

1 inch = 200 feet

Date: 8/24/2017

**Rainbow Child Care Center**  
**3055 N Ankeny Blvd**







*Plan and Zoning Commission  
Staff Report*

*Meeting Date: November 7, 2017*

---

**Agenda Item:** 3055 N. Ankeny Blvd. – Rainbow Child Care Center Site Plan  
**Report Date:** November 2, 2017  
**Prepared by:** Eric Carstens, AICP  
Planning Administrator

**Staff Recommendation:**

That the Plan and Zoning Commission approve the site plan for 3055 N Ankeny Blvd, Rainbow Child Care Center.

**Project Summary:**

The subject property is 1.38 acres (+/-), and is located at 3055 N Ankeny Blvd. This site is situated on part of Lot 2, Briarwood Plat 21, east of N. Ankeny Blvd and north of Central Bank. The site is zoned C-2, General Retail and Highway Oriented Commercial District. The proposed site plan includes an 11,992 square-foot building for use as a child care center, with outdoor space for playground equipment and a splash pad.

The proposed site plan includes site improvements for the building, associated parking, landscaping, utility service connections, and stormwater management. There are 50 parking spaces required for this development, and 46 parking spaces are provided. The applicant has requested and received an administrative variance for the shortage of 4 parking spaces. The landscaping shown on the proposed site plan complies with all applicable regulations. One trash enclosure is located near the southeast corner of the proposed building. It will be constructed of CMU and brick to match the building, as detailed on Sheet 6 of the site plan.

The site will be accessed from an existing drive at the southeast corner of the site, which extends north from NE 28<sup>th</sup> Street through the Central Bank site. There will also be a future frontage road along N. Ankeny Blvd. that will extend south from the Fareway site. Sidewalk exists along N. Ankeny Blvd. A pedestrian connection is proposed at the northwest corner of the site.

**Site Plan Worksheet  
3055 N. Ankeny Blvd.  
Rainbow Child Care Center**

The site plan regulations in the zoning code have a variety of design standards and factors for review. The following worksheet is intended to provide staff's comments related to this project and those items.

**A. Site Development**

- 1. The orientation, alignment, spacing, and placement of a building, driveway, parking area and/or service area on the site shall be compatible with and complimentary to buildings and sites in the neighboring area.**

Access to the site is provided by an existing drive from NW 28<sup>th</sup> Street through the Central Bank site. The primary building facade is oriented to the west facing N Ankeny Blvd. The building meets all required setbacks required by code.

- 2. The site shall be planned to be compatible with the streetscape that is prevalent in the area.**

The site plan complies with the landscaping and parking lot requirements of the code.

- 3. The site shall provide for adequate parking and circulation for vehicles, bicycles and pedestrians. This includes safe bicycle and pedestrian movement from public walks to the building and from parking areas to the building.**

The site provides for adequate parking and circulation. The proposed site plan provides 46 of the required 50 parking spaces. The applicant has requested and received an administrative variance for the shortage of 4 parking spaces. The site also provides a five-foot sidewalk connection from the main entrance of the building to the existing sidewalk along N Ankeny Blvd. A sidewalk will also be provided around the perimeter of the proposed building.

- 4. The site shall have such entrances and exits upon adjacent streets and such internal traffic circulation pattern as will not unduly increase congestion or decrease safety on the site or surrounding public streets. Studies of the traffic impact shall be provided if deemed necessary by the Community Development Director.**

A traffic study was reviewed and approved for the proposed development. The site will be accessed from an existing drive at the southeast corner of the site, which extends north from NE 28<sup>th</sup> Street through the Central Bank site. There will also be a future frontage road along N. Ankeny Blvd. that will extend south from the Fareway site.

- 5. Parking areas shall be treated with decorative elements, building wall extensions, plantings, berms, or other means so as to reduce their impact on public ways and adjoining properties.**

Parking is located on the south and west sides of the building, and meets the requirements for off-street parking as stated in Chapter 194.01(6) (A). Screening is required along N Ankeny Blvd, and will be satisfactorily provided.

- 6. Service areas; loading and unloading docks, delivery areas, dumpsters, outside storage areas and large storm water detention basins shall be treated with decorative elements, building wall extensions, plantings, berms, or other means so as to screen from view from public ways and adjoining properties.**

There will be no additional outdoor storage with the exception of one trash enclosure located near the southwest corner of the building. The dumpster enclosure will be constructed with elements complementary to the design of the primary structure.

- 7. All newly installed utility lines shall be underground and entry fixtures located away from high use areas or screened in an approved manner.**

All services to the building will be underground.

- 8. Exterior lighting, when used, shall enhance the building design and the adjoining landscape. All lighting should be appropriate to the use of the building and surrounding properties with intensity of illumination limited to its intended use and not as an attraction to the site. Lighting shall be directed to eliminate impacts on adjoining sites.**

Site lighting will be directed away from adjoining property and downward.

- 9. The design shall provide adequate provisions for surface and subsurface drainage. Storm water detention, drainage and storm sewer improvements shall be designed to reduce the danger of erosion, flooding, landslide or other endangerment of surrounding property.**

Storm water detention for this parcel is located on-site via subsurface detention located in the southern portion of the site. Ultimately, all stormwater will outlet into the Briarwood pond to the east.

- 10. Utility connections to water and sanitary sewer lines shall be designed so as to not overload existing public utility lines. Studies of system loading shall be provided if deemed necessary by the Community Development Director.**

The applicant proposes to connect to the existing 12" water main along N Ankeny Blvd, and provide the site with 2" water service. The applicant proposes to extend the existing 8" sanitary service from the south of the site, northerly, in order to facilitate future development to the north of the site. The subject site will utilize 6" sanitary service from said 8" sanitary extension.

- 11. Site design should provide open space in areas visible to the public. A majority of the required open space should be located in front and side yards.**

Open space is primarily provided on the eastern portion of the site, adjacent to the Briarwood Golf Course.



- 12. Landscaping shall enhance architectural features and contribute to the beauty and utility of a development. Existing trees should be protected whenever possible to maintain the maturity of the site.**

The proposed parking lot shading requirements conform to the landscape requirements of the code.

## **B. Building Design**

- 1. Buildings shall have good scale and maintain or enhance the established scale of buildings and sites of neighboring buildings and sites.**

The proposed building is a single-story structure, and will be a maximum of 25'-6" in height to the uppermost point. There are buildings in the general vicinity with similar scale.

- 2. Materials selected for buildings shall provide compatible textures and colors as those of neighboring buildings.**

The proposed materials are a combination of brick, vinyl siding, and stone veneer, with an asphalt shingle roof and a base of split-face concrete block.

- 3. All mechanical equipment or other utility hardware on roof, ground, or buildings, refuse and waste removal areas, service yards, storage yards, and exterior work areas shall be screened from or located as not to be visible from public view, using materials consistent with the building and site.**

The dumpster enclosure will be constructed with elements complementary to the design of the primary structure. It will be constructed of CMU and brick to match the building, as detailed on Sheet 6 of the site plan.

- 4. Multiple buildings on the same site shall provide for compatible and complimentary design and materials.**

There is only one building proposed on this site, but will be compatible and complimentary with adjacent development.

## **C. Signs**

- 1. Every sign shall have good scale and proportion in relationship to its site and function, as well as the signage and use of neighboring properties.**

Signage shown on the plans are for reference only. Final design and allowances will be determined with future sign permits.

- 2. Building signs shall be designed as an integral architectural element of the building.**

Signage shown on the submitted plans is for reference only. Final design and allowances will be determined with future sign permits.

- 3. Yard signs shall be designed to provide elements compatible with the building design and architectural elements.**

A potential yard sign location has been shown on the site plan and Sheet 6 includes a design for a possible sign. Final design and allowances will be determined with future sign permits.

- 4. Each sign shall be designed in a manner not to compete for attention with signs on adjoining premises.**

All signs submitted for permit in the future shall comply with Chapter 195: Signs.

#### **D. Factors for Evaluation**

**The following factors and characteristics, which affect the function and appearance of a development, should govern the Plan and Zoning Commission's evaluation of a site plan submission:**

- 1. Conformance to Design Standards and other applicable code requirements.**

The plans submitted conform to the written regulations of the City.

- 2. Location of the building(s), and the relationship to the development site and neighboring buildings and sites.**

The site layout is compatible with setbacks.

- 3. Layout and utilization of building, parking, drive-ways, and open spaces.**

The 11,992 square-foot building and the circulation system for traffic is appropriate.

- 4. Architectural character, including scale, style, color and type of material, of the building and signage as it relates to the neighborhood.**

The proposed building is a single-story structure, and will be a maximum of 25'-6" in height to the uppermost point. The proposed building relates to the surrounding commercial areas.

- 5. Impact on sanitary sewer, storm sewer, drainage, water, and street systems.**

It appears that the impacts on these utility systems can be accommodated adequately.





Civil Engineering Consultants, Inc.

---

September 8, 2017

City of Ankeny Plan and Zoning Commission

RE: SITE PLAN – RAINBOW CHILD CARE CENTER

Dear Members of the Commission:

On behalf of EIG14T Development, we ask for your review and approval of the site plan for the proposed Rainbow Child Care Center to be located at the NE quadrant of the intersection of North Ankeny Boulevard and NE 28<sup>th</sup> Street.

This child care center is proposed to contain 11,922 sf in building area, including adequate parking and drives, and shall provide separate outdoor play areas for children of different age groups. The facility proposes to be very secure for the safety of the children, having fencing surround the play areas.

Access shall be from 28<sup>th</sup> Street through a private drive. The drive shall eventually connect from NE 28<sup>th</sup> Street to NE 36<sup>th</sup> Street to the north. Having several access points onto North Ankeny Boulevard.

A public sanitary sewer is proposed to be extended through the site to serve future development to the north. Stormwater detention/quality shall be treated in a proposed subsurface facility to be located under the parking lot.

Rainbow Child Care Center seeks to assist in fulfilling the daycare needs for the City of Ankeny. We ask for your review and approval of this project.

Sincerely,

CIVIL ENGINEERING CONSULTANTS, INC.

Bart A. Turk, PLA  
Project Manager



# SITE PLAN OF RAINBOW CHILD CARE CENTER

| Sheet List Table |                |
|------------------|----------------|
| Sheet Number     | Sheet Title    |
| 1                | COVER          |
| 2                | DIMENSION PLAN |
| 3                | GRADING PLAN   |
| 4                | UTILITY PLAN   |
| 5                | LANDSCAPE PLAN |
| 6                | DETAILS        |
| 7                | DETAILS        |



VICINITY SKETCH  
NO SCALE



## GENERAL NOTES

- ONE WEEK PRIOR TO CONSTRUCTION CONTRACTOR SHALL NOTIFY:
  - CITY OF ANKENY BUILDING DIVISION
  - EIGHT RCCC 202 IA-ANKENY NORTH LLC & PAT AND SONS CONSOLIDATED LLC SOL
  - CIVIL ENGINEERING CONSULTANTS, INC.
  - "ONE CALL" UTILITY LOCATE SERVICE
  - CITY OF ANKENY PUBLIC WORKS
- ALL DIMENSIONS ARE TO BACK OF CURB, OUTSIDE OF BUILDING WALL, AND TO PROPERTY LINES.
- 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.
- 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.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH 2017 SUDAS & CITY OF ANKENY SUPPLEMENTAL SPECIFICATIONS.
- ALL DEBRIS SPILLED ON CITY/D.O.T. R.O.W. AND ADJOINING PROPERTY SHALL BE REMOVED BY OWNER/CONTRACTOR IN TIMELY FASHION.
- A SIGN PERMIT IS REQUIRED BEFORE SIGNS ARE INSTALLED.

## GRADING NOTES

- 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.
- ALL AREAS WHICH ARE TO RECEIVE EMBANKMENT SHALL HAVE TOP 12-INCHES DISCED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- ALL AREAS TO RECEIVE STRUCTURAL FILL SHALL BE BENCHED.
- 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.
- 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.
- MAINTAIN ALL CUT AND FILL AREAS TO ACCOMMODATE SURFACE DRAINAGE.
- GRADING CONTRACTOR SHALL STOCKPILE TOP SOIL FOR SHOULDERING & SEED/SOD BEDS.
- FINISHED GRADE ON ALL NON-PAVED AREAS SHALL BE WITHIN 0.20 FOOT OF PLAN GRADE. PAVED AREAS SHALL BE WITHIN 0.10 FOOT.
- 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.
- TOPSOIL SHALL BE SPREAD TO A MINIMUM THICKNESS OF 6-INCHES ON ALL LANDSCAPED AREAS.
- BACKFILL TO TOP OF ALL CURBS.
- ALL ELEVATIONS ARE TO GUTTER GRADE UNLESS NOTED OTHERWISE.
- EXISTING TILE LINES ENCOUNTERED SHALL BE RESTORED OR ROUTED TO A STORM SEWER WHETHER ACTIVE OR NOT.

## SEEDING NOTES

- FERTILIZER (16-16-16) SHALL BE APPLIED TO AREA TO BE SEEDDED AT A RATE OF 650 LBS/ACRE.
- AREA TO BE SEEDDED 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.
- FERTILIZER SHALL BE INCORPORATED INTO SOIL TO A DEPTH OF 3" WITH A MECHANICAL ROCK PICKER OR A SPRING TOOTH CULTIVATOR.
- ON ALL AREAS ACCESSIBLE TO MACHINERY, A DROP-TYPE SEEDER ATTACHED TO A LANDSCAPE ROLLER SHALL BE USED TO SOY GRASS SEED, ON AREAS INACCESSIBLE TO MACHINERY A CYCLONE SEEDER WILL BE PERMITTED. NO OTHER HAND SEEDING METHOD IS ACCEPTABLE.
- ALL SEEDDED AREAS SHALL BE MULCHED IMMEDIATELY AFTER SEEDING BY APPLYING 2 TONS OF DRY MULCH PER ACRE.
- 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.
- ALL SEEDDED 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

- 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%.
- SOD SHALL BE CUT AT A UNIFORM THICKNESS OF APPROXIMATELY 1" PLUS OR MINUS 1/4".
- BEFORE STRIPPING, SOD SHALL BE MOVED TO A UNIFORM HEIGHT OF 2 1/2".
- SOD SHALL BE REASONABLY FREE OF DISEASE AND SOIL-BORNE INSECTS.
- SOD SHALL BE FREE OF OBJECTIONABLE GRASSY AND BROADLEAF WEEDS.
- SOD SHALL BE HARVESTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY NOT ADVERSELY AFFECT THE SURVIVAL OF SOD.
- SOD SHALL BE CUT, DELIVERED AND INSTALLED IN A TIME PERIOD OF 36 HOURS.
- 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.
- 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.
- SOD SHALL BE STAKED ON ALL SLOPES THAT ARE 4:1 OR STEEPER.
- 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.
- SOD SHALL NOT BE MOVED UNTIL IT IS FIRMLY ROOTED. NO MORE THAN 1/3 OF GRASS LEAF SHALL BE REMOVED.

## UTILITY NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2017 VERSION OF THE STATE WIDE URBAN DESIGN STANDARDS AND SPECIFICATIONS (SUDAS).
- 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.
- RECONNECT ANY FIELD TILE THAT ARE INTERCEPTED DURING UTILITY CONSTRUCTION.
- CONTRACTOR SHALL PROTECT AND BACK FILL AROUND UNDERGROUND UTILITIES. BACK FILL SHALL BE IN 6-INCH LAYERS, COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- ALL WATER MAIN SERVICE WORK SHALL BE CONSTRUCTED ACCORDING TO SUDAS VERSION 2017.
- ALL BUILDING DOWNSPOUTS SHALL BE CONNECTED TO NEW STORM SEWERS.
- SANITARY SEWER PROVIDED BY CITY OF ANKENY.
- 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.
- MANHOLE ADJUSTMENTS TO EXISTING MANHOLES SHALL INCLUDE NOT MORE THAN 18-INCH OF ADJUSTING RINGS. LARGER ADJUSTMENTS SHALL REQUIRE A NEW BARREL SECTION.
- SANITARY MANHOLES SHALL HAVE 2 PIECE CASTINGS AND 1 & 1 INSERTS.

## UTILITY CONTACTS

ANKENY PUBLIC WORKS PH: 515-465-6484  
KEN FLAGLER KFLAGER@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: 515-263-1505  
RAY MONTROYA RAY.MONTROYA@CENTURYLINK.COM

## OWNER/APPLICANT

EIGHT RCCC 202 IA-ANKENY NORTH LLC  
& PAT AND SONS CONSOLIDATED LLC SOL  
1742 CROOKS ROAD  
TROY, MICHIGAN 48064  
CONTACT: AMY LABADIE (248-514-9274)

## 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 = 11,942 SF  
PAVING = 22,001 SF  
OPEN SPACE = 26,183 SF  
TOTAL = 60,125 SF

IMPERVIOUS = 31,223 SF  
ERU: 10

## PARKING REQUIREMENTS

PARKING REQUIRED: 1 SPACE PER 300 SF GFA AND NUMBER OF EMPLOYEES ON A SHIFT  
11,942 / 300 = 40  
10 EMPLOYEES  
40 + 10 = 50

## PARKING PROVIDED

46 SPACES (INCL 2 HC SPACES)  
WE ASK FOR AN ADMINISTRATIVE VARIANCE OF 41 SPACES

## CERTIFICATIONS

|  |   |
|--|---|
|  | 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.<br><br>BY: _____ (DATE: _____)<br>BART A. TURK, IOWA REG. NO. 279<br>MY LICENSE RENEWAL DATE IS: JUNE 30, 2019<br>PAGES OR SHEETS COVERED BY THIS SEAL: _____<br>SHEETS 1-7 |
|--|---|

## LEGEND

| EXISTING / PROPOSED |                       |
|---------------------|-----------------------|
| — ST 18"            | STORM SEWER & SIZE    |
| — SAN 18"           | SANITARY SEWER & SIZE |
| — W 18"             | WATER MAIN & SIZE     |
| ○                   | MANHOLE               |
| △                   | STORM INTAKE          |
| ▽                   | FIRE HYDRANT          |
| △                   | VALVE                 |
| △                   | F.E.S.                |
| —                   | EXISTING CONTOURS     |
| —                   | PROPOSED CONTOURS     |
| —                   | SILT FENCE            |
| ●                   | SOIL BORING LOCATION  |
| □                   | TRANSFORMER PAD       |
| ⊙                   | STREET LIGHT POLE     |

1+23.45 - LOT #

## 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

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



RAINBOW CHILD CARE CENTER

ANKENY, IOWA

COVER

SHEET  
OF 7

A1852



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

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



| DATE: | 10-30-2017 | REVISIONS | COMMENTS |
|-------|------------|-----------|----------|
|       |            | 1         |          |
|       |            | 2         |          |
|       |            | 3         |          |
|       |            | 4         |          |
|       |            | 5         |          |

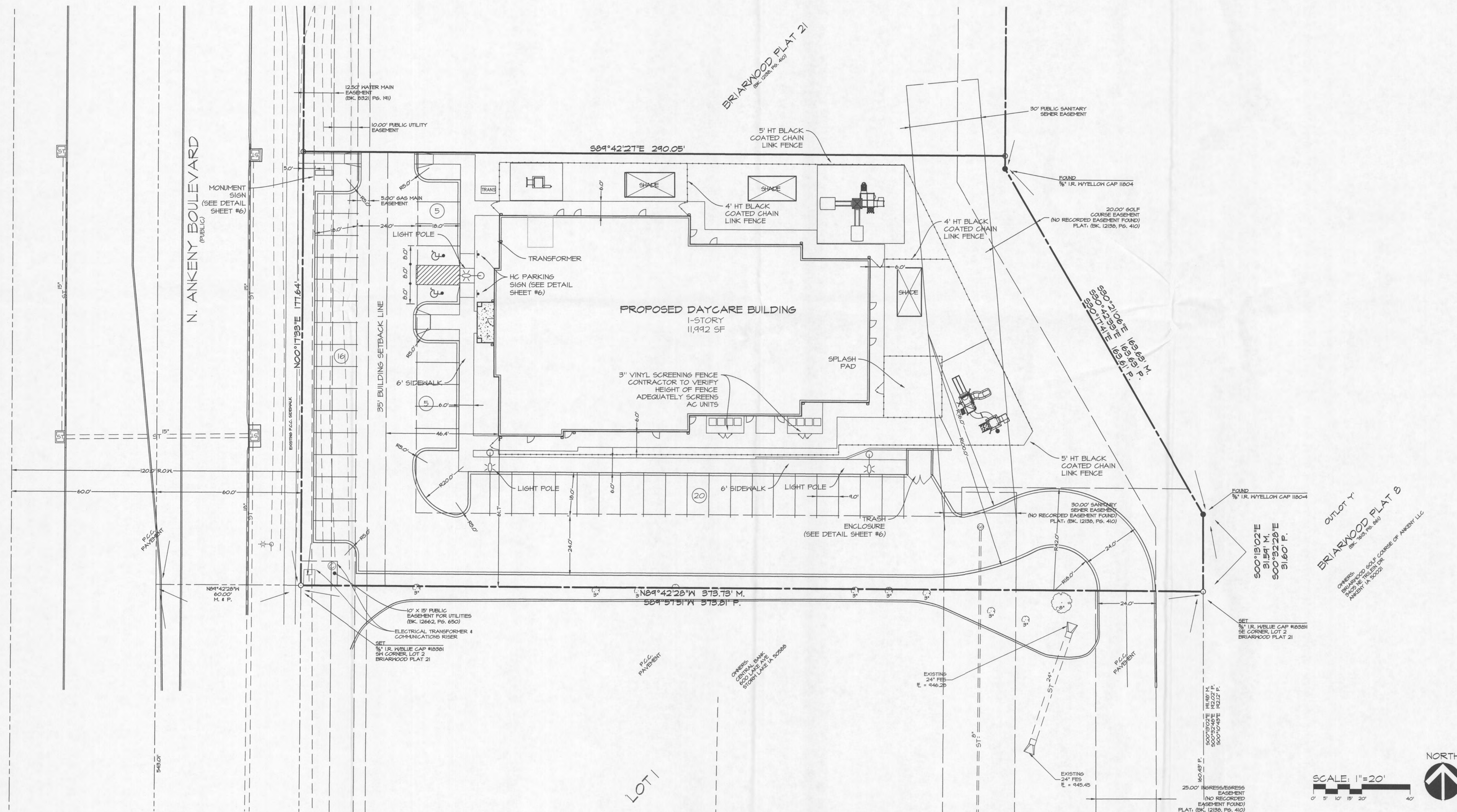
DATE OF SURVEY: 02-04-2017  
DESIGNED BY: CEC

**RAINBOW CHILD CARE CENTER**  
ANKENY, IOWA

### DIMENSION PLAN

SHEET  
**2**  
OF -

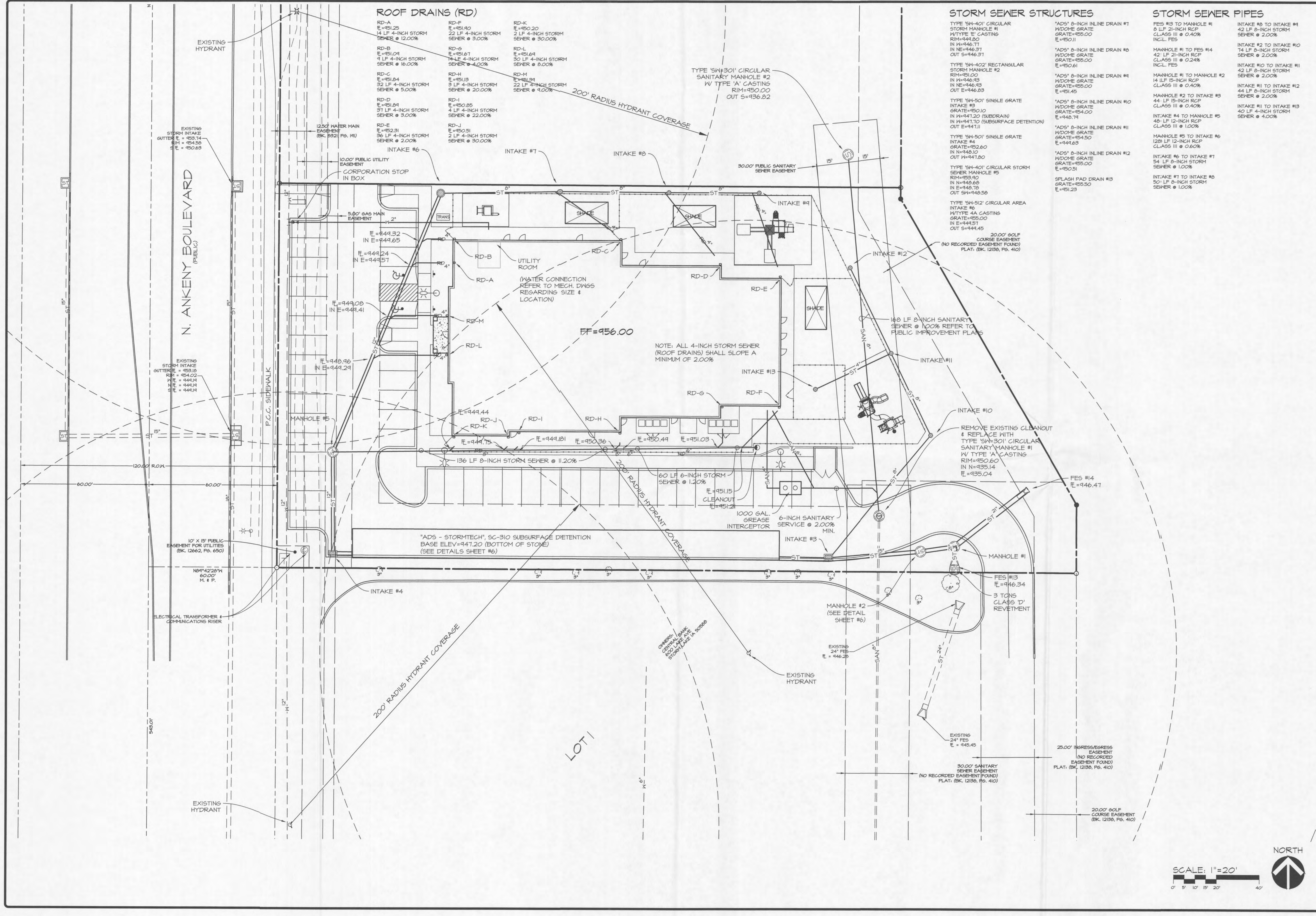
A1852











ROOF DRAINS (RD)

- RD-A  
E=951.25  
14 LF 4-INCH STORM  
SEWER @ 12.00%
- RD-B  
E=951.09  
4 LF 4-INCH STORM  
SEWER @ 16.00%
- RD-C  
E=951.84  
32 LF 4-INCH STORM  
SEWER @ 5.00%
- RD-D  
E=951.84  
37 LF 4-INCH STORM  
SEWER @ 3.00%
- RD-E  
E=952.31  
36 LF 4-INCH STORM  
SEWER @ 2.00%
- RD-F  
E=951.40  
22 LF 4-INCH STORM  
SEWER @ 3.00%
- RD-G  
E=951.67  
14 LF 4-INCH STORM  
SEWER @ 4.00%
- RD-H  
E=951.13  
5 LF 4-INCH STORM  
SEWER @ 20.00%
- RD-I  
E=950.85  
4 LF 4-INCH STORM  
SEWER @ 22.00%
- RD-J  
E=950.51  
2 LF 4-INCH STORM  
SEWER @ 30.00%
- RD-K  
E=950.20  
2 LF 4-INCH STORM  
SEWER @ 30.00%
- RD-L  
E=951.64  
30 LF 4-INCH STORM  
SEWER @ 8.00%
- RD-M  
E=951.34  
22 LF 4-INCH STORM  
SEWER @ 9.00%

STORM SEWER STRUCTURES

- TYPE 'SW-401' CIRCULAR  
STORM MANHOLE #1  
W/TYPE 'E' CASTING  
RIM=944.80  
IN N=946.77  
OUT S=946.37
- TYPE 'SW-402' RECTANGULAR  
STORM MANHOLE #2  
RIM=951.00  
IN N=946.43  
OUT S=946.83
- TYPE 'SW-501' SINGLE GRATE  
INTAKE #3  
GRATE=950.10  
IN N=947.20 (SUBDRAIN)  
OUT E=947.11
- TYPE 'SW-501' SINGLE GRATE  
INTAKE #4  
GRATE=952.60  
IN N=948.10  
OUT N=947.80
- TYPE 'SW-401' CIRCULAR STORM  
SEWER MANHOLE #5  
RIM=953.30  
IN N=948.60  
OUT S=948.50
- TYPE 'SW-512' CIRCULAR AREA  
INTAKE #6  
W/TYPE 'A' CASTING  
GRATE=955.00  
IN E=944.51  
OUT S=944.45
- \*ADS' 8-INCH INLINE DRAIN #7  
WDOME GRATE  
GRATE=955.00  
E=950.11
- \*ADS' 8-INCH INLINE DRAIN #8  
WDOME GRATE  
GRATE=955.00  
E=950.61
- \*ADS' 8-INCH INLINE DRAIN #9  
WDOME GRATE  
GRATE=955.00  
E=951.45
- \*ADS' 8-INCH INLINE DRAIN #10  
WDOME GRATE  
GRATE=954.00  
E=948.74
- \*ADS' 8-INCH INLINE DRAIN #11  
WDOME GRATE  
GRATE=954.50  
E=944.63
- \*ADS' 8-INCH INLINE DRAIN #12  
WDOME GRATE  
GRATE=955.00  
E=950.51
- SPLASH PAD DRAIN #13  
GRATE=955.50  
E=951.23

STORM SEWER PIPES

- FES #13 TO MANHOLE #1  
0 LF 21-INCH RCP  
CLASS III @ 0.40%  
INCL. FES
- INTAKE #2 TO INTAKE #10  
42 LF 8-INCH STORM  
SEWER @ 2.00%
- INTAKE #2 TO INTAKE #11  
42 LF 8-INCH STORM  
SEWER @ 2.00%
- INTAKE #2 TO INTAKE #12  
44 LF 8-INCH STORM  
SEWER @ 2.00%
- INTAKE #3 TO INTAKE #13  
40 LF 4-INCH STORM  
SEWER @ 4.00%
- INTAKE #4 TO INTAKE #5  
40 LF 12-INCH RCP  
CLASS III @ 1.00%
- MANHOLE #5 TO INTAKE #6  
120 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%

Civil Engineering Consultants, Inc.

2400 86th Street, Unit 12 • Des Moines, Iowa 50322  
515.276.4884 • Fax: 515.276.7084 • mail@cecinc.com

CEC

RAINBOW CHILD CARE CENTER  
ANKENY, IOWA  
UTILITY PLAN

| REVISIONS | DATE       | COMMENTS |
|-----------|------------|----------|
| 1         | 10-30-2017 |          |
| 2         |            |          |
| 3         |            |          |
| 4         | 02-04-2017 |          |
| 5         | CEC        |          |
| 6         | CEC        |          |

DATE OF SURVEY: 02-04-2017  
DESIGNED BY: CEC  
DRAWN BY: CEC

DATE: 10-30-2017

4

OF 7

AI052



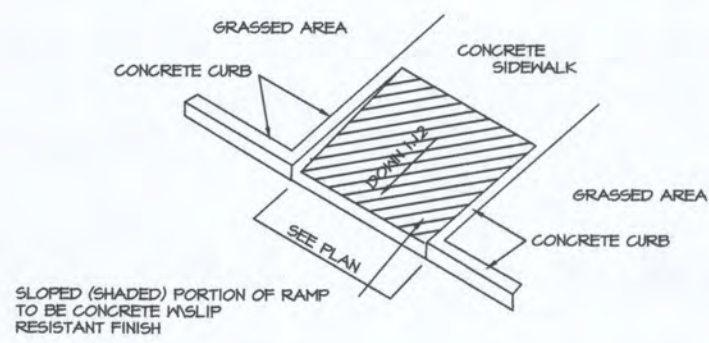
| DATE: | 10-30-2017 | REVISIONS | COMMENTS         |
|-------|------------|-----------|------------------|
|       |            | 1         |                  |
|       |            | 2         |                  |
|       |            | 3         |                  |
|       |            | 4         |                  |
|       |            | 5         | DESIGNED BY: CEC |
|       |            | 6         | DRAWN BY: CEC    |



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

## CURB RAMP

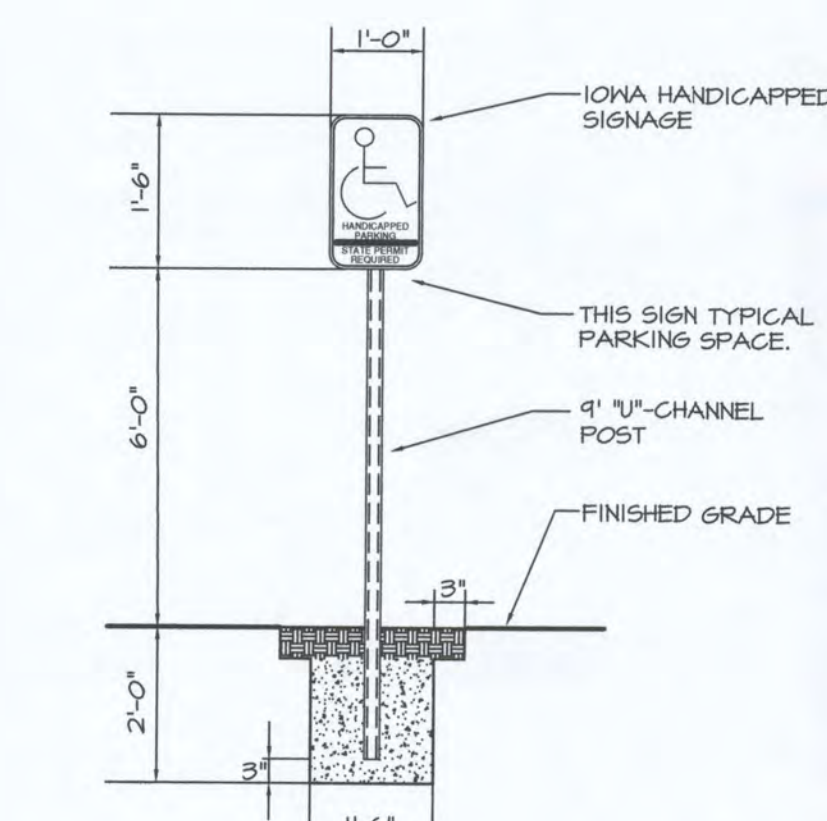
NO SCALE



NOTE: ADA CURB CUT @ SIDEWALK PERPENDICULAR TO RAMP.

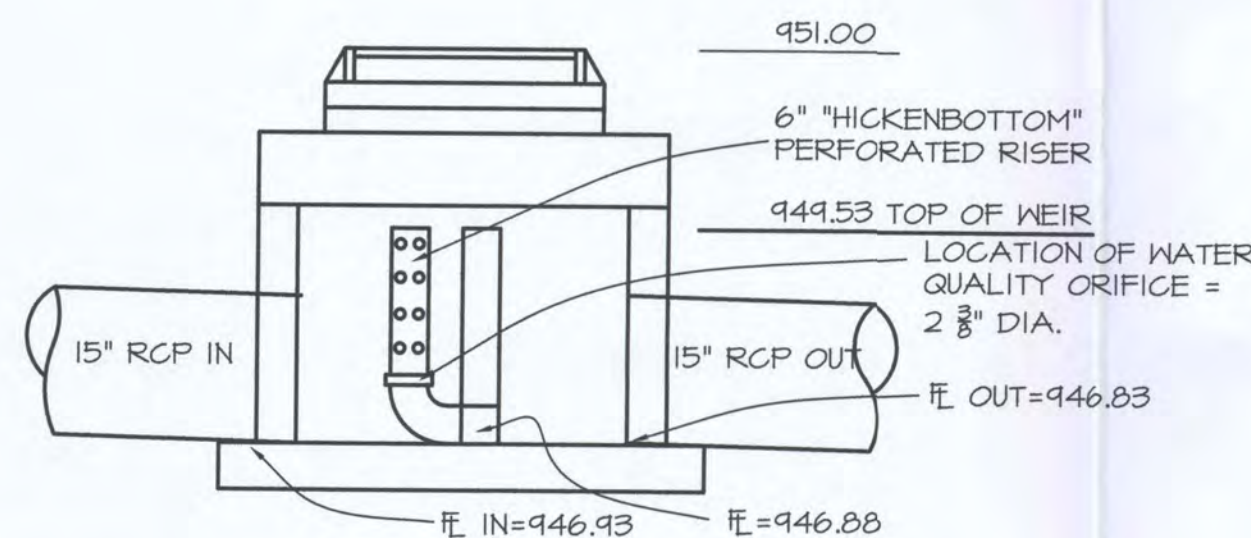
## CURB RAMP

NO SCALE



## HANDICAP PARKING SIGN

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



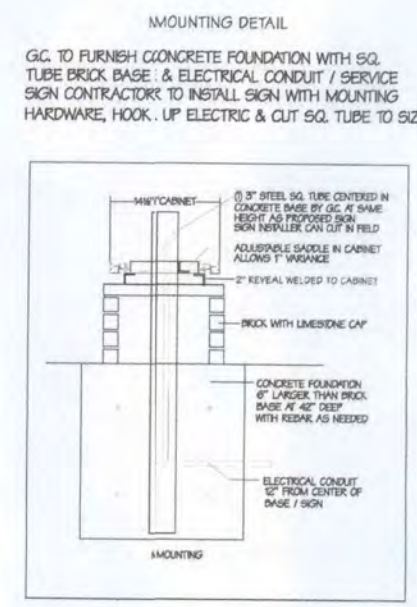
## Basin Outlet Detail (Manhole #2)

NO SCALE



RAINBOW VARIOUS TYPICAL RASCALS

(1) 6' X 7' ILLUMINATED D/F MONUMENT SIGN  
SCALE 1/2" = 1'  
RAL MS-611A X 75H-070164



Building to Dimensions 'Tall' List  
JOHNSON  
2000 Limited Liability  
2000 Limited Liability



## Rainbow Rascals

Ankeny (north), Iowa

### STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-310, SC-315, OR APPROVED EQUAL.
- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
- CHAMBERS SHALL PROVIDE CONTINUOUS, UNSTRUCTURED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD REDUCE FLOW OR LIMIT ACCESS FOR INSPECTION.
- 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 12.12.1.2 ARE MET FOR LONG-DURATION DEAD LOADS AND SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE PRESENCE.
- CHAMBERS SHALL MEET ASTM F2222 (POLYETHYLENE) OR ASTM F2221 (POLYPROPYLENE) STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS.
- CHAMBERS SHALL BE DESIGNED AND ALLOWED LOADS DETERMINED IN ACCORDANCE WITH ASTM F2221 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 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: REFUSE DELIVERING CHAMBERS TO THE PROJECT SITE.
  - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.5 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2221 AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
  - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12.1.2 ARE MET, THE 10-YEAR DRAINAGE ROLLUP GALS SPECIFIED IN ASTM F2221 OR ASTM F2222 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
  - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- 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

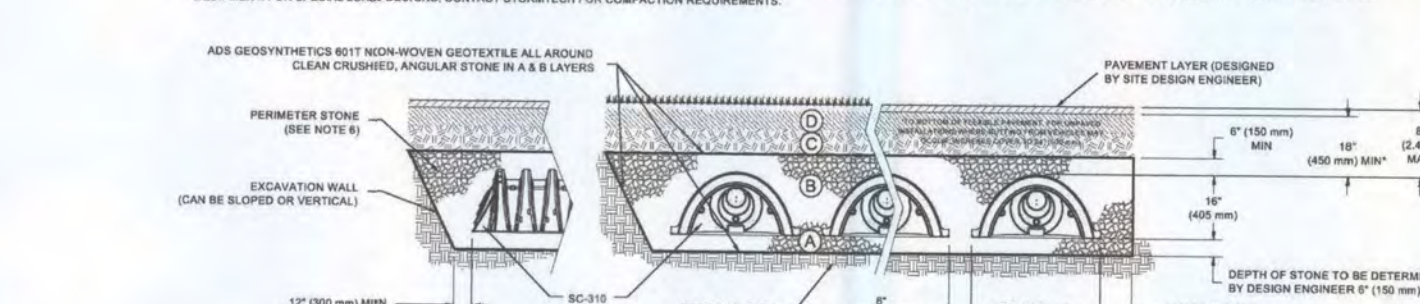
- STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED PRE-CONSTRUCTION MEETING WITH THE INSTALLER.
- STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR STATED OVER THE CHAMBERS.
- STORMTECH RECOMMENDS A BACKFILL METHOD:
  - STORMTECH LOCATES OFF THE CHAMBERS.
  - BACKFILL FROM INSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
  - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELLED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEALED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM 4" (100 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4" (20 mm) MINIMUM.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "EXSTORM CATCH 1" PERIMETER DRAINAGE FOR ALL RASCALS TO PROTECT THE SUBSURFACE.
- STORMWATER MANAGEMENT SYSTEMS FROM CONSTRUCTION SITE RUNOFF.

### NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
  - NO PLUMBER, TIE, LADDER, DUMP TRUCK, OR EXCAVATOR ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740 CONSTRUCTION GUIDE".
  - NO CONSTRUCTION EQUIPMENT CAN BE PLACED IN THE "STORMTECH SC-310/SC-740 CONSTRUCTION GUIDE".
  - NO FILL OF 300 mm OF STABILIZED COVER MATERIAL OVER THE CHAMBERS IS REQUIRED FOR "DUMP TRUCK" TRUCK OR EXCAVATOR.
  - USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STANDARD WARRANTY.
- CONTACT STORMTECH AT 1-888-882-2638 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

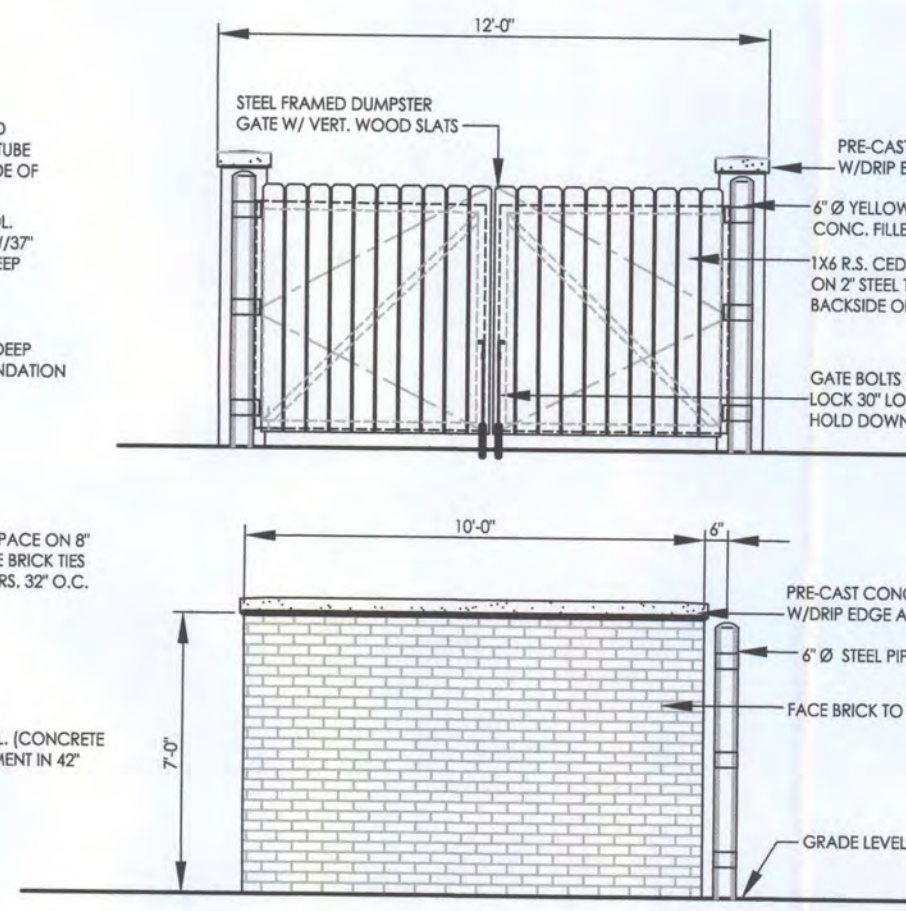
### ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

| MATERIAL LOCATION  | DESCRIPTION  | AASHTO MATERIAL CLASSIFICATIONS                       | COMPACTION / DENSITY REQUIREMENT   |
|--|--|---|--|
| FINAL FILL, FILL MATERIAL FOR LAYER 12' STAYS FROM THE TOP OF THE 12' LAYER TO THE BOTTOM OF THE 12' LAYER | ANY SOIL/ROCK MATERIAL, NATIVE SOIL, OR PER PERMITS IN PLACE. CHECK PLANS FOR EMBEDMENT MATERIAL AND PREPARATION REQUIREMENTS. | N/A   | PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE EMBEDMENT MATERIAL AND PREPARATION REQUIREMENTS.  |
| FINAL FILL, FILL MATERIAL FOR LAYER 12' STAYS FROM THE TOP OF THE 12' LAYER TO THE BOTTOM OF THE 12' LAYER | DRANKER, WELL-GRADED, SOIL/ROCK MATERIAL, 10% FINE, OR PROPOSED AGGREGATE.   | AASHTO M141<br>A-1, A-2, A-3                          | BELOW CHAMBERS AFTER 12" (300 mm) OF MATERIAL, WHEN THE CHAMBERS IS REACHED, COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX. LIFTS TO 1.5 MIN. PER PROJECT SPECIFICATION FOR WELL-GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROPOSED AGGREGATE. |
| EMBEDMENT STONE, FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE OR LAYER TO THE 12' LAYER ABOVE.  | CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" (20 mm) AND 1 1/2" (38 mm).                              | AASHTO M21<br>3.35", 4.40", 5.6", 6.7", 7.8, 8.8, 9.5 | NO COMPACT REQUIRED.   |
| FOUNDATION STONE, FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE OR LAYER TO THE 12' LAYER ABOVE. | CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" (20 mm) AND 1 1/2" (38 mm).                              | AASHTO M21<br>3.35", 4.40", 5.6", 6.7", 7.8, 8.8, 9.5 | PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE 1/2" (12 mm).  |



### NOTES:

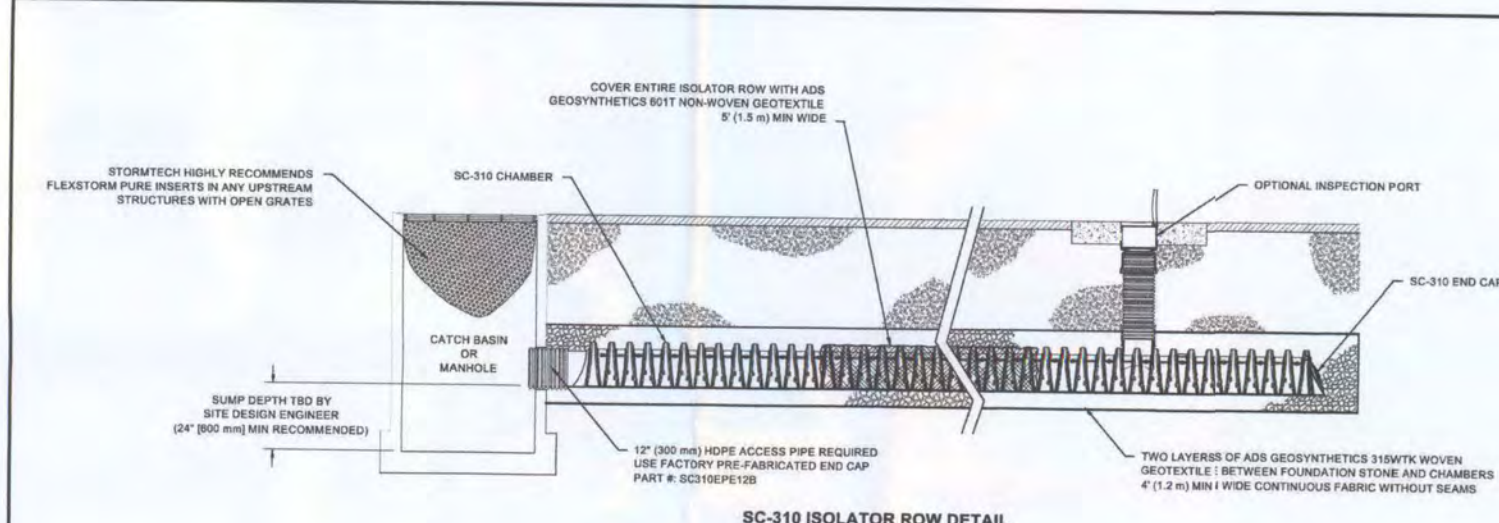
- SC-310 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2221 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", ASTM F2222 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS.
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING 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.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONLY LAYER 12' PLACED, ANY SOIL/MATERIAL COVER PLACED LAYER 12' TO THE FINISHED GRADE. MOST PAYMENT BURRAGE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 12' OR 12' IF THE SITE DESIGN ENGINEER'S DISCRETION.



## Dumpster Enclosure Plan

N.T.S.

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

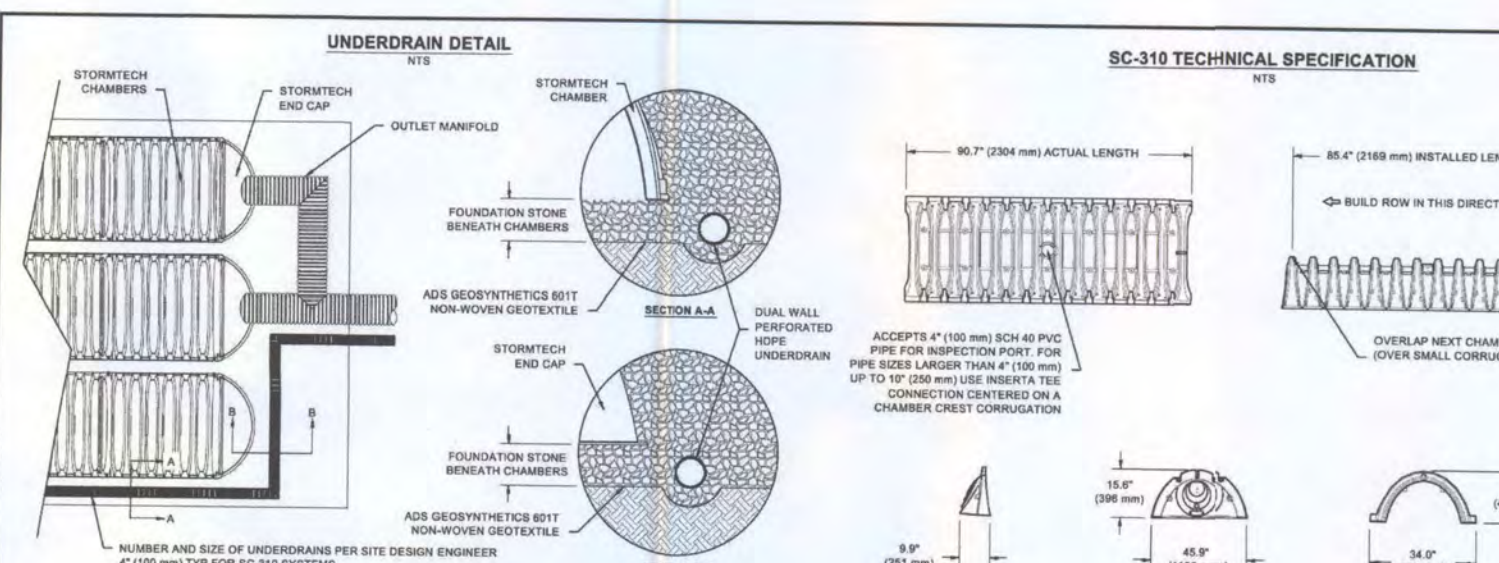


### INSPECTION & MAINTENANCE

- STEP 1: INSPECT ISOLATOR ROW FOR SEDIMENT.
  - INSPECT FOR SEDIMENT (IF PRESENT).
  - REMOVER SEDIMENT ON INSPECTOR'S LINE.
  - USING A FLARELANT AND STAYAL ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG.
  - COVER A CHAMBER INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVEL (OPTIONAL).
  - IF SEDIMENT IS AT OR ABOVE 1" (25 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2: CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS.
  - REMOVE COVER FROM STRUCTURE AT UPTREAM END OF ISOLATOR ROW.
  - USING A JETVAC, JETVAC DOWN THE ISOLATOR ROW THROUGH CHAMBER BY PIPE.
  - USING A JETVAC, JETVAC DOWN THE ISOLATOR ROW THROUGH CHAMBER BY PIPE.
  - FOLLOW CHAMBER ISOLATOR FOR COMPLETED SPACE ENTRY IF EXISTING MANHOLE.
  - IF SEDIMENT IS AT OR ABOVE 1" (25 mm) PROCEED TO STEP 3. IF NOT, PROCEED TO STEP 3.
- STEP 3: REPLACE ALL COVERS, GRATES, FILTERS, AND LOGS, RECORD OBSERVATIONS AND ACTIONS.
- STEP 4: INSPECT AND CLEAN MAINLINE AND MANHOLES UPTREAM OF THE STORMTECH SYSTEM.

### NOTES

- 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.
- CONDUCT JETTING AND VACUATING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



| CHAMBER | MAX DIAMETER OF INSERT TEE | HEIGHT FROM BASE OF CHAMBER (H) |
|---------|----------------------------|---------------------------------|
| SC-310  | 4" (100 mm)                | 4" (100 mm)                     |
| SC-315  | 6" (150 mm)                | 6" (150 mm)                     |
| SC-320  | 8" (200 mm)                | 8" (200 mm)                     |
| SC-325  | 10" (250 mm)               | 10" (250 mm)                    |
| SC-330  | 12" (300 mm)               | 12" (300 mm)                    |
| SC-335  | 14" (350 mm)               | 14" (350 mm)                    |
| SC-340  | 16" (400 mm)               | 16" (400 mm)                    |
| SC-345  | 18" (450 mm)               | 18" (450 mm)                    |
| SC-350  | 20" (500 mm)               | 20" (500 mm)                    |
| SC-355  | 22" (550 mm)               | 22" (550 mm)                    |
| SC-360  | 24" (600 mm)               | 24" (600 mm)                    |
| SC-365  | 26" (650 mm)               | 26" (650 mm)                    |
| SC-370  | 28" (700 mm)               | 28" (700 mm)                    |
| SC-375  | 30" (750 mm)               | 30" (750 mm)                    |
| SC-380  | 32" (800 mm)               | 32" (800 mm)                    |
| SC-385  | 34" (850 mm)               | 34" (850 mm)                    |
| SC-390  | 36" (900 mm)               | 36" (900 mm)                    |
| SC-395  | 38" (950 mm)               | 38" (950 mm)                    |
| SC-400  | 40" (1000 mm)              | 40" (1000 mm)                   |

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



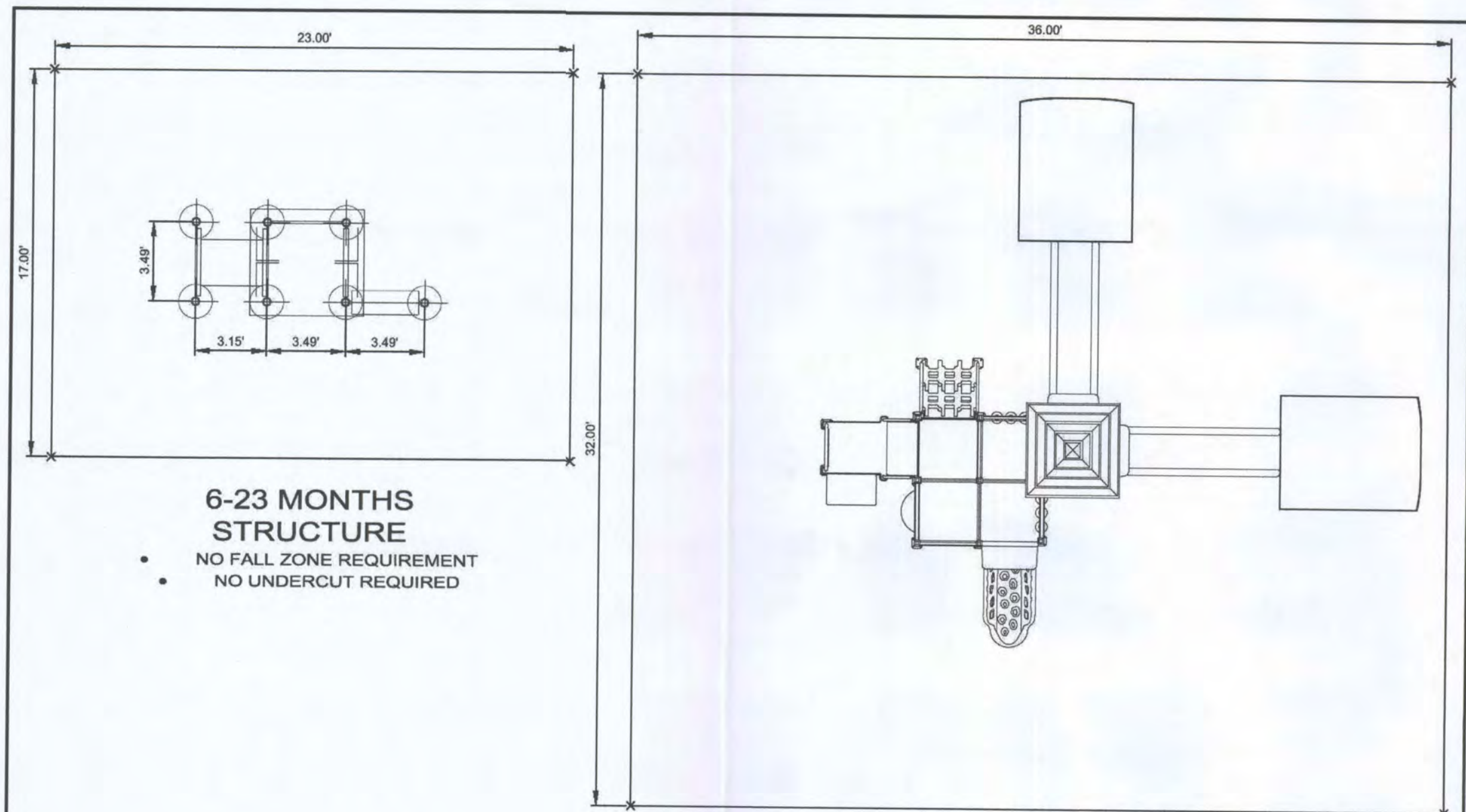
RAINBOW CHILD CARE CENTER  
3055 NORTH ANKENY BOULEVARD, ANKENY, IA 50021

DETAILS

SHEET  
6  
OF 7

A1652



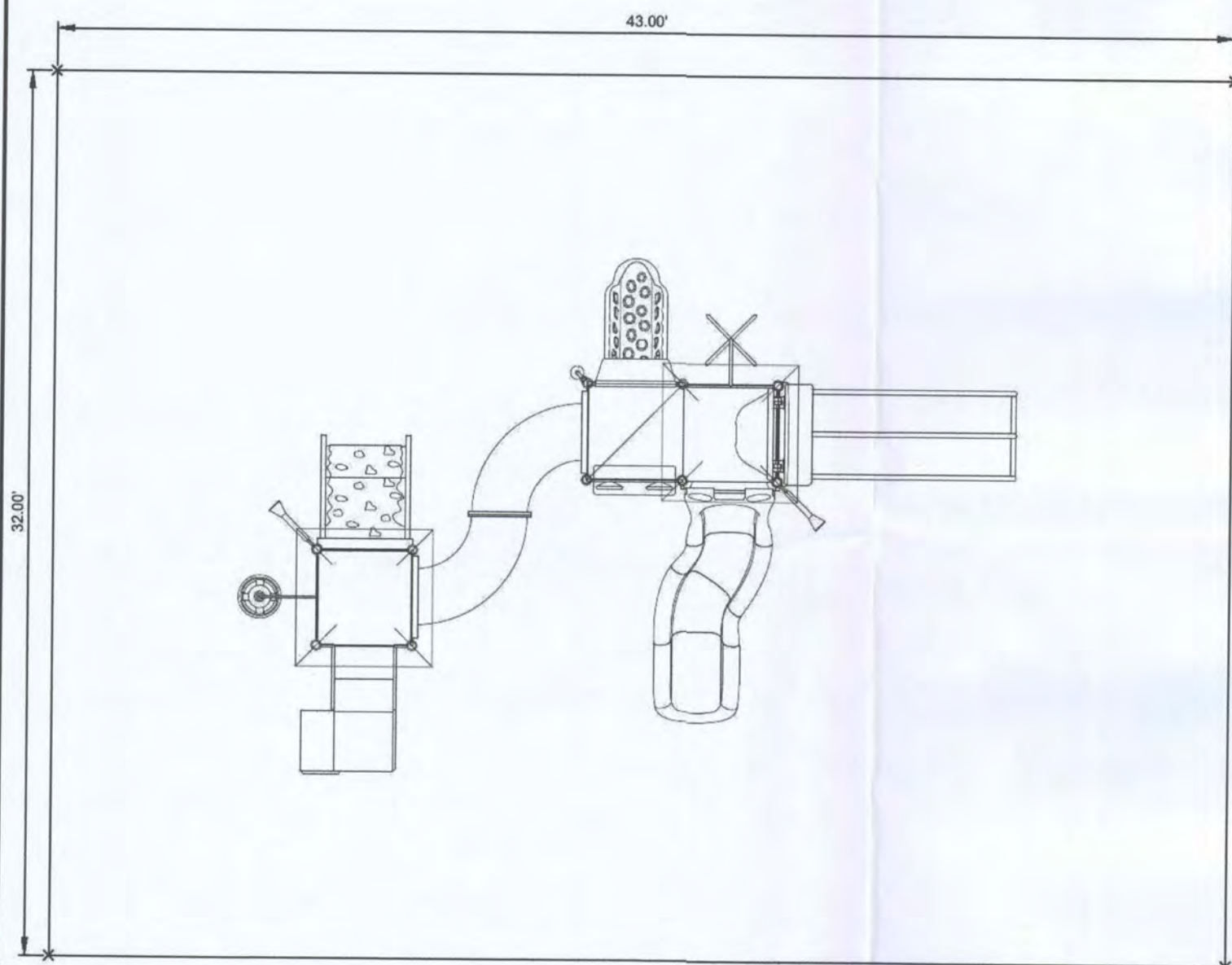


**6-23 MONTHS  
STRUCTURE**

- 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**



**BLACK VINYL COATED  
FENCE & GATE DETAIL**

SCALE: 1" = 5'

**NOTE:**

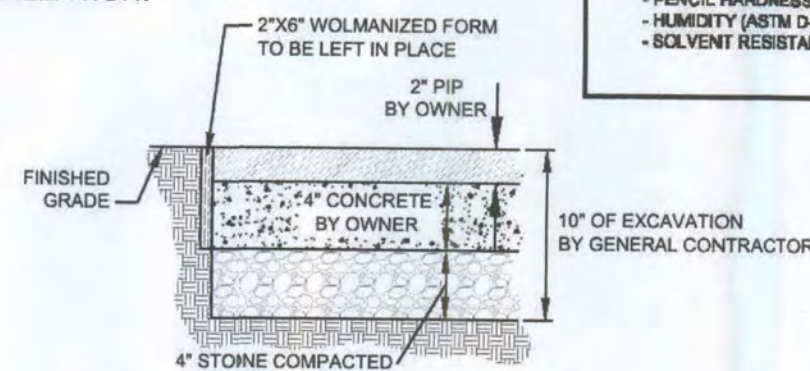
1. THE FENCE DEPICTED IN THIS DETAIL IS TO BE 5' HIGH IN PERIMETER AREAS AND 4' HIGH IN INTERIOR PLAY YARD AREAS.
2. LATCH TYPE: MAGNA LATCH.
3. BOLTS CANNOT BE MORE THAN 1/2" PAST NUTS.
4. NO GAPS LARGER THAN 3" IN FENCING & GATES.
5. IF ORNAMENTAL STEEL FENCE IS REQUIRED BY CITY OR OTHER REGULATORY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

**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 ON SITE 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.

**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.

**GENERAL NOTES**

**DESIGN LOADS**

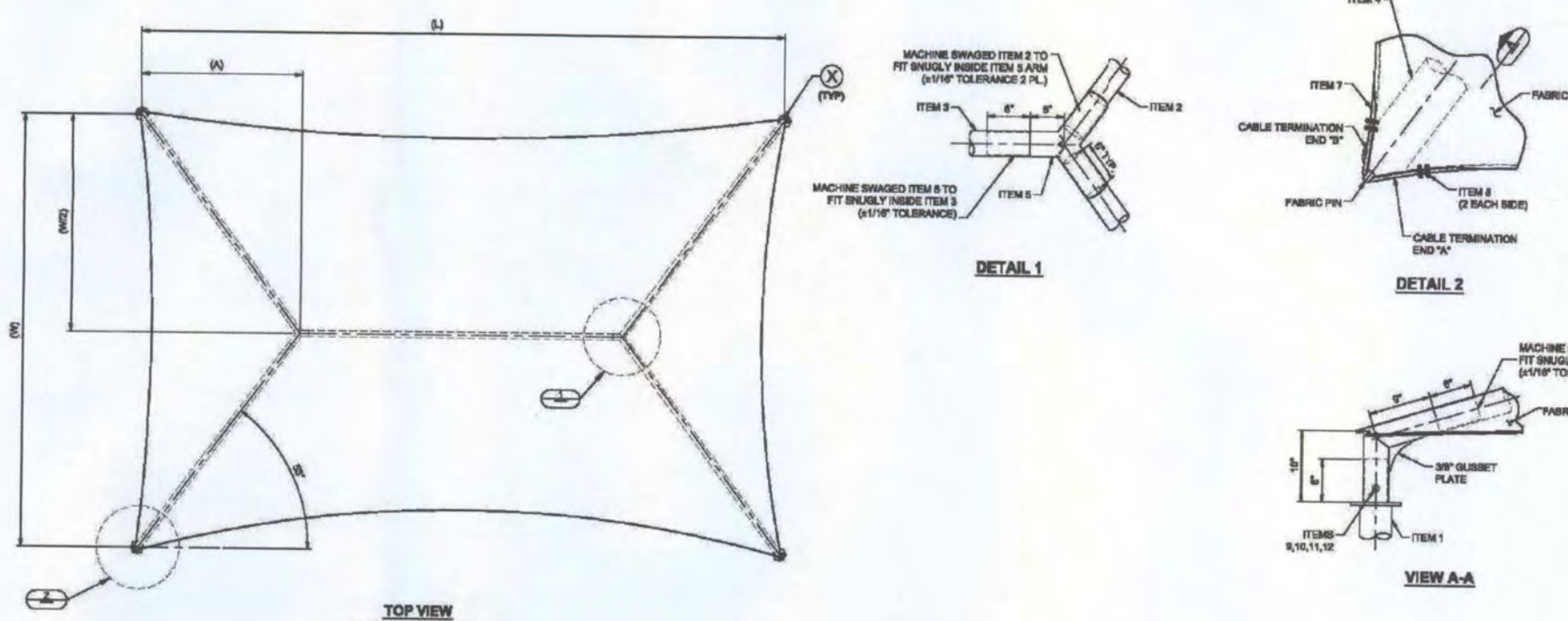
BUILDING CODE: TBD  
LIVE LOADS: 5 PSF  
SNOW LOAD: 5 PSF  
WIND LOADS: 90 MPH (3-sec. Gust)  
EXPOSURE C

**STRUCTURAL STEEL**

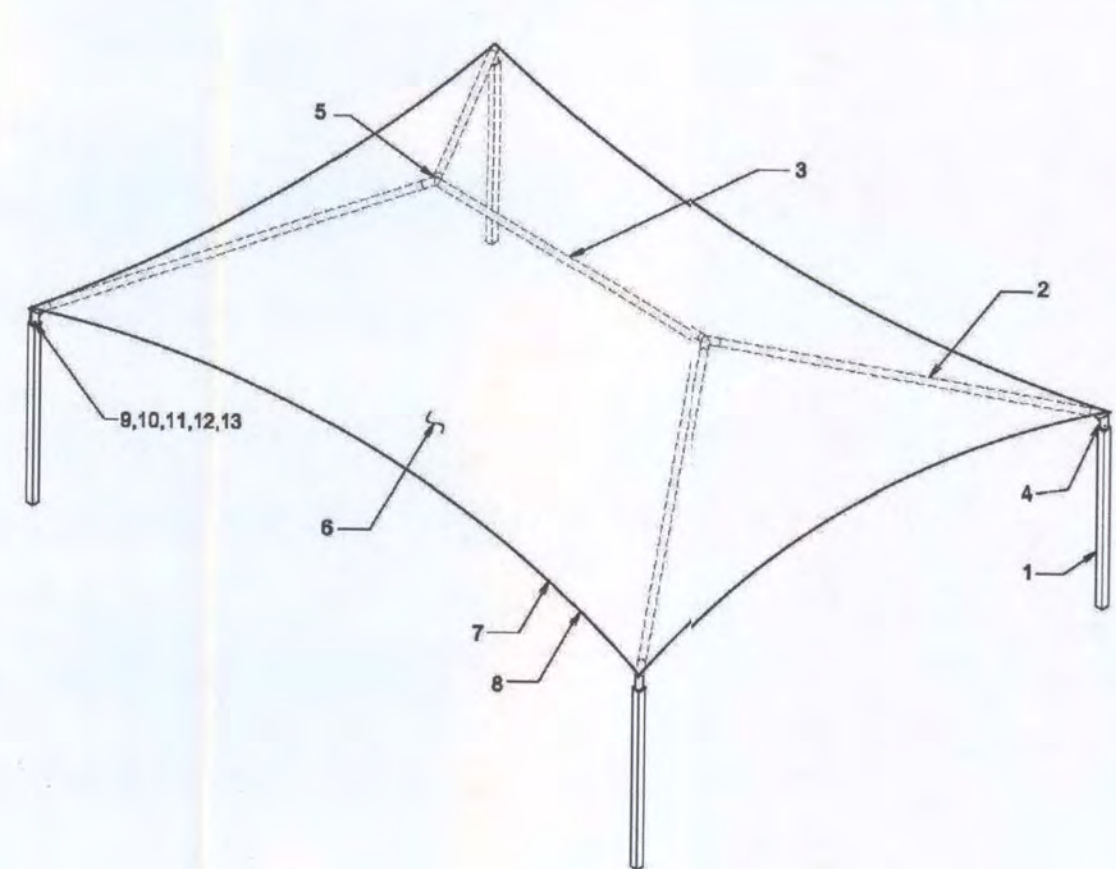
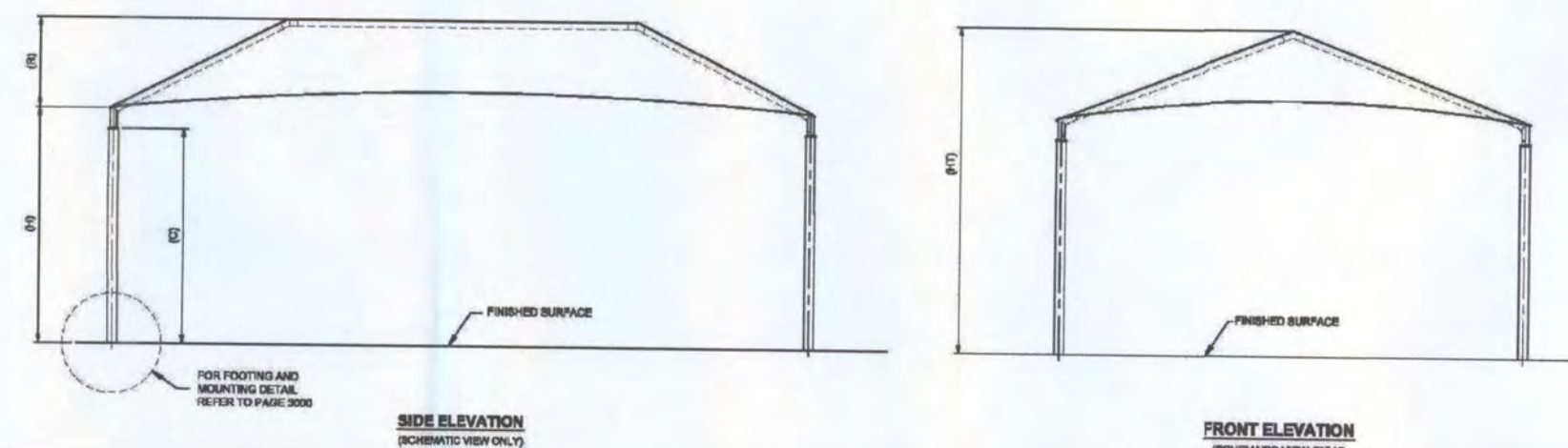
1. ALL GALVANIZED STEEL TUBE PRODUCTS ARE MANUFACTURED PER ASTM A-500, TYPICAL MECHANICAL PROPERTIES AGRIEVED FOR GALVANIZED TUBE PRODUCTS.
2. ALL STRUCTURAL STEEL SHAPES SHALL BE COLD FORMED - HSS ASTM A500 GRADE C, UNLESS OTHERWISE NOTED. TYPICAL MECHANICAL PROPERTIES FOR HSS PRODUCTS.
3. ALL PLATES 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 DETAIL, 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 TOIC (MANUFACTURED BY SHIPWY WILLIAMS OR TIGER OUTLAD). TO ACHIEVE OPTIMUM ADHESION, IT IS RECOMMENDED THAT THE PROPER TREATMENT AND DRYING TAKE PLACE BEFORE COATING. POLYESTER POWDER (TIG) SPECIFICATIONS SHALL BE AS FOLLOWS:  
- PENIL HARDNESS (ASTM D-3358)  
- HUMIDITY (ASTM D-2657)  
- SOLVENT RESISTANCE (PD METHOD) - 50 DEL RUBB BL. SOFTENES.

**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.



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



**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      | ---            | ---          |

**SHADE STRUCTURE  
INSTALLATION INFORMATION**

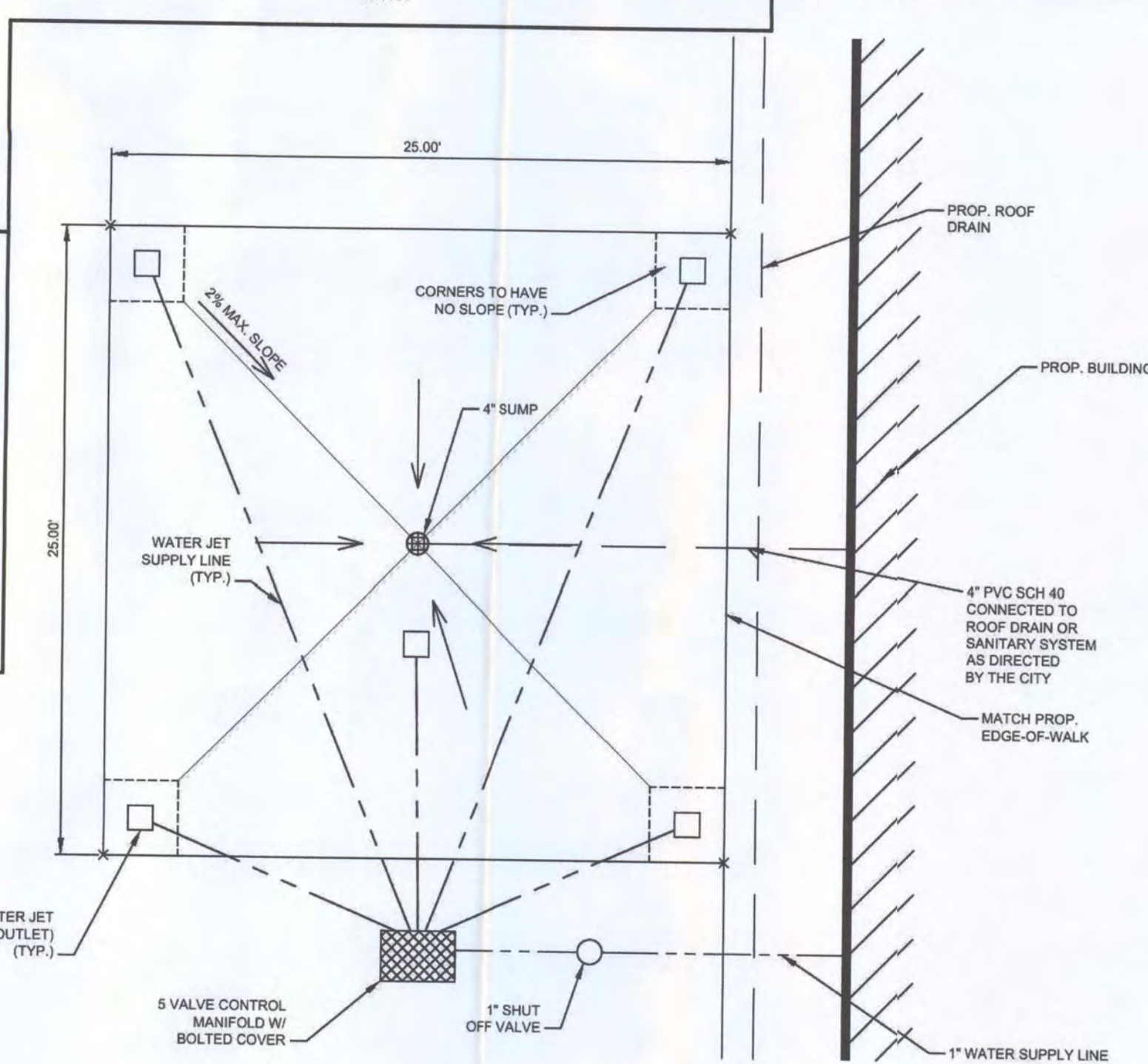
1. UNDER EACH CORNER POST SHALL BE PLACED A 2'X2' 42" DEEP CONCRETE FOUNDATION.
2. FOUNDATIONS SHALL BE PLACED BY OWNER.

**SHADE STRUCTURE  
MAINTENANCE INFORMATION**

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

**10' X 20' SHADE STRUCTURE**

N.T.S.



**SPLASH PAD DETAILS**

SCALE: 1" = 5'

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

**DETAILS**

**SHEET**  
**1**  
**OF 7**

AI652

| DATE:                 | REVISIONS | COMMENTS |
|-----------------------|-----------|----------|
| DATE OF SURVEY: ##### | 1         |          |
| DESIGNED BY: CEC      | 2         |          |
| DRAWN BY: CEC         | 3         |          |
|                       | 4         |          |
|                       | 5         |          |
|                       | 6         |          |

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

**CEC**





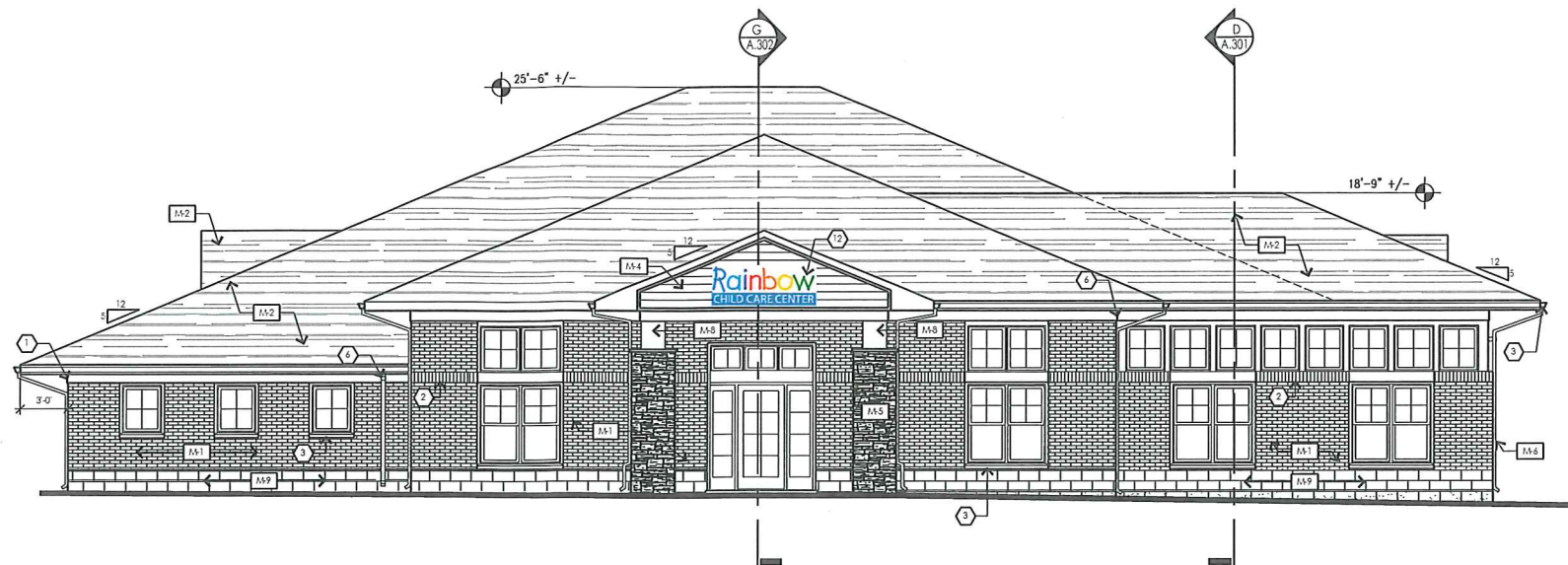
RAINBOW CHILD  
CARE CENTER

C-PROTOTYPE  
3055 N ANKENY BLVD.  
ANKENY, IA 50021

PROJECT NO: 2017.0310  
DATE: 07.06.17

A.200  
EXTERIOR ELEVATIONS

CHECKED: RC DRAWN: JC



1 FRONT (NORTH) ELEVATION 3/16"= 1'-0"

Exterior Elevation Materials

| SYMBOL | ITEM                    | MANUFACTURER                | MODEL                           | COLOR / FINISH                            | NOTES  |
|--------|-------------------------|-----------------------------|---------------------------------|---|--|
| M-1    | BRICK                   | BRAMPTON BRICK              | CROSSROADS SERIES               | COLOR - JASPER                            | IF BRICK IS NOT READILY AVAILABLE PROVIDE OPTIONS FOR OWNER TO APPROVE |
| M-2    | ASPHALT SHINGLES        | GAF ROOFING                 | TRI-SEAL HD - LIFETIME SHINGLES | COLOR - WEATHERED WOOD                    | -  |
| M-3    | BREAK METAL TRIM        | QUALITY EDGE                | TRI-LINE ENGRAINED TRIM COIL    | COLOR - 607 (CLAY)                        | -  |
| M-4    | VINYL SIDING            | CERTANTEED CORPORATION      | DOUBLE 5' CLAPBOARD             | MST                                       | -  |
| M-5    | STONE VENEER            | -                           | -                               | -   | VER. W/ OWNER FOR MANUFACTURER, MODEL, AND COLOR                       |
| M-6    | PPE-FIN ALUMINUM GUTTER | MASTIC HOME EXTERIORS       | 6' GUTTER COIL - 27 GAUGE       | COLOR - REBBLESTONE CLAY (VERIFY W/OWNER) | -  |
| M-7    | SELS                    | T.B.D.                      | LIVESTONE                       | VARI-GATED                                | -  |
| M-8    | CEDAR TRIM BOARD        | -                           | CEDAR                           | NATURAL & SEALED                          | -  |
| M-9    | SPURFACE C.M.U.         | MICHIGAN CERTIFIED CONCRETE | SPURFACE FACED                  | VAOLS                                     | IF BLOCK IS NOT READILY AVAILABLE PROVIDE OPTIONS FOR OWNER TO APPROVE |

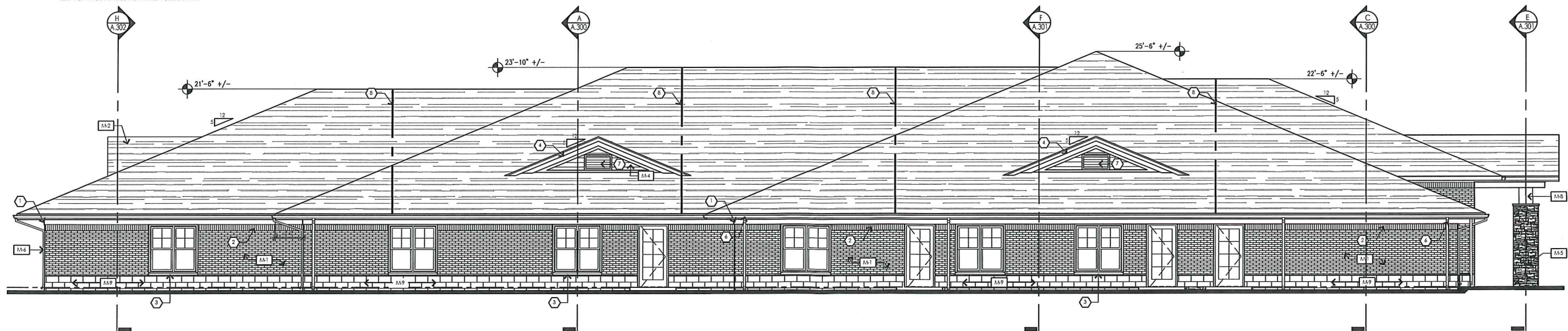
Keyed Elevation Notes:

1. TYPICAL EAVE - SEE DETAIL FOR MORE INFORMATION
2. BRICK SOLDER COURSE (TYP.)
3. SILL SLOPED TO ALLOW WATER RUNOFF WITH DRP EDGE
4. 1X2 TRIM SPD. ON 1X6 PAKE BPD. ON 1X6 SUB-PAKE BPD. WITH PPE-FINISHED ALUMINUM WRAP
5. 1/2" AZTEK PANEL (PAINT)
6. PRE-FINISHED ALUMINUM GUTTER AND DOWNSPOUT - VERIFY CONNECTION DETAIL AND LOCATION WITH CIVIL ENGINEER
7. PROVIDE LOUVERED DORMERS FOR MECHANICAL INTAKE (VER. W/ MECH. DRAWINGS)
8. LINE OF DRAFT STOPPING
9. LINE OF BUILDING BEYOND
10. CONDENSING UNIT. SEE MECH. DRAWINGS FOR EXACT LOCATIONS
11. 60ML EPDM ROOF FULLY ADHERED
12. PROPOSED 8' X 30' SIGN SHOWN. SIGN TO BE PERMITTED UNDER SEPARATE SUBMITTAL BY SIGN VENDOR.

General Elevation Notes:

1. ALL TRIM BOARDS (JUNO.) WILL BE CLAD IN PPE-FIN. ALUM. - DETERMINE GAUGE FOR RAINBOW CHILD CARE CENTER SPEC.
2. EXTERIOR BRICK IS TO BE STANDARD SIZE - COURSE OUT QUON CORNERS
3. EXTERIOR WINDOWS ARE JELDWEN. THEY ARE OPERABLE AND HAVE SCREENS. SCREENS ARE TO BE 1/8" MESH OR BETTER.
4. DO NOT SCALE HATCHING. REFER TO BUILDING SECTIONS & WALL SECTIONS FOR PROPER CONSTRUCTION METHODS. A.300 - A.305
5. SIGNAGE TO BE INSTALLED BY G.C. AS DIRECTED BY OWNER

NOTE:  
JELD-WEN WINDOWS TO BE PPE-FINISHED W/DBERT SAND

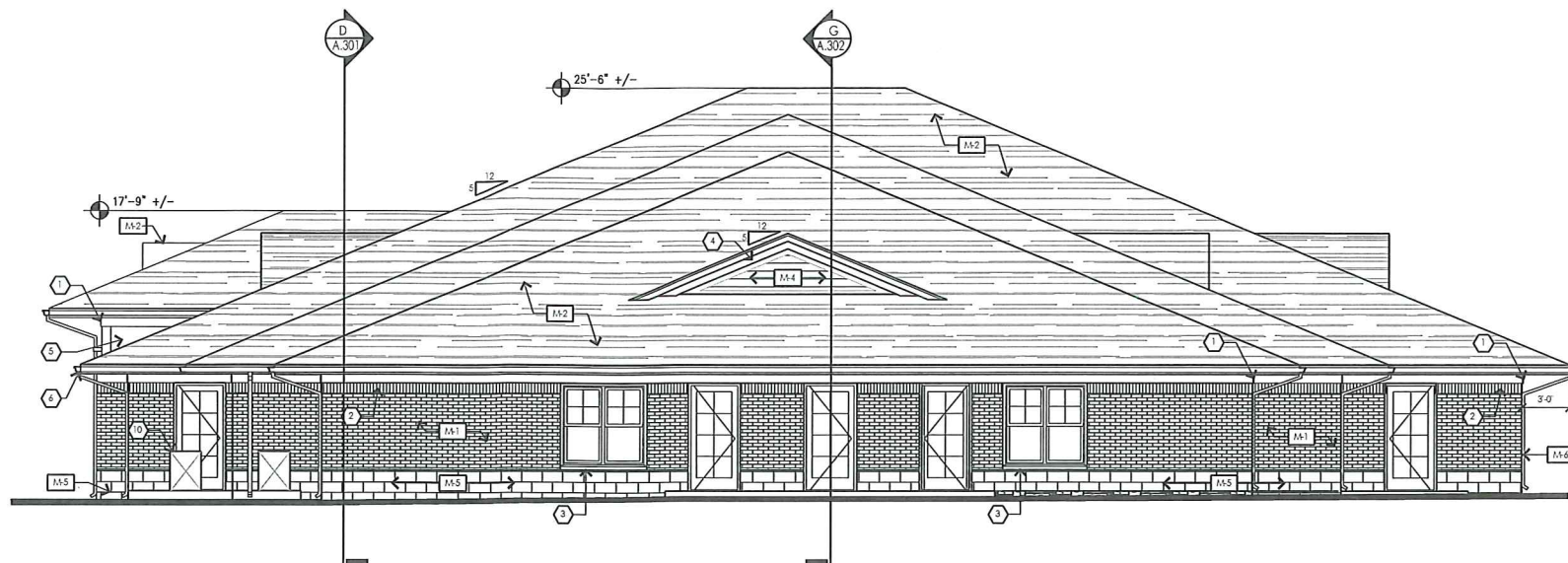


2 LEFT (EAST) ELEVATION 3/16"= 1'-0"



RAINBOW CHILD  
CARE CENTERC-PROTOTYPE  
3055 N ANKENY BLVD.  
ANKENY, IA 50021PROJECT NO: 2017.0310  
DATE: 07.06.17A.201  
EXTERIOR ELEVATIONS

CHECKED: RC DRAWN: JC



1 REAR (SOUTH) ELEVATION 3/16" = 1'-0"

## Exterior Elevation Materials

| SYMBOL | ITEM                    | MANUFACTURER                | MODEL                           | COLOR / FINISH                         | NOTES  |
|--------|-------------------------|-----------------------------|---------------------------------|--|--|
| M-1    | BRICK                   | BRAMPTON BRICK              | CROSSROADS SERIES               | COLOR - JASPER                         | IF BRICK IS NOT READILY AVAILABLE PROVIDE OPTIONS FOR OWNER TO APPROVE |
| M-2    | ASPHALT SHINGLES        | GAF ROOFING                 | TWIGLINE HD - LIFETIME SHINGLES | COLOR - WEATHERED WOOD                 | -  |
| M-3    | BREAK METAL TRIM        | QUALITY EDGE                | TRULINE EMBOSSED TRIM COIL      | COLOR - 607 (CLAY)                     | -  |
| M-4    | VINYL SIDING            | CERTANTEED COFFINATION      | DOUBLE 5" CLAPBOARD             | MST                                    | -  |
| M-5    | STONE VENEER            | -                           | -                               | -                                      | VER. W/ OWNER FOR MANUFACTURER, MODEL AND COLOR                        |
| M-6    | PPE-FRI ALUMINUM GUTTER | MASTIC HOME EXTERIORS       | 6" GUTTER COIL - 27 GAUGE       | COLOR - TERRAZZO CLAY (VERIFY W/OWNER) | -  |
| M-7    | SELS                    | T.B.D.                      | LIMESTONE                       | VARIEGATED                             | -  |
| M-8    | CEDAR TRIM BOARD        | -                           | CEDAR                           | NATURAL & SEALED                       | -  |
| M-9    | SPLITFACE C.M.U.        | MICHIGAN CERTIFIED CONCRETE | SPLIT FACED                     | VAOLS                                  | IF BLOCK IS NOT READILY AVAILABLE PROVIDE OPTIONS FOR OWNER TO APPROVE |

## NOTE:

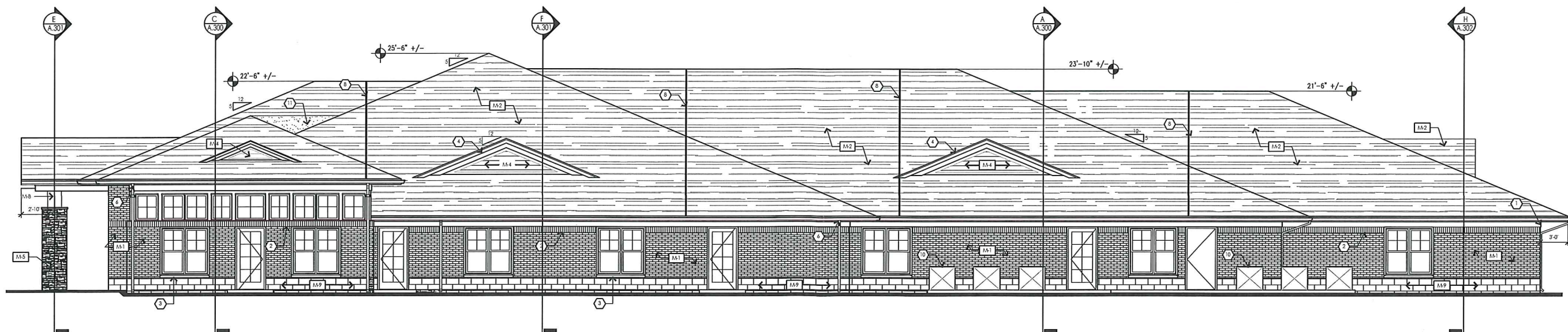
JELD-WEN WINDOWS TO BE PPE-FRI FINISHED W/DEBERT SAND

## Keyed Elevation Notes:

1. TYPICAL EAVE - SEE DETAIL FOR MORE INFORMATION
2. BRICK SOLDIER COURSE (TYP.)
3. SILL SLOPED TO ALLOW WATER RUNOFF WITH DFP EDGE
4. 1X2 TRIM BFD. ON 1X6 PAKE BFD. ON 1X4 SUB-PAKE BFD. WITH PPE-FRI FINISHED ALUMINUM WRAP
5. 1/2" AZTEK PANEL (PANT)
6. PPE-FRI FINISHED ALUMINUM GUTTER AND DOWNSPOUT - VERIFY CONNECTION DETAIL AND LOCATION WITH CIVIL ENGINEER
7. PROVIDE LOUVERED DORMERS FOR MECHANICAL INTAKE/EXHAUST (W/ MECH. DRAWINGS)
8. LINE OF DRAFT STOPPING
9. LINE OF BUILDING BEYOND
10. CONDENSING UNIT. SEE MECH. DRAWINGS FOR EXACT LOCATIONS
11. 60ML EPDM ROOF FULLY ADHERED
12. PROPOSED 8" X 30" SIGN SHOWN. SIGN TO BE PERMITTED UNDER SEPARATE SUBMITTAL BY SIGN VENDOR.

## General Elevation Notes:

- 1). ALL TRIM BOARDS (J.W.O.) WILL BE CLAD IN PPE-FRI ALUM. - DETERMINE GAUGE PER RAINBOW CHILD CARE CENTER SPEC.
- 2). EXTERIOR BRICK IS TO BE STANDARD SIZE - COURSE OUT QUOTE IN CORNERS
- 3). EXTERIOR WINDOWS ARE JELD-WEN. THEY ARE OPERABLE AND HAVE SCREENS. SCREENS ARE TO BE 1/4" MESH OR BETTER.
- 4). DO NOT SCALE HATCHING. REFER TO BUILDING SECTIONS & WALL SECTIONS FOR PROPER CONSTRUCTION METHODS. A.300 - A.305
- 5). SIGNAGE TO BE INSTALLED BY G.C. AS DIRECTED BY OWNER



2 RIGHT (WEST) ELEVATION 3/16" = 1'-0"



