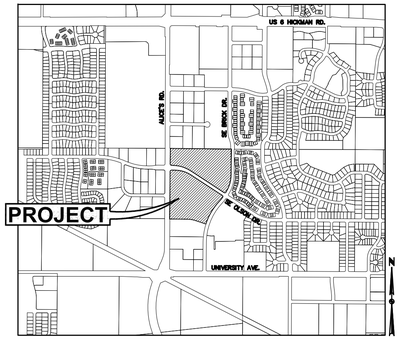
SITE PLAN & PRELIMINARY PLAT FOR:

AUTUMN RIDGE APARTMENTS

WAUKEE, IOWA

VICINITY MAP

NOT TO SCALE



WAUKEE

OWNER / APPLICANT

CENTENNIAL DEVELOPMENT L.C.
2785 N. ANKENY BLVD, SUITE 22
ANKENY, IA 50021

SITE CONTACT

CLASSIC BUILDERS
1910 SW PLAZA SHOPS LANE
ANKENY, IA 50023
PH. (515) 965-7876

ENGINEER

CIVIL DESIGN ADVANTAGE, LLC
CONTACT: ERIN OLLENDIKE
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH. (515) 369-4400
FX. (515) 369-4410

SURVEYOR

CIVIL DESIGN ADVANTAGE, LLC
CONTACT: MIKE BROONER
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH. (515) 369-4400
FX. (515) 369-4410

ARCHITECT

PLUM BUILDING SYSTEMS
CONTACT: KEVIN RIESBERG
1100 SE ALICE'S ROAD
WAUKEE, IOWA 50263
PH. (515) 978-6267

DATE OF SURVEY

JULY 1, 2014

BENCHMARKS

BM#1 BURY BOLT ON HYDRANT @ SE CORNER OF SE OLSON DR. & SE BRICK DR.
ELEVATION=1049.35

BM#2 TAGGED BURY BOT ON HYDRANT @ NW CORNER OF SE LAUREL & SE LEGACY
ELEVATION=1036.49

BM#3 BURY BOLT ON HYDRANT @ NE CORNER OF ALICES RD & FRONTIER AVE.
ELEVATION=1045.36

SUBMITTAL DATES

-SITE PLAN SUBMITTAL TO CITY #1:	09/09/2014
-SITE PLAN SUBMITTAL TO CITY #2:	10/24/2014
-SITE PLAN SUBMITTAL TO CITY #3:	11/12/2014

ZONING

LOTS 4 & 5
PLANNED DEVELOPMENT: UNDERLYING ZONING R-3 MUILTI-FAMILY RESIDENTIAL DISTRICT

LOTS 1, 2 & 3
C-1 COMMUNITY AND HIGHWAY SERVICE COMMERCIAL DISTRICT

PROJECT SITE ADDRESS

650 & 850 SE BRICK DRIVE

EXISTING/ PROPOSED USE

PD - PLANNED DEVELOPMENT
(UNDERLYING ZONING: R-3 MULTI-FAMILY)

DEVELOPMENT SUMMARY

UNITS:

(10) 36 UNIT BUILDINGS	=	360 UNITS
(1) 30 UNIT BUILDING	=	30 UNITS
(1) 24 UNIT BUILDING	=	24 UNITS
(1) 20 UNIT BUILDINGS	=	20 UNITS
TOTAL UNITS:	=	434 UNITS

DENSITY:

LOT 1	=	17.9 UNITS/AC
LOT 2	=	20.4 UNITS/AC

NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN UPDATED SITE PLAN ILLUSTRATING ANY CHANGES MADE DURING CONSTRUCTION AND RECEIVE APPROVAL IN WRITING FROM THE CITY OF WAUKEE DEVELOPMENT SERVICES DEPARTMENT OF SAID CHANGES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES MADE WITHOUT WRITTEN APPROVAL.

2. THE RESULTS OF THE GEOTECHNICAL REPORT ARE TO BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT. THE SITE PLAN IS SUBJECT TO ANY CHANGES REQUIRED BY THE REPORT.

LEGAL DESCRIPTION

LOT 4 AND LOT 5, AUTUMN RIDGE PLAT 1, AN OFFICIAL PLAT, IN THE CITY OF WAUKEE, DALLAS COUNTY.

CONSTRUCTION SCHEDULE

PHASE 1:
ANTICIPATED START DATE = FALL 2014
ANTICIPATED FINISH DATE = SUMMER 2015

PHASE 2:
ANTICIPATED START DATE = FALL 2015
ANTICIPATED FINISH DATE = SUMMER 2016

PHASE 3:
ANTICIPATED START DATE = SPRING 2016
ANTICIPATED FINISH DATE = FALL 2016

PHASE 4:
ANTICIPATED START DATE = FALL 2016
ANTICIPATED FINISH DATE = SPRING 2017

PHASE 5:
ANTICIPATED START DATE = SPRING 2017
ANTICIPATED FINISH DATE = FALL 2017

PHASE 6:
ANTICIPATED START DATE = FALL 2017
ANTICIPATED FINISH DATE = SPRING 2018

INDEX OF SHEETS

NO.	DESCRIPTION
1	COVER SHEET
2-3	DETAILS
4	PRELIMINARY PLAT
5	PHASING PLAN, HYDRANT COVERAGE PLAN & DETAILS
6-9	DIMENSION PLAN
10-14	GRADING PLAN
15-22	UTILITY PLAN
23-26	EROSION PLAN
27	LANDSCAPE PLAN

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

UTILITY WARNING

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN. A REQUEST WAS MADE TO IOWA ONE CALL FOR THE UTILITY PROVIDERS TO LOCATE THEIR UTILITIES IN THE FIELD.

CIVIL DESIGN ADVANTAGE
3405 SE CROSSROADS DR. SUITE G, GRIMES, IOWA 50111
PH: (515) 369-4400 Fax: (515) 369-4410
PROJECT NO. 1402.069

GENERAL LEGEND

PROPOSED

PROJECT BOUNDARY
LOT LINE
SECTION LINE
CENTER LINE
RIGHT OF WAY — R/W —
PERMANENT EASEMENT — P/E —
TEMPORARY EASEMENT — T/E —
TYPE SW-501 STORM INTAKE
TYPE SW-503 STORM INTAKE
TYPE SW-505 STORM INTAKE
TYPE SW-506 STORM INTAKE
TYPE SW-513 STORM INTAKE
TYPE SW-401 STORM MANHOLE
TYPE SW-402 STORM MANHOLE
TYPE SW-301 SANITARY MANHOLE
STORM/SANITARY CLEANOUT
WATER VALVE
FIRE HYDRANT ASSEMBLY
SIGN
DETECTABLE WARNING PANEL
STORM SEWER STRUCTURE NO. ST-10
STORM SEWER PIPE NO. L-10
SANITARY SEWER STRUCTURE NO. S-10
SANITARY SEWER PIPE NO. P-10
SANITARY SEWER WITH SIZE — 8"S —
SANITARY SERVICE — S — S — S — S —
STORM SEWER
STORM SERVICE — ST — ST — ST —
WATERMAIN WITH SIZE — 8"W —
WATER SERVICE — W — W — W —
SAWCUT (FULL DEPTH)
SILT FENCE
USE AS CONSTRUCTED U.A.C.
MAIL BOX PAD M
DOWNSPOUT LOCATION
FRONT GARAGE FINISHED FLOOR ELEVATION G.F.E.
MINIMUM PROTECTION ELEVATION M.P.E.

EXISTING

SANITARY MANHOLE
WATER VALVE BOX
FIRE HYDRANT
WATER CURB STOP
WELL
STORM SEWER MANHOLE
STORM SEWER SINGLE INTAKE
STORM SEWER DOUBLE INTAKE
FLARED END SECTION
ROOF DRAIN/ DOWNSPOUT
DECIDUOUS TREE
CONIFEROUS TREE
DECIDUOUS SHRUB
CONIFEROUS SHRUB
ELECTRIC POWER POLE
GUY ANCHOR
STREET LIGHT
POWER POLE W/ TRANSFORMER
UTILITY POLE W/ LIGHT
ELECTRIC BOX
ELECTRIC TRANSFORMER
ELECTRIC MANHOLE OR VAULT
TRAFFIC SIGN
TELEPHONE JUNCTION BOX
TELEPHONE MANHOLE/VAULT
TELEPHONE POLE
GAS VALVE BOX
CABLE TV JUNCTION BOX
CABLE TV MANHOLE/VAULT
MAIL BOX
BENCHMARK
SOIL BORING
UNDERGROUND TV CABLE — TV —
GAS MAIN — G —
FIBER OPTIC — FO —
UNDERGROUND TELEPHONE — T —
OVERHEAD ELECTRIC — OE —
UNDERGROUND ELECTRIC — E —
FIELD TILE — TILE —
SANITARY SEWER W/ SIZE — 8"S —
STORM SEWER W/ SIZE — 15" RCP —
WATER MAIN W/ SIZE — 8"W —

THE PROJECT REQUIRES AN IOWA NPDES PERMIT #2. CIVIL DESIGN ADVANTAGE WILL PROVIDE THE PERMITS AND THE INITIAL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE CONTRACTORS USE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING THE SWPPP THROUGHOUT CONSTRUCTION AND MEETING LOCAL, STATE AND FEDERAL REQUIREMENTS.

ALL CONSTRUCTION MATERIALS, DUMPSTERS, DETACHED TRAILERS OR SIMILAR ITEMS ARE PROHIBITED ON PUBLIC STREETS OR WITHIN THE PUBLIC R.O.W.

THE 2014 EDITION OF SUDAS STANDARD SPECIFICATIONS AND THE MOST RECENT EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN. THE WAUKEE STANDARD SPECIFICATIONS SHALL GOVERN IN THE EVENT OF CONTRASTING REQUIREMENTS.

THIS DESIGN SPECIFICALLY PREPARED FOR USE AT THE LOCATION SHOWN. USE IN ANY OTHER MANNER EXCEEDS THE INTENDED PURPOSE OF THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS. THE WAUKEE STANDARD SPECIFICATIONS SHALL GOVERN IN THE EVENT OF CONTRASTING REQUIREMENTS.

LICENSED PROFESSIONAL ENGINEER ERIN L. OLLENDIKE 16926 IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

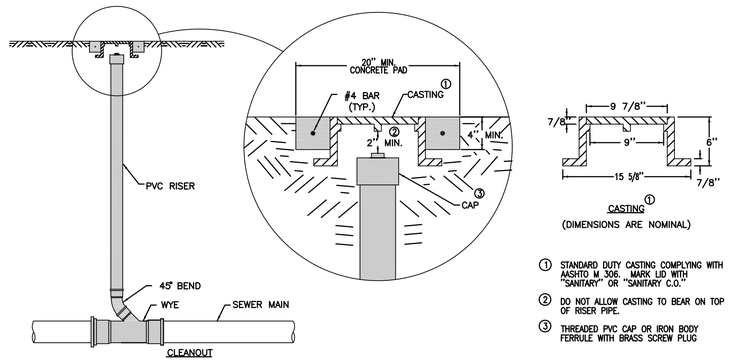
PRELIMINARY
NOT FOR CONSTRUCTION

ERIN L. OLLENDIKE, P.E. DATE

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2015
PAGES OR SHEETS COVERED BY THIS SEAL:
SHEETS 1-3, 5-26

AUTUMN RIDGE APARTMENTS

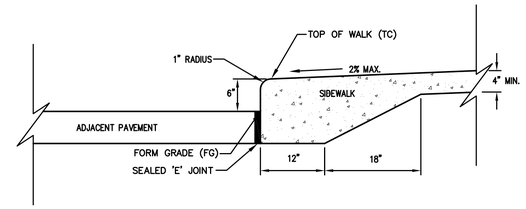
FILE: L:\2014\1402069\DWG\1402069-SITE.DWG
PLOTTED BY: JEFF NESVIK PLOT DATE: 11/12/2014 2:48 PM COMMENT: ENG
TECH:



1. STANDARD DUTY CASTING COMPLYING WITH AASHTO M 306. MARK LID WITH "SANITARY" OR "SANITARY C.O."
2. DO NOT ALLOW CASTING TO BEAR ON TOP OF RISER PIPE.
3. THREADED PVC CAP OR IRON BODY FERRULE WITH BRASS SCREW PLUG

SW-203 SANITARY CLEANOUT

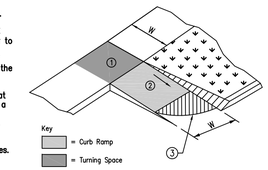
NOT TO SCALE



CLASS 'A' 6" CURB AND SIDEWALK

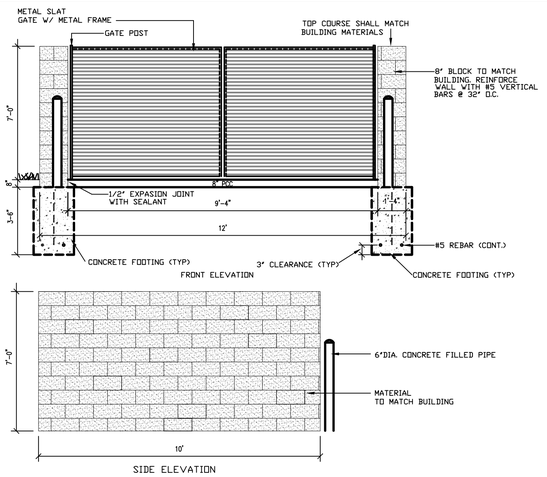
NOT TO SCALE

1. Perpendicular Curb Ramp: Target running sloped of 6.25% with a maximum running slope of the 8.3%.
2. Turning Space: Target slope of 1.5% with a maximum slope perpendicular to the trowel directions of 2.0%. At mid-block crossings, cross slope of landing may exceed 2.0% to match the roadway grade. Min. 5'x5'.
3. Provide an area of special shaping at the bottom of the ramp to provide a smooth transition to the gutterline. 2% maximum slope in any direction.
4. The minimum pavement depth for ramps and landings shall be 6-inches.



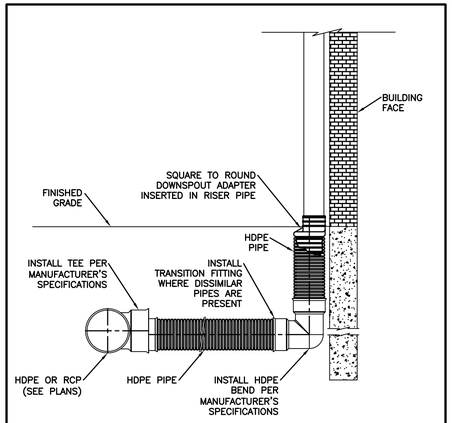
PERPENDICULAR CURB RAMP @ CLASS 'A' INTEGRAL CURB

NOT TO SCALE



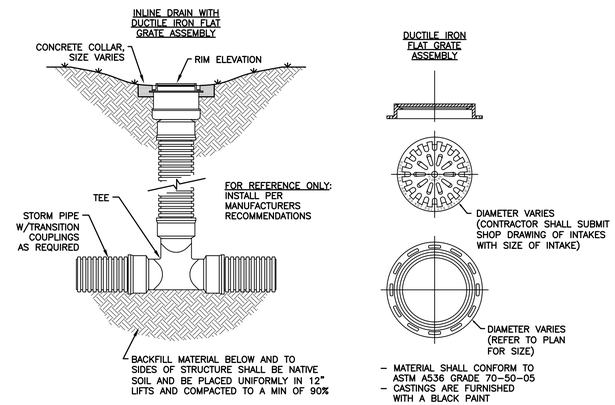
DUMPSTER ENCLOSURE DETAIL

NOT TO SCALE



ROOF DRAIN CONNECTION WITH TEE

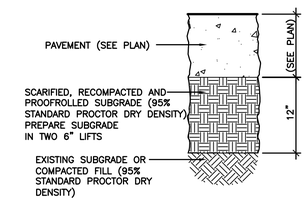
NOT TO SCALE



- MATERIAL SHALL CONFORM TO ASTM A536 GRADE 70-50-05
- CASTINGS ARE FURNISHED WITH A BLACK PAINT

NYLOPLAST INLINE DRAIN

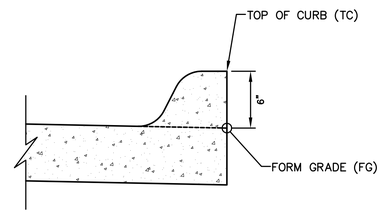
NOT TO SCALE



NOTE:
1. SUBGRADE PREPARATION SHALL EXTEND 24" BEYOND EDGE OF PAVING OR BACK OF CURB. EXCEPT WHEN ABUTTING EXISTING PAVEMENT.

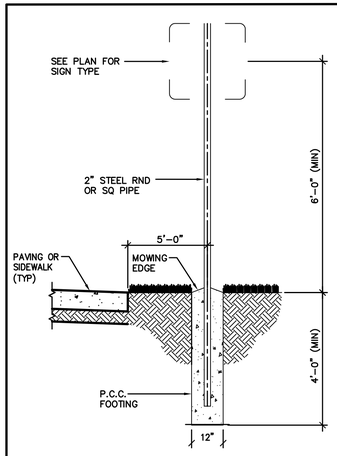
12" SUBGRADE PREPARATION

NOT TO SCALE



INTEGRAL 6" STANDARD CURB SPOT ELEVATION REFERENCE DETAIL

NOT TO SCALE

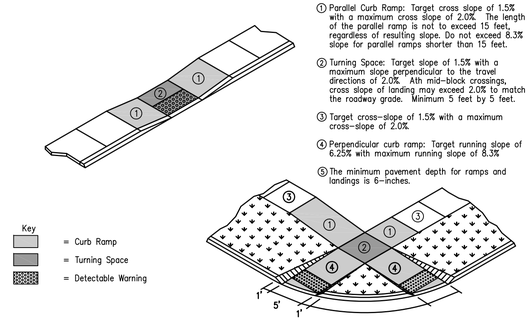


NOTE:
THE CONTRACTOR WILL FURNISH ALL SIGN PANELS AND SHALL INSTALL SIGNS AND FURNISH ALL OTHER MATERIALS, INCLUDING, BUT NOT LIMITED TO, POSTS, FASTENERS, AND FOOTINGS.

TYPICAL SIGN POST

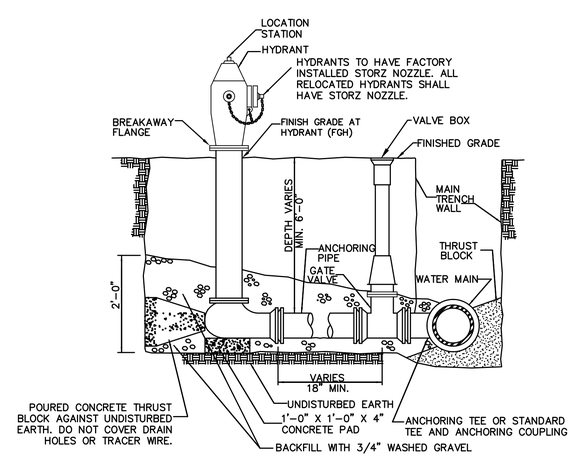
NOT TO SCALE

1. Parallel Curb Ramp: Target cross slope of 1.5% with a maximum cross slope of 2.0%. The length of the parallel ramp is not to exceed 15 feet, regardless of resulting slope. Do not exceed 8.3% slope for parallel ramps shorter than 15 feet.
2. Turning Space: Target slope of 1.5% with a maximum slope perpendicular to the trowel directions of 2.0%. Ath mid-block crossings, cross slope of landing may exceed 2.0% to match the roadway grade. Minimum 5 feet by 5 feet.
3. Target cross-slope of 1.5% with a maximum cross-slope of 2.0%.
4. Perpendicular curb ramp: Target running slope of 6.25% with maximum running slope of 8.3%
5. The minimum pavement depth for ramps and landings is 6-inches.



CURB RAMPS OUTSIDE OF INTERSECTION RADIUS

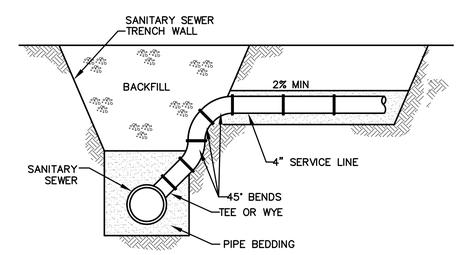
NOT TO SCALE



NOTES
1. MINIMUM SIZE FOR PIPING, VALVES AND FITTINGS FROM WATER MAIN TO HYDRANT INLET: 6".
2. PROVIDE TRACER WIRE AND TRACER WIRE STATION.
3. WRAP HYDRANT, PIPE AND FITTINGS WITH POLYETHYLENE ENCASEMENT.

HYDRANT ASSEMBLY DETAIL

NOT TO SCALE



NOTES:
1. USE FOR SERVICE CONNECTION WHEN SANITARY SEWER DEPTH EXCEEDS 12.0'
2. STOP ALL GRANULAR BACKFILL AND BEDDING 10' FROM THE END OF THE SERVICE.

SANITARY SEWER SERVICE RISER

NOT TO SCALE

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JJN
CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS
DETAILS

WAUKEE, IOWA

1402.069

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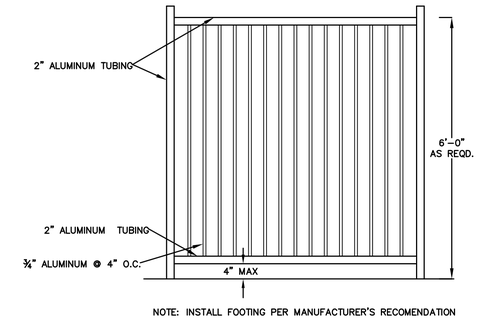
PLOTTED BY: JEFF NESVIK TECH: ENG:

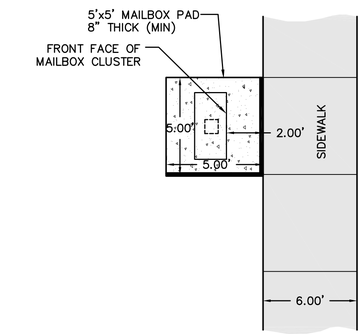


6' POOL FENCE

NOT TO SCALE

INSTALLATION NOTE:

1. MAILBOX PADS TO BE INSTALLED BY DEVELOPER.
2. CLUSTER MAILBOX TO BE LOCATED BETWEEN THE BUILDING AND SIDEWALK.
3. DETERMINE SIDEWALK SIDE OF MAILBOX PAD ELEVATION ASSUMING CONSTANT 4% SLOPE FROM BACK OF CURB TO SIDEWALK SIDE OF MAILBOX PAD. RESULTING SLOPE FROM BACK OF CURB TO STREET SIDE OF MAILBOX PAD WILL BE GREATER THAN 4%. FOR EXAMPLE, FOR A 29' WIDE PAVEMENT WITH A 60' WIDE R.O.W. AND A 2% MAILBOX PAD CROSS SLOPE, THE RESULTING SLOPE FROM THE BACK OF CURB TO THE STREET SIDE OF MAILBOX PAD IS 6.2%.



MAILBOX PAD DETAIL

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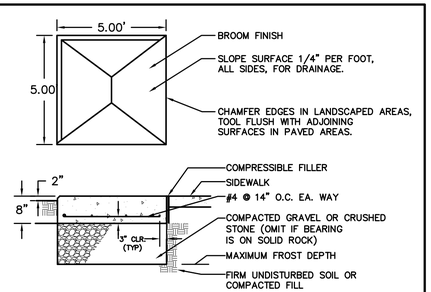

GENERAL NOTES

1. CONCRETE: C4 MIX.
2. REINFORCING STEEL: ASTM A615, GRADE 60.
3. THIS BASE DETAIL CAN BE USED FOR NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS (NDCBU) CLUSTER BOXES AND PARCEL LOCKERS WITH 4"x10" BOLT PATTERN.
4. REQUIRED EXPANSION BOLT CAPACITY, BASED ON CALCULATED DESIGN LOAD= 3100 LBS TENSION, 2000 LBS SHEAR.
5. MAILBOX PADS TO BE INSTALLED BY DEVELOPER.

MAILBOX PAD DETAIL

NOT TO SCALE

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JJN

CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS

DETAILS

WAUKEE, IOWA

1402.069

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FILENAME: 1402069-SITE.DWG PLOT DATE: 1/12/2014 2:49 PM COMMENT:
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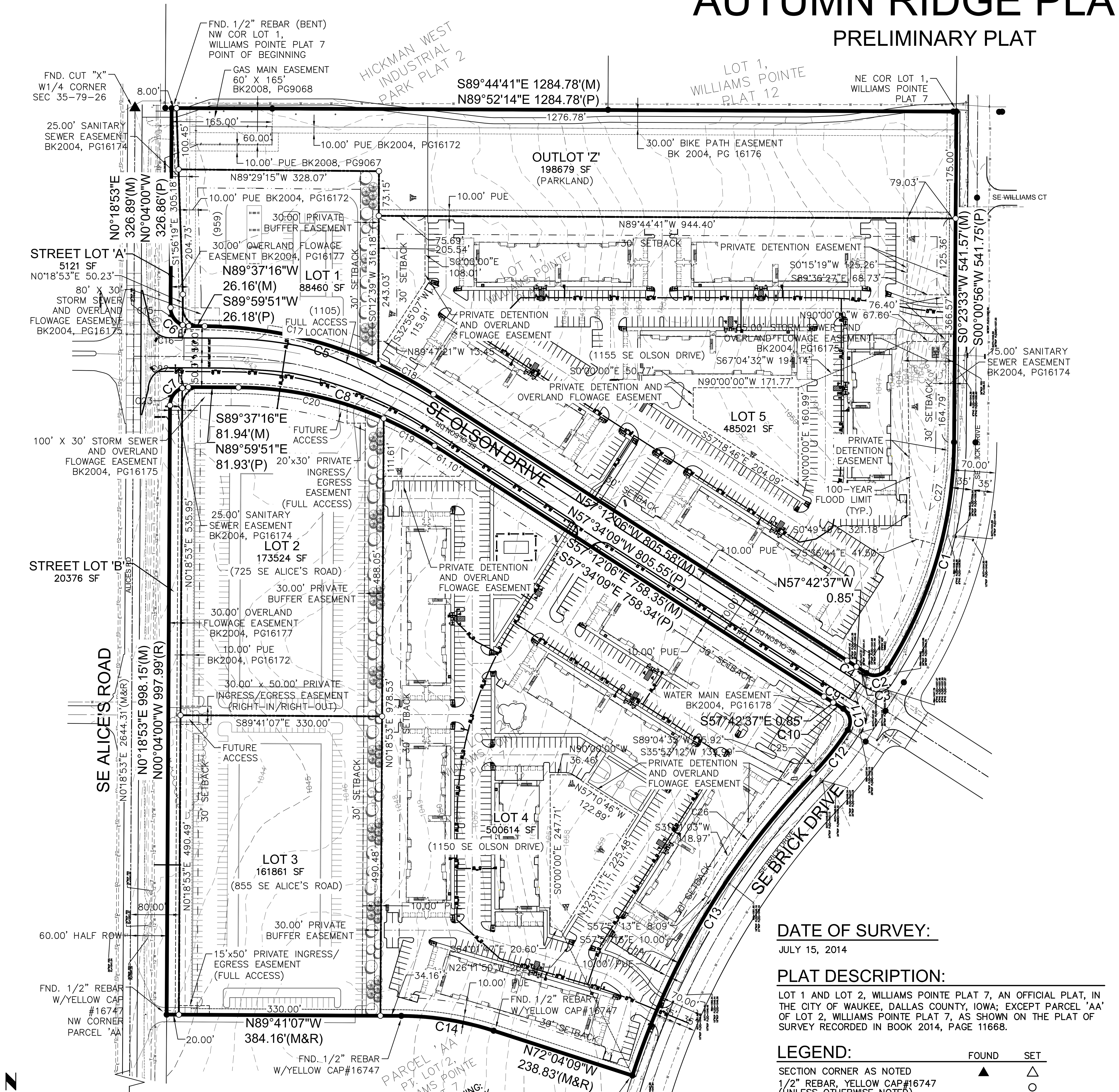
AUTUMN RIDGE PLAT 1

PRELIMINARY PLAT



NOTES

1. ALL LANDSCAPE BUFFERS SHALL BE INSTALLED WITH THE DEVELOPMENT OF EACH INDIVIDUAL LOT.
2. OUTLOT 'Z' SHALL BE DEDICATED TO THE CITY AS PARKLAND.
3. LOTS A AND B SHALL BE DEDICATED TO THE CITY AS RIGHT-OF-WAY.
4. FIVE FOOT PUBLIC SIDEWALKS WILL BE REQUIRED ADJACENT TO ALL LOTS IN THE PLAT AT THE TIME EACH INDIVIDUAL LOT IS DEVELOPED.
5. THE CONCEPTUAL PLAN SHOWN FOR LOTS 1-3 IS PRELIMINARY AND IS SHOWN AS A REPRESENTATION OF HOW THE LOTS COULD DEVELOP.
6. LOTS 2 AND 3 WILL BE REQUIRED TO PROVIDE A PRIVATE INGRESS/EGRESS EASEMENT ACROSS THE LOT FOR JOINT ACCESS AT THE TIME A SITE PLAN IS SUBMITTED.

BULK REGULATIONS:

PLANNED DEVELOPMENT: UNDERLYING ZONING 'R-3' MULTI FAMILY RESIDENTIAL DISTRICT (LOTS 4-5)

A. PRINCIPAL PERMITTED USES FOR THIS AREA SHALL INCLUDE CONDOMINIUM AND APARTMENT DWELLINGS.
B. MINIMUM LOT AREA: 10,000 SQUARE FEET;
C. MINIMUM FLOOR AREA: 750 SQUARE FEET PER UNIT, EXCEPT EFFICIENCIES AND 1 BEDROOM UNITS WHICH SHALL BE 600 SF
D. MAXIMUM DENSITY: 21 HOUSING UNITS PER GROSS ACRE
E. MAXIMUM NUMBER OF UNITS IN A BUILDING: 36 UNITS
F. FRONT YARD: 30 FEET PERIMETER BOUNDARY
G. SIDE YARD: NO MINIMUM SHALL APPLY EXCEPT WHERE BORDERING AN R-4 DISTRICT OR C DISTRICT IN WHICH CASE THE SIDE YARD SHALL BE 25 FEET; THE BUILDINGS SHALL HAVE A MINIMUM OF 10 FEET BETWEEN THE BUILDINGS.
H. REAR YARD: DWELLING - 25 FEET PERIMETER BOUNDARY; THE BUILDINGS SHALL HAVE A MINIMUM OF 20 FEET BETWEEN THE BUILDINGS.
I. LANDSCAPING & OPEN SPACE:
   a. ALL SITES SHOULD CONFORM TO THE CITY'S ORDINANCE FOR LANDSCAPING AND OPEN SPACE WITH REGARD TO THE AMOUNT OF OPEN SPACE TO BE PROVIDED WITHIN EACH LOT IN ADDITION TO THE NUMBER AND TYPE OF PLANTINGS NEEDED WITHIN EACH SITE.
   b. BUFFERS: WHERE THIS DISTRICT BORDERS A ROW DWELLING AND TOWNHOME DWELLING DISTRICT (R-4) OR A COMMERCIAL (C) ZONED DISTRICT, A THREE (3) FOOT HIGH BUFFER SHALL BE PROVIDED CONSISTING OF TWENTY-FIVE (25) FEET IN WIDTH DESIGNED WITH AN EARTH BERM AND PLANTINGS.
      i. BUFFER PLANTINGS SHOULD BE PROVIDED AS PRESCRIBED BY THE CITY'S LANDSCAPE AND OPEN SPACE ORDINANCE.
J. PARKING:
   a. A MINIMUM OF 2 SPACES PER DWELLING UNIT, 1 VISITOR SPACE PER 5 DWELLING UNITS.
   b. A MINIMUM OF ONE GARAGE SPACE SHOULD BE PROVIDED FOR 1/3 OF THE TOTAL NUMBER OF UNITS.

'C-1' COMMUNITY AND HIGHWAY SERVICE COMMERCIAL DISTRICT (LOTS 1-3)

A. PRINCIPAL PERMITTED USES FOR THIS AREA SHALL INCLUDE RETAIL BUSINESS OR SERVICE ESTABLISHMENTS LISTED IN THE C-1 REQUIREMENTS AND ANY USE LISTED WITHIN THE C-1A NEIGHBORHOOD COMMERCIAL DISTRICT.
B. MINIMUM LOT AREA: NO MINIMUM
C. MINIMUM LOT WIDTH: NO MINIMUM
D. FRONT YARD: 30 FEET; WHEN FRONTING ON THE RIGHT-OF-WAY OF A MAJOR THOROUGHFARE SHOWN ON THE OFFICIAL MAJOR STREET PLAN, THE FRONT YARD SHALL BE MEASURED FROM THE PROPOSED RIGHT-OF-WAY LINE.
E. SIDE YARD: NO MINIMUM SHALL APPLY EXCEPT WHERE THE SIDE YARD IS ADJACENT TO A "R" DISTRICT, IN WHICH CASE THE YARD SHALL BE AT LEAST 15 FEET
F. REAR YARD: 30 FEET.
G. MAXIMUM BUILDING HEIGHT: 40 FEET EXCEPT THAT RADIO COMMUNICATION TOWERS CONSTRUCTED IN COMPLIANCE WITH 221.1 OF THE WAUKEE MUNICIPAL CODE MAY NOT EXCEED 45 FEET IN HEIGHT.
H. MAXIMUM STORIES: 3
I. BUILDING AREA: NO SINGLE BUILDING WITHIN THIS DISTRICT SHALL EXCEED 50,000 SQUARE FEET. (NO CONFIGURATION OF BUILDINGS SHALL BE ALLOWED THAT ARE PLANNED OR INTENDED TO CIRCUMVENT THIS REQUIREMENT.)

CURVE DATA:

CURVE	DELTA	RADIUS	LENGTH	BEARING	CHORD
(M) C1	32°01'03"	700.00'	391.17'	S16°24'04"W	386.10'
(M) C2	90°22'35"	25.00'	39.43'	S77°35'53"W	35.47'
(M) C3	0°32'16"	2035.00'	19.10'	N57°26'29"W	19.10'
(M) C4	0°30'31"	1965.00'	17.44'	N57°27'22"W	17.44'
(M) C5	32°25'10"	700.00'	396.08'	N73°24'41"W	390.81'
(M) C6	89°56'09"	30.00'	47.09'	N44°39'11"W	42.40'
(M) C7	90°03'51"	30.00'	47.16'	N45°20'49"E	42.45'
(M) C8	32°25'10"	600.00'	339.49'	S73°24'41"E	334.98'
(M) C9	0°30'31"	2035.00'	18.07'	S57°27'22"E	18.07'
(M) C10	0°32'16"	1965.00'	18.44'	S57°26'29"E	18.44'
(M) C11	90°00'00"	25.00'	39.27'	S12°10'21"E	35.36'
(M) C12	11°01'54"	472.67'	91.01'	S38°20'36"W	90.87'
(M) C13	25°56'23"	1285.00'	581.77'	S30°53'21"W	576.81'
(M) C14	17°36'58"	500.00'	153.73'	N80°52'38"W	153.12'
C15	70°31'44"	30.00'	36.93'	N34°56'58"W	34.64'
C16	19°24'25"	30.00'	10.16'	N79°55'03"W	10.11'
C17	23°59'01"	700.00'	293.01'	N77°37'45"W	290.88'
C18	8°26'09"	700.00'	103.06'	N61°25'10"W	102.97'
C19	9°02'26"	600.00'	94.67'	S61°43'19"E	94.58'
C20	23°22'43"	600.00'	244.82'	S77°55'54"E	243.13'
C22	19°32'07"	30.00'	10.23'	N80°36'41"E	10.18'
C23	70°31'44"	30.00'	36.93'	N35°34'45"E	34.64'
C24	14°07'46"	1285.00'	316.89'	S24°59'02"W	316.08'
C25	1°39'23"	462.67'	13.37'	N43°01'51"E	13.37'
C26	11°48'38"	1295.00'	266.94'	S37°57'14"W	266.47'
C27	14°01'16"	688.50'	168.49'	N7°23'33"E	168.07'

CURVE	DELTA	RADIUS	LENGTH	BEARING	CHORD
(P) C1	32°01'16"	700.00'	391.21'	S16°01'34"W	386.14'
(P) C2	90°24'12"	25.00'	39.45'	S77°14'18"W	35.48'
(P) C3	0°31'16"	2035.00'	19.10'	N57°49'44"W	19.10'
(P) C4	0°31'43"	1965.00'	18.13'	N57°50'01"W	18.13'
(P) C5	32°26'00"	700.00'	396.25'	N73°47'09"W	390.98'
(P) C6	89°56'09"	30.00'	47.09'	N45°02'05"W	42.40'
(P) C7	90°03'51"	30.00'	47.16'	S44°57'55"E	42.45'
(P) C8	32°26'00"	600.00'	339.64'	S73°47'09"E	335.12'
(P) C9	0°31'43"	2035.00'	18.77'	S57°50'01"E	18.77'
(P) C10	0°32'16"	1965.00'	18.45'	S57°49'44"E	18.45'
(P) C11	90°03'48"	25.00'	39.30'	S12°31'42"E	35.37'
(P) C12	11°02'40"	472.67'	91.11'	S37°56'44"W	90.97'
(R) C13	25°56'23"	1285.00'	581.77'	N-A	N-A
(R) C14	17°36'58"	500.00'	153.73'	N80°52'38"W	153.12'

DATE OF SURVEY:

JULY 15, 2014

PLAT DESCRIPTION:

LOT 1 AND LOT 2, WILLIAMS POINTE PLAT 7, AN OFFICIAL PLAT, IN THE CITY OF WAUKEE, DALLAS COUNTY, IOWA; EXCEPT PARCEL 'AA' OF LOT 2, WILLIAMS POINTE PLAT 7, AS SHOWN ON THE PLAT OF SURVEY RECORDED IN BOOK 2014, PAGE 11668.

LEGEND:

	FOUND	SET
SECTION CORNER AS NOTED	▲	△
1/2" REBAR, YELLOW CAP#16747 (UNLESS OTHERWISE NOTED)		○
5/8" REBAR (UNLESS OTHERWISE NOTED)	●	
PLATTED BEARING & DISTANCE	P	
MEASURED BEARING & DISTANCE	M	
RECORDED BEARING & DISTANCE	R	
DEEDED BEARING & DISTANCE	D	
MINIMUM PROTECTION ELEVATION	MPE	
PUBLIC UTILITY EASEMENT	P.U.E.	
CENTERLINE	—·—·—	
SECTION LINE	—-—-—	
EASEMENT LINE	- - - - -	

ENGINEER/SURVEYOR:

CIVIL DESIGN ADVANTAGE
3405 SE CROSSROADS DR, SUITE G
GRIMES, IOWA 50111

OWNER/APPLICANT:

CENTENNIAL DEVELOPMENT L.C.
2785 N. ANKENY BLVD, SUITE 22
ANKENY, IA 50023

ZONING:

LOTS 1, 2 & 3
C-1 COMMUNITY AND HIGHWAY SERVICE COMMERCIAL DISTRICT

LOTS 4 & 5
PLANNED DEVELOPMENT (PD)
UNDERLYING ZONING: R-3 MULTI-FAMILY RESIDENTIAL DISTRICT

I HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED SURVEY WORK WAS PERFORMED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

LICENSED PROFESSIONAL LAND SURVEYOR MICHAEL D. LEE 16747 IOWA

PRELIMINARY NOT FOR CONSTRUCTION

MICHAEL D. LEE, P.L.S. DATE

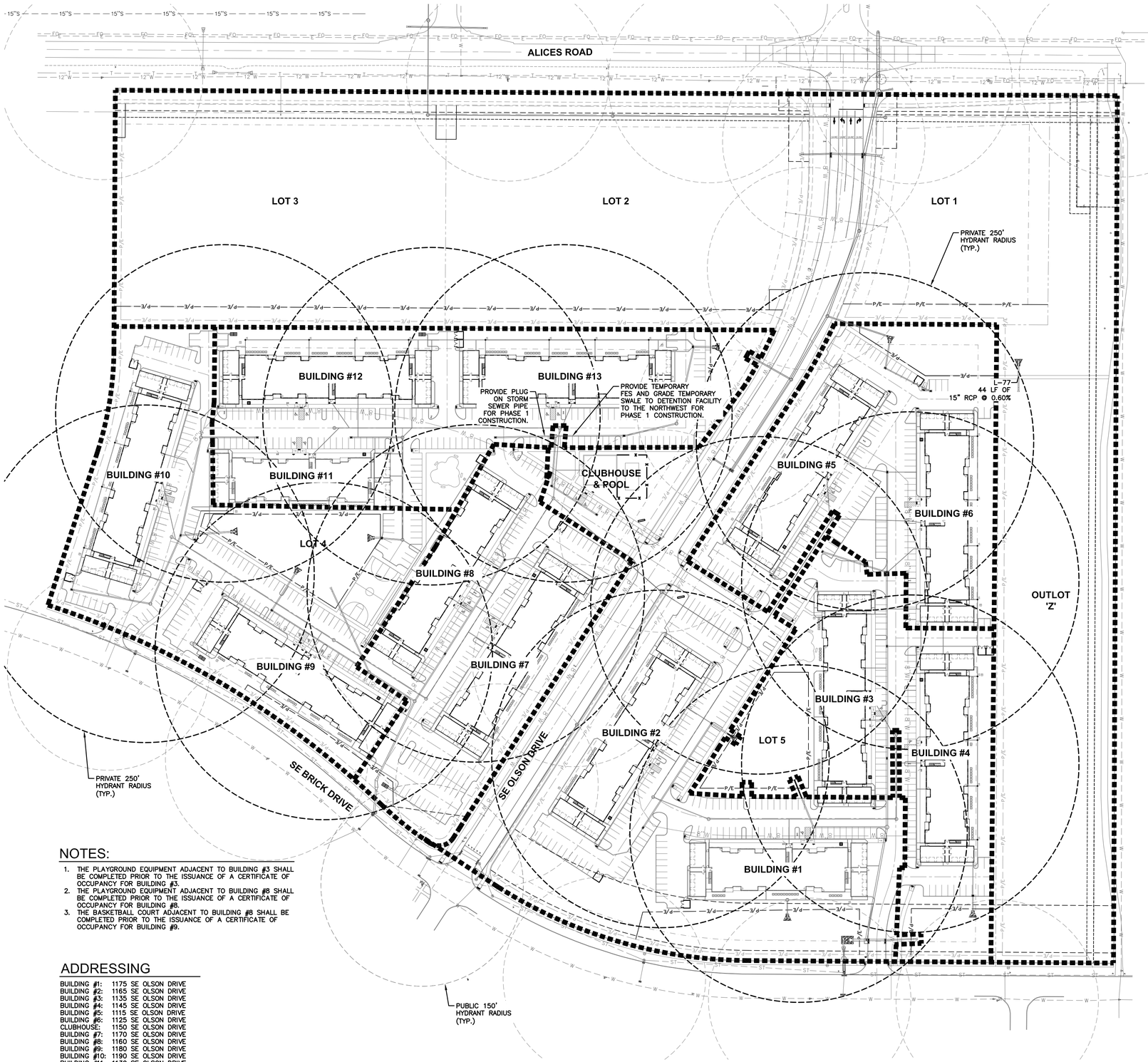
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2014
PAGES OR SHEETS COVERED BY THIS SEAL:
THIS SHEET

FILE: H:\2014\1402069\DWG\1402069-FINAL & PRELIM PLAT.DWG
FILE DATE: 11/12/14 DATE PLOTTED: 11/12/2014 3:06 PM
PLOTTED BY: JEFF NESVIK TECH: COMMENT: ENG:

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

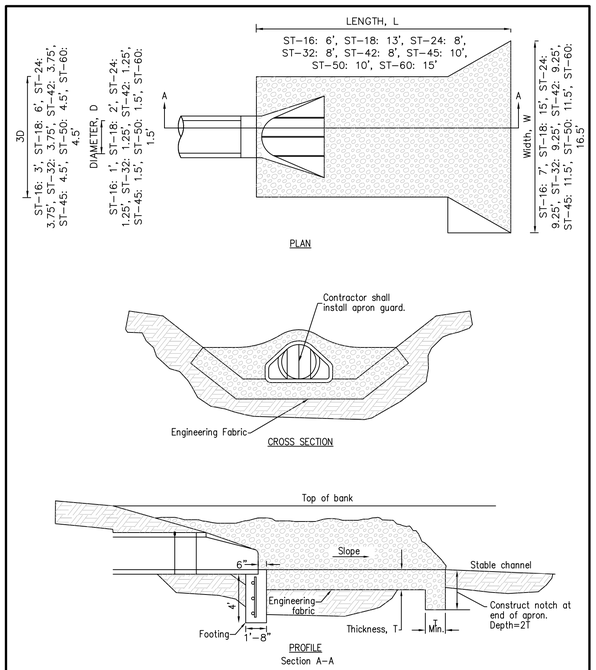
CIVIL DESIGN ADVANTAGE
3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JJN

AUTUMN RIDGE APARTMENTS
PRELIMINARY PLAT
WAUKEE, IOWA



PHASING SCHEDULE

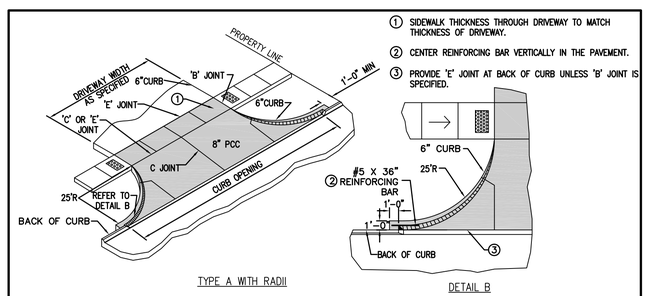
PHASE 1	
• SITE GRADING AND UTILITIES	– FALL 2014
• BUILDINGS 1, 2, CLUBHOUSE AND POOL	– LATE FALL 2014
PHASE 2	
• BUILDINGS 3 AND 4	– FALL 2015
PHASE 3	
• BUILDINGS 5 AND 6	– SPRING 2016
PHASE 4	
• BUILDINGS 7 AND 8	– FALL 2016
PHASE 5	
• BUILDINGS 9 AND 10	– SPRING 2017
PHASE 6	
• BUILDINGS 11, 12 AND 13	– FALL 2017



NOTE:
THE LAST THREE SECTIONS AND THE APRON SHALL BE CONNECTED WITH PIPE CONNECTIONS PER SECTION 4030.302C OF SUDAS.

ROCK APRON FOR PIPE OUTLET

NOT TO SCALE



① SIDEWALK THICKNESS THROUGH DRIVEWAY TO MATCH THICKNESS OF DRIVEWAY.

② CENTER REINFORCING BAR VERTICALLY IN THE PAVEMENT.

③ PROVIDE 'E' JOINT AT BACK OF CURB UNLESS 'B' JOINT IS SPECIFIED.

PRIVATE DRIVE CONNECTION DETAIL

NOTES:

1. THE PLAYGROUND EQUIPMENT ADJACENT TO BUILDING #3 SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR BUILDING #3.
2. THE PLAYGROUND EQUIPMENT ADJACENT TO BUILDING #8 SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR BUILDING #8.
3. THE BASKETBALL COURT ADJACENT TO BUILDING #8 SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR BUILDING #9.

ADDRESSING

BUILDING #1:	1175 SE OLSON DRIVE
BUILDING #2:	1165 SE OLSON DRIVE
BUILDING #3:	1135 SE OLSON DRIVE
BUILDING #4:	1145 SE OLSON DRIVE
BUILDING #5:	1115 SE OLSON DRIVE
BUILDING #6:	1125 SE OLSON DRIVE
CLUBHOUSE:	1150 SE OLSON DRIVE
BUILDING #7:	1170 SE OLSON DRIVE
BUILDING #8:	1160 SE OLSON DRIVE
BUILDING #9:	1180 SE OLSON DRIVE
BUILDING #10:	1190 SE OLSON DRIVE
BUILDING #11:	1130 SE OLSON DRIVE
BUILDING #12:	1120 SE OLSON DRIVE
BUILDING #13:	1110 SE OLSON DRIVE

SCALE
0' 40 80' 160'

REVISIONS	DATE
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3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JJN
CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS
PHASING PLAN, HYDRANT COVERAGE PLAN & DETAILS

WAUKEE, IOWA

1402.069

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PLOTTED BY: JEFF NESVIK
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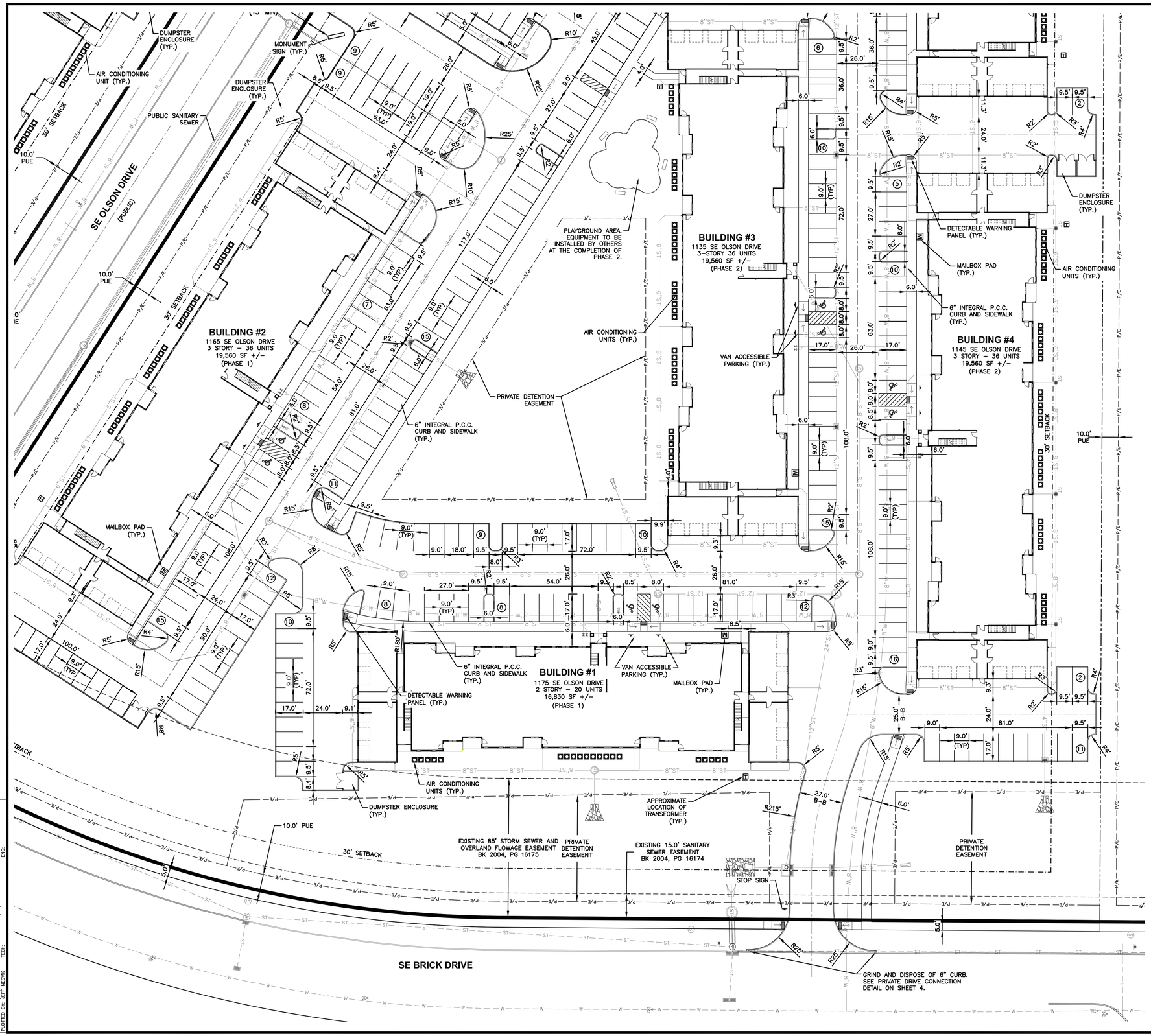


GENERAL NOTES

1. THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY OF WAUKEE STANDARD SPECIFICATIONS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
2. ALL WORK SHALL COMPLY WITH ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
3. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
4. PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER, ENGINEER, AND/OR ARCHITECT, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
5. ONE WEEK PRIOR TO CONSTRUCTION WITHIN CITY R.O.W. OR ANY CONNECTION TO PUBLIC UTILITIES CONTRACTOR SHALL NOTIFY THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
6. ALL CONSTRUCTION WITHIN PUBLIC R.O.W./ EASEMENTS, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE CITY OF WAUKEE STANDARD SPECIFICATIONS.
7. ALL DIMENSIONS ARE TO BACK OF CURB, BUILDING FACE OR PROPERTY LINE UNLESS OTHERWISE NOTED.
8. CONTRACTOR TO VERIFY BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.
9. PLACE 3/4 INCH EXPANSION JOINT BETWEEN ALL P.C.C. PAVEMENT/SIDEWALKS AND BUILDING. PLACE 1/2 INCH EXPANSION JOINT BETWEEN SIDEWALKS AND P.C.C. PAVEMENT.
10. REMOVE ALL DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY.
11. ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
12. DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY.
13. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
15. THE CONTRACTOR MAY BE REQUIRED TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY, AS DIRECTED BY THE ENGINEER OR THE CITY.
16. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT, INCLUDING STAGING OF CONSTRUCTION DETAILS.
17. ALL SCOUR STOP SHALL BE INSTALLED BY A CERTIFIED CONTRACTOR ACCORDING TO SCOUR STOP PRODUCT SPECIFICATIONS.
18. ALL PERMITS AND ADDITIONAL FEES REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACT BID.
19. MONUMENT SIGNS ARE TO BE REVIEWED AND APPROVED BY THE DEVELOPMENT SERVICES DEPARTMENT.
20. ALL STAKING IS TO BE DONE UNDER THE DIRECTION OF A LICENSED ENGINEER OR SURVEYOR.
21. IT IS THE CONTRACTORS RESPONSIBILITY TO SCHEDULE A PRE–CONSTRUCTION MEETING WITH THE CITY OF WAUKEE DEVELOPMENT SERVICES DEPARTMENT AT LEAST ONE WEEK PRIOR TO CONSTRUCTION ACTIVITIES COMMENCING.
22. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CITY OF WAUKEE DEVELOPMENT SERVICES DEPARTMENT 72 HOURS PRIOR TO ANY PLANNED WEEKEND OR HOLIDAY WORK.
23. AN AS–BUILT SITE PLAN ILLUSTRATING THE LOCATION AND DEPTHS OF SITE UTILITIES AND GRADES FOR DRAINAGE SWALES, DETENTION FACILITIES AND FFE'S SHALL BE PROVIDED IN PDF FORM AND HARD COPY UPON COMPLETION OF EACH PHASE OF DEVELOPMENT TO THE CITY WAUKEE'S DEVELOPMENT SERVICES DEPARTMENT.

TRAFFIC CONTROL NOTES

1. ALL APPLICABLE CITY PERMITS, INCLUDING BUT NOT LIMITED TO CLOSURE PERMITS, SHALL BE OBTAINED PRIOR TO ANY CONSTRUCTION WITHIN CITY R.O.W. OR LANE CLOSURES.
2. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
3. PERMANENT SIGNING THAT CONVEYS A MESSAGE CONTRARY TO THE MESSAGE OF TEMPORARY SIGNING AND NOT APPLICABLE TO THE WORKING CONDITIONS SHALL BE COVERED BY THE CONTRACTOR WHEN DIRECTED BY THE CITY.
4. THE CONTRACTOR SHALL COORDINATE HIS TRAFFIC CONTROL WITH OTHER CONSTRUCTION PROJECTS IN THE AREA.
5. SIDEWALK CLOSED SIGNS REQUIRED FOR ALL SIDEWALK CLOSURES. SIGNAGE AND TEMPORARY PEDESTRIAN ACCESS ROUTE THROUGH CONSTRUCTION AREA SHALL MEET THE REQUIREMENTS OF PUBLIC RIGHT–OF–WAY ACCESSIBILITY GUIDELINES (PROWAG), SECTION R205 AND IOWA DOT DESIGN MANUAL, CHAPTER 12A–4.
6. THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR TO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.
7. ALL SIGNING AND LANE STRIPING WILL NEED TO COMPLY WITH MUTCD. MAINTENANCE AND REPLACEMENT OF THE SIGNING AND STRIPING WILL BE THE RESPONSIBILITY OF THE APPLICANT.

PAVEMENT THICKNESS

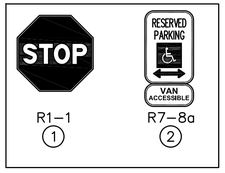
1. SIDEWALKS	4" P.C.C. (C–4 MIX)
2. DRIVEWAYS	6" P.C.C. (C–4 MIX)
3. PRIVATE ROADS	7" P.C.C. (C–4 MIX)
4. DRIVE APPROACH WITHIN ROW	8" P.C.C. (C–4 MIX)

PARKING REQUIREMENTS

2 SPACES PER DWELLING UNIT
1 COMMON SPACE PER 5 UNITS

PARKING REQUIRED:	
2 SPACES PER UNIT	= 868 SPACES
1 COMMON SPACE PER 5 UNITS	= 87 SPACES
TOTAL REQUIRED	= 955 SPACES
PARKING PROVIDED:	
GARAGES	= 156 SPACES
COMMON (OFF STREET) PARKING	= 796 SPACES
TOTAL PROVIDED	= 952 SPACES
ACCESSIBLE PARKING REQUIRED:	
501–1000 SPACES = 2% OF TOTAL	= 20 SPACES
1 VAN ACCESSIBLE SPACE PER 6 ACCESSIBLE SPACES	= 4 SPACES
TOTAL ACCESSIBLE PARKING REQUIRED:	= 24 SPACES
ACCESSIBLE PARKING PROVIDED:	
STANDARD ACCESSIBLE SPACES	= 14 SPACES
VAN ACCESSIBLE SPACES	= 14 SPACES
TOTAL ACCESSIBLE PARKING PROVIDED:	= 28 SPACES

SIGN LEGEND



* * * N O T E * * *
THE APARTMENT UNITS THAT ARE SHOWN ARE FOR REFERENCE PURPOSES ONLY. FINAL UNIT TYPE IS SUBJECT TO CHANGE. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS.

SCALE
0' 15' 30' 60'

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
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3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JJN
CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS
DIMENSION PLAN
WAUKEE, IOWA

FILE: J:\2014\1402069\DWG\1402069-SITE.DWG
PLOT DATE: 11/12/2014 PLOTTED BY: JEFF NESVIK
COMMENT: ENG:
TECH:

LOT 2

LOT 1

BUILDING #13
1110 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 6)

CLUBHOUSE
1150 SE OLSON DRIVE
(PHASE 1)

POOL
(PHASE 1)

BUILDING #8
1160 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 4)

BUILDING #7
1170 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 4)

BUILDING #5
1115 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 3)

BUILDING #6
1125 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 3)

SE OLSON DRIVE
(PUBLIC)

30.0' PRIVATE BUFFER EASEMENT
10.0' PUE
30' SETBACK
DUMPSTER ENCLOSURE (TYP.)
AIR CONDITIONING UNIT (TYP.)
PRIVATE DETENTION EASEMENT
PUBLIC WATERMAIN
PUBLIC STORM SEWER
VAN ACCESSIBLE PARKING (TYP.)
MAILBOX PAD (TYP.)
DETECTABLE WARNING (TYP.)
6' POOL FENCE. REFER TO DETAIL ON SHEET 2.
ACCESSIBLE PARKING SIGN (TYP.)
PLAYGROUND AREA. EQUIPMENT TO BE INSTALLED BY OTHERS.
MONUMENT SIGN (TYP.)
16' (15' MIN)
CONNECTION FL 8" (SW)=1040.24
CONNECTION FL 8" (NE)=1040.02
STOP SIGN
PUBLIC SANITARY SEWER
ST-76 15" RCP APRON FL 15" (E)=1046.45
ST-77 15" RCP APRON FL 15" (W)=1046.71
44 LF OF 15" RCP @ 0.60%
5.0' SIDEWALK (SEE SHEET 10 FOR CONTINUATION OF SIDEWALK)

SCALE
0' 15' 30' 60'

REVISIONS	DATE
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AUTUMN RIDGE APARTMENTS
DIMENSION PLAN

WAUKEE, IOWA

1402.069

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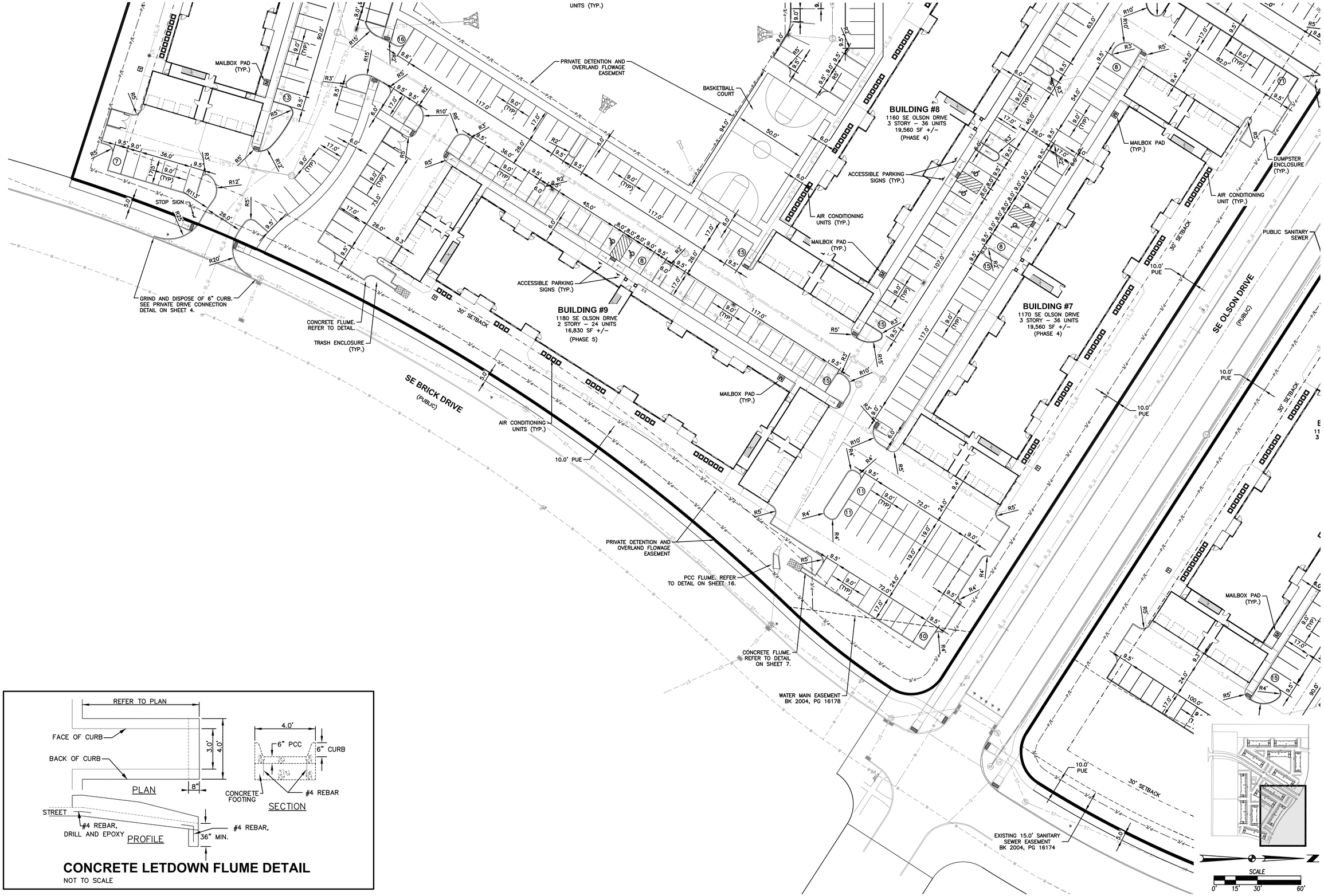

CONCRETE LETDOWN FLUME DETAIL

NOT TO SCALE

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CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS

DIMENSION PLAN

WAUKEE, IOWA

8/27

1402.069

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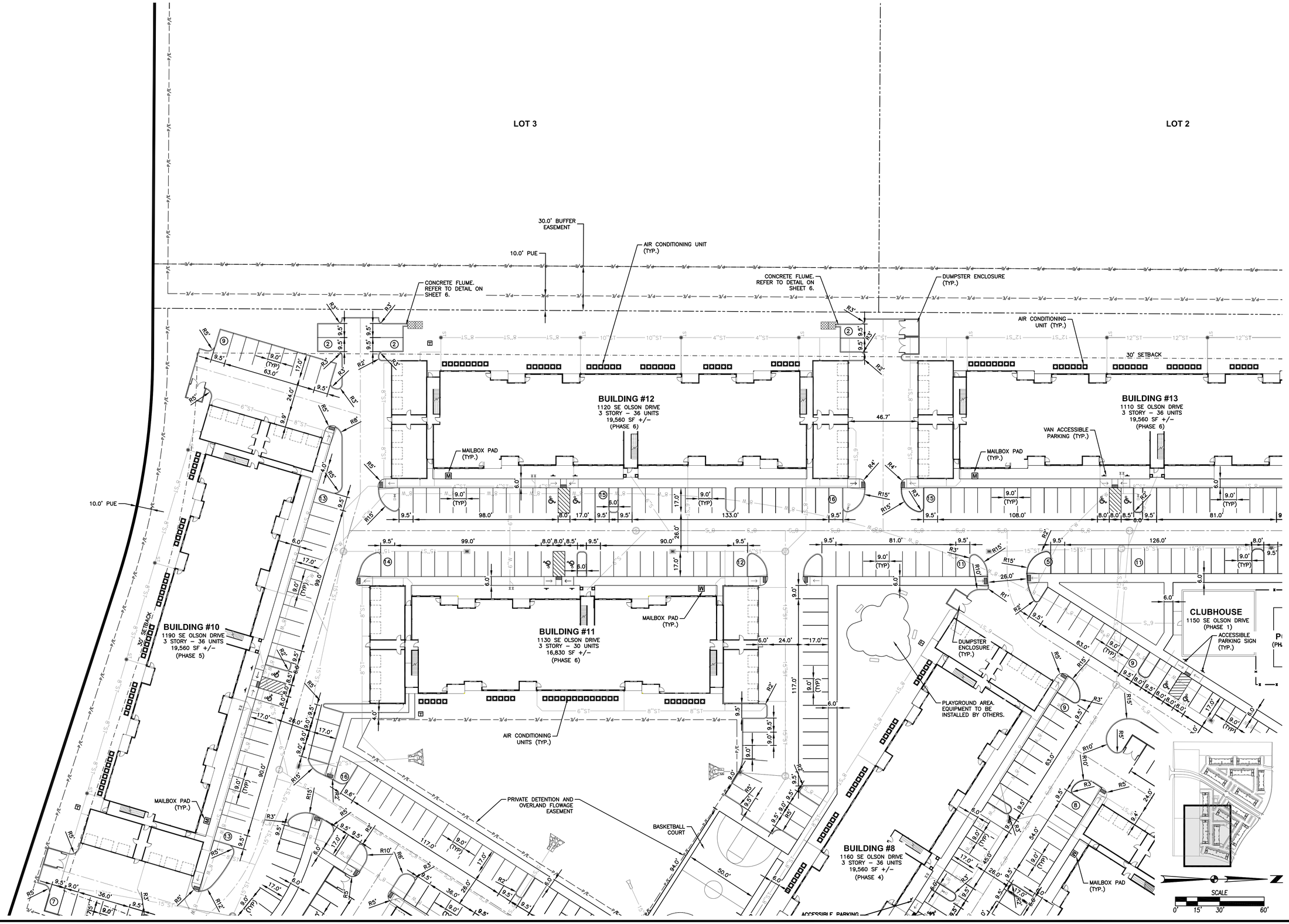

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AUTUMN RIDGE APARTMENTS
DIMENSION PLAN

WAUKEE, IOWA

9/27

1402.069

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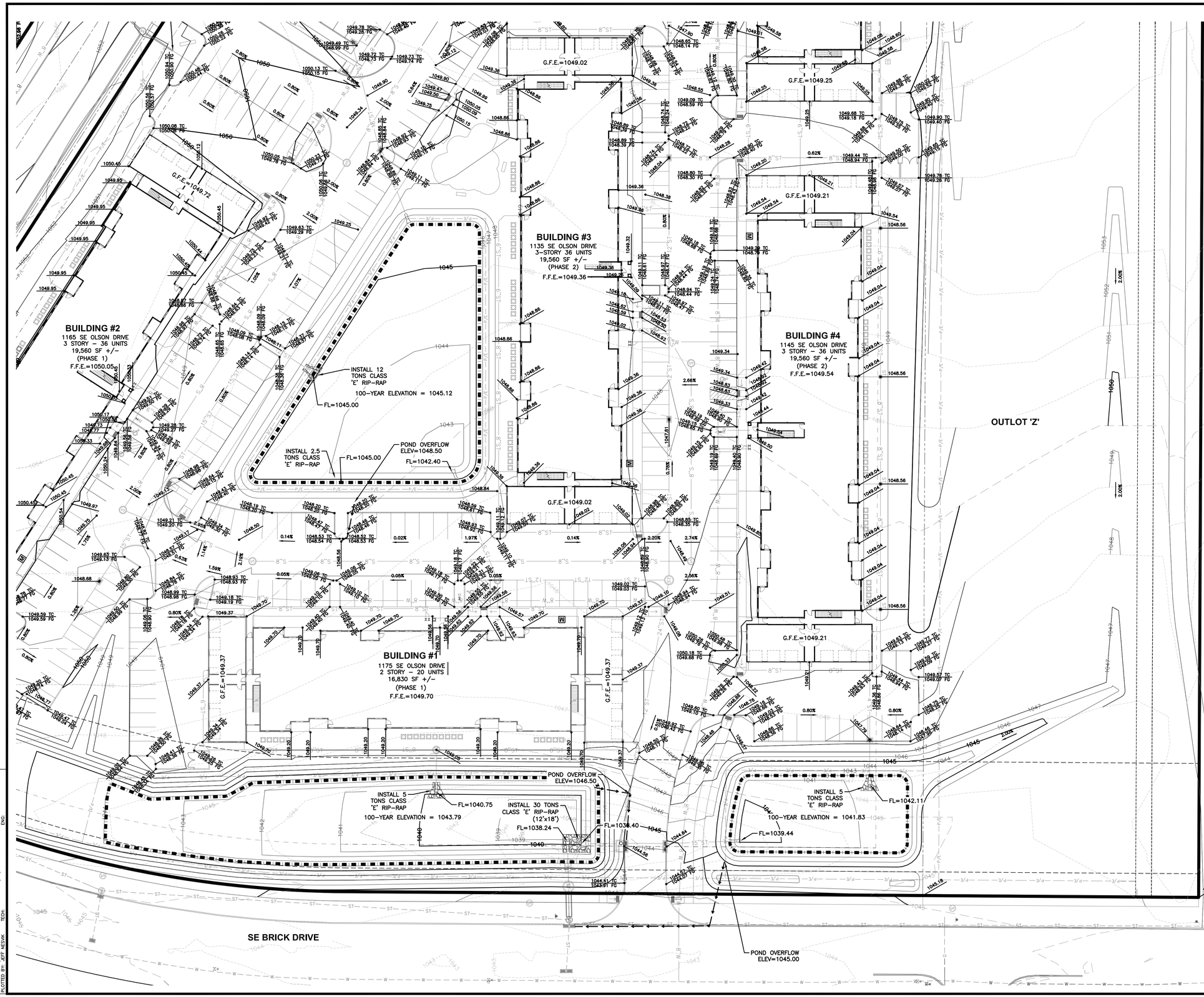

GRADING NOTES

1. THE COMPLETION AND APPROVAL OF THE COSESCO PERMIT SHALL BE PROVIDED TO THE CITY OF WAUKEE BUILDING DIVISION AND STORM WATER DEPARTMENT PRIOR TO ANY GRADING ACTIVITIES.
2. CONTRACTOR SHALL STRIP ALL DELETERIOUS MATERIAL. THE TOP 6" OF TOPSOIL IS TO BE STOCKPILED AND RESPREAD AFTER GRADING IS COMPLETE. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A SUITABLE TOPSOIL STOCKPILE SITE.
3. EXCAVATION SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY OF WAUKEE STANDARD SPECIFICATIONS, IF APPLICABLE.
4. MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
5. ALL SPOT ELEVATIONS ARE FORM GRADE (FG) OR TOP OF FINISHED SURFACES UNLESS OTHERWISE NOTED.
6. SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS.
7. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
8. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
9. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
10. REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR DETAILS ON EROSION CONTROL.
11. FINAL FINISH GRADING TO BE APPROVED BY THE ARCHITECT AND CIVIL ENGINEER. MATCH EXISTING GRADES AT THE INTERFACE OF NEW AND EXISTING GRADES OR PAVING.
12. SIDEWALKS:
    MAINTAIN 1% MINIMUM AND 5% MAXIMUM LONGITUDINAL SLOPES ON ALL PAVED WALKWAYS. ALL WALKS TO HAVE 2.0% MAXIMUM TRANSVERSE SLOPE IN THE DIRECTION OF NATURAL DRAINAGE. SAW CUT JOINTS AS SOON AS CONCRETE HAS SET. SAW CUTS TO BE 1/8" TO 1/4" WIDE; DEPTH: LONGITUDINAL T/3, TRANSVERSE T/4.
13. THE GRADING OF THE DETENTION FACILITY, INSTALLATION OF THE STORM SEWER SYSTEM (IF APPLICABLE), INSTALLATION OF THE ORIFICE PLATE AND INSTALLATION OF THE TEMPORARY STAND PIPE SHALL BE COMPLETED AND FUNCTIONAL PRIOR TO ANY INCREASE IN IMPERVIOUS SURFACES WITHIN THE SITE OR THE PREVIOUSLY MENTIONED ITEMS SHALL BE GRADED/ INSTALLED AS SOON AS POSSIBLE.
14. A CERTIFIED AS-BUILT GRADING PLAN OF THE DETENTION BASIN AND DRAINAGE SWALES SHALL BE SUBMITTED TO THE CITY OF WAUKEE UPON COMPLETION OF THE SITE IMPROVEMENTS FOR EACH PHASE OF CONSTRUCTION PRIOR TO FINAL ACCEPTANCE.
15. ALL FOUNDATIONS AND DECK POSTS WITHIN 1 FOOT OF A LOT BOUNDARY SHALL BE STAKED AND AN AS-BUILT PROVIDED AT TIME OF BUILDING PERMIT AND INDIVIDUAL LOT CONSTRUCTION.
16. CONSTRUCTION OPERATIONS SHALL PROTECT STORM SEWERS AND DRAINAGE WAYS FROM ALLOWING SLURRY FROM CONCRETE OPERATIONS TO DISCHARGE OFFSITE.

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JJN
CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS

GRADING PLAN

WAUKEE, IOWA

10/27

1402.069

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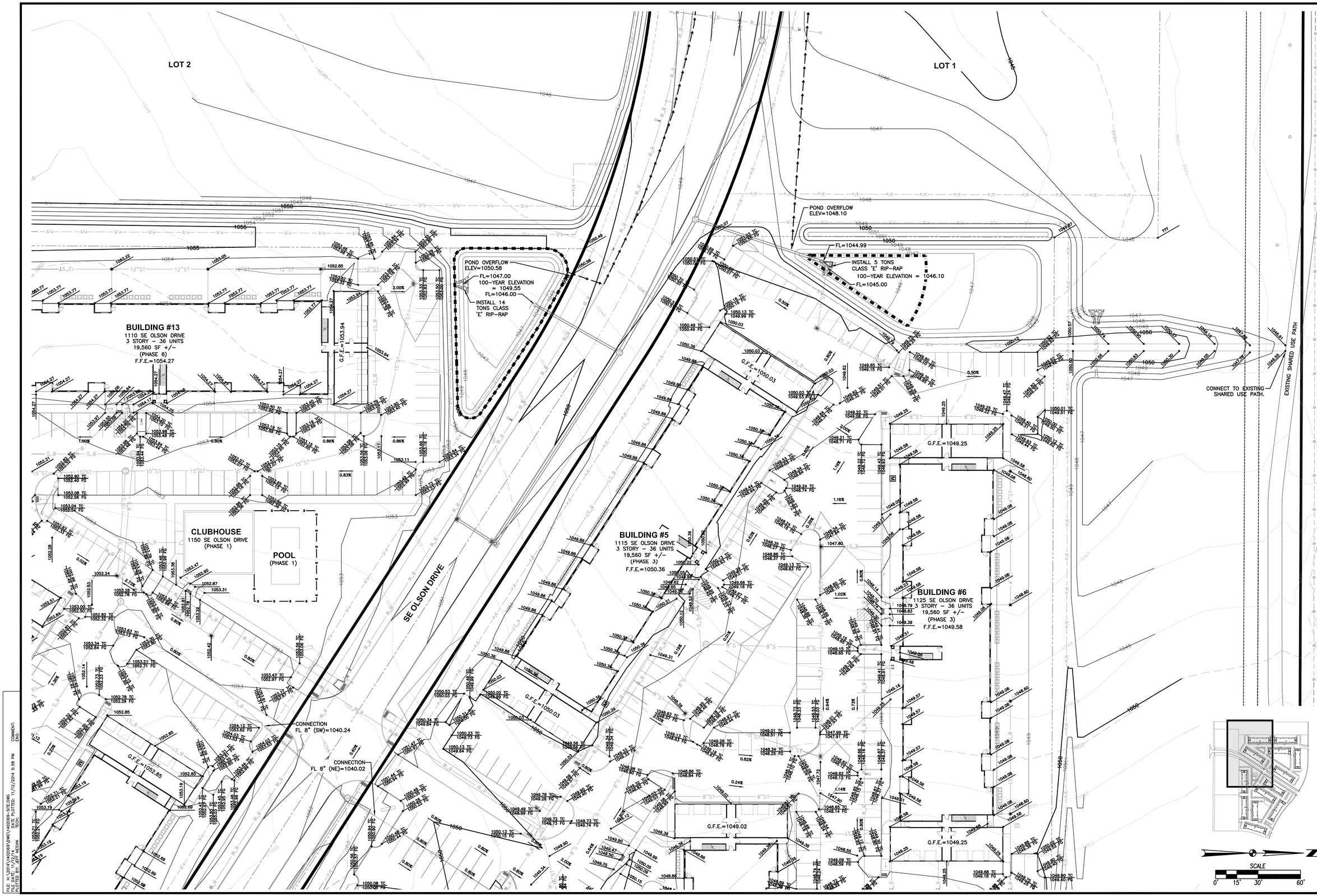

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
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AUTUMN RIDGE APARTMENTS

GRADING PLAN

WAUKEE, IOWA

11/27

1402.069

FILE: J:\1402069\DWG\1402069-SITE.DWG
PLOTTED BY: JEFF NESVIK TECH:
COMMENT: ENG:

ALICES ROAD

SE OLSON DRIVE

LOT 2

LOT 1

BUILDING #13
1110 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 6)
F.F.E.=1054.27

G.F.E.=1053.94

POND OVERFLOW
ELEV=1050.58
FL=1047.00
100–YEAR ELEVATION
= 1049.55
FL=1046.00
INSTALL 14
TONS CLASS
'E' RIP–RAP

G.F.E.=1050.03

POND OVERFLOW
ELEV=1048.10
FL=1044.99
INSTALL 5 TONS
CLASS 'E' RIP–RAP
100–YEAR ELEVATION = 1046.10
FL=1045.00

G.F.E.=1049.25

SCALE
0' 15' 30' 60'

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
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FIRST SUBMITTAL	09/09/14

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GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: JJN

CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS

GRADING PLAN

WAUKEE, IOWA

12/27

1402.069

FILE: H:\2014\1402069\DWG\1402069-SITE.DWG
LAYOUT: 12-GRADING PLAN SHEET 12 OF 27
PLOTTED BY: JEFF NESVIK 11/12/2014 5:59 PM
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COMMENT:
ENG:

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FILE DATE: 11/12/14 DATE PLOTTED: 11/12/2014 5:59 PM COMMENT:
PLOTTED BY: JEFF NESVIK TECH: ENG:

AUTUMN RIDGE APARTMENTS

GRADING PLAN

WAUKEE, IOWA

13/27

1402.069

CIVIL DESIGN ADVANTAGE

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: JJN

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

LOT 3

LOT 2

INSTALL 50 SF SCOUR STOP

INSTALL 50 SF SCOUR STOP

BUILDING #12
1120 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 6)
F.F.E.=1053.92

BUILDING #13
1110 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 6)
F.F.E.=1054.27

BUILDING #10
1190 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 5)
F.F.E.=1054.38

BUILDING #11
1130 SE OLSON DRIVE
3 STORY – 30 UNITS
16,830 SF +/–
(PHASE 6)
F.F.E.=1053.50

CLUBHOUSE
1150 SE OLSON DRIVE
(PHASE 1)

BUILDING #8
1160 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 4)
F.F.E.=1052.84

INSTALL 7 TONS CLASS 'E' RIP-RAP

FL=1048.50

FL=1048.00

INSTALL 7 TONS CLASS 'E' RIP-RAP

100-YEAR ELEVATION = 1050.98

FL=1047.00

INSTALL 5 TONS CLASS 'E' RIP-RAP

POND OVERFLOW ELEV=1052.61

FL=1046.00

SCALE
0' 15' 30' 60'

REVISIONS	DATE
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CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS

GRADING PLAN

WAUKEE, IOWA

1402.069

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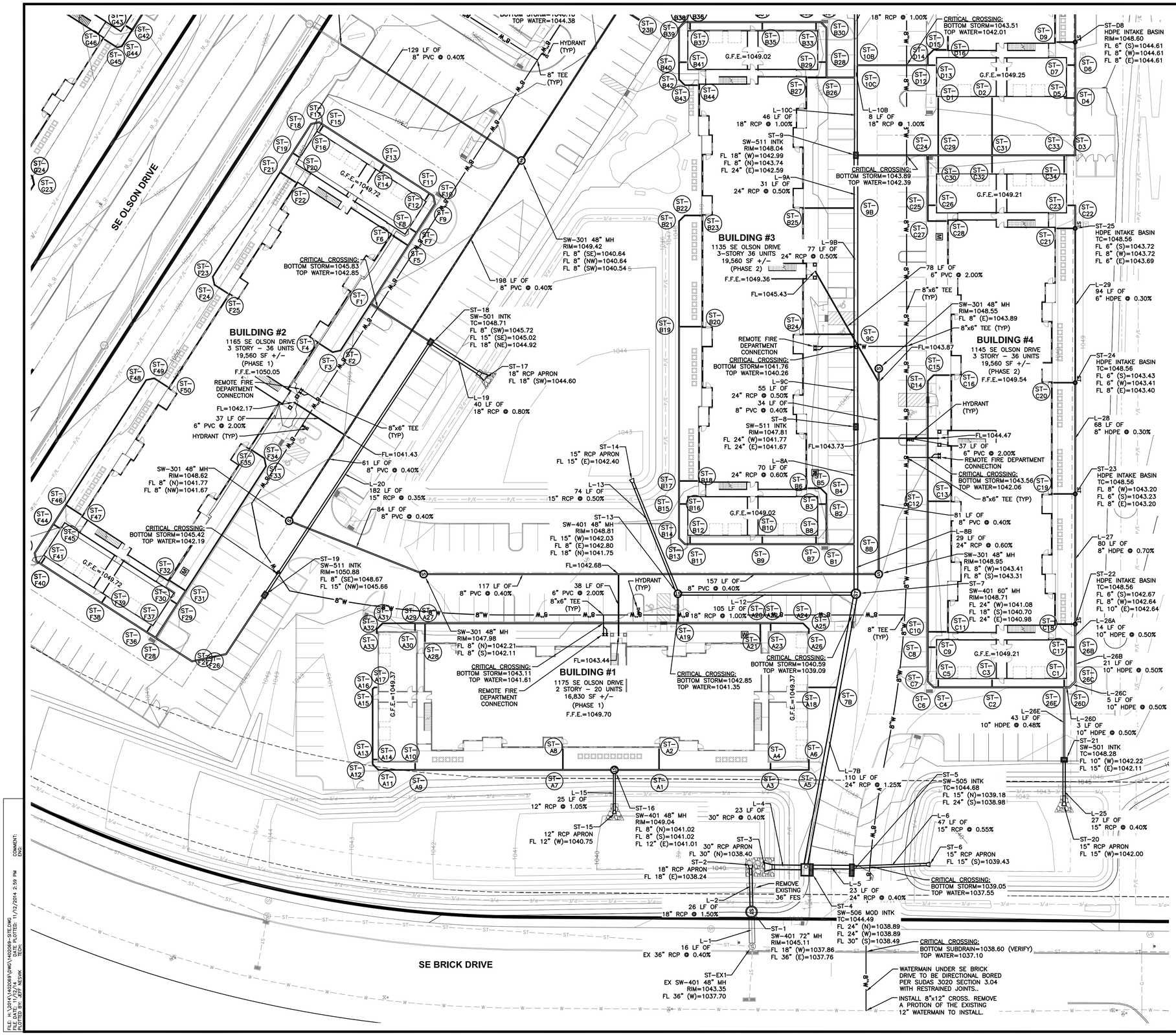
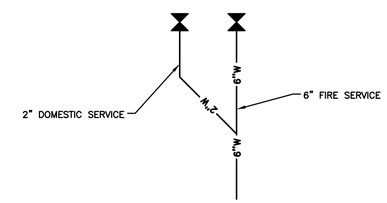


UTILITY NOTES

1. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR UTILITY SERVICE SIZES AND EXACT LOCATIONS. REFER TO ELECTRICAL PLANS FOR ELECTRIC AND TELEPHONE SERVICE CONSTRUCTION DETAILS. REFER TO MECHANICAL PLANS FOR GAS SERVICE CONSTRUCTION DETAILS.
2. FIELD VERIFY ELEVATIONS AND LOCATIONS OF ALL CONNECTIONS TO EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
3. PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETE.
4. BACKFILL ALL UTILITY TRENCHES ACCORDING TO THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY OF WAUKEE STANDARD SPECIFICATIONS. MAINTAIN A MINIMUM OF 6.0' COVER OVER ALL WATERMAINS.
5. ALL UTILITIES SHALL BE STUBBED TO 5 FEET FROM BUILDINGS. REFER TO MEP PLANS FOR DESIGN FROM 5' OUTSIDE OF BUILDING FACE.
6. ADJUST ALL MANHOLES AND INTAKES TO FINISHED GRADES. INSTALL CHIMNEY SEALS ON ANY ADJUSTED MANHOLES. ALL PROPOSED SANITARY MANHOLES ARE TO UTILIZE A TYPE 'B' CASTING.
7. ALL SANITARY SEWER AND WATER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
8. 18" MINIMUM VERTICAL CLEARANCE BETWEEN STORM SEWER AND SANITARY SEWER PIPES. 18" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND WATER MAIN.
9. MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER MAINS.
10. WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS. THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK. THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT 800-292-8989 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
11. ALL WATERMAIN WORK, PUBLIC OR PRIVATE SHALL BE DONE IN ACCORDANCE WITH THE CITY OF WAUKEE STANDARD SPECIFICATIONS.
12. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
13. PRIVATE UTILITIES TO BE INSTALLED PER THE CITY OF WAUKEE STANDARD SPECIFICATIONS AND THE LATEST VERSION OF THE UNIFORM PLUMBING CODE. CONTACT BUILDING INSPECTION A MINIMUM OF 24 HOURS IN ADVANCE FOR UTILITY INSTALLATION INSPECTIONS. ALL APPLICABLE UTILITY COMPANIES SHALL BE CONTACTED 48 HOURS PRIOR TO ANY WORK BEING STARTED.
14. OWNER IS RESPONSIBLE FOR MAINTENANCE OF PRIVATE RETENTION FACILITIES AND PRIVATE UTILITIES.
15. CONTRACTOR SHALL PREVENT ENTRY OF MUD, DIRT, DEBRIS AND OTHER MATERIAL INTO NEW AND EXISTING SEWER SYSTEMS. SHOULD ANY CONTAMINATION OCCUR DURING CONSTRUCTION, THE CONTRACTOR SHALL CLEAN AT NO COST TO THE OWNER. INSTALL SEDIMENT CONTROLS AT ALL PERMANENT STORM SEWER INLETS. DROP DOWN INLET PROTECTION IS REQUIRED FOR PUBLIC STREETS.
16. CONTRACTOR SHALL TEST AND INSPECT ALL PROPOSED STORM SEWER, WATERMAIN AND SANITARY SEWER. THE CITY OF WAUKEE ENGINEERING DEPARTMENT IS REQUIRED TO WITNESS TESTING. ALL TESTING SHALL BE COMPLETED MEETING CITY OF WAUKEE STANDARDS.
17. ALL UTILITY TIE-INS TO EXISTING PUBLIC UTILITIES SHOULD BE COORDINATED WITH THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
18. ALL PRIVATE AND PUBLIC SANITARY SEWER AND STORM SEWER PIPES SHALL BE CLEANED OUT AND TELEWSED. A HARD COPY OF THE REPORT AND VIDEO SHALL BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
19. ALL CONNECTIONS TO EXISTING SANITARY SEWER MANHOLES SHALL BE CORE DRILLED AND A LINK SEAL SHALL BE USED FOR THE CONNECTION.

TYPICAL WATER SERVICE DETAIL



SCALE
0' 15' 30' 60'

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JJN
CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS
UTILITY PLAN
WAUKEE, IOWA

FILE: H:\2014\1402069\DWG\1402069-SITE.DWG
PLOT DATE: 1/12/2014 COMMENT:
PLOTTED BY: JEFF NESWICK TECH: ENG:

LOT 2

LOT 1

BUILDING #13
1110 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 6)
F.F.E.=1054.27

CLUBHOUSE
1150 SE OLSON DRIVE
(PHASE 1)
FL=1041.75

POOL
(PHASE 1)

BUILDING #5
1115 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 3)
F.F.E.=1050.36

BUILDING #6
1125 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 3)
F.F.E.=1049.58

SE OLSON DRIVE

15" FES W/10" ORIFICE PLATE. REFER TO AUTUMN RIDGE PLAT 1 CONSTRUCTION PLANS FOR DETAILS.

8-INCH VALVE. REFER TO AUTUMN RIDGE PLAT 1 CONSTRUCTION DRAWINGS FOR DETAILS.

CONNECTION FL 8" (SW)=1040.24

CONNECTION FL 8" (NE)=1040.02

REMOTE FIRE DEPARTMENT CONNECTION

CRITICAL CROSSING: BOTTOM STORM=1049.26 TOP WATER=1047.61

CRITICAL CROSSING: BOTTOM STORM=1049.30 TOP WATER=1046.36

CRITICAL CROSSING: BOTTOM STORM=1049.14 TOP WATER=1046.30

CRITICAL CROSSING: BOTTOM STORM=1046.77 TOP WATER=1045.27

CRITICAL CROSSING: BOTTOM STORM=1045.15 TOP WATER=1043.26

CRITICAL CROSSING: BOTTOM STORM=1044.38

CRITICAL CROSSING: BOTTOM STORM=1044.60 TOP WATER=1041.95

CRITICAL CROSSING: BOTTOM STORM=1044.26 TOP WATER=1042.34

CRITICAL CROSSING: BOTTOM STORM=1043.51 TOP WATER=1042.01

SCALE
0' 15' 30' 60'

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: JJN

CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS

UTILITY PLAN

WAUKEE, IOWA

16/27

1402.069

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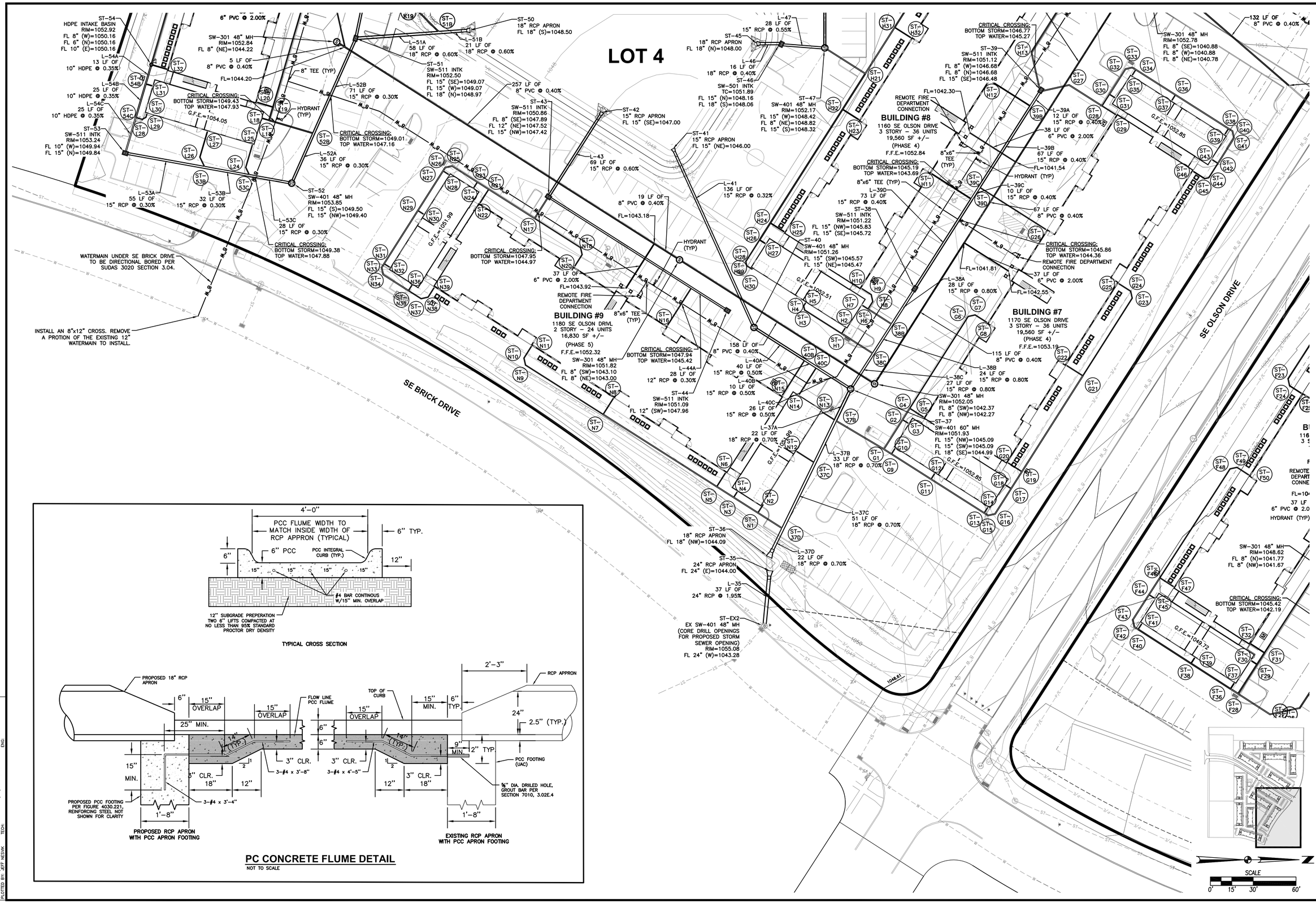

PC CONCRETE FLUME DETAIL

NOT TO SCALE

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

3405 S.E. CROSSROADS DRIVE, SUITE G
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AUTUMN RIDGE APARTMENTS

UTILITY PLAN

WAUKEE, IOWA

1402.069

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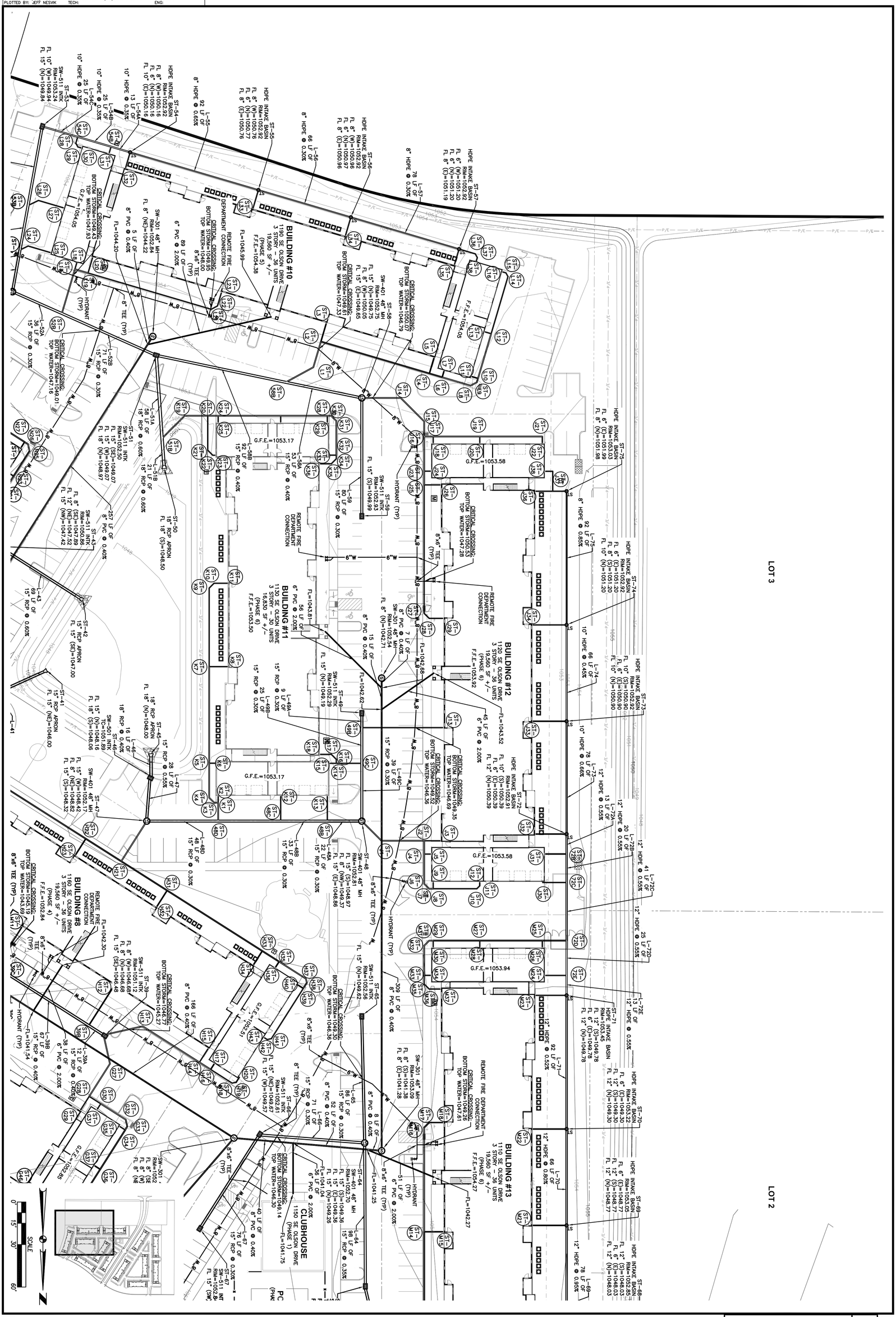

18 / 27

1402.069

AUTUMN RIDGE APARTMENTS

UTILITY PLAN

WAUKEE, IOWA

CIVIL DESIGN ADVANTAGE

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

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REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
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List of Intakes and Utility Accesses

Structure Number ST-#	Location	Type or Standard Road Plan	Form Grade/Rim Elevation	Note
ST- A1		TEE	IE 1041.16	
ST- A2		6" ROOF DRAIN	IE 1041.23	
ST- A3		TEE	IE 1041.51	
ST- A4		6" ROOF DRAIN	IE 1041.53	
ST- A5		TEE	IE 1041.63	
ST- A6		6" ROOF DRAIN	IE 1041.66	
ST- A7		TEE	IE 1041.18	
ST- A8		6" ROOF DRAIN	IE 1041.25	
ST- A9		TEE	IE 1041.64	
ST- A10		6" ROOF DRAIN	IE 1041.66	
ST- A11		45º BEND	IE 1041.75	
ST- A12		45º BEND	IE 1041.78	
ST- A13		TEE	IE 1041.79	
ST- A14		6" ROOF DRAIN	IE 1041.81	
ST- A15		45º BEND	IE 1042.01	
ST- A16		45º BEND	IE 1042.02	
ST- A17		6" ROOF DRAIN	IE 1042.03	
ST- A18		6" ROOF DRAIN	IE 1039.93	
ST- A19		TEE	IE 1042.88	
ST- A20		TEE	IE 1043.14	
ST- A21		6" ROOF DRAIN	IE 1043.20	
ST- A22		TEE	IE 1043.17	
ST- A23		6" ROOF DRAIN	IE 1043.20	
ST- A24		45º BEND	IE 1043.27	
ST- A25		45º BEND	IE 1043.30	
ST- A26		6" ROOF DRAIN	IE 1043.31	
ST- A27		TEE	IE 1043.66	
ST- A28		6" ROOF DRAIN	IE 1043.72	
ST- A29		TEE	IE 1043.69	
ST- A30		6" ROOF DRAIN	IE 1043.72	
ST- A31		45º BEND	IE 1043.79	
ST- A32		45º BEND	IE 1043.82	
ST- A33		6" ROOF DRAIN	IE 1043.83	
ST- B1		TEE	IE 1040.93	
ST- B2		TEE	IE 1041.06	
ST- B3		6" ROOF DRAIN	IE 1041.08	
ST- B4		45º BEND	IE 1041.09	
ST- B5		45º BEND	IE 1041.12	
ST- B6		6" ROOF DRAIN	IE 1041.16	
ST- B7		TEE	IE 1040.97	
ST- B8		6" ROOF DRAIN	IE 1040.99	
ST- B9		TEE	IE 1041.13	
ST- B10		6" ROOF DRAIN	IE 1041.16	
ST- B11		TEE	IE 1041.36	
ST- B12		6" ROOF DRAIN	IE 1041.38	
ST- B13		45º BEND	IE 1041.38	
ST- B14		45º BEND	IE 1041.40	
ST- B15		TEE	IE 1041.51	
ST- B16		6" ROOF DRAIN	IE 1041.53	
ST- B17		TEE	IE 1041.58	
ST- B18		6" ROOF DRAIN	IE 1041.64	
ST- B19		TEE	IE 1042.06	
ST- B20		6" ROOF DRAIN	IE 1042.13	
ST- B21		45º BEND	IE 1042.38	
ST- B22		45º BEND	IE 1042.41	
ST- B23		6" ROOF DRAIN	IE 1042.46	
ST- B24		6" ROOF DRAIN	IE 1042.30	
ST- B25		6" ROOF DRAIN	IE 1042.80	
ST- B26		TEE	IE 1043.41	
ST- B27		6" ROOF DRAIN	IE 1043.47	
ST- B28		TEE	IE 1043.46	
ST- B29		6" ROOF DRAIN	IE 1043.48	
ST- B30		45º BEND	IE 1043.56	
ST- B31		45º BEND	IE 1043.59	
ST- B32		TEE	IE 1043.60	
ST- B33		6" ROOF DRAIN	IE 1043.63	
ST- B34		TEE	IE 1043.77	
ST- B35		6" ROOF DRAIN	IE 1043.79	
ST- B36		TEE	IE 1043.99	
ST- B37		6" ROOF DRAIN	IE 1044.02	
ST- B38		45º BEND	IE 1044.01	
ST- B39		45º BEND	IE 1044.04	
ST- B40		TEE	IE 1044.14	
ST- B41		6" ROOF DRAIN	IE 1044.17	

List of Storm Sewer Pipe

Pipe Number L-#	Structure To ST-#	Structure From ST-#	Storm Sewer Material	Diameter inches	Length feet	Slope %	FL(out)	Fl(in)	Note
L- A1	ST- 15	ST- A1	PVC	8	28	0.50	1041.02	1041.16	
L- A2	ST- A1	ST- A2	PVC	6	13	0.50	1041.16	1041.23	
L- A3	ST- A1	ST- A3	PVC	8	69	0.50	1041.16	1041.51	
L- A4	ST- A3	ST- A4	PVC	6	4	0.50	1041.51	1041.53	
L- A5	ST- A3	ST- A5	PVC	8	24	0.50	1041.51	1041.63	
L- A6	ST- A5	ST- A6	PVC	6	7	0.50	1041.63	1041.66	
L- A7	ST- 15	ST- A7	PVC	8	32	0.50	1041.02	1041.18	
L- A8	ST- A7	ST- A8	PVC	6	13	0.50	1041.18	1041.25	
L- A9	ST- A7	ST- A9	PVC	8	91	0.50	1041.18	1041.64	
L- A10	ST- A9	ST- A10	PVC	6	4	0.50	1041.64	1041.66	
L- A11	ST- A9	ST- A11	PVC	6	23	0.50	1041.64	1041.75	
L- A12	ST- A11	ST- A12	PVC	6	5	0.50	1041.75	1041.78	
L- A13	ST- A12	ST- A13	PVC	6	3	0.50	1041.78	1041.79	
L- A14	ST- A13	ST- A14	PVC	6	3	0.50	1041.79	1041.81	
L- A15	ST- A13	ST- A15	PVC	6	43	0.50	1041.79	1042.01	
L- A16	ST- A15	ST- A16	PVC	6	2	0.50	1042.01	1042.02	
L- A17	ST- A16	ST- A17	PVC	6	2	0.50	1042.02	1042.03	
L- A18	ST- 7B	ST- A18	PVC	6	19	0.50	1039.83	1039.93	
L- A19	ST- 12	ST- A19	PVC	6	16	0.50	1042.80	1042.88	
L- A20	ST- A19	ST- A20	PVC	8	51	0.50	1042.88	1043.14	
L- A21	ST- A20	ST- A21	PVC	6	12	0.50	1043.14	1043.20	
L- A22	ST- A20	ST- A22	PVC	8	7	0.50	1043.14	1043.17	
L- A23	ST- A22	ST- A23	PVC	6	5	0.50	1043.17	1043.20	
L- A24	ST- A22	ST- A24	PVC	6	20	0.50	1043.17	1043.27	
L- A25	ST- A24	ST- A25	PVC	6	5	0.50	1043.27	1043.30	
L- A26	ST- A25	ST- A26	PVC	6	3	0.50	1043.30	1043.31	
L- A27	ST- A19	ST- A27	PVC	8	155	0.50	1042.88	1043.66	
L- A28	ST- A27	ST- A28	PVC	6	12	0.50	1043.66	1043.72	
L- A29	ST- A27	ST- A29	PVC	8	7	0.50	1043.66	1043.69	
L- A30	ST- A29	ST- A30	PVC	6	5	0.50	1043.69	1043.72	
L- A31	ST- A29	ST- A31	PVC	6	20	0.50	1043.69	1043.79	
L- A32	ST- A31	ST- A32	PVC	6	5	0.50	1043.79	1043.82	
L- A33	ST- A32	ST- A33	PVC	6	3	0.50	1043.82	1043.83	
L- B1	ST- 8B	ST- B1	PVC	8	18	0.50	1040.84	1040.93	
L- B2	ST- B1	ST- B2	PVC	8	25	0.50	1040.93	1041.06	
L- B3	ST- B2	ST- B3	PVC	6	5	0.50	1041.06	1041.08	
L- B4	ST- B2	ST- B4	PVC	6	7	0.50	1041.06	1041.09	
L- B5	ST- B4	ST- B5	PVC	6	5	0.50	1041.09	1041.12	
L- B6	ST- B5	ST- B6	PVC	6	8	0.50	1041.12	1041.16	
L- B7	ST- B1	ST- B7	PVC	8	7	0.50	1040.93	1040.97	
L- B8	ST- B7	ST- B8	PVC	6	5	0.50	1040.97	1040.99	
L- B9	ST- B7	ST- B9	PVC	8	33	0.50	1040.97	1041.13	
L- B10	ST- B9	ST- B10	PVC	6	5	0.50	1041.13	1041.16	
L- B11	ST- B9	ST- B11	PVC	8	45	0.50	1041.13	1041.36	
L- B12	ST- B11	ST- B12	PVC	6	5	0.50	1041.36	1041.38	
L- B13	ST- B11	ST- B13	PVC	8	4	0.50	1041.36	1041.38	
L- B14	ST- B13	ST- B14	PVC	8	5	0.50	1041.38	1041.40	
L- B15	ST- B14	ST- B15	PVC	8	21	0.50	1041.40	1041.51	
L- B16	ST- B15	ST- B16	PVC	6	5	0.50	1041.51	1041.53	
L- B17	ST- B15	ST- B17	PVC	8	15	0.50	1041.51	1041.58	
L- B18	ST- B17	ST- B18	PVC	6	12	0.50	1041.58	1041.64	
L- B19	ST- B17	ST- B19	PVC	8	95	0.50	1041.58	1042.06	
L- B20	ST- B19	ST- B20	PVC	6	14	0.50	1042.06	1042.13	
L- B21	ST- B19	ST- B21	PVC	6	65	0.50	1042.06	1042.38	
L- B22	ST- B21	ST- B22	PVC	6	5	0.50	1042.38	1042.41	
L- B23	ST- B22	ST- B23	PVC	6	10	0.50	1042.41	1042.46	
L- B24	ST- 9C	ST- B24	PVC	6	32	0.50	1042.14	1042.30	
L- B25	ST- 9B	ST- B25	PVC	6	32	0.50	1042.64	1042.80	
L- B26	ST- 10C	ST- B26	PVC	8	18	0.50	1043.32	1043.41	
L- B27	ST- B26	ST- B27	PVC	6	12	0.50	1043.41	1043.47	
L- B28	ST- B26	ST- B28	PVC	8	10	0.50	1043.41	1043.46	
L- B29	ST- B28	ST- B29	PVC	6	5	0.50	1043.46	1043.48	
L- B30	ST- B28	ST- B30	PVC	8	21	0.50	1043.46	1043.56	
L- B31	ST- B30	ST- B31	PVC	8	5	0.50	1043.56	1043.59	
L- B32	ST- B31	ST- B32	PVC	8	3	0.50	1043.59	1043.60	
L- B33	ST- B32	ST- B33	PVC	6	5	0.50	1043.60	1043.63	
L- B34	ST- B32	ST- B34	PVC	8	33	0.50	1043.60	1043.77	
L- B35	ST- B34	ST- B35	PVC	6	5	0.50	1043.77	1043.79	
L- B36	ST- B34	ST- B36	PVC	8	45	0.50	1043.77	1043.99	
L- B37	ST- B36	ST- B37	PVC	6	5	0.50	1043.99	1044.02	
L- B38	ST- B36	ST- B38	PVC	8	4	0.50	1043.99	1044.01	
L- B39	ST- B38	ST- B39	PVC	8	5	0.50	1044.01	1044.04	
L- B40	ST- B39	ST- B40	PVC	8	21	0.50	1044.04	1044.14	
L- B41	ST- B40	ST- B41	PVC	6	5	0.50	1044.14	1044.17	

List of Intakes and Utility Accesses

Structure Number ST-#	Location	Type or Standard Road Plan	Form Grade/Rim Elevation	Note
ST- B42		45º BEND	IE 1044.20	
ST- B43		45º BEND	IE 1044.22	
ST- B44		6" ROOF DRAIN	IE 1044.26	
ST- C1		6" ROOF DRAIN	IE 1042.48	
ST- C2		TEE	IE 1042.68	
ST- C3		6" ROOF DRAIN	IE 1042.70	
ST- C4		TEE	IE 1042.84	
ST- C5		6" ROOF DRAIN	IE 1042.86	
ST- C6		45º BEND	IE 1042.85	
ST- C7		45º BEND	IE 1042.88	
ST- C8		TEE	IE 1042.98	
ST- C9		6" ROOF DRAIN	IE 1043.01	
ST- C10		TEE	IE 1043.03	
ST- C11		6" ROOF DRAIN	IE 1043.09	
ST- C12		TEE	IE 1043.43	
ST- C13		6" ROOF DRAIN	IE 1043.50	
ST- C14		45º BEND	IE 1043.80	
ST- C15		45º BEND	IE 1043.82	
ST- C16		6" ROOF DRAIN	IE 1043.87	
ST- C17		6" ROOF DRAIN	IE 1042.62	
ST- C18		6" ROOF DRAIN	IE 1042.73	
ST- C19		6" ROOF DRAIN	IE 1043.30	
ST- C20		6" ROOF DRAIN	IE 1043.50	
ST- C21		6" ROOF DRAIN	IE 1043.78	
ST- C22		90º BEND	IE 1043.80	
ST- C23		6" ROOF DRAIN	IE 1043.82	
ST- C24		TEE	IE 1043.96	
ST- C25		TEE	IE 1044.12	
ST- C26		6" ROOF DRAIN	IE 1044.14	
ST- C27		90º BEND	IE 1044.17	
ST- C28		6" ROOF DRAIN	IE 1044.23	
ST- C29		CROSS	IE 1044.00	
ST- C30		6" ROOF DRAIN	IE 1044.05	
ST- C31		CROSS	IE 1044.16	
ST- C32		6" ROOF DRAIN	IE 1044.22	
ST- C33		TEE	IE 1044.39	
ST- C34		6" ROOF DRAIN	IE 1044.44	
ST- D1		6" ROOF DRAIN	IE 1044.17	
ST- D2		6" ROOF DRAIN	IE 1044.34	
ST- D3		90º BEND	IE 1044.41	
ST- D4		TEE	IE 1044.51	
ST- D5		6" ROOF DRAIN	IE 1044.54	
ST- D6		TEE	IE 1044.57	
ST- D7		6" ROOF DRAIN	IE 1044.60	
ST- D8		HDPE INTAKE BASIN	IE 1044.61	
ST- D9		6" ROOF DRAIN	IE 1044.67	
ST- D10		HDPE INTAKE BASIN	IE 1044.85	
ST- D11		6" ROOF DRAIN	IE 1044.92	
ST- D12		TEE	IE 1043.58	
ST- D13		6" ROOF DRAIN	IE 1043.61	
ST- D14		45º BEND	IE 1043.61	
ST- D15		45º BEND	IE 1043.64	
ST- D16		6" ROOF DRAIN	IE 1043.68	
ST- D17		45º BEND	IE 1044.34	
ST- D18		6" ROOF DRAIN	IE 1044.43	
ST- D19		TEE	IE 1044.69	
ST- D20		45º BEND	IE 1044.79	
ST- D21		45º BEND	IE 1044.80	
ST- D22		6" ROOF DRAIN	IE 1044.83	
ST- D23		TEE	IE 1044.86	
ST- D24		6" ROOF DRAIN	IE 1044.90	
ST- D25		TEE	IE 1044.89	
ST- D26		6" ROOF DRAIN	IE 1044.91	
ST- D27		45º BEND	IE 1044.96	
ST- D28		45º BEND	IE 1044.97	
ST- D29		TEE	IE 1044.98	
ST- D30		6" ROOF DRAIN	IE 1045.00	
ST- D31		TEE	IE 1045.08	
ST- D32		6" ROOF DRAIN	IE 1045.09	
ST- D33		TEE	IE 1045.21	
ST- D34		6" ROOF DRAIN	IE 1045.23	
ST- D35		45º BEND	IE 1045.23	

List of Storm Sewer Pipe

Pipe Number L-#	Structure To ST-#	Structure From ST-#	Storm Sewer Material	Diameter inches	Length feet	Slope %	FL(out)	Fl(in)	Note
L- B42	ST- B40	ST- B42	PVC	6	11	0.50	1044.14	1044.20	
L- B43	ST- B42	ST- B43	PVC	6	5	0.50	1044.20	1044.22	
L- B44	ST- B43	ST- B44	PVC	6	8	0.50	1044.22	1044.26	
L- C1	ST- 26E	ST- C1	PVC	6	5	0.50	1042.45	1042.48	
L- C2	ST- 26E	ST- C2	PVC	8	45	0.50	1042.45	1042.68	
L- C3	ST- C2	ST- C3	PVC	6	5	0.50	1042.68	1042.70	
L- C4	ST- C2	ST- C4	PVC	8	33	0.50	1042.68	1042.84	
L- C5	ST- C4	ST- C5	PVC	6	5	0.50	1042.84	1042.86	
L- C6	ST- C4	ST- C6	PVC	8	3	0.50	1042.84	1042.85	
L- C7	ST- C6	ST- C7	PVC	8	5	0.50	1042.85	1042.88	
L- C8	ST- C7	ST- C8	PVC	8	21	0.50	1042.88	1042.98	
L- C9	ST- C8	ST- C9	PVC	6	5	0.50	1042.98	1043.01	
L- C10	ST- C8	ST- C10	PVC	8	10	0.50	1042.98	1043.03	
L- C11	ST- C10	ST- C11	PVC	6	12	0.50	1043.03	1043.09	
L- C12	ST- C10	ST- C12	PVC	8	80	0.50	1043.03	1043.43	
L- C13	ST- C12	ST- C13	PVC	6	14	0.50	1043.43	1043.50	
L- C14	ST- C12	ST- C14	PVC	6	74	0.50	1043.43	1043.80	
L- C15	ST- C14	ST- C15	PVC	6	5	0.50	1043.80	1043.82	
L- C16	ST- C15	ST- C16	PVC	6	10	0.50	1043.82	1043.87	
L- C17	ST- 26B	ST- C17	PVC	6	5	0.50	1042.60	1042.62	
L- C18	ST- 26	ST- C18	PVC	6	12	0.50	1042.67	1042.73	
L- C19	ST- 27	ST- C19	PVC	6	14	0.50	1043.23	1043.30	
L- C20	ST- 28	ST- C20	PVC	6	14	0.50	1043.43	1043.50	
L- C21	ST- 29	ST- C21	PVC	6	12	0.50	1043.72	1043.78	
L- C22	ST- 29	ST- C22	PVC	6	15	0.50	1043.72	1043.80	
L- C23	ST- C22	ST- C23	PVC	6	5	0.50	1043.80	1043.82	
L- C24	ST- 9	ST- C24	PVC	8	44	0.50	1043.74	1043.96	
L- C25	ST- C24	ST- C25	PVC	8	31	0.50	1043.96	1044.12	
L- C26	ST- C25	ST- C26	PVC	6	5	0.50	1044.12	1044.14	
L- C27	ST- C25	ST- C27	PVC	8	10	0.50	1044.12	1044.17	
L- C28	ST- C27	ST- C28	PVC	6	12	0.50	1044.17	1044.23	
L- C29	ST- C24	ST- C29	PVC	8	7	0.50	1043.96	1044.00	
L- C30	ST- C29	ST- C30	PVC	6	11	0.50	1044.00	1044.05	
L- C31	ST- C29	ST- C31	PVC	8	33	0.50	1044.00	1044.16	
L- C32	ST- C31	ST- C32	PVC	6	11	0.50	1044.16	1044.22	
L- C33	ST- C31	ST- C33	PVC	8	45	0.50	1044.16	1044.39	
L- C34	ST- C33	ST- C34	PVC	6	11	0.50	1044.39	1044.44	
L- D1	ST- C29	ST- D1	PVC	6	35	0.50	1044.00	1044.17	
L- D2	ST- C31	ST- D2	PVC	6	35	0.50	1044.16	1044.34	
L- D3	ST- C33	ST- D3	PVC	8	7	0.30	1044.39	1044.41	
L- D4	ST- D3	ST- D4	PVC	8	35	0.30	1044.41	1044.51	
L- D5	ST- D4	ST- D5	PVC	6	7	0.50	1044.51	1044.54	
L- D6	ST- D4	ST- D6	PVC	8	21	0.30	1044.51	1044.57	
L- D7	ST- D6	ST- D7	PVC	6	5	0.50	1044.57	1044.60	
L- D8	ST- D6	ST- D8	PVC	8	14	0.30	1044.57	1044.61	
L- D9	ST- D8	ST- D9	PVC	6	12	0.50	1044.61	1044.67	
L- D10	ST- D8	ST- D10	PVC	8	80	0.30	1044.61	1044.85	
L- D11	ST- D10	ST- D11	PVC	6	14	0.50	1044.85	1044.92	
L- D12	ST- 10B	ST- D12	PVC	8	44	0.50	1043.36	1043.58	
L- D13	ST- D12	ST- D13	PVC	6	5	0.50	1043.58	1043.61	
L- D14	ST- D12	ST- D14	PVC	6	6	0.50	1043.58	1043.61	
L- D15	ST- D14	ST- D15	PVC	6	5	0.50	1043.61	1043.64	
L- D16	ST- D15	ST- D16	PVC	6	8	0.50	1043.64	1043.68	
L- D17	ST- 10	ST- D17	PVC	6	55	0.50	1044.06	1044.34	
L- D18	ST- D17	ST- D18	PVC	6	18	0.50	1044.34	1044.43	
L- D19	ST- 11	ST- D19	PVC	8	43	0.30	1044.56	1044.69	
L- D20	ST- D19	ST- D20	PVC	6	33	0.30	1044.69	1044.79	
L- D21	ST- D20	ST- D21	PVC	6	5	0.30	1044.79	1044.80	
L- D22	ST- D21	ST- D22	PVC	6	10	0.30	1044.80	1044.83	
L- D23	ST- D19	ST- D23	PVC	8	58	0.30	1044.69	1044.86	
L- D24	ST- D23	ST- D24	PVC	6	12	0.30	1044.86	1044.90	
L- D25	ST- D23	ST- D25	PVC	8	10	0.30	1044.86	1044.89	
L- D26	ST- D25	ST- D26	PVC	6	5	0.30	1044.89	1044.91	
L- D27	ST- D25	ST- D27	PVC	8	21	0.30	1044.89	1044.96	
L- D28	ST- D27	ST- D28	PVC	8	5	0.30	1044.96	1044.97	
L- D29	ST- D28	ST- D29	PVC	8	3	0.30	1044.97	1044.98	
L- D30	ST- D29	ST- D30	PVC	6	5	0.30	1044.98	1045.00	
L- D31	ST- D29	ST- D31	PVC	8	33	0.30	1044.98	1045.08	
L- D32	ST- D31	ST- D32	PVC	6	5	0.30	1045.08	1045.09	
L- D33	ST- D31	ST- D33	PVC	8	45	0.30	1045.08	1045.21	
L- D34	ST- D33	ST- D34	PVC	6	5	0.30	1045.21	1045.23	
L- D35	ST- D33	ST- D35	PVC	8	4	0.30	1045.21	1045.23	

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JJN
CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS

UTILITY PLAN

WAUKEE, IOWA

FILE: H:\2014\1402069\DWG\1402069-SITE.DWG
PLOT DATE: 11/12/2014 PLOTTED: 11/12/2014 3:49 PM COMMENT:
PLOTTED BY: JEFF NESVIK TECH: ENG:

List of Intakes and Utility Accesses

Structure Number ST-#	Location	Type or Standard Road Plan	Form Grade/Rim Elevation	Note
ST- D36		45° BEND	IE 1045.24	
ST- D37		TEE	IE 1045.30	
ST- D38		6" ROOF DRAIN	IE 1045.32	
ST- D39		HDPE INTAKE BASIN	IE 1045.35	
ST- D40		6" ROOF DRAIN	IE 1045.39	
ST- D41		HDPE INTAKE BASIN	IE 1045.63	
ST- D42		6" ROOF DRAIN	IE 1045.68	
ST- E1		22.5° BEND	IE 1045.04	
ST- E2		TEE	IE 1045.17	
ST- E3		6" ROOF DRAIN	IE 1045.24	
ST- E4		TEE	IE 1045.57	
ST- E5		6" ROOF DRAIN	IE 1045.63	
ST- E6		TEE	IE 1045.62	
ST- E7		6" ROOF DRAIN	IE 1045.64	
ST- E8		45° BEND	IE 1045.72	
ST- E9		45° BEND	IE 1045.75	
ST- E10		TEE	IE 1045.76	
ST- E11		6" ROOF DRAIN	IE 1045.78	
ST- E12		90° BEND	IE 1045.93	
ST- E13		6" ROOF DRAIN	IE 1045.95	
ST- E14		TEE	IE 1045.13	
ST- E15		45° BEND	IE 1045.30	
ST- E16		45° BEND	IE 1045.32	
ST- E17		6" ROOF DRAIN	IE 1045.35	
ST- E18		TEE	IE 1045.23	
ST- E19		6" ROOF DRAIN	IE 1045.27	
ST- E20		TEE	IE 1045.26	
ST- E21		6" ROOF DRAIN	IE 1045.28	
ST- E22		90° BEND	IE 1045.34	
ST- E23		TEE	IE 1045.36	
ST- E24		6" ROOF DRAIN	IE 1045.38	
ST- E25		TEE	IE 1045.46	
ST- E26		6" ROOF DRAIN	IE 1045.47	
ST- E27		TEE	IE 1045.59	
ST- E28		6" ROOF DRAIN	IE 1045.61	
ST- E29		45° BEND	IE 1045.61	
ST- E30		45° BEND	IE 1045.62	
ST- E31		TEE	IE 1045.68	
ST- E32		6" ROOF DRAIN	IE 1045.70	
ST- E33		TEE	IE 1045.73	
ST- E34		6" ROOF DRAIN	IE 1045.77	
ST- E35		TEE	IE 1046.01	
ST- E36		6" ROOF DRAIN	IE 1046.06	
ST- E37		TEE	IE 1046.22	
ST- E38		6" ROOF DRAIN	IE 1046.26	
ST- E39		TEE	IE 1046.46	
ST- E40		6" ROOF DRAIN	IE 1046.49	
ST- E41		TEE	IE 1046.50	
ST- E42		6" ROOF DRAIN	IE 1046.52	
ST- E43		45° BEND	IE 1046.55	
ST- E44		45° BEND	IE 1046.57	
ST- E45		6" ROOF DRAIN	IE 1046.58	
ST- F1		TEE	IE 1045.85	
ST- F2		45° BEND	IE 1045.95	
ST- F3		45° BEND	IE 1045.97	
ST- F4		6" ROOF DRAIN	IE 1046.00	
ST- F5		TEE	IE 1045.98	
ST- F6		6" ROOF DRAIN	IE 1046.01	
ST- F7		TEE	IE 1046.01	
ST- F8		6" ROOF DRAIN	IE 1046.02	
ST- F9		45° BEND	IE 1046.07	
ST- F10		45° BEND	IE 1046.09	
ST- F11		TEE	IE 1046.10	
ST- F12		6" ROOF DRAIN	IE 1046.11	
ST- F13		TEE	IE 1046.19	
ST- F14		6" ROOF DRAIN	IE 1046.21	
ST- F15		TEE	IE 1046.33	
ST- F16		6" ROOF DRAIN	IE 1046.34	
ST- F17		45° BEND	IE 1046.34	
ST- F18		45° BEND	IE 1046.36	
ST- F19		TEE	IE 1046.42	
ST- F20		6" ROOF DRAIN	IE 1046.43	
ST- F21		TEE	IE 1046.46	
ST- F22		6" ROOF DRAIN	IE 1046.50	
ST- F23		45° BEND	IE 1046.70	
ST- F24		45° BEND	IE 1046.71	
ST- F25		6" ROOF DRAIN	IE 1046.74	

List of Storm Sewer Pipe

Pipe Number L-#	Structure To ST-#	Structure From ST-#	Storm Sewer Material	Diameter inches	Length feet	Slope %	FL(out)	Fl(in)	Note
L- D36	ST- D35	ST- D36	PVC	8	5	0.30	1045.23	1045.24	
L- D37	ST- D36	ST- D37	PVC	8	21	0.30	1045.24	1045.30	
L- D38	ST- D37	ST- D38	PVC	6	5	0.30	1045.30	1045.32	
L- D39	ST- D37	ST- D39	PVC	8	15	0.30	1045.30	1045.35	
L- D40	ST- D39	ST- D40	PVC	6	12	0.30	1045.35	1045.39	
L- D41	ST- D39	ST- D41	PVC	8	95	0.30	1045.35	1045.63	
L- D42	ST- D41	ST- D42	PVC	6	14	0.30	1045.63	1045.68	
L- E1	ST- 11	ST- E1	PVC	8	36	0.50	1044.85	1045.04	
L- E2	ST- E1	ST- E2	PVC	8	28	0.50	1045.04	1045.17	
L- E3	ST- E2	ST- E3	PVC	6	14	0.50	1045.17	1045.24	
L- E4	ST- E2	ST- E4	PVC	8	80	0.50	1045.17	1045.57	
L- E5	ST- E4	ST- E5	PVC	6	12	0.50	1045.57	1045.63	
L- E6	ST- E4	ST- E6	PVC	8	10	0.50	1045.57	1045.62	
L- E7	ST- E6	ST- E7	PVC	6	5	0.50	1045.62	1045.64	
L- E8	ST- E6	ST- E8	PVC	8	21	0.50	1045.62	1045.72	
L- E9	ST- E8	ST- E9	PVC	8	5	0.50	1045.72	1045.75	
L- E10	ST- E9	ST- E10	PVC	8	3	0.50	1045.75	1045.76	
L- E11	ST- E10	ST- E11	PVC	6	5	0.50	1045.76	1045.78	
L- E12	ST- E10	ST- E12	PVC	6	33	0.50	1045.76	1045.93	
L- E13	ST- E12	ST- E13	PVC	6	5	0.50	1045.93	1045.95	
L- E14	ST- 12	ST- E14	PVC	8	43	0.30	1045.00	1045.13	
L- E15	ST- E14	ST- E15	PVC	6	57	0.30	1045.13	1045.30	
L- E16	ST- E15	ST- E16	PVC	6	5	0.30	1045.30	1045.32	
L- E17	ST- E16	ST- E17	PVC	6	10	0.30	1045.32	1045.35	
L- E18	ST- E14	ST- E18	PVC	8	35	0.30	1045.13	1045.23	
L- E19	ST- E18	ST- E19	PVC	6	12	0.30	1045.23	1045.27	
L- E20	ST- E18	ST- E20	PVC	8	10	0.30	1045.23	1045.26	
L- E21	ST- E20	ST- E21	PVC	6	5	0.30	1045.26	1045.28	
L- E22	ST- E20	ST- E22	PVC	6	25	0.30	1045.26	1045.34	
L- E23	ST- E22	ST- E23	PVC	8	7	0.30	1045.34	1045.36	
L- E24	ST- E23	ST- E24	PVC	6	5	0.30	1045.36	1045.38	
L- E25	ST- E23	ST- E25	PVC	8	33	0.30	1045.36	1045.46	
L- E26	ST- E25	ST- E26	PVC	6	5	0.30	1045.46	1045.47	
L- E27	ST- E25	ST- E27	PVC	8	45	0.30	1045.46	1045.59	
L- E28	ST- E27	ST- E28	PVC	6	5	0.30	1045.59	1045.61	
L- E29	ST- E27	ST- E29	PVC	8	4	0.30	1045.59	1045.61	
L- E30	ST- E29	ST- E30	PVC	8	5	0.30	1045.61	1045.62	
L- E31	ST- E30	ST- E31	PVC	8	21	0.30	1045.62	1045.68	
L- E32	ST- E31	ST- E32	PVC	6	5	0.30	1045.68	1045.70	
L- E33	ST- E31	ST- E33	PVC	8	15	0.30	1045.68	1045.73	
L- E34	ST- E33	ST- E34	PVC	6	12	0.30	1045.73	1045.77	
L- E35	ST- E33	ST- E35	PVC	8	95	0.30	1045.73	1046.01	
L- E36	ST- E35	ST- E36	PVC	6	14	0.30	1046.01	1046.06	
L- E37	ST- E35	ST- E37	PVC	8	68	0.30	1046.01	1046.22	
L- E38	ST- E37	ST- E38	PVC	6	14	0.30	1046.22	1046.26	
L- E39	ST- E37	ST- E39	PVC	8	80	0.30	1046.22	1046.46	
L- E40	ST- E39	ST- E40	PVC	6	12	0.30	1046.46	1046.49	
L- E41	ST- E39	ST- E41	PVC	8	15	0.30	1046.46	1046.50	
L- E42	ST- E41	ST- E42	PVC	6	5	0.30	1046.50	1046.52	
L- E43	ST- E41	ST- E43	PVC	6	17	0.30	1046.50	1046.55	
L- E44	ST- E43	ST- E44	PVC	6	5	0.30	1046.55	1046.57	
L- E45	ST- E44	ST- E45	PVC	6	4	0.30	1046.57	1046.58	
L- F1	ST- 19	ST- F1	PVC	8	43	0.30	1045.72	1045.85	
L- F2	ST- F1	ST- F2	PVC	6	35	0.30	1045.85	1045.95	
L- F3	ST- F2	ST- F3	PVC	6	5	0.30	1045.95	1045.97	
L- F4	ST- F3	ST- F4	PVC	6	10	0.30	1045.97	1046.00	
L- F5	ST- F1	ST- F5	PVC	8	43	0.30	1045.85	1045.98	
L- F6	ST- F5	ST- F6	PVC	6	12	0.30	1045.98	1046.01	
L- F7	ST- F5	ST- F7	PVC	8	10	0.30	1045.98	1046.01	
L- F8	ST- F7	ST- F8	PVC	6	5	0.30	1046.01	1046.02	
L- F9	ST- F7	ST- F9	PVC	8	21	0.30	1046.01	1046.07	
L- F10	ST- F9	ST- F10	PVC	8	5	0.30	1046.07	1046.09	
L- F11	ST- F10	ST- F11	PVC	8	3	0.30	1046.09	1046.10	
L- F12	ST- F11	ST- F12	PVC	6	5	0.30	1046.10	1046.11	
L- F13	ST- F11	ST- F13	PVC	8	33	0.30	1046.10	1046.19	
L- F14	ST- F13	ST- F14	PVC	6	5	0.30	1046.19	1046.21	
L- F15	ST- F13	ST- F15	PVC	8	45	0.30	1046.19	1046.33	
L- F16	ST- F15	ST- F16	PVC	6	5	0.30	1046.33	1046.34	
L- F17	ST- F15	ST- F17	PVC	8	4	0.30	1046.33	1046.34	
L- F18	ST- F17	ST- F18	PVC	8	5	0.30	1046.34	1046.36	
L- F19	ST- F18	ST- F19	PVC	8	21	0.30	1046.36	1046.42	
L- F20	ST- F19	ST- F20	PVC	6	5	0.30	1046.42	1046.43	
L- F21	ST- F19	ST- F21	PVC	8	15	0.30	1046.42	1046.46	
L- F22	ST- F21	ST- F22	PVC	6	12	0.30	1046.46	1046.50	
L- F23	ST- F21	ST- F23	PVC	8	77	0.30	1046.46	1046.70	
L- F24	ST- F23	ST- F24	PVC	8	5	0.30	1046.70	1046.71	
L- F25	ST- F24	ST- F25	PVC	6	10	0.30	1046.71	1046.74	

List of Intakes and Utility Accesses

Structure Number ST-#	Location	Type or Standard Road Plan	Form Grade/Rim Elevation	Note
ST- F26		45° BEND	IE 1046.85	
ST- F27		45° BEND	IE 1046.97	
ST- F28		TEE	IE 1046.99	
ST- F29		TEE	IE 1047.06	
ST- F30		6" ROOF DRAIN	IE 1047.08	
ST- F31		TEE	IE 1047.09	
ST- F32		6" ROOF DRAIN	IE 1047.13	
ST- F33		45° BEND	IE 1047.37	
ST- F34		45° BEND	IE 1047.38	
ST- F35		6" ROOF DRAIN	IE 1047.41	
ST- F36		TEE	IE 1047.00	
ST- F37		6" ROOF DRAIN	IE 1047.01	
ST- F38		TEE	IE 1047.09	
ST- F39		6" ROOF DRAIN	IE 1047.11	
ST- F40		TEE	IE 1047.23	
ST- F41		6" ROOF DRAIN	IE 1047.24	
ST- F42		45° BEND	IE 1047.24	
ST- F43		45° BEND	IE 1047.26	
ST- F44		TEE	IE 1047.32	
ST- F45		6" ROOF DRAIN	IE 1047.33	
ST- F46		TEE	IE 1047.36	
ST- F47		6" ROOF DRAIN	IE 1047.40	
ST- F48		45° BEND	IE 1047.64	
ST- F49		45° BEND	IE 1047.65	
ST- F50		6" ROOF DRAIN	IE 1047.68	
ST- G1		TEE	IE 1045.03	
ST- G2		TEE	IE 1045.16	
ST- G3		6" ROOF DRAIN	IE 1045.18	
ST- G4		TEE	IE 1045.21	
ST- G5		6" ROOF DRAIN	IE 1045.27	
ST- G6		45° BEND	IE 1045.59	
ST- G7		45° BEND	IE 1045.62	
ST- G8		6" ROOF DRAIN	IE 1045.67	
ST- G9		TEE	IE 1045.07	
ST- G10		6" ROOF DRAIN	IE 1045.09	
ST- G11		TEE	IE 1045.23	
ST- G12		6" ROOF DRAIN	IE 1045.26	
ST- G13		TEE	IE 1045.46	
ST- G14		6" ROOF DRAIN	IE 1045.48	
ST- G15		45° BEND	IE 1045.48	
ST- G16		45° BEND	IE 1045.50	
ST- G17		TEE	IE 1045.61	
ST- G18		6" ROOF DRAIN	IE 1045.63	
ST- G19		TEE	IE 1045.68	
ST- G20		6" ROOF DRAIN	IE 1045.74	
ST- G21		TEE	IE 1046.08	
ST- G22		6" ROOF DRAIN	IE 1046.15	
ST- G23		45° BEND	IE 1046.41	
ST- G24		45° BEND	IE 1046.43	
ST- G25		6" ROOF DRAIN	IE 1046.48	
ST- G26		6" ROOF DRAIN	IE 1046.44	
ST- G27		45° BEND	IE 1046.78	
ST- G28		TEE	IE 1046.92	
ST- G29		6" ROOF DRAIN	IE 1046.98	
ST- G30		TEE	IE 1046.97	
ST- G31		6" ROOF DRAIN	IE 1047.00	
ST- G32		45° BEND	IE 1047.08	
ST- G33		45° BEND	IE 1047.10	
ST- G34		TEE	IE 1047.12	
ST- G35		6" ROOF DRAIN	IE 1047.14	
ST- G36		TEE	IE 1047.28	
ST- G37		6" ROOF DRAIN	IE 1047.31	
ST- G38		TEE	IE 1047.51	
ST- G39		6" ROOF DRAIN	IE 1047.53	
ST- G40		45° BEND	IE 1047.53	
ST- G41		45° BEND	IE 1047.55	
ST- G42		TEE	IE 1047.66	
ST- G43		6" ROOF DRAIN	IE 1047.68	
ST- G44		45° BEND	IE 1047.72	
ST- G45		45° BEND	IE 1047.73	
ST- G46		6" ROOF DRAIN	IE 1047.78	
ST- H1		TEE	IE 1045.44	
ST- H2		6" ROOF DRAIN	IE 1045.46	
ST- H3		45° BEND	IE 1045.59	
ST- H4		45° BEND	IE 1045.61	
ST- H5		6" ROOF DRAIN	IE 1045.62	

List of Storm Sewer Pipe

Pipe Number L-#	Structure To ST-#	Structure From ST-#	Storm Sewer Material	Diameter inches	Length feet	Slope %	FL(out)	Fl(in)	Note
L- F26	ST- 22	ST- F26	PVC	8	8	0.30	1046.83	1046.85	
L- F27	ST- F26	ST- F27	PVC	8	40	0.30	1046.85	1046.97	
L- F28	ST- F27	ST- F28	PVC	8	5	0.30	1046.97	1046.99	
L- F29	ST- F28	ST- F29	PVC	8	25	0.30	1046.99	1047.06	
L- F30	ST- F29	ST- F30	PVC	6	5	0.30	1047.06	1047.08	
L- F31	ST- F29	ST- F31	PVC	8	10	0.30	1047.06	1047.09	
L- F32	ST- F31	ST- F32	PVC	6	12	0.30	1047.09	1047.13	
L- F33	ST- F31	ST- F33	PVC	6	91	0.30	1047.09	1047.37	
L- F34	ST- F33	ST- F34	PVC	6	5	0.30	1047.37	1047.38	
L- F35	ST- F34	ST- F35	PVC	6	10	0.30	1047.38	1047.41	
L- F36	ST- F28	ST- F36	PVC	8	7	0.30	1046.97	1047.00	
L- F37	ST- F36	ST- F37	PVC	6	5	0.30	1047.00	1047.01	
L- F38	ST- F36	ST- F38	PVC	8	33	0.30	1047.00	1047.09	
L- F39	ST- F38	ST- F39	PVC	6	5	0.30	1047.09	1047.11	
L- F40	ST- F38	ST- F40	PVC	8	45	0.30	1047.09	1047.23	
L- F41	ST- F40	ST- F41	PVC	6	5	0.30	1047.23	1047.24	
L- F42	ST- F40	ST- F42	PVC	8	4	0.30	1047.23	1047.24	
L- F43	ST- F42	ST- F43	PVC	8	5	0.30	1047.24	1047.26	
L- F44	ST- F43	ST- F44	PVC	8	21	0.30	1047.26	1047.32	
L- F45	ST- F44	ST- F45	PVC	6	5	0.30	1047.32	1047.33	
L- F46	ST- F44	ST- F46	PVC	8	15	0.30	1047.32	1047.36	
L- F47	ST- F46	ST- F47	PVC	6	12	0.30	1047.36	1047.40	
L- F48	ST- F46	ST- F48	PVC	6	91	0.30	1047.36	1047.64	
L- F49	ST- F48	ST- F49	PVC	6	5	0.30	1047.64	1047.65	
L- F50	ST- F49	ST- F50	PVC	6	10	0.30	1047.65	1047.68	
L- G1	ST- 37B	ST- G1	PVC	8	40	0.50	1044.83	1045.03	
L- G2	ST- G1	ST- G2	PVC	8	25	0.50	1045.03	1045.16	
L- G3	ST- G2	ST- G3	PVC	6	5	0.50	1045.16	1045.18	
L- G4	ST- G2	ST- G4	PVC	8	10	0.50	1045.16	1045.21	
L- G5	ST- G4	ST- G5	PVC	6	12	0.50	1045.21	1045.27	
L- G6	ST- G4	ST- G6	PVC	6	77	0.50	1045.21	1045.59	
L- G7	ST- G6	ST- G7	PVC	6	5	0.50	1045.59	1045.62	
L- G8	ST- G7	ST- G8	PVC	6	10	0.50	1045.62	1045.67	
L- G9	ST- G1	ST- G9	PVC	8	7	0.50	1045.03	1045.07	
L- G10	ST- G9	ST- G10	PVC	6	5	0.50	1045.07	1045.09	
L- G11	ST- G9	ST- G11	PVC	8	33	0.50	1045.07	1045.23	
L- G12	ST- G11	ST- G12	PVC	6	5	0.50	1045.23	1045.26	
L- G13	ST- G11	ST- G13	PVC	8	45	0.50	1045.23	1045.46	
L- G14	ST- G13	ST- G14	PVC	6	5	0.50	1045.46	1045.48	
L- G15	ST- G13	ST- G15	PVC	8	4	0.50	1045.46	1045.48	
L- G16	ST- G15	ST- G16	PVC	8	5	0.50	1045.48	1045.50	
L- G17	ST- G16	ST- G17	PVC	8	21	0.50	1045.50	1045.61	
L- G18	ST- G17	ST- G18	PVC	6	5	0.50	1045.61	1045.63	
L- G19	ST- G17	ST- G19	PVC	8	15	0.50	1045.61	1045.68	
L- G20	ST- G19	ST- G20	PVC	6	12	0.50	1045.68	1045.74	
L- G21	ST- G19	ST- G21	PVC	8	80	0.50	1045.68	1046.08	
L- G22	ST- G21	ST- G22	PVC	6	14	0.50	1046.08	1046.15	
L- G23	ST- G21	ST- G23	PVC	6	65	0.50	1046.08	1046.41	
L- G24	ST- G23	ST- G24	PVC	6	5	0.50	1046.41	1046.43	
L- G25	ST- G24	ST- G25	PVC	6	10	0.50	1046.43	1046.48	
L- G26	ST- 39C	ST- G26	PVC	6	56	0.50	1046.16	1046.44	
L- G27	ST- 39	ST- G27	PVC	8	20	0.50	1046.68	1046.78	
L- G28	ST- G27	ST- G28	PVC	8	28	0.50	1046.78	1046.92	
L- G29	ST- G28	ST- G29	PVC	6	12	0.50	1046.92	1046.98	
L- G30	ST- G28	ST- G30	PVC	6	10	0.50	1046.92	1046.97	
L- G31	ST- G30	ST- G31	PVC	6	5	0.50	1046.97	1047.00	
L- G32	ST- G30	ST- G32	PVC	8	21	0.50	1046.97	1047.08	
L- G33	ST- G32	ST- G33	PVC	8	5	0.50	1047.08	1047.10	
L- G34	ST- G33	ST- G34	PVC	8	3	0.50	1047.10	1047.12	
L- G35	ST- G34	ST- G35	PVC	6	5	0.50	1047.12	1047.14	
L- G36	ST- G34	ST- G36	PVC	8	33	0.50	1047.12	1047.28	
L- G37	ST- G36	ST- G37	PVC	6	5	0.50	1047.28	1047.31	
L- G38	ST- G36	ST- G38	PVC	8	45	0.50	1047.28	1047.51	
L- G39	ST- G38	ST- G39	PVC	6	5	0.50	1047.51	1047.53	
L- G40	ST- G38	ST- G40	PVC	8	4	0.50	1047.51	1047.53	
L- G41	ST- G40	ST- G41	PVC	8	5	0.50	1047.53	1047.55	
L- G42	ST- G41	ST- G42	PVC	8	21	0.50	1047.55	1047.66	
L- G43	ST- G42	ST- G43	PVC	6	5	0.50	1047.66	1047.68	
L- G44	ST- G42	ST- G44	PVC	6	12	0.50	1047.66	1047.72	
L- G45	ST- G44	ST- G45	PVC	6	3	0.50	1047.72	1047.73	
L- G46	ST- G45	ST- G46	PVC	6	10	0.50	1047.73	1047.78	
L- H1	ST- 38C	ST- H1	PVC	8	27	0.50	1045.30	1045.44	
L- H2	ST- H1	ST- H2	PVC	6	5	0.50	1045.44	1045.46	
L- H3	ST- H1	ST- H3	PVC	6	31	0.50	1045.44	1045.59	
L- H4	ST- H3	ST- H4	PVC	6	3	0.50	1045.59	1045.61	
L- H5	ST- H4	ST- H5	PVC	6	3	0.50	1045.61	1045.62	

DATE	REVISIONS
11/12/14	THIRD SUBMITTAL
10/24/14	SECOND SUBMITTAL
09/09/14	FIRST SUBMITTAL

CIVIL DESIGN ADVANTAGE
3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JJN

AUTUMN RIDGE APARTMENTS
UTILITY PLAN
WAUKEE, IOWA

FILE: H:\2014\1402069\DWG\1402069-SITE.DWG
FILE DATE: 11/12/14 DATE PLOTTED: 11/12/2014 3:48 PM
PLOTTED BY: JEFF NESVIK TECH:
COMMENT:
ENG:

List of Intakes and Utility Accesses

Structure Number ST-#	Location	Type or Standard Road Plan	Form Grade/Rim Elevation	Note
ST- H6		TEE	IE 1045.60	
ST- H7		6" ROOF DRAIN	IE 1045.63	
ST- H8		45° BEND	IE 1045.64	
ST- H9		45° BEND	IE 1045.66	
ST- H10		6" ROOF DRAIN	IE 1045.70	
ST- H11		6" ROOF DRAIN	IE 1046.28	
ST- H12		6" ROOF DRAIN	IE 1046.59	
ST- H13		45° BEND	IE 1046.82	
ST- H14		TEE	IE 1047.06	
ST- H15		6" ROOF DRAIN	IE 1047.12	
ST- H16		TEE	IE 1047.11	
ST- H17		6" ROOF DRAIN	IE 1047.13	
ST- H18		45° BEND	IE 1047.20	
ST- H19		45° BEND	IE 1047.21	
ST- H20		6" ROOF DRAIN	IE 1047.24	
ST- H21		TEE	IE 1048.92	
ST- H22		TEE	IE 1049.01	
ST- H23		6" ROOF DRAIN	IE 1049.05	
ST- H24		TEE	IE 1049.29	
ST- H25		6" ROOF DRAIN	IE 1049.33	
ST- H26		TEE	IE 1049.34	
ST- H27		6" ROOF DRAIN	IE 1049.35	
ST- H28		45° BEND	IE 1049.39	
ST- H29		45° BEND	IE 1049.40	
ST- H30		6" ROOF DRAIN	IE 1049.41	
ST- H31		TEE	IE 1049.03	
ST- H32		6" ROOF DRAIN	IE 1049.08	
ST- H33		TEE	IE 1049.27	
ST- H34		6" ROOF DRAIN	IE 1049.31	
ST- H35		TEE	IE 1049.32	
ST- H36		6" ROOF DRAIN	IE 1049.33	
ST- H37		45° BEND	IE 1049.39	
ST- H38		45° BEND	IE 1049.40	
ST- H39		TEE	IE 1049.41	
ST- H40		6" ROOF DRAIN	IE 1049.43	
ST- H41		45° BEND	IE 1049.54	
ST- H42		45° BEND	IE 1049.55	
ST- H43		6" ROOF DRAIN	IE 1049.56	
ST- J1		45° BEND	IE 1049.46	
ST- J2		TEE	IE 1049.62	
ST- J3		6" ROOF DRAIN	IE 1049.68	
ST- J4		TEE	IE 1049.67	
ST- J5		6" ROOF DRAIN	IE 1049.69	
ST- J6		45° BEND	IE 1049.77	
ST- J7		45° BEND	IE 1049.80	
ST- J8		TEE	IE 1049.81	
ST- J9		6" ROOF DRAIN	IE 1049.84	
ST- J10		45° BEND	IE 1049.97	
ST- J11		45° BEND	IE 1049.98	
ST- J12		6" ROOF DRAIN	IE 1050.00	
ST- J13		6" ROOF DRAIN	IE 1049.45	
ST- J14		45° BEND	IE 1050.13	
ST- J15		45° BEND	IE 1050.20	
ST- J16		TEE	IE 1050.23	
ST- J17		TEE	IE 1050.25	
ST- J18		6" ROOF DRAIN	IE 1050.27	
ST- J19		TEE	IE 1050.35	
ST- J20		6" ROOF DRAIN	IE 1050.37	
ST- J21		90° BEND	IE 1050.49	
ST- J22		6" ROOF DRAIN	IE 1050.50	
ST- J23		TEE	IE 1050.31	
ST- J24		6" ROOF DRAIN	IE 1050.32	
ST- J25		TEE	IE 1050.34	
ST- J26		6" ROOF DRAIN	IE 1050.37	
ST- J27		45° BEND	IE 1050.61	
ST- J28		45° BEND	IE 1050.63	
ST- J29		6" ROOF DRAIN	IE 1050.66	
ST- J30		6" ROOF DRAIN	IE 1050.26	
ST- J31		6" ROOF DRAIN	IE 1050.37	
ST- J32		6" ROOF DRAIN	IE 1050.46	
ST- J33		6" ROOF DRAIN	IE 1050.97	
ST- J34		6" ROOF DRAIN	IE 1051.27	
ST- J35		TEE	IE 1052.02	
ST- J36		6" ROOF DRAIN	IE 1052.06	

List of Storm Sewer Pipe

Pipe Number L-#	Structure To ST-#	Structure From ST-#	Storm Sewer Material	Diameter inches	Length feet	Slope %	FL(out)	Fl(in)	Note
L- H6	ST- 38B	ST- H6	PVC	8	20	0.50	1045.50	1045.60	
L- H7	ST- H6	ST- H7	PVC	6	5	0.50	1045.60	1045.63	
L- H8	ST- H6	ST- H8	PVC	6	7	0.50	1045.60	1045.64	
L- H9	ST- H8	ST- H9	PVC	6	5	0.50	1045.64	1045.66	
L- H10	ST- H9	ST- H10	PVC	6	8	0.50	1045.66	1045.70	
L- H11	ST- 39D	ST- H11	PVC	6	32	0.50	1046.12	1046.28	
L- H12	ST- 39B	ST- H12	PVC	6	32	0.50	1046.43	1046.59	
L- H13	ST- 39	ST- H13	PVC	8	27	0.50	1046.68	1046.82	
L- H14	ST- H13	ST- H14	PVC	8	48	0.50	1046.82	1047.06	
L- H15	ST- H14	ST- H15	PVC	6	12	0.50	1047.06	1047.12	
L- H16	ST- H14	ST- H16	PVC	6	10	0.50	1047.06	1047.11	
L- H17	ST- H16	ST- H17	PVC	6	5	0.50	1047.11	1047.13	
L- H18	ST- H16	ST- H18	PVC	8	18	0.50	1047.11	1047.20	
L- H19	ST- H18	ST- H19	PVC	8	3	0.50	1047.20	1047.21	
L- H20	ST- H19	ST- H20	PVC	6	5	0.50	1047.21	1047.24	
L- H21	ST- 47	ST- H21	PVC	8	32	0.30	1048.82	1048.92	
L- H22	ST- H21	ST- H22	PVC	8	30	0.30	1048.92	1049.01	
L- H23	ST- H22	ST- H23	PVC	6	14	0.30	1049.01	1049.05	
L- H24	ST- H22	ST- H24	PVC	8	95	0.30	1049.01	1049.29	
L- H25	ST- H24	ST- H25	PVC	6	12	0.30	1049.29	1049.33	
L- H26	ST- H24	ST- H26	PVC	8	15	0.30	1049.29	1049.34	
L- H27	ST- H26	ST- H27	PVC	6	5	0.30	1049.34	1049.35	
L- H28	ST- H26	ST- H28	PVC	6	18	0.30	1049.34	1049.39	
L- H29	ST- H28	ST- H29	PVC	6	3	0.30	1049.39	1049.40	
L- H30	ST- H29	ST- H30	PVC	6	5	0.30	1049.40	1049.41	
L- H31	ST- H21	ST- H31	PVC	8	39	0.30	1048.92	1049.03	
L- H32	ST- H31	ST- H32	PVC	6	14	0.30	1049.03	1049.08	
L- H33	ST- H31	ST- H33	PVC	8	80	0.30	1049.03	1049.27	
L- H34	ST- H33	ST- H34	PVC	6	12	0.30	1049.27	1049.31	
L- H35	ST- H33	ST- H35	PVC	8	15	0.30	1049.27	1049.32	
L- H36	ST- H35	ST- H36	PVC	6	5	0.30	1049.32	1049.33	
L- H37	ST- H35	ST- H37	PVC	8	23	0.30	1049.32	1049.39	
L- H38	ST- H37	ST- H38	PVC	8	3	0.30	1049.39	1049.40	
L- H39	ST- H38	ST- H39	PVC	8	5	0.30	1049.40	1049.41	
L- H40	ST- H39	ST- H40	PVC	6	5	0.30	1049.41	1049.43	
L- H41	ST- H39	ST- H41	PVC	6	42	0.30	1049.41	1049.54	
L- H42	ST- H41	ST- H42	PVC	6	3	0.30	1049.54	1049.55	
L- H43	ST- H43	ST- H43	PVC	6	3	0.30	1049.55	1049.56	
L- J1	ST- 48	ST- J1	PVC	8	18	0.50	1049.37	1049.46	
L- J2	ST- J1	ST- J2	PVC	8	31	0.50	1049.46	1049.62	
L- J3	ST- J2	ST- J3	PVC	6	12	0.50	1049.62	1049.68	
L- J4	ST- J2	ST- J4	PVC	8	10	0.50	1049.62	1049.67	
L- J5	ST- J4	ST- J5	PVC	6	5	0.50	1049.67	1049.69	
L- J6	ST- J4	ST- J6	PVC	8	21	0.50	1049.67	1049.77	
L- J7	ST- J6	ST- J7	PVC	8	5	0.50	1049.77	1049.80	
L- J8	ST- J7	ST- J8	PVC	8	3	0.50	1049.80	1049.81	
L- J9	ST- J8	ST- J9	PVC	6	5	0.50	1049.81	1049.84	
L- J10	ST- J8	ST- J10	PVC	6	31	0.50	1049.81	1049.97	
L- J11	ST- J10	ST- J11	PVC	6	3	0.50	1049.97	1049.98	
L- J12	ST- J11	ST- J12	PVC	6	3	0.50	1049.98	1050.00	
L- J13	ST- 49B	ST- J13	PVC	6	58	0.50	1049.16	1049.45	
L- J14	ST- 58	ST- J14	PVC	8	26	0.30	1050.05	1050.13	
L- J15	ST- J14	ST- J15	PVC	8	24	0.30	1050.13	1050.20	
L- J16	ST- J15	ST- J16	PVC	8	11	0.30	1050.20	1050.23	
L- J17	ST- J16	ST- J17	PVC	8	7	0.30	1050.23	1050.25	
L- J18	ST- J17	ST- J18	PVC	6	5	0.30	1050.25	1050.27	
L- J19	ST- J17	ST- J19	PVC	8	33	0.30	1050.25	1050.35	
L- J20	ST- J19	ST- J20	PVC	6	5	0.30	1050.35	1050.37	
L- J21	ST- J19	ST- J21	PVC	8	45	0.30	1050.35	1050.49	
L- J22	ST- J21	ST- J22	PVC	6	5	0.30	1050.49	1050.50	
L- J23	ST- J16	ST- J23	PVC	8	25	0.30	1050.23	1050.31	
L- J24	ST- J23	ST- J24	PVC	6	5	0.30	1050.31	1050.32	
L- J25	ST- J23	ST- J25	PVC	8	10	0.30	1050.31	1050.34	
L- J26	ST- J25	ST- J26	PVC	6	12	0.30	1050.34	1050.37	
L- J27	ST- J25	ST- J27	PVC	6	91	0.30	1050.34	1050.61	
L- J28	ST- J27	ST- J28	PVC	6	5	0.30	1050.61	1050.63	
L- J29	ST- J28	ST- J29	PVC	6	10	0.30	1050.63	1050.66	
L- J30	ST- 72C	ST- J30	PVC	6	17	0.30	1050.21	1050.26	
L- J31	ST- 72B	ST- J31	PVC	6	15	0.30	1050.32	1050.37	
L- J32	ST- 72	ST- J32	PVC	6	22	0.30	1050.39	1050.46	
L- J33	ST- 73	ST- J33	PVC	6	24	0.30	1050.90	1050.97	
L- J34	ST- 74	ST- J34	PVC	6	24	0.30	1051.20	1051.27	
L- J35	ST- 75	ST- J35	PVC	6	10	0.30	1051.99	1052.02	
L- J36	ST- J35	ST- J36	PVC	6	12	0.30	1052.02	1052.06	

List of Intakes and Utility Accesses

Structure Number ST-#	Location	Type or Standard Road Plan	Form Grade/Rim Elevation	Note
ST- J37		90° BEND	IE 1052.07	
ST- J38		6" ROOF DRAIN	IE 1052.08	
ST- K1		TEE	IE 1048.64	
ST- K2		6" ROOF DRAIN	IE 1048.66	
ST- K3		45° BEND	IE 1048.65	
ST- K4		45° BEND	IE 1048.68	
ST- K5		TEE	IE 1048.80	
ST- K6		6" ROOF DRAIN	IE 1048.83	
ST- K7		TEE	IE 1049.15	
ST- K8		6" ROOF DRAIN	IE 1049.21	
ST- K9		45° BEND	IE 1049.43	
ST- K10		45° BEND	IE 1049.45	
ST- K11		6" ROOF DRAIN	IE 1049.50	
ST- K12		6" ROOF DRAIN	IE 1048.79	
ST- K13		6" ROOF DRAIN	IE 1048.89	
ST- K14		TEE	IE 1049.18	
ST- K15		6" ROOF DRAIN	IE 1049.21	
ST- K16		45° BEND	IE 1049.20	
ST- K17		45° BEND	IE 1049.22	
ST- K18		6" ROOF DRAIN	IE 1049.26	
ST- K19		45° BEND	IE 1048.70	
ST- K20		TEE	IE 1048.75	
ST- K21		45° BEND	IE 1048.83	
ST- K22		45° BEND	IE 1048.84	
ST- K23		6" ROOF DRAIN	IE 1048.85	
ST- K24		TEE	IE 1048.77	
ST- K25		6" ROOF DRAIN	IE 1048.79	
ST- K26		TEE	IE 1048.91	
ST- K27		6" ROOF DRAIN	IE 1048.92	
ST- K28		TEE	IE 1049.01	
ST- K29		6" ROOF DRAIN	IE 1049.02	
ST- K30		45° BEND	IE 1049.02	
ST- K31		45° BEND	IE 1049.04	
ST- K32		TEE	IE 1049.11	
ST- K33		6" ROOF DRAIN	IE 1049.13	
ST- K34		45° BEND	IE 1049.12	
ST- K35		45° BEND	IE 1049.13	
ST- K36		6" ROOF DRAIN	IE 1049.16	
ST- L1		45° BEND	IE 1049.56	
ST- L2		TEE	IE 1049.65	
ST- L3		6" ROOF DRAIN	IE 1049.72	
ST- L4		TEE	IE 1050.05	
ST- L5		6" ROOF DRAIN	IE 1050.11	
ST- L6		TEE	IE 1050.10	
ST- L7		6" ROOF DRAIN	IE 1050.13	
ST- L8		45° BEND	IE 1050.21	
ST- L9		45° BEND	IE 1050.23	
ST- L10		TEE	IE 1050.25	
ST- L11		6" ROOF DRAIN	IE 1050.27	
ST- L12		TEE	IE 1050.41	
ST- L13		6" ROOF DRAIN	IE 1050.44	
ST- L14		45° BEND	IE 1050.62	
ST- L15		45° BEND	IE 1050.64	
ST- L16		6" ROOF DRAIN	IE 1050.65	
ST- L17		TEE	IE 1049.46	
ST- L18		6" ROOF DRAIN	IE 1049.48	
ST- L19		TEE	IE 1049.51	
ST- L20		6" ROOF DRAIN	IE 1049.57	
ST- L21		45° BEND	IE 1049.96	
ST- L22		45° BEND	IE 1049.99	
ST- L23		6" ROOF DRAIN	IE 1050.04	
ST- L24		45° BEND	IE 1049.62	
ST- L25		6" ROOF DRAIN	IE 1049.70	
ST- L26		45° BEND	IE 1049.73	
ST- L27		6" ROOF DRAIN	IE 1049.82	
ST- L28		45° BEND	IE 1050.06	
ST- L29		45° BEND	IE 1050.07	
ST- L30		6" ROOF DRAIN	IE 1050.09	
ST- L31		6" ROOF DRAIN	IE 1050.14	
ST- L32		6" ROOF DRAIN	IE 1050.22	
ST- L33		6" ROOF DRAIN	IE 1050.83	
ST- L34		6" ROOF DRAIN	IE 1051.03	
ST- L35		6" ROOF DRAIN	IE 1051.25	

List of Storm Sewer Pipe

Pipe Number L-#	Structure To ST-#	Structure From ST-#	Storm Sewer Material	Diameter inches	Length feet	Slope %	FL(out)	Fl(in)	Note
L- J37	ST- J35	ST- J37	PVC	8	15	0.30	1052.02	1052.07	
L- J38	ST- J37	ST- J38	PVC	6	5	0.30	1052.07	1052.08	
L- K1	ST- 48D	ST- K1	PVC	8	13	0.50	1048.57	1048.64	
L- K2	ST- K1	ST- K2	PVC	6	5	0.50	1048.64	1048.66	
L- K3	ST- K1	ST- K3	PVC	8	3	0.50	1048.64	1048.65	
L- K4	ST- K3	ST- K4	PVC	8	5	0.50	1048.65	1048.68	
L- K5	ST- K4	ST- K5	PVC	8	25	0.50	1048.68	1048.80	
L- K6	ST- K5	ST- K6	PVC	6	5	0.50	1048.80	1048.83	
L- K7	ST- K5	ST- K7	PVC	8	69	0.50	1048.80	1049.15	
L- K8	ST- K7	ST- K8	PVC	6	13	0.50	1049.15	1049.21	
L- K9	ST- K7	ST- K9	PVC	6	56	0.50	1049.15	1049.43	
L- K10	ST- K9	ST- K10	PVC	6	5	0.50	1049.43	1049.45	
L- K11	ST- K10	ST- K11	PVC	6	10	0.50	1049.45	1049.50	
L- K12	ST- 48C	ST- K12	PVC	6	18	0.50	1048.70	1048.79	
L- K13	ST- 48B	ST- K13	PVC	6	18	0.50	1048.80	1048.89	
L- K14	ST- 49C	ST- K14	PVC	6	18	0.50	1049.09	1049.18	
L- K15	ST- K14	ST- K15	PVC	6	5	0.50	1049.18	1049.21	
L- K16	ST- K14	ST- K16	PVC	6	3	0.50	1049.18	1049.20	
L- K17	ST- K16	ST- K17	PVC	6	5	0.50	1049.20	1049.22	
L- K18	ST- K17	ST- K18	PVC	6	8	0.50	1049.22	1049.26	
L- K19	ST- 51B	ST- K19	PVC	8	23	0.30	1048.63	1048.70	
L- K20	ST- K19	ST- K20	PVC	8	17	0.30	1048.70	1048.75	
L- K21	ST- K20	ST- K21	PVC	6	25	0.30	1048.75	1048.83	
L- K22	ST- K21	ST- K22	PVC	6	5	0.30	1048.83	1048.84	
L- K23	ST- K22	ST- K23	PVC	6	2	0.30	1048.84	1048.85	
L- K24	ST- K20	ST- K24	PVC	8	8	0.30	1048.75	1048.77	
L- K25	ST- K24	ST- K25	PVC	6	5	0.30	1048.77	1048.79	
L- K26	ST- K24	ST- K26	PVC	8	45	0.30	1048.77	1048.91	
L- K27	ST- K26	ST- K27	PVC	6	5	0.30	1048.91	1048.92	
L- K28	ST- K26	ST- K28	PVC	8	33	0.30	1048.91	1049.01	
L- K29	ST- K28	ST- K29	PVC	6	5	0.30	1049.01	1049.02	
L- K30	ST- K28	ST- K30	PVC	8	3	0.30	1049.01	1049.02	
L- K31	ST- K30	ST- K31	PVC	8	6	0.30	1049.02	1049.04	
L- K32	ST- K31	ST- K32	PVC	8	25	0.30	1049.04	1049.11	
L- K33	ST- K32	ST- K33	PVC	6	5	0.30	1049.11	1049.13	
L- K34	ST- K32	ST- K34	PVC	6	3	0.30	1049.11	1049.12	
L- K35	ST- K34	ST- K35	PVC	6	5	0.30	1049.12	1049.13	
L- K36	ST- K35	ST- K36	PVC	6	8	0.30	1049.13	1049.16	
L- L1	ST- 58B	ST- L1	PVC	8	23	0.50	1049.44	1049.56	
L- L2	ST- L1	ST- L2	PVC	8	19	0.50	1049.56	1049.65	
L- L3	ST- L2	ST- L3	PVC	6	14	0.50	1049.65	1049.72	
L- L4	ST- L2	ST- L4	PVC	8	80	0.50	1049.65	1050.05	
L- L5	ST- L4	ST- L5	PVC	6	12	0.50	1050.05	1050.11	
L- L6	ST- L4	ST- L6	PVC	8	10	0.50	1050.05	1050.10	
L- L7	ST- L6	ST- L7	PVC	6	5	0.50	1050.10	1050.13	
L- L8	ST- L6	ST- L8	PVC	8	21	0.50	1050.10	1050.21	
L- L9	ST- L8	ST- L9	PVC	8	5	0.50	1050.21	1050.23	
L- L10	ST- L9	ST- L10	PVC	8	3	0.50	1050.23	1050.25	
L- L11	ST- L10	ST- L11	PVC	6	5	0.50	1050.25	1050.27	
L- L12	ST- L10	ST- L12	PVC	8	33	0.50	1050.25	1050.41	
L- L13	ST- L12	ST- L13	PVC	6	5	0.50	1050.41	1050.44	
L- L14	ST- L12	ST- L14	PVC	6	42	0.50	1050.41	1050.62	
L- L15	ST- L14	ST- L15	PVC	6	3	0.50	1050.62	1050.64	
L- L16	ST- L15	ST- L16	PVC	6	3	0.50	1050.64	1050.65	
L- L17	ST- 52B	ST- L17	PVC	8	33	0.50	1049.29	1049.46	
L- L18	ST- L17	ST- L18	PVC	6	5	0.50	1049.46	1049.48	
L- L19	ST- L17	ST- L19	PVC	8	10	0.50	1049.46	1049.51	
L- L20	ST- L19	ST- L20	PVC	6	12	0.50	1049.51	1049.57	
L- L21	ST- L19	ST- L21	PVC	6	91	0.50	1049.51	1049.96	
L- L22	ST- L21	ST- L22	PVC	6	5	0.50	1049.96	1049.99	
L- L23	ST- L22	ST- L23	PVC	6	10	0.50	1049.99	1050.04	
L- L24	ST- 53C	ST- L24	PVC	6	7	0.50	1049.58	1049.62	
L- L25	ST- L24	ST- L25	PVC	6	17	0.50	1049.62	1049.70	
L- L26	ST- 53B	ST- L26	PVC	6	9	0.50	1049.68	1049.73	
L- L27	ST- L26	ST- L27	PVC	6	19	0.50	1049.73	1049.82	
L- L28	ST- 54C	ST- L28	PVC	6	5	0.50	1050.03	1050.06	
L- L29	ST- L28	ST- L29	PVC	6	3	0.50	1050.06	1050.07	
L- L30	ST- L29	ST- L30	PVC	6	3	0.50	1050.07	1050.09	
L- L31	ST- 54B	ST- L31	PVC	6	5	0.50	1050.11	1050.14	
L- L32	ST- 54	ST- L32	PVC	6	12	0.50	1050.16	1050.22	
L- L33	ST- 55	ST- L33	PVC	6	14	0.50	1050.76	1050.83	
L- L34	ST- 56	ST- L34	PVC	6	14	0.50	1050.96	1051.03	
L- L35	ST- 57	ST- L35	PVC	6	12	0.50	1051.19	1051.25	

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

3405 S.E. CROSSROADS DRIVE, SUITE G
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CIVIL DESIGN ADVANTAGE
ENGINEER: EKO
EI: JJN

AUTUMN RIDGE APARTMENTS

UTILITY PLAN

WAUKEE, IOWA

1402.069

FILE: H:\2014\1402069\DWG\1402069-SITE.DWG
FILE DATE: 11/12/14 DATE PLOTTED: 11/12/2014 3:47 PM
PLOTTED BY: JEFF NESVIK TECH:
COMMENT:
ENG:

List of Intakes and Utility Accesses

Structure Number ST-#	Location	Type or Standard Road Plan	Form Grade/Rim Elevation	Note
ST- L36		45° BEND	IE 1051.25	
ST- L37		45° BEND	IE 1051.27	
ST- L38		6" ROOF DRAIN	IE 1051.28	
ST- M1		45° BEND	IE 1047.88	
ST- M2		TEE	IE 1047.98	
ST- M3		6" ROOF DRAIN	IE 1048.01	
ST- M4		TEE	IE 1048.21	
ST- M5		6" ROOF DRAIN	IE 1048.23	
ST- M6		TEE	IE 1048.37	
ST- M7		6" ROOF DRAIN	IE 1048.40	
ST- M8		45° BEND	IE 1048.39	
ST- M9		45° BEND	IE 1048.41	
ST- M10		TEE	IE 1048.52	
ST- M11		6" ROOF DRAIN	IE 1048.54	
ST- M12		TEE	IE 1048.57	
ST- M13		6" ROOF DRAIN	IE 1048.63	
ST- M14		TEE	IE 1048.97	
ST- M15		6" ROOF DRAIN	IE 1049.04	
ST- M16		45° BEND	IE 1049.34	
ST- M17		45° BEND	IE 1049.36	
ST- M18		6" ROOF DRAIN	IE 1049.41	
ST- M19		6" ROOF DRAIN	IE 1047.97	
ST- M20		6" ROOF DRAIN	IE 1048.14	
ST- M21		6" ROOF DRAIN	IE 1048.89	
ST- M22		6" ROOF DRAIN	IE 1049.42	
ST- M23		6" ROOF DRAIN	IE 1049.89	
ST- M24		6" ROOF DRAIN	IE 1049.93	
ST- M25		TEE	IE 1050.07	
ST- M26		6" ROOF DRAIN	IE 1050.10	
ST- M27		TEE	IE 1050.30	
ST- M28		6" ROOF DRAIN	IE 1050.32	
ST- M29		TEE	IE 1050.46	
ST- M30		6" ROOF DRAIN	IE 1050.49	
ST- M31		45° BEND	IE 1050.48	
ST- M32		45° BEND	IE 1050.50	
ST- M33		TEE	IE 1050.61	
ST- M34		6" ROOF DRAIN	IE 1050.63	
ST- M35		45° BEND	IE 1050.64	
ST- M36		45° BEND	IE 1050.67	
ST- M37		6" ROOF DRAIN	IE 1050.71	
ST- N1		TEE	IE 1044.35	
ST- N2		6" ROOF DRAIN	IE 1044.38	
ST- N3		TEE	IE 1044.45	
ST- N4		6" ROOF DRAIN	IE 1044.48	
ST- N5		TEE	IE 1044.53	
ST- N6		6" ROOF DRAIN	IE 1044.59	
ST- N7		TEE	IE 1045.00	
ST- N8		6" ROOF DRAIN	IE 1045.07	
ST- N9		45° BEND	IE 1045.33	
ST- N10		45° BEND	IE 1045.35	
ST- N11		6" ROOF DRAIN	IE 1045.40	
ST- N12		6" ROOF DRAIN	IE 1044.68	
ST- N13		6" ROOF DRAIN	IE 1044.89	
ST- N14		6" ROOF DRAIN	IE 1045.34	
ST- N15		6" ROOF DRAIN	IE 1045.42	
ST- N16		6" ROOF DRAIN	IE 1048.03	
ST- N17		TEE	IE 1047.98	
ST- N18		45° BEND	IE 1048.17	
ST- N19		45° BEND	IE 1048.20	
ST- N20		6" ROOF DRAIN	IE 1048.25	
ST- N21		TEE	IE 1048.17	
ST- N22		6" ROOF DRAIN	IE 1048.23	
ST- N23		TEE	IE 1048.22	
ST- N24		6" ROOF DRAIN	IE 1048.25	
ST- N25		45° BEND	IE 1048.33	
ST- N26		45° BEND	IE 1048.35	
ST- N27		TEE	IE 1048.37	
ST- N28		6" ROOF DRAIN	IE 1048.39	
ST- N29		TEE	IE 1048.53	
ST- N30		6" ROOF DRAIN	IE 1048.56	

List of Storm Sewer Pipe

Pipe Number L-#	Structure To ST-#	Structure From ST-#	Storm Sewer Material	Storm Sewer Diameter inches	Storm Sewer Length feet	Storm Sewer Slope %	FL(out)	Fl(in)	Note
L- L36	ST- 57	ST- L36	PVC	6	12	0.50	1051.19	1051.25	
L- L37	ST- L36	ST- L37	PVC	6	3	0.50	1051.25	1051.27	
L- L38	ST- L37	ST- L38	PVC	6	3	0.50	1051.27	1051.28	
L- M1	ST- 61	ST- M1	PVC	6	10	0.50	1047.83	1047.88	
L- M2	ST- M1	ST- M2	PVC	6	20	0.50	1047.88	1047.98	
L- M3	ST- M2	ST- M3	PVC	6	5	0.50	1047.98	1048.01	
L- M4	ST- M2	ST- M4	PVC	8	45	0.50	1047.98	1048.21	
L- M5	ST- M4	ST- M5	PVC	6	5	0.50	1048.21	1048.23	
L- M6	ST- M4	ST- M6	PVC	8	33	0.50	1048.21	1048.37	
L- M7	ST- M6	ST- M7	PVC	6	5	0.50	1048.37	1048.40	
L- M8	ST- M6	ST- M8	PVC	8	3	0.50	1048.37	1048.39	
L- M9	ST- M8	ST- M9	PVC	8	5	0.50	1048.39	1048.41	
L- M10	ST- M9	ST- M10	PVC	8	21	0.50	1048.41	1048.52	
L- M11	ST- M10	ST- M11	PVC	6	5	0.50	1048.52	1048.54	
L- M12	ST- M10	ST- M12	PVC	8	10	0.50	1048.52	1048.57	
L- M13	ST- M12	ST- M13	PVC	6	12	0.50	1048.57	1048.63	
L- M14	ST- M12	ST- M14	PVC	8	80	0.50	1048.57	1048.97	
L- M15	ST- M14	ST- M15	PVC	6	14	0.50	1048.97	1049.04	
L- M16	ST- M14	ST- M16	PVC	8	74	0.50	1048.97	1049.34	
L- M17	ST- M16	ST- M17	PVC	8	5	0.50	1049.34	1049.36	
L- M18	ST- M17	ST- M18	PVC	6	10	0.50	1049.36	1049.41	
L- M19	ST- 68B	ST- M19	PVC	6	15	0.50	1047.89	1047.97	
L- M20	ST- 68	ST- M20	PVC	6	22	0.50	1048.03	1048.14	
L- M21	ST- 69	ST- M21	PVC	6	24	0.50	1048.77	1048.89	
L- M22	ST- 70	ST- M22	PVC	6	24	0.50	1049.30	1049.42	
L- M23	ST- 71	ST- M23	PVC	6	22	0.50	1049.78	1049.89	
L- M24	ST- 72E	ST- M24	PVC	6	15	0.50	1049.85	1049.93	
L- M25	ST- 72D	ST- M25	PVC	8	18	0.50	1049.98	1050.07	
L- M26	ST- M25	ST- M26	PVC	6	5	0.50	1050.07	1050.10	
L- M27	ST- M25	ST- M27	PVC	8	45	0.50	1050.07	1050.30	
L- M28	ST- M27	ST- M28	PVC	6	5	0.50	1050.30	1050.32	
L- M29	ST- M27	ST- M29	PVC	8	33	0.50	1050.30	1050.46	
L- M30	ST- M29	ST- M30	PVC	6	5	0.50	1050.46	1050.49	
L- M31	ST- M29	ST- M31	PVC	8	3	0.50	1050.46	1050.48	
L- M32	ST- M31	ST- M32	PVC	8	5	0.50	1050.48	1050.50	
L- M33	ST- M32	ST- M33	PVC	8	21	0.50	1050.50	1050.61	
L- M34	ST- M33	ST- M34	PVC	6	5	0.50	1050.61	1050.63	
L- M35	ST- M33	ST- M35	PVC	6	7	0.50	1050.61	1050.64	
L- M36	ST- M35	ST- M36	PVC	6	5	0.50	1050.64	1050.67	
L- M37	ST- M36	ST- M37	PVC	6	8	0.50	1050.67	1050.71	
L- N1	ST- 37D	ST- N1	PVC	8	21	0.50	1044.24	1044.35	
L- N2	ST- N1	ST- N2	PVC	6	7	0.50	1044.35	1044.38	
L- N3	ST- N1	ST- N3	PVC	8	21	0.50	1044.35	1044.45	
L- N4	ST- N3	ST- N4	PVC	6	5	0.50	1044.45	1044.48	
L- N5	ST- N3	ST- N5	PVC	8	15	0.50	1044.45	1044.53	
L- N6	ST- N5	ST- N6	PVC	6	12	0.50	1044.53	1044.59	
L- N7	ST- N5	ST- N7	PVC	8	95	0.50	1044.53	1045.00	
L- N8	ST- N7	ST- N8	PVC	6	14	0.50	1045.00	1045.07	
L- N9	ST- N7	ST- N9	PVC	8	65	0.50	1045.00	1045.33	
L- N10	ST- N9	ST- N10	PVC	8	5	0.50	1045.33	1045.35	
L- N11	ST- N10	ST- N11	PVC	6	10	0.50	1045.35	1045.40	
L- N12	ST- 37C	ST- N12	PVC	6	15	0.50	1044.60	1044.68	
L- N13	ST- 37B	ST- N13	PVC	6	12	0.50	1044.83	1044.89	
L- N14	ST- 40C	ST- N14	PVC	6	23	0.50	1045.22	1045.34	
L- N15	ST- 40B	ST- N15	PVC	6	30	0.50	1045.27	1045.42	
L- N16	ST- 44B	ST- N16	PVC	6	32	0.50	1047.87	1048.03	
L- N17	ST- 43	ST- N17	PVC	8	17	0.50	1047.89	1047.98	
L- N18	ST- N17	ST- N18	PVC	6	39	0.50	1047.98	1048.17	
L- N19	ST- N18	ST- N19	PVC	6	5	0.50	1048.17	1048.20	
L- N20	ST- N19	ST- N20	PVC	6	10	0.50	1048.20	1048.25	
L- N21	ST- N17	ST- N21	PVC	8	39	0.50	1047.98	1048.17	
L- N22	ST- N21	ST- N22	PVC	6	12	0.50	1048.17	1048.23	
L- N23	ST- N21	ST- N23	PVC	8	10	0.50	1048.17	1048.22	
L- N24	ST- N23	ST- N24	PVC	6	5	0.50	1048.22	1048.25	
L- N25	ST- N23	ST- N25	PVC	8	21	0.50	1048.22	1048.33	
L- N26	ST- N25	ST- N26	PVC	8	5	0.50	1048.33	1048.35	
L- N27	ST- N26	ST- N27	PVC	8	3	0.50	1048.35	1048.37	
L- N28	ST- N27	ST- N28	PVC	6	5	0.50	1048.37	1048.39	
L- N29	ST- N27	ST- N29	PVC	8	33	0.50	1048.37	1048.53	
L- N30	ST- N29	ST- N30	PVC	6	5	0.50	1048.53	1048.56	

List of Intakes and Utility Accesses

Structure Number ST-#	Location	Type or Standard Road Plan	Form Grade/Rim Elevation	Note
ST- N31		TEE	IE 1048.76	
ST- N32		6" ROOF DRAIN	IE 1048.78	
ST- N33		45° BEND	IE 1048.78	
ST- N34		45° BEND	IE 1048.80	
ST- N35		TEE	IE 1048.91	
ST- N36		6" ROOF DRAIN	IE 1048.93	
ST- N37		45° BEND	IE 1048.96	
ST- N38		45° BEND	IE 1048.99	
ST- N39		6" ROOF DRAIN	IE 1049.03	

Notes:

List of Storm Sewer Pipe

Pipe Number L-#	Structure To ST-#	Structure From ST-#	Storm Sewer Material	Storm Sewer Diameter inches	Storm Sewer Length feet	Storm Sewer Slope %	FL(out)	Fl(in)	Note
L- N31	ST- N29	ST- N31	PVC	8	45	0.50	1048.53	1048.76	
L- N32	ST- N31	ST- N32	PVC	6	5	0.50	1048.76	1048.78	
L- N33	ST- N31	ST- N33	PVC	8	4	0.50	1048.76	1048.78	
L- N34	ST- N33	ST- N34	PVC	8	5	0.50	1048.78	1048.80	
L- N35	ST- N34	ST- N35	PVC	8	21	0.50	1048.80	1048.91	
L- N36	ST- N35	ST- N36	PVC	6	5	0.50	1048.91	1048.93	
L- N37	ST- N35	ST- N37	PVC	6	11	0.50	1048.91	1048.96	
L- N38	ST- N37	ST- N38	PVC	6	5	0.50	1048.96	1048.99	
L- N39	ST- N38	ST- N39	PVC	6	8	0.50	1048.99	1049.03	

Notes:

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
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EI: JJN
CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS
UTILITY PLAN
WAUKEE, IOWA

FILE: H:\2014\1402069\DWG\1402069-SITE.DWG
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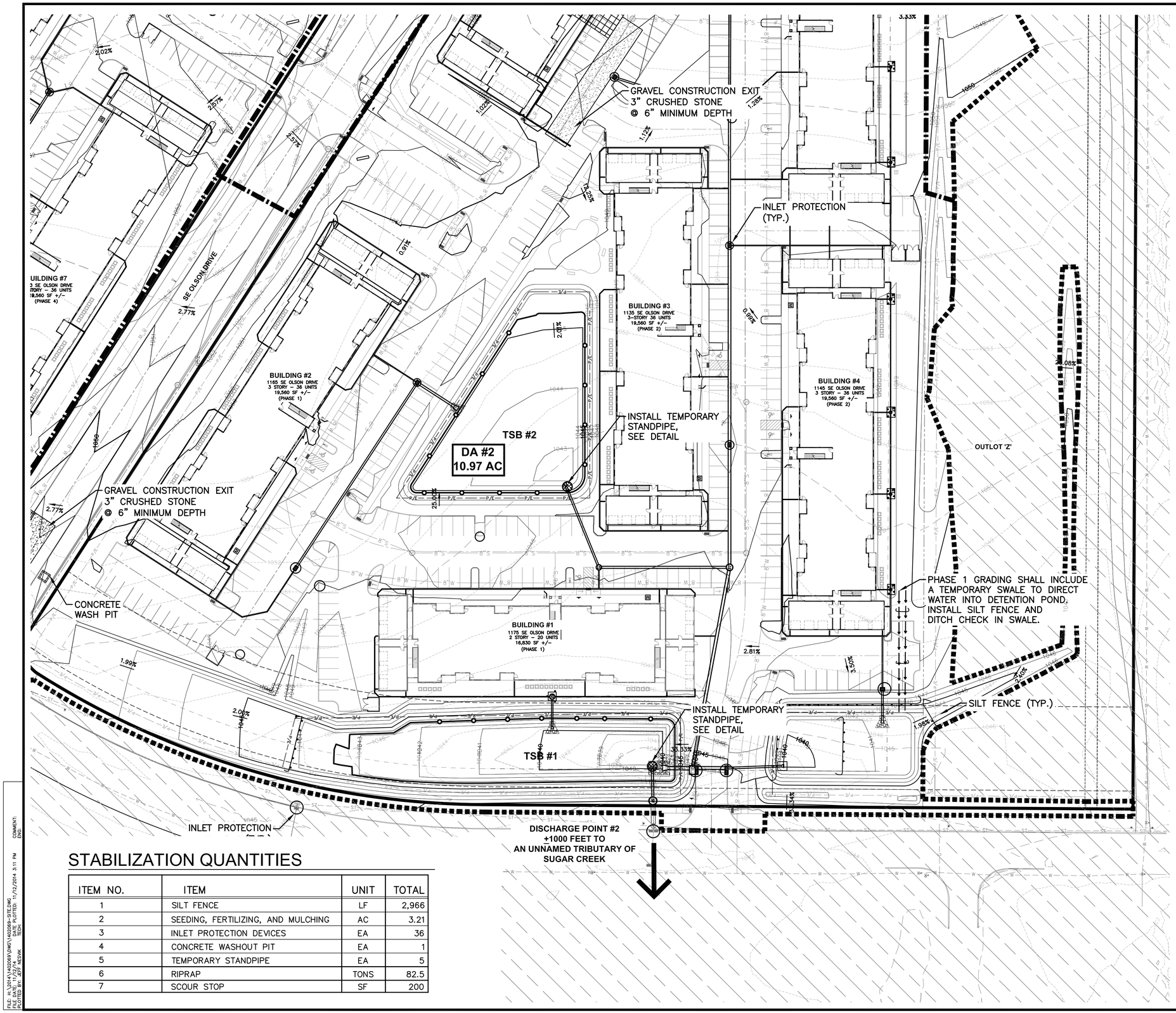


AREAS OF DISTURBANCE

PHASE I: INCLUDES MASS GRADING FOR LOTS 1, 5 & OUTLOT Z, CLUBHOUSE AND SE OLSON DRIVE.
DISTURBED AREA = 20.1 ACRES
TOPSOIL QUANTITY REQUIRED FOR OPEN SPACE AREAS: 3,152 CY

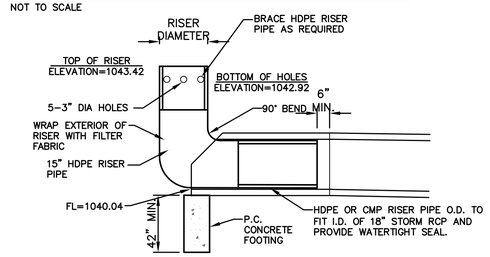
PHASE 4: INCLUDES MASS GRADING FOR LOTS 2, 3 AND 4.
DISTURBED AREA = 12.9 ACRES
TOPSOIL QUANTITY REQUIRED FOR OPEN SPACE AREAS: 2,231 CY

NOTES:

1. THE GENERAL PERMIT #2 HOLDER SHALL SUBMIT WRITTEN VERIFICATION THAT A MINIMUM TOPSOIL DEPTH OF 4-INCHES WAS SPREAD ACROSS ALL LOTS AND RIGHT-OF-WAYS WITHIN THE PLAT AFTER EACH PHASE OF CONSTRUCTION IS COMPLETES PRIOR TO A PERMANENT OCCUPANCY PERMIT BEING ISSUED.
2. CONSTRUCTION OPERATIONS SHALL PROTECT STORM SEWERS AND DRAINAGE WAYS FROM ALLOWING SLURRY FROM CONCRETE OPERATIONS TO DISCHARGE OFFSITE.
3. WITH EACH PHASE OF DEVELOPMENT THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING EROSION CONTROLS THAT WILL DIRECT WATER INTO ONE OF THE FIVE TEMPORARY SEDIMENT BASINS BEING PROPOSED ON THE SITE. ALL TEMPORARY SWALES SHALL HAVE DITCH CHECKS INSTALLED.

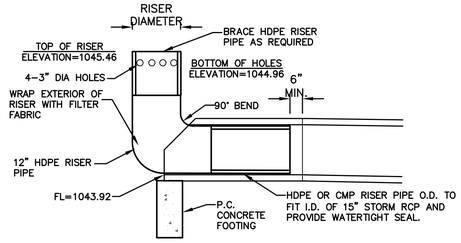
TEMPORARY STAND PIPE #1 DETAIL

NOT TO SCALE



TEMPORARY STAND PIPE #2 DETAIL

NOT TO SCALE



STABILIZATION QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	2,966
2	SEEDING, FERTILIZING, AND MULCHING	AC	3.21
3	INLET PROTECTION DEVICES	EA	36
4	CONCRETE WASHOUT PIT	EA	1
5	TEMPORARY STANDPIPE	EA	5
6	RIPRAP	TONS	82.5
7	SCOUR STOP	SF	200

SCALE
0' 20' 40' 80'

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
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AUTUMN RIDGE APARTMENTS

EROSION PLAN

WAUKEE, IOWA

1402.069

FILE: H:\2014\1402069\DWG\1402069-SITE.DWG
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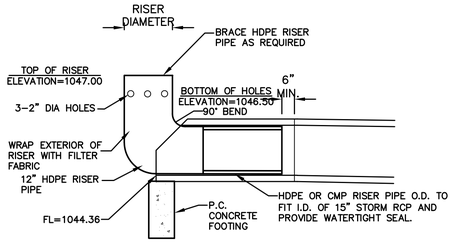
PLOTTED BY: JEFF NESVIK
PLOT DATE: 11/12/2014 3:11 PM
COMMENT:
ENG:
TECH:

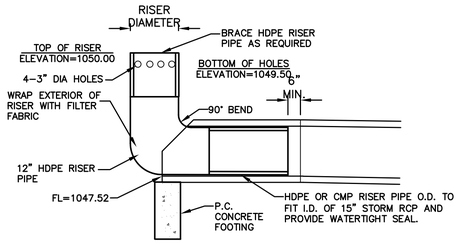
TEMPORARY STAND PIPE #4 DETAIL

NOT TO SCALE



TEMPORARY STAND PIPE #5 DETAIL

NOT TO SCALE



ALICES ROAD

DISCHARGE POINT #1
±1800 FEET TO
AN UNNAMED TRIBUTARY OF
SUGAR CREEK

SILT FENCE (TYP.)

SE OLSON DRIVE

LOT 1

LOT 2

DA #1
5.31 AC

DA #3
14.39 AC

INSTALL TEMPORARY STANDPIPE, SEE DETAIL

TSB #5

TSB #4

TSB #3

PROPOSED STOCKPILE LOCATION FOR PHASE 4 CONSTRUCTION. VERIFY FINAL LOCATION WITH CONTRACTOR.

PROPOSED STAGING AREA FOR PHASES 4–6. VERIFY EXACT LOCATION WITH CONTRACTOR

PROPOSED STAGING AREA FOR PHASES 2 & 3. VERIFY EXACT LOCATION WITH CONTRACTOR

PROPOSED STOCKPILE LOCATION FOR PHASE 1 CONSTRUCTION. VERIFY FINAL LOCATION WITH CONTRACTOR.

GRAVEL CONSTRUCTION EXIT
3" CRUSHED STONE
@ 6" MINIMUM DEPTH

PHASE 1 GRADING SHALL INCLUDE A TEMPORARY SWALE TO DIRECT WATER INTO TSB #5. INSTALL SILT FENCE AND DITCH CHECK IN SWALE.

BUILDING #12
1120 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/-
(PHASE 6)

BUILDING #13
1110 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/-
(PHASE 6)

BUILDING #5
1115 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/-
(PHASE 3)

BUILDING #6
1125 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/-
(PHASE 3)

BUILDING #8
1160 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/-
(PHASE 4)

1150 SE OLSON DRIVE
(PHASE 1)

CONNECTION
FL 8" (SW)=1040.24

CONNECTION
FL 8" (NE)=1040.02

SCALE
0' 20' 40' 80'

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
SECOND SUBMITTAL	10/24/14
FIRST SUBMITTAL	09/09/14

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JJN
CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS

EROSION PLAN

WAUKEE, IOWA

24/27

1402.069

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PLOTTED BY: JEFF NESVIK END:
TECH:

GRAVEL CONSTRUCTION EXIT
3" CRUSHED STONE
@ 6" MINIMUM DEPTH

PHASE 1 GRADING SHALL INCLUDE A TEMPORARY SWALE TO DIRECT WATER INTO TSB #5. INSTALL SILT FENCE AND DITCH CHECK IN SWALE.

BUILDING #10
1190 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 5)

BUILDING #11
1130 SE OLSON DRIVE
3 STORY – 30 UNITS
16,830 SF +/–
(PHASE 6)

INSTALL TEMPORARY STANDPIPE, SEE DETAIL

TSB #3

DA #3
14.39 AC

INLET PROTECTION (TYP.)

BUILDING #9
1180 SE OLSON DRIVE
2 STORY – 24 UNITS
16,830 SF +/–
(PHASE 5)

BUILDING #8
1160 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 4)

BUILDING #7
1170 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 4)

SE OLSON DRIVE

SE BRICK DRIVE

PROPOSED STAGING AREA FOR PHASE I. CONTRACTOR SHALL DETERMINE EXACT LOCATION AND VERIFY THE LOCATION WITH THE CITY OF WAUKEE DEVELOPMENT SERVICES DEPARTMENT. ALL CONSTRUCTION TRADE WORKERS SHALL UTILIZE THIS DURING CONSTRUCTION. NO PARKING WILL BE ALLOWED ON EXISTING PUBLIC STREETS SURROUNDING THE SITE.

UNDISTURBED AREA

DISCHARGE POINT #3
+1800 FEET TO
AN UNNAMED TRIBUTARY OF
SUGAR CREEK

GRAVEL CONSTRUCTION EXIT
3" CRUSHED STONE
@ 6" MINIMUM DEPTH

CONCRETE WASH PIT

BUILDING #2
1165 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 1)

TSB #2

DA #2
10.97 AC

BUILDING #1
1175 SE OLSON DRIVE
2 STORY – 20 UNITS
16,830 SF +/–
(PHASE 1)

TSB #1

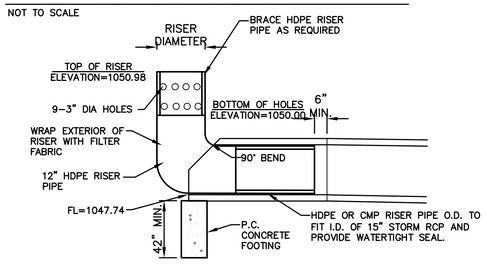
INLET PROTECTION (TYP.)

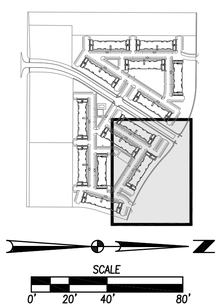
SE BRICK DRIVE

DISCHARGE POINT #2
+1000 FEET TO
AN UNNAMED TRIBUTARY OF
SUGAR CREEK

TEMPORARY STAND PIPE #3 DETAIL

NOT TO SCALE





REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
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EROSION PLAN

WAUKEE, IOWA

1402.069

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DISCHARGE POINT #1
+1800 FEET TO
AN UNNAMED TRIBUTARY
SUGAR CREEK

SE OLSON DRIVE

LOT 3

LOT 2

UNDISTURBED AREA

SILT FENCE (TYP.)

PROPOSED STOCKPILE LOCATION FOR PHASE 4 CONSTRUCTION. VERIFY FINAL LOCATION WITH CONTRACTOR.

INSTALL TEMPORARY STANDPIPE, SEE DETAIL

TSB #5

BUILDING #12
1120 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 6)

BUILDING #13
1110 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 5)

PROPOSED STAGING AREA FOR PHASES 4–6. VERIFY EXACT LOCATION WITH CONTRACTOR

PROPOSED STAGING AREA FOR PHASES 2 & 3. VERIFY EXACT LOCATION WITH CONTRACTOR

BUILDING #10
1190 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 5)

BUILDING #11
1130 SE OLSON DRIVE
3 STORY – 30 UNITS
16,830 SF +/–
(PHASE 6)

GRAVEL CONSTRUCTION EXIT
3" CRUSHED STONE
@ 6" MINIMUM DEPTH

1150 SE OLSON DRIVE
(PHASE 1)

PHASE 1 GRADING SHALL INCLUDE A TEMPORARY SWALE TO DIRECT WATER INTO TSB #5. INSTALL SILT FENCE AND DITCH CHECK IN SWALE.

BUILDING #4
1115 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 3)

INSTALL TEMPORARY STANDPIPE, SEE DETAIL

TSB #3

BUILDING #8
1160 SE OLSON DRIVE
3 STORY – 36 UNITS
19,560 SF +/–
(PHASE 4)

CONNECTION
FL 8" (SW)=1040.24

CONNECTION
FL 8" (NE)=1040.02

DA #3
14.39 AC

SCALE
0' 20' 40' 80'

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
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CIVIL DESIGN ADVANTAGE

AUTUMN RIDGE APARTMENTS

WAUKEE, IOWA

EROSION PLAN

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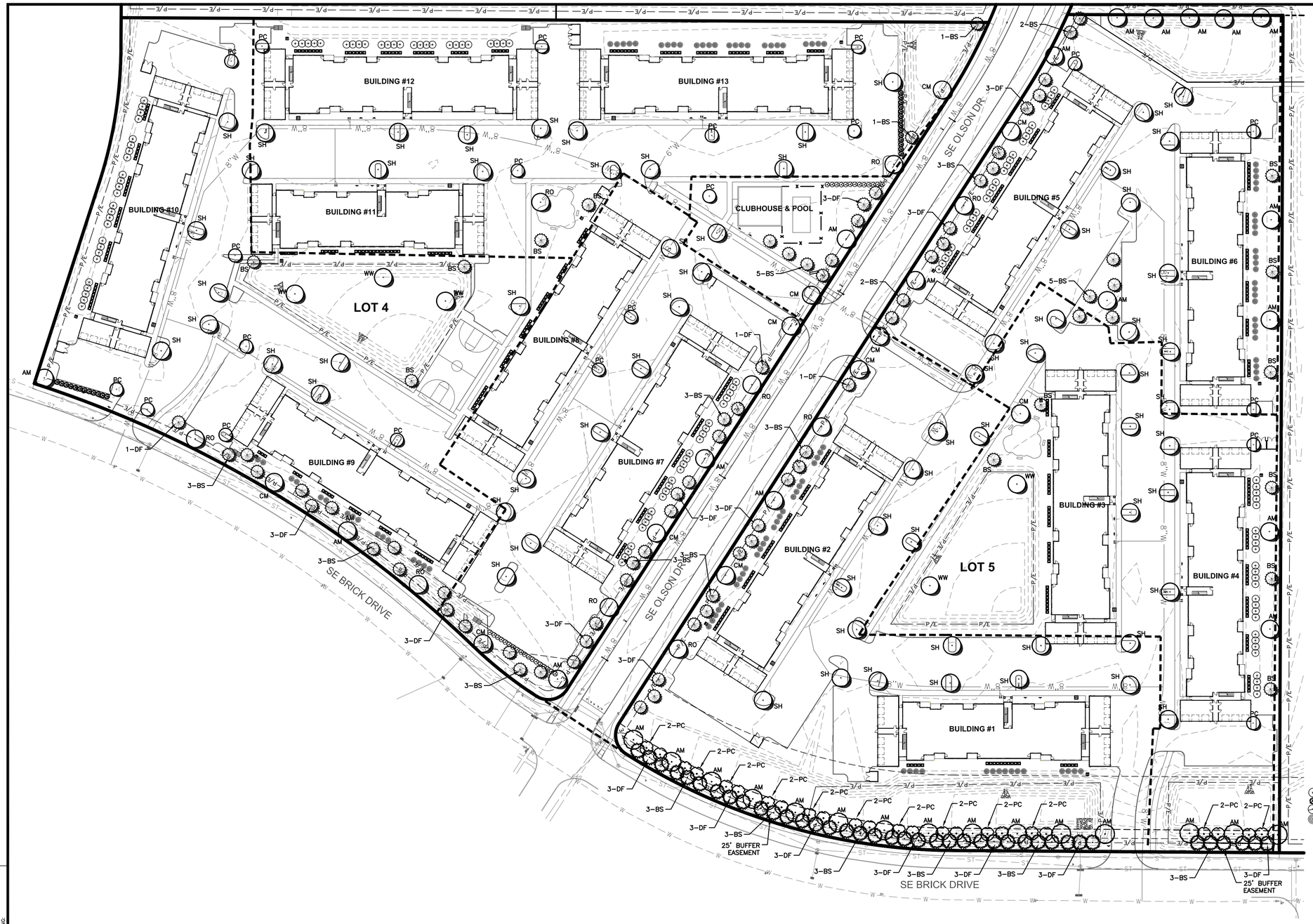


LANDSCAPE NOTES

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. ALL CONSTRUCTION SHALL CONFORM TO THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS.
3. TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1
4. ALL PLANT MATERIAL SHALL BE HEALTHY SPECIMENS WITHOUT DEFORMITIES, VOIDS AND OPEN SPACES, WITH WELL DEVELOPED BRANCH AND ROOT SYSTEMS; TRUE TO HEIGHT, SHAPE AND CHARACTER OF GROWTH OF THE SPECIES OR VARIETY.
5. BACKFILL TO TOP OF CURB. (MINUS 1 1/2" FOR SOD, IF REQ.)
6. WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
7. SHREDDED HARDWOOD MULCH SHALL BE PLACED AROUND ALL TREES, SHRUBS AND IN ALL PLANTING BEDS TO A (MIN) DEPTH OF 3".
8. ALL EDGING SHALL BE SPADE CUT EDGE.
9. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
10. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY. R.O.W. SHALL BE CLEAN AND FREE OF DEBRIS PRIOR TO ANY RAIN EVENT.
11. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
12. CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN TO OWNER, IF REQUESTED, FOR APPROVAL.
13. THE PERMANENT OCCUPANCY OF EACH BUILDING WILL BE SUBJECT TO MEETING THE IDNR REQUIREMENTS FOR SITE ESTABLISHMENT.

LOT 4 - LANDSCAPE REQUIREMENTS

SITE AREA = 500,614 SF
OPEN SPACE REQUIRED (20%) = 100,123 SF
OPEN SPACE PROVIDED (45%) = 225,378 SF
IMPERVIOUS AREA = 275,236 SF

1 TREE PER 1,000 SF OR REQUIRED OPEN SPACE.
1 SHRUB PER 1,000 SF OR REQUIRED OPEN SPACE.

MINIMUM 50% = OVERSTORY
MINIMUM 25% = EVERGREEN

OVERSTORY TREES = 8' MIN. HEIGHT
EVERGREEN TREES = 6' MIN. HEIGHT
ORNAMENTAL TREES = 6' MIN. HEIGHT

TREES REQUIRED: 100
TREES PROVIDED: 113

SHRUBS REQUIRED: 100
SHRUBS PROVIDED: 155

LOT 5 - LANDSCAPE REQUIREMENTS

SITE AREA = 485,021 SF
OPEN SPACE REQUIRED (20%) = 97,004 SF
OPEN SPACE PROVIDED (-%) = - SF
IMPERVIOUS AREA = - SF

1 TREE PER 1,000 SF OR REQUIRED OPEN SPACE.
1 SHRUB PER 1,000 SF OR REQUIRED OPEN SPACE.

MINIMUM 50% = OVERSTORY
MINIMUM 25% = EVERGREEN

OVERSTORY TREES = 8' MIN. HEIGHT
EVERGREEN TREES = 6' MIN. HEIGHT
ORNAMENTAL TREES = 6' MIN. HEIGHT

TREES REQUIRED: 97
TREES PROVIDED: 105

SHRUBS REQUIRED: 97
SHRUBS PROVIDED: 115

PLANT SCHEDULE

CODE	QTY	OVERSTORY TREES		SIZE	COND
AM	18	AUTUMN BLAZE MAPLE	ACER RUBRUM 'AUTUMN BLAZE'	8' HT.	B&B
CM	11	CRIMSON KING MAPLE	ACER PLATANOIDES	8' HT.	B&B
SH	68	SHADEMASTER HONEYLOCUST	GLEDITSIA TRICANTHAS INERMIS 'SHADEMASTER'	8' HT.	B&B
RO	11	RED OAK	QUERCUS RUBRA	8' HT.	B&B
WW	5	WEEPING WILLOW	SALIX BABY LONICA	8' HT.	B&B

CODE	QTY	ORNAMENTAL TREES		SIZE	COND
PC	20	PRAIRIE FIRE CRAB	MALUS X 'PRAIRE FIRE'	1.5" CAL	B&B

CODE	QTY	EVERGREEN TREES		SIZE	COND
DF	30	DOUGLAS FIR	PSEUDOTSGA MENZIESII	6' HT.	B&B
BS	53	COLORADO BLUE SPRUCE	PICEA PUNGENS	6' HT.	B&B

CODE	QTY	SHRUBS		SIZE	COND
BB	125	BURNING BUSH	EUOUNYMOUS ALATAS	18" HT.	CONT
SJ	26	SEA GREEN JUNIPER	JUNIPEROUS CHINENSIS 'SEA GREEN'	18" HT.	CONT
ID	31	IVORY HALO DOGWOOD	CORNUS ALBA	18" HT.	CONT
PJ	106	PJM RHODODENDRON	RHODODENDRON PJM	18" HT.	CONT

LOT 5 - BUFFER REQUIREMENTS (EAST)

LENGTH = 743' SF
1 OVERSTORY, 2 EVERGREEN & 2 ORNAMENTAL TREES PER 50 LF.

OVERSTORY TREES REQUIRED: -15
EVERGREEN TREES REQUIRED: -31
ORNAMENTAL TREES REQUIRED: -31

OVERSTORY TREES PROVIDED: -15
EVERGREEN TREES PROVIDED: -39
ORNAMENTAL TREES PROVIDED: -24

BUFFER PLANT SCHEDULE

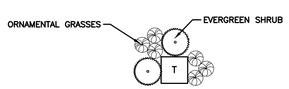
CODE	QTY	OVERSTORY TREES		SIZE	COND
AM	15	AUTUMN BLAZE MAPLE	ACER RUBRUM 'AUTUMN BLAZE'	8' HT.	B&B

CODE	QTY	ORNAMENTAL TREES		SIZE	COND
PC	24	PRAIRIE FIRE CRAB	MALUS X 'PRAIRE FIRE'	1.5" CAL	B&B

CODE	QTY	EVERGREEN TREES		SIZE	COND
DF	21	DOUGLAS FIR	PSEUDOTSGA MENZIESII	6' HT.	B&B
BS	18	COLORADO BLUE SPRUCE	PICEA PUNGENS	6' HT.	B&B

OTHER REQUIREMENTS

ONE TREE PER 40 LF OF STREET FRONTAGE TO BE SET A MINIMUM 5 FEET INTO THE SITE BETWEEN THE PRIVATE PARKING AND PUBLIC SIDEWALK.



ELECTRICAL TRANSFORMER SCREENING DETAIL

ALL GROUND MOUNTED MECHANICAL UNITS TO BE ADEQUATELY SCREENED FROM PUBLIC VIEW.

LOCATIONS AND QUANTITY OF ELECTRICAL UNITS SHALL BE DETERMINED BY UTILITY PROVIDER.

IMPERVIOUS AREAS

PHASE 1: 114,825 SF
CLUBHOUSE: 13,935 SF
PHASE 2: 83,890 SF
PHASE 3: 91,170 SF
PHASE 4: 92,715 SF
PHASE 5: 107,300 SF
PHASE 6: 121,350 SF

PHASING SCHEDULE

PHASE 1
- SITE GRADING AND UTILITIES – FALL 2014
- BUILDINGS 1, 2, CLUBHOUSE AND POOL – LATE FALL 2014

PHASE 2
- BUILDINGS 3 AND 4 – FALL 2015

PHASE 3
- BUILDINGS 5 AND 6 – SPRING 2016

PHASE 4
- BUILDINGS 7 AND 8 – FALL 2016

PHASE 5
- BUILDINGS 9 AND 10 – SPRING 2017

PHASE 6
- BUILDINGS 11, 12 AND 13 – FALL 2017

TURF GRASS

SEED OR SOD ALL AREAS DISTUREBED AREAS AS DIRECTED BY OWNER.

IF SEED IS CHOSEN, CONTRACTOR SHALL HYDRO SEED USING TYPE 1 URBAN LAWN MIX AS SPECIFIED BY SUDAS

NOTE:
SEED OR SOD ALL DISTURBED AREAS WITHIN PHASE 1 AND ALL DISTURBED AREAS WITHIN PUBLIC RIGHT-OF-WAY. TEMPORARY SEED THE REMAINDER OF THE PROPERTY UNTIL DEVELOPMENT OCCURS, AT WHICH TIME IT SHALL BE SEEDED OR SODDED AS STATED ABOVE.

N
SCALE
0' 30' 60' 120'

REVISIONS	DATE
THIRD SUBMITTAL	11/12/14
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LANDSCAPE PLAN

WAUKEE, IOWA

27/27

1402.069

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