NOTE

Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

CAMELOT
PHASE TWO

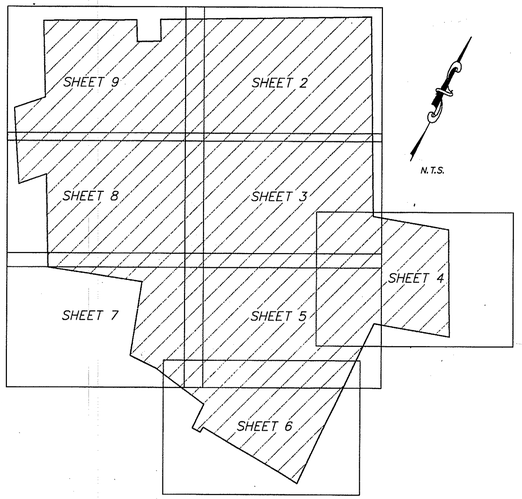
PART OF U.S. SURVEY 1787, FRACTIONAL SEC. 26, T.46N., R.3E.
ST. CHARLES COUNTY, MISSOURI

IMPROVEMENT PLANS

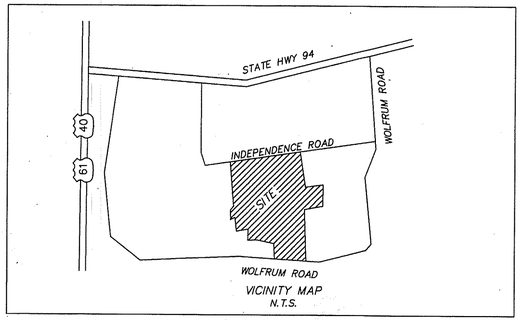
134 LOTS

CITY OF WELDON SPRING GENERAL NOTES

1. Gas, water and other underground utilities shall not conflict with the depth or horizontal locations of existing and proposed sanitary and storm sewers, including house laterals.
2. Underground utilities have been plotted from available information and, therefore, their locations must be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor and shall be located prior to grading or construction of improvements.
3. All filled places under buildings, proposed sanitary and storm sewer lines, and/or paved areas including trench backfills shall be compacted to 90% of the maximum dry density as determined by the "Modified A.A.S.H.T.O. Test" (ASTM D-1557) unless otherwise specified by the local governing authority specifications. All tests will be verified by a soils engineer.
4. All filled places in paved State, County or City roads (highways) shall be compacted to 90% of the maximum dry density as determined by the "Modified A.A.S.H.T.O. T-180" Compaction Test," (ASTM D-1557), unless otherwise specified by local governing authority specifications. All tests will be verified by a Soils Engineer.
5. No area shall be cleared without permission of the developer.
6. All grades shall be within 0.2 feet more or less of those shown on the grading plan.
7. No slope shall be greater than 3:1 and shall be either sodded or seeded and mulched.
8. All grading for this development shall conform to the recommendations in the soils report for this development prepared by a soil consultant.
9. The developer shall contract with a soil consultant firm registered in the State of Missouri during the grading operation to monitor cut and fills and to insure proper compaction has been achieved.
10. Owner/Developer assumes full responsibility as to the performance of the grading operation and assurance that all properties and roads will be adequately protected.
11. The total yardage for this project is based on a 15 % shrinkage factor.
12. The shrinkage factor is subject to change, due to soil conditions, (types and moisture content), weather conditions, and the percent compaction actually achieved at the time year grading is performed. As a result, adjustments in final grade may be required. If adjustments need to be made, the contractor shall contact Pickett, Ray & Silver, Inc., prior to completion of the grading.
13. Earth quantities were obtained from aerial grid mapping with contours at two foot intervals, with a tolerance of plus or minus one foot or one-half (1/2) contour interval.
14. The computed bid yardage is to finish grades as shown, and does not include the removal of subgrade where required.
15. Developer shall conform to Weldon Spring Grading and Erosion Control Ordinance.
16. If bales are destroyed by heavy rains, vandalism, etc., they are to be replaced immediately by Contractor.
17. Where natural vegetation is removed during grading, vegetation shall be re-established in such a density as to prevent erosion. Permanent type grasses shall be established as soon as possible or during the next seeding period after grading has been completed. Refer to Weldon Spring Grading and Erosion Ordinance.
18. When grading operations are completed or suspended for more than 30 days, permanent grass must be established at sufficient density to provide erosion control on the site. Between permanent grass seeding periods, temporary cover shall be provided according to the designated officials recommendation.
19. Any wells and/or springs which may exist on this property should be located and sealed in a manner acceptable to the City of Weldon Spring.
20. All existing trash, debris and broken concrete pieces on site must be removed and disposed of off-site.
21. Debris and foundation material from any existing on-site building or structure which is scheduled to be razed for this development must be disposed of off-site.
22. Soft soils in the bottom and banks of any former pond sites should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed public right-of-way locations or on any storm sewer location.
23. Development is not located within the 100 Year Flood Plain Limits as shown on the F.E.M.A. Map Panel No. 29183C 0115D.
24. All existing improvements damaged or destroyed during construction shall be replaced or repaired in kind.
25. Polyvinyl Chloride (PVC) shall conform to the requirements of ASTM D-3034 Standard Specifications for the PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, SDR-35.
26. All P.V.C. sanitary sewer pipe to be SDR-35 or equal with clean 1/2" to 1"granular stone bedding uniformly graded. This bedding shall extend from 4" below the pipe to the pipe to the springline of the pipe. Immediately backfill over pipe, this should consist of the same size or minus stone from springline of pipe to 6" above top of pipe.
27. All exterior sewer manholes shall be waterproofed on the exterior in accordance with Missouri Department of Natural Resources specifications. 10 CSR-8.120(7)(E).
28. Brick shall not be used on manholes.
29. The minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding house connection shall not be less than the diameter of the sanitary sewer plus a vertical distance not less than two and one-half feet (2-1/2').
30. Storm sewers 18" diameter or smaller shall be A.S.T.M. C-14.
31. Storm sewers 21" diameter or larger shall be A.S.T.M. C-76, Class II.
32. All storm sewer pipe under pavement, regardless of size, shall be reinforced concrete pipe (A.S.T.M. C-76, Class III) unless noted otherwise on the plans.
33. All manhole and catch basin tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor. At the time of construction stake out of the sewer lines, all curb and grate inlets will be face staked. If normal face stakes fall in line with sewer construction, the Engineer will set these stakes on a double offset. It shall be the responsibility of the sewer contractor to preserve all face stakes from destruction.
34. All standard street curb inlets to have front of inlet 2 feet behind curb.
35. All grout for rip-rap shall be high slump ready-mix concrete.
36. The Duckett Creek Sewer District shall be notified at least 48 hours prior to construction of sanitary sewers for coordination and inspection.
37. All sanitary and storm sewers shall meet all specifications and installation requirements of the local governing authority.
38. All storm and sanitary trench backfills will be water jetted. Granular backfill will be used under pavement areas.
39. Easements shall be provided for storm sewers, sanitary sewers and all utilities on the record plat. See record plat for location and size of easements. This does not apply to house laterals.
40. Hazard markers will consist of three (3) standard specification, "Manual on Uniform Traffic Control Devices," end of roadway markers mounted on two (2) pound "U" channel sign post. Each marker shall consist of an eighteen (18) inch diamond reflectorized red panel. The bottom of each panel shall be mounted a minimum of four (4) feet above the elevation of the pavement surface.
41. All street construction shall meet the City of Weldon Spring specifications.
42. All existing and proposed monuments, as required, will be shown on the Final Record Plat.
43. Water lines, valves, sleeves, meters and etc., shall meet all specifications and installation requirements of the local governing authority.
44. All cast iron pipe for water mains shall conform to A.W.W.A. specification C-106 and/or C-108. The cast iron fittings shall conform to A.W.W.A. specification C-110. All rubber gasket joints for water cast iron pressure pipe and fittings shall conform to A.W.W.A. specification C-111.
45. All water hydrants and valves shall be cast iron and installed in accordance with plans and details.
46. All P.V.C. water pipe shall have a minimum pressure rate of PR-200 or SDR-21.
47. NOTE: The grading and elevations shown on the grading plans are for construction purposes only. Finished grades and slopes will vary from those shown on the plans depending upon the location, size, and type of house built on the lot. However, care should be taken to insure that finished grading conforms to drainage area maps.
48. This tract is served by:
    Missouri-American Water Company
    Duckett Creek Sanitary District
    Cuivre River Electric
    Southwestern Bell Telephone
    St. Charles Gas Company
    Cottleville Fire Protection District
    Francis Howell School District
    St. Charles Post Office
49. All pipe shall have positive drainage through manholes. No flat base structures are allowed.
50. The contractor shall prevent strom, surface water, mud and construction debris from entering existing sanitary sewer mains.
51. NOTE: Install Sight Proof Fence per Duckett Creek Sanitary Sewer Dist. Specifications.
52. Provide 1½" conduit to nearest phone access before pavement is installed.
53. Provide water service to Lift Station with a 1' Frost Proof Hydrant.
54. Clean granular fill will be used as backfill for sanitary trench backfill that will support a storm sewer at sanitary sewer and storm sewer crossings.



SHEET KEY MAP



LOCATION MAP

DRAWING INDEX

Sheet	Description
1	COVER SHEET
2-9	FLAT PLANS
10-17	GRADING PLANS
18-22	SANITARY SEWER PROFILES
23-26	STORM SEWER PROFILES
27-31	STREET PROFILES
32	ENTRANCE PLAN
33-34	FORCE MAIN PROFILES
35-36	LIFT STATION DETAILS
37-44	DRAINAGE AREA MAPS
45-49	CONSTRUCTION DETAILS

LEGEND

Sanitary Sewer (Proposed)	MH 20	Sanitary Structure		R.C.P.	Reinforced Concrete Pipe
Sanitary Sewer (Existing)	CI 30	Storm Structure		C.M.P.	Corrugated Metal Pipe
Storm Sewer (Proposed)		Test Hole		C.I.P.	Cast Iron Pipe
Storm Sewer (Existing)	PP	Power Pole		P.V.C.	Polyvinyl Chloride
8"W Water Line & Size		Light Standard		V.C.P.	Vitrified Clay Pipe
EX W Existing water line		Double Water Meter Setting			
Tee & Valve		Single Water Meter Setting		C.O.	Clean Out
Hydrant	C.I.	Curb Inlet		V.T.	Vent Trap
Cap	S.C.I.	Skewed Curb Inlet		T.B.R.	To Be Removed
18 Lot or Building Number	D.C.I	Double Curb Inlet		T.B.R.&R	To Be Removed & Relocated
x Existing Fence Line	G.I.	Grate Inlet		T.B.P.	To Be Protected
Existing Tree Line	A.I.	Area Inlet		T.B.A.	To Be Abondoned
Street Sign	D.A.I.	Double Area Inlet		B.C.	Base Of Curb
Existing Contour	C.C.	Concrete Collar		T.C.	Top Of Curb
Proposed Contour	F.E.	Flared End Section		T.W.	Top Of Wall
Grouted Rip-Rap	E.P.	End Pipe		B.W.	Base Of Wall
End of Lateral	E.D.	Energy Dissipator		(TYP)	Typical
Asphalt Pavement	M.H.	Manhole		U.N.O.	Unless Noted Otherwis
Concrete Pavement	C.P.	Concrete Pipe		U.I.P.	Use in Place

SITE BENCHMARK

BM #1

R.R. SPIKE S.W. SIDE OF THE POWER POLE 1' HIGH ON THE N. SIDE OF INDEPENDENCE HIGHTS ROAD AT THE N.W. CORNER.

ELEV. 585.67

REVISION

Rev. 2-16-96

PICKETT RAY & SILVER

Civil Engineers
Planners
Land Surveyors

333 Mid Rivers Mall Dr.
St. Peters, MO 63376

397-1211 FAX 397-1104

ENGINEERS AUTHENTICATION

The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in the project and specifically includes revisions after this date unless reauthenticated.

PICKETT, RAY & SILVER, INC.

Signature Date

DEVELOPER

WHITTAKER CONSTRUCTION, INC.
335A MID RIVERS MALL DRIVE
ST. PETERS, MO. 63376
970-1511

© Copyright 1995 by

CONFIDENTIAL P
The use, reproductio
drawing are reserved

DRAWN J.L.K.
CHECKED

FIELD BOOK 568

PROJ
JOB

CAMELOT – PHASE TWO
FLAT PLAN

DEC. 1995 JOB NO. 94-120
Rev. 2-16-96

℄ INDEPENDENCE (40' W.) ROAD
EXISTING ℄ AS TRAVELED
0+01.92
N63°17'39"E 656.59'
N63°01'47"E 1185.41'
10' WIDE RIGHT-OF-WAY DEDICATION STRIP
4' W. CONC. SIDEWALK
CENTER 18' W. ROADWAY EASEMENT

ENCHANTED (50' W.) COURT
26' W. CONCRETE PAVEMENT (TYPICAL)
GRAIL CASTLE (50' W.) COURT
CAMELOT DRIVE
TOWER HILL (50' W.) COURT

PHASE ONE
PHASE TWO

BASIN "A"
BASIN "B"

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 inch = 50 ft.

SEE SHEET 9
SEE SHEET 3

NOTE
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

941200ES

2
49

NOTE
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

CAMELOT – PHASE TWO
FLAT PLAN
DEC. 1995 JOB NO. 94-120
REV. 2-16-96

BASIN "B"

SEE SHEET 2

SEE SHEET 8

SEE SHEET 5

SEE SHEET 4

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 inch = 50 ft.

CREED ST. W. RAINWAY EASEMENT

3
49

94120ES

CAMELOT – PHASE TWO
FLAT PLAN

DEC. 1995 JOB NO. 94-120
REV. 2-10-96

SEE SHEET 3

SEE SHEET 5

LANCELOT (50' W.) DRIVE
26' W. CONCRETE PAVEMENT

PHASE ONE
PHASE TWO

N 3°41'55" E
666.42'
S 26°37'18" E
932.58'
S 73°51'01" W
666.28'

50'W EASEMENT TO SHELL PIPELINE CORP.
BK 230 PG 117, BK 235 PG 15
& BK 1742 PG 324

5' x 26" WIDE CONCRETE PAVEMENT (TYPICAL)

LIMITS OF HIGH WATER

LAKE "F"
15 YR. H.W. = 579.69
100 YR. H.W. = 579.88

NOTE
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

N/F DALE KOLB B 585 / P 553

N/F EGELHOFF 585/555

N/F KOLB BOOK 585 PAGE 551

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 inch = 50 ft.

U.S. SURVEY 1987
FRAC. SECTION 26.

CAMELOT – PHASE TWO
FLAT PLAN

DEC. 1995 JOB NO. 94-120

REV. 2-16-96

SEE SHEET 3

SEE SHEET 4

SEE SHEET 7

SEE SHEET 6

50'W EASEMENT TO SHELL PIPELINE CORP. BK 235 PG 15 & BK 1742 PG 324

26' WIDE CONCRETE PAVEMENT (TYP.)

CAMELOT DRIVE (50' W.)

GARETH DRIVE (50' W.)

WIZARD COURT (50' W.)

U.S. SURVEY 1787 FRAC. SECTION 26, T30N - R3W

LIMITS OF HIGH WATER

LAKE "F"
15 YR. H.W. = 579.69
100 YR. H.W. = 579.88

PEDESTRIAN TRAIL

1' BERM (TYPICAL)

GRAPHIC SCALE
50 0 50 10
(IN FEET)
1 inch = 50 ft.

NOTE
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

94120DES

CAMELOT – PHASE TWO
FLAT PLAN

DEC. 1995 JOB NO. 94-120
REV. 2-16-96

SEE SHEET 5

N79°25'09"W 518.84'

N00°06'37"W 229.96'

N89°11'56"W 79.44'

S05°46'59"W 50.01'

N85°12'56"W 340.57'

S86°56'56"E 141.30'

N85°49'56"W 295.79'

N84°12'56"W 173.96'

S00°20'45"E 1544.15'

(50' W.) COURT 1-8

AGRAVAINE (50' W.) COURT 9-13

CAMELOT (50' W.) DRIVE

WOLFRUM ROAD

24' WIDE CONCRETE PAVEMENT (TYPICAL)

4' W. CONC. SIDEWALK

89 7+61
90 5+81
91 4+00
92 4+05
93
98 4+87
99 3+95
100 2+03
101 0+53
102 2+15
103 3+06
104 4+31
105 4+36
106 1+69
107 1+63
108 5+91
109 7+57
110 10+53
111 11+96
112

M.H. 238, 237, 236, 235, 234, 233, 232, 242, 243, 202, 203, 201, 200-A, 220, 208, 207, 206, 205, 204, 219

C.I. 2-12, 2-11, 2-9, 2-5, 2-6

A.I. 2-11, 2-7

F.E. 2-10, 2-8, 2-3

L.S. 200

LIFT STATION 0+00.00

VALVE BOX

24 HR. STORAGE

B30 R@12'

B31 R@16'

B32 R@16'

1+10.05 GREN 3-5

1' BERM (TYPICAL)

0+00.00 10'x10' GROUTED RIPRAP w/ Energy Dissipators

0+15.00 10'x10' GROUTED RIPRAP

0+67.74 10'x10' GROUTED RIPRAP

8" P.V.C. FORCE MAIN

Right-of-way Dedication

NOTE: SEE SHEET 1 OF 49 ITEMS 51-53 FOR ADDITIONAL LIFTSTATION REQUIREMENTS.

PARCEL B1501 / P1345

BASIN 'G'

15 Yr. HW = 531.25
100 Yr. HW = 532.55

Limits of High Water

CLEANOUT (TYPICAL)

CENTER LINE AS-TRAVELED

CENTER LINE PER B306 / PG 435-437

FRAC. SECTION 26
FRAC. SECTION 35

N/F WALSH B318 / P269

FRAC. SECTION 26
FRAC. SECTION 25

N/F KOLB BOOK 585 PAGE 551

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 inch = 50 ft.

NOTE
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

94120DES

CAMELOT – PHASE TWO
FLAT PLAN

DEC. 1995 JOB NO. 94-120
REV. 2-16-96

NOTE
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

SEE SHEET 8

SEE SHEET 5

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 inch = 50 ft.

N/F CARPENTER B 552 / P 823

S72°41'38"W 831.61'

67 12+32 | 68 13+14 | 69 14+46

50'W EASEMENT TO SHELL PIPELINE CORP. BK 230 PG 117, BK 235 PG 15 & BK 1742 PG 324

F.E. 2-38 15+76 0+22.00 10'x10' GROUTED RIPRAP

M.H. 275 | M.H. 275A | 5435 | 5436

BASIN "E"
100 Yr. HW=535.41
15 Yr. HW=532.68
LIMITS OF HIGH WATER

F.E. 2-31 | F.E. 2-31A 0+00.00 10'x10' Grouted Riprap Energy Dissipator

649.48'

PEDESTRIAN TRAIL

0+72.00 M.H. 2-32

85 | 84

M.H. 2-33 24+15.74

86 | 87 | 88 10+93 | 89 7+61

CALIBURN (50' W.) COURT

26' W. CONCRETE PAVEMENT & CURB (TYP.)

Note: 1½" PVC Pipe Force Main from individual grinder pumps (private) Typical for Lots 84 thru 87

M.H. 239 | M.H. 240 | C.I. 2-34

B29 R@14.5'

STA: 9+13.33
STA: 0+00
STA: 0+00

M.H. 238

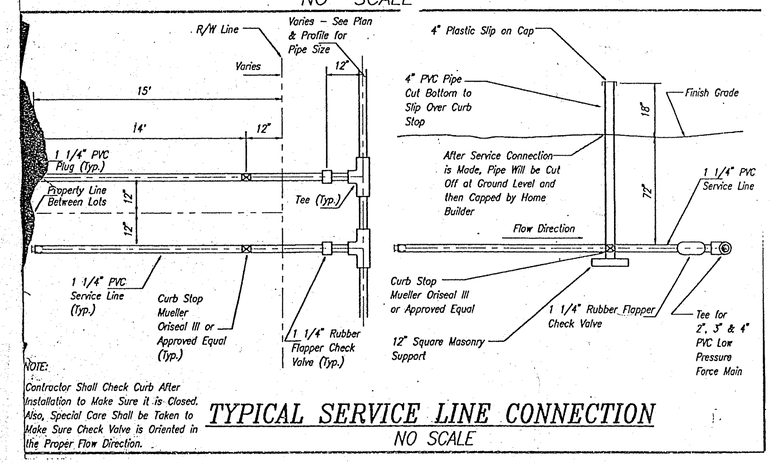
N17°06'36"W

N89°35'49"W 254.70'

N79°25'09"W

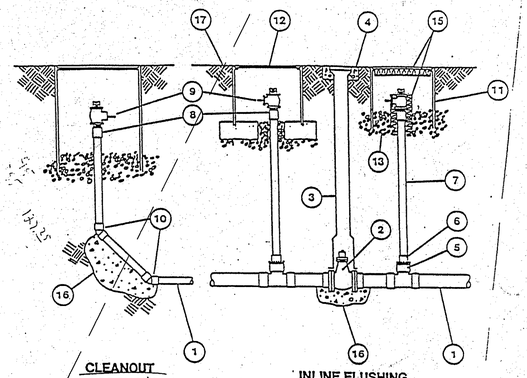
N/F KOLB B 1332 / P 1533

AIR RELEASE VALVE OR AIR VACUUM VALVE
NO SCALE



NOTE: Contractor Shall Check Curb After Installation to Make Sure it is Closed. Also, Special Care Shall be Taken to Make Sure Check Valve is Oriented in the Proper Flow Direction.

TYPICAL SERVICE LINE CONNECTION
NO SCALE



CLEANOUT ASSEMBLY N.T.S.

INLINE FLUSHING ASSEMBLY N.T.S.

end of line

NOTE: Lots 84, 85, 86 & 87 CONNECT TO MH 240 WITH INDIVIDUAL PRIVATE GRINDER PUMPS.

PRELIMINARY PRESSURE SEWER - PIPE SIZING AND BRANCH ANALYSIS
CAMALOT

Prepared By:

Jan-12-96

Zone Number	Accumulated Total Of Cores This Zone	Existing Pipe Size	Gal Per 100 Lineal Feet	Length Of Zone	Capacity Of Zone	Average Daily Flow	Average Fluid Changes Per Day	Average Retention Time (Hr)	Accumulated Retention Time (Hr)
This spreadsheet was calculated using pipe diameters for: SDR21PVC								Gallons Per Dwelling =	200
1.00	3	1.50	12.07	300	36.21	600	16.57	1.45	2.16
2.00	4	2.00	18.84	125	23.55	800	33.97	0.71	0.71

PRELIMINARY PRESSURE SEWER - PIPE SIZING AND BRANCH ANALYSIS
CAMALOT

Prepared By:

Jan-12-96

Zone Number	Number Of Cores In Zone	Accumulated # Of Cores In Zone	Max # Of Simultanious Operations	Max Flow In GPM	Pipe Size (Inch)	Max Velocity (FPS)	Length Of Main This Zone	Friction Loss Factor (ft/100ft)	Friction Loss This Zone	Accumulated Friction Loss (Feet)	Max Main Elevation	Minimum Pump Elevation	Static Head (Feet)	Total Dynamic Head (ft)
This spreadsheet was calculated using pipe diameters for: SDR21PVC								Friction loss calculations were based on a Constant for inside roughness of "C" = 120						
1.00	3	3	2	22	1.50	3.04	300	3.25	9.76	12.68	582	562	20	32.68
2.00	1	4	3	33	2.00	2.92	125	2.33	2.92	2.92	582	570	12	14.92

FLUSHING CONNECTIONS

1. LOW PRESSURE SEWER SYSTEM (LPSS) MAIN. See plan view for valve size.
2. GATE VALVE - fully ported, size of LPSS main. See plan view for valve size. Valve is not included in price bid for in-line flush assemblies.
3. VALVE BOX - length as required.
4. CONCRETE COLLAR
5. TEE or SADDLE - size of LPSS main.
6. REDUCER - 2" x size of LPSS main.
7. 2" RISER
8. THREADED ADAPTER
9. 1-1/2" GATE VALVE - wrench operated.
10. ELBOW - 45°
11. METER BOX or concrete, steel or aluminum corrugated pipe, etc.
12. COVER - concrete, steel, etc. weatherproof, vandal-proof.
13. GRAVEL BEDDING - for box support and surface water leaching.
14. INSULATION
15. CONCRETE THRUST BLOCK
16. FINISHED GRADE

941200ES

REV. 2-16-96

CAMELOT – PHASE TWO
FLAT PLAN

DEC. 1995 JOB NO. 94-120

SEE SHEET 9

SEE SHEET 3

SEE SHEET 7

SEE SHEET 1 OF 49 FOR ADDITIONAL LIFT STATION REQUIREMENTS

N45°06'11"E 372.40'(R4)

N/F BOATMEN'S TRUST COMPANY, CO-TRUSTEE U/W ADOLPHUS BUSCH, III, DECEASED B 1732 P 1720

12.80' 60.08' S45°00'11"W 255.76'

N27°07'30"W 603.77'(R4) 660+19

N27°07'30"W 806.99'

LIMITS OF HIGH WATER

"LAKE "D" 15 YR. H.W. = 548.55 100 YR. H.W. = 548.83

"LAKE "C" 15 YR. H.W. = 580.42 100 YR. H.W. = 580.64

LIMITS OF HIGH WATER

PERCEVAL DRIVE

PEDESTRIAN TRAIL

3" P.V.C. FORCE MAIN

PROPOSED SANITARY SEWER AERIAL CROSSING

6" CONC. VERT. CURB

26' WIDE CONCRETE PAVEMENT (TYPICAL)

GRAPHIC SCALE

50 0 50 100

(IN FEET)

1 inch = 50 ft.

NOTE

Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

94120DES

REV. 2-16-96

CAMELOT – PHASE TWO
FLAT PLAN

DEC. 1995 JOB NO. 94-120

NOTE
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

NOTE :
THE PROPOSED SIDEWALK SHOWN ALONG INDEPENDENCE DRIVE IS APPROXIMATE LOCATION ONLY. THE SIDEWALK WILL MEANDER THROUGH THE TREES ALONG INDEPENDENCE DRIVE RIGHT-OF-WAY.

℄ INDEPENDENCE (40' W.) ROAD

N63°17'39"E 811.67'

10' WIDE RIGHT-OF-WAY DEDICATION STRIP 566.79' (TO CENTERLINE WEST ENTRANCE)

4' W. CONC. SIDEWALK

SUBDIVISION
PG 4

N/F LATTA B 625 / P 14

N27°31'16"W 657.41'

N27°07'30"W 208.65'

N45°02'32"E 284.43'

N29°29'52"W

S28°23'49"E

FRAC. SECTION 26 U.S. SURVEY 1782

N/F SCHAFFER B 625 / P 520

S27°22'20"E 190.64'

N27°17'38"W 189.07'

N62°51'45"E 208.58'

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 inch = 50 ft.

GALAHAD COURT (50' W.) ENCHANTED DRIVE (50' W.) MERLIN LN. (50' W.) DRIVE

26' WIDE CONCRETE PAVEMENT (TYPICAL)

1' BERM (TYPICAL)

3" P.V.C. FORCE MAIN

LIMIT OF HIGH WATER

LAKE "C"

SEE SHEET 8

SEE SHEET 2

9/49

REV. 2-16-96

CAMELOT
GRADING PLAN

Dec. 1995 — Job No. 94-120

N63°17'39"E 956.59' — N63°01'47"E 1185.41'

CLEARING LIMITS (TYP.) — 0+94.92 END 7" PVMT. BEGIN 6" PVMT. — GRADING LIMITS

ENCHANTED (50' W.) COURT

GRAIL CASTLE (50' W.) COURT

CAMELOT (50' W.) DRIVE

TOWER HILL (50' W.) COURT

BASIN "A" — BASIN "B"

GENESEE & WESTERN RAILWAY EASEMENT

Lake "C" 15yr-HW = 580.4ft 100yr-HW = 580.4ft

SEE SHEET 17

SEE SHEET 11

94120DES

REV. 2-16-96

CAMELOT
GRADING PLAN

Dec. 1995 — Job No. 94-120

SEE SHEET 10

SEE SHEET 16

SEE SHEET 12

SEE SHEET 13

LEGEND (50' W.) COURT

CAMELOT (50' W.) DRIVE

GUINEVERE (50' W.) COURT

GUINEVERE (50' W.) DRIVE

CORNWALL (50' W.) DRIVE

LANCELOT (50' W.) DRIVE

BASIN "B"

50'W. EASEMENT TO SHELL PIPELINE CORP. BK 230 PG 117, BK 235 PG 15 & BK 1742 PG 324

GRADING LIMITS

CLEARING LIMITS

11

49

CAMELOT
GRADING PLAN

Dec. 1995 — Job No. 94-120

REV. 2-16-90

LANCELOT (50' W.) DRIVE

SEE SHEET 11

SEE SHEET 13

50'W. EASEMENT TO SHELL PIPELINE CORP. BK 230 PG 117, BK 235 PG 15 & BK 1742 PG 324

GRADING LIMITS

CLEARING LIMITS (TYP.)

CLEARING LIMITS

LIMITS OF HIGH WATER

EXISTING LAKE "F"

15 YR. H.W. = 579.69
100 YR. H.W. = 579.88
TOP DAM = 583.7
SPILLWAY = 582.2

BERM TYPICAL

LANCELOT (50' W.) DRIVE

N 73°41'45" E

666.42'

S 73°51'01" W

666.28'

S 16°37'18" E

332.58'

N/F DALE KOLB B 585 / P 553

N/F KOLB BOOK 585 PAGE 551

EGEL 585/

U.S. SURVEY 1787

FRAC. SECTION 28

12/49

CAMELOT
GRADING PLAN

Dec. 1995 — Job No. 94-120

REV: 2-16-96

SEE SHEET 11

SEE SHEET 12

SEE SHEET 15

SEE SHEET 14

50'W EASEMENT TO SHELL PIPELINE CORP. BK 1765 PG 117, BK 1735 PG 15 & BK 1742 PG 324

CAMELOT DRIVE

GARETH (60' W.) DRIVE

WIZARD (60' W.) COURT

KGRAVAINE CT.

PEDESTRIAN TRAIL

EXISTING LAKE
10 YR. HWL = 579.69
100 YR. HWL = 579.89
TOP DAM = 582.7
SPILLWAY = 582.2

Note:
Existing outfall pipe to be removed and all existing trees on dam to be cleared.

CAMELOT
GRADING PLAN

Dec. 1995 Job No. 94-120

REV. 2/16/96

SEE SHEET 13

SEE SHEET 15 FOR ADDITIONAL GRADING

SEE SHEET 16 FOR ADDITIONAL GRADING

SEE SHEET 17 FOR ADDITIONAL GRADING

SEE SHEET 18 FOR ADDITIONAL GRADING

SEE SHEET 19 FOR ADDITIONAL GRADING

SEE SHEET

REV. 2-16-96

CAMELOT
GRADING PLAN

Dec. 1995 Job No.

SEE SHEET 16

N/F
CARPENTER
B 552 / P 823

S72°41'38"W
831.61'

50'W. EASEMENT TO SHELL PIPELINE CORP.
BK 230 PG 117, BK 235 PG 15
& BK 1742 PG 324

BASIN "E"
15YR. H.W. = 534.05
100YR. H.W. = 535.40
TOP DAM = 538.5
SPILLWAY = 537.00
20' LONG GRASS SPILLWAY

N/F
KOLB
B 1332 / P 1533

N17°06'35"W

N89°35'49"W
654.70'

N29°25'09"W

CALBURN (50'W)
COURT

PARCEL

67 68 69 70 84 85 86 87 88 89

FE 2-38
FE 2-31A
FE 2-31
MH 2-33
MH 2-32
MH 2-40
MH 2-39
MH 2-30
CI 2-34
EP 2-31B

GRADING LIMITS
CLEARING LIMITS

3:1 SLOPE

B29
R@14.5'

STA: 9+13.33
STA: 0+00
STA: 0+00

94120ES

15

Rev. 2-16-96

CAMELOT
GRADING PLAN

Dec. 1995 — Job No. 94-120

SEE SHEET 17

SEE SHEET 15

SEE SHEET 17

Existing "D" Lake
15 YR. H.W. = 548.55
100 YR. H.W. = 548.83
TOP DAM = 551.9
SPILLWAY = 550.4

Existing "C" Lake
15 YR. H.W. = 580.42
100 YR. H.W. = 580.64
TOP DAM 583.9
SPILLWAY = 582.4

Note: Existing outfall pipe to be removed and all existing trees at dam to be cleared.

Existing outfall pipe to be removed and all existing trees at dam to be cleared

N45°06'11"E
N/F BOATMENS TRUST COMPANY, CO-TRUSTEE U/W ADOLPHUS BOSCH, III, DECEASED
DB 1732 P 1720
255.76'
S45°00'11"W
112.80'
60.08'
372.40'
N45°00'11"E
603.77'(R+M)
808.36'
60.36'

PERCEVAL DRIVE
GUINNEVERE (50' W.) DRIVE
PEDESTRIAN TRAIL
FOREST MAIN
LIMITS OF HIGH WATER
CLEARING LIMITS
GRADING LIMITS
2.5H:1V SLOPE
3:1 SLOPE
FORCE MAIN
VALVE BOX
ASPHALT PATH
CONCRETE PATH
B1501 / PIPE PARCEL
B87 R=812.5'
B19 R=810'
B20 R=811'
B21 R=816'
L.S. (+4)
E.P. 2-46A
E.P. 2-46B
E.P. 2-46C
E.P. 2-46D
E.P. 2-46E
E.P. 2-46F
E.P. 2-46G
E.P. 2-46H
E.P. 2-46I
E.P. 2-46J
E.P. 2-46K
E.P. 2-46L
E.P. 2-46M
E.P. 2-46N
E.P. 2-46O
E.P. 2-46P
E.P. 2-46Q
E.P. 2-46R
E.P. 2-46S
E.P. 2-46T
E.P. 2-46U
E.P. 2-46V
E.P. 2-46W
E.P. 2-46X
E.P. 2-46Y
E.P. 2-46Z
E.P. 2-46AA
E.P. 2-46AB
E.P. 2-46AC
E.P. 2-46AD
E.P. 2-46AE
E.P. 2-46AF
E.P. 2-46AG
E.P. 2-46AH
E.P. 2-46AI
E.P. 2-46AJ
E.P. 2-46AK
E.P. 2-46AL
E.P. 2-46AM
E.P. 2-46AN
E.P. 2-46AO
E.P. 2-46AP
E.P. 2-46AQ
E.P. 2-46AR
E.P. 2-46AS
E.P. 2-46AT
E.P. 2-46AU
E.P. 2-46AV
E.P. 2-46AW
E.P. 2-46AX
E.P. 2-46AY
E.P. 2-46AZ
E.P. 2-46BA
E.P. 2-46BB
E.P. 2-46BC
E.P. 2-46BD
E.P. 2-46BE
E.P. 2-46BF
E.P. 2-46BG
E.P. 2-46BH
E.P. 2-46BI
E.P. 2-46BJ
E.P. 2-46BK
E.P. 2-46BL
E.P. 2-46BM
E.P. 2-46BN
E.P. 2-46BO
E.P. 2-46BP
E.P. 2-46BQ
E.P. 2-46BR
E.P. 2-46BS
E.P. 2-46BT
E.P. 2-46BU
E.P. 2-46BV
E.P. 2-46BW
E.P. 2-46BX
E.P. 2-46BY
E.P. 2-46BZ
E.P. 2-46CA
E.P. 2-46CB
E.P. 2-46CC
E.P. 2-46CD
E.P. 2-46CE
E.P. 2-46CF
E.P. 2-46CG
E.P. 2-46CH
E.P. 2-46CI
E.P. 2-46CJ
E.P. 2-46CK
E.P. 2-46CL
E.P. 2-46CM
E.P. 2-46CN
E.P. 2-46CO
E.P. 2-46CP
E.P. 2-46CQ
E.P. 2-46CR
E.P. 2-46CS
E.P. 2-46CT
E.P. 2-46CU
E.P. 2-46CV
E.P. 2-46CW
E.P. 2-46CX
E.P. 2-46CY
E.P. 2-46CZ
E.P. 2-46DA
E.P. 2-46DB
E.P. 2-46DC
E.P. 2-46DD
E.P. 2-46DE
E.P. 2-46DF
E.P. 2-46DG
E.P. 2-46DH
E.P. 2-46DI
E.P. 2-46DJ
E.P. 2-46DK
E.P. 2-46DL
E.P. 2-46DM
E.P. 2-46DN
E.P. 2-46DO
E.P. 2-46DP
E.P. 2-46DQ
E.P. 2-46DR
E.P. 2-46DS
E.P. 2-46DT
E.P. 2-46DU
E.P. 2-46DV
E.P. 2-46DW
E.P. 2-46DX
E.P. 2-46DY
E.P. 2-46DZ
E.P. 2-46EA
E.P. 2-46EB
E.P. 2-46EC
E.P. 2-46ED
E.P. 2-46EE
E.P. 2-46EF
E.P. 2-46EG
E.P. 2-46EH
E.P. 2-46EI
E.P. 2-46EJ
E.P. 2-46EK
E.P. 2-46EL
E.P. 2-46EM
E.P. 2-46EN
E.P. 2-46EO
E.P. 2-46EP
E.P. 2-46EQ
E.P. 2-46ER
E.P. 2-46ES
E.P. 2-46ET
E.P. 2-46EU
E.P. 2-46EV
E.P. 2-46EW
E.P. 2-46EX
E.P. 2-46EY
E.P. 2-46EZ
E.P. 2-46FA
E.P. 2-46FB
E.P. 2-46FC
E.P. 2-46FD
E.P. 2-46FE
E.P. 2-46FF
E.P. 2-46FG
E.P. 2-46FH
E.P. 2-46FI
E.P. 2-46FJ
E.P. 2-46FK
E.P. 2-46FL
E.P. 2-46FM
E.P. 2-46FN
E.P. 2-46FO
E.P. 2-46FP
E.P. 2-46FQ
E.P. 2-46FR
E.P. 2-46FS
E.P. 2-46FT
E.P. 2-46FU
E.P. 2-46FV
E.P. 2-46FW
E.P. 2-46FX
E.P. 2-46FY
E.P. 2-46FZ
E.P. 2-46GA
E.P. 2-46GB
E.P. 2-46GC
E.P. 2-46GD
E.P. 2-46GE
E.P. 2-46GF
E.P. 2-46GG
E.P. 2-46GH
E.P. 2-46GI
E.P. 2-46GJ
E.P. 2-46GK
E.P. 2-46GL
E.P. 2-46GM
E.P. 2-46GN
E.P. 2-46GO
E.P. 2-46GP
E.P. 2-46GQ
E.P. 2-46GR
E.P. 2-46GS
E.P. 2-46GT
E.P. 2-46GU
E.P. 2-46GV
E.P. 2-46GW
E.P. 2-46GX
E.P. 2-46GY
E.P. 2-46GZ
E.P. 2-46HA
E.P. 2-46HB
E.P. 2-46HC
E.P. 2-46HD
E.P. 2-46HE
E.P. 2-46HF
E.P. 2-46HG
E.P. 2-46HH
E.P. 2-46HI
E.P. 2-46HJ
E.P. 2-46HK
E.P. 2-46HL
E.P. 2-46HM
E.P. 2-46HN
E.P. 2-46HO
E.P. 2-46HP
E.P. 2-46HQ
E.P. 2-46HR
E.P. 2-46HS
E.P. 2-46HT
E.P. 2-46HU
E.P. 2-46HV
E.P. 2-46HW
E.P. 2-46HX
E.P. 2-46HY
E.P. 2-46HZ
E.P. 2-46IA
E.P. 2-46IB
E.P. 2-46IC
E.P. 2-46ID
E.P. 2-46IE
E.P. 2-46IF
E.P. 2-46IG
E.P. 2-46IH
E.P. 2-46II
E.P. 2-46IJ
E.P. 2-46IK
E.P. 2-46IL
E.P. 2-46IM
E.P. 2-46IN
E.P. 2-46IO
E.P. 2-46IP
E.P. 2-46IQ
E.P. 2-46IR
E.P. 2-46IS
E.P. 2-46IT
E.P. 2-46IU
E.P. 2-46IV
E.P. 2-46IW
E.P. 2-46IX
E.P. 2-46IY
E.P. 2-46IZ
E.P. 2-46JA
E.P. 2-46JB
E.P. 2-46JC
E.P. 2-46JD
E.P. 2-46JE
E.P. 2-46JF
E.P. 2-46JG
E.P. 2-46JH
E.P. 2-46JI
E.P. 2-46JJ
E.P. 2-46JK
E.P. 2-46JL
E.P. 2-46JM
E.P. 2-46JN
E.P. 2-46JO
E.P. 2-46JP
E.P. 2-46JQ
E.P. 2-46JR
E.P. 2-46JS
E.P. 2-46JT
E.P. 2-46JU
E.P. 2-46JV
E.P. 2-46JW
E.P. 2-46JX
E.P. 2-46JY
E.P. 2-46JZ
E.P. 2-46KA
E.P. 2-46KB
E.P. 2-46KC
E.P. 2-46KD
E.P. 2-46KE
E.P. 2-46KF
E.P. 2-46KG
E.P. 2-46KH
E.P. 2-46KI
E.P. 2-46KJ
E.P. 2-46KK
E.P. 2-46KL
E.P. 2-46KM
E.P. 2-46KN
E.P. 2-46KO
E.P. 2-46KP
E.P. 2-46KQ
E.P. 2-46KR
E.P. 2-46KS
E.P. 2-46KT
E.P. 2-46KU
E.P. 2-46KV
E.P. 2-46KW
E.P. 2-46KX
E.P. 2-46KY
E.P. 2-46KZ
E.P. 2-46LA
E.P. 2-46LB
E.P. 2-46LC
E.P. 2-46LD
E.P. 2-46LE
E.P. 2-46LF
E.P. 2-46LG
E.P. 2-46LH
E.P. 2-46LI
E.P. 2-46LJ
E.P. 2-46LK
E.P. 2-46LL
E.P. 2-46LM
E.P. 2-46LN
E.P. 2-46LO
E.P. 2-46LP
E.P. 2-46LQ
E.P. 2-46LR
E.P. 2-46LS
E.P. 2-46LT
E.P. 2-46LU
E.P. 2-46LV
E.P. 2-46LW
E.P. 2-46LX
E.P. 2-46LY
E.P. 2-46LZ
E.P. 2-46MA
E.P. 2-46MB
E.P. 2-46MC
E.P. 2-46MD
E.P. 2-46ME
E.P. 2-46MF
E.P. 2-46MG
E.P. 2-46MH
E.P. 2-46MI
E.P. 2-46MJ
E.P. 2-46MK
E.P. 2-46ML
E.P. 2-46MM
E.P. 2-46MN
E.P. 2-46MO
E.P. 2-46MP
E.P. 2-46MQ
E.P. 2-46MR
E.P. 2-46MS
E.P. 2-46MT
E.P. 2-46MU
E.P. 2-46MV
E.P. 2-46MW
E.P. 2-46MX
E.P. 2-46MY
E.P. 2-46MZ
E.P. 2-46NA
E.P. 2-46NB
E.P. 2-46NC
E.P. 2-46ND
E.P. 2-46NE
E.P. 2-46NF
E.P. 2-46NG
E.P. 2-46NH
E.P. 2-46NI
E.P. 2-46NJ
E.P. 2-46NK
E.P. 2-46NL
E.P. 2-46NM
E.P. 2-46NN
E.P. 2-46NO
E.P. 2-46NP
E.P. 2-46NQ
E.P. 2-46NR
E.P. 2-46NS
E.P. 2-46NT
E.P. 2-46NU
E.P. 2-46NV
E.P. 2-46NW
E.P. 2-46NX
E.P. 2-46NY
E.P. 2-46NZ
E.P. 2-46OA
E.P. 2-46OB
E.P. 2-46OC
E.P. 2-46OD
E.P. 2-46OE
E.P. 2-46OF
E.P. 2-46OG
E.P. 2-46OH
E.P. 2-46OI
E.P. 2-46OJ
E.P. 2-46OK
E.P. 2-46OL
E.P. 2-46OM
E.P. 2-46ON
E.P. 2-46OO
E.P. 2-46OP
E.P. 2-46OQ
E.P. 2-46OR
E.P. 2-46OS
E.P. 2-46OT
E.P. 2-46OU
E.P. 2-46OV
E.P. 2-46OW
E.P. 2-46OX
E.P. 2-46OY
E.P. 2-46OZ
E.P. 2-46PA
E.P. 2-46PB
E.P. 2-46PC
E.P. 2-46PD
E.P. 2-46PE
E.P. 2-46PF
E.P. 2-46PG
E.P. 2-46PH
E.P. 2-46PI
E.P. 2-46PJ
E.P. 2-46PK
E.P. 2-46PL
E.P. 2-46PM
E.P. 2-46PN
E.P. 2-46PO
E.P. 2-46PP
E.P. 2-46PQ
E.P. 2-46PR
E.P. 2-46PS
E.P. 2-46PT
E.P. 2-46PU
E.P. 2-46PV
E.P. 2-46PW
E.P. 2-46PX
E.P. 2-46PY
E.P. 2-46PZ
E.P. 2-46QA
E.P. 2-46QB
E.P. 2-46QC
E.P. 2-46QD
E.P. 2-46QE
E.P. 2-46QF
E.P. 2-46QG
E.P. 2-46QH
E.P. 2-46QI
E.P. 2-46QJ
E.P. 2-46QK
E.P. 2-46QL
E.P. 2-46QM
E.P. 2-46QN
E.P. 2-46QO
E.P. 2-46QP
E.P. 2-46QQ
E.P. 2-46QR
E.P. 2-46QS
E.P. 2-46QT
E.P. 2-46QU
E.P. 2-46QV
E.P. 2-46QW
E.P. 2-46QX
E.P. 2-46QY
E.P. 2-46QZ
E.P. 2-46RA
E.P. 2-46RB
E.P. 2-46RC
E.P. 2-46RD
E.P. 2-46RE
E.P. 2-46RF
E.P. 2-46RG
E.P. 2-46RH
E.P. 2-46RI
E.P. 2-46RJ
E.P. 2-46RK
E.P. 2-46RL
E.P. 2-46RM
E.P. 2-46RN
E.P. 2-46RO
E.P. 2-46RP
E.P. 2-46RQ
E.P. 2-46RR
E.P. 2-46RS
E.P. 2-46RT
E.P. 2-46RU
E.P. 2-46RV
E.P. 2-46RW
E.P. 2-46RX
E.P. 2-46RY
E.P. 2-46RZ
E.P. 2-46SA
E.P. 2-46SB
E.P. 2-46SC
E.P. 2-46SD
E.P. 2-46SE
E.P. 2-46SF
E.P. 2-46SG
E.P. 2-46SH
E.P. 2-46SI
E.P. 2-46SJ
E.P. 2-46SK
E.P. 2-46SL
E.P. 2-46SM
E.P. 2-46SN
E.P. 2-46SO
E.P. 2-46SP
E.P. 2-46SQ
E.P. 2-46SR
E.P. 2-46SS
E.P. 2-46ST
E.P. 2-46SU
E.P. 2-46SV
E.P. 2-46SW
E.P. 2-46SX
E.P. 2-46SY
E.P. 2-46SZ
E.P. 2-46TA
E.P. 2-46TB
E.P. 2-46TC
E.P. 2-46TD
E.P. 2-46TE
E.P. 2-46TF
E.P. 2-46TG
E.P. 2-46TH
E.P. 2-46TI
E.P. 2-46TJ
E.P. 2-46TK
E.P. 2-46TL
E.P. 2-46TM
E.P. 2-46TN
E.P. 2-46TO
E.P. 2-46TP
E.P. 2-46TQ
E.P. 2-46TR
E.P. 2-46TS
E.P. 2-46TT
E.P. 2-46TU
E.P. 2-46TV
E.P. 2-46TW
E.P. 2-46TX
E.P. 2-46TY
E.P. 2-46TZ
E.P. 2-46UA
E.P. 2-46UB
E.P. 2-46UC
E.P. 2-46UD
E.P. 2-46UE
E.P. 2-46UF
E.P. 2-46UG
E.P. 2-46UH
E.P. 2-46UI
E.P. 2-46UJ
E.P. 2-46UK
E.P. 2-46UL
E.P. 2-46UM
E.P. 2-46UN
E.P. 2-46UO
E.P. 2-46UP
E.P. 2-46UQ
E.P. 2-46UR
E.P. 2-46US
E.P. 2-46UT
E.P. 2-46UU
E.P. 2-46UV
E.P. 2-46UW
E.P. 2-46UX
E.P. 2-46UY
E.P. 2-46UZ
E.P. 2-46VA
E.P. 2-46VB
E.P. 2-46VC
E.P. 2-46VD
E.P. 2-46VE
E.P. 2-46VF
E.P. 2-46VG
E.P. 2-46VH
E.P. 2-46VI
E.P. 2-46VJ
E.P. 2-46VK
E.P. 2-46VL
E.P. 2-46VM
E.P. 2-46VN
E.P. 2-46VO
E.P. 2-46VP
E.P. 2-46VQ
E.P. 2-46VR
E.P. 2-46VS
E.P. 2-46VT
E.P. 2-46VU
E.P. 2-46VV
E.P. 2-46VW
E.P. 2-46VX
E.P. 2-46VY
E.P. 2-46VZ
E.P. 2-46WA
E.P. 2-46WB
E.P. 2-46WC
E.P. 2-46WD
E.P. 2-46WE
E.P. 2-46WF
E.P. 2-46WG
E.P. 2-46WH
E.P. 2-46WI
E.P. 2-46WJ
E.P. 2-46WK
E.P. 2-46WL
E.P. 2-46WM
E.P. 2-46WN
E.P. 2-46WO
E.P. 2-46WP
E.P. 2-46WQ
E.P. 2-46WR
E.P. 2-46WS
E.P. 2-46WT
E.P. 2-46WU
E.P. 2-46WV
E.P. 2-46WW
E.P. 2-46WX
E.P. 2-46WY
E.P. 2-46WZ
E.P. 2-46XA
E.P. 2-46XB
E.P. 2-46XC
E.P. 2-46XD
E.P. 2-46XE
E.P. 2-46XF
E.P. 2-46XG
E.P. 2-46XH
E.P. 2-46XI
E.P. 2-46XJ
E.P. 2-46XK
E.P. 2-46XL
E.P. 2-46XM
E.P. 2-46XN
E.P. 2-46XO
E.P. 2-46XP
E.P. 2-46XQ
E.P. 2-46XR
E.P. 2-46XS
E.P. 2-46XT
E.P. 2-46XU
E.P. 2-46XV
E.P. 2-46XW
E.P. 2-46XX
E.P. 2-46XY
E.P. 2-46XZ
E.P. 2-46YA
E.P. 2-46YB
E.P. 2-46YC
E.P. 2-46YD
E.P. 2-46YE
E.P. 2-46YF
E.P. 2-46YG
E.P. 2-46YH
E.P. 2-46YI
E.P. 2-46YJ
E.P. 2-46YK
E.P. 2-46YL
E.P. 2-46YM
E.P. 2-46YN
E.P. 2-46YO
E.P. 2-46YP
E.P. 2-46YQ
E.P. 2-46YR
E.P. 2-46YS
E.P. 2-46YT
E.P. 2-46YU
E.P. 2-46YV
E.P. 2-46YW
E.P. 2-46YX
E.P. 2-46YY
E.P. 2-46YZ
E.P. 2-46ZA
E.P. 2-46ZB
E.P. 2-46ZC
E.P. 2-46ZD
E.P. 2-46ZE
E.P. 2-46ZF
E.P. 2-46ZG
E.P. 2-46ZH
E.P. 2-46ZI
E.P. 2-46ZJ
E.P. 2-46ZK
E.P. 2-46ZL
E.P. 2-46ZM
E.P. 2-46ZN
E.P. 2-46ZO
E.P. 2-46ZP
E.P. 2-46ZQ
E.P. 2-46ZR
E.P. 2-46ZS
E.P. 2-46ZT
E.P. 2-46ZU
E.P. 2-46ZV
E.P. 2-46ZW
E.P. 2-46ZX
E.P. 2-46ZY
E.P. 2-46ZZ
E.P. 2-46AAA
E.P. 2-46AAB
E.P. 2-46AAC
E.P. 2-46AAD
E.P. 2-46AAE
E.P. 2-46AAF
E.P. 2-46AAG
E.P. 2-46AAH
E.P. 2-46AAI
E.P. 2-46AAJ
E.P. 2-46AAK
E.P. 2-46AAL
E.P. 2-46AAM
E.P. 2-46AAN
E.P. 2-46AAO
E.P. 2-46AAP
E.P. 2-46AAQ
E.P. 2-46AAR
E.P. 2-46AAS
E.P. 2-46AAT
E.P. 2-46AAU
E.P. 2-46AAV
E.P. 2-46AAW
E.P. 2-46AAX
E.P. 2-46AAY
E.P. 2-46AAZ
E.P. 2-46ABA
E.P. 2-46ABB
E.P. 2-46ABC
E.P. 2-46ABD
E.P. 2-46ABE
E.P. 2-46ABF
E.P. 2-46ABG
E.P. 2-46ABH
E.P. 2-46ABI
E.P. 2-46ABJ
E.P. 2-46ABK
E.P. 2-46ABL
E.P. 2-46ABM
E.P. 2-46ABN
E.P. 2-46ABO
E.P. 2-46ABP
E.P. 2-46ABQ
E.P. 2-46ABR
E.P. 2-46ABS
E.P. 2-46ABT
E.P. 2-46ABU
E.P. 2-46ABV
E.P. 2-46ABW
E.P. 2-46ABX
E.P. 2-46ABY
E.P. 2-46ABZ
E.P. 2-46ACA
E.P. 2-46ACB
E.P. 2-46ACC
E.P. 2-46ACD
E.P. 2-46ACE
E.P. 2-46ACF
E.P. 2-46ACG
E.P. 2-46ACH
E.P. 2-46ACI
E.P. 2-46ACJ
E.P. 2-46ACK
E.P. 2-46ACL
E.P. 2-46ACM
E.P. 2-46ACN
E.P. 2-46ACO
E.P. 2-46ACP
E.P. 2-46ACQ
E.P. 2-46ACR
E.P. 2-46ACS
E.P. 2-46ACT
E.P. 2-46ACU
E.P. 2-46ACV
E.P. 2-46ACW
E.P. 2-46ACX
E.P. 2-46ACY
E.P. 2-46ACZ
E.P. 2-46ADA
E.P. 2-46ADB
E.P. 2-46ADC
E.P. 2-46ADD
E.P. 2-46ADE
E.P. 2-46ADF
E.P. 2-46ADG
E.P. 2-46ADH
E.P. 2-46ADI
E.P. 2-46ADJ
E.P. 2-46ADK
E.P. 2-46ADL
E.P. 2-46ADM
E.P. 2-46ADN
E.P. 2-46ADO
E.P. 2-46ADP
E.P. 2-46ADQ
E.P. 2-46ADR
E.P. 2-46ADS
E.P. 2-46ADT
E.P. 2-46ADU
E.P. 2-46ADV
E.P. 2-46ADW
E.P. 2-46ADX
E.P. 2-46ADY
E.P. 2-46ADZ
E.P. 2-46AEA
E.P. 2-46AEB
E.P. 2-46AEC
E.P. 2-46AED
E.P. 2-46AEE
E.P. 2-46AEF
E.P. 2-46AEG
E.P. 2-46AEH
E.P. 2-46AEI
E.P. 2-46AEJ
E.P. 2-46AEK
E.P. 2-46AEL
E.P. 2-46AEM
E.P. 2-46AEN
E.P. 2-46AEO
E.P. 2-46AEP
E.P. 2-46AEQ
E.P. 2-46AER
E.P. 2-46AES
E.P. 2-46AET
E.P. 2-46AEU
E.P. 2-46AEV
E.P. 2-46AEW
E.P. 2-46AEX
E.P. 2-46AEY
E.P. 2-46AEZ
E.P. 2-46AFA
E.P. 2-46AFB
E.P. 2-46AFC
E.P. 2-46AFD
E.P. 2-46AFE
E.P. 2-46AFF
E.P. 2-46AFG
E.P. 2-46AFH
E.P. 2-46AFI
E.P. 2-46AFJ
E.P. 2-46AFK
E.P. 2-46AFL
E.P. 2-46AFM
E.P. 2-46AFN
E.P. 2-46AFO
E.P. 2-46AFP
E.P. 2-46AFQ
E.P. 2-46AFR
E.P. 2-46AFS
E.P. 2-46AFT
E.P. 2-46AFU
E.P. 2-46AFV
E.P. 2-46AFW
E.P. 2-46AFX
E.P. 2-46AFY
E.P. 2-46AFZ
E.P. 2-46AGA
E.P. 2-46AGB
E.P. 2-46AGC
E.P. 2-46AGD
E.P. 2-46AGE
E.P. 2-46AGF
E.P. 2-46AGG
E.P. 2-46AGH
E.P. 2-46AGI
E.P. 2-46AGJ
E.P. 2-46AGK
E.P. 2-46AGL
E.P. 2-46AGM
E.P. 2-46AGN
E.P. 2-46AGO
E.P. 2-46AGP
E.P. 2-46AGQ
E.P. 2-46AGR
E.P. 2-46AGS
E.P. 2-46AGT
E.P. 2-46AGU
E.P. 2-46AGV
E.P. 2-46AGW
E.P. 2-46AGX
E.P. 2-46AGY
E.P. 2-46AGZ
E.P. 2-46AHA
E.P. 2-46AHB
E.P. 2-46AHC
E.P. 2-46AHD
E.P. 2-46AHE
E.P. 2-46AHF
E.P. 2-46AHG
E.P. 2-46AHH
E.P. 2-46AHI
E.P. 2-46AHJ
E.P. 2-46AHK
E.P. 2-46AHL
E.P. 2-46AHM
E.P. 2-46AHN
E.P. 2-46AHO
E.P. 2-46AHP
E.P. 2-46AHQ
E.P. 2-46AHR
E.P. 2-46AHS
E.P. 2-46AHT
E.P. 2-46AHU
E.P. 2-46AHV
E.P. 2-46AHW
E.P. 2-46AHX
E.P. 2-46AHY
E.P. 2-46AHZ
E.P. 2-46AIA
E.P. 2-46AIB
E.P. 2-46AIC
E.P. 2-46AID
E.P. 2-46AIE
E.P. 2-46AIF
E.P. 2-46AIG
E.P. 2-46AIH
E.P. 2-46AII
E.P. 2-46AIJ
E.P. 2-46AIK
E.P. 2-46AIL
E.P. 2-46AIM
E.P. 2-46AIN
E.P. 2-46AIO
E.P. 2-46AIP
E.P. 2-46AIQ
E.P. 2-46AIR
E.P. 2-46AIS
E.P. 2-46AIT
E.P. 2-46AIU
E.P. 2-46AIV
E.P. 2-46AIW
E.P. 2-46AIX
E.P. 2-46AIY
E.P. 2-46AIZ
E.P. 2-46AJA
E.P. 2-46AJB
E.P. 2-46AJC
E.P. 2-46AJD
E.P. 2-46AJE
E.P. 2-46AJF
E.P. 2-46AJG
E.P. 2-46AJH
E.P. 2-46AJI
E.P. 2-46AJJ
E.P. 2-46AJK
E.P. 2-46AJL
E.P. 2-46AJM
E.P. 2-46AJN
E.P. 2-46AJO
E.P. 2-46AJP
E.P. 2-46AJQ
E.P. 2-46AJR
E.P. 2-46AJS
E.P. 2-46AJT
E.P. 2-46AJU
E.P. 2-46AJV
E.P. 2-46AJW
E.P. 2-46AJX
E.P. 2-46AJY
E.P. 2-46AJZ
E.P. 2-46AKA
E.P. 2-46AKB
E.P. 2-46AKC
E.P. 2-46AKD
E.P. 2-46AKE
E.P. 2-46AKF
E.P. 2-46AKG
E.P. 2-46AKH
E.P. 2-46AKI
E.P. 2-46AKJ
E.P. 2-46AKK
E.P. 2-46AKL
E.P. 2-46AKM
E.P. 2-46AKN
E.P. 2-46AKO
E.P. 2-46AKP
E.P. 2-46AKQ
E.P. 2-46AKR
E.P. 2-46AKS
E.P. 2-46AKT
E.P. 2-46AKU
E.P. 2-46AKV
E.P. 2-46AKW
E.P. 2-46AKX
E.P. 2-46AKY
E.P. 2-46AKZ
E.P. 2-46ALA
E.P. 2-46ALB
E.P. 2-46ALC
E.P. 2-46ALD
E.P. 2-46ALE
E.P. 2-46ALF
E.P. 2-46ALG
E.P. 2-46ALH
E.P. 2-46ALI
E.P. 2-46ALJ
E.P. 2-46ALK
E.P. 2-46ALL
E.P. 2-46ALM
E.P. 2-46ALN
E.P. 2-46ALO
E.P. 2-46ALP
E.P. 2-46ALQ
E.P. 2-46ALR
E.P. 2-46ALS
E.P. 2-46ALT
E.P. 2-46ALU
E.P. 2-46ALV
E.P. 2-46ALW
E.P. 2-46ALX
E.P. 2-46ALY
E.P. 2-46ALZ
E.P. 2-46AMA
E.P. 2-46AMB
E.P. 2-46AMC
E.P. 2-46AMD
E.P. 2-46AME
E.P. 2-46AMF
E.P. 2-46AMG
E.P. 2-46AMH
E.P. 2-46AMI
E.P. 2-46AMJ
E.P. 2-46AMK
E.P. 2-46AML
E.P. 2-46AMM
E.P. 2-46AMN
E.P. 2-46AMO
E.P. 2-46AMP
E.P. 2-46AMQ
E.P. 2-46AMR
E.P. 2-46AMS
E.P. 2-46AMT
E.P. 2-46AMU
E.P. 2-46AMV
E.P. 2-46AMW
E.P. 2-46AMX
E.P. 2-46AMY
E.P. 2-46AMZ
E.P. 2-46ANA
E.P. 2-46ANB
E.P. 2-46ANC
E.P. 2-46AND
E.P. 2-46ANE
E.P. 2-46ANF
E.P. 2-46ANG
E.P. 2-46ANH
E.P. 2-46ANI
E.P. 2-46ANJ
E.P. 2-46ANK
E.P. 2-46ANL
E.P. 2-46ANM
E.P. 2-46ANN
E.P. 2-46ANO
E.P. 2-46ANP
E.P. 2-46ANQ
E.P. 2-46ANR
E.P. 2-46ANS
E.P. 2-46ANT
E.P. 2-46ANU
E.P. 2-46ANV
E.P. 2-46ANW
E.P. 2-46ANX
E.P. 2-46ANY
E.P. 2-46ANZ
E.P. 2-46AOA
E.P. 2-46AOB
E.P. 2-46AOC
E.P. 2-46AOD
E.P. 2-46AOE
E.P. 2-46AOF
E.P. 2-46AOG
E.P. 2-46AOH
E.P. 2-46AOI
E.P. 2-46AOJ
E.P. 2-46AOK
E.P. 2-46AOL
E.P. 2-46AOM
E.P. 2-46AON
E.P. 2-46AOO
E.P. 2-46AOP
E.P. 2-46AOQ
E.P. 2-46AOR
E.P. 2-46AOS
E.P. 2-46AOT
E.P. 2-46AOU
E.P. 2-46AOV
E.P. 2-46AOW
E.P. 2-46AOX
E.P. 2-46AOY
E.P. 2-46AOZ
E.P. 2-46APA
E.P. 2-46APB
E.P. 2-46APC
E.P. 2-46APD
E.P. 2-46APE
E.P. 2-46APF
E.P. 2-46APG
E.P. 2-46APH
E.P. 2-46API
E.P. 2-46APJ
E.P. 2-46APK
E.P. 2-46APL
E.P. 2-46APM
E.P. 2-46APN
E.P. 2-46APO
E.P. 2-46APP
E.P. 2-46APQ
E.P. 2-46APR
E.P. 2-46APS
E.P. 2-46APT
E.P. 2-46APU
E.P. 2-46APV
E.P. 2-46APW
E.P. 2-46APX
E.P. 2-46APY
E.P. 2-46APZ
E.P. 2-46AQA
E.P. 2-46AQB
E.P. 2-46AQC
E.P. 2-46AQD
E.P. 2-46AQE
E.P. 2-46AQF
E.P. 2-46AQG
E.P. 2-46AQH
E.P. 2-46AQI
E.P. 2-46AQJ
E.P. 2-46AQK
E.P. 2-46AQL
E.P. 2-46AQM
E.P. 2-46AQN
E.P. 2-46AQO
E.P. 2-46AQP
E.P. 2-46AQQ
E.P. 2-46AQR
E.P. 2-46AQS
E.P. 2-46AQT
E.P. 2-46AQU
E.P. 2-46AQV
E.P. 2-46AQW
E.P. 2-46AQX
E.P. 2-46AQY
E.P. 2-46AQZ
E.P. 2-46ARA
E.P. 2-46ARB
E.P. 2-46ARC
E.P. 2-46ARD
E.P. 2-46ARE
E.P. 2-46ARF
E.P. 2-46ARG
E.P. 2-46ARH
E.P. 2-46ARI
E.P. 2-46ARJ
E.P. 2-46ARK
E.P. 2-46ARL
E.P. 2-46ARM
E.P. 2-46ARN
E.P. 2-46ARO
E.P. 2-46ARP
E.P. 2-46ARQ
E.P. 2-46ARR
E.P. 2-46ARS
E.P. 2-46ART
E.P. 2-46ARU
E.P. 2-46ARV
E.P. 2-46ARW
E.P. 2-46ARX
E.P. 2-46ARY
E.P. 2-46ARZ
E.P. 2-46ASA
E.P. 2-46ASB
E.P. 2-46ASC
E.P. 2-46ASD
E.P. 2-46ASE
E.P. 2-46ASF
E.P. 2-46ASG
E.P. 2-46ASH
E.P. 2-46ASI
E.P. 2-46ASJ
E.P. 2-46ASK
E.P. 2-46ASL
E.P. 2-46ASM
E.P. 2-46ASN
E.P. 2-46ASO
E.P. 2-46ASP
E.P. 2-46ASQ
E.P. 2-46ASR
E.P. 2-46ASS
E.P. 2-46AST
E.P. 2-46ASU
E.P. 2-46ASV
E.P. 2-46ASW
E.P. 2-46ASX
E.P. 2-46ASY
E.P. 2-46ASZ
E.P. 2-46ATA
E.P. 2-46ATB
E.P. 2-46ATC
E.P. 2-46ATD
E.P. 2-46ATE
E.P. 2-46ATF
E.P. 2-46ATG
E.P. 2-46ATH
E.P. 2-46ATI
E.P. 2-46ATJ
E.P. 2-46ATK
E.P. 2-46ATL
E.P. 2-46ATM
E.P. 2-46ATN
E.P. 2-46ATO
E.P. 2-46ATP
E.P. 2-46ATQ
E.P. 2-46ATR
E.P. 2-46ATS
E.P. 2-46ATT
E.P. 2-46ATU
E.P. 2-46ATV
E.P. 2-46ATW
E.P. 2-46ATX
E.P. 2-46ATY
E.P. 2-46ATZ
E.P. 2-46AUA
E.P. 2-46AUB
E.P. 2-46AUC
E.P. 2-46AUD
E.P. 2-46AUE
E.P. 2-46AUF
E.P. 2-46AUG
E.P. 2-46AUH
E.P. 2-46AUI
E.P. 2-46AUJ
E.P. 2-46AUK
E.P. 2-46AUL
E.P. 2-46AUM
E.P. 2-46AUN
E.P. 2-46AUO
E.P. 2-46AUP
E.P. 2-46AUQ
E.P. 2-46AUR
E.P. 2-46AUS
E.P. 2-46AUT
E.P. 2-46AUU
E.P. 2-46AUV
E.P. 2-46AUW
E.P. 2-46AUX
E.P. 2-46AUY
E.P. 2-46AUZ
E.P. 2-46AVA
E.P. 2-46AVB
E.P. 2-46AVC
E.P. 2-46AVD
E.P. 2-46AVE
E.P. 2-46AVF
E.P. 2-46AVG
E.P. 2-46AVH
E.P. 2-46AVI
E.P. 2-46AVJ
E.P. 2-46AVK
E.P. 2-46AVL
E.P. 2-46AVM
E.P. 2-46AVN
E.P. 2-46AVO
E.P. 2-46AVP
E.P. 2-46AVQ
E.P. 2-46AVR
E.P. 2-46AVS
E.P. 2-46AVT
E.P. 2-46AVU
E.P. 2-46AVV
E.P. 2-46AVW
E.P. 2-46AVX
E.P. 2-46AVY
E.P. 2-46AVZ
E.P. 2-46AWA
E.P. 2-46AWB
E.P. 2-46AWC
E.P. 2-46AWD
E.P. 2-46AWE
E.P. 2-46AWF
E.P. 2-46AWG
E.P. 2-46AWH
E.P. 2-46AWI
E.P. 2-46AWJ
E.P. 2-46AWK
E.P. 2-46AWL
E.P. 2-46AWM
E.P. 2-46AWN
E.P. 2-46AWO
E.P. 2-46AWP
E.P. 2-46AWQ
E.P. 2-46AWR
E.P. 2-46AWS
E.P. 2-46AWT
E.P. 2-46AWU
E.P. 2-46AWV
E.P. 2-46AWW
E.P. 2-46AWX
E.P. 2-46AWY
E.P. 2-46AWZ
E.P. 2-46AXA
E.P. 2-46AXB
E.P. 2-46AXC
E.P. 2-46AXD
E.P. 2-46AXE
E.P. 2-46AXF
E.P. 2-46AXG
E.P. 2-46AXH
E.P. 2-46AXI
E.P. 2-46AXJ
E.P. 2-46AXK
E.P. 2-46AXL
E.P. 2-46AXM
E.P. 2-46AXN
E.P. 2-46AXO
E.P. 2-46AXP
E.P. 2-46AXQ
E.P. 2-46AXR
E.P. 2-46AXS
E.P. 2-46AXT
E.P. 2-46AXU
E.P. 2-46AXV
E.P. 2-46AXW
E.P. 2-46AXX
E.P. 2-46AXY
E.P. 2-46AXZ
E.P. 2

REV. 2-16-96

CAMELOT
GRADING PLAN

Dec. 1995 — Job No. 94-120

SUBDIVISION
PG 14

N/F
LATTA
B 625 / P 14

N/F
SCHAFFER
B 625 / P 520

ENCHANTED DRIVE (50' W.)

GALAHAD COURT (50' W.)

GRADING LIMITS

FENCE MAIN

N63°17'39"E

N27°13'46"W 284.43'

N45°02'32"E 284.43'

N27°07'30"W 208.65'

S88°33'46"E N20°26'52"W

S27°22'20"E 190.64'

N27°17'38"W 180.07'

N62°51'45"E 208.58'

Existing Lake "C"
15yr. H.W. = 580.42
100yr. H.W. = 580.64

SEE SHEET 16

SEE SHEET 10

94120DGS

CAMELOT
SANITARY SEWER PROFILES

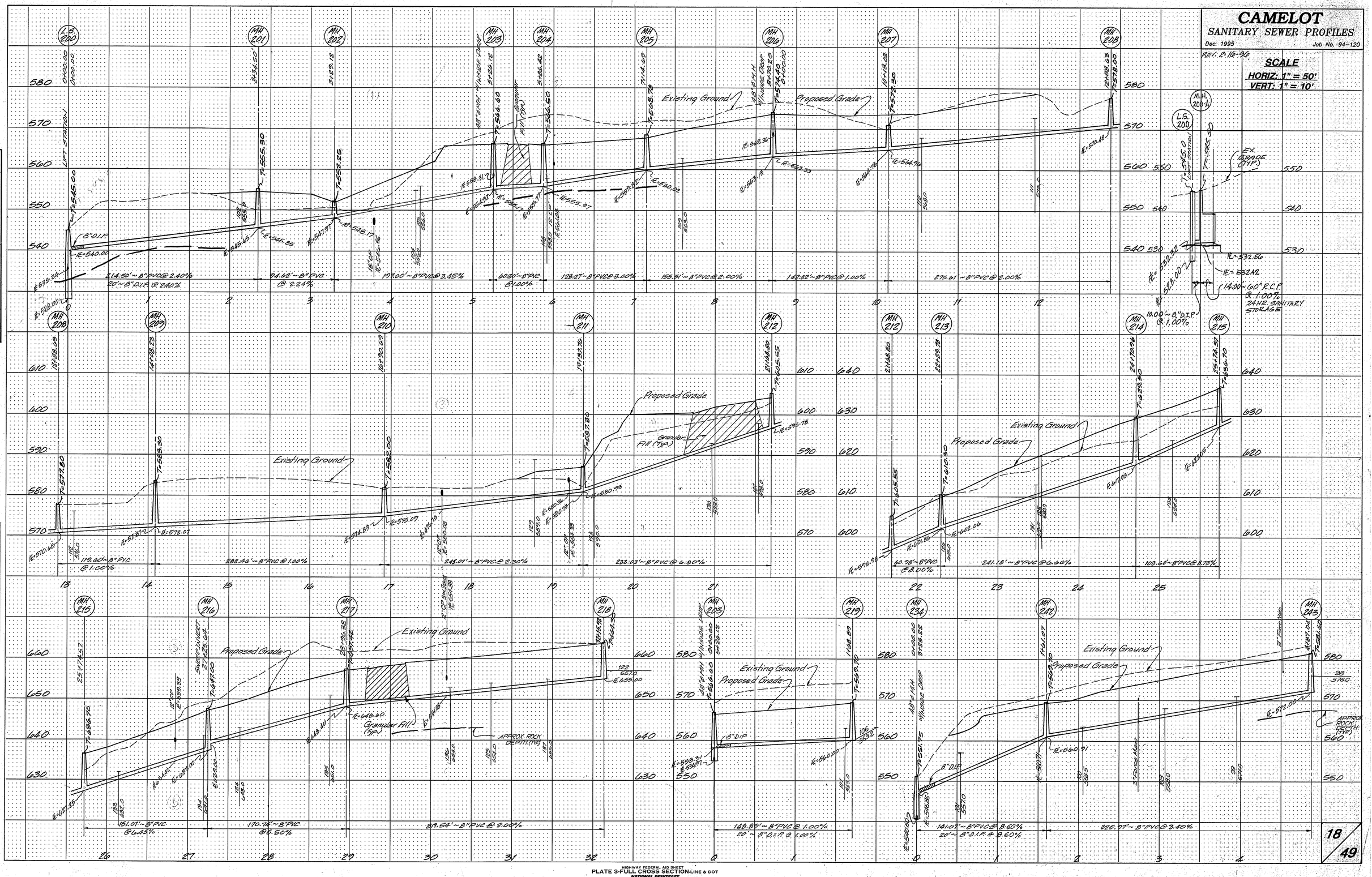
Dec. 1995 — Job No. 94-120

REV: 2-16-96

SCALE
HORIZ: 1" = 50'
VERT: 1" = 10'

FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE



HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-LINE & DOT
NATIONAL PRINTFAST
PRINTED IN U.S.A.

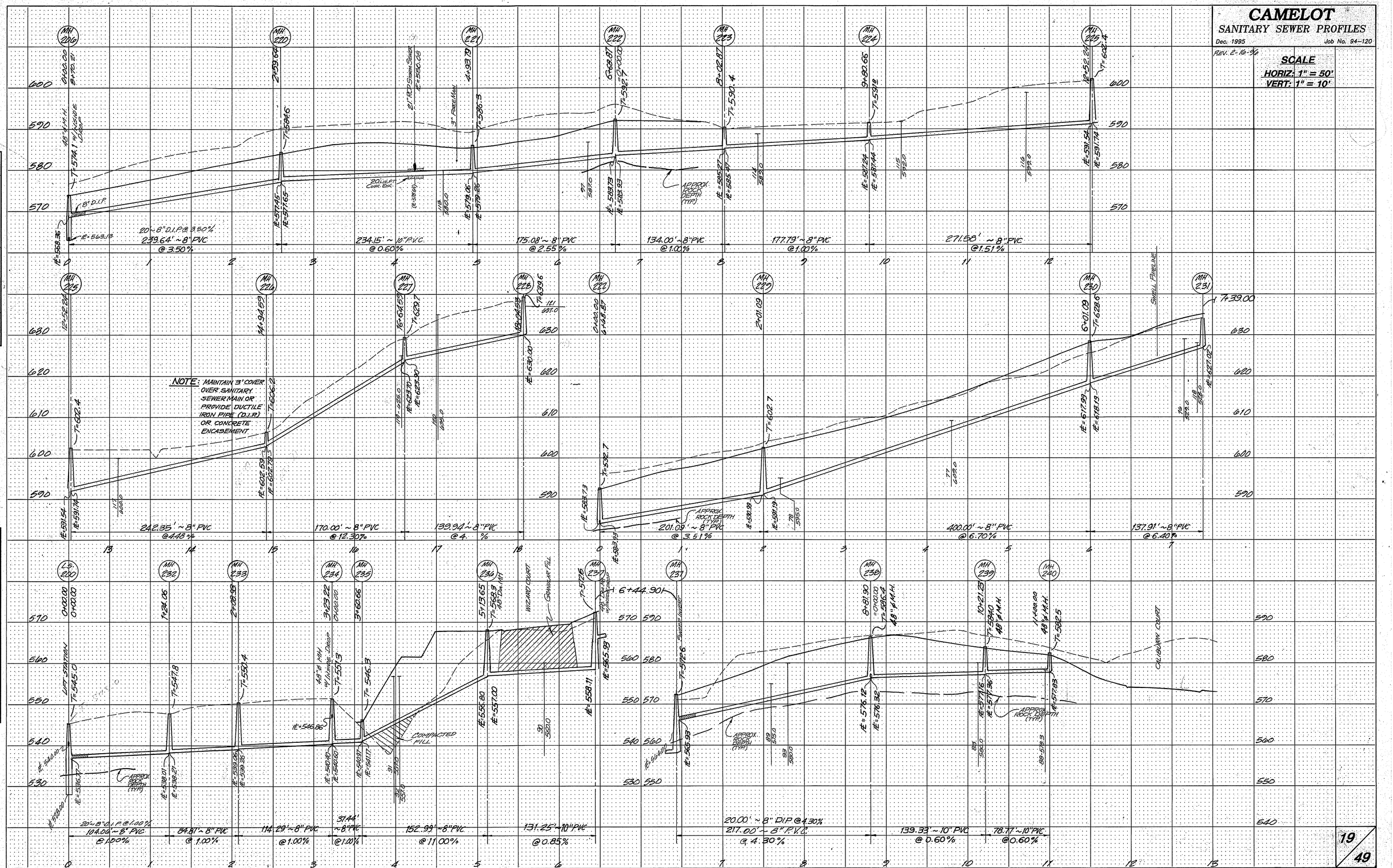
CAMELOT

SANITARY SEWER PROFILES

Dec. 1995 — Job No. 94-120

REV. 2-16-96

SCALE
HORIZ: 1" = 50'
VERT: 1" = 10'



FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — FIELD AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — FIELD AREAS CHECKED — BY — DATE

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-LINE & DOT
NATIONAL PRINTFAST
PRINTED IN U.S.A.

CAMELOT

SANITARY SEWER PROFILES

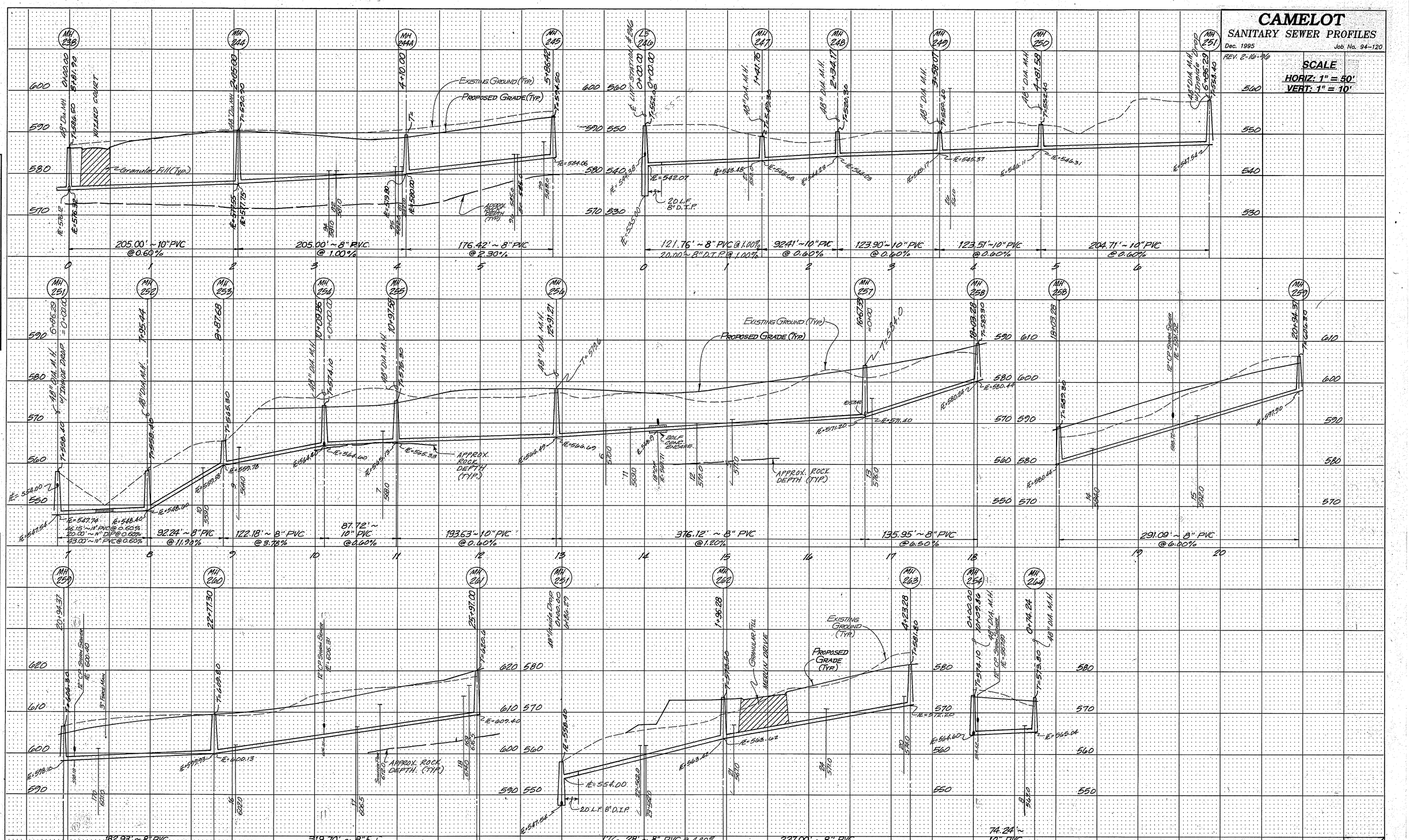
Dec. 1995 — Job. No. 94-120

REV. 2-16-96

SCALE
HORIZ: 1" = 50'
VERT: 1" = 10'

FINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — NOTE BOOK — NO. — BY — DATE

ORIGINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — NOTE BOOK — NO. — BY — DATE



HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-LINE & DOT
NATIONAL PRINTFAST
PRINTED IN U.S.A.

CAMELOT

SANITARY SEWER PROFI

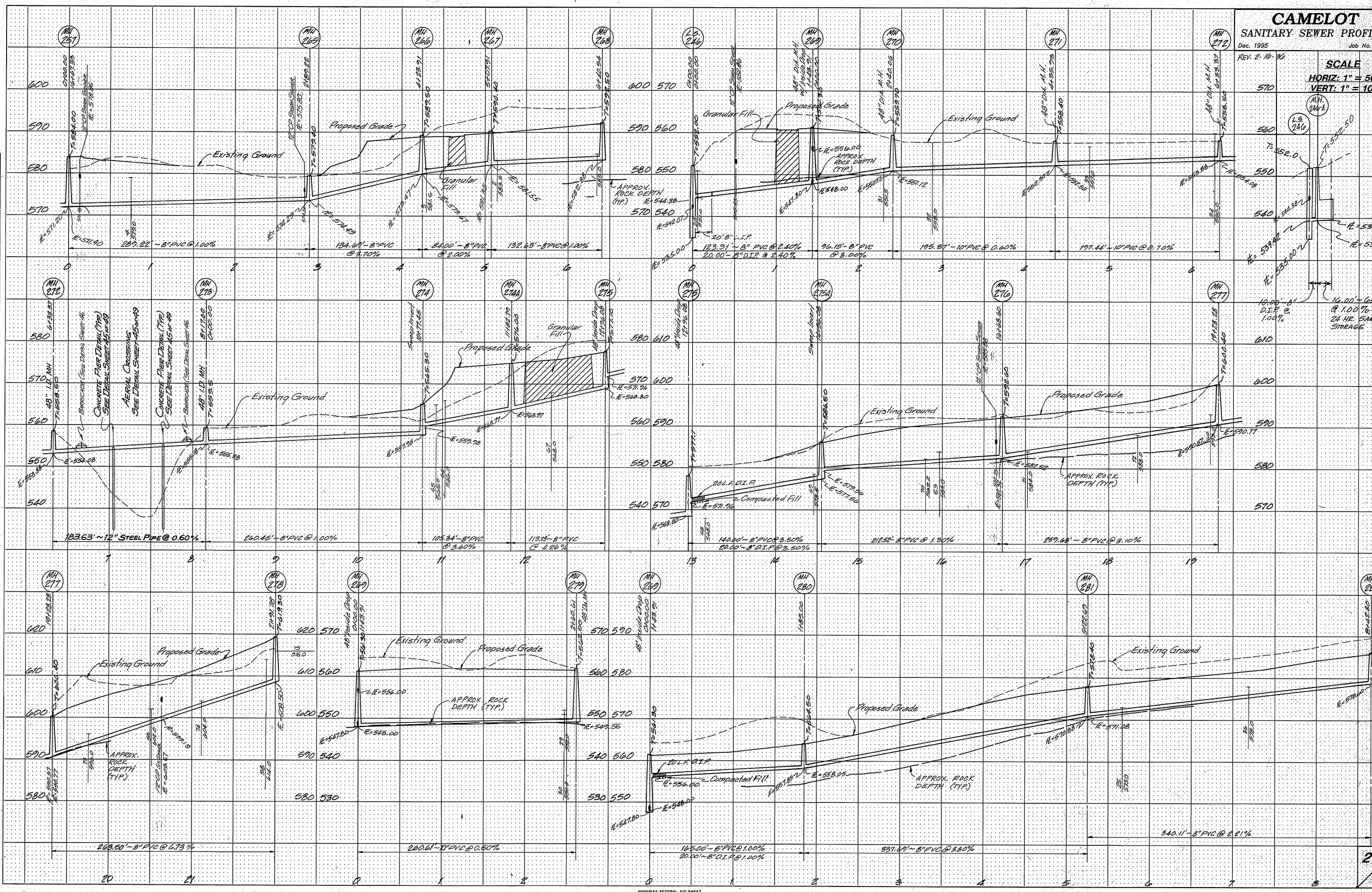
Dec. 1995 — Job No.

REV. 2-16-96

SCALE

HORIZ: 1" = 5

VERT: 1" = 1



FINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — NO. — BY — DATE — TEMPLATE — AREAS — AREAS CHECKED

ORIGINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — NO. — BY — DATE — TEMPLATE — AREAS — AREAS CHECKED

CAMELOT

SANITARY SEWER PROFI

Dec. 1995 Job No.

REV. 2-16-96

SCALE

HORIZ: 1" = 50'

VERT: 1" = 10'

FINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS CHECKED — NOTE BOOK — NO. — BY — DATE

ORIGINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS CHECKED — NOTE BOOK — NO. — BY — DATE

CAMELOT
STORM SEWER PROFILES

Dec. 1995 — Job No. 94-120

REV. 2-16-96

SCALE
HORIZ: 1" = 50'
VERT: 1" = 10'

FINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS — NOTE BOOK — NO. — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS — NOTE BOOK — NO. — AREAS CHECKED — BY — DATE

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-LINE & DOT
NATIONAL PRINTFAST
PRINTED IN U.S.A.

CAMELOT
STORM SEWER PROFILES

Dec. 1995 — Job No. 94-120

REV. 2-16-96

SCALE
HORIZ: 1" = 50'
VERT: 1" = 10'

FINAL SURVEY — PRINTED / PLOTTED / TEMPLATE / AREAS / NOTE BOOK / NO. / AREAS CHECKED / BY / DATE

ORIGINAL SURVEY — PRINTED / PLOTTED / TEMPLATE / AREAS / NOTE BOOK / NO. / AREAS CHECKED / BY / DATE

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-LINE & DOT
NATIONAL PRINTFAST
PRINTED IN U.S.A.

CAMELOT
STORM SEWER PROFILES

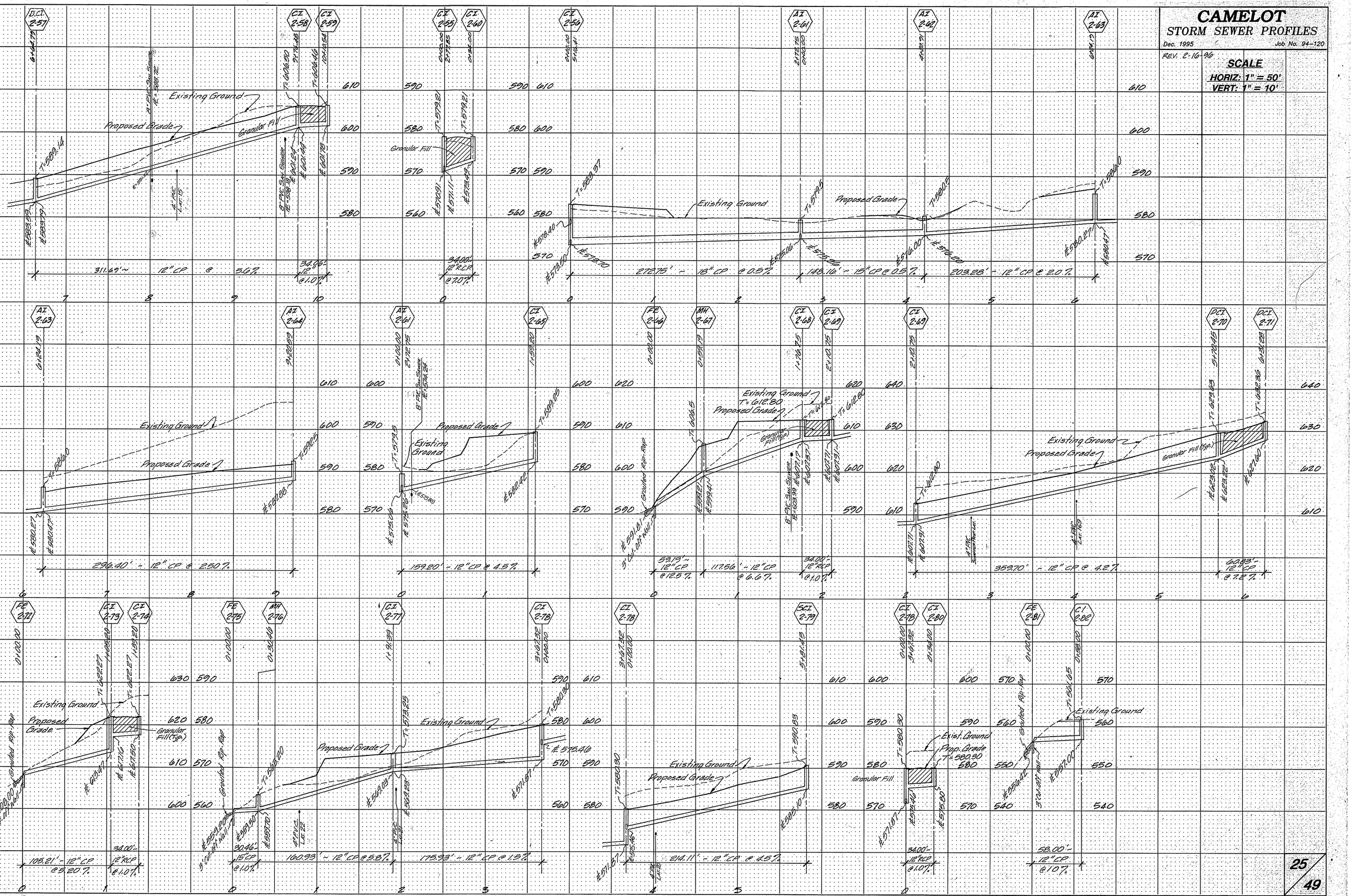
Dec. 1995 — Job No. 94-120

REV. 2-16-96

SCALE
HORIZ: 1" = 50'
VERT: 1" = 10'

FINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS — NOTE BOOK — NO. — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS — NOTE BOOK — NO. — AREAS CHECKED — BY — DATE



HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-LINE & DOT
NATIONAL PRINTFAST
PRINTED IN U.S.A.

CAMELOT
STORM SEWER PROFILES

Dec. 1995 — Job No. 94-120

REV. 2-16-96

FINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — NOTE BOOK — NO. — BY — DATE

ORIGINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — NOTE BOOK — NO. — BY — DATE

Proposed Grade — Existing Ground — Grouted Rip-Rap — 3' Cutoff Wall — Compacted Fill (Typ.)

137.92' - 12" CP @ 7.0%

90.00' - 12" CP @ 12.2% — 110.00' - 12" CP @ 6.20%

162.87' - 12" CP @ 4.4%

136.00' - 12" CP @ 8.9% — 100.12' - 12" CP @ 4.2% — 114.95' - 12" CP @ 1.0% — 122.50' - 12" CP @ 6.5%

160.00' - 12" CP @ 0.50%

87.60' - 12" CP @ 9.4% — 113.86' - 12" CP @ 11.0%

62.18' - 12" CP @ 4.8% — 157.72' - 12" CP @ 7.0%

41.00' Ex. CMP @ 7.44% — 10' - 24" CMP @ 7.44%

105.00' - 12" R.C.P. @ 18.67%

50.00' 12" R.C.P. @ 4.00%

50.00' 12" R.C.P. @ 4.00%

63.00' 27" R.C.P. @ 1.59%

105.00' - 12" R.C.P. @ 18.67%

Existing Lake "C" Top Dam = 583.3 Spillway = 582.4

100 Yr. H.W. = 580.64 15 Yr. H.W. = 580.42

2' Concrete Cutoff Wall — Anti-Seepage Collar (See Detail This Sheet) — 8' Conc. Cradle

Existing Lake "F" Top Dam = 583.7 Spillway = 582.2

100 Yr. H.W. = 578.88 15 Yr. H.W. = 578.60

Basin "G" Top Dam = 534.5 Spillway = 533.0

100 Yr. H.W. = 532.46 15 Yr. H.W. = 531.88

Basin "E" Top Dam = 538.8 Spillway = 537.0

100 Yr. H.W. = 535.40 15 Yr. H.W. = 534.05

Existing Lake "D" Top Dam = 551.3 Spillway = 550.4

100 Yr. H.W. = 548.83 15 Yr. H.W. = 548.65

20'x10' Grouted Riprap w/Energy Dissipators

Basin "F" Top Dam = 538.5 Spillway = 537.0

ANTISEEPAGE COLLAR CONSTRUCTION

N.T.S.

PAYLINE WIDTH — EMBANKMENT — 3 #4 BARS 5' LONG — 1" THICK COLLAR — 6" MIN. — 12" — 24" — 24"

NOTE: Trench shall be backfilled in this 11ft with clay soil approved by geotechnical engineer or an approved soil mixed with 5% Bentonite clay by weight. The backfill should be compacted to a minimum of 85% of the Modified Proctor Dry Density Test (ASTM D-1557).

SCALE

HORIZ: 1" = 50'

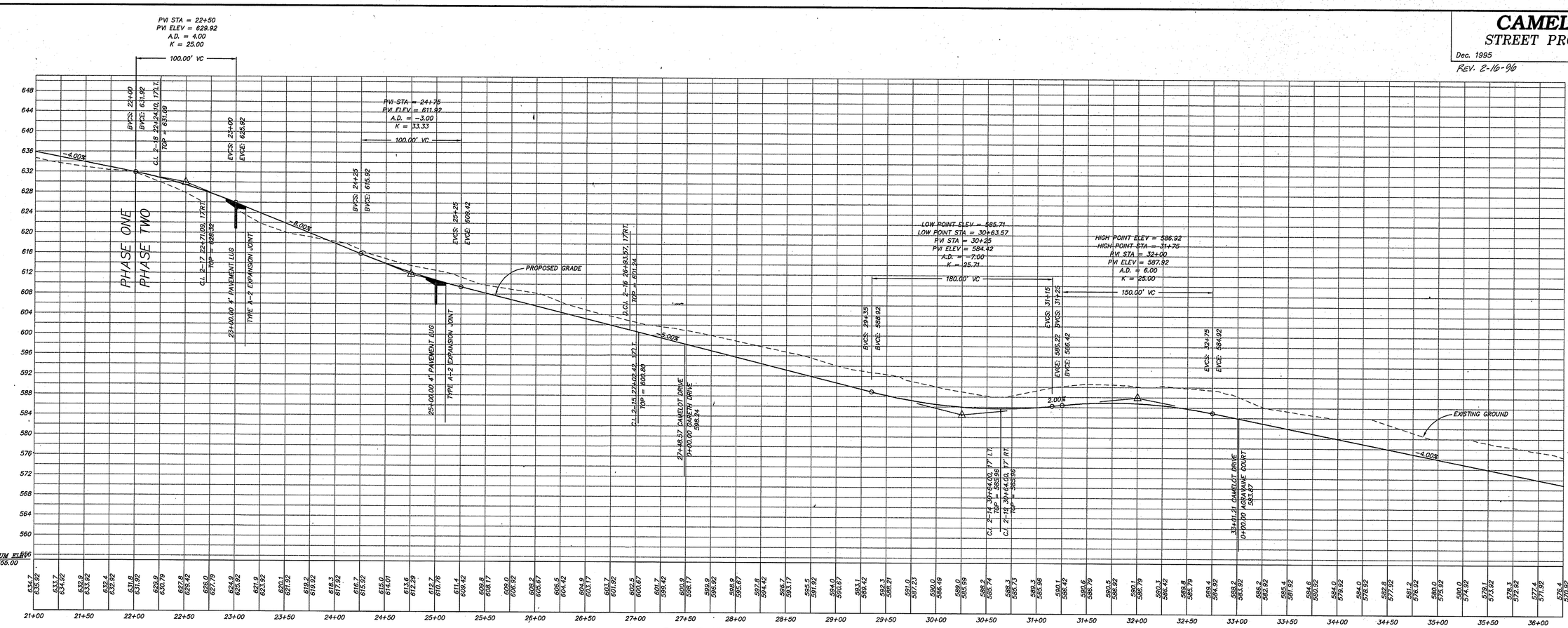
VERT: 1" = 10'

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-LINE & DOT
NATIONAL PRINTFAST
PRINTED IN U.S.A.

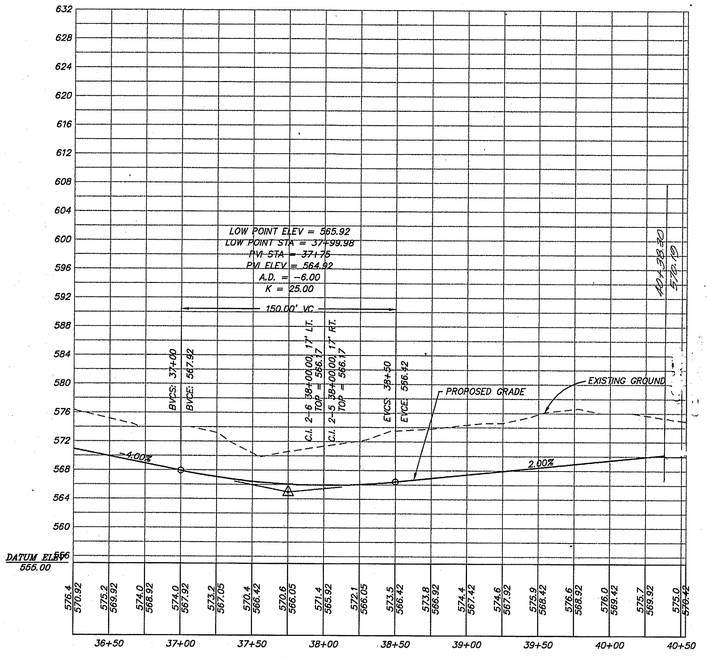
CAMELOT
STREET PROFILES

Dec. 1995 — Job No. 94-120

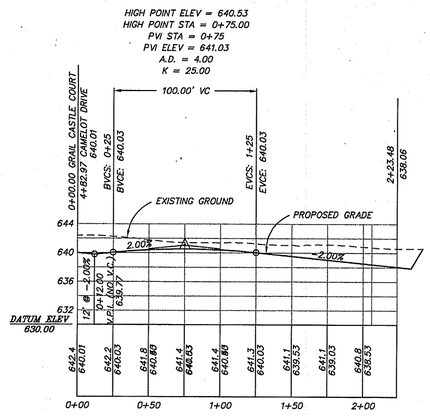
REV. 2-16-96



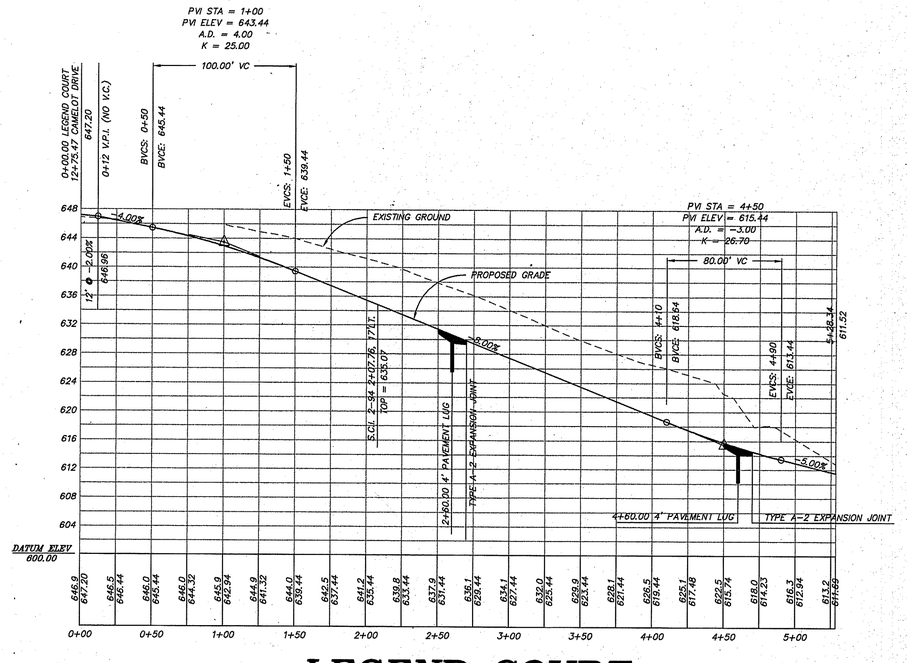
CAMELOT DRIVE



CAMELOT DRIVE



GRAIL CASTLE COURT



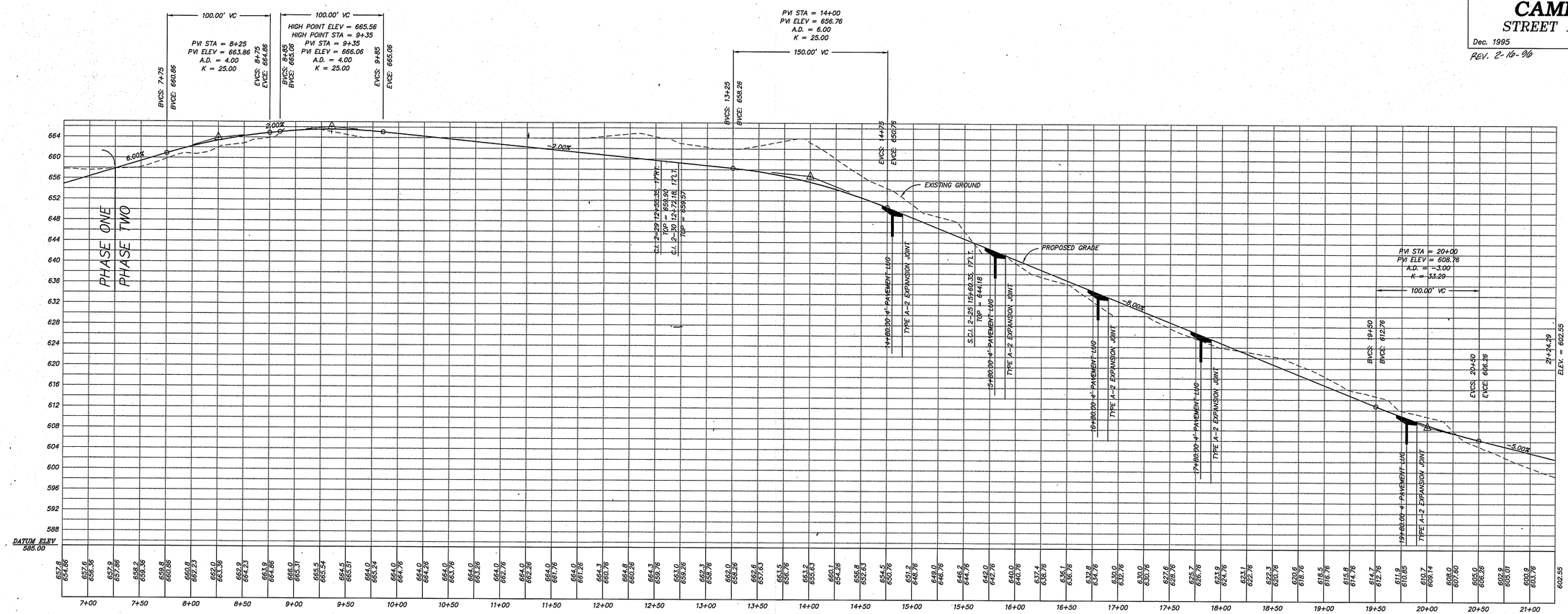
LEGEND COURT

C: \DRAWING\CAL.TPFL

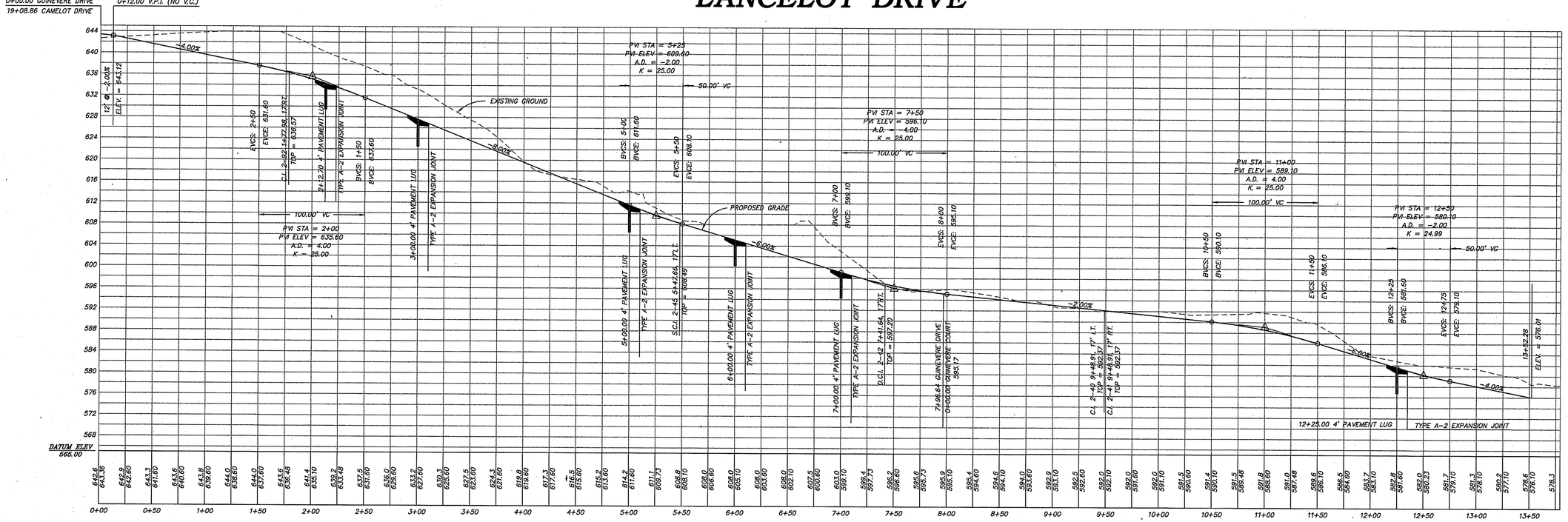
CAMELOT
STREET PROFILES

Dec. 1995 Job No. 94-120

REV. 2-16-96



LANCELOT DRIVE



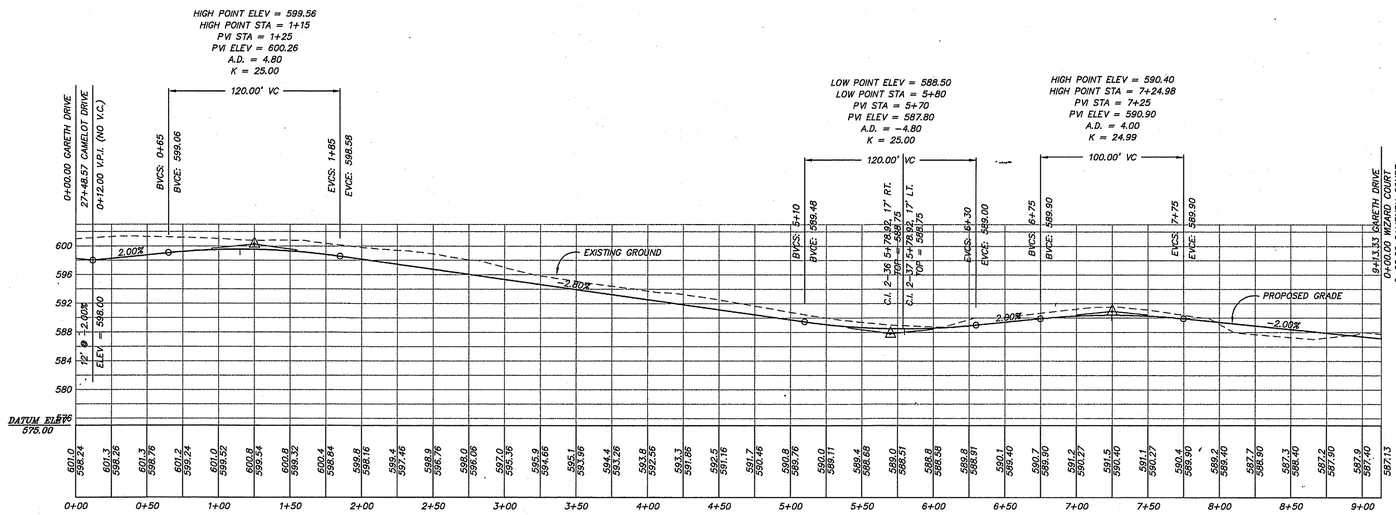
GUINEVERE DRIVE

C:\DRAWING\CAM_TPFL

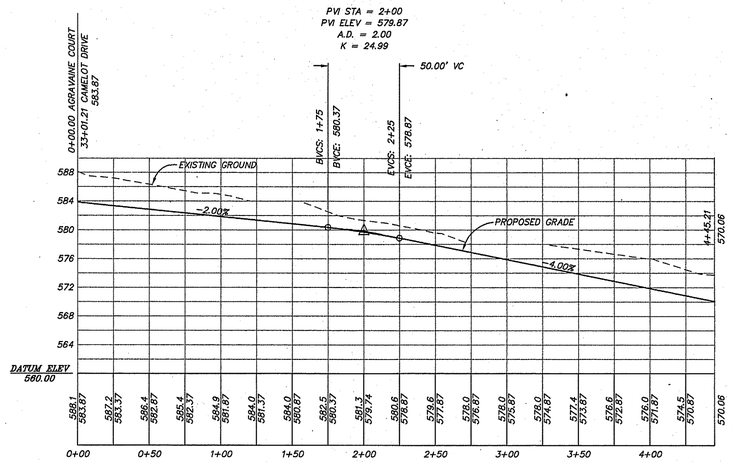
CAMELOT
STREET PROFILES

Dec. 1995 Job No. 94-120

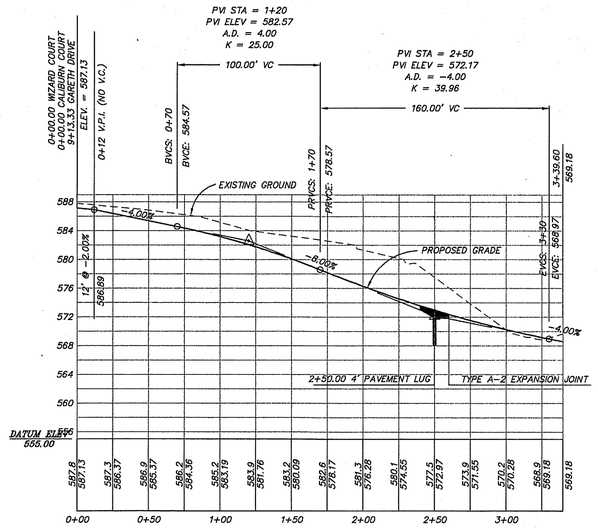
REV. 2-16-96



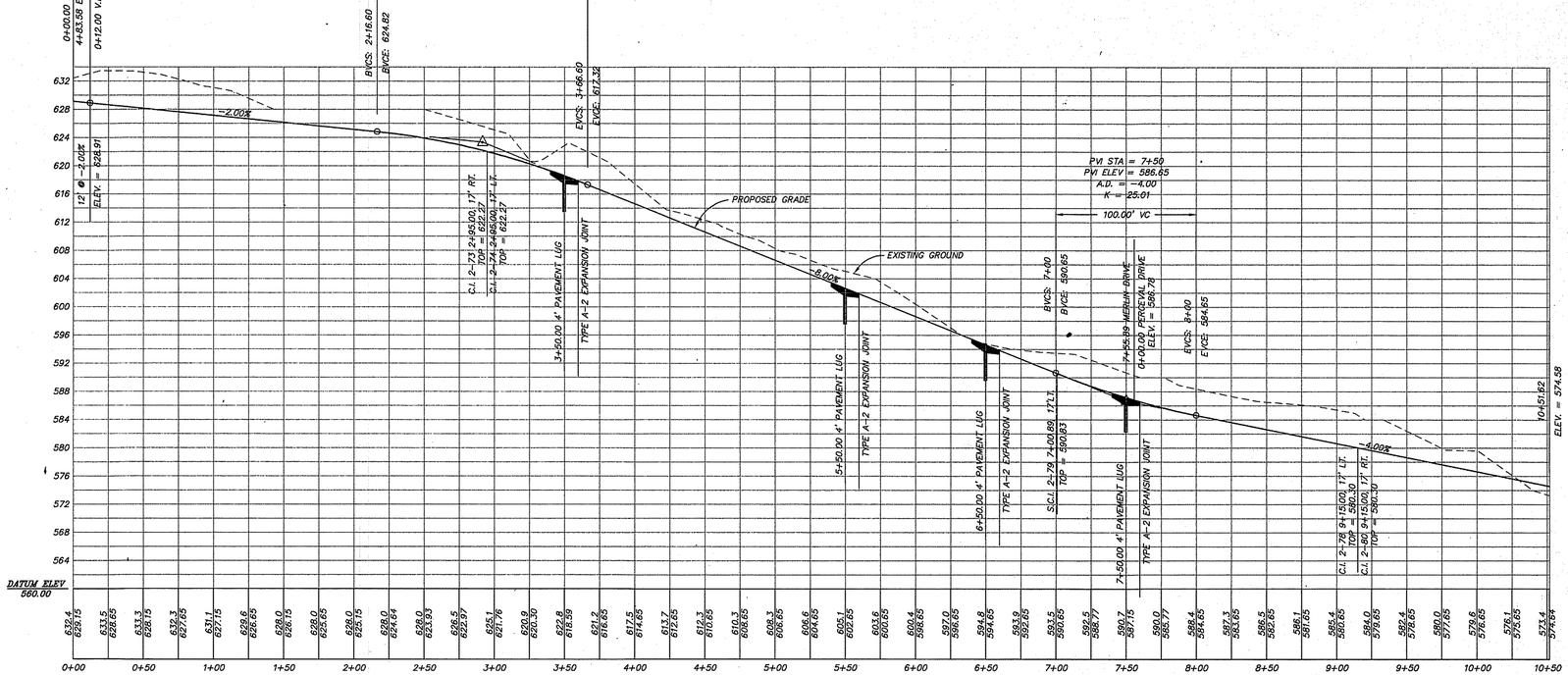
GARETH DRIVE



AGRAVAINE COURT



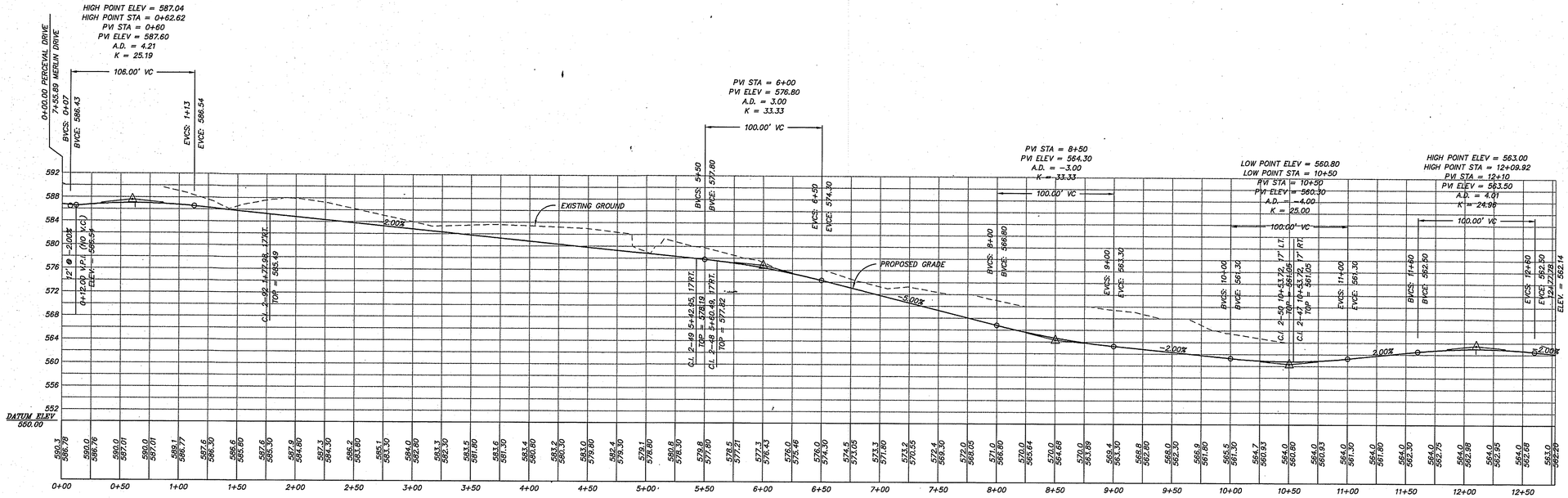
WIZARD COURT



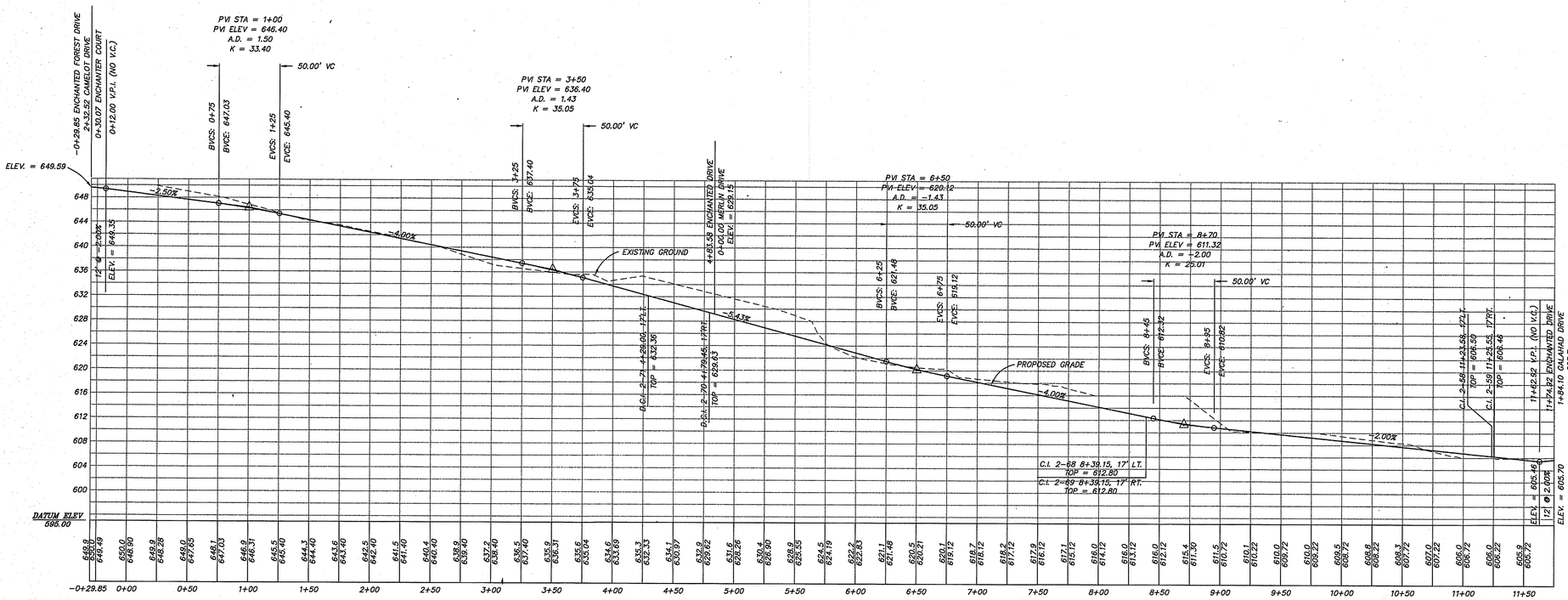
MERLIN DRIVE

C:\DRAWING\CAL1TPFL

CAMELOT
STREET PROFILES
Dec. 1995 Job No. 94-120
REV. 2-16-96



PERCEVAL DRIVE



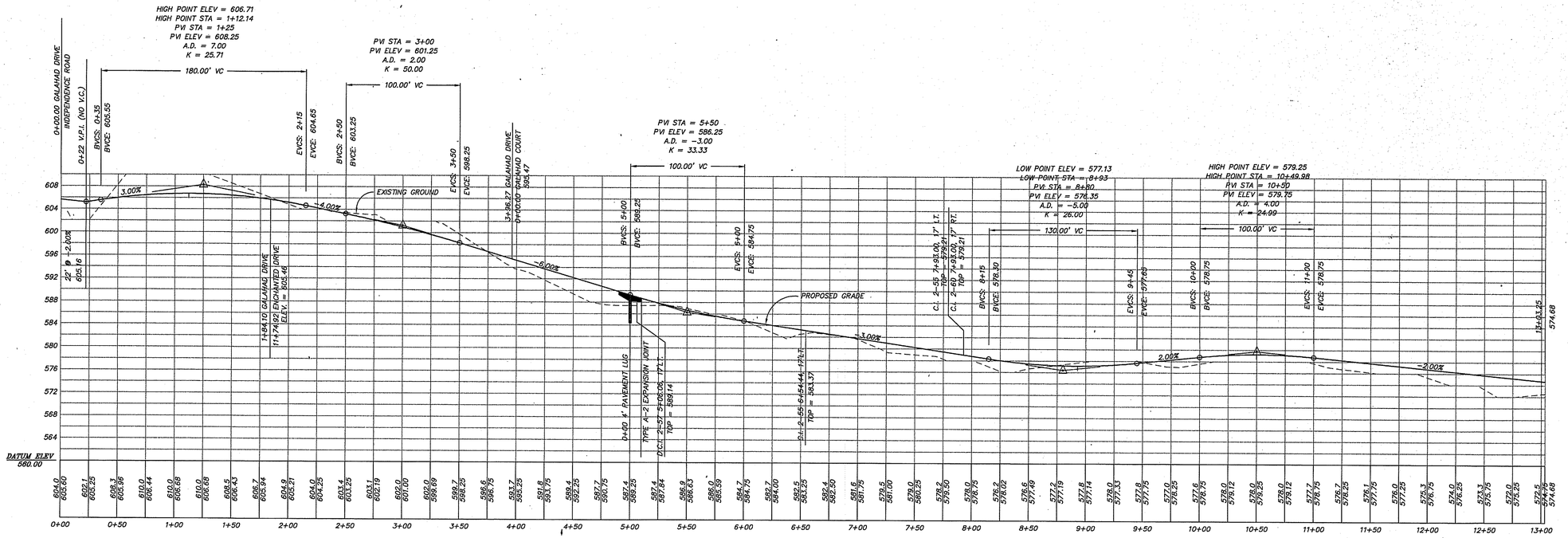
ENCHANTED DRIVE

C:\DRAWING\CAMLTPFL

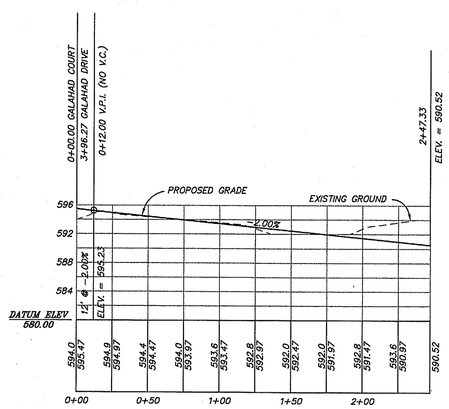
CAMELOT
STREET PROFILES

Dec. 1995 Job No. 94-120

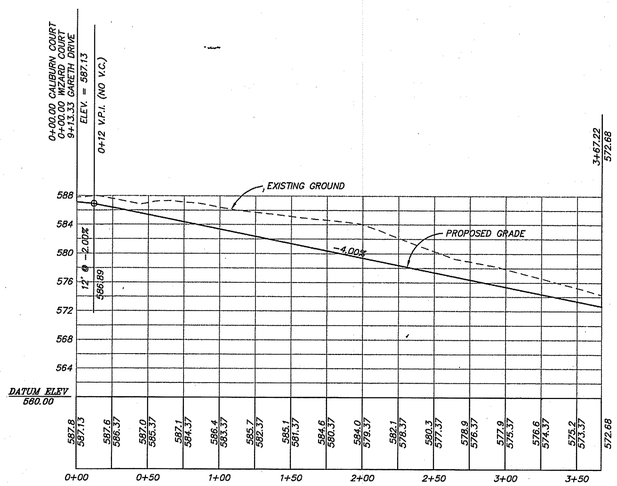
REV. 2-16-96



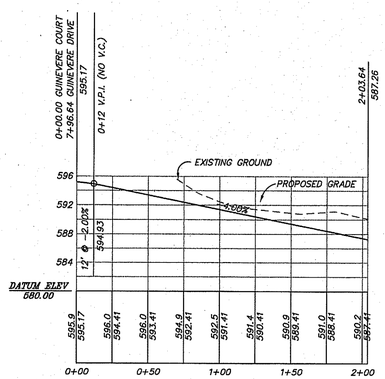
GALAHAD DRIVE



GALAHAD COURT



CALIBURN COURT



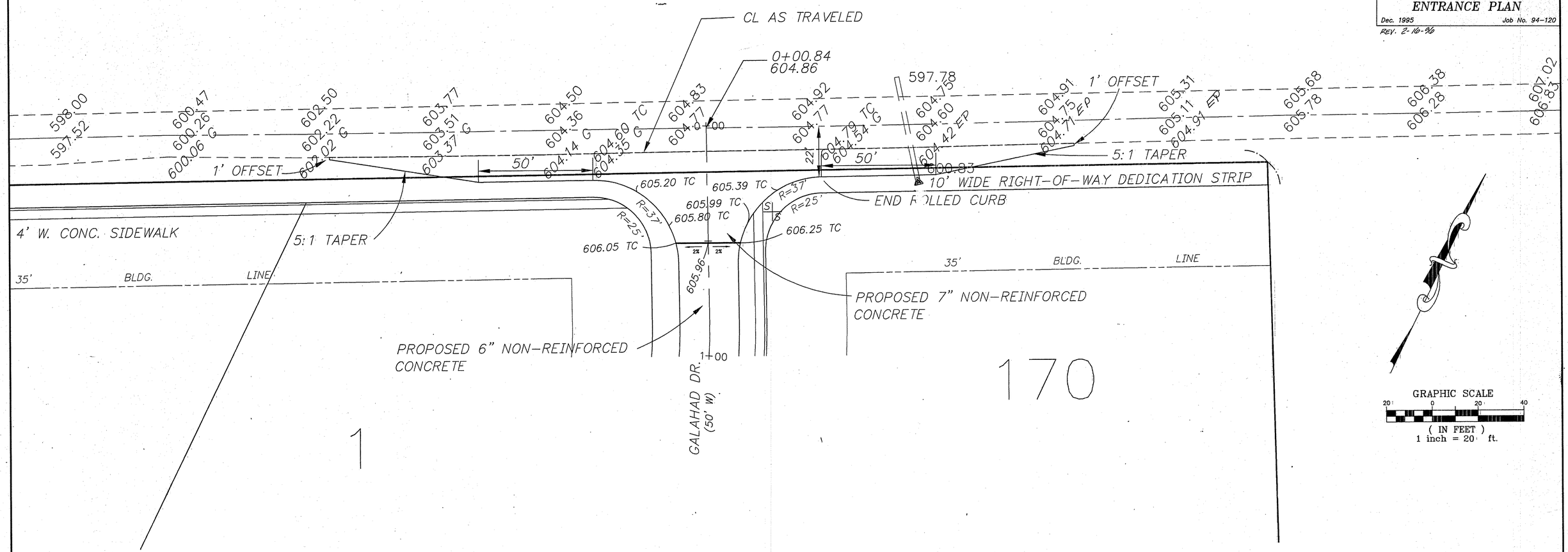
GUINEVERE COURT

C:\DRAWING\CMLTPFL

CAMELOT
ENTRANCE PLAN

Dec. 1995 Job No. 94-120

REV. 2-16-96

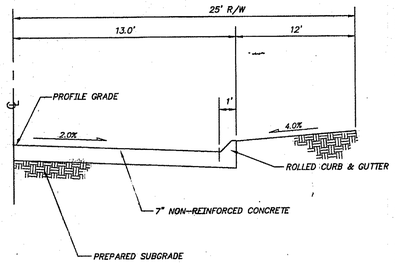


NOTE

Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

NOTE :

THE PROPOSED SIDEWALK SHOWN ALONG INDEPENDENCE DRIVE IS APPROXIMATE LOCATION ONLY. THE SIDEWALK WILL MEANDER THROUGH THE TREES ALONG INDEPENDENCE DRIVE RIGHT-OF-WAY.



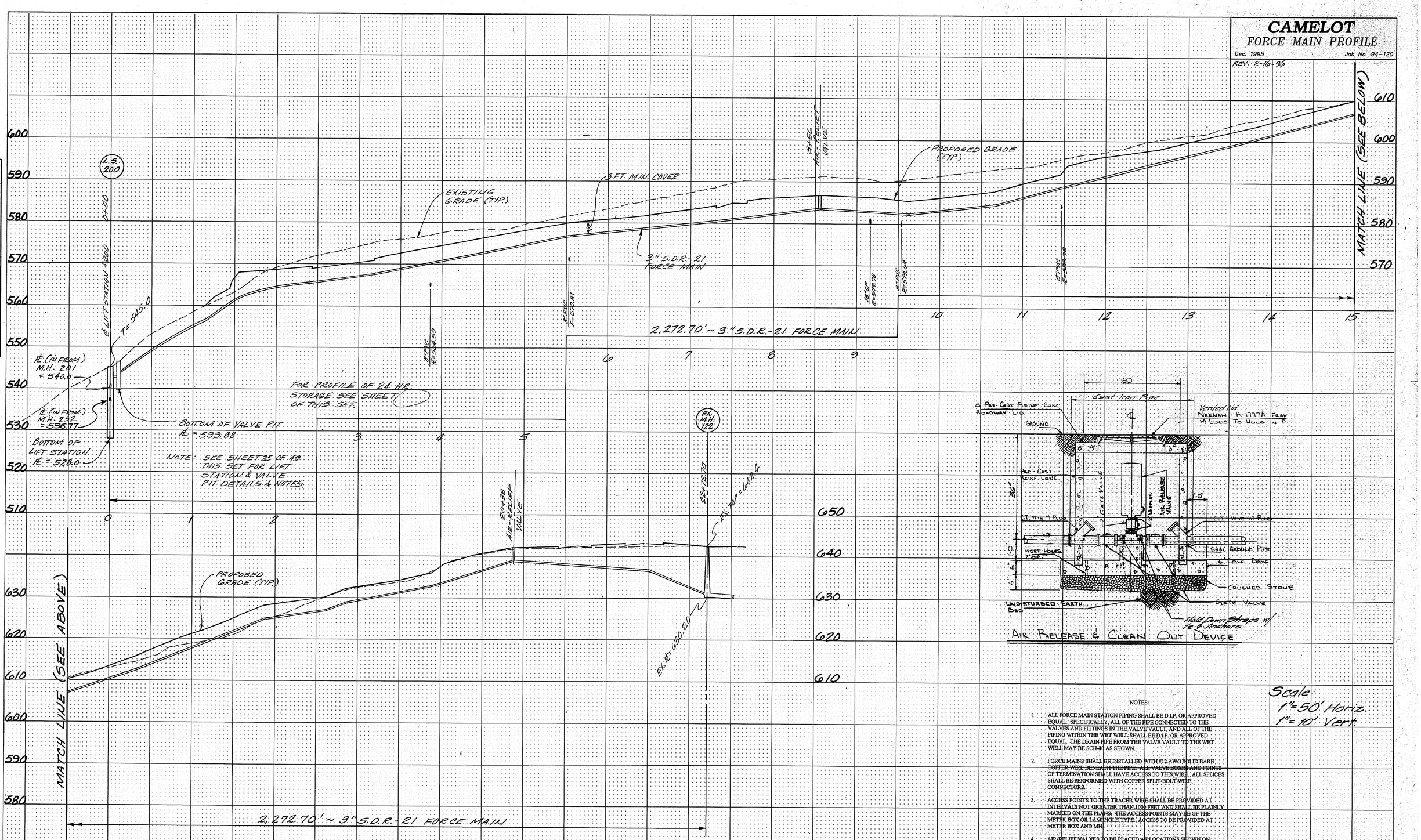
TYPICAL PAVEMENT 1/2 SECTION

UNNAMED

CAMELOT
FORCE MAIN PROFILE

Dec. 1995 — Job No. 94-120

REV. 2-16-96



AIR RELEASE & CLEAN OUT DEVICE

NOTES:

1. ALL FORCE MAIN STATION PIPING SHALL BE D.I.P. OR APPROVED EQUAL. SPECIFICALLY, ALL OF THE PIPE CONNECTED TO THE VALVES AND FITTINGS IN THE VALVE VAULT, AND ALL OF THE PIPING WITHIN THE WET WELL SHALL BE D.I.P. OR APPROVED EQUAL. THE DRAIN PIPE FROM THE VALVE VAULT TO THE WET WELL MAY BE SCH-40 AS SHOWN.
2. FORCE MAINS SHALL BE INSTALLED WITH #12 AWG SOLID BARE ~~COPPER WIRE BENEATH THE PIPE. ALL VALVE BOXES AND POINTS~~ OF TERMINATION SHALL HAVE ACCESS TO THIS WIRE. ALL SPLICES SHALL BE PERFORMED WITH COPPER SPLIT-BOLT WIRE CONNECTORS.
3. ACCESS POINTS TO THE TRACER WIRE SHALL BE PROVIDED AT INTERVALS NOT GREATER THAN 1000 FEET AND SHALL BE PLAINLY MARKED ON THE PLANS. THE ACCESS POINTS MAY BE OF THE METER BOX OR LAMPHOLE TYPE. ACCESS TO BE PROVIDED AT METER BOX AND MH.
4. AIR-RELIEF VALVES TO BE PLACED AT LOCATIONS SHOWN ON FORCE MAIN PROFILE (SEE DETAIL - THIS SHEET).

Scale:
1"=50' Horiz.
1"=10' Vert.

FINAL SURVEY — DATE / BY / SURVYED / PLOTTED / TEMPLATE / AREAS CHECKED / NOTE BOOK / NO.

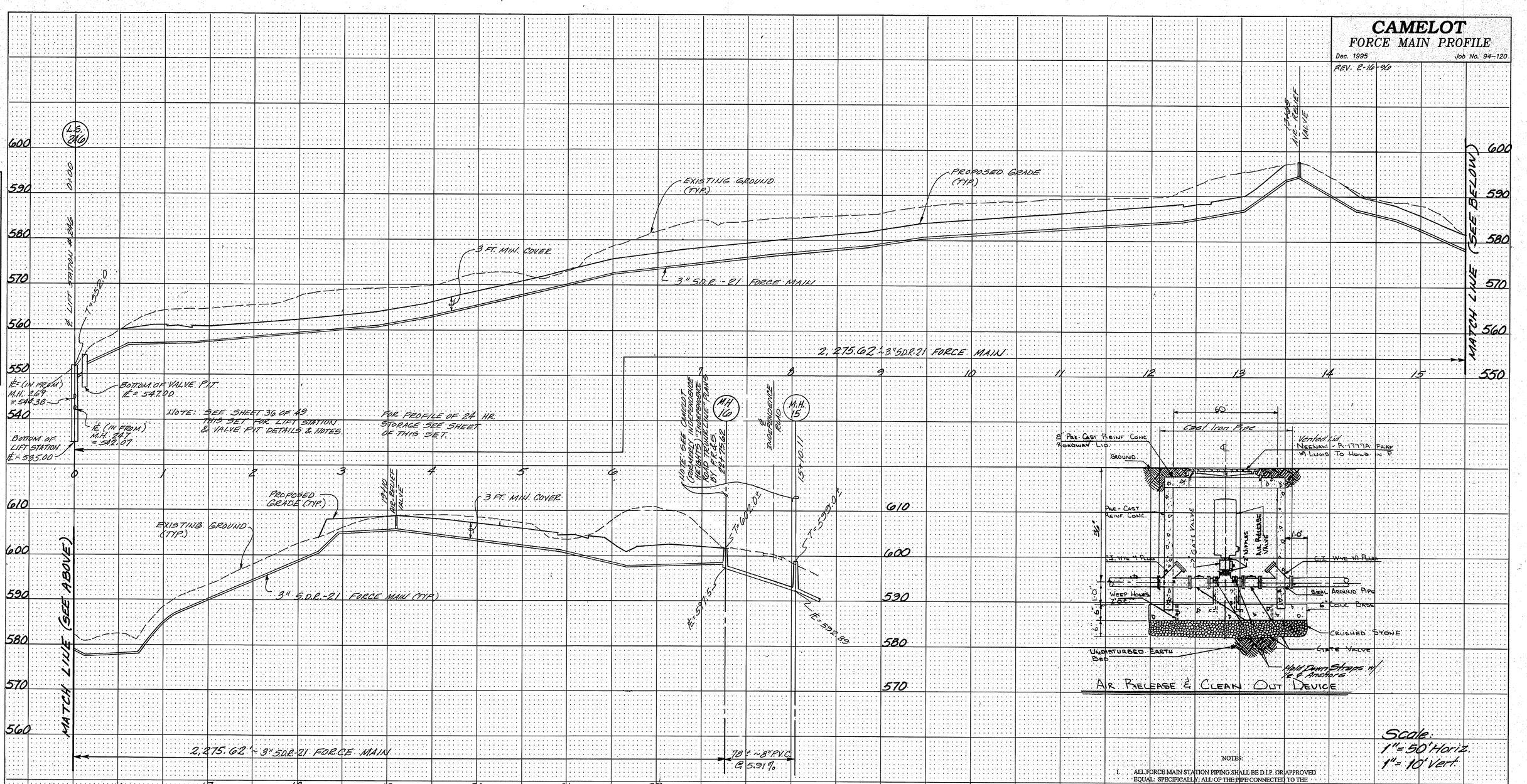
ORIGINAL SURVEY — DATE / BY / SURVYED / PLOTTED / TEMPLATE / AREAS CHECKED / NOTE BOOK / NO.

33/49

CAMELOT
FORCE MAIN PROFILE

Dec. 1995 — Job No. 94-120

REV. 2-16-96



AIR RELEASE & CLEAN OUT DEVICE

Scale:
1" = 50' Horiz.
1" = 10' Vert.

NOTES:

1. ALL FORCE MAIN STATION PIPING SHALL BE D.I.P. OR APPROVED EQUAL. SPECIFICALLY, ALL OF THE PIPE CONNECTED TO THE VALVES AND FITTINGS IN THE VALVE VAULT, AND ALL OF THE PIPING WITHIN THE WET WELL SHALL BE D.I.P. OR APPROVED EQUAL. THE DRAIN PIPE FROM THE VALVE VAULT TO THE WET WELL MAY BE SCH-40 AS SHOWN.
2. FORCE MAINS SHALL BE INSTALLED WITH #12 AWG SOLID BARE ~~COPPER WIRE BENEATH THE PIPE. ALL VALVE BOXES AND POINTS~~ OF TERMINATION SHALL HAVE ACCESS TO THIS WIRE. ALL SPLICES SHALL BE PERFORMED WITH COPPER SPLIT-BOLT WIRE CONNECTORS.
3. ACCESS POINTS TO THE TRACER WIRE SHALL BE PROVIDED AT INTERVALS NOT GREATER THAN 1000 FEET AND SHALL BE PLAINLY MARKED ON THE PLANS. THE ACCESS POINTS MAY BE OF THE METER BOX OR LAMPHOLE TYPE. ACCESS TO BE PROVIDED AT METER BOX AND MH.
4. AIR-RELIEF VALVES TO BE PLACED AT LOCATIONS SHOWN ON FORCE MAIN PROFILE (SEE DETAIL - THIS SHEET).

FINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, TEMPLATE, AREAS CHECKED, NO., BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, TEMPLATE, AREAS CHECKED, NO., BY, DATE

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-LINE & DOT
NATIONAL PRINTFAST
PRINTED IN U.S.A.

CAMELOT
LIFT STATION DETAILS

Dec. 1995 Job No. 94-120

REV. 2-16-96

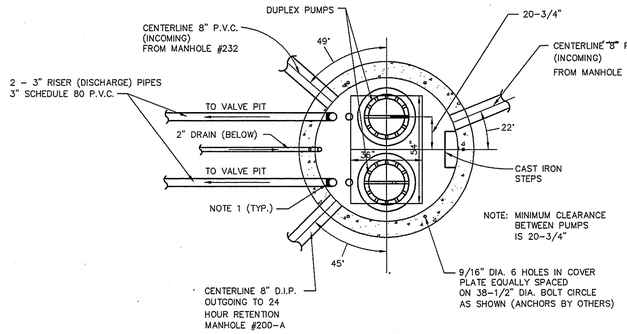
PUMP STATION GENERAL NOTES

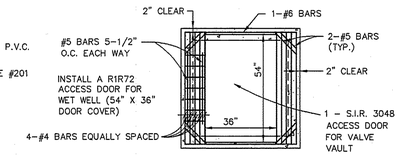
1. Use S/S bolts on all connections.
2. Use S/S chain (lifting chain).
3. Connection box or channel (rated NEMA 3R or NEMA 4R according to conditions), located outside of the wet well to facilitate pump and/or control wire removal without disturbing the moisture seal.
4. Slope valve pit bottom to 3" drain pipe.
5. 15" clearance between check valve arms and valve pit wall.
6. Strain relief fittings to be used on junction box. Strain reliefs shall be plastic and rubber grommet, water resistant box connectors.
7. Fresh water to be provided in valve pit with frost free bib. Contractor to install 3/4" potable water supply in accordance with applicable plumbing codes.
8. All locking hardware will be "Best Locking Hardware" per Duckett Creek Sanitary District specifications.
9. Power line to enter valve pit through 3" PVC conduit.
10. The 12 foot wide access road and the area within the fence shall be paved with 2" of type "C" asphaltic concrete laid over 6" of type "X" asphaltic concrete. All subgrade shall consist of 6" of well compacted crushed limestone.
11. Power lines and level switch cables shall enter valve pit through a 3" PVC conduit connected to the junction box.
12. RACO VERBATIM (Alarm Dialer), shall be provided per Duckett Creek Sanitary District specifications. Alarm dialer to be installed inside of lift station control panel enclosure. Provide required space inside of enclosure to add motor starter, circuit breakers, and capacitors for future pump.
13. Provide 4" PVC through wall of valve pit into wet well for wiring. The wiring raceway installed between the valve pit and wet well shall be sealed at each end with chase foam.
14. A-lock type compression fittings shall be used where all piping passes through the concrete walls.
15. Pipes to be located a minimum of 1.0 feet clear above or below joint.
16. Lift station shall be enclosed by a 6 foot chain link or woven wire fence with 3 strands of barbed wire across the top. A gate shall be provided with truck access.
17. The valve pit floor shall be sloped with a three sided invert towards the drain pipe. Use 2 inch concrete fillet.
18. Pump slide rails shall be supported with brackets every 15 feet. Concrete supports placed underneath the valves and tees inside the valve pit shall be placed so:
    A. The supports are solidly secured in the valve pit floor.
    B. They allow for a minimum of 10" clearance under the valve bodies.
    C. Not to interfere with flange bolt removal.

    All sewage pipes running through the valve pit and wet well walls shall be passed through an A-lock type compression fitting.
19. The wet well and valve pit shall be provided with Bilco, Type Q or K aluminum sidewalk type access doors with padlock type lugs.
20. All pump power and control leads, level control, and float wires shall be hung from the switch bracket supplied by the pump manufacturer. The switch bracket shall be attached to the wet well access door frame. Pumps shall be wired so that they alternate, except where the in fluent rate exceeds the capacity of one pump and activates the second pump.
21. Shop drawings shall be submitted to Duckett Creek Sanitary District for review in accordance with the general conditions and shall include mechanical and electrical details of equipment as well as schematics and interconnection drawings. A minimum of three (3) sets of drawings shall be furnished. The following shop drawings are required:
    A. Main Circuit Breaker
    B. Wiring Devices
    C. Motor Starters and Control Devices
    D. Alarm and Transmitting Equipment
    E. Pump Control Panel
22. All force main station piping shall be D.I.P. or approved equal. Specifically, all of the pipe connected to the valves and fitting in the valve vault, and all of the piping within the wet well shall be D.I.P. or approved equal. The drain pipe from the valve vault to the wet well may be SUCH-40 as shown.
23. All wet well steps shall be PVC coated.
24. The pump station manufacturer shall be present and responsible for the initial start up of the station. The manufacturer will further be responsible to check for proper installation of the unit and will make all necessary adjustments to insure proper operation, fully meeting the performance specifications.
25. Float requirements are as follows:
    A. Off Float – The pump shall have water covering a minimum of 1/2 the pump motor at the off level.
    B. First Pump – No less than 1-1/2' above top of pump motor.
    C. Second Pump – No less than 2' above top of pump motor.
    D. High Level – No less than 2-1/2' above the top of pump motor and alarm no more than 1 inch below the 24 hour retention line.
    E. Add float switch for future pump.
26. Run #12 AWG stranded conductor with insulation for direct burial over the force main. Splice only with split bolt type of wire connectors. Provide access to line at valve pit and receiving manhole.
27. Precast wet well and valve pit manufactured by "Kluster Bros." may be used in lieu of cast in place reinforced concrete structures.
28. Permanent signs that read "DANGER, KEEP OUT, SEWAGE TREATMENT FACILITY," shall be posted so that the signs are no further than 13' from the next sign or fence corner post.
29. The minimum clearances around all valves, elbows, flanges and mechanical joints and pipe connections shall be:

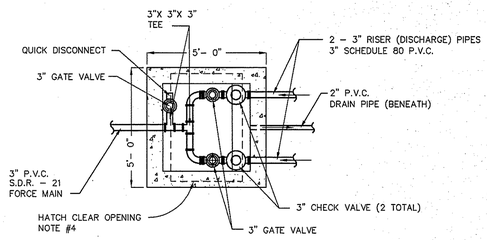
    4" off floor
    18" off wall or obstruction
    (Valve boxes) 48" inside height
    (Dry wells) 30" inside height
30. All valves (e.g. check valves and gate valves), shall be installed to facilitate easy removal without cutting the piping. Examples of acceptable methods are: unions, bolt together flanges.
31. Mechanical strength of piping materials where valves are installed is essential. The construction material for piping where valves are installed shall be either cast or ductile iron or equal.
32. Wet well floors shall provide a one to one slope to the hopper bottom to prevent accumulation of debris. The horizontal area of the floor shall not be greater than necessary for proper installation and functioning of the pump base or inlet.
33. Strain relief shall be provided in the wet well for all motor and control wires.
34. Motors shall have ground-fault interrupting circuit breakers.
35. Pumps shall have internal moisture and heat sensors that will not allow the pump to restart without manual resetting at the control panels.
36. Stations shall utilize either the floating mercury switch or the transducer type control.
37. The valve box shall be designed and built to prevent ground or rain water flooding.
38. The storage volume in the wet well shall be such as to prevent heat build up in the motor due to frequent starting (this is also an important consideration where odd-a-phase units are used) and at the same time septic conditions must be avoided due to excessive retention times.
39. All electrical conduits shall be either threaded rigid metal conduit, or threaded steel intermediate metal. (See N.E.C. hazardous locations, Class I, Group D, Division 1).
40. Force mains shall be installed with #12 AWG solid bare copper wire beneath the pipe. All valve boxes and points of termination shall have an access to this wire. All splices shall be performed with copper split-bolt wire connectors.
41. Access points to the tracer wire shall be provided at intervals not greater than 1,000 feet and shall be plainly marked on the plans. The access points may be of the meter box or lamphole type.
42. Force mains that terminate at manholes or lift stations at a point higher than 2 feet must be made into an outside drop. The drop must have a threaded screw plug or cap at the top clean-out and the bottom inlet shall be at the flow line or floor.
43. Where controls are located above ground, the controls shall be of the floating mercury or flow matcher type.
44. In wet-well/dry-well stations, controls shall be of the bubbler or flow matcher type.
    A. The final bubbler tube or canister shall be mounted to provide for easy removal and cleaning.
    B. There shall be a platform easily accessible from the ladder to provide easy removal of the final bubbler tube or canister.
45. Control wires that enter the wet-well (except moisture sensor wires) shall be either ground fault protected or less than 24 volts to ground.
46. Control voltages must be provided for stations of two or more pumps in one of the following ways.
    A. Separate, plainly marked fuse or circuit breakers.
    B. If the control voltages is taken from the fuse/s or circuit breaker that supplies power for any other device (e.g., a pump); a method must be provided to switch to an alternate fuse/s or circuit breaker in the event that breaker or fuse opens.
47. All control panels shall contain a GFI duplex receptacle that can provide 20 amperes at 115 volts and shall have a locking cover.
48. Each station shall have an audio visual alarm with self contained power source. The alarm shall activate on power outage and/or high water alarm float shall not be used for any other purposes. Telemetry may be required by the District.
49. All pump flanges and carriages shall be compatible with the A.B.S. Slide Rail system.
50. There shall be an air-light moisture seal between the control panel and the connection box.
51. All pump lift chains, float hangers, cord strain relief grips, and fastening hardware shall be stainless steel.
52. Valve vault "by-pass" pipe shall have a 4" quick disconnect fitting with cap.
53. All pumps, valves, pipe, electrical controls, etc. for both (2) pumps shall be installed before acceptance by Duckett Creek Sanitary District.
54. Outfall gravity line shall be in service before lift station is accepted by Duckett Creek Sanitary District.
55. An above ground Junction Box is to be provided for pump and float cable splices.

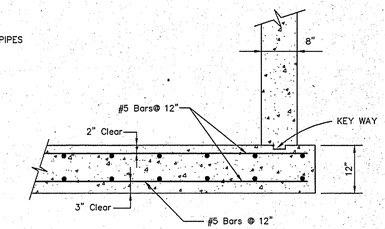
LIFT STATION #200



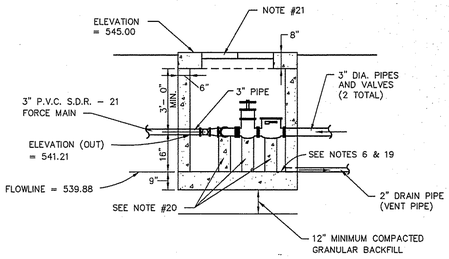


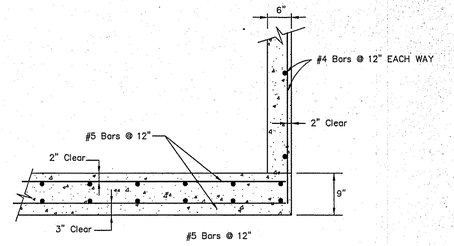
TYPICAL PLAN VIEW OF VALVE PIT TOP



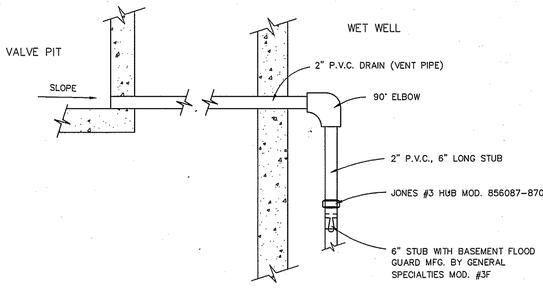


PUMP STATION BASE REINFORCING

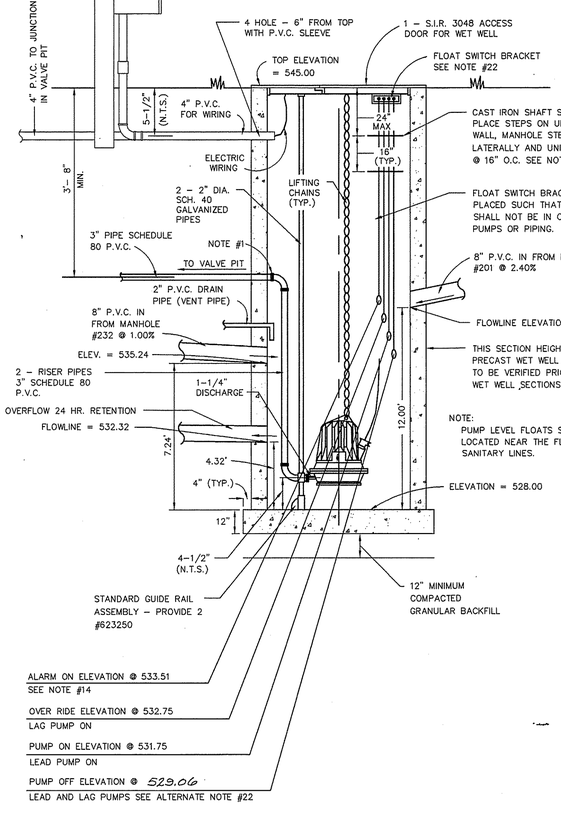


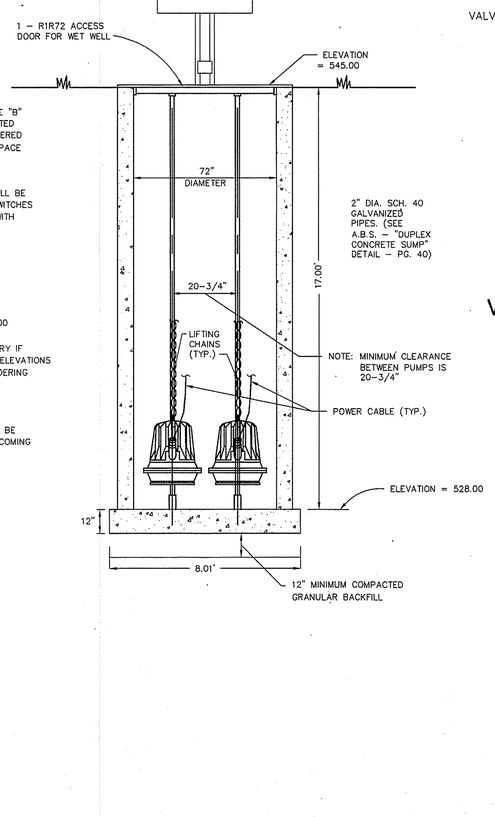


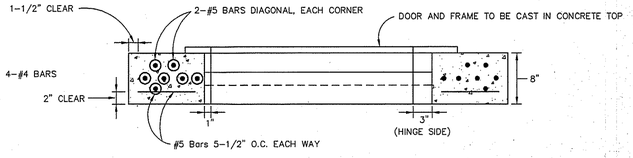
VALVE PIT REINFORCING



VALVE PIT DRAIN BACK FLOW PREVENTER







TYPICAL SECTION OF PUMP STATION AND VALVE PIT TOP REINFORCING

C:\ACAD\LIFTSTA

CAMELOT
LIFT STATION DETAILS

Dec. 1995 Job No. 94-120

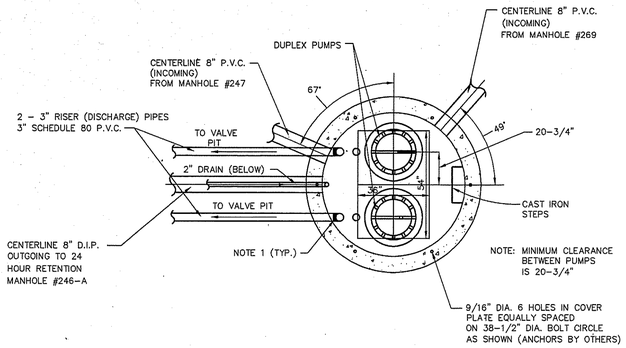
REV. 2-16-96

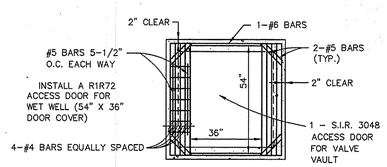
PUMP STATION GENERAL NOTES

1. Use S/S bolts on all connections.
2. Use S/S chain (lifting chain).
3. Connection box or channel (rated NEMA 3R or NEMA 4R according to conditions), located outside of the wet well to facilitate pump and/or control wire removal without disturbing the moisture seal.
4. Slope valve pit bottom to 3" drain pipe.
5. 15" clearance between check valve arms and valve pit wall.
6. Strain relief fittings to be used on junction box. Strain reliefs shall be plastic and rubber grommet, water resistant box connectors.
7. Fresh water to be provided in valve pit with frost free bib. Contractor to install 3/4" potable water supply in accordance with applicable plumbing codes.
8. All locking hardware will be "Best Locking Hardware" per Duckett Creek Sanitary District specifications.
9. Power line to enter valve pit through 3" PVC conduit.
10. The 12 foot wide access road and the area within the fence shall be paved with 2" of type "C" asphaltic concrete laid over 6" of type "A" asphaltic concrete. All subgrade shall consist of 6" of well compacted crushed limestone.
11. Power lines and level switch cables shall enter valve pit through a 3" PVC conduit connected to the junction box.
12. RACO, VERBATIM (Alarm Dialer), shall be provided per Duckett Creek Sanitary District specifications. Alarm dialer to be installed inside of lift station control panel enclosure. Provide required space inside of enclosure to add motor starter, circuit breakers, and capacitors for future pump.
13. Provide 4" PVC through wall of valve pit into wet well for wiring. The wiring raceway installed between the valve pit and wet well shall be sealed at each end with chase foam.
14. A-lock type compression fittings shall be used where all piping passes through the concrete walls.
15. Pipes to be located a minimum of 1.0 feet clear above or below joint.
16. Lift station shall be enclosed by a 6 foot chain link or woven wire fence with 3 strands of barbed wire across the top. A gate shall be provided with truck access.
17. The valve pit floor shall be sloped with a three sided invert towards the drain pipe. Use 2 inch concrete fillet.
18. Pump slide rails shall be supported with brackets every 15 feet. Concrete supports placed underneath the valves and less inside the valve pit shall be placed so:
    A. The supports are solidly secured in the valve pit floor.
    B. They allow for a minimum of 10" clearance under the valve bodies.
    C. Not to interfere with flange bolt removal.

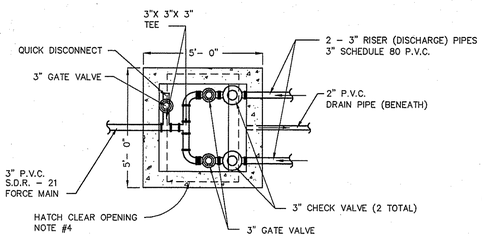
    All sewage pipes running through the valve pit and wet well walls shall be passed through an A-lock type compression fitting.
19. The wet well and valve pit shall be provided with Bilco, Type Q or K aluminum sidewalk type access doors with padlock type lugs.
20. All pump power and control leads, level control, and float wires shall be hung from the switch bracket supplied by the pump manufacturer. The switch bracket shall be attached to the wet well access door frame. Pumps shall be wired so that they alternate, except where the in fluent rate exceeds the capacity of one pump and activates the second pump.
21. Shop drawings shall be submitted to Duckett Creek Sanitary District for review in accordance with the general conditions and shall include mechanical and electrical details of equipment as well as schematics and interconnection drawings. A minimum of three (3) sets of drawings shall be furnished. The following shop drawings are required:
    A. Main Circuit Breaker
    B. Wiring Devices
    C. Motor Starters and Control Devices
    D. Alarm and Transmitting Equipment
    E. Pump Control Panel
22. All force main station piping shall be D.I.P. or approved equal. Specifically, all of the pipe connected to the valves and fitting in the valve vault, and all of the piping within the wet well shall be D.I.P. or approved equal. The drain pipe from the valve vault to the wet well may be SUCH-40 as shown.
23. All wet well steps shall be PVC coated.
24. The pump station manufacturer shall be present and responsible for the initial start up of the station. The manufacturer will further be responsible to check for proper installation of the unit and will make all necessary adjustments to insure proper operation, fully meeting the performance specifications.
25. Float requirements are as follows:
    A. Off Float – The pump shall have water covering a minimum of 1/2 the pump motor at the off level.
    B. First Pump – No less than 1-1/2' above top of pump motor.
    C. Second Pump – No less than 2' above top of pump motor.
    D. High Level – No less than 2-1/2' above the top of pump motor and alarm no more than 1 inch below the 24 hour retention line.
    E. Add float switch for future pump.
26. Run #12 AWG stranded conductor with insulation for direct burial over the force main. Splice only with split bolt type of wire connectors. Provide access to line at valve pit and receiving manhole.
27. Precast wet well and valve pit manufactured by "Klueter Bros." may be used in lieu of cast in place reinforced concrete structures.
28. Permanent signs that read "DANGER, KEEP OUT, SEWAGE TREATMENT FACILITY," shall be posted so that the signs are no further than 13' from the next sign or fence corner post.
29. The minimum clearances around all valves, elbows, flanges and mechanical joints and pipe connections shall be:
    4" off floor
    18" off wall or obstruction
    (Valve boxes) 48" inside height
    (Dry wells) 90" inside height
30. All valves (e.g. check valves and gate valves), shall be installed to facilitate easy removal without cutting the piping. Examples of acceptable methods are: unions, bolt together flanges.
31. Mechanical strength of piping materials where valves are installed is essential. The construction material for piping where valves are installed shall be either cast or ductile iron or equal.
32. Wet well floors shall provide a one to one slope to the hopper bottom to prevent accumulation of debris. The horizontal area of the floor shall not be greater than necessary for proper installation and functioning of the pump base or inlet.
33. Strain relief shall be provided in the wet well for all motor and control wires.
34. Motors shall have ground-fault interrupting circuit breakers.
35. Pumps shall have internal moisture and heat sensors that will not allow the pump to restart without manual resetting at the control panels.
36. Stations shall utilize either the floating mercury switch or the transducer type control.
37. The valve box shall be designed and built to prevent ground or rain water flooding.
38. The storage volume in the wet well shall be such as to prevent heat build up in the motor due to frequent starting (this is also an important consideration where add-a-phase units are used) and at the same time septic conditions must be avoided due to excessive retention times.
39. All electrical conduits shall be either threaded rigid metal conduit, or threaded steel intermediate metal. (See N.E.C. hazardous locations, Class I, Group D, Division 1).
40. Force mains shall be installed with #12 AWG solid bare copper wire beneath the pipe. All valve boxes and points of termination shall have an access to this wire. All splices shall be performed with copper split-bolt wire connectors.
41. Access points to the tracer wire shall be provided at intervals not greater than 1,000 feet and shall be plainly marked on the plans. The access points may be of the meter box or lamphole type.
42. Force mains that terminate at manholes or lift stations at a point higher than 2 feet must be made into an outside drop. The drop must have a threaded screw plug or cap at the top clean-out and the bottom inlet shall be at the flow line or floor.
43. Where controls are located above ground, the controls shall be of the floating mercury or flow matcher type.
44. In wet-well/dry-well stations, controls shall be of the bubbler or flow matcher type.
    A. The final bubbler tube or canister shall be mounted to provide for easy removal and cleaning.
    B. There shall be a platform easily accessible from the ladder to provide easy removal of the final bubbler tube or canister.
45. Control wires that enter the wet-well (except moisture sensor wires) shall be either ground fault protected or less than 24 volts to ground.
46. Control voltages must be provided for stations of two or more pumps in one of the following ways.
    A. Separate, plainly marked fuse or circuit breakers.
    B. If the control voltages is taken from the fuse/s or circuit breaker that supplies power for any other device (e.g., a pump); a method must be provided to switch to an alternate fuse/s or circuit breaker in the event that breaker or fuse opens.
47. All control panels shall contain a GFI duplex receptacle that can provide 20 amperes at 115 volts and shall have a locking cover.
48. Each station shall have an audio visual alarm with self contained power source. The alarm shall activate on power outage and/or high water alarm float shall not be used for any other purposes. Telemetry may be required by the District.
49. All pump flanges and carriages shall be compatible with the A.B.S. Slide Rail system.
50. There shall be an air-light moisture seal between the control panel and the connection box.
51. All pump lift chains, float hangers, cord strain relief grips, and fastening hardware shall be stainless steel.
52. Valve vault "by-pass" pipe shall have a 4" quick disconnect fitting with cap.
53. All pumps, valves, pipe, electrical controls, etc. for both (2) pumps shall be installed before acceptance by Duckett Creek Sanitary District.
54. Outfall gravity line shall be in service before lift station is accepted by Duckett Creek Sanitary District.
55. An above ground Junction Box is to be provided for pump and float cable splices.

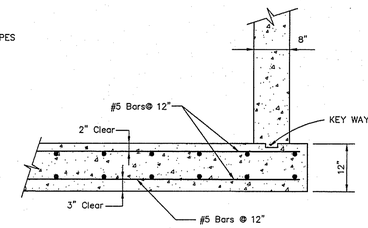
LIFT STATION #246



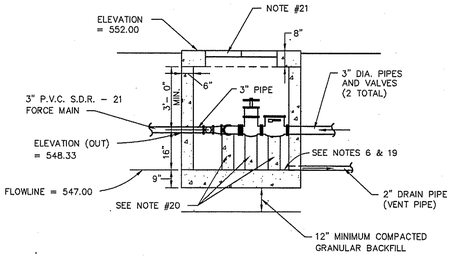


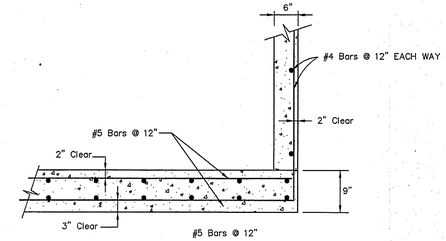
TYPICAL PLAN VIEW OF VALVE PIT TOP



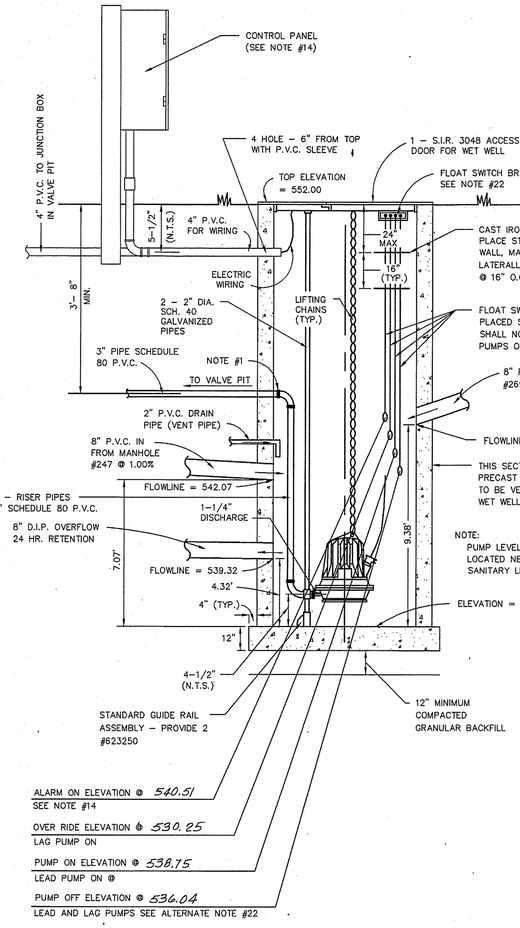


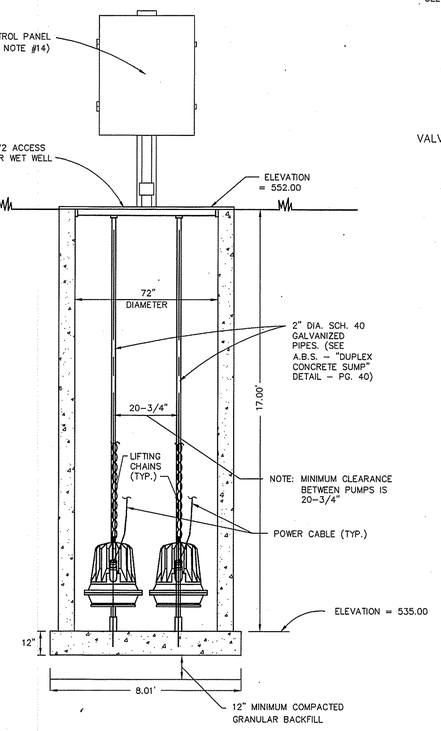
PUMP STATION BASE REINFORCING

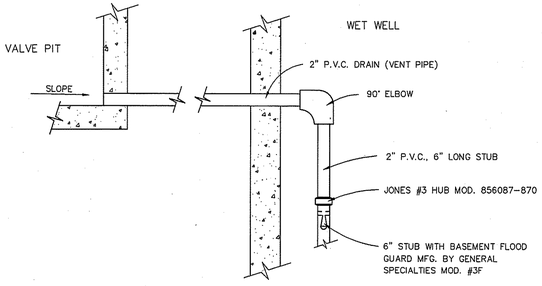




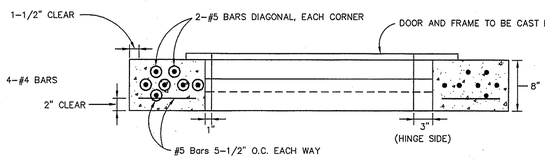
VALVE PIT REINFORCING







VALVE PIT DRAIN BACK FLOW PREVENTER



TYPICAL SECTION OF PUMP STATION AND VALVE PIT TOP REINFORCING

C:\ACAD\LIFTS1A

CAMELOT
DRAINAGE AREA MAP

Rev. 2-16-96

Dec. 1995

Job No. 94-120

N63°17'39"E 856.59'

N63°01'47"E 1185.41'

0+07.52

0+64.52 END 7" PVC
BEGIN 8" PVC

ENCHANTED (50' W.) COURT

CAMELOT DRIVE (50' W.)

TOWER HILL (50' W.) COURT

CENTER OF W. RIDGEWAY EASEMENT

GRADING LIMITS

CLEARING LIMITS (TYP.)

2:1 SLOPE

4:1 SLOPE

0.70 Aᴅ @ 1.9
Q = 1.33 c.f.s.

0.59 Aᴅ @ 1.9
Q = 1.12 c.f.s.

1.40 Aᴅ @ 1.9
Q = 2.66 c.f.s. AT STA. (50' W.) COURT
HIGH POINT 10+75+ 640.50

TQ=2.66

TQ=2.66

BASIN "A"

BASIN "B"

SEE SHEET 44

SEE SHEET 38

NOTE: FOR DRAINAGE PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

94120DES

37
49

Rev. 2-16-96

CAMELOT
DRAINAGE AREA MAP

Dec. 1995 — Job No. 94-120

SEE SHEET 37

SEE SHEET 43

SEE SHEET 39

SEE SHEET 40

LEGEND

0.25 As @ 1.9
Q = 0.48 c.f.s.
TQ = 0.48

1.56 As @ 1.9
Q = 2.97 c.f.s.
TQ = 2.97

1.30 As @ 1.9
Q = 2.47 c.f.s.
TQ = 4.10

0.80 As @ 1.9
Q = 1.52 c.f.s.
TQ = 1.55

0.56 As @ 1.9
Q = 1.06 c.f.s.
TQ = 0.49

0.26 As @ 1.9
Q = 0.49 c.f.s.
TQ = 0.49

0.90 As @ 1.9
Q = 1.71 c.f.s.
TQ = 1.71

0.79 As @ 1.9
Q = 1.50 c.f.s.
TQ = 1.50

0.17 As @ 1.9
Q = 0.32 c.f.s.

0.54 As @ 1.9
Q = 1.03 c.f.s.
TQ = 1.82

0.45 As @ 1.9
Q = 0.86 c.f.s.

0.39 As @ 1.9
Q = 0.74 c.f.s.
TQ = 0.74

TQ = 3.07
TQ = 1.63
TQ = 2.85
TQ = 1.60

50' W. EASEMENT TO SHELL PIPELINE CORP. BK 235 PG 15 BK 230 PG 117, BK 238 PG 324 & BK 1742 PG 324

NOTE: FOR DRAINAGE PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

CAMELOT
DRAINAGE AREA MAP

Dec. 1995 Job No. 94-120

Rev. 2-16-96

LANCELOT (50' W.) DRIVE

CLEARING LIMITS (TYP.)

GRADING LIMITS

50'W. EASEMENT TO SHELL PIPELINE CORP. BK 235 PG 15 *BK 230 PG 177 BK 235 PG 324 & BK 1942 PG 324

SEE SHEET 38

SEE SHEET 40

N/F DALE KOLB B 585 / P 553

N/F KOLB BOOK 585 PAGE 551

EGEL 585/

N 41°45'57" E 666.42'

S 26°37'18" E 932.58'

S 73°51'01" W 666.28'

0.50 AΣ @ 1.9 Q=0.95 c.f.s. Tc=1.11

0.43 AΣ @ 1.9 Q=0.82 c.f.s.

0.44 AΣ @ 1.9 Q=0.82 c.f.s. Tc=0.82

0.83 AΣ @ 1.9 Q=1.58 c.f.s. Tc=2.40

0.53 AΣ @ 1.9 Q=1.01 c.f.s. Tc=3.41

2.37 AΣ @ 1.9 Q=4.50 c.f.s. Tc=4.50

1.05 AΣ @ 1.9 Q=2.00 c.f.s. Tc=4.42

Tc=6.42

EXISTING LAKE 15 YR. H.W.= 573.60 100 YR. H.W.= 573.80

LIMITS OF HIGH WATER

MH 227 MH 228 MH 226 MH 225 MH 224 MH 223 MH 222 MH 221 MH 220 MH 219 MH 218 MH 217 MH 216 MH 215 MH 214 MH 213 MH 212 MH 211 MH 210

FE 2-26 FE 2-28 FE 2-27 FE 2-25 FE 2-24 FE 2-23 FE 2-22 FE 2-21 FE 2-20

CI 2-29 CI 2-30 SCI 2-25 DCI 2-21 AI 2-28 AI 2-24 AI 2-22 AI 2-23

B23 T@20' B22 R@17'

PT = 1+74.83 PC = 14+98.48

NOTE: FOR DRAINAGE PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

U.S. SURVEY 1787 FRAC. SECTION 28

Rev. 2-16-96

CAMELOT
DRAINAGE AREA MAP

Dec. 1995 — Job No. 94-120

SEE SHEET 38

SEE SHEET 39

SEE SHEET 42

SEE SHEET 41

50'W. EASEMENT TO SHELL PIPELINE CORP. BK. 235 PG. 15, BK. 250 PG. 177, BK. 1742 PG. 324

CAMELOT DRIVE

WIZARD'S (50') W. COURT

AGRAVAINE

PEDESTRIAN TRAIL

Existing Lake 100 YR. HW. = 579.60 100 YR. HW. = 579.88

LIMITS OF HIGH WATER

GRADING LIMITS

Q=1.60 cfs

Q=5.72 A@1.9 Q=1.08 c.f.s.

Q=1.24 A@1.9 c.f.s.

Q=3.19 cfs

Q=0.84 A@1.9 Q=1.60 c.f.s.

Q=0.83 A@1.9 Q=1.59 c.f.s.

Q=3.92 cfs

Q=0.73 A@1.9 Q=1.39 c.f.s.

Q=1.22 A@1.9 c.f.s.

Q=6.42 cfs

Q=2.37 A@1.9 Q=4.50 c.f.s.

Q=2.00 cfs

NOTE: FOR DRAINAGE PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

Rev. 2-16-96

CAMELOT
DRAINAGE AREA MAP

Dec. 1995 — Job No. 94-120

SEE SHEET 40

STORMWATER DETENTION BASIN "G"

AREA TO EXISTING DISCHARGE BASIN "G"
- 6.80 @ 1.7 CFS / ACRE
- Q= 11.56 CFS

POST DEVELOPED Q TO BASIN:
- RUNOFF VIA FE'S: 5.30 ACRES @ 1.9 CFS / ACRE
- Q= 10.07 CFS
- RUNOFF DIRECT TO BASIN: 4.32 ACRES @ 1.9 CFS / ACRE
- Q= 8.21 CFS
- TQ TO BASIN = 18.28 CFS (1,096.80 CFM)

BYPASS BASIN:
- 0.10 ACRE @ 1.9 CFS / ACRE
- Q= 0.19 CFS Q=

ALLOWABLE RELEASE:
- 11.56 CFS Q= 11.37 CFS

NOTE: FOR DRAINAGE PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

941200ES

Rev. 2-16-96

CAMELOT
DRAINAGE AREA MAP

Dec. 1995 — Job No. 94-120

SEE SHEET 43

SEE SHEET 40

N/F CARPENTER B 552 / P 823

S72°41'38"W 831.61'

50'W EASEMENT TO SHELL PIPELINE CORP. BK 230 PG 117, BK 235 PG 15, & BK 1742 PG 324

STORMWATER DETENTION BASIN "E"
DESIGN STORM 15 YR/20 MIN

AREA TO EXISTING DISCHARGE POINT:
25.78 ACRES @ 1.7 CFS/ACRE
Q= 43.83 CFS

POST DEVELOPED Q TO BASIN:
RUNOFF VIA FE'S: 5.38 ACRES @ 1.9 CFS/ACRE
Q= 10.22 CFS
RUNOFF DIRECT TO BASIN: 18.10 ACRES @ 1.9 CFS/ACRE
Q= 34.39 CFS
TQ TO BASIN: 4461 CFS (2,676.60 CFM)

BYPASS BASIN:
0.69 ACRES @ 1.9 CFS/ACRE
Q= 1.13 CFS

ALLOWABLE RELEASE:
43.83 CFS - 1.31 CFS Q= 42.52 CFS
(Exist. Runoff)(Bypass)

BASIN "E"
TQ=2.47

TQ=2.47
1.30 Ac @ 1.9
Q=2.47 C.F.C.

N17°06'55"W 843.48'

N89°35'49"W 654.70'

N79°25'05"W

PARCEL 34

NOTE: FOR DRAINAGE PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

94120DES

CAMELOT
DRAINAGE AREA MAP

Dec. 1995 — Job No. 94-120

Rev 2-16-96

SEE SHEET 44

SEE SHEET 38

SEE SHEET 42

NOTE: FOR DRAINAGE PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

Existing Lake
15 YR. H.W. = 549.55
100 YR. H.W. = 549.88

Existing Lake
15 YR. H.W. = 580.42
100 YR. H.W. = 580.64

N/F BOATMEN'S TRUST COMPANY, CO-TRUSTEE U/W ADOLPHUS BUSCH, JR. DECEASED
DB 1732 P 1720

N45°06'11"E 255.76'
S45°06'11"W

N27°07'30"W 372.40'(R4)

603.72'(R4)

1260'

60.08'

60.36'

Q=1.98

Q=4.43

Q=5.99

Q=1.43

Q=1.77

Q=2.55

Q=1.33

Q=1.10

Q=2.79

0.88 AC @ 1.9
Q=1.67 c.f.s.

0.93 AC @ 1.9
Q=1.77 c.f.s.

0.75 AC @ 1.9
Q=1.43 c.f.s.

0.64 AC @ 1.9
Q=1.22 c.f.s.

0.70 AC @ 1.9
Q=1.33 c.f.s.

1.47 AC @ 1.9
Q=2.79 c.f.s.

0.54 AC @ 1.9
Q=1.03 c.f.s.

0.86 AC @ 1.9
Q=1.63 c.f.s.

0.17 AC @ 1.9
Q=0.32 c.f.s.

30" RCP @ 1.9
Q=2.44 c.f.s.

B150' L.P. PARCEL

CLEARING LIMITS

DRIVE

GUINEVERE (50' W.)

PEDESTRIAN TRAIL

941209S

CAMELOT
DRAINAGE AREA MAP

Dec. 1995 — Job No. 94-120

Rev. 2-16-96

SUBDIVISION
PG 14

N/F
LATTA
B 625 / P 14

N63°17'39"E

SCHAFFER
B 625 / P 520

N27°27'22"E 190.69'

N27°16'W 1850'

N63°17'39"E 208.58'

N27°30'W 208.69'

N45°02'32"E 284.43'

S28°22'48"E 405.25'

CALAHAN'S SQUARE (50' W)

ENCHANTED DRIVE (50' W)

CRYSTAL SPRING COURT (50' W)

GRADING LIMITS

4:1 SLOPE

2:1 SLOPE

LIMITS OF HIGH WATER

15 YR. HW. = 580.42
100 YR. HW. = 580.64

Existing Lake

0.81 AS@1.9 Q=1.65 c.f.s. TQ=1.82

0.94 AS@1.9 Q=1.82 c.f.s. TQ=3.44

1.16 AS@1.9 Q=3.86 c.f.s.

0.42 AS@1.9 Q=0.80 c.f.s. TQ=0.80

0.31 AS@1.9 Q=0.59 c.f.s. TQ=1.39

0.52 AS@1.9 Q=0.99 c.f.s. TQ=2.45

0.45 AS@1.9 Q=0.86 c.f.s. TQ=3.44

0.70 AS@1.9 Q=1.33 c.f.s. TQ=1.12

0.59 AS@1.9 Q=1.12 c.f.s. TQ=1.71

0.30 AS@1.9 Q=0.68 c.f.s. TQ=4.15

1.16 AS@1.9 Q=2.20 c.f.s.

0.32 AS@1.9 Q=0.61 c.f.s. TQ=0.96

0.57 AS@1.9 Q=1.08 c.f.s. TQ=2.41

0.20 AS@1.9 Q=0.38 c.f.s. TQ=4.30

TQ=4.30

TQ=1.40

0.37 AS@1.9 Q=0.65 c.f.s.

0.41 AS@1.9 Q=0.78 c.f.s. TQ=0.78

0.88 AS@1.9 Q=1.67 c.f.s. TQ=1.67

0.54 AS@1.9 Q=1.03 c.f.s. TQ=2.70

TQ=1.81

TQ=12.51

0.73 AS@1.9 Q=1.39 c.f.s.

0.69 AS@1.9 Q=1.31 c.f.s. TQ=3.12

0.30 AS@1.9 Q=0.57 c.f.s. TQ=1.16

0.61 AS@1.9 Q=1.16 c.f.s. TQ=1.16

TQ=1.39

TQ=2.70

TQ=3.12

TQ=3.44

TQ=4.15

TQ=4.30

TQ=1.16

TQ=1.67

TQ=1.81

TQ=12.51

TQ=0.78

TQ=0.80

TQ=0.96

TQ=1.82

TQ=2.41

TQ=2.45

TQ=3.44

TQ=4.30

TQ=1.40

TQ=1.71

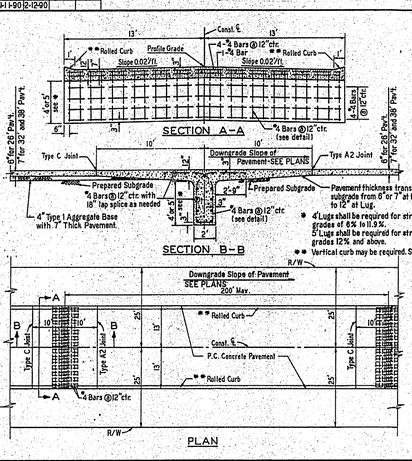
TQ=1.12

CAMELOT
CONSTRUCTION DETAILS

Dec. 1995 Job No. 94-120

REV: 2-16-96

NEW REVISIONS
5-17-89 I-1-90 12-1290



GENERAL NOTES

1. Do not scale drawing. Follow dimensions.
2. For longitudinal and transverse joints, dowel and tie bar requirements and curb dimensions refer to the Pavement Construction Details for "Joints and Curbs", Standard Drawing C502.03.
3. Pavement Lugs shall be required on all street grades of 6% or greater.
4. Pavement Lugs shall be located at or near the point at which the street grade first exceeds 6% and then proceed uphill at the following spacing: 200' intervals on tangent sections; 100' intervals on horizontal curve sections; or as otherwise directed by the Department.
5. Pavement Lugs shown are for a 26' wide pavement. When required on pavements narrower or wider than 26', details are similar.

BAR BEND DETAIL

ST. LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI
PAVEMENT CONSTRUCTION DETAILS

PAVEMENT LUG

APPROVED: _____ DIRECTOR

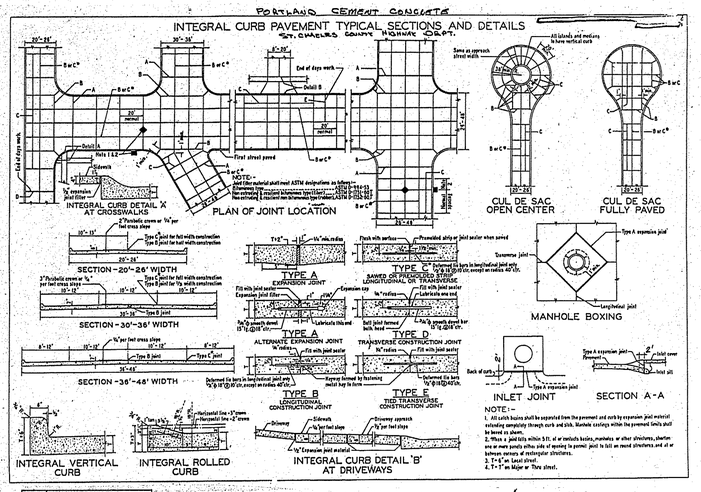
DATE: JAN 1 1 1990

DRAWING C502.04

PORTLAND CEMENT CONCRETE

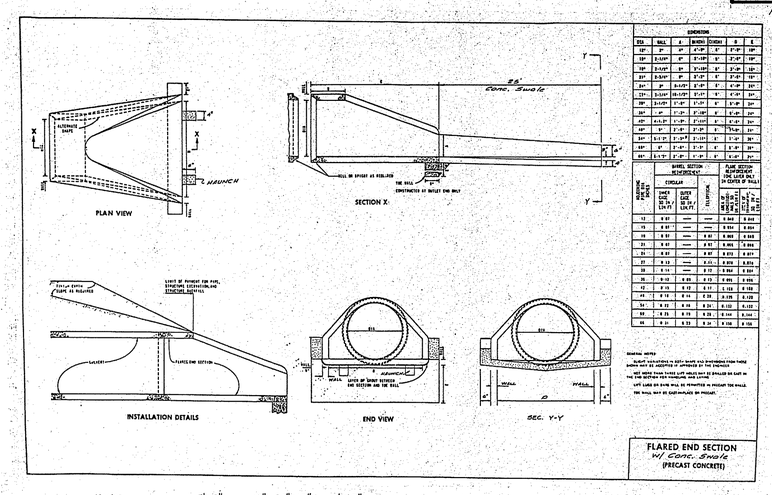
INTEGRAL CURB PAVEMENT TYPICAL SECTIONS AND DETAILS

ST. CHARLES COUNTY HIGHWAY DEPT.



NOTE:-

1. All width basins shall be supported from the pavement and curb by expansion joint material extending completely through curb and slab. Manhole castings within the pavement limits shall be boxed as shown.
2. Where a joint falls within 5 ft. of an obstructions, manholes or other structures, shorten one or more panels on the side of opening to permit joint to fall on nearest obstructions and at or between corners of rectangular obstructions.
3. T-4" on Local street.
4. T-7" on Major or Thru street.



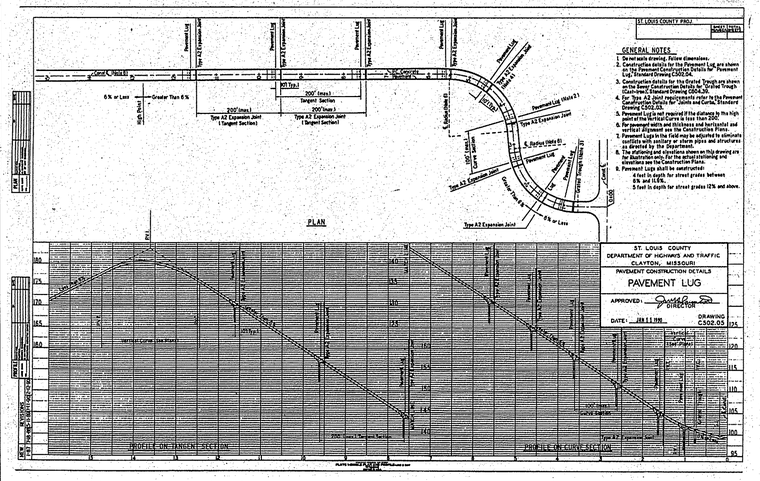
SIZE	WALL	A	BARREL DIAMETER	B	C
18"	2"	3"	1'-6"	4"	1'-8"
24"	2-1/2"	3"	2'-1"	4"	2'-3"
30"	2-1/2"	3"	2'-7"	4"	2'-9"
36"	2-1/2"	3"	3'-1"	4"	3'-3"
42"	3"	3-1/2"	3'-6"	5"	3'-8"
48"	3-1/2"	3'-0"	4'-0"	5"	4'-2"
54"	4"	3'-3"	4'-6"	6"	4'-8"
60"	4"	3'-6"	5'-0"	6"	5'-2"
66"	4"	3'-9"	5'-6"	6"	5'-8"
72"	4"	4'-0"	6'-0"	6"	6'-2"
84"	4-1/2"	4'-3"	7'-0"	6"	7'-2"
96"	5"	4'-6"	8'-0"	6"	8'-2"

CONDITIONS

PIPE SIZE	CIRCULAR: SLOPE	CIRCULAR: SLOPE	ELLIPTICAL	PLATE SECTION REQUIRED: SLOPE	PLATE SECTION REQUIRED: SLOPE
	0% to 10%	10% to 20%		0% to 10%	10% to 20%
12"	0.87	—	—	0.556	0.556
15"	0.87	—	—	0.556	0.556
18"	0.87	—	0.87	0.868	0.868
21"	0.87	—	0.87	0.868	0.868
24"	0.87	—	0.87	0.872	0.872
30"	0.87	—	0.87	0.872	0.872
36"	0.13	—	0.13	0.872	0.872
42"	0.13	—	0.13	0.872	0.872
48"	0.13	—	0.13	0.872	0.872
54"	0.13	0.13	0.13	0.872	0.872
60"	0.13	0.13	0.13	0.872	0.872
66"	0.13	0.13	0.13	0.872	0.872
72"	0.13	0.13	0.13	0.872	0.872
84"	0.13	0.13	0.13	0.872	0.872
96"	0.13	0.13	0.13	0.872	0.872
54"	0.13	0.13	0.13	0.132	0.132
60"	0.13	0.13	0.13	0.132	0.132
66"	0.13	0.13	0.13	0.132	0.132
72"	0.13	0.13	0.13	0.132	0.132
84"	0.13	0.13	0.13	0.132	0.132
96"	0.13	0.13	0.13	0.132	0.132

GENERAL NOTES

1. ALL CONCRETE SHALL BE CLASS "A" AIR ENTRAINED CONCRETE.
2. ALL REINFORCING STEEL SHALL BE GRADE 60 UNLESS OTHERWISE NOTED.
3. THE TOP SECTION FOR TONGUE AND GROOVE JOINTS SHALL BE USED AS THE TOP SECTION FOR TONGUE AND GROOVE JOINTS.
4. ALL LUGS ON BARREL WALL TO BE REMOVED AT PRECAST THE WALL.
5. THE WALL MAY BE CAST MONOLITHIC OR PRECAST.



GENERAL NOTES

1. Do not scale drawing. Follow dimensions.
2. Construction limits for the Paved Trough are shown on the Sewer Construction Details for "Grated Trough, Type 1" Standard Drawing C604.01.
3. Construction details for the Grated Trough are shown on the Sewer Construction Details for "Grated Trough, Type 2" Standard Drawing C604.02.
4. Curb Type A2 shall be required for this Pavement Lug. See Details for "Joints and Curbs", Standard Drawing C502.03.
5. Pavement Lug is not required if the slope on the high side of the pavement is 6% or greater.
6. For pavement widths and thickness and horizontal and vertical alignment see the Construction Plans.
7. Pavement Lugs in the field may be adjusted to eliminate conflicts with sanitary or storm inlets and structures or to fit field conditions.
8. The stationing and elevations shown on this drawing are for illustration only. For the actual stationing and elevations see the Construction Plans.
9. Pavement Lugs shall be constructed:
   5-foot in depth for street grades between 6% and 11.9%.
   5-foot in depth for street grades 12% and above.

ST. LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI
PAVEMENT CONSTRUCTION DETAILS

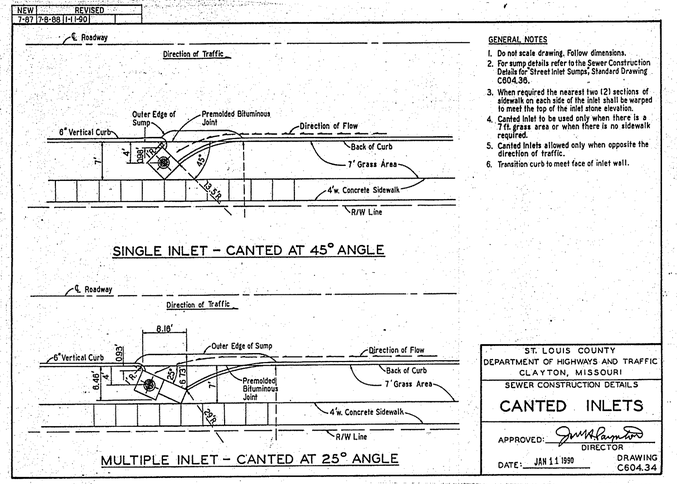
PAVEMENT LUG

APPROVED: _____ DIRECTOR

DATE: JAN 1 1 1990

DRAWING C502.03

NEW REVISED
7-87 7-8-88 11-1-90



GENERAL NOTES

1. Do not scale drawing. Follow dimensions.
2. For sump details refer to the Sewer Construction Details for "Street Inlet Dumps", Standard Drawing C604.36.
3. When required the nearest two (2) sections of sidewalk on each side of the inlet shall be warped to meet the top of the inlet stone elevation.
4. Canted Inlet to be used only when there is a 7 ft. grass area or when there is no sidewalk required.
5. Canted Inlets allowed only when opposite the direction of traffic.
6. Transition curb to meet face of inlet wall.

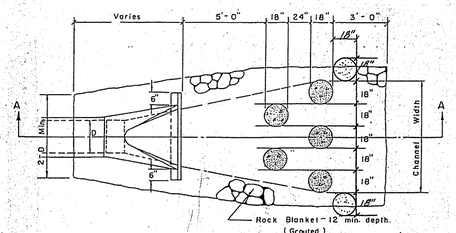
ST. LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI
SEWER CONSTRUCTION DETAILS

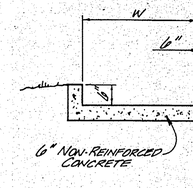
CANTED INLETS

APPROVED: _____ DIRECTOR

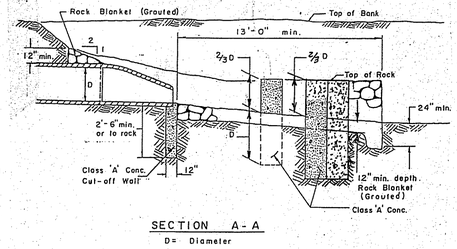
DATE: JAN 1 1 1990

DRAWING C604.34





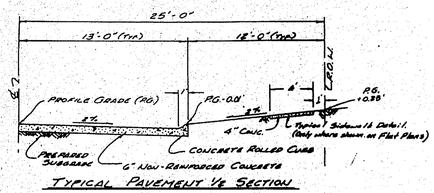
CROSS SECTION
PAVED SWALE
SEE FLAT PLANS FOR WIDTH
N.T.S.



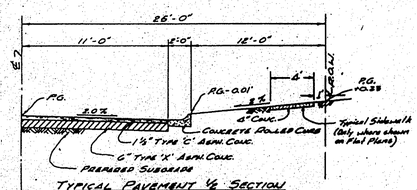
CROSSING NO.	L TOTAL LENGTH OF PIPE (FT.)	ℓ LENGTH BETWEEN ℄ OF PIPE SUPPORTS (FT.)	D CARRIER PIPE OUTSIDE DIAMETER (IN.)	t* CARRIER PIPE WALL THICKNESS (IN.)
1	186.63	61.60'	13	0.50

NOTES:

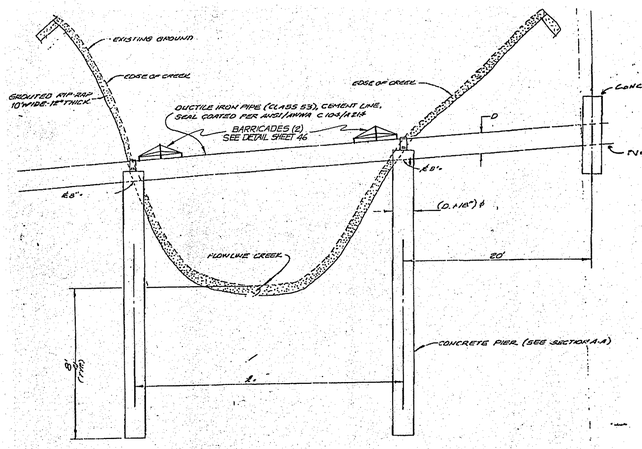
1. IF ROCK IS ENCOUNTERED SET CONCRETE PIER 24" INTO ROCK.
2. ALL SPLICES IN REINFORCING STEEL SHALL BE 30 BAR DIAMETERS.
3. MINIMUM COVER OVER PRIMARY REINFORCING STEEL TO BE 2".
4. ULTIMATE COMPRESSIVE STRESS IN CONCRETE (28 DAYS) = 3000 P.S.I.
5. ULTIMATE TENSILE STRESS IN REINFORCING STEEL = 18,000 P.S.I.



TYPICAL PAVEMENT ½ SECTION

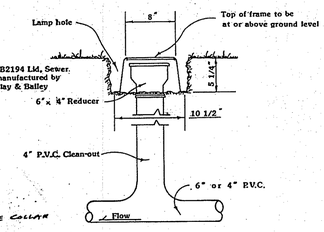


TYPICAL PAVEMENT ½ SECTION
ALTERNATE

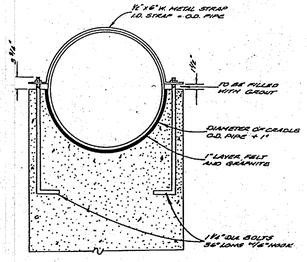


AERIAL CREEK CROSSING DETAIL
(NOT TO SCALE)

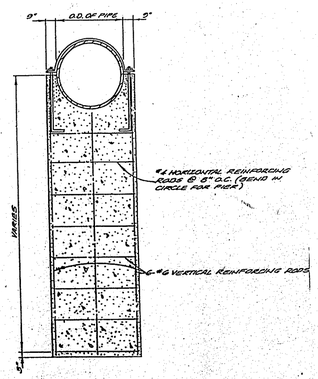
GENERAL NOTES



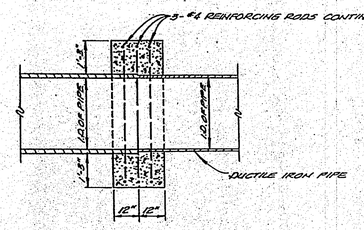
CLEAN-OUT DETAIL
Not to Scale



Flared End Section with Energy Dissipator



CONCRETE PIER DETAIL ~ SECTION A-A
(NOT TO SCALE)



CONCRETE COLLAR DETAIL ~ SECTION B-B
(NOT TO SCALE)

CAMELOT
CONSTRUCTION DETAILS

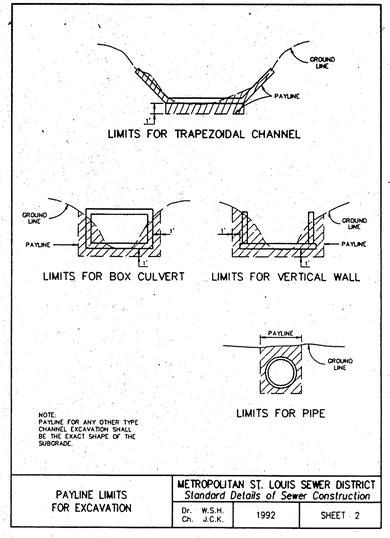
Dec. 1995 — Job No. 94-120

REV. 2-16-96

ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASEMENT	INSIDE DIMENSIONS OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASEMENT
4	30	2.50	3.28				
6	30	2.50	3.59				
8	30	2.50	3.87				
10	30	2.50	4.09				
12	30	2.50	4.25				
15	36	3.00	5.55				
18	36	3.00	5.77	14 x 23	41	3.42	5.94
21	39	3.25	6.61				
24	42	3.50	7.39	19 x 30	49	4.08	7.68
27	45	3.75	8.18	22 x 34	53	4.42	8.61
30	49	4.08	9.30	24 x 38	58	4.83	9.70
33	53	4.42	10.53	27 x 42	62	5.17	10.71
36	56	4.67	11.43	29 x 45	66	5.50	11.72
39	DISCONTINUED			32 x 49	71	5.92	13.14
42	63	5.25	13.38	34 x 53	75	6.25	14.05
48	70	5.83	15.67	38 x 60	83	6.92	16.18
54	77	6.42	18.15	43 x 68	92	7.67	18.81
60	84	7.00	20.73	48 x 76	101	8.42	21.59
66	91	7.58	23.45	53 x 83	109	9.08	24.35
72	98	8.17	26.37	58 x 91	118	9.83	27.45
78	105	8.75	29.39	63 x 98	126	10.50	30.50
84	112	9.33	32.57	68 x 106	135	11.25	33.91
90	119	9.92	35.90	72 x 113	143	11.92	36.99
96	126	10.50	39.37	77 x 121	152	12.67	40.69
102	133	11.08	42.99	82 x 128	160	13.33	44.45
108	140	11.67	46.75	87 x 136	168	14.00	47.79
114	147	12.25	50.66	92 x 143	176	14.67	51.70
120	154	12.83	54.72	97 x 151	185	15.42	56.01
126	161	13.42	58.92				
132	168	14.00	63.27	106 x 166	202	16.83	64.48
144	182	15.17	72.40	116 x 180	218	18.17	73.59

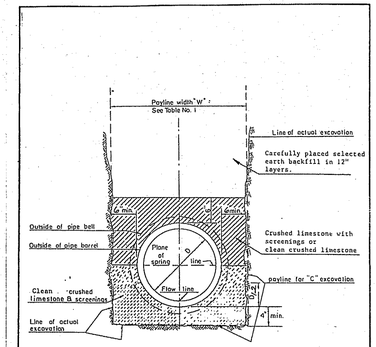
TABLE 1
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. B.E.B. Ch. J.C.K. | 1992 | SHEET 1



PAYLINE LIMITS FOR EXCAVATION

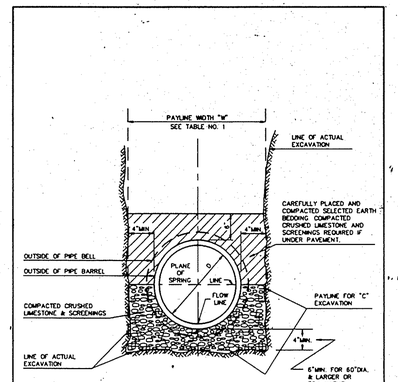
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. | 1992 | SHEET 2



Rev. 6-19-95 TD

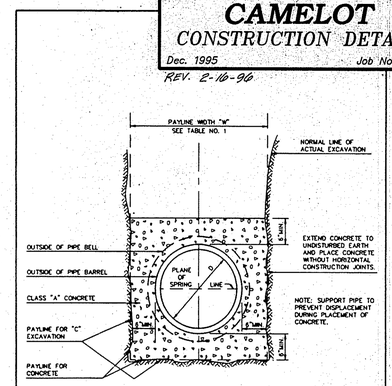
PIPE BEDDING CLASS "C" (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)

DUCKETT CREEK SEWER DISTRICT
STANDARD CONSTRUCTION DETAIL
DETAIL NO. JAN. 1989



PIPE BEDDING CLASS "C" (MODIFIED FOR REINFORCED CONCRETE PIPE)

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. | 1992 | SHEET 4



CONCRETE ENCASEMENT

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. | 1992 | SHEET 5

(CLASS "A" BEDDING)

CONCRETE CRADLE

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. | 1992 | SHEET 6

SECTION OF MANHOLE		DIMENSION
TOP TRANSITION	UPPER	26 1/2" DIA.
	LOWER	42" DIA.
BOTTOM SECTION	8" THRU 24" DIA. PIPE	42" DIA.
	27" THRU 36" DIA. PIPE	42" SQUARE

TABLE NO. 2
STANDARD MANHOLE DIMENSIONS

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.G.W. Ch. J.C.K. | 1992 | SHEET 7

LINE MANHOLE PIPE SEWERS 8"-24" DIA.

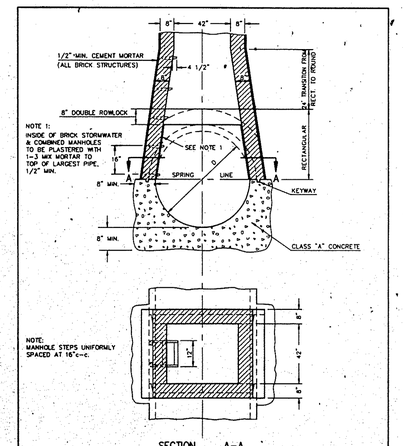
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. | 1992 | SHEET 8

TYPICAL LINE MANHOLE ON PIPE SEWER 27" THRU 36" IN DIAMETER

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. | 1992 | SHEET 9

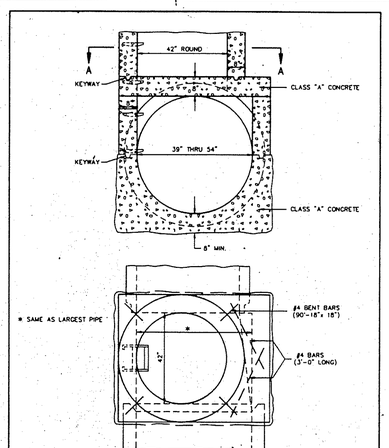
MANHOLE ON PIPE SEWER 27" THRU 36" (ALTERNATE)

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. D.A.B. Ch. J.C.K. | 1992 | SHEET 10



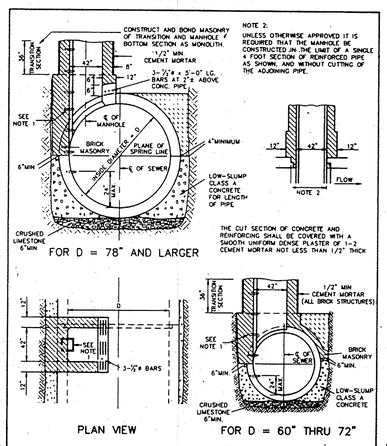
MANHOLE ON CONCRETE PIPE SEWERS 39" THRU 54" DIAMETER

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. | 1992 | SHEET 11



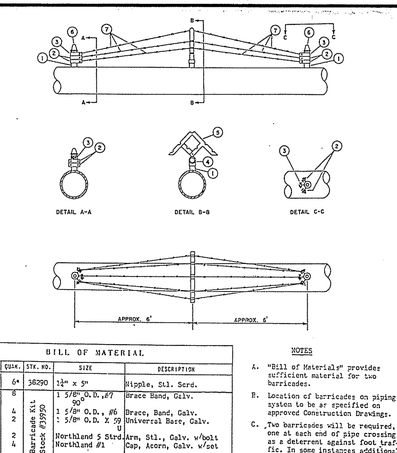
MANHOLE ON CONC. PIPE 39" THRU 54" (ALTERNATE)

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. | 1992 | SHEET 12



TYPICAL MANHOLE BASE REINFORCED CONCRETE PIPE SEWERS 60" AND LARGER IN DIAMETER

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. | 1992 | SHEET 13



BILL OF MATERIAL

NO.	QUAN.	STK. NO.	SIZE	DESCRIPTION
1	6*	38290	3/4" x 5"	Nipple, Stl. Sord.
2	8	Barricade Kit Stock #39990	1 5/8" O.D. x.87 90° U	Brace Band, Galv.
3	4		1 5/8" O.D., #6	Brace, Band, Galv.
4	2		1 5/8" O.D. X 59 U	Universal Base, Galv.
5	2		Northland S Strd.	Arm, Stl., Galv. w/bolt
6	4		Northland #1	Cap, Acorn, Galv. w/set screw
7	1**	59805	4 Point, 12½ Gauge	Wire, Barbed, Galv.

*1/2" Bare pipe on job may be substituted for 1/2" x 5" nipple. Screw threads not necessary.

**Contact supervisor before ordering barbed wire. Barbed wire supplied in 1320' rolls only, not returnable to Storeroom. Contact supervisor for availability and disposal of unused wire. Approx.

NOTES

A. "Bill of Materials" provides sufficient material for two barricades.

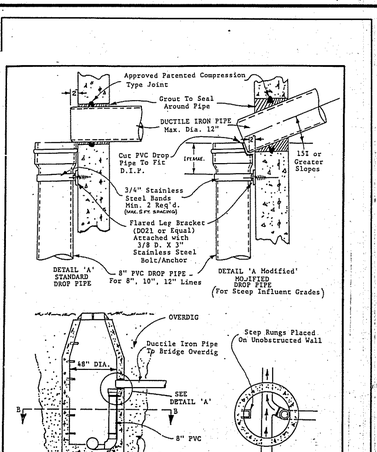
B. Location of barricades on piping system to be ar specified on approved Construction Drawings.

C. Two barricades will be required, one at each end of pipe crossing as a deterrent against foot traffic. In some instances additional barricades may be required.

D. Cost any exposed pipe with mastic, Stock #51857.

AERIAL CROSSING BARRIER DETAIL

M.F.B.



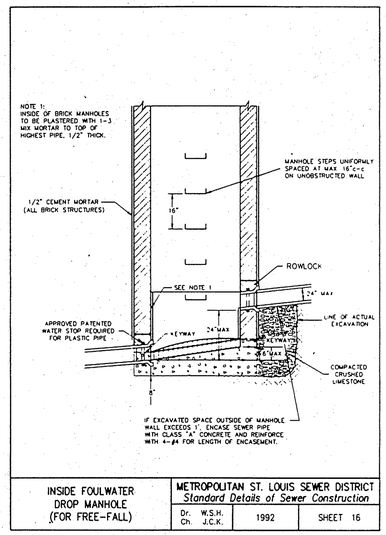
INSIDE DROP MANHOLE

DUCKETT CREEK SEWER DISTRICT
STANDARD CONSTRUCTION DETAIL
DETAIL NO. JAN. 1989

REV. 2-16-96

CAMELOT
CONSTRUCTION DETAILS

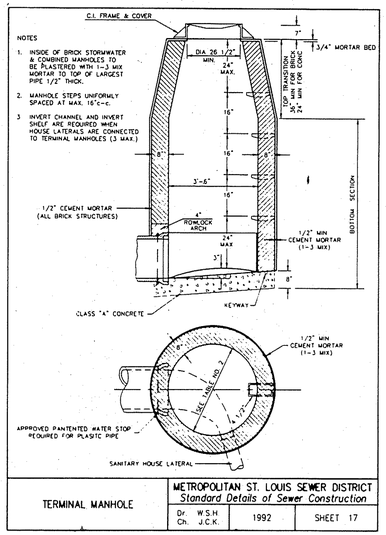
Dec. 1995 — Job. No. 94-120



INSIDE FOULWATER DROP MANHOLE (FOR FREE-FALL)

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

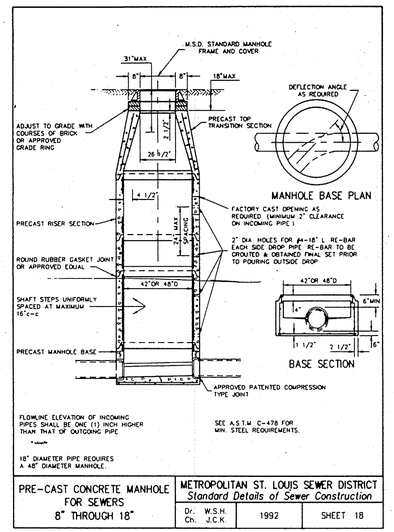
Dr. W.S.H. Ch. J.C.K.	1992	SHEET 16



TERMINAL MANHOLE

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

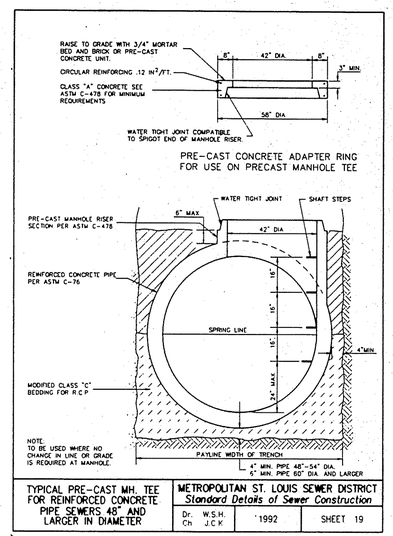
Dr. W.S.H. Ch. J.C.K.	1992	SHEET 17



PRE-CAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 18"

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. W.S.H. Ch. J.C.K.	1992	SHEET 18

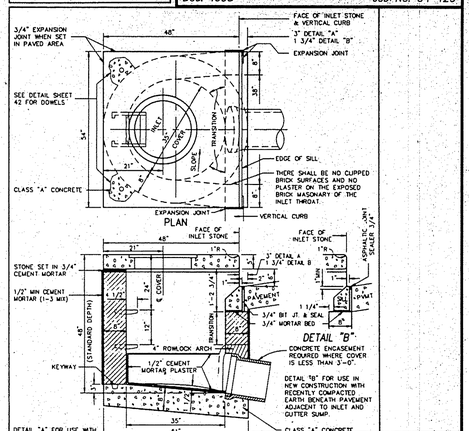


TYPICAL PRE-CAST MH. TEE FOR REINFORCED CONCRETE PIPE SEWERS 48" AND LARGER IN DIAMETER

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. W.S.H. Ch. J.C.K.	1992	SHEET 19

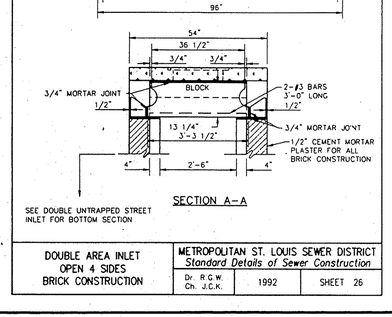
UNTRAPPED STREET INLET BRICK CONSTRUCTION



VERTICAL SECTION ON ℄ *DETAIL "A" AS SHOWN*

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. W.S.H. Ch. J.C.K.	1992	SHEET 20



VERTICAL SECTION

DETAIL "A" AS SHOWN

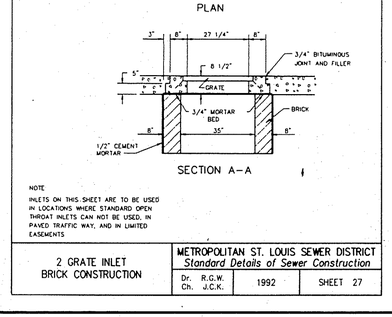
DETAIL "A" FOR USE WITH VERTICAL CURBS AND CONDITIONS OF STABLE COMPACTED EARTH BENEATH PAVEMENT ADJACENT TO INLET AND GUTTER SUMP.

DETAIL "B" FOR USE IN NEW CONSTRUCTION WITH RECENTLY COMPACTED EARTH BENEATH PAVEMENT ADJACENT TO INLET GUTTER SUMP.

TRAPPED STREET INLET BRICK CONSTRUCTION

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

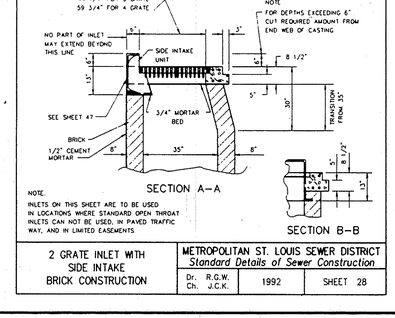
Dr. W.S.H. Ch. J.C.K.	1992	SHEET 21



MULTIPLE STREET INLET BRICK CONSTRUCTION

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

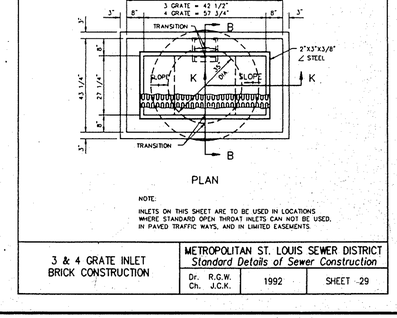
Dr. D.A.B. Ch. J.C.K.	1992	SHEET 22



DOUBLE UNTRAPPED STREET INLET BRICK CONSTRUCTION

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

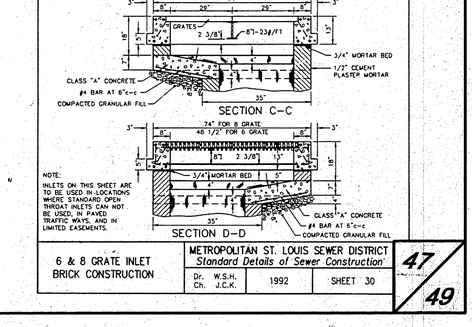
Dr. D.A.B. Ch. J.C.K.	1992	SHEET 23



AREA INLET OPEN 4 SIDES BRICK CONSTRUCTION

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. R.G.W. Ch. J.C.K.	1992	SHEET 24



AREA INLET MANHOLE (12" THRU 24")

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. R.G.W. Ch. J.C.K.	1992	SHEET 25

DOUBLE AREA INLET OPEN 4 SIDES BRICK CONSTRUCTION

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. R.G.W. Ch. J.C.K.	1992	SHEET 26

2 GRATE INLET BRICK CONSTRUCTION

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. R.G.W. Ch. J.C.K.	1992	SHEET 27

2 GRATE INLET WITH SIDE INTAKE BRICK CONSTRUCTION

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. R.G.W. Ch. J.C.K.	1992	SHEET 28

3 & 4 GRATE INLET BRICK CONSTRUCTION

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. R.G.W. Ch. J.C.K.	1992	SHEET 29

6 & 8 GRATE INLET BRICK CONSTRUCTION

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. W.S.H. Ch. J.C.K.	1992	SHEET 30

PRECAST CONCRETE STORMWATER STRUCTURES

MINIMUM DISTANCE FLOWLINE TO TOP OF STONE OR GRATE

PIPE ID. NOMINAL INCHES	AREA INLET CIRCULAR BASE DIA. 42"	48"	60"	2 GRATE INLET CIRCULAR BASE DIA. SQUARE 42"	48"	60"	60" (MAX.)	SINGLE STREET INLET CIRCULAR BASE DIA. 42"	48"	60"	RECTANGLE (MAX.)
12"	45"			38"			31"	48"			41"
15"	48"			41"			34"	51"			44"
18"	52"			44"			37"	55"			48"
21"	55"			47"			40"	58"			51"
24"		58"			51"		44"		61"		54"
27"			78"			71"	NA			81"	NA
30"			82"			74"	NA			85"	NA
33"			85"			77"	NA			88"	NA

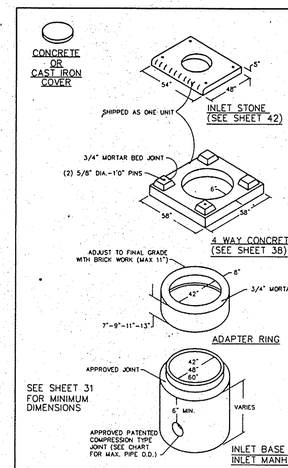
(SEE SHEET 32 FOR DETAIL) (SEE SHEET 33 FOR DETAIL) (SEE SHEET 34 FOR DETAIL)

NOTE: 1. 48" DIA. BASE REQUIRES 7" HIGH TRANSTION SECTION TO 42" DIA., SIMILAR TO "ADAPTER RING" SHEET 32.

2. 60" DIA. BASE REQUIRES 24" HIGH CONCENTRIC REDUCER TRANSITION TO 42" DIA., SIMILAR TO "ADAPTER RING" SHEET 32.

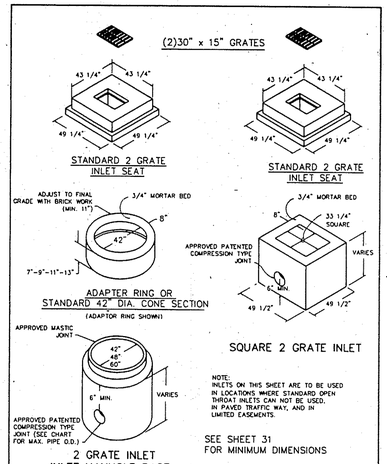
PRECAST CONCRETE STORMWATER STRUCTURES	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. J.L.G. Ch. J.C.K.	SEPT. 1990	SHEET 31

CONCRETE OR CAST IRON COVER



AREA INLET PRECAST CONCRETE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. J.L.G. Ch. J.C.K.	APRIL 1992	SHEET 32

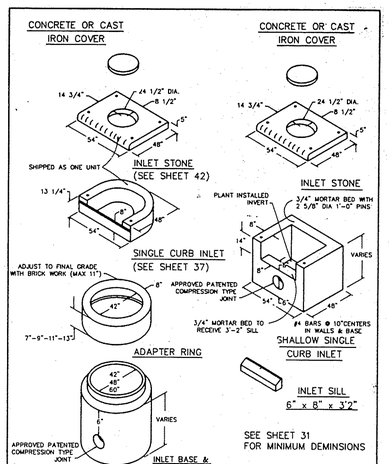
(2)30" x 15" GRATES



2 GRATE INLETS PRECAST CONCRETE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. J.L.G. Ch. J.C.K.	APRIL 1992	SHEET 33

CONCRETE OR CAST IRON COVER

CONCRETE OR CAST IRON COVER

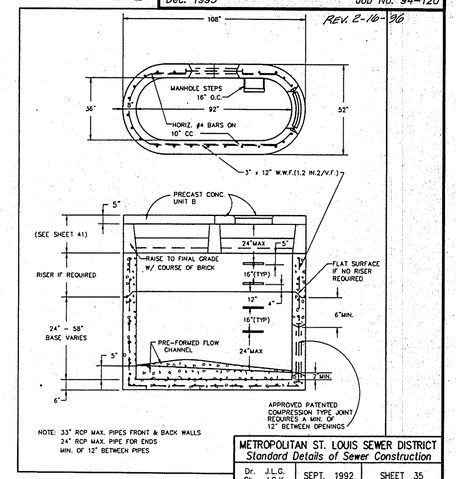


SINGLE STREET INLETS PRECAST CONCRETE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. J.L.G. Ch. J.C.K.	APRIL 1991	SHEET 34

DOUBLE UNTRAPPED STREET INLET PRECAST CONCRETE

CAMELOT
CONSTRUCTION DETAILS
Dec. 1995 Job No. 94-120

REV. 2-16-96



NOTE: 33" RCP MAX. PIPES FRONT & BACK WALLS 24" RCP MAX. PIPE FOR ENDS MIN. OF 12" BETWEEN PIPES

METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. J.L.G. Ch. J.C.K.	SEPT. 1992	SHEET 35

TRAPPED STREET INLET BASE PRECAST CONCRETE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. W.S.H. Ch. J.C.K.	1992	SHEET 36

NOTES
1. SET STANDARD INLET STONE IN 3/4" MORTAR BED AND DOWEL WITH 5/8" DIA. 1'-0" LONG PINS AND GROUT.
2. RAISE TO FINAL GRADE WITH COURSES OF BRICK AND 3/4" MORTAR BED.
3. THIS UNIT IS TO BE USED WITH, 42" I.D., POURED IN PLACE CONCRETE OR BRICK BASE.
4. 4000 P.S.I. CONCRETE REQUIRED.

PRE-CAST CONCRETE UNIT FOR SINGLE STREET INLET	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. W.S.H. Ch. J.C.K.	1992	SHEET 37

NOTES
1. SET STANDARD INLET STONE IN 3/4" MORTAR BED AND DOWEL WITH 5/8" 1'-0" LONG PINS AND GROUT.
2. RAISE TO FINAL GRADE WITH COURSES OF BRICK AND SET THE UNIT TO BASE WITH 3/4" MORTAR BED.
3. THIS UNIT IS TO BE USED WITH, 42" I.D., BASE.
4. 4000 P.S.I. CONCRETE IS REQUIRED.

PRE-CAST CONCRETE UNIT FOR 4 WAY AREA INLET	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. D.A.B. Ch. J.C.K.	1992	SHEET 38

CONCRETE DOUBLE STREET INLET W/PRE CAST CONCRETE UNIT A	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. R.G.W. Ch. J.C.K.	1992	SHEET 39

NOTES
1. SET 2 STANDARD INLET STONES IN 3/4" MORTAR BED AND DOWEL WITH 5/8" 1'-0" LONG PINS AND GROUT.
2. RAISE TO FINAL GRADE WITH COURSES OF BRICK & SET THE UNIT TO BASE WITH 3/4" MORTAR BED.
3. TO BE USED WITH POURED IN-PLACE CONCRETE BASE.
4. 4000 P.S.I. CONCRETE REQUIRED.

PRE-CAST CONCRETE UNIT A FOR STREET DOUBLE INLET	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. R.G.W. Ch. J.C.K.	1992	SHEET 40

NOTES
1. SET 2 STANDARD INLET STONES IN 3/4" MORTAR BED AND DOWEL WITH 5/8" DIA. 1'-0" LONG PINS AND GROUT.
2. SET THE UNIT TO BASE WITH 3/4" MORTAR BED.
3. THIS UNIT TO BE USED WITH PRE CAST BASE OR BRICK BASE HAVING 8" THICK WALLS AND INSIDE DIMENSIONS CONFORMING TO THE INSIDE DIMENSIONS OF THE UNIT AS INDICATED.
4. 4000 P.S.I. CONCRETE REQUIRED.

PRE-CAST CONCRETE UNIT B FOR STREET DOUBLE INLET	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. R.G.W. Ch. J.C.K.	1992	SHEET 41

STANDARD - INLET STONES, BLOCKS & DESIGN DETAILS	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. W.S.H. Ch. J.C.K.	1992	SHEET 42

PRE - CAST CONCRETE INLET COVER	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. R.G.W. Ch. J.C.K.	1992	SHEET 43

DETAILS OF INLET FRAME AND GRATES	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	DR. R.G.W. Ch. J.C.K.	1992	SHEET 44

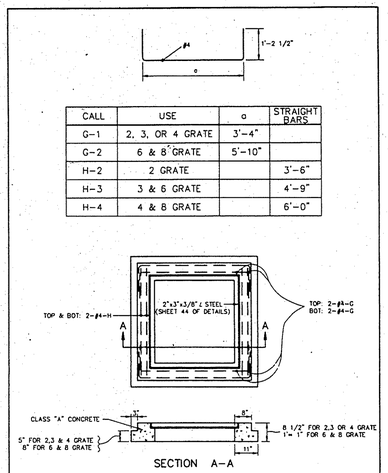
FINISH	- ASPHALTIC 10 MIL COATING
MATERIAL	- MILD CARBON STEEL - ASTM A569
CAPACITY	- H-20 LOADING
WEIGHT	- 65 LB MINIMUM
TOLERANCES	- ALL DIMENSIONS 1/8"±
IDENTIFICATION	- THE MANUFACTURER MUST PLACE HIS NAME OR MARK ON EACH UNIT FOR THE PURPOSE OF IDENTIFICATION.

DETAIL OF STEEL GRATE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. R.G.W. Ch. J.C.K.	1992	SHEET 45

CAMELO
CONSTRUCTION DETAILS

Dec. 1995 — Job No. 94-120

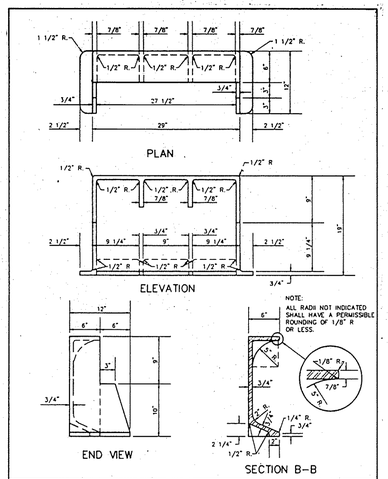
CALL	USE	a	STRAIGHT BARS
G-1	2, 3, OR 4 GRATE	3'-4"	
G-2	6 & 8 GRATE	5'-10"	
H-2	2 GRATE		3'-6"
H-3	3 & 6 GRATE		4'-9"
H-4	4 & 8 GRATE		6'-0"



STEEL REQUIREMENTS FOR GRATE INLET SEAT

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

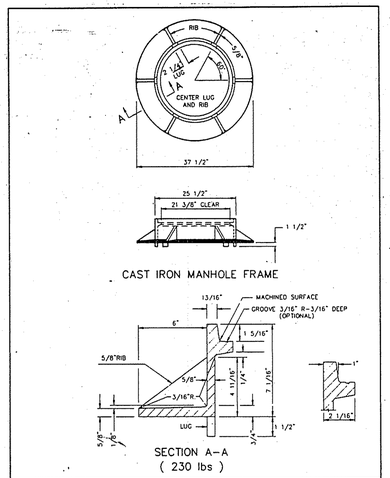
Dr. W.S.H. Ch. J.C.K.	1992	SHEET 46



CAST IRON SIDE INTAKE UNIT FOR GRATED INLETS 249 LBS.

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

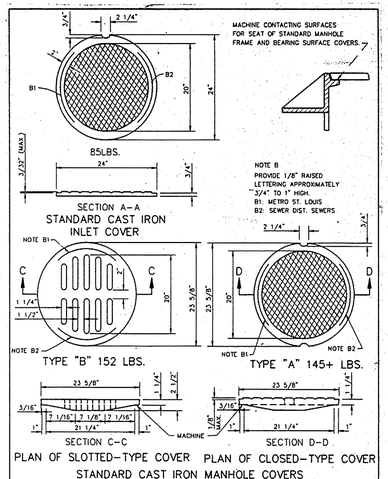
Dr. R.G.W. Ch. J.C.K.	1992	SHEET 47



CAST IRON MANHOLE FRAME

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. D.A.B. Ch. J.C.K.	1992	SHEET 48



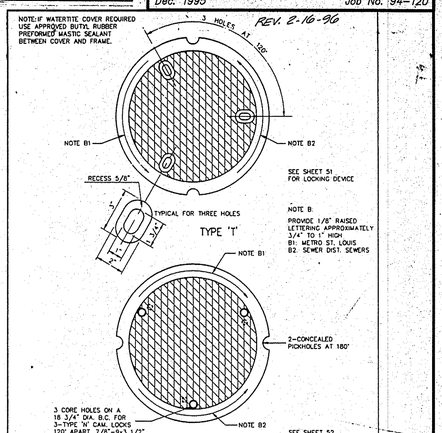
CAST IRON COVERS MANHOLES AND INLETS

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. R.G.W. Ch. J.C.K.	1992	SHEET 49

CAST IRON MANHOLE COVERS (LOCK TYPE)

REV. 2-16-96



METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. W.S.H. Ch. J.C.K.	1992	SHEET 50

LOCKING DEVICE FOR TYPE "T" LOCK TYPE MANHOLE COVER

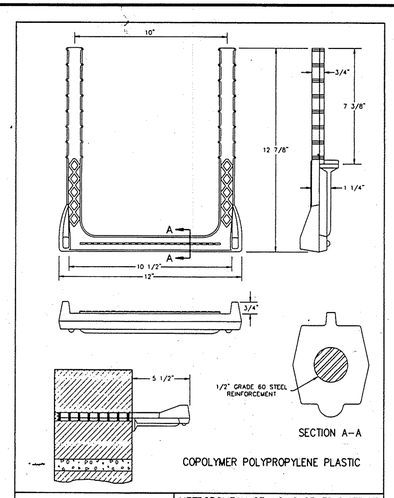
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. R.G.W. Ch. J.C.K.	1992	SHEET 51

LOCKING DEVICE FOR TYPE "N" LOCK TYPE MANHOLE COVER

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

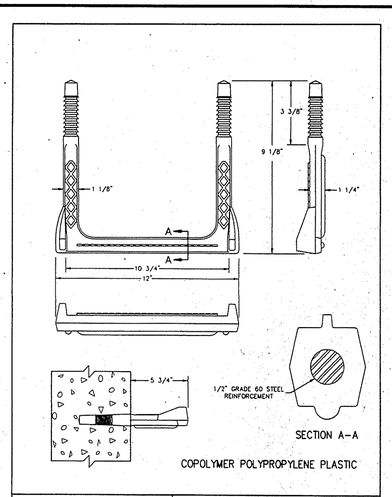
Dr. J.L.G. Ch. J.C.K.	1992	SHEET 52



PS1-B MANHOLE STEP INTO JOINT

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

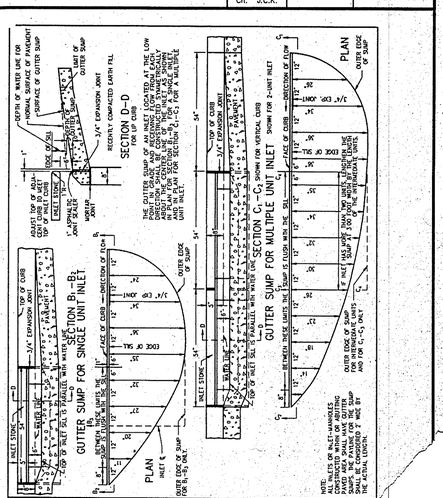
Dr. W.S.H. Ch. J.C.K.	1992	SHEET 53



MANHOLE STEP FOR PRECAST MANHOLE

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

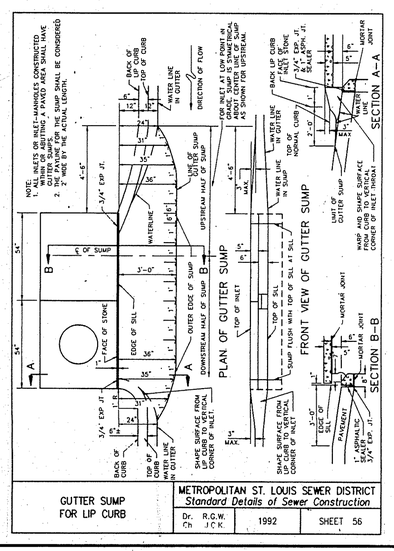
Dr. D.A.B. Ch. J.C.K.	1992	SHEET 54



GUTTER SUMPS FOR VERTICAL CURB

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

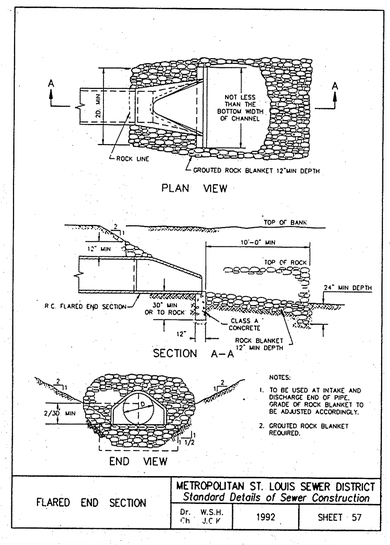
Dr. W.S.H. Ch. J.C.K.	1992	SHEET 55



GUTTER SUMP FOR LIP CURB

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

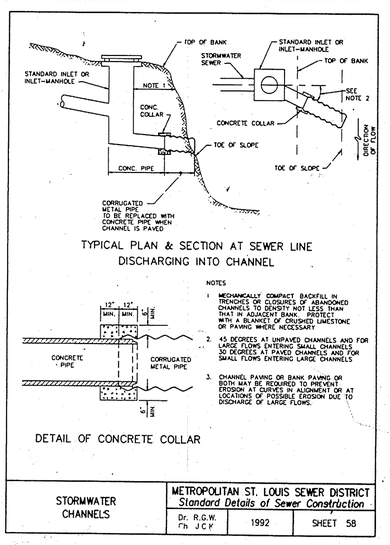
Dr. R.G.W. Ch. J.C.K.	1992	SHEET 56



FLARED END SECTION

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

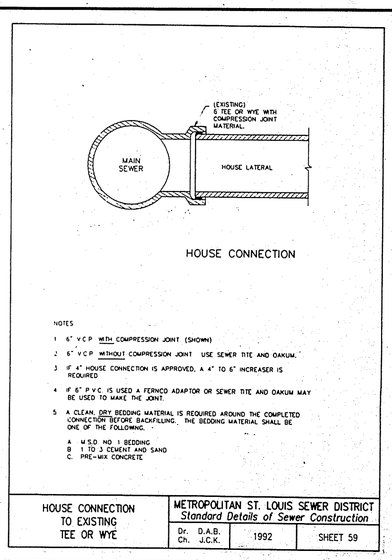
Dr. W.S.H. Ch. J.C.K.	1992	SHEET 57



STORMWATER CHANNELS

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

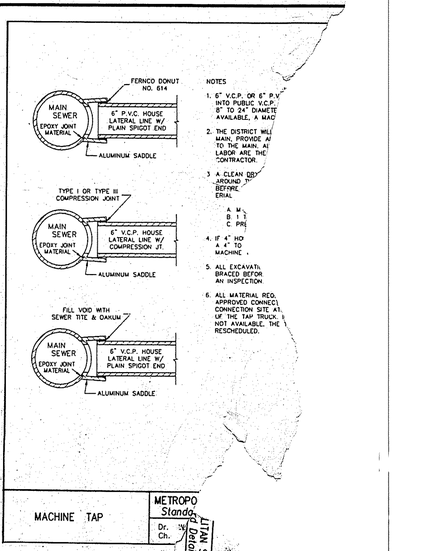
Dr. R.G.W. Ch. J.C.K.	1992	SHEET 58



HOUSE CONNECTION TO EXISTING TEE OR WYE

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. D.A.B. Ch. J.C.K.	1992	SHEET 59



METROPO
Standa
Dr.
Ch.

P.F.V. = Partial Flow Velocity (See attached Calcs)

CAMELOT PH.2 REV: 2-16-96 SUBMITTED: 2-19-96 FILENAME: 9120

UPP STR	LOW STR	L	DIA	UPPER FL LN	LOWER FL LN	PS	UPPER ST EL	DEPTH HY GR	UPPER HY EL	LOWER HY EL	HYDR GRADE	FR HEAD	VEL	VEL HEAD	JUNC LOSS	TURN LOSS	CURVE LOSS	STR GRADE	INL CAP	DR AREA	PI	Q	TQ	PIPE CAP		REMARKS
																									1	Inlet Control
																									2	Depth = 0.90'
FE2-102	EXEP2-1	10	24	601.57	600.83	7.40	0.00	0.00	602.01	601.27	.00080	0.01	1.08	0.02	0.03	0.00	0.00	LOW	11.80	1.78	1.90	3.38	3.38	33.33		
EXEP2-1	EXEP	41	24	600.83	597.78	7.44	0.00	0.00	601.27	599.78	.00080	0.03	1.08	0.02	0.00	0.00	0.00		0.00	0.00	0.00	0.00	3.38	33.42		
CI2-100	MH2-99	158	12	632.04	621.00	6.99	637.25	4.85	632.40	621.36	.00560	0.88	3.39	0.18	0.24	0.00	0.00	LOW	4.00	1.40	1.90	2.66	2.66	9.42	3	
MH2-99	FE2-98	62	12	617.99	615.00	4.82	624.60	6.20	618.40	616.00	.00560	0.35	3.39	0.18	0.00	0.06	0.00		0.00	0.00	0.00	0.00	2.66	7.82	4	PFV=3.05FPS
CI2-97	MH2-96	114	12	606.13	593.60	10.99	610.55	4.08	606.47	593.94	.00690	0.79	3.78	0.22	0.29	0.00	0.00	LOW	4.00	1.56	1.90	2.97	2.97	11.81	5	
MH2-96	FE2-95	88	12	590.03	581.80	9.35	599.00	8.61	590.39	582.80	.00690	0.61	3.78	0.22	0.00	0.14	0.00		0.00	0.00	0.00	0.00	2.97	10.90	6	PFV=3.21FPS
SCI2-94	FE2-93	160	12	630.80	630.00	0.50	635.07	4.03	631.04	631.00	.00020	0.03	0.61	0.01	0.01	0.00	0.00	8%	1.00	0.25	1.90	0.48	0.48	2.52	7	PFV=0.47FPS
																									8	
																									9	
																									10	
																									11	
																									12	PFV=3.71FPS
CI2-95	MH2-91	123	12	632.00	624.04	6.47	636.57	4.43	632.14	624.10	.00020	0.02	0.62	0.01	0.01	0.00	0.00	4%	1.21	0.26	1.90	0.49	0.49	9.06	8	
MH2-91	AI2-90	115	12	623.84	622.79	0.91	628.50	4.40	624.10	622.89	.00020	0.02	0.62	0.01	0.00	0.01	0.00		0.00	0.00	0.00	0.00	0.49	3.40	9	
AI2-90	MH2-89A	160	12	622.59	615.87	4.20	628.20	5.31	622.89	615.93	.00190	0.30	1.97	0.06	0.08	0.01	0.00	3S	8.25	0.56	1.90	1.06	1.55	7.30	10	
MH2-89A	AI2-89	136	12	615.67	603.57	8.90	620.20	4.27	615.93	603.81	.00190	0.26	1.97	0.06	0.00	0.00	0.00		0.00	0.00	0.00	0.00	1.55	10.63	11	
AI2-89	FE2-88	163	12	603.37	596.20	4.40	607.40	3.59	603.81	597.20	.00740	1.21	3.91	0.24	0.28	0.04	0.00	3S	8.25	0.80	1.90	1.52	3.07	7.47	12	PFV=3.71FPS
CI2-87	AI2-86	110	12	582.00	575.18	6.20	586.65	4.37	582.28	575.37	.00210	0.23	2.08	0.07	0.09	0.00	0.00	LOW	4.00	0.86	1.90	1.63	1.63	8.87	13	
AI2-86	FE2-85	90	12	574.98	564.00	12.20	580.90	5.53	575.37	565.00	.01320	1.19	5.22	0.42	0.52	0.04	0.00	4S	11.00	1.30	1.90	2.47	4.10	12.44	14	PFV=4.66FPS
CI2-84	FE2-83	138	12	570.65	561.00	6.99	575.25	4.22	571.03	562.00	.00610	0.85	3.55	0.20	0.27	0.00	0.00	LOW	4.00	1.47	1.90	2.79	2.79	9.42	15	PFV=3.09FPS
CI2-82	FE2-81	58	12	557.00	556.42	1.00	561.65	4.07	557.58	557.42	.00160	0.09	1.82	0.05	0.07	0.00	0.00	LOW	4.00	0.75	1.90	1.43	1.43	3.56	16	PFV=1.71FPS
CI2-80	CI2-78	34	12	575.80	575.46	1.00	580.30	4.28	576.02	575.90	.00150	0.05	1.77	0.05	0.07	0.00	0.00	4%	1.21	0.73	1.90	1.39	1.39	3.56	17	
																									18	
																									19	
																									20	
SC12-79	CI2-78	214	12	585.10	575.46	4.50	590.83	5.47	585.36	575.72	.00110	0.23	1.48	0.03	0.04	0.00	0.00	4%	2.42	0.61	1.90	1.16	1.16	7.56	18	
CI2-78	CI2-77	176	12	571.87	569.23	1.50	580.30	7.80	572.50	569.55	.00770	1.35	3.97	0.25	0.29	0.04	0.00	4%	1.21	0.30	1.90	0.57	3.12	4.36	19	
CI2-77	MH2-76	161	12	569.03	559.70	5.80	573.25	3.70	569.55	560.59	.01550	2.49	5.64	0.49	0.42	0.08	0.00	4%	4.00	0.69	1.90	1.31	4.43	8.58	20	
MH2-76	FE2-75	30	15	559.50	559.20	1.00	563.20	2.61	560.59	560.45	.00470	0.14	3.61	0.20	-0.14	0.14	0.00	LOW	0.00	0.00	0.00	0.00	4.43	6.46	21	PFV=3.90FPS
																									22	
																									23	PFV=1.37FPS
CI2-74	CI2-73	34	12	617.50	617.16	1.00	622.27	4.74	617.53	617.48	.00050	0.02	0.99	0.02	0.03	0.00	0.00	5%	0.85	0.41	1.90	0.78	0.78	3.56	24	
CI2-73	FE2-72	105	12	613.47	608.00	5.21	622.27	8.52	613.75	609.00	.00160	0.17	1.82	0.05	0.05	0.01	0.00	5%	0.85	0.34	1.90	0.65	1.43	8.13	25	
																									26	
																									27	
																									28	PFV=4.92FPS
DCI2-71	DCI2-70	61	12	627.60	623.22	7.18	632.36	4.52	627.84	623.41	.00100	0.06	1.43	0.03	0.04	0.00	0.00	5.43%	1.46	0.59	1.90	1.12	1.12	9.55	24	
DCI2-70	CI2-69	360	12	623.02	607.91	4.20	629.63	6.22	623.41	608.35	.00470	1.70	3.12	0.15	0.18	0.01	0.00	5.43%	1.46	0.70	1.90	1.33	2.45	7.30	25	
CI2-69	CI2-68	34	12	607.71	607.37	1.00	612.80	4.46	608.35	607.65	.00930	0.32	4.38	0.30	0.26	0.11	0.00	4%	1.21	0.52	1.90	0.99	3.44	3.56	26	
CI2-68	MH2-67	118	12	607.17	599.41	6.58	612.80	5.15	607.65	599.62	.01460	1.72	5.47	0.47	0.31	0.00	0.00	4%	1.21	0.45	1.90	0.86	4.30	9.14	27	
MH2-67	FE2-66	59	12	599.21	591.81	12.54	606.50	6.88	599.62	592.81	.01460	0.86	5.47	0.47	0.00	0.09	0.00		0.00	0.00	0.00	0.00	4.30	12.62	28	PFV=4.92FPS
																									29	
CI2-60	CI2-55	34	12	573.49	571.11	7.00	579.21	5.44	573.77	571.66	.00220	0.07	2.13	0.07	0.09	0.00	0.00	LOW	4.00	0.88	1.90	1.67	1.67	9.43	30	
			12	582.42	575.26	4.50	589.25	6.46	582.80	575.76	.00380	0.61	2.80	0.12	0.16	0.00	0.00	LOW	4.00	1.16	1.90	2.20	2.20	7.56		

AI2-64 AI2-63	278	12	587.80	580.47	2.00	592.50	4.23	588.27	580.88	.00280	0.77	2.32	0.08	0.11	0.00	0.00	3S	8.25	0.46	1.90	1.82	1.82	5.04	31	
AI2-63 AI2-62	203	12	580.27	576.20	2.00	586.00	5.12	580.88	576.40	.00950	1.93	4.42	0.30	0.34	0.06	0.00	3S	8.25	0.87	1.90	1.65	3.47	5.04	32	
AI2-62 AI2-61	148	15	576.00	575.26	0.50	580.50	4.10	576.40	575.76	.00410	0.61	3.38	0.18	-0.05	0.08	0.00	3S	8.25	0.36	1.90	0.68	4.15	4.57	33	
AI2-61 CI2-56	273	18	575.06	573.70	0.50	579.50	3.74	575.76	574.27	.00440	1.20	3.94	0.24	0.13	0.16	0.00	4S	11.00	0.32	1.90	0.61	6.96	7.41	34	
CI2-59 CI2-58	34	12	601.78	601.44	1.00	606.46	4.36	602.10	601.52	.00050	0.02	1.02	0.02	0.03	0.00	0.00	2%	1.93	0.42	1.90	0.80	0.80	3.56	35	
CI2-58 DCI2-57	312	12	601.24	583.79	5.59	606.50	4.98	601.52	584.02	.00150	0.47	1.77	0.05	0.05	0.00	0.00	2%	1.93	0.31	1.90	0.59	1.39	8.43	36	
DCI2-57CI2-56	148	12	583.59	578.40	3.51	589.14	5.13	584.02	578.83	.00480	0.71	3.14	0.15	0.16	0.00	0.00	5.8%	0.84	0.57	1.90	1.08	2.47	6.67	37	BYPASS0.24CFS
CI2-56 CI2-55	239	18	573.50	571.11	1.00	583.37	9.10	574.27	571.66	.00870	2.08	5.55	0.48	0.36	0.17	0.00	3%	1.57	0.20	1.90	0.38	9.81	10.50	38	
CI2-55 MH2-54	228	18	570.91	557.42	5.92	579.50	7.84	571.66	558.17	.01420	3.23	7.08	0.78	0.53	0.34	0.00	3%	1.57	0.54	1.90	1.03	12.51	25.55	39	
MH2-54 FE2-53	50	21	554.80	554.30	1.00	561.70	5.32	556.38	556.05	.00620	0.31	5.20	0.42	-0.27	0.29	0.00		0.00	0.00	0.00	0.00	12.51	15.85	40	PFV=5.77FPS
CI2-52 FE2-51	223	12	568.51	554.00	6.51	573.05	4.22	568.83	555.00	.00310	0.69	2.52	0.10	0.13	0.00	0.00	LOW	4.00	1.04	1.90	1.98	1.98	9.09	41	PFV=2.02FPS
CI2-50 CI2-47	34	12	555.66	555.32	1.00	561.05	5.13	555.92	555.73	.00250	0.08	2.25	0.08	0.11	0.00	0.00	LOW	4.00	0.93	1.90	1.77	1.77	3.56	42	
CI2-49 CI2-48	38	12	573.47	573.00	1.24	578.19	4.70	573.49	573.39	.00140	0.05	1.69	0.04	0.05	0.00	0.00	2%	1.93	0.70	1.90	1.33	1.33	3.96	43	
CI2-48 CI2-47	491	12	568.82	555.32	2.75	577.82	8.54	569.28	555.73	.00510	2.52	3.25	0.16	0.19	0.02	0.00	2.4%	1.78	0.64	1.90	1.22	2.55	5.91	44	
CI2-47 FE2-46	130	12	555.12	547.50	5.86	561.05	5.32	555.73	548.50	.02830	3.67	7.63	0.90	1.08	0.10	0.00	LOW	4.00	0.88	1.90	1.67	5.99	8.63	45	PFV=8.24FPS
SCI2-45MH2-44	130	12	604.02	596.49	5.79	608.49	4.17	604.32	596.79	.00230	0.30	2.18	0.07	0.09	0.00	0.00	6.2%	1.00	0.90	1.90	1.71	1.71	8.57	46	BYPASS0.71CFS
MH2-44 FE2-43	59	12	590.39	589.20	2.02	602.50	11.70	590.80	590.00	.00230	0.14	2.18	0.07	0.00	0.04	0.00		0.00	0.00	0.00	0.00	1.71	5.06	47	PFV=1.96FPS
DCI2-42CI2-41	203	12	591.64	587.59	2.00	597.20	5.18	592.02	587.97	.00180	0.36	1.91	0.06	0.08	0.00	0.00	4.5%	2.80	0.79	1.90	1.50	1.50	5.03	48	
CI2-41 CI2-40	34	12	587.39	587.05	1.00	592.37	4.94	587.43	587.26	.00260	0.09	2.32	0.08	0.04	0.04	0.00	2%	1.93	0.17	1.90	0.32	1.82	3.56	49	
CI2-40 MH2-39	134	12	586.85	579.65	5.37	592.37	5.11	587.26	580.39	.00640	0.86	3.63	0.20	0.20	0.00	0.00	2%	1.93	0.54	1.90	1.03	2.85	8.26	50	
MH2-39 FE2-38	42	12	579.45	579.03	1.00	586.30	5.91	580.39	580.03	.00640	0.27	3.63	0.20	0.00	0.09	0.00		0.00	0.00	0.00	0.00	2.85	3.56	51	PFV=4.03FPS
CI2-37 CI2-36	34	12	583.57	583.23	1.00	588.75	4.97	583.78	583.63	.00200	0.07	2.02	0.06	0.08	0.00	0.00	LOW	4.00	0.83	1.90	1.59	1.59	3.56	52	
CI2-36 FE2-35	178	12	583.03	580.00	1.70	588.75	5.13	583.63	581.00	.00800	1.43	4.06	0.26	0.31	0.00	0.00	LOW	4.00	0.84	1.90	1.60	3.19	4.65	53	PFV=4.38FPS
CI2-34 MH2-33	102	12	567.50	566.48	1.00	572.35	4.24	568.11	566.58	.00480	0.49	3.14	0.15	0.20	0.00	0.00	LOW	4.00	1.30	1.90	2.47	2.47	3.56	54	
MH2-33 MH2-32	144	12	566.28	548.31	12.48	574.30	7.72	566.58	548.43	.00480	0.69	3.14	0.15	0.00	0.06	0.00		0.00	0.00	0.00	0.00	2.47	12.59	55	
MH2-32 FE2-31	37	12	548.11	544.48	9.81	554.30	5.87	548.43	545.48	.00480	0.18	3.14	0.15	0.00	0.06	0.00		0.00	0.00	0.00	0.00	2.47	11.16	56	PFV=2.51FPS
CI2-30 CI2-29	38	12	655.60	655.22	1.00	659.57	3.61	655.96	655.52	.00070	0.03	1.21	0.02	0.03	0.00	0.00	2%	1.93	0.50	1.90	0.95	0.95	3.56	57	
CI2-29 FE2-28	150	12	655.02	653.52	1.00	659.90	4.38	655.52	654.52	.00250	0.37	2.25	0.08	0.09	0.00	0.00	2%	1.93	0.43	1.90	0.82	1.77	3.56	58	PFV=2.25FPS
DCI2-27MH2-26A	88	12	596.00	591.40	5.23	600.60	4.07	596.53	591.93	.01600	1.40	5.73	0.51	0.68	0.00	0.00	LOW	10.00	2.37	1.90	4.50	4.50	8.15	59	
MH2-26AFE2-26	60	12	589.00	580.60	14.00	594.30	4.89	589.41	581.60	.01600	0.96	5.73	0.51	0.00	0.00	0.00		0.00	0.00	0.00	0.00	4.50	13.33	60	PFV=5.16FPS
SCI2-25AI2-24	166	12	639.47	636.16	1.99	644.18	4.43	639.75	636.28	.00050	0.09	1.04	0.02	0.03	0.00	0.00	8%	1.00	0.43	1.90	0.82	0.82	5.03	61	
AI2-24 AI2-23	170	12	635.96	618.98	9.99	644.50	8.22	636.28	619.24	.00450	0.77	3.06	0.14	0.18	0.01	0.00	3S	8.25	0.83	1.90	1.58	2.40	11.26	62	
AI2-23 AI2-22	216	12	618.78	608.00	4.99	624.50	5.26	619.24	608.46	.00920	1.98	4.34	0.29	0.26	0.07	0.00	3S	8.25	0.53	1.90	1.01	3.41	7.96	63	
AI2-22 AI2-21	289	12	605.43	591.85	4.70	612.50	6.53	605.97	592.32	.01540	4.45	5.63	0.49	0.36	0.06	0.00	3S	8.25	0.53	1.90	1.01	4.42	7.72	64	
AI2-21 FE2-20	253	12	591.65	579.00	5.00	597.40	5.08	592.32	580.00	.03250	8.21	8.17	1.04	0.94	0.10	0.00	3S	8.25	1.05	1.90	2.00	6.42	7.97	65	PFV=9.11FPS
CI2-19 CI2-14	34	12	581.49	580.83	1.94	585.96	4.31	581.65	581.53	.00150	0.05	1.77	0.05	0.07	0.00	0.00	LOW	4.00	0.73	1.90	1.39	1.39	4.96	66	
CI2-18 CI2-17	57	12	626.00	623.01	5.25	631.09	4.87	626.22	623.23	.00040	0.02	0.94	0.01	0.01	0.00	0.00	5%	0.85	0.39	1.90	0.74	0.74	8.16	67	
CI2-17 DCI2-16	411	12	620.40	595.90	5.96	628.32	7.64	620.68	596.42	.00200	0.83	2.04	0.06	0.07	0.00	0.00	6.8%	0.50	0.45	1.90	0.86	1.60	8.70	68	BYPASS 0.36CFS
DCI2-16CI2-15	35	12	595.70	595.35	1.00	601.24	4.82	596.42	595.99	.00570	0.20	3.41	0.18	0.19	0.04	0.00	5%	1.90	0.57	1.90	1.08	2.68	3.56	69	
CI2-15 CI2-14	359	12	593.76	580.83	3.60	600.80	6.50	594.30	581.53	.01210	4.35	4.99	0.39	0.36	0.11	0.00	5%	0.85	0.65	1.90	1.24	3.92	6.76	70	BYPASS 0.39CFS
CI2-14 MH2-13A	61	21	580.63	580.32	0.51	585.96	4.43	581.53	581.13	.00170	0.10	2.71	0.11	-0.10	0.40	0.00	LOW	4.00	0.64	1.90	1.22	6.53	11.30	71	
MH2-13AFE2-13	225	21	580.12	579.00	0.50	587.00	5.87	581.13	580.75	.00170	0.38	2.71	0.11	0.00	0.00	0.00		0.00	0.00	0.00	0.00	6.53	11.18	72	PFV=2.83FPS

CI2-12	AI2-11	118	12	561.40	556.21	4.40	567.75	5.92	561.83	556.64	.00640	0.76	3.63	0.20	0.27	0.00	0.00	LOW	4.00	1.90	1.90	2.85	2.85	7.47	73	
CI2-11	FE2-10	110	12	553.01	542.00	10.01	562.00	8.55	553.45	543.00	.01700	1.87	5.91	0.54	0.72	0.00	0.00	3S	8.25	0.94	1.90	1.79	4.64	11.27	74	PFV=5.60FPS
CI2-9	MH2-8A	73	12	563.73	563.00	1.00	568.45	3.92	564.53	563.71	.00720	0.52	3.85	0.23	0.31	0.00	0.00	LOW	4.00	1.59	1.90	3.02	3.02	3.56	75	
MH2-8A	FE2-8	65	12	558.65	558.00	1.00	568.70	9.23	559.47	559.00	.00720	0.47	3.85	0.23	0.00	0.00	0.00		0.00	0.00	0.00	0.00	3.02	3.56	76	PFV=4.33FPS
AI2-7	CI2-6	105	12	561.95	560.90	1.00	566.40	3.97	562.44	561.16	.00240	0.25	2.20	0.08	0.11	0.00	0.00	4S	11.00	0.91	1.90	1.73	1.73	3.56	77	
CI2-6	CI2-5	34	15	560.70	560.36	1.00	566.17	5.01	561.16	560.69	.00560	0.19	3.95	0.24	0.28	0.00	0.00	LOW	4.00	1.64	1.90	3.12	4.85	6.46	78	
CI2-5	MH2-4	151	15	560.16	547.74	8.23	566.17	5.48	560.69	548.89	.01190	1.80	5.74	0.51	0.46	0.00	0.00	LOW	4.00	1.16	1.90	2.20	7.05	18.53	79	
MH2-4	FE2-3	34	18	547.54	547.20	1.00	552.00	3.11	548.89	548.70	.00450	0.15	3.99	0.25	-0.19	0.23	0.00		0.00	0.00	0.00	0.00	7.05	10.50	80	PFV=4.29FPS