings	:	4.000000 Seconds
Zeniths	:	10.000000 Seconds
Elevation Differences (Constant)	:	0.050000 FeetUS
Elevation Differences (PPM)	:	0.000000
Differential Levels	:	0.010000 FeetUS / Mile
Centering Error Instrument	:	0.000000 FeetUS
Centering Error Target	:	0.000000 FeetUS
Centering Error Vertical	:	0.000000 FeetUS

Company Library Instrument LeicaTCRP1203
Note: New 12/04 3" robotic total station

Distances (Constant)	:	0.006562 FeetUS
Distances (PPM)	:	2.000000
Angles	:	4.000000 Seconds
Directions	:	2.000000 Seconds
Azimuths & Bearings	:	4.000000 Seconds
Zeniths	:	10.000000 Seconds
Elevation Differences (Constant)	:	0.004921 FeetUS
Elevation Differences (PPM)	:	2.000000
Differential Levels	:	0.010000 FeetUS / Mile
Centering Error Instrument	:	0.006562 FeetUS
Centering Error Target	:	0.005577 FeetUS
Centering Error Vertical	:	0.005577 FeetUS

Listing of Input Data
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```
[File: H:\Projects\151021-09-Rplcmt_8_Bridges\Sur\Starnet\Whitesboro\21061123 edit.dat]
# STAR*CARLSON Version 1.0.3
# Copyright 2005 Starplus Software, Inc.

# Input Field File : H:\Projects\151021-09-Rplcmt_8_Bridges\Sur\Field\Whitesboro Site - MP238.22
# Date Processed   : 12-19-2016 08:03:36

.Units  FeetUS
.Units  DMS
.Order  AtFromTo
.Sep    -
.3D


# These coordinates are from gps in the field
# C  10              1142646.60000 1162789.45000   431.88000 'CB
# C  20              1143348.55580 1162382.57230   430.52000 'CB

#These coordinates are from static gps
C  10     1142646.56000 1162789.46000   431.82000   ! ! !  'CB 10
C  20     1143348.60000 1162382.52000   430.47000   * ! !  'CB 20

.instrument LeicaTCRP1203

# Job  : 21061123
# Date : 11-20-2016
# Time : 02:09:30

.Delta  Off
#DV 10-20                          811.3512  90-06-10.00   4.830/4.820 'CB
SS 10-20-100         359-59-59.00   811.3516  90-06-07.00   4.830/4.820 'CHK@BS
SS 10-20-388           0-00-05.00   811.3486  90-06-07.00   4.830/4.820 'CHK@BS

DV 10-20                          811.3512  90-06-10.00   4.840/4.850 'CB
SS 10-20-389           0-00-03.00   811.3532  90-06-06.00   4.840/4.850 'CHK@BS
DV 10-20                          811.3504  90-05-48.00   4.840/4.850 'CB
M  10-20-11          345-59-55.00   406.2680  87-13-21.50   4.840/4.730 'CB 11
DV 10-20                          811.3514  90-05-47.50   4.840/4.850 'CB
M  10-20-12           30-41-29.00   425.3820  87-46-35.50   4.840/5.050 'CB 12
DV 10-20                          811.3504  90-05-45.00   4.840/4.850 'CB
M  10-20-13           48-59-16.50   383.8738  91-13-44.00   4.840/4.950 'CB 13
DV 10-20                          811.3529  90-05-47.00   4.840/4.850 'CB
M  10-20-14            5-44-16.50   449.6811  89-53-17.00   4.840/5.020 'CB 14
DV 10-20                          811.3519  90-05-45.50   4.840/4.850 'CB
M  10-20-15          355-44-14.00   442.4419  89-53-49.00   4.840/5.020 'CB 15
DV 10-20                          811.3506  90-05-45.50   4.840/4.850 'CB
M  10-20-16          357-37-42.00   567.4497  89-57-20.00   4.840/5.020 'CB 16

DV 13-10                          383.8682  88-48-36.00   5.200/4.880 'CB
SS 13-10-390         359-59-56.00   383.8669  88-48-37.00   5.200/4.880 'CHK@BS
SS 13-10-433         359-59-44.00   383.8676  88-48-33.00   5.200/4.880 'CHK@BS

DV 10-20                          811.3486  90-06-12.00   5.200/5.160 'CB
SS 10-20-434         359-59-59.00   811.3480  90-06-13.00   5.200/5.160 'CHK@BS

DV 12-10                          425.3759  92-12-18.50   5.100/5.050 'CB
SS 12-10-529           0-00-0.00    425.3754  92-12-18.00   5.100/5.050 'CHK@BS
DV 12-10                          425.3764  92-12-01.50   5.100/5.050 'CB
M  12-10-17          243-55-59.50   424.9727  90-33-03.50   5.100/4.790 'CB 17
M 12-10-13           296-43-45.00   137.1315 100-22-19.00   5.100/5.020 'CHK@13
M 12-10-11            64-25-43.00   316.4207  89-22-48.00   5.100/5.020 'CHK@11
```

DV 17-12		424.9742	89-29-25.00	5.030/5.070 'CB
SS 17-12-600	0-00-01.00	424.9739	89-29-24.00	5.030/5.070 'CHK@BS
SS 17-12-676	0-00-06.00	424.9742	89-29-25.00	5.030/5.070 'CHK@BS
DV 11-10		406.2794	92-49-56.00	5.290/5.050 'CB
SS 11-10-677	0-00-01.00	406.2785	92-49-55.00	5.290/5.050 'CHK@BS
DV 11-10		406.2770	92-49-36.50	5.290/5.050 'CB
M 11-10-18	108-34-13.50	528.5891	88-51-16.00	5.290/4.710 'CB 18
DV 18-11		528.6068	91-13-25.50	5.150/5.060 'CB
SS 18-11-681	0-00-0.00	528.6065	91-13-23.00	5.150/5.060 'CHK@BS
SS 18-11-931	0-00-02.00	528.6800	91-13-26.00	5.150/5.060 'CHK@BS
M 18-11-932	0-09-21.00	181.3066	91-47-57.00	5.150/5.020 'CBS 932
M 18-11-933	0-06-46.00	304.7239	91-30-29.00	5.150/5.020 'CBS 933
M 18-11-934	0-20-44.00	419.3887	91-22-27.00	5.150/5.020 'CBS 934
DV 16-10		567.4297	90-03-24.00	5.050/4.780 'CB
SS 16-10-935	0-00-07.00	567.4304	90-03-23.00	5.050/4.780 'CHK@BS
M 16-10-20	187-51-29.00	245.5143	90-22-44.00	5.050/5.020 'CHK@20
DV 20-10		811.3478	89-55-04.50	5.100/4.980 'CB
SS 20-10-1363	359-59-59.00	811.3480	89-55-04.00	5.100/4.980 'CHK@BS
DV 20-10		811.3484	89-54-45.50	5.100/4.980 'CB
M 20-10-21	334-03-44.00	357.6182	86-52-43.00	5.100/5.380 'CB 21
M 20-10-14	352-57-41.00	366.6830	89-41-37.00	5.100/5.020 'CHK@14
DV 21-20		357.6323	93-11-03.00	5.500/4.860 'CB
SS 21-20-1535	0-00-01.00	357.6320	93-11-04.00	5.500/4.860 'CHK@BS
DV 21-20		357.6332	93-10-46.50	5.500/4.860 'CB
M 21-20-23	120-40-25.00	464.0490	90-36-01.00	5.500/5.160 'CB 23
SS 21-20-1536	309-40-03.00	196.2121	94-51-24.00	5.500/5.020 'MPM
DV 21-20		357.6323	93-10-46.50	5.500/4.860 'CB
M 21-20-24	300-46-43.50	803.1402	89-03-28.00	5.500/4.880 'CB 24
SS 21-20-1684	359-59-59.00	357.6323	93-11-06.00	5.500/4.860 'CHK@BS
DV 14-10		449.6855	90-06-36.00	5.240/5.100 'CB
SS 14-10-1685	359-59-59.00	449.6865	90-06-37.00	5.240/5.100 'CHK@BS
M 14-10-15	79-42-20.00	78.0480	90-13-06.00	5.240/5.020 'CHK@15
DV 15-10		442.4387	90-06-48.00	5.340/5.100 'CB
SS 15-10-1709	0-00-0.00	442.4387	90-06-48.00	5.340/5.100 'CHK@BS
M 15-10-16	188-32-36.00	126.0727	90-18-07.00	5.340/5.020 'CHK@16
DV 24-21		803.1316	90-56-16.00	4.920/5.680 'CB
SS 24-21-1732	359-59-58.00	803.1323	90-56-16.00	4.920/5.680 'CHK@BS
SS 24-21-1797	0-00-03.00	803.1326	90-56-17.00	4.920/5.680 'CHK@BS
DV 23-21		464.0635	89-19-18.00	4.650/5.680 'CB
SS 23-21-1798	0-00-0.00	464.0625	89-19-18.00	4.650/5.680 'CHK@BS
SS 23-21-1894	0-00-05.00	464.0635	89-19-14.00	4.650/5.680 'CHK@BS
DV 11-10		406.2896	92-50-50.00	5.190/4.840 'CB
SS 11-10-1895	359-59-59.00	406.2893	92-50-50.00	5.190/4.840 'CHK@BS
M 11-10-934	107-14-31.00	109.2477	89-25-27.00	5.190/5.020 'CHK@934
SS 11-10-1944	0-00-03.00	406.3716	92-50-44.00	5.190/4.840 'CHK@BS
DV 934-18		419.3871	88-37-04.00	4.770/5.020 'CB
SS 934-18-1945	359-59-59.00	419.3949	88-37-04.00	4.770/5.020 'CHK@BS
M 934-18-933	0-36-50.00	114.6826	88-51-07.00	4.770/5.020 'CHK@933
DV 933-18		304.6917	88-31-13.00	5.020/5.020 'CB
SS 933-18-1961	0-00-08.00	304.6970	88-31-13.00	5.020/5.020 'CHK@BS
M 933-18-11	179-44-05.00	223.9046	90-50-25.00	5.020/5.020 'CHK@11
DV 932-18		181.3105	88-09-10.00	4.740/5.020 'CB
SS 932-18-1998	359-59-52.00	181.3194	88-09-10.00	4.740/5.020 'CHK@BS

M 932-18-11 179-45-49.00 347.3052 90-52-56.00 4.740/5.020 'CHK

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetUS) = 2

Fixed Stations	N	E	Elev	Description
10	1142646.5600	1162789.4600	431.8200	CB 10

Partially Fixed	N	E	Elev	Description
	StdErr	StdErr	StdErr	
20	1143348.6000	1162382.5200	430.4700	CB 20
	FREE	FIXED	FIXED	

Number of Measured Angle Observations (DMS) = 24

At	From	To	Angle	StdErr	t-T
10	20	11	345-59-55.00	5.40	0.03
10	20	12	30-41-29.00	5.40	0.02
10	20	13	48-59-16.50	5.87	0.03
10	20	14	5-44-16.50	5.14	0.02
10	20	15	355-44-14.00	5.17	0.03
10	20	16	357-37-42.00	4.76	0.02
12	10	17	243-55-59.50	7.74	-0.05
12	10	13	296-43-45.00	13.34	-0.03
12	10	11	64-25-43.00	7.30	-0.02
11	10	18	108-34-13.50	7.20	-0.01
18	11	932	0-09-21.00	9.23	0.01
18	11	933	0-06-46.00	6.21	0.01
18	11	934	0-20-44.00	5.36	0.00
16	10	20	187-51-29.00	10.21	-0.06
20	10	21	334-03-44.00	5.84	-0.04
20	10	14	352-57-41.00	5.66	-0.03
21	20	23	120-40-25.00	8.17	0.00
21	20	24	300-46-43.50	6.25	0.04
14	10	15	79-42-20.00	23.03	-0.03
15	10	16	188-32-36.00	17.19	-0.04
11	10	934	107-14-31.00	18.00	-0.02
934	18	933	0-36-50.00	14.06	-0.01
933	18	11	179-44-05.00	12.91	-0.02
932	18	11	179-45-49.00	14.02	-0.02

Number of Measured Distance Observations (FeetUS) = 53

From	To	Distance	StdErr	HI	HT	Comb Grid	Type
10	20	811.3512	0.0119	4.840	4.850	1.0000559	S
10	20	811.3504	0.0119	4.840	4.850	1.0000559	S
10	11	406.2680	0.0113	4.840	4.730	1.0000554	S
10	20	811.3514	0.0119	4.840	4.850	1.0000559	S
10	12	425.3820	0.0114	4.840	5.050	1.0000556	S
10	20	811.3504	0.0119	4.840	4.850	1.0000559	S
10	13	383.8738	0.0113	4.840	4.950	1.0000562	S
10	20	811.3529	0.0119	4.840	4.850	1.0000559	S
10	14	449.6811	0.0114	4.840	5.020	1.0000559	S
10	20	811.3519	0.0119	4.840	4.850	1.0000559	S
10	15	442.4419	0.0114	4.840	5.020	1.0000559	S
10	20	811.3506	0.0119	4.840	4.850	1.0000559	S
10	16	567.4497	0.0116	4.840	5.020	1.0000559	S
13	10	383.8682	0.0113	5.200	4.880	1.0000562	S
10	20	811.3486	0.0119	5.200	5.160	1.0000559	S
12	10	425.3759	0.0114	5.100	5.050	1.0000556	S
12	10	425.3764	0.0114	5.100	5.050	1.0000556	S
12	17	424.9727	0.0114	5.100	4.790	1.0000555	S
12	13	137.1315	0.0110	5.100	5.020	1.0000559	S
12	11	316.4207	0.0112	5.100	5.020	1.0000550	S
17	12	424.9742	0.0114	5.030	5.070	1.0000555	S

11	10	406.2794	0.0113	5.290	5.050	1.0000554	S
11	10	406.2770	0.0113	5.290	5.050	1.0000554	S
11	18	528.5891	0.0115	5.290	4.710	1.0000544	S
18	11	528.6068	0.0115	5.150	5.060	1.0000544	S
18	932	181.3066	0.0110	5.150	5.020	1.0000541	S
18	933	304.7239	0.0112	5.150	5.020	1.0000542	S
18	934	419.3887	0.0114	5.150	5.020	1.0000543	S
16	10	567.4297	0.0116	5.050	4.780	1.0000559	S
16	20	245.5143	0.0111	5.050	5.020	1.0000557	S
20	10	811.3478	0.0119	5.100	4.980	1.0000559	S
20	10	811.3484	0.0119	5.100	4.980	1.0000559	S
20	21	357.6182	0.0113	5.100	5.380	1.0000554	S
20	14	366.6830	0.0113	5.100	5.020	1.0000558	S
21	20	357.6323	0.0113	5.500	4.860	1.0000554	S
21	20	357.6332	0.0113	5.500	4.860	1.0000554	S
21	23	464.0490	0.0114	5.500	5.160	1.0000553	S
21	20	357.6323	0.0113	5.500	4.860	1.0000554	S
21	24	803.1402	0.0119	5.500	4.880	1.0000545	S
14	10	449.6855	0.0114	5.240	5.100	1.0000559	S
14	15	78.0480	0.0109	5.240	5.020	1.0000558	S
15	10	442.4387	0.0114	5.340	5.100	1.0000559	S
15	16	126.0727	0.0110	5.340	5.020	1.0000557	S
24	21	803.1316	0.0119	4.920	5.680	1.0000545	S
23	21	464.0635	0.0114	4.650	5.680	1.0000553	S
11	10	406.2896	0.0113	5.190	4.840	1.0000554	S
11	934	109.2477	0.0110	5.190	5.020	1.0000548	S
934	18	419.3871	0.0114	4.770	5.020	1.0000543	S
934	933	114.6826	0.0110	4.770	5.020	1.0000546	S
933	18	304.6917	0.0112	5.020	5.020	1.0000542	S
933	11	223.9046	0.0111	5.020	5.020	1.0000547	S
932	18	181.3105	0.0110	4.740	5.020	1.0000541	S
932	11	347.3052	0.0113	4.740	5.020	1.0000546	S

Number of Zenith Observations (DMS) = 53

From	To	Zenith	StdErr	HI	HT
10	20	90-06-10.00	10.20	4.840	4.850
10	20	90-05-48.00	10.20	4.840	4.850
10	11	87-13-21.50	10.77	4.840	4.730
10	20	90-05-47.50	10.20	4.840	4.850
10	12	87-46-35.50	10.71	4.840	5.050
10	20	90-05-45.00	10.20	4.840	4.850
10	13	91-13-44.00	10.86	4.840	4.950
10	20	90-05-47.00	10.20	4.840	4.850
10	14	89-53-17.00	10.63	4.840	5.020
10	20	90-05-45.50	10.20	4.840	4.850
10	15	89-53-49.00	10.65	4.840	5.020
10	20	90-05-45.50	10.20	4.840	4.850
10	16	89-57-20.00	10.40	4.840	5.020
13	10	88-48-36.00	10.86	5.200	4.880
10	20	90-06-12.00	10.20	5.200	5.160
12	10	92-12-18.50	10.71	5.100	5.050
12	10	92-12-01.50	10.71	5.100	5.050
12	17	90-33-03.50	10.71	5.100	4.790
12	13	100-22-19.00	15.54	5.100	5.020
12	11	89-22-48.00	11.24	5.100	5.020
17	12	89-29-25.00	10.71	5.030	5.070
11	10	92-49-56.00	10.77	5.290	5.050
11	10	92-49-36.50	10.77	5.290	5.050
11	18	88-51-16.00	10.46	5.290	4.710
18	11	91-13-25.50	10.46	5.150	5.060
18	932	91-47-57.00	13.44	5.150	5.020
18	933	91-30-29.00	11.34	5.150	5.020
18	934	91-22-27.00	10.73	5.150	5.020
16	10	90-03-24.00	10.40	5.050	4.780
16	20	90-22-44.00	11.99	5.050	5.020

20	10	89-55-04.50	10.20	5.100	4.980
20	10	89-54-45.50	10.20	5.100	4.980
20	21	86-52-43.00	10.99	5.100	5.380
20	14	89-41-37.00	10.94	5.100	5.020
21	20	93-11-03.00	10.99	5.500	4.860
21	20	93-10-46.50	10.99	5.500	4.860
21	23	90-36-01.00	10.60	5.500	5.160
21	20	93-10-46.50	10.99	5.500	4.860
21	24	89-03-28.00	10.20	5.500	4.880
14	10	90-06-36.00	10.63	5.240	5.100
14	15	90-13-06.00	23.11	5.240	5.020
15	10	90-06-48.00	10.65	5.340	5.100
15	16	90-18-07.00	16.32	5.340	5.020
24	21	90-56-16.00	10.20	4.920	5.680
23	21	89-19-18.00	10.60	4.650	5.680
11	10	92-50-50.00	10.77	5.190	4.840
11	934	89-25-27.00	17.94	5.190	5.020
934	18	88-37-04.00	10.73	4.770	5.020
934	933	88-51-07.00	17.36	4.770	5.020
933	18	88-31-13.00	11.34	5.020	5.020
933	11	90-50-25.00	12.36	5.020	5.020
932	18	88-09-10.00	13.44	4.740	5.020
932	11	90-52-56.00	11.04	4.740	5.020

Number of Measured Sideshots (DMS, FeetUS) = 28

At	From To	Angle	Distance	Vertical	HI	HT
10	20					
	100	359-59-59.00	811.3516	90-06-07.00	4.830	4.820
	388	0-00-05.00	811.3486	90-06-07.00	4.830	4.820
	389	0-00-03.00	811.3532	90-06-06.00	4.840	4.850
13	10					
	390	359-59-56.00	383.8669	88-48-37.00	5.200	4.880
	433	359-59-44.00	383.8676	88-48-33.00	5.200	4.880
10	20					
	434	359-59-59.00	811.3480	90-06-13.00	5.200	5.160
12	10					
	529	0-00--0.00	425.3754	92-12-18.00	5.100	5.050
17	12					
	600	0-00-01.00	424.9739	89-29-24.00	5.030	5.070
	676	0-00-06.00	424.9742	89-29-25.00	5.030	5.070
11	10					
	677	0-00-01.00	406.2785	92-49-55.00	5.290	5.050
18	11					
	681	0-00--0.00	528.6065	91-13-23.00	5.150	5.060
	931	0-00-02.00	528.6800	91-13-26.00	5.150	5.060
16	10					
	935	0-00-07.00	567.4304	90-03-23.00	5.050	4.780
20	10					
	1363	359-59-59.00	811.3480	89-55-04.00	5.100	4.980
21	20					
	1535	0-00-01.00	357.6320	93-11-04.00	5.500	4.860
	1536	309-40-03.00	196.2121	94-51-24.00	5.500	5.020
	1684	359-59-59.00	357.6323	93-11-06.00	5.500	4.860
14	10					
	1685	359-59-59.00	449.6865	90-06-37.00	5.240	5.100
15	10					
	1709	0-00--0.00	442.4387	90-06-48.00	5.340	5.100
24	21					
	1732	359-59-58.00	803.1323	90-56-16.00	4.920	5.680
	1797	0-00-03.00	803.1326	90-56-17.00	4.920	5.680
23	21					
	1798	0-00--0.00	464.0625	89-19-18.00	4.650	5.680
	1894	0-00-05.00	464.0635	89-19-14.00	4.650	5.680
11	10					

	1895	359-59-59.00	406.2893	92-50-50.00	5.190	4.840
	1944	0-00-03.00	406.3716	92-50-44.00	5.190	4.840
934	18					
	1945	359-59-59.00	419.3949	88-37-04.00	4.770	5.020
933	18					
	1961	0-00-08.00	304.6970	88-31-13.00	5.020	5.020
932	18					
	1998	359-59-52.00	181.3194	88-09-10.00	4.740	5.020

Adjustment Statistical Summary

Iterations = 2

Number of Stations = 16

Number of Observations = 130
Number of Unknowns = 43
Number of Redundant Obs = 87

Observation	Count	Sum Squares of StdRes	Error Factor
Angles	24	9.620	0.774
Distances	53	14.920	0.649
Zeniths	53	39.010	1.049
Total	130	63.550	0.855

The Chi-Square Test at 5.00% Level Passed
Lower/Upper Bounds (0.852/1.148)

Adjusted Station Information

Coordinate Changes from Entered Provisionals (FeetUS)

Station	dN	dE	dZ
10	-0.0000	-0.0000	-0.0000
20	-0.0726	-0.0000	-0.0000

Adjusted Coordinates (FeetUS)

Station	N	E	Elev	Description
10	1142646.5600	1162789.4600	431.8200	CB 10
20	1143348.5274	1162382.5200	430.4700	CB 20
11	1142937.9721	1162507.0350	451.6369	CB 11
12	1143071.6173	1162793.8388	448.1177	CB 12
13	1143009.7045	1162913.6934	423.5041	CB 13
14	1143056.2090	1162603.9251	432.5177	CB 14
15	1143011.8095	1162539.7125	432.4386	CB 15
16	1143125.3067	1162484.7889	432.0868	CB 16
17	1143254.4187	1163177.4930	444.3500	CB 17
18	1142710.1700	1162030.1397	462.8221	CB 18
932	1142787.8394	1162193.8794	457.2574	CBS 932
933	1142840.9275	1162305.2720	454.9410	CBS 933
934	1142888.6113	1162409.5632	452.9019	CBS 934
21	1143149.0408	1162678.7084	449.6641	CB 21
23	1143347.8378	1163098.0230	445.1613	CB 23
24	1142806.3429	1161952.4290	463.5465	CB 24

Adjusted Positions and Ellipsoid Heights (FeetUS)

Station	Latitude	Longitude	Ellip Ht	Geoid Ht
10	43-07-43.738530	75-18-00.021947	326.0974	-105.7226
20	43-07-50.732028	75-18-05.363730	324.7369	-105.7331
11	43-07-46.658946	75-18-03.769615	345.9073	-105.7297
12	43-07-47.935345	75-17-59.875139	342.3947	-105.7230
13	43-07-47.305820	75-17-58.271960	317.7841	-105.7201
14	43-07-47.811902	75-18-02.438876	326.7902	-105.7275
15	43-07-47.383158	75-18-03.313798	326.7096	-105.7290
16	43-07-48.512253	75-18-04.030901	326.3564	-105.7304
17	43-07-49.682464	75-17-54.664642	338.6361	-105.7139
18	43-07-44.481394	75-18-10.246370	357.0815	-105.7406
932	43-07-45.223672	75-18-08.022733	351.5205	-105.7369
933	43-07-45.731102	75-18-06.509927	349.2067	-105.7343
934	43-07-46.186231	75-18-05.093975	347.1700	-105.7319
21	43-07-48.717318	75-18-01.411430	343.9382	-105.7258
23	43-07-50.617017	75-17-55.716815	339.4454	-105.7159
24	43-07-45.442837	75-18-11.274298	357.8040	-105.7425
			Average:	-105.7286

Convergence Angles (DMS) and Grid Factors at Stations
(Grid Azimuth = Geodetic Azimuth - Convergence)
(Elevation Factor Includes a Geoid Height Correction at Each Station))

Station	Convergence Angle	------- Factors ------- Scale	x Elevation	= Combined
10	0-52-38.69	1.00007158	0.99998441	1.00005599
20	0-52-35.15	1.00007126	0.99998448	1.00005574
11	0-52-36.18	1.00007136	0.99998347	1.00005483
12	0-52-38.86	1.00007159	0.99998363	1.00005522
13	0-52-39.95	1.00007168	0.99998481	1.00005649
14	0-52-37.10	1.00007144	0.99998438	1.00005582
15	0-52-36.50	1.00007139	0.99998438	1.00005577
16	0-52-36.03	1.00007134	0.99998440	1.00005574
17	0-52-42.45	1.00007189	0.99998381	1.00005570

18	0-52-31.71	1.00007099	0.99998293	1.00005392
932	0-52-33.24	1.00007112	0.99998320	1.00005431
933	0-52-34.29	1.00007120	0.99998331	1.00005451
934	0-52-35.26	1.00007129	0.99998341	1.00005469
21	0-52-37.82	1.00007150	0.99998356	1.00005506
23	0-52-41.75	1.00007182	0.99998378	1.00005560
24	0-52-31.02	1.00007093	0.99998290	1.00005382
Project Averages:	0-52-36.62	1.00007140	0.99998380	1.00005520

Adjusted Observations and Residuals

Adjusted Measured Angle Observations (DMS)

At	From	To	Angle	Residual	StdErr	StdRes
10	20	11	345-59-55.30	0-00-00.30	5.40	0.1
10	20	12	30-41-29.98	0-00-00.98	5.40	0.2
10	20	13	48-59-14.98	-0-00-01.52	5.87	0.3
10	20	14	5-44-06.38	-0-00-10.12	5.14	2.0
10	20	15	355-44-17.53	0-00-03.53	5.17	0.7
10	20	16	357-37-44.61	0-00-02.61	4.76	0.5
12	10	17	243-55-59.50	-0-00-00.00	7.74	0.0
12	10	13	296-43-44.80	-0-00-00.20	13.34	0.0
12	10	11	64-25-30.51	-0-00-12.49	7.30	1.7
11	10	18	108-34-11.96	-0-00-01.54	7.20	0.2
18	11	932	0-09-20.09	-0-00-00.91	9.23	0.1
18	11	933	0-06-47.49	0-00-01.49	6.21	0.2
18	11	934	0-20-43.21	-0-00-00.79	5.36	0.1
16	10	20	187-51-26.75	-0-00-02.25	10.21	0.2
20	10	21	334-03-44.00	0-00-00.00	5.84	0.0
20	10	14	352-57-38.80	-0-00-02.20	5.66	0.4
21	20	23	120-40-25.00	-0-00-00.00	8.17	0.0
21	20	24	300-46-43.50	-0-00-00.00	6.25	0.0
14	10	15	79-42-16.33	-0-00-03.67	23.03	0.2
15	10	16	188-32-23.98	-0-00-12.02	17.19	0.7
11	10	934	107-14-40.60	0-00-09.60	18.00	0.5
934	18	933	0-37-00.04	0-00-10.04	14.06	0.7
933	18	11	179-43-58.07	-0-00-06.93	12.91	0.5
932	18	11	179-45-47.63	-0-00-01.37	14.02	0.1

Adjusted Measured Distance Observations (FeetUS)

From	To	Distance	Residual	StdErr	StdRes
10	20	811.3488	-0.0024	0.0119	0.2
10	20	811.3488	-0.0016	0.0119	0.1
10	11	406.2694	0.0014	0.0113	0.1
10	20	811.3488	-0.0026	0.0119	0.2
10	12	425.3768	-0.0052	0.0114	0.5
10	20	811.3488	-0.0016	0.0119	0.1
10	13	383.8733	-0.0005	0.0113	0.0
10	20	811.3488	-0.0041	0.0119	0.3
10	14	449.6819	0.0008	0.0114	0.1
10	20	811.3488	-0.0031	0.0119	0.3
10	15	442.4475	0.0056	0.0114	0.5
10	20	811.3488	-0.0018	0.0119	0.1
10	16	567.4392	-0.0105	0.0116	0.9
13	10	383.8689	0.0007	0.0113	0.1
10	20	811.3489	0.0003	0.0119	0.0
12	10	425.3706	-0.0053	0.0114	0.5
12	10	425.3706	-0.0058	0.0114	0.5
12	17	424.9747	0.0020	0.0114	0.2
12	13	137.1347	0.0032	0.0110	0.3
12	11	316.4148	-0.0059	0.0112	0.5
17	12	424.9722	-0.0020	0.0114	0.2
11	10	406.2865	0.0071	0.0113	0.6
11	10	406.2865	0.0095	0.0113	0.8
11	18	528.5876	-0.0015	0.0115	0.1
18	11	528.6014	-0.0054	0.0115	0.5
18	932	181.3066	-0.0000	0.0110	0.0
18	933	304.7120	-0.0119	0.0112	1.1
18	934	419.3868	-0.0019	0.0114	0.2
16	10	567.4393	0.0096	0.0116	0.8
16	20	245.5248	0.0105	0.0111	0.9
20	10	811.3487	0.0009	0.0119	0.1

20	10	811.3487	0.0003	0.0119	0.0
20	21	357.6142	-0.0040	0.0113	0.4
20	14	366.6867	0.0037	0.0113	0.3
21	20	357.6339	0.0016	0.0113	0.1
21	20	357.6339	0.0007	0.0113	0.1
21	23	464.0524	0.0034	0.0114	0.3
21	20	357.6339	0.0016	0.0113	0.1
21	24	803.1370	-0.0032	0.0119	0.3
14	10	449.6818	-0.0037	0.0114	0.3
14	15	78.0640	0.0160	0.0109	1.5
15	10	442.4477	0.0090	0.0114	0.8
15	16	126.0830	0.0103	0.0110	0.9
24	21	803.1348	0.0032	0.0119	0.3
23	21	464.0601	-0.0034	0.0114	0.3
11	10	406.2920	0.0024	0.0113	0.2
11	934	109.2571	0.0094	0.0110	0.9
934	18	419.3897	0.0026	0.0114	0.2
934	933	114.6917	0.0091	0.0110	0.8
933	18	304.7086	0.0169	0.0112	1.5
933	11	223.9003	-0.0043	0.0111	0.4
932	18	181.3113	0.0008	0.0110	0.1
932	11	347.3061	0.0009	0.0113	0.1

Adjusted Zenith Observations (DMS)

From	To	Zenith	Residual	StdErr	StdRes
10	20	90-05-46.76	-0-00-23.24	10.20	2.3
10	20	90-05-46.76	-0-00-01.24	10.20	0.1
10	11	87-13-16.07	-0-00-05.43	10.77	0.5
10	20	90-05-46.76	-0-00-00.74	10.20	0.1
10	12	87-46-35.39	-0-00-00.11	10.71	0.0
10	20	90-05-46.76	0-00-01.76	10.20	0.2
10	13	91-13-29.81	-0-00-14.19	10.86	1.3
10	20	90-05-46.76	-0-00-00.24	10.20	0.0
10	14	89-53-21.57	0-00-04.57	10.63	0.4
10	20	90-05-46.76	0-00-01.26	10.20	0.1
10	15	89-53-52.53	0-00-03.53	10.65	0.3
10	20	90-05-46.76	0-00-01.26	10.20	0.1
10	16	89-57-22.84	0-00-02.84	10.40	0.3
13	10	88-48-26.26	-0-00-09.74	10.86	0.9
10	20	90-05-59.47	-0-00-12.53	10.20	1.2
12	10	92-12-10.69	-0-00-07.81	10.71	0.7
12	10	92-12-10.69	0-00-09.19	10.71	0.9
12	17	90-32-56.57	-0-00-06.93	10.71	0.6
12	13	100-22-21.52	0-00-02.52	15.54	0.2
12	11	89-22-43.69	-0-00-04.31	11.24	0.4
17	12	89-29-18.07	-0-00-06.93	10.71	0.6
11	10	92-49-44.85	-0-00-11.15	10.77	1.0
11	10	92-49-44.85	0-00-08.35	10.77	0.8
11	18	88-51-07.88	-0-00-08.12	10.46	0.8
18	11	91-13-17.98	-0-00-07.52	10.46	0.7
18	932	91-47-56.27	-0-00-00.73	13.44	0.1
18	933	91-30-20.50	-0-00-08.50	11.34	0.7
18	934	91-22-20.92	-0-00-06.08	10.73	0.6
16	10	90-03-14.69	-0-00-09.31	10.40	0.9
16	20	90-23-06.73	0-00-22.73	11.99	1.9
20	10	89-54-48.09	-0-00-16.41	10.20	1.6
20	10	89-54-48.09	0-00-02.59	10.20	0.3
20	21	86-52-39.51	-0-00-03.49	10.99	0.3
20	14	89-41-31.59	-0-00-05.41	10.94	0.5
21	20	93-10-50.83	-0-00-12.17	10.99	1.1
21	20	93-10-50.83	0-00-04.33	10.99	0.4
21	23	90-35-50.13	-0-00-10.87	10.60	1.0
21	20	93-10-50.83	0-00-04.33	10.99	0.4
21	24	89-03-21.42	-0-00-06.58	10.20	0.6
14	10	90-06-23.90	-0-00-12.10	10.63	1.1

14	15	90-13-14.39	0-00-08.39	23.11	0.4
15	10	90-06-39.19	-0-00-08.81	10.65	0.8
15	16	90-18-21.99	0-00-14.99	16.32	0.9
24	21	90-56-09.43	-0-00-06.57	10.20	0.6
23	21	89-19-07.12	-0-00-10.88	10.60	1.0
11	10	92-50-40.62	-0-00-09.38	10.77	0.9
11	934	89-25-37.49	0-00-10.49	17.94	0.6
934	18	88-36-43.63	-0-00-20.37	10.73	1.9
934	933	88-51-27.69	0-00-20.69	17.36	1.2
933	18	88-31-10.05	-0-00-02.95	11.34	0.3
933	11	90-50-40.63	0-00-15.63	12.36	1.3
932	18	88-09-14.70	0-00-04.70	13.44	0.4
932	11	90-52-49.00	-0-00-07.00	11.04	0.6

Adjusted Bearings (DMS) and Horizontal Distances (FeetUS)

(Relative Confidence of Bearing is in Seconds)

From	To	Grid Bearing	Grid Dist Grnd Dist	95% RelConfidence Brg	 Dist	 PPM
10	11	N44-06-09.89W	405.8139 405.7914	10.85	0.0125	30.9249
10	12	N00-35-24.78E	425.0799 425.0563	9.70	0.0131	30.7978
10	13	N18-53-09.80E	383.8071 383.7855	11.38	0.0155	40.3977
10	14	N24-21-58.82W	449.7061 449.6809	7.45	0.0140	31.1865
10	15	N34-21-47.66W	442.4714 442.4467	7.47	0.0142	32.0714
10	16	N32-28-20.60W	567.4706 567.4389	5.88	0.0146	25.6421
10	20	N30-06-05.22W	811.3928 811.3475	1.26	0.0085	10.5239
11	12	N65-00-55.28E	316.4135 316.3961	13.04	0.0206	65.1800
11	18	S64-28-02.08W	528.5100 528.4813	20.08	0.0139	26.2108
11	932	S64-23-09.79W	347.2840 347.2651	21.74	0.0183	52.6562
11	933	S64-18-47.63W	223.8882 223.8759	22.42	0.0168	75.0051
11	934	S63-08-30.70W	109.2576 109.2517	32.66	0.0168	153.5565
12	13	S62-40-50.45E	134.9012 134.8937	26.45	0.0212	157.2854
12	17	N64-31-24.24E	424.9787 424.9551	21.28	0.0197	46.2778
14	15	S55-20-17.49W	78.0677 78.0634	42.18	0.0185	237.1054
14	20	N37-08-26.46W	366.7018 366.6813	9.05	0.0154	41.9194
15	16	N25-49-23.72W	126.0882 126.0812	28.14	0.0174	137.8284
16	20	N24-36-53.90W	245.5329 245.5192	13.24	0.0156	63.3444
18	932	N64-37-22.18E	181.2270 181.2172	25.65	0.0163	90.1961
18	933	N64-34-49.58E	304.6233 304.6067	22.35	0.0149	48.7631
18	934	N64-48-45.29E	419.2892 419.2665	23.05	0.0149	35.6007
20	21	S56-02-21.26E	357.1028 357.0830	14.36	0.0138	38.7428
21	23	N64-38-03.75E	464.0528 464.0271	24.61	0.0198	42.5757
21	24	S64-44-22.29W	803.0713 803.0276	20.99	0.0206	25.6151
933	934	N65-25-45.32E	114.6751 114.6689	38.25	0.0172	149.8827

Sideshot Coordinates Computed After Adjustment

Station	N	E	Elev	Description
100	1143348.5277	1162382.5153	430.3999	CHK@BS
388	1143348.5369	1162382.5372	430.3999	CHK@BS
389	1143348.5369	1162382.5281	430.3839	CHK@BS
390	1142646.5591	1162789.4675	431.7974	CHK@BS
433	1142646.5513	1162789.4885	431.8049	CHK@BS
434	1143348.5245	1162382.5171	430.4063	CHK@BS
529	1142646.5558	1162789.4600	431.8051	CHK@BS
600	1143071.6184	1162793.8363	448.0964	CHK@BS
676	1143071.6276	1162793.8315	448.0944	CHK@BS
677	1142646.5651	1162789.4523	431.8075	CHK@BS
681	1142937.9741	1162507.0393	451.6349	CHK@BS
931	1142938.0011	1162507.1076	451.6256	CHK@BS
935	1142646.5572	1162789.4390	431.8049	CHK@BS
1363	1142646.5625	1162789.4631	431.7679	CHK@BS
1535	1143348.5270	1162382.5236	430.4401	CHK@BS
1536	1143093.9304	1162491.1175	433.5329	MPM
1684	1143348.5242	1162382.5216	430.4366	CHK@BS
1685	1142646.5567	1162789.4639	431.7963	CHK@BS
1709	1142646.5674	1162789.4549	431.8075	CHK@BS
1732	1143149.0466	1162678.7024	449.6552	CHK@BS
1797	1143149.0291	1162678.7110	449.6513	CHK@BS
1798	1143149.0397	1162678.7059	449.6297	CHK@BS
1894	1143149.0494	1162678.7003	449.6387	CHK@BS
1895	1142646.5639	1162789.4589	431.8087	CHK@BS
1944	1142646.4990	1162789.5109	431.8165	CHK@BS
1945	1142710.1655	1162030.1350	462.7722	CHK@BS
1961	1142710.1856	1162030.1450	462.8112	CHK@BS
1998	1142710.1602	1162030.1356	462.8228	CHK@BS

Error Propagation

Station Coordinate Standard Deviations (FeetUS)

Station	N	E	Elev
10	0.000000	0.000000	0.000000
20	0.004032	0.000000	0.000000
11	0.007180	0.007128	0.009374
12	0.005355	0.008166	0.009198
13	0.006772	0.008314	0.010328
14	0.005834	0.006540	0.009384
15	0.006166	0.006201	0.008997
16	0.006280	0.006289	0.009192
17	0.017587	0.015363	0.018109
18	0.023321	0.009914	0.013163
932	0.018078	0.009904	0.014319
933	0.013932	0.009047	0.012615
934	0.011257	0.009236	0.012082
21	0.009553	0.007361	0.009515
23	0.026714	0.011709	0.019357
24	0.026118	0.020629	0.029656

Station Coordinate Error Ellipses (FeetUS)
Confidence Region = 95%

Station	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Elev
10	0.000000	0.000000	0-00	0.000000
20	0.009870	0.000000	0-00	0.000000
11	0.021352	0.012543	44-34	0.018373
12	0.020043	0.013025	95-33	0.018027
13	0.021226	0.015440	114-28	0.020242
14	0.016246	0.014009	70-19	0.018392
15	0.016074	0.014136	46-17	0.017634
16	0.016246	0.014467	45-21	0.018016
17	0.051452	0.024901	141-15	0.035493
18	0.058221	0.021392	167-47	0.025799
932	0.044353	0.024052	175-20	0.028065
933	0.034364	0.021734	9-10	0.024724
934	0.029224	0.020401	27-44	0.023681
21	0.025538	0.014808	29-34	0.018649
23	0.066474	0.026042	168-43	0.037939
24	0.076777	0.027240	143-41	0.058125

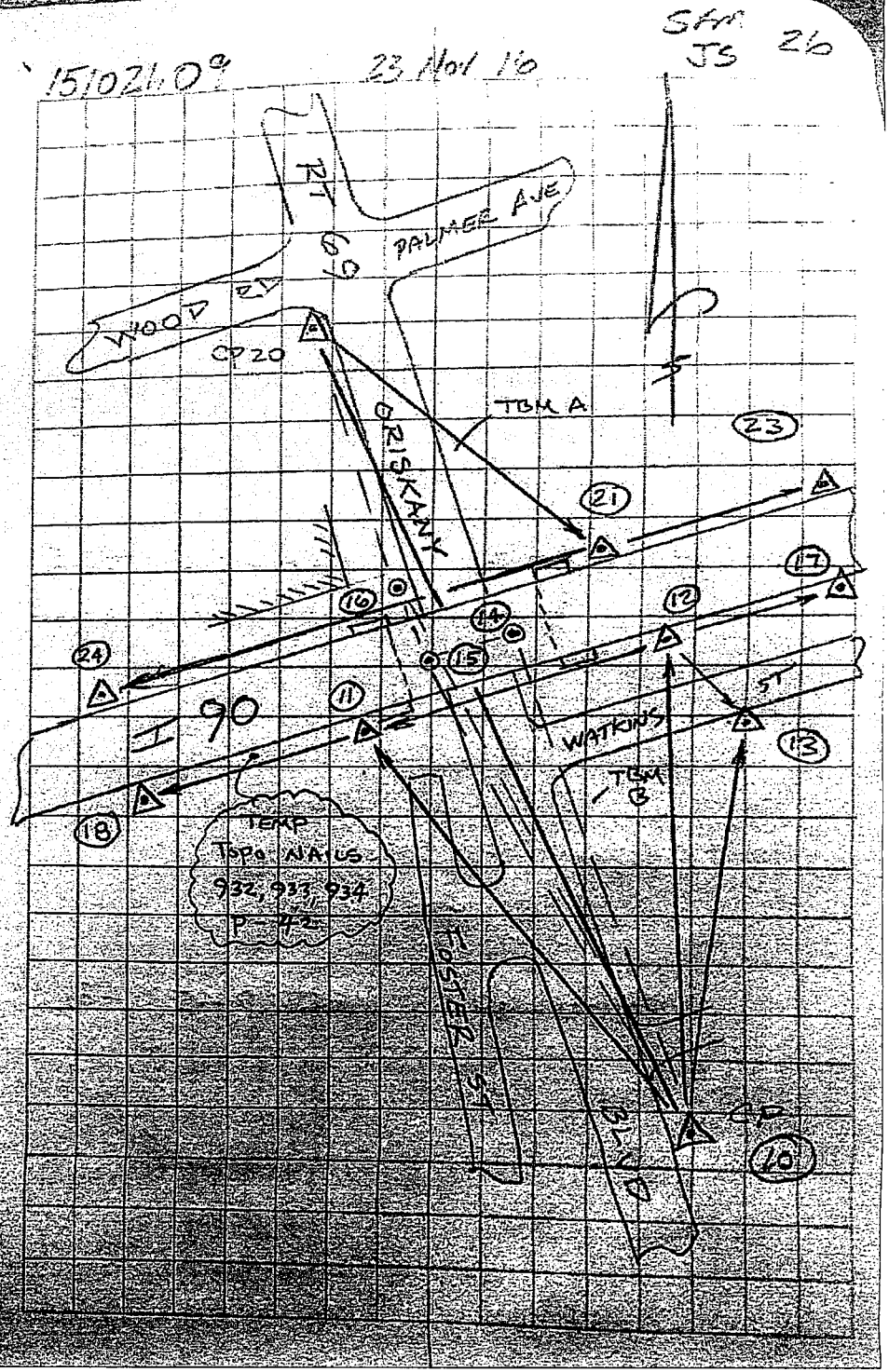
Relative Error Ellipses (FeetUS)
Confidence Region = 95%

Stations From	To	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Vertical
10	11	0.021352	0.012543	44-34	0.018373
10	12	0.020043	0.013025	95-33	0.018027
10	13	0.021226	0.015440	114-28	0.020242
10	14	0.016246	0.014009	70-19	0.018392
10	15	0.016074	0.014136	46-17	0.017634
10	16	0.016246	0.014467	45-21	0.018016
10	20	0.009870	0.000000	0-00	0.000000
11	12	0.021137	0.019458	99-08	0.022007
11	18	0.051450	0.013853	154-31	0.018112
11	932	0.036599	0.018287	154-25	0.021215
11	933	0.024330	0.016793	154-19	0.016545
11	934	0.017298	0.016777	153-06	0.014940
12	13	0.021634	0.016774	99-20	0.017566
12	17	0.043839	0.019667	154-31	0.030574
14	15	0.018624	0.015830	67-27	0.015196

14	20	0.016136	0.015328	66-13	0.018392
15	16	0.017494	0.017086	6-29	0.016624
16	20	0.016097	0.015204	27-05	0.018016
18	932	0.022533	0.016346	154-40	0.015236
18	933	0.033014	0.014854	154-34	0.017188
18	934	0.046856	0.014927	154-45	0.017855
20	21	0.024865	0.013835	33-58	0.018649
21	23	0.055372	0.019757	154-38	0.033039
21	24	0.081717	0.020571	154-44	0.055052
933	934	0.021265	0.017188	154-59	0.014884

Elapsed Time = 00:00:00

NYSTA - WHITESBORO
(ORISKANY BLVD)
MP 238.22



NYSTA - ORISKANY BLVD

RTK CONTROL

LEICA SR UNIT 'D'

NYSPC C NAD '83/11 NAD '88

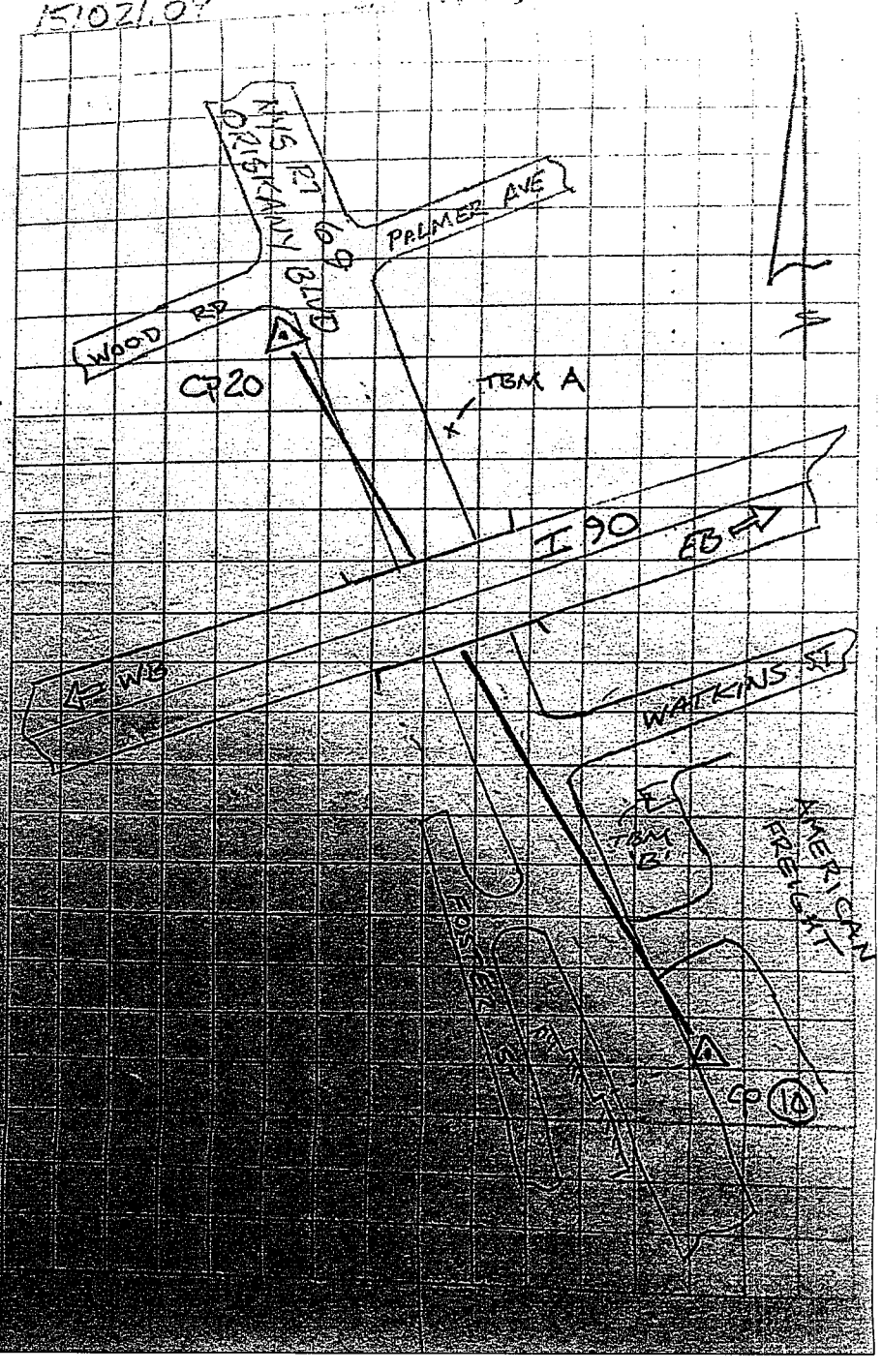
GEOG 12A

(20) SET 5/8" REROD W/ PL FA CAP AT SW'LY CORNER INTERSECTION OF ORISKANY BLVD AND WOOD RD

RTK	1143348.58	1162382.56	430.51
CONV →	1143348.56	1162382.57	430.52
(HELD)			

(19) SET 5/8" REROD W/ PL FA CAP E'LY SIDE OF ORISKANY BLVD, 400'+/- SE'LY OF NYSTA OVERPASS

	1142648.60	1162789.45	431.84



ORISKANY BLVD

CP (10)	4.67	~~436.55~~ 436.49			431.82 = STATIC ~~431.88~~
TP 1	4.57	~~437.26~~ 437.20	3.86	~~432.69~~ 432.63	
TP 2	4.02	~~435.67~~ 435.61	5.61	~~431.65~~ 431.59	
CP (20)	4.89	~~435.41~~ 435.35	5.15	430.52	~~430.52~~ 430.47
TBM ~~A~~ 1	5.57	~~436.64~~ 436.58	4.34	431.07	~~431.07~~ 431.01
TP 5	0.06	~~436.70~~ 436.64	0.00	~~436.64~~ 436.58	
TP 6	4.12	~~437.17~~ 437.11	4.25	~~432.45~~ 432.39	

151021D? 23 Nov 16

JS 28
30° ○
Zeisner?

HELD RTK (NAVD '88)
DERIVED ELEVATION

T/C

T/C

CP (20) (430.51 RTK p-27)

CH'D 'X' SE'LY COR T.C. PULL BOX
E'LY SIDE ORISKANY BLVD @
DRWY TO ZANGRILLI ENGINEERING,
190'+/- N'LY OF NYSTA OVERPASS

FND NGS VERT. CONTROL MARK DISK SET
VERTICALLY IN MOST N'LY BRIDGE (N'LY FACE)
PIER OF NYSTA OVERPASS E'LY SIDE
ORISKANY BLVD
NGS Y 405 RESET 1987

T/C

NYSTA - ORISKANY

15102100

SET CH'D 'X' NW'LY RIM WATER MH ON CONC VAULT, 35'± S'LY OF S'LY EP WATKINS ST & 45'± E'LY OF E'LY EP ORISKANY BLVD

		437.11			
		~~437.17~~	-X28		
		435.96			430.35
TBM B	5.61	~~436.02~~	6.76	430.41	~~430.41~~
					431.82
CP (10)			4.14	431.88	~~431.88~~ [431.82]

NYSTA - ORISKANY

Te (10) Bs (20) w/ 0°
HI = 4.83 ✓ HT = 4.82 ✓
HD = 811.35 HER = 0.00 VER = 0.00

100 ✓ (20)

115 ✓ TBM 'B' ✓ 430.41 ▷29
└ MEAS → 430.43 ✓

233 VOID ETI
239, 240 ADD DC
30 301 301

320 U OIL/PETRO PAINT ✓

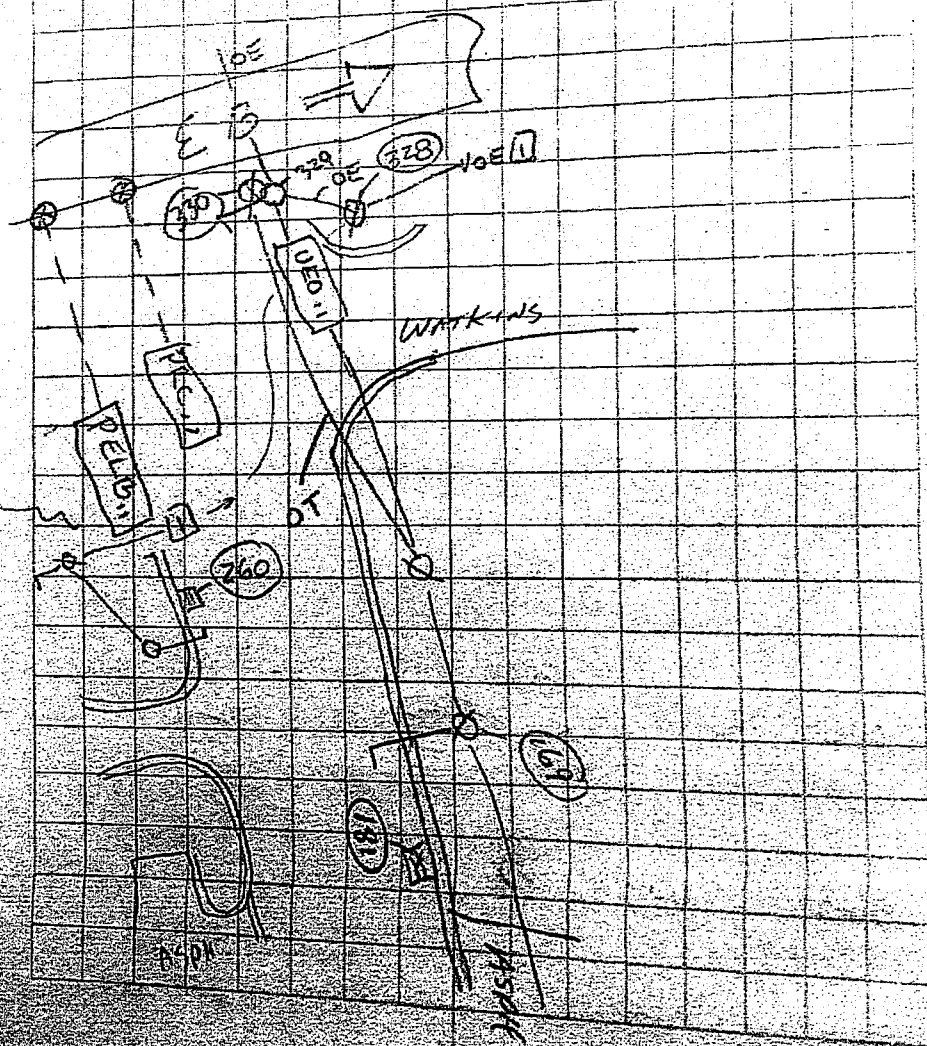
321 BUCKEYE PARTNERS
800-331-4115 ✓

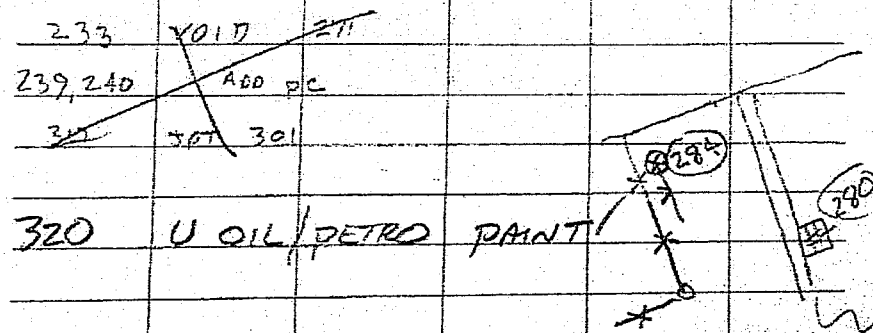
329 OE ONLY
330 UT FROM
331 GUY TO (330)

✓ (20) ✓

15 10 21.09

- HELD RTK COORDS @ CP (10)
- HELD "LEVEL" ELEV @ CP (20) P-28
- HELD INV RTK AZ (10) → (20)
  AZ = 329° 54' 07"
- HELD MEAS N & E @ CP (20)





28

NYSTA - ORISKANY

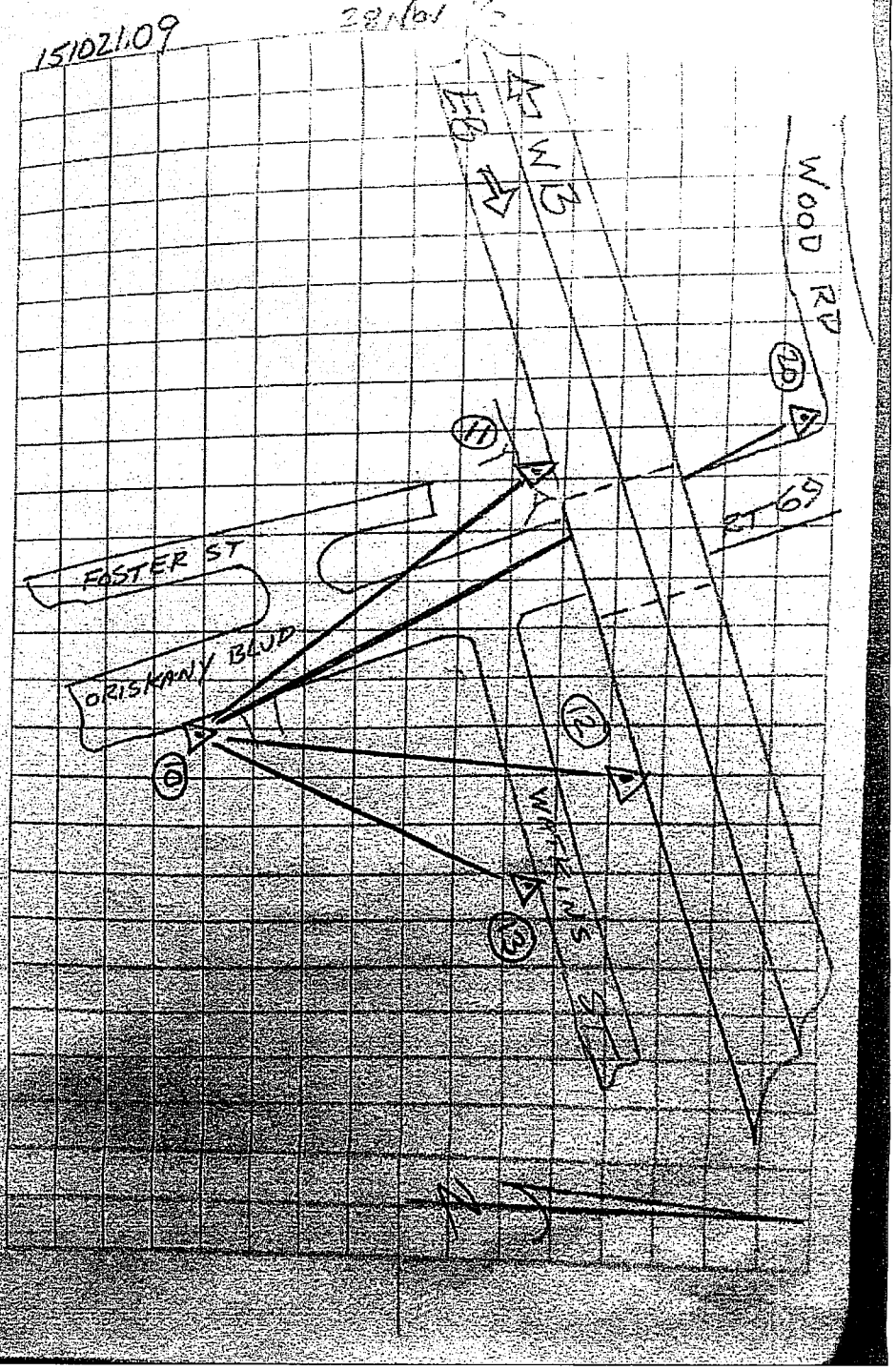
Te (10) Bs (20) w/ 0°
HI= 4.84 HT= 4.85
HD= 811.35 Her= -0.00 Ver= -0.10
389 ✓ (20)

(11) SET 10" GALV SPIKE
BACK SIDE G. RAIL EASTBOUND
@ W'LY END BRIDGE OVER
ORISKANY BLVD HT= 4.73

(12) SET 10" GALV SPIKE TOP BANK
BACK SIDE G. RAIL EAST BOUND
100'+/- E'LY OF OVERPASS
OVER ORISKANY BLVD
HT= 5.05

(13) SET 10" GALV SPIKE SOUTH
SIDE WATKINS ST OPPO
NE COR RR FOR AMERICAN
FREIGHT HT= 4.95

151021.09



NYSTA - ORISKANY

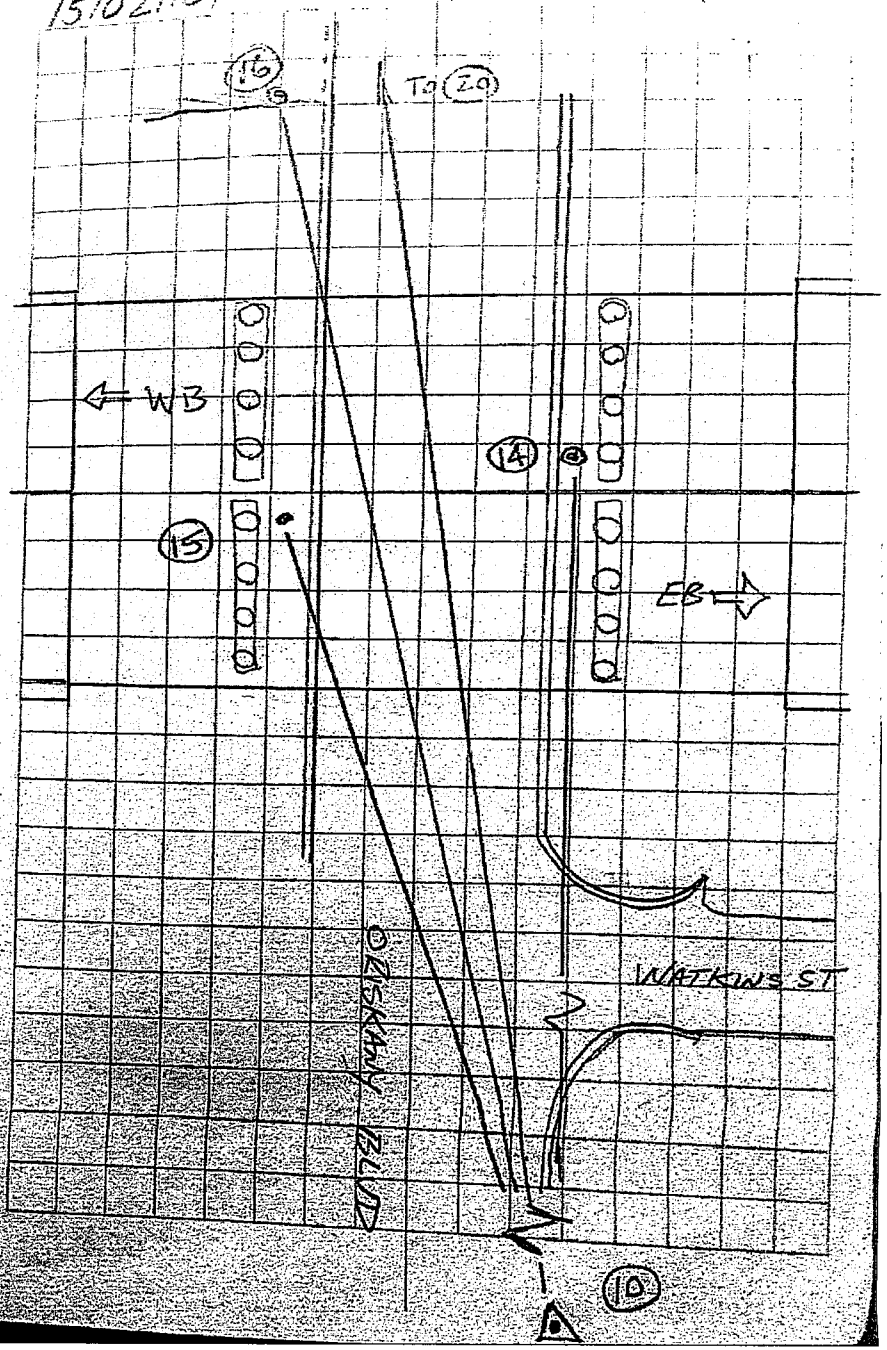
TC (10)

(14) SET MH IN ASPH BACK SIDE CURBING E SIDE ORISKANY BLVD UNDER BRIDGE 6'+/- N'LY of ℄ BRIDGE

(15) SET 60d BACK SIDE CURBING W SIDE ORISKANY BLVD UNDER BRIDGE, 6'± S'LY of ℄ BRIDGE

(16) SET MN ASPH DRWY, W SIDE ORISKANY BLVD, 65'± S'LY EDGE N'LY of N'LY FASCIA THRUWAY OVERPASS

15102L.09



NY STA - ORISKANY

Rc (13) BS (10) w/ 0°

HI = 5.201 HT = 4.881

HD = 383.78 HER = 0.00 VER = -0.05

390 ✓ (10) ✓

AZO TIM POST w/ VEM & DANEZ BOX ✓

433 ✓ (10) ✓

15102.09 22 Nov 16

SFA
JS 35

NYSTA - ORIBKANN

Tie (10) BS (20) w/ 0°
HT= 5.20/ HT= 5.16/
HD= 8.11.35 HER= 0.00 VER= -0.06
434 CHK (20) /

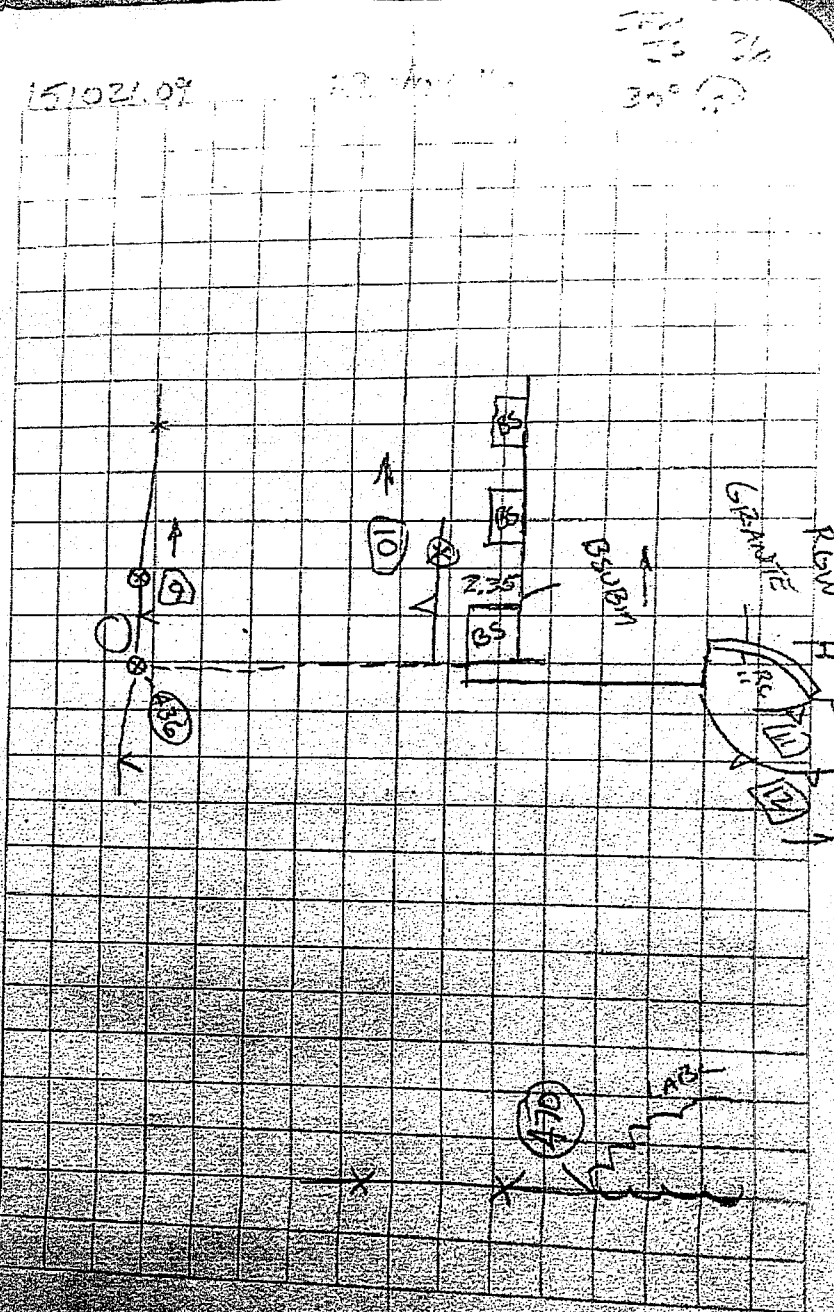
435 FND 3/4" DIA SOLID IRON ROD, 1' B.G., GOOD COND

436 EDGE OLD LAID STONE! MORT BRIDGE WALL EMBANKMENT +/- POOR CONDITION

438 NAT GRID 12" STEEL /

449 EDGE STONE/MORT SLOPE - STABILIZATION

470 BUSH/TREES LINE ALONG E TO EAST



OZISKANY BLVD
500
9
20
21
BSOBM
INSTA - ORISKANY
EDGE LAID STONE / CONCRETE
BRICK WALL / SLOPE
STAGING LOCATION
520
20
528

NYSTA- ORISKANY

Fe (12) BS (10) W/O

HI= 5.10 ✓ HI= 5.05 ✓

HD= 425.06 HER= 0.00 VER= -0.02

529 ✓ (10) ✓

(17) SET 10" GALV SPIKE ✓ @ TOP BANK BACK SIDE GUIDE RAIL EASTBOUND @ MP 238.1 HT= 4.79 ✓

567 END W BEAM / BEG B. BEAM

568 G. RAIL CABLE ANCHOR

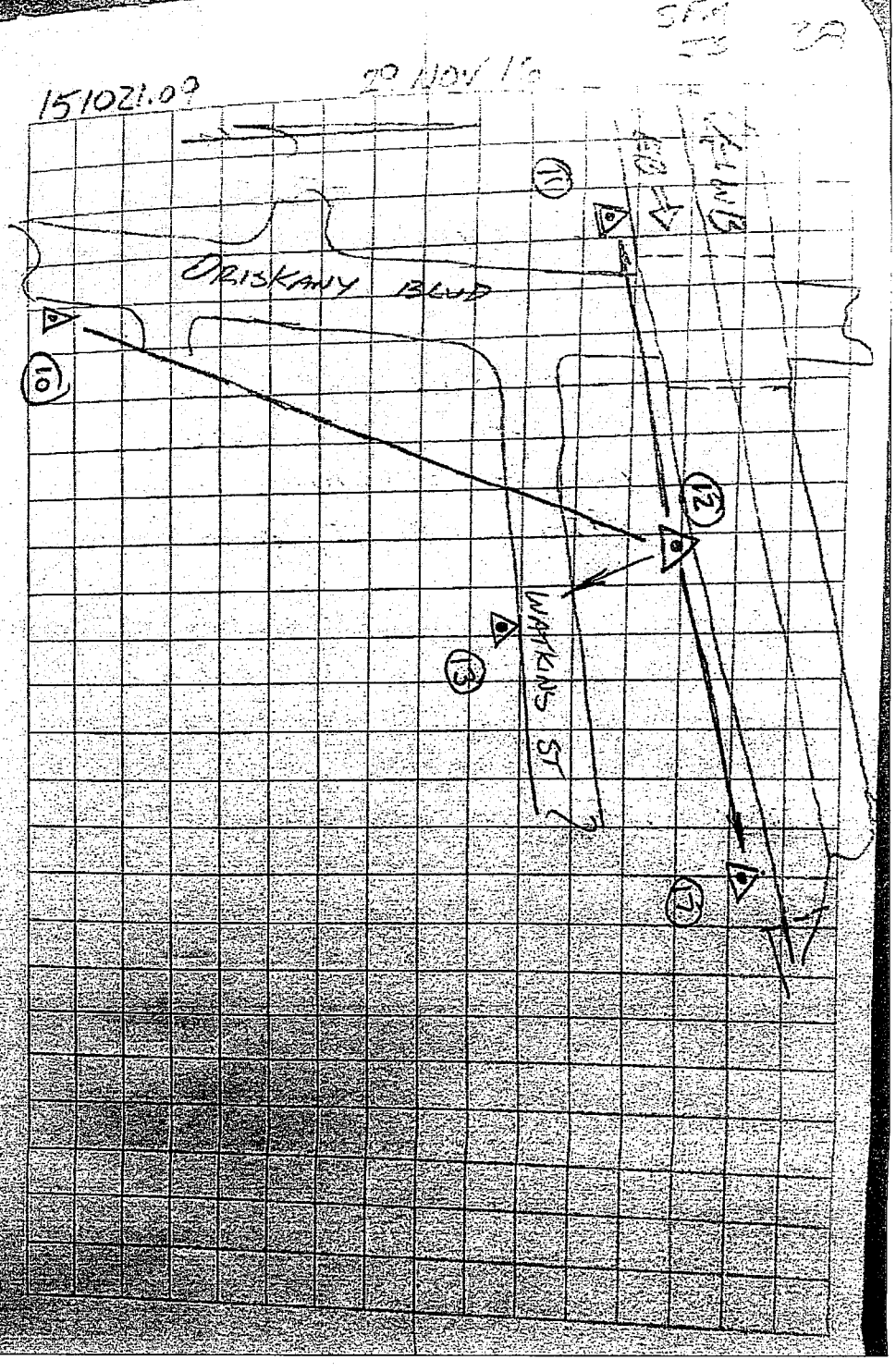
*580 & 581 HT= 7.0 ✓

598 ✓ (13) ✓

↳ ΔN 0.0 ✓ ΔE -0.01 ✓ ΔZ +0.03 ✓

599 ✓ (11) ✓

↳ ΔN 0.02 ✓ ΔE -0.02 ✓ ΔZ 0.00 ✓



NYSTA ORISKANY

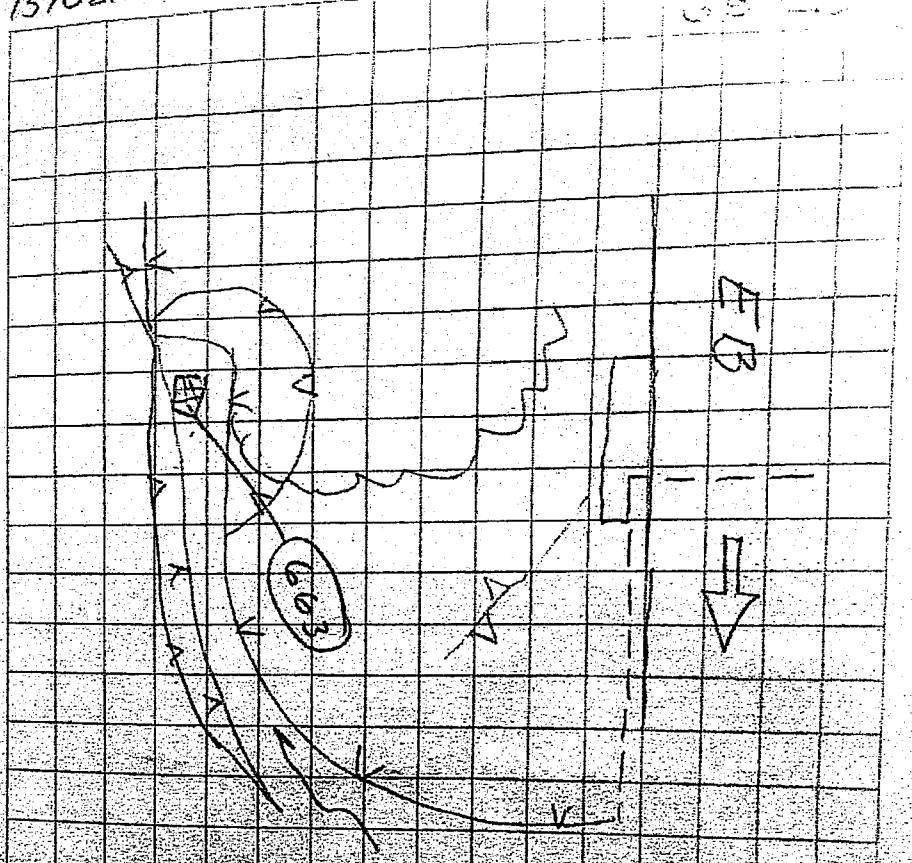
Te (17) BS (12) w/ 0°
HI= 5.03 HT= 5.07
HD= 42495 HERE= 0.00 VERE= -0.04
600 ✓ (12) ✓

601 Top of WINALL ABOVE ✓
& NYSTA PLAQUE
MOHAWK SECTION
STA 1490 + 17

663 & DI

676 ✓ (12) ✓

151021.09



INSTA- OR SKANY

T2 (11) BS (10) W/ 0°

HI= 5.29 ✓ HT= 5.05 ✓

HD= 405.78 HER= -0.01 VER= -0.04

677 ✓ (12) ✓

(12) SET 10" GALV SPIKE TOP ✓ OF BLNK BACK SIDE EASTBOUND GUIDE RAIL

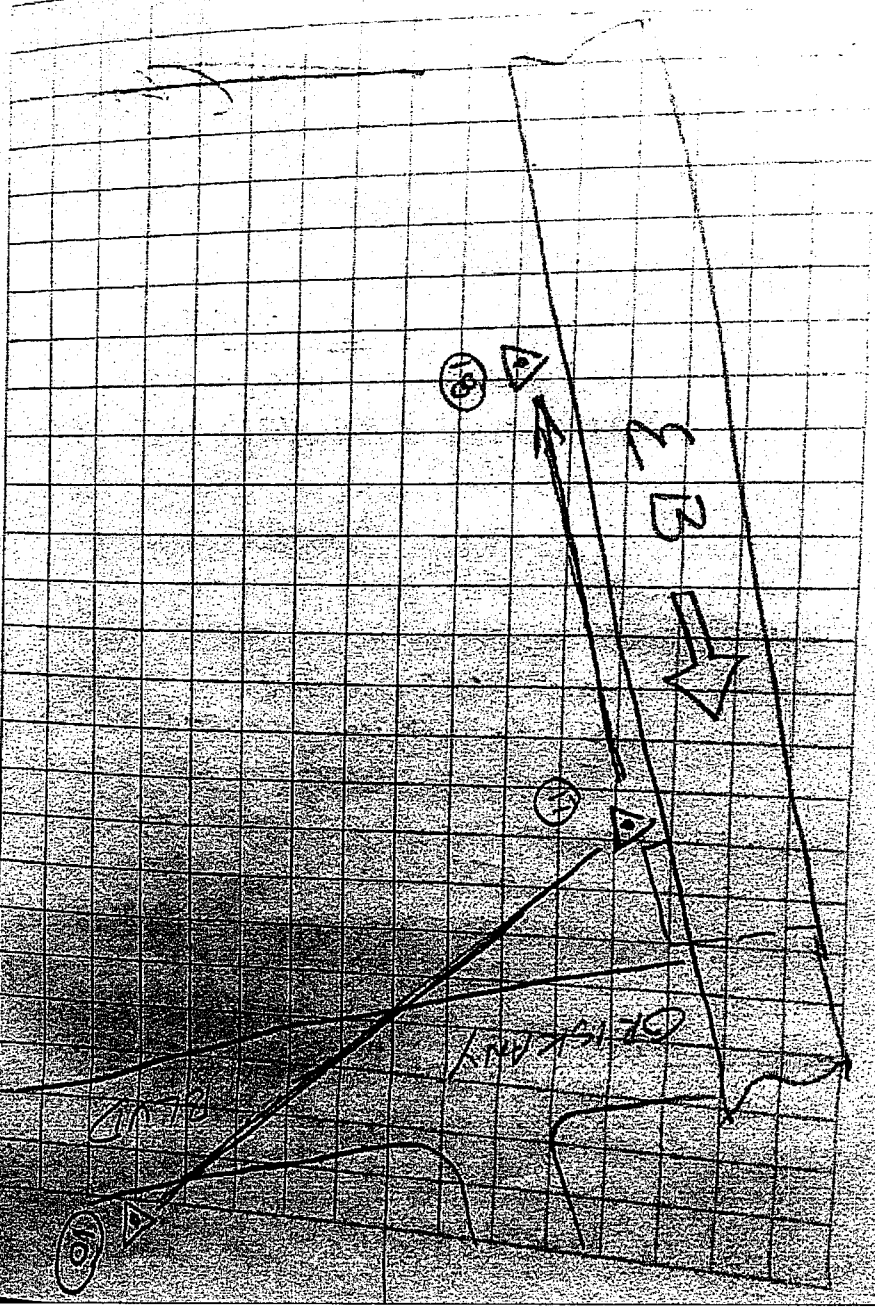
HT= 4.71

6801

— HEAVY RAIN —

— NO SEARCH OR TRACKING —

151021.09



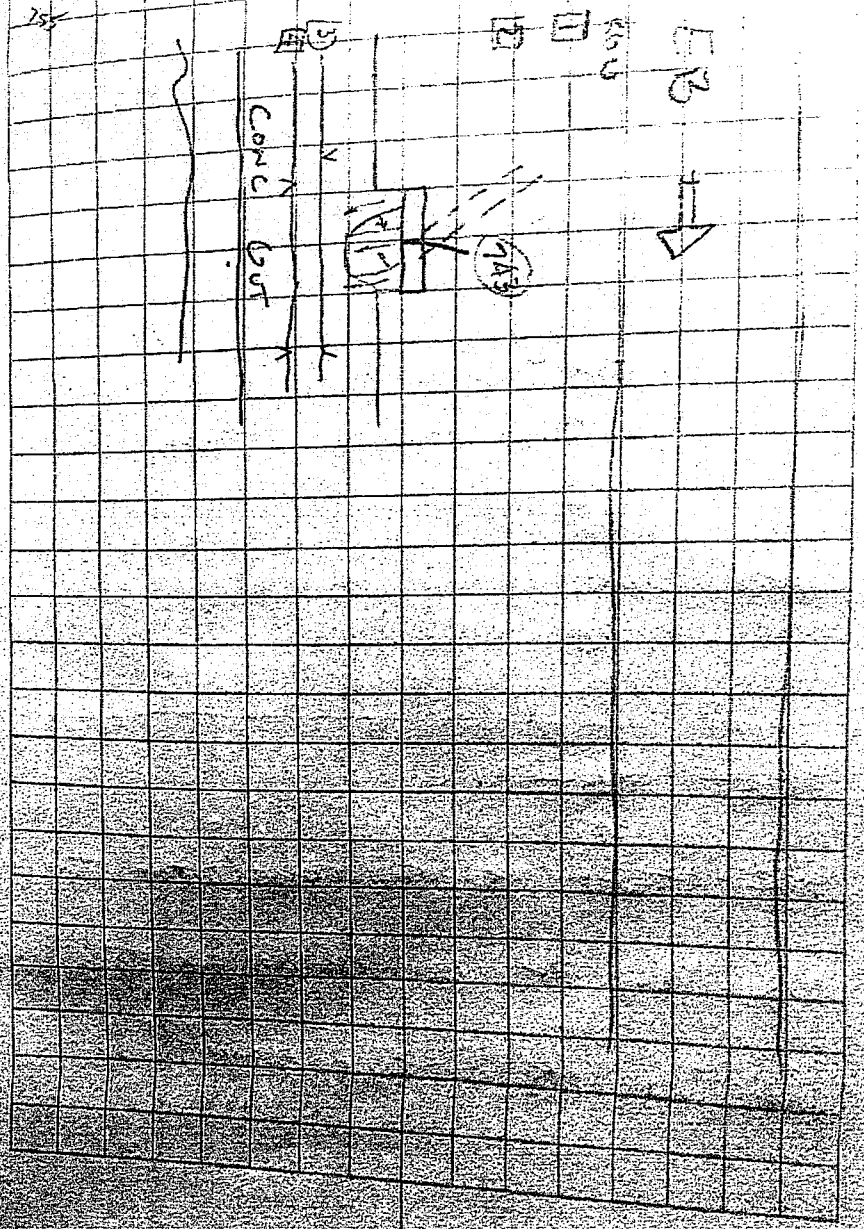
NYSTA - ORISKANY

TC (18) BS (11) W/ 00°
HI = 5.15 ✓ HT = 5.06 ✓
HD = 528.48 HER = 0.00 VER = -0.05
6081 ✓ (11) ✓

718 GROUND ELEV @ CONC HDWALL, DO NOT CONTOUR INTERIOR ✓
719 TOP CONC HDWALL
743 S INV 24" CONC PIPE IN CONC HDWALL

804 BACK EDGE CONC GUTTER, DOWNSTREAM GUTTER SLOPES ARE SUNK IN WITH UP TO 1' +/- SOIL/SOD. NOT DETAILED FOUND ENDS OF GUTTER TO SHOOT.
831 GUTTER EXTREMELY BURIED FROM 821
832 LEG 3 (@ EXPOSED CONC)
834 GROUND ELEV @ CONC HDWAL, APPEARS SLOUGHED, SLOPE ERODED EXPOSE CONC PIPE BACKSIDE HEADWALL
* DO NOT CONTOUR INTERIOR

15021.09



NYSTA - ORISKANY

836 TOP & N END EXPOSED CONC PIPE

837 EXPOSED CONC PIPE & HD WALL

843 & 844 EXPOSED CONC

850 4 SINV 24" CONC, 1ST JOINT UPSTREAM is SLOUGHED.

851, 852 TOP CONC HDWALL, TILTED & SLOUGHED

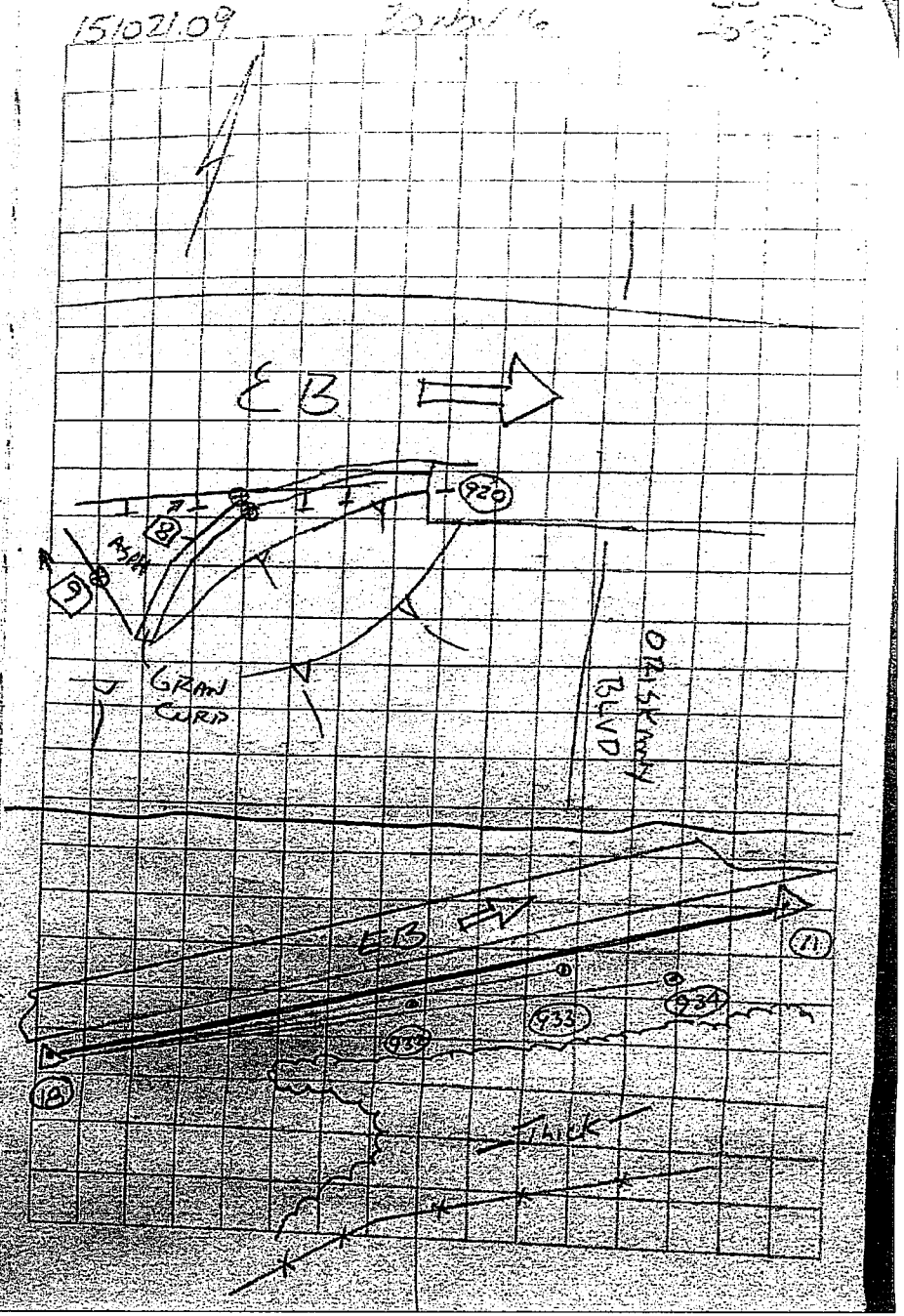
931 ✓ (11)

RESET BS —

(932) TEMP PK FOR SLOPE/DITCH TOPO

(933) TEMP PK FOR SLOPE/DITCH TOPO

(934) TEMP PK FOR SLOPE/DITCH TOPO



IVY STA - ORK

TE (16) BS (10) W/ 0°

HI = 5.05 ✓ HT = 4.78 ✓

HD = 567.43 HER = -0.02' VER = -0.03'

935 ✓ (10) ✓

948 END BROKEN TRI Δ CONC MON END BASE IN GOOD COND, BROKEN BUT PLUMB 0.5' B.G. HELD ✓

970 LELB 4 IS TOP OF 24" RCP END SECTION ✓

985 INV OF ES @ CROWN OF 24" RCP ES ✓

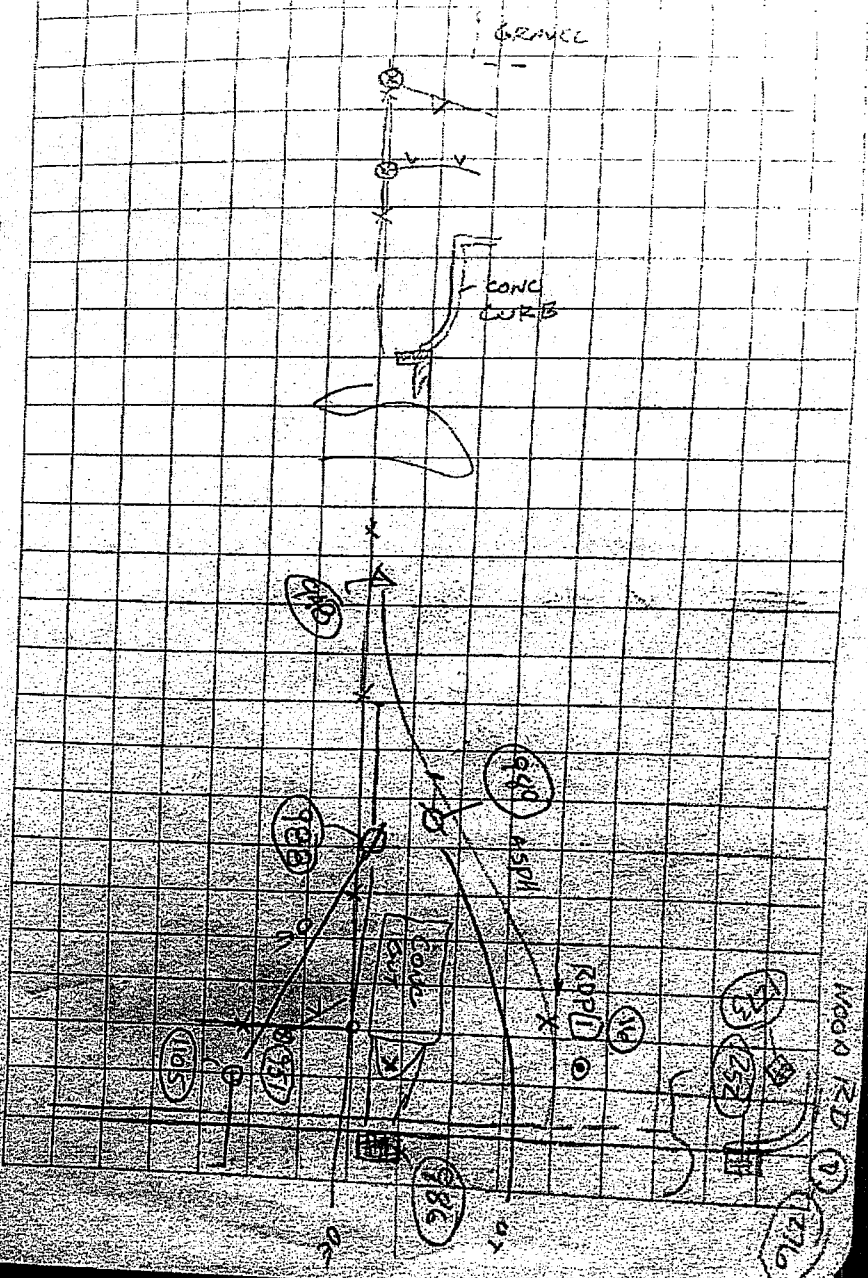
986 DS @ INV -3.55 24" RCP FROM WSW

1104 3 BOLE POPLAR 2@ 20", 1@ 24"

1109 EDGE LAID STONE/MORT. CONC SLAB BEHIND GRAN CURB

1277 ✓ (20)

151021.09



10/STA - 0215+00.00

1278 ℄ DT

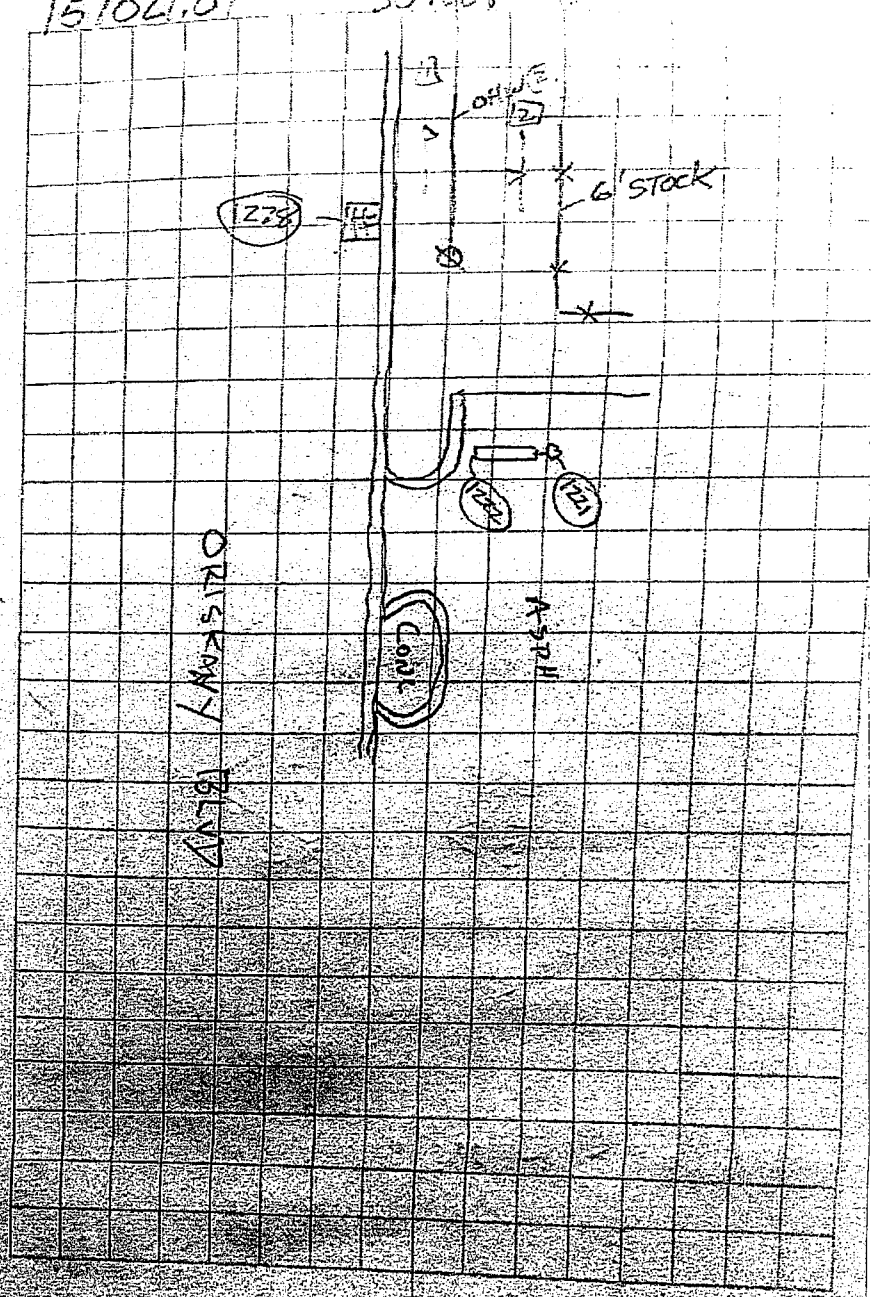
1222 END 10" WIDE CANTLV'R SIGN
FROM POST

1353 BM

1362 11
~~1363~~ ✓ (10) BS ✓

15102L.09 30 MPH

SFN
35



NYSTA - ORISKANY

⊼e (20) BS (10) w/ 0°
HI= 5.10 ✓ HT= 4.98
HD= 811.35 HER= 0.00 VER= -0.08 ✓

1363 ✓ (10)

(21) SET 10" GALV SPIKE BACK
SIDE WESTBOUND GUIDE
RAIL EAST OF OVERPASS
10' +/- E OF MP 238.2
HT= ~~4.91~~ 5.38 ✓

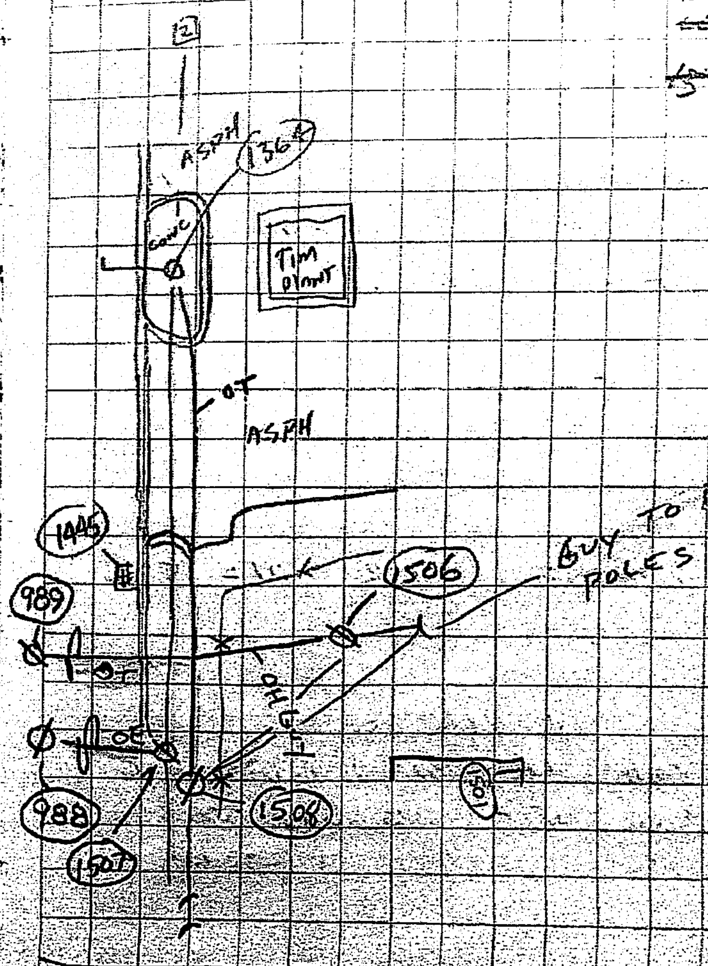
1364
1405 TIM RET WALL / PLANTER ✓
1413 TIM POST SIGN
" " w/ WATER MTR MONITOR
1471 EDGE MORT/STONE
1501 CONC BACK EDGE CURB, POOR COND
1506 GUY POLE, OH GUY TO
JUNCTION OF N-S & W OT
1508 OT TO N, UT E+S FACE
1512 NGS CARSONITE WIT POST
1513 VERTICAL CONTROL DISK ON
N FACE PIER - SEE LEVEL NOTES
1524 HT= 7.02 ✓

151021.09 02 DEC 16

SFM
JS 50

~~[illegible]~~
~~[illegible]~~
~~[illegible]~~
~~[illegible]~~
~~[illegible]~~

* (22) VOID *



1534 V (14)
ΔN 0.00 ΔE -0.03 ΔZ -0.02 ✓

NYSTA ORISKANY

SFM
JS 51

15 10 21.09 02 Dec 16

Fe (21) Bs (10) W/ 0°
HI= 5.50 HT= 4.86
HD= 357.08 HER= -0.01 VER= -0.03

1535 ✓ (10)

1536 FND 4" x 4" GRAN MON W/ D.H. 0.5' ABOVE GRADE GOOD COND.

(23) SET 10" GALV SPIKE BACK SIDE WESTBOUND GUIDE RAIL @ NW COR OVERPASS OVER MAIN ST & RR HT= 5.16

(24) SET 10" GALV SPIKE BACK SIDE WEST BOUND GUIDE RAIL 80' W +/- OF E. END CONC CURB HT= 4.84

1094 ✓ (12)

42

NYSTA - ORISKANY

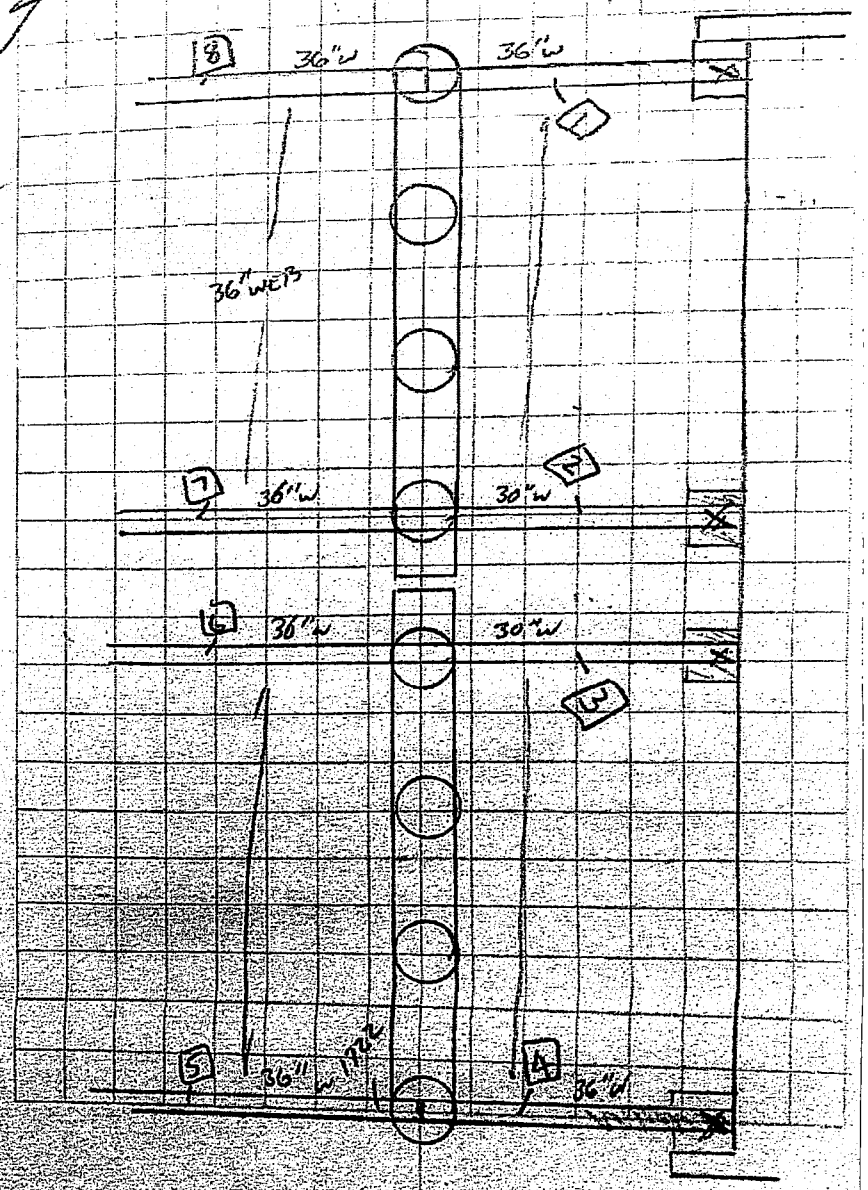
T (14) BS (10) W/ 0°
HT = 5.24 / HT = 5.10 /
HD = 449.68 HER = 0.00 VER = -0.02
1685 ✓ (10)

1690 ℄ E FACE 3.5' ø CONC piers /
— 1697

1706 COR FEN
1707 UT MARKER POST // W/ E

1708 ✓ (15) /

15102.09



NYSTA - ORISKANY

AC (15) BS (10) w/ 2

HD= HT=

HD= 442.44 HER= 0.00 VER= -0.02

1709 ✓ (10)

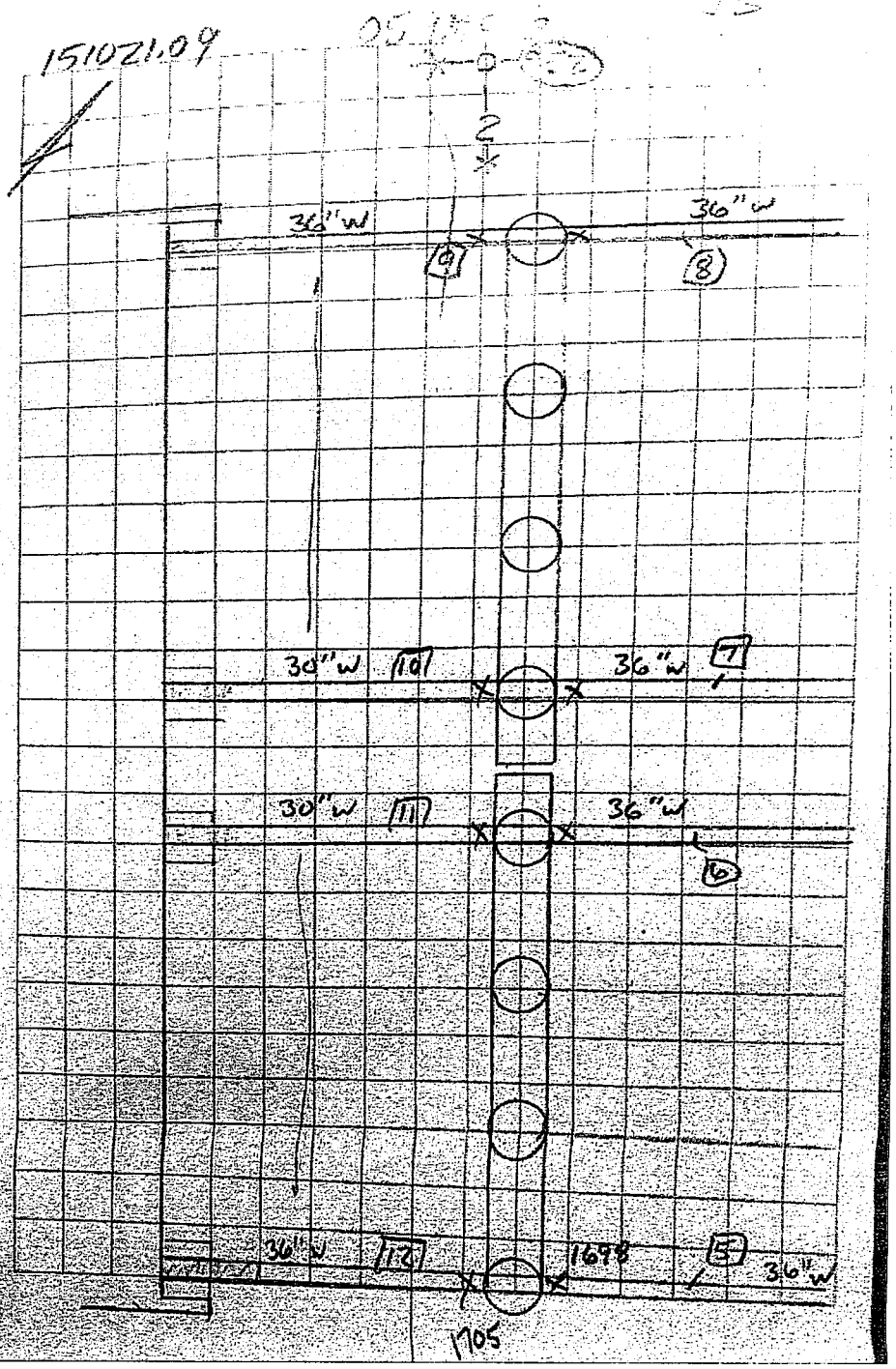
1714-1721 W FACE 30"Ø CONC COLS

* ALL GIRDERS IN SPAN OVER RTG9 ARE 36" WEB & ALL HAVE 1" +/- STRESS PLATES

* ALL GIRDERS IN SPANS FROM COLS TO BACKWALL HAVE NO STRESS PLATE, FACIA GIRDERS ARE 36" WEB & ALL OTHERS ARE 30" WEB

1731 ✓ (16)

151021.09



NYSTA ORISKANY

TC (24) BS (21) w/ 0°

HI = 4.92 / HT = 4.87 5.68 /

HD = 803.02 HEE = -0.01 VER = -0.08

1732 ✓ (21)

1742 ℄ 30" STM MH

460.90 -2.45 To 30" CONC TO SE

451.45

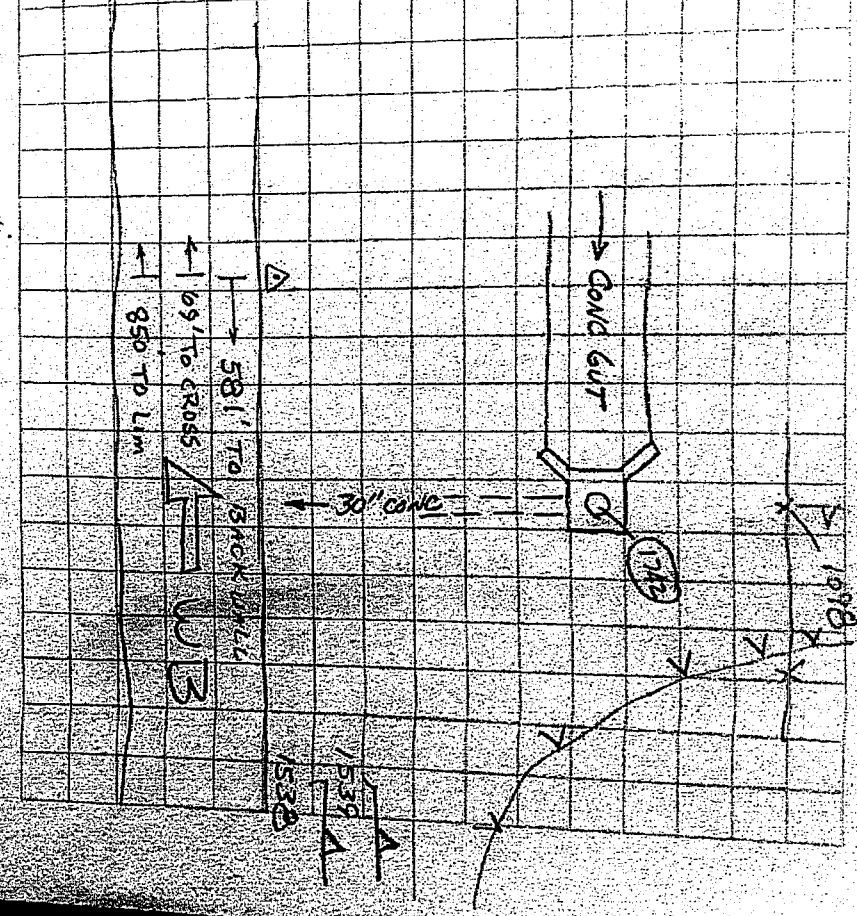
1797 ✓ (21)

15 10 21 09

(1743, 1744 VOID)

456.17

- 4.7



NYSTA - ORISKANY

Te (23) BS (21) W/ 0°
HI= 4.65 HT= 5.68
HD= 464.03 HER= +0.01 VER= +0.06
1798 ✓ (21) ✓

1823 CONC STORM STRUCT ✓
W END EXPOSED W/ NUMEROUS
3" Ø HOLES FOR INLET, DI
ON TOP

1829 ℄ DI 415.87
-3.6 APPEARS to be 18"
RCP ? 410.27
1830 DIRECTION ± RCP
1834 END TRI & CONC MON, PLUSH ✓
TOP SHEARED

1894 ✓ (21) ✓

151021.09

1630
1632

NYSTA - ORISKANY

X @ (11) BS (10) W/ 0°

HI = 5.19 ✓ HT = 4.84 ✓

HD = 405.79 HER = 0.00 VER = -0.04

1695 ✓ (10) ✓

1901 C & DI

-11.0 36" CONC FROM SW TO NE

-3.25 24" CONC FROM NW

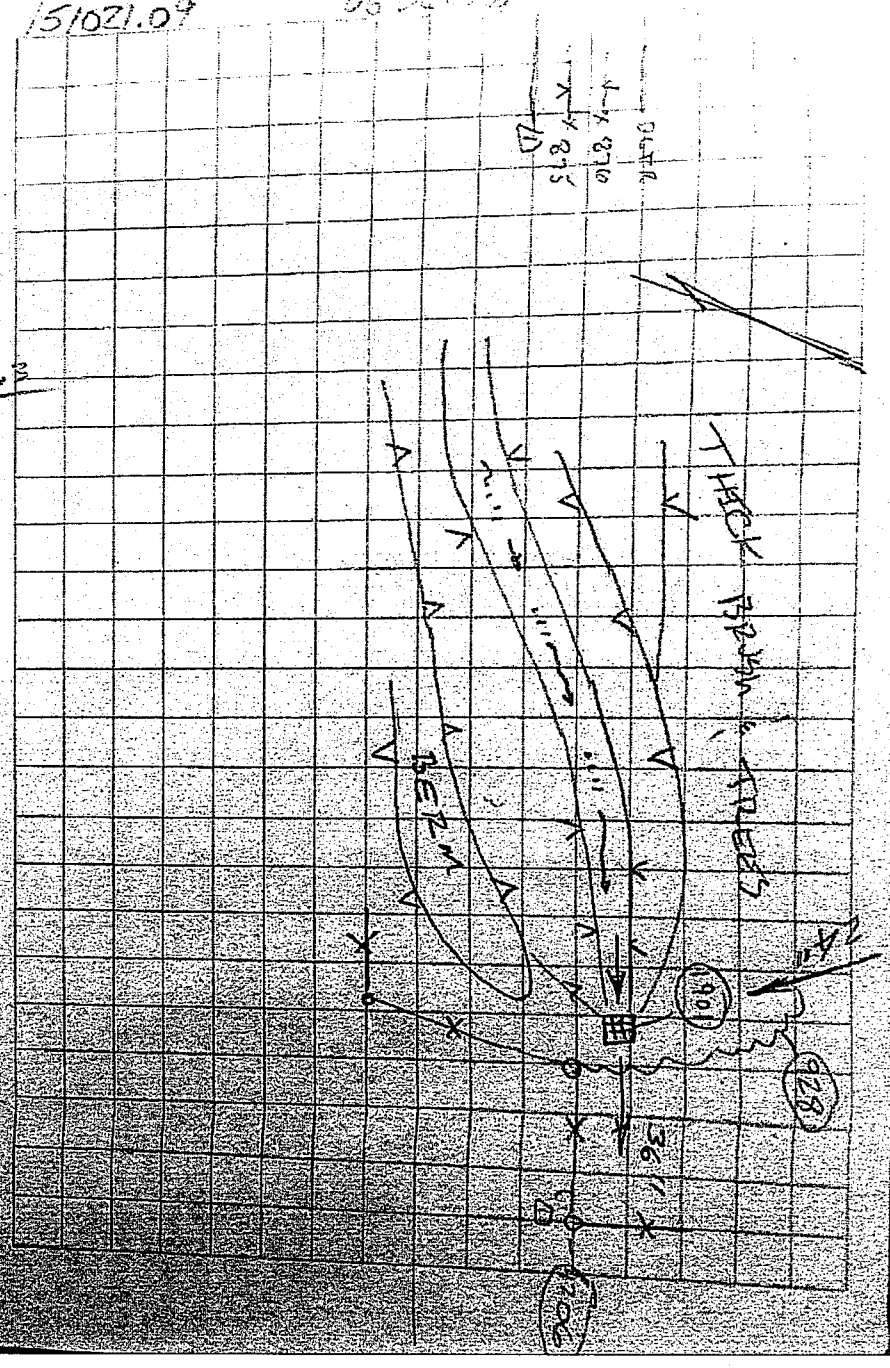
SEE PAGE 63

1902 C N'LY EDGE 1' X 1' +/-

KNOCKOUT IN SIDE OF

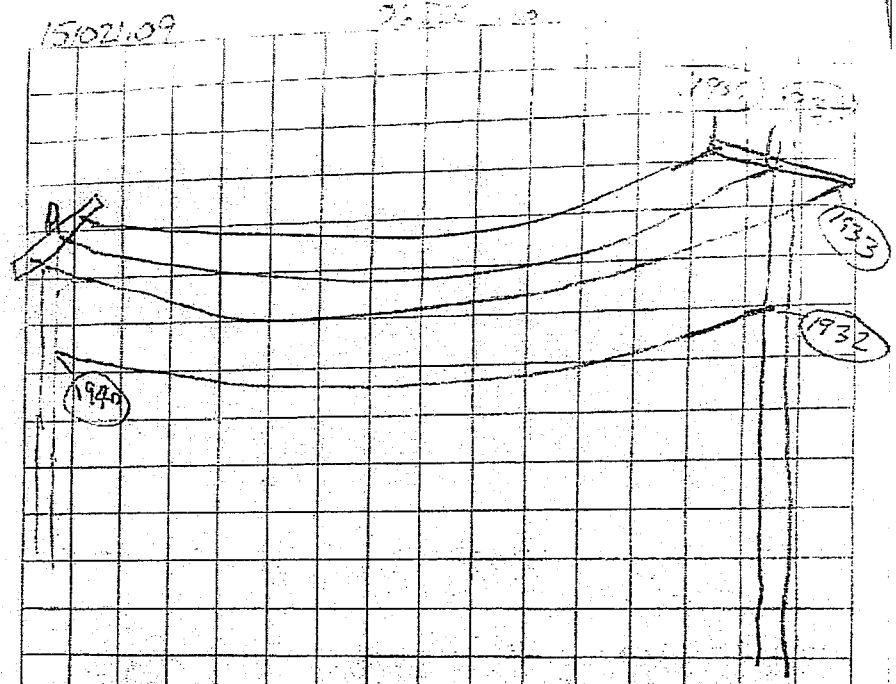
C. B.

151021.09



NYSDA ORISKANY

1932	OH GUY @ POLE
1933	W'LY OF @ BENCH POLE
1934	CENTER OF
1935	E'LY OF
1936	APPROX. SAG PT E'LY OF
1937	CENTER
1938	W'LY
1939	OGUY
1940	OH GUY @ POLE
1941	E'LY OF
1942	CENTER OF
1943	W'LY OF
✓ 1944	✓ (16) WRONG PRISM ✓ OK



NY 57A ORISKANY

Te (934) Bs (18) w/ 0°
HI = 4.77 ✓ HT = 5.02 ✓
HD = 419.26 HER = 0.00 VER = -0.06
1945 ✓ (18)
TOPO of TOE / DITCH
1960 ✓ (933)

Te (933) BS (18) w/ 0°
HI = 5.02 ✓ HT = 5.02 ✓
HD = 304.59 HER = -0.03 VER = -0.02
1961 ✓ (18)
1983 E INV 36" ϕ CONC PIPE ✓ E
HOWARD
* 1984 HT = 10.9 ✓

✓ 1997 (11) ✓
ΔN 0.00 ΔE +0.01 ΔZ -0.03

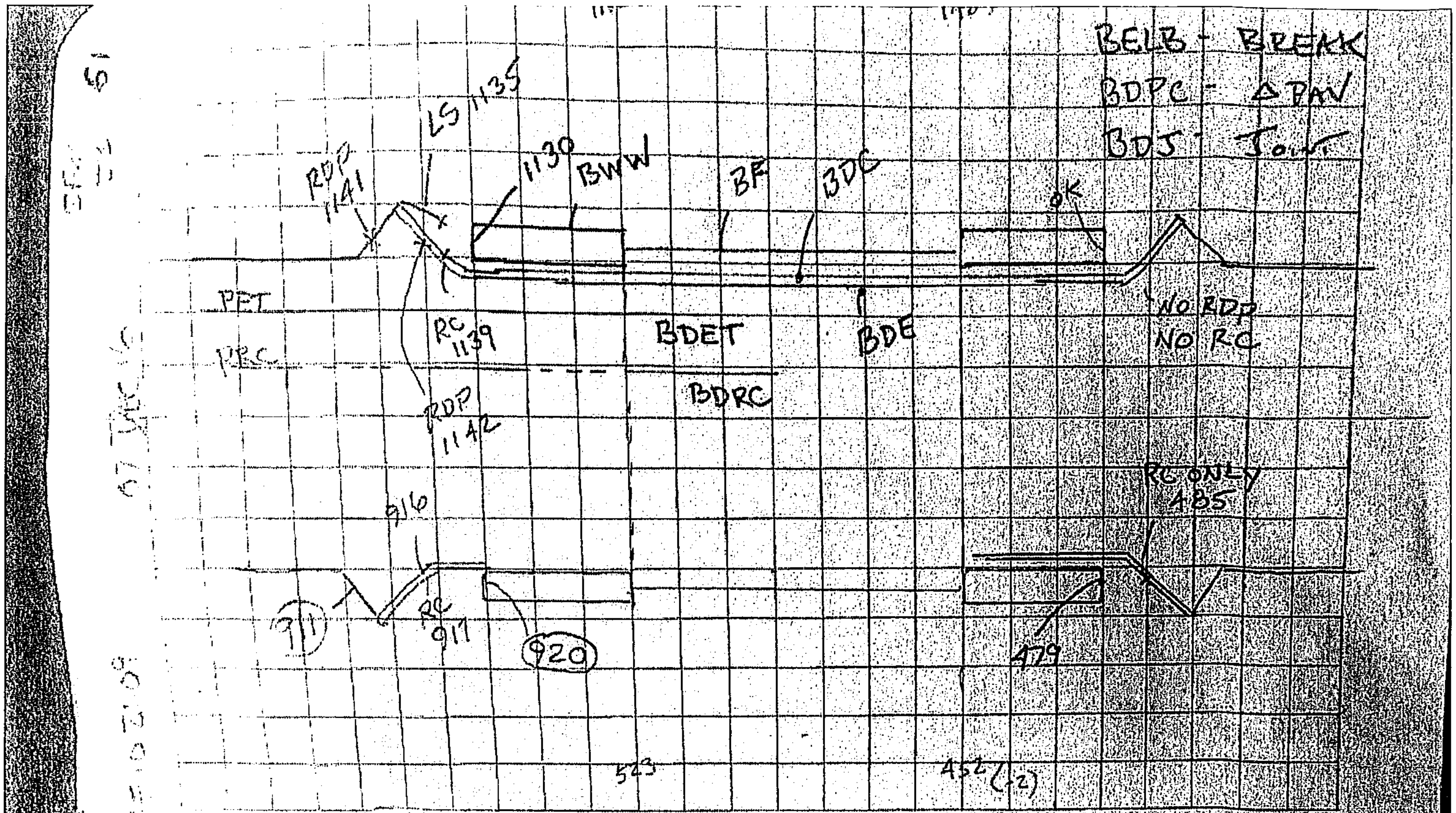
15102.09

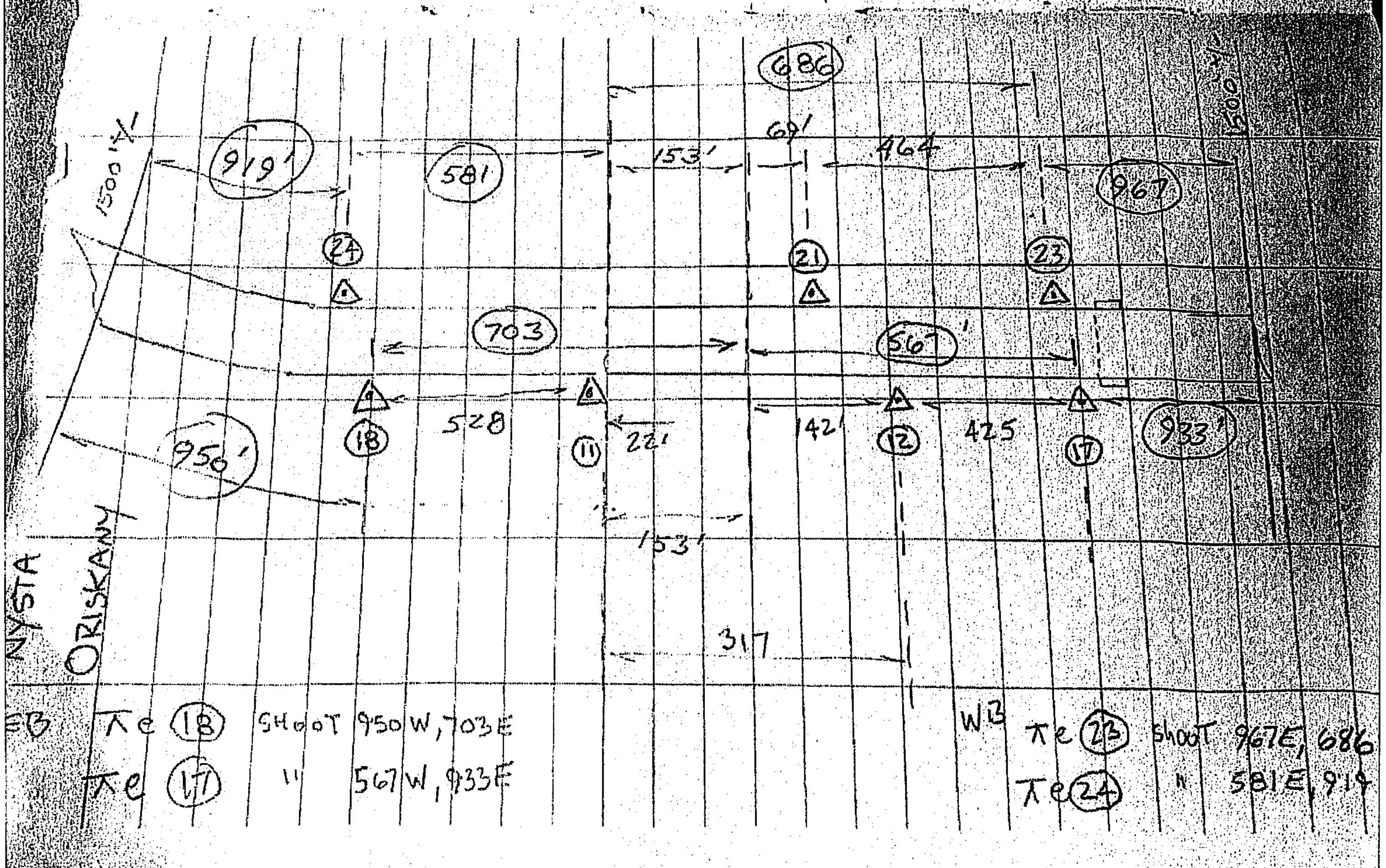
SFW
TS 60

36 INC

THICK 13.2 USH / TREES

49


BELB - BREAK
BDPC - Δ PAV
BDJ - JOINT
RDP 1141
LS 1135
1130
BWW
BF
BDC
OK
PET
PRC
RC 1139
BDET
BDE
NO RDP
NO RC
RDP 1142
BDRC
RC ONLY 485
916
911
RC 917
920
479
523
452 (-2)


686
1500'±
919'
581
153'
69'
464
967
1500'±
24
21
23
703
567'
528
221
142'
425
933'
18
11
12
17
950'
153'
317
NYSTA
ORISKANY
EB Te (18) SHOOT 950W, 703E
Te (17) " 567W, 933E
WB Te (23) SHOOT 967E, 686
Te (24) " 581E, 919

NYSTA - ORISKANY

932 BS 18 w/ 0°

HI = 4.741 HT = 5.02

HD = 181.22 HER = 0.00 VER = 0.00

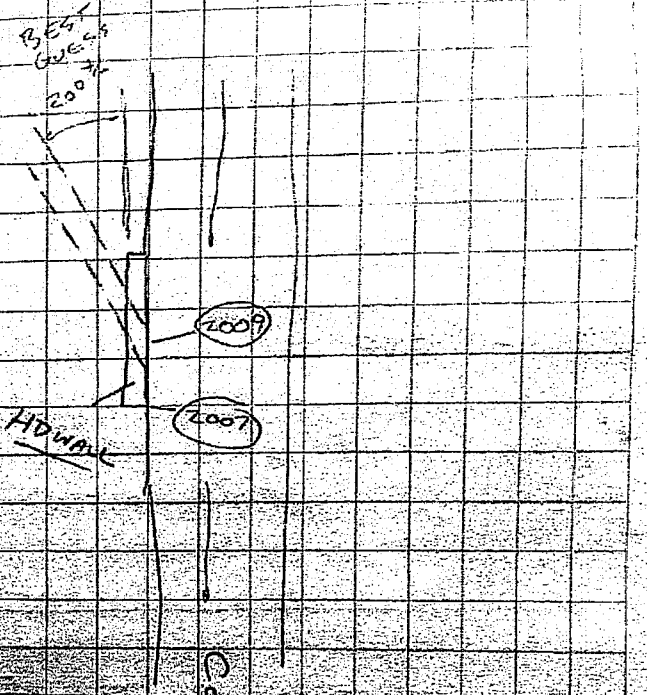
1998 ✓ 18

2007 N FACE CONC HDWALL

2009 INV 24" CONC

2016 ✓ 11

15102.09



NYSTA ORISKANY

← INVS →

430.74

(1276) STM MH — -6.2 24" RCP FROM E 424.54

-7.3 24" RCP TO SE 423.44

-6.6 18" RCP FROM SW 424.14

(1273) 428.34 DI — -4.1 18" RCP TO NE 424.24

(1278) DI 431.02 — -4.85 24" RCP TO W 426.17

-4.85 FROM SE 426.17

(1252) DI 430.47 — -2.5 12" RCP FROM SW 427.97

-7.0 24" RCP FROM NW [illegible]

-7.1 24" TO SE [illegible]

431.55 (1445) DI — -4.25 18" RCP TO NW [illegible]

(1901) DI 438.21 — -11.0 36" RCP FROM SW & TO NE [illegible]

-3.25 24" RCP FROM NW [illegible]

(946) 431.53 DI — -8.5 ± ℄ INV NW-SE (O/S IN [illegible]

CB, NOT VISIBLE - VARIABLE SUMP

ELEV. IN CB ASSUME 24" NW-SE)

TG ℄ ASSUME 24"

-3.55 18" RCP FROM SWW [illegible]

(280) DI 432.03 — -6.1 36" RCP FROM SW [illegible]

-10.8 48" RCP TO NE [illegible]

-9.7 24" RCP FROM SE [illegible] BEST EST. USING WEIGHTED TAPE

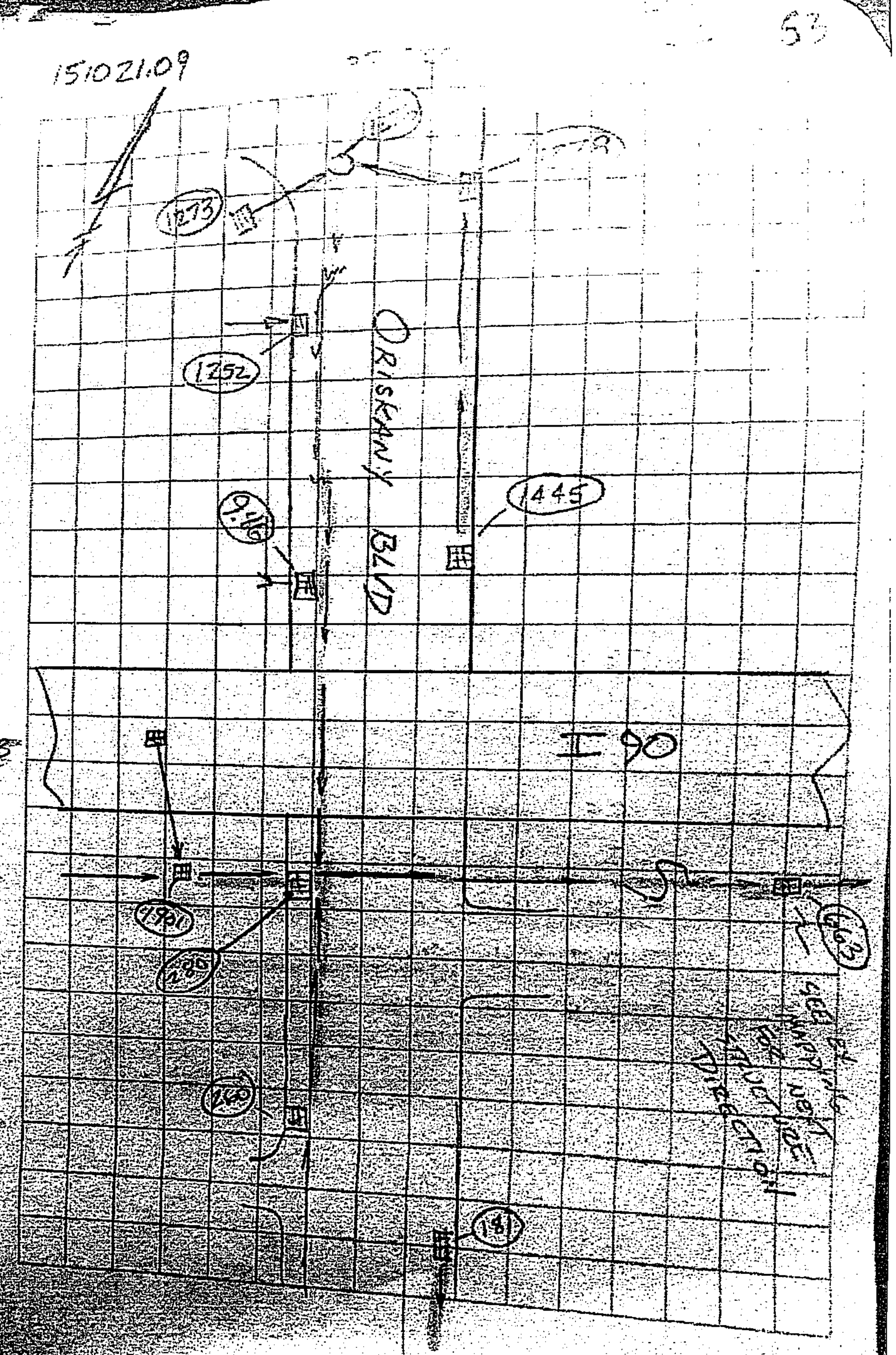
-10.6 24" RCP FROM NW [illegible]

(260) 431.34 DI — -7.9 24" RCP FROM SE & TO NW [illegible]

(181) 431.59 DI — -4.5 [illegible] RCP TO SE [illegible]

(663) DI 413.22 — -6.0 [illegible] SW [illegible]

-6.0 [illegible] TO NE



NYSTA ORISKANY (WHITES
STATIC GPS
FILE: 20161208W

CP(16)
HI = 6.56'
START = 12:08p
STOP = 1:10p

CP(20)
HI = 6.56'
START = 1:23
STOP = 2:23

NYSTA - WHITESBORO

MAIN LINE

⊼ @ (18) BS (11) w/ 0

HI = 5.24 ✓   HT = 5.00 ✓

HD = 528.49   HER = +0.01   VER = -0.08

2017 ✓ (11) ✓

2215 ✓ (11)

⊼ @ (17) BS (12) w/ 0°

HI = 5.25 ✓   HT = 4.99 ✓

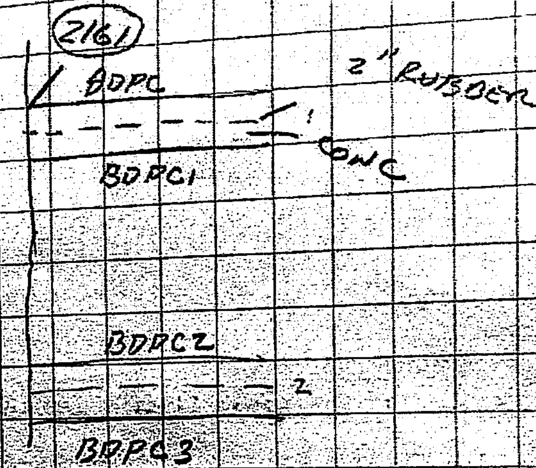
HD = 424.96   HER = +0.01   VER = -0.04

2216 ✓ (12)

2389 11

✓ BS +06" ✓

15102109   13 DEC ?



4

3

5

*NOTE: APPEARS 2236 BDE IS A BND SHOT; CREATE BDE @ TYP O/S FROM BBC - USE ELEV +0.15 HIGHER THAN PELB 2335

SAM 70
JS

13 DEC 16

1510Z

NYSTA - WHITESBORO

At (1) BS (2) w/ 0°
HT= 5.32 ✓
VER= -0.05

455.55
2510 BS -5.5 24"? TO SE 450.05

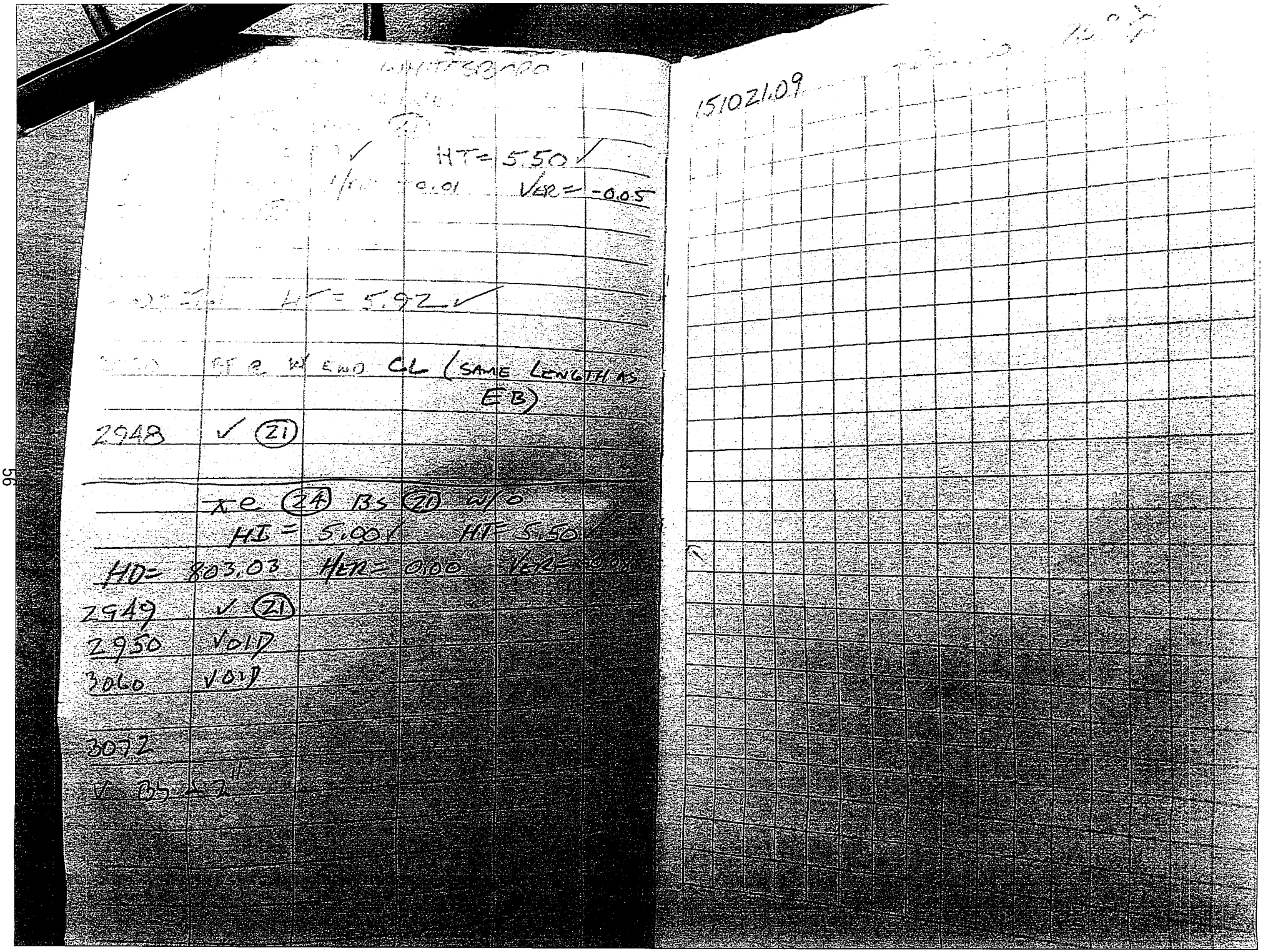
451.87
2533 DS -5.9 ~~ENV~~, CANT NOT SEE PIPE 446.17

2570 11
✓ BS 0 ✓

At (17) BS (12) w/ 00
HI= 5.11 ✓ HT= 5.13 ✓
HD= 424.97 HER= +0.01 VER= -0.04

2571 ✓ (12)
445.20
2610 DS -6.4 ~~SEE PIPE~~ CANT SEE PIPE, APPEARS FULL TO SE
2700 H
✓ BS -0.1'

55


HT = 5.50 ✓
VER = -0.05
HT = 5.92 ✓
CL (SAME LENGTH AS EB)
2948 ✓ (21)
Xo (24) Bs (21) W/O
HI = 5.00 ✓ HT = 5.50 ✓
HD = 803.03 HER = 0.00 VER = -0.05
2949 ✓ (21)
2950 VOID
3060 VOID
3072
151021.09

[illegible] WHITES CORO

[illegible]

[illegible] TO [illegible] w/ 0°

HT = [illegible] ✓ HT = 5.50 ✓

[illegible]

[illegible] +0.01 VERT -0.04

~~3[illegible] 3[illegible]~~

3119 ~~BDDC~~ [illegible]

✓ ~~3190~~

✓ ~~3185~~

3215 // -01"

✓ 135

151021.09 [illegible] 16

SFM
JS 72

UTICA - WHITESBORO

— MAINLINE —

(20) TO (21) W/ 0°

HT= 5.48 ✓

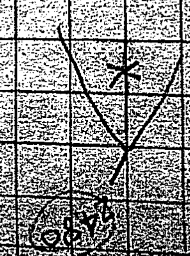
HERR +0.70 VERR -0.11 ✓

.02

3216	✓ (21)
3218	[illegible]
3	[illegible]
466.05 ~~[illegible]~~	TS -11.7 30" TO SSE ~~449.3~~
473.95 3310	DS -3.4 24" TO SE ~~470.~~
490.93 3343	DS -3.8 24" TO SE ~~455.13~~
3389	✓ (21)

151021.09-1 — 19 FEB. 16 — 6° JS

NEED 1ST INVERT



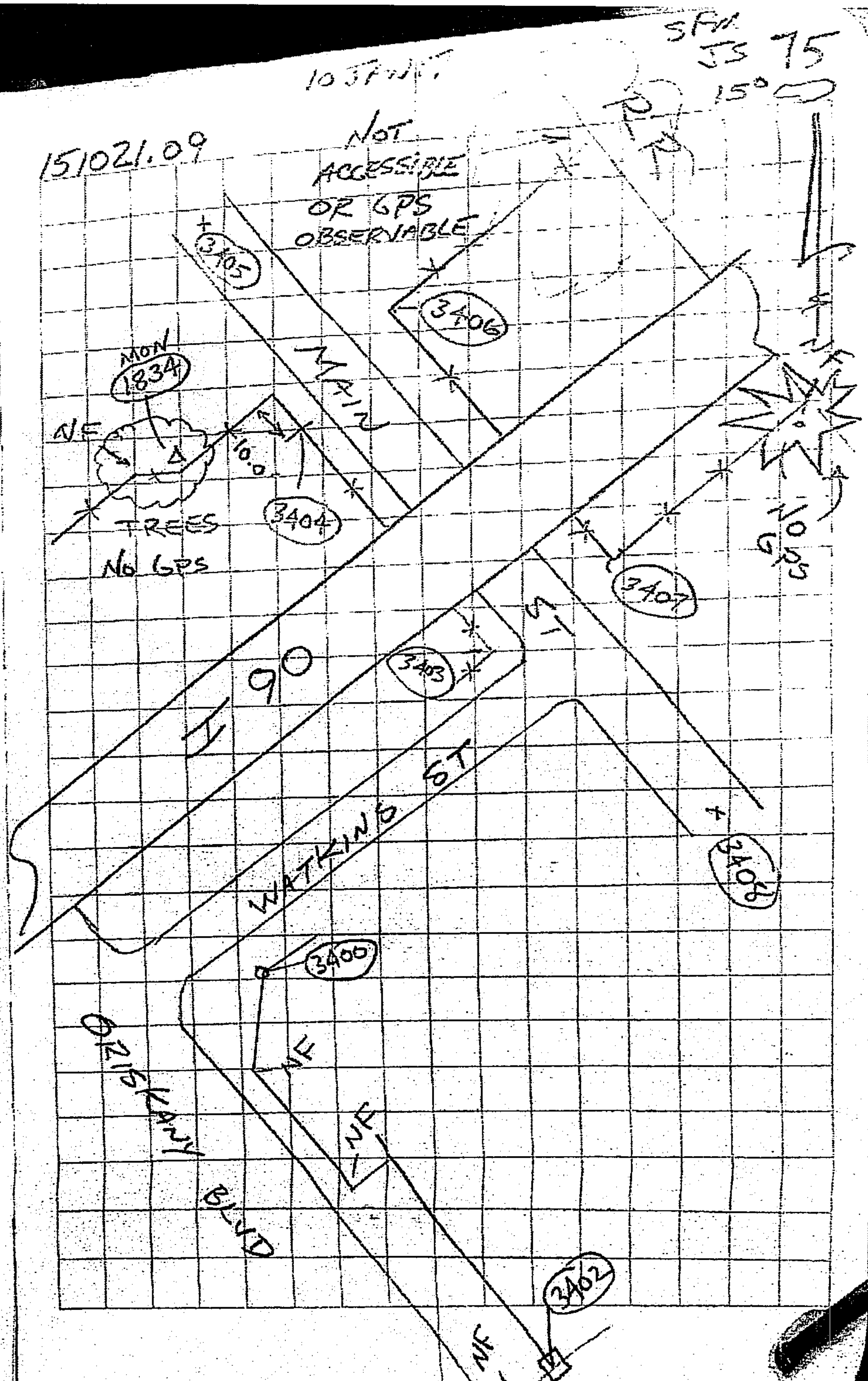
NYSTA ORISKANY
(WHITESBORO) ...
LEICA SR RTK ...
FILE: 20170110 ...

3400 FND 1" IRON PIPE ✓ 0.8' B.G.
GOOD COND.

3401 ✓ CP (10) ✓

3402 FND 4"x4" GRAN MON W/ ✓
DH (TYP REG. 3) 0.8' HIGH
GOOD COND.

3403, 3404 FENCE CORS ✓
* 3404 IS ℄ EXTEND 3403 → 3404 10.0' TO ✓
COR FENCE
3405 ℄ MAIN ST SPLIT CURB ✓
3406 FEN. COR ✓
3407 " " ✓
3408 ℄ MAIN ST ✓



WHITEBORO

TK

CONT

3409 FND 4" X 4" GRAN MON/ 0.3' BELOW GRADE GOOD COND.

3410 FND PIN/CAP "DELTA ENG." 0.1' BG

3411 FND 3/4" IRON PIPE/ FLUSH

3412 FND TRI-CONC MON/ FLUSH, PEAK OF CONC CRUMBLED BUT BRASS PIN STILL EXISTS INTACT. (LOCATED ±0.3'g)

* POOR COORD QUALITY

3413 FND 5/8" REROD/ 0.3' HIGH

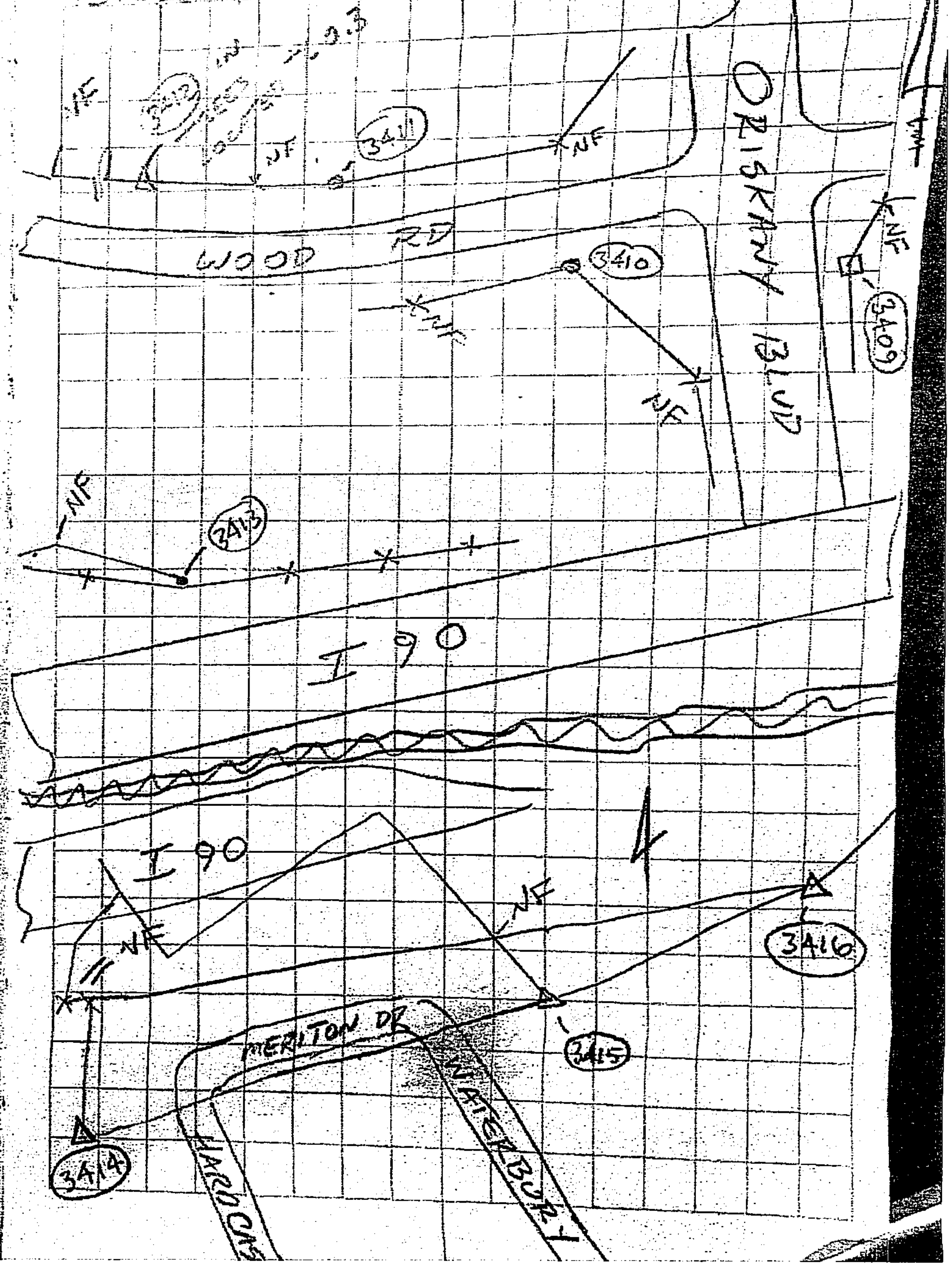
3414 FND TRI CONC MON/ 1.3' HIGH, GOOD COND. W/ BRASS PIN

3415 FND TRI CONC MON/ 2' HIGH, LEANING E'LY, HELD ℄ BASE

3416 FND BROKEN CONC MON/ ¢ PT FL SHOT TOP ℄ REMAINING TRI CONC BASE W/ BENT RE-RODS, DUG OUT SMOOTH SIDES 1' DEEP.

SFM 76
JS

15102L09 10 JAN 17



NYSTA - HERKIMER
EB OFF RAMP MAINLINE

151021.09

25 JAN 17

SFM
JS

78

23°

TC (13) 35 (19) w/ 0°
HI= 5.03 HT= ~~5.02~~ 4.90
HD= 296.42 HER= 0.00 VER= -0.01
3564 ✓ (19)

3605 GDH
3606 GDH

✓ BS

NYSTA - WHITESBORO (ORISKANY BLVD)

FILE: 20170130BORE

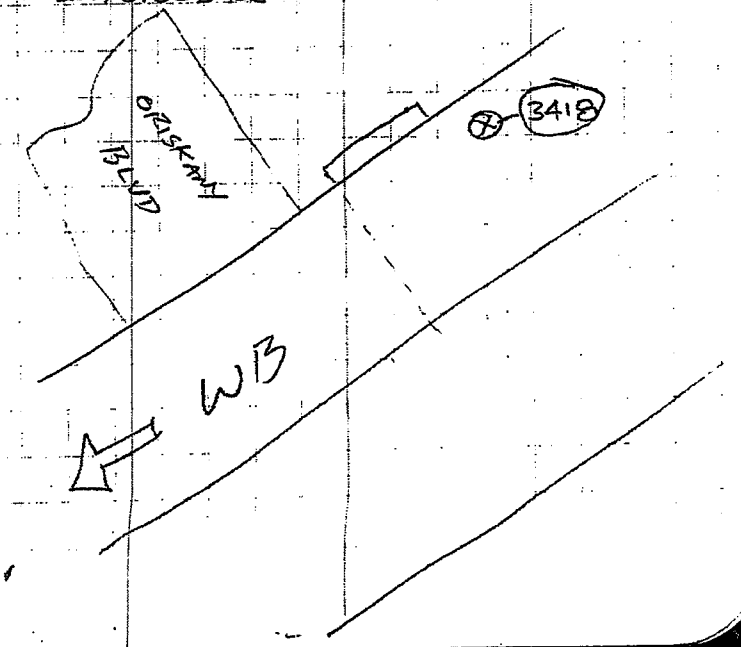
TC (16) BS (20) w/ 0°
HI= 4.97 HT= 5.02
HD= 245.52 HER= +0.01 VER= +0.05

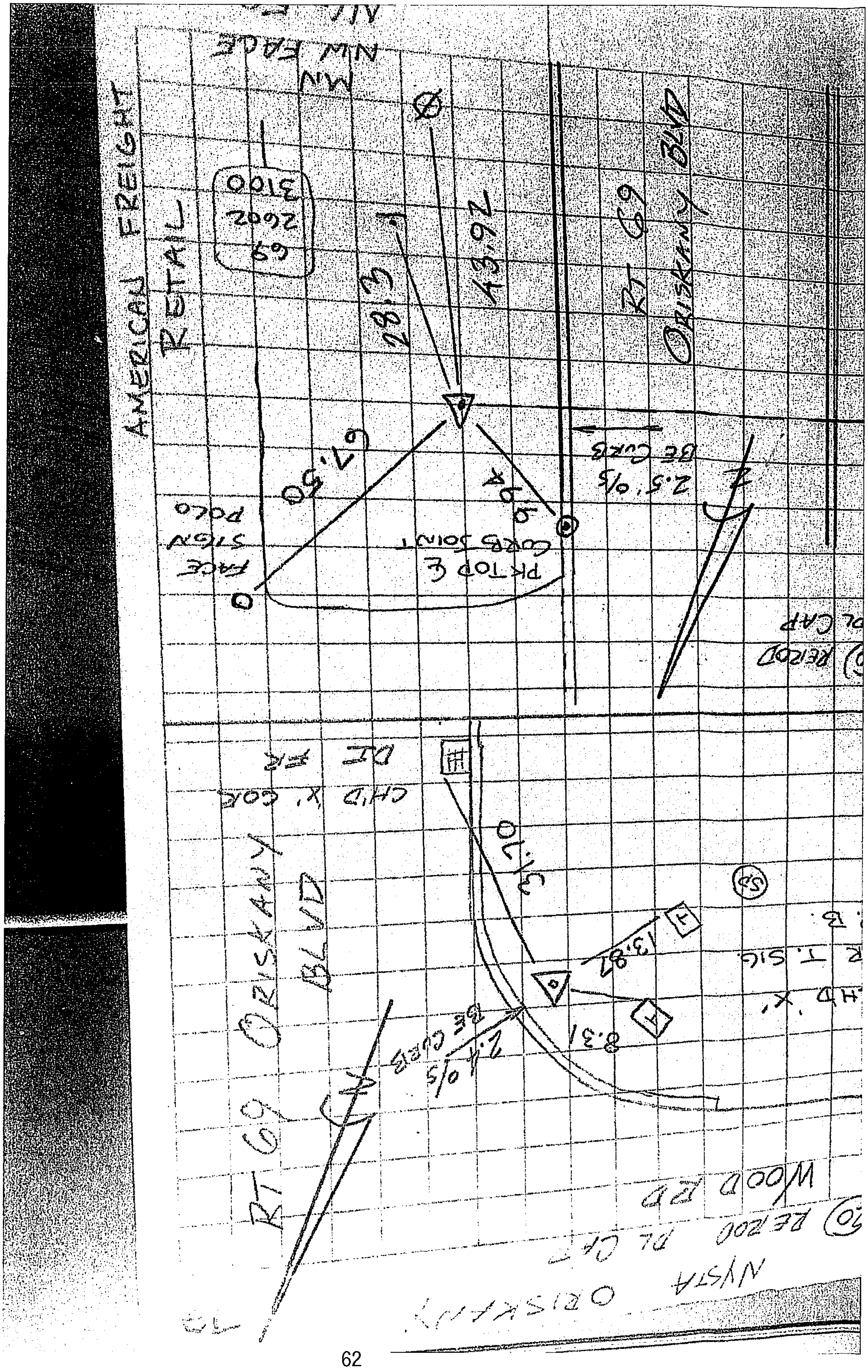
3417 ✓ (20)

3418 GDH

3419 ✓ (17)
→ ΔN -0.01 ΔE -0.07 ΔZ +0.02

3420 TC pull Box, prev'ly missed




AMERICAN FREIGHT
RETAIL
NW FACE
69
2602
3100
28.3
43.92
RT 69 ORISKANY BLVD
69.50
40.6
2.5' o/s BE CURB
PK TOP € CURB JOINT
FACE SIGN POLO
RT 69 ORISKANY BLVD
31.10
13.87
8.31
2.4' o/s BE CURB
WOOD RD
NYSTA ORISKANY