

8850 FAIRVIEW RD

19720112

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Groundwater and Wastewater Services File Imaging Project
May 2007
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File
6730A
9/7/95

MINT HILL MUNICIPAL PARK

PRELIMINARY MASTER PLAN

TOWN OF MINT HILL, N.C.

GNA DESIGN ASSOCIATES, Inc.
428 East Fourth Street
Suite 408 (704) 373-1907
Charlotte, NC 28202
Surveying • Landscape Architecture • Civil Engineering

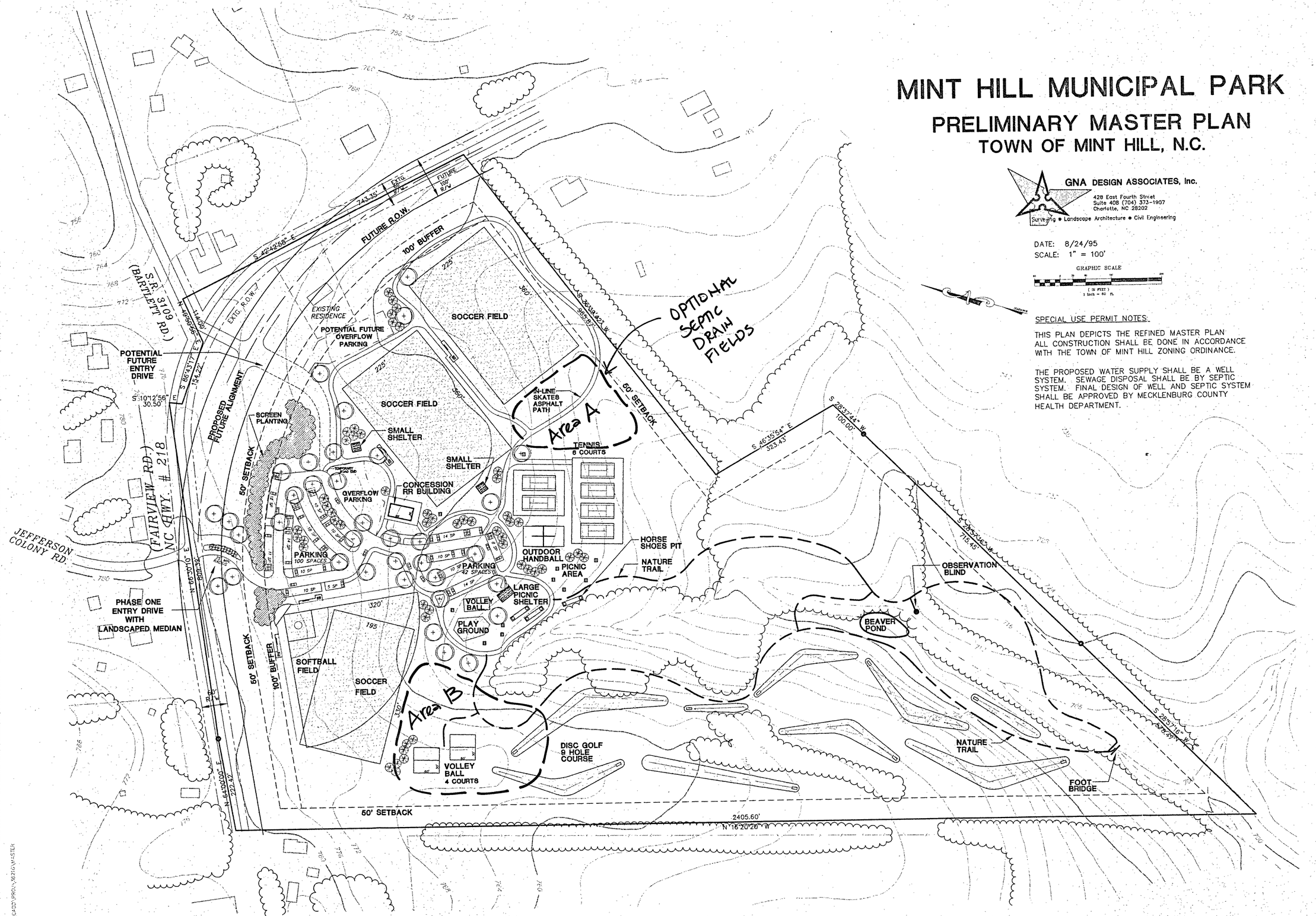
DATE: 8/24/95
SCALE: 1" = 100'

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

SPECIAL USE PERMIT NOTES:

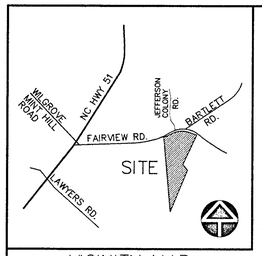
THIS PLAN DEPICTS THE REFINED MASTER PLAN ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF MINT HILL ZONING ORDINANCE.

THE PROPOSED WATER SUPPLY SHALL BE A WELL SYSTEM. SEWAGE DISPOSAL SHALL BE BY SEPTIC SYSTEM. FINAL DESIGN OF WELL AND SEPTIC SYSTEM SHALL BE APPROVED BY MECKLENBURG COUNTY HEALTH DEPARTMENT.



C:\ADD FILE F:\CAD\SPROJ\96210\MASTER

6730A



VICINITY MAP

STORM DRAINAGE TABLE

STRUCTURE NO.	GRATE EL.	INVERT IN	INVERT OUT	PIPE SECTION	FLOW CFS	LENGTH FEET	SLOPE FT/FT	MATERIAL
FES-1	N/A		737.37					
DI-2	746.50	739.07,738.32	738.12	2-1	21.5	50	0.015	24"RCP
DI-3	751.50	746.17	745.97	3-2	3.6	140	0.0493	15"RCP
DI-4	751.50		747.25	4-3	1.7	108	0.010	15"RCP
DI-5	755.50		751.77	5-3	1.7	56	0.100	15"RCP
DI-6	745.50	740.82	740.32	6-2	16.9	200	0.010	24"RCP
DI-7	749.50	745.36	745.16	7-6	14.3	96	0.0452	18"RCP
CB-8	751.05	746.61	746.36	8-7	13.7	40	0.025	18"RCP
CB-9	755.10		751.85	9-8	1.6	88	0.0595	15"RCP
DI-10	753.00	749.51	749.31	10-9	9.4	108	0.025	15"RCP
DI-11	761.65	757.07	756.87	11-10	8.9	128	0.0575	15"RCP
CB-12	762.25	759.03	758.83	12-11	8.1	88	0.020	15"RCP
DI-13	763.00		759.75	13-12	3.6	72	0.010	15"RCP
FES-14	N/A	776.00						
FES-15	N/A		775.12	14-15	1.0	88	0.010	18"RCP

APPROXIMATE FUTURE REALIGNMENT OF NC 218 AS PER PRELIMINARY PLAN BY NCDOT.

FAIRVIEW RD. NC 218

N 64°00'00" E 222.42'

N 66°30'10" E 809.32'

18"RCP

FES-14

FES-15

FLARED END SECTION-TYP. SEE DETAIL 5/C11

S 10°12'56" E 30.50'

PROPOSED FUTURE ALIGNMENT

S 86°43'17" E 154.22'

S 50°05'54" E 174.00'

BARTLETT RD. S.R. 3109

S 42°42'58" E

S 43°35'

FUTURE R.O.W.

FUTURE R/W 100'

SEPTIC REPAIR FIELD 150' x 133'

SEE DETAIL 6/C13 FOR PRESSURE MANIFOLD AND DRAIN FIELD

PROPOSED SEPTIC FIELD

8- 4"DIA. DRAIN LINES

7- 4"DIA. DRAIN LINES

133'

73'

2" PVC FORCE MAIN

6" DIA. PRESSURE MANIFOLD

+761.90

2500 gal Pump Tank

SANITARY SEWER DUPLEX PUMP STATION SEE DETAIL 7/C13

MIN. 2500 GALLON DUAL CHAMBER SEPTIC TANK SEE DETAIL 5/C13

WATER DEMAND: 35 LBS. PRESSURE AT BUILDING.

+761.00

FFE 764.0 CONC. RR BLDG

DI-13

DI-12

DI-11

DI-10

15" RCP

762

+763.00

+759.36

+754.90

CATCH BASIN TYP. SEE DETAIL 3/C12

CB-356

+756.90

DROP INLET TYP. SEE DETAIL 2/C12

DI-4

DI-5

DI-3

DI-7

DI-6

CB-8

+755.25

+751.75

+751.00

+751.40

+749.70

+749.30

+748.75

+750.30

+748.25

+749.05

+748.10

24"RCP

18"RCP

TENNIS COURTS

PRACTICE COURTS

SOFTBALL FIELD

SOCCER FIELD

PLAY GROUND

VOL. BALL

VOLLEY BALL

DENSE WOODS

PROPOSED WELL LOCATION 100' CLEARANCE

SEE DETAIL 4/C13 FOR WELL

EMERGENCY SPILLWAY 12' WIDE, INV. = 739.5

TOP OF BERM = 741.0

DETENTION BASIN SEE DETAIL 3/C-11

RAISE OR LOWER THE FINAL ELEVATION OF THIS SOCCER FIELD TO ADJUST FOR A BALANCED CUT/FILL FOR THE SITE.

+753.00

+754.95

+757.60

+756.50

+756.90

+753.10

+751.15

+749.40

NOTE:
REFER TO SHEET C-5 FOR EROSION CONTROL PLAN
REFER TO SHEET C-11 FOR GRADING AND UTILITY NOTES.

COMMENTS:
2500 gal Septic Tank
2500 gal Pump Tank
Lift pump required
15 lines x 133' long x 3 wd. x 12" stone
1995 Total lineal feet
Keep septic system > 100' from proposed well
septic system to be installed in accordance with approved plot plan
pressure manifold septic system design see booklet in file
for design specifications

SIGNED:
Amos H. Scott - GNA DESIGN 11/9/95

TOPO FROM GEODATA CORP.
PHOTOGRAMMETRIC METHOD
PHOTO DATE: 1-25-95

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

North

CADD FILE: >XREF F:\CADD\PROJ\36216\BASE F:\CADD\PROJ\36216\GRADING

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 2332 THOMAS L. HOWARD 10-16-95

Project: MINT HILL MUNICIPAL PARK FOR THE TOWN OF MINT HILL
8850 FAIRVIEW ROAD
MINT HILL, N.C.

Sheet Title: GRADING, STORM DRAINAGE, AND UTILITIES PLAN

Checked By TLH
Drawn By AHS
Date Drawn 10/16/95

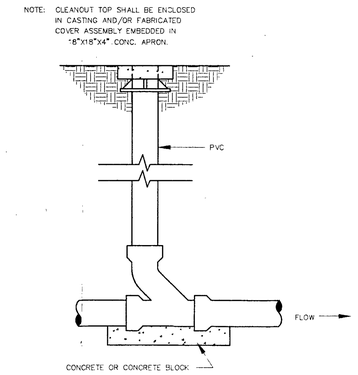
Revisions
No. Date
No. Date
No. Date
No. Date

Issue Date

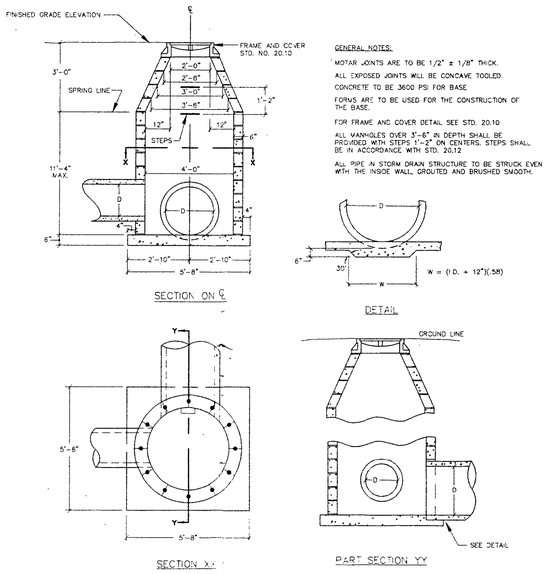
Project Number 36216
Sheet C-4 Of

SITE UTILITY NOTES:

1. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
2. CONTRACTOR SHALL PROVIDE ALL THE MATERIALS AND APPURTENANCES NECESSARY FOR THE COMPLETE INSTALLATION OF THE UTILITIES. ALL PIPES AND FITTINGS SHALL BE INSPECTED BY THE BUILDING INSPECTOR PRIOR TO BEING COVERED.
3. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY, MECKLENBURG COUNTY, AND STATE AS APPLICABLE.
4. ALL WATER LINES SHALL HAVE A MINIMUM COVER OF 36" ABOVE TOP OF PIPE.
5. CONTRACTOR SHALL ADJUST LOCATION OF PROPOSED WATER LINES AS REQUIRED TO AVOID CONFLICTS WITH STORM SEWER OR OTHER UTILITIES.
6. CLEANOUTS ARE TO BE SPACED FOR A MAXIMUM OF 50 FEET ON 4" LINES AND 100 FEET ON 6" LINES.
7. LOCATION, SIZE, AND INVERT ELEVATIONS OF SANITARY SEWER SHALL BE COORDINATED WITH THE APPROVED PLUMBING PLANS FOR THE BUILDING.
8. THE GENERAL CONTRACTOR SHALL CONSTRUCT SEPTIC TANK, FIELD, AND WATER WELL IN ACCORDANCE WITH MECKLENBURG COUNTY AND NC DEPT. OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES CODES AND REGULATIONS. CONTRACTOR SHALL INSURE THAT PERMITS AND APPROVALS HAVE BEEN OBTAINED.
9. GENERAL CONTRACTOR SHALL INSTALL UTILITIES TO WITHIN 5' OF BUILDING. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR UTILITIES IN THE BUILDING AND WITHIN 5' OF THE BUILDING.
10. INSTALLATION AND REPAIR OF UNDERGROUND ELECTRICAL, GAS, AND TELEPHONE UTILITIES AND DISTURBED AREAS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR APPLICABLE UTILITY COMPANY. THE DISTURBED AREAS BENEATH EXISTING ASPHALT SHALL BE RE-COMPACTED TO THE REQUIRED SPECIFICATIONS, AND THE STONE BASE AND ASPHALT BE RETURNED TO ITS ORIGINAL CONDITION.



1 SANITARY SEWER CLEANOUT
N.T.S. CMLDS STD. DTL.



GENERAL NOTES:

MORTAR JOINTS ARE TO BE 1/2" ± 1/8" THICK.

ALL EXPOSED JOINTS WILL BE CONCAVE TOOLED.

CONCRETE TO BE 3600 PSI FOR BASE.

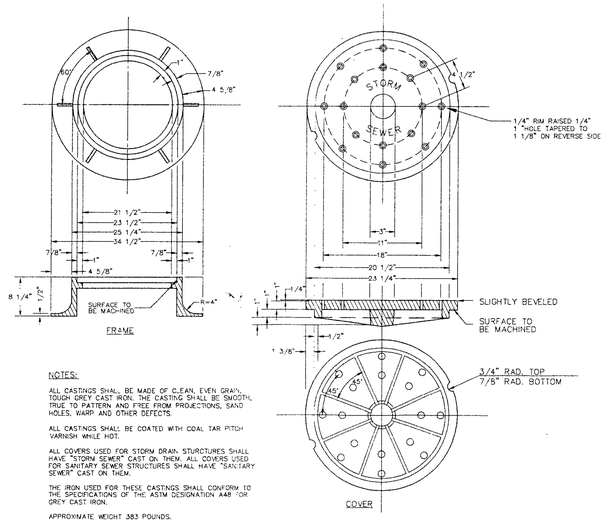
FORMS ARE TO BE USED FOR THE CONSTRUCTION OF THE BASE.

FOR FRAME AND COVER DETAIL SEE STD. 20.10

ALL MANHOLES OVER 3'-6" IN DEPTH SHALL BE PROVIDED WITH STEPS 1'-2" ON CENTERS. STEPS SHALL BE IN ACCORDANCE WITH STD. 20.12

ALL PIPE IN STORM DRAIN STRUCTURE TO BE STRUCK EVEN WITH THE INSIDE WALL, GROUTED AND BRUSHED SMOOTH.

2 BLOCK MANHOLE 15" THRU 36" PIPE
CM.DS NO. 20.09



NOTES:

ALL CASTINGS SHALL BE MADE OF CLEAN, EVEN GRAIN, TOUGH GREY CAST IRON. THE CASTING SHALL BE SMOOTH, TRUE TO PATTERN AND FREE FROM PROJECTIONS, SAND HOLES, WARP AND OTHER DEFECTS.

ALL CASTINGS SHALL BE COATED WITH COAL TAR PITCH VARNISH WHILE HOT.

ALL COVERS USED FOR STORM DRAIN STURCTURES SHALL HAVE "STORM SEWER" CAST ON THEM. ALL COVERS USED FOR SANITARY SEWER STRUCTURES SHALL HAVE "SANITARY SEWER" CAST ON THEM.

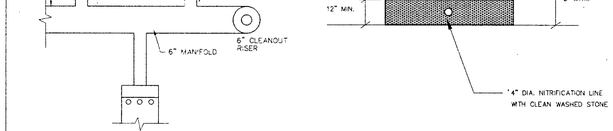
THE IRON USED FOR THESE CASTINGS SHALL CONFORM TO THE SPECIFICATIONS OF THE ASTM DESIGNATION A48 OR GREY CAST IRON.

APPROXIMATE WEIGHT 383 POUNDS.

3 MANHOLE FRAME, COVER
N.T.S. CHAR. STD. DTL. 20.10

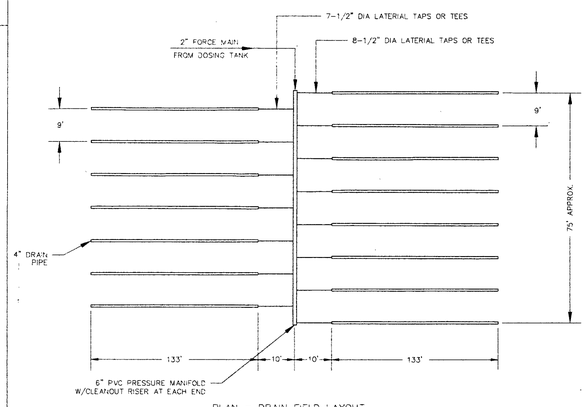
1. CONTRACTOR SHALL PROVIDE EQUIPMENT FOR , AND COMPLETE THE INSTALLATION FOR A WATER SUPPLY WELL INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
   - DRILL WELL AND INSTALL CASING
   - PUMP EQUIMENT AND ELECTRICAL SERVICE
   - WELL HOUSE
   - STORAGE TANK
2. WELL SHALL BE LOCATED IN AREA DEPICTED ON THE PLANS. CONTRACTOR SHALL CLEAR AREA AND ENCLOSE WITH AN 8 FT. HIGH CHAIN LINK FENCE WITH LOCKABLE SWING GATE.
3. ALL EQUIPMENT AND INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL HEALTH DEPARTMENT REQUIREMENTS AND MUST MEET ALL REQUIREMENTS OF THE N.C. DEPT. OF HUMAN RESOURCES, TITLE 10, CHAPTER 10, SUBCHAPTER 10D REGARDING WATER SUPPLIES AND WELLS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, INSPECTIONS AND APPROVALS.
5. WELL SYSTEM SHALL PROVIDE AS A MINIMUM:
   - AVERAGE WATER DEMAND = 25 GPM
   - PEAK WATER DEMAND = 55 GPM
   - PRESSURE AT CONC./RESTROOM BLDG. = 35 PSI

4 WATER SUPPLY WELL
N.T.S.



DETAIL - PRESSURE MANIFOLD CONNECTIONS

SECTION - NITRIFICATION TRENCH

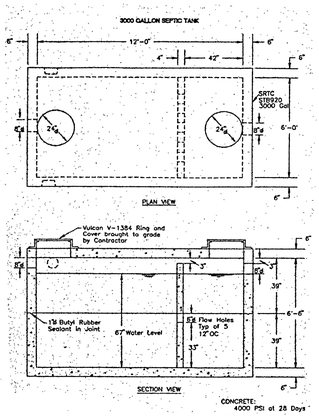


PLAN - DRAIN FIELD LAYOUT

NOTES:

1. CONTRACTOR SHALL PROVIDE A COMPLETE ON-SITE SEPTIC SEWER SYSTEM WHICH CONSISTS OF A SEPTIC TANK, DUPLEX EFFLUENT PUMP STATION AND DOSING TANK, FORCE MAIN, PRESSURE MANIFOLD, AND GROUND ABSORPTION FIELDS.
2. ALL EQUIPMENT, MATERIALS, AND INSTALLATION SHALL MEET THE REQUIREMENTS OF THE N.C. DEPT. OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES LAWS AND RULES FOR SEWAGE TREATMENT AND DISPOSAL SYSTEMS, LATEST AMENDED VERSION, AS WELL AS LOCAL HEALTH DEPT. STANDARDS AND REQUIREMENTS.
3. THE FOLLOWING MATERIALS SHALL BE USED.

   6" MANIFOLD - PVC, SCHEDULE 80, SOLID
   2" FORCE MAIN - PVC, SCHEDULE 80, SOLID
   4" DRAIN FIELD LINES - PERFORATED CORRUGATED POLYETHYLENE MEETING ASTM F 405
   1/2" MANIFOLD LATERAL - PVC, SCHEDULE 80, SOLID



CONCRETE: 4000 PSI at 28 Days
REINFORCING: H-20 Bridge Loading

NOTES:

1. SEPTIC TANK SHALL BE MIN. 2500 GALLON.
2. TANK SHALL BE TWO COMPARTMENT DESIGN, PRECAST CONCRETE UNIT, MEETING ALL STATE AND LOCAL REQUIREMENTS.
3. TANK SHALL HAVE TWO MANHOLE RISERS WITH RIM AND COVER EXTENDED TO FINISHED GROUND ELEVATION.

5 SEPTIC TANK
N.T.S.

6 SEPTIC SYSTEM AND DRAIN FIELDS
N.T.S.

PUMP MODEL	IMPELLER CODE	HP RATING CP	DP	CF	DS	VAC	RPM	D1	D2	D3
3067 3Ø	265	1.9				230/460 3Ø	3600	2"	--	--

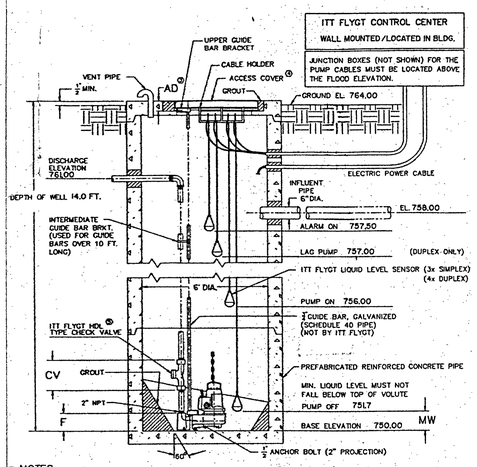
MOTOR DATA

RATED OUTPUT POWER HP (KW)	Ø	VOLTS NOM.	FULL LOAD AMPS	LOCKED ROTOR AMPS	LOCKED ROTOR KVA	LOCKED ROTOR CODE LETTER KVA/HP	RATED INPUT POWER KW	POLES/RPM
1.9 (1.4)	3	200 230 460 575	5.4 4.8 2.4 2.0	34.0 31.0 16.0 11.0	12.7	H	1.8	2/3400

Pump Motor HP	EFFICIENCY 100% LOAD	75% LOAD	50% LOAD	POWER FACTOR 100% LOAD	75% LOAD	50% LOAD
1.9 (3Ø)	79.0	80.0	78.5	0.92	0.89	0.82

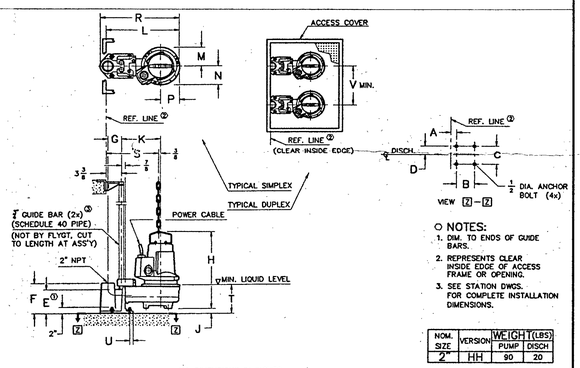
CABLE DATA

HP	VOLTS	MAX. LENGTH FT.	CABLE SIZE	NOMINAL DIA.	CONDUCTORS (IN ONE CABLE)
1.9 (3Ø)	200 230 460 575	210 270 1100 1160	#14/7	19.0mm (0.75")	(3) #14AWG (PWR) (2) #14AWG (CTRL) (1) #14AWG (GND) (1) #14AWG (GC)



○ NOTES:

1. INDICATES INFORMATION TO BE DETERMINED BY OTHERS.
2. LOCATE ANCHOR BOLTS USING CLEAR INSIDE EDGE OF ACCESS FRAME AND CENTER LINE OF PUMP AS REFERENCE POINT. BOLT LOCATIONS MUST BE HELD TO MAINTAIN EXACT POSITION OF PUMP RELATIVE TO ACCESS FRAME.
3. GROUT OPENING FOR ACCESS FRAME.
4. HEAVY DUTY ACCESS COVER AVAILABLE FROM ITT FLYGT. (CONSULT ITT FLYGT CORP. FOR COVER DIMENSIONS)
5. CONFIGURATION AND DIMENSIONS SHOWN ARE MINIMUM REQUIREMENTS ONLY. ALL DETAILS, INCLUDING SIZING OF PIT, TYPE, LOCATION AND ARRANGEMENTS OF VALVES AND PIPING, ETC. ARE TO BE SPECIFIED BY THE CONSULTING ENGINEER AND ARE SUBJECT TO HIS APPROVAL.



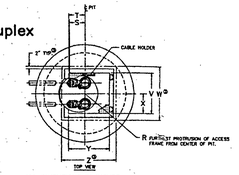
○ NOTES:
1. DIM. TO ENDS OF GUIDE BARS.
2. REPRESENTS CLEAR INSIDE EDGE OF ACCESS FRAME OR OPENING.
3. SEE STATION DWGS. FOR COMPLETE INSTALLATION DIMENSIONS.

NOM. SIZE	VERSION	WEIGHT (LBS) PUMP	DISCH
2"	HH	90	20

ALL DIMENSIONS IN INCHES

NOM. SIZE	VERSION	DIMENSIONAL CHART A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V
2"	HH	13	3⅜	4½	2½	5½	6⅝	2⅜	17½	1	8⅛	16⅛	4½	4½	4⅜	17⅛	11⅜	8	3	15⅞

Duplex



ALL DIMENSIONS IN INCHES

NOM. SIZE	VERSION	DIMENSIONAL CHART STATION A	B	C	D	F	G	H	R	S	T	U	CV	MW	PL	SIZE	COVER V	W	X	Y	Z	AD
2"	HH	14	39	43	21	61	51	28	27	11	12	60	61	6	78	8	30	40	15	30	40	43

1. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND EQUIPMENT FOR COMPLETE INSTALLATION OF DUPLEX EFFLUENT PUMPS AND DOSING TANK. ALL MATERIALS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF N.C. DEPT. OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES LAWS AND RULES FOR SEWAGE TREATMENT AND DISPOSAL SYSTEMS, LATEST AMENDED VERSIONS.
2. PUMPS SHALL BE FLYGT, MODEL 3067, 1.9 HORSEPOWER, 3 PHASE, IMPELLER CODE 265.
3. DUPLEX PUMP AND DOSING TANK INSTALLATION SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   - 6 FT. DIA. PRECAST CONCRETE DOSING TANK
   - 2 PUMPS WITH SLIDE RAILS
   - FLOAT SWITCHES
   - ELECTRIC SERVICE AND PANEL LOCATED INSIDE BUILDING
   - ALARM AND WARNING LIGHT MOUNTED ON BUILDING
   - LOCKABLE HATCH COVER
   - VALVES AND PIPING
4. PUMPS SHALL BE INSTALLED IN 6 FT. DIA. PRECAST CONCRETE DOSING TANK WITH HINGED, LOCKABLE COVER.
5. PUMPS AND VALVES SHALL BE INSTALLED IN DOSING TANK. ISOLATION VALVES SHALL BE INSTALLED BETWEEN PUMPS AND DISCHARGE TEE. CHECK VALVES SHALL BE INSTALLED IN VERTICAL PIPING. GLOBE OR BALL VALVE SHALL BE INSTALLED IN DISCHARGE PIPE AND SHALL BE USED TO ADJUST DISCHARGE FLOW RATE AND HEAD.
6. PUMP DESIGN PARAMETERS ARE DISCHARGE 60 GPM AT TDH 35 FT. PRESSURE AT DISTRIBUTION MANIFOLD (AT DRAIN FIELDS) SHALL BE 2 TO 4 FT. OF HEAD.

7 DUPLEX EFFLUENT SEWER PUMP STATION
N.T.S.

AHS 11/9/95

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Project: MINT HILL MUNICIPAL PARK FOR THE TOWN OF MINT HILL, MINT HILL, N.C.
8850 FAIRVIEW ROAD

Sheet Title: UTILITY DETAILS

Checked By: TLH
Drawn By: AHS
Date Drawn: 10/16/95

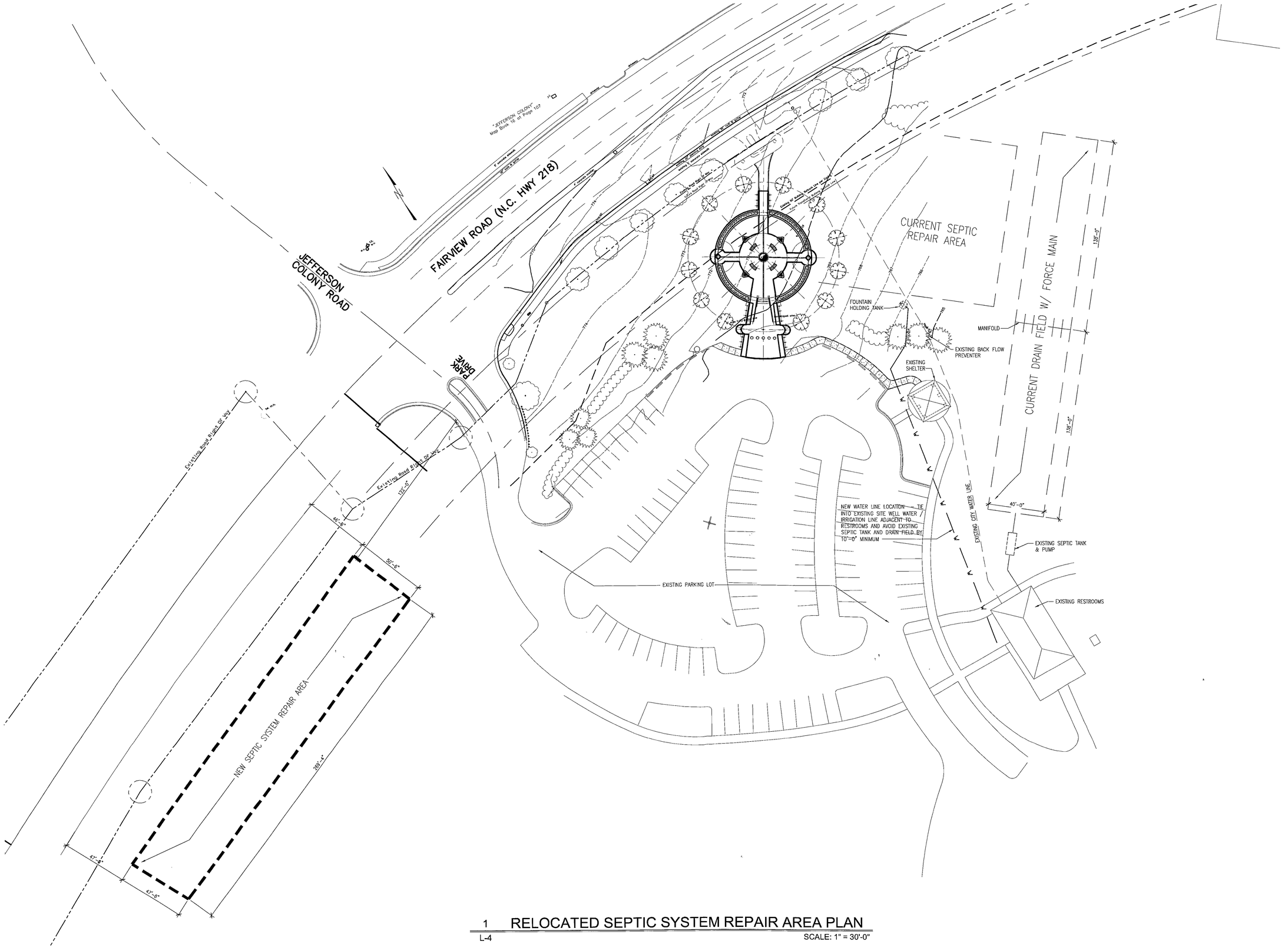
Revisions
No.____ Date____
No.____ Date____
No.____ Date____
No.____ Date____

Issue Date____

Project Number: 36216

Sheet: C-13

CADD FILE: F:\CADD\PROJ\36216\DETAIL



1 RELOCATED SEPTIC SYSTEM REPAIR AREA PLAN

L-4 SCALE: 1" = 30'-0"

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Seal

Issue Date: 9-28-2010

Revisions :

RELOCATED SEPTIC FIELD REPAIR AREA & WATER LINE CORRECTION

L-4
Sheet no.