

Date May 18, 2020

**RESOLUTION SETTING HEARING ON REQUEST FROM CASEY'S MARKETING COMPANY FOR APPROVAL OF PUD FINAL DEVELOPMENT PLAN FOR "CASEY'S STORE NO. 1192" FOR PROPERTY AT 3200 SOUTHWEST 9<sup>TH</sup> STREET**

**WHEREAS**, on May 7, 2020, the City Plan and Zoning Commission voted 12-0 to **APPROVE** a request from Casey's Marketing Company (lessee), represented by Marni Beck (officer), to approve the PUD Final Development Plan for "Casey's Store No. 1192" on property located at 3200 Southwest 9<sup>th</sup> Street ("Property") to allow redevelopment of the existing 21,664 square foot general food sales store with a 4,817 square foot limited retail sales store with pump island canopy with 14 fueling locations, subject to the following revisions:

1. Compliance with all administrative review requirements for the Final Development Plan in accordance with the previously approved PUD Conceptual Plan.
2. Provision of Public Pedestrian Easements in locations where the public sidewalk would encroach into the site.
3. Provision of cross access easements on the Final Development Plan to ensure share use of the southeastern driveway and parking maneuvering with the commercial center to the south.
4. Provision of a signature landscape feature at the intersection of Southwest 9<sup>th</sup> Street and Park Avenue in compliance with the requirements of the PUD Conceptual Plan.
5. Designation of seasonal merchandise display areas.
6. Modification of the lighting to ensure that it complies with maximums of 2.0 footcandles at property lines across the street or adjoining commercial use and 0.5 footcandles across from or adjoining residential use; and

**WHEREAS**, the Property is legally described as follows:

THE EAST 2 FEET OF LOT ONE (1); LOT TWO (2); LOT THREE (3); LOT FOUR (4); LOT FIVE (5); LOT SIX (6) AND SEVEN (7), EXCEPT BEGINNING AT THE NORTHEAST CORNER OF LOT 6, THENCE SOUTH 132 FEET TO THE NORTHEAST CORNER OF LOT 6, THENCE SOUTH 132 FEET TO THE SOUTHEAST CORNER OF LOT 7, THENCE WEST 23.5 FEET ALONG THE SOUTH LINE OF LOT 7, THENCE NORTH 10.8 FEET, THENCE NORTHWESTERLY 37.06 FEET TO A POINT ON THE NORTH LINE OF LOT 6 WHICH IS 48.5 FEET WEST OF THE NORTHEAST CORNER OF LOT 6, THENCE EAST 48.5 FEET TO THE POINT OF BEGINNING; LOT EIGHT (8), EXCEPT THE EAST 23.5 FEET THEREOF; LOT NINE (9), EXCEPT THE EAST 23.5 FEET THEREOF; ALL IN LITTLETON PLACE, AN OFFICIAL PLAT, NOW INCLUDED IN AND FORMING A PART OF THE CITY OF DES MOINES, IOWA. SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD DEED FROM BK7321 PG866.

**NOW THEREFORE, BE IT RESOLVED**, by the City Council of the City of Des Moines, Iowa, as follows:

1. That the attached communication from the Plan and Zoning Commission is hereby received and

Date May 18, 2020

filed.

2. That the meeting of the City Council at which the proposed PUD Final Development Plan for “Casey’s Store No. 1192” is to be considered, and at which time the City Council will hear both those who oppose and those who favor the proposal, shall be held at 5:00 p.m. on June 8, 2020, by electronic means in accordance with the Governor’s and Mayor’s Proclamations and to encourage and maintain social distancing to curb the spread of COVID19 in the community, with or without public access to the meeting location.
3. That the City Clerk is hereby authorized and directed to cause notice of said proposal in the accompanying form to be given by publication once, not less than seven (7) days and not more than twenty (20) days before the date of hearing, all as specified in Section 362.3 and Section 414.4 of the Iowa Code. The City Clerk is instructed to provide this notice including information about participation in the electronic meeting as indicated above.

MOVED BY \_\_\_\_\_ TO ADOPT.

FORM APPROVED:

/s/ Glenna K. Frank  
 Glenna K. Frank, Assistant City Attorney

(10-2020-7.93)

COUNCIL ACTION	YEAS	NAYS	PASS	ABSENT
COWNIE				
BOESEN				
GATTO				
GRAY				
MANDELBAUM				
VOSS				
WESTERGAARD				
TOTAL				

MOTION CARRIED APPROVED

**CERTIFICATE**

I, P. KAY CMELIK, City Clerk of said City hereby certify that at a meeting of the City Council of said City of Des Moines, held on the above date, among other proceedings the above was adopted.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year first above written.

\_\_\_\_\_  
 Mayor

\_\_\_\_\_  
 City Clerk



Date May 18, 2020  
 Agenda Item 17  
 Roll Call # \_\_\_\_\_

May 12, 2020

Honorable Mayor and City Council  
 City of Des Moines, Iowa

Members:

Communication from the City Plan and Zoning Commission advising that at their meeting held May 5, 2020 the following action was taken regarding a request from Casey's Marketing Company (lessee) represented by Marni Beck (officer) for review and approval of a PUD Final Development Plan "Casey's Store No. 1192" for property located at 3200 Southwest 9<sup>th</sup> Street, to allow redevelopment of the existing 21,664-sqaure foot general food sales store with a 4,817-square foot gas station/convenience store to include a pump island canopy with 14 fueling locations. The subject property is owned by Tursi, LC.

**COMMISSION ACTION:**

After public hearing, the members voted 12-0 as follows:

Commission Action:	Yes	Nays	Pass	Absent
Francis Boggus				X
Dory Briles				X
Abby Chungath	X			
Jacqueline Easley	X			
Jann Freed	X			
John "Jack" Hilmes	X			
Lisa Howard	X			
Carolyn Jenison	X			
Greg Jones	X			
William Page	X			
Rocky Sposato	X			
Steve Wallace	X			
Greg Wattier	X			
Emily Webb	X			

**APPROVAL** of the proposed PUD Final Development Plan subject to the following conditions:

1. Compliance with all administrative review requirements for the Final Development Plan in accordance with the previously approved PUD Conceptual Plan.
2. Provision of Public Pedestrian Easements in locations where the public sidewalk would encroach into the site.

3. Provision of cross access easements on the Final Development Plan to ensure share use of the southeastern driveway and parking maneuvering with the commercial center to the south.
4. Provision of a signature landscape feature at the intersection of Southwest 9<sup>th</sup> Street and Park Avenue in compliance with the requirements of the PUD Conceptual Plan.
5. Designation of seasonal merchandise display areas.
6. Modification of the lighting to ensure that it complies with maximums of 2.0 footcandles at property lines across the street or adjoining commercial use and 0.5 footcandles across from or adjoining residential use.

(10-2020-7.93)

### **RECOMMENDATION TO THE P&Z COMMISSION**

Staff recommends approval of the proposed PUD Final Development Plan subject to the following conditions:

1. Compliance with all administrative review requirements for the Final Development Plan in accordance with the previously approved PUD Conceptual Plan.
2. Provision of Public Pedestrian Easements in locations where the public sidewalk would encroach into the site.
3. Provision of cross access easements on the Final Development Plan to ensure share use of the southeastern driveway and parking maneuvering with the commercial center to the south.
4. Provision of a signature landscape feature at the intersection of Southwest 9<sup>th</sup> Street and Park Avenue in compliance with the requirements of the PUD Conceptual Plan.
5. Designation of seasonal merchandise display areas.
6. Modification of the lighting to ensure that it complies with maximums of 2.0 footcandles at property lines across the street or adjoining commercial use and 0.5 footcandles across from or adjoining residential use.

### **STAFF REPORT TO THE PLANNING COMMISSION**

1. **Purpose of Request:** Development of a 4,817-square foot limited retail sales store with fuel station having a pump island canopy for 14 vehicle fueling locations. The store would sell packaged wine and beer.
2. **Size of Site:** 2.12 acres.
3. **Existing Zoning (site):** Legacy "PUD" Planned Unit Development.
4. **Existing Land Use (site):** Vacant grocery store.



## 5. Adjacent Land Use and Zoning:

**North** – “MX1” & “N5”; Uses are a barber shop and single-family dwellings.

**South** – “MX1”; Use is the Park Avenue Plaza commercial center.

**East** – “MX1” & “P2”; Uses are Park Avenue Christian Church, Des Moines Vacuum, and Sellers Trustworthy Hardware Store.

**West** – “N3a”; Uses are single-family dwellings.

**6. General Neighborhood/Area Land Uses:** The subject site is located on the Southwest 9<sup>th</sup> Street commercial corridor at the intersection with Park Avenue. This is considered a Neighborhood Node with a grocery store, a commercial center, a church, and a public elementary school located at the intersection.

**7. Applicable Recognized Neighborhood(s):** The subject property is located in the Grays Lake Neighborhood and within 250 of the Indianola Hills and Watrous Heights Neighborhoods. The neighborhood associations were notified of the meeting by mailing of the Preliminary Agenda to all recognized neighborhood associations on April 17, 2020. Additionally, separate notifications of the hearing for this specific item were mailed on April 27, 2020 (10 days prior to the original public hearing) to the neighborhood associations and to the primary titleholder on file with the Polk County Assessor for each property within 250 feet of the site.

All agendas and notices are mailed to the primary contact(s) designated by the recognized neighborhood association to the City of Des Moines Neighborhood Development Division at the time of the mailing. The Grays Lake Neighborhood Association notices were mailed to Rick Trower, 1310 Broad Street, Des Moines, IA 50315. The Indianola Hills Neighborhood Association notices were mailed to Jeni Dooley, 712 Virginia Avenue, Des Moines, IA 50315. The Watrous Heights Neighborhood notices were mailed to David Johnston, 604 Philip Street, Des Moines, IA 50315.

**8. Relevant Zoning History:** On January 27, 2020 by Ordinance No. 15,857, the City Council rezoned the property to “PUD” Planned Unit Development to allow for development of the property for a gas station/convenience store with sales of wine and beer.

**9. PlanDSM Future Land Use Plan Designation:** Community Mixed Use within a Neighborhood Node.

**10. Applicable Regulations:** Considering the criteria set forth in Chapter 18B of the Iowa Code, and based on the provisions of Chapter 134 Section 134-2.2.9.C, all PUD Final Development Plans must be reviewed and approved by the City Council after review and recommendation by the Plan and Zoning Commission.

## II. ADDITIONAL APPLICABLE INFORMATION

- 1. Drainage/Grading:** The applicant has provided for a storm water management in accordance with Site Plan requirements in Section 135-8.3.2 of Chapter 135 of the City Code. Because the site would be over an acre in area, water quality detention is required as is a Storm Water Pollution Protection Plan approved by the Iowa DNR. The developer has provided this with Sheet C-401 of the submitted Final Development Plan. Development of the site must comply with the Tree Preservation and Mitigation Ordinance contained in Chapter 42, Article X, of the City Code.

Underground stormwater storage chambers are proposed on the northwest portion of the site to manage required stormwater detention (see Sheet C-201 of submitted Final Development Plan). These chambers would outlet into public storm sewer available in Park Avenue at the northwest corner of the site.

- 2. Street System:** A traffic study was prepared by the developer. The City Traffic and Transportation Division has reviewed the report and has recommended that left turn movements on the eastern driveway to Park Avenue be limited to right-in, right-out only. This has been accommodated with the submitted Final Development Plan. There were no other recommendations that would require modifications to the adjoining streets or intersection. The submitted Final Development Plan indicates sidewalk that would partially encroach into the private property. Public pedestrian easements should be provided on the Final Development Plan in these locations.
- 3. Parking:** The City's standard off-street parking requirement for retail uses with fuel sales is 1 parking space per 300 square feet. This would require a minimum of 17 spaces for a 4,817-square foot building. A total of 27 parking spaces are proposed. The proposed Final Development Plan does need to show the necessary cross access easements between the site to the south to allow the use of the shared southeastern driveway.
- 4. Design Guidelines:** The approved PUD Conceptual Plan requires that the proposed convenience store project be developed in accordance with the City's Gas Station/Convenience Store Site Plan Design Guidelines that were contained the previous Site Plan Ordinance applicable at the time of the rezoning. The following are the guidelines as listed in former Chapter 82 of the City Code (Section 82-214.8) with staff comments as appropriate in italics.

#### Site Design

- A. The optimal layout of any individual site requires an in-depth understanding of local context and a thorough site analysis. The components of a gas station and convenience store to be considered in site design include, but are not limited to:
  - (i) Primary structure/retail sales building/single or multiple tenant;
  - (ii) Pump island, canopy structure, and lighting;
  - (iii) Refuse, service and storage area;
  - (iv) Circulation systems and parking;
  - (v) Service bays;
  - (vi) Ancillary uses such as car washes, drive through uses, ATMs and telephones.



*Staff believes the proposal would generally meet this guideline. The submitted Final Development Plan provides for pedestrian-oriented adjoining Class "A" sidewalks, outdoor seating and bicycle racks. The site has substantial frontage towards both Southwest 9<sup>th</sup> Street and Park Avenue and has residential development to the west. The layout is in accordance with the approved Conceptual Plan, which was determined consistent with the form contemplated in the Southwest 9<sup>th</sup> Street Corridor Plan for an expansion of the existing grocery store building.*

- B. Maximum size of site should not exceed two (2) acres without a rezoning to a PUD Planned Unit Development pursuant to Chapter 134, Division 13 of the Municipal Code of the City of Des Moines and site review under a Conceptual Plan approved by the Plan and Zoning Commission and City Council.

*The proposal complies with this guidelines as the site measures 2.12 acres and the property was rezoned to a what is now a Legacy "PUD" District.*

- C. Minimum open space should be 20% of the site or 1,000 square feet per vehicle fueling location, whichever is greater.

*The site measures 92,347 square feet and would contain 14 fueling locations. A minimum of 18,470 square feet of open space is required to meet this guideline. The submitted Final Development Plan shows that the site would have at least 29,507 square feet (31.95% of site) of open space. This meets and exceeds this guideline.*

- D. All development proposals should show evidence of coordination with the site plan as well as arrangement of buildings and planning elements of neighboring properties by:
- (i) Responding to local development patterns and the streetscape by use of consistent building setbacks, orientation and relationship of structures to the street and linkages to pedestrian facilities;
  - (ii) Seeking shared-access with adjoining commercial uses where feasible to minimize curb cuts and enhance pedestrian and vehicular circulation;
  - (iii) Minimizing cross traffic conflicts within parking areas.

*Dedicated pedestrian routes are shown and provided from the both Southwest 9<sup>th</sup> Street and Park Avenue sidewalks to the building.*

*The site is separated from other commercial properties by streets. Therefore, shared driveways and circulation points are not necessary. Shared access would be maintained for the commercial center adjoining to the south.*

- E. The site plan shall mitigate the negative impacts from site activities on adjoining uses as follows:
- (i) Service areas, storage areas and refuse enclosures should be oriented away from public view and screened from adjacent sites;
  - (ii) Drive-through windows, menu boards and associated stacking lanes should be oriented away from residential areas or screened from public view;

- (iii) Auto repair bay openings and car-wash openings should be oriented away from residential uses;
- (iv) Lighting should be non-invasive to adjoining residential use.

*The proposed trash enclosure and can recycling crusher would be located at the west rear of the site and in the least visible portion of the site.*

- F. The site plan shall provide identifiable pedestrian access from adjoining public pedestrian routes through the site to the primary building and from accessory functions within the site. This can be accomplished by use of special paving colors or textures and appropriately scaled lighting.

*Pedestrian routes to the building are identified to the public sidewalk system on both public streets.*

### Architecture

- A. The following architectural guidelines encourage creative response to local and regional context and contribute to the aesthetic identity of the community.
- B. Building design should consider the unique qualities and character of the surrounding area and be consistent with the city's 2020 Character Area Plans (this is superseded by PlanDSM). Where character is not defined by 2020 Community Character Plan, building design should be of a high quality with primary use of durable materials such as masonry, block, or stone.
- C. A facility occupying a pad or portion of a building within a larger commercial center should be designed to reflect the design elements of that center.
- D. Drive-through elements should be integrated into the building rather than appear to be applied or "stuck-on" to the building.
- E. All sides of a building should express consistent architectural detail and character, with a primary use of durable materials such as brick, masonry block, or in special instances a predominant material found in the surrounding commercial area. Columns should be designed to minimize visual impact.
- F. Walls, pump island canopies and other outdoor covered areas should be compatible with the building, using similar material, color and detailing.
- G. To encourage visually interesting roofs, variations in the roof line and treatments such as extended eaves and parapet walls with cornice treatments are encouraged.
- H. Perceived height and bulk should be reduced by dividing the building mass into smaller-scaled components. Examples of treatments that could be used to avoid excessive bulk and height include:
  - (i) Low-scale planters and site walls.
  - (ii) Wainscot treatment.
  - (iii) Clearly pronounced eaves or cornices.
  - (iv) Subtle changes in material color and texture.
  - (v) Variation in roof forms.
  - (vi) Covered pedestrian frontages and recessed entries.
  - (vii) Deeply set windows with mullions.

*All facades of the proposed building would be sided with brick and stone and would have an architectural panel system above the first-floor ceiling over the entrance. The*



*proposed building design includes wall plane variation and parapet wall height on the street facing facades.*

I. Canopies:

- (i) Integration of materials on canopies that are similar or compatible to those used on the building or site walls is desirable (e.g., wrap the canopy columns with brick that matches the building). Multiple canopies or canopies that express differing masses are encouraged.

*The proposed fuel pump island canopy would be sided with metal and supported by metal columns clad with brick to match the building. The canopy has a raised articulation to break up the long linear pump array that is proposed.*

- (ii) Canopy height should not be less than 13'-9" as measured from the finished grade to the lowest point on the canopy fascia. The overall height of canopies should not exceed 18'.

*The submitted information indicates the total canopy height would be approximately 21-feet 9-inches to accommodate the raised articulation in the center. The majority remainder of the canopy would be at 16-feet 9-inches in total height. The height of the underside clearance of the canopy would 13-feet 9-inches. The fascia are proposed to be at 3-feet in height.*

- J. All display items for sale, excluding seasonal items (i.e., sand, salt, pop, firewood) should be located within the main building. All outdoor display of seasonal items shall be identified on the site plan and be located outside of any required setbacks. No display of seasonal items should exceed 5' in height.

*The staff recommends that proposed seasonal outdoor display locations be established on the Final Development Plan.*

Landscape Design

- A. Landscaping is integral to the overall design concept and should be carefully planned to enhance the overall appearance and function of the site.
- B. Landscape buffers with screen fencing should mask the site from adjacent residential uses. Plantings that exceed the minimum Des Moines Landscaping Standards may be required.
- C. Dense landscaping or architectural treatments should be provided to screen unattractive views and features such as storage areas, trash enclosures, utility cabinets and other similar elements.
- D. A site design for projects located at a street intersection should provide special landscape treatments, including by way of example perennial plant beds, site walls, native grasses, decorative sign foundations and housing.
- E. Proper maintenance and timely replacement of plant material is required and will be enforced based on the approved site plan.
- F. Monument signs are encouraged and are required when the site adjoins a residential district.

*The submitted Final Development Plan has shown landscaping in accordance with the former "C-2" District requirements as required in the approved PUD Conceptual Plan. The submitted Final Development Plan complies with this including providing a Class A sidewalk with tree planters. City staff are working with Des Moines Water Works regarding the placement of the trees in proximity to the water main in Park Avenue. In either instance if a tree cannot be provided the planter bed would require other plant material. The Final Development Plan should show a significant landscape feature at the intersection to meet the design guideline. This could be accomplished by berming up the proposed monument sign and adding perennial beds, a concentration of shrubs, ornamental grasses or a combination of those strategies.*

*The Final Development Plan includes a note that states "the required landscaping shall be maintained for the life of the certificate of occupancy or certificate of zoning compliance."*

*The submitted Final Development Plan includes a monument style sign in conformance with this guideline.*

### Lighting

- A. Lighting of gas stations and convenience stores should enhance safety and provide light levels appropriate to the visual task with minimal glare, light trespass and excess site brightness. Lighting should not be a nuisance or a hazard.
- B. Direct light trespass beyond property lines is prohibited. The maximum horizontal illuminance at grade and the maximum vertical illuminance at five feet above grade measured at the property line should not exceed Illuminating Engineering Society of North America (IESNA) recommended practices for light trespass. (0.5 footcandles for residential, 2.0 footcandles for commercial). The site plan must contain illuminance models showing light levels throughout the site.
- C. Light fixtures mounted under canopies should be completely recessed into the canopy with flat lenses that are translucent and completely flush with the bottom surface (ceiling) of the canopy. Generally, lights shall not be mounted on the top or sides (fascias) of the canopy and internally illuminated/entirely translucent canopies should be prohibited. However, accent lighting on the sides (fascias) of the canopy may be permitted.
- D. Parking Lot and Site Lighting:
  - (i) All luminaries should be of full cut-off design, aimed downward and away from the property line;
  - (ii) Maximum pole heights should not exceed 20'.
- F. Building-Mounted Lighting:
  - (i) All luminaries should be a full cut-off design and aimed downward.
  - (ii) All luminaries should be recessed or shielded so the light source is not directly visible from the property line.

*The approved Conceptual Plan includes a note that states "all site lighting will be in compliance with the lighting standards of City Code Section 82-214.8 to the satisfaction of the Community Development Director" and that "lighting shall consist of low-glare cut off type fixtures to reduce the glare of light pollution on surrounding area." Lighting would be reviewed in detail during the site plan phase. The submitted photometric with the Final Development Plan generally demonstrates compliance. However, it indicates a few spot*



*locations along Park Avenue where the readings outside the property line indicate higher than the 2.0 footcandle maximum. The proposed lighting would need to be adjusted so that the photometric model complies with this provision.*

## **SUMMARY OF DISCUSSION**

Erik Lundy presented staff report and recommendation.

Greg Broussard stated he didn't have anything to add after the staff presentation. He is open to any questions the commission may have.

Emily Webb asked if there are any staff recommendations they are not in agreement with?

Greg Broussard stated they agree with all staff recommendations.

## **CHAIRPERSON OPENED THE PUBLIC HEARING**

Thomas Nichols, 933 Caulder Avenue stated he believes there are enough convenience stores on SW 9<sup>th</sup> Street. He would like to see another grocery store and the City should try harder to fill this space with a discount grocery store.

Mike Ludwig stated this is a review to determine whether the final development plan is consistent with the PUD zoning and conceptual plan that has already been approved by Council. The debate for the use of the property occurred several months ago during the hearing on the rezoning of the property. During the rezoning hearing, the SW 9<sup>th</sup> business group was in full support and the proposal was found to be consistent with the SW 9<sup>th</sup> Corridor plan.

Greg Broussard stated he does not have any further comments at this time.

## **CHAIRPERSON CLOSED THE PUBLIC HEARING**

Will Page asked if there will be illuminated lighting on the fascia of the canopy?


Erik Lundy stated this project does not have illuminated lighting within the canopy fascia. That design guideline is to allow for something like a neon band across the canopy.

## **COMMISSION ACTION:**

John "Jack" Hilmes made a motion for approval of the requested Type 2 Design Alternative to allow reuse of the building for an "Assembly, Place of Worship" while providing six (6) off-street parking stalls so long as the use contains seating for no more than 150 people and **DENIAL** of the requested Type 2 Design Alternative to allow waiver of the required curb barriers for the on-site surface parking lot. The Commission believes that concrete curb barriers should be provided in place of the proposed landscape timbers.

Motion passed: 12-0

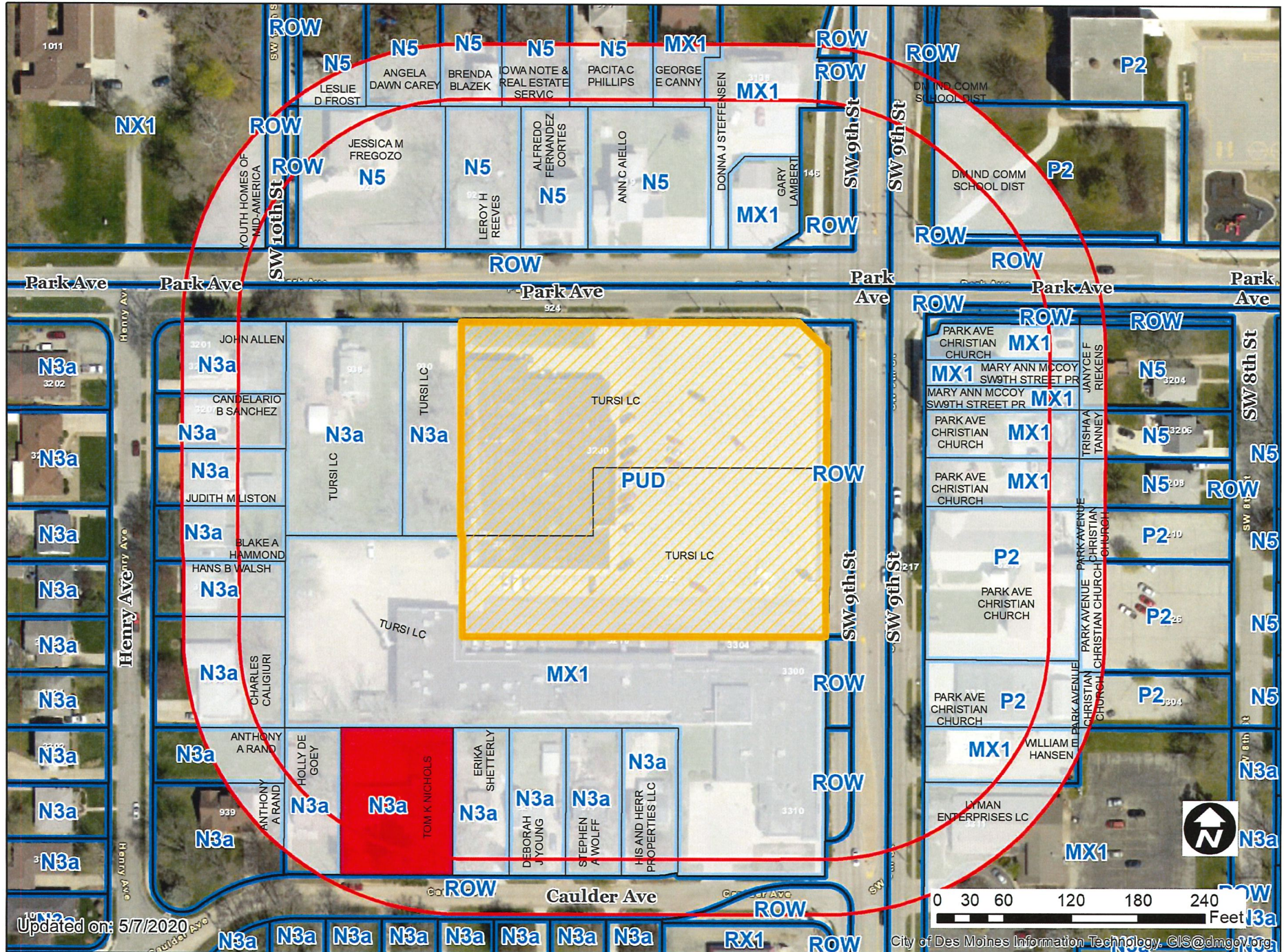
Respectfully submitted,



Michael Ludwig, AICP  
Planning Administrator

MGL:tjh  
Attachments





Updated on: 5/7/2020

City of Des Moines Information Technology, GIS@dmgov.org

1 inch = 114 feet

17



GOVERNING SPECIFICATIONS FOR PUBLIC IMPROVEMENTS (2020 SUDAS) AND THE CITY OF DES MOINES GENERAL SUPPLEMENTAL SPECIFICATIONS TO SUDAS EFFECTIVE AT THE TIME OF PLAN APPROVAL.

IOWA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION", SERIES 2018 AND ALL CURRENT GENERAL SUPPLEMENTAL SPECIFICATIONS AND MATERIALS INSTRUCTIONAL MEMORANDUM SHALL GOVERN AS REFERENCED.

MUTCOD 2009 AS ADOPTED BY IOWA DEPARTMENT OF TRANSPORTATION.

DATE OF SUBMITTAL  
APRIL 8, 2020

APPROVAL DATES  
PLANNING AND ZONING: \_\_\_\_\_  
CITY COUNCIL: \_\_\_\_\_

**SITE SUMMARY**  
PARCEL AREA: 2.44 ACRES  
PUD AREA: 2.12 ACRES  
ZONING: PLANNED UNIT DEVELOPMENT DISTRICT (PUD)  
LAND USE: THE LAND USE SHALL CONSIST OF A GAS STATION AND AN ASSOCIATED CONVENIENCE STORE WITH 7 PUMPS AND 14 FUELING LOCATIONS.

**IMPERVIOUS AREA**  
EXISTING: 86,684 SF  
PROPOSED: 62,703 SF  
NEW PAVEMENT: 57,885 SF  
NEW BUILDING: 4,817 SF

**OPEN SPACE**  
REQUIRED (20%) = 18,442 SF  
PROVIDED = 29,507 SF

**BUILDINGS**  
EXISTING: 22,231 SF  
PROPOSED: 4,817 SF

**BUILDING INFORMATION**  
# OF EMPLOYEES AT MAX PER SHIFT: 4  
1 STORY HEIGHT: 20' 8"

**PARKING**  
REQUIRED 1/300SF: 17 STALLS  
PROVIDED: 27 STALLS

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY IOWA ONE CALL, 1-800-292-8989.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF OJASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."



**PUD FINAL DEVELOPMENT PLAN APPROVAL**

APPROVED     APPROVED WITH CONDITIONS. SEE EXHIBIT "A"

IN ACCORDANCE WITH SECTION 135-9, 2019 DES MOINES MUNICIPAL CODE, AS AMENDED.

NO CHANGES TO THIS PLAN UNLESS APPROVED IN WRITING FROM THE COMMUNITY DEVELOPMENT DIRECTOR.

DATE: \_\_\_\_\_ COMMUNITY DEVELOPMENT DIRECTOR: \_\_\_\_\_

PLAN REVISIONS		
REV	ISSUED FOR	DATE

# CITY OF DES MOINES

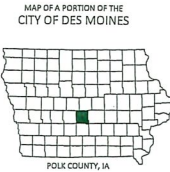
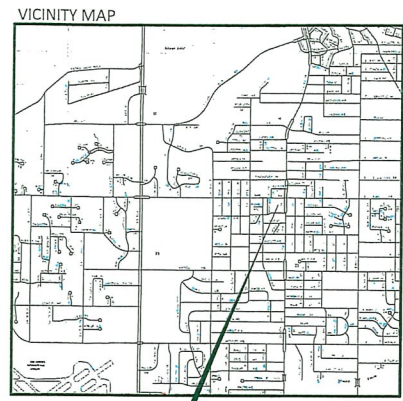
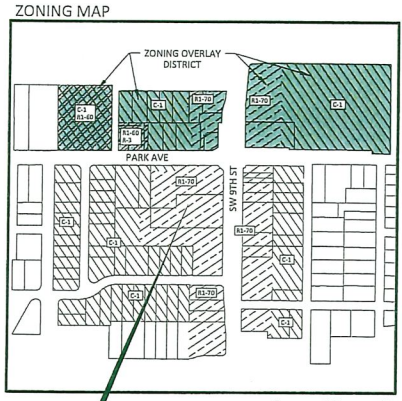
## PUD FINAL DEVELOPMENT PLAN FOR

# CASEY'S GENERAL STORE NO. 1192

# PARK AVE & SW 9TH STREET

# 3200 SW 9TH STREET

APRIL, 2020



SHEET NUMBER	SHEET TITLE
C-001	COVER SHEET
C-002	GENERAL NOTES
C-003	ALTA
C-004	ALTA
C-100	EXISTING SITE/DEMOLITION PLAN
C-101	SITE PLAN LAYOUT
C-201	GRADING PLAN
C-202 - C-203	SIDEWALK SHEETS
C-301 - C-303	UTILITY PLAN
C-401	SWPPP/EROSION CONTROL
C-601 - C-602	CIVIL DETAILS SHEETS
C-701	LANDSCAPING PLAN
C-702	LANDSCAPING DETAILS
ADS 1-5	UNDERGROUND STORMWATER STORAGE PLAN

THIS PLAN SET CONTAINS 22 SHEETS.

**OWNER**  
TURSI LC  
3011 143RD ST  
URBANDA LA IA 50323-2062  
CHRIS TURSI  
515-577-8206  
CHRISTOPHERTURSI@GMAIL.COM

**DEVELOPER**  
CASEY'S GENERAL STORE  
ONE CONVENIENCE BLVD. PO BOX 3001  
ANKENY, IA 50021  
KATIE DEROUCHÉY  
515-963-3829  
KATIE.DEROUCHEY@CASEYS.COM

**ENGINEER/SURVEYOR/LANDSCAPE ARCHITECT**  
GREG BROUSSARD, ENGINEER  
JOSH DREYER, SURVEYOR  
JOSH SHIELDS, LANDSCAPE ARCHITECT

**BOLTON AND MENK**  
1519 BALTIMORE DRIVE  
AMES, IA 50010

**ARCHITECT**  
DANIEL WILLRICH, ARCHITECT  
PELDS DESIGN SERVICES  
2323 DIXON STREET  
DES MOINES, IA 50316

**PUD LEGAL DESCRIPTION**  
THAT PART OF LOT THREE (3); LOT FOUR (4); LOT FIVE (5); LOT SIX (6) LOT SEVEN (7); LOT EIGHT (8); AND LOT NINE (9) OF LITTLETON PLACE, AN OFFICIAL PLAT, NOW INCLUDED IN AND FORMING A PART OF THE CITY OF DES MOINES, IOWA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:  
BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 3; THENCE NORTH 89° 47' 26" EAST, A DISTANCE OF 300.50 FEET ALONG THE SOUTH RIGHT-OF-WAY LINE OF PARK AVENUE; THENCE SOUTH 87° 02' 54" EAST, A DISTANCE OF 18.37 FEET ALONG THE SOUTHERLY RIGHT-OF-WAY OF PARK AVENUE; THENCE SOUTH 25° 01' 22" EAST, A DISTANCE OF 19.08 FEET ALONG THE WESTERLY RIGHT-OF-WAY OF SW 9TH STREET; THENCE SOUTH 00° 01' 55" WEST, A DISTANCE OF 259.02 FEET ALONG THE WEST RIGHT-OF-WAY LINE OF SW 9TH STREET TO THE SOUTH LINE OF SAID LOT 9; THENCE SOUTH 89° 47' 26" WEST, A DISTANCE OF 325.30 FEET ALONG THE SOUTH LINE OF SAID LOT 9; THENCE NORTH 00° 13' 34" WEST, A DISTANCE OF 30.47 FEET TO THE SOUTHWEST CORNER OF SAID LOT 3; THENCE NORTH 00° 05' 13" EAST, A DISTANCE OF 153.28 FEET ALONG THE WEST LINE OF SAID LOT 3 TO THE POINT OF BEGINNING. SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD DEED FROM BK7321 PG866.

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

**JOSHUA L. SHIELDS**  
LANDSCAPE ARCHITECT  
REG. NO. 0563    DATE: \_\_\_\_\_

MY LICENSE RENEVAL DATE IS JUNE 30, 2020  
PAGES OR SHEETS COVERED BY THIS SEAL: C-701 - C-702

**PRELIMINARY**

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

**GREGORY A. BROUSSARD**  
REGISTERED PROFESSIONAL ENGINEER  
REG. NO. 15192    DATE: \_\_\_\_\_

MY LICENSE RENEVAL DATE IS DECEMBER 31, 2021  
PAGES OR SHEETS COVERED BY THIS SEAL: C-001, C-002, C-100 - C-601

**PRELIMINARY**

Bolton & Menk, Inc. 2020. All rights reserved. PROJECT: 1519 BALTIMORE DRIVE, URBANDA, IA 50323-2062. DATE: 04/08/2020 15:07:00



1519 BALTIMORE DRIVE  
AMES, IOWA 50010  
Phone: (515) 233-6100  
Email: Ames@bolton-menk.com  
www.bolton-menk.com

NO.	DESCRIPTION	DATE
1	DEM	
2	DEM	
3	C&B	
4	DEM	
5	DEM	

CASEY'S GENERAL STORE		SHEET
DES MOINES, IOWA		C-001
TITLE SHEET		

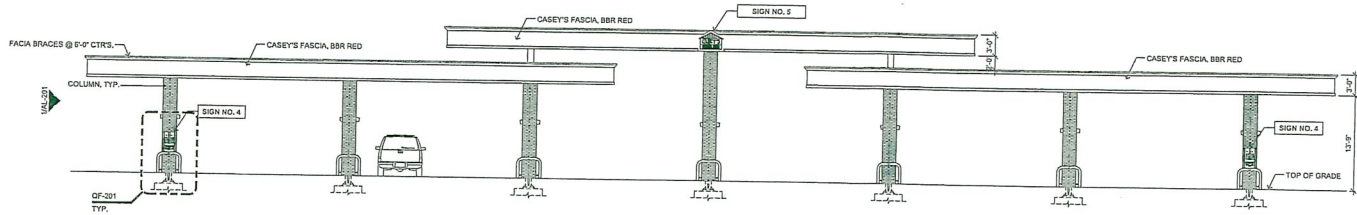


Sign #	Sign	Type	Location	Illumination	Dimensions				Area Ft <sup>2</sup>
					Bottom	Top	Width	Height	
6	House Logo	Surface	Canopy Side	Internal	14'-0-1/2"	16'-5-5/8"	3'-5-5/8"	2'-5"	6.38
6	House Logo	Surface	Canopy Side	Internal	14'-0-1/2"	16'-5-5/8"	3'-5-5/8"	2'-5"	6.38
5	House Logo	Surface	Canopy Front	Internal	18'-0-3/4"	21'-5-1/8"	3'-5-5/8"	2'-5"	6.38
4	Snap Frame	Advertising	Canopy Column	N/A	3'-0"	7'-0-1/2"	2'-4"	3'-8"	8.55
4	Snap Frame	Advertising	Canopy Column	N/A	3'-0"	7'-0-1/2"	2'-4"	3'-8"	8.55
4	Snap Frame	Advertising	Canopy Column	N/A	3'-0"	7'-0-1/2"	2'-4"	3'-8"	8.55
Total									53.38

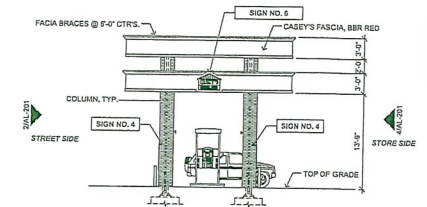
**\*\*VERIFY ALL SIGNAGE WITH SIGN PERMITS\*\***

**General Notes**

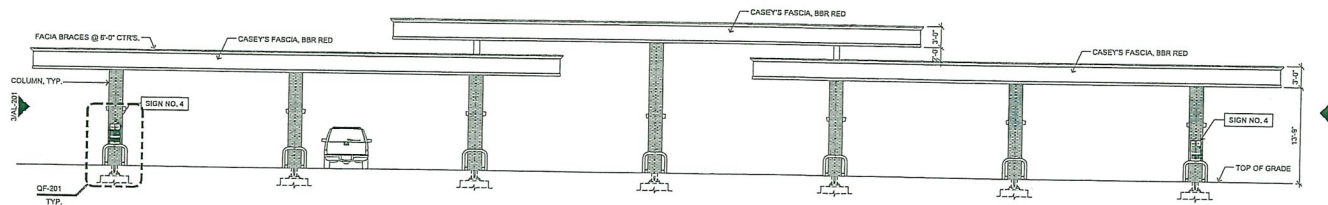
- RELATED SHEETS: FOR ADDITIONAL INFORMATION NOT DIRECTLY REFERENCED, SEE THE FOLLOWING SHEETS:
  - G-001 FOR GENERAL PROJECT NOTES
  - AL-101 FOR GENERAL SITE PLAN
  - Sign Packet FOR SIGNAGE SCHEDULE AND NOTES
  - OF-Series FOR DESIGN AND DETAILS RELATED TO FUELING FACILITY
- GASOLINE ISLAND CANOPY: REVIEW SHOP DRAWINGS PROVIDED BY CANOPY SUPPLIER AND ADVISE CASEY'S CONSTRUCTION MANAGER OF ANY DISCREPANCIES
- EMERGENCY GAS SHUT OFF: REFER TO SHEETS A-201, AG-101 & E-101 FOR EMERGENCY SHUT OFF LOCATIONS.



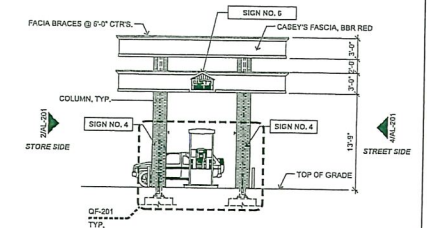
4 Pump Island Canopy - (Street Side)  
1/8" = 1'-0"



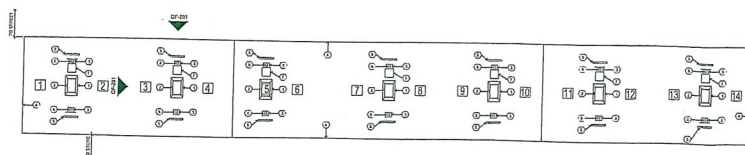
3 Pump Island Canopy - Right Side Elevation  
1/8" = 1'-0"



2 Pump Island Canopy - (Store Side)  
1/8" = 1'-0"




1 Pump Island Canopy - Left Side Elevation  
1/8" = 1'-0"



5 Canopy Layout Plan  
Not To Scale

**Keyed Canopy Layout Plan Notes**

- FUEL ISLANDS
- FUEL DISPENSERS: SUPPLIED BY OWNER
- CANOPY COLUMN: SUPPLIED BY CANOPY MFG.
- EDGE OF CANOPY, ABOVE
- STEEL GUARD PIPE: SET INTO CONG SLAB AS INDICATED IN DETAIL, ELEVATIONS (2 PER ISLAND)
- INTERNAL DOWNSPOUTS: ROUTE THROUGH COLUMNS AND UNDERGROUND TO STORM SEWER OR DETENTION IF APPLICABLE
- TRASH CAN AND WASH BUCKETS
- PUMP LABELS: MOUNTED ON CANOPY COLUMNS



**P ELDS DESIGN SERVICES**  
Architects | Engineers | Surveying

2021 E. Main Street, Des Moines, Iowa 50319 | P.O. Box 4022 Des Moines, Iowa 50325 | P: 515-281-4195 F: 515-281-2023  
PDS 200 101 14-054

---

**CASEY'S CONSTRUCTION DIVISION**  
One Convergence Blvd., P.O. Box 2001, Ankeny, IA 50021 515-985-6100

---

SW 9TH & PARK AVE.  
DES MOINES, IA

10/19/19  
07/08/20

GASOLINE ISLAND CANOPY ELEVATIONS

**STANDARD CONSTRUCTION NOTES:**

- ALL IMPROVEMENTS ON SITE AND IN THE CITY RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE 2020 EDITION OF THE IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS) AND THE CITY OF DES MOINES GENERAL SUPPLEMENTAL SPECIFICATIONS TO SUDAS EFFECTIVE AT THE TIME OF PLAN APPROVAL AND SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES. THE CONTRACTOR SHALL HAVE A COMPLETE SET OF THE CURRENT SUDAS STANDARD SPECIFICATIONS ON SITE DURING ALL CONSTRUCTION ACTIVITIES.
- ANY DEFECTIVE WORK CONDIGNED BY THE ENGINEER/OWNER SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH SECTION 1050, 1.08 'REMOVAL OF DEFECTIVE WORK' OF THE STANDARDS SPECIFICATIONS. FAILURE TO REMOVE DEFECTIVE WORK MAY RESULT IN SUSPENSION OF OPERATIONS AND/OR WITHHOLDING OF PAYMENTS UNTIL DEFECTIVE WORK HAS BEEN REMOVED AND REPLACED.
- THE CONTRACTOR SHALL PRESERVE ALL SURVEY CONTROL, LINE AND GRADE STAKES IN ACCORDANCE WITH SECTION 1050, 1.10 'LINE AND GRADE STAKES' OF THE STANDARD SPECIFICATIONS.
- PRIOR TO MOBILIZING OFF OF THE JOB SITE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER/OWNER TO REQUEST A FINAL INSPECTION IN ACCORDANCE WITH SECTION 1050, 1.14 'FINAL INSPECTION AND ACCEPTANCE' OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL PROCURE ALL NECESSARY PERMITS AND LICENSES IN ACCORDANCE WITH SECTION 1070, 1.03 'PERMITS AND LICENSES' OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY AND COMPLYING WITH ALL CURRENT AND FUTURE FEDERAL AND STATE OSHA REQUIREMENTS IN ACCORDANCE WITH SECTION 1070, 2.02 'CONVENIENCE AND SAFETY' OF THE STANDARD SPECIFICATIONS.
- IN ACCORDANCE WITH SECTION 1070, 2.08 'PROTECTION OF PROPERTY' OF THE STANDARD SPECIFICATIONS, THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL ITS WORK FROM DAMAGE AND SHALL PROTECT THE PROPERTY AND ADJACENT PRIVATE PROPERTY FROM INJURY OR LOSS ARISING IN CONNECTION WITH THE WORK. THE CONTRACTOR SHALL REPAIR OR RESTORE ANY SUCH DAMAGE, INJURY, OR LOSS TO PROPERTY OR ADJACENT PROPERTY. THE CONTRACTOR SHALL PROTECT TREES AND OTHER PROPERTY NOT MARKED FOR REMOVAL.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SITE CLEANLINESS. UPON REQUEST BY THE ENGINEER/OWNER, THE CONTRACTOR SHALL, AT ITS EXPENSE, CLEANUP AND REMOVE ALL REFUSE AND UNUSED MATERIALS OF ANY KIND RESULTING FROM THE WORK INCLUDING CLEANING AND SWEEPING OF ADJACENT STREETS. UPON FAILURE TO DO SO WITHIN THREE WORKING DAYS AFTER SUCH REQUEST BY THE ENGINEER/OWNER, THE WORK MAY BE DONE BY THE OWNER AND THE COST THEREOF CHARGED TO THE CONTRACTOR AND DEDUCTED FROM ITS FINAL PAYMENT IN ACCORDANCE WITH SECTION 1070, 2.15 'FINISHING AND CLEANUP REQUIREMENTS' OF THE STANDARD SPECIFICATIONS.
- THIS SITE SHALL BE MAINTAINED IN COMPLIANCE WITH ALL CITY CODE APPLICABLE WITH THE APPROVAL OF THE PUD CONCEPTUAL PLAN BY THE CITY COUNCIL ON JANUARY 27, 2020 ROLL CALL NO. 20-0187.
- ANY NEW ROOFTOP MECHANICAL EQUIPMENT MUST BE SCREENED FROM STREET LEVEL VIEW.
- TRANSFORMERS, JUNCTION BOXES, AIR CONDITIONERS OVER 3 FEET IN HEIGHT, OR OTHER SUCH ITEMS MAY NOT BE LOCATED IN THE REQUIRED SETBACK AREAS.
- ANY AMENDMENTS OR CHANGES TO THE PROJECT SITE THAT DO NOT MEET WHAT IS SHOWN ON THE PUD FINAL DEVELOPMENT PLAN NEED TO BE APPROVED WITH THE PERMIT AND DEVELOPMENT CENTER PRIOR TO INSTALLATION AND CONSTRUCTION.
- LIGHTING MUST BE LOW GLARE CUT OFF TYPE FIXTURES TO REDUCE THE GLARE OF LIGHT POLLUTION ON SURROUNDING PROPERTIES.

**UTILITY COORDINATION NOTES:**

- THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT (800) 292-8989 TO LOCATE EXISTING UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
- ANTICIPATED UTILITY CONFLICTS HAVE BEEN IDENTIFIED AND EACH RESPECTIVE UTILITY OWNER HAS BEEN INFORMED OF THE POTENTIAL CONFLICTS. THE CONTRACTOR SHALL PROTECT THE EXISTING UTILITIES TO REMAIN WITHIN THE PROJECT SITE.
- IF A CONFLICT IS DISCOVERED BY THE CONTRACTOR, NOTIFY THE ENGINEER IMMEDIATELY AND COORDINATE WITH OWNER OF UTILITY TO RESOLVE CONFLICT.
- PRIVATE WATER AND SEWER SERVICES MUST MEET UNIFORM PLUMBING CODE (UPC) AND ALL CITY OF DES MOINES AMENDMENTS TO UPC.
- CONTRACTOR RESPONSIBLE FOR VERIFYING ALL PIPE MATERIAL REQUIREMENTS PRIOR TO CONSTRUCTION.

**PROJECT NOTES:**

- ALL WORK IN THE CITY RIGHT-OF-WAY REQUIRES A RIGHT-OF-WAY PERMIT TO BE OBTAINED BY THE CONTRACTOR.
- ALL SIDEWALK AND DRIVEWAY APPROACH WORK REQUIRES A PERMIT TO BE OBTAINED BY THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING CONSTRUCTION STAKING.
- CONTRACTOR SHALL PROPERLY SECURE PROJECT SITE AT THE END OF EACH DAY.
- CONTRACTOR OPERATIONS CREATING OBJECTIONABLE LEVELS OF NOISE SHALL NOT BEGIN PRIOR TO 7:00 AM AND SHALL END PRIOR TO 7:00 PM.
- ALL DISTURBED AREAS SHALL BE SEEDED AND/OR MULCHED (DEPENDING ON DATE) UPON COMPLETION OF GRADING.
- ALL UTILITY SERVICES (SANITARY, WATER, AND SUMP) SHALL BE INSTALLED BY A PLUMBER LICENSED IN THE CITY.
- THE CONTRACTOR SHALL LIMIT THEIR ACCESS TO THE PROJECT SITE TO THE STABILIZED ENTRANCE LOCATIONS SHOWN IN THE SWPPP.
- THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT, THE DEVELOPER, AND BOLTON & MENK, INC. ONE WEEK PRIOR TO THE START OF ANY CONSTRUCTION.
- THE CONTRACTOR SHALL REPLACE ALL PAVEMENT MARKINGS DAMAGED DURING CONSTRUCTION.
- CONTRACTOR SHALL INSTALL ONE (1) BIKE RACK. BIKE RACK SHALL BE BELSON MODEL NUMBER CBBR-SUR-S5.

**STORM WATER POLLUTION PREVENTION PLAN NOTES:**

- CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS OF IDNR NPDES GENERAL PERMITS #2.
- CONTRACTOR SHALL MINIMIZE THE AMOUNT OF SOIL EXPOSED DURING CONSTRUCTION ACTIVITY
- STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARINGS, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 94 CALENDAR DAYS. IN DROUGHT-STRIKEN AREAS AND AREAS THAT HAVE RECENTLY RECEIVED SUCH HIGH AMOUNTS OF RAIN THAT SEEDING WITH FIELD EQUIPMENT IS IMPOSSIBLE AND INITIATING VEGETATIVE STABILIZATION IMMEDIATELY IS INFEASIBLE, ALTERNATIVE STABILIZATION MEASURES MUST BE EMPLOYED AS SPECIFIED BY THE DEPARTMENT. IN LIMITED CIRCUMSTANCES, STABILIZATION MAY NOT BE REQUIRED IF THE INTENDED FUNCTION OF A SPECIFIC AREA OF THE SITE NECESSITATES THAT IT REMAIN DISTURBED.
- MINIMIZE THE EXPOSURE OF BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE TO PRECIPITATION AND STORM WATER. MINIMIZATION OF EXPOSURE IS NOT REQUIRED IN CASES WHERE THE EXPOSURE TO PRECIPITATION AND TO STORM WATER WILL NOT RESULT IN A DISCHARGE OF POLLUTANTS, OR WHERE EXPOSURE OF A SPECIFIC MATERIAL OR PRODUCT POSSES LITTLE RISK OF STORM WATER CONTAMINATION (SUCH AS FINAL PRODUCTS AND MATERIALS INTENDED FOR OUTDOOR USE).
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM SPILLS AND LEAKS AND IMPLEMENT CHEMICAL SPILL AND LEAK PREVENTION AND RESPONSE PROCEDURES.
- CONCRETE WASHOUTS SHALL BE PROVIDED ON SITE.
- QUALIFIED PERSONNEL SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN STABILIZED WITH A PERENNIAL VEGETATIVE COVER OF SUFFICIENT DENSITY TO PRECLUDE EROSION AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. UNLESS EROSION IS EVIDENT OR OTHER CONDITIONS WARRANT THEM, REGULAR INSPECTIONS ARE NOT REQUIRED ON AREAS THAT HAVE BEEN STABILIZED WITH A PERENNIAL VEGETATIVE COVER OF SUFFICIENT DENSITY TO PRECLUDE EROSION.
- DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM.
- EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.
- BASED ON THE RESULTS OF THE INSPECTION, POLLUTION PREVENTION MEASURES IDENTIFIED IN THE PLANS SHALL BE REVISED AT THE CONSTRUCTION SITE AS APPROPRIATE AS SOON AS PRACTICABLE AFTER THE INSPECTION AND TO THE PLAN AS SOON AS PRACTICABLE AFTER THE INSPECTION BUT IN NO CASE MORE THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. IF THE PERMITTEE DETERMINES THAT MAKING THESE CHANGES AT THE CONSTRUCTION SITE OR TO THE PLAN LESS THAN 72 HOURS AFTER THE INSPECTION IS IMPRACTICABLE, THE PERMITTEE SHALL DOCUMENT IN THE PLAN WHY IT IS IMPRACTICABLE AND INDICATE AN ESTIMATED DATE BY WHICH THE CHANGES WILL BE MADE.
- A REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN, AND ACTIONS TAKEN SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS AFTER FINAL STABILIZATION HAS BEEN ACHIEVED AND A NOTICE OF DISCONTINUATION HAS BEEN SUBMITTED TO THE DEPARTMENT.
- EROSION CONTROL MEASURES SHOWN ON THE PLAN ARE THE MINIMUM REQUIRED TO BE INSTALLED. ADDITIONAL MEASURES MAY BE REQUIRED TO PROTECT/STABILIZE THE SITE. ADDITIONAL CONTROLS

MAY INCLUDE, BUT ARE NOT LIMITED TO SILT FENCE, COMPOST BLANKETS, FILTER SOCKS, RIPRAP, FLOW TRANSITION MAPS, ETC. ANY ADDITIONAL CONTROL MEASURE REQUIRED SHALL BE INSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COSTS TO THE OWNER.

**TRAFFIC CONTROL NOTES:**

- THE CONTRACTOR SHALL DEVELOP A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH SECTION 1070, 2.06 'TRAFFIC CONTROL' OF THE STANDARD SPECIFICATIONS. ANY TRAFFIC CONTROL DEVICES OR SAFETY EQUIPMENT NEEDED TO CONSTRUCT THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION PHASING AND TRAFFIC CONTROL PLAN WITH PLANNED DETOURS, IF APPLICABLE, TO THE ENGINEER FOR APPROVAL BEFORE THE START OF ANY CONSTRUCTION ACTIVITIES.
- IF NECESSARY, STREETS WILL BE CLOSED IN ACCORDANCE WITH SECTION 1070, 2.06 'TRAFFIC CONTROL' OF THE STANDARD SPECIFICATIONS.
- ALL TRAFFIC CONTROL PLANS MUST BE REVIEWED AND APPROVED BY THE CITY PRIOR TO PLACEMENT OF TRAFFIC CONTROL DEVICES AND SIGNS FOR EACH STAGE OF THE PROJECT.
- ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
- PORTABLE MOUNTINGS FOR WARNING SIGNS MAY BE USED FOR TEMPORARY INSTALLATIONS OF 3 DAYS OR LESS ALL OTHER TRAFFIC CONTROL SHALL BE POST MOUNTED.
- THE PROPOSED SIGNAGE MAY BE MODIFIED TO MEET FIELD CONDITIONS, PREVENT OBSTRUCTIONS AND TO ACCOMMODATE CONSTRUCTION SCHEDULING UPON APPROVAL OF THE PROJECT ENGINEER
- SIGNAGE MAINTENANCE SHALL BE CONSIDERED INCIDENTAL TO TRAFFIC CONTROL AND REQUIRED AS DIRECTED BY THE ENGINEER.
- ALL CONSTRUCTION SIGNS SHALL BE DIAMOND GRADE FLUORESCENT ORANGE OR WHITE V.I.P. SHEETINGS OR EQUIVALENT. (IOWA DOT TYPE VII SHEETING).
- THE CONTRACTOR SHALL CONTACT THE CITY TO REMOVE ALL PERMANENT STREET SIGNS CONFLICTING WITH PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL REMOVE ALL OTHER SIGNS AS DETERMINED BY THE ENGINEER AND THEY SHALL REMAIN THE PROPERTY OF THE RESPECTIVE OWNERS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER WORK.
- AT THE TIME OF INITIAL SETUP OR AT THE TIME OF MAJOR STAGE CHANGES, 100 PERCENT OF EACH TYPE OF DEVICE (SIGNS, CONES, TUBULAR MARKERS, DRUMS, BARRICADES, VERTICAL PANELS, CHANGABLE MESSAGE SIGNS, AND PAVEMENT MARKINGS) SHALL BE CLASSIFIED AS ACCEPTABLE BY THE REQUIREMENT OF THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA), "QUALITY STANDARD FOR WORK ZONE TRAFFIC CONTROL DEVICES 1992." THROUGHOUT THE DURATION OF THE PROJECT, UNACCEPTABLE DEVICES OR SITUATIONS THAT ARE FOUND ON THE JOBSITE AS DETERMINED BY BEFORE MENTIONED PUBLICATION SHALL BE REPLACED OR THE SITUATION CORRECTED WITHIN 12 HOURS OF INITIAL NOTIFICATIONS BY THE ENGINEER.
- AT EACH SIDEWALK CLOSURE LOCATION PLACE TYPE II BARRICADES WITH "SIDEWALK CLOSED" SIGNS AT EACH CLOSURE END AND PLACE "SIDEWALK CLOSED AHEAD" SIGNS ALONG THE SIDEWALK AT NEAREST STREET INTERSECTIONS ON EACH SIDE OF THE CLOSURE LOCATION IN ACCORDANCE WITH THE MUTCD.

**GRADING NOTES:**

- ALL GRADING OPERATIONS SHALL BE COMPLETED IN ACCORDANCE WITH DIVISION 2 OF THE SPECIFICATIONS
- THE PROPOSED CONTOURS ARE SHOWN ARE TO FINISH GROUND/TOP OF PAVEMENT
- CONTRACTOR SHALL GRADE ALL AREAS IN THE PAVEMENT BOX TO SUBGRADE, AND ALL OTHER AREAS TO FINISH GROUND.
- ALL TOPSOIL STRIPPED SHALL BE RESPREAD ON LOT(S), IF POSSIBLE.
- TOPSOIL AND/OR OTHER UNSUITABLE MATERIAL WITHIN THE PAVEMENT BOX SHALL BE REMOVED.
- THE CONTRACTOR SHALL SHAPE GRADED AREAS TO MAINTAIN SURFACE DRAINAGE AT ALL TIMES.
- THE CONTRACTOR SHALL BACKFILL CURBS AS SOON AS POSSIBLE UPON COMPLETION OF PAVING
- DEWATERING (IF NECESSARY) IS CONTRACTOR'S RESPONSIBILITY AND SHALL BE CONSIDERED INCIDENTAL.
- ALL DISTURBED AREAS SHALL BE RESTORED BY SEEDING OR SODDING.

**SANITARY SEWER NOTES:**

- SANITARY SEWER INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH DIVISIONS 3, 4, AND 6 OF THE SPECIFICATIONS
- SANITARY SEWER SERVICE SHALL BE 6" SCHEDULE 40 PVC.
- SANITARY SEWER BEDDING SHALL BE CLASS F-3 BEDDING UNLESS OTHERWISE SPECIFIED.
- CONTRACTOR SHALL TELEVIEW EXISTING MAIN AND PROVIDE VIDEO TO THE CITY FOR REVIEW AFTER SERVICE INSTALLATION.

**STORM SEWER NOTES:**

- STORM SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH DIVISIONS 3, 4, AND 6 OF THE SPECIFICATIONS.
- STORM SEWER SHALL BE BEDDING SHALL BE CLASS R-2.
- STORM SEWER CLEANOUTS SHALL BE TYPE-A1.
- RCP PLUGS SHALL BE CONSIDERED INCIDENTAL TO STORM SEWER CONSTRUCTION.
- THE CONTRACTOR SHALL REPAIR ANY FIELD TILE ENCOUNTERED DURING CONSTRUCTION OF THIS PROJECT (WHETHER SHOWN ON THE PLAN OR NOT) BY SPlicing OR CONNECTING THE TILE TO THE NEW STORM SEWER SYSTEM.

**WATER MAIN NOTES:**

- WATER SERVICE INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH DIVISIONS 3 AND 5 OF THE SPECIFICATIONS.
- WATER MAIN SHALL BE INSTALLED WITH 5.5 FEET COVER (MINIMUM).
- PUBLIC WATER MAIN VALVES SHALL BE OPERATED BY CITY PERSONNEL ONLY.

**LANDSCAPING NOTES:**

- CONTRACTOR TO CONTACT THE MUNICIPAL FORESTRY DIVISION PRIOR TO PLANTING IN THE PUBLIC RIGHT-OF-WAY AT 283-4105.
- ALL WIRE, TWINE, AND BURLAP SHALL BE REMOVED FROM THE ROOTBALL OF STREET TREES PRIOR TO PLANTING.
- THE REQUIRED LANDSCAPING, BOTH EXISTING AND PROPOSED, SHALL BE MAINTAINED FOR THE LIFE OF THE CERTIFICATE OF OCCUPANCY.

DATE PLOTTED: 11/15/2023 10:58:11 AM. PLOTTER: HP PLOTTER. PLOT SCALE: 1"=20'-0".



1510 BALTIMORE DRIVE  
AMES, IOWA 50010  
Phone: (515) 233-6200  
Email: Ames@bolton-menk.com  
www.bolton-menk.com

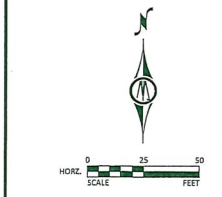
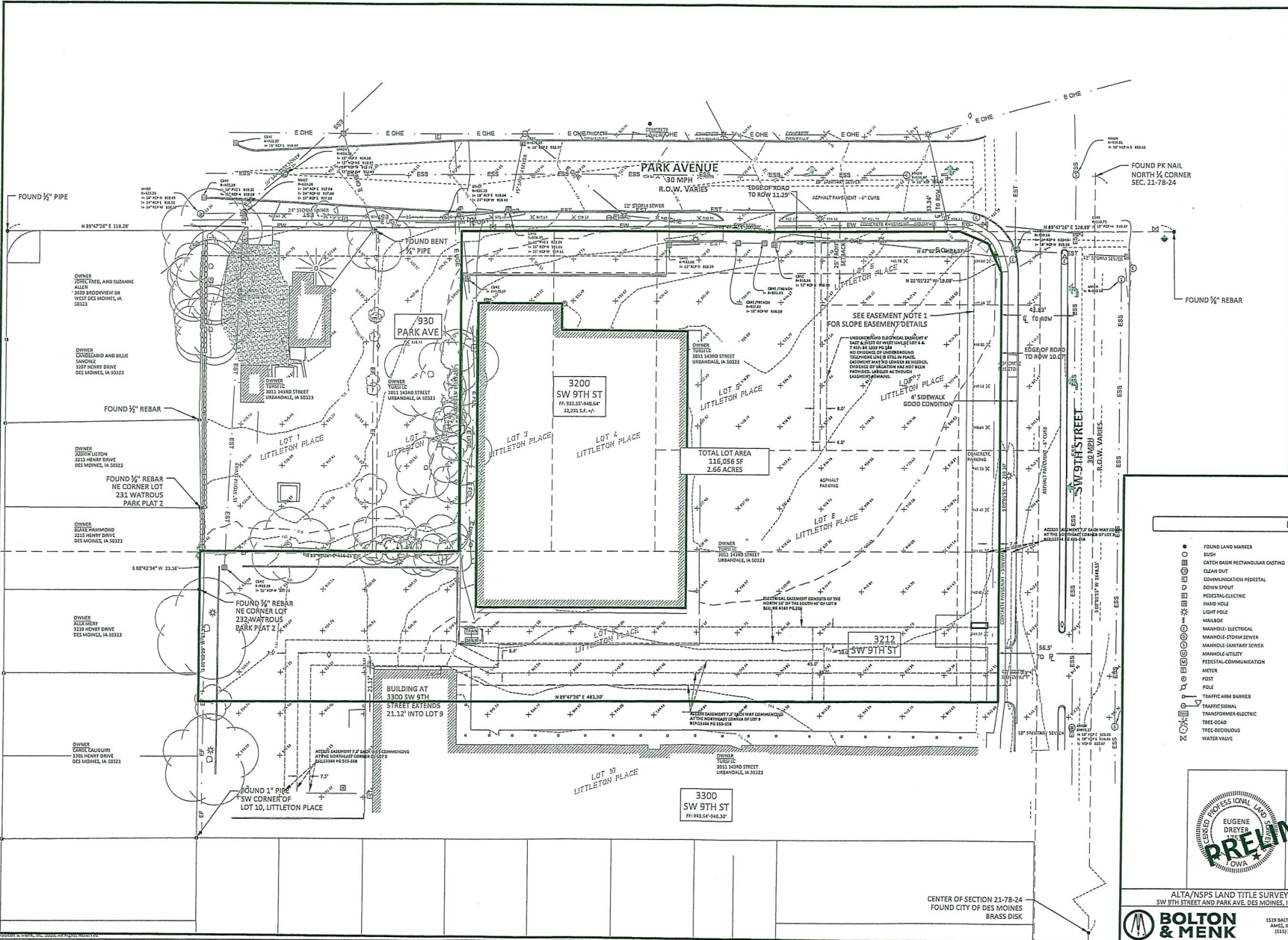
REVISION	DATE	BY	DESCRIPTION
01	DEM		
02	DEM		
03	GAB		
04	DEM		
05	DEM		
06	DEM		
07	DEM		
08	DEM		
09	DEM		
10	DEM		
11	DEM		
12	DEM		
13	DEM		
14	DEM		
15	DEM		
16	DEM		
17	DEM		
18	DEM		
19	DEM		
20	DEM		
21	DEM		
22	DEM		
23	DEM		
24	DEM		
25	DEM		
26	DEM		
27	DEM		
28	DEM		
29	DEM		
30	DEM		
31	DEM		
32	DEM		
33	DEM		
34	DEM		
35	DEM		
36	DEM		
37	DEM		
38	DEM		
39	DEM		
40	DEM		
41	DEM		
42	DEM		
43	DEM		
44	DEM		
45	DEM		
46	DEM		
47	DEM		
48	DEM		
49	DEM		
50	DEM		
51	DEM		
52	DEM		
53	DEM		
54	DEM		
55	DEM		
56	DEM		
57	DEM		
58	DEM		
59	DEM		
60	DEM		
61	DEM		
62	DEM		
63	DEM		
64	DEM		
65	DEM		
66	DEM		
67	DEM		
68	DEM		
69	DEM		
70	DEM		
71	DEM		
72	DEM		
73	DEM		
74	DEM		
75	DEM		
76	DEM		
77	DEM		
78	DEM		
79	DEM		
80	DEM		
81	DEM		
82	DEM		
83	DEM		
84	DEM		
85	DEM		
86	DEM		
87	DEM		
88	DEM		
89	DEM		
90	DEM		
91	DEM		
92	DEM		
93	DEM		
94	DEM		
95	DEM		
96	DEM		
97	DEM		
98	DEM		
99	DEM		
100	DEM		

CASEY'S GENERAL STORE  
DES MOINES, IOWA  
GENERAL NOTES

SHEET

C-002





**LEGEND**

●	FOUND LAND MARKER	— C —	COMMUNICATION UNDERGROUND
■	BASH	— F —	FENCE
□	CATCH BASIN RECTANGULAR CASTING	— G —	GAS UNDERGROUND
○	CLEAR CUT	— H —	HOSE CONDUITS
○	COMMUNICATION PEDESTAL	— I —	INTERMEDIATE CONDUITS
○	DOWN SPOUT	— O —	OVERHEAD ELECTRIC
○	PEDESTAL-ELECTRIC	— P —	RETAINING WALL
○	HAND HOLE	— S —	SANITARY SEWER
○	LIGHT POLE	— T —	STORM SEWER
○	MAILBOX	— U —	CONCRETE SURFACE
○	MANHOLE-ELECTRICAL	— V —	ASPHALT SURFACE
○	MANHOLE-STORM SEWER	— W —	EXISTING BUILDING
○	MANHOLE-SANITARY SEWER	— X —	GRAVEL SURFACE
○	MANHOLE-UTILITY		
○	PEDESTAL-COMMUNICATION		
○	METER		
○	POST		
○	POLE		
○	TRAFFIC ARM BARRIER		
○	TRAFFIC SIGNAL		
○	TRANSFORMER-ELECTRIC		
○	TREE-GOED		
○	TREE-DEODIOUS		
○	WATER VALVE		

I hereby certify that this land surveying document was prepared by me and the related field work was performed by me or under my direct supervision and that I am a duly licensed land surveyor under the laws of the State of Iowa.

**EUGENE DRYER, L.S.**  
 REGISTERED PROFESSIONAL LAND SURVEYOR

**PRELIMINARY**

RES. NO. 24413 DATE: 12/31/2020  
 MY LICENSE RENEWAL DATE IS: 12/31/2020  
 PAGES OR SHEETS COVERED BY THIS SEAL: ALL SHEETS

ALTA/NSPS LAND TITLE SURVEY  
 SW 9TH STREET AND PARK AVE. DES MOINES, IOWA

**BOLTON & MENK**  
 1519 BALTIMORE DRIVE  
 AMES, IOWA 50010  
 (515) 233-6300

FOR: CASEY'S GENERAL STORE, INC.

JOB NUMBER: A13.138877 FIELD BOOK: DRAWN BY: DEM

SHEET C-003

H:\CARTS\PIA\13118877\_BoltonMenk\CAD\CAD\FIG1-118877 - ALTA.dwg 4/16/2020 1:43 PM

**LEGAL DESCRIPTION**

THE EAST 2 FEET OF LOT ONE (1);  
 LOT TWO (2);  
 LOT THREE (3);  
 LOT FOUR (4);  
 LOT FIVE (5);  
 LOT SIX (6) AND SEVEN (7), EXCEPT BEGINNING AT THE NORTHEAST CORNER OF LOT 6, THENCE SOUTH 133 FEET TO THE NORTHEAST CORNER OF LOT 6, THENCE SOUTH 132 FEET TO THE SOUTHEAST CORNER OF LOT 7, THENCE WEST 23.5 FEET ALONG THE SOUTH LINE OF LOT 7, THENCE NORTH 10.8 FEET, THENCE NORTHWESTERLY 17.26 FEET TO A POINT ON THE NORTH LINE OF LOT 6 WHICH IS 48.5 FEET WEST OF THE NORTHEAST CORNER OF LOT 6, THENCE EAST 48.5 FEET TO THE POINT OF BEGINNING;  
 LOT EIGHT (8), EXCEPT THE EAST 23.5 FEET THEREOF;  
 LOT NINE (9), EXCEPT THE EAST 23.5 FEET THEREOF;  
 ALL IN LITTLETON PLACE, AN OFFICIAL PLAT, NOW INCLUDED IN AND FORMING A PART OF THE CITY OF DES MOINES, IOWA.  
 SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD  
 DEED FROM 807323 P0666

**TITLE OPINION**

**GENERAL NOTES**

1. WEST AND SOUTH LINES OF LITTLETON PLACE WERE SET BY COURT DECREE. UNABLE TO FIND COURT DOCUMENTS.
2. DESCRIPTION FOR RIGHT-OF-WAY ACQUIRED BY CITY OF DES MOINES AT THE NORTHEAST CORNER OF LOT 6 DOES NOT CLOSE. ADDITIONAL INFORMATION HAS BEEN REQUESTED FROM THE CITY OF DES MOINES.

**GENERAL NOTES**

1. THERE ARE SIDEWALKS PRESENT ON THE PROPOSED SITE ALONG THE NORTH AND EAST EDGES OF THE PROPERTY.
2. NEAREST WATER HYDRANT: 170 FEET.
3. CURRENT PROPERTY ZONING: C-1 NEIGHBORHOOD RETAIL COMMERCIAL
4. ADJACENT PROPERTY ZONING: C-1 NEIGHBORHOOD RETAIL COMMERCIAL  
 R-70 ONE-FAMILY LOW-DENSITY RESIDENTIAL
5. SETBACK REQUIREMENTS:  
 S.1. FRONT YARD - 25'  
 S.2. SIDE YARD - 10'  
 S.3. REAR YARD - 0'
6. LIGHTING REQUIREMENTS:
7. PARKING REQUIREMENTS: 1 SPACE PER 200 SQUARE FEET OF BUILDING FOR BUILDINGS OVER 4000 SQUARE FEET. FOR BUILDINGS LESS THAN 4000 SQUARE FEET: 1 SPACE FOR 300 SQUARE FEET.
8. SIGNAGE AND LANDSCAPING REQUIREMENTS: ANTICIPATED PROBLEMS: 30% OPEN GREEN SPACE REQUIREMENTS, PARKING LOT PERIMETER LANDSCAPING, AND PARKING LOT SHADING. SIGNS SHALL BE MONUMENT SIGNS MEETING CITY CODE.
9. NO WATERMAIN FIELD LOCATED, WATERMAIN SHOWN FROM MAPS FROM CITY OF DES MOINES, IOWA.
10. IOWA ONE CALL DESIGN INFORMATION REQUEST #55305511 WAS CREATED ON 2019-05-14. IOWA ONE CALL DESIGN LOCATE REQUEST #551309722 WAS CREATED ON 2019-05-21 FOR LOCATES TO BE PLACED ON THE GROUND. NO VISIBLE EVIDENCE OF ANY LOCATES ON THE GROUND WERE NOTICED DURING THIS ALTA SURVEY. UTILITY LINEWORK IN THE DRAWING WAS RECREATED FROM FOUND UTILITY STRUCTURES AND DESIGN INFORMATION MAPS FROM THE UTILITY COMPANIES.

**CHURCH PROXIMITY**

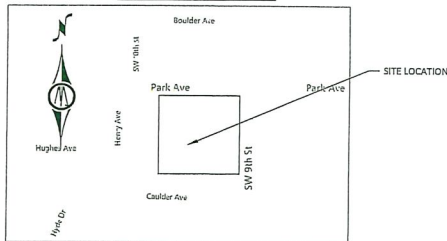
- PARK AVENUE CHRISTIAN CHURCH - 284 FT
- PARK AVENUE PRESBYTERIAN CHURCH - 550 FT
- IGLESIA PENTECOSTAL UNIDA INTL - 827 FT
- LUTHERAN CHURCH THE GOOD SHEPHERD - 1,979 FT
- LINCOLN HEIGHTS LUTHERAN CHURCH - 2,847 FT

**SCHOOL PROXIMITY**

- PARK AVENUE ELEMENTARY - 127 FT
- LINCOLN HIGH SCHOOL - 2,375 FT
- SOUTH UNION ELEMENTARY SCHOOL - 4,658 FT

**VICINITY MAP FROM BING MAPS**

**CITY OF DES MOINES, IOWA**



**CONTROL POINTS**

POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
101	7475373.296	18524493.67	934.942	VFCP /SET CLT X
102	7475393.689	18524873.62	942.911	VFCP /SET CLT X
103	7475615.221	18524873.5	940.687	VFCP /SET CLT X
104	7475640.53	18524536.46	927.025	VFCP /SET CLT X

**EASEMENT**

1. SEE SLOPE EASEMENT LOCATED IN BOOK 5181 PAGE 11

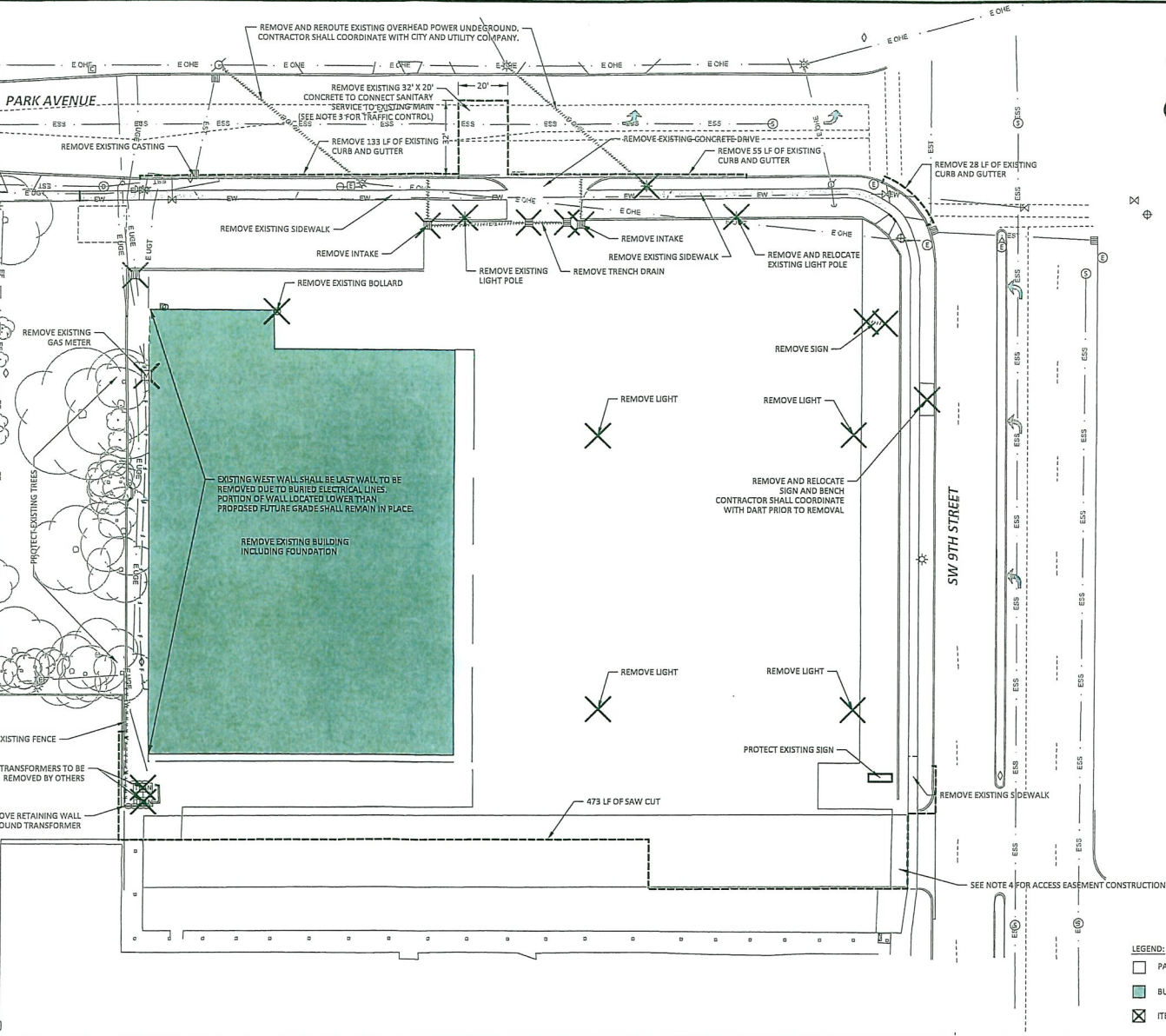
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON \_\_\_\_\_, 2019.

ALTA/NSPS LAND TITLE SURVEY SW 9TH STREET AND PARK AVE, DES MOINES, IA		1519 BALTHAZORE DRIVE AMES, IOWA 50010 (515) 233-0100	FOR: CASP'S GENERAL STONE, INC.	SHEET C-004
JOB NUMBER:	A13.118877	FIELD BOOK:	DRAWN BY:	SDM





- NOTE**
1. PROTECT ALL TREES AND BUSHES UNLESS SHOWN ON PLANS FOR REMOVAL. CONTRACTOR SHALL PROTECT TREES PER CITY OF DES MOINES TREE PROTECTION DETAIL AS SHOWN ON SHEET C-702.
  2. COORDINATE WITH ENGINEER BEFORE REMOVAL OF LANDSCAPING NOT SHOWN ON PLAN
  3. CONTRACTOR SHALL DEVELOP TRAFFIC CONTROL PLAN FOR WORK WITHIN THE R.O.W. AND OBTAIN APPROVAL FROM CITY PRIOR TO STARTING WORK.
  4. COORDINATE WITH MALL TO THE SOUTH ON DRIVEWAY CLOSURE FOR ENTRANCE CONSTRUCTION. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.
  5. CONTRACTOR IS TO COORDINATE WITH CITY AND FOLLOW TREE REMOVAL & MITIGATION ORDINANCE OF THE CITY CODE.



- LEGEND:**
- PAVEMENT REMOVAL
  - BUILDING REMOVAL
  - X

 ITEM REMOVAL



1519 BALTIMORE DRIVE  
 ANKES, IOWA 50010  
 Phone: (515) 233-8100  
 Email: Ames@bolton-menk.com  
 www.bolton-menk.com

REVISED	DATE	BY	DESCRIPTION	CHK
DEM				
DEM				
GAB				
DATE PLOTTED	11/11/2017			

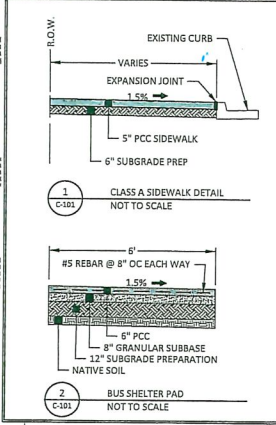
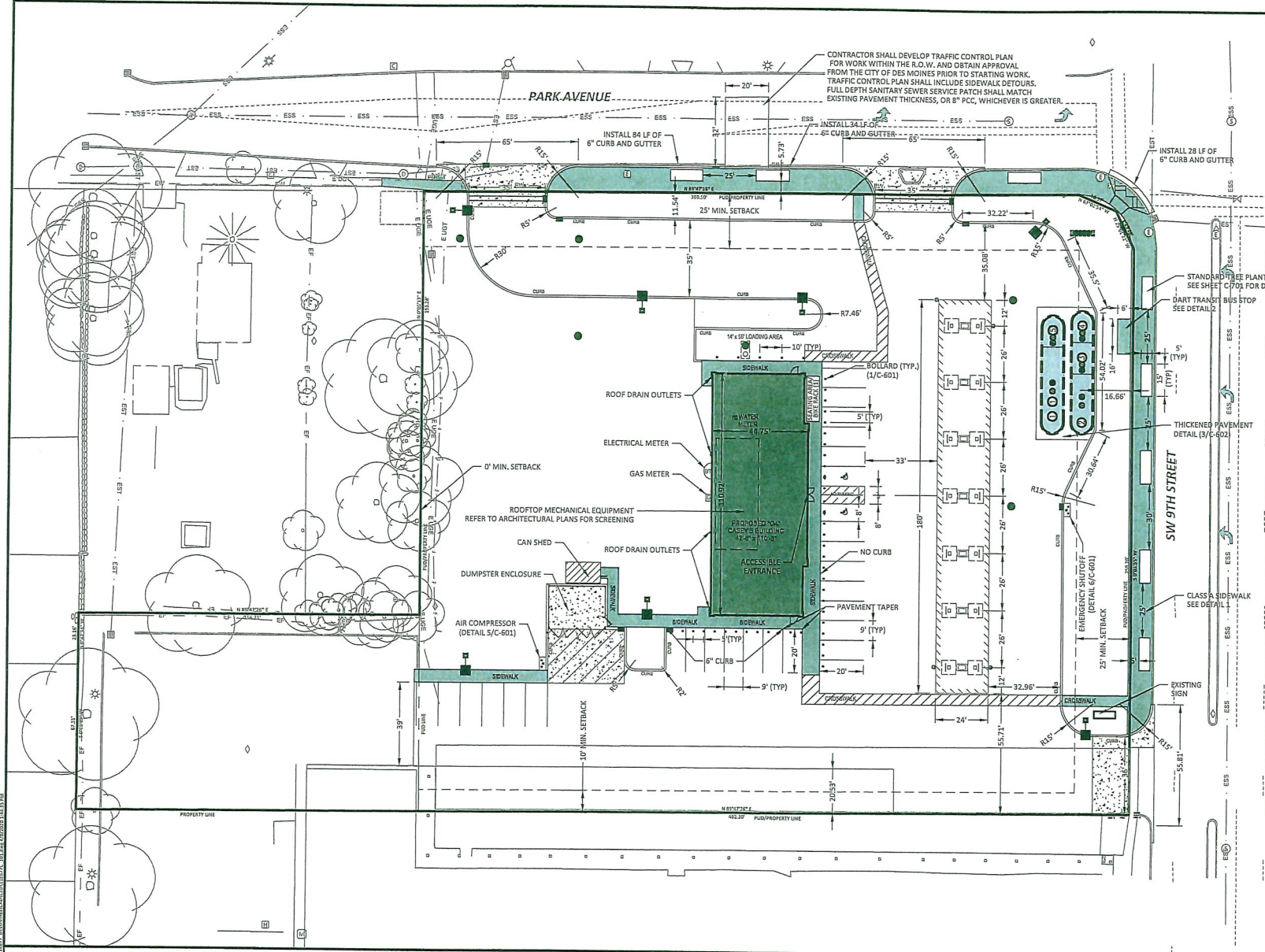
CASEY'S GENERAL STORE  
 DES MOINES, IOWA  
 EXISTING SITE AND DEMOLITION PLAN

SHEET  
 C-100

© Bolton & Menk, Inc. 2016. All rights reserved. PROJECT: 1519 BALTIMORE DRIVE, ANKES, IOWA 50010. SHEET: C-100



CONTRACTOR SHALL DEVELOP TRAFFIC CONTROL PLAN FOR WORK WITHIN THE R.O.W. AND OBTAIN APPROVAL FROM THE CITY OF DES MOINES PRIOR TO STARTING WORK. TRAFFIC CONTROL PLAN SHALL INCLUDE SIDEWALK DETOURS. FULL DEPTH SANITARY SEWER SERVICE PATCH SHALL MATCH EXISTING PAVEMENT THICKNESS, OR 8" PCC, WHICHEVER IS GREATER.



**LEGEND**

	8" PAVEMENT
	7" PAVEMENT
	6" PAVEMENT
	SIDEWALK 5" PAVEMENT (DETAIL 1/ C-601)



3539 BALTIMORE DRIVE  
AMES, IOWA 50010  
Phone: (515) 233-6100  
Email: ames@bolton-menk.com  
www.bolton-menk.com

DATE	DESCRIPTION

CASEY'S GENERAL STORE  
DES MOINES, IOWA  
SITE PLAN LAYOUT

SHEET  
C-101

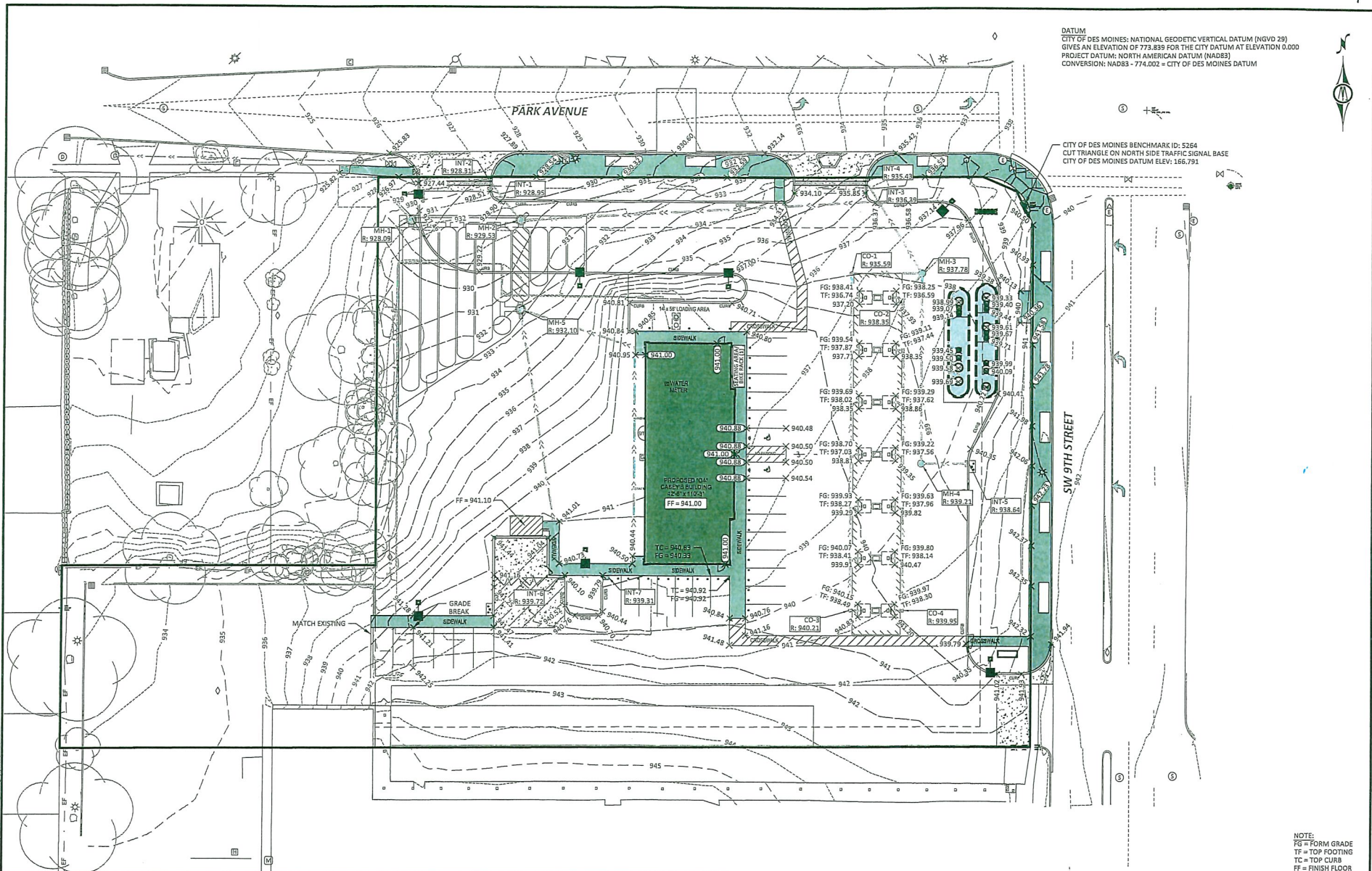
© Bolton & Menk, Inc. 2016. All rights reserved.  
3539 BALTIMORE DRIVE, AMES, IOWA 50010  
PHONE: (515) 233-6100  
WWW.BOLTON-MENK.COM



DATUM  
 CITY OF DES MOINES: NATIONAL GEODETIC VERTICAL DATUM (NGVD 29)  
 GIVES AN ELEVATION OF 773.839 FOR THE CITY DATUM AT ELEVATION 0.000  
 PROJECT DATUM: NORTH AMERICAN DATUM (NAD83)  
 CONVERSION: NAD83 - 774.002 = CITY OF DES MOINES DATUM



CITY OF DES MOINES BENCHMARK ID: 5264  
 CUT TRIANGLE ON NORTH SIDE TRAFFIC SIGNAL BASE  
 CITY OF DES MOINES DATUM ELEV: 166.791



NOTE:  
 FG = FORM GRADE  
 TF = TOP FOOTING  
 TC = TOP CURB  
 FF = FINISH FLOOR



1519 BALTIMORE DRIVE  
 AMES, IOWA 50010  
 Phone: (515) 233-6100  
 Email: Ames@bolton-menk.com  
 www.bolton-menk.com

NO.	DATE	BY	CHKD
1	DEM		
2	DEM		
3	GAB		
4	DEM		
5	DEM		
6	DEM		
7	DEM		
8	DEM		
9	DEM		
10	DEM		
11	DEM		
12	DEM		
13	DEM		
14	DEM		
15	DEM		
16	DEM		
17	DEM		
18	DEM		
19	DEM		
20	DEM		
21	DEM		
22	DEM		
23	DEM		
24	DEM		
25	DEM		
26	DEM		
27	DEM		
28	DEM		
29	DEM		
30	DEM		
31	DEM		
32	DEM		
33	DEM		
34	DEM		
35	DEM		
36	DEM		
37	DEM		
38	DEM		
39	DEM		
40	DEM		
41	DEM		
42	DEM		
43	DEM		
44	DEM		
45	DEM		
46	DEM		
47	DEM		
48	DEM		
49	DEM		
50	DEM		
51	DEM		
52	DEM		
53	DEM		
54	DEM		
55	DEM		
56	DEM		
57	DEM		
58	DEM		
59	DEM		
60	DEM		
61	DEM		
62	DEM		
63	DEM		
64	DEM		
65	DEM		
66	DEM		
67	DEM		
68	DEM		
69	DEM		
70	DEM		
71	DEM		
72	DEM		
73	DEM		
74	DEM		
75	DEM		
76	DEM		
77	DEM		
78	DEM		
79	DEM		
80	DEM		
81	DEM		
82	DEM		
83	DEM		
84	DEM		
85	DEM		
86	DEM		
87	DEM		
88	DEM		
89	DEM		
90	DEM		
91	DEM		
92	DEM		
93	DEM		
94	DEM		
95	DEM		
96	DEM		
97	DEM		
98	DEM		
99	DEM		
100	DEM		

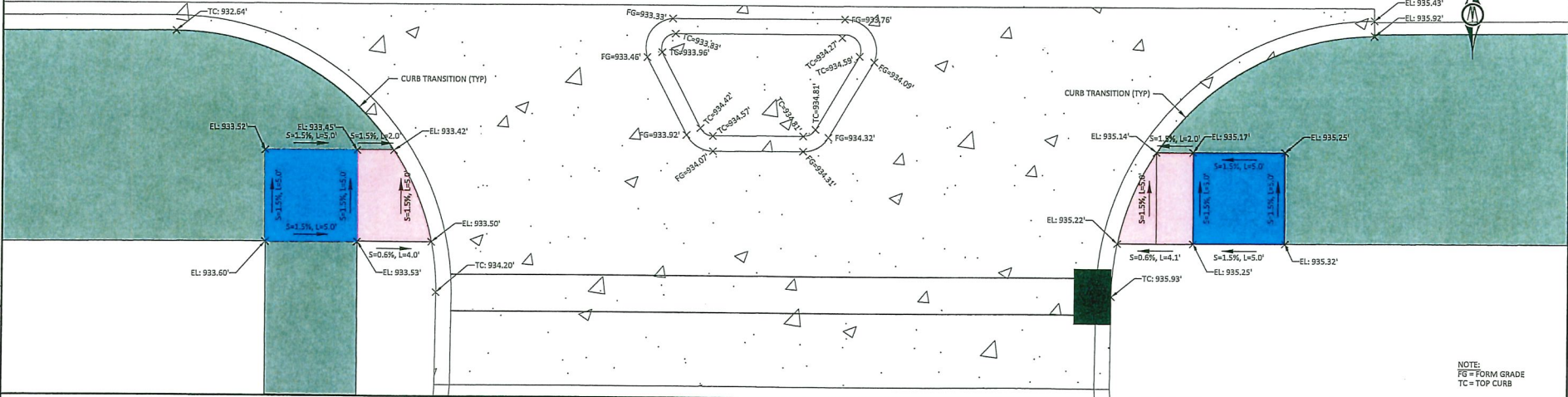
CASEY'S GENERAL STORE  
 DES MOINES, IOWA  
 GRADING PLAN

SHEET  
 C-201

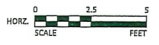
PARK AVE



PARK AVE



NOTE:  
FG = FORM GRADE  
TC = TOP CURB



3518 BALTIMORE DRIVE  
AVES, IOWA, 50010  
Phone: (515) 233-6100  
Email: ames@bolton-menk.com  
www.bolton-menk.com

REV	DESCRIPTION	DATE
1	DEM	
2	DEM	
3	DEM	
4	DEM	
5	DEM	
6	DEM	
7	DEM	
8	DEM	
9	DEM	
10	DEM	
11	DEM	
12	DEM	
13	DEM	
14	DEM	
15	DEM	
16	DEM	
17	DEM	
18	DEM	
19	DEM	
20	DEM	
21	DEM	
22	DEM	
23	DEM	
24	DEM	
25	DEM	
26	DEM	
27	DEM	
28	DEM	
29	DEM	
30	DEM	
31	DEM	
32	DEM	
33	DEM	
34	DEM	
35	DEM	
36	DEM	
37	DEM	
38	DEM	
39	DEM	
40	DEM	
41	DEM	
42	DEM	
43	DEM	
44	DEM	
45	DEM	
46	DEM	
47	DEM	
48	DEM	
49	DEM	
50	DEM	

CASEY'S GENERAL STORE  
DES MOINES, IOWA

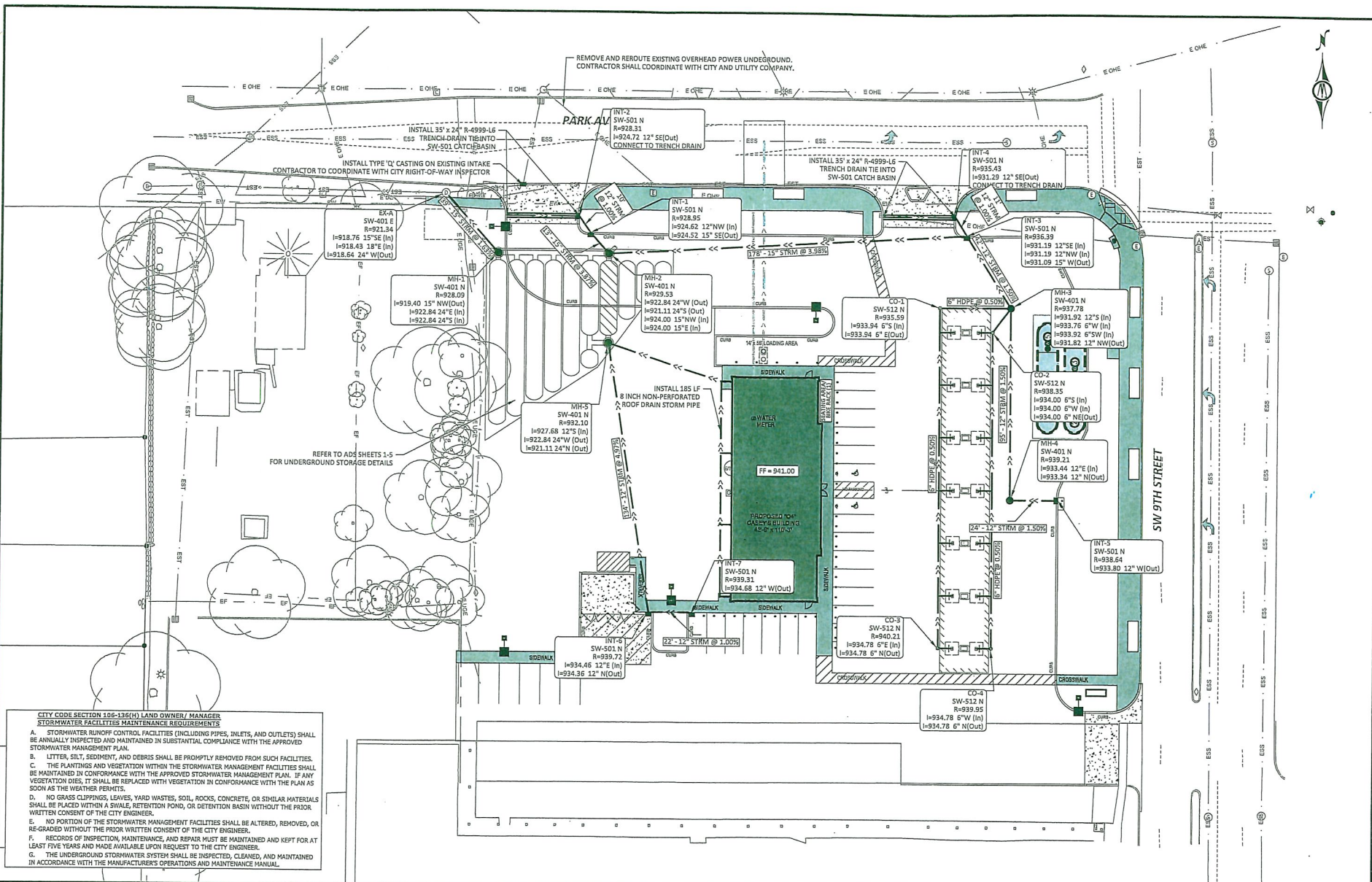
SIDWALK SHEETS

SHEET  
C-202

© Bolton & Menk, Inc. 2015. All rights reserved. 1501000001







REMOVE AND REROUTE EXISTING OVERHEAD POWER UNDERGROUND.  
CONTRACTOR SHALL COORDINATE WITH CITY AND UTILITY COMPANY.

INSTALL TYPE 'C' CASTING ON EXISTING INTAKE  
CONTRACTOR TO COORDINATE WITH CITY RIGHT-OF-WAY INSPECTOR

REFER TO ADD SHEETS 1-5  
FOR UNDERGROUND STORAGE DETAILS

**CITY CODE SECTION 105-135(H) LAND OWNER/ MANAGER  
STORMWATER FACILITIES MAINTENANCE REQUIREMENTS**

A. STORMWATER RUNOFF CONTROL FACILITIES (INCLUDING PIPES, INLETS, AND OUTLETS) SHALL BE ANNUALLY INSPECTED AND MAINTAINED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED STORMWATER MANAGEMENT PLAN.

B. LITTER, SILT, SEDIMENT, AND DEBRIS SHALL BE PROMPTLY REMOVED FROM SUCH FACILITIES.

C. THE PLANTINGS AND VEGETATION WITHIN THE STORMWATER MANAGEMENT FACILITIES SHALL BE MAINTAINED IN CONFORMANCE WITH THE APPROVED STORMWATER MANAGEMENT PLAN. IF ANY VEGETATION DIES, IT SHALL BE REPLACED WITH VEGETATION IN CONFORMANCE WITH THE PLAN AS SOON AS THE WEATHER PERMITS.

D. NO GRASS CLIPPINGS, LEAVES, YARD WASTES, SOIL, ROCKS, CONCRETE, OR SIMILAR MATERIALS SHALL BE PLACED WITHIN A SHALE, RETENTION POND, OR DETENTION BASIN WITHOUT THE PRIOR WRITTEN CONSENT OF THE CITY ENGINEER.

E. NO PORTION OF THE STORMWATER MANAGEMENT FACILITIES SHALL BE ALTERED, REMOVED, OR REGRADED WITHOUT THE PRIOR WRITTEN CONSENT OF THE CITY ENGINEER.

F. RECORDS OF INSPECTION, MAINTENANCE, AND REPAIRS MUST BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE UPON REQUEST TO THE CITY ENGINEER.

G. THE UNDERGROUND STORMWATER SYSTEM SHALL BE INSPECTED, CLEANED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S OPERATIONS AND MAINTENANCE MANUAL.



1519 BALTIMORE DRIVE  
AMES, IOWA 50010  
Phone: (515) 233-8100  
Email: Ames@bolton-menk.com  
www.bolton-menk.com

NO.	DATE	DESCRIPTION
1	DEM	
2	DEM	
3	CAS	
4	11/18/17	

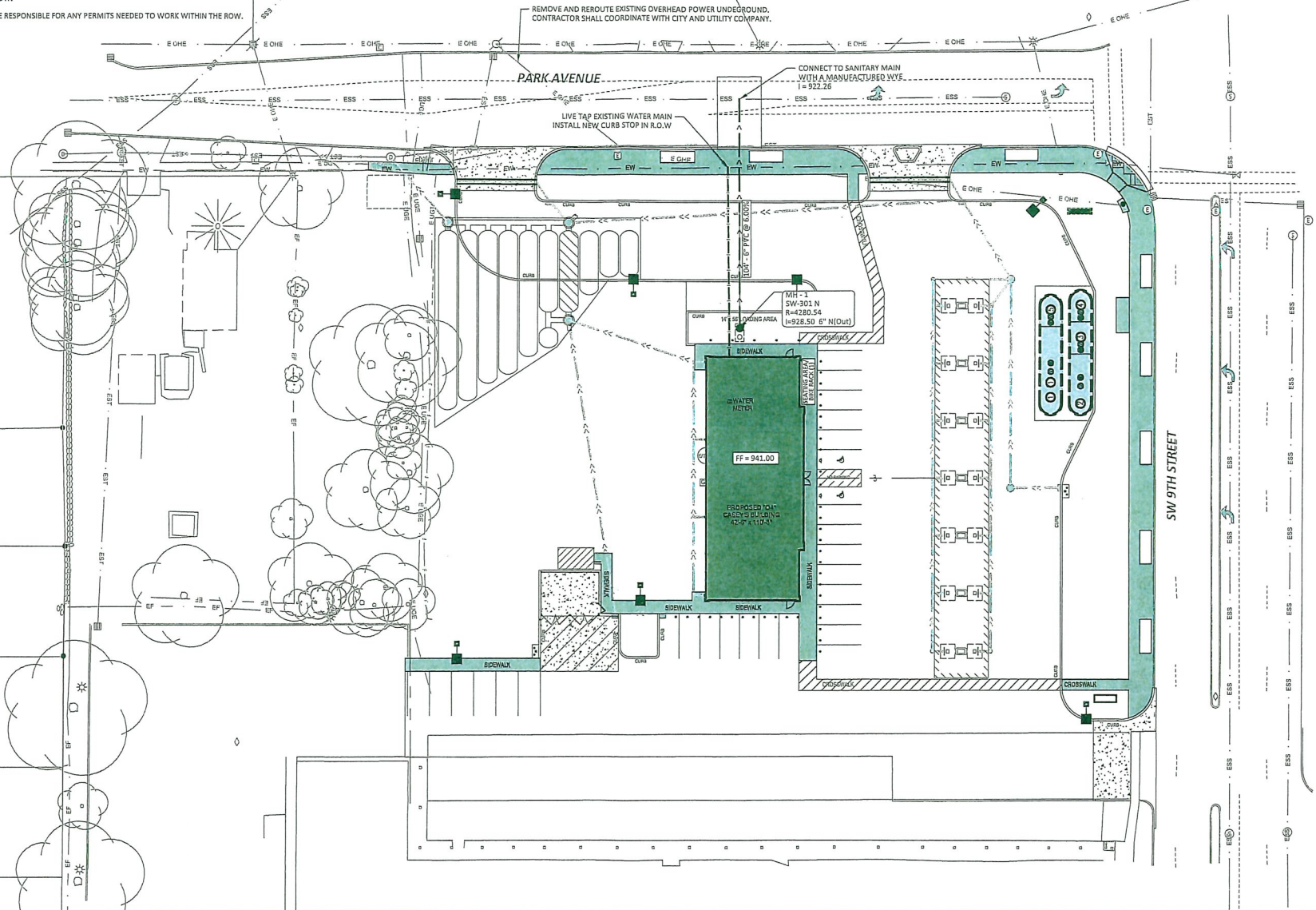
CASEY'S GENERAL STORE  
DES MOINES, IOWA  
UTILITY PLAN

SHEET  
C-301



NOTES:

- 1. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN TO CITY OF DES MOINES FOR APPROVAL PRIOR TO WORKING IN ROW.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PERMITS NEEDED TO WORK WITHIN THE ROW.



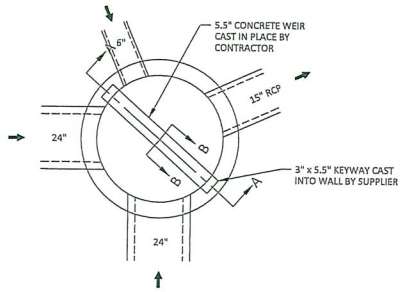
1519 BALTIMORE DRIVE  
AMES, IOWA 50010  
Phone: (515) 233-6100  
Email: Ames@bolton-menk.com  
www.bolton-menk.com

DATE	BY	DESCRIPTION
DEM		
DEM		
GAB		
DATE PLOTTED		
A11111877		

CASEY'S GENERAL STORE  
DES MOINES, IOWA  
UTILITY PLAN

SHEET  
C-302

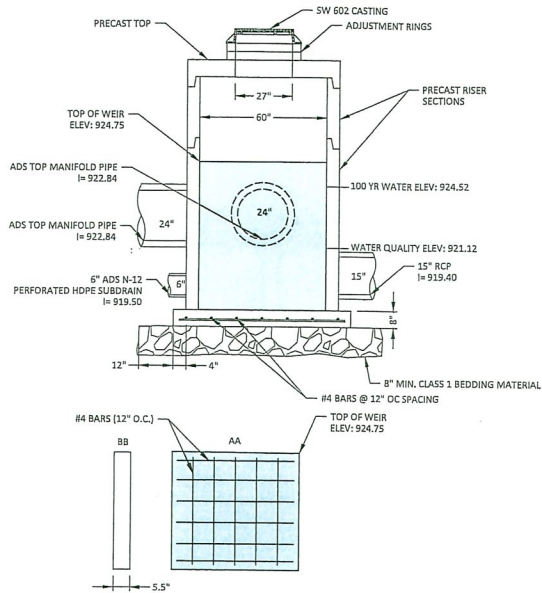
Created & Printed by: 11/15/2017 10:41 AM (Print) Revit  
 Plot Date: 11/15/2017 10:41 AM (Print) Plotter: HP DesignJet T1130  
 Plot Scale: 1/8" = 1'-0" (Print) Plot Size: 36" x 48" (Print)



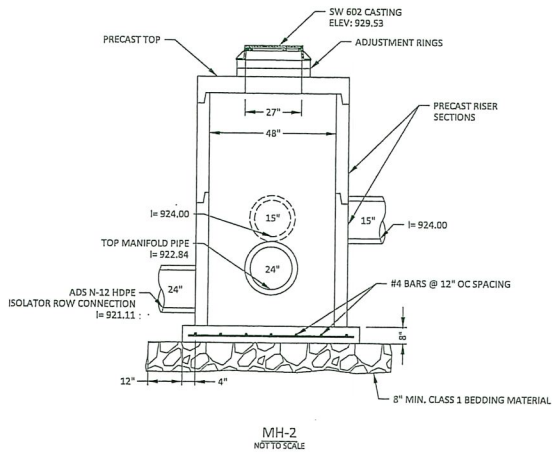
**NOTE:**

- WEIR SHALL BE CONSTRUCTED TO PREVENT LEAKAGE AROUND THE WALL

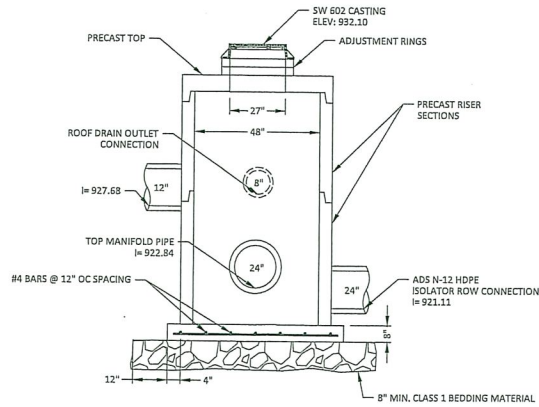
**MH-1 WITH WEIR**  
NOT TO SCALE



- NOTES:**  
STORAGE CHAMBER DATA:
- 100-YEAR WATER ELEV. = 924.52'
  - WATER QUALITY ELEV. = 921.12'
  - TOP ELEV. = 926.92'
  - BOTTOM ELEV. = 919.50'
  - EMERGENCY OVERFLOW ELEV. = 924.75'
  - WATER QUALITY VOLUME = 4,082 CU. FT.
  - 100-YEAR STORM VOLUME = 18,089 CU. FT.



**MH-2**  
NOT TO SCALE



**MH-5**  
NOT TO SCALE

© Bolton & Menk, Inc. 2020. All Rights Reserved. 1524212-1 (MAY/2020) - Rev. 01/2020 1:04 PM

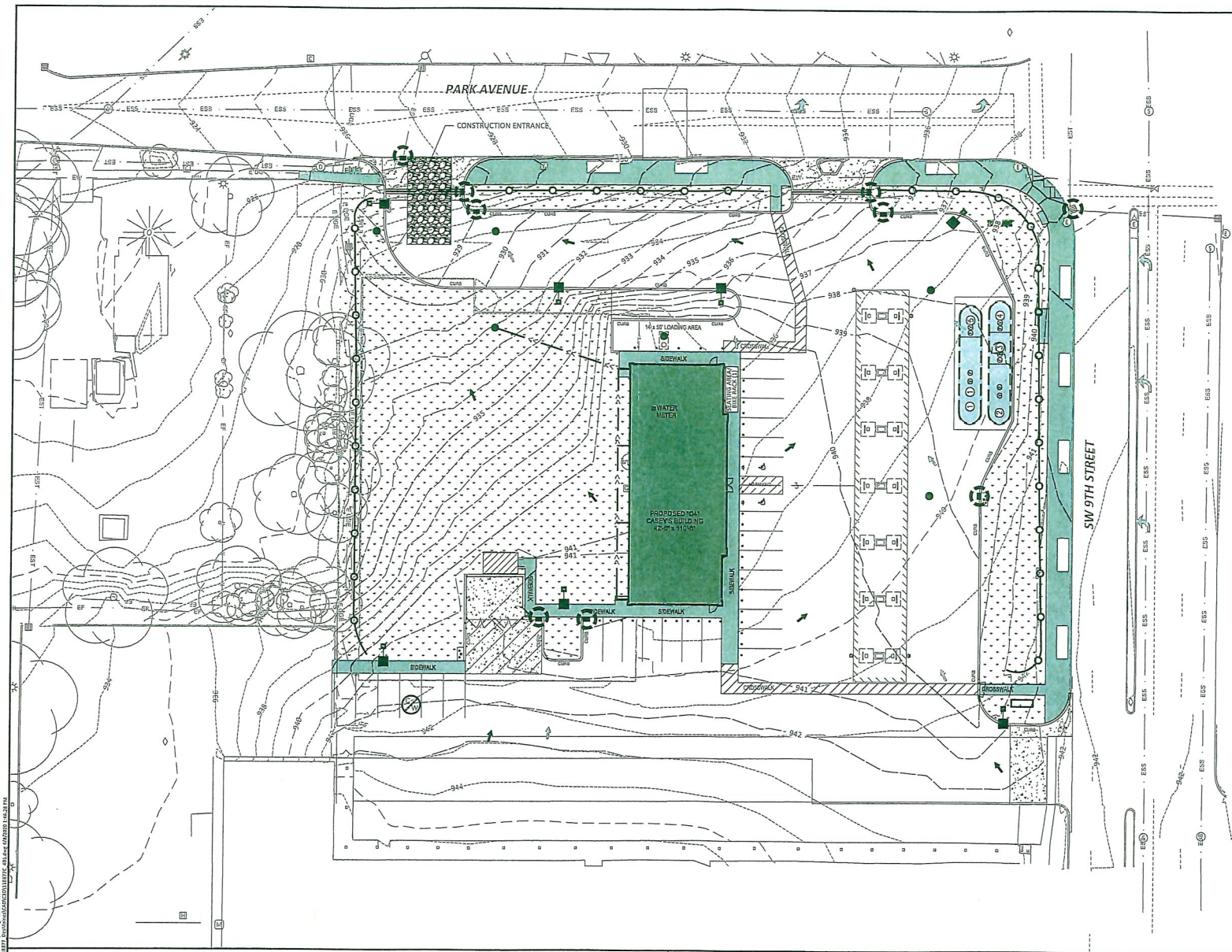


1519 BALTIMORE DRIVE  
AMES, IOWA 50010  
Phone: (515) 239-6100  
Email: Ames@bolton-menk.com  
www.bolton-menk.com

REVISED	BY	DATE	DESCRIPTION
DEM			
DEM			
CSB			
QUANTITY			
A13.118877			

CASEY'S GENERAL STORE  
DES MOINES, IOWA  
UTILITY DETAILS





**EROSION CONTROL LEGEND**

- SILT FENCE
- INLET PROTECTION
- EXISTING/PROPOSED DRAINAGE FLOW
- CONCRETE WASHOUT
- CONSTRUCTION ENTRANCE STONE
- SEED (TYPE 1)



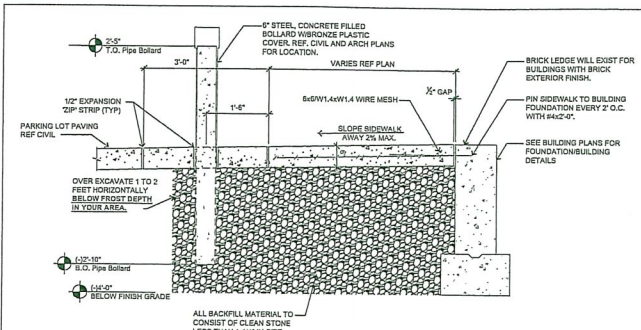
1519 BALTIMORE DRIVE  
 AMES, IOWA 50010  
 Phone: (515) 233-6100  
 Email: Ames@bolton-menk.com  
 www.bolton-menk.com

REVISION	DEM	DATE	DESCRIPTION
REVISION	DEM		
DESIGNED	QAB		
DATE PLOTTED		06/13/11	11:08:77

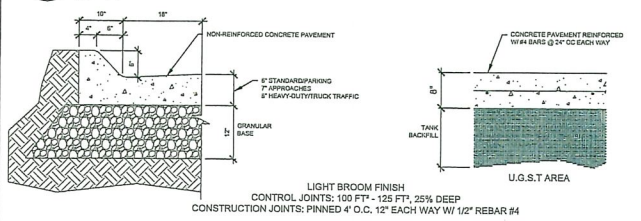
CASEY'S GENERAL STORE  
 DES MOINES, IOWA  
 SWPPP AND EROSION CONTROL

SHEET  
 C-401

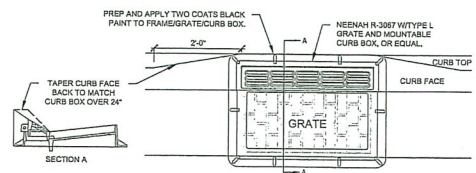
06/13/11 11:08:77  
 1519 BALTIMORE DRIVE  
 AMES, IOWA 50010  
 Phone: (515) 233-6100  
 Email: Ames@bolton-menk.com  
 www.bolton-menk.com



**1 TYPICAL BUILDING SIDEWALK AND BOLLARD**  
3/4" = 1'-0"



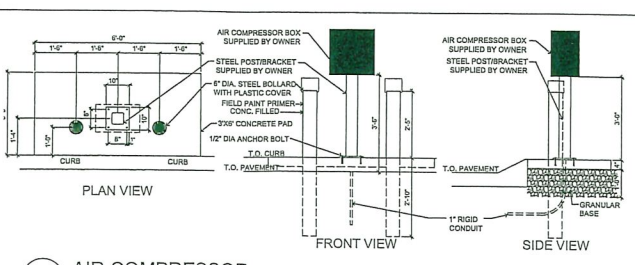
**2 CONCRETE PAVING AND CURB**  
Not to Scale



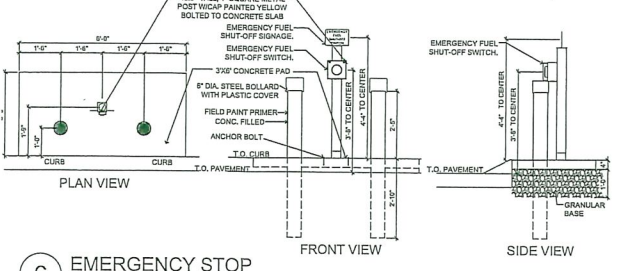
**3 CURB INLET**  
Not to Scale



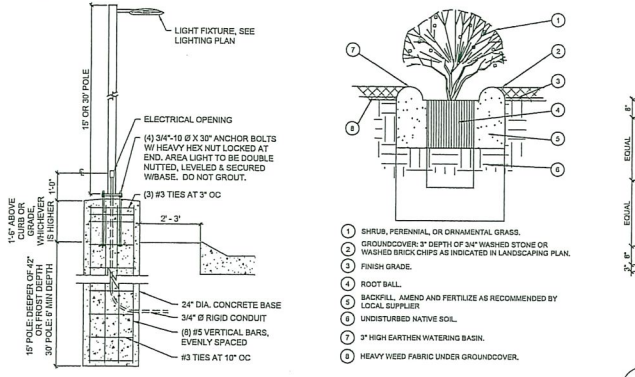
**4 TYPICAL FILL SECTION**  
Not to Scale



**5 AIR COMPRESSOR**  
1/2" = 1'-0"

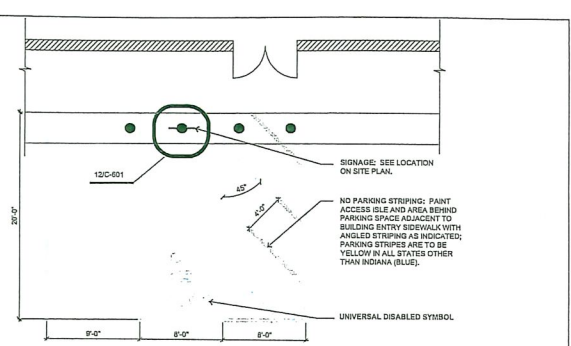


**6 EMERGENCY STOP**  
1/2" = 1'-0"

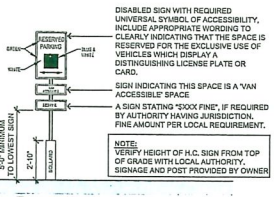


**7 AREA LIGHTING**  
1/2" = 1'-0"

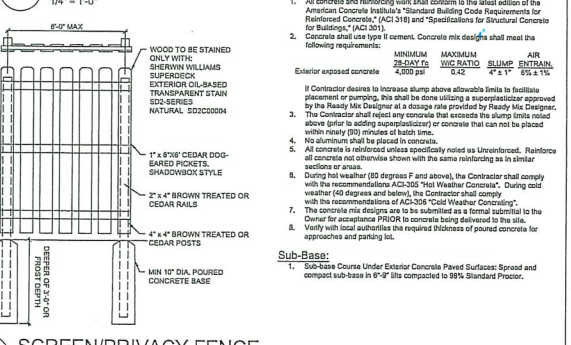
**8 PLANT/SHRUB INSTALLATION**  
Not to Scale



**9 ADA PARKING SPACES**  
3/16" = 1'-0"



**10 ADA PARKING SIGN**  
1/4" = 1'-0"



**11 SCREEN/PRIVACY FENCE**  
1/2" = 1'-0"

**GENERAL NOTES**

**Concrete:**

- All concrete and reinforcing work shall conform to the latest edition of the American Concrete Institute's "Standard Building Code Requirements for Reinforced Concrete," (ACI 318) and "Specifications for Structural Concrete for Buildings," (ACI 301).
- Concrete shall use type II cement. Concrete mix designs shall meet the following requirements:
 

MINIMUM	MAXIMUM	AIR
SLUMP	W/C RATIO	ENTRANCE
4.00 FT	0.42	4 ± 1%

Entire exposed concrete shall be finished with a smooth finish.

If Contractor desires to increase slump above allowable limits to facilitate placement or pumping, this shall be done utilizing a superplasticizer approved by the Ready Mix Designer at a dosage rate provided by Ready Mix Designer. The Contractor shall reject any concrete that exceeds the slump limits noted above (prior to adding superplasticizer) or concrete that can not be placed within ninety (90) minutes of batch time.

- No admixtures shall be placed in concrete, unless specifically noted as Unreinforced. Reinforce all concrete not otherwise shown with the same reinforcing as in similar sections or areas.
- During hot weather (60 degrees F and above), the Contractor shall comply with the recommendations ACI 308 "Hot Weather Concreting". During cold weather (40 degrees and below), the Contractor shall comply with the recommendations of ACI 308 "Cold Weather Concreting".
- The concrete mix designs are to be submitted as a formal submission to the Owner for acceptance PRIOR to concrete being delivered to the site.
- Verify with local authorities the required thickness of poured concrete for approaches and parking lot.

**Sub-Bases:**

- Sub-base Course Under Exterior Concrete Pavement Surface: Spread and compact sub-base in 6"-9" lifts compacted to 98% Standard Proctor.

DATE PLOTTED: 11/11/2023 10:58:00 AM  
 PLOT NUMBER: 11/11/2023 10:58:00 AM  
 PLOT SCALE: 1/4" = 1'-0"  
 PLOT SHEET: 11/11/2023 10:58:00 AM

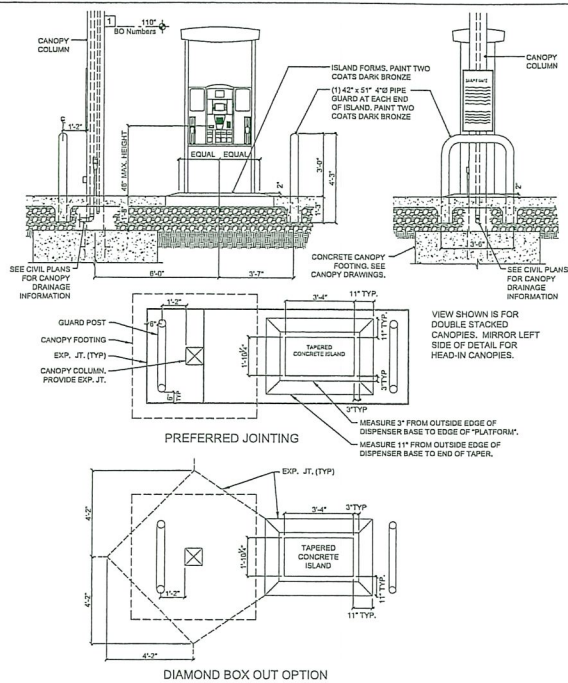


**BOLTON & MENK**  
 1519 BALTIMORE DRIVE  
 AMES, IOWA 50010  
 Phone: (515) 239-6200  
 Email: Ames@bolton-menk.com  
 www.bolton-menk.com

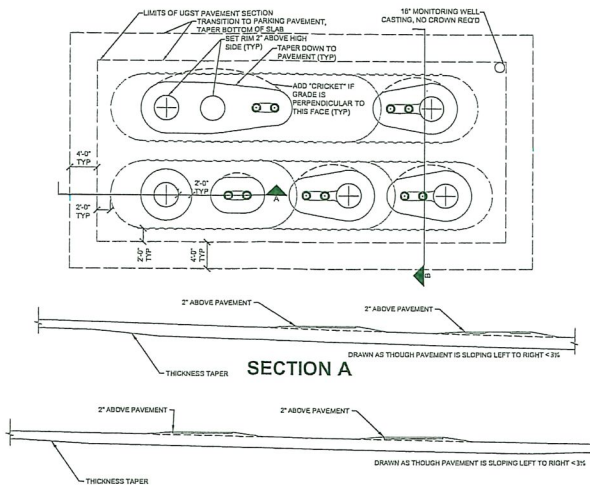
REVISED	BY	DATE	DESCRIPTION	DATE
01	DEM			
02	DEM			
03	GAB			
04	DEM			
05	DEM			
06	DEM			
07	DEM			
08	DEM			
09	DEM			
10	DEM			
11	DEM			
12	DEM			
13	DEM			
14	DEM			
15	DEM			
16	DEM			
17	DEM			
18	DEM			
19	DEM			
20	DEM			

CASEY'S GENERAL STORE  
 DES MOINES, IOWA  
 CIVIL DETAILS SHEETS  
 SHEET C-601

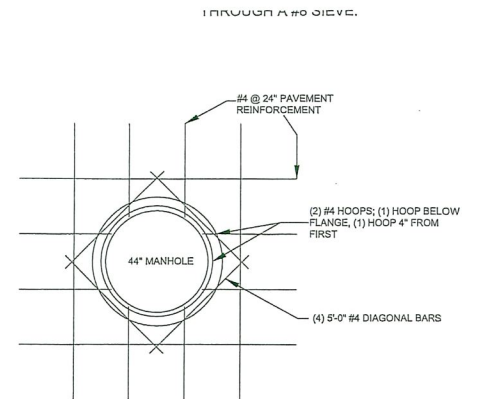




1 GAS TAPERED FUEL ISLAND (PREFERRED OPTION)  
3/8" = 1'-0"



2 UGST PAVING FOR PAVEMENT SLOPE <3%  
Not to Scale



3 UGST Manhole Detail  
1/2" = 1'-0"

General Notes:  
1 ALL REINFORCING IS CENTER OF SLAB.

DRAWN BY: J. H. ...  
 CHECKED BY: ...  
 DATE: ...



1519 BALTIMORE DRIVE  
 AMES, IOWA 50200  
 Phone: (515) 233-6200  
 Email: Ames@bolton-menk.com  
 www.bolton-menk.com

REVISED	DATE	BY	DESCRIPTION

CASEY'S GENERAL STORE  
 DES MOINES, IOWA  
 CIVIL DETAILS SHEETS

SHEET  
 C-602

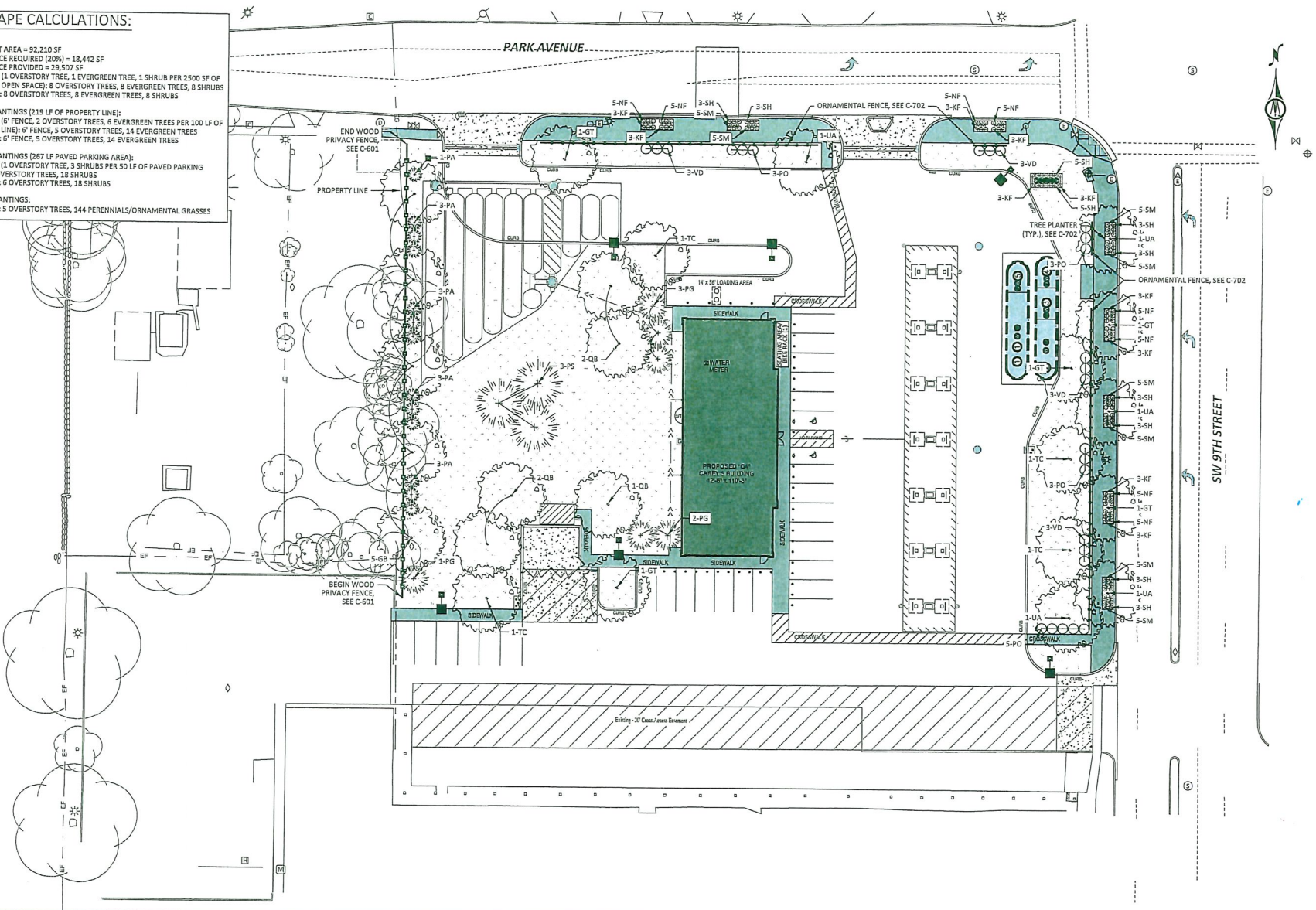
**LANDSCAPE CALCULATIONS:**

**OPEN SPACE:**  
 TOTAL LOT AREA = 92,210 SF  
 OPEN SPACE REQUIRED (20%) = 18,442 SF  
 OPEN SPACE PROVIDED = 29,507 SF  
 REQUIRED (1 OVERSTORY TREE, 1 EVERGREEN TREE, 1 SHRUB PER 2500 SF OF  
 REQUIRED OPEN SPACE): 8 OVERSTORY TREES, 8 EVERGREEN TREES, 8 SHRUBS  
 PROVIDED: 8 OVERSTORY TREES, 8 EVERGREEN TREES, 8 SHRUBS

**BUFFERYARD PLANTINGS (219 LF OF PROPERTY LINE):**  
 REQUIRED (6' FENCE, 2 OVERSTORY TREES, 6 EVERGREEN TREES PER 100 LF OF  
 PROPERTY LINE): 6' FENCE, 5 OVERSTORY TREES, 14 EVERGREEN TREES  
 PROVIDED: 6' FENCE, 5 OVERSTORY TREES, 14 EVERGREEN TREES

**PARKING LOT PLANTINGS (267 LF PAVED PARKING AREA):**  
 REQUIRED (1 OVERSTORY TREE, 3 SHRUBS PER 50 LF OF PAVED PARKING  
 AREA): 5 OVERSTORY TREES, 15 SHRUBS  
 PROVIDED: 6 OVERSTORY TREES, 18 SHRUBS

**STREETSCAPE PLANTINGS:**  
 PROVIDED: 5 OVERSTORY TREES, 144 PERENNIALS/ORNAMENTAL GRASSES



3539 BALTIMORE DRIVE  
 AMES, IOWA 50010  
 Phone: (515) 233-6100  
 Email: ames@bolton-menk.com  
 www.bolton-menk.com

NO.	REVISION	DATE
1	DEM	
2	DEM	
3	DEM	
4	DEM	
5	DEM	
6	DEM	
7	DEM	
8	DEM	
9	DEM	
10	DEM	
11	DEM	
12	DEM	
13	DEM	
14	DEM	
15	DEM	
16	DEM	
17	DEM	
18	DEM	
19	DEM	
20	DEM	
21	DEM	
22	DEM	
23	DEM	
24	DEM	
25	DEM	
26	DEM	
27	DEM	
28	DEM	
29	DEM	
30	DEM	
31	DEM	
32	DEM	
33	DEM	
34	DEM	
35	DEM	
36	DEM	
37	DEM	
38	DEM	
39	DEM	
40	DEM	
41	DEM	
42	DEM	
43	DEM	
44	DEM	
45	DEM	
46	DEM	
47	DEM	
48	DEM	
49	DEM	
50	DEM	
51	DEM	
52	DEM	
53	DEM	
54	DEM	
55	DEM	
56	DEM	
57	DEM	
58	DEM	
59	DEM	
60	DEM	
61	DEM	
62	DEM	
63	DEM	
64	DEM	
65	DEM	
66	DEM	
67	DEM	
68	DEM	
69	DEM	
70	DEM	
71	DEM	
72	DEM	
73	DEM	
74	DEM	
75	DEM	
76	DEM	
77	DEM	
78	DEM	
79	DEM	
80	DEM	
81	DEM	
82	DEM	
83	DEM	
84	DEM	
85	DEM	
86	DEM	
87	DEM	
88	DEM	
89	DEM	
90	DEM	
91	DEM	
92	DEM	
93	DEM	
94	DEM	
95	DEM	
96	DEM	
97	DEM	
98	DEM	
99	DEM	
100	DEM	

CASEY'S GENERAL STORE  
 DES MOINES, IOWA  
 LANDSCAPING PLAN

© Bolton & Menk, Inc. 2022. All Rights Reserved.  
 1500 WEST 17TH AVENUE, SUITE 100, DENVER, CO 80202-3445, USA





PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER:	REX OLLENBURG 612-505-1814 REX.OLLENBURG@ADS-PIPE.COM
ADS SALES REP:	JASON MATHES 515-257-0092 JASON.MATHES@ADS-PIPE.COM
PROJECT NO:	S157690



ADVANCED DRAINAGE SYSTEMS, INC.



## CASEY'S GENERAL STORE

### DES MOINES, IA

#### MC-4500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-4500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE 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, 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.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
  - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
  - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE 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 SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
  - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

#### IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

- STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR 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.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- 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

- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
  - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
  - NO RUBBER TIRE LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
  - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- 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 CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING 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.



**PROPOSED LAYOUT**

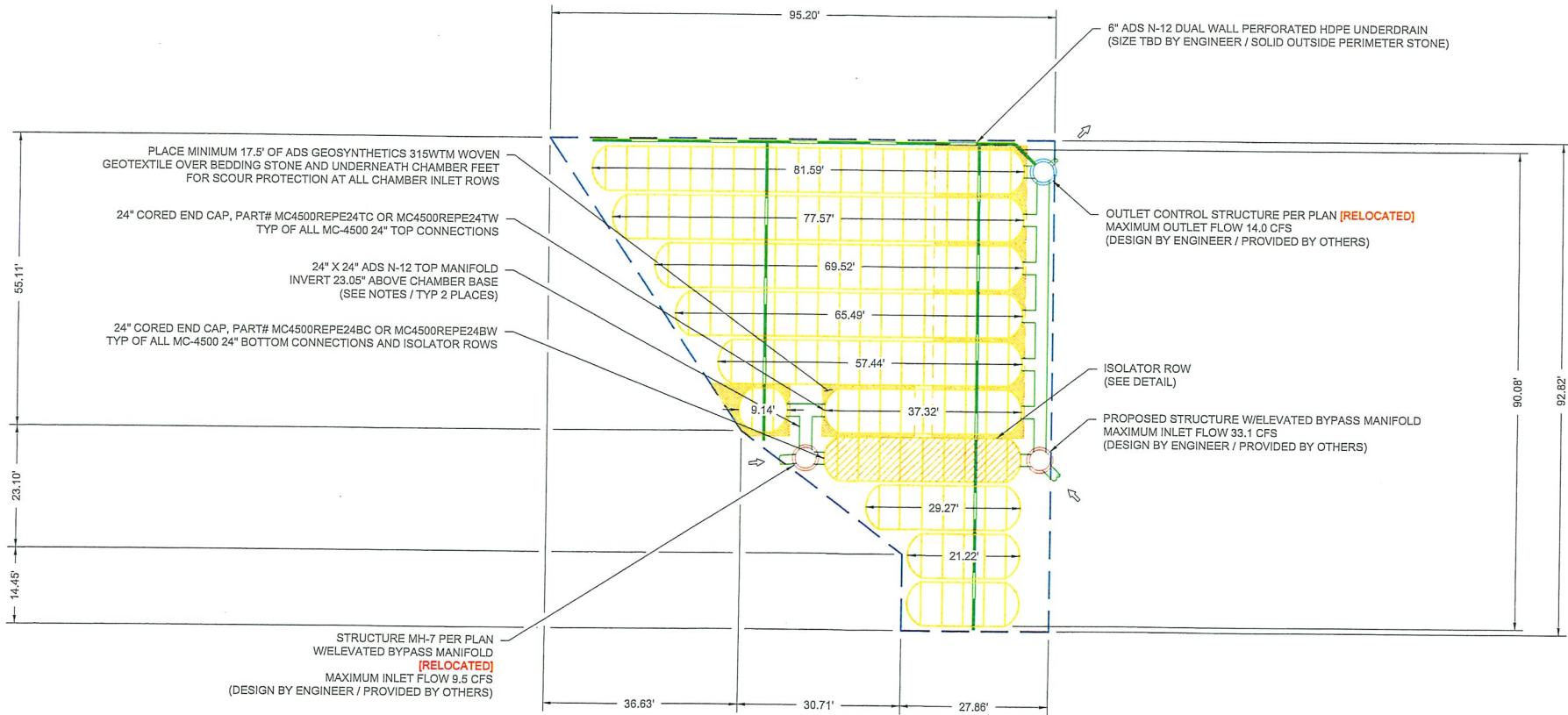
112	STORMTECH MC-4500 CHAMBERS
22	STORMTECH MC-4500 END CAPS
12	STONE ABOVE (in)
17	STONE BELOW (in)
40	% STONE VOID
24379	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
5646	SYSTEM AREA (ft <sup>2</sup> )
335	SYSTEM PERIMETER (ft)

**PROPOSED ELEVATIONS**

932.92	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
926.42	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
927.92	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
927.92	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
927.92	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
926.92	TOP OF STONE
925.92	TOP OF MC-4500 CHAMBER
922.84	24" TOP MANIFOLD INVERT
921.11	24" ISOLATOR ROW CONNECTION INVERT
920.92	BOTTOM OF MC-4500 CHAMBER
919.50	UNDERDRAIN INVERT
919.50	BOTTOM OF STONE

**NOTES**

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.



CASEY'S GENERAL STORE  
DES MOINES, IA

DATE: 11/12/19  
DRAWN: SLV  
CHECKED: CTS  
PROJECT #: S157690

DATE	DESCRIPTION
	REMOVED NOT FOR CONSTRUCTION



70 WOOD ROAD, SUITE 3 | ROCKY HILL, CT 06067  
860-259-8188 | 888-292-2884 | WWW.STORMTECH.COM



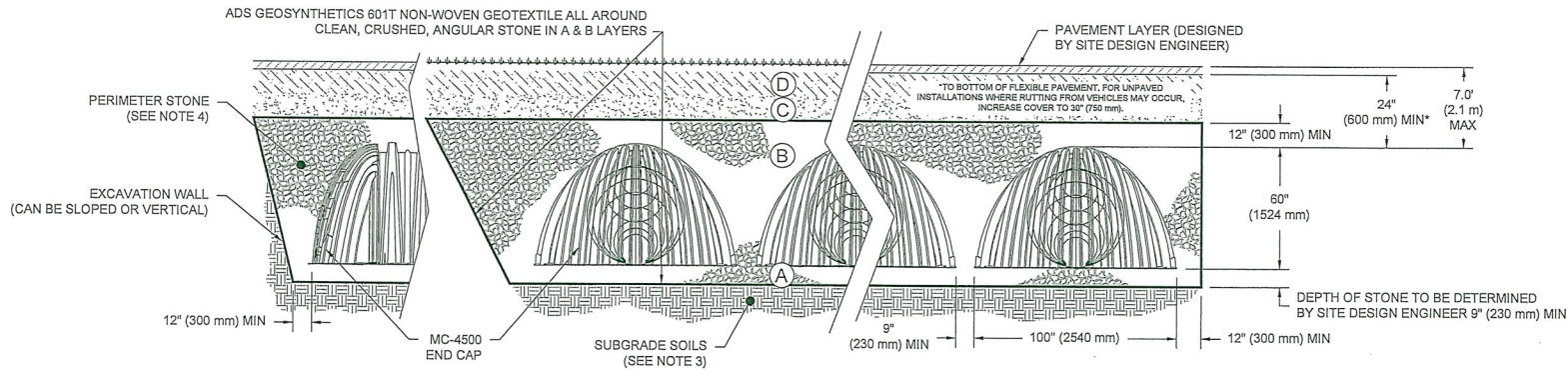
4640 TRUENAN BLVD  
HILLIARD, OH 43026

THIS DRAWING HAS BEEN PREPARED BY AN ENGINEER OR OTHER PROFESSIONAL PERSONNEL WHO ASSUMES FULL RESPONSIBILITY OF THE SITE DESIGN. ENGINEER TO ENSURE THAT THE PROJECT(S) DESCRIBED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

## ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 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	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 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2-4, A-3  OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>1</sup> 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>1</sup> 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

- PLEASE NOTE:
- 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".
  - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
  - 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.
  - 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.



### NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
- MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 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.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

CASEY'S GENERAL STORE  
 DES MOINES, IA  
 DATE: 11/12/19  
 DRAWN: SLV  
 PROJECT #: S157690  
 CHECKED: CTS

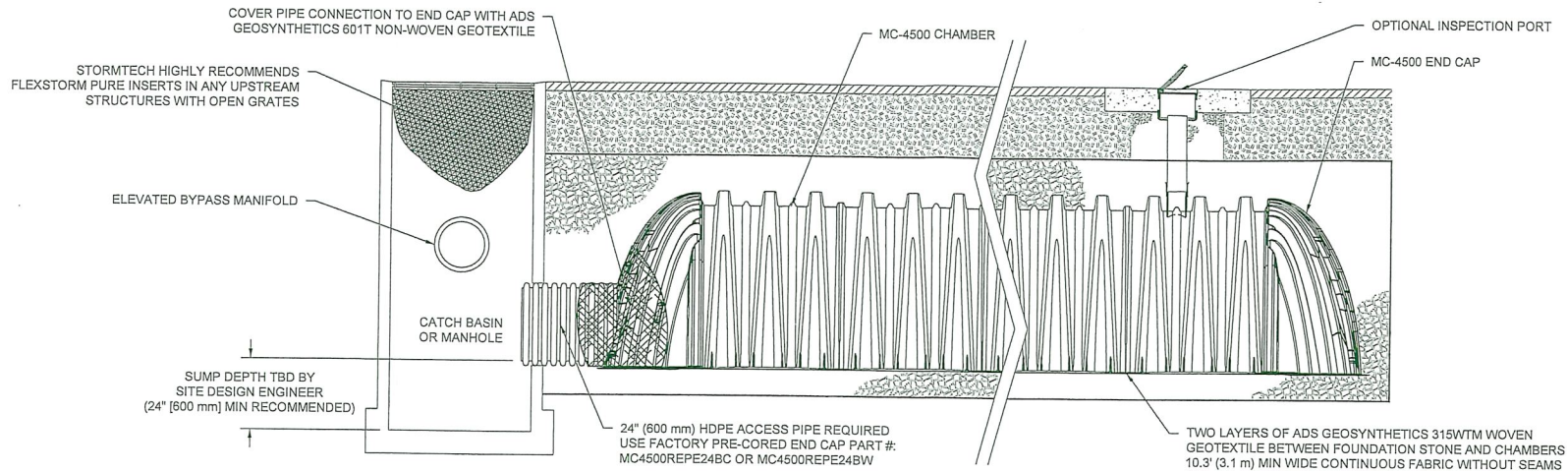
DATE	DESCRIPTION
01/05/20	AMK REMOVED NOT FOR CONSTRUCTION
	CHD DESCRIPTION

**StormTech**  
Construction Services  
 70 WOOD ROAD, SUITE 5 | ROCKY HILL, CT 06067  
 866-529-1185 | 860-895-2894 | WWW.STORMTECH.COM

4640 TRUENMAN BLVD  
 HILLIARD, OH 43026  
**ADS**  
ADVANCED DRAINAGE SYSTEMS, INC.

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCTS BE USED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE CODES, REGULATIONS, AND PROJECT REQUIREMENTS.





**MC-4500 ISOLATOR ROW DETAIL**

N.T.S.

**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.

CASEY'S GENERAL STORE  
DES MOINES, IA

DATE: 11/12/19  
DRAWN: SLV  
PROJECT #: S167890  
CHECKED: CTS

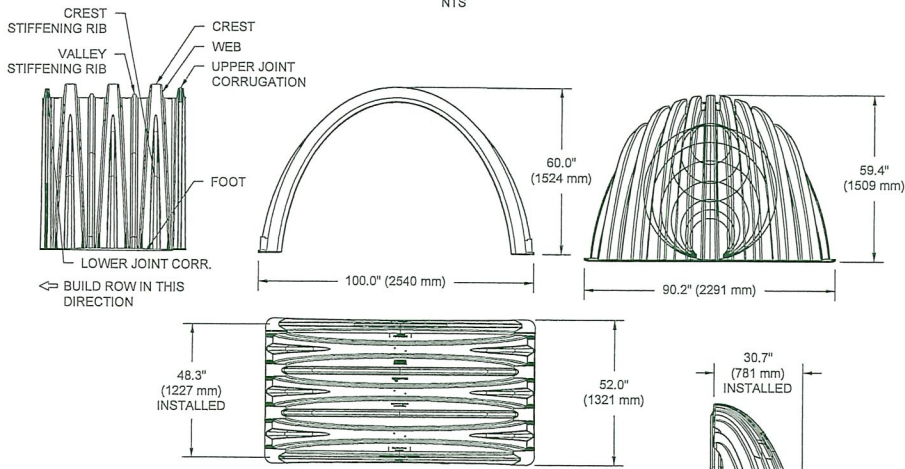
DATE	DATE	DESCRIPTION
01/06/20	AUK	REMOVED NOT FOR CONSTRUCTION DESCRIPTION
	DNW	CHD

**Stormtech**  
Division: Stormwater Management  
20 INWOOD ROAD, SUITE 3 | ROCKY HILL, CT | 06067  
860-528-9188 | 846-862-2884 | WWW.STORMTECH.COM

**ADS**  
ADVANCED DRAINAGE SYSTEMS, INC.  
4640 TRUEMAN BLVD  
HILLIARD, OH 43026

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ASSURE THAT THE PRODUCTS TO BE USED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

### MC-4500 TECHNICAL SPECIFICATION



#### NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	100.0" X 60.0" X 48.3"	(2540 mm X 1524 mm X 1227 mm)
CHAMBER STORAGE	106.5 CUBIC FEET	(3.01 m <sup>3</sup> )
MINIMUM INSTALLED STORAGE*	162.6 CUBIC FEET	(4.60 m <sup>3</sup> )
WEIGHT	130.0 lbs.	(59.0 kg)

#### NOMINAL END CAP SPECIFICATIONS

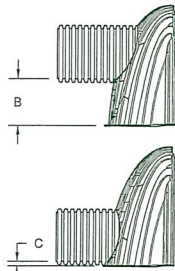
SIZE (W X H X INSTALLED LENGTH)	90.2" X 59.4" X 30.7"	(2291 mm X 1509 mm X 781 mm)
END CAP STORAGE	35.7 CUBIC FEET	(1.01 m <sup>3</sup> )
MINIMUM INSTALLED STORAGE*	108.7 CUBIC FEET	(3.08 m <sup>3</sup> )
WEIGHT	135.0 lbs.	(61.2 kg)

\*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"  
 STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"  
 END CAPS WITH A WELDED CROWN PLATE END WITH "C"  
 END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

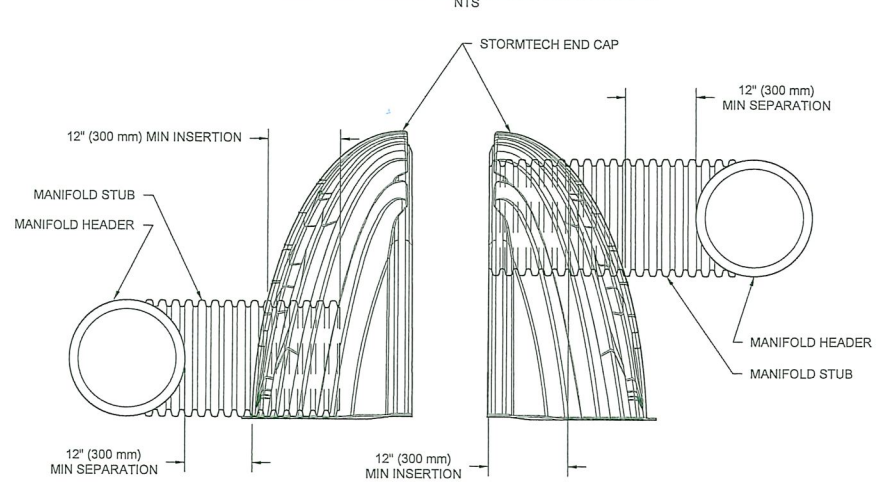
PART #	STUB	B	C
MC4500REPE06T		42.54" (1,081 mm)	---
MC4500REPE06B	6" (150 mm)	---	0.86" (22 mm)
MC4500REPE08T		40.50" (1,029 mm)	---
MC4500REPE08B	8" (200 mm)	---	1.01" (26 mm)
MC4500REPE10T		38.37" (975 mm)	---
MC4500REPE10B	10" (250 mm)	---	1.33" (34 mm)
MC4500REPE12T		35.69" (907 mm)	---
MC4500REPE12B	12" (300 mm)	---	1.55" (39 mm)
MC4500REPE15T		32.72" (831 mm)	---
MC4500REPE15B	15" (375 mm)	---	1.70" (43 mm)
MC4500REPE18T		29.36" (746 mm)	---
MC4500REPE18TW		---	---
MC4500REPE18BC		---	1.97" (50 mm)
MC4500REPE18BW		---	---
MC4500REPE24TC		23.05" (585 mm)	---
MC4500REPE24TW		---	---
MC4500REPE24BC		---	2.26" (57 mm)
MC4500REPE24BW		---	---
MC4500REPE30BC	30" (760 mm)	---	2.95" (76 mm)
MC4500REPE36BC	36" (900 mm)	---	3.25" (83 mm)
MC4500REPE42BC	42" (1050 mm)	---	3.55" (90 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



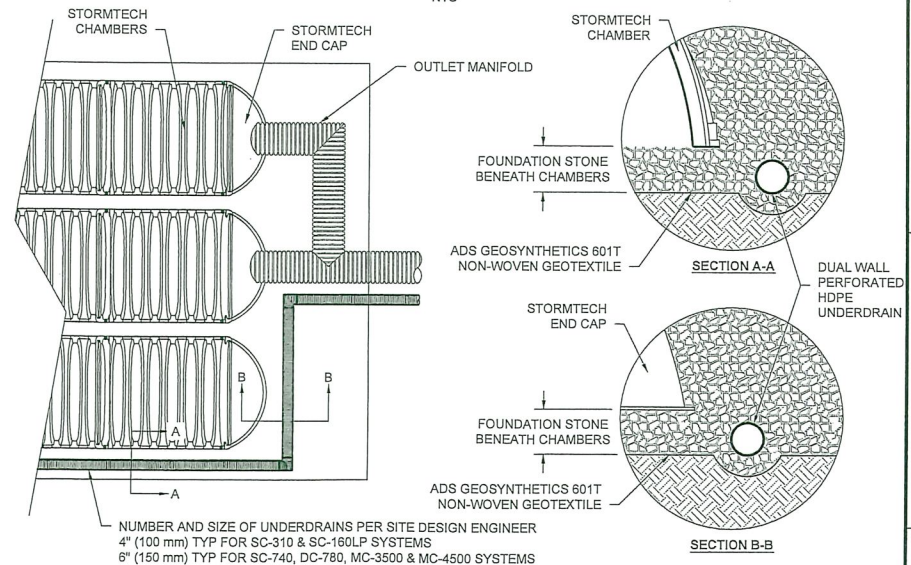
CUSTOM PRECAST INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

### MC-SERIES END CAP INSERTION DETAIL



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

### UNDERDRAIN DETAIL



NUMBER AND SIZE OF UNDERDRAINS PER SITE DESIGN ENGINEER  
 4" (100 mm) TYP FOR SC-310 & SC-160LP SYSTEMS  
 6" (150 mm) TYP FOR SC-740, DC-780, MC-3500 & MC-4500 SYSTEMS

CASEY'S GENERAL STORE  
 DES MOINES, IA

DATE: 11/12/19  
 DRAWN: SLV  
 PROJECT #: S157690  
 CHECKED: CTS



70 WOODS ROAD, SUITE 1 ROCKY HILL, CT 06867  
 800-225-0100 | 860-225-2004 | WWW.STORMTECH.COM

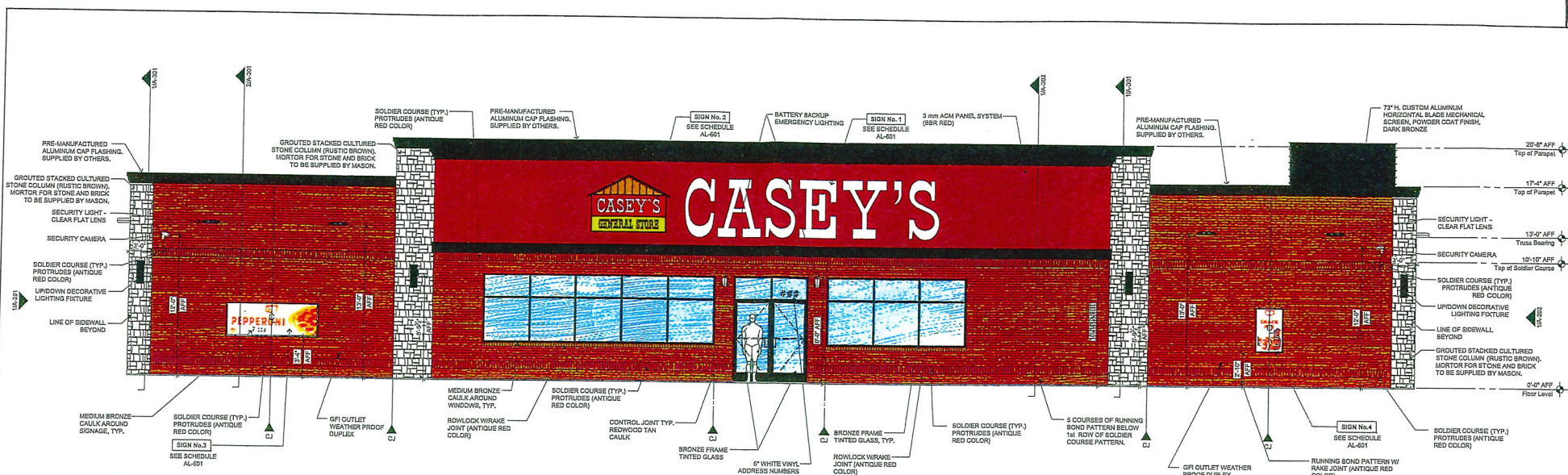
4640 TRUENAN BLVD  
 HILLIARD, OH 43026



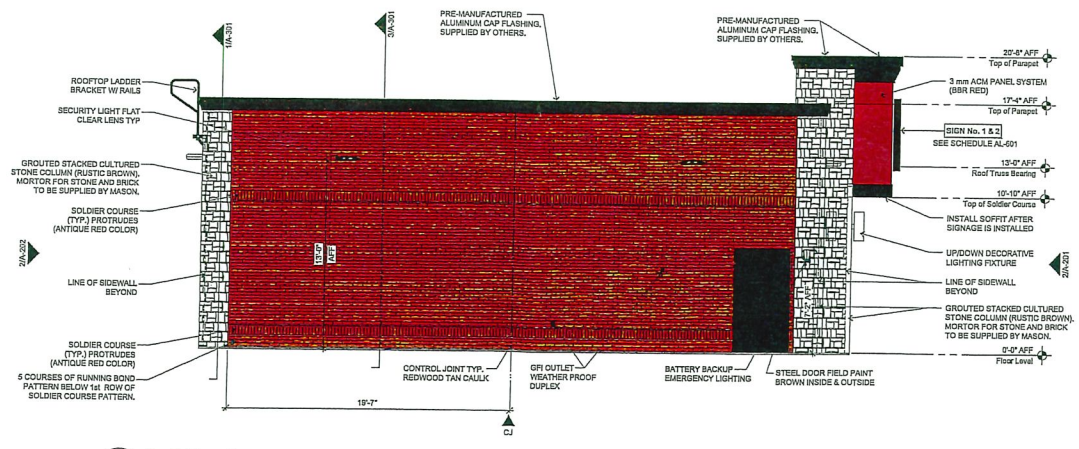
ADVANCED DRAINAGE SYSTEMS, INC.

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO US BY THE CLIENT. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ASSURE THAT THE PROJECT IS DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE LAWS, REGULATIONS AND PROJECT REQUIREMENTS.

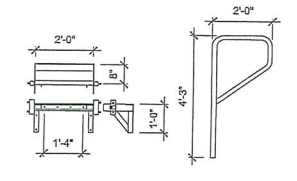




2 East Elevation  
1/4" = 1'-0"



1 South Elevation  
1/4" = 1'-0"



3 Ladder Bracket  
N.T.S.

**General Notes**

- REFER TO AL-801 FOR SIGNAGE SCHEDULE INCLUDING SIZE AND AREA OF SIGNS SHOWN ON ELEVATIONS.

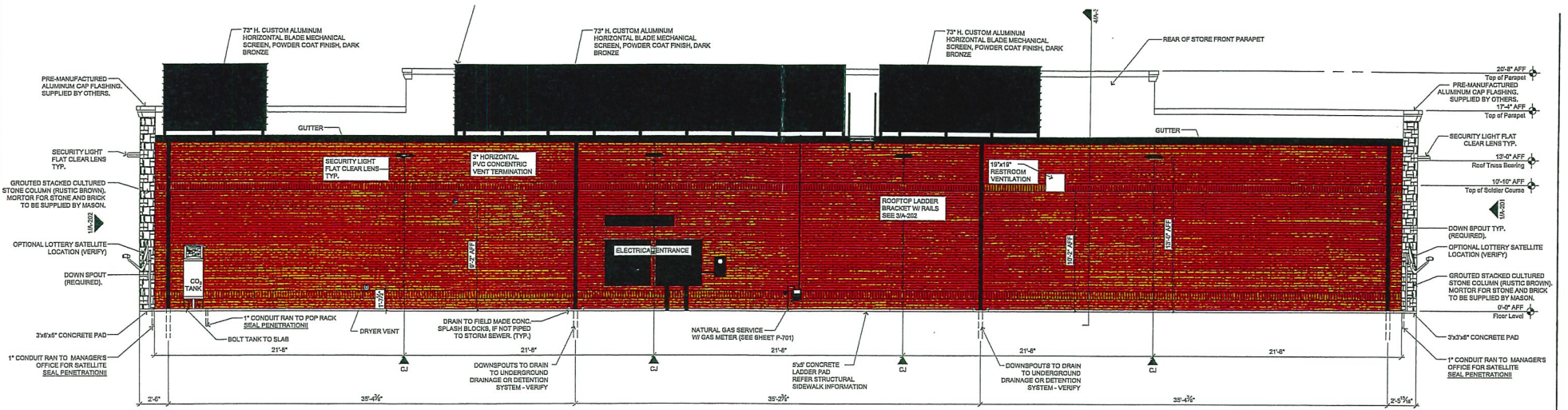
**P**ELDS DESIGN SERVICES  
Architecture | Engineering | Surveying  
2333 Dixon Blvd., Des Moines, Iowa 50318 | P.O. Box 47528 Des Moines, Iowa 50326 | P: 515-251-8166 | F: 515-251-2333  
E: info@pelds.com | www.pelds.com

**CASEY'S** General Store

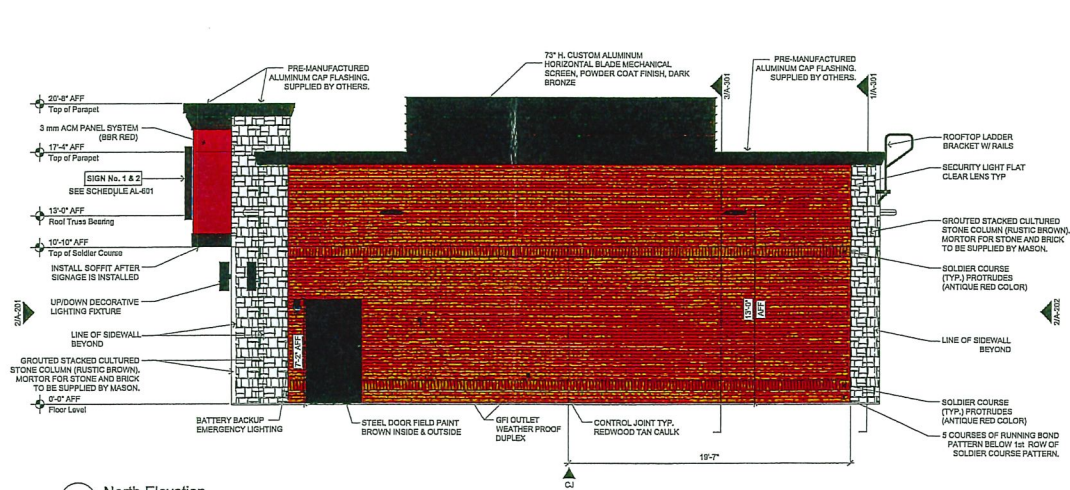
CASEY'S CONSTRUCTION DIVISION  
One Convenience Blvd., P.O. Box 3001, Ankeny, Ia. 50021 515-955-8100

DATE: 10/18/19  
PROJECT: SW 9TH & PARK AVE. DES MOINES, IA  
TYPE: EXTERIOR ELEVATIONS

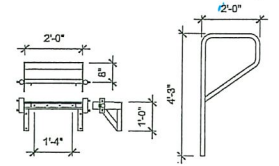




2 West Elevation  
14' x 1'-0"



1 North Elevation  
14' x 1'-0"



3 Ladder Bracket  
NTS

General Notes

- REFER TO AL-601 FOR SIGNAGE SCHEDULE INCLUDING SIZE AND AREA OF SIGNS SHOWN ON ELEVATIONS.

<b>ELDS DESIGN SERVICES</b> Architecture   Engineering   Surveying	
2023 Green Street, Des Moines, Iowa 50319   P.O. Box 4028 Des Moines, Iowa 50326   P: 515-265-4158 F: 515-265-2259 PROJECT NO. 18-045	
<b>CASEY'S CONSTRUCTION DIVISION</b> One Convergence Blvd., P.O. Box 20061, Ankeny, Ia. 50021 515-965-8100	
SW 6TH & PARK AVE. DES MOINES, IA	10/18/19 EXTERIOR ELEVATIONS <b>A-202</b>
CONSTRUCTION DIVISION R. STEVENS      DANIEL WALLRICH	