E-11

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6529-03-71	STP 1091(2)	1

INDEX OF SHEETS

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Sheet No. 3A&3B	Miscellaneous Quantities
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Sheet No. 5-5.15	Plan and Profile (Includes Erosion Control Plan)
Sheet No. 6-6.11	Standard Detail Drawings
Sheet No. ———	Sign Plates
Sheet No. ———	Structure Plans
Sheet No. ———	Computer Earthwork Data
Sheet No. ———	Cross Sections

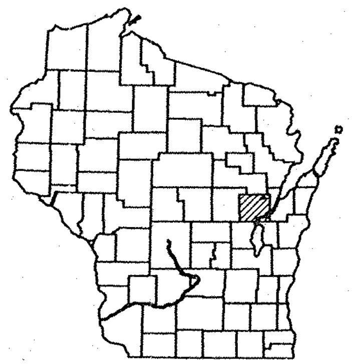
TOTAL SHEETS = 38

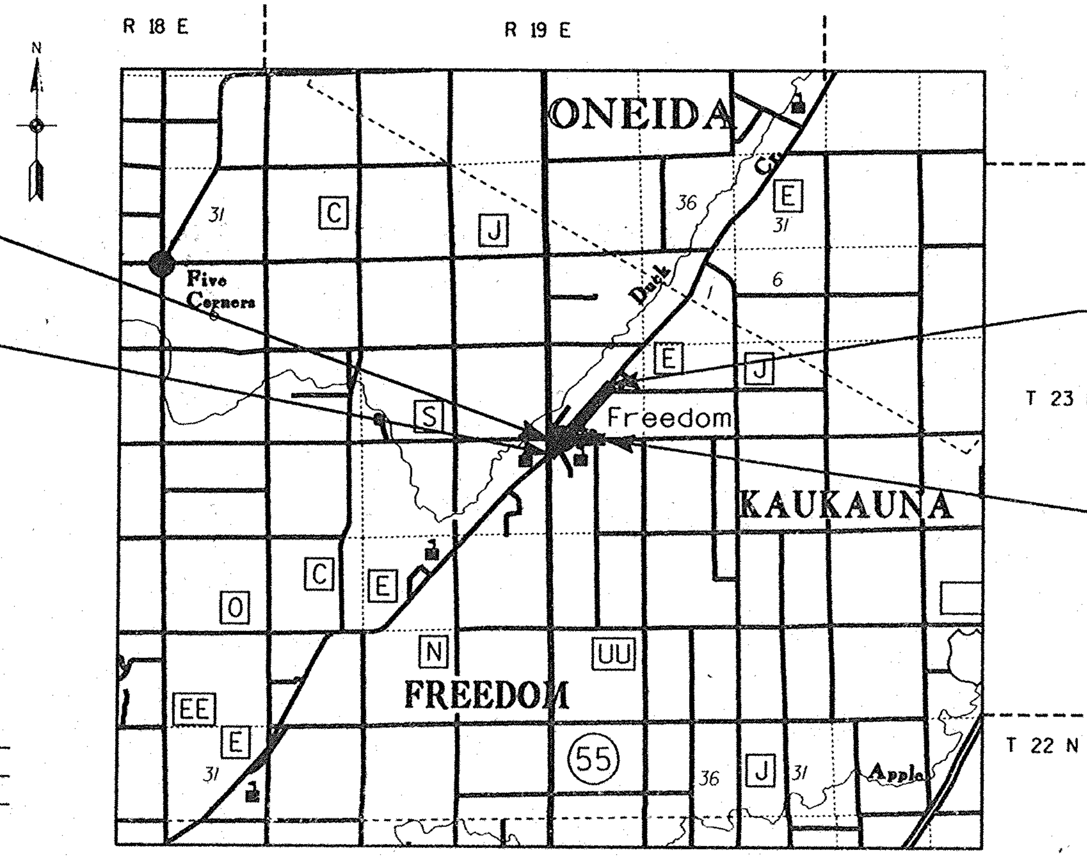
FREEDOM VILLAGE STREETS
(C.T.H. "S" AND C.T.H. "E")
C.T.H. "E"
OUTAGAMIE COUNTY

"AS BUILT"

STATE PROJECT NUMBER
6529-03-71

AS BUILT PLAN
NO.
SUPERVISOR RALPH FORSETH
RESIDENT SCOTT BROSTEAU (AYRES)
CONTRACTOR SOMMERS CONST. CO. INC.
COMPLETED 11-07-95





LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = C.T.H. "E"=0.790 MILES

DESIGN DESIGNATION

A.D.T.	(1994)	=	2,565
A.D.T.	(2014)	=	3,130
D.H.V.	(2014)	=	410
D.		=	50%-50%
T.		=	6%
V.		=	35 M.P.H.
ESALS		=	306,600

CONVENTIONAL SIGNS

COUNTY LINE	COMBUSTIBLE FLUIDS (UNDER PRESSURE)
CORPORATE LIMITS	UNDERGROUND UTILITIES GAS
PROPERTY LINE	ELECTRIC
LOT LINE	TELEPHONE
LIMITED HIGHWAY EASEMENT	SERVICE PEDESTAL
EXISTING RIGHT OF WAY	CABLE MARKER
NEW RIGHT OF WAY	POWER POLE
REFERENCE LINE	TELEPHONE POLE
SLOPE INTERCEPT	RAILROADS
ORIGINAL GROUND	MARSH
MARSH OR ROCK PROFILE	WOODED AREA
CULVERT IN PLACE	SILT FENCE
CULVERT REQUIRED	
CULVERT REQUIRED (Profile)	

ACCEPTED FOR
COUNTY of OUTAGAMIE
12/5/94 [signature]
DATE COUNTY HIGHWAY COMMISSIONER

PLANS PREPARED BY
AYRES ASSOCIATES Engineers/Architects Scientists/Photogrammetrists Owen Ayres & Associates Inc. Green Bay, Wisconsin

[Seal: WISCONSIN RONALD J. HENKE E-18970 GREEN BAY PROFESSIONAL ENGINEER] [signature]

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AYRES ASSOCIATES
Designer	AYRES ASSOCIATES
District Examiner	D.H. CARLSON
District Supervisor	J.C. LAMERS
Project Development Engineer	
C.O. Plan Examiner	E.N. BENISCH

APPROVED FOR DISTRICT OFFICE
DATE: 1/5/95 James Lamers
(Signature)

ALL COORDINATES SHOWN ON THIS PLAN ARE SCALED FROM U.S.G.S. TOPOGRAPHIC MAP, FREEDOM, WI., 7.5 MINUTE QUADRANGLE, CENTRAL ZONE, FOR IDENTIFICATION ONLY.

LE NAME: TITLE.DGN

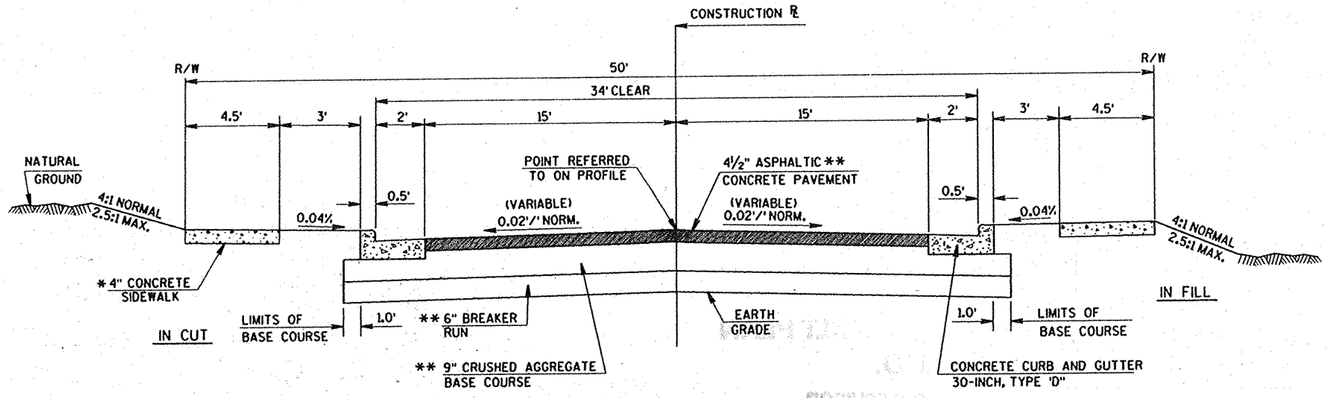
WISDOT/CADDS SHEET 10

E-11

E-11

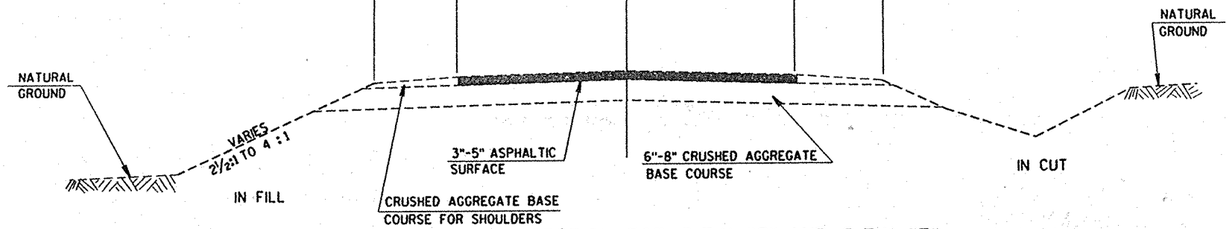
STATE PROJECT NUMBER	SHEET NO
6529-03-71	2.0

TYPICAL SECTION, GENERAL NOTES, AND UTILITIES
FOR
C.T.H. "S" AND C.T.H. "E" OUTAGAMIE COUNTY



*-NOT PART OF THIS CONTRACT
**-PRODUCING THIS CONTRACT

TYPICAL SECTION FOR C.T.H. "S" AND C.T.H. "E"



EXISTING TYPICAL SECTION FOR C.T.H. "S" AND C.T.H. "E"

GENERAL NOTES

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN SHEETS ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE EXACT LOCATION AND LIMITS OF PRIVATE ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FEILD.

ALL DISTANCES SHOWN ON THIS PLAN ARE GROUND DISTANCE.

BEARINGS SHOWN ON THIS PLAN ARE MAGNETIC BEARINGS TO THE NEAREST SECOND.

CURVE DATA IS BASED ON ARC DEFINITION.

ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE.

CURB HEIGHTS AT THE END OF CURB AND GUTTER SHALL BE TAPERED FROM 0 INCHES TO 6 INCHES IN 6 FEET, UNLESS OTHERWISE NOTED.

THE LOCATION OF EXISTING AND PROPOSED UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

ALL RADII SHOWN ARE TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.

CURB CUTS FOR HANDICAPPED RAMPS SHALL BE PROVIDED IN ALL QUADRANTS OF EACH INTERSECTION FOR FUTURE CONSTRUCTION OF SIDEWALK.

THE WIDTH OF THE ROADWAY AS SHOWN ON THE PLAN AND PROFILE SHEETS IS NOT TO SCALE.

RUNOFF COEFFICIENT FOR DRAINAGE CAN BE FOUND ON FIGURE 2 CHAPTER 10, FDM. RUNOFF COEFFICIENT FOR THIS PROJECT; EXISTING PAVEMENT 0.80, NEW PAVEMENT 0.80. TOTAL PROJECT AREA 7.9 ACRES. TOTAL AREA DISTURBED 7.9 ACRES.

ALL WORK TO DRIVEWAYS AND SIDEWALK BEHIND THE CURB AND GUTTER WILL BE DONE BY OTHERS.

UTILITIES

WISCONSIN ELECTRIC POWER COMPANY — TELEPHONE 1-414-735-0705
800 SOUTH LYNNDALE
P.O. BOX 1699
APPLETON, WISCONSIN 54914
ATTENTION: MR. JIM JACOBS

AMERITECH — TELEPHONE 1-414-735-3250
221 WEST WASHINGTON ST.
P.O. BOX 2159
APPLETON, WISCONSIN 54913
ATTENTION: MR. JOHN STUMPF

FREEDOM SANITARY DISTRICT NO. 1 — TELEPHONE 1-414-788-5763
P.O. BOX 1014
FREEDOM, WISCONSIN 54131
ATTENTION: MR. MARK KERKHOFF

D.N.R. AREA LIAISON
WISCONSIN DEPARTMENT OF NATURAL RESOURCES — TELEPHONE 1-414-492-5809
P.O. BOX 10448
1125 N. MILITARY AVE.
GREEN BAY, WISCONSIN 54307-0448
ATTENTION: KELLY O'CONNOR

WISCONSIN GAS COMPANY — TELEPHONE 1-715-432-2700
1921 SOUTH 8th STREET
P.O. BOX 789
WISCONSIN RAPIDS, WISCONSIN 54494
ATTENTION: MR. DENNIS CHERNEY

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

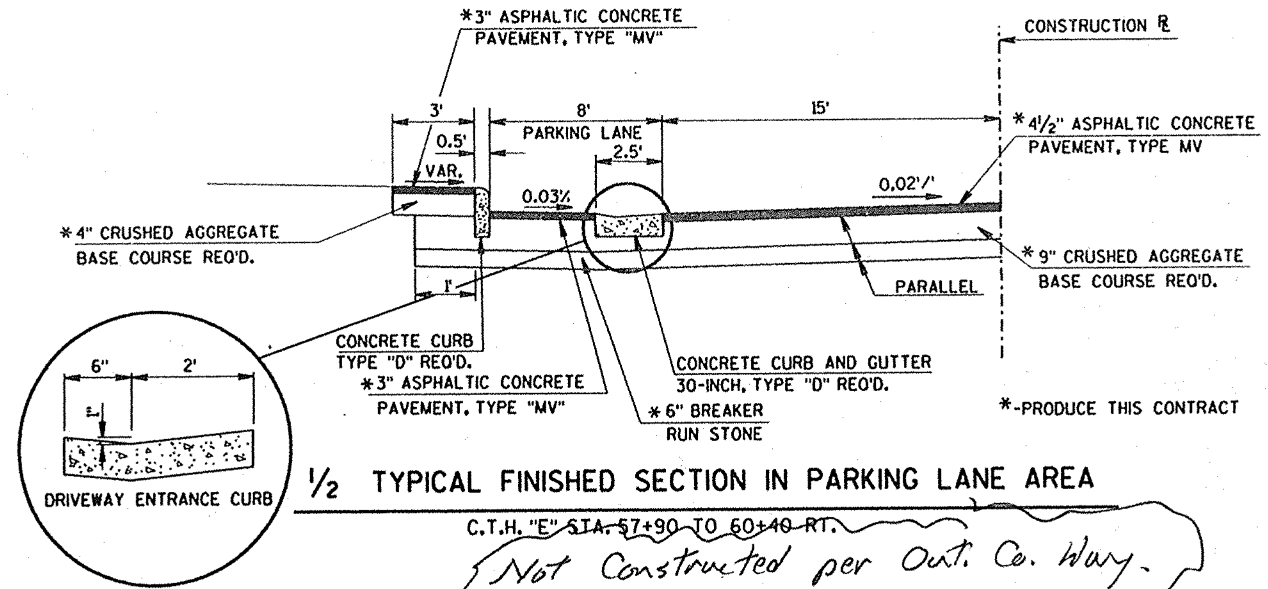
CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE
TELEFAX (414) 259-0947
TDD (FOR HEARING IMPAIRED) 1-800-542-2289
WIS. STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE.

STANDARD DETAIL DRAWINGS

8A5-10a&b	INLET COVERS
8A5-10d	INLET AND MANHOLE COVERS
8B6-3	MANHOLES, TYPE 1
8B7-3	MANHOLES, TYPE 2 AND 3
8C1-5	INLETS, TYPE 1,2,3, AND 4
8D1-11	CONCRETE CURB, CONCRETE CURB AND GUTTER, AND PAVEMENT TIES
8D4-3	CONCRETE SURFACE DRAIN AND ASPHALTIC FLUME
8D5-8	CURB RAMPS
8E9-4	SILT FENCE
8F1-11	APRON ENDWALLS FOR CULVERT PIPE
8F2-1	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE PROJECT NUMBER	SHEET NO.
6529-03-71	2.1

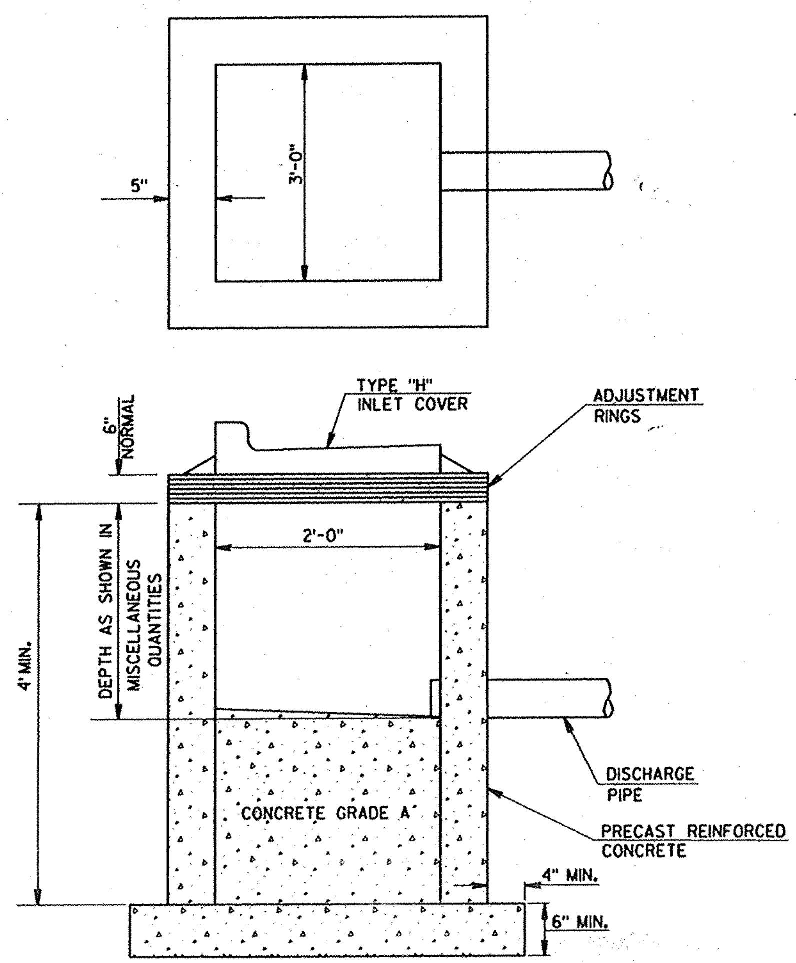
CONSTRUCTION DETAILS
FOR
C.T.H. "S" AND "E" OUTAGAMIE COUNTY



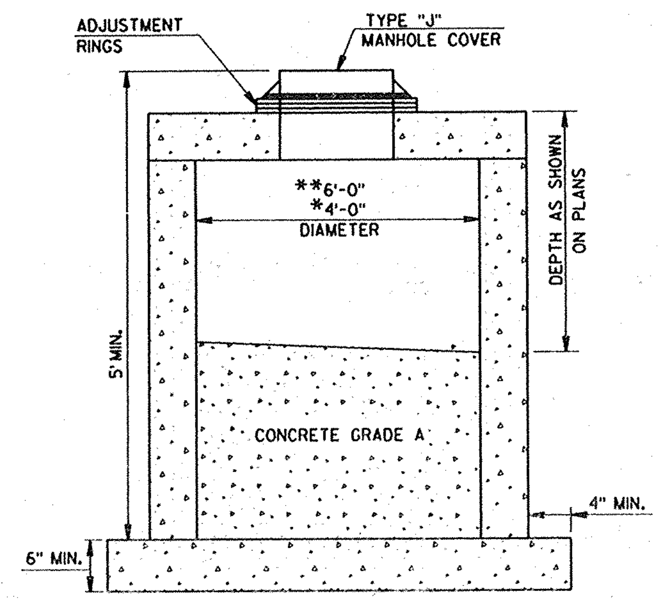
½ TYPICAL FINISHED SECTION IN PARKING LANE AREA

~~C.T.H. "E" STA. 57+90 TO 60+40 RT.~~

Not Constructed per Out. Co. Hwy. Dept.



INLET, TYPE 3



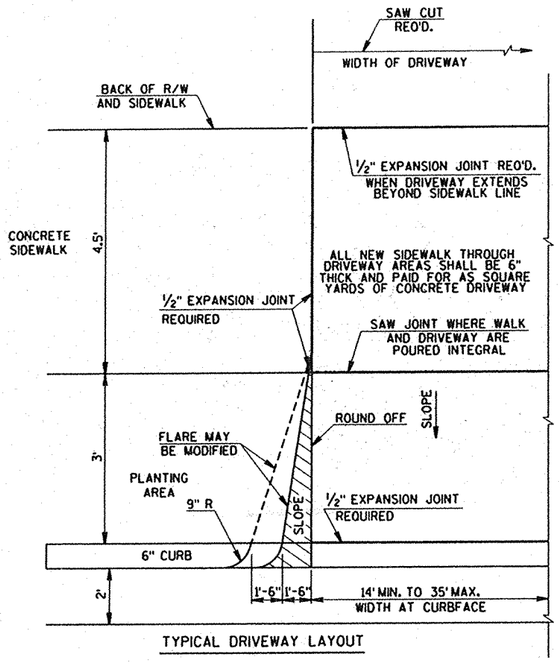
MANHOLE

* TYPE 1
** TYPE 2

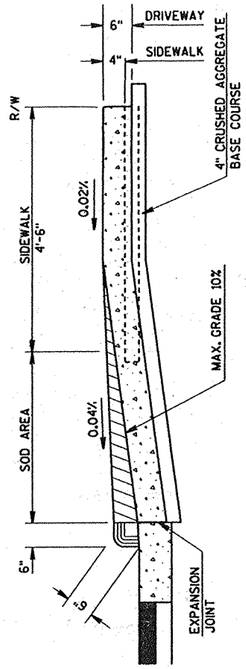
DATE OF PLOT = 01/04/95
DESIGN FILE IS f:\dgn\5024\detail2.dgn
DGN LEVELS ON = 1-62

STATE PROJECT NUMBER	SHEET NO
6529-03-71	2.2

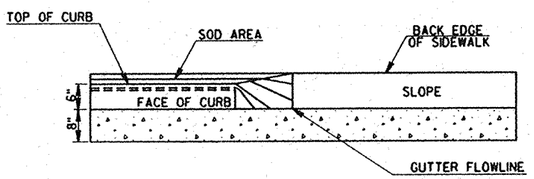
CONSTRUCTION DETAILS
FOR
C.T.H. "S" AND C.T.H. "E" OUTAGAMIE COUNTY



TYPICAL DRIVEWAY LAYOUT



PROFILE (PARALLEL TO ℄ OF DRIVEWAY)
(CONCRETE SHOWN)



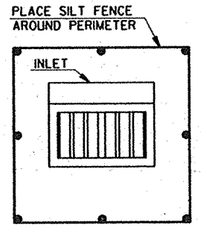
PROFILE (PARALLEL TO ℄ OF ROADWAY)

DRIVEWAY DETAILS

NOTE: DRIVEWAY DETAIL SHOWN FOR CURB OPENING SIZE ONLY.
CONCRETE DRIVEWAY IS NOT PART OF THIS CONTRACT

GENERAL NOTES FOR DRIVEWAYS

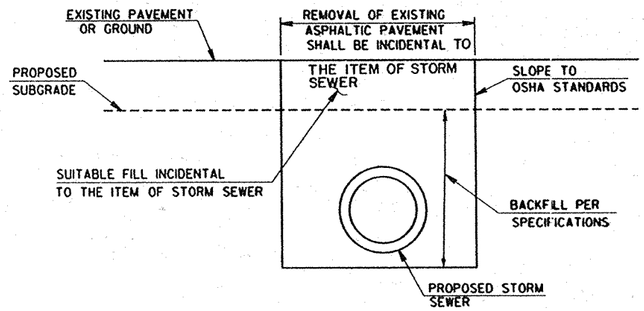
RESIDENTIAL DRIVEWAY WIDTHS SHALL BE A MAX. OF 24 FEET.
COMMERCIAL DRIVEWAY WIDTHS SHALL BE A MAX. OF 35 FEET.



SILT FENCE INSTALLATION

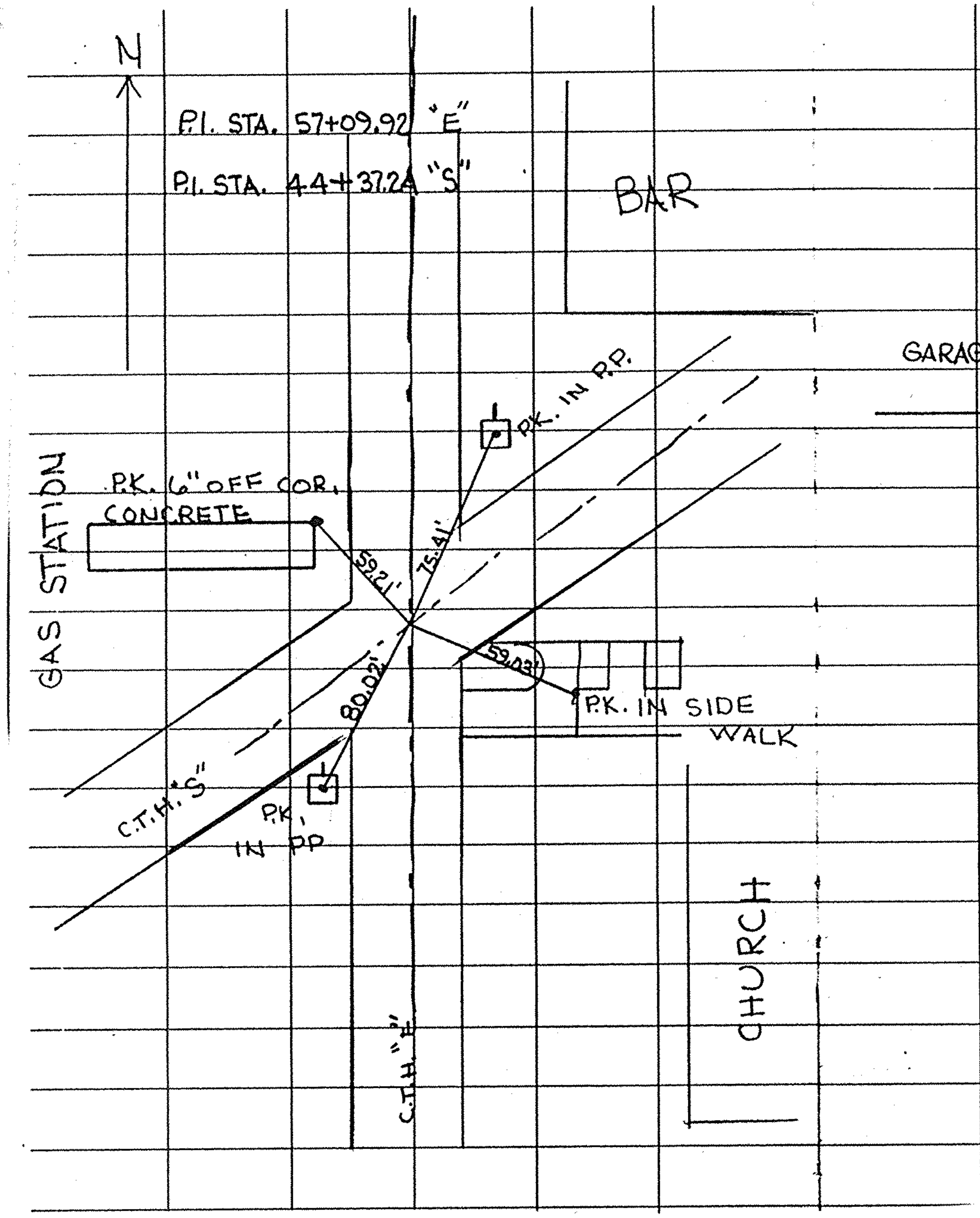
(AT INLETS)

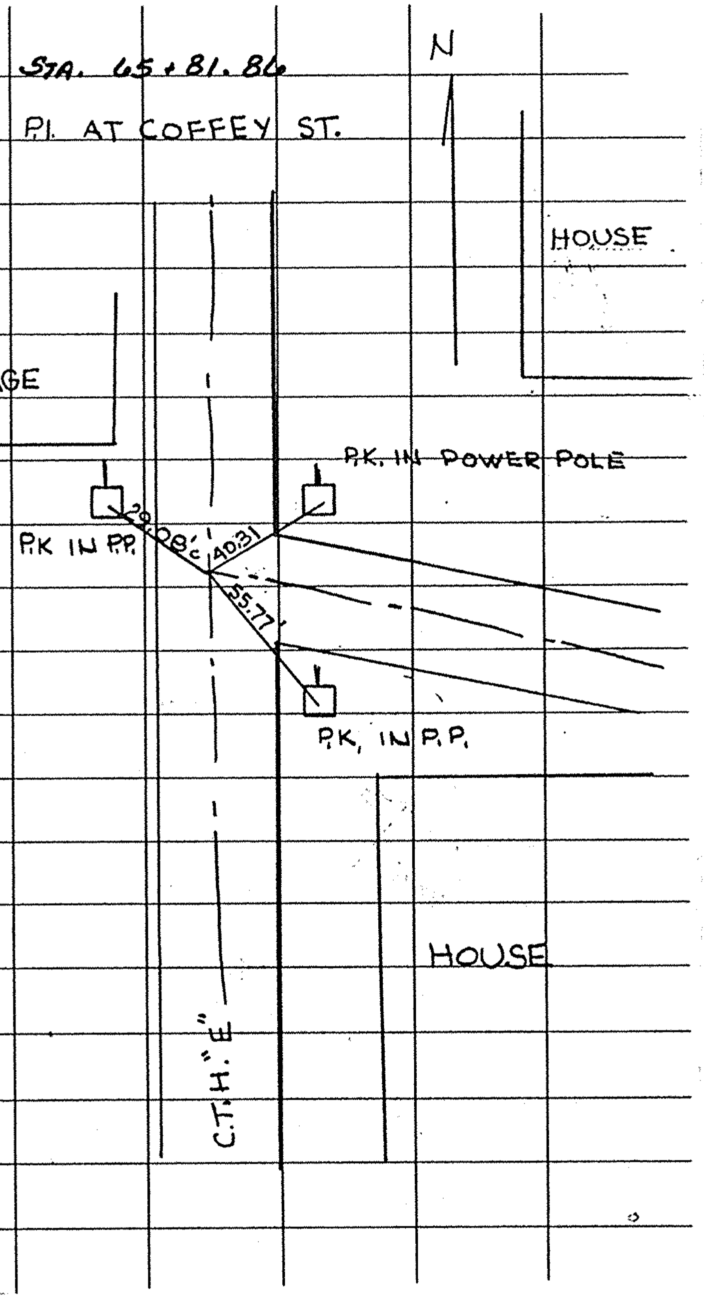
1. ALL SILT FENCE REQ'D. FOR THIS PROJECT SHALL MEET THE REQUIREMENTS FOR SILTY SOILS
2. IMMEDIATELY AFTER CONSTRUCTION OF ANY INLET, CONTRACTOR SHALL CONSTRUCT SILT FENCE AROUND THE INLET IN ACCORDANCE WITH THE DETAIL SHOWN ON THE PLANS TO MINIMIZE SEDIMENTATION IN THE INLET AND STROM SEWER.

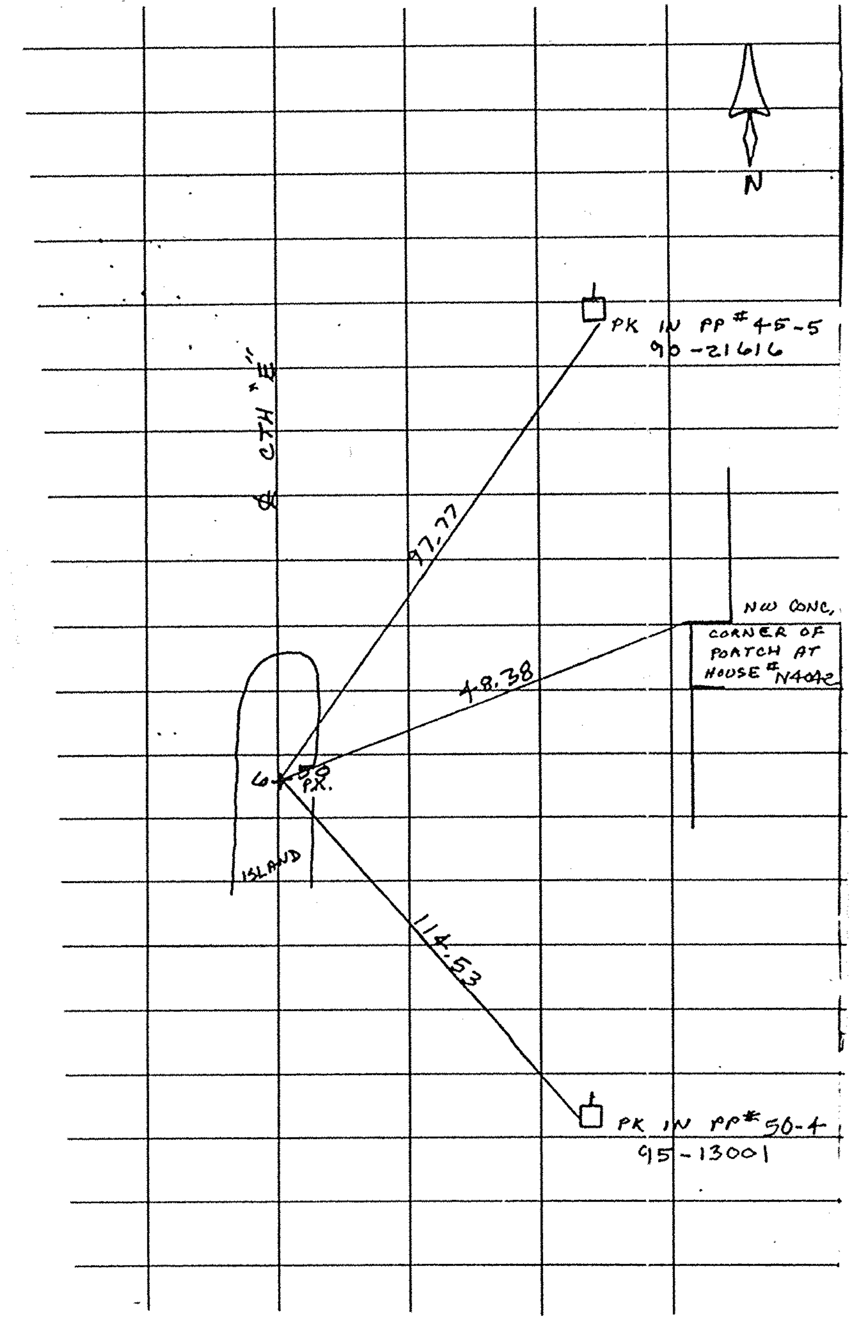


STORM SEWER EXCAVATION

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

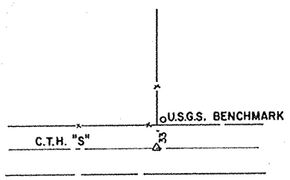

N
P.I. STA. 57+09.92 "E"
P.I. STA. 44+37.24 "S"
BAR
GAS STATION
P.K. 6" OFF COR. CONCRETE
P.K. IN P.P.
59.21'
75.41'
80.02'
59.03'
P.K. IN SIDE WALK
C.T.H. "S"
P.K. IN PP
C.T.H. "E"
CHURCH


STA. 65+81.86
P.I. AT COFFEY ST.
N
HOUSE
GARAGE
P.K. IN POWER POLE
P.K. IN P.P.
29.08'
40.31
55.77'
P.K. IN P.P.
C.T.H. "E"
HOUSE

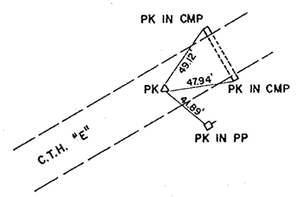

N
PK IN PP # 45-5
90-21616
℄ CTH "E"
97.77
NW CONC. CORNER OF PORTCH AT HOUSE # N4042
48.38
6.50
P.K.
ISLAND
114.53
PK IN PP # 50-4
95-13001

STATE PROJECT NUMBER	SHEET NO.
6529-03-71	2.3

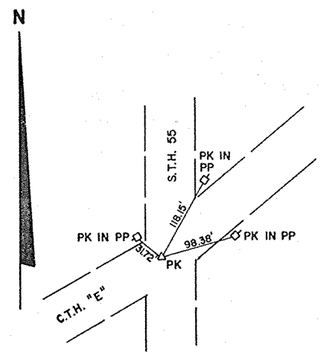
TIES FOR C.T.H. "E" AND C.T.H. "S"



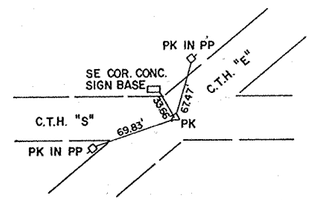
STA. 10+00±
C.T.H. "S"



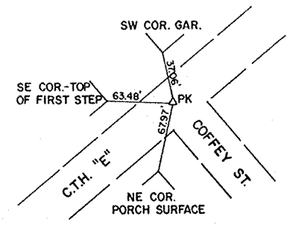
STA. 38+00
C.T.H. "E"



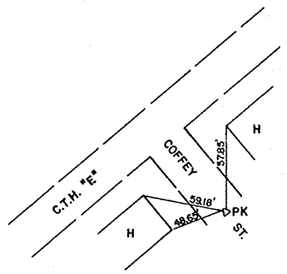
P.I. STA. 44+58.48
C.T.H. "E" AT S.T.H. 55



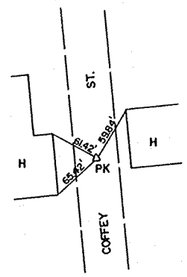
P.I. STA. 57+08.24
C.T.H. "E" AT C.T.H. "S"



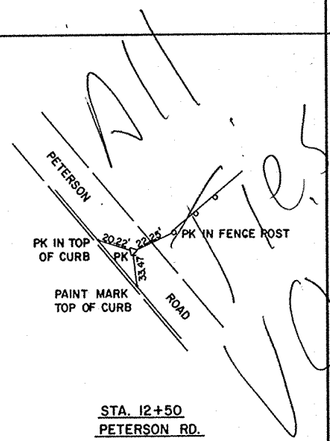
P.I. STA. 65+81.86
C.T.H. "E" AT COFFEY ST.



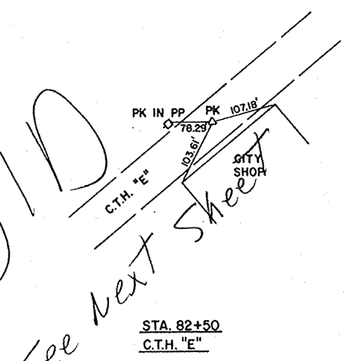
P.I. STA. 10+65.14
COFFEY ST.



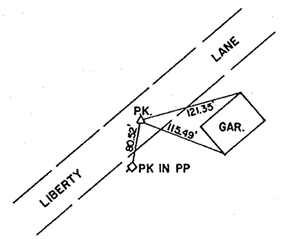
P.O.L. STA. 13+00
COFFEY ST.



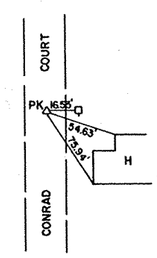
STA. 12+50
PETERSON RD.



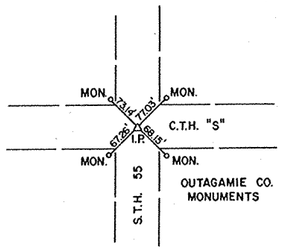
STA. 82+50
C.T.H. "E"



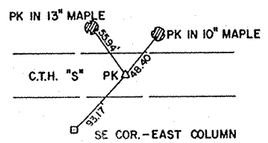
STA. 12+50
LIBERTY LN.



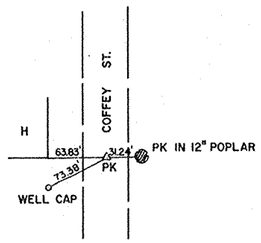
STA. 12+00
CONRAD CT.



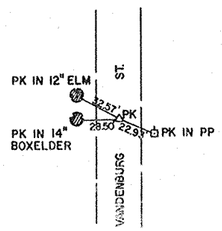
STA. 36+44.88
C.T.H. "S" AT S.T.H. 55



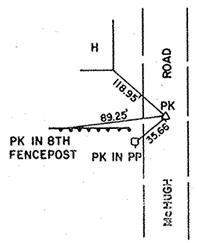
P.O.L. 50+80.69
C.T.H. "S"



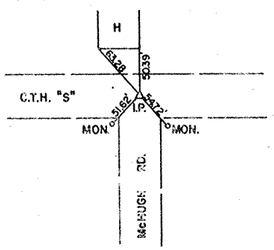
STA. 12+00
(C.T.H. "S" = 10+00)
COFFEY ST.



STA. 8+00
VANDENBURG ST.



STA. 8+00
McHUGH ROAD



STA. 62+89.88
C.T.H. "S"

All ties void See next Sheet

DATE 02/22/95

ESTIMATE OF QUANTITIES

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	6529-03-71 QUANTITY
20301	REMOVING OLD CULVERT, STATION 37+42	L.S.	1.00	1.00
20302	REMOVING OLD CULVERT, STATION 10+27	L.S.	1.00	1.00
20303	REMOVING OLD CULVERT, STATION 9+68	L.S.	1.00	1.00
20304	REMOVING OLD CULVERT, STATION 74+85	L.S.	1.00	1.00
20405	REMOVING CURB AND GUTTER	L.F.	40.00	40.00
30413	PRODUCING AND STOCKPILING CRUSHED AGGREGATE BASE COURSE	TON	17,550.00	17,550.00
40501	ASPHALTIC MATERIAL FOR PLANT MIXES	TON	391.00	391.00
41534	CONCRETE SURFACE DRAINS	C.Y.	.70	.70
52260	REINFORCED CONCRETE APRON ENDWALLS FOR CULVERT PIPE, 12-INCH	EACH	2.00	2.00
52266	REINFORCED CONCRETE APRON ENDWALLS FOR CULVERT PIPE, 30-INCH	EACH	1.00	1.00
52363	REINFORCED CONCRETE APRON ENDWALLS FOR HORIZONTAL ELLIP. CULVERT PIPE, 24X38-INCH	EACH	1.00	1.00
60102	CONCRETE CURB, TYPE D	L.F.	261.00	261.00
60133	CONCRETE CURB AND GUTTER, 30-INCH, TYPE D	L.F.	13,695.00	13,695.00
60604	MEDIUM RANDOM RIPRAP	C.Y.	20.00	20.00
60825	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 12-INCH	L.F.	1,841.00	1,841.00
60826	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 15-INCH	L.F.	808.00	808.00
60827	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 18-INCH	L.F.	2,008.00	2,008.00
60828	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 21-INCH	L.F.	182.00	182.00
60829	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 24-INCH	L.F.	1,686.00	1,686.00

SHEET 3

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	6529-03-71 QUANTITY
60830	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 27-INCH	L.F.	421.00	421.00
60831	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 30-INCH	L.F.	462.00	462.00
60850	REINFORCED CONCRETE PIPE, CLASS IV, STORM SEWER, 12-INCH	L.F.	31.00	31.00
60854	REINFORCED CONCRETE PIPE, CLASS IV, STORM SEWER, 24-INCH	L.F.	121.00	121.00
61110	MANHOLES, TYPE 1	EACH	25.00	25.00
61112	MANHOLES, TYPE 3	EACH	8.00	8.00
61121	INLETS, TYPE 1	EACH	1.00	1.00
61122	INLETS, TYPE 3	EACH	51.00	51.00
61151	MANHOLE COVERS, TYPE J	EACH	33.00	33.00
61163	INLET COVERS, TYPE C	EACH	1.00	1.00
61167	INLET COVERS, TYPE H	EACH	51.00	51.00
61910	MOBILIZATION	L.S.	1.00	1.00
62815	SILT FENCE, DELIVERED	L.F.	1,000.00	1,000.00
62816	SILT FENCE, INSTALLED	L.F.	1,000.00	1,000.00
62817	SILT FENCE MAINTENANCE	L.F.	500.00	500.00
64202	FIELD OFFICE, TYPE D	L.S.	1.00	1.00
64505	GEOTEXTILE FABRIC, TYPE R	S.Y.	70.00	70.00
64601	SAWING EXISTING PAVEMENT	L.F.	195.00	195.00
90001	PRODUCING BREAKER RUN STONE	TON	9,000.00	9,000.00
90002	PRODUCING ASPHALTIC CONCRETE PAVEMENT, TYPE MV	TON	6,740.00	6,740.00
90003	REINFORCED CONC. HORIZONTAL ELLIPT. PIPE, CLASS HE-IV, STORM SEWER, 24 X 38-INCH	L.F.	184.00	184.00
90402	QUALITY MANAGEMENT PROGRAM, ASPHALTIC MIXTURE	TON	6,740.00	6,740.00
90999	ON-THE-JOB TRAINING	HRS.	250.00	250.00

MISCELLANEOUS QUANTITIES FOR C.T.H. "E"&"S" OUTAGAMIE COUNTY

MANHOLES, INLETS AND COVERS

STRUCTURE NUMBER	STATION	LOCATION	STRUCTURE	DISTANCE LT. /RT.	TYPE	COVER	GRATE LT. /RT.	ELEVATIONS PAVEMENT	ELEVATIONS FLOWLINE	DEPTH (L.F.)	REMARKS
4	48+35	C.T.H."E"	INLET	16.5' RT.	3	H	LT.	753.08	749.00	3.0	
5	10+62	CONRAD ST.	INLET	13.5' RT.	3	H	RT.	752.56	748.55	3.0	
6	10+25	CONRAD ST.	INLET	13.5' RT.	3	H	LT.	752.65	748.25	3.4	
7	48+90	C.T.H. "E"	MANHOLE	10' LT.	1	J		753.00	748.00	3.8	
8	48+90	C.T.H. "E"	INLET	16.5' LT.	3	H	LT.	752.88	748.50	3.4	
9	50+50	C.T.H. "E"	INLET	16.5' RT.	3	H	LT.	751.96	747.90	3.1	
10	10+59	LIBERTY LN.	INLET	17.5' RT.	3	H	RT.	752.08	748.00	3.1	
11	10+29	LIBERTY LN.	INLET	17.5' LT.	3	H	LT.	751.68	747.60	3.1	
12	51+00	C.T.H. "E"	MANHOLE	10' LT.	3	J		751.78	746.95	3.6	
13	51+00	C.T.H. "E"	INLET	16.5' LT.	3	H		751.66	747.60	3.1	
14	54+25	C.T.H. "E"	INLET	16.5' RT.	3	H	LT.	749.40	745.70	2.7	
15	54+25	C.T.H. "E"	INLET	16.5' LT.	3	H	RT.	749.50	745.70	2.8	
16	54+25	C.T.H. "E"	MANHOLE	10' LT.	1	J		749.62	745.50	2.9	
17	44+68	C.T.H. "S"	INLET	16.5' RT.	3	H	RT.	750.95	746.50	3.5	
18	44+35	C.T.H. "S"	MANHOLE	9' LT.	3	J		750.33	744.50	4.6	
19	45+10	C.T.H. "S"	INLET	16.5' LT.	3	H	LT.	751.67	747.00	3.7	
20	59+45	C.T.H. "E"	INLET	16.5' LT.	3	H	RT.	749.38	745.50	2.9	
21	59+50	C.T.H. "E"	MANHOLE	10' LT.	1	J		749.72	745.21	3.3	
22	60+19	C.T.H. "E"	INLET	16.5' LT.	3	H	LT.	749.20	745.70	2.5	
23	60+20	C.T.H. "E"	MANHOLE	10' LT.	1	J		749.55	745.42	2.9	
24	60+62	C.T.H. "E"	INLET	16.5' RT.	3	H	LT.	750.00	746.00	3.0	
25	63+00	C.T.H. "E"	INLET	16.5' LT.	3	H	LT.	750.93	747.00	3.0	
26	63+00	C.T.H. "E"	MANHOLE	10' LT.	1	J		751.05	746.75	3.1	
27	63+00	C.T.H. "E"	INLET	16.5' RT.	3	H	RT.	750.93	747.00	3.0	
28	69+27	C.T.H. "E"	INLET	16.5' RT.	3	H	LT.	749.62	745.40	3.2	
29	69+50	C.T.H. "E"	MANHOLE	10' LT.	1	H		749.67	745.00	3.4	
30	69+50	C.T.H. "E"	INLET	16.5' LT.	3	J	RT.	749.55	745.40	3.2	
31	73+50	C.T.H. "E"	INLET	16.5' RT.	3	H		747.75	743.75	3.0	
32	73+50	C.T.H. "E"	MANHOLE	10' RT.	1	J	RT.	747.87	742.90	3.7	
33	73+50	C.T.H. "E"	INLET	16.5' LT.	3	H		747.75	743.75	3.0	TEE INTO TRUNKLINE (TEE INCIDENTAL)
36	76+77	C.T.H. "E"	INLET	16.5' LT.	3	H	LT.	746.75	742.75	3.0	
34	77+05	C.T.H. "E"	INLET	16.5' LT.	3	H	RT.	746.70	742.70	3.0	
34A	77+11	C.T.H. "E"	INLET	16.5' RT.	3	H	LT.	746.70	742.90	3.0	TEE INTO TRUNKLINE (TEE INCIDENTAL)
35	77+48	C.T.H. "E"	MANHOLE	10' LT.	3	J	RT.	746.96	742.20	3.5	
36A	77+68	C.T.H. "E"	INLET	16.5' LT.	3	H		746.89	742.85	3.0	
40	81+70	C.T.H. "E"	MANHOLE	10' LT.	1	J		748.23	743.47	3.5	
41	81+73	C.T.H. "E"	INLET	16.5' LT.	3	H	RT.	748.12	744.10	3.0	
42	81+73	C.T.H. "E"	INLET	16.5' RT.	3	H	LT.	748.12	744.10	3.0	
43	85+00	C.T.H. "E"	MANHOLE	10' LT.	1	J		749.22	744.13	3.8	
44	85+00	C.T.H. "E"	INLET	16.5' LT.	3	H	RT.	749.10	745.10	3.0	
45	85+00	C.T.H. "E"	INLET	16.5' RT.	3	H	LT.	749.10	745.10	3.0	
52	37+00	C.T.H. "S"	MANHOLE	9' LT.	1	J		746.34	740.10	5.0	
53	37+00	C.T.H. "S"	ENDWALL	35' LT.					742.50		
55	38+70	C.T.H. "S"	INLET	16.5' LT.	3	H	RT.	745.90	741.90	4.0	
56	38+70	C.T.H. "S"	MANHOLE	9' LT.	1	J		746.04	740.96	3.8	
57	39+72	C.T.H. "S"	MANHOLE	9' LT.	1	J		746.47	741.46	3.8	
58	38+70	C.T.H. "S"	INLET	16.5' RT.	3	H	RT.	745.90	741.90	4.0	
59	40+03	C.T.H. "S"	INLET	16.5' LT.	3	H	LT.	746.72	742.70	4.0	
59A	39+95	C.T.H. "S"	MANHOLE	9' LT.	1	J		746.79	741.62	3.9	
60	41+80	C.T.H. "S"	INLET	16.5' LT.	3	H	LT.	747.78	744.78	4.0	
61	41+80	C.T.H. "S"	MANHOLE	9' LT.	1	J		747.90	742.90	3.8	
62	41+80	C.T.H. "S"	INLET	16.5' RT.	3	H	RT.	747.78	744.78	4.0	
63	48+50	C.T.H. "S"	INLET	16.5' LT.	3	H	RT.	750.10	745.80	3.3	
64	48+50	C.T.H. "S"	MANHOLE	9' LT.	1	J		750.22	745.50	3.5	
65	48+50	C.T.H. "S"	INLET	16.5' RT.	3	H	LT.	750.10	745.80	3.3	
66	51+51	C.T.H. "S"	INLET	16.5' LT.	3	H	RT.	748.31	744.31	3.0	
67	10+39	COFFEY ST.	INLET	17.5' LT.	3	H	LT.	748.41	744.31	3.0	
68	51+68	C.T.H. "S"	MANHOLE	9' LT.	3	J		748.35	743.31	3.8	
69	52+05	C.T.H. "S"	MANHOLE	9' LT.	1	J		748.14	742.95	3.9	
69A	52+30	C.T.H. "S"	MANHOLE	9' LT.	1	J		747.99	742.85	3.9	
70	10+27	COFFEY ST.	INLET	17.5' RT.	3	H	RT.	748.29	744.29	3.0	
71	52+30	C.T.H. "S"	INLET	16.5' LT	3	H	RT.	747.87	743.87	3.0	
72	52+30	C.T.H. "S"	INLET	16.5' RT.	3	H	LT.	747.87	743.87	3.0	
73	54+03	C.T.H. "S"	INLET	32' RT.	3	H	LT.	748.15	743.60	3.6	
74	54+20	C.T.H. "S"	MANHOLE	9' LT.	1	J		748.29	742.07	5.0	
75	54+38	C.T.H. "S"	INLET	35' RT.	3	H	LT.	748.15	744.00	3.2	

MANHOLES, INLETS AND COVERS

STRUCTURE NUMBER	STATION	LOCATION	STRUCTURE	DISTANCE LT. /RT.	TYPE	COVER	GRATE LT. /RT.	ELEVATIONS PAVEMENT	ELEVATIONS FLOWLINE	DEPTH (L.F.)	REMARKS
76	57+50	C.T.H. "S"	INLET	16.5' LT.	3	H	RT.	742.50	738.00	3.5	
77	57+50	C.T.H. "S"	MANHOLE	9' LT.	1	J		742.62	737.12	4.3	
78	57+50	C.T.H. "S"	INLET	16.5' RT.	3	H	LT.	742.50	738.00	3.5	
79	60+50	C.T.H. "S"	MANHOLE	9' LT.	1	J		730.86	725.46	4.2	
80	60+50	C.T.H. "S"	INLET	16.5' RT.	3	H	LT.	730.74	726.70	3.0	
79A	60+46	C.T.H. "S"	INLET	28' LT.	1	C		730.50	726.25	3.0	TEE INTO TRUNKLINE (TEE INCIDENTAL)
81	61+38	C.T.H. "S"	INLET	16.5' LT.	3	H	RT.	729.10	725.10	3.0	
82	61+58	C.T.H. "S"	INLET	36' LT.	3	H	LT.	728.60	724.70	2.9	
83	61+95	C.T.H. "S"	INLET	36' LT.	3	H	RT.	728.50	724.90	2.6	
84	61+75	C.T.H. "S"	MANHOLE	9' LT.	1	J		728.76	724.46	3.0	
85	62+43	C.T.H. "S"	INLET	16.5' LT.	3	H	LT.	727.97	723.97	3.0	
86	9+59	MC HUGH RD.	INLET	21.5' LT.	3	H	RT.	727.60	723.90	2.7	
87	63+00	C.T.H. "S"	MANHOLE	32' RT.	3	J		727.93	723.54	3.1	
88	9+47	MC HUGH RD.	ENDWALL	27' LT.					726.10		
89	63+00	C.T.H. "S"	MANHOLE	9' LT.	3	J		727.36	723.79	3.0	
90	9+67	MC HUGH RD.	ENDWALL	33' RT.	1				723.50		
301	1+91	TRALEE LN.	MANHOLE	20' RT.	1	J		745.00	740.00	3.8	
302	3+52	TRALEE LN.	MANHOLE	29' RT.	1	J		736.00	730.85	3.9	PROVIDE CUT OUT FOR FUTURE S.S.
303	5+00	TRALEE LN.	MANHOLE	20' LT.	1	J		735.80	729.52	5.0	PROVIDE CUT OUT FOR FUTURE S.S.
304	7+02	TRALEE LN.	MANHOLE	20' LT.	1	J		733.50	727.71	4.5	PROVIDE CUT OUT FOR FUTURE S.S.
305			MANHOLE		3	J		732.36	727.00	4.7	CONNECT EXIST. PIPES INTO MANHOLE
306			MANHOLE		3	J		730.13	725.07	3.8	

CONCRETE CURB, TYPE "D"

STATION-STATION	LOCATION	QUANTITY L.F.
57+90-60+40RT	C.T.H."E"	261

CONCRETE CURB AND GUTTER, 30-INCH, TYPE "D"

STATION-STATION	LOCATION	QUANTITY L.F.
35+50-35+90 RT.	C.T.H. "S"	40
36+56.88-39+64 LT	C.T.H. "S"	315
36+56.88-44+37 RT	C.T.H. "S"	720
39+64-44+37 LT	C.T.H. "S"	435
44+37-51+97 LT	C.T.H. "S"	680
44+37-54+20 RT	C.T.H. "S"	950
51+97-61+76 LT	C.T.H. "S"	1175
54+20-62+90 RT	C.T.H. "S"	1050
61+76-63+68 LT	C.T.H. "S"	190
46+40-57+08 LT	C.T.H. "E"	1030
46+40-48+96 RT	C.T.H. "E"	230
48+96-51+09 RT	C.T.H. "E"	190
51+09-57+08 RT	C.T.H. "E"	605
57+08- 65+69 RT	C.T.H. "E"	810
57+08-59+83 LT	C.T.H. "E"	270
59+83- 77+23 LT	C.T.H. "E"	1730
65+69-69+57 RT	C.T.H. "E"	405
69+57-81+26 RT	C.T.H. "E"	1160
77+23-81+26 LT	C.T.H. "E"	400
81+26-87+85 LT	C.T.H. "E"	655
81+26-87+85 RT	C.T.H. "E"	655
TOTAL		13,695

REMOVING CULVERT PIPES (LUMP SUM EACH)

STATION	LOCATION	SIZE (IN. DIA.)	TYPE	LENGTH L.F.
37+42	C.T.H. "S"	24	C.M.P.	58
10+27	PETERSON ST.	18	C.M.P.	48
9+68	MC HUGH RD.	18	C.M.P.	56
74+85	C.T.H. "E"	18	R.C.P.	50

MANHOLE AND INLET TOTALS

MANHOLES
TYPE 1 = 25 EACH
TYPE 3 = 8 EACH

MANHOLE COVERS
TYPE J = 33 EACH

INLETS
TYPE 1 = 1 EACH
TYPE 3 = 51 EACH

INLET COVERS
TYPE C = 1 EACH
TYPE H = 51 EACH

SILT FENCE DELIVERED, INSTALLED AND MAINTENANCE

LOCATION	DELIVERED AND INSTALLED L.F.	MAINTENANCE L.F.
AT EACH INLET	920	460
UNDISTRIBUTED	80	40
TOTALS	1,000	500

SAWING EXISTING PAVEMENT

STATION-STATION	LOCATION	QUANTITY L.F.
35+50-36+57	C.T.H."S"	195

REMOVING CURB AND GUTTER

STATION-STATION	LOCATION	QUANTITY L.F.
35+50-35+90 RT.	C.T.H."S"	40

STORM SEWER SUMMARY

LOCATION FROM	LOCATION TO	DIAMETER (IN.)	LENGTH (L.F.)	TYPE	ELEVATIONS INLET	ELEVATIONS DISCHARGE	REMARKS
4	7	12	58	R.C.P. S.S. CLASS III	749.00	748.50	
5	6	12	44	R.C.P. S.S. CLASS III	748.55	748.25	
6	7	12	36	R.C.P. S.S. CLASS III	748.25	748.00	
8	7	12	5	R.C.P. S.S. CLASS III	748.50	748.20	
7	12	18	206	R.C.P. S.S. CLASS III	748.00	746.95	
9	12	12	54	R.C.P. S.S. CLASS III	747.90	747.30	
10	11	12	42	R.C.P. S.S. CLASS III	748.00	747.60	
11	12	12	44	R.C.P. S.S. CLASS III	747.60	747.20	
13	12	12	5	R.C.P. S.S. CLASS III	747.60	747.40	
12	16	18	321	R.C.P. S.S. CLASS III	746.95	745.50	
14	16	12	23	R.C.P. S.S. CLASS III	745.70	745.50	
15	16	12	5	R.C.P. S.S. CLASS III	745.70	745.50	
16	18	18	283	R.C.P. S.S. CLASS III	745.50	744.70	
25	26	12	5	R.C.P. S.S. CLASS III	747.00	746.75	
27	26	12	23	R.C.P. S.S. CLASS III	747.00	746.75	
26	23	12	276	R.C.P. S.S. CLASS III	746.75	745.42	
24	23	12	46	R.C.P. S.S. CLASS III	746.00	745.70	
22	23	12	5	R.C.P. S.S. CLASS III	745.70	745.60	
23	21	18	66	R.C.P. S.S. CLASS III	745.42	745.21	
20	21	12	5	R.C.P. S.S. CLASS III	745.50	745.40	
21	18	18	234	R.C.P. S.S. CLASS III	745.21	744.50	
52	51	27	157	R.C.P. S.S. CLASS III	740.10	739.30	*51 IS AN EXIST. M.H. TO TAP INTO (INCIDENTAL)
53	52	12	23	R.C.P. S.S. CLASS III	742.50	740.10	*53 IS A 12-INCH CONC. APRON ENDWALL
56	52	27	166	R.C.P. S.S. CLASS III	740.10	740.96	
58	56	12	23	R.C.P. S.S. CLASS III	741.90	741.40	
55	56	12	5	R.C.P. S.S. CLASS III	741.90	741.40	
57	56	27	98	R.C.P. S.S. CLASS III	741.46	740.96	
54	57	15	24	R.C.P. S.S. CLASS III	742.22	742.10	FUTURE STUB, BRICK END CLOSED AT *54
59A	57	24	19	R.C.P. S.S. CLASS III	741.62	741.46	
59	59A	12	8	R.C.P. S.S. CLASS III	742.70	742.20	
61	59A	24	181	R.C.P. S.S. CLASS III	742.90	741.62	
60	61	12	5	R.C.P. S.S. CLASS III	744.78	744.30	
62	61	12	23	R.C.P. S.S. CLASS III	744.78	744.30	
18	61	24	251	R.C.P. S.S. CLASS III	744.50	742.90	
17	18	12	44	R.C.P. S.S. CLASS III	746.50	745.50	
19	17	12	54	R.C.P. S.S. CLASS III	747.00	746.60	
28	29	12	37	R.C.P. S.S. CLASS III	745.40	745.10	
30	29	12	5	R.C.P. S.S. CLASS III	745.40	745.10	
29	32	12	396	R.C.P. S.S. CLASS III	745.00	742.90	
33	32	12	5	R.C.P. S.S. CLASS III	743.75	743.20	
31	32	12	23	R.C.P. S.S. CLASS III	743.75	743.20	
32	35	18	394	R.C.P. S.S. CLASS III	742.90	742.20	
36	TEE	12	5	R.C.P. S.S. CLASS III	742.75	742.60	TEE IS INCIDENTAL
34	35	12	46	R.C.P. S.S. CLASS III	742.70	742.40	
34A	34	12	3	R.C.P. S.S. CLASS III	742.90	742.80	
44	43	12	5	R.C.P. S.S. CLASS III	745.10	744.40	
45	43	12	23	R.C.P. S.S. CLASS III	745.10	744.40	
43	40	15	326	R.C.P. S.S. CLASS III	744.13	743.47	
41	40	12	5	R.C.P. S.S. CLASS III	744.10	743.70	
42	40	12	23	R.C.P. S.S. CLASS III	744.10	743.70	
40	35	15	418	R.C.P. S.S. CLASS III	743.47	742.20	
36A	TEE	12	5	R.C.P. S.S. CLASS III	742.85	742.30	TEE IS INCIDENTAL
35	301	21	182	R.C.P. S.S. CLASS III	742.20	740.00	
301	302	18	157	R.C.P. S.S. CLASS III	740.00	731.59	
302	303	24	144	R.C.P. S.S. CLASS III	730.85	729.52	
303	304	24	198	R.C.P. S.S. CLASS III	729.52	727.71	
304	305	24	64	R.C.P. S.S. CLASS III	727.71	727.13	
305	306	30	152	R.C.P. S.S. CLASS III	727.00	725.07	
306	307	30	310	R.C.P. S.S. CLASS III	725.07	721.20	*307 IS A 30-INCH CONCRETE APRON ENDWALL

STORM SEWER SUMMARY

LOCATION FROM	LOCATION TO	DIAMETER (IN.)	LENGTH (L.F.)	TYPE	ELEVATIONS INLET	ELEVATIONS DISCHARGE	REMARKS
63A	63	12	10	R.C.P. S.S. CLASS III	745.83	745.80	FUTURE STUB, BRICK END CLOSED AT *63A
63	64	12	5	R.C.P. S.S. CLASS III	745.80	745.50	
65	64	12	23	R.C.P. S.S. CLASS III	745.80	745.50	
64	68	18	314	R.C.P. S.S. CLASS III	745.50	743.31	
66	68	12	16	R.C.P. S.S. CLASS III	744.31	744.00	
67	68	12	25	R.C.P. S.S. CLASS III	744.31	744.00	
68	69	18	33	R.C.P. S.S. CLASS III	743.31	742.95	
70A	69	15	40	R.C.P. S.S. CLASS III	743.10	743.00	FUTURE STUB, BRICK END CLOSED AT *70A
69	69A	24	21	R.C.P. S.S. CLASS III	742.95	742.85	
70	71	12	20	R.C.P. S.S. CLASS III	744.29	743.87	
71	69A	12	5	R.C.P. S.S. CLASS III	743.87	743.30	
72	69A	12	23	R.C.P. S.S. CLASS III	743.87	743.30	
69A	74	24	186	R.C.P. S.S. CLASS III	742.85	742.07	
75	73	12	32	R.C.P. S.S. CLASS III	744.00	743.60	
73	74	12	42	R.C.P. S.S. CLASS III	743.60	743.00	
74	77	24	326	R.C.P. S.S. CLASS III	742.07	737.12	
76	77	12	5	R.C.P. S.S. CLASS III	738.00	737.70	
78	77	12	23	R.C.P. S.S. CLASS III	738.00	737.70	
77	79	24	296	R.C.P. S.S. CLASS III	737.12	725.46	
80	79	12	23	R.C.P. S.S. CLASS III	726.70	726.20	
79A	79	12	17	R.C.P. S.S. CLASS III	726.25	726.00	
79	84	24	121	R.C.P. S.S. CLASS IV	725.46	724.46	
83	82	12	36	R.C.P. S.S. CLASS III	724.90	724.70	
82	84	12	31	R.C.P. S.S. CLASS III	724.70	724.50	
84	89	24x38	121	R.C.H.E.P. S.S. CLASS IV	724.46	723.79	
89	87	24x38	45	R.C.H.E.P. S.S. CLASS IV	723.79	723.54	
85	87	12	55	R.C.P. S.S. CLASS III	723.97	723.77	
88	86	12	8	R.C.P. S.S. CLASS III	726.10	723.90	*88 IS A 12-INCH CONC. APRON ENDWALL
86	87	12	31	R.C.P. S.S. CLASS IV	723.90	723.70	
87	90	24x38	18	R.C.H.E.P. S.S. CLASS IV	723.54	723.50	*90 IS A 24x38-INCH CONC. APRON ENDWALL

STORM SEWER TOTALS

12-INCH	R.C.P. S.S. CLASS III	1,841 L.F.
12-INCH	R.C.P. S.S. CLASS IV	31 L.F.
15-INCH	R.C.P. S.S. CLASS III	808 L.F.
18-INCH	R.C.P. S.S. CLASS III	2,008 L.F.
21-INCH	R.C.P. S.S. CLASS III	182 L.F.
24-INCH	R.C.P. S.S. CLASS III	1,686 L.F.
27-INCH	R.C.P. S.S. CLASS III	421 L.F.
30-INCH	R.C.P. S.S. CLASS III	462 L.F.
24x38-INCH	R.C.H.E.P. S.S. CLASS IV	184 L.F.
24-INCH	R.C.P. S.S. CLASS IV	121 L.F.

CONCRETE ENDWALLS
12-INCH *2
30-INCH *1
24x38-INCH *1

PRODUCING BREAKER RUN STONE

LOCATION	QUANTITY TONS.
C.T.H. "S"	3,570
C.T.H. "E"	5,430
TOTAL	9,000

MEDIUN RANDOM RIPRAP AND GEOTEXTILE FABRIC

LOCATION	MEDIUM RANDOM RIPRAP C.Y.	GEOTEXTILE FABRIC TYPE "R" S.Y.
S.S. OUTFALL *307	10	35
S.S. OUTFALL *90	10	35
TOTALS	20	70

PRODUCING ASPHALTIC CONCRETE PAVEMENT, TYPE "MV"

LOCATION	PRODUCING ASPHALTIC CONCRETE PAVEMENT, TYPE "MV" TONS	ASPHALTIC MATERIAL FOR PLANT MIXES FIGURED @ 5.8% TONS
C.T.H."S"	2,580	150
C.T.H."E"	3,915	227
P.E.'s & PARKING LOTS	245	14
TOTALS	6,740	391

PRODUCING CRUSHED AGGREGATE BASE COURSE

LOCATION	QUANTITY TONS
C.T.H."S"	7,000
C.T.H."E"	10,550
TOTAL	17,550

CONCRETE SURFACE DRAIN

STATION	LOCATION	QUANTITY C.Y.
63+68	C.T.H. "S" LT.	0.7

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	L.H.E. ACRES		ACRES REQUIRED			TOTAL REMAINING ACRES	OPERATIONS PROJECT NUMBER
			TEMP.	PERM.	NEW R/W REQUIRED	EXISTING R/W	TOTAL R/W REQUIRED		
1	MARGARET GARVEY	FEE TITLE			0.364	-	0.364		
2	ANNA RIESE	FEE TITLE			0.004	-	0.004		
3	JOSEPH H. & CLARA GEENEN	FEE TITLE			0.002	-	0.002		
4	BERNARD W. & ELIZABETH MAE SCHUH	FEE TITLE			0.002	-	0.002		

REVISION DATE	R/W PROJECT NUMBER	SHEET NUMBER
	6529-1-00	
	FEDERAL PROJECT NUMBER	

PLAT OF RIGHT OF WAY REQUIRED FOR

FREEDOM VILLAGE STREETS

SCALE 0 100 200 Ft. DATE November 1, 1978

CONSTRUCTION PROJECT NUMBER

6529-1-71 4

6529-03-71 4.0

R - 18 - E

LAYOUT

SCALE 0 1/2 1 2 MILES

TOTAL NET LENGTH OF CENTERLINE = 0.4718 MI.

TOWN OF FREEDOM

END RELOCATION ORDER
PROJECT 6529-1-00
STA. 69+57.62
AT THE INTERSECTION OF THE C.T.H. 'E' ℄ AND THE ℄ OF PETERSON ROAD.

SECTION CORNER

SECTION LINE

SECTION LINE

MARGARET GARVEY (1)

JOSEPH H. & CLARA GEENEN (3)

ANNA RIESE (2)

BERNARD W. & ELIZABETH MAE SCHUH (4)

LOT 1 BLOCK C

N 88°28' W
N 23°44' W
15.00'
12.80'
S 41° 00' W
15.00'

SW - SW 11-22-18

NW - NW 14-22-18

SE - SW 11-22-18

BANK DR.

ASSUMED 1/4 LINE

P.I. STA. 65+81.86
AZ.=178° 08' 22"

P.I. STA. 44+58.48
AZ. 170° 03' 40"

S.T.H. '55'

C.T.H. 'S'

C.T.H. 'E'

BLOCK C

BLOCK B

BLOCK A

BLOCK D

ALLEY

CONRAD CT.

LIBERTY LA.

COFFEY CT.

PETERSON RD.

STA. 44+66.38 C.T.H. 'E' = STA. 10+00.00 S.T.H. '55'

STA. 48+96.30 C.T.H. 'E' = STA. 10+00.00 CONRAD CT.

STA. 51+09.10 C.T.H. 'E' = STA. 10+00.00 LIBERTY LA.

P.I. STA. 57+08.24 C.T.H. 'E' = STA. 44+37.24 C.T.H. 'S' AZ. = 179° 47' 55"

STA. 59+82.90 C.T.H. 'E' = STA. 10+00.00 BANK DR.

STA. 65+69.34 C.T.H. 'E' = STA. 10+00.00 COFFEY CT.

STA. 69+57.62 C.T.H. 'E' = STA. 10+00.00 PETERSON RD.

LOT 28 BLOCK D

N 41° 00' E
15.00'
N 49° 00' W
22.60'
27.13'
S 15° 25' E

BEGIN RELOCATION ORDER
PROJECT 6529-1-00
STA. 44+66.38
960 FEET SOUTH OF THE NORTHWEST CORNER OF SECTION 14, T 22 N, R 18 E.

LOT 1 BLOCK A

15.00'
N 40° 47' E
15.00'
12.96'
N 23° 50' 30" W
S 88° 28' E

NOTE: ALL BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE REPLAT OF BLOCKS A, B, C & D. OF THE ASSESSOR'S MAP OF FREEDOM.

FREEDOM

APPROVED FOR OUTAGAMIE COUNTY

11-13-78 DATE

COUNTY HIGHWAY COMMISSIONER

PLANS PREPARED BY

OWEN AYRES & ASSOCIATES
CONSULTING ENGINEERS

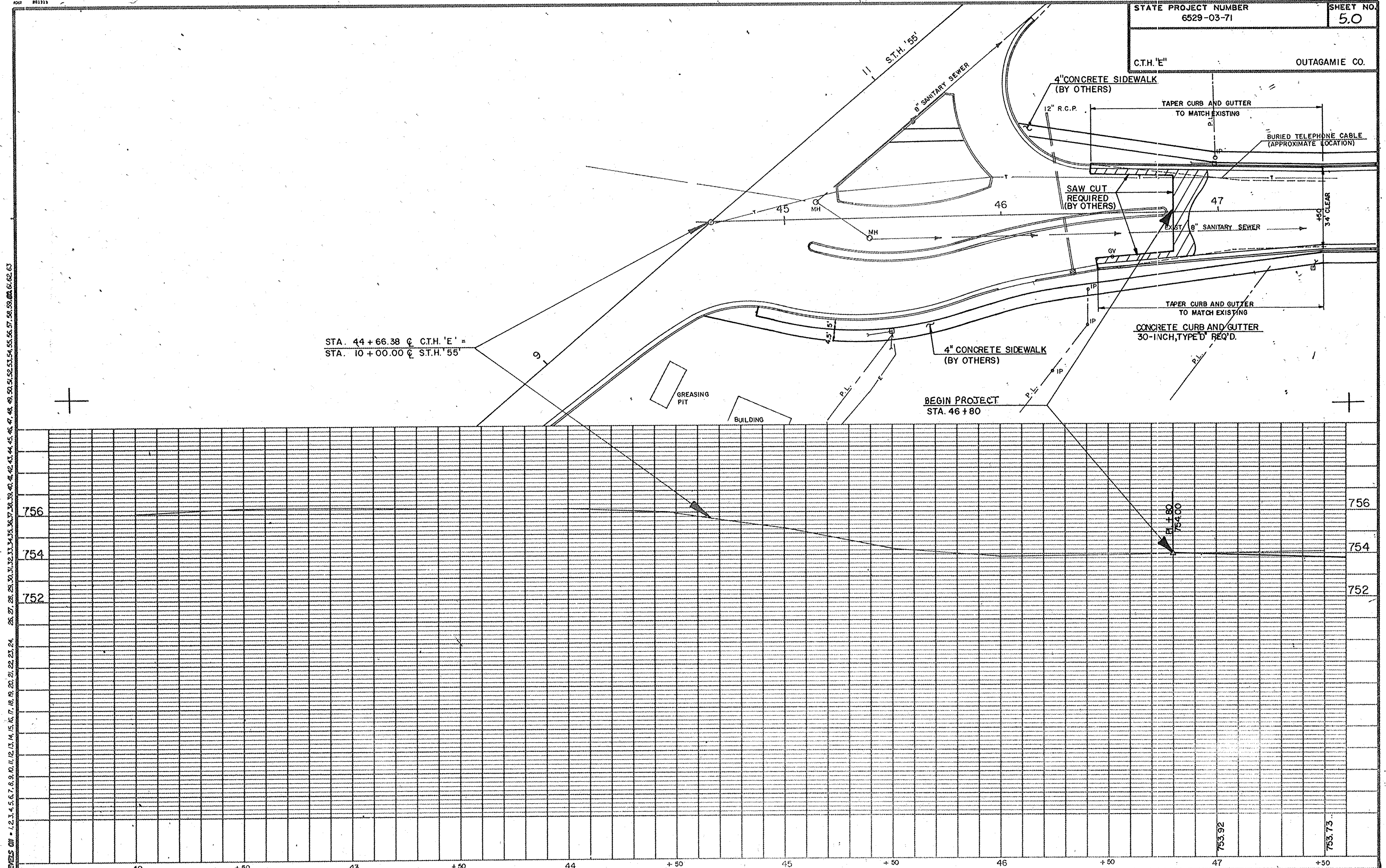
GREEN BAY, WISCONSIN

Catalog No. 2130-0000

STATE PROJECT NUMBER 6529-03-71

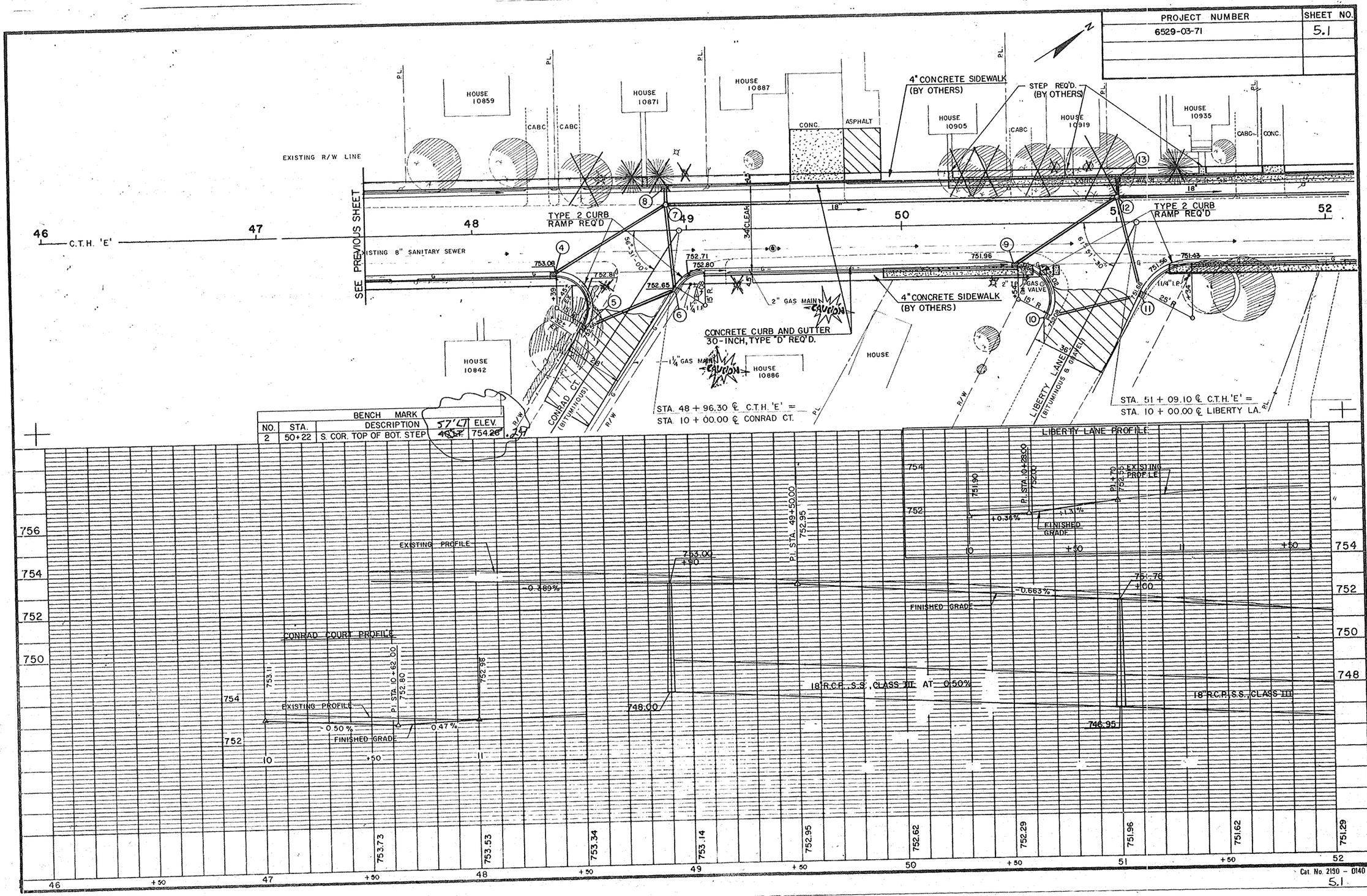
SHEET NO. 5.0

C.T.H. 'E' OUTAGAMIE CO.


S.T.H. '55'
8" SANITARY SEWER
4" CONCRETE SIDEWALK
(BY OTHERS)
12" R.C.P.
TAPER CURB AND GUTTER
TO MATCH EXISTING
BURIED TELEPHONE CABLE
(APPROXIMATE LOCATION)
SAW CUT
REQUIRED
(BY OTHERS)
45
46
47
MH
EXIST. 8" SANITARY SEWER
+50
34' CLEAR
GV
IP
TAPER CURB AND GUTTER
TO MATCH EXISTING
CONCRETE CURB AND GUTTER
30-INCH, TYPE 'D' REQ'D.
STA. 44+66.38 ℄ C.T.H. 'E' =
STA. 10+00.00 ℄ S.T.H. '55'
4" CONCRETE SIDEWALK
(BY OTHERS)
GREASING
PIT
BUILDING
BEGIN PROJECT
STA. 46+80
P.L.
756
754
752
46+80
754.00
753.92
753.73
42
+50
43
+50
44
+50
45
+50
46
+50
47
+50

FILE NAME: HDGN:

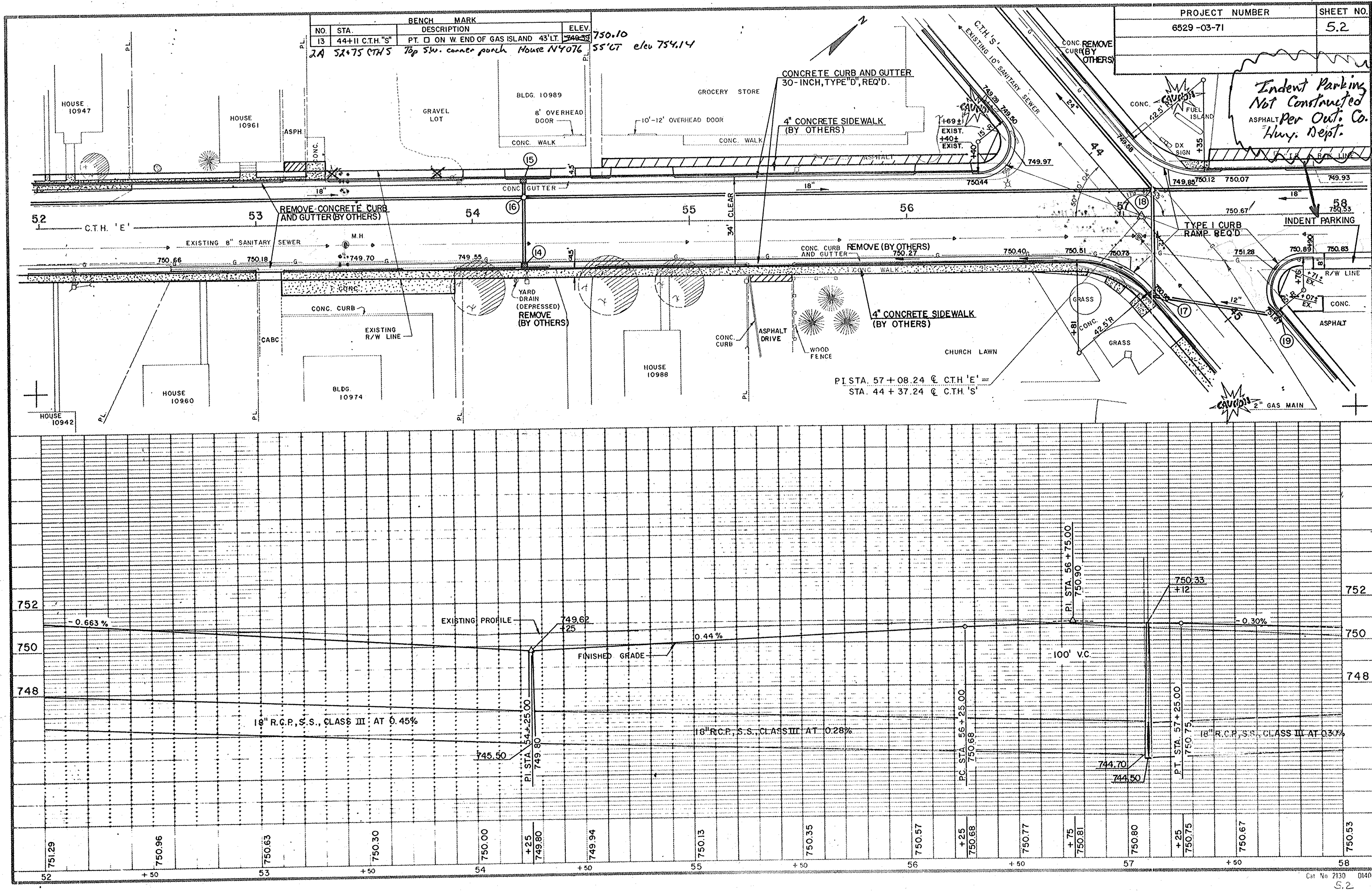
PROJECT NUMBER	SHEET NO.
6529-03-71	5.1



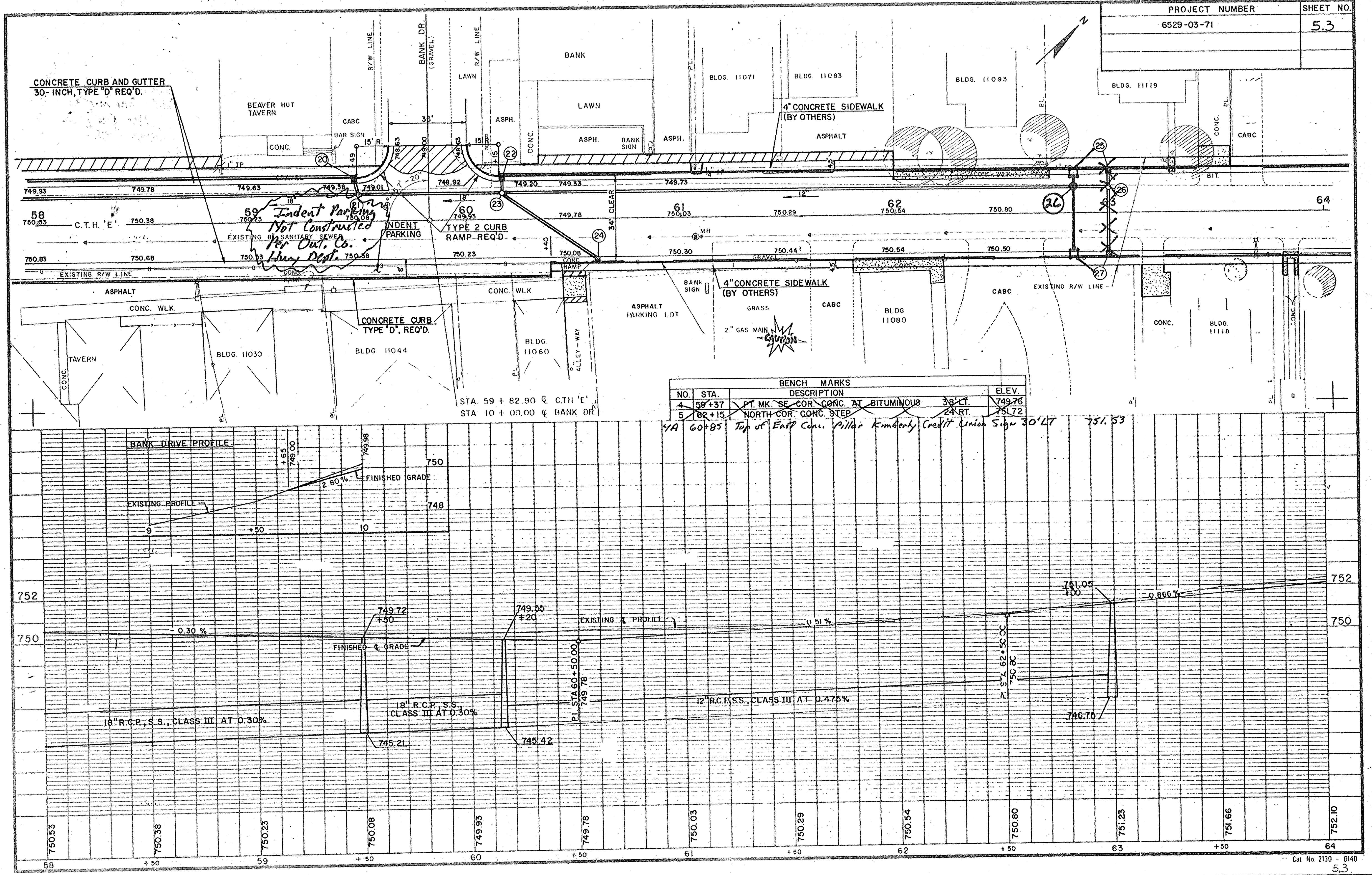
BENCH MARK				
NO.	STA.	DESCRIPTION	57'℄	ELEV.
2	50+22	S. COR. TOP OF BOT. STEP	48'LT.	754.26

LIBERTY LANE PROFILE

EXISTING PROFILE
FINISHED GRADE
P.I. STA. 10+28.00
P.I. STA. 49+50.00
+0.36%
+1.3%
-0.389%
-0.663%
CONRAD COURT PROFILE
P.I. STA. 10+62.00
EXISTING PROFILE
FINISHED GRADE
-0.50%
0.47%
18" R.C.P., S.S., CLASS III AT 0.50%
18" R.C.P., S.S., CLASS III


PROJECT NUMBER
6529-03-71
SHEET NO.
5.2
BENCH MARK
NO. STA. DESCRIPTION ELEV.
13 44+11 C.T.H. "S" PT. □ ON W. END OF GAS ISLAND 43' LT. 749.59 750.10
2A 52+75 CTH S Top Stu. corner porch House N4076 55' CT elev 754.14
Indent Parking Not Constructed Per Out. Co. Hwy. Dept.
HOUSE 10947
HOUSE 10961
GRAVEL LOT
BLDG. 10989
8' OVERHEAD DOOR
GROCERY STORE
10'-12' OVERHEAD DOOR
CONC. WALK
CONCRETE CURB AND GUTTER 30-INCH, TYPE "D", REQ'D.
4" CONCRETE SIDEWALK (BY OTHERS)
C.T.H. 'S'
EXISTING 10" SANITARY SEWER
REMOVE (BY OTHERS)
FUEL ISLAND
DX SIGN
REMOVE CONCRETE CURB AND GUTTER (BY OTHERS)
C.T.H. 'E'
EXISTING 8" SANITARY SEWER
M.H.
34' CLEAR
TYPE I CURB RAMP REQ'D.
INDENT PARKING
R/W LINE
CONC. CURB AND GUTTER REMOVE (BY OTHERS)
YARD DRAIN (DEPRESSED) REMOVE (BY OTHERS)
EXISTING R/W LINE
CONC. CURB
CABC
4" CONCRETE SIDEWALK (BY OTHERS)
ASPHALT DRIVE
WOOD FENCE
CHURCH LAWN
GRASS
HOUSE 10988
BLDG. 10974
HOUSE 10960
HOUSE 10942
P.I. STA. 57 + 08.24 ℄ C.T.H 'E' = STA. 44 + 37.24 ℄ C.T.H. 'S'
CAUTION 2" GAS MAIN
52 53 54 55 56 57 58
EXISTING PROFILE
FINISHED GRADE
-0.663 %
0.44 %
-0.30%
749.62 +25
100' V.C.
P.I. STA. 56 + 75.00 750.90
750.33 +12
18" R.C.P., S.S., CLASS III AT 0.45%
18" R.C.P., S.S., CLASS III AT 0.28%
18" R.C.P., S.S., CLASS III AT 0.30%
745.50
P.I. STA. 54 + 25.00 749.80
P.C. STA. 56 + 25.00 750.68
P.T. STA. 57 + 25.00 750.75
744.70
744.50
751.29 750.96 750.63 750.30 750.00 749.80 749.94 750.13 750.35 750.57 750.68 750.77 750.81 750.80 750.75 750.67 750.53

PROJECT NUMBER	SHEET NO.
6529-03-71	5.3

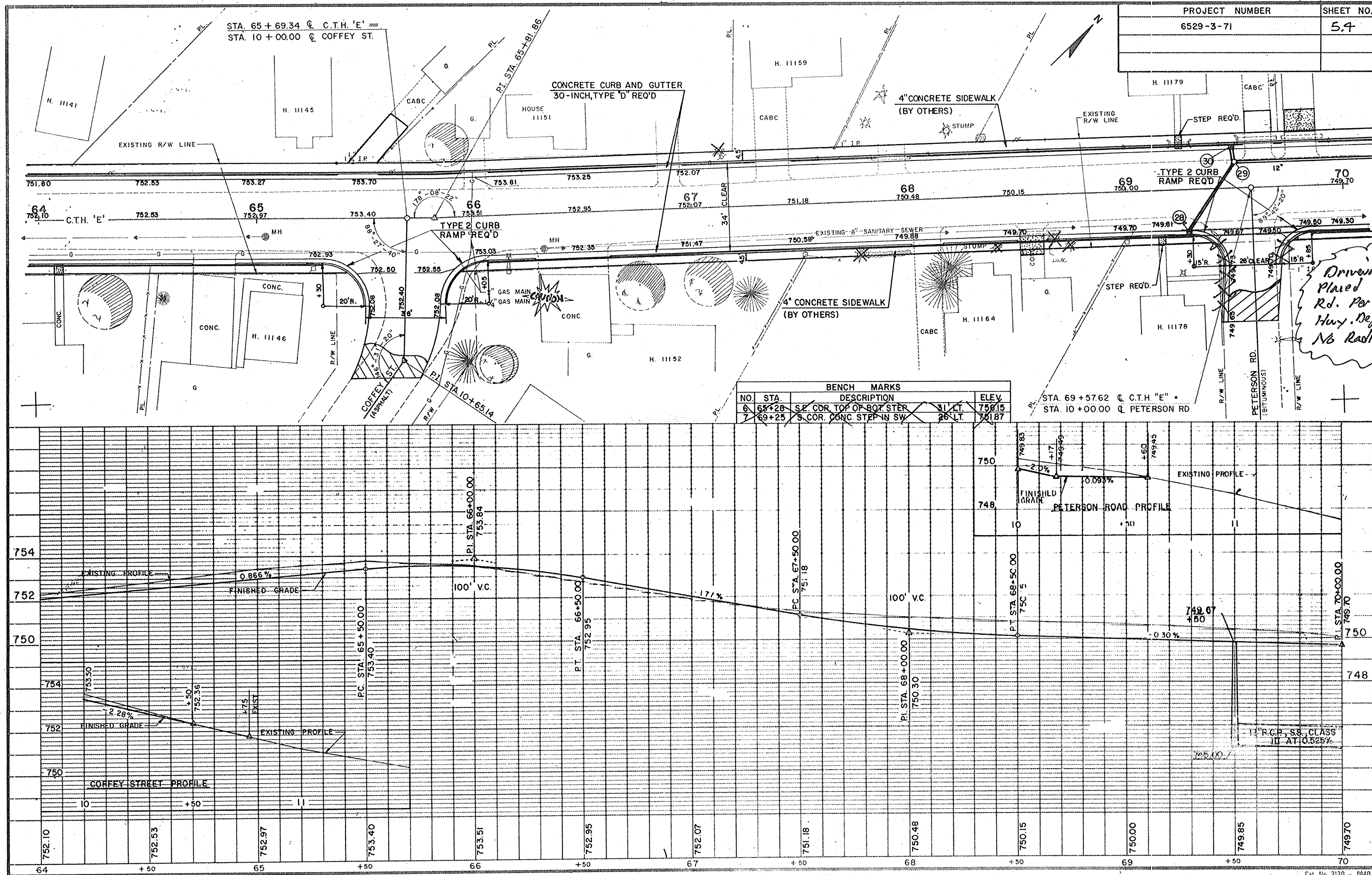


CONCRETE CURB AND GUTTER 30- INCH, TYPE "D" REQ'D.
BEAVER HUT TAVERN
CABC
BAR SIGN
CONC.
R/W LINE
BANK DR. (GRAVEL)
LAWN
BANK
ASPH.
BANK SIGN
BLDG. 11071
BLDG. 11083
BLDG. 11093
BLDG. 11119
4" CONCRETE SIDEWALK (BY OTHERS)
ASPHALT
36'
15' R.
Indent Parking Not Constructed Per Out. Co. Hwy. Dept.
INDENT PARKING
TYPE 2 CURB RAMP REQ'D
34' CLEAR
C.T.H. 'E'
EXISTING 8" SANITARY SEWER
EXISTING R/W LINE
CONC. WLK.
CONCRETE CURB TYPE "D", REQ'D.
TAVERN
BLDG. 11030
BLDG 11044
BLDG 11060
ALLEY-WAY
ASPHALT PARKING LOT
GRASS
2" GAS MAIN
CAUTION
BLDG 11080
BLDG. 11118
STA. 59 + 82.90 ℄ CTH 'E'
STA 10 + 00.00 ℄ BANK DR.
BANK DRIVE PROFILE
FINISHED GRADE
EXISTING PROFILE
2.80%
EXISTING ℄ PROFILE
FINISHED ℄ GRADE
- 0.30 %
0.51 %
0.066 %
18" R.C.P., S.S., CLASS III AT 0.30%
18" R.C.P. S.S. CLASS III AT 0.30%
12" R.C.P. S.S., CLASS III AT 0.475%
P.I. STA 60+50.00 749.78
745.21
745.42
746.70
751.05

NO.	STA.	DESCRIPTION		ELEV.
4	59+37	PT. MK. SE COR. CONC. AT BITUMINOUS	38' LT.	749.76
5	62+15	NORTH COR. CONC. STEP	24' RT.	751.72
4A	60+85	Top of East Conc. Pillar Kimberly Credit Union Sign	30' LT	751.53

Cat No 2130 - 0140

PROJECT NUMBER	SHEET NO.
6529-3-71	5.4

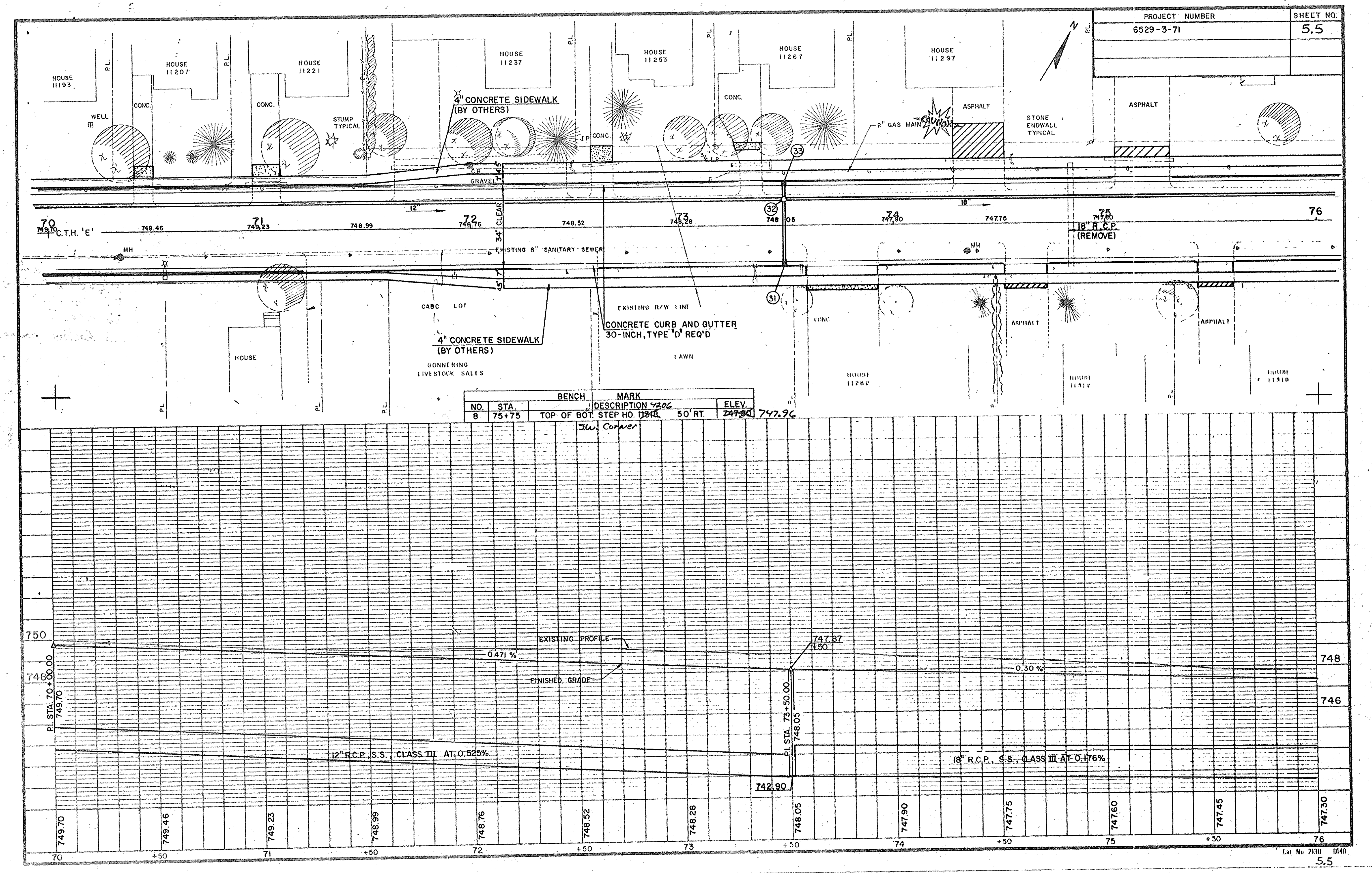

STA. 65 + 69.34 ℄ C.T.H. 'E' = STA. 10 + 00.00 ℄ COFFEY ST.
P.I. STA. 65+81.86
CONCRETE CURB AND GUTTER 30-INCH, TYPE "D" REQ'D
4" CONCRETE SIDEWALK (BY OTHERS)
EXISTING R/W LINE
STEP REQ'D.
TYPE 2 CURB RAMP REQ'D
C.T.H. 'E'
EXISTING 8" SANITARY SEWER
34' CLEAR
GAS MAIN
CAUTION
COFFEY ST. (ASPHALT)
P.I. STA. 10+65.14
STA. 69 + 57.62 ℄ C.T.H. "E" = STA. 10 + 00.00 ℄ PETERSON RD
PETERSON RD. (BITUMINOUS)
R/W LINE
H. 11141
H. 11145
HOUSE 11151
H. 11159
H. 11179
H. 11146
H. 11152
H. 11164
H. 11178
STUMP
CABC
CONC.
MH
PETERSON ROAD PROFILE
EXISTING PROFILE
FINISHED GRADE
P.I. STA. 66+00.00 753.84
100' V.C.
P.C. STA. 65 + 50.00 753.40
P.T. STA. 66+50.00 752.95
PC STA. 67+50.00 751.18
P.I. STA. 68+00.00 750.30
P.T. STA. 68+50.00 750.15
P.I. STA. 70+00.00 749.70
0.866 %
1.71 %
-0.30 %
749.67 +50
12" R.C.P., S.S. CLASS III AT 0.525%
COFFEY STREET PROFILE
-2.28%
-2.0%
-0.093%
752.10
752.53
752.97
753.40
753.51
752.95
752.07
751.18
750.48
750.15
750.00
749.85
749.70
64
+50
65
66
67
68
69
70

BENCH MARKS				
NO.	STA.	DESCRIPTION		ELEV.
6	65+28	S.E. COR. TOP OF BOT. STEP	31' LT.	756.15
7	69+25	S. COR. CONC. STEP IN SW.	26' LT.	751.87

Driveway Curb Placed at Peterson Rd. Per Out Co. Hwy. Dept. No Radius poured

Cat. No. 2130 - D140

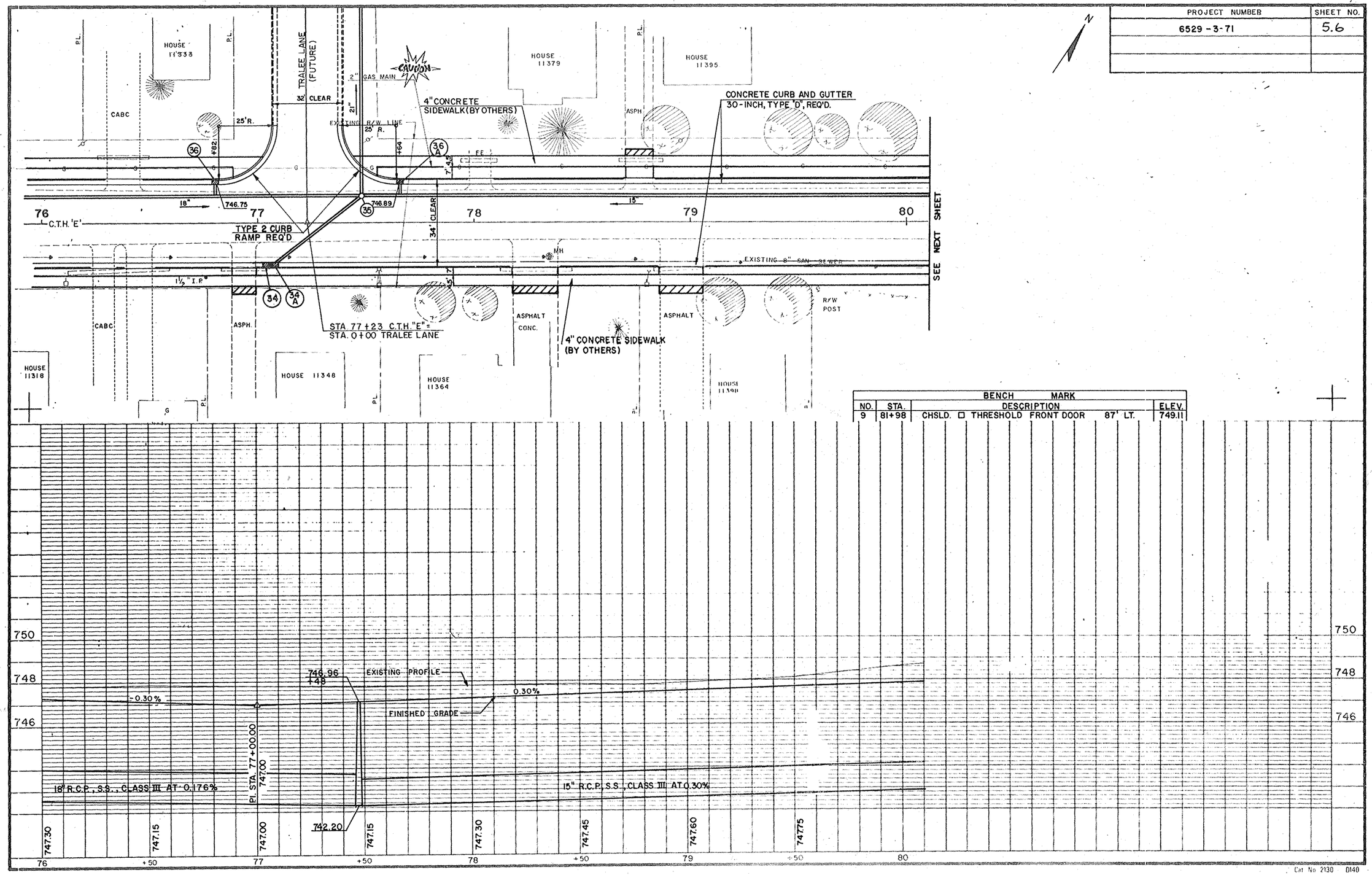
PROJECT NUMBER	SHEET NO.
6529-3-71	5.5



BENCH MARK				
NO.	STA.	DESCRIPTION 4206		ELEV.
8	75+75	TOP OF BOT. STEP HO. ~~11318~~ SW. Corner	50' RT.	~~747.80~~ 747.96

5.5

PROJECT NUMBER	SHEET NO.
6529 - 3 - 71	5.6



BENCH MARK			
NO.	STA.	DESCRIPTION	ELEV.
9	81+98	CHSLD. □ THRESHOLD FRONT DOOR 87' LT.	749.11

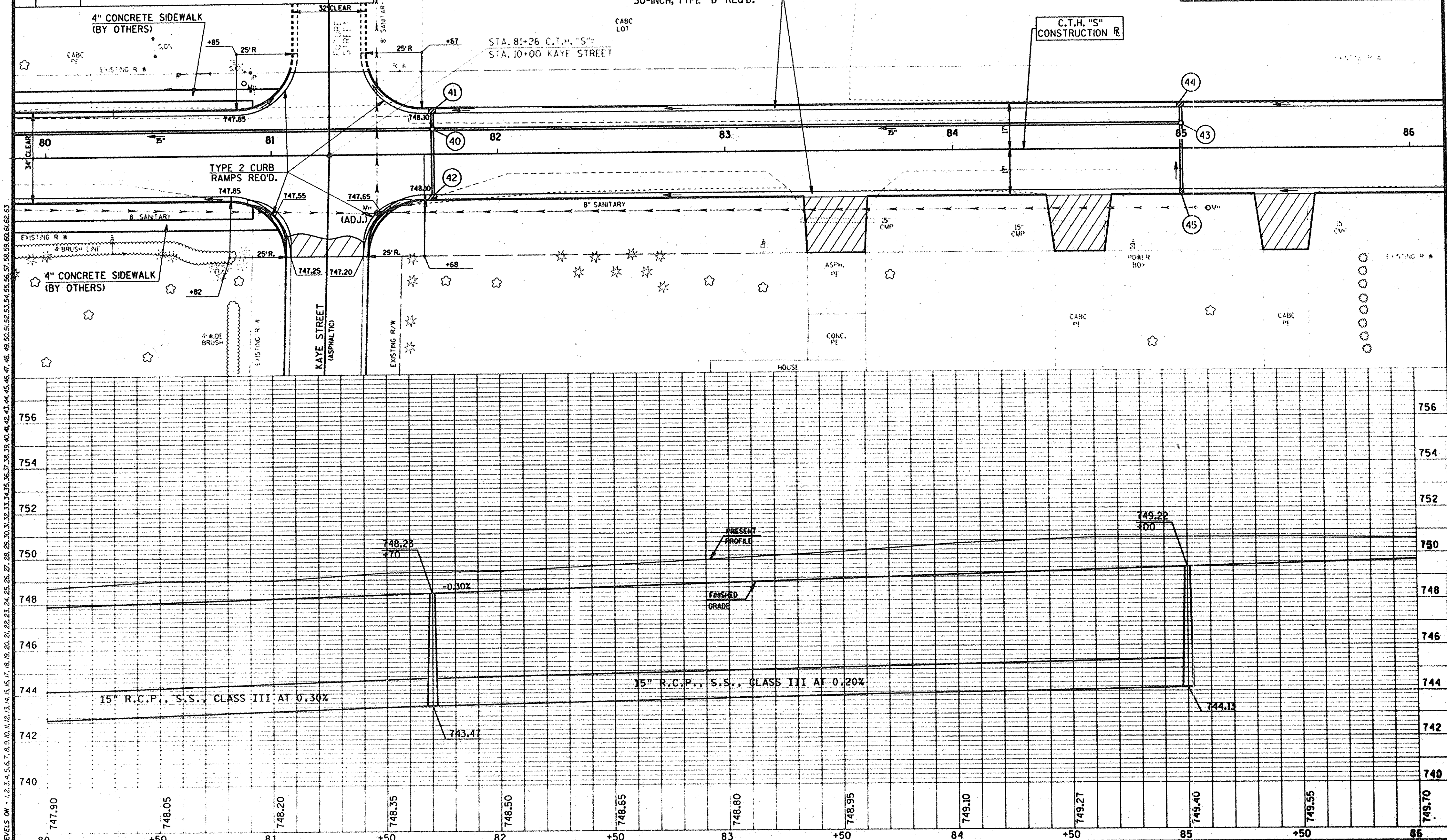
DESIGN FILE IS f:\dgn\5024\pp2.dgn
DGN LEVELS ON = 1-63

STATE PROJECT NUMBER	SHEET NO
6529-03-71	5.7

PLAN AND PROFILE
FOR
C.T.H. "E" & "S" OUTAGAMIE COUNTY

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
9	81+98	CHIS. BOX THRESHOLD SERVICE DOOR- 87' LT.	749.11



BUILDING
BM#9
CONCRETE CURB AND GUTTER
30-INCH, TYPE "D" REQ'D.
C.T.H. "S"
CONSTRUCTION ℄
4" CONCRETE SIDEWALK
(BY OTHERS)
32' CLEAR
STA. 81+26 C.T.H. "S"=
STA. 10+00 KAYE STREET
CABC
LOT
25' R
+85
+67
747.85
748.10
748.30
TYPE 2 CURB
RAMPS REQ'D.
747.55
747.65
8" SANITARY
(ADJ.)
34' CLEAR
EXISTING R/W
4" BRUSH LINE
747.25
747.20
4" CONCRETE SIDEWALK
(BY OTHERS)
+82
+68
KAYE STREET
(ASPHALTIC)
EXISTING R/W
4" WIDE BRUSH
15" CMP
ASPH. PE
CONC. PE
HOUSE
POWER BOX
CABC PE
80
81
82
83
84
85
86
748.23
370
749.22
300
PRESENT PROFILE
FINISHED GRADE
-0.30%
15" R.C.P., S.S., CLASS III AT 0.30%
15" R.C.P., S.S., CLASS III AT 0.20%
743.47
744.13
756
754
752
750
748
746
744
742
740
747.90
748.05
748.20
748.35
748.50
748.65
748.80
748.95
749.10
749.27
749.40
749.55
749.70
+50

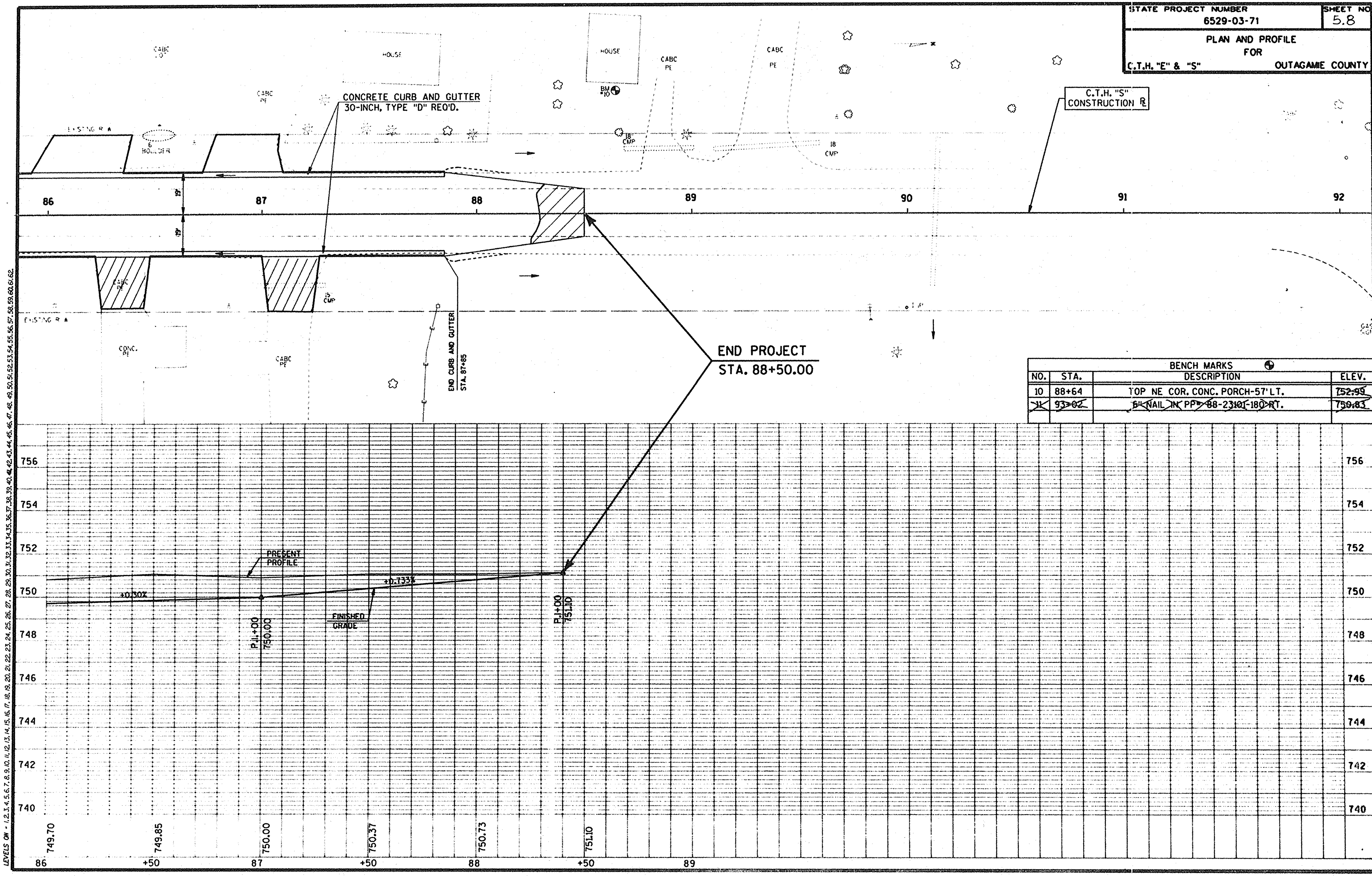
FILE NAME: HDGN:PP2.DGN

DATE OF PLOT = 12/27/94
DESIGN FILE IS f:‡dgn‡5024‡pp3.dgn
DGN LEVELS ON = 1-62

STATE PROJECT NUMBER 6529-03-71

SHEET NO. 5.8

PLAN AND PROFILE FOR C.T.H. "E" & "S" OUTAGAMIE COUNTY



HOUSE
CABC PE
CONCRETE CURB AND GUTTER 30-INCH, TYPE "D" REQ'D.
EXISTING R/W
BOULDER
BM #10
18 CMP
C.T.H. "S" CONSTRUCTION ℞
86
87
88
89
90
91
92
19'
CONC. PE
END CURB AND GUTTER STA. 87+85
END PROJECT STA. 88+50.00
PRESENT PROFILE
+0.30%
+0.733%
FINISHED GRADE
P.I. 87+00 750.00
P.I. 88+50 751.10
756
754
752
750
748
746
744
742
740
749.70
749.85
750.00
750.37
750.73
751.10
+50
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
10	88+64	TOP NE COR. CONC. PORCH-57' LT.	~~752.99~~ 752.95
~~11~~	~~93+02~~	~~6" NAIL IN PP# 88-23101-180 RT.~~	~~750.83~~

FILE NAME: HDGN:PP3.DGN

WISDOT/CADDS SHEET 40

STATE PROJECT NUMBER 6529-03-71 | SHEET NO 5.9

PLAN AND PROFILE FOR C.T.H. "E" & "S" OUTAGAMIE COUNTY

STA. 0+00 TRALEE LN.= STA. 77+23 C.T.H. "E"

TRALEE LN.

C.T.H. "E"

CONCRETE CURB AND GUTTER 30-INCH, TYPE "D" REQ'D.

FUTURE 12"S.S. PROVIDE CUTOUT IN MH F.L. 728.50

FUTURE 12" S.S. PROVIDE CUTOUT IN MH F.L. 730.50

FUTURE 12" S.S. PROVIDE CUTOUT IN MH F.L. 732.66

STA. 7+45 TRALEE LN.= STA. 8+32 KILLARNY LN.

KILLARNY LANE

ABANDONED DETENTION POND

MEDIUM RANDOM RIPRAP REQ'D

WOODS

DUCK CREEK RIVER

NOTE: ALL MANHOLE CUT OUTS FOR FUTURE PIPES SHALL BE BRICKED CLOSED IN FIELD.

24" R.C.P. S.S. CLASS III @ 1.21%

18" R.C.P. S.S. CLASS III @5.22%

24" R.C.P. S.S. CLASS III @0.9%

24" R.C.P. S.S. CLASS III @0.90%

24" R.C.P. S.S. CLASS III @ 0.9%

30" R.C.P. S.S. CLASS III @1.24%

30" R.C.P. S.S. CLASS III @1.24%

746.86 +09

745.00 +91

742.20

740.00

736.00 +52

735.80 +00

731.59

730.85

729.52

733.50 +02

732.96

727.71

727.13

727.00

730.13

725.07

PRESENT PROFILE

FILL

721.20

750 745 740 735 730 725 720 715 710

0 +50 1 +50 2 +50 3 +50 4 +50 5 +50 6 +50 7 +50 8 +50 9 +50 10 +50 11 +50 12 +50 13 +50 14 +50 15

DATE OF PLOT = 12/21/94
DESIGN FILE IS = r:\dgn\5024spp4.dgn
DGN LEVELS ON = 1-62

PLOT NAME: PP4.PRF
SCALES: 1"=50'

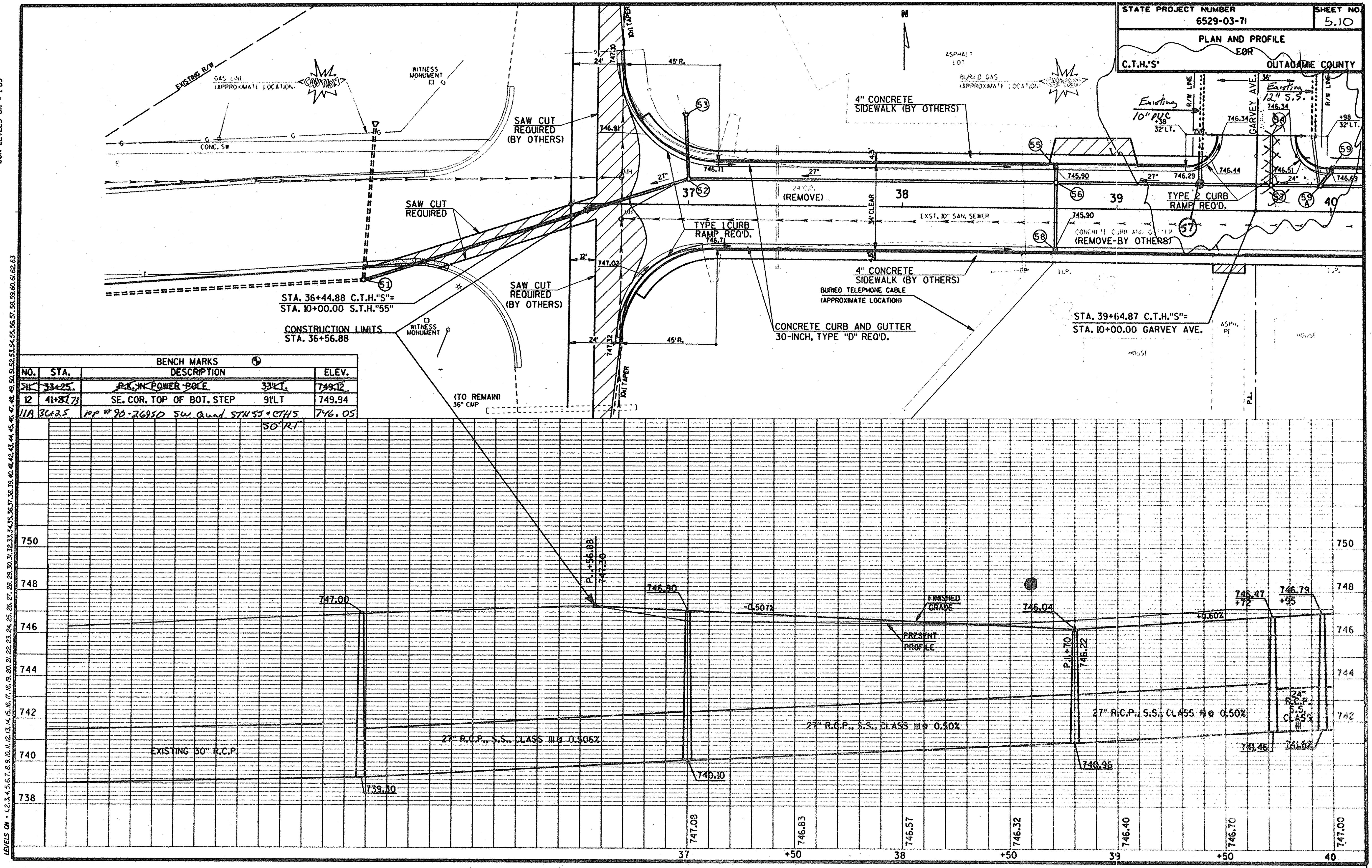
FILE NAME: PP4.DGN

PROJECT NO. 5024.00

STATE PROJECT NUMBER	SHEET NO.
6529-03-71	5.10

PLAN AND PROFILE FOR

C.T.H."S" OUTAGAMIE COUNTY



PEN TABLE = ALLREF1.TBL
DATE OF PLOT = 12/22/94
DESIGN FILE IS = f:\dgn\5024\pp.dgn
DGN LEVELS ON = 1-63
EXISTING R/W
GAS LINE (APPROXIMATE LOCATION)
CAUTION
WITNESS MONUMENT
CONC. SW
SAW CUT REQUIRED (BY OTHERS)
SAW CUT REQUIRED
TYPE 1 CURB RAMP REQ'D.
4" CONCRETE SIDEWALK (BY OTHERS)
24' C.P. (REMOVE)
EXST. 10" SAN. SEWER
BURIED GAS (APPROXIMATE LOCATION)
CONCRETE CURB AND GUTTER (REMOVE-BY OTHERS)
TYPE 2 CURB RAMP REQ'D.
BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)
CONCRETE CURB AND GUTTER 30-INCH, TYPE "D" REQ'D.
STA. 36+44.88 C.T.H."S"= STA. 10+00.00 S.T.H."55"
CONSTRUCTION LIMITS STA. 36+56.88
STA. 39+64.87 C.T.H."S"= STA. 10+00.00 GARVEY AVE.
(TO REMAIN) 36" CMP
Existing 10" PVC
Existing 12" S.S.
GARVEY AVE.
R/W LINE
10:1 TAPER
45' R.
HOUSE
FINISHED GRADE
PRESENT PROFILE
P.I. +56.88 747.30
P.I. +70 746.22
-0.507%
+0.60%
EXISTING 30" R.C.P.
27" R.C.P., S.S., CLASS III @ 0.506%
27" R.C.P., S.S., CLASS III @ 0.50%
24" R.C.P. S.S. CLASS III
747.00
739.30
746.30
740.10
746.04
740.96
746.47 +72
746.79 +95
741.46
741.62
747.08
746.83
746.57
746.32
746.40
746.70
747.00
37
+50
38
39
40

BENCH MARKS			
NO.	STA.	DESCRIPTION	ELEV.
~~11~~	~~33+25~~	~~P.K. IN POWER POLE 33' LT.~~	~~749.12~~
12	41+~~81~~73	SE. COR. TOP OF BOT. STEP 91' LT	749.94
11A	36+25	PP #90-26950 SW Quad STH 55 + CTHS 50' RT	746.05

FILE NAME: HDGN:PP.DGN

WISDOT/CADDS SHEET 48

PROJECT NUMBER	SHEET NO.
6529-3-71	5.11

Existing 10" PVC S.S.

Existing 12" Storm Sewer

36' CLEAR

WOOD FENCE

GARVEY AVE. (ASPHALT)

2" GAS MAIN

CAUTION

CONC.

CONCRETE CURB AND GUTTER 30-INCH, TYPE "D", REQ'D.

4" CONCRETE SIDEWALK (BY OTHERS)

ASPHALT

SERVICE STATION

FUEL PUMP ISLAND

CONC. SLAB

GRAVEL DRIVE

CONC. GUTTER

'DX' SIGN

TYPE 2 CURB RAMP REQ'D

C.T.H. 'S' (BITUMINOUS)

CONC. CURB & GUTTER (REMOVE-BY OTHERS)

EXIST 10" SAN. SEWER

4" CONCRETE SIDEWALK (BY OTHERS)

EXISTING R/W LINE

SHED

BOTTLE GAS STORAGE DECK (TO BE REMOVED BY OTHERS)

SUPER VALUE STORE

CONC. WLK.

BITUMINOUS

R/W LINE

EXIST. SAN. SEWER

CSW (BY OTHERS)

MH

STATUE

CONC

GRASS LAWN

HOUSE

ASPH.

STA. 39 + 64.87 C.T.H. 'S' = STA. 10 + 00.00 GARVEY RD.

P.I. STA. 44 + 37.24 C.T.H. 'E'

STA. 57 + 08.24 C.T.H. 'E' 750.10

BENCH MARKS			
NO.	STA.	DESCRIPTION	ELEV.
12	41+73	SE. COR. TOP OF BOT. STEP 91' LT.	749.94
13	44+11	PAINT □ ON W. END GAS ISLAND 43' LT.	749.59

GARVEY AVE. PROFILE

℄ C.T.H. 'S'

EXISTING PROFILE

0.32%

FINISHED GRADE

746.81

+35 746.70

+50

+72 746.47

+95 747.79

+80 747.90

+0.60%

EXISTING PROFILE

FINISHED GRADE

+1.14%

+1.33 750.33

+3.08%

+1.708%

P.I. STA. 42+75.00 748.65

P.I. STA. 44+22.00 750.32

STA. 44+37.24 EL. 750.79 = ℄ C.T.H. 'E'

742.90

744.50

24" R.C.P., S.S., CLASS III AT 0.69%

24" R.C.P., S.S., CLASS III AT 0.64%

27" R.C.P., S.S., CLASS III AT 0.50%

24" R.C.P., S.S., CLASS III AT 0.69%

741.46

741.62

746.40 | 746.70 | 747.00 | 747.30 | 747.60 | 747.90 | 748.20 | 748.50 | 748.65 | 748.93 | 749.50 | 750.07 | 750.32 | 750.79 | 751.02 | 751.87

39 +50 40 +50 41 +50 42 +50 43 +50 44 +50 45

Cat No 2130 - 0140

5.11

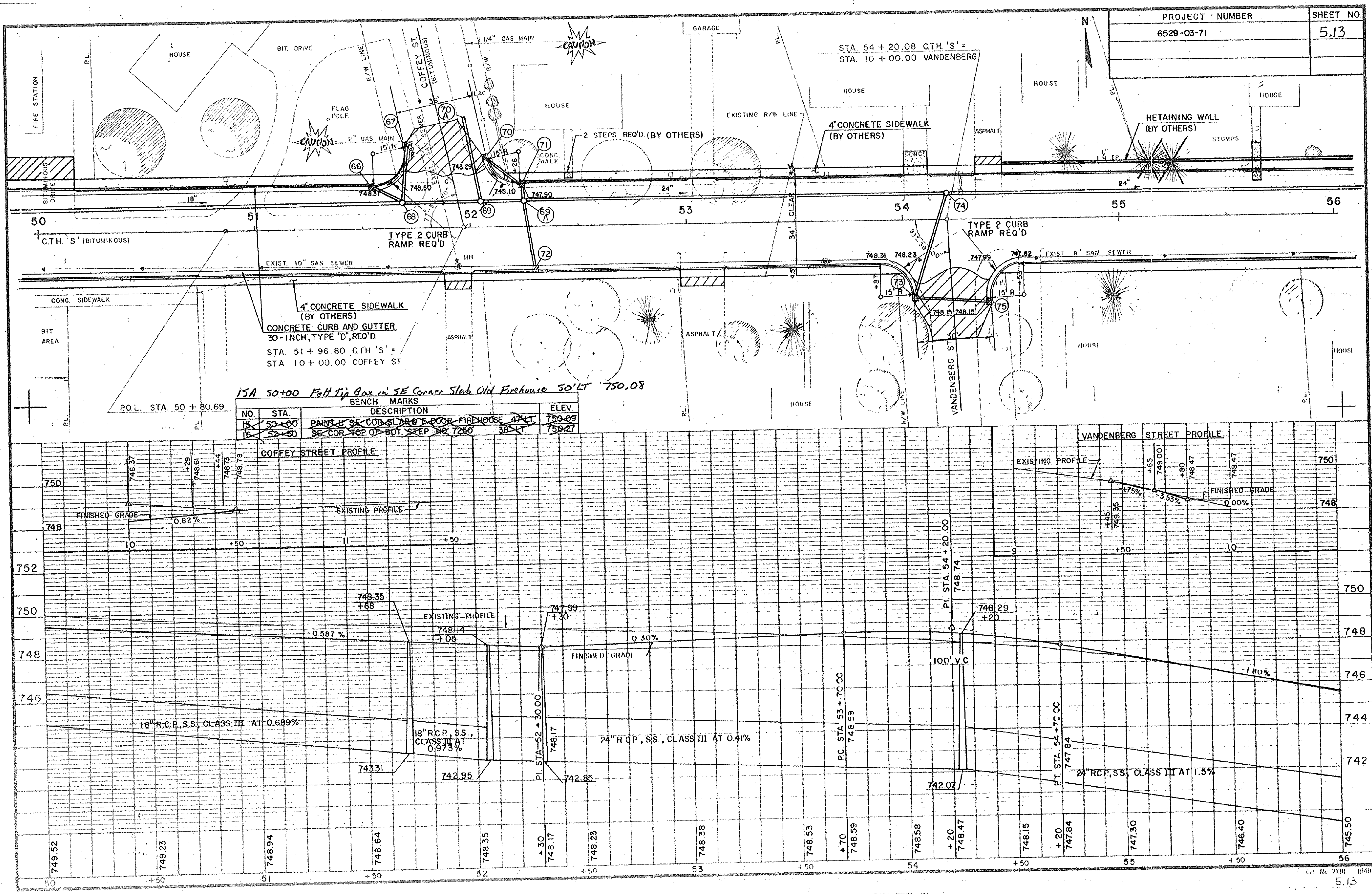
PROJECT NUMBER	SHEET NO.
6529-3-71	5.12

BENCH MARKS				
NO.	STA.	DESCRIPTION		ELEV.
13	44+11	PAINTED ☐ W. END GAS ISLAND	43' LT.	~~749.39~~ 750.10
~~14~~	~~45+68~~	~~PAINTED ☐ ON S. COR. WALK~~	~~25' LT.~~	~~753.14~~
~~15~~	~~50+60~~	~~PAINTED ☐ SE COR SLAB @ E DOOR FIREHOUSE~~	~~47' LT.~~	~~750.09~~

Cat. No 2130 - D140

5.12

PROJECT NUMBER	SHEET NO.
6529-03-71	5.13

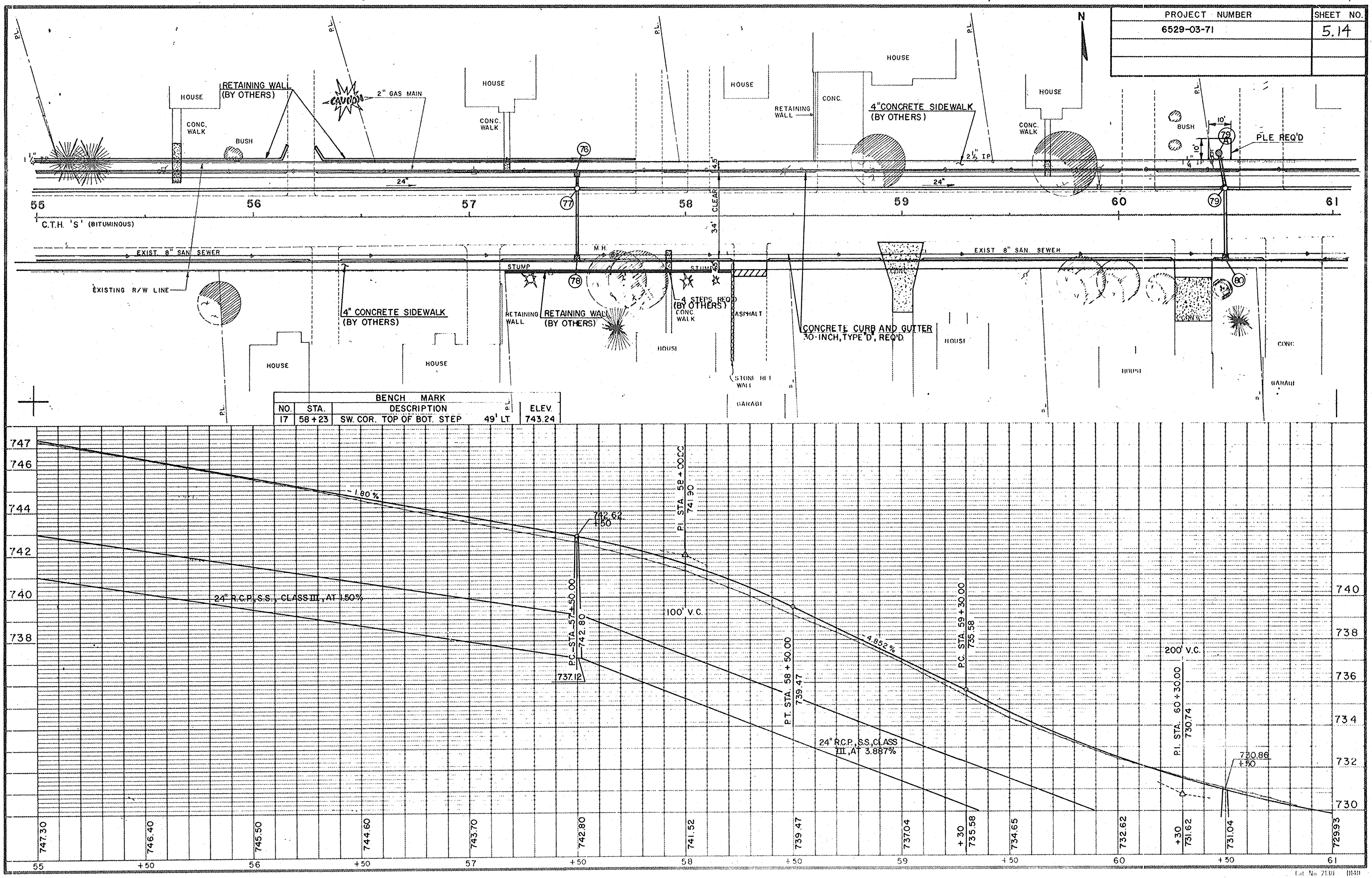


N
FIRE STATION
HOUSE
BIT. DRIVE
FLAG POLE
2" GAS MAIN
CAUTION
R/W LINE
COFFEY ST. (BITUMINOUS)
EXIST. 15" SAN. SEWER
1 1/4" GAS MAIN
HOUSE
GARAGE
2 STEPS REQ'D (BY OTHERS)
EXISTING R/W LINE
4" CONCRETE SIDEWALK (BY OTHERS)
STA. 54 + 20.08 C.T.H. 'S' = STA. 10 + 00.00 VANDENBERG
HOUSE
RETAINING WALL (BY OTHERS)
STUMPS
ASPHALT
BITUMINOUS DRIVE
C.T.H. 'S' (BITUMINOUS)
TYPE 2 CURB RAMP REQ'D
34' CLEAR
EXIST. 10" SAN. SEWER
EXIST. 8" SAN. SEWER
CONC. SIDEWALK
BIT. AREA
4" CONCRETE SIDEWALK (BY OTHERS)
CONCRETE CURB AND GUTTER 30-INCH, TYPE "D", REQ'D.
STA. 51 + 96.80 C.T.H. 'S' = STA. 10 + 00.00 COFFEY ST.
P.O.L. STA. 50 + 80.69
VANDENBERG ST.
15A 50+00 Felt Tip Box in SE Corner Slab Old Firehouse 50' LT 750.08
COFFEY STREET PROFILE
FINISHED GRADE
EXISTING PROFILE
0.82%
VANDENBERG STREET PROFILE
1.75%
-3.53%
0.00%
EXISTING PROFILE
-0.587%
0.30%
FINISHED GRADE
100' V.C.
-1.80%
PI STA. 54 + 20.00 748.74
PC STA. 53 + 70.00 748.59
PT. STA. 54 + 70.00 747.84
PI STA. 52 + 30.00 748.17
18" R.C.P., S.S., CLASS III AT 0.689%
18" R.C.P., S.S., CLASS III AT 0.973%
24" R.C.P., S.S., CLASS III AT 0.41%
24" R.C.P., S.S., CLASS III AT 1.5%
743.31
742.95
742.85
742.07
749.52
749.23
748.94
748.64
748.35
748.17
748.23
748.38
748.53
748.59
748.58
748.47
748.15
747.84
747.30
746.40
745.50
5.13

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
~~15~~	~~50+00~~	~~PAINT □ SE COR. SLAB @ E. DOOR FIREHOUSE 47' LT.~~	~~750.09~~
~~16~~	~~52+50~~	~~SE COR. TOP OF BOT. STEP NO. 7260 38' LT.~~	~~750.27~~

PROJECT NUMBER	SHEET NO.
6529-03-71	5.14



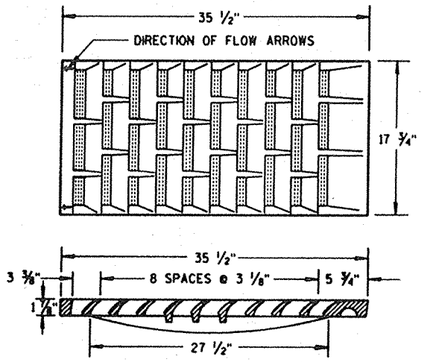
N
P.L.
HOUSE
RETAINING WALL (BY OTHERS)
CONC. WALK
BUSH
CAUTION
2" GAS MAIN
RETAINING WALL
CONC.
4"CONCRETE SIDEWALK (BY OTHERS)
2½" IP
PLE REQ'D
10'
24"
55
56
57
58
59
60
61
CLEAR
34'
C.T.H. 'S' (BITUMINOUS)
EXIST. 8" SAN. SEWER
EXIST. 8" SAN. SEWER
EXISTING R/W LINE
M.H.
STUMP
4 STEPS REQ'D (BY OTHERS)
ASPHALT
4" CONCRETE SIDEWALK (BY OTHERS)
RETAINING WALL (BY OTHERS)
CONCRETE CURB AND GUTTER 30-INCH, TYPE 'D', REQ'D.
STONE RET. WALL
GARAGE
CONC.
747
746
744
742
740
738
740
738
736
734
732
730
-1.80%
742.62 +50
P.I. STA. 58+00.00 741.90
100' V.C.
24" R.C.P., S.S., CLASS III, AT 1.50%
P.C. STA. 57+50.00 742.80
737.12
P.T. STA. 58+50.00 739.47
-4.852%
P.C. STA. 59+30.00 735.58
24" R.C.P., S.S., CLASS III, AT 3.887%
200' V.C.
P.I. STA. 60+30.00 730.74
730.86 +50
747.30
746.40
745.50
744.60
743.70
742.80
741.52
739.47
737.04
+30 735.58
734.65
732.62
+30 731.62
731.04
729.93
+50
+50
+50
+50
+50
+50
Cat. No. 2138 1040
5.14

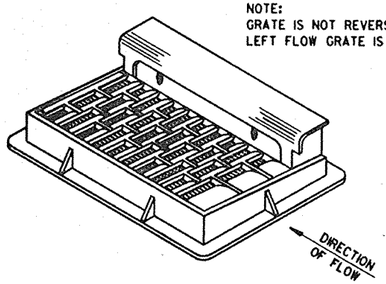
BENCH MARK				
NO.	STA.	DESCRIPTION	℄	ELEV.
17	58+23	SW. COR. TOP OF BOT. STEP	49' LT	743.24

PROJECT NUMBER	SHEET NO.
6529-03-71	5.15

BENCH MARK			
NO.	STA.	DESCRIPTION	ELEV.
18	62+18	NE. COR. TOP OF BOT. STEP HO. 7489 62' RT.	732.35

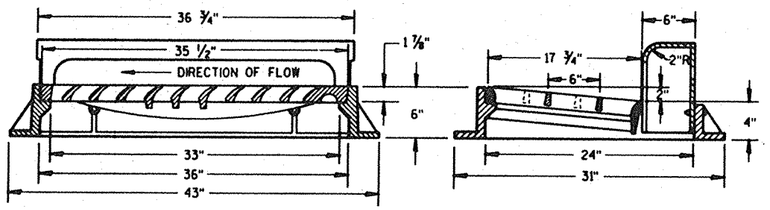
Cat No 2130 D140
5.15





NOTE:
GRATE IS NOT REVERSIBLE.
LEFT FLOW GRATE IS SHOWN

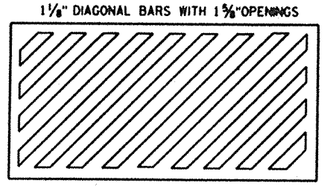
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



TYPE "H"

(APPROXIMATE WEIGHT 145 LBS.)
FRAME..... 195 LBS.
GRATE..... 135 LBS.
CURB BOX..... 115 LBS.

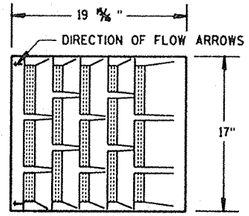
1 1/8" DIAGONAL BARS WITH 1 5/8"OPENINGS

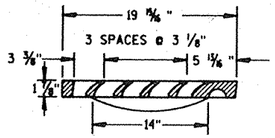


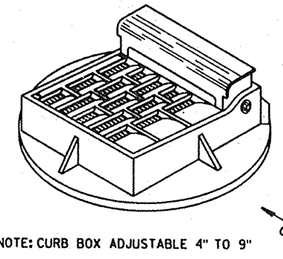
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/2" X 17 3/4" X 2")
(APPROXIMATE WEIGHT 170 LBS.)
GRATE..... 170 LBS.

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



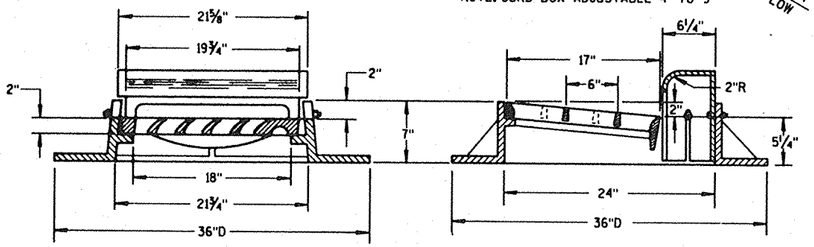




NOTE:
GRATE IS NOT REVERSIBLE
LEFT FLOW GRATE IS SHOWN

NOTE: CURB BOX ADJUSTABLE 4" TO 9"

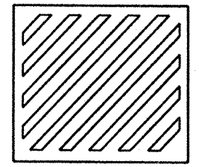
DIRECTION OF FLOW



TYPE "A"

(APPROXIMATE WEIGHT 405 LBS.)
FRAME..... 235 LBS.
GRATE..... 85 LBS.
CURB BOX..... 85 LBS.

1" DIAGONAL BARS
WITH 1 1/2" OPENINGS



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 7/8" X 17" X 1 1/8 "
GRATE..... 85 LBS.

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

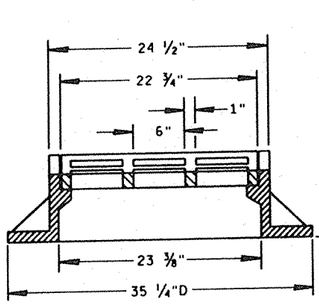
INLET COVERS

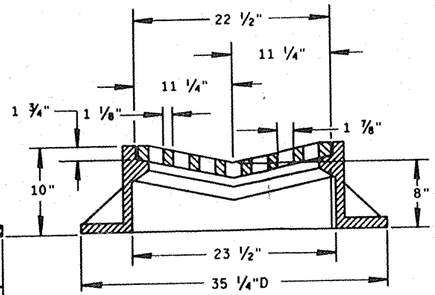
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

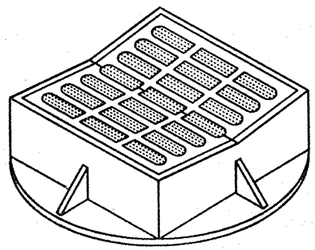
APPROVED
12/19/94
DATE
CHIEF ROADWAY DESIGN ENGINEER
FHWA

S.D.D. 8 A 5-10a

S.D.D. 8 A 5-10a



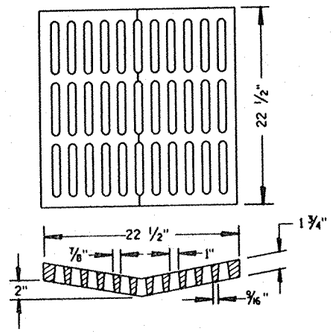




TYPE "B"

(APPROXIMATE WEIGHT 395 LBS.)

FRAME..... 285 LBS.
GRATE..... 110 LBS.

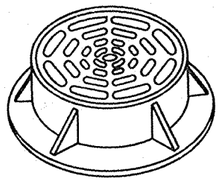


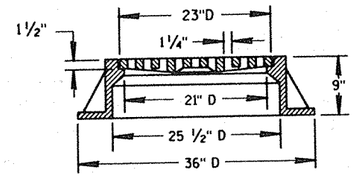
ALTERNATIVE GRATE FOR FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 125 LBS.)
GRATE.....125 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE





TYPE "C"

(APPROXIMATE WEIGHT 340 LBS.)

FRAME..... 235 LBS.
GRATE..... 105 LBS.

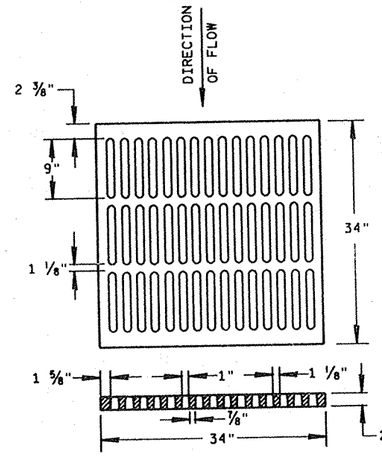
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

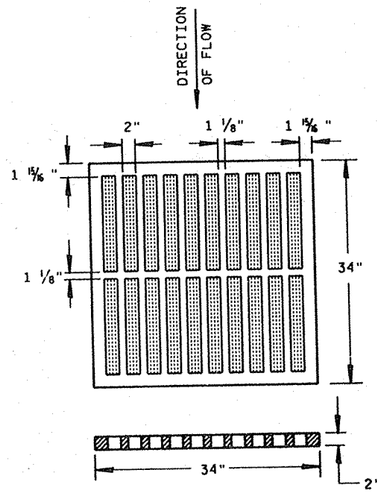


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 365 LBS.)
GRATE.....365 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

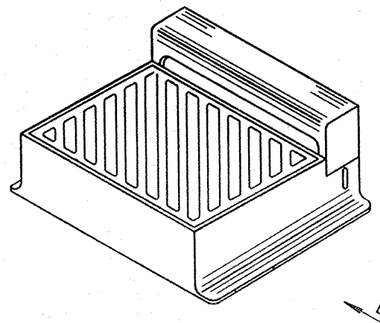


TYPE "MS"

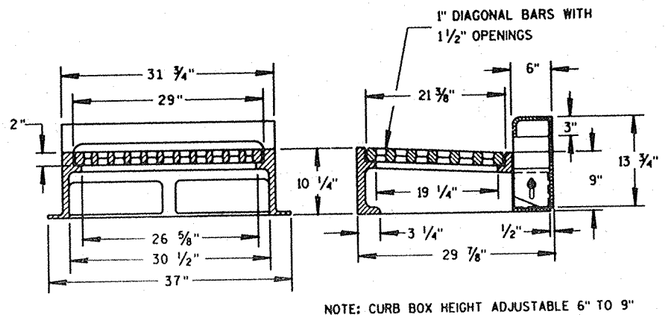
(APPROXIMATE GRATE WEIGHT 270 LBS.)
GRATE.....270 LBS.

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

(APPROXIMATE WEIGHT 670 LBS.)

FRAME..... 360 LBS.
GRATE..... 160 LBS.
CURB BOX..... 150 LBS.

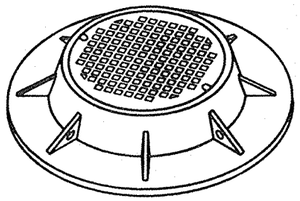
INLET COVERS

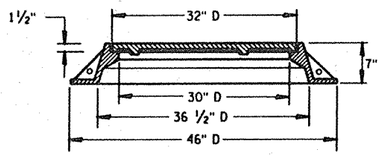
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 12/19/94 DATE
Ross L. Thompson CHIEF ROADWAY DESIGN ENGINEER
FHWA

S.D.D. 8 A 5-10b

S.D.D. 8 A 5-10b

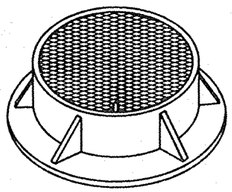


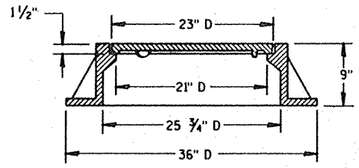


TYPE "K"

(APPROXIMATE WEIGHT 535 LBS.)

FRAME.....330 LBS.
LID.....205 LBS.





TYPE "J"

(APPROXIMATE WEIGHT 315 LBS.)

FRAME.....200 LBS.
LID.....115 LBS.

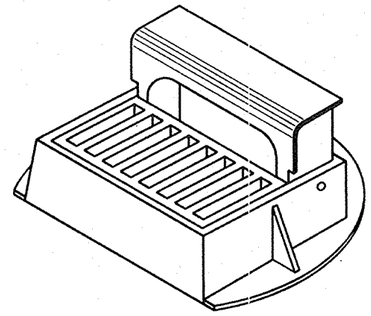
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

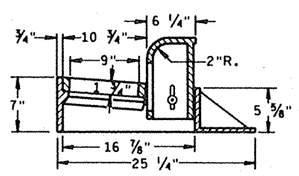
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

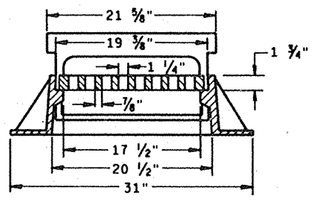
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



CURB BOX ADJUSTABLE 4" TO 10"

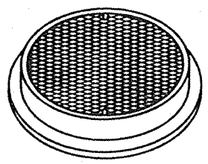


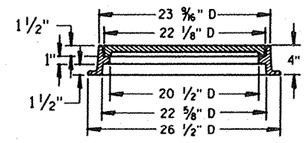


INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 280 LBS.)

FRAME.....145 LBS.
GRATE..... 50 LBS.
CURB BOX..... 85 LBS.

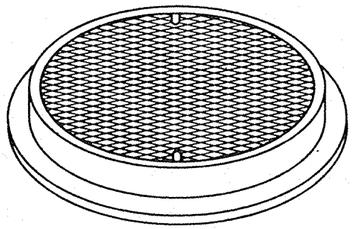


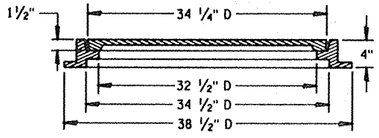


TYPE "L"

(APPROXIMATE WEIGHT 145 LBS.)

FRAME.....75*
LID.....70*





TYPE "M"

(APPROXIMATE WEIGHT 385 LBS.)

FRAME..... 125*
LID..... 260*

INLET AND MANHOLE COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

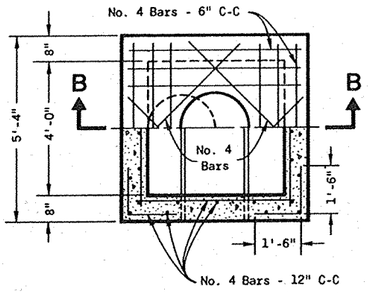
APPROVED
12/19/94
DATE

Roger L. Rimmerman
CHIEF ROADWAY DESIGN ENGINEER

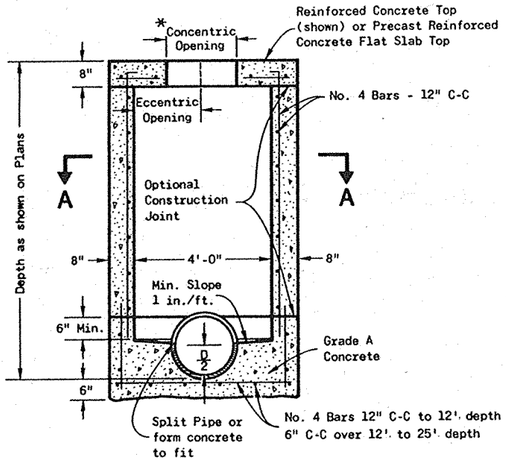
FHWA

S.D.D. 8 A 5-10d

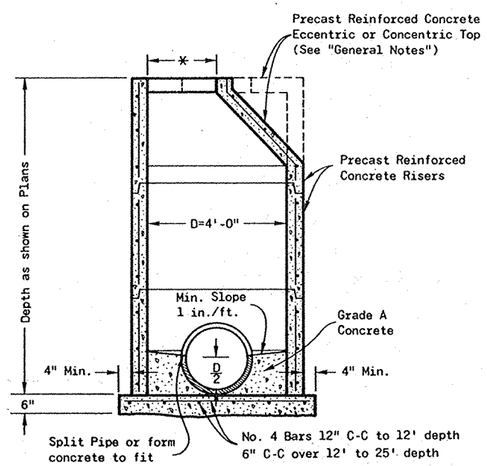
S.D.D. 8 A 5-10d



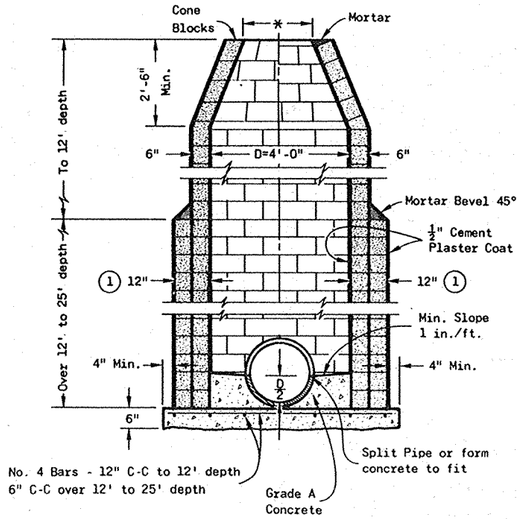
HALF SECTION A-A



SECTION B-B
REINFORCED CONCRETE



PRECAST REINFORCED CONCRETE



CONCRETE BLOCK

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All drainage structures are designated on the plans as "Manholes 1-C", "Catch Basins 1-B", "Inlets 3-H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Precast Reinforced Concrete Cone Tops (Eccentric or Concentric) may be used on concrete block structures. The Cone Tops shall be installed on a bed of mortar.

Eccentric Cone Tops may be used on all structures, and Concentric Cone Tops shall be used only on structures 5 feet or less in depth, unless otherwise directed by the Engineer.

Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches; minimum wall embedment of 3 inches; and be capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of 1 inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to Federal Specification TT-P-645 or equivalent. Steps of approved Polypropelene plastic coated reinforcement bar will be acceptable.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers may be placed with tongue up or down.

All Precast Inlet Units shall conform to the pertinent requirements of AASHTO Designation M 199.

* Use 2'-0" diameter opening with Type "C", "L" and "J" covers, or 3'-0" diameter with Type "K" and "M" covers.

(1) 2 courses 6" block.

MANHOLES TYPE 1

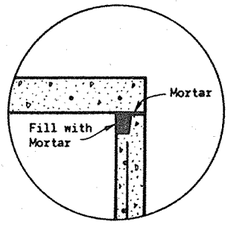
State of Wisconsin
Department of Transportation

APPROVED 4-13-82
DATE
FHWA

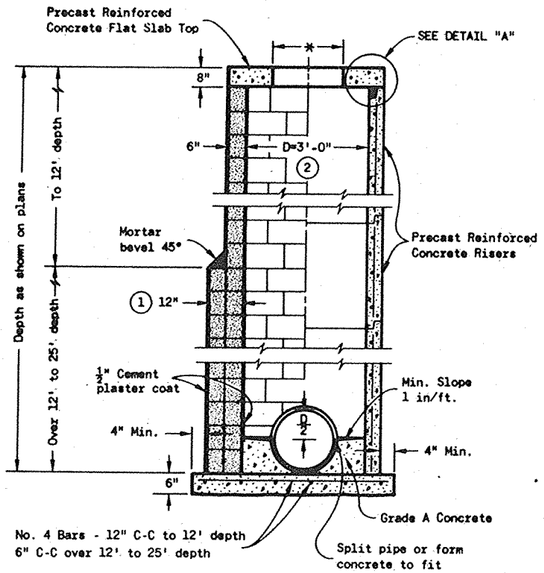
S.D.D. 8 B 6-3

MANHOLES TYPE 1

S.D.D. 8 B 6-3

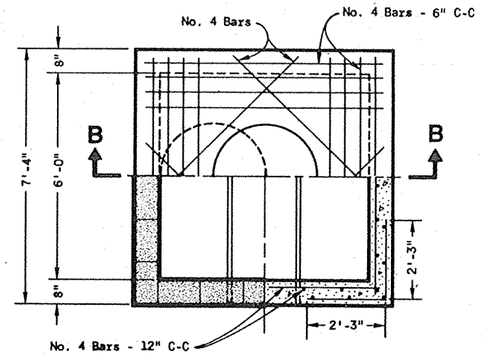


DETAIL "A"

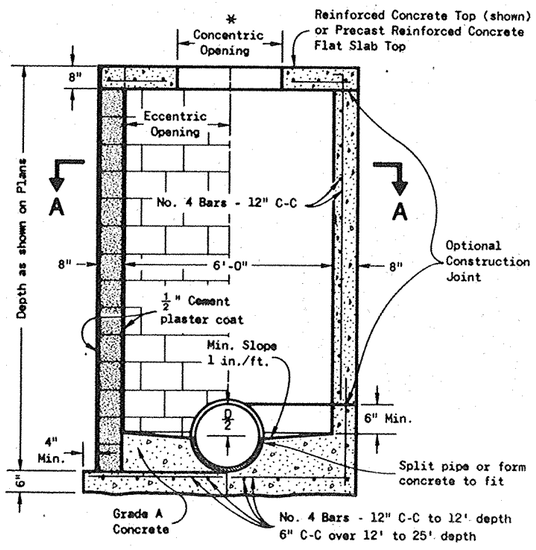


CONCRETE BLOCK 2 PRECAST REINFORCED CONCRETE

MANHOLES TYPE 2

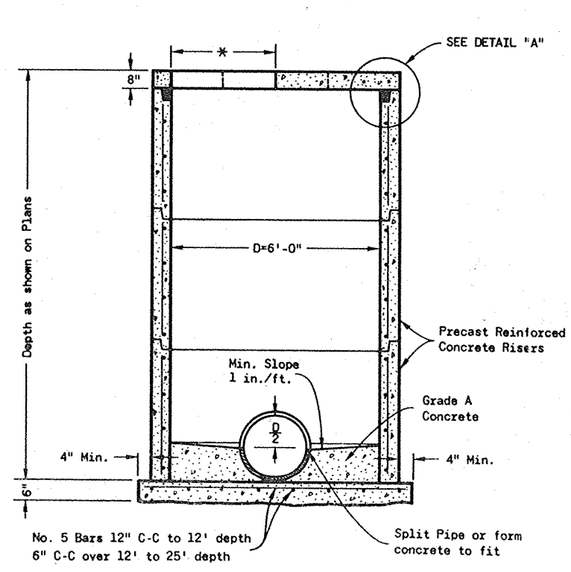


HALF SECTION A-A



SECTION B-B

CONCRETE BLOCK REINFORCED CONCRETE



PRECAST REINFORCED CONCRETE

MANHOLES TYPE 3

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All drainage structures are designated on the plans as "Manholes 1-C", "Catch Basins 1-B", "Inlets 3-H", etc. The first digit designates the masonry portion of the structure , and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6" in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches; minimum wall embedment of 3 inches; and capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of ½ inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to federal specification TT-P-645 or equivalent. Steps of approved Polypropylene plastic coated reinforcement bar are acceptable.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers shall be placed with tongue down.

All precast inlet units shall conform to the pertinent requirements of AASHTO Designation M 199.

* Use 2'-0" diameter opening with type "C", "L", and "J" covers, or 3'-0" diameter with type "K" and "M" covers.

(1) 2 courses 6" block.

(2) When connecting pipes are 24" or larger the Precast Manholes may be increased to 42" diameter.

MANHOLES TYPE 2 & 3

State of Wisconsin
Department of Transportation

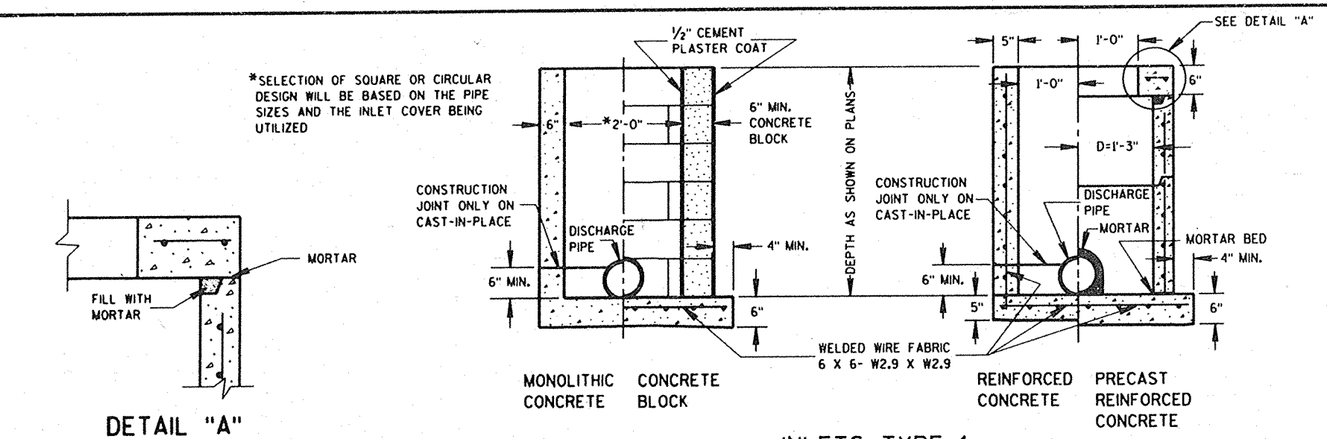
APPROVED 4-13-82
DATE

CHIEF DESIGN ENGINEER

FHWA

S.D.D. 8 B 7-3

S.D.D. 8 B 7-3



INLETS TYPE 1

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 1-C", "CATCH BASINS 1-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

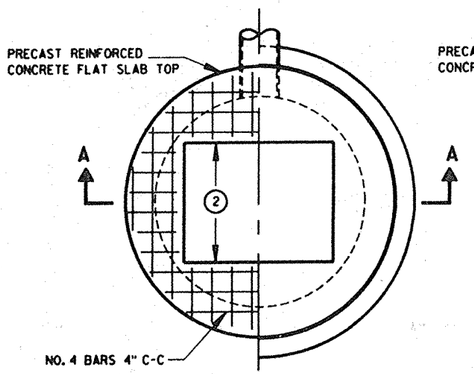
PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

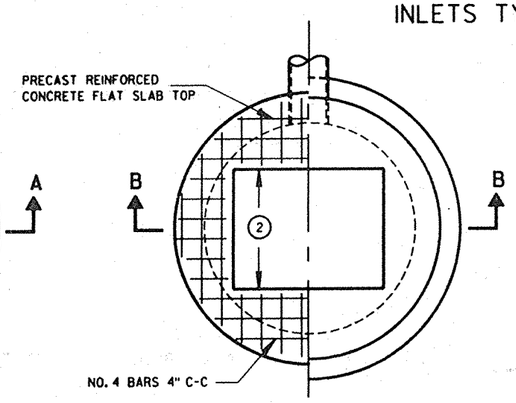
PRECAST REINFORCED CONCRETE RISERS SHALL BE PLACED WITH TONGUE DOWN.

(1) USE 2'-6" OPENING FOR TYPE 2 INLETS, 3'-0" OPENING FOR TYPE 3 INLETS, AND 2'-11" FOR TYPE 4 INLETS.

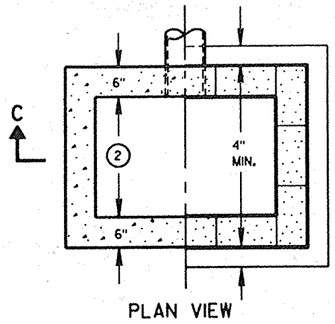
(2) USE 2'-0" OPENING FOR TYPE 1, 2 & 3 INLETS, 2'-6½" OPENING FOR TYPE 4 INLETS.



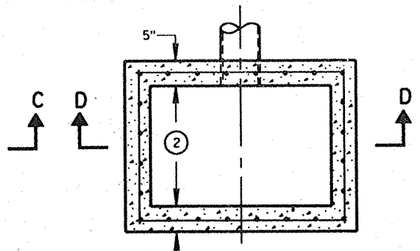
PLAN VIEW



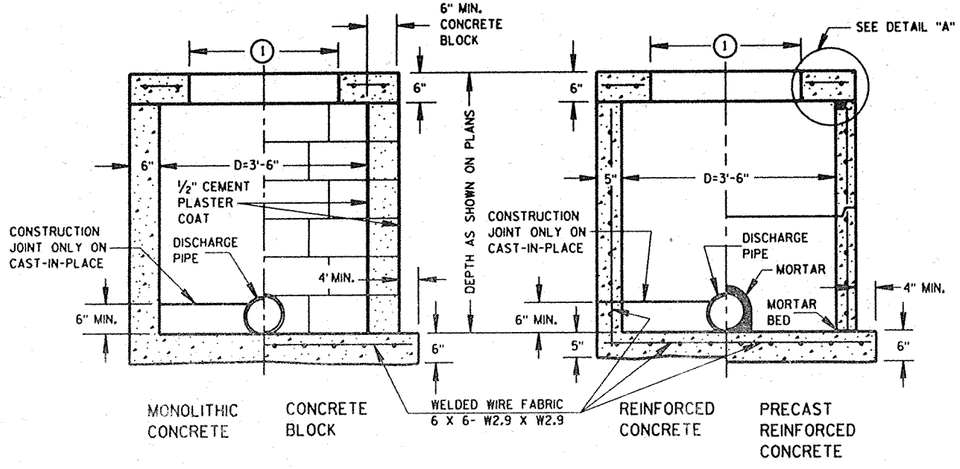
PLAN VIEW



PLAN VIEW

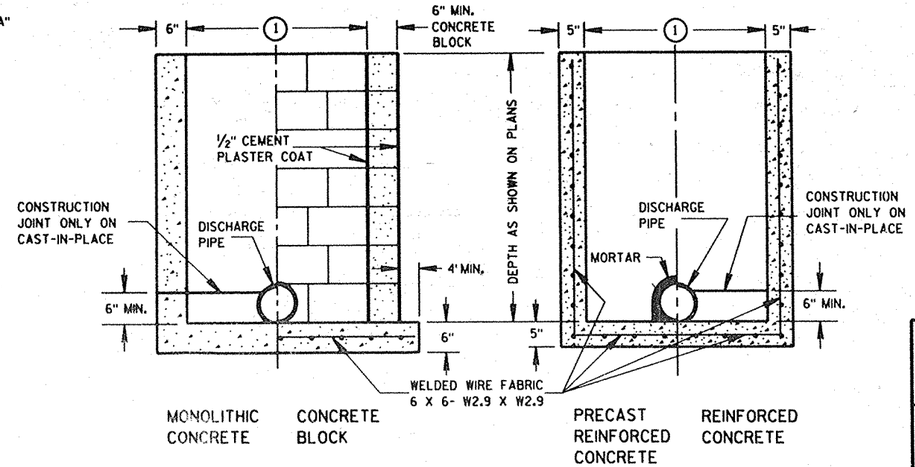


PLAN VIEW



SECTION A-A

SECTION B-B



SECTION C-C

SECTION D-D

INLETS TYPE 2, 3 & 4

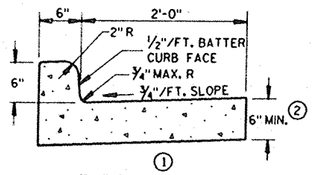
INLETS TYPE 1, 2, 3 & 4

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

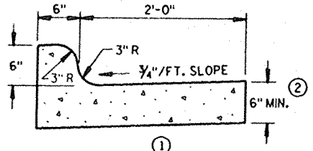
APPROVED 8/26/94 DATE
Roy L. Thompson
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 C 1-5

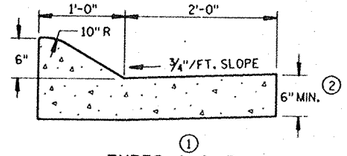
S.D.D. 8 C 1-5



TYPES A & D

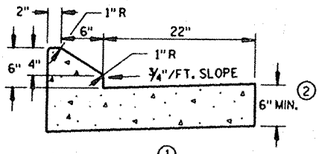


TYPES K & L

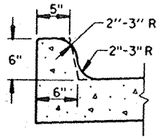


TYPES A & D

CONCRETE CURB & GUTTER 36"

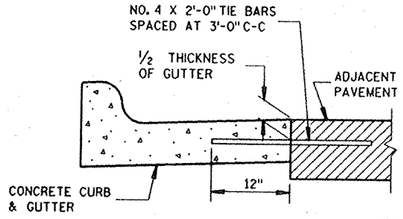


TYPES G & J



OPTIONAL CURB SHAPE FOR TYPES K & L

CONCRETE CURB & GUTTER 30"



TYPICAL TIE BAR LOCATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEALANT IS NOT REQUIRED IN THE JOINTS OF CONCRETE CURB OR CONCRETE CURB & GUTTER EXCEPT AS REQUIRED FOR INTEGRAL GUTTER.

PAVEMENT TIES ARE REQUIRED, WHEN INCLUDED IN THE CONTRACT, WHERE CONCRETE CURB, CONCRETE CURB AND GUTTER OR CONCRETE PAVEMENT IS PLACED ADJACENT TO EXISTING CONCRETE.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. TIE BARS AND A LONGITUDINAL CONSTRUCTION JOINT ARE NOT REQUIRED WITH THIS ALTERNATE.

PAVEMENT JOINTS SHALL BE EXTENDED THROUGH INTEGRAL CURB & GUTTER. JOINTS IN INTEGRAL GUTTER SHALL HAVE THE SAME DIMENSIONS AS THE JOINTS IN THE ADJACENT PAVEMENT. JOINTS IN INTEGRAL CURB SHALL BE 1/8" WIDE.

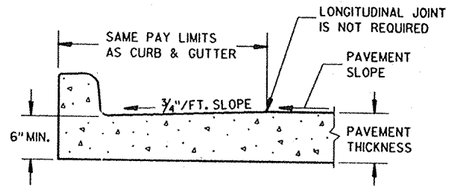
JOINTS IN INTEGRAL CURB & GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME SEALANT SPECIFIED FOR THE PAVEMENT JOINT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB & GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE TWO FEET BEHIND THE BACK OF CURBS.

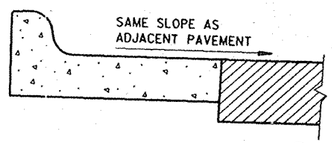
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G AND K.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

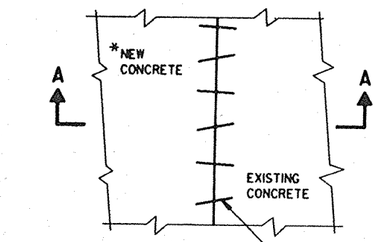
(3) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATIONS WILL BE SHOWN ELSEWHERE IN THE PLAN.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

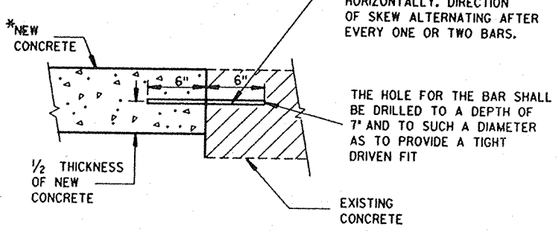


REVERSE SLOPE GUTTER (3)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

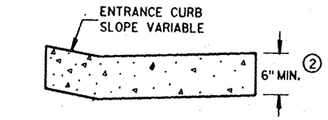


PLAN VIEW

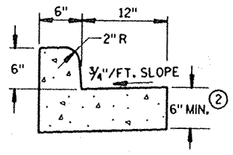
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.



SECTION A-A
PAVEMENT TIES

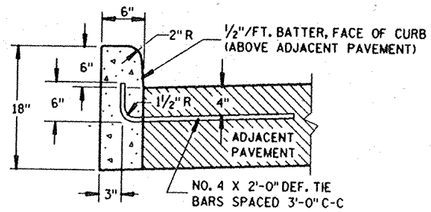


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

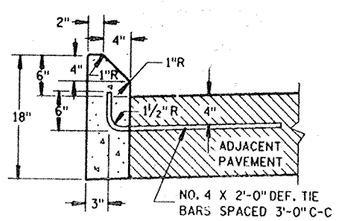


TYPES A & D

CONCRETE CURB & GUTTER 18"



TYPES A & D



TYPES G & J

CONCRETE CURB

CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES

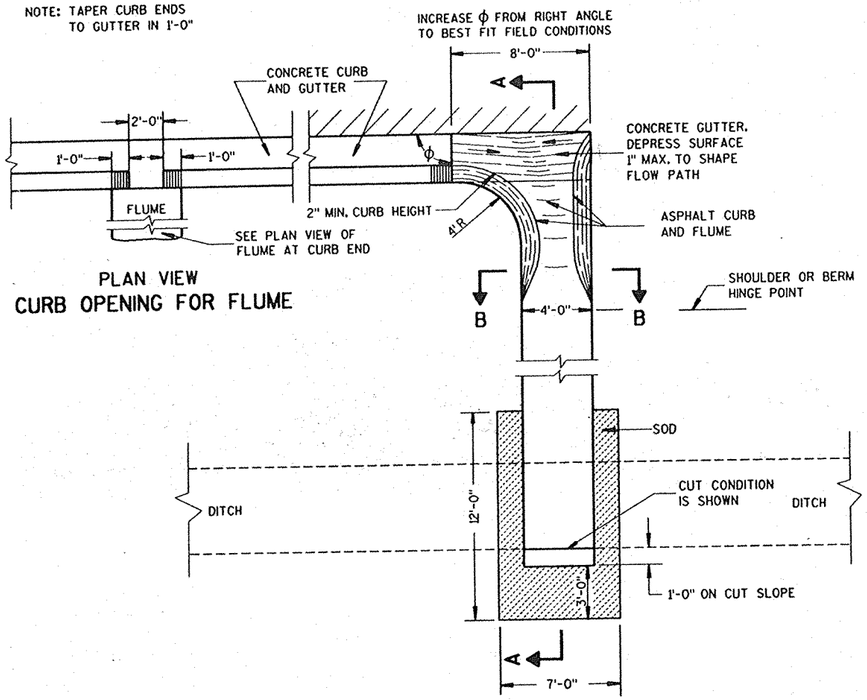
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-23-86
DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA

S.D.D. 8 D 1-11

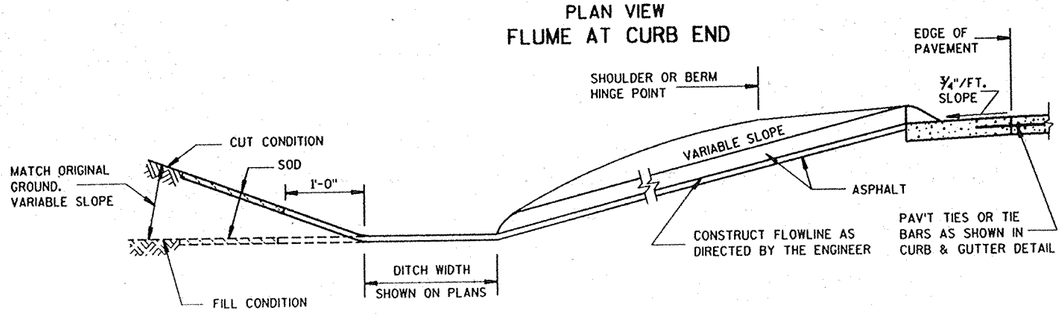
S.D.D. 8 D 1-11

ASPHALTIC FLUME

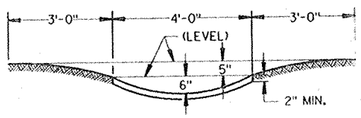


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

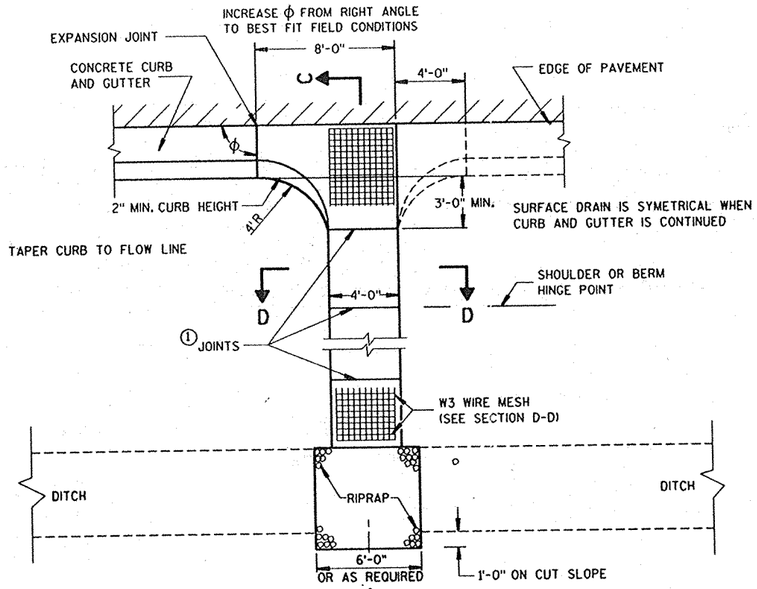
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

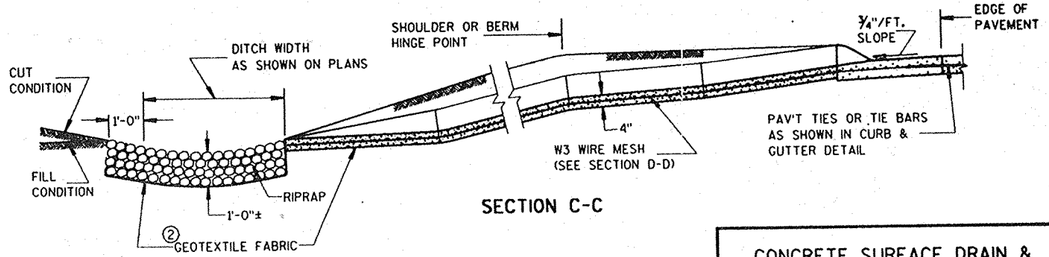
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

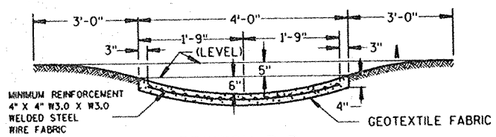
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

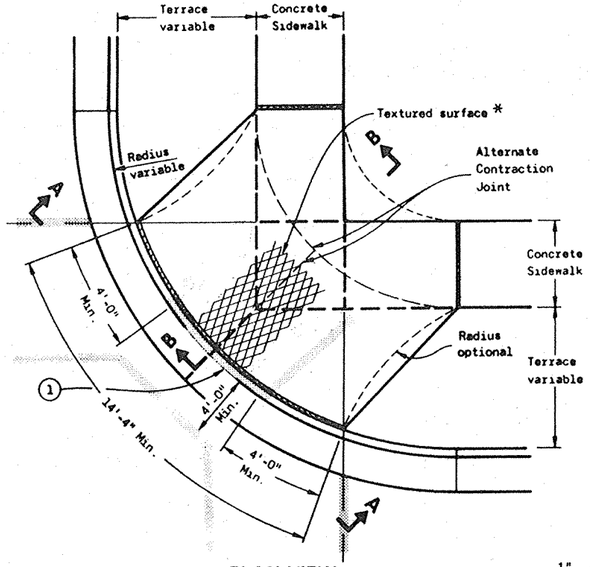
CONCRETE SURFACE DRAIN & ASPHALTIC FLUME

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 10/23/09
DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA

S.D.D. 8 D 4-3

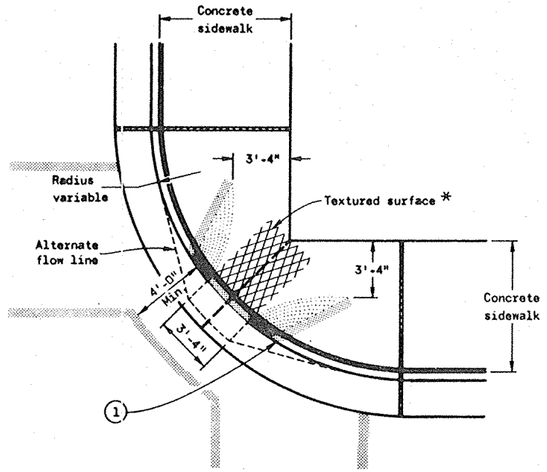
S.D.D. 8 D 4-3



PLAN VIEW

TYPE 1 RAMP

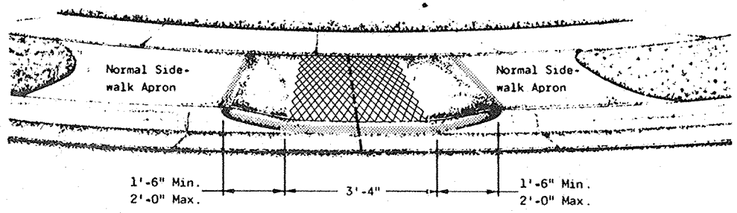
(CENTER OF CORNER RADIUS)



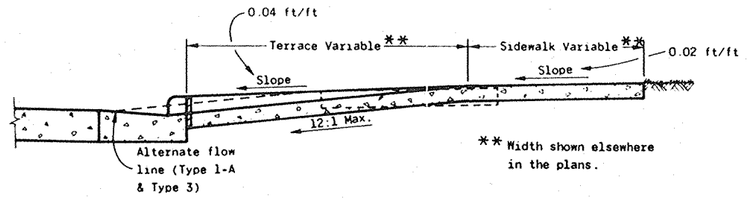
PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)



VIEW **A-A**



SECTION **B-B**

$\frac{1}{2}$" ═══ EXPANSION JOINTS - SIDEWALK

— — — CONTRACTION JOINTS

Location of joints may be varied from those shown to better fit site conditions and/or local government preference.

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Ramps shall be built at 12:1 or flatter. When necessary, the sidewalk elevation may be lowered to meet the high point on the ramp.

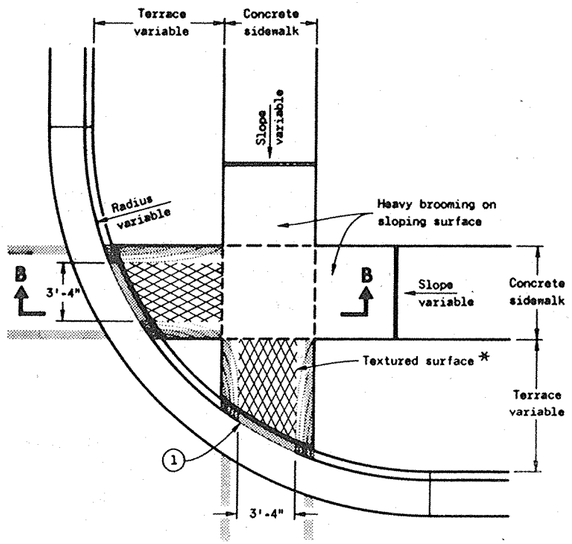
Type 1 or Type 1-A Ramps shall have a normal sidewalk apron and curb on both sides of ramp

Curb ramps shall be measured and paid for as Concrete Sidewalk and Concrete Curb and Gutter.

Surface texturing shall consist of linear impressions approximately $\frac{1}{4}$ inch to $\frac{3}{8}$ inch in depth and width, oriented to provide a uniform pattern of diamond shapes measuring approximately $1\frac{1}{4}$ inches in width by $2\frac{1}{4}$ inches in length, with the length being parallel to the direction of pedestrian movement. This surface texture may be achieved by impressing and removing a piece of expanded metal regular industrial mesh into the surface of the ramp while the concrete is in a plastic state

(1) The ramp shall be bordered on both sides and on the curb line with a 4 inch wide yellow stripe or with brick of a contrasting color. Normally the paint stripe alternate will be used. The municapality or the department will apply this striping unless otherwise specified in the contract.

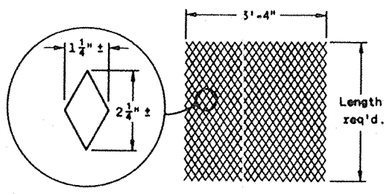
If a municapality requires the brick alternate, special details and provisions are shown elsewhere in the plans.



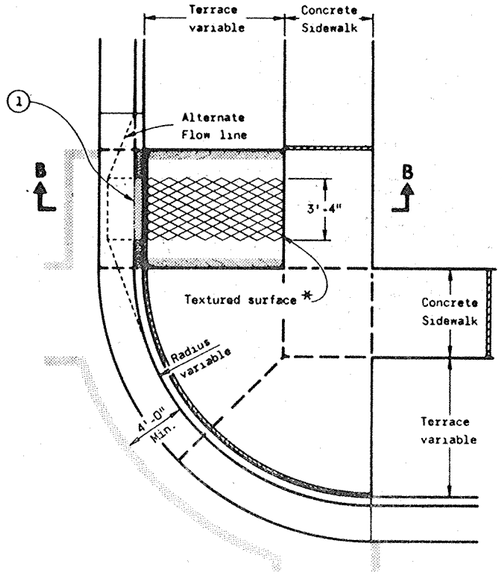
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



DETAIL OF DIAMOND PATTERN * .



PLAN VIEW

TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS

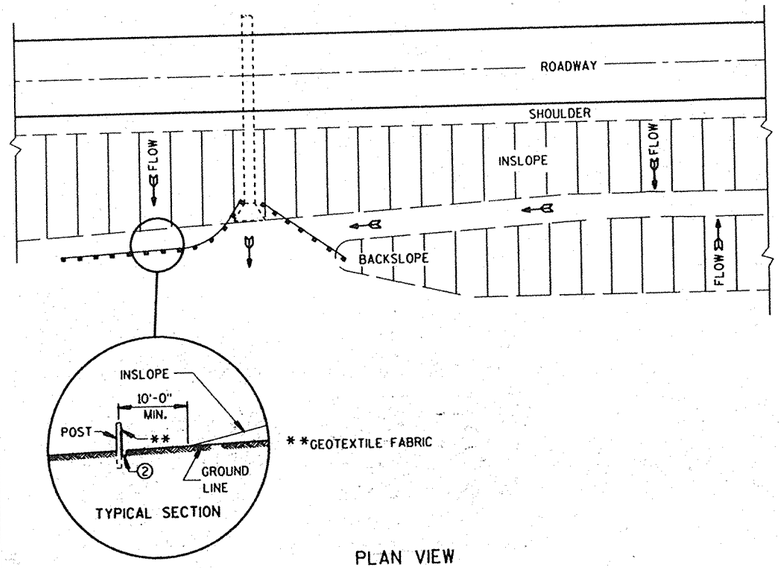
State of Wisconsin
Department of Transportation

APPROVED 10-23-84 DATE
FHWA

CHIEF DESIGN ENGINEER

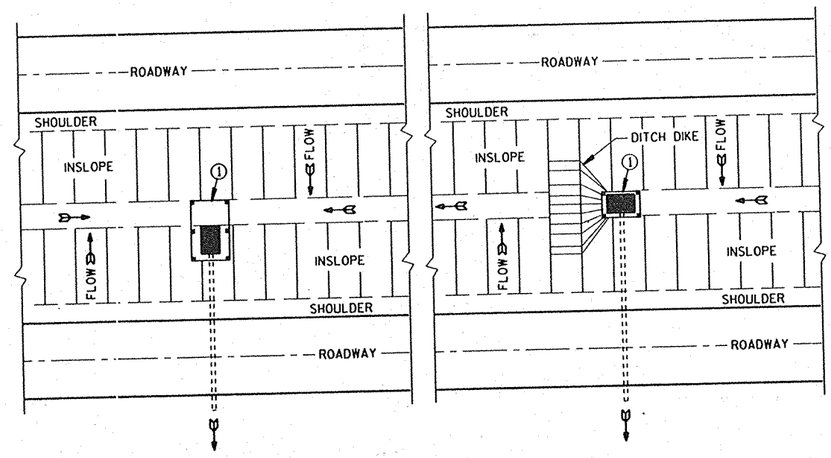
S.D.D. 8 D 5-8

S.D.D. 8 D 5-8



PLAN VIEW

TYPICAL APPLICATIONS OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

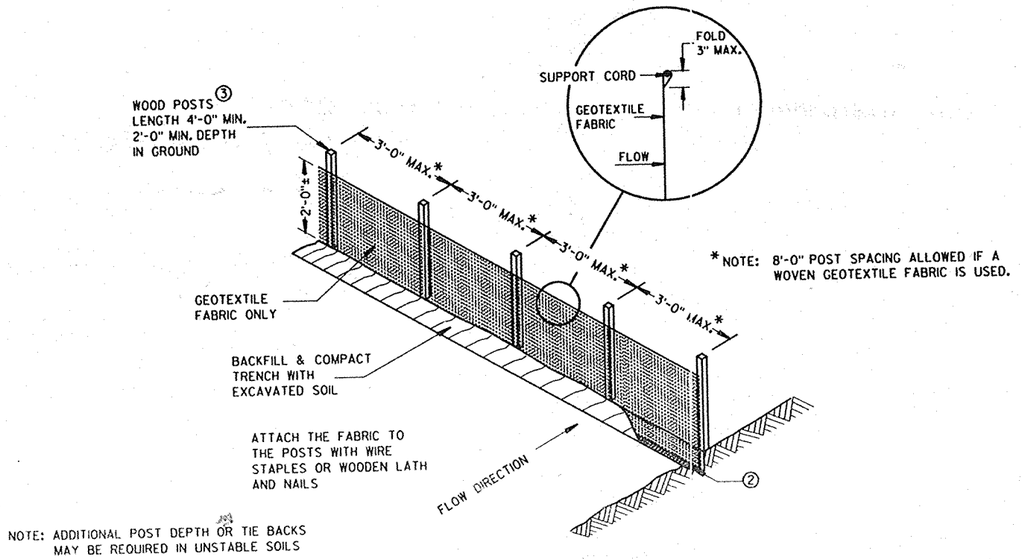
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

① HORIZONTAL BRACE WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE ENGINEER.

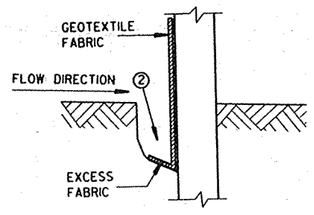
② TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

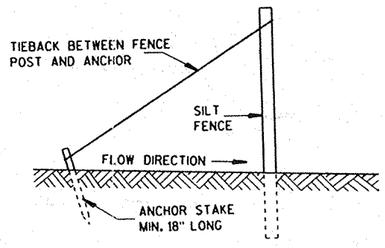


NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

SILT FENCE
(NON-REINFORCED)



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/29/94 — Roy A. Thompson
DATE — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 E 9-4

S.D.D. 8 E 9-4

METAL APRON ENDWALLS

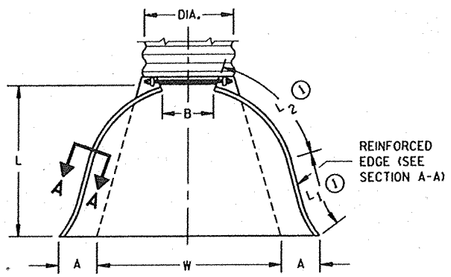
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

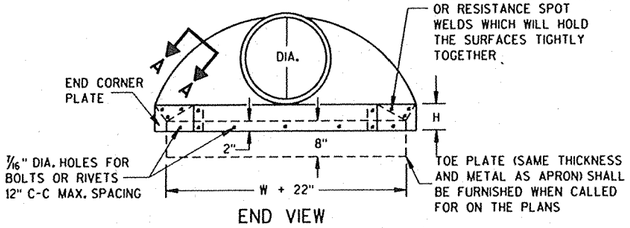
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 3/8	72 7/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4-35 ** 48 1/4-100	* **	90	5 1/2	2 3/5 to 1
60	6	* ** 30-35	60	39	99	96	5	2 to 1
66	6 1/2	* ** 24-30	* ** 72-78	* ** 21-27	99	102	5 1/2	2 to 1
72	7	* ** 24-36	78	21	99	108	6	2 to 1
78	7 1/2	* ** 24-36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

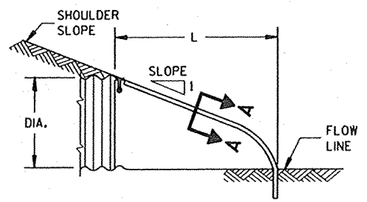
*MINIMUM
**MAXIMUM



PLAN VIEW

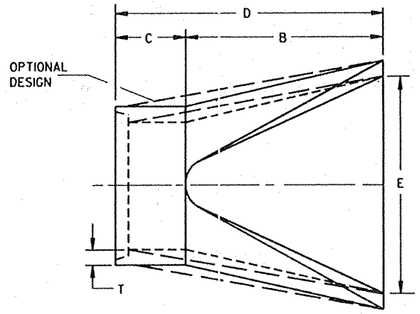


END VIEW

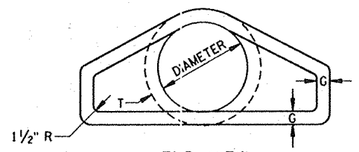


SIDE ELEVATION

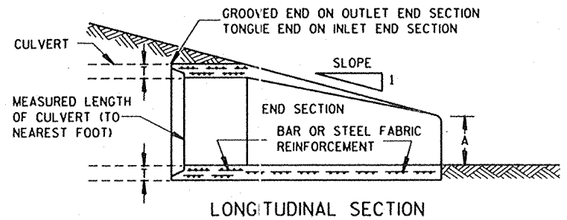
METAL ENDWALLS



PLAN

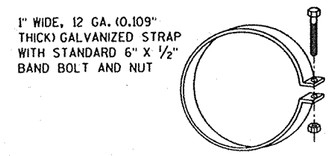


END VIEW



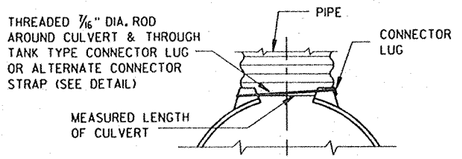
LONGITUDINAL SECTION

CONCRETE ENDWALLS

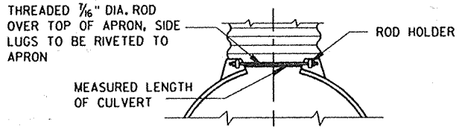


ALTERNATE FOR TYPE 1 CONNECTION

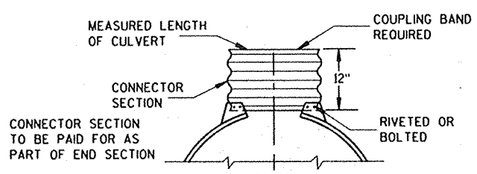
END SECTION CONNECTOR STRAP



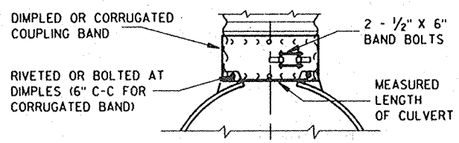
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

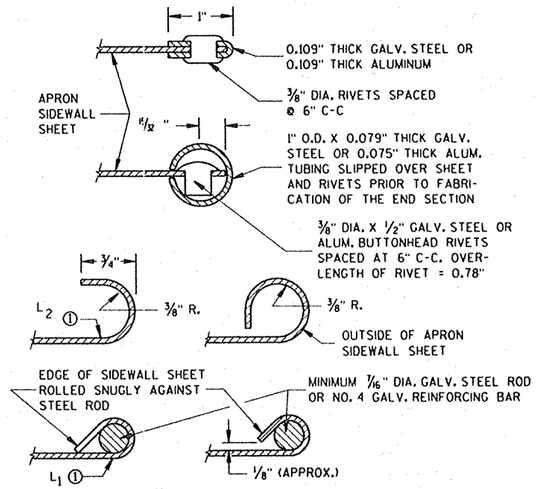
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

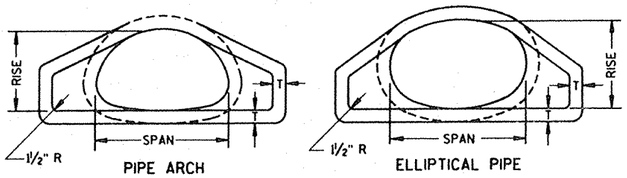
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

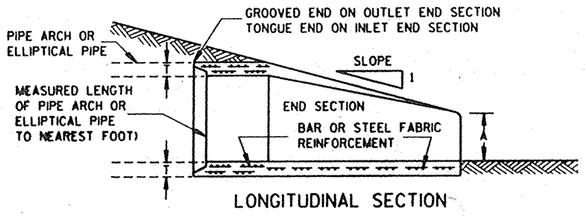
APPROVED
11/30/94
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 F 1-11

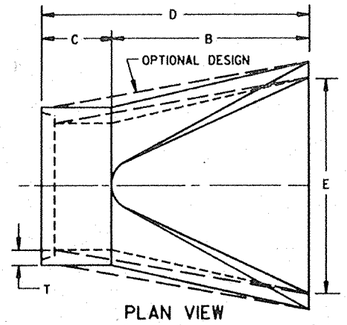
S.D.D. 8 F 1-11



END VIEW

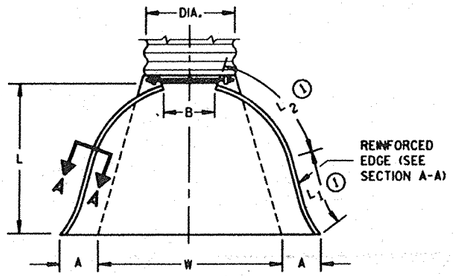


LONGITUDINAL SECTION

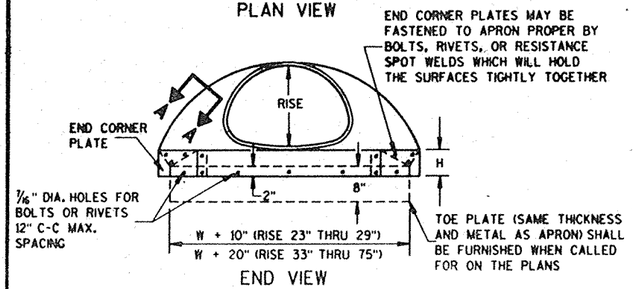


PLAN VIEW

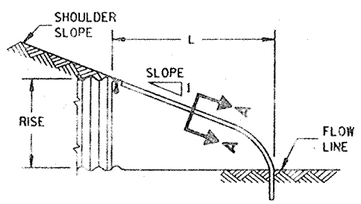
CONCRETE ENDWALLS



PLAN VIEW

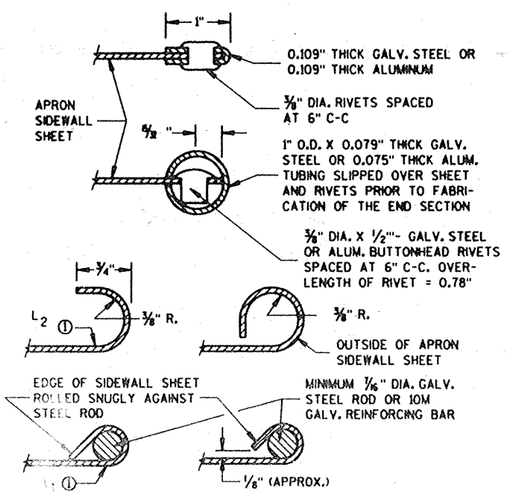


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅝	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

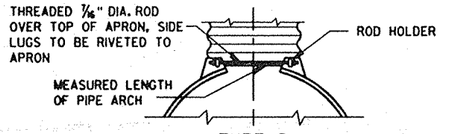
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15¹⁵⁄₁₆	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

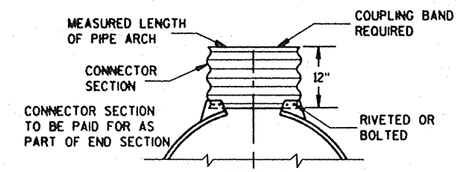
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



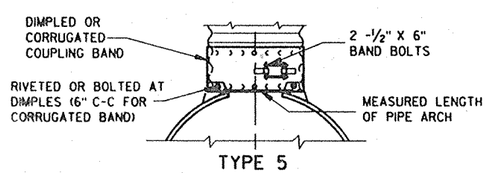
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:
ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 11/30/94 (DATE)
Roy L. Thompson
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 F 2-1