SITE PLAN
OF
RAINBOW CHILD CARE CENTER

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2	DIMENSION PLAN
3	GRADING PLAN
4	UTILITY PLAN
5	LANDSCAPE PLAN
6	DETAILS
7	DETAILS

VICINITY SKETCH
NO SCALE

GENERAL NOTES

1. ONE WEEK PRIOR TO CONSTRUCTION CONTRACTOR SHALL NOTIFY:
   A. CITY OF ANKENY BUILDING DIVISION
   B. EIGI4T RCCC 202 IA-ANKENY NORTH LLC % PAT AND SONS CONSOLIDATED LLC SOL
   C. CIVIL ENGINEERING CONSULTANTS, INC.
   D. "ONE CALL" UTILITY LOCATE SERVICE
   E. CITY OF ANKENY PUBLIC WORKS
2. ALL DIMENSIONS ARE TO BACK OF CURB, OUTSIDE OF BUILDING WALL, AND TO PROPERTY LINES.
3. LOCATIONS AND DIMENSIONS SHOWN ON PLANS FOR EXISTING FACILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. ENGINEER DOES NOT GUARANTEE ACCURACY OF INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN. IT IS RESPONSIBILITY OF CONTRACTOR TO CONTACT ALL PUBLIC AND/OR PRIVATE UTILITIES SERVING AREA TO DETERMINE PRESENT EXTENT AND EXACT LOCATION OF THEIR FACILITIES BEFORE BEGINNING WORK.
4. CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT UTILITIES OR STRUCTURES AT SITE. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO NOTIFY OWNERS OF UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK. CONTRACTOR SHALL NOTIFY PROPER UTILITY IMMEDIATELY UPON BREAKING OR DAMAGE TO ANY UTILITY LINE OR APPURTENANCE, OR INTERRUPTION OF SERVICE. HE SHALL NOTIFY PROPER UTILITY INVOLVED. IF EXISTING UTILITY LINES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, CONTRACTOR SHALL NOTIFY ENGINEER SO THAT CONFLICT MAY BE RESOLVED.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH 2017 SUDAS & CITY OF ANKENY SUPPLEMENTAL SPECIFICATIONS.
6. ALL DEBRIS SPILLED ON CITY/D.O.T. R.O.W. AND ADJOINING PROPERTY SHALL BE REMOVED BY OWNER/CONTRACTOR IN TIMELY FASHION.
7. A SIGN PERMIT IS REQUIRED BEFORE SIGNS ARE INSTALLED.

GRADING NOTES

1. STRIP A MINIMUM OF 6" OF TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT INCLUDING WASTE AND/OR BORROW AREAS. ADDITIONAL STRIPPING MAY BE REQUIRED TO ADEQUATELY REMOVE ORGANICS AND SOFT SEDIMENTS.
2. ALL AREAS WHICH ARE TO RECEIVE EMBANKMENT SHALL HAVE TOP 12-INCHES DISCED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
3. ALL AREAS TO RECEIVE STRUCTURAL FILL SHALL BE BENCHED.
4. ANY LOCALIZED AREAS WHICH CANNOT BE SATISFACTORILY COMPACTED OR WHICH SHOW EVIDENCE OF PUMPING ACTION SHALL BE UNDERCUT AND RECOMPACTED WITH ON-SITE FILL MATERIAL.
5. ALL FILL SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 95.0% OF STANDARD PROCTOR DENSITY WITH MOISTURE LIMITS SET FORTH IN SOILS REPORT.
6. MAINTAIN ALL CUT AND FILL AREAS TO ACCOMMODATE SURFACE DRAINAGE.
7. GRADING CONTRACTOR SHALL STOCKPILE TOP SOIL FOR SHOULDERING & SEED/SOD BEDS.
8. FINISHED GRADE ON ALL NON-PAVED AREAS SHALL BE WITHIN 0.20 FOOT OF PLAN GRADE. PAVED AREAS SHALL BE WITHIN 0.10 FOOT.
9. CONTRACTOR SHALL VERIFY LOCATION AND PROTECT ALL EXISTING UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY CONTRACTOR AT CONTRACTOR'S EXPENSE, TO SATISFACTION OF UTILITY OWNER.
10. TOPSOIL SHALL BE SPREAD TO A MINIMUM THICKNESS OF 6-INCHES ON ALL LANDSCAPEDAREAS.
11. BACKFILL TO TOP OF ALL CURBS.
12. ALL ELEVATIONS ARE TO GUTTER GRADE UNLESS NOTED OTHERWISE.
13. ALL EXISTING TILE LINES ENCOUNTERED SHALL BE RESTORED OR ROUTED TO A STORM SEWER WHETHER ACTIVE OR NOT.

SEEDING NOTES

1. FERTILIZER (16-16-16) SHALL BE APPLIED TO AREA TO BE SEEDED AT A RATE OF 650 LBS/ACRE.
2. AREA TO BE SEEDED SHALL BE SMOOTH, AND ALL WASHED AND GULLIES FILLED TO MEET DESIRED CROSS SECTION. AREAS ACCESSIBLE TO MACHINERY SHALL BE CULTIVATED TO A DEPTH OF 3". AREAS INACCESSIBLE TO MACHINE SHALL BE CULTIVATED TO A DEPTH OF 1 1/2 INCHES.
3. FERTILIZER SHALL BE INCORPORATED INTO SOIL TO A DEPTH OF 3" WITH A MECHANICAL ROCK PICKER OR A SPRING TOOTH CULTIVATOR.
4. ON ALL AREAS ACCESSIBLE TO MACHINERY, A DROP-TYPE SEEDER ATTACHED TO A LANDSCAPE ROLLER SHALL BE USED TO SOW GRASS SEED. ON AREAS INACCESSIBLE TO MACHINERY A CYCLONE SEEDER WILL BE PERMITTED. NO OTHER HAND SEEDING METHOD IS ACCEPTABLE.
5. ALL SEEDED AREAS SHALL BE MULCHED IMMEDIATELY AFTER SEEDING BY APPLYING 2 TONS OF DRY MULCH PER ACRE.
6. MULCH MAY CONSIST OF STRAW (OAT, WHEAT, BARLEY OR RYE). HAY, BROMEGRASS, TIMOTHY, ORCHARD GRASS, ALFALFA OR CLOVER SHALL NOT BE USED. ALL MATERIAL MUST BE FREE OF ALL NOXIOUS WEEDS.
7. ALL SEEDED AREAS SHALL BE WATERED ARTIFICIALLY A MINIMUM OF TWICE A DAY FOR FIRST WEEK AFTER INSTALLATION, AND ONCE A DAY DURING THE SECOND AND THIRD WEEK AFTER INSTALLATION.

SODDING NOTES

1. SOD SHALL BE A FOUR WAY BLEND WHICH SHALL CONTAIN 25% OF EACH OF FOLLOWING: KENTUCKY BLUE GRASS AND ONE OTHER BLUE GRASS, CREEPING RED FESCUE, AND TALL FESCUE. ABOVE CONTENT MAY VARY UP TO 5%.
2. SOD SHALL BE CUT AT A UNIFORM THICKNESS OF APPROXIMATELY 1" PLUS OR MINUS 1/4".
3. BEFORE STRIPPING, SOD SHALL BE MOWED TO A UNIFORM HEIGHT OF 2 1/2".
4. SOD SHALL BE REASONABLY FREE OF DISEASE AND SOIL-BORNE INSECTS.
5. SOD SHALL BE FREE OF OBJECTIONABLE GRASSY AND BROADLEAF WEEDS.
6. SOD SHALL BE HARVESTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY NOT ADVERSELY AFFECT THE SURVIVAL OF SOD.
7. SOD SHALL BE CUT, DELIVERED AND INSTALLED IN A TIME PERIOD OF 36 HOURS.
8. SOD BED SHALL BE IN A FIRM BUT UNCOMPACTED CONDITION WITH A RELATIVELY FINE TEXTURE AND FREE OF FOOTPRINTS DEEPER THAN 1/2" AT TIME OF SODDING.
9. SOD SHALL BE LAID WITH STAGGERED JOINTS AT RIGHT ANGLES TO DIRECTION OF SLOPE. IN DITCH BOTTOMS, SOD SHALL BE LAID AT RIGHT ANGLES TO DIRECTION OF THE FLOW OF WATER.
10. SOD SHALL BE STAKED ON ALL SLOPES THAT ARE 4:1 OR STEEPER.
11. IN ABSENCE OF ADEQUATE RAINFALL, SOD SHALL BE WATERED BY CONTRACTOR AFTER INSTALLATION TO A DEPTH OF AT LEAST 4". SUBSEQUENT WATERINGS SHALL MAINTAIN MOISTURE TO A DEPTH OF 4 INCHES.
12. SOD SHALL NOT BE MOWN UNTIL IT IS FIRMLY ROOTED. NO MORE THAN 1/3 OF GRASS LEAF SHALL BE REMOVED.

UTILITY NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2017 VERSION OF THE STATE WIDE URBAN DESIGN STANDARDS AND SPECIFICATIONS (SUDAS).
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. DAMAGE TO UTILITIES OR STRUCTURES SHALL BE REPAIRED BY CONTRACTOR TO SATISFACTION OF UTILITY OWNER.
3. RECONNECT ANY FIELD TILE THAT ARE INTERCEPTED DURING UTILITY CONSTRUCTION.
4. CONTRACTOR SHALL PROTECT AND BACK FILL AROUND UNDERGROUND UTILITIES. BACK FILL SHALL BE IN 6-INCH LAYERS, COMPACTED TO 95% STANDARD PROCTOR DENSITY.
5. ALL WATER MAIN SERVICE WORK SHALL BE CONSTRUCTED ACCORDING TO SUDAS VERSION 2017.
6. ALL BUILDING DOWNSPOUTS SHALL BE CONNECTED TO NEW STORM SEWERS.
7. SANITARY SEWER PROVIDED BY CITY OF ANKENY.
8. WHERE SEWERS CROSS OVER OR LESS THAN 18-INCHES BELOW A WATER MAIN, LOCATE ONE FULL LENGTH OF SEWER PIPE OF WATER MAIN MATERIAL OR RCP WITH FLEXIBLE O-RING GASKET JOINTS SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM WATER MAIN.
9. MANHOLE ADJUSTMENTS TO EXISTING MANHOLES SHALL INCLUDE NOT MORE THAN 18-INCH OF ADJUSTING RINGS. LARGER ADJUSTMENTS SHALL REQUIRE A NEW BARREL SECTION.
10. SANITARY MANHOLES SHALL HAVE 2 PIECE CASTINGS AND 1 & 1 INSERTS.

UTILITY CONTACTS

ANKENY PUBLIC WORKS	PH: 515-965-6484
KEN PLAGER	KPLAGER@ANKENYIOWA.GOV
MIDAMERICAN ELEC & GAS	PH: 515-281-2260
THERESA McGUIRE	TMMcGUIRE@MIDAMERICAN.COM
MEDIACOM COMM. CORP.	PH: 515-246-2252
PAUL MAY	PMAY@MEDIACOMCC.COM
CENTURYLINK LOCAL NETWORK	PH: 515-263-7385
RAY MONTOYA	RAY.MONTOYA@CENTURYLINK.COM

OWNER/APPLICANT

EIGI4T RCCC 202 IA-ANKENY NORTH LLC
% PAT AND SONS CONSOLIDATED LLC SOL
1742 CROOKS ROAD
TROY, MICHIGAN 48084
CONTACT: AMY LABADIE (248-519-9279)

PROJECT MANAGER

BART TURK
CIVIL ENGINEERING CONSULTANTS, INC.
2400 86th STREET, UNIT 12.
DES MOINES, IOWA 50322
CONTACT PH: 515-276-4884, EXT. 222
EMAIL: TURK@CECLAC.COM

AREAS

BUILDING = 11,992 SF
PAVING = 22,001 SF
OPEN SPACE = 26,183 SF
TOTAL = 60,175 SF

IMPERVIOUS = 37,223 SF
ERU: 10

PARKING REQUIREMENTS

PARKING REQUIRED: 1 SPACE PER 300 SF GFA AND NUMBER OF EMPLOYEES ON A SHIFT
11,992/ 300 = 40
10 EMPLOYEES
40 + 10 = 50

PARKING PROVIDED
46 SPACES (INCL 2 HC SPACES)
WE ASK FOR AN ADMINISTRATIVE VARIANCE OF 4 SPACES

LEGAL DESCRIPTION

LOT 2, EXCEPT THE NORTH 51.02 FEET, IN BRIARWOOD PLAT 21, AN OFFICIAL PLAT, NOW INCLUDED IN AND FORMING A PART OF THE CITY OF ANKENY, POLK COUNTY, IOWA.

ZONING

C-2 (GENERAL RETAIL AND HIGHWAY ORIENTED COMMERCIAL DISTRICT)

SETBACKS

FRONT = 35 FEET
REAR = 40 FEET
SIDE = NONE

CERTIFICATIONS

BART A. TURK
LANDSCAPE ARCHITECT
NO. 279

I HEREBY CERTIFY THAT THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA.

BY:______________________ DATE:__________
BART A. TURK, IOWA REG. NO. 279
MY LICENCE RENEWAL DATE IS: JUNE 30, 2019
PAGES OR SHEETS COVERED BY THIS SEAL:
SHEETS 1-7

LEGEND

━━ ━ ━ ━━	PROPERTY BOUNDARY
—— – – ——	SECTION LINES
—— – – ——	LOT LINES
—— - ——	CENTERLINE
▲	FOUND SECTION CORNER
△	SET SECTION CORNER (5/8" I.R. W/YELLOW CAP #7844 UNLESS OTHERWISE NOTED)
●	FOUND PROPERTY CORNER
⊙	SET PROPERTY CORNER (5/8" I.R. W/YELLOW CAP #7844 UNLESS OTHERWISE NOTED)
D.	DEEDED DISTANCE
M.	MEASURED DISTANCE
P.	PREVIOUSLY RECORDED DISTANCE
I.R.	IRON ROD
I.P.	IRON PIPE
P.O.B.	POINT OF BEGINNING
(123)	ADDRESS
B.S.L.	BUILDING SETBACK LINE
1+23.45 - LOT #	SANITARY SEWER SERVICE WYE LOCATION

EXISTING	PROPOSED	
— — ST18"	——	STORM SEWER & SIZE
— —SAN8"	——	SANITARY SEWER & SIZE
— — W8"	——	WATER MAIN & SIZE
○	●	MANHOLE
▭	▨	STORM INTAKE
ᵒ	●	FIRE HYDRANT
⋈	⧓	VALVE
△	▲	F.E.S.
-990- - -		EXISTING CONTOURS
	—990—	PROPOSED CONTOURS
×—×—×		SILT FENCE
◉		SOIL BORING LOCATION
T		TRANSFORMER PAD
☆		STREET LIGHT POLE

Civil Engineering Consultants, Inc.
2400 86th Street . Unit 12 . Des Moines, Iowa 50322
515.276.4884 . Fax: 515.276.7084 . mail@ceclac.com

CEC

DATE: 10-30-2017	REVISIONS	COMMENTS
	1	
	2	
	3	
DATE OF SURVEY: 02-09-2017	4	
DESIGNED BY: CEC	5	
DRAWN BY: CEC	6	

RAINBOW CHILD CARE CENTER
ANKENY, IOWA

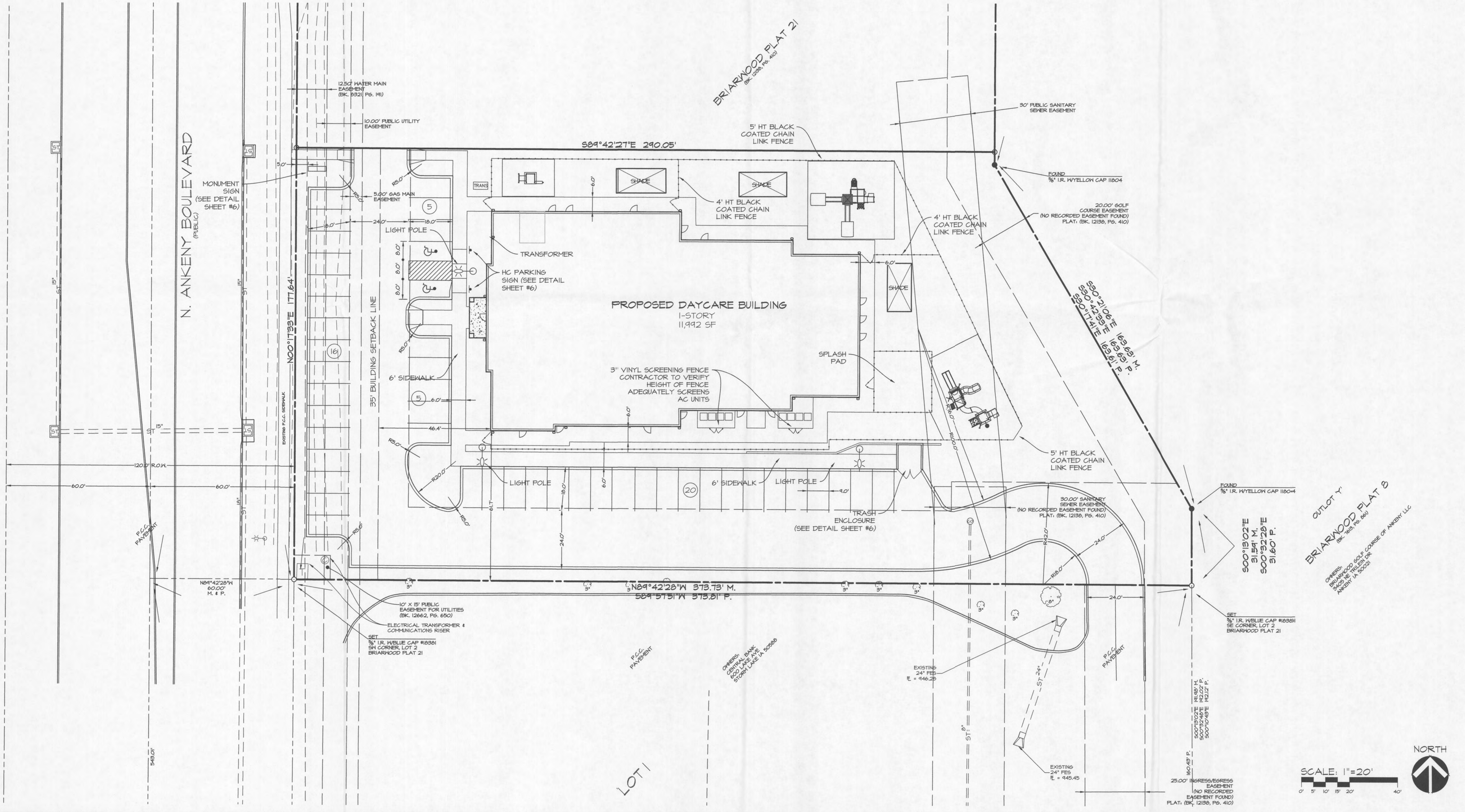
COVER

SHEET
1
OF 7

A1852

LIGHTING INFORMATION

3 EA. DSXII LED 60C 700 T3M
20' POLES.



RAINBOW CHILD CARE CENTER
ANKENY, IOWA

DIMENSION PLAN

DATE:	10-30-2017	REVISIONS	COMMENTS
		1	
		2	
		3	
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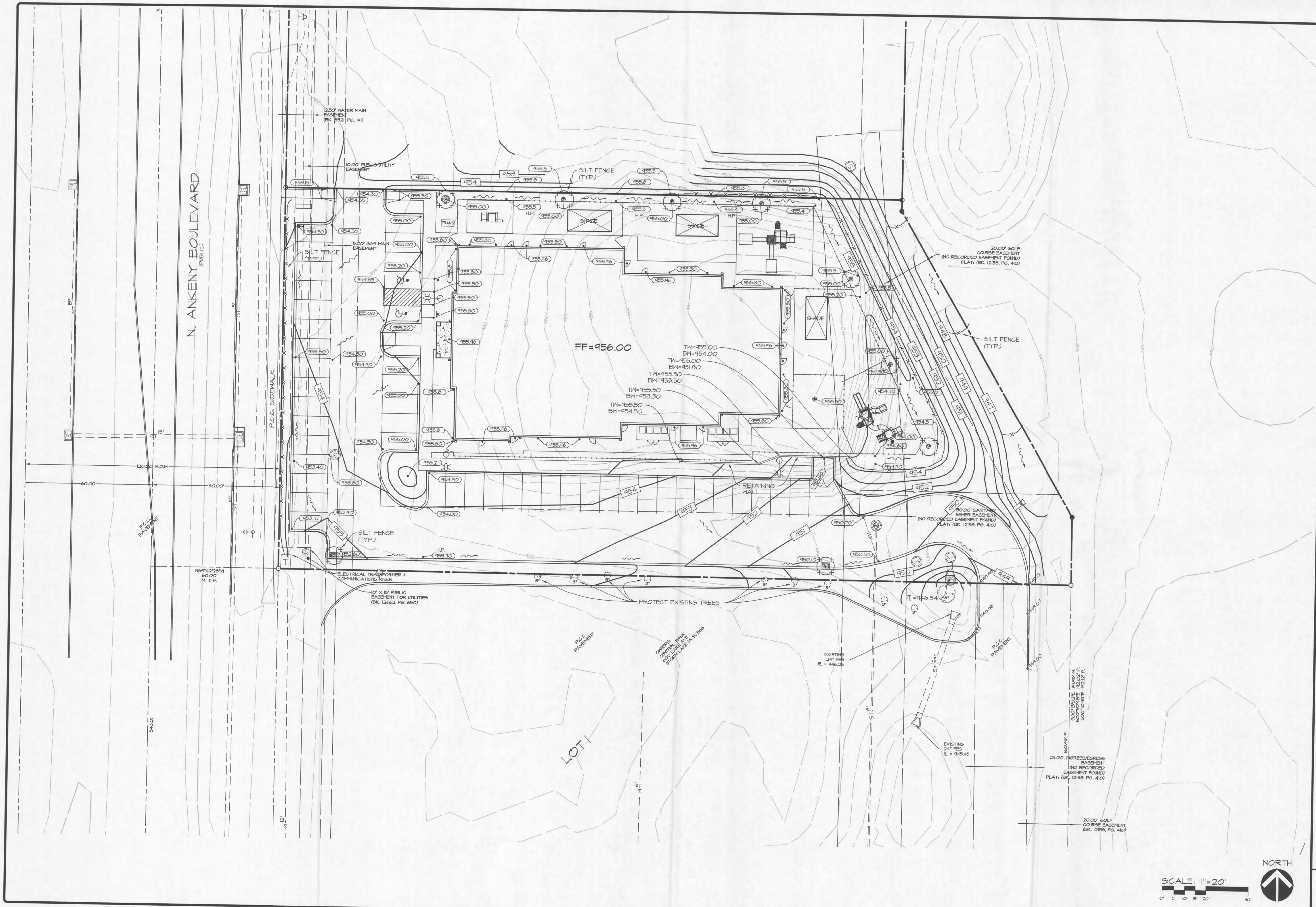
SHEET
2
OF 7

A1852



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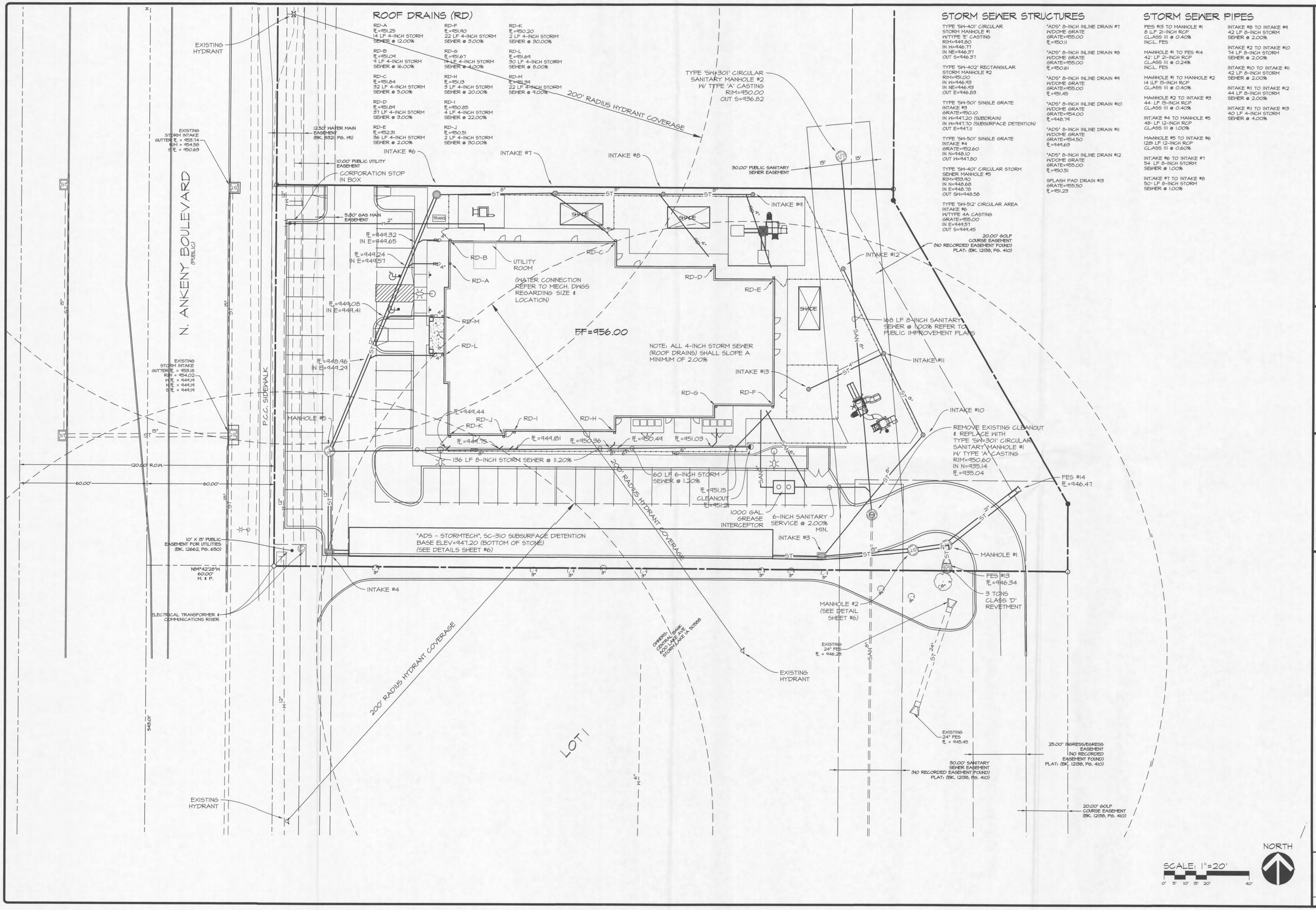
RAINBOW CHILD CARE CENTER
ANKENY, IOWA

GRADING PLAN

SHEET 3 OF 7

A1852



ROOF DRAINS (RD)

RD-A
FL=951.25
14 LF 4-INCH STORM
SEWER @ 12.00%

RD-B
FL=951.09
9 LF 4-INCH STORM
SEWER @ 16.00%

RD-C
FL=951.84
32 LF 4-INCH STORM
SEWER @ 5.00%

RD-D
FL=951.89
37 LF 4-INCH STORM
SEWER @ 3.00%

RD-E
FL=952.31
36 LF 4-INCH STORM
SEWER @ 2.00%

RD-F
FL=951.90
22 LF 4-INCH STORM
SEWER @ 3.00%

RD-G
FL=951.67
14 LF 4-INCH STORM
SEWER @ 4.00%

RD-H
FL=951.13
3 LF 4-INCH STORM
SEWER @ 20.00%

RD-I
FL=950.85
4 LF 4-INCH STORM
SEWER @ 22.00%

RD-J
FL=950.51
2 LF 4-INCH STORM
SEWER @ 30.00%

RD-K
FL=950.20
2 LF 4-INCH STORM
SEWER @ 30.00%

RD-L
FL=951.69
30 LF 4-INCH STORM
SEWER @ 8.00%

RD-M
FL=951.39
22 LF 4-INCH STORM
SEWER @ 9.00%

STORM SEWER STRUCTURES

TYPE 'SW-401' CIRCULAR
STORM MANHOLE #1
W/TYPE 'E' CASTING
RIM=949.80
IN W=946.77
IN NE=946.37
OUT S=946.37

TYPE 'SW-402' RECTANGULAR
STORM MANHOLE #2
RIM=951.00
IN W=946.93
IN NE=946.93
OUT E=946.83

TYPE 'SW-501' SINGLE GRATE
INTAKE #3
GRATE=950.10
IN W=947.20 (SUBDRAIN)
IN W=947.70 (SUBSURFACE DETENTION)
OUT E=947.11

TYPE 'SW-501' SINGLE GRATE
INTAKE #4
GRATE=952.60
IN N=948.10
OUT W=947.80

TYPE 'SW-401' CIRCULAR STORM
SEWER MANHOLE #5
RIM=953.90
IN N=948.68
IN E=948.78
OUT SW=948.58

TYPE 'SW-512' CIRCULAR AREA
INTAKE #6
W/TYPE 4A CASTING
GRATE=955.00
IN E=949.57
OUT S=949.45

"ADS" 8-INCH INLINE DRAIN #7
W/DOME GRATE
GRATE=955.00
FL=950.11

"ADS" 8-INCH INLINE DRAIN #8
W/DOME GRATE
GRATE=955.00
FL=950.61

"ADS" 8-INCH INLINE DRAIN #9
W/DOME GRATE
GRATE=955.00
FL=951.45

"ADS" 8-INCH INLINE DRAIN #10
W/DOME GRATE
GRATE=954.00
FL=948.79

"ADS" 8-INCH INLINE DRAIN #11
W/DOME GRATE
GRATE=954.50
FL=949.63

"ADS" 8-INCH INLINE DRAIN #12
W/DOME GRATE
GRATE=955.00
FL=950.51

SPLASH PAD DRAIN #13
GRATE=955.50
FL=951.23

STORM SEWER PIPES

FES #13 TO MANHOLE #1
8 LF 21-INCH RCP
CLASS III @ 0.40%
INCL. FES

MANHOLE #1 TO FES #14
42 LF 21-INCH RCP
CLASS III @ 0.24%
INCL. FES

MANHOLE #1 TO MANHOLE #2
14 LF 15-INCH RCP
CLASS III @ 0.40%

MANHOLE #2 TO INTAKE #3
44 LF 15-INCH RCP
CLASS III @ 0.40%

INTAKE #4 TO MANHOLE #5
48 LF 12-INCH RCP
CLASS III @ 1.00%

MANHOLE #5 TO INTAKE #6
128 LF 12-INCH RCP
CLASS III @ 0.60%

INTAKE #6 TO INTAKE #7
54 LF 8-INCH STORM
SEWER @ 1.00%

INTAKE #7 TO INTAKE #8
50 LF 8-INCH STORM
SEWER @ 1.00%

INTAKE #8 TO INTAKE #9
42 LF 8-INCH STORM
SEWER @ 2.00%

INTAKE #2 TO INTAKE #10
74 LF 8-INCH STORM
SEWER @ 2.00%

INTAKE #10 TO INTAKE #11
42 LF 8-INCH STORM
SEWER @ 2.00%

INTAKE #11 TO INTAKE #12
44 LF 8-INCH STORM
SEWER @ 2.00%

INTAKE #11 TO INTAKE #13
40 LF 4-INCH STORM
SEWER @ 4.00%

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REVISIONS	COMMENTS
1	
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DATE: 10-30-2017
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DESIGNED BY: CEC
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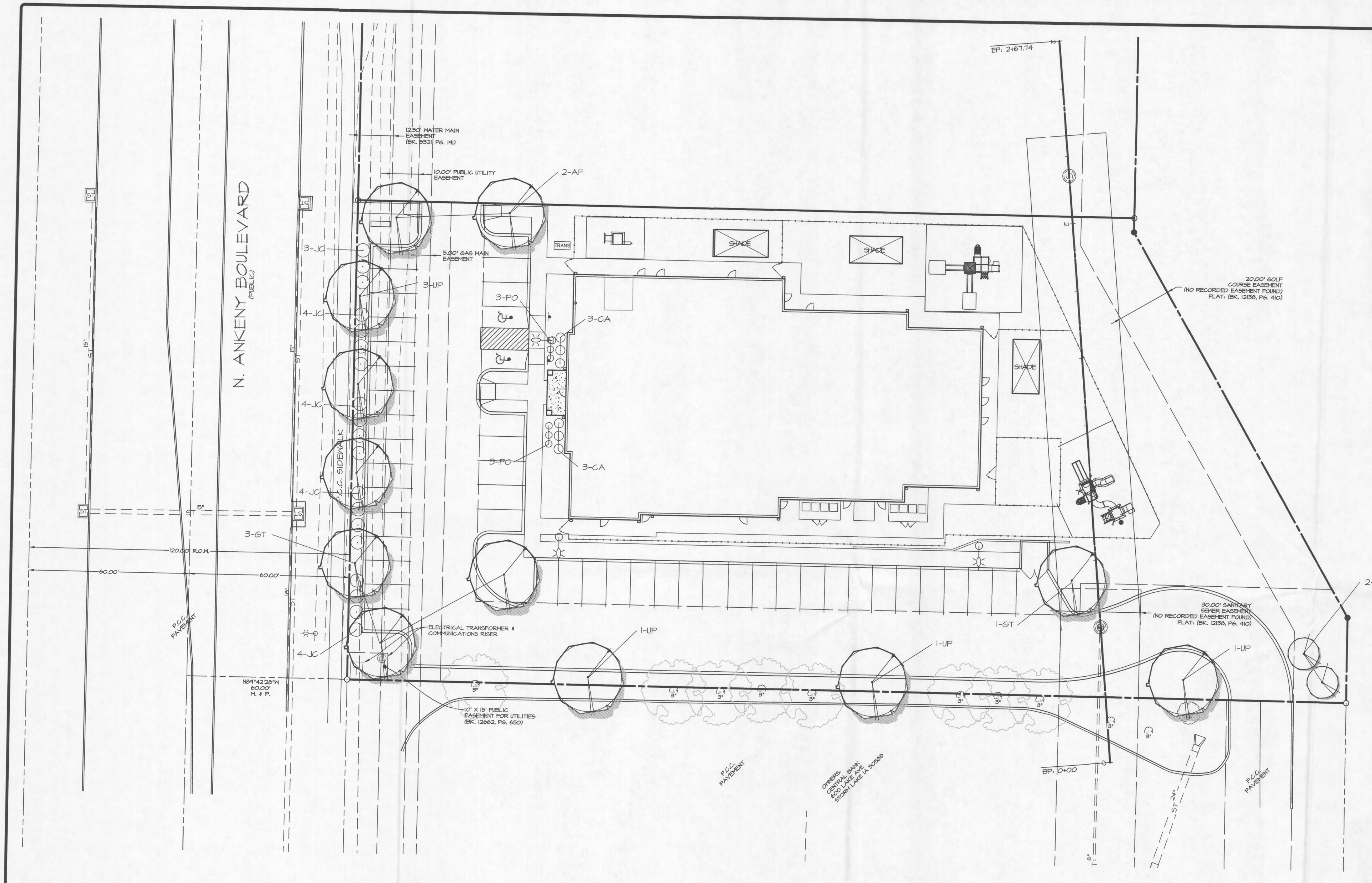
RAINBOW CHILD CARE CENTER
ANKENY, IOWA

UTILITY PLAN

SHEET
4
OF 7

A1852



PLANTING SCHEDULE

UP	6	Ulmus americana 'Pioneer' Pioneer Elm	2 1/2" Cal.	B&B/Cont.	See Plan
GT	4	Gleditsia triacanthos inermis 'Skycole' Skyline Honey Locust	2 1/2" Cal.	B&B/Cont.	See Plan
AF	2	Acer freemani 'Marmo' Marmo Maple	2 1/2" Cal.	B&B/Cont.	See Plan
PC	2	Pyrus calleryana 'Cleveland Select' Cleveland Select Flowering Pear	1 1/2" Cal.	Cont.	See Plan
CA	6	Calamagrostis x acutiflora Karl Foerster Grass	#2	Cont.	See Plan
PO	6	Physocarpus opulifolius 'Donna May' Little Devil Dwarf Ninebark	#2	Cont.	See Plan
JC	19	Juniperus chinensis Sea Green Juniper	#2	Cont.	See Plan

PARKING LOT SHADING

Requirement: Shade 20% of the paved area with overstory deciduous trees (706 sf).

22,001 sf (paved area) x 0.20 = 4,400
4,400/706 = 6 trees.

Trees within islands (full): 2 proposed.
Trees around perimeter (partial): 8 proposed.

OPEN SPACE LANDSCAPING

Requirement: 1 plant unit per 3,000 sf of required open space.
60,175 x 20% = 12,035 sf
12,035sf (20%) open space / 3,000 = 4 units.
Use 3 trees and 3 shrubs per unit.
(3)(3)= 12 trees and 12 shrubs required.

SCALE: 1"=20'
0' 5' 10' 15' 20' 40'

NORTH

SHEET
5
OF 7
A1852

RAINBOW CHILD CARE CENTER
ANKENY, IOWA

LANDSCAPE PLAN

DATE:	10-30-2017	REVISIONS	COMMENTS
		1	
		2	
		3	
DATE OF SURVEY:	02-04-2017	4	
DESIGNED BY:	CEC	5	
DRAWN BY:	CEC	6	

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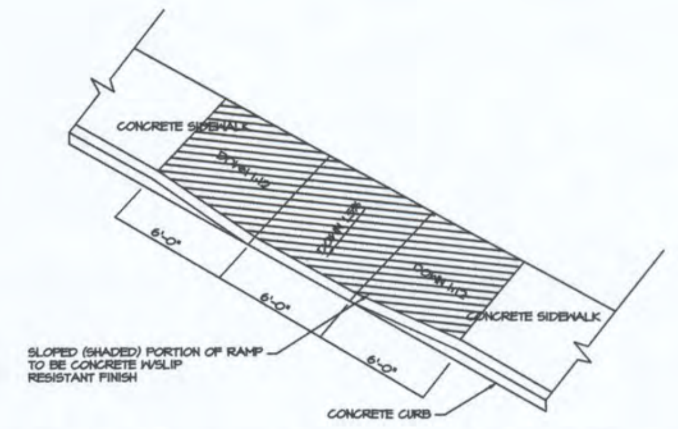
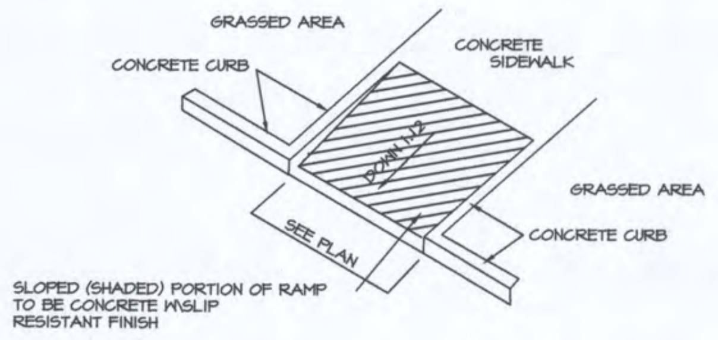


NOTE: ADA CURB CUT @ NO SIDEWALK PERPENDICULAR TO RAMP.

CURB RAMP

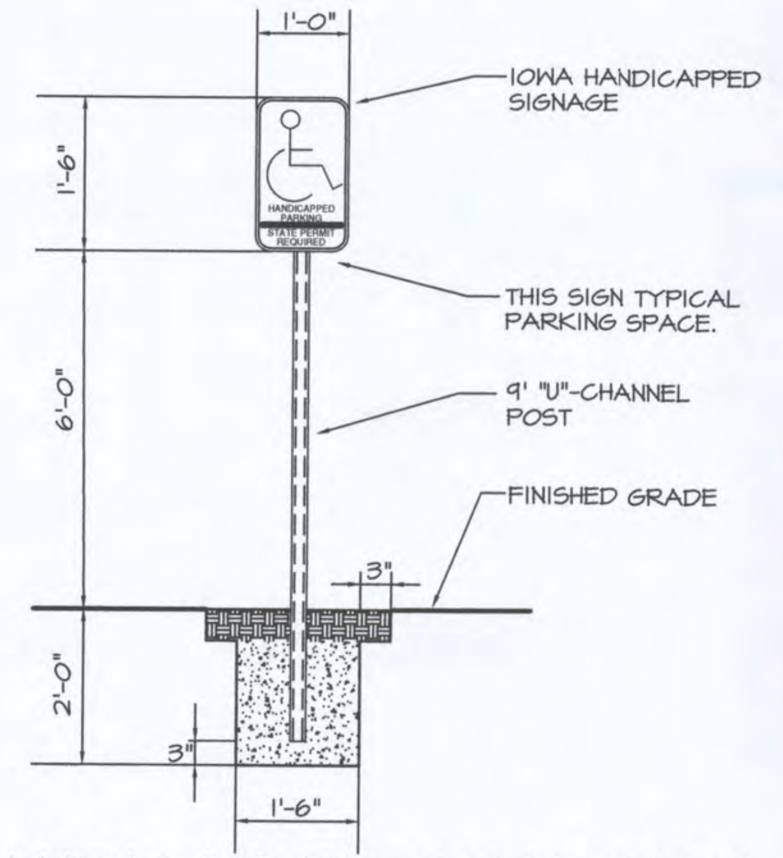
NO SCALE



NOTE: ADA CURB CUT @ SIDEWALK PERPENDICULAR TO RAMP.

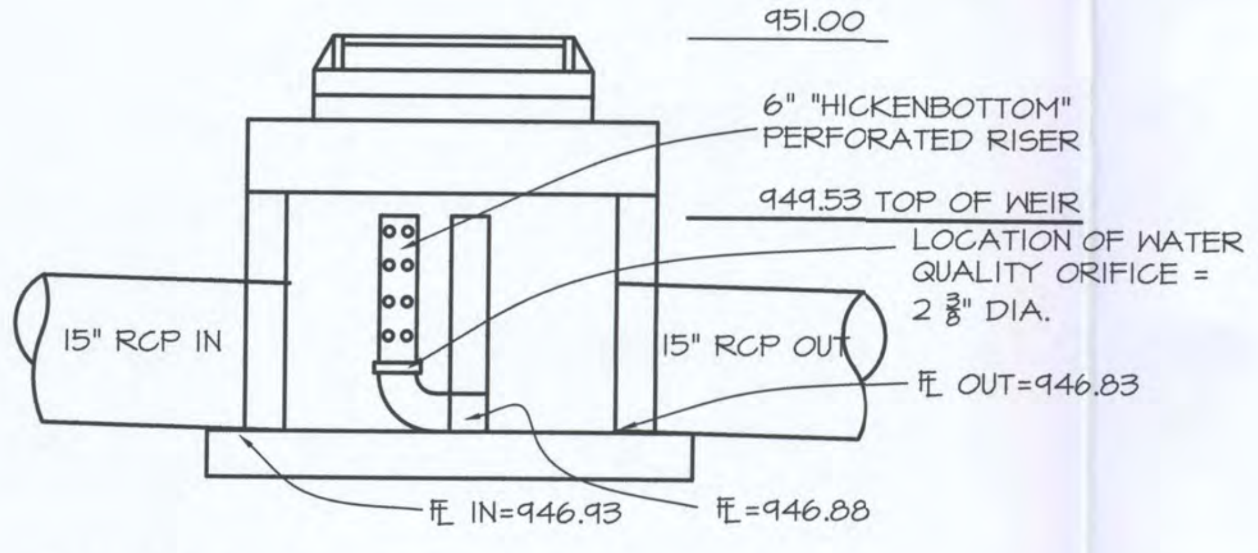
CURB RAMP

NO SCALE



HANDICAP PARKING SIGN

(PER IOWA STATE D.O.T.) NO SCALE



BASIN OUTLET DETAIL (MANHOLE #2)

NO SCALE

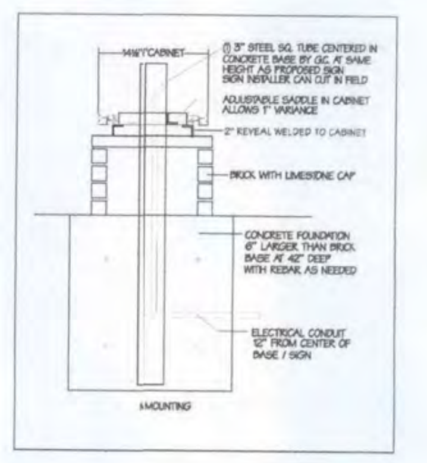
RAINBOW VARIOUS
TYPICAL RCCC PRINTS
TYPICAL SIGNS

(1) 61" X 75" ILLUMINATED D/F MONUMENT SIGN

SCALE 1/2" =1'
RAI_ MS-61in X 75in_070114

MOUNTING DETAIL

G.C. TO FURNISH CONCRETE FOUNDATION WITH SQ. TUBE BRICK BASE & ELECTRICAL CONDUIT / SERVICE SIGN CONTRACTOR TO INSTALL SIGN WITH MOUNTING HARDWARE, HOOK . UP ELECTRIC & CUT SQ. TUBE TO SIZE



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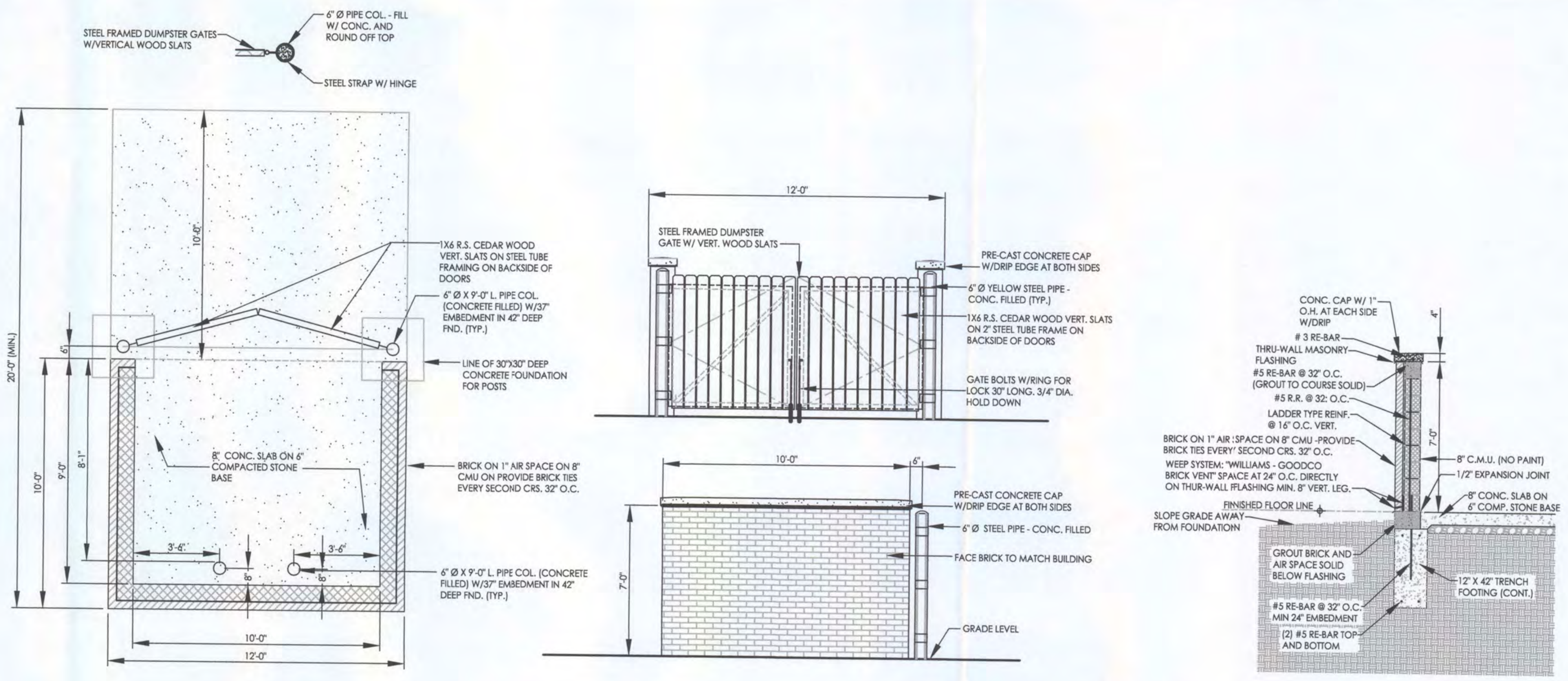
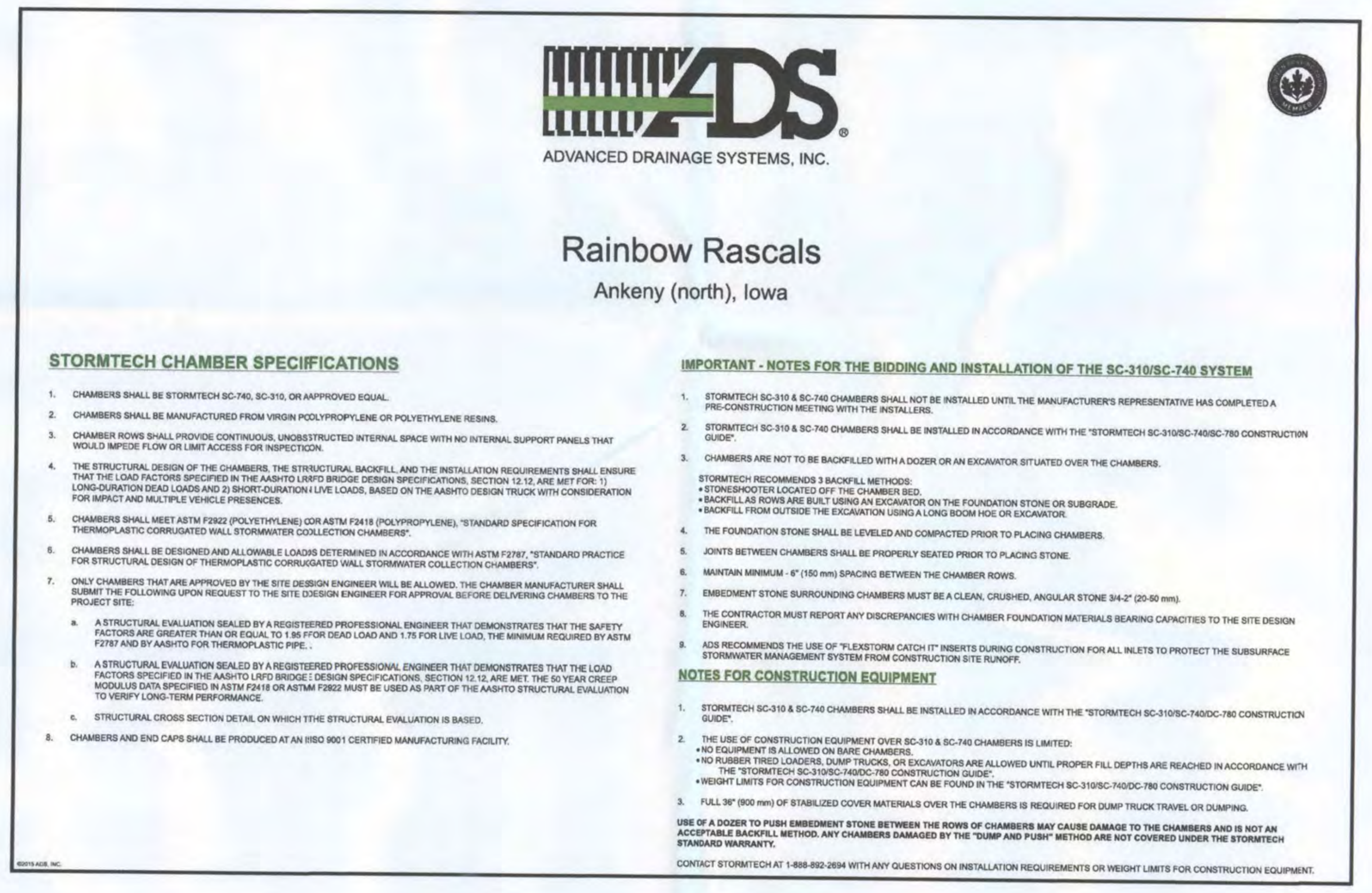


Dumpster Enclosure Plan

N.T.S.

GENERAL NOTES:
1. ALL EXTERIOR MATERIALS TO MATCH BUILDING IF THERE IS NO BRICK TO MATCH - MATCH MASONRY
2. ADHERE TO ALL LOCAL ORDINANCES AND DESIGN REQUIREMENTS. NOTIFY ARCHITECT OF ANY DISCREPANCIES.



ADVANCED DRAINAGE SYSTEMS, INC.

Rainbow Rascals

Ankeny (north), Iowa

STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740, SC-310, OR APPROVED EQUAL.
2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
5. CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
7. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
   - a. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
   - b. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
   - c. STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310/SC-740 SYSTEM

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.

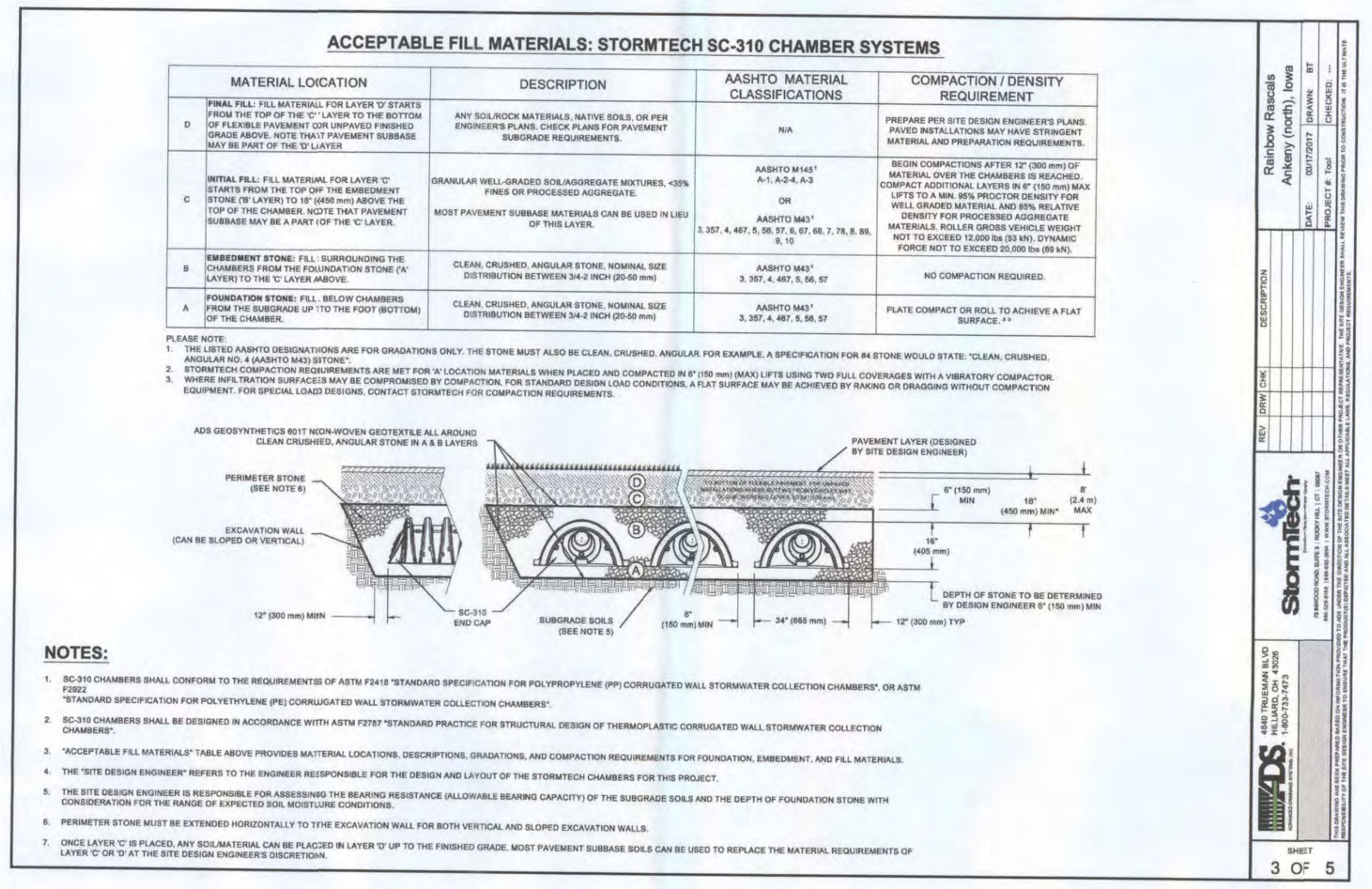
   STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

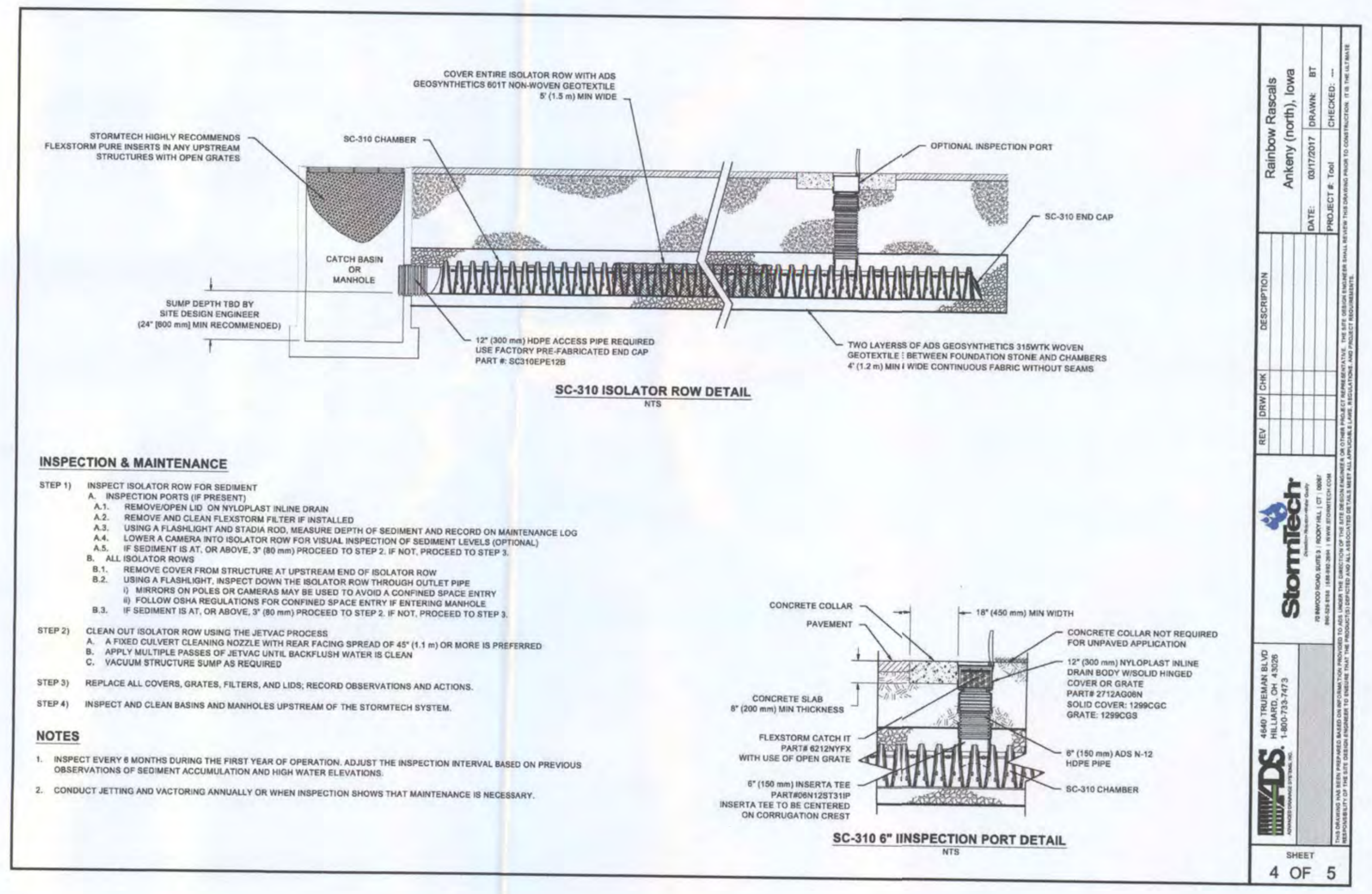
MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2][3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

NOTES:

1. SC-310 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
5. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
7. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

Rainbow Rascals
Ankeny (north), Iowa
DATE: 03/17/2017 DRAWN: BT
PROJECT #: Tool CHECKED: ---
REV DRW CHK DESCRIPTION
StormTech
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473
SHEET 3 OF 5



SC-310 ISOLATOR ROW DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

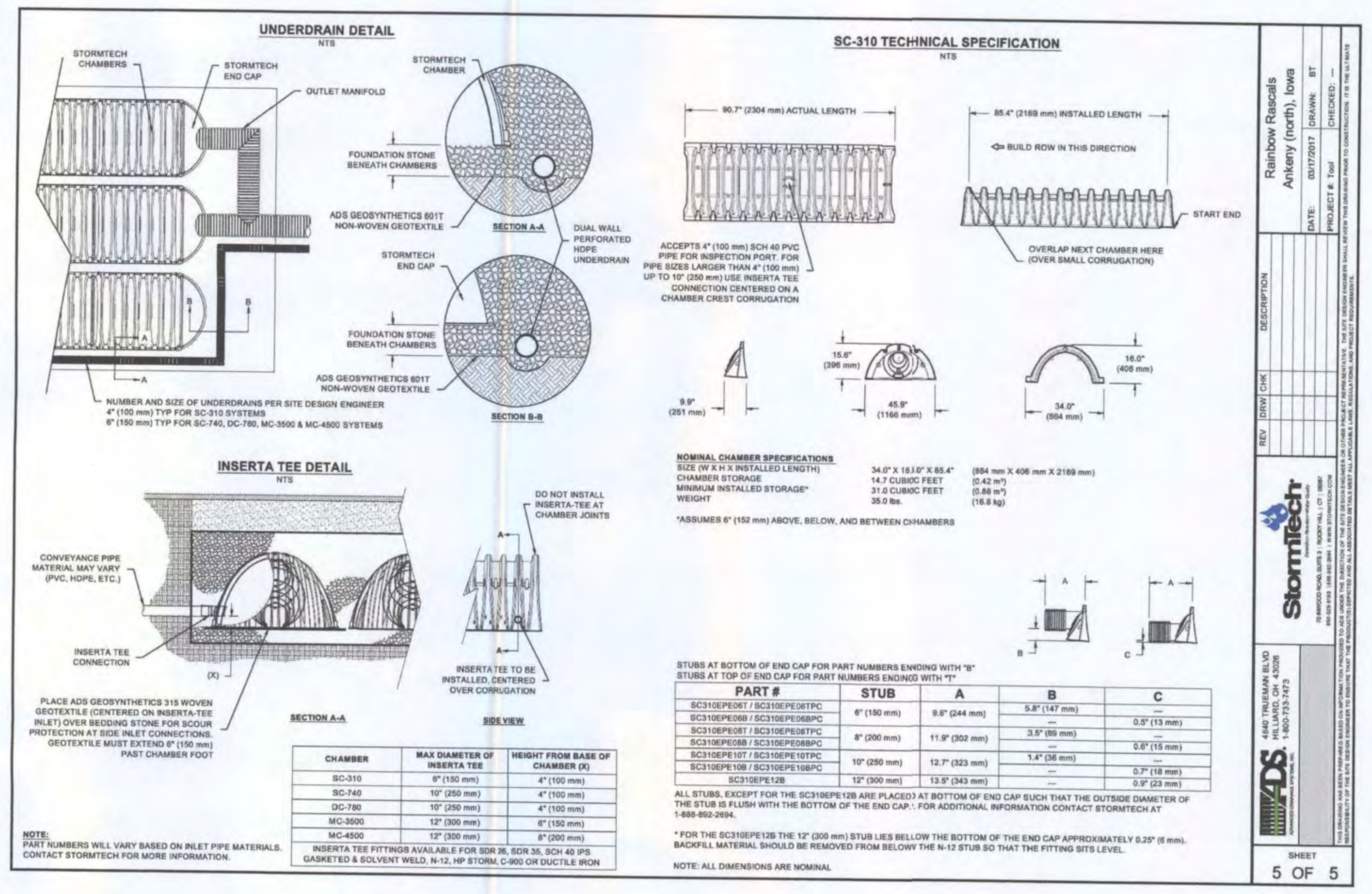
NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SC-310 6" INSPECTION PORT DETAIL

NTS

Rainbow Rascals
Ankeny (north), Iowa
DATE: 03/17/2017 DRAWN: BT
PROJECT #: Tool CHECKED: ---
REV DRW CHK DESCRIPTION
StormTech
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473
SHEET 4 OF 5



UNDERDRAIN DETAIL

NTS

NUMBER AND SIZE OF UNDERDRAINS PER SITE DESIGN ENGINEER
4" (100 mm) TYP FOR SC-310 SYSTEMS
6" (150 mm) TYP FOR SC-740, DC-780, MC-3500 & MC-4500 SYSTEMS

INSERTA TEE DETAIL

NTS

CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON		

NOTE:
PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.

SC-310 TECHNICAL SPECIFICATION

NTS

NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	34.0" X 16.0" X 85.4"	(864 mm X 406 mm X 2169 mm)
CHAMBER STORAGE	14.7 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	31.0 CUBIC FEET	(0.88 m³)
WEIGHT	35.0 lbs.	(16.8 kg)

*ASSUMES 6" (152 mm) ABOVE, BELOW, AND BETWEEN CHAMBERS

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	A	B	C
SC310EPE06T / SC310EPE06TPC	6" (150 mm)	9.6" (244 mm)	5.8" (147 mm)	---
SC310EPE06B / SC310EPE06BPC			---	0.5" (13 mm)
SC310EPE08T / SC310EPE08TPC	8" (200 mm)	11.9" (302 mm)	3.5" (89 mm)	---
SC310EPE08B / SC310EPE08BPC			---	0.6" (15 mm)
SC310EPE10T / SC310EPE10TPC	10" (250 mm)	12.7" (323 mm)	1.4" (36 mm)	---
SC310EPE10B / SC310EPE10BPC			---	0.7" (18 mm)
SC310EPE12B	12" (300 mm)	13.5" (343 mm)	---	0.9" (23 mm)

ALL STUBS, EXCEPT FOR THE SC310EPE12B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC310EPE12B THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

Rainbow Rascals
Ankeny (north), Iowa
DATE: 03/17/2017 DRAWN: BT
PROJECT #: Tool CHECKED: ---
REV DRW CHK DESCRIPTION
StormTech
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473
SHEET 5 OF 5

CEC
Civil Engineering Consultants, Inc.
2400 86th Street . Unit 12 . Des Moines, Iowa 50322
515.276.4884 . Fax: 515.276.7084 . mail@ceclac.com

REVISIONS	COMMENTS
1	
2	
3	
4	
5	
6	

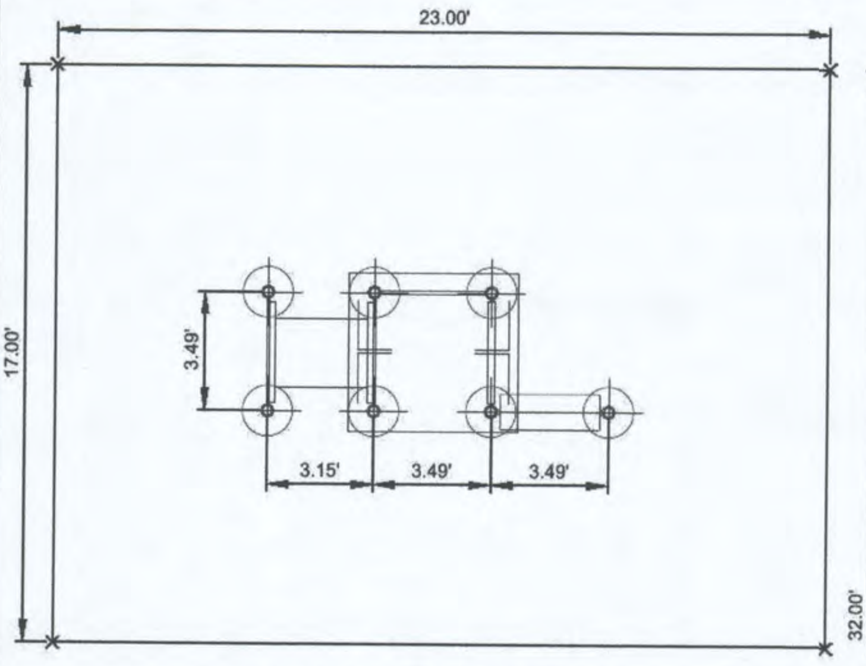
DATE: ############
##
#
DATE OF SURVEY: ############
DESIGNED BY: CEC
DRAWN BY: CEC

RAINBOW CHILD CARE CENTER
3055 NORTH ANKENY BOULEVARD, ANKENY, IA 50021

DETAILS

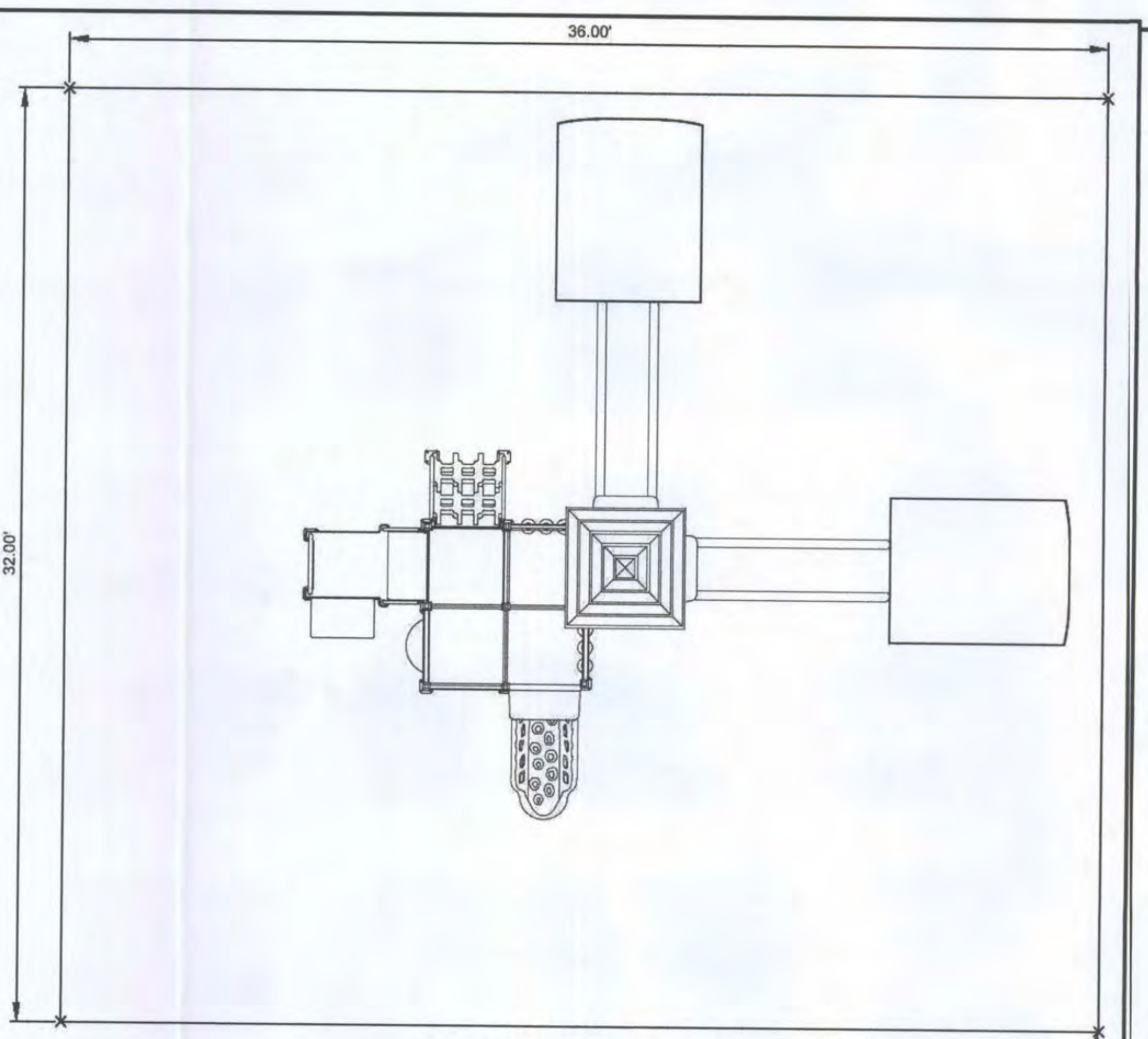
SHEET 6 OF 7

A1852



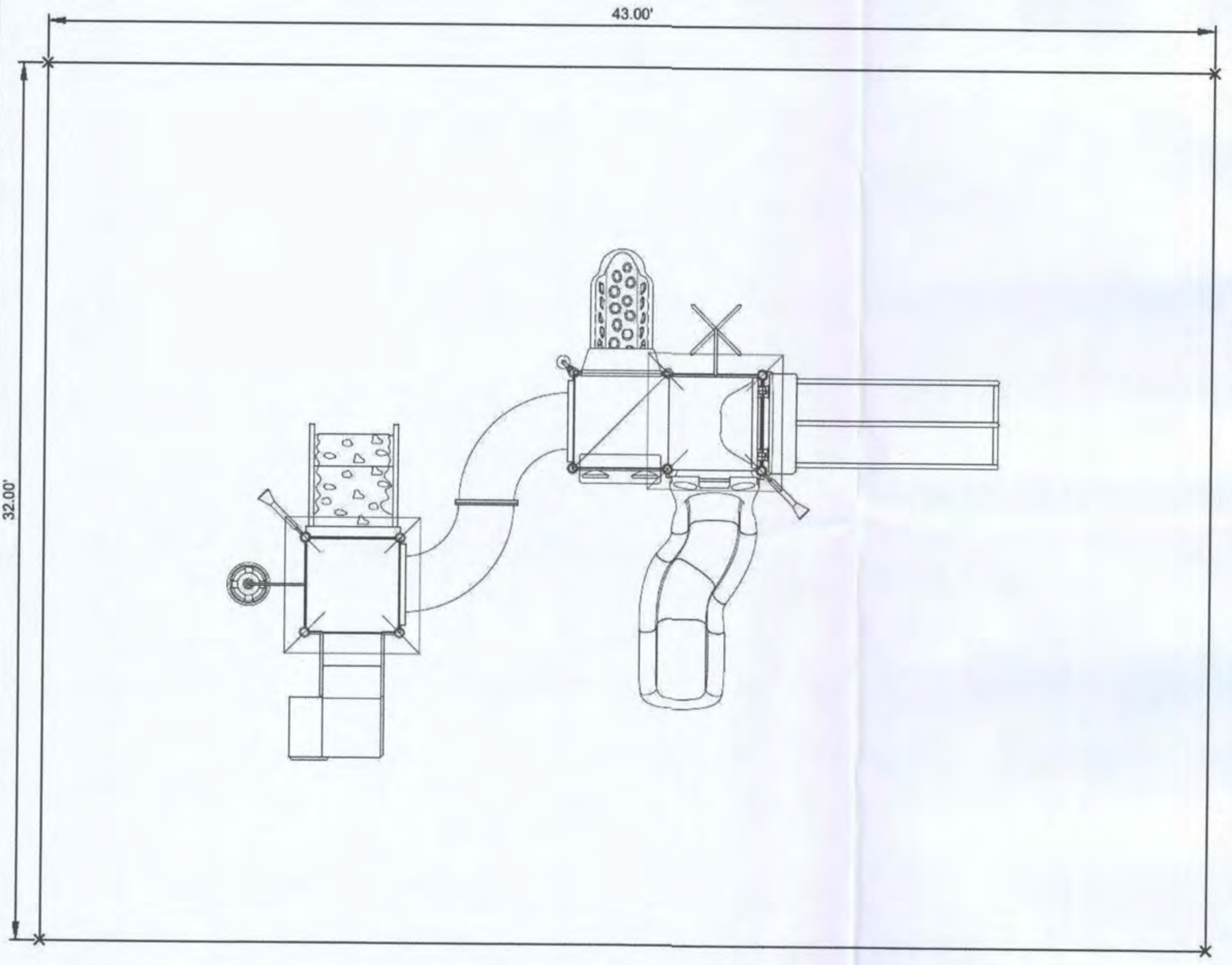
6-23 MONTHS STRUCTURE

- NO FALL ZONE REQUIREMENT
- NO UNDERCUT REQUIRED



TODDLER PLAY STRUCTURE

ENGINEER SHALL PROVIDE GRADING ELEVATION ON THE PLANS FOR EACH CORNER (TYP.) FOR ALL 3 STRUCTURES AND SPLASH PAD



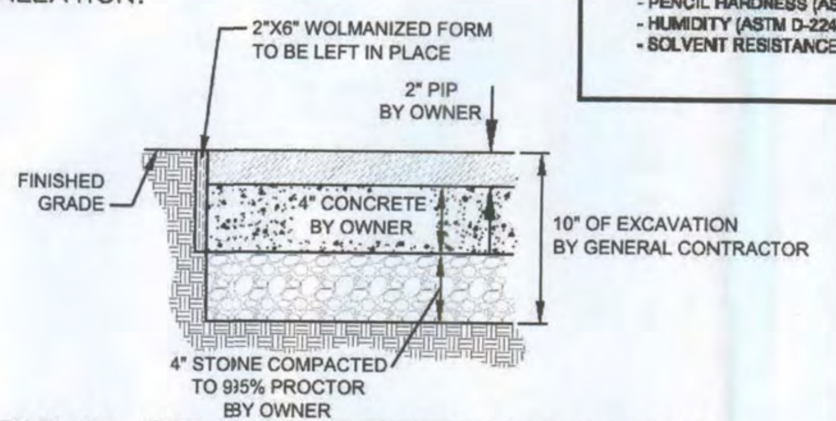
VARIOUS ROCK CLIMB STRUCTURE

PLAY STRUCTURES

SCALE: 1" = 5'

PLAYGROUND STRUCTURE INSTALLATION INFORMATION

1. THE EQUIPMENT SHOWN HERE ARE TO BE LOCATED AT THE FURTHEST "CORNER FENCE" LOCATIONS FROM THE BUILDING.
2. THE GENERAL CONTRACTOR IS TO UNLOAD AND STORE PLAYGROUND EQUIPMENT ONSITE AND INFORM THE OWNER WHEN THESE ARE TO BE INSTALLED. IT SHOULD BE CONSIDERED THAT THERE IS A 7 WEEK LEAD TIME FROM ORDER TO DELIVERY.
3. GENERAL CONTRACTOR TO ENSURE THAT THE EXTERIOR DIMENSIONS OF THE TODDLER AND ROCK CLIMB STRUCTURES ARE UNDERCUT THE SURROUNDING FINISHED GRADE BY A DEPTH OF 10" AND COMPACTED.
4. THE OWNER WILL THEN INSTALL THE REQUIRED POLES FOR THE STRUCTURES AS REQUIRED.
5. THE OWNER WILL THEN SUPPLY AND INSTALL 4" OF COMPACTED STONE & 4" OF CONCRETE. THE GENERAL CONTRACTOR WILL COORDINATE WITH THE OWNER AND FENCES AND SOD SHALL BE INSTALLED AFTER THE PLACEMENT OF THE COMPACTED STONE.
6. 2" P.I.P. (FALL ZONE SURFACE) SHALL THEN BE INSTALLED BY THE OWNER.
7. ALL STRUCTURES SHOULD BE AT FINISHED GRADE AFTER INSTALLATION.



TYPICAL CROSS SECTION UNDER ROCK CLIMB & TODDLER STRUCTURES

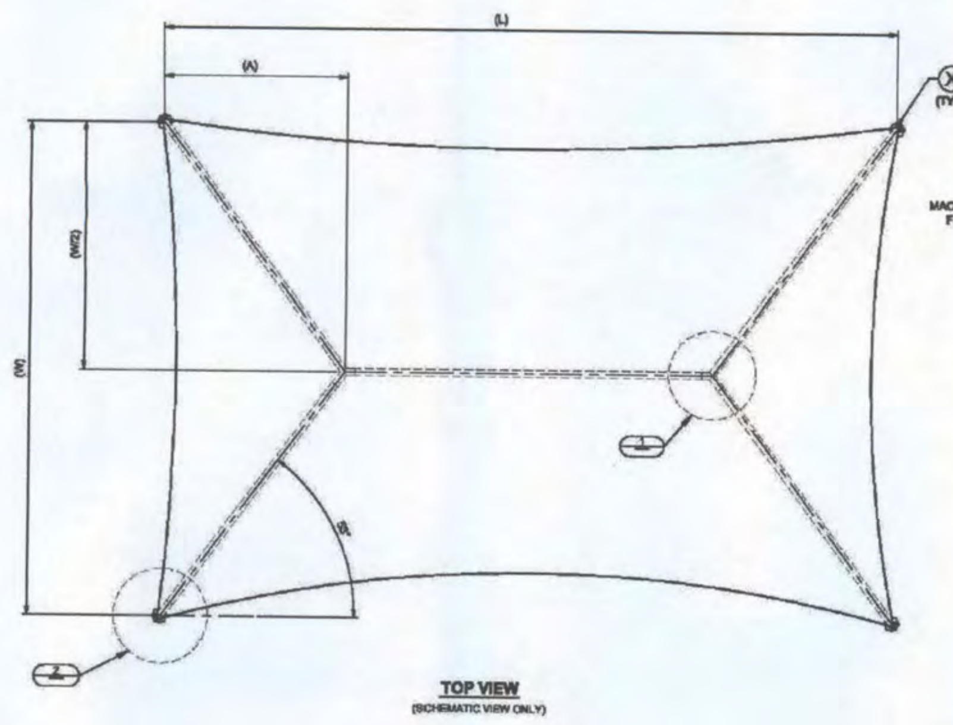
N.T.S.

BLACK VINYL COATED FENCE & GATE DETAIL

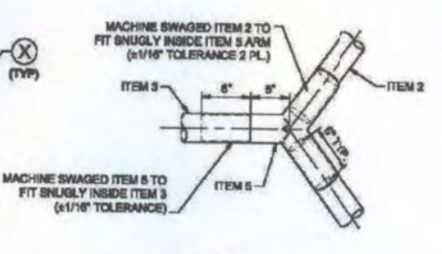
SCALE: 1" = 5'

NOTE:

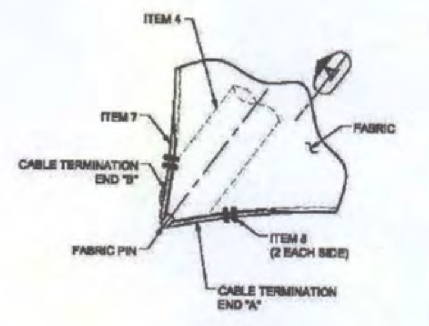
1. THE FENCE DEPICTED IN THIS DETAIL IS TO BE 5' HIGH IN PERIMETER AREAS AND 4' HIGH IN INTERIOR PLAY YARD AREAS.
2. LATCH TYPE: MAGNA LATCH.
3. BOLTS CANNOT BE MORE THAN 1/2" PAST NUTS.
4. NO GAPS LARGER THAN 3" IN FENCING & GATES.
5. IF ORNAMENTAL STEEL FENCE IS REQUIRED BY CITY OR OTHER REGULATORY ENTITY, FENCE SHALL BE POWDER COATED.



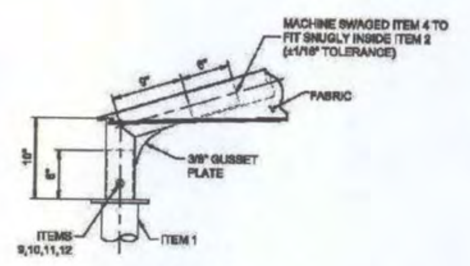
TOP VIEW
(SCHEMATIC VIEW ONLY)



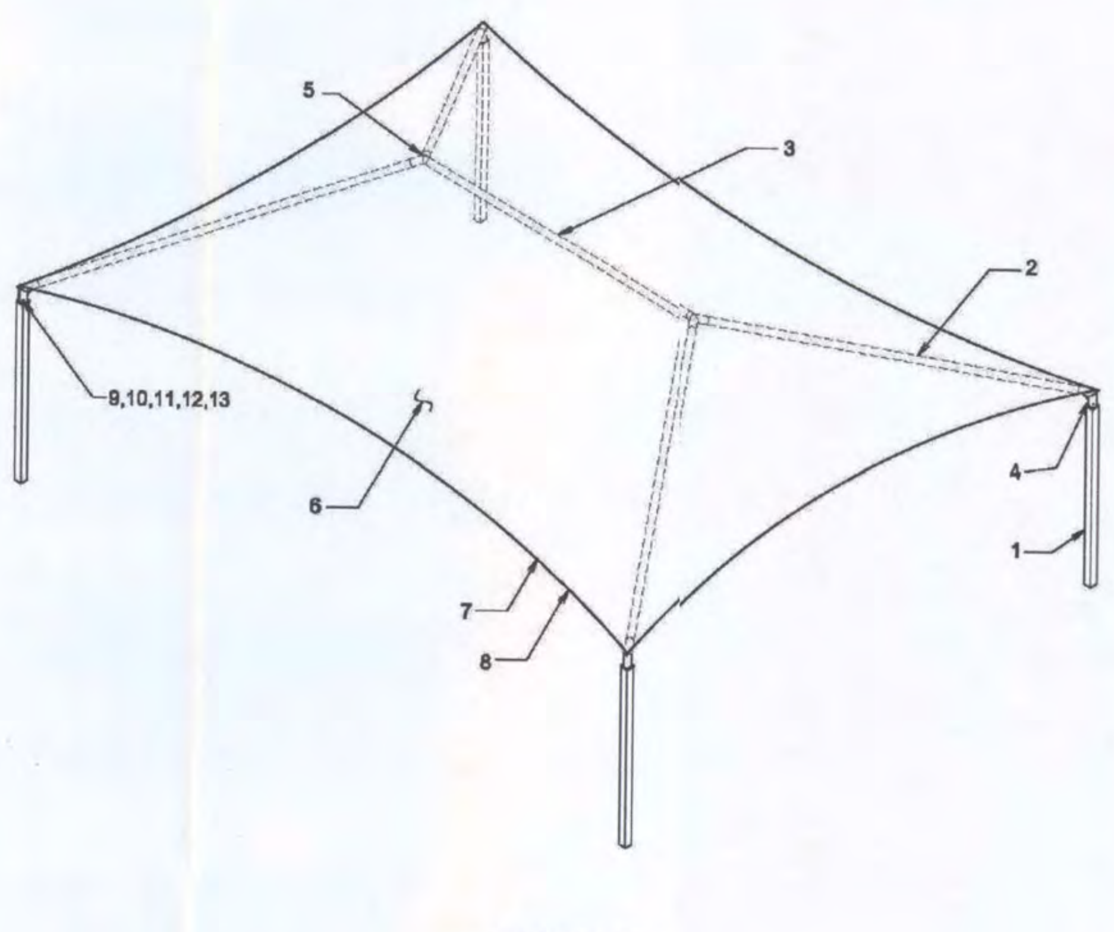
DETAIL 1



DETAIL 2



VIEW A-A

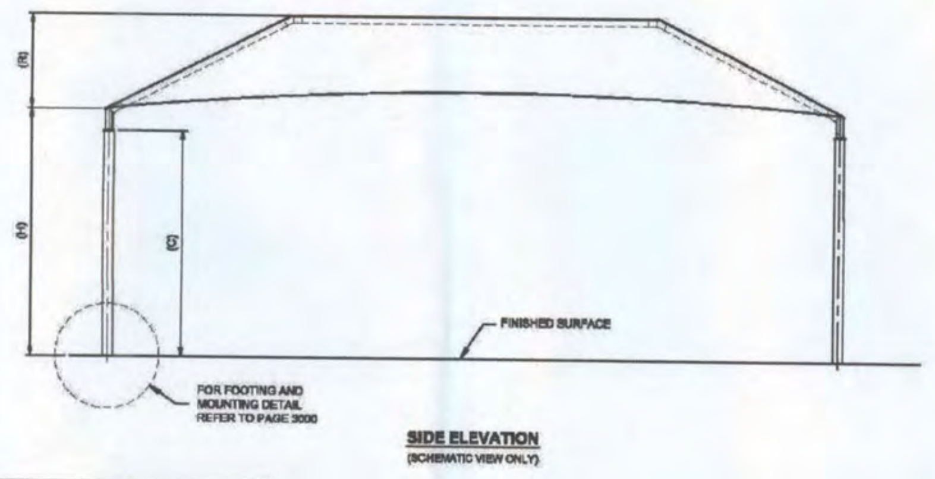


ISOMETRIC VIEW

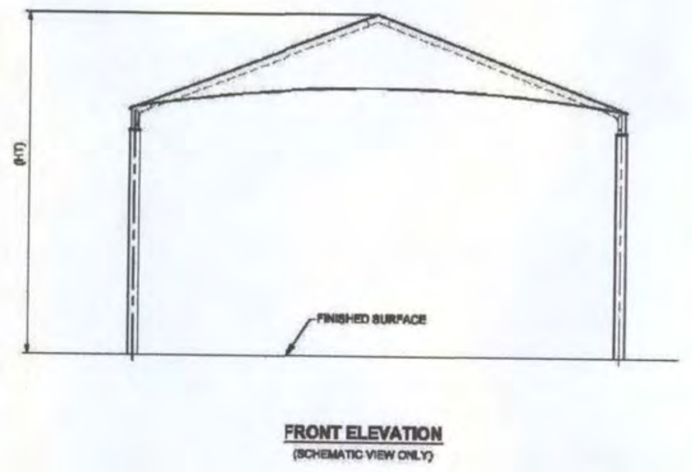
Err

TABLE OF DIMENSIONS

(L)	(W)	(A)	(H)	(C)	(R)	(HT)
20'	10'		7' - 3"			



SIDE ELEVATION
(SCHEMATIC VIEW ONLY)



FRONT ELEVATION
(SCHEMATIC VIEW ONLY)

LIST OF MATERIALS

ITEM	QTY.	DESCRIPTION	MATERIAL / DWG	SMI PART No.
1	4	COLUMN	—	—
2	4	EXTENSION	—	—
3	1	RIDGE	—	—
4	4	RAFTER	—	—
5	2	CROSSPIECE	—	—
6	1	FABRIC TOP	—	—
7	1	STEEL CABLE	—	—
8	4	CABLE CLAMP	—	—
9	4	Ø1/2" x 4 1/2" HEX HEAD BOLT	—	—
10	4	Ø1/2" HEX NUT	—	—
11	8	Ø1/2" FLAT WASHER	—	—
12	8	Ø1/2" FLAT WASHER	—	—
13	4	Ø1/2" SPLIT LOCK WASHER	—	—

GENERAL NOTES

DESIGN LOADS

BUILDING CODE	TBD
LIVE LOADS	5 PSF
SNOW LOAD	5 PSF
WIND LOADS	90 MPH (3-Sec. Gust) EXPOSURE C

STRUCTURAL STEEL

1.- ALL GALVANIZED STEEL TUBE PRODUCTS ARE MANUFACTURED PER ASTM A-500, TYPICAL MECHANICAL PROPERTIES ACHIEVED FOR GALVANIZED TUBE PRODUCTS.

2.- ALL STRUCTURAL STEEL SHAPES SHALL BE COLD FORMED HSS ASTM A500 GRADE C, UNLESS OTHERWISE NOTED, TYPICAL MECHANICAL PROPERTIES FOR HSS PRODUCTS.

3.- ALL PLATES SHALL COMPLY WITH ASTM A572 GRADE 50.

4.- ALL STEEL TUBING SHALL BE TRIPLE COATED FOR RUST PROTECTION USING THE IN-LINE ELECTROPLATING COAT PROCESS. TUBING SHALL BE INTERNALLY COATED WITH ZINC AND ORGANIC COATINGS TO PREVENT CORROSION AS MANUFACTURED BY ALLIED TUBE & CONDUIT.

5.- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.

6.- ALL SHOP WELDS SHALL BE EXECUTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY (AWS) D1.1 SPECIFICATIONS. ALL WELDS SHALL BE CONTINUOUS WHERE LENGTH IS NOT GIVEN, UNLESS OTHERWISE SHOWN OR NOTED ON DRAWINGS. ALL WELDS SHALL DEVELOP THE FULL STRENGTH OF THE WEAKER MEMBER. ALL WELDS SHALL BE MADE USING E70XX .045 WIRE.

7.- SHOP CONNECTIONS SHALL BE WELDED UNLESS NOTED OTHERWISE. FIELD CONNECTIONS SHALL BE AS INDICATED ON THE DRAWINGS (IF REQUIRED). ALL FILLET WELDS SHALL BE A MINIMUM OF 3/16" UNLESS OTHERWISE NOTED. FIELD WELDS SHALL NOT BE ALLOWED.

8.- ALL STAINLESS STEEL BOLTS SHALL COMPLY WITH ASTM F-593, ALLOY GROUP 1 OR 2 ALL NUTS SHALL COMPLY WITH ASTM F-594 ALLOY GROUP 1 OR 2.

9.- ALL STRUCTURAL STEEL SHALL BE PAINTED WITH ONE SHOP COAT (2.5 TO 3.5 MILS THICK MIN). THIS COAT IS A WEATHER RESISTANT POWDER COATING BASED ON POLYESTER TGIC (MANUFACTURED BY SHERWIN WILLIAMS OR TIGER DRYLAC). TO ACHIEVE OPTIMUM ADHESION, IT IS RECOMMENDED THAT THE PROPER TREATMENT AND DRYING TAKE PLACE BEFORE COATING. POLYESTER POWDER (TGIC) SPECIFICATIONS SHALL BE AS FOLLOWS:
- PENCIL HARDNESS (ASTM D-3363).
- HUMIDITY (ASTM D-2247).
- SOLVENT RESISTANCE (PCI METHOD) - 50 DEL RUBS SL. SOFTNES.

AIRCRAFT CABLE

1.- WIRE ROPE CABLE SHALL BE 7x19 STRAND CORE GALVANIZED WIRE ROPE WITH A BREAKING STRENGTH VALUE OF 7,000 LBS (1/4" DIAMETER), OR GALVANIZED WIRE ROPE WITH A BREAKING STRENGTH VALUE OF 14,500 LBS (3/8" DIAMETER) IF ANY SIDE EXCEEDS 30 FEET IN LENGTH.

2.- CABLES SHALL BE FED THROUGH THE FABRIC SLEEVES AROUND THE PERIMETER OF THE CANOPY AND TENSIONED UNTIL THE FABRIC PANELS (DESIGNED PURPOSELY UNDERSIZED) REACH A TAUNT APPEARANCE. ANY LONG TERM CABLE SAG SHALL BE MINIMIZED DURING THE MAINTENANCE RE-TIGHTENING VISITS AS REQUIRED.

10' X 20' SHADE STRUCTURE

N.T.S.

SHADE STRUCTURE INSTALLATION INFORMATION

1. UNDER EACH CORNER POST SHALL BE PLACED A 2'X2' 42" DEEP CONCRETE FOUNDATION.
2. FOUNDATIONS SHALL BE PLACED BY OWNER.

SHADE STRUCTURE MAINTENANCE INFORMATION

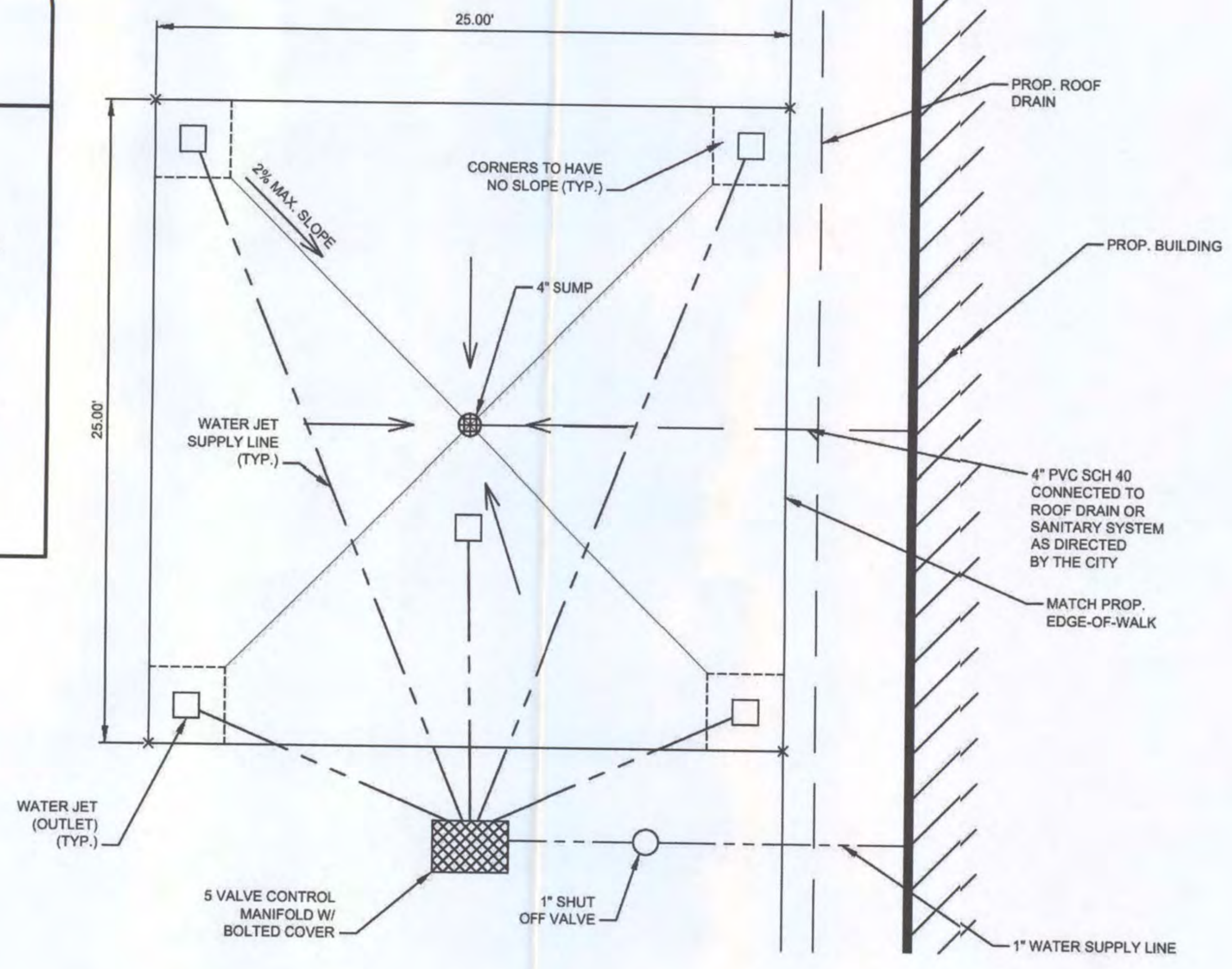
CLOTH COVER SHOULD BE REMOVED IN THE EVENT OF SNOW ACCUMULATION OR WINDS IN EXCESS OF 90 MPH.

NOTE:

- THE AUTOCAD FILE OF THIS SHEET CONTAINS BLOCKS WHICH MAY BE USED ON PLAN VIEW (AT A ONE TO ONE SCALE) FOR THESE ITEMS (EXCEPT SPLASH PAD).
- FURTHER, THE SPLASH PAD AREA IS EITHER FENCED IN ALONG THE PERIMETER OF THE SPLASH PAD OR IN A GENERAL FENCED AREA THEREBY RESTRICTING ACCESS TO THIS AREA AS NEEDED.

SPLASH PAD INSTALLATION INFORMATION

1. GENERAL CONTRACTOR TO UNDERCUT A 25'–6" x 25'–6" SPLASH PAD AREA WITH A FINISHED FORMED AREA OF 25' x 25' BUTTED TO SIDEWALK, OR AS DRAWINGS STATE, 10" BELOW FINISHED GRADE. CONCRETE FORMS SHOULD BE SET FROM TOP OF SIDEWALK EDGE, DO NOT PITCH.
2. PROVIDE A 1" WATER MAIN FROM IRRIGATION LINE PASS METER, USING SCHEDULE 80 PVC JUST OUTSIDE THE SPLASH PAD AREA IN SOD WITH 1" SHUTOFF VALVE.
3. SPLASH PAD UNDERGROUND WATER PIPING SYSTEM WILL BE INSTALLED USING SCHEDULE 80 PVC, INCLUDING THE MANIFOLD AND ALL VALVES.
4. PROVIDE 4" ROUND DRAIN TIED INTO STORM DRAIN (OR AS DIRECTED BY THE CITY) GOING AROUND BUILDING FOR THE GUTTER TIE–INS AS SHOWN ON YOUR DRAWINGS. STUB UP IN CENTER OF PAD 2' FROM GRADE WITH A REMOVABLE CAP. 90 DEGREE ELBOW SHOULD BE ABOUT 2' BELOW 10" UNDERCUT OF PROPER PITCH TO STORM.
5. NOTE: CONCRETE FORMS NEED TO BE INSTALLED TO FINAL GRADE BEFORE SPLASH PAD UNDERGROUND GOES IN WHEN REQUIRED GRADE IS REACHED.
6. GENERAL CONTRACTOR SHOULD MAINTAIN AREA UNTIL SPLASH PAD CONCRETE IS POURED.
7. ONCE ALL OF THE ABOVE ITEMS HAVE BEEN COMPLETED AND GRADES VERIFIED BY 814 REP. AND GC REP., GENERAL CONTRACTOR SHALL SCHEDULE THE RCCC INSTALLER(S) TO COME INSTALL THE EMBEDS BEFORE SIDEWALKS ARE POURED. PLEASE PLAN 8 WEEKS LEAD–TIME FOR THIS SOW.
8. GENERAL CONTRACTOR TO FLUSH STORM DRAIN AFTER ALL CONNECTIONS HAVE BEEN MADE.
9. ONCE UNDERGROUND PLUMBING AND SPLASH PAD EMBEDS ARE INSTALLED BY RCCC INSTALLER, GENERAL CONTRACTOR TO PROVIDE 6" COMPACTED STONE BASE WITH 4" OF LIGHTLY BROOMED FINISHED CONCRETE. THE PAD SHOULD HAVE A UNIFORM 2% FALL TO THE DRAIN AND BE AT THE SAME OUTSIDE ELEVATION AS THE SIDEWALK.



SPLASH PAD DETAILS

SCALE: 1" = 5'

CEC

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DATE:	##############	REVISIONS	COMMENTS
	###	1	
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	#	3	
DATE OF SURVEY:	##############	4	
DESIGNED BY:	CEC	5	
DRAWN BY:	CEC	6	

RAINBOW CHILD CARE CENTER
3055 NORTH ANKENY BOULEVARD, ANKENY, IA 50021

DETAILS

SHEET
7
OF 7

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