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SURVEYS AT PAGE _____, RECEPTION NUMBER _____
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STATE OF COLORADO
C.D.O.T. FORM 1269-
REVISED: JULY, 1996

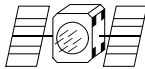


COLORADO DEPARTMENT OF TRANSPORTATION

Region One
18500 East Colfax Avenue
Aurora, Colorado 80011
Phone: (303) 757-9744 FAX: (303) 757-9746

SURVEY UNIT: Joseph P. Conway

Sheet Revisions		



SH 40 MP 255.8 to MP 256.5

Located in:
Sections 28 & 29, T.3S., R74W.
of the 6th P.M.
Clear Creek County, Colorado



CONTROL SURVEY DIAGRAM	
NH 0403-039	
Town of Empire	
PROJECT CODE: 12869	
Sheet Subset: 1 of 4	Sheet Number:

GEODETTIC COORDINATE SUMMARY TABLE (ADJUSTED FIELD DATA)

POINT NAME	GEODETTIC COORDINATES NAD-83(92) (CHARN)		ELLIP. HEIGHT	ELEV (m) (NAVD '88)	MAPPING ANGLE	COMBINED FACTOR	NAD 83(92) ZONE 0502	
	LATITUDE(N)	LONGITUDE(W)					NORTHING (m)	EASTING (m)
CM-MP 255.8	39°45'40.80671" N	105°41'26.12476" W	2616.805	2628.030	-00°07'12.731"	0.999591599	518847.677	898070.051
CM-MP 255.9	39°45'40.64762" N	105°41'15.09517" W	2612.549	2623.790	-00°07'05.775"	0.999592258	518842.224	898332.577
CM-MP 256.2	39°45'39.12440" N	105°40'56.99959" W	2617.788	2629.050	-00°06'54.362"	0.999591351	518794.368	898763.210
CM-MP 256.4	39°45'37.94815" N	105°40'47.25892" W	2608.081	2619.360	-00°06'48.219"	0.999592809	518757.628	898994.996
CM-MP 256.6	39°45'34.80752" N	105°40'33.38619" W	2586.352	2597.640	-00°06'39.470"	0.999596043	518660.119	899325.023

PROJECT COORDINATE SUMMARY TABLE (ADJUSTED FIELD DATA METERS)

POINT NAME	PROJECT COORDINATES		ELEV (m) (NAVD '29)	DESCRIPTION
	NORTH (m)	EAST (m)		
CM-MP 255.8	214047.761	288470.896	2626.519	CDOT Type II Control Monument
CM-MP 255.9 GPS EMPIRE	214042.315	288733.539	2622.279	CDOT Type II Control Monument
CM-MP 256.2	213994.433	289164.341	2627.546	CDOT Type II Control Monument
CM-MP 256.4	213957.677	289396.218	2617.850	CDOT Type II Control Monument
CM-MP 256.6	213860.123	289726.379	2605.283	CDOT Type II Control Monument

PROJECT COORDINATE SUMMARY TABLE (ADJUSTED FIELD DATA FEET)

POINT NAME	PROJECT COORDINATES		ELEV(ft) (NAVD '29)	DESCRIPTION
	NORTH (ft)	EAST (ft)		
CM-MP 255.8	702255.03	946424.93	8617.17	CDOT Type II Control Monument
CM-MP 255.9 GPS EMPIRE	702237.16	947286.62	8603.26	CDOT Type II Control Monument
CM-MP 256.2	702080.07	948700.01	8620.54	CDOT Type II Control Monument
CM-MP 256.4	701959.48	949460.76	8588.73	CDOT Type II Control Monument
CM-MP 256.6	701639.42	950543.96	8547.50	CDOT Type II Control Monument

CONSTRUCTION SURVEYING AND MONUMENTATION REQUIREMENTS:

- 1). This Control Survey Diagram represents the horizontal and vertical control for the project established by the Division. It is possible that some of the survey control monuments listed have been disturbed or obliterated. It is the Contractor's responsibility to verify the existence and stability of the control monuments before submitting a bid price.

2). All Type 1 and Type 2 monuments shall be set flush with the ground. Witness posts shall be installed 1 foot from and facing all Type 1 and Type 2 monuments, or as directed by the Project Engineer.

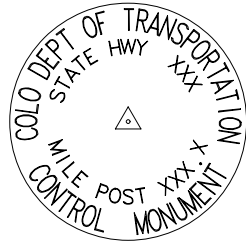
3). Installation of Type 3 and Type 3-A monuments shall be completed in the same day that installation is commenced. Under no circumstances shall holes in the roadway be left open overnight.

4). When installing Type 3-A monuments, the aluminum monument box shall be positively secured in the roadway surface. The monument box shall be caulked with asphalt caulking between the monument box and the edges of the roadway surface to provide a positive moisture barrier around the monument box.
- 5). Control survey procedures, statistical analysis, and accuracy obtained for horizontal and vertical control shall be documented in the field book.

6). Legible copies of the field books shall be submitted to the Project Engineer for review on a monthly basis.

7). It is ultimately the prime Contractors responsibility to insure that these requirements, as well as any contained in the CDOT specifications, project special provisions, and CDOT Survey Manual are fulfilled under this contract.

8). The minimum staking intervals for each item are described on the plans or in the CDOT Survey Manual. If the contractor wishes to reduce the minimum intervals, a Contract Modification Order must be negotiated and the cost of the item reduced accordingly.



Typical Control Monument Cap
Not to Scale



CM-MP - Control Point Monuments set by CDOT. They are CDOT type 2 monuments, a 3-1/4" dia. aluminum control monument cap (as shown) on a 3' X 3/4" dia. finned aluminum security rod on a 3' X 3/4" dia. smooth aluminum rod.

BASIS OF BEARINGS: Bearings used in the calculation of coordinates are based on a grid bearing of S 73°32'20" E from CM-MP 256.4 to CM-MP 256.6, as obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN).

BASIS OF ELEVATIONS: Project is based on a found CDOT Control Monument at Mile Post 256.6, with a NAVD '29 and project elevation of 8547.50 feet, or 2605.283 meters.

COORDINATE DATUM: Project coordinates are modified Colorado State Plane Central Zone NAD '83(92) coordinates. The combined elevation/scale factor used to modify the coordinates from state plane to project coordinates was 1.000407354. Project coordinates were truncated by 305,011.269m in the Northing and by 609,964.985m in the Easting after converting from state plane coordinates to project coordinates. The CHARN is based on the NAD '83(92) datum.

NOTE: This control survey is for the use of the Colorado Department of Transportation personnel. The survey is not a complete boundary survey and does not subdivide land. Title policy, title commitment, and title research were not part of this control survey, therefore, easements, rights, and restrictions of record are not shown. The verification of the physical evidence with relation to easements, rights of way, property boundaries, and restriction, as described in the instruments of record, were not included in this control survey.

NOTE: Refer to M-629-1 Survey Monuments of the Current Standard Plans, Colorado Department of Transportation, M & S Standards for survey monument descriptions. Refer to M-100-1 Standard Symbols of the Current Standard Plans, Colorado Department of Transportation, M & S Standards for standard symbol definitions.

NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the statement shown hereon.

SURVEYORS STATEMENT: I, Betty J. Claybrook, a Professional Land Surveyor in the State of Colorado, hereby state that this Control Survey Diagram was prepared under my direct supervision this 27th day of June, 2000, from a field survey performed under my supervision and checking during the month of March, 2000, for and on behalf of the Department of Transportation, State of Colorado, and is not a Land Survey Plat or Right-of-Way Survey Plat and to the best of my knowledge and belief this control survey, as shown, meets the minimum horizontal control tolerances of a CDOT Type B Survey, as listed in Chapter Three of the Colorado Department of Transportation 1992 Survey Manual.

Geodetic data is derived from a re-adjustment into the Colorado High Accuracy Network of observations provided to the CDOT by TriConsultants, Inc. in 1989. Refer to Tri-Consultants Project Report of 1990, completed under CDOT Project CXIR 51-70-31 for Tri-Consultants Surveyor's Statement as to the requirements and accuracy of any Geodetic Coordinate Summary data shown hereon.

TMQSS field survey data was provided to the CDOT by CDOT personnel and consultant surveyors from a field survey performed in 1995, and updated by CDOT personnel in March, 2000, and to the best of my knowledge and belief meets the minimum horizontal control tolerances of a CDOT type D survey, as listed in Chapter Three of the Colorado Department of Transportation 1992 survey manual.


Betty J. Claybrook
Colorado PLS No. 31150

Date:

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STATE OF COLORADO
CIVIL FORM 7269a
REVISED: JULY 1996



COLORADO DEPARTMENT OF TRANSPORTATION

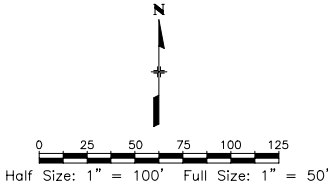
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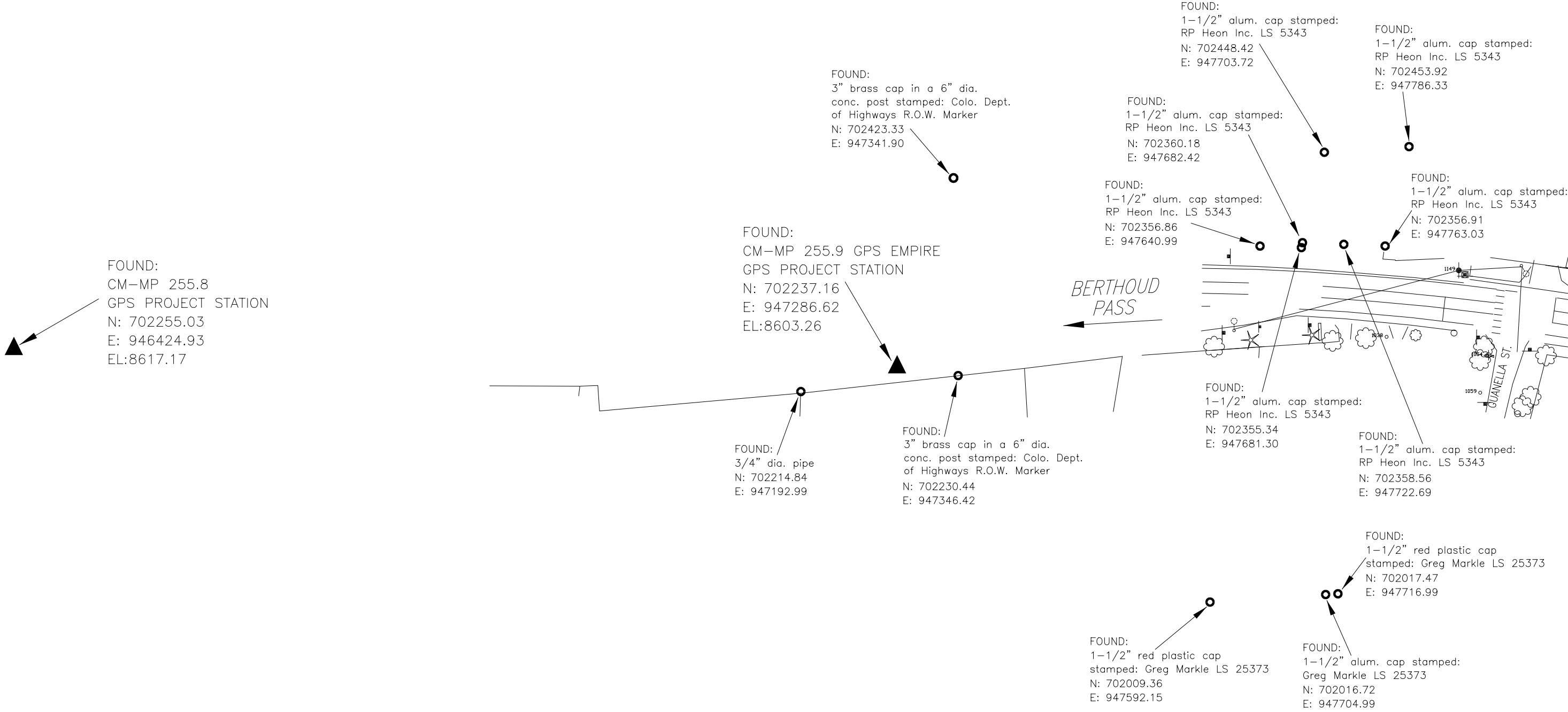
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CONTROL SURVEY DIAGRAM	
NH 0403-039	
Town of Empire	
PROJECT CODE: 12869	
Subset Sheets: 2 of 4	SHEET NUMBER:



STATE OF COLORADO
CIVIL FORM 1969
REVISED: JULY 1996



COLORADO DEPARTMENT OF TRANSPORTATION

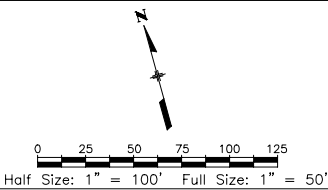
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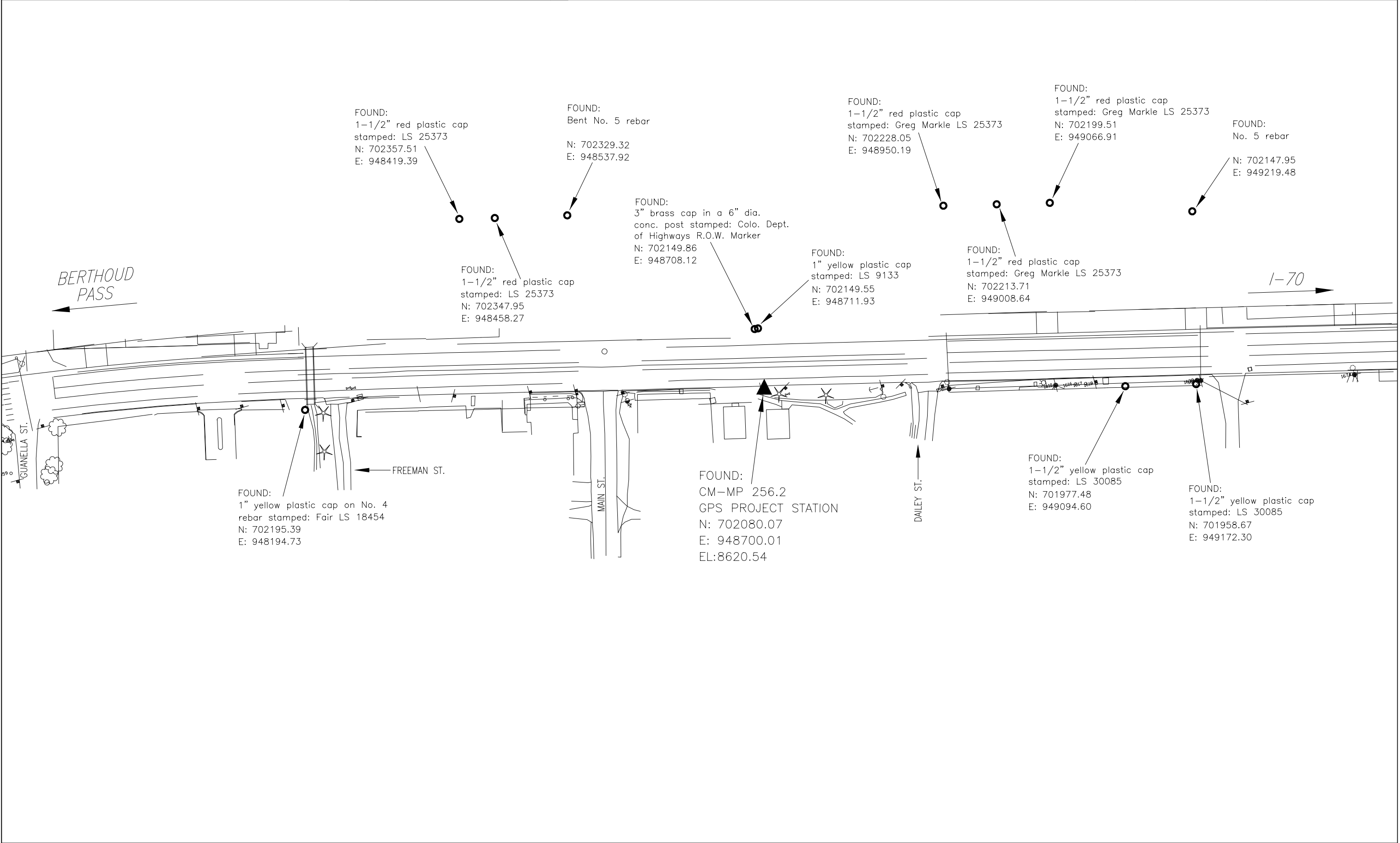


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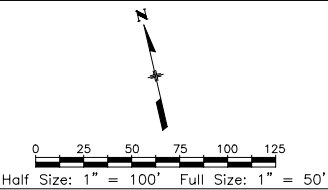
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