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FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	232(4)	1954	1	69

STATE OF INDIANA STATE HIGHWAY DEPARTMENT

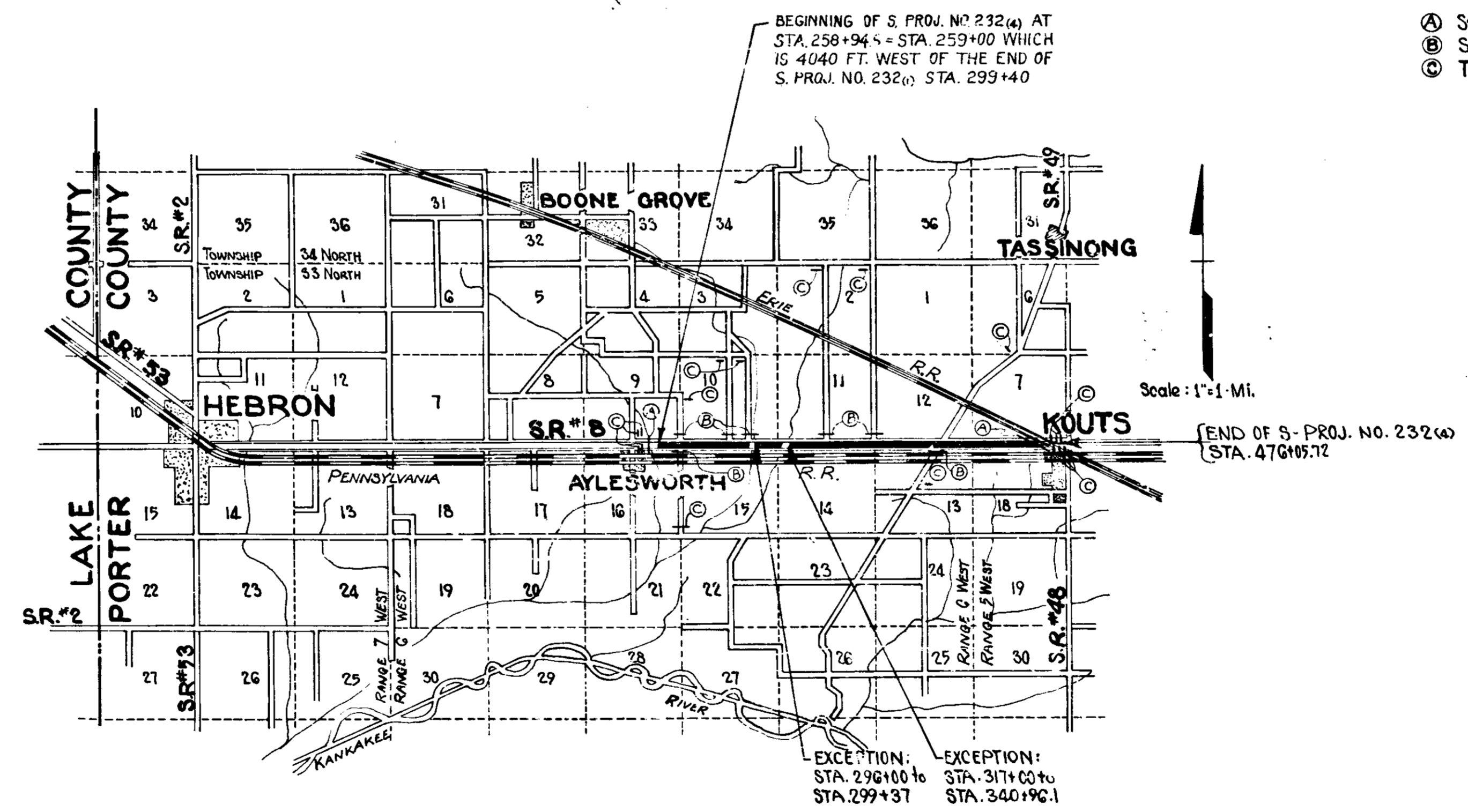
PLAN AND PROFILE OF PROPOSED STATE HIGHWAY S-PROJECT NO. 232 (4)

BEGINNING AT A POINT ON STATE ROAD NO. 8 APPROXIMATELY 594.4 FEET WEST OF THE EAST SECTION LINE OF SECTION 9, T-33-N, R-6-W, AND RUNNING IN AN EASTERLY DIRECTION 21,111.1 FEET TO A POINT APPROXIMATELY 2877 FEET WEST OF THE EAST SECTION LINE OF SECTION 7, T-33-N, R-5-W, ALL IN PORTER COUNTY.

GROSS LENGTH- 4.111 MI.
NET LENGTH- 3.594 MI.
SCALES:
PLAN LONG- 1"=100' PROF:LE HORIZ- 1"=100'
TRANS- 1"=100' VERT- 1"=10' 1.080%

REVISIONS		
SHEET NO.	DATE	REVISED
7	8-10-55	Per R/W Dept.
9	8-10-55	Per R/W Dept.
10	8-10-55	Per R/W Dept.
16	8-10-55	Per R/W Dept.
17	8-10-55	Per R/W Dept.

- LEGEND**
- Ⓐ Std. Barricade, Type "A"
 - Ⓑ Std. Barricade, Type "B"
 - Ⓒ Typical Sign Standard.



DESIGN DATA

Average Daily Traffic (1955)	1000	VPD
Average Daily Traffic (1975)	1500	VPD
Design Hourly Volume	190	VPD
Directional Distribution	50% East	
Trucks	25%	
Design Speed	70	M.P.H.

APPROVED AND ADOPTED 2-23-55
BY STATE HIGHWAY DEPARTMENT OF INDIANA
Neil R. Gordin
CHAIRMAN - STATE HIGHWAY DEPARTMENT OF INDIANA
APPROVED 2-18-55
Carl E. Vogelsong
CHIEF ENGINEER - STATE HIGHWAY DEPARTMENT OF INDIANA

STATE HIGHWAY COMMISSION OF INDIANA.
STANDARD SPECIFICATIONS DATED 1952
TO BE USED WITH THESE PLANS.

RECOMMENDED FOR APPROVAL 2-17-55
W. H. Robinson
ENGINEER IN CHARGE - STATE HIGHWAY DEPARTMENT OF INDIANA

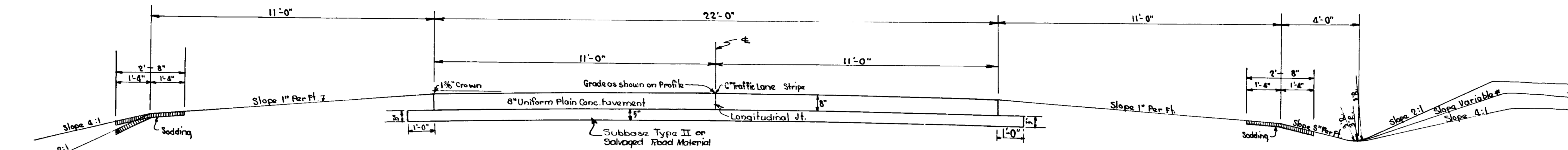
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED :-

DISTRICT ENGINEER	DATE

FEDERAL ROAD DISTRICT NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	15764	1954	2	87

SECTION -

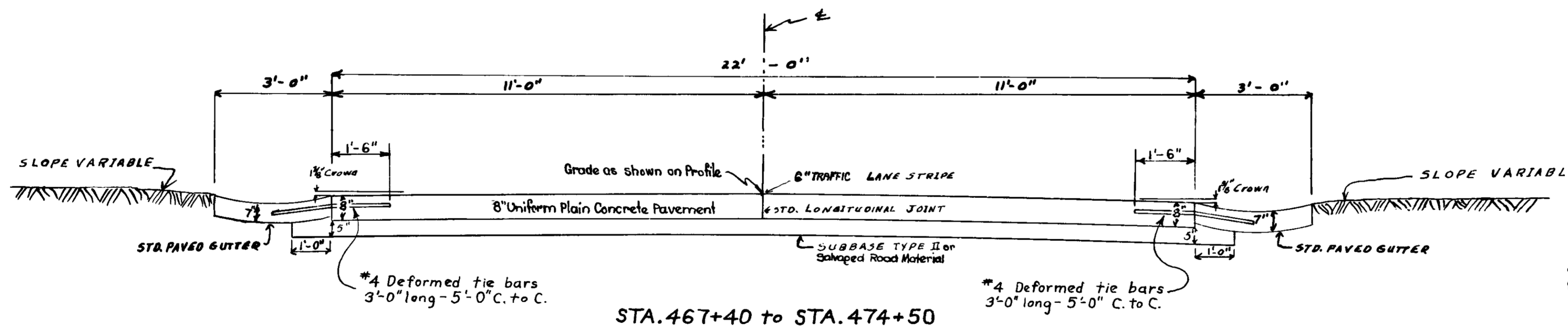


STA. 258+94.6 to STA. 467+40
 STA. 474+50 to STA. 476+05.73

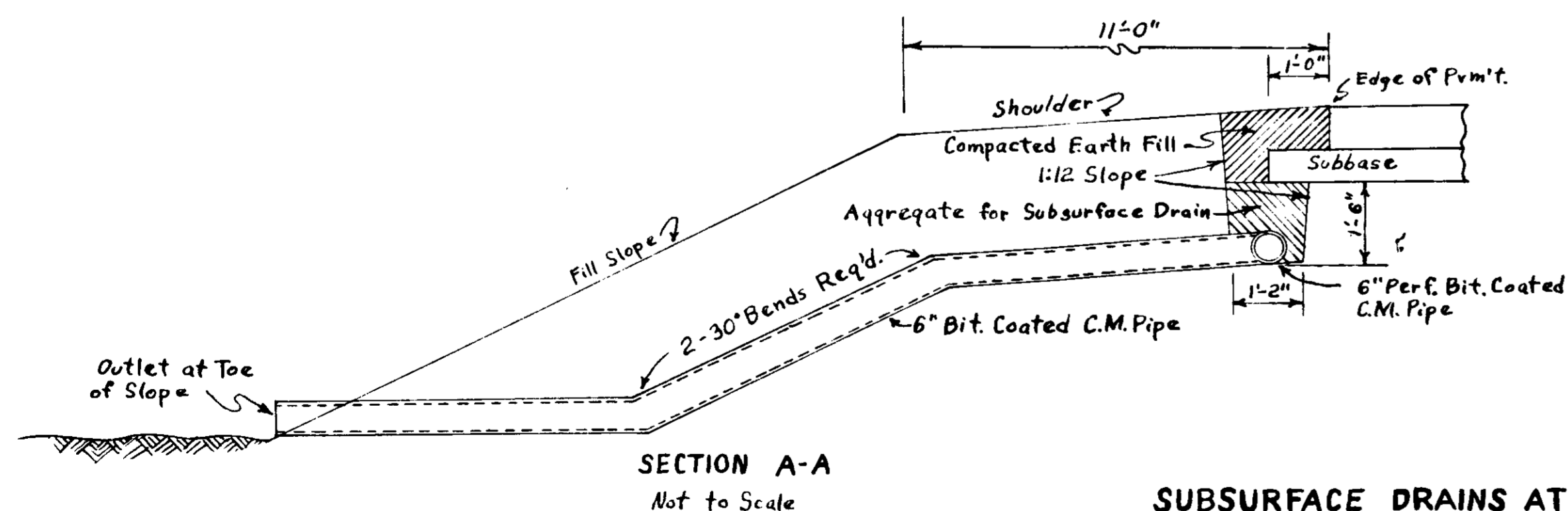
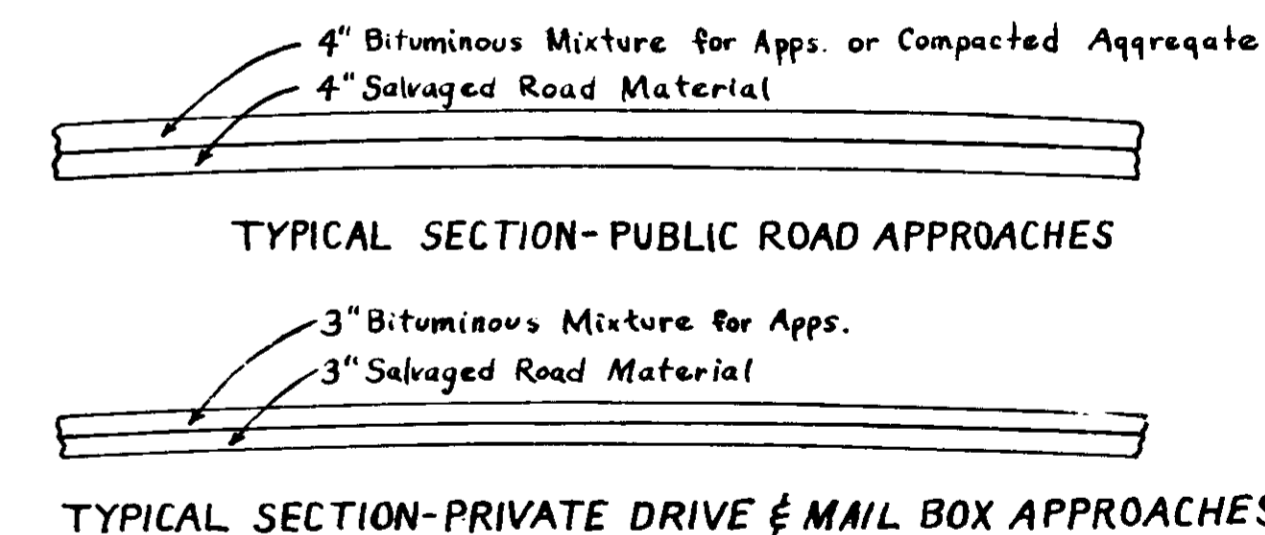
NOTE: Where any part of a fill requires a 2:1 slope, that slope shall be continued throughout the fill on that side.

* Variable from ditch line to a point 3'-0" from Right of Way Line (R/W 80') Cut 2'-9" to 5'-6"

Cut to be difference in elevation between ditch line and original ground line at a point 3'-0" from R/W Line (80' R/W)

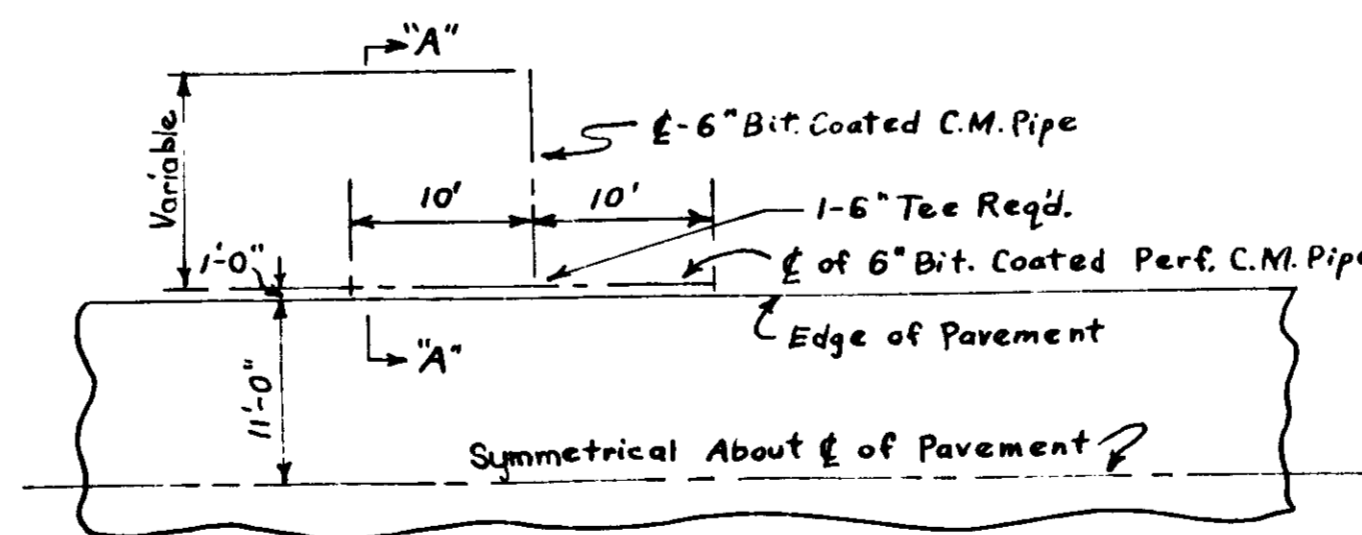


STA. 467+40 to STA. 474+50



SECTION A-A
Not to Scale

SUBSURFACE DRAINS AT SAGS
(Location by Engineer)



HALF PLAN
Scale: 1/4"=1'-0"

TYPICAL CROSS SECTIONS

SCALE: 1/2"=1'-0" Except as Shown

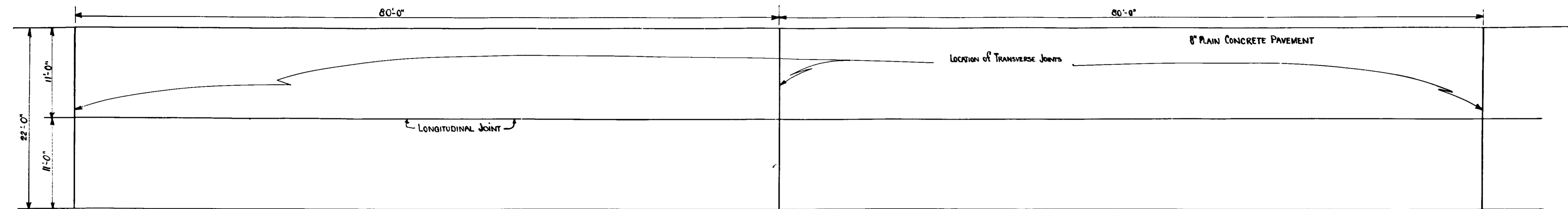
APPROVED *Carl E. Vogelgesang*
 CHIEF ENGINEER - STATE HIGHWAY DEPARTMENT OF INDIANA

RECOMMENDED FOR APPROVAL 2-17-55

APPROVED *W. H. Behrens*
 CHAIRMAN - STATE HIGHWAY DEPARTMENT OF INDIANA

W. H. Behrens
 ENGINEER OF ROAD DESIGN - STATE HIGHWAY DEPARTMENT OF INDIANA

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	2326	1954	4	



1/8" SAWED TRANSVERSE JOINT
Sta. 270+00 to Sta. 271+60

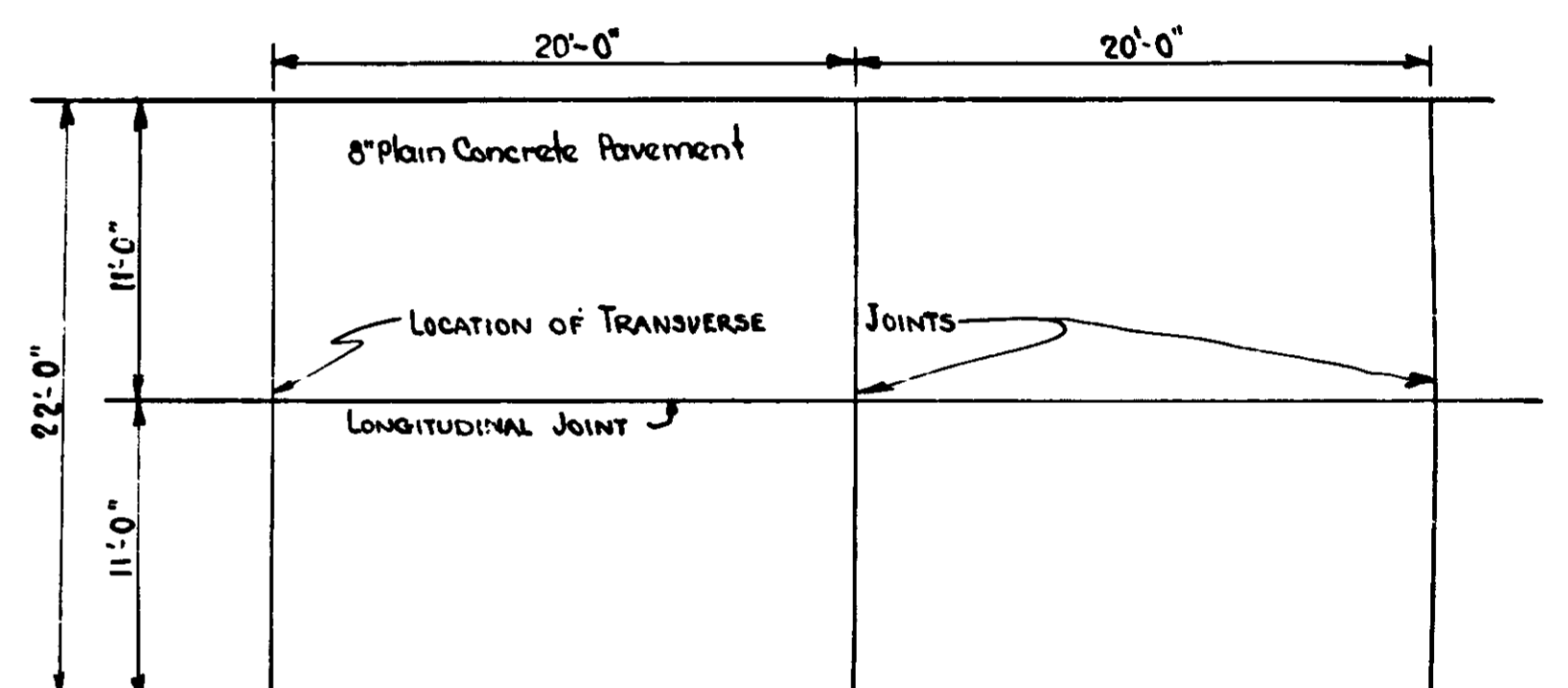
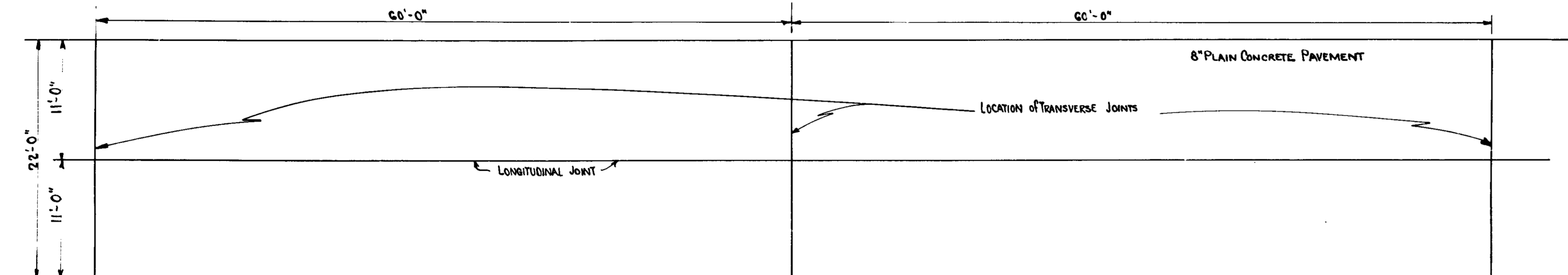
1/8" SAWED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 272+40 to Sta. 274+00

1/4" SAWED TRANSVERSE JOINT
Sta. 274+80 to Sta. 276+40

1/4" SAWED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 277+20 to Sta. 278+80

3/8" FORMED TRANSVERSE JOINT Scale: 1"=6'
Sta. 279+60 to Sta. 280+40

3/8" FORMED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 281+20 to Sta. 282+00



1/8" SAWED TRANSVERSE JOINT
Sta. 302+00 to Sta. 303+80

1/8" SAWED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 304+40 to Sta. 306+20

1/4" SAWED TRANSVERSE JOINT
Sta. 306+80 to Sta. 308+60

1/4" SAWED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 309+20 to Sta. 310+40

3/8" FORMED TRANSVERSE JOINT Scale: 1"=6'
Sta. 311+00 to Sta. 312+20

3/8" FORMED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 312+80 to Sta. 314+00

1/8" SAWED TRANSVERSE JOINT
Sta. 400+00 to Sta. 402+00

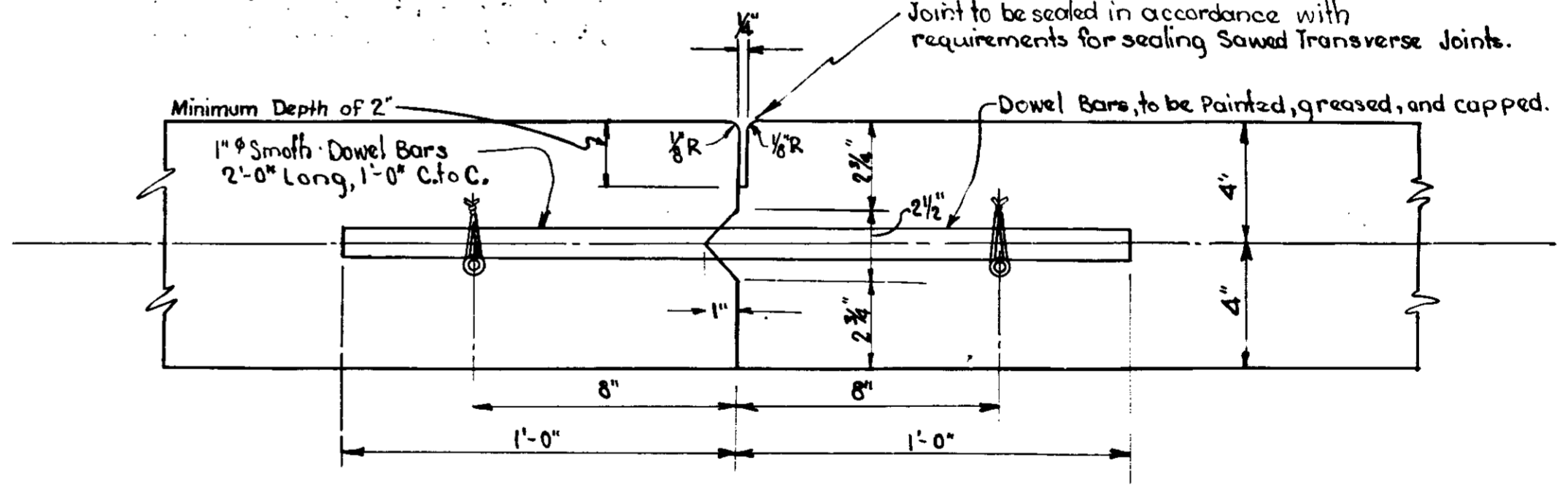
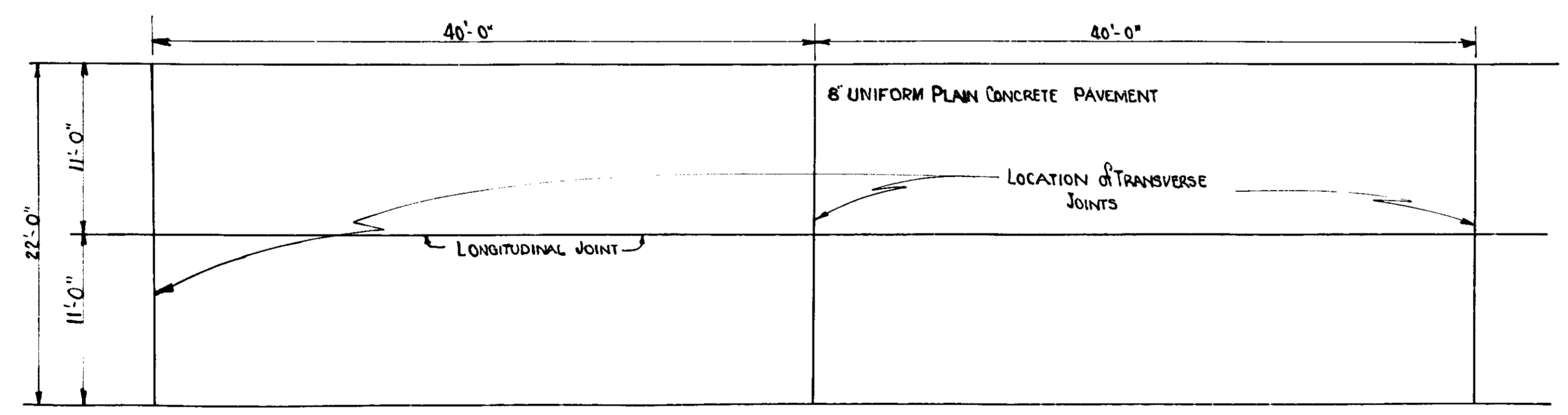
1/8" SAWED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 402+20 to Sta. 404+00

1/4" SAWED TRANSVERSE JOINT
Sta. 404+20 to Sta. 406+00

1/4" SAWED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 406+20 to Sta. 408+00

3/8" FORMED TRANSVERSE JOINT Scale: 1"=6'
Sta. 408+20 to Sta. 410+00

3/8" FORMED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 410+20 to Sta. 412+00



NOTE: Chairs Supporting Bars to be set as shown on Type "D-1" Contraction Joint on Std. Pavement Joint Sheet

SPECIAL CONSTRUCTION JOINT
Scale: 3" = 1'-0"

1/8" SAWED TRANSVERSE JOINT.
Sta. 350+00 to Sta. 352+00

1/8" SAWED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 352+40 to Sta. 354+00

1/4" SAWED TRANSVERSE JOINT.
Sta. 354+40 to Sta. 356+00

1/4" SAWED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 356+40 to Sta. 358+00

3/8" FORMED TRANSVERSE JOINT
Sta. 358+40 to Sta. 360+00

3/8" FORMED SPECIAL CONTRACTION JOINT, TYPE D1 and D5
Sta. 360+40 to Sta. 362+00

Scale: 1"=6'

SPECIAL PAVEMENT JOINTS

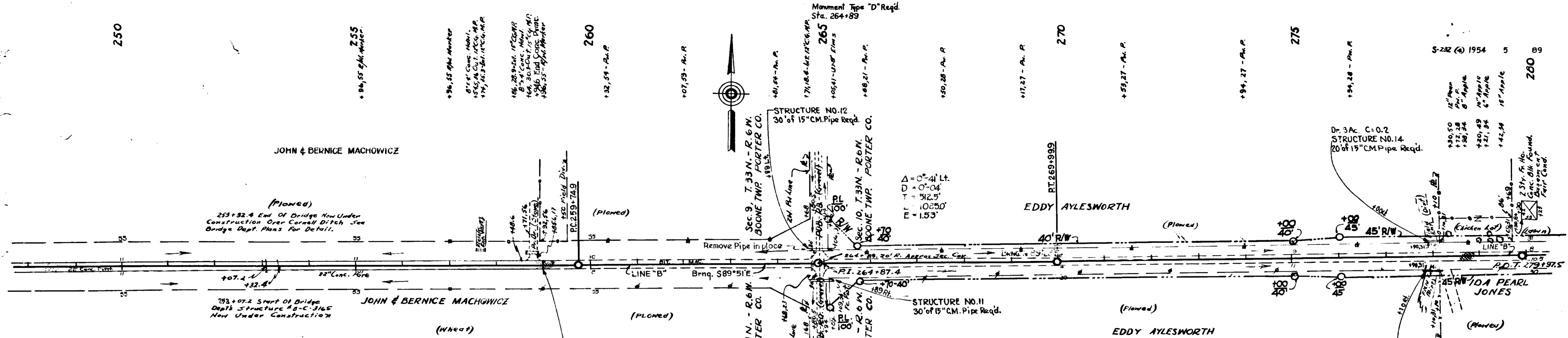
Scale: AS Shown.

W.H. FRICK
C.W. LEMONS
5-53
7-53
A.L. CHRISTIANSON 7-53

W.H. FRICK
C.W. LEMONS
5-53
7-53
A.L. CHRISTIANSON 7-53

7219-T

7220-L



TYPICAL CROSS SECTIONS AS SHOWN ON SHEET NO. 2 TO BE USED ON THIS PROJECT. STATE HIGHWAY COMMISSION OF INDIANA STANDARD SPECIFICATIONS DATED 1952, TO BE USED WITH THESE PLANS.

STANDARDS UNDER DATES AS LISTED IN INDEX ON TITLE SHEET TO BE USED ON THIS PROJECT.

GRADE LINE AS SHOWN ON PROFILE REPRESENTS TOP OF FINISHED SURFACE.

ALL DITCHES OF 1% AND OVER SHALL BE SODDED EXCEPT WHERE DITCH IS IN ROCK CUT OR WHERE PAVED SIDE DITCH IS TO BE CONSTRUCTED.

ALL SHOULDERS, CUT AND FILL SLOPES SHALL BE PLAIN OR MULCHED SEEDS EXCEPT WHERE SODDING IS SPECIFIED.

SHOULDERS ARE TO BE SODDED AS SHOWN ON MISCELLANEOUS STANDARD SHEET "B". SODDING SHALL BE PLACED ALONG PAVED SIDE DITCH AS SHOWN ON MISCELLANEOUS STANDARD SHEET "E".

EXCAVATION QUANTITIES AS SHOWN ON PLAN AND PROFILE SHEETS INCLUDE ESTIMATED EXCAVATION FOR PRIVATE AND PUBLIC APPROACHES. (See Table on Sheet No. 16)

PUBLIC ROAD APPROACHES SHALL BE CONSTRUCTED TO A DEPTH OF 8 INCHES. THE TOP 4 INCHES SHALL CONSIST OF BITUMINOUS MIXTURE FOR APPROACHES, AND THE BOTTOM 4 INCHES SHALL CONSIST OF SALVAGED ROAD MATERIAL. OTHER DETAILS TO BE THE SAME AS SHOWN ON MISCELLANEOUS STANDARD SHEET "I".

PRIVATE DRIVE AND MAIL BOX APPROACHES SHALL BE CONSTRUCTED TO A DEPTH OF 6 INCHES. THE TOP 3 INCHES SHALL CONSIST OF BITUMINOUS MIXTURE FOR APPROACHES, AND THE BOTTOM 3 INCHES SHALL CONSIST OF SALVAGED ROAD MATERIAL. OTHER DETAILS TO BE THE SAME AS SHOWN ON MISCELLANEOUS STANDARD SHEETS "B" & "H".

QUANTITIES FOR PIPE CULVERT HEADWALLS ARE BASED ON USING STANDARD HEADWALLS FOR RETAINING 2:1 SLOPES AND PRIVATE DRIVE HEADWALLS FOR RETAINING 4:1 SLOPES.

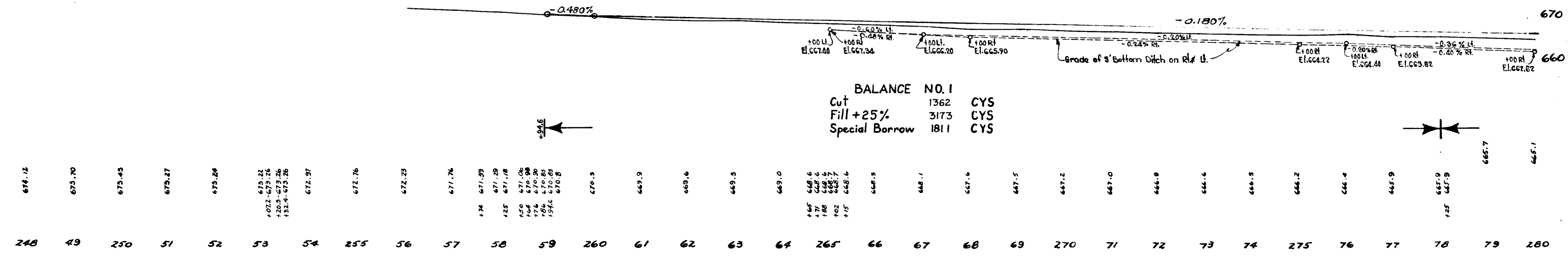
MANHOLES, CATCH BASINS & INLETS ARE TO BE BUILT IN SUCH A MANNER THAT CASTING WILL NOT CONFLICT WITH PAVED GUTTER.

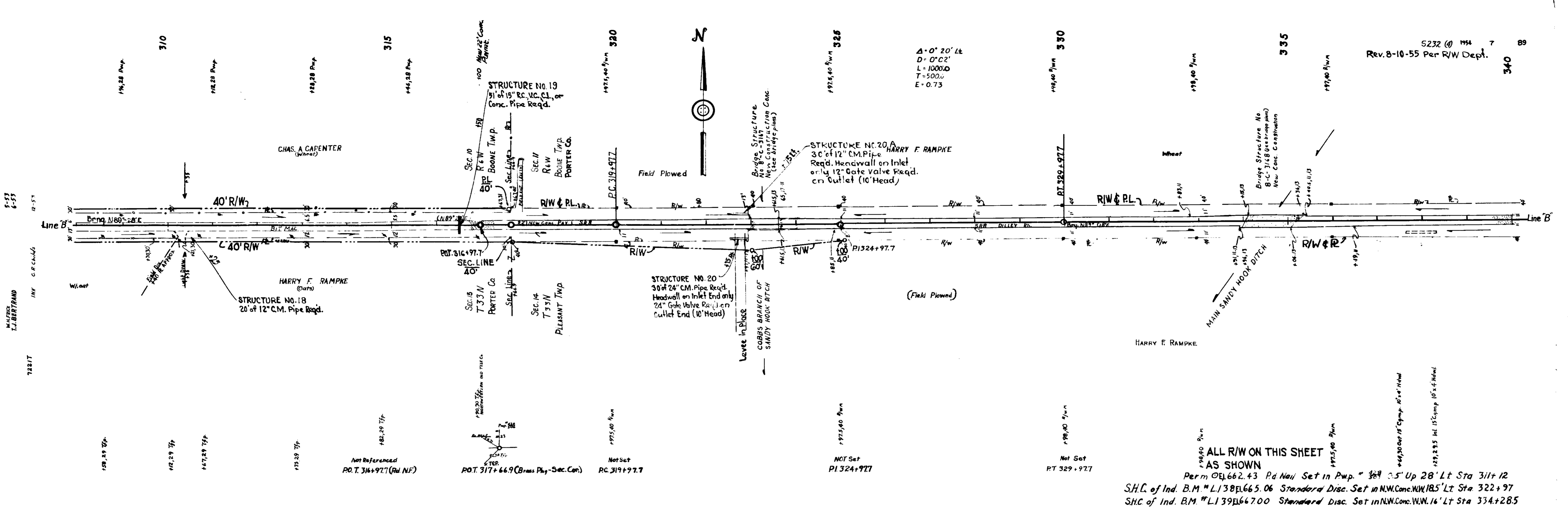
ALL CURVES OF LESS THAN 1°-00' ARE NOT TO BE SUPERELEVATED AND THE CROWN IS TO BE LEFT IN.

+34.6 +00
El. 670.83 El. 670.32
V.C. 200

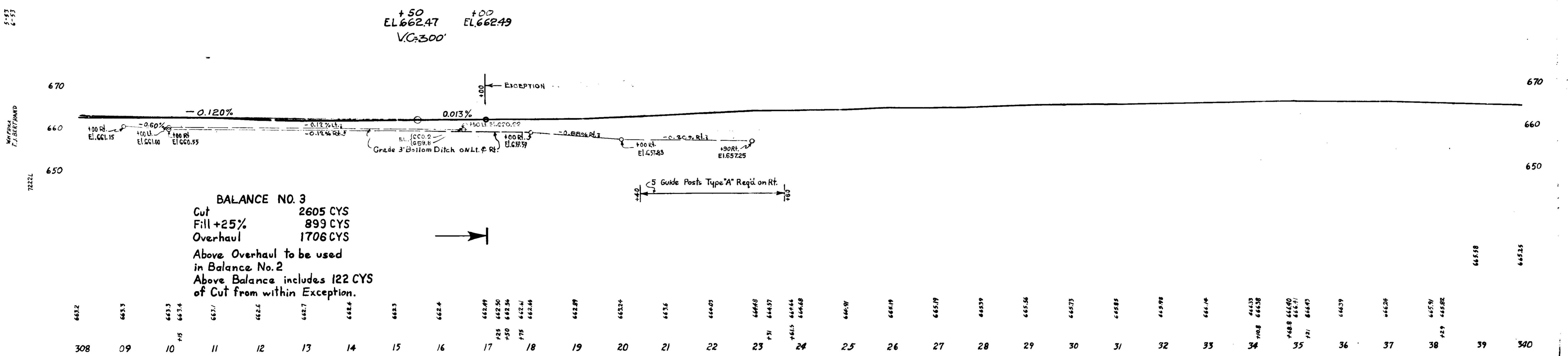
BALANCE NO. 1

Cut	1362	CYS
Fill + 25%	3173	CYS
Special Borrow	1811	CYS





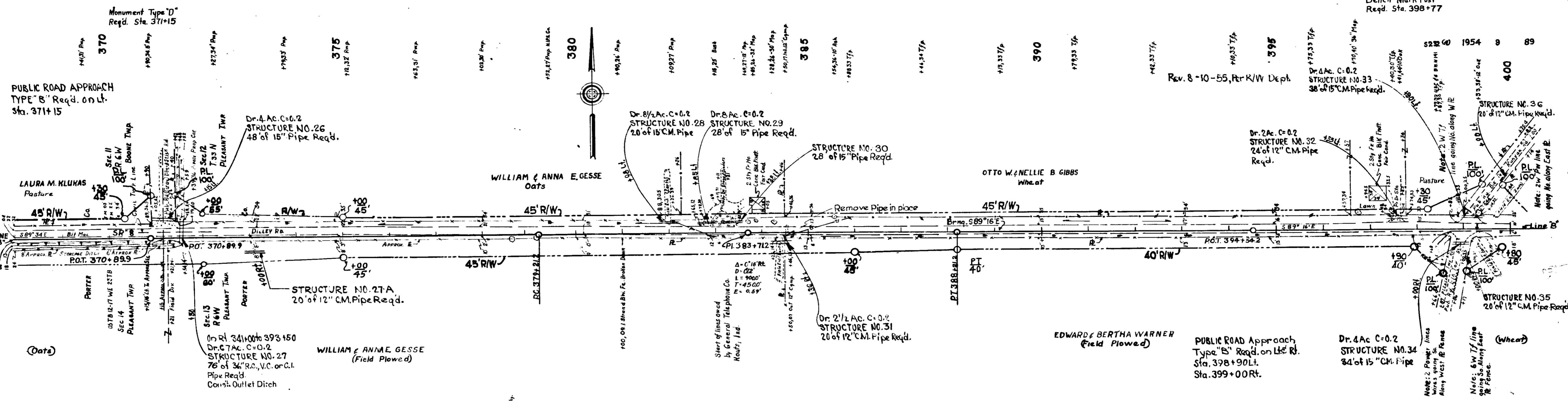
ALL R/W ON THIS SHEET AS SHOWN
 Perm of El. 662.43 Rd Nail Set in Pwp. " 3/4" 0.5' Up 28' Lt Sta 311+12
 S.H.C. of Ind. B.M. #L138 p. 665.06 Standard Disc. Set in NW Conc. W.W. 18.5' Lt Sta 322+97
 S.H.C. of Ind. B.M. #L139 El. 667.00 Standard Disc. Set in NW Conc. W.W. 16' Lt Sta 334+28.5



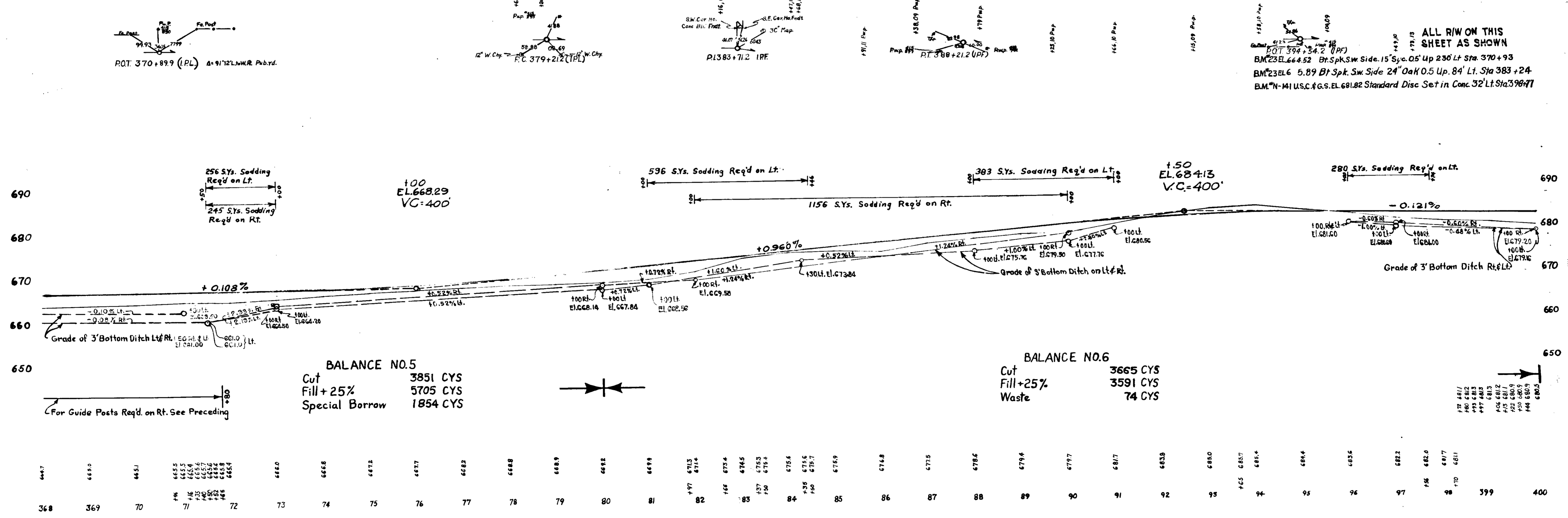
BALANCE NO. 3
 Cut 2605 CYS
 Fill +25% 899 CYS
 Overhaul 1706 CYS
 Above Overhaul to be used in Balance No. 2
 Above Balance includes 122 CYS of Cut from within Exception.

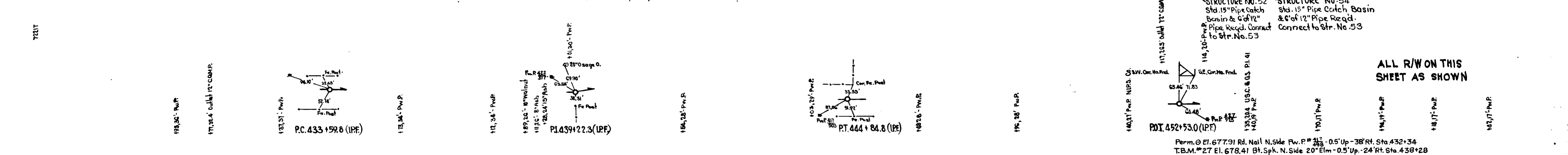
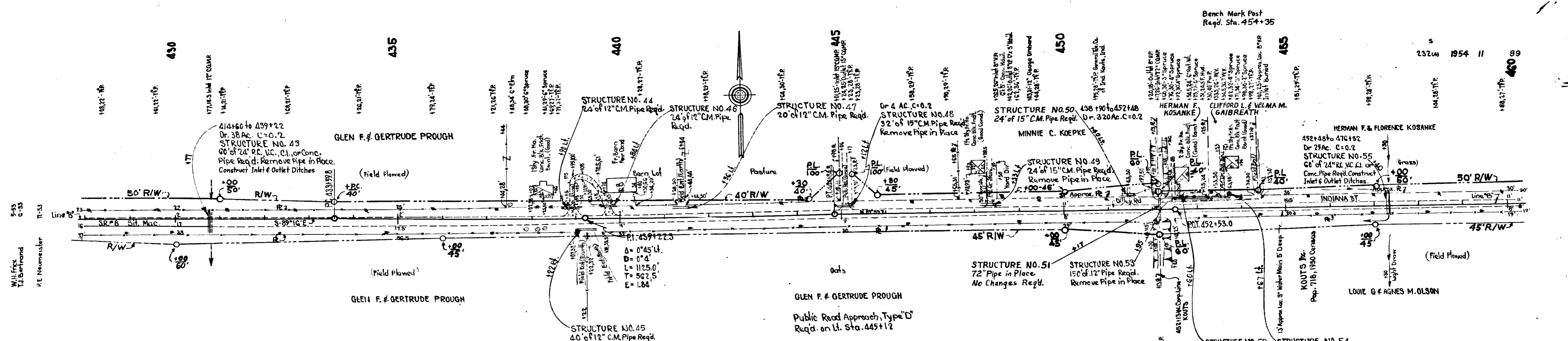
652	653	653.3	653.4	657.1	652.6	655.7	652.3	652.4	652.99	652.50	652.54	652.41	652.26	652.89	652.24	652.6	652.05	652.68	652.57	651.5	652.44	652.48	652.97	652.19	652.19	652.59	652.56	652.73	652.85	652.98	652.44	652.33	652.38	652.8	652.90	652.41	652.41	652.93	652.9	652.24	652.91	652.82	652.58	652.55
308	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	340												

Bench Mark Post
Reqd. Sta. 398+77



ALL R/W ON THIS SHEET AS SHOWN
 BM 23 EL 664.52 Br. Spk. Sw. Side 15' Sp. 0.5' Up 230' Lt. Sta. 370+93
 BM 23 EL 6 5.89 Br. Spk. Sw. Side 24' Oak 0.5' Up 84' Lt. Sta. 383+24
 BM *N-141 U.S.C. & G.S. EL 681.82 Standard Disc Set in Conc. 32' Lt. Sta. 398+77





186 S.Ys. Sodding
Req'd. on Lt.

251 S.Ys. Sodding
Req'd. on Lt.

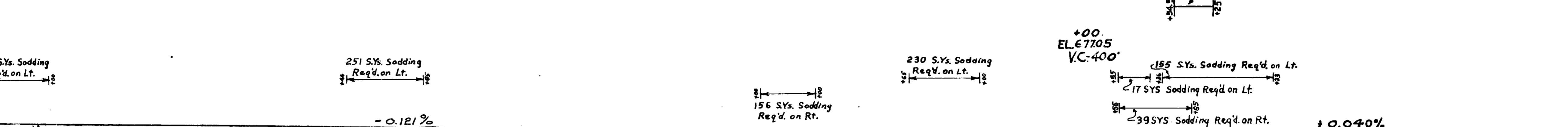
230 S.Ys. Sodding
Req'd. on Lt.

156 S.Ys. Sodding
Req'd. on Rt.

155 S.Ys. Sodding
Req'd. on Lt.

17 S.Ys. Sodding
Req'd. on Lt.

39 S.Ys. Sodding
Req'd. on Rt.



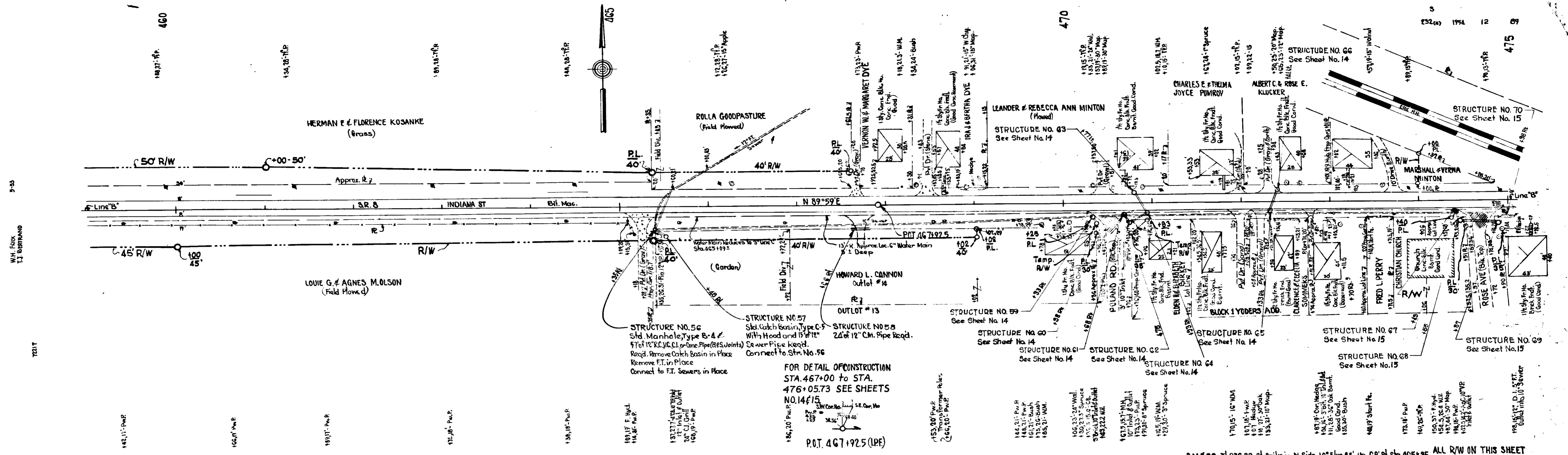
BALANCE NO. 8

Cut	1976 SYS
Fill +25%	6818 SYS
Special Borrow	4842 SYS

BALANCE NO. 9

Cut	1600 SYS
Fill +25%	6770 SYS
Special Borrow	5170 SYS

6764	6763	6762	6761	6760	6759	6758	6757	6756	6755	6754	6753	6752	6751	6750	6749	6748	6747	6746	6745	6744	6743	6742	6741	6740	6739	6738	6737	6736	6735	6734	6733	6732	6731	6730	6729	6728	6727	6726	6725	6724	6723	6722	6721	6720	6719	6718	6717	6716	6715	6714	6713	6712	6711	6710	6709	6708	6707	6706	6705	6704	6703	6702	6701	6700	6699	6698	6697	6696	6695	6694	6693	6692	6691	6690	6689	6688	6687	6686	6685	6684	6683	6682	6681	6680	6679	6678	6677	6676	6675	6674	6673	6672	6671	6670	6669	6668	6667	6666	6665	6664	6663	6662	6661	6660	6659	6658	6657	6656	6655	6654	6653	6652	6651	6650	6649	6648	6647	6646	6645	6644	6643	6642	6641	6640	6639	6638	6637	6636	6635	6634	6633	6632	6631	6630	6629	6628	6627	6626	6625	6624	6623	6622	6621	6620	6619	6618	6617	6616	6615	6614	6613	6612	6611	6610	6609	6608	6607	6606	6605	6604	6603	6602	6601	6600	6599	6598	6597	6596	6595	6594	6593	6592	6591	6590	6589	6588	6587	6586	6585	6584	6583	6582	6581	6580	6579	6578	6577	6576	6575	6574	6573	6572	6571	6570	6569	6568	6567	6566	6565	6564	6563	6562	6561	6560	6559	6558	6557	6556	6555	6554	6553	6552	6551	6550	6549	6548	6547	6546	6545	6544	6543	6542	6541	6540	6539	6538	6537	6536	6535	6534	6533	6532	6531	6530	6529	6528	6527	6526	6525	6524	6523	6522	6521	6520	6519	6518	6517	6516	6515	6514	6513	6512	6511	6510	6509	6508	6507	6506	6505	6504	6503	6502	6501	6500	6499	6498	6497	6496	6495	6494	6493	6492	6491	6490	6489	6488	6487	6486	6485	6484	6483	6482	6481	6480	6479	6478	6477	6476	6475	6474	6473	6472	6471	6470	6469	6468	6467	6466	6465	6464	6463	6462	6461	6460	6459	6458	6457	6456	6455	6454	6453	6452	6451	6450	6449	6448	6447	6446	6445	6444	6443	6442	6441	6440	6439	6438	6437	6436	6435	6434	6433	6432	6431	6430	6429	6428	6427	6426	6425	6424	6423	6422	6421	6420	6419	6418	6417	6416	6415	6414	6413	6412	6411	6410	6409	6408	6407	6406	6405	6404	6403	6402	6401	6400	6399	6398	6397	6396	6395	6394	6393	6392	6391	6390	6389	6388	6387	6386	6385	6384	6383	6382	6381	6380	6379	6378	6377	6376	6375	6374	6373	6372	6371	6370	6369	6368	6367	6366	6365	6364	6363	6362	6361	6360	6359	6358	6357	6356	6355	6354	6353	6352	6351	6350	6349	6348	6347	6346	6345	6344	6343	6342	6341	6340	6339	6338	6337	6336	6335	6334	6333	6332	6331	6330	6329	6328	6327	6326	6325	6324	6323	6322	6321	6320	6319	6318	6317	6316	6315	6314	6313	6312	6311	6310	6309	6308	6307	6306	6305	6304	6303	6302	6301	6300	6299	6298	6297	6296	6295	6294	6293	6292	6291	6290	6289	6288	6287	6286	6285	6284	6283	6282	6281	6280	6279	6278	6277	6276	6275	6274	6273	6272	6271	6270	6269	6268	6267	6266	6265	6264	6263	6262	6261	6260	6259	6258	6257	6256	6255	6254	6253	6252	6251	6250	6249	6248	6247	6246	6245	6244	6243	6242	6241	6240	6239	6238	6237	6236	6235	6234	6233	6232	6231	6230	6229	6228	6227	6226	6225	6224	6223	6222	6221	6220	6219	6218	6217	6216	6215	6214	6213	6212	6211	6210	6209	6208	6207	6206	6205	6204	6203	6202	6201	6200	6199	6198	6197	6196	6195	6194	6193	6192	6191	6190	6189	6188	6187	6186	6185	6184	6183	6182	6181	6180	6179	6178	6177	6176	6175	6174	6173	6172	6171	6170	6169	6168	6167	6166	6165	6164	6163	6162	6161	6160	6159	6158	6157	6156	6155	6154	6153	6152	6151	6150	6149	6148	6147	6146	6145	6144	6143	6142	6141	6140	6139	6138	6137	6136	6135	6134	6133	6132	6131	6130	6129	6128	6127	6126	6125	6124	6123	6122	6121	6120	6119	6118	6117	6116	6115	6114	6113	6112	6111	6110	6109	6108	6107	6106	6105	6104	6103	6102	6101	6100	6099	6098	6097	6096	6095	6094	6093	6092	6091	6090	6089	6088	6087	6086	6085	6084	6083	6082	6081	6080	6079	6078	6077	6076	6075	6074	6073	6072	6071	6070	6069	6068	6067	6066	6065	6064	6063	6062	6061	6060	6059	6058	6057	6056	6055	6054	6053	6052	6051	6050	6049	6048	6047	6046	6045	6044	6043	6042	6041	6040	6039	6038	6037	6036	6035	6034	6033	6032	6031	6030	6029	6028	6027	6026	6025	6024	6023	6022	6021	6020	6019	6018	6017	6016	6015	6014	6013	6012	6011	6010	6009	6008	6007	6006	6005	6004	6003	6002	6001	6000	5999	5998	5997	5996	5995	5994	5993	5992	5991	5990	5989	5988	5987	5986	5985	5984	5983	5982	5981	5980	5979	5978	5977	5976	5975	5974	5973	5972	5971	5970	5969	5968	5967	5966	5965	5964	5963	5962	5961	5960	5959	5958	5957	5956	5955	5954	5953	5952	5951	5950	5949	5948	5947	5946	5945	5944	5943	5942	5941	5940	5939	5938	5937	5936	5935	5934	5933	5932	5931	5930	5929	5928	5927	5926	5925	5924	5923	5922	5921	5920	5919	5918	5917	5916	5915	5914	5913	5912	5911	5910	5909	5908	5907	5906	5905	5904	5903	5902	5901	5900	5899	5898	5897	5896	5895	5894	5893	5892	5891	5890	5889	5888	5887	5886	5885	5884	5883	5882	5881	5880	5879	5878	5877	5876	5875	5874	5873	5872	5871	5870	5869	5868	5867	5866	5865	5864	5863	5862	5861	5860	5859	5858	5857	5856	5855	5854	5853	5852	5851	5850	5849	5848	5847	5846	5845	5844	5843	5842	5841	5840	5839	5838	5837	5836	5835	5834	5833	5832	5831	5830	5829	5828	5827	5826	5825	5824	5823	5822	5821	5820	5819	5818	5817	5816	5815	5814	5813	5812	5811	5810	5809	5808	5807	5806	5805	5804	5803	5802	5801	5800	5799	5798	5797	5796	5795	5794	5793	5792	5791	5790	5789	5788	5787	5786	5785	5784	5783	5782	5781	5780	5779	5778	5777	5776	5775	5774	5773	5772	5771	5770	5769	5768	5767	5766	5765	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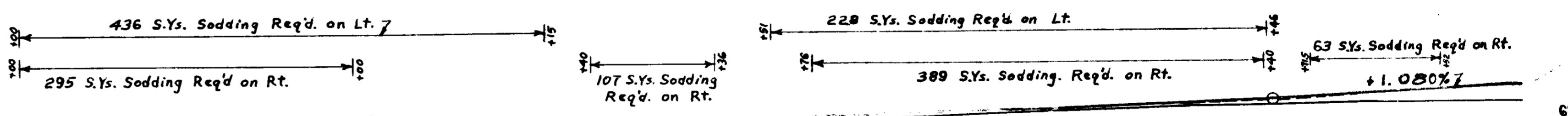


FOR DETAIL OF CONSTRUCTION
 STA. 467+00 TO STA.
 476+05.73 SEE SHEETS
 NO. 14 & 15

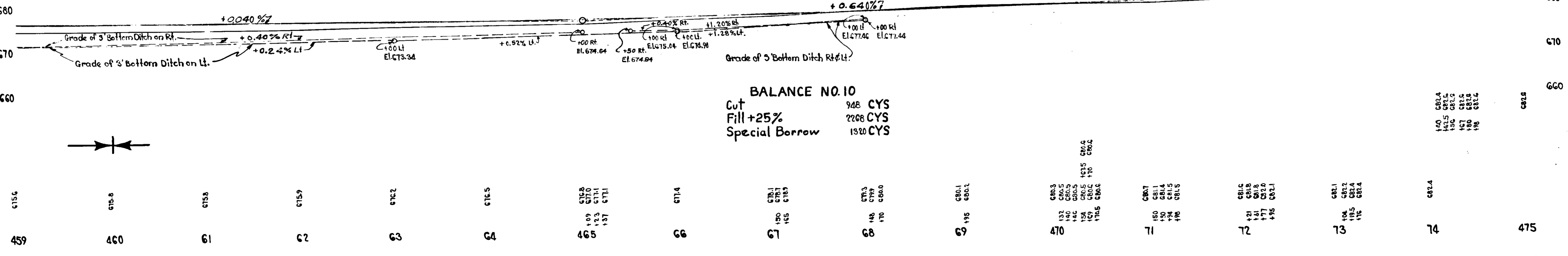
B.M. # 29 EL. 676.89 of Spike in N. Side 10\"/>

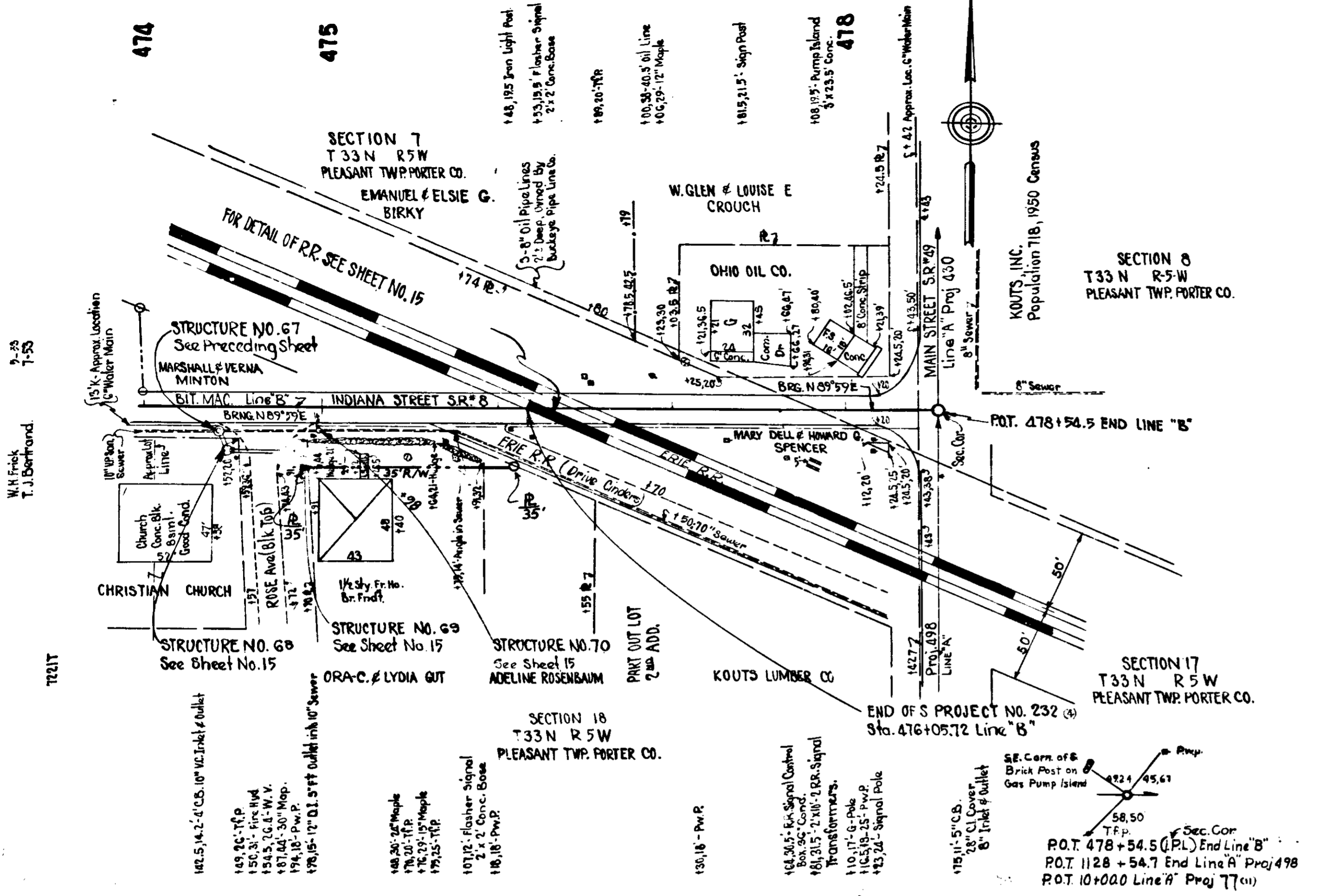
+00
 EL. 677.61
 V.C. 400'

+50
 EL. 688.05
 V.C. 300'



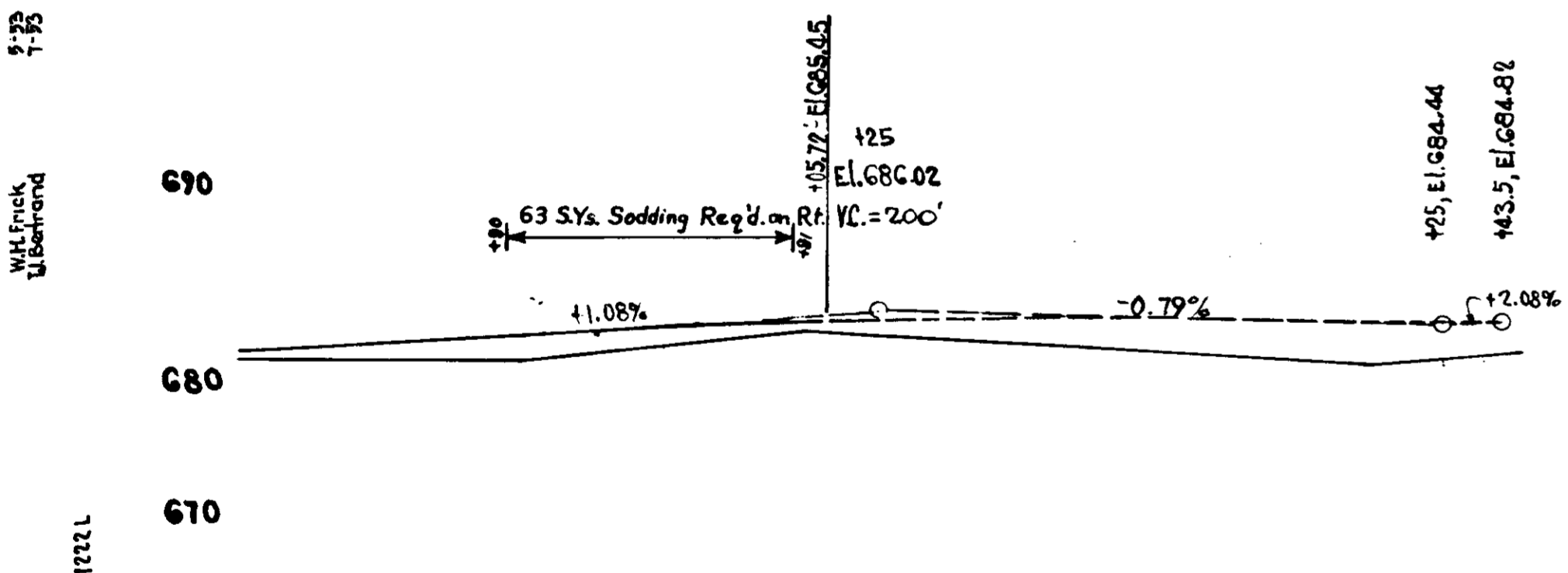
BALANCE NO. 10
 Cut 948 CYS
 Fill +25% 2268 CYS
 Special Borrow 1320 CYS





ALL R/W ON THIS SHEET TO BE AS SHOWN

Perm. 0 E1.684-00 - Top Fire Hydrant W. Side Rose St. 31' R. Sta. 478+50
B.M.#1A-A (Proj. 430) 685.00 Bl. Spike W. Side 36" Map 52' Rt. Sta. 478+73
U.S.C. & G.S.# 0-141



Station	Elevation
474	681.4
474	682.4
474	683.4
474	684.4
474	685.4
474	686.4
474	687.4
474	688.4
474	689.4
474	690.4
475	681.5
475	682.5
475	683.5
475	684.5
475	685.5
475	686.5
475	687.5
475	688.5
475	689.5
475	690.5
70	681.0
70	682.0
70	683.0
70	684.0
70	685.0
70	686.0
70	687.0
70	688.0
70	689.0
70	690.0
71	681.1
71	682.1
71	683.1
71	684.1
71	685.1
71	686.1
71	687.1
71	688.1
71	689.1
71	690.1
76	681.6
76	682.6
76	683.6
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76	685.6
76	686.6
76	687.6
76	688.6
76	689.6
76	690.6

468

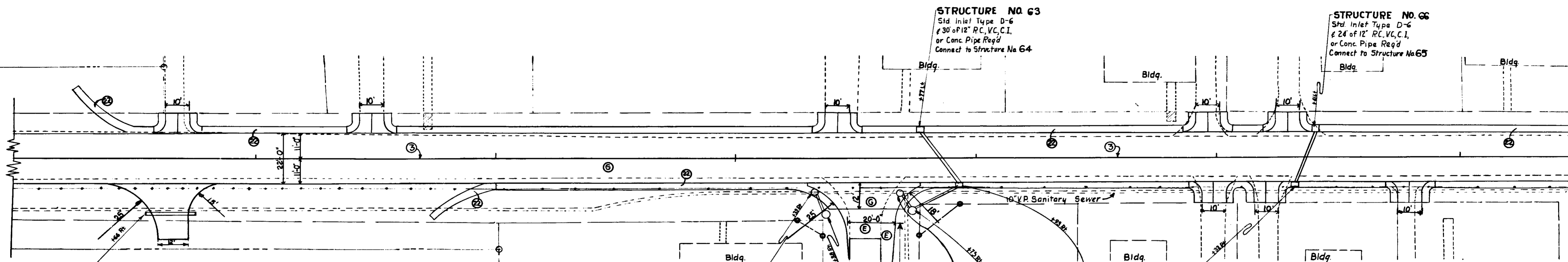
469

470+00

471

472

473



STRUCTURE NO. 58
See Sheet No. 12

STRUCTURE NO. 59
Catch Basin in place Type 4
Ring & Cover Furnished & Adjusted
To Grade of 5' of Reconstructed
Manhole Req'd.

STRUCTURE NO. 60
Std. Catch Basin Type C-5
With Hood of 9' of 12" R.C.V.C.
C.I. or Conc. Pipe Req'd.
Connect to Structure No. 59

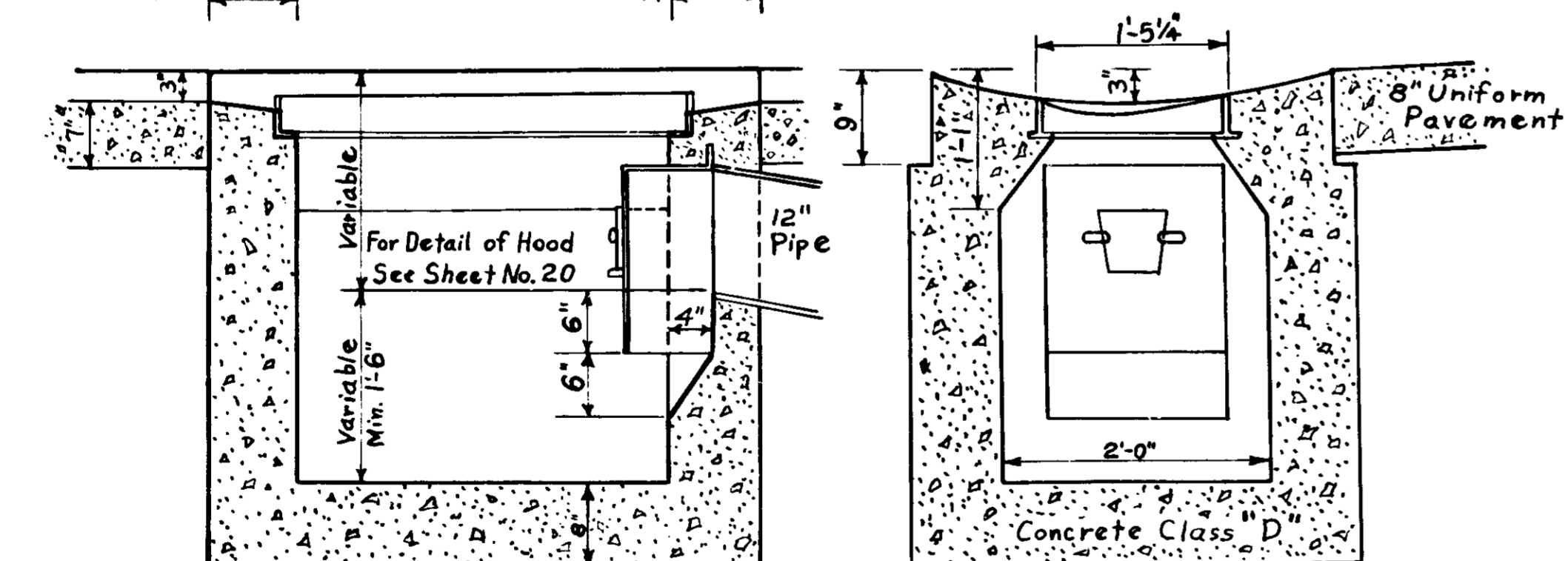
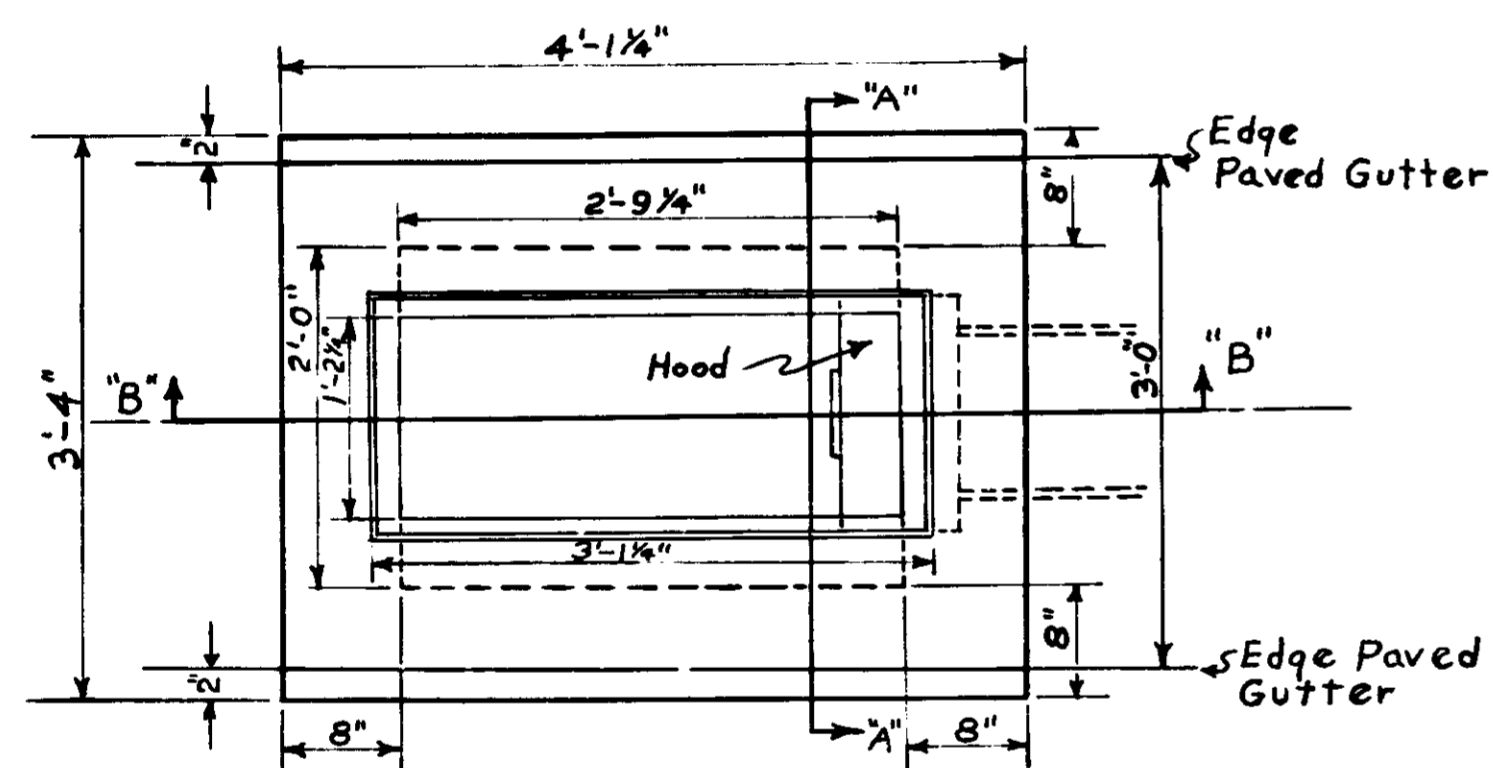
STRUCTURE NO. 61
Manhole in Place Type 4
Ring & Cover Furnished & Adjusted
To Grade of 4' of Reconstructed
Manhole Req'd.

STRUCTURE NO. 62
Std. Catch Basin Type C-5
With Hood of 9' of 12" R.C.V.C.
C.I. or Conc. Pipe Req'd.
Connect to Structure No. 61

STRUCTURE NO. 64
Std. Inlet Type D-6
of 20' of 12" R.C.V.C.I. or
Conc. Pipe Req'd.
Connect to Structure No. 62

STRUCTURE NO. 65
Spl. Catch Basin Type D-6
With Hood of 1-12" on 12"
R.C.V.C.I. or Conc. Tee
Req'd. Connect to Sewer
Pipe in Place. See Detail
of Spl. Catch Basin on
this Sheet.

STRUCTURE NO. 66
Std. Inlet Type D-6
of 24' of 12" R.C.V.C.I.
or Conc. Pipe Req'd.
Connect to Structure No. 65



SECTION "B" "B"

SECTION "A" "A"

DETAIL OF SPECIAL CATCH BASIN TYPE D-6

SCALE: 1"=1'-0"

NOTE—For Typical Details of Type
I & III Drives See Sheet No. 15

ADDITIONAL QUANTITIES

Private Drive Pavement	158	SYS
8" Uniform Plain Concrete Pvm't.	115	SYS
Paved Gutter	1070	LFT
Reinforced Steel	251	LBS
Concrete Header	76	LFT
8" Bitum. Mix. for Apps.	151	SYS
6" Bitum. Mix. for Apps.	59	SYS
Sidewalk Removal	5	SYS

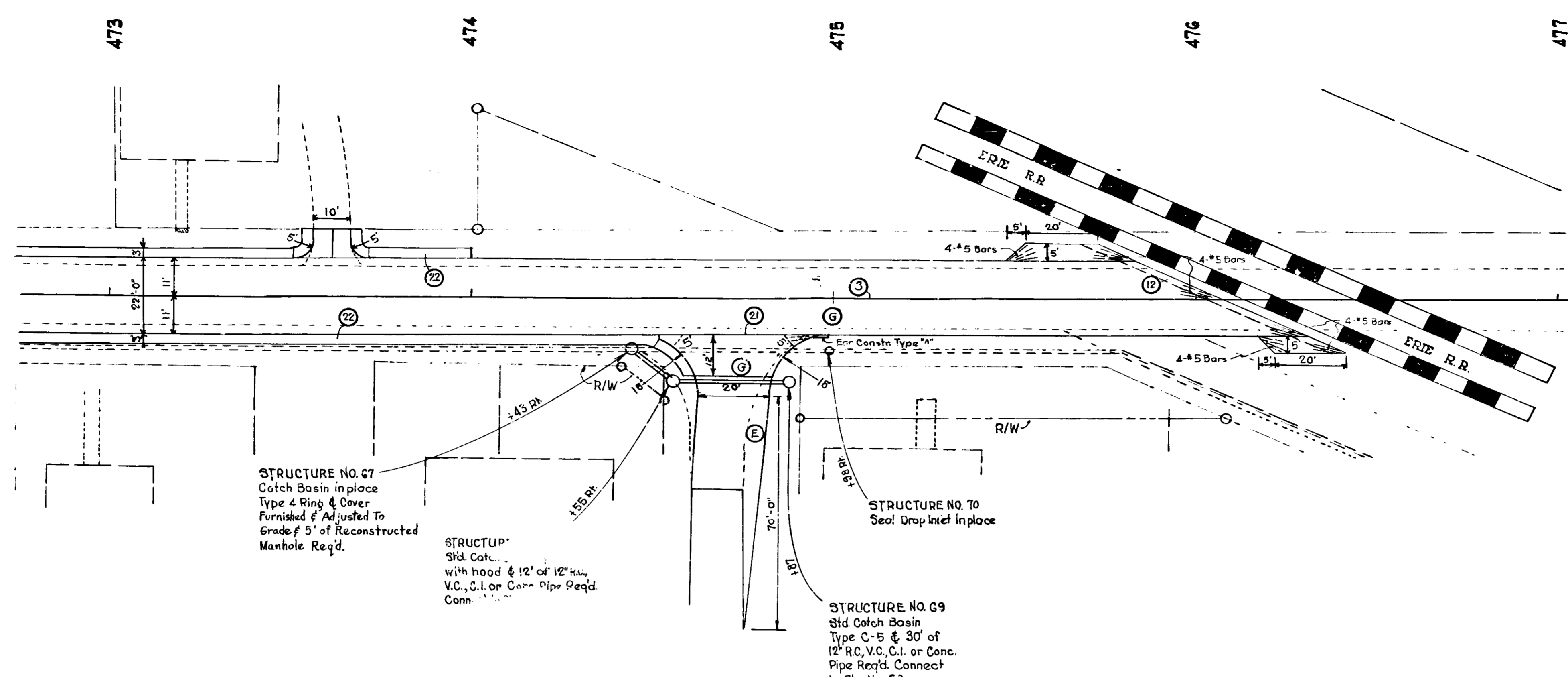
LEGEND

- ③ Longitudinal Joint
- ④ Butt Joint
- ⑤ 1/2" Expansion Joint
- ⑥ Concrete Header
- ⑦ Concrete Curb
- ⑧ Integral Concrete Curb
- ⑨ Keyway Construction Joint
- ⑩ Paved Gutter
- ⑪ Private Drive Pavement
- ⑫ 6" Bituminous Mixture
- ⑬ 8" Bituminous Mixture
- ⑭ Concrete Sidewalk
- ⑮ 8" Plain Concrete Pavement
- ⑯ 6" Compacted Aggregate
- ⑰ 8" Compacted Aggregate
- ⑱ Sidewalk Removal

DETAILS

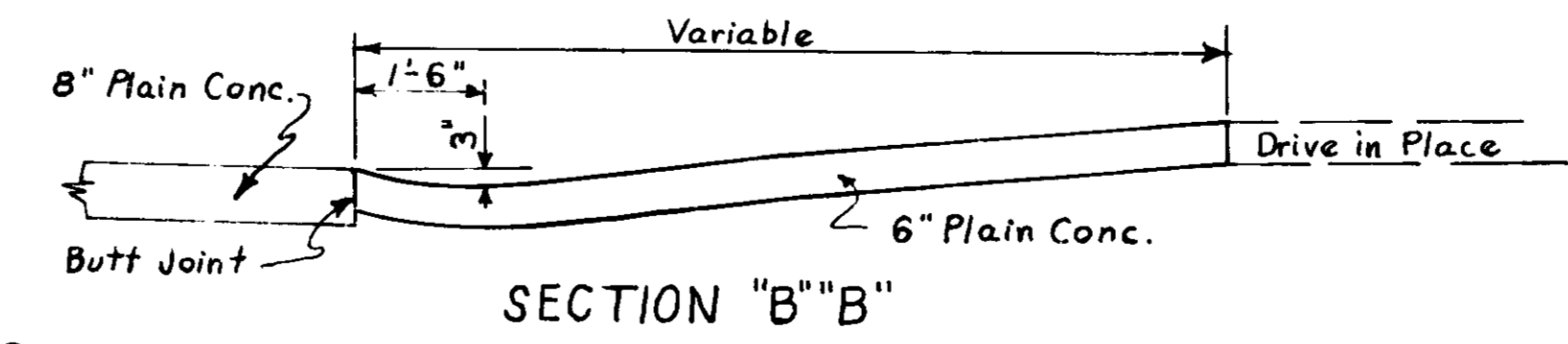
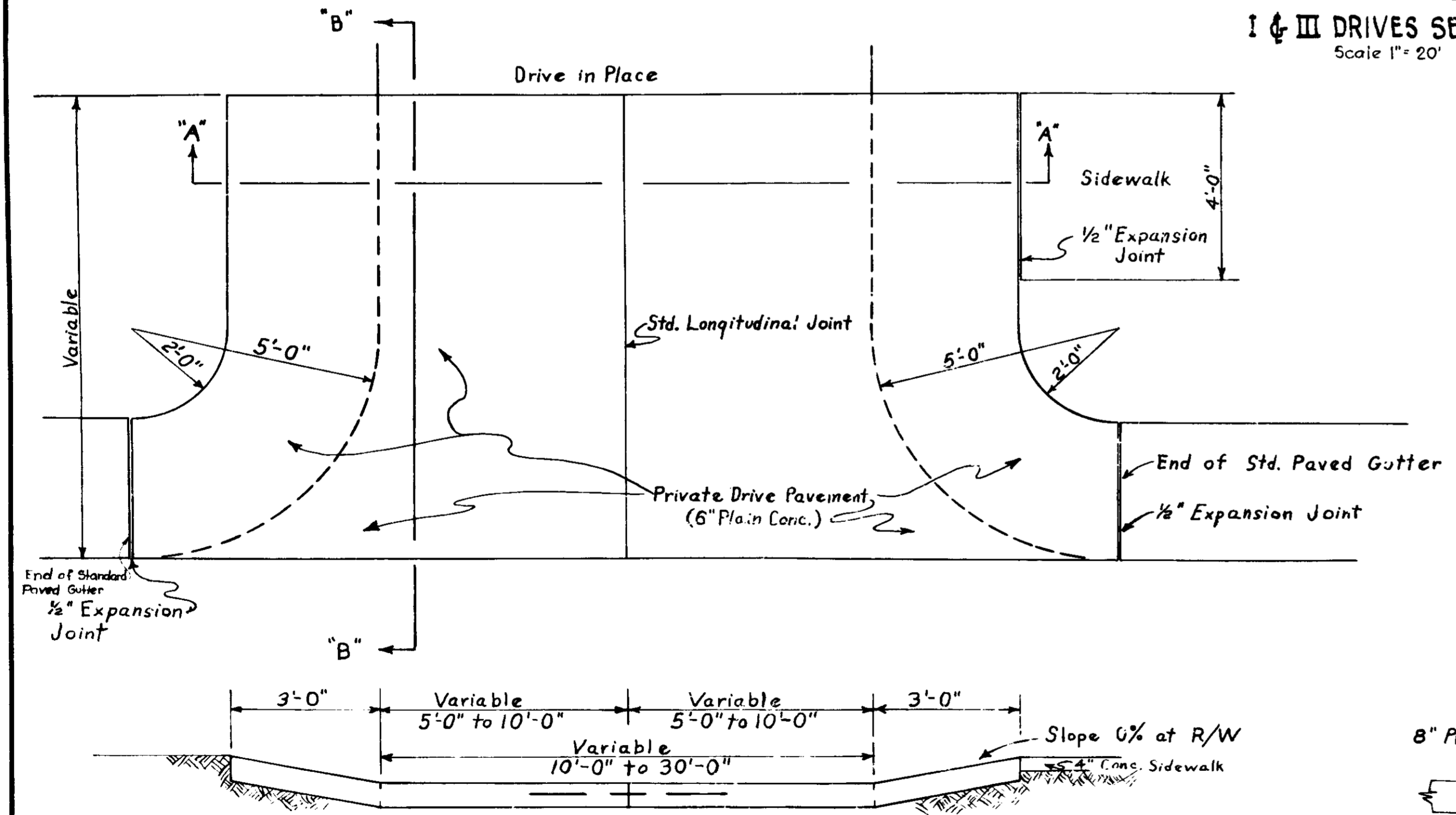
SCALE: AS SHOWN

FEDERAL ROAD DIVISION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	232	1954	15	



- LEGEND**
- ③ Longitudinal Joint
 - ⑤ Butt Joint
 - ⑥ 1/2" Expansion Joint
 - ⑦ Concrete Header
 - ⑧ Concrete Curb
 - ⑨ Integral Concrete Curb
 - ⑩ Keyway Construction Joint
 - ⑪ Paved Gutter
 - ⑫ Private Drive Pavement
 - ⑬ 6" Bituminous Mixture
 - ⑭ 8" Bituminous Mixture
 - ⑮ Concrete Sidewalk
 - ⑯ 8" Plain Concrete Pavement
 - ⑰ 8" Compacted Aggregate
 - ⑱ 8" Compacted Aggregate
 - ⊘ Sidewalk Removal

NOTE:- FOR TYPICAL DETAILS OF TYPE I & III DRIVES SEE BELOW
Scale 1" = 20'



DETAIL TYPE I & III DRIVES
SCALE: 1/2" = 1'-0"

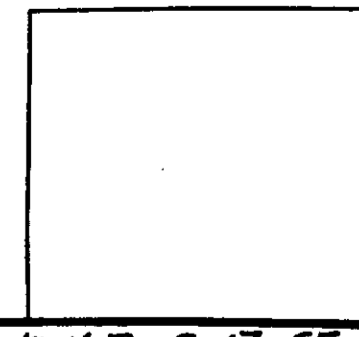
DETAILS
SCALE: AS SHOWN

Rev. 8-10-55- Per R/W Dept.

APPROACHES

LOCATION	DESCRIPTION	EXCAVATION CU. YDS.		LENGTH	WIDTH	RADIUS		STABILIZED SURF. SQ. YDS.	8" COMP. AGE	PVT. DUNE PMT. SYS.	8" PLAIN CONC. SYS.	REINFR. STEEL LBS.
		CUT	FILL			"L"	"W"					
264+89 Rt.	"B"	0	20	60	15	38-38			147	7	99	142
264+89 Lt.	"B"	0	20	60	15	38-38			147	7	99	142
278+00 Rt.	"V"	0	5									
278+10 Lt.	"V"	0	5									
278+20 Rt.	"V"	0	5									
280+67 Lt.	"II"	0	5	34	12	15#25	66					
286+12 Lt.	"V"	0	5									
304+26 Lt.	"II"	0	0	29	12	15#25	59					
310+25 Rt.	"V"	5	0									
344+32 Lt.	"D"	10	10	55	14	25#25			70		53	48
351+41 Lt.	"II"	0	0	29	12	15#25	59					
357+40 Rt.	"II"	0	20	34	30	20#20	134					
371+12 Lt.	"S"	0	20	60	18	36#36		148	1	99	142	G Type "B" Guide Posts.
381+98 Lt.	"V"	0	5									
382+85 Lt.	"II"	0	0	34	12	15#25	66					
383+36 Lt.	"II"	0	0	34	12	15#25	66					
384+36 Rt.	"V"	0	0									
397+55 Lt.	"II"	0	0	34	12	15#25	66					
398+50 Lt.	"S"	0	35	115	16	34#36		301		135	131	
399+00 Rt.	"S"	0	40	75	18	36#36		189		106	128	
399+00 Lt.	"V"	0	5									
399+30 Lt.	"V"	0	10									
410+85 Lt.	"V"	0	0									
413+75 Rt.	"IV"	0	5	29	20	20#20	84					G Type "B" Guide Post
415+36 Rt.	"IV"	0	5	29	20	20#20	84					G Type "B" Guide Post
416+05 Rt.	"IV"	0	5	29	20	20#20	84					G Type "B" Guide Post
423+28 Lt.	"II"	0	5	36	17	15#25	68					
424+30 Rt.	"V"	0	5									
455+90 Lt.	"II"	5	0	29	12	15#25	59					
439+12 Rt.	"V"	0	0									
439+32 Rt.	"V"	0	0									
439+64 Lt.	"II"	0	0	29	12	15#25	59					
441+30 Lt.	"V"	0	5									
445+12 Lt.	"D"	0	20	65	12	25#25		184		53	48	
448+33 Lt.	"II"	0	5	34	12	15#25	66					
451+40 Lt.	"II"	0	9	47	12	15#25	83					
452+48 Lt.	"II"	5	0	29	12	15#25			59			
453+38 Lt.	"II"	0	5	29	12	15#25	59					
454+37 Lt.	"V"	0	5									
465+23 Rt.	"II"	0	0	29	12	15#25	59					
467+05 Lt.	"I"	0	0									See Detail on Sheet No. 14
467+06 Rt.	"II"	0	0									14
468+48 Lt.	"I"	0	0									14
470+33 Lt.	"I"	0	0									14
470+56 Rt.	"D"	0	0									14
471+97 Lt.	"I"	0	0									14
471+99 Rt.	"I"	0	0									14
472+120 Rt.	"I"	0	0									14
472+32 Lt.	"I"	0	0									14
472+79 Rt.	"I"	0	0									14
473+70 Lt.	"I"	0	0									15
474+73 Rt.	"D"	0	5									15
317+75 Lt.	"V"	0	2									
373+00 Rt.	"V"	0	2									

DETAILS



ESTIMATE OF QUANTITIES

GRADING			PAVEMENT			MISCELLANEOUS		
ITEM	UNIT	QUANTITY	ITEM	UNIT	QUANTITY	ITEM	UNIT	QUANTITY
COMMON EXCAVATION	CYS	20,327	SUBBASE TYPE "II"	CYS	1812	SODDING	SYS.	19,307
SOLID ROCK EXCAVATION	CYS		REINFORCED CONCRETE	SYS.		FURNISHING AND PLACING	SYS.	
SPECIAL BORROW	CYS	26,351	PLAIN CONCRETE	SYS.	47,155	"SEED"	LBS.	16,623
			H.E.S. REINFORCED CONCRETE	SYS.		FURNISHING AND PLACING FERTILIZER	LBS.	8
			H.E.S. PLAIN CONCRETE	SYS.		FURNISHING AND PLACING AGRICULTURAL	LBS.	
OVERHAUL	CYS	1706	PLAIN CONCRETE FOR PRIVATE DRIVE CROSSOVERS	SYS.	217	LIMESTONE	TONS	48
ADDED HAUL	UNITS		PRIVATE DRIVE	SYS.		FURNISHING AND PLACING MULCHING MATERIAL	TONS	86
						GUARD RAIL	LFT.	
DEAT EXCAVATION SURCHARGE - 4'	CYS		REINFORCING STEEL	LBS.	1035	FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
SURCHARGE - 4' - 8'	LFT.					STEEL BEAM GUARD RAIL	LFT.	
SURCHARGE - 8' - 2'	LFT.		CONTRACTION JOINTS, TYPE	LFT.		SHOP CURVED STEEL BEAM GUARD RAIL	LFT.	
MACHINE OPERATION	HRS.		EXPANSION JT., 1" PREF. BITUM.	LFT.		WIRE ROPE GUARD RAIL	LFT.	
MACHINE AVAILABILITY	HRS.		EXPANSION JT., 1" COPR. OR COPR. RUBBER	LFT.		WOVEN WIRE FABRIC GUARD RAIL	LFT.	
DYNAMITE	LBS.		EXPANSION JT., 1" PREF. FIBER	LFT.		FLEXIBLE STEEL PLATE OR STEEL BEAM GUARD RAIL	LFT.	
TEST HOLES	LFT.		EXPANSION JT., 1" PREFORMED WITH LOAD TRANSFER	LFT.		RESETTING FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
CAGED DYNAMITE HOLES	LFT.		3" PREFORMED BITUM. EXP. JT.	LFT.	22	RESET STEEL BEAM GUARD RAIL	LFT.	
						RESET WIRE ROPE GUARD RAIL	LFT.	
GRADE "B" SPECIAL BORROW	CYS.	170	CONCRETE BASE	SYS.		GUARD RAIL SALVAGE	LFT.	
TOP SOIL	CYS.		H.E.S. CONCRETE BASE	SYS.				
			CONCRETE PATCHES	SYS.		GUIDE POSTS, TYPE "A"	EA.	40
			CLASS I CONCRETE PATCHES	SYS.		GUIDE POSTS, TYPE "B"	EA.	24
			CLASS II CONCRETE PATCHES	SYS.		RESET GUIDE POSTS	EA.	
			CLASS III CONCRETE PATCHES	SYS.				
			CLASS IV CONCRETE PATCHES	SYS.		BARRICADES, TYPE "A"	EA.	2
						BARRICADES, TYPE "B"	EA.	8
			CONCRETE WIDENING	SYS.		TYPICAL SIGN STANDARDS	EA.	18
			FILLING CRACKS AND JOINTS	GALS.				
			1/4" SAWED TRANSVERSE JOINTS	LFT.	528	RAILROAD CROSSING SIGN, TYPE "A"	EA.	
			1/4" SAWED TRANSVERSE JOINTS	LFT.	484	RAILROAD CROSSING SIGN, TYPE "B"	EA.	
			3/8" FORMED TRANSVERSE JOINTS	LFT.	440	ADVANCE RAILROAD WARNING SIGN	EA.	
			1/8" SAWED SPECIAL CONTRACTION JOINTS, TYPE D-1 or D-5	LFT.	484			
			1/4" SAWED SPECIAL CONTRACTION JOINTS, TYPE D-1 or D-5	LFT.	462	PAVED SIDE DITCH, TYPE "A"	LFT.	129
			3/8" FORMED SPECIAL CONTRACTION JOINTS, TYPE D-1 or D-5	LFT.	440	PAVED SIDE DITCH, TYPE "C"	LFT.	83
						PAVED SIDE DITCH, TYPE "	LFT.	
			AGGREGATE FOR COMPACTED AGGREGATE BASE	TONS	800	BITUM MIXTURE FOR APPROACHES	TONS	620
			AGGREGATE FOR COMPACTED AGGREGATE SURFACE	TONS				
			WATER FOR COMPACTED AGGREGATE BASE	M.GALS.		CONCRETE SIDEWALK	SYS.	
			WATER FOR COMPACTED AGGREGATE SURFACE	M.GALS.		1" PREF. BITUM. EXP. JT. FOR SIDEWALK	LFT.	
						CROSSWALK	SYS.	
						CONCRETE HEADER	LFT.	76
						(1) INCLUDES FOR WEDGE & LEVELING COURSES	TONS	

STRUCTURES											
ITEM	PIPE - LINEAL FEET										
	4"	6"	8"	10"	12"	15"	18"	24"	36"		
REINFORCED CONCRETE					570						
CASTINGS					366	51	63	30			
RC, VC, CL, or CONC. (B. & S. JOINTS)					57	156	104				
EXTRA 5 REIN. WITH REINFORCED CONCRETE											
FOR CONCRETE SEWER	600	400	200								
SEWER					15						
VIT. CLAY SEWER											
REIN. CONC. SEWER											
BITUM. COATED CORR. METAL											
DRIP COATED CORR. METAL											
RC, VC, CL, or CI	600	400	200								

SUBSURFACE DRAINAGE			CASTINGS ADJUSTED TO GRADE		FOR STRUCTURES			GATE VALVES	
PIPE - LINEAL FEET			AGG. CU. YDS.	EACH	ITEM	UNIT	QUANTITY	SIZE	HEAD
6" BITUM. COATED C.M.		168			CONCRETE CLASS "D"	CYS	132	24"	10'
6" BITUM. COATED PERF. C.M.		132	115		REINFORCING STEEL	LBS.	38.6	12"	10'
6" CORR. METAL PER. CONC. SEWER OR PERF. VC SEWER		720							

CATCH BASINS		PIPE CATCH BASIN		INLETS		MANHOLES		RECONSTRUCTED		CASTINGS FURNISHED AND ADJUSTED TO GRADE	
TYPE	EACH	SIZE	EACH	TYPE	EACH	TYPE	EACH	TYPE	LN FT	TYPE	EACH
C-5	2	24"	2	D-C	3	A-4	1	MANHOLE	14		
C-5	4	18"		E-7	2	B-4		CATCH BASIN		4	3
Sp. D-C WITH HOOD	1	24"						INLET			

STRUCTURE DATA

STRUCTURE NUMBER	LOCATION	DESCRIPTION	SKLW	LENGTH	HEIGHT	WINDS	FLOW LINE		CONCRETE CLASS	SPECIAL BORROW GRADE	REINFORCING STEEL	REMARKS
							UP STREAM ELEV.	DOWN STREAM ELEV.				
11	204189RL	15" CM Pipe		30'					.69			
12	204189UL	15" CM Pipe		30'					.69			
13	278110RL	15" CM Pipe		40'					.69			
14	278110UL	15" CM Pipe		40'					.69			
15	280160UL	15" CM Pipe		24'					.69			Remove Pipe in Place
16	280160UL	15" CM Pipe		20'					.69			
17	304120UL	15" CM Pipe		24'					.58			
18	310125RL	12" RC, VC, CL or Conc. Pipe		20'					.69			
19	316150	12" RC, VC, CL or Conc. Pipe		51'			660.2	659.8	.69	7		Headwall on Inlet End Only. Gate Valve on Outlet End.
20	322175RL	12" RC, VC, CL or Conc. Pipe		30'					.62			Remove FI in Place. Connect to FI in Place.
21	344119	12" Gate Valve (10' Head)		120'					.69			
22	344132UL	15" RC, VC, CL or Conc. Pipe		30'					.69			Remove FI in Place. Connect to FI in Place.
23	344150RL	15" CM Pipe		30'					.69			
24	355111	12" RC, VC, CL or Conc. Pipe		6'					.69			Connect to Str. No. 21. Remove Catch Basin in Place.
25	357146RL	18" RC, VC, CL or Conc. Pipe		42'			661.8	661.6	.69	6		Remove Pipe in Place.
26	371151L	15" CM Pipe		48'					.69			
27	371150	36" RC, VC, CL or Conc. Pipe		76'			661.0	661.0	.69	35		Construct Outlet Ditch
28	381198UL	12" CM Pipe		20'					.69			
29	382185UL	15" Pipe		28'					.69			
30	383188UL	15" Pipe		28'					.69			
31	384136RL	12" CM Pipe		20'					.58			
32	397155UL	12" CM Pipe		24'					.60			
33	398190UL	15" CM Pipe		38'					.69			
34	399100RL	15" CM Pipe		34'					.69			
35	399100RL	12" CM Pipe		20'					.58			
36	399190UL	12" CM Pipe		20'					.58			
37	406100	24" RC, VC, CL or Conc. Pipe		57'			676.4	676.2	1.24	10		Construct Outlet Ditch
38	410185UL	12" CM Pipe		20'					.58			
39	412151RL	12" CM Pipe		24'					.58			
40	416165RL	12" CM Pipe		24'					.58			
41	423123UL	18" CM Pipe		24'					.80			
42	424130RL	12" CM Pipe		20'					.58			
43	430177	24" RC, VC, CL or Conc.		60'			674.6	674.4	1.24	10		Remove Pipe in Place. Construct Inlet & Outlet Ditches
44	438190UL	12" CM Pipe		24'					.58			
45	439122RL	12" CM Pipe		40'					.58			
46	439184UL	12" CM Pipe		24'					.58			
47	441136UL	12" CM Pipe		20'					.58			
48	445112UL	15" CM Pipe		32'					.69			Remove Pipe in Place
49	448133UL	15" CM Pipe		24'					.69			Remove Pipe in Place
50	451101UL	15" CM Pipe		24'					.69			
51	452117	72" Pipe in Place		24'					.69			No Change Req'd.
52	452160UL	15" Std. Pipe Catch Basin & Pipe		150'					.64			Connect to Str. No. 53. Remove Pipe in Place
53	452195UL	12" Pipe		150'					.64			
54	453147UL	15" Std. Pipe Catch Basin		6'					.69			
55	457140	24" RC, VC, CL or Conc. Pipe		60'			672.0	671.6	1.75	10		Connect to Str. No. 53. Construct Inlet & Outlet Ditches.
56	465135RL	12" Std. Manhole (Type B) & RC, VC, CL or Conc. Pipe Joints		57'					.75	25		Remove Catch Basin in Place. Remove F.T. in Place. Connect to F.T. Sewer in Place.
57	465148RL	12" Std. Catch Basin, Type C-5 With Hood & Sewer Pipe		15'					.58			Connect to Str. No. 56
58	467106RL	12" CM Pipe		24'					.58			
59	470153RL	12" Catch Basin in Place, Type 4 Casting Furnished & Adjusted to Grade & Reconstructed Manhole		5'					.58			
60	470158RL	12" Std. Catch Basin, Type C-5 With Hood & RC, VC, CL or Conc. Pipe		9'					.69			Connect to Str. No. 59
61	470168RL	12" Manhole in Place, Type 4 Casting Furnished & Adjusted to Grade & Reconstructed Manhole		4'					.69			
62	470175RL	12" Std. Catch Basin, Type C-5 With Hood & RC, VC, CL or Conc. Pipe		9'					.69			Connect to Str. No. 61
63	470177UL	12" Std. Inlet, Type D-C & RC, VC, CL or Conc. Pipe		50'					.69	7		Connect to Str. No. 64
64	470193RL	12" Std. Inlet, Type D-C & RC, VC, CL or Conc. Pipe		20'					.69			Connect to Str. No. 62
65	472132RL	12" Spl. Catch Basin, Type D-C With Hood & 1-12" on 12" RC, VC, CL or Conc. Tee		24'					.69			Connect to Sewer Pipe in Place
66	472141UL	12" Std. Inlet, Type D-C & RC, VC, CL or Conc. Pipe		24'					.69	6		Connect to Str. No. 65
67	474143RL	12" Catch Basin in Place, Type 4 Casting Furnished & Adjusted to Grade & Reconstructed Manhole		5'					.69			
68	474155RL	12" Std. Catch Basin, Type C-5 With Hood & RC, VC, CL or Conc. Pipe		12'					.69			Connect to Str. No. 67
69	474181RL	12" Std. Catch Basin, Type C-5 & RC, VC, CL or Conc. Pipe		30'					.69			Connect to Str. No. 68
70	474198RL	12" Drop Inlet in Place		30'					.69			Send Drop Inlet in Place.
20A	322175UL	12" CM Pipe		30'					.29			Const. Headwall on Inlet only. Gate Valve on Outlet.
27A	373166RL	12" Gate Valve (10' Head)		20'					.58			
39	41											