CLIVE PLANNING & ZONING COMMISSION

AGENDA, REGULAR MEETING
1900 NW 114th Street
October 3, 2024 5:30 PM

This meeting will be conducted in-person in the City Council Chambers and virtually via Zoom platform. To participate virtually use the following link: https://us06web.zoom.us/j/89178956404

Call to Order

Roll Call

Action Items

1. Minutes
    a. Approve *09/05/2024* Meeting Minutes
2. Country Club Glen Plat 13 Site Plan/Preliminary Plat
3. Chapter 14: Landscaping Ordinance Update Discussion

Staff Report

1. 2025 Meeting Dates

Adjournment

Approval of Meeting Minutes

Staff Report

TO: Planning and Zoning Commission members
FROM:
Kelly Rivera, Administrative Specialist

DATE: October 3, 2024
RE: Approve *09/05/2024* Meeting Minutes

Attachments:
1. PZ Minutes 09_05_2024 Draft

CLIVE PLANNING AND ZONING COMMISSION MEETING MINUTES

Regular Session
September 5, 2024

This meeting was held in the Clive City Council Chambers and public access was provided in-person at City Hall and via Zoom. Information on how to access via Zoom was provided on the city's website and on the agenda. The recording of the meeting is available on the city's website at:
https://www.cityofclive.com/connect/boards_and_commissions/planning_and_zoning_commission.php

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Call to Order/Roll Call

ALOWITZ CALLED THE MEETING TO ORDER AT 5:30 p.m.

PRESENT: LINDSAY BRANDON, JULIE CORREA, MARCIA HUNTER, CHRIS PANZI (5:36), JEFFREY ANDERZHON, MICHAEL ALOWITZ
ABSENT: MILLY ORTIZ-PAGAN
STAFF: GRUTZMACHER, PURVIS, RIVERA

Action Items

1. **Approve Meeting Minutes – June 6, 2024**
   Correa motioned to approve the June 6, 2024 meeting minutes, seconded by Brandon.
   Roll Call: Ayes: Correa, Brandon, Hunter, Anderzhon, Alowitz
   Panzi not available for vote.
   Motion carried.

2. **Site Plan Amendment – Edward Jones – 1100 73rd ST**
   The applicant requested approval to construct an approximately 1,496 sf addition on the west facade.

   The addition will require the removal of two parking spaces but will add four new parallel parking spaces east of the building.

   Correa motioned to recommend approval of the Site Plan Amendment, seconded by Brandon.
   Roll Call: Ayes: Correa, Brandon, Hunter, Anderzhon, Alowitz
   Panzi not available for vote.
   Motion carried.

Discussion Items

a. Grutzmacher spoke about the new CivicClerk Agenda Management Program. Commissioners will still be able to access the packets through the system and no significant changes are expected.

DRAFT

b. Grutzmacher went over the possibilities for change to Planning & Zoning meeting nights due to changes to other meeting schedules. Due to conflicts with commissioners' schedules, staff will review dates and present other possibilities.

Staff Report

Adjournment at 5:52 p.m.

DRAFT

Staff Report

TO: Planning and Zoning Commission members
FROM:
Kathryn Purvis, Planner

DATE: October 3, 2024
RE: Country Club Glen Plat 13 Site Plan/Preliminary Plat

GENERAL INFORMATION

Applicant: Casco Civil on behalf of Leader's Real Estate
Requested Action: Approval of a preliminary plat & site plan
Location: Lot 2 Country Club Glen Plat 12

LAND USES & ZONING			
Location	**Existing Land Use**	**Land Use Plan Designation**	**Current Zoning**
Subject Property	Vacant	Commercial-Retail/Services	C-4
North	Townhome residential	Residential- Medium Density	R-4
East	Institutional - church	Commercial-Retail/Services	C-4
South	Commercial - retail, convenience, fast food	Commercial-Retail/Services	C-4
West	Commercial - grocery store	Commercial-Retail/Services	C-4

CASE HISTORY

1995- Incorporated into the City of Clive and zoned R-1
1996 - Property Rezoned from R-1 to R-4
1997- Property rezoned from R-4 to C-4
1997- Country Club Glen Plat 1 Preliminary Plat approved
1998- Country Club Glen Plat 1 Final Plat approved
2022- Country Club Plat 12 Preliminary Plat approved
2022- Country Club Plat 12 Final Plat approved

BACKGROUND

The applicant is requesting approval for a site plan and preliminary plat that will divide Lot 2 of Country Club Glen Plat 12 into two lots and one outlot in order to allow construction of a drive-thru coffee shop and a general retail/office use building. The outlot will be reserved for stormwater management. The subject property was annexed into the City in 1995, and was part of the Country Club Glen rezoning master development plan. Historically, a popcorn factory occupied the site before it was

annexed and transitioned back to agricultural use.

ANALYSIS

The subject site is approximately 2.86 acres and the preliminary plat will create two developable lots and one outlot. Lot 1 is 1.41 acres in size and is proposed to be developed into a drive-thru coffee shop. Lot 2 is 0.97 acres and is proposed for a general retail/office building. Outlot A is approximately 0.49 acres and will provide stormwater management in conjunction with the existing Outlot X. Outlot X is owned by Fareway and is intended to serve stormwater management purposes for the subject property, consistent with the Country Club Glen Plat 12 Preliminary Plat. The layout of the stormwater outlots also provides additional separation between the commercial development and townhome residences to the north.

Building Design & Site Lighting

Lot 1 is proposed to be developed with a 2,450 square feet, one-story drive-thru coffee shop. The proposed development includes a drive-thru lane along the western edge of the property that queues to the north and outlets onto the frontage road on the south boundary of the property. A patio approximately 547 square feet in size is proposed to the south of the building. The building is proposed to be constructed primarily of brick veneer with metal and wood cladding accents, consistent with the requirements of the Development Standards Manual. An aluminum decorative fence is proposed around the patio area. Rooftop mechanical units and ground mounted utilities on the building are screened.

Lot 2 is proposed to house a 4,280 square feet one-story building. There is not a proposed tenant for this building at this time; however, the site has been designed to support a flex-use commercial building utilizing the 6/1000 square feet parking requirement. Shared parking between proposed Lots 1 and 2 will be included with the final plat. The building is proposed to be constructed primarily of brick veneer with EIFS and storefront glazing as secondary materials, consistent with the requirements of the Development Standards Manual. The applicant is working on revised elevations to reflect a minimum of 60% primary materials; staff anticipates updated elevations prior to the October 3 meeting. Roof mounted mechanical units are screened with the parapet walls.

Parking lot lighting is provided throughout both Lots. Additional downcast lights are proposed on both buildings.

Site Layout & Circulation

Access to Hickman Road is provided by a frontage road that extends east and west and provides access to two controlled intersections - NW 156th Street and NW 161st Street. Access into the site from the frontage road aligns with the access from Hickman Road. The connection to the frontage road is 36' and reduces to a 30' internal drive aisle serving both proposed Lots; the additional drive aisle width is necessary to accommodate delivery vehicle routing. All drive aisles provide internal two-way circulation throughout the site. The drive-thru on Lot 1 has a dedicated exit onto the frontage road.

Pedestrian access is provided into the site with a sidewalk connection to the Raccoon

River Valley Trail along Hickman Road. Additional private sidewalks provide circulation internal to the site and provide a connection to the Fareway site.

Parking
The minimum required parking for Lot 1 is 28 parking spaces (10 spaces/1000 square feet of gross floor area + exterior service area excluding the first 300 square feet). Lot two requires a minimum of 26 parking spaces (6/1000 square feet of gross floor area). The applicant is proposing a total of 66 parking spaces between the two lots that will be managed with a shared parking agreement to be executed with the final plat.

Landscaping & Stormwater Management
With initial development of Country Club Glen Plat 1 and the Country Club Pointe Townhomes, the required 50 ft landscape buffer was split between the residential townhomes and the commercial lots, resulting in half of the buffer (25' buffer width) required on each property. The required landscape buffer on the subject site was installed with the Fareway store construction; no additional landscape buffers are required. Parking lot frontage trees are located on the south side of the frontage road. Proposed site trees are in conformance with minimum planting requirements.

Outlot A is reserved for stormwater management and will not have any structures or parking areas. Stormwater is generally managed by a detention basin located in both proposed Outlot A and existing Outlot X, which will be governed by stormwater maintenance agreements for both outlots. The dumpster enclosure is proposing a hose bib to be attached for cleaning purposes. The dumpster pad will be pitched to the west, allowing the wash water to flow through the green space behind the dumpster and receive pre-treatment before being outlet into an intake protected by a Barracuda separator. Due to the overall grading of the site and location of existing utilities, on-site detention is very limited, particularly to the south from the frontage road. Barracuda separators are installed at most intakes to provide the required treatment of stormwater.

Utilities
Minor water and sanitary sewer mains extensions will be constructed to support the development. 6" water services run to both proposed buildings, as well as to a private hydrant. Separate fire and domestic water services are proposed for both buildings; however, only the drive-thru coffee shop on Lot 1 will install a sprinkler system in the building at this time.

The sanitary sewer main extension will terminate in a public manhole on Lot 1 and be extended through Lot 1 to Lot 2 in a private easement.

Private storm sewer is provided across both Lots within private easements, and outlets to the proposed detention basin to the north.

PUBLIC COMMENT
Notice was sent to the surrounding property owners within 310-feet of the subject site on September 20, 2024. To date, staff has received general inquiries via phone and email, but no comments for or against the project have been provided.

STAFF RECOMMENDATION

Staff recommends approval of the Preliminary Plat/ Site Plan for Country Club Glen Plat 13, subject to resolution of all the remaining items outlined in the staff comment letter dated September 25, 2024.

Attachments:

1. Site Plan/Preliminary Plat
2. Architectural Renderings
3. Lighting Cut Sheets
4. Notice Letter and Mail Labels
5. Public Comments
6. Comment letter 9-25-24

COUNTRY CLUB GLEN PLAT 13 PRELIMINARY PLAT AND SITE PLAN

LOT 2 IN COUNTRY CLUB GLEN PLAT 12,
AN OFFICIAL PLAT, NOW INCLUDED IN
AND FORMING A PART OF THE
CITY OF CLIVE, DALLAS COUNTY, IOWA

TABLE OF ABBREVIATIONS

NOTE: NOT ALL ABBREVIATIONS USED

AI	AREA INLET	N	NORTH
ASPH	ASPHALT	NE	NORTHEAST
ATG	ADJUST TO GRADE	NW	NORTHWEST
BB	BOTTOM OF RAMP ELEVATION	PB	PLAT BOOK
BC	BACK OF CURB ELEVATION	PERM	PERMANENT
BFP	BACKFLOW PREVENTER	PG	PAGE
BLDG	BUILDING	PGS	PAGES
BM	BENCHMARK	PL	PROPERTY LINE
BOT	BOTTOM	PR	PROPOSED
BS	BOTTOM OF SLOPE ELEVATION	PVC	POLYVINYL CHLORIDE
BW	BOTTOM OF WALL ELEVATION	PVMT	PAVEMENT
CI	CURB INLET	R	RADIUS
CL	CENTER LINE	RCP	REINFORCED CONCRETE PIPE
CL-SW	CENTER LINE OF SWALE	REC	RECORD
CMP	CORRUGATED METAL PIPE	(R)	RECORD
CO	CLEAN OUT	ROW	RIGHT OF WAY
CONC	CONCRETE	R/W	RIGHT OF WAY
DB	DEED BOOK	S	SOUTH
DIP	DUCTILE IRON PIPE	(S)	SURVEY
DS	DOWNSPOUT	SE	SOUTHEAST
E	EAST	SF	SQUARE FEET
ELEV	ELEVATION	SURV	SURVEY
EM	ELECTRIC METER	SW	SOUTHWEST
EOP	EDGE OF PAVEMENT	T	TRANSFORMER
ESMT	EASEMENT	TBR	TO BE REMOVED
EX	EXISTING	TB	TOP OF BANK ELEVATION
FDC	FIRE DEPARTMENT CONNECTION	TC	TOP OF CURB ELEVATION
FF	FINISHED FLOOR ELEVATION	TFP	TRANSFORMER PAD
FL	FLOW LINE ELEVATION	TG	TOP OF GRATE
FO	FIBER OPTIC	TP	ADJACENT TOP OF PAVEMENT
GEN	GENERATOR	TS	TOP OF SLOPE ELEVATION
GTI	GRATE TOP INLET	TW	TOP OF WALL ELEVATION
GM	GAS METER	TYP	TYPICAL
GV	GAS VALVE	UGFO	UNDERGROUND FIBER OPTIC LINE
HC	HANDICAPPED	UIP	USE IN PLACE
HHE	ELECTRIC HAND HOLE	VCP	VITRIFIED CLAY PIPE
HHTS	TRAFFIC SIGNAL HAND HOLE	W	WEST
HHSL	SIGNAL LIGHT HAND HOLE	WM	WATER METER
IRR	IRRIGATION	WV	WATER VALVE
ICVR	IRRIGATION CONTROL VALVE RECLAIMED		
MAX	MAXIMUM		
MH	MANHOLE		
MIN	MINIMUM		
MOP	MOBILE ORDER PICKUP		

ZONING INFORMATION SUMMARY

ZONE: C-4 PLANNED SHOPPING CENTER COMMERCIAL DISTRCT
FRONT SETBACK: 60'
REAR SETBACK: 75'
SIDE SETBACK: 25'
MINIMUM OPEN SPACE: 25%
MINIMUM LOT AREA: NONE
MINIMUM LOT WIDTH: NONE
MINIMUM LOT DEPTH: NONE
MAXIMUM HEIGHT: NONE

WHERE SIDE OR REAR OF BUILDING WITH A C-4 PLANNED SHOPPING DISTRCIT IS ADJACENT TO ANOTHER BUIDLING WITHIN A C-4 PLANNED SHOPPING DISTRICT, THE INTERNAL YARD REQUIRMENT MAY BE EITHER ZERO FEET OR 12.5'

DEVELOPMENT INFORMATION SUMMARY

TOTAL PROPERTY AREA:125,302 SF / 2.86 ACRES
TOTAL DISTURBED AREA:128,292 SF / 2.95 ACRES

LOT 1

ADDRESS: 15935 HICKMAN ROAD
LOT AREA: 61,570.32 SF/ 1.41 ACRES
PROPOSED BUILDING: 2,540 / 4.13%
OTHER IMPERVIOUS: 36,148.53 SF / 58.7% IMPERVIOUS
TOTAL IMPERVIOUS: 38,688.53 SF / 62.8% IMPERVIOUS
USE: COFFEE SHOP WITH DRIVE-THROUGH
IBC OCCUPANCY: A-2
PARKING REQUIRMENT: 10 SPACES PER 1,000 SF GFA + EXTERIOR SEATING EXCLUDING THE FIRST 300 SF
REQUIRED PARKING: 28
PROVIDED PARKING:49
PROVIDED ADA PARKING: 2

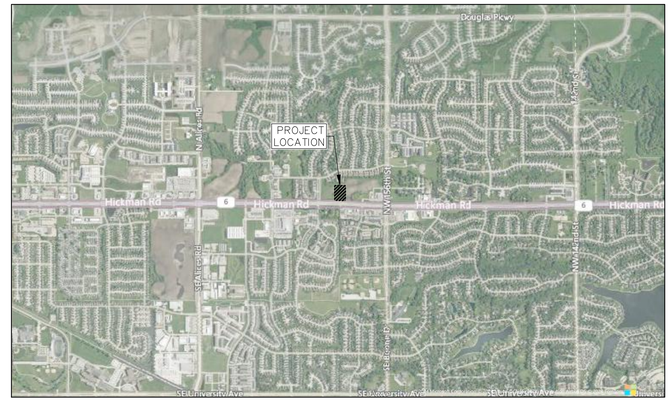
LOT 2

ADDRESS: 15925 HICKMAN ROAD
LOT AREA: 42,401.81 SF / 0.97 ACRES
PROPOSED BUILDING: 4,280 / 10.1%
OTHER IMPERVIOUS: 17,529.49 SF / 41.3% IMPERVIOUS
TOTAL IMPERVIOUS SF 21,809.49 / 51.4% IMPERVIOUS
USE: FLEX OR RETAIL
IBC OCCUPANCY: B
PARKING REQUIRMENT: 6 SPACES PER 1,000 SF GFA
REQUIRED PARKING: 26
PROVIDED PARKING: 17
PROVIDED ADA PARKING: 2

OUTLOT A

OUTLOT AREA: 21,284.62 SF / 0.49 ACRES
USE: STORMWATER MANAGEMENT
TOTAL IMPERVIOUS: 0 SF / 0% IMPERVIOUS

N
(1"=2000')



PERTINENT INFORMATION	
PROPERTY ADDRESS:	15935 HICKMAN ROAD
MUNICIPALITY:	CITY OF CLIVE
STATE:	IOWA
ZIP CODE:	50325
CURRENT ZONING:	C-4 (COMMERCIAL DISTRICT)
TOTAL SITE AREA:	2.86± ACRES (125,302± SF)
AREA OF DISTURBANCE:	2.95± ACRES (128,292± SF)

SHEET INDEX

C0.0 – COVER SHEET
C0.1 – GENERAL NOTE & SITE INFORMATION
C1.0 – EXISTING CONDITIONS AND DEMOLITION PLAN
C2.0 – PRELIMINARY PLAT & SITE PLAN
C2.1 – PRELIMINARY PLAT & SITE PLAN
C2.2 – FIRE HYDRANT EXHIBIT
C3.0 – GRADING PLAN
C3.1 – GRADING PLAN
C4.0 – UTILITY PLAN
C4.1 – UTILITY PLAN
C4.2 – WATER UTILITY PLAN
C4.3 – UTILITY CROSSING PLAN
C4.4 – STORM AND SANITARY SEWER PROFILES
C4.5 – STORM SEWER PROFILES
C5.0 – CONSTRUCTION DETAILS
C5.1 – CONSTRUCTION DETAILS
C5.2 – CONSTRUCTION DETAILS
C5.3 – CONSTRUCTION DETAILS
C7.0 – DETENTION BASIN PLAN AND DETAILS

LEGEND OF SYMBOLS

EXISTING		PROPOSED
	PROPERTY LINE	
	LOT LINE	
	SETBACK	
	UTILITY POLE	
	LIMITS OF DISTURBANCE	
	GUY WIRE	
	WALL	
	TREE	
	TREE LINE	
	BUILDING	
	TELEPHONE LINE	T
OHE	ELECTRIC LINE (OVERHEAD)	OHE
UGE	ELECTRIC LINE (UNDERGROUND)	UGE
FO	FIBER OPTIC CABLE	FO
	WATER LINE	W
WM	WATER MAIN LINE	WM
G	GAS LINE	G
CA	CABLE LINE	CA
SAN	SANITARY LINE	SAN
	STORM LINE	
FM	FORCE MAIN	FM
	CONC. MANH. WITH STORM SEWER	
	GRATE INLET WITH STORM SEWER	
	AREA INLET WITH STORM SEWER	
	FLARED END SECTION	
	MANHOLE WITH SANITARY SEWER	
	STORM STRUCTURE NUMBER	
	SANITARY STRUCTURE NUMBER	
	LIGHT	
	FIRE DEPARTMENT CONNECTION	
	FIRE HYDRANT	
	GAS VALVE	
GM	GAS METER	GM
	CLEAN OUT	
	WATER VALVE	
WM	WATER METER	WM
EM	ELECTRIC METER	EM
565	CONTOUR	565
565.19	SPOT ELEVATION	565.19
TC 565.19	SPOT ELEVATION AT TOP OF CURB	TC 565.19
TP 565.19	SPOT ELEVATION AT BOTTOM OF CURB	TP 565.19
FL 565.19	SPOT ELEVATION AT FLOWLINE OF GUTTER	FL 565.19
FGTW 565.19	SPOT ELEVATION AT TOP OF WALL	FGTW 565.19
FGBW 565.19	SPOT ELEVATION AT BOTTOM OF WALL	FGBW 565.19
TB 565.19	SPOT ELEVATION AT TOP OF BANK	TB 565.19
BB 565.19	SPOT ELEVATION AT BOTTOM OF BANK	BB 565.19
	STREET SIGN	
	FENCE	

PROJECT CONTACTS

OWNER:
LEADERS REAL ESTATE
NATHAN PALMER
200 E. PALM VALLEY DRIVE, SUITE 1060
OVIEDO, FL 32765
(614) 586-3303
NPALMER@LEADERSCRE.COM

POWER:
MIDAMERICAN ENERGY
CHAD ERNST
(515) 252-6413
CHAD.ERNST@MIDAMERICAN.COM

STORM:
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2123 NW 111TH ST.
CLIVE, IA 50325
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(515) 867-5128
RTOKUHISA@CITYOFCLIVE.COM

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2123 NW 111TH STREET
CLIVE, IA 50325
KURT FARLOW, WATER SUPERVISOR
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23998 141ST STREET
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MATT COOPER
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WATER:
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CLIVE, IA 50325
CLAY GARCIA, FIRE CHIEF
(515) 223-1595
CGARCIA@CITYOFCLIVE.COM

UTILITY LOCATES:
IOWA ONE-CALL SYSTEM, INC.
ONECALL@IOWAONECALL.COM

FLOOD ZONE NOTE

ACCORDING TO THE FLOOD INSURANCE RATE MAP ISSUED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), MAP 19153C0305F DATED FEBRUARY 1, 2019 SHOWS THIS DEVELOPMENT IS LOCATED IN FLOOD ZONE "X" (UNSHADED). FLOOD ZONE "X" (UNSHADED) IS DEFINED AS AN AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD HAZARD.

GEOTECHNICAL REPORT NOTE

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND FOLLOW ALL RECOMMENDATIONS AS OUTLINED IN THE GEOTECHNICAL REPORT TITLED "PROPOSED URGENT CAREDEVELOPMENT ECS PROJECT NUMBER 16:15227" PREPARED BY ECS MIDWEST, LLC DATED APRIL 2, 2024 AND ALL ADDENDUMS AND ENVIRONMENTAL REPORTS/RECOMMENDATIONS.

CALL BEFORE YOU
DIG - DRILL - BLAST
811 or 1-800-292-8989
IOWA ONE-CALL SYSTEM, INC.

THE TOPOGRAPHIC INFORMATION IN THIS PLAN SET IS BASED OFF AN ALTA/NSPS LAND TITLE SURVEY PROVIDED BY CLAPSADDLE-GARBER ASSOCIATES, INC. ON FEBRUARY 20, 2024.

CASCO CIVIL
A CASCO Diversified Corporation Company
12 Sunnen Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100

COUNTRY CLUB GLEN PLAT 13
PRELIMINARY PLAT AND SITE PLAN
NW 161st STREET & HICKMAN ROAD/US HWY 6
CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

No.	Description	Date
1	STARBUCKS 2ND REVIEW	04/10/24
2	DEVELOPMENT REVIEW	04/17/24
3	DEVELOPMENT REVIEW RE-SUBMITTAL	07/19/24
4	DEVELOPMENT REVIEW RESPONSE	08/20/24
5	DEVELOPMENT REVIEW RESUBMITTAL	09/16/24

LICENSED PROFESSIONAL ENGINEER
SARAH BAX FONDA
P29031
IOWA
09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

Drawn By/Checked By:	MW/SBF
Project Number	2303492
Permit	08-20-24
Bid	-- -- --

COVER SHEET

C0.0

K:\URGENT CARE\LEADERS REAL ESTATE\PROJECTS\CLIVE IA - STARBUCKS 2303492\CD\CIVIL CONSTRUCTION DOCUMENTS\C0 - P & Z - COVER.DWG

ENGINEERING GENERAL NOTES

1. THE SITEWORK ON THIS PROJECT SHALL MEET OR EXCEED ALL STANDARDS AND SPECIFICATIONS REQUIRED BY THE CITY OF CLIVE.
2. CASCO DIVERSIFIED CORPORATION HAS NOT PERFORMED ANY INVESTIGATION REGARDING UNDERGROUND CONDITIONS, HAZARDOUS WASTES, OR UTILITIES AFFECTING THE SITE SHOWN HEREIN.
3. ALL DIMENSIONS ARE FROM THE FACE OF CURB UNLESS OTHERWISE NOTED.
4. ALL DISTURBED AREAS OUTSIDE OF PAVEMENT AND BUILDING PAD AREAS SHALL RECEIVE 4" OF SUITABLE TOPSOIL. CONTRACTOR SHALL SOD, MULCH, FERTILIZE AND MAINTAIN ALL DISTURBED AREAS OUTSIDE OF PAVEMENT UNTIL SUFFICIENT VEGETATIVE GROWTH HAS BEEN ESTABLISHED PER THE SWPPP. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS REQUIRED TO ESTABLISH PERMANENT SOIL STABILIZATION.
5. ALL SURVEY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A LICENSED PROFESSIONAL SURVEYOR IN THE STATE OF IOWA AT THE CONTRACTOR'S OWN EXPENSE.
6. ALL TRENCHES EXCAVATED UNDERNEATH AREAS TO BE PAVED SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL AND COMPACTED TO MEET REQUIREMENTS OF THE GEOTECHNICAL REPORT AND CITY OF CLIVE REQUIREMENTS.
7. CONTRACTOR SHALL INSTALL ALL UNDERGROUND PIPING AND CONDUITS PER THE REQUIREMENTS OF THE RESPECTIVE MANUFACTURERS AND THE CITY OF CLIVE.
8. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, NEITHER THE OWNER NOR THE ENGINEER WILL BE RESPONSIBLE FOR COMPLIANCE WITH ALL LOCAL, STATE, AND FEDERAL SAFETY MEASURES AND REGULATIONS. CONTRACTOR SHALL COMPLY WITH ALL OSHA REGULATIONS AND SAFETY MEETING REQUIREMENTS. THE CONTRACTOR SHALL BE COMPLETELY AND SOLELY RESPONSIBLE FOR JOB SITE CONDITIONS, INCLUDING SAFETY OF ALL PROPERTY AND PERSONS AT ALL TIMES DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT APPLIES CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING, MAINTAINING, AND IMPLEMENTING ALL SAFETY DEVICES AND PRACTICES DURING CONSTRUCTION.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PUBLIC AND PRIVATE PROPERTY ADJACENT TO THE WORK. CONTRACTOR SHALL EXERCISE DUE CARE AND CAUTION TO AVOID DAMAGE TO SUCH PROPERTY. CONTRACTOR SHALL REPLACE OR RESTORE TO EQUAL OR BETTER CONDITION THAN THE ORIGINAL CONDITION AT THE CONTRACTOR'S OWN EXPENSE, ALL IMPROVEMENTS WITHIN OR ADJACENT TO THE AREA OF WORK WHICH ARE NOT DESIGNATED FOR REMOVAL OR ADJUSTMENT AND WHICH ARE DAMAGED OR REMOVED AS A RESULT OF THE CONTRACTOR'S ACTIONS.
10. CONTRACTOR SHALL CONTINUALLY MONITOR JOB SITE CONDITIONS. CONDITIONS REQUIRING CONSTRUCTION DIFFERENT THAN THAT SHOWN ON ON THE PLANS SHALL BE REPORTED TO THE ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING PRESENCE AND LOCATIONS (VERTICALLY AND HORIZONTALLY) OF ALL UTILITIES. IN NO WAY DOES THE ENGINEER OR THE OWNER SUGGEST, IMPLY, OR CONFIRM THAT UTILITIES SHOWN ARE INCLUSIVE OF ALL UTILITIES WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING IN PLACE ALL UTILITIES. ANY DAMAGE OR LOSS TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. SHOULD ANY DAMAGE OCCUR AS A RESULT OF THE CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL REPLACE OR REPAIR THE DAMAGES TO THE FULL SATISFACTION OF THE UTILITY OWNER AT THE CONTRACTOR'S OWN EXPENSE. THE CONTRACTOR SHALL AGREE TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE OWNER AND THE ENGINEER FROM ANY AND ALL DAMAGES OR LOSS.
12. UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS, AND INFORMATION, AND THEREFORE, DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, NUMBER OF, OR LOCATION OF THESE FACILITIES, STRUCTURES, AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION, OR CONSTRUCTION OF IMPROVEMENTS.
13. THE LOCATION AND TYPE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE INFORMATION HAS BEEN PROVIDED FROM A TOPOGRAPHIC AND UTILITY SURVEY PROVIDED BY CLAPSADDLE-GARBER ASSOCIATES, INC. THE CONTRACTOR SHALL VERIFY THE SIZES, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES DURING CONSTRUCTION. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM PLAN.
14. VERIFY ALL BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.
15. VERIFY FLOOR ELEVATIONS OF EXISTING BUILDINGS. ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING AT 1.0% MINIMUM AS NECESSARY.
16. EXISTING SITE FEATURES TO REMAIN ARE TO BE PROTECTED THROUGHOUT CONSTRUCTION.
17. THE LATEST EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND CITY OF CLIVE SUPPLEMENTALS SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS NOTED OTHERWISE.

CONSTRUCTION NOTES

GRADING:

1. ALL CONTOURS SHOWN ON THESE PLANS ARE BASED ON U.S.G.S. DATA.
2. ALL GRADING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF CLIVE.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESTORE THE GRADE TO THE DESIGN ELEVATIONS.
4. NO SLOPES SHALL BE GRADED STEEPER THAN 4:1 (HORIZONTAL : VERTICAL), AND SHALL BE SODDED AND MULCHED.
5. ONLY THE DESIGNATED CONSTRUCTION ACCESS ROUTE MAY BE USED TO MOVE EQUIPMENT IN AND OUT. NO OTHER ACCESS POINT WILL BE PERMITTED.
6. ALL SILTATION MEASURES MUST BE IN PLACE BEFORE ANY OPERATIONS THAT DISTURB THE NATURAL GRADE COMMENCES. THIS INCLUDES GRUBBING OR STUMP REMOVAL. THE CITY OF CLIVE SHALL BE NOTIFIED UPON COMPLETION OF ALL SILTATION AND EROSION FACILITIES AND SHALL INSPECT AND APPROVE SUCH FACILITIES PRIOR TO THE COMMENCEMENT OF ANY CLEARING OR GRADING ACTIVITIES. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH THE CITY OF CLIVE UPON COMPLETION OF ALL SILTATION MEASURES BEING INSTALLED. NO OPERATIONS THAT DISTRUB THE NATURAL GRADE SHALL COMMENCE PRIOR TO THE MEETING.
7. SILTATION AND CONTROL FACILITIES MUST BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. THIS INCLUDES REMOVAL OF MUD FROM SILTATION BASINS AND REPLACEMENT OF CITY OF CLIVE APPROVED EROSION CONTROL DEVICES. MUD SHALL NOT BE PERMITTED TO MIGRATE OFF THE SITE. DAMAGE OR FAILURE OF SILTATION AND EROSION CONTROL FACILITIES SHALL BE REPAIRED. DAMAGE OR FAILURE OF SILTATION AND EROSION CONTROL FACILITIES SHALL BE REPAIRED IMMEDIATELY BUT NOT LONGER THAN 24 HOURS AFTER NOTIFICATION. IF PROPOSED MEASURES FAIL TO ADEQUATELY PROTECT THE ADJOINING PROPERTY ADDITIONAL FACILITIES SHALL BE INSTALLED AS DIRECTED.
8. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY THE CONTRACTOR TO PROTECT OFF-SITE PROPERTY FROM EROSION OR SILTATION. THE ENGINEER SHALL NOT BE LIABLE FOR DAMAGE CAUSED BY EROSION OR SILTATION DUE TO DEFECTIVE SILTATION CONTROL DEVICES.
9. MUD WILL NOT BE PERMITTED TO BE CARRIED OFF SITE ONTO PUBLIC STREETS. A TEMPORARY WASH FACILITY SHALL BE PROVIDED TO REMOVE MUD FROM VEHICLE TIRES BEFORE ENTERING THE PUBLIC STREETS.
10. MEASURES SHALL BE TAKEN TO CONTROL DUST AS NECESSARY.
11. IT SHALL BE THE GRADING CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE SOILS ENGINEER OF WORK IN PROGRESS AND TO COMPLY WITH SPECIFICATIONS SET BY THE SOILS ENGINEER WITH REGARD TO COMPACTION, SURFACE PREPARATION AND PLACEMENT OF FILL.
12. ALL STUMPS, LIMBS, AND OTHER DEBRIS ARE TO BE REMOVED FROM THE SITE.
13. ALL DRAINAGE SWALES AND OTHER DISTURBED AREAS SHALL BE SODDED.
14. ALL FILL AREAS, INCLUDING TRENCH BACKFILLS, UNDER BUILDINGS, PROPOSED STORM AND SANITARY SEWER LINES, PUBLIC RIGHT OF WAY AND PAVED AREAS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHO T-180 COMPACTION TEST", (A.S.T.M. D- 1557) UNLESS OTHERWISE REQUIRED IN THE SOILS REPORT FOR THIS PROJECT.

DESCRIPTION

LOT 2 IN COUNTRY CLUB GLEN PLAT 12, AN OFFICIAL PLAT, NOW INCLUDED IN AND FORMING A PART OF THE CITY OF CLIVE, DALLAS COUNTY, IOWA.

SURVEY NOTE

THE TOPOGRAPHIC INFORMATION IN THIS PLAN SET IS BASED OFF AN ALTA/NSPS LAND TITLE SURVEY PROVIDED BY CLAPSADDLE-GARBER ASSOCIATES, INC. ON FEBRUARY 20, 2024.

ACTUAL FIELD CONDITIONS ARE TO BE VERIFIED PRIOR TO COMMENCEMENT OF WORK.

CITY OF CLIVE GENERAL NOTES

APPENDIX D. SITE PLAN AND CONSTRUCTION DRAWING STANDARD NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF CLIVE'S DEVELOPMENT REGULATIONS, POLICIES, AND STATEWIDE URBAN DESIGN AND STANDARDS MANUAL (SUDAS).
2. ONE WEEK PRIOR TO CONSTRUCTION OF ANY PUBLIC IMPROVEMENTS, THE CONTRACTOR SHALL NOTIFY THE CITY OF CLIVE.
3. THE CONTRACTOR AND DEVELOPER'S ENGINEER SHALL ATTEND A REQUIRED PRE-CONSTRUCTION WITH THE CITY PUBLIC WORKS AND ENGINEERING DEPARTMENTS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. THE CONTRACTOR SHALL VERIFY THE LOCATION AND PROTECT ALL UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CITY AND THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE AS-BUILT LOCATION OF ALL SANITARY SEWER, SUMP AND WATER MAIN SERVICES AND VERIFYING LOCATIONS ON THE AS-BUILT DRAWINGS.
6. RECONNECT ANY FIELD TILE THAT IS INTERCEPTED DURING UTILITY CONSTRUCTION, LOCATION OF FIELD TILE SHALL BE NOTED ON THE AS-BUILT DRAWINGS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING TRAFFIC CONTROL IN ACCORDANCE WITH THE CURRENT VERSION OF MUTCD.
8. PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS, AS-BUILT RECORD DRAWINGS (HORIZONTAL AND VERTICAL AS-BUILT DATA IN STATE PLANE COORDINATES AND NAVD 88 DATUM) FOR ALL WATER, SANITARY SEWER, STORM SEWER PIPING AND ASSOCIATED APPURTENANCES, AND SITE GRADING WILL BE PROVIDED (VOLUME CALCULATIONS FOR ALL STORM WATER DETENTION FACILITIES SHALL ALSO BE PROVIDED).
9. SIDEWALK AND DRIVEWAY APPROACH INSTALLATIONS SHALL BE INSPECTED BY THE CITY OF CLIVE FOLLOWING A MINIMUM 48-HOUR NOTICE.
10. THE OWNER/CONTRACTOR SHALL REMOVE ALL DEBRIS SPILLED ON CITY OF CLIVE RIGHT-OF-WAY AND ADJOINING PROPERTY IMMEDIATELY.
11. AT NO TIME SHALL EQUIPMENT, CONSTRUCTION MATERIAL AND/OR STOCKPILED FILL BE STORED ON CITY OF CLIVE RIGHT-OF-WAY.
12. THE DEVELOPER IS RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENTATION CONTROL DEVICES THROUGHOUT CONSTRUCTION.
13. OFF-STREET PARKING AND ACCESS DRIVES SHALL BE PROVIDED PRIOR TO CONSTRUCTION FOR CREWS AND EQUIPMENT.
14. ADDITIONAL EROSION AND SEDIMENTATION CONTROL DEVICES MAY BE REQUIRED BY CITY OF CLIVE INSPECTORS BASED ON ACTUAL FIELD CONDITION.
15. PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY/FINAL PLAT APPROVAL, ALL UTILITY STRUCTURES, MANHOLES, VALVES, INTAKES SHALL BE RAISED LEVEL WITH FINISH GRADE.
16. ALL UTILITIES, INCLUDING ELECTRICAL AND TELEPHONE SHALL BE LOCATED UNDERGROUND.
17. ALL DISTURBED AREAS SHALL BE SODDED UNLESS OTHER LANDSCAPING IS IDENTIFIED ON THE SITE PLAN.
18. EXISTING LANDSCAPING SHALL BE PROTECTED WITH TEMPORARY SNOW FENCE DURING CONSTRUCTION.
19. ALL TRASH DUMPSTERS SHALL BE SCREENED FROM VIEW WITH APPROVED STRUCTURE.
20. ALL ROOF MOUNTED MECHANICAL UNITS AND/OR TELECOMMUNICATION DEVICES OR GROUND MOUNTED EQUIPMENT SHALL BE SCREENED FROM VIEW WITH APPROVED STRUCTURE OR LANDSCAPING.
21. ALL TOPSOIL MUST MEET CLIVE POST-CONSTRUCTION STORM WATER MANUAL. TOPSOIL SHALL BE MINIMUM 4"DEPTH, MINIMUM [2, OR AS INDICATED IN SWMP]% ORGANIC CONTENT, 6.0-8.0 PH, MAXIMUM 25% FRIABLE CLAY CONTENT, AND FREE OF DEBRIS, HARD CLODS, ROOTS, SOD, STIFF CLAY, HARD PAN, AND STONES LARGER THAN 1".
22. ALL TOPSOIL MUST MEED IOWA DEPARTMENT OF NATURAL RESOURCES GENERAL PERIT #2 REQUIREMENTS TO MINIMIZE SOIL COMPACTION, DEFINED AS WORKING THE SOIL PRIOR TO SEEDING/SODDING SUCH THAT A PENETROMETER CAN BE INSERTED INTO THE UPPER 6 INCHES WITH LESS FORCE THAN 200 PSO. AS AN ALTERNATIVE TO THE PENETROMETER TEST, A SOIL WITH BULK DENSITY LESS THAN 1.49 GRAMS/CUBIC CENTIMETER SHALL BE DEEMED COMPLIANT WITH THIS REQUIREMENT.
23. NO PLANT MATERIAL SHALL BE SUBSTITUTED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE CITY OF CLIVE.
24. NO CHANGES TO THE APPROVED PLAN MAY BE MADE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE CITY OF CLIVE.
25. CONTRACTOR, FINANCING AND/OR PROJECT IDENTIFICATION SIGNS SHALL NOT BE INSTALLED ON THE CITY OF CLIVE RIGHT-OF-WAY.
26. VALVES INCLUDED IN STORMWATER MANAGEMENT FACILITIES SHALL BE CLOSED AT THE TIME OF FINAL INSPECTION AND ISSUANCE OF CERTIFICATE OF OCCUPANCY/APPROVAL OF FINAL PLAT.

APPENDIX E. SANITARY SEWER TYPICAL NOTES

1. ALL SANITARY SEWER SHALL BE PVC TRUSS PIPE WITH CLASS F3 BEDDING UNLESS OTHERWISE NOTED ON PLANS.
2. THE CONTRACTOR SHALL INSTALL SEWER TAPE AT THE END OF EACH SANITARY SEWER SERVICE.
3. ALL INVERTS LOCATED AT AN ELEVATION ABOVE THE CENTERLINE OF THE EXISTING THROUGH PIPE AND LESS THAN 2.0 FEET ABOVE THE MANHOLE FLOOR SHALL HAVE A POURED-IN-PLACE SLOPED INVERT.
4. ALL MANHOLES WITHIN PAVEMENT SHALL HAVE TYPE B ADJUSTABLE CASTINGS AND INTERNAL CHIMNEY SEALS. ALL MANHOLES NOT WITHIN PAVEMENT SHALL HAVE TYPE A NON-ADJUSTABLE CASTINGS AND EXTERNAL CHIMNEY SEALS.
5. ALL 4-INCH AND 6-INCH SANITARY SEWER SERVICES SHALL BE SDR 23.5 IN ACCORDANCE WITH SUDAS AND SHALL BE EXTENDED 10 FEET INSIDE LOT LINES UNLESS OTHERWISE NOTED ON PLANS.
6. MANHOLE STEPS ARE REQUIRED IN ALL SANITARY SEWER MANHOLES.
7. MANHOLE COVERS SHALL HAVE RAISED DIAMOND ROUGHNESS PATTERNS.
8. THE CONTRACTOR SHALL TELEVISE EVERY SANITARY SEWER LINE AND PROVIDE A COPY OF THE DIGITAL REPORT INCLUDING A VIDEO RECORDING UTILIZING A PACP COMPLIANT FORMAT TO THE PUBLIC WORKS DIRECTOR. USING A 500 GALLON TANK AND GARDEN HOSE, THE CONTRACTOR SHALL GRAVITY FLOW WATER DOWN THE PIPE DURING TELEVISING SO DIPS AND SAGS CAN BE IDENTIFIED. THE CITY SHALL NOTIFY THE CONTRACTOR OF ANY NECESSARY CLEANING AND/OR REPAIRS. THE CONTRACTOR SHALL JET CLEAN AND VACUUM ANY SECTION OF PIPE FROM MANHOLE TO MANHOLE WITH MUD OR DEBRIS GREATER THAN 1 FOOT DEEP ALONG WITH ANY DOWNSTREAM SECTIONS AS REQUIRED DUE TO CONSTRUCTION. THESE SEGMENTS SHALL THEN BE RE-TELEVISED TO DEMONSTRATE PIPES ARE CLEAN. REQUIRED TELEVISING SHALL BE AT THE CONTRACTOR'S EXPENSE.
9. SPECIAL SANITARY SEWER CONNECTIONS SHALL BE MADE WITH 441 STYLE WATER MAIN CLAMP.
10. PROVIDE SHOP DRAWINGS FOR MANHOLE STRUCTURES FOR APPROVAL BY CITY PRIOR TO ORDERING OR INSTALLING MANHOLES.

APPENDIX G. STORM SEWER NOTES

1. THE CONTRACTOR SHALL TELEVISE EVERY STORM SEWER LINE AND PROVIDE A COPY OF THE DIGITAL REPORT INCLUDING A VIDEO RECORDING UTILIZING A PACP COMPLIANT FORMAT TO THE PUBLIC WORKS DIRECTOR.
2. ALL INTAKE CASTINGS SHALL HAVE PHASE 2 ENVIRONMENTAL SYMBOLOGY OR TEXT
3. ADDITIONAL RIPRAP MAY BE REQUIRED AT THE FES BASED UPON FIELD REVIEW BY CITY OF CLIVE.
4. PROVIDE SUBDRAIN BEHIND BACK OF CURB ON PUBLIC STREETS AS REQUIRED BASED ON SUBSURFACE MOISTURE CONDITIONS. CONNECT SUBDRAIN TO STORM SEWER INTAKE USING RCP PIPE BENEATH PAVEMENT.
5. ALL INTAKES SHALL HAVE VANE GRATES.
6. 8-INCH FOOTING DRAINS TO BE PVC, SDR 35.
7. FOOTING DRAIN SERVICES TO BE 4-INCH PVC, SDR 35. EXTEND SERVICES 10'INSIDE LOT UNLESS OTHERWISE NOTED.
8. ALL INTAKES SHALL BE LOCATED A MINIMUM OF 7.5 FEET FROM END OF RETURNS.
9. ALL INTAKES SHALL BE LOCATED A MINIMUM OF 1 FOOT FROM DRIVEWAY FLARES.
10. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3'-6"COVER ON ALL STORM SEWER, INCLUDING SUMP SERVICES.
11. ALL INTAKES SHALL BE POURED-IN-PLACE CONCRETE STRUCTURES.

K:\URGENT CARE\LEADERS REAL ESTATE\PROJECTS\CLIVE IA - STARBUCKS 2303492\CDS\CIVIL CONSTRUCTION DOCUMENTS\00 - P & Z COVER.DWG

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COUNTRY CLUB GLEN PLAT 13
PRELIMINARY PLAT AND SITE PLAN
NW 161st STREET & HICKMAN ROAD/US HWY 6
CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

No.	Description	Date
1	STARBUCKS 2ND REVIEW	04/10/24
2	DEVELOPMENT REVIEW	04/17/24
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5	DEVELOPMENT REVIEW RESUBMITTAL	09/16/24

LICENSED PROFESSIONAL ENGINEER
SARAH BAX FONDA
P29031
IOWA
09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

Drawn By/Checked By:	MW/SBF
Project Number	2303492
Permit	08-20-24
Bid	-- -- --

GENERAL NOTE &
SITE INFORMATION

CALL BEFORE YOU
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IOWA ONE-CALL SYSTEM, INC.

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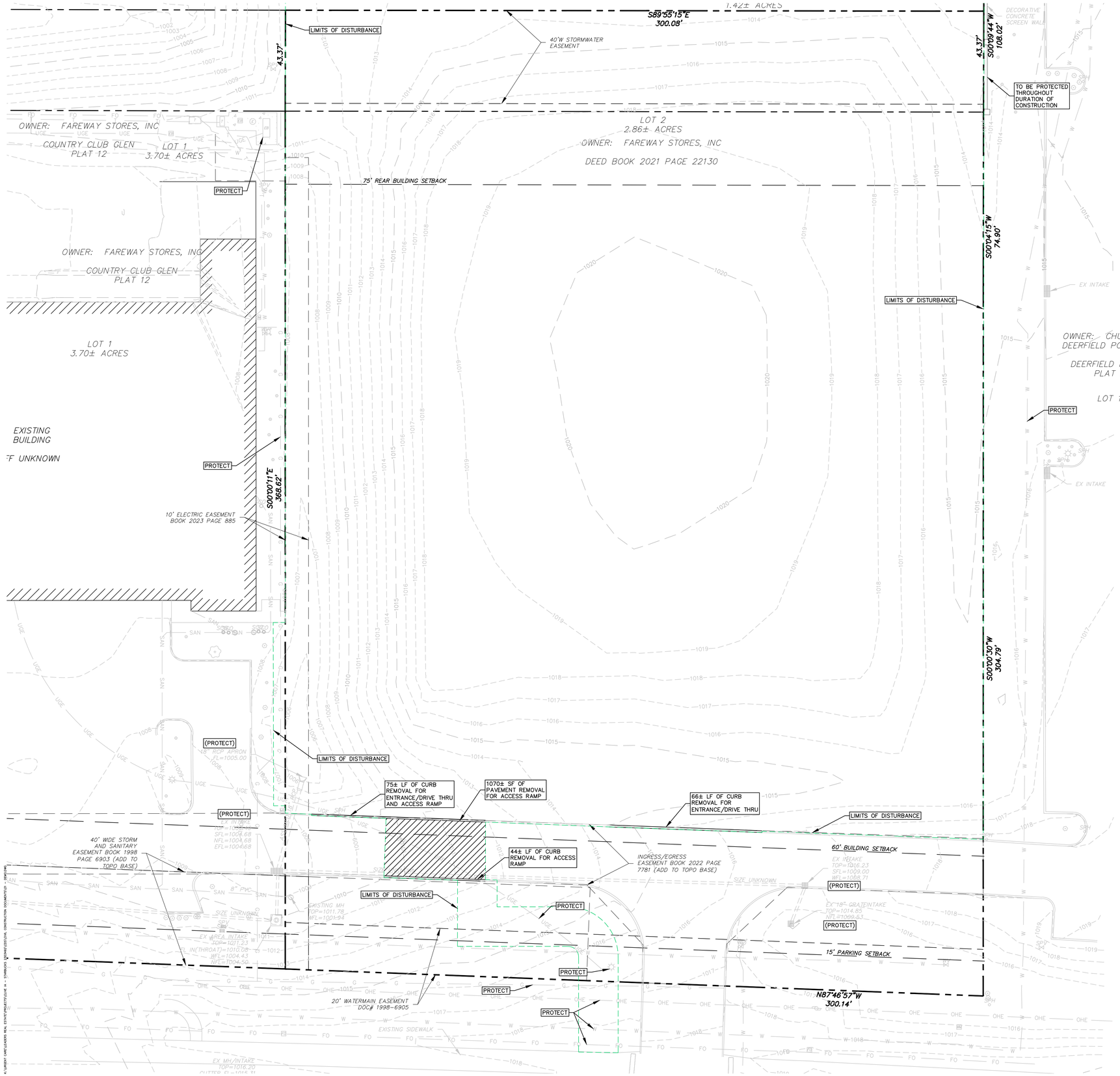

LEGEND

- EXISTING PAVEMENT TO BE REMOVED
- EXISTING CONCRETE TO BE REMOVED
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING CONCRETE SIDEWALK
- LIMITS OF DISTURBANCE

DEMOLITION NOTES

1. CONTRACTOR TO INVESTIGATE POSSIBLE FIELD TILE AND REPORT ANY UPSTREAM INFRASTRUCTURE THAT WOULD BE IMPACTED BY REMOVAL OF THE PIPE TO THE ENGINEER OF RECORD PRIOR TO DEMOLITION.
2. ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF CLIVE REQUIREMENTS.
3. UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS, AND INFORMATION, AND THEREFORE, DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, NUMBER OF, OR LOCATION OF THESE FACILITIES, STRUCTURES, AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION, OR CONSTRUCTION OF IMPROVEMENTS.
4. THE LOCATION AND TYPE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY AND ARE ACCURATE AND COMPLETE TO THE BEST OF THE KNOWLEDGE OF CASCO CIVIL. THE INFORMATION HAS BEEN PROVIDED FROM A TOPOGRAPHIC AND UTILITY SURVEY PROVIDED BY CLAPSADDLE-GARBER ASSOCIATES, INC. THE CONTRACTOR SHALL VERIFY THE SIZES, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM PLAN.
5. VERIFY ALL BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.
6. EXISTING SITE FEATURES TO REMAIN ARE TO BE PROTECTED THROUGHOUT CONSTRUCTION.
7. CONTRACTOR TO PROTECT ALL ADJACENT ITEMS, STRUCTURES, UTILITIES, AND LANDSCAPING ON NEIGHBORING PROPERTIES.

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COUNTRY CLUB GLEN PLAT 13
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LICENSED PROFESSIONAL ENGINEER
SARAH BAX FONDA
P29031
IOWA
09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

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0 10 20 40
SCALE: 1" = 20'

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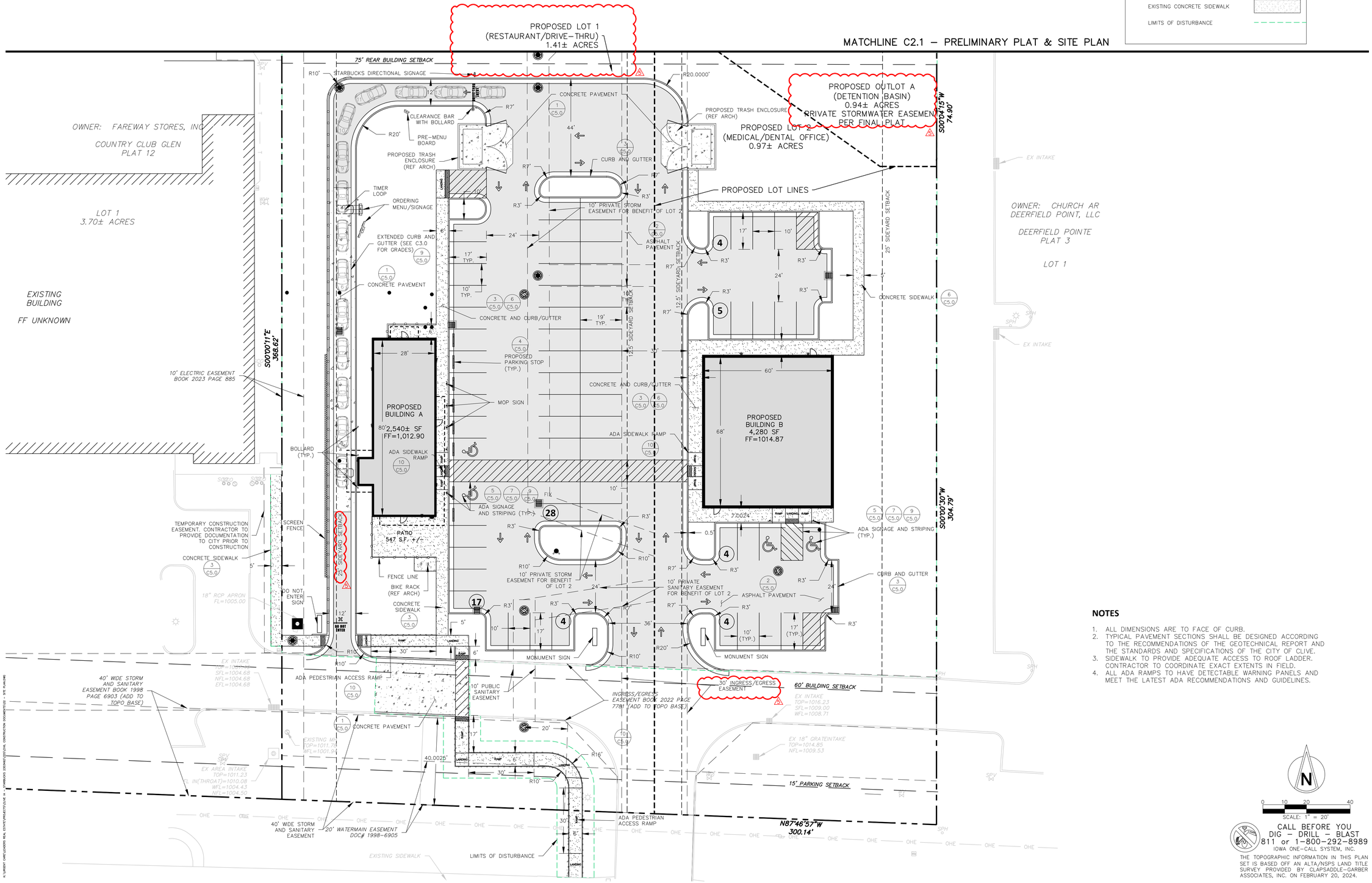
EXISTING CONDITIONS AND DEMOLITION PLAN

C1.0

PAVEMENT LEGEND

2 C5.0	PROPOSED ASPHALT PAVEMENT
1 C5.0	PROPOSED CONCRETE PAVEMENT
6 C5.0	PROPOSED CONCRETE SIDEWALK
	EXISTING ASPHALT PAVEMENT
	EXISTING CONCRETE PAVEMENT
	EXISTING CONCRETE SIDEWALK
	LIMITS OF DISTURBANCE

MATCHLINE C2.1 – PRELIMINARY PLAT & SITE PLAN



NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB.
2. TYPICAL PAVEMENT SECTIONS SHALL BE DESIGNED ACCORDING TO THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND THE STANDARDS AND SPECIFICATIONS OF THE CITY OF CLIVE.
3. SIDEWALK TO PROVIDE ADEQUATE ACCESS TO ROOF LADDER. CONTRACTOR TO COORDINATE EXACT EXTENTS IN FIELD.
4. ALL ADA RAMPS TO HAVE DETECTABLE WARNING PANELS AND MEET THE LATEST ADA RECOMMENDATIONS AND GUIDELINES.

SCALE: 1" = 20'

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SARAH BAX FONDA
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PRELIMINARY PLAT & SITE PLAN

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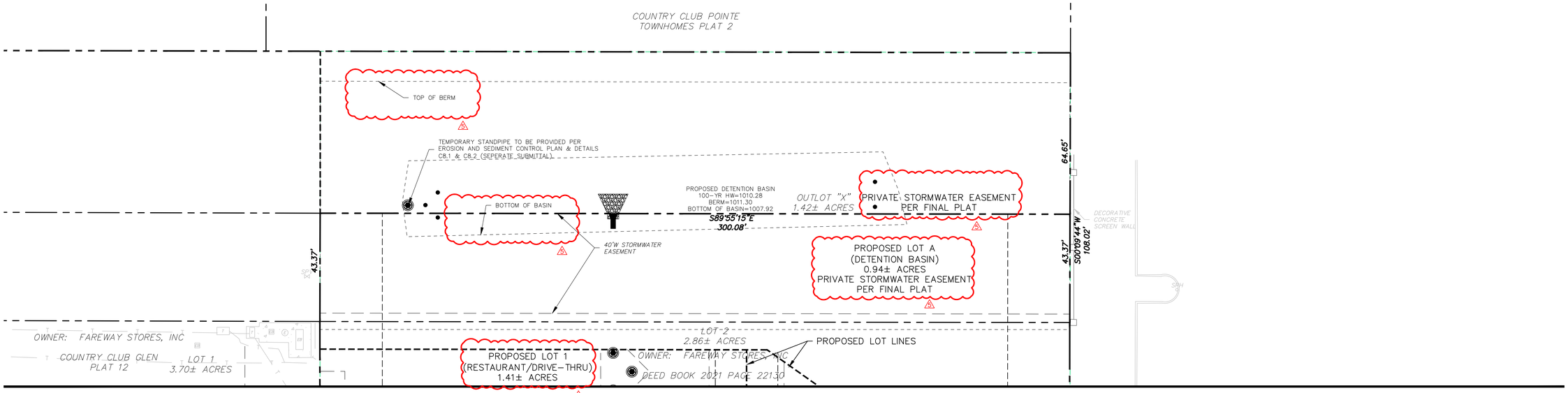

MATCHLINE C2.0 – PRELIMINARY PLAT & SITE PLAN

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PRELIMINARY PLAT
& SITE PLAN

C2.1

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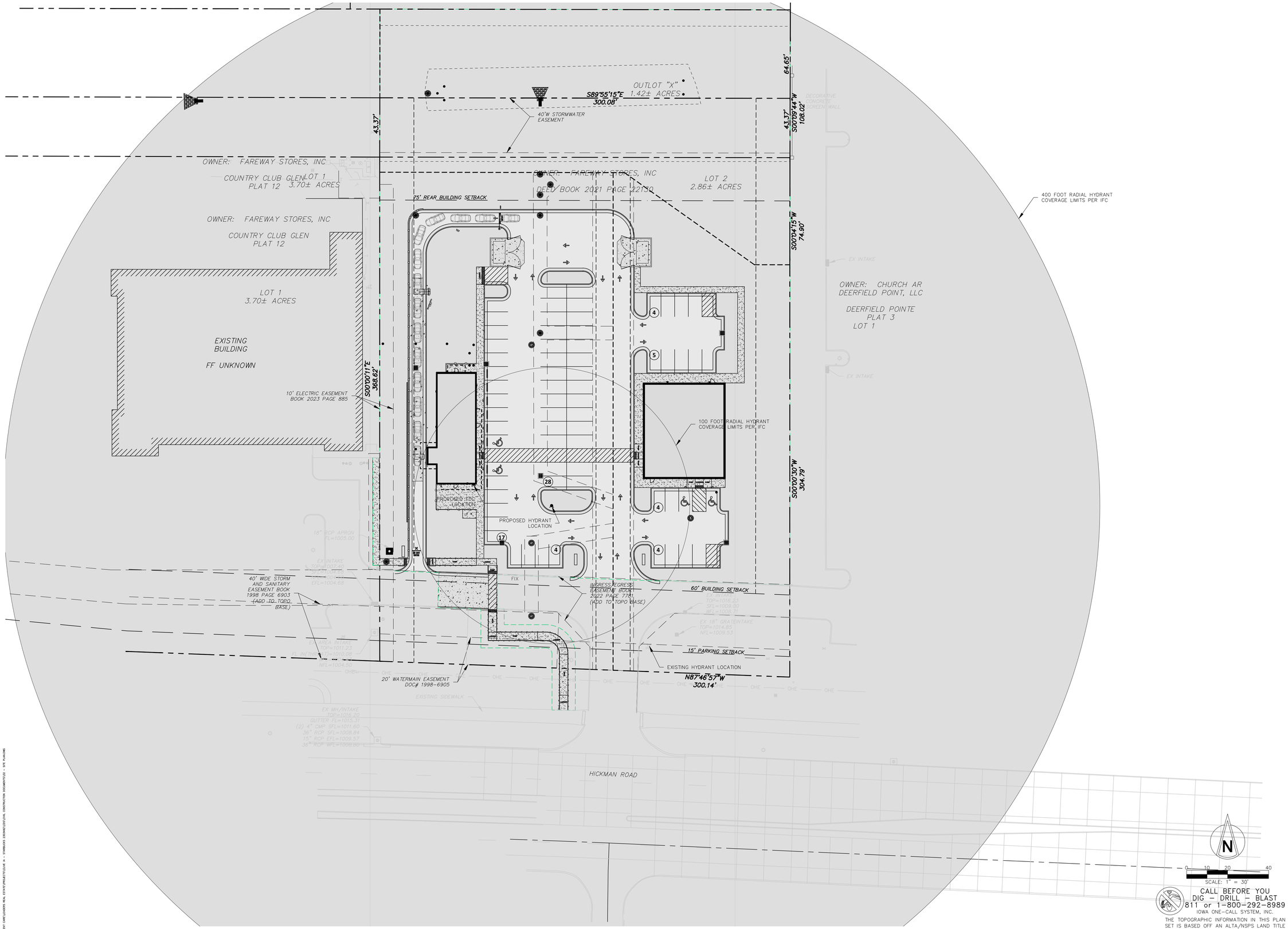

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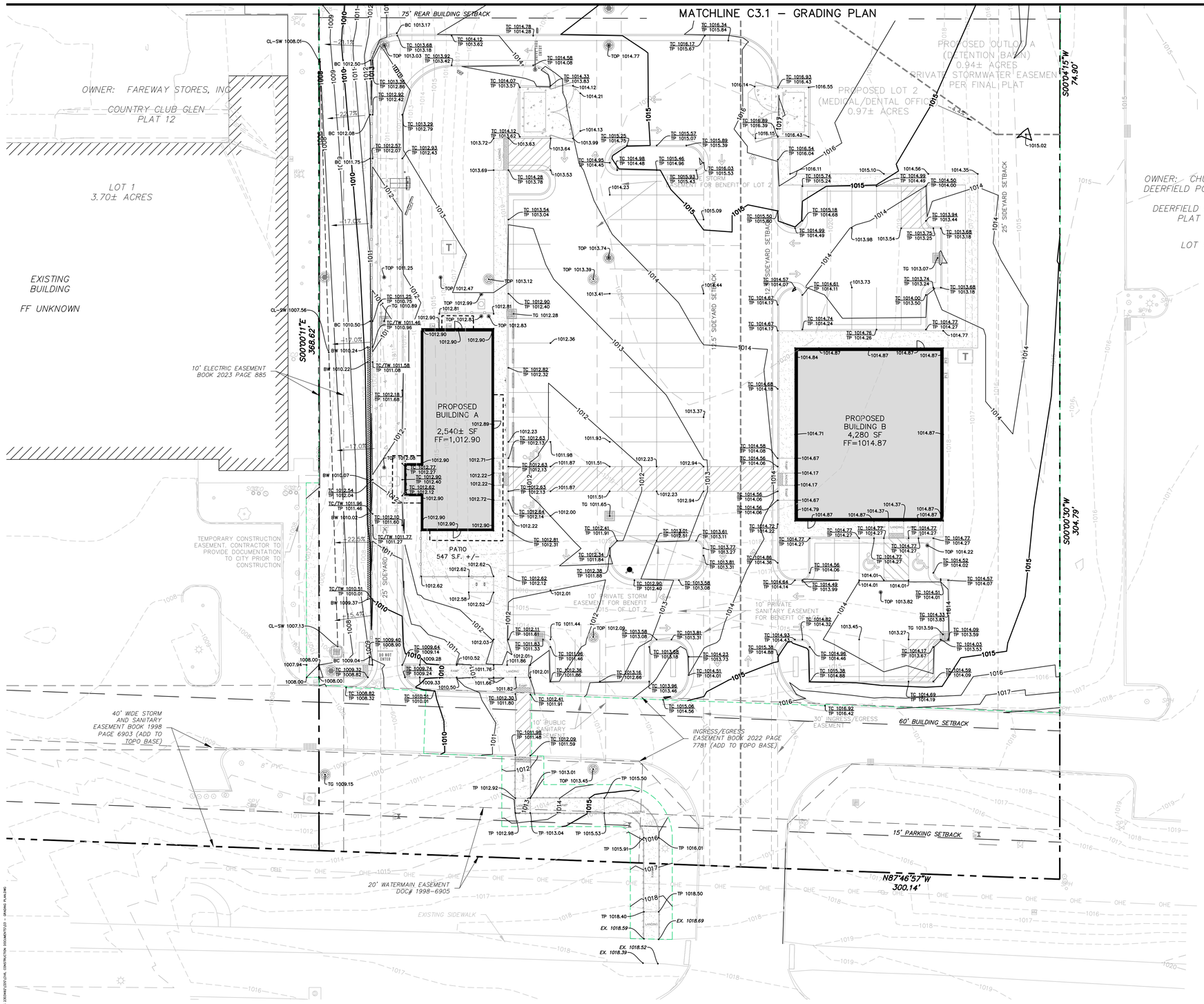
LICENSED PROFESSIONAL ENGINEER
SARAH BAX FONDA
P29031
IOWA
09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

Drawn By/Checked By:	MW/SBF
Project Number	2303492
Permit	08-20-24
Bid	-- -- --

FIRE HYDRANT EXHIBIT

C2.2



LEGEND OF SYMBOLS

EXISTING		PROPOSED
565.19	SPOT ELEVATION	565.19
TC 565.19	SPOT ELEVATION AT TOP OF CURB	TC 565.19
TP 565.19	SPOT ELEVATION AT BOTTOM OF CURB	TP 565.19
BC 565.19	SPOT ELEVATION AT BACK OF CURB	BC 565.19
TW 565.19	SPOT ELEVATION AT TOP OF WALL	TW 565.19
BW 565.19	SPOT ELEVATION AT BOTTOM OF WALL	BW 565.19
TG 565.19	SPOT ELEVATION AT TOP OF GRATE	TG 565.19
TOP 565.19	SPOT ELEVATION AT TOP OF STRUCTURE	TOP 565.19

GRADING NOTES

1. MAXIMUM CROSS SLOPE OF SIDEWALK IS 2.0%.
2. REFER TO GEOTECHNICAL REPORT PREPARED BY ECS MIDWEST, LLC DATED SEPTEMBER 8, 2023 – ECS PROJECT NUMBER 16:14998.
3. ALL ACCESSIBILITY MEASURES SHALL BE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
4. PER THE GEOTECHNICAL REPORT, 3–4" OF TOPSOIL IS LOCATED THROUGHOUT THE SITE. THIS TOPSOIL MUST BE PRESERVED ON THE SITE, AND MAY NOT LEAVE AS PART OF THE EARTHWORK ESTIMATED BELOW.
5. ALL TOPSOIL MUST MEET CLIVE POST–CONSTRUCTION STORM WATER MANUAL. TOPSOIL SHALL BE MINIMUM 4" DEPTH, MINIMUM 2 [OR AS INDICATED IN SWMP]% ORGANIC CONTENT, 6.0–8.0 PH, MAXIMUM 25% FRIABLE CLAY CONTENT, AND FREE OF DEBRIS, HARD CLODS, ROOTS, SOD, STIFF CLAY, HARD PAN, AND STONES LARGER THAN 1". ALL TOPSOIL MUST MEET IOWA DEPARTMENT OF NATURAL RESOURCES GENERAL PERMIT #2 REQUIREMENTS TO MINIMIZE SOIL COMPACTION, DEFINED AS WORKING THE SOIL PRIOR TO SEEDING/SODDING SUCH THAT A PENETROMETER CAN BE INSERTED INTO THE UPPER 6 INCHES WITH LESS FORCE THAN 200 PSI. AS AN ALTERNATIVE TO THE PENETROMETER TEST, A SOIL WITH BULK DENSITY LESS THAN 1.49 GRAMS/CUBIC CENTIMETER SHALL BE DEEMED COMPLIANT WITH THIS REQUIREMENT.

EARTHWORK ESTIMATE

CUT – 15,335± CUBIC YARDS (TO FINISHED GRADE)
FILL – 636± CUBIC YARDS (TO FINISHED GRADE)
= TOTAL 14,699 CUBIC YARDS (CUT)

THE ENGINEER HAS CALCULATED THE ABOVE QUANTITIES OF EARTHWORK TO BE REGARDED AS AN ESTIMATE OF THE BULK MOVEMENT OR REDISTRIBUTION OF SOILS ON THIS PROJECT. AS AN ESTIMATE, THESE QUANTITIES ARE INTENDED FOR GENERAL USE, AND THE ENGINEER ASSUMES NO LIABILITY FOR COST OVERRUNS DUE TO EXCESS EXCAVATED MATERIALS OR SHORTAGES OF FILL.

THE QUANTITIES ESTIMATED FOR EARTHWORK ARE BASED UPON THE HORIZONTAL AND VERTICAL LOCATION OF THE IMPROVEMENTS AS PROPOSED ON THE SITE ENGINEERING PLANS.

THE ENGINEER'S EARTHWORK ESTIMATE DOES NOT INCLUDE ANY OF THE FOLLOWING EARTHWORK THAT MAY BE NECESSARY FOR COMPLETION OF THE PROJECT: MISCELLANEOUS UNDERGROUND CONDUITS, INCLUDING SEWER LINES AND WATER MAINS, STANDARD MANHOLES; ELECTRICAL OR TELEPHONE CONDUITS; BASES FOR LIGHT STANDARDS; BUILDING FOOTINGS OR PIERS, ETC.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACTUAL SIZE OF THE FIELD EXCAVATIONS MADE FOR THE INSTALLATION OF UNDERGROUND STRUCTURES, AND AS SUCH, THE ACTUAL QUANTITIES OF EARTHWORK FROM SUCH ITEMS MAY VARY FROM THE ESTIMATE SHOWN ABOVE.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR COSTS INCURRED DUE TO REMOVAL OF UNSUITABLE MATERIAL WHICH MUST BE REMOVED FROM THE SITE.

SHRINKAGE FACTORS USED TO DETERMINE THE BULK FILL WILL VARY ON EACH PROJECT DUE TO SPECIFIC SOIL CHARACTERISTICS. THE SHRINKAGE FACTOR USED FOR THIS PROJECT AS INDICATED ABOVE, IS AN ASSUMED VALUE.

IF EXCESS OR BORROW MATERIAL IS TO BE TRUCKED, IT SHALL BE TO OR FROM AN APPROVED SITE IN ACCORDANCE WITH ALL GOVERNING AUTHORITIES.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUIRE A PERMIT FOR HAULING FROM THE APPROPRIATE GOVERNING AUTHORITY.

CASCO CIVIL
A CASCO Diversified Corporation Company
12 Summers Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100

COUNTRY CLUB GLEN PLAT 13
PRELIMINARY PLAT AND SITE PLAN
NW 161st STREET & HICKMAN ROAD/US HWY 6
CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

No.	Description	Date
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LICENSED PROFESSIONAL ENGINEER
SARAH BAX FONDA
P29031
IOWA
09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

Drawn By/Checked By:	MW/SBF
Project Number	2303492
Permit	08-20-24
Bid	-- -- --

GRADING PLAN

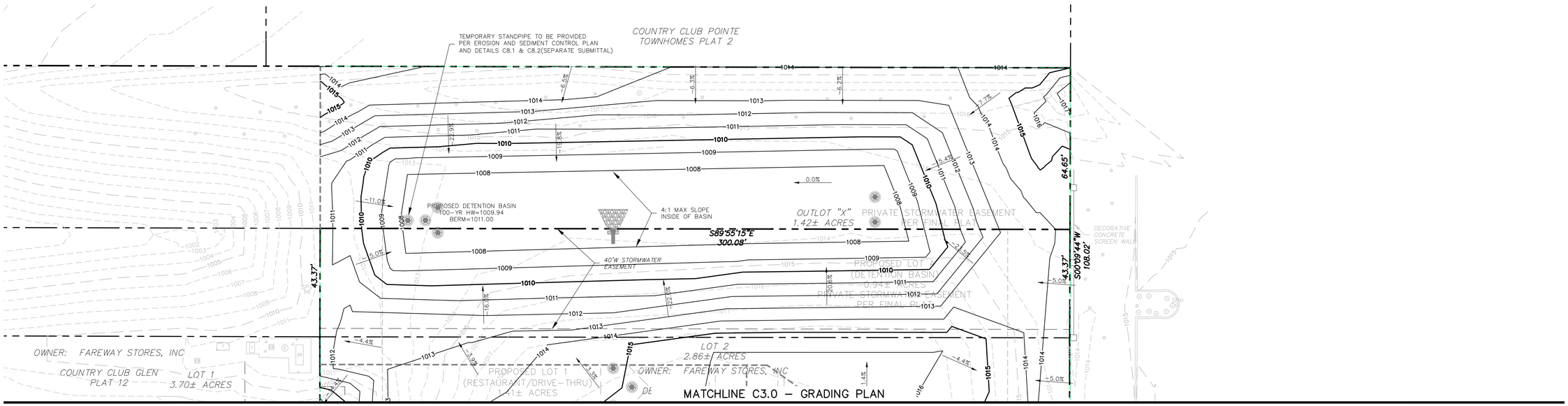
N

0 10 20 40
SCALE: 1" = 20'

CALL BEFORE YOU DIG – DRILL – BLAST
811 or 1–800–292–8989
IOWA ONE–CALL SYSTEM, INC.

THE TOPOGRAPHIC INFORMATION IN THIS PLAN SET IS BASED OFF AN ALTA/NSPS LAND TITLE SURVEY PROVIDED BY CLAPSADDLE–GARBER ASSOCIATES, INC. ON FEBRUARY 20, 2024.

C3.0



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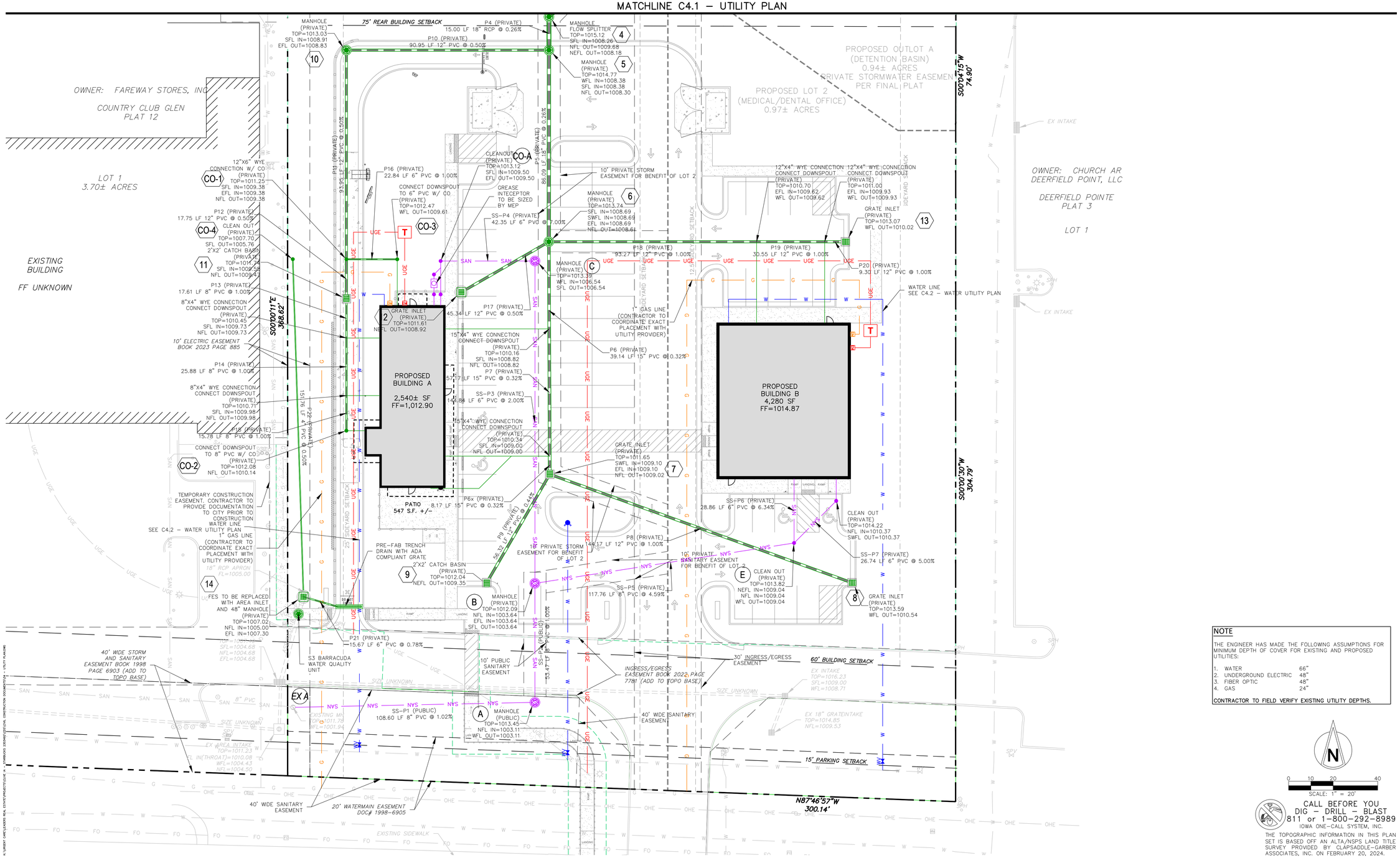
C3.1

K:\URGENT CASES\LEADERS REAL ESTATE\PROJECTS\LVE 4 - STARBUCKS 2303492\CIVIL CONSTRUCTION DOCUMENTS\03 - GRADING PLAN.DWG

MATCHLINE C4.1 – UTILITY PLAN



NOTE

THE ENGINEER HAS MADE THE FOLLOWING ASSUMPTIONS FOR MINIMUM DEPTH OF COVER FOR EXISTING AND PROPOSED UTILITIES:

1.	WATER	66"
2.	UNDERGROUND ELECTRIC	48"
3.	FIBER OPTIC	48"
4.	GAS	24"

CONTRACTOR TO FIELD VERIFY EXISTING UTILITY DEPTHS.

SCALE: 1" = 20'

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LICENSED PROFESSIONAL ENGINEER SARAH BAX FONDA P29031 IOWA
09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

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UTILITY PLAN

C4.0

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COUNTRY CLUB GLEN PLAT 13
PRELIMINARY PLAT AND SITE PLAN
NW 161st STREET & HICKMAN ROAD/US HWY 6
CLIVE, IA 50325

CASCO CIVIL
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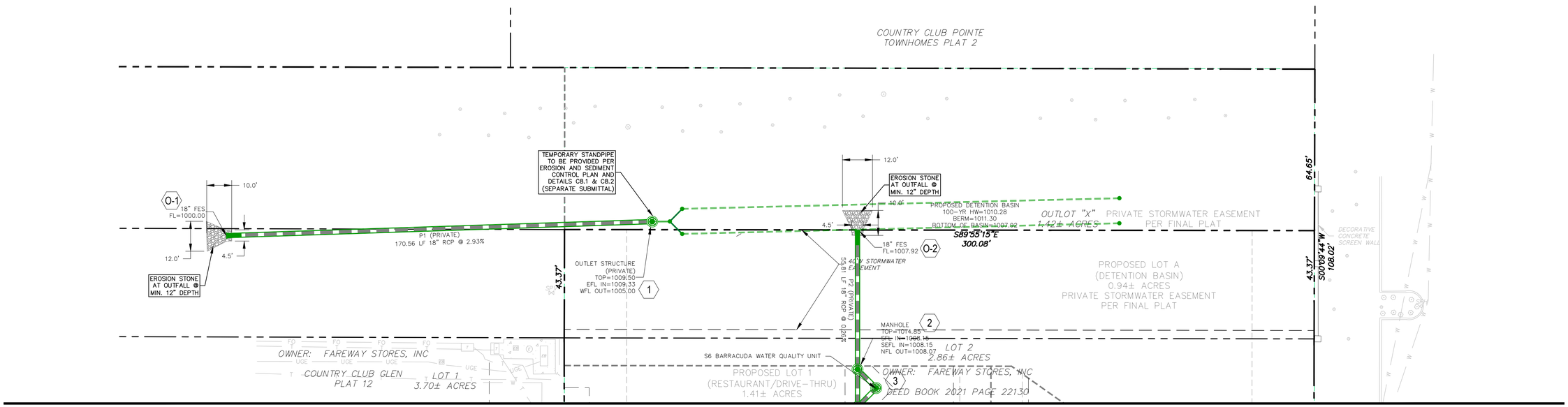
12 Summen Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100



MATCHLINE C4.0 – UTILITY PLAN

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COUNTRY CLUB GLEN PLAT 13
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LICENSED PROFESSIONAL ENGINEER
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IOWA
09/16/24

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UTILITY PLAN

N

0 10 20 40
SCALE: 1" = 20'

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IOWA ONE-CALL SYSTEM, INC.

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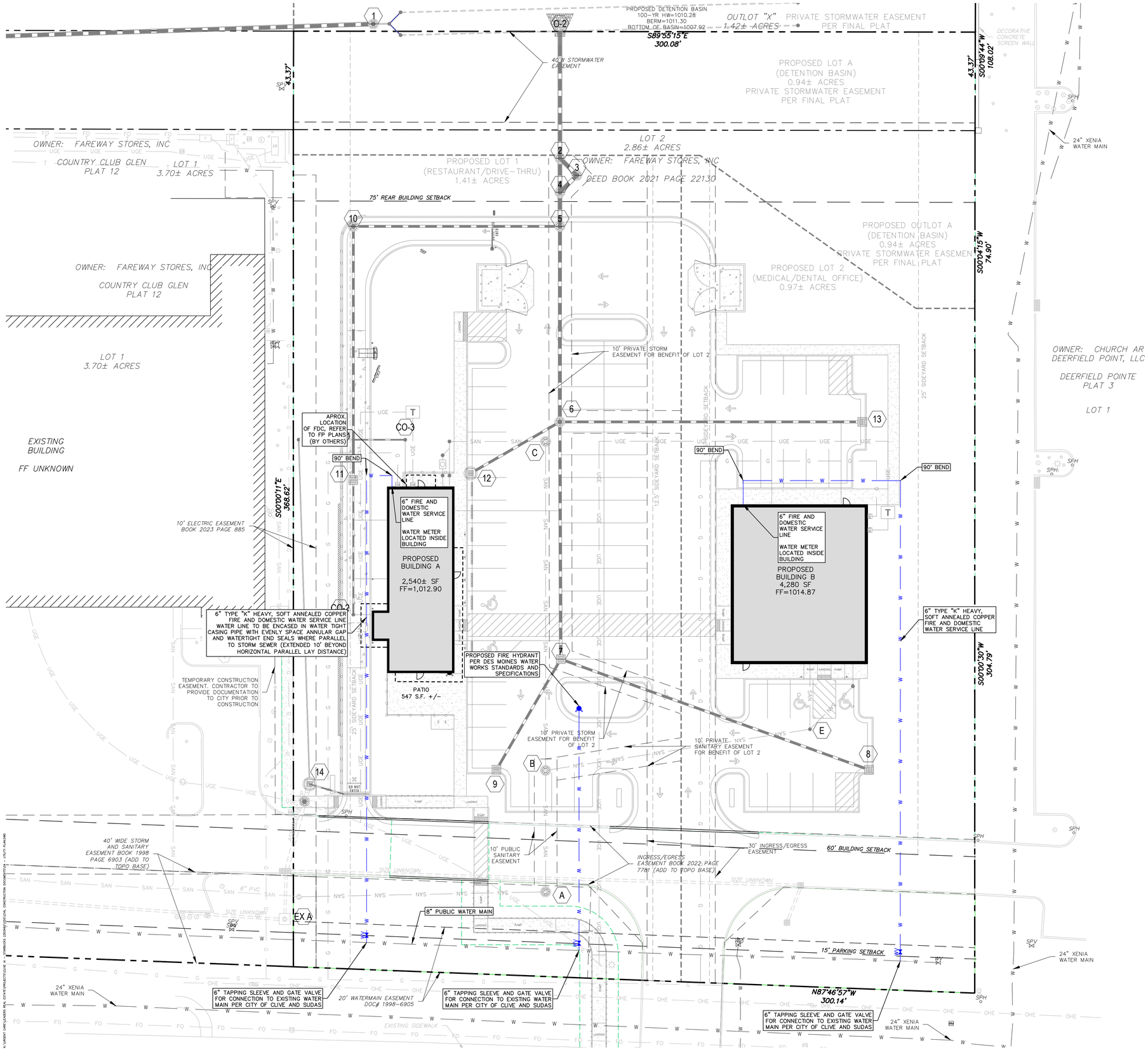
C4.1



WATER UTILITY PLAN LEGEND

EXISTING WATER LINE/MAIN	W
PROPOSED WATER LINE/MAIN	W
EXISTING SANITARY LINE/MAIN	SAN
PROPOSED SANITARY LINE/MAIN	SAN
EXISTING UTILITY	T
PROPOSED UTILITY	T

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COUNTRY CLUB GLEN PLAT 13
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WATER UTILITY PLAN

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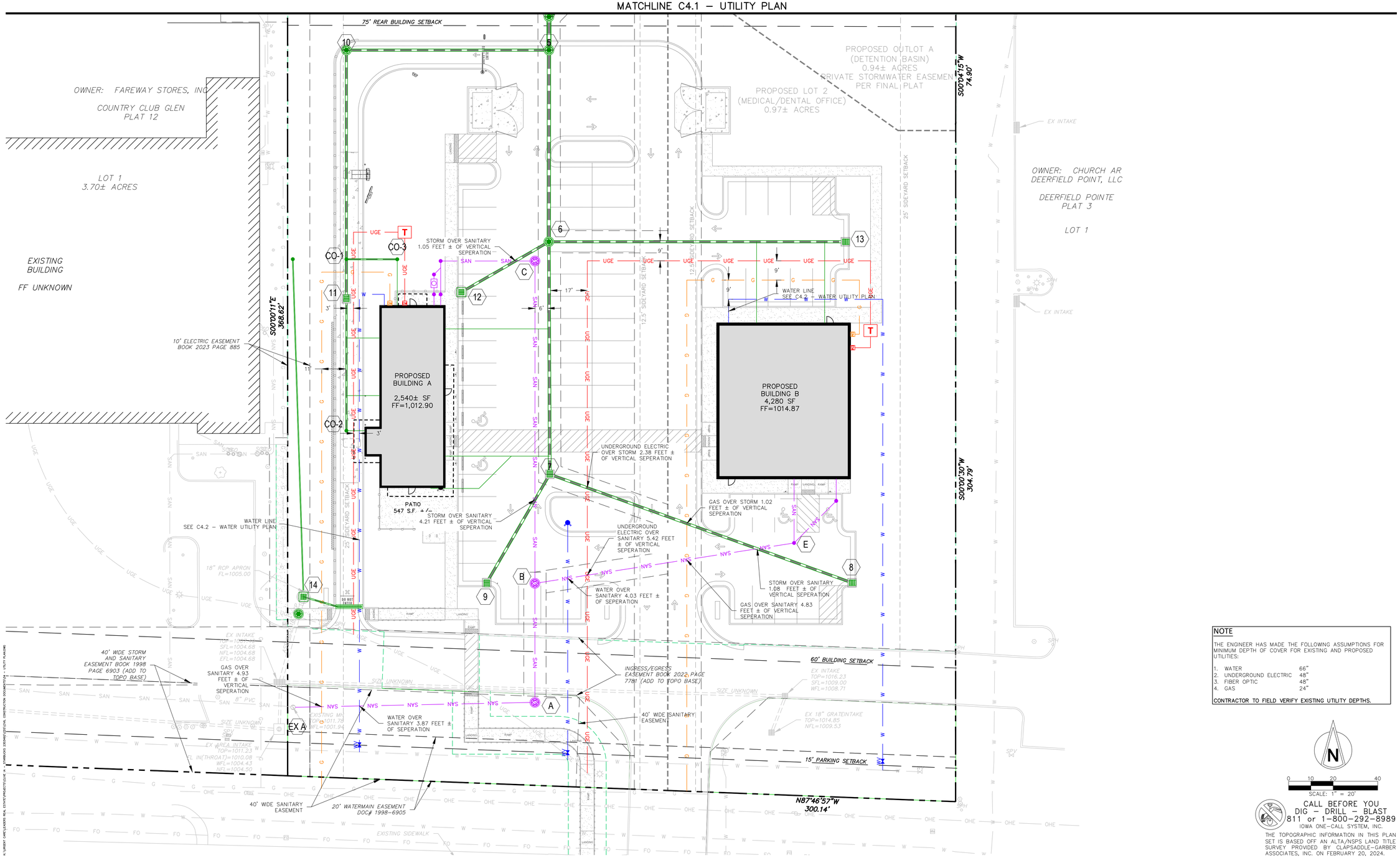
C4.2

MATCHLINE C4.1 – UTILITY PLAN



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COUNTRY CLUB GLEN PLAT 13
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NOTE

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1.	WATER	66"
2.	UNDERGROUND ELECTRIC	48"
3.	FIBER OPTIC	48"
4.	GAS	24"

CONTRACTOR TO FIELD VERIFY EXISTING UTILITY DEPTHS.

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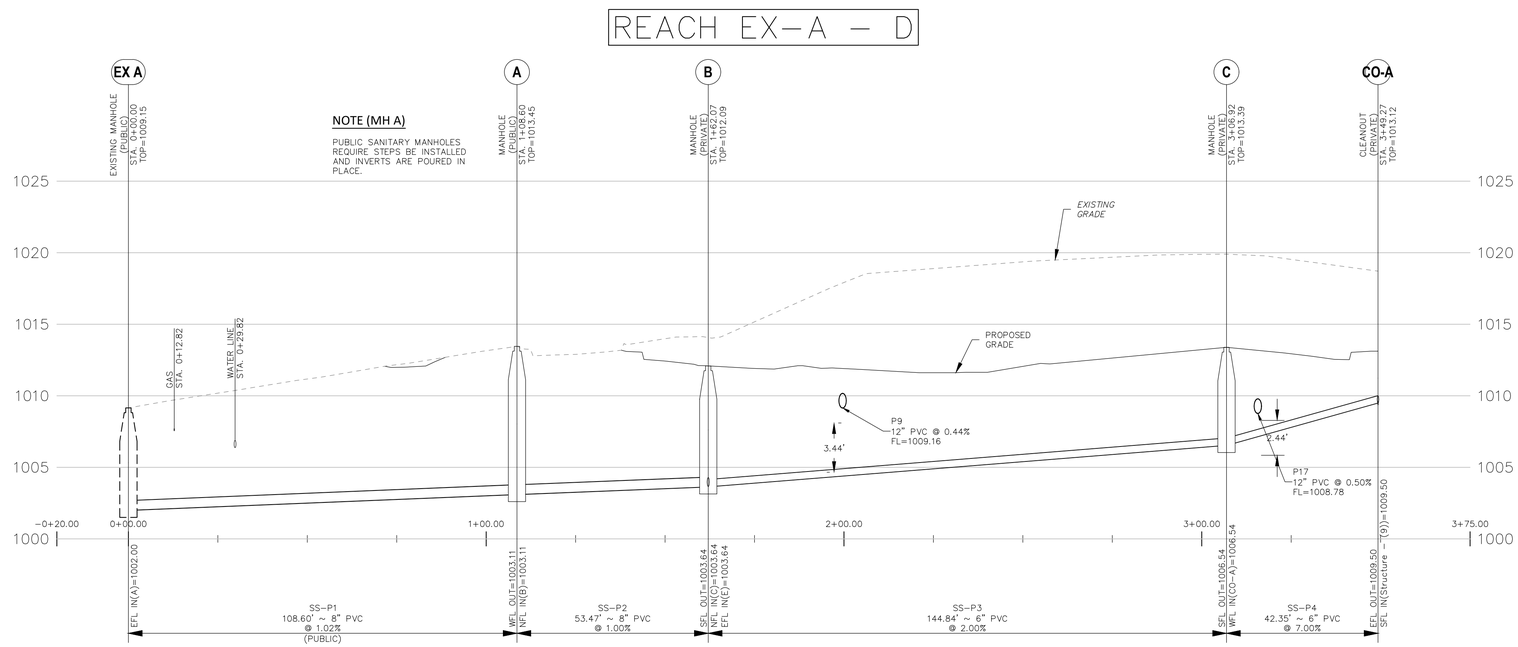
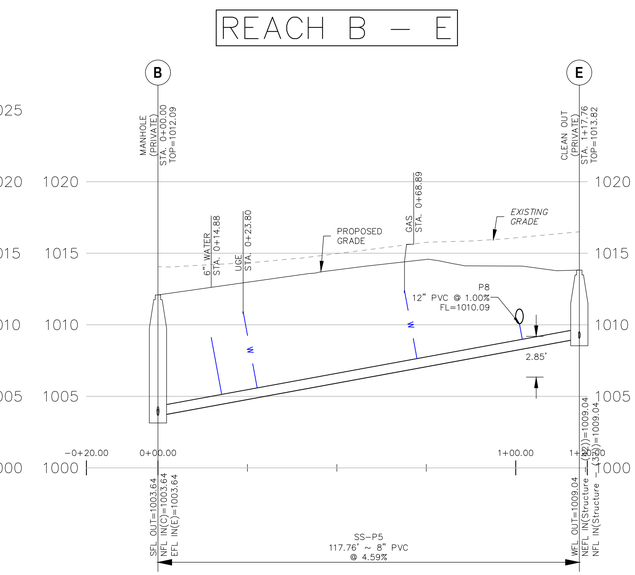
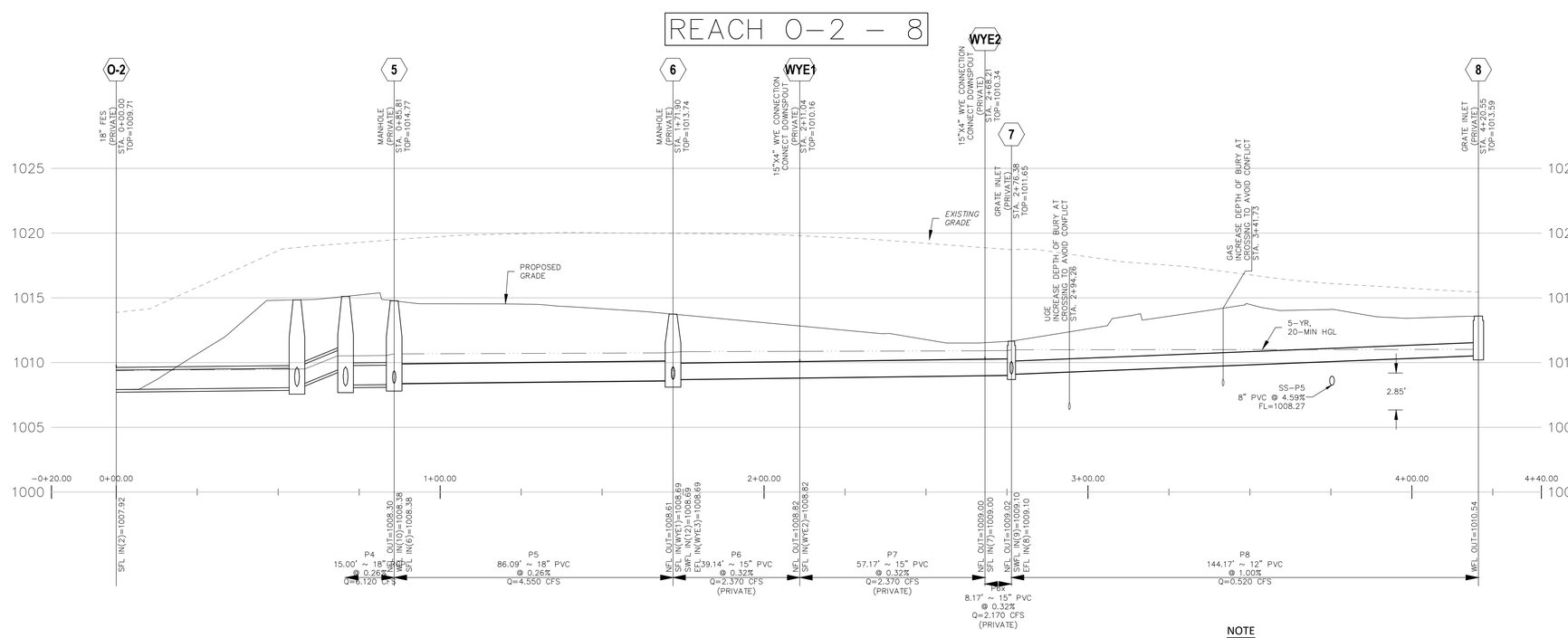
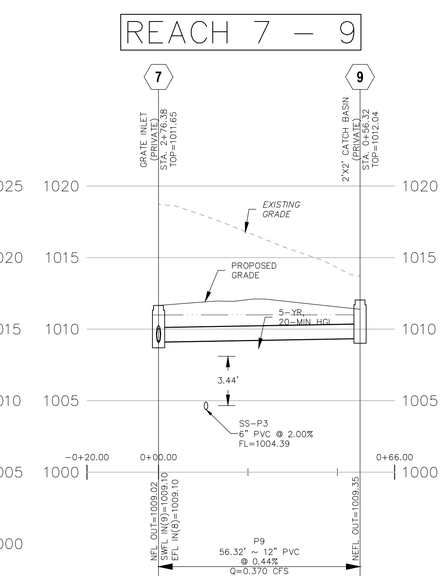
UTILITY CROSSING PLAN

C4.3









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COUNTRY CLUB GLEN PLAT 13
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LICENSED PROFESSIONAL ENGINEER
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22831
IOWA
09/16/24

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STORM AND SANITARY SEWER PROFILES

C4.4

NOTE

ALL SANITARY AND STORM PIPES LOCATED UNDER PROPOSED PAVEMENT OR WITHIN 2' OF PROPOSED PAVEMENT TO HAVE GRANULAR BACKFILL TO PAVEMENT SUBGRADE.

NOTE

THE ENGINEER HAS MADE THE FOLLOWING ASSUMPTIONS FOR MINIMUM DEPTH OF COVER FOR EXISTING AND PROPOSED UTILITIES:

1.	WATER	66"
2.	UNDERGROUND ELECTRIC	48"
3.	FIBER OPTIC	48"
4.	GAS	24"

CONTRACTOR TO FIELD VERIFY EXISTING UTILITY DEPTHS.

PROFILE SCALE:
1"=5'
1"=20'

STORM SEWER PROFILES

LEGEND

PROPOSED GRADE	
EXISTING GRADE	
10 YR, 15 MIN HGL	
GRANULAR BACKFILL	

CALL BEFORE YOU DIG – DRILL – BLAST
811 or 1-800-292-8989
IOWA ONE-CALL SYSTEM, INC.

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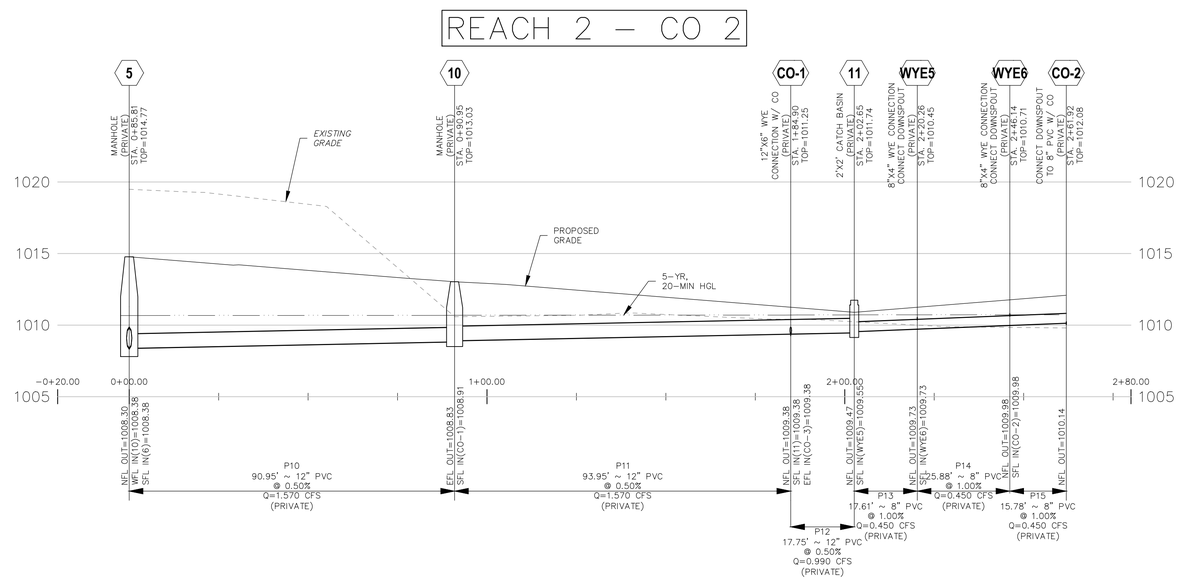
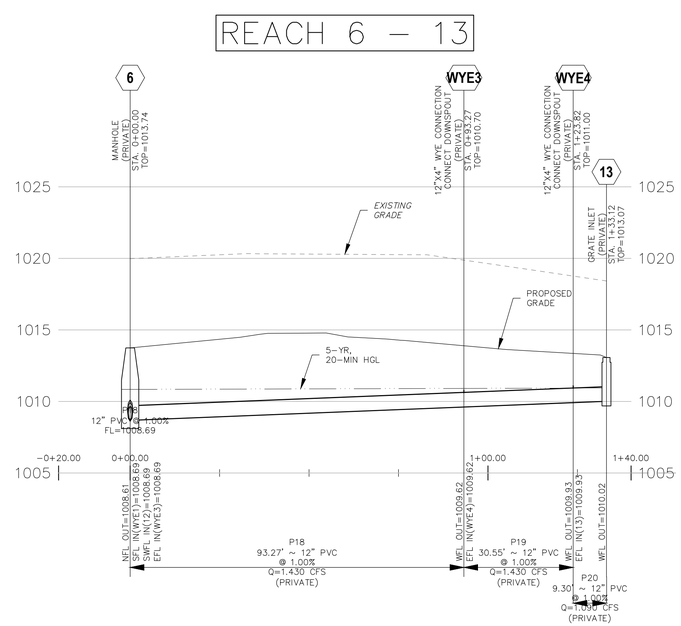
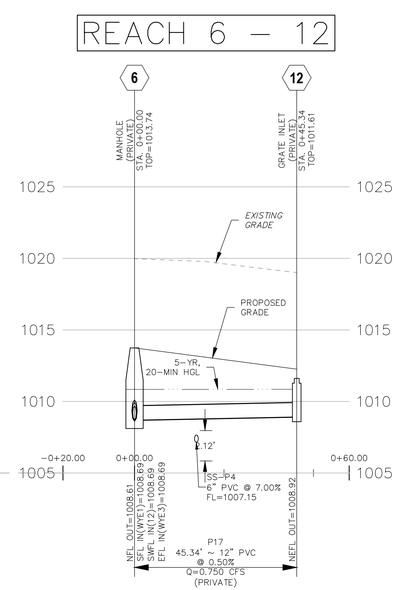
K:\GROUP CIRCLE\LEADERS REAL ESTATE\PROJECTS\CLIVE IA - STARBUCKS 2303492\CD\CIVIL CONSTRUCTION DOCUMENTS\SP4 - UTILITY PLAN.DWG







NOTE

ALL SANITARY AND STORM PIPES LOCATED UNDER PROPOSED PAVEMENT OR WITHIN 2' OF PROPOSED PAVEMENT TO HAVE GRANULAR BACKFILL TO PAVEMENT SUBGRADE.

NOTE

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1"=5'

1"=20'

STORM SEWER PROFILES

LEGEND

PROPOSED GRADE	
EXISTING GRADE	
10 YR, 15 MIN HGL	
GRANULAR BACKFILL	

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COUNTRY CLUB GLEN PLAT 13
PRELIMINARY PLAT AND SITE PLAN

NW 161st STREET & HICKMAN ROAD/US HWY 6
CLIVE, IA 50325

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IOWA
09/16/24

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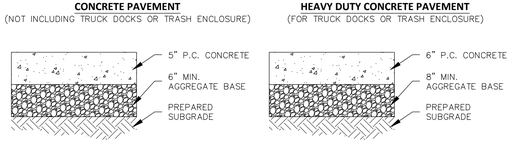
STORM SEWER PROFILES

C4.5

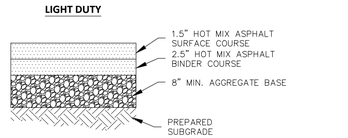
K:\GROUP CORE\LEADERS REAL ESTATE\PROJECTS\CLIVE IA - STARBUCKS 2303492\DSV\CIVIL CONSTRUCTION DOCUMENTS\04 - UTILITY PLAN.DWG



NOTE: PROVIDE CONTROL JOINTS AT 15' CENTERS PER IOWADOT STANDARDS.

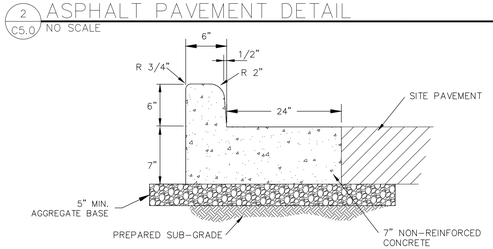
NOTE: PROVIDE CONTROL JOINTS AT 15' CENTERS PER IOWADOT STANDARDS.

1 C5.0 CONCRETE PAVEMENT DETAIL
NO SCALE



NOTE: ALL PAVEMENT RECOMMENDATIONS TO CONFORM TO GEOTECHNICAL REPORT.

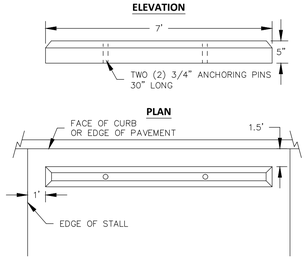
2 C5.0 ASPHALT PAVEMENT DETAIL
NO SCALE



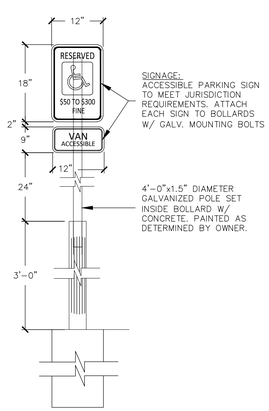
NOTES:

1. ALL CONCRETE SHALL BE MINIMUM FC=4000 P.S.I.
2. ALL CONSTRUCTION MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL ORDINANCES.
3. ANY UNSUITABLE SOIL (AS DETERMINED BY SOILS ENGINEER) BELOW STRUCTURE SHALL BE REMOVED AND REPLACED WITH SELECT EARTHEN MATERIAL COMPACTED IN PLACE WITH VIBRATORY TAMPER.
4. PROVIDE 1/2" EXPANSION JOINTS AT 20' CENTERS.

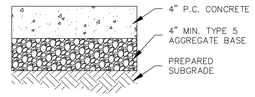
3 C6.0 STANDARD CONCRETE CURB & GUTTER DETAIL
NO SCALE



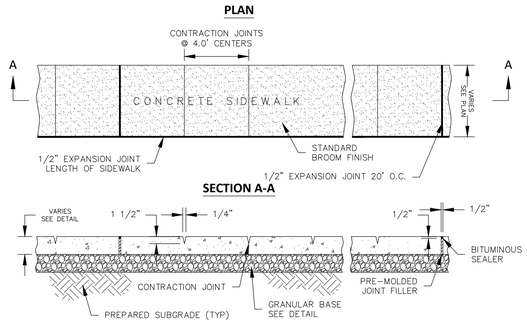
4 C5.0 PARKING STOP DETAIL
NO SCALE



5 C5.0 ACCESSIBLE SIGN DETAIL
NO SCALE



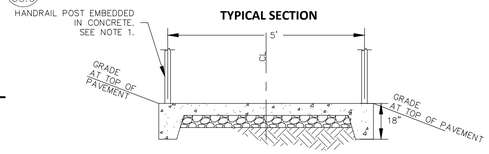
6 C5.0 CONCRETE SIDEWALK DETAIL
NO SCALE



SUBGRADE PREPARATION NOTE:

ALL EXPOSED AND/OR DISTURBED GRANULAR BASE AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF OPTIMUM DENSITY IN ACCORDANCE W/ASTM D 1557 AT OPTIMUM MOISTURE CONTENT AND TO A MINIMUM DEPTH OF 4" – ALL SUBGRADE SOIL AREAS EXPOSED BY EXCAVATIONS AND GRADING SHALL BE COMPACTED TO A MINIMUM OF 95% OF OPTIMUM DENSITY IN ACCORDANCE W/ASTM D 1557 AT OPTIMUM MOISTURE CONTENT AND TO A MINIMUM DEPTH OF 12" – FILL WHERE REQUIRED SHALL BE PLACED IN LIFTS NOT TO EXCEED 8" LOOSE MEASURE AND SHALL BE COMPACTED AS OUTLINED ABOVE – THE ON SITE TESTING COMPANY SHALL PROVIDE TESTING AND INSPECTION OF THE SOIL WORK PRIOR TO PLACING CONCRETE.

7 C5.0 TYPICAL SLAB JOINT DETAIL
NO SCALE

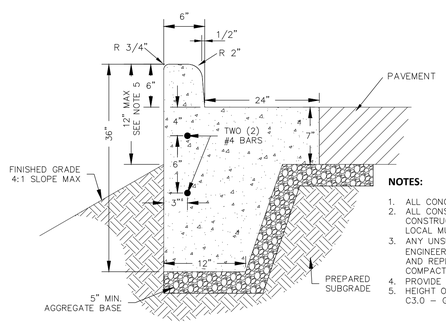


NOTE:

1. ADA COMPLIANT HANDRAILS TO BE 1.5" DIAMETER STEEL PIPE RAIL; TOP, MIDDLE, AND BOTTOM. SET POST 6" MIN. INTO CONCRETE HOLE WITH EPOXY GROUT. COLOR/FINISH OF RAMP RAILING SHOULD BE STANDARD METAL HAND RAIL. COORDINATE WITH OWNER.

2. ROCK WITH GEOTEXTILE FABRIC BEHIND ALL CURB CUTS ALONG PEDESTRIAN PATHWAY.

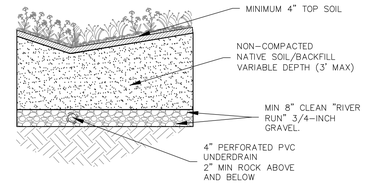
8 C5.0 PEDESTRIAN ACCESS RAMP
NO SCALE



NOTES:

1. ALL CONCRETE SHALL BE MINIMUM FC=4000 P.S.I.
2. ALL CONSTRUCTION MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL ORDINANCES.
3. ANY UNSUITABLE SOIL (AS DETERMINED BY SOILS ENGINEER) BELOW STRUCTURE SHALL BE REMOVED AND REPLACED WITH SELECT EARTHEN MATERIAL COMPACTED IN PLACE WITH VIBRATORY TAMPER.
4. PROVIDE 1/2" EXPANSION JOINTS AT 20' CENTERS.
5. HEIGHT OF EXPOSED BACK OF CURB VARIES. SEE C3.0 – GRADING PLAN FOR DETAILS.

9 C5.0 EXTENDED CONCRETE CURB & GUTTER DETAIL
NO SCALE



10 C5.0 TYPICAL SWALE & UNDERDRAIN SECTION
NO SCALE

ADS® Barracuda™ Max

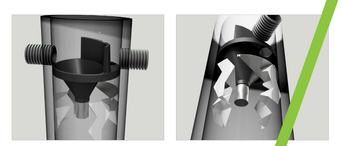
The Barracuda Max is market-changing stormwater quality technology. This high-performance vortex hydrodynamic separator is designed to remove total suspended solids in order to protect our precious receiving waters. The Barracuda Max is also an outstanding value that offers multiple pipe configurations, and quick installation. The "Max" version of the Barracuda is built on the base platform of the original ADS Barracuda with improved removal efficiencies and installation components.

Features

- Single manhole design
- No elevation loss between the inlet and outlet
- Variable inlet/outlet angle configurations (not just 180 degree orientation)
- Internal bypass for inline installation (where applicable)
- Revolutionary, patent-pending "teeth" mitigate turbulence in the sump area to prevent re-suspension of captured contaminants and an added deflector plate and bowl extension enhance the unit's removal capabilities

Benefits

- Internal components are in stock for quick delivery
- The S3, S4, S6, and S8 can be installed in a standard 36" (900 mm), 48" (1200 m), 72" (1800 m), and 96" (2400 m) precast manhole, respectively
- The S3 & S4 can be provided factory installed within a 36" (900 mm) and 48" (1200 mm) ADS HP manhole and delivered to the jobsite
- The Barracuda Max "teeth" and deflector plate apparatus are fabricated and designed for quick and easy field assembly
- Designed for easy maintenance using a vacuum truck or similar equipment.
- Inspection and maintenance are performed from the surface with no confined space entry



Barrucuda Specification

Materials and Design

- Concrete Structures: Designed for H-20 traffic loading and applicable soil loads or as otherwise determined by a Licensed Professional Engineer. The materials and structural design of the devices shall be per ASTM C857 and ASTM C858.
- 36" (900 mm) and 48" (1200 mm) HP Manhole Structures: Made from an impact modified copolymer polypropylene meeting the material requirements of ASTM F2764. The eccentric cone reducer shall be manufactured from polyethylene material meeting ASTM D3350 cell class 213320C. Gaskets shall be made of material meeting the requirements of ASTM F477.
- Separator internals shall be substantially constructed of stainless steel, polyethylene or other thermoplastic material approved by the manufacturer.

Performance

- The stormwater treatment unit shall be an inline unit capable of conveying 100% of the design peak flow. If peak flow rates exceed maximum hydraulic rate, the unit shall be installed offline.
- The Barracuda Max unit shall be designed to remove at least 80% of the suspended solids on an annual aggregate removal basis. Said removal shall be based on full-scale third party testing using OK-110 media gradation or equivalent and 300 mg/L influent concentration. Said full scale testing shall have included sediment capture based on actual total mass collected by the stormwater treatment unit.

- OR -

The Barracuda Max unit shall be designed to remove at least 50% of TSS using a media mix with d_{50}=75 micron and 200 mg/L influent concentration.

- OR -

The Barracuda Max unit shall be designed to remove at least 50% of TSS per current NJDEP/NJCAT HDS protocol.

- The stormwater treatment unit internals shall consist of (1) separator cone assembly, and (1) sump assembly, which includes the "teeth".

Barracuda Max Model	Manhole Diameter	NJDEP (50% removal)	OK-110 (80% removal)
S3	36" (900 mm)	0.85 CFS (24.1 L/s)	0.86 CFS (24.1 L/s)
S4	48" (1200 mm)	1.52 CFS (43.0 L/s)	1.52 CFS (43.0 L/s)
S6	72" (1800 mm)	3.40 CFS (96.3 L/s)	3.42 CFS (96.8 L/s)
S8	96" (2400 mm)	6.08 CFS (172.2 L/s)	6.08 CFS (172.2 L/s)

* Peak bypass flows are dependent on final design

Installation

Installation of the stormwater treatment unit(s) shall be performed per manufacturer's installation instructions. Such instructions can be obtained by calling Advanced Drainage Systems at 800-821-6710 or by logging on to www.adspipe.com.

ADS

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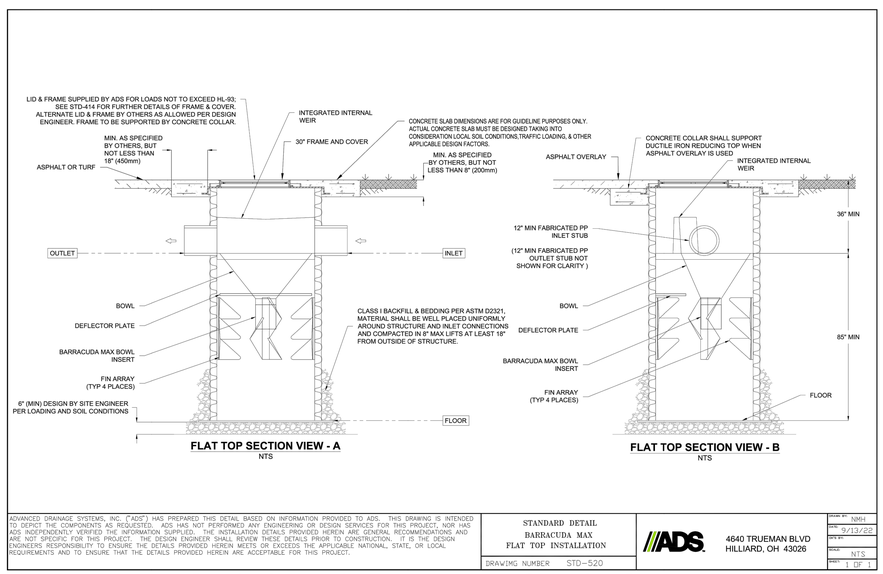
adspipe.com
800-821-6710



ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

STANDARD DETAIL
BARRACUDA MAX
FLAT TOP INSTALLATION

DRAWING NUMBER STD-520

ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026

DRAWN BY	NMH
DATE	9/13/22
CHK BY	
SCALE	NTS
SHEET	1 OF 1

11 C5.0 EXTENDED CONCRETE CURB & GUTTER DETAIL
NO SCALE

CALL BEFORE YOU DIG – DRILL – BLAST
811 or 1-800-292-8989
IOWA ONE-CALL SYSTEM, INC.

THE TOPOGRAPHIC INFORMATION IN THIS PLAN SET IS BASED OFF AN ALTA/NSPS LAND TITLE SURVEY PROVIDED BY CLAPSADDLE-GARBER ASSOCIATES, INC. ON FEBRUARY 20, 2024.

CASCO CIVIL
A CASCO Diversified Corporation Company
12 Summen Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100

COUNTRY CLUB GLEN PLAT 13
PRELIMINARY PLAT AND SITE PLAN
NW 161st STREET & HICKMAN ROAD/US HWY 6
CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

No.	Description	Date
1	STARBUCKS 2ND REVIEW	04/10/24
2	DEVELOPMENT REVIEW	04/17/24
3	DEVELOPMENT REVIEW RE-SUBMITTAL	07/19/24
4	DEVELOPMENT REVIEW RESPONSE	08/20/24
5	DEVELOPMENT REVIEW RESUBMITTAL	09/16/24

LICENSED PROFESSIONAL ENGINEER
SARAH BAX FONDA
P29031
IOWA
09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

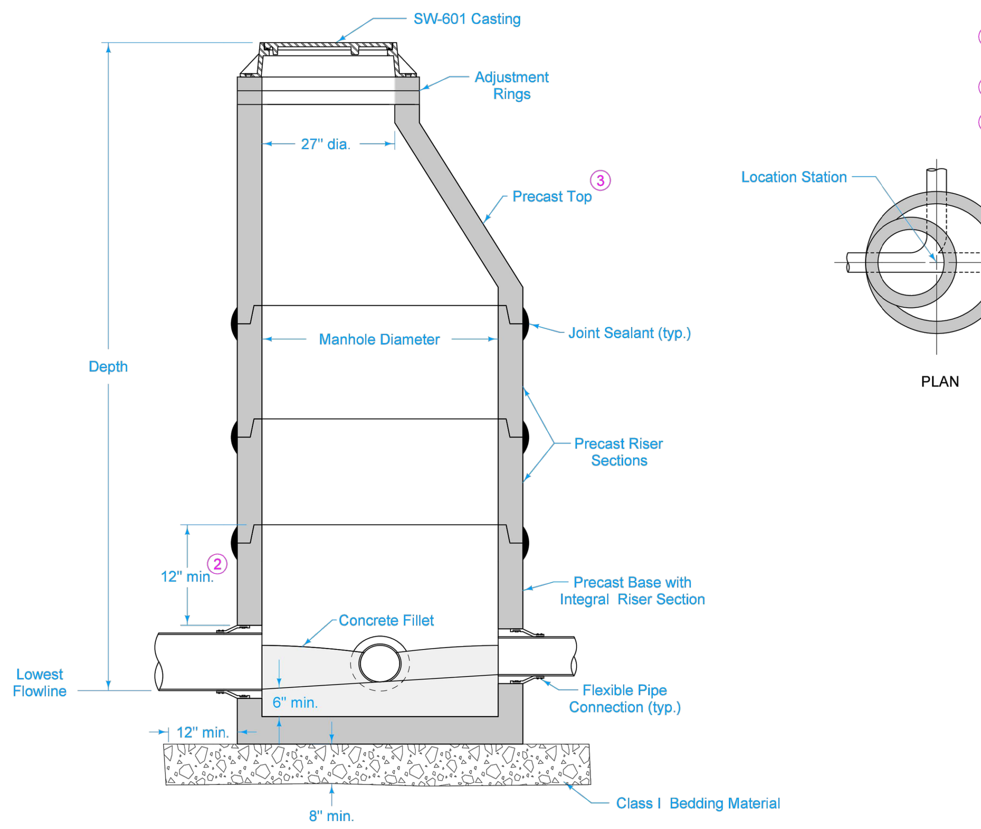
Drawn By/Checked By:	MW/SBF
Project Number	2303492
Permit	08-20-24
Bid	-- -- --

DETAILS

C5.0

K:\URBAN CHAMPS\DEPO REAL ESTATE\PROJECTS\CLVE 14 - STARBUCKS 2023492\CD\CIVIL CONSTRUCTION DOCUMENTS\05 - CONSTRUCTION DETAILS.DWG

CIRCULAR SANITARY SEWER MANHOLE (SW-301)



TYPICAL SECTION

If manhole depth exceeds 20 feet, install steps.

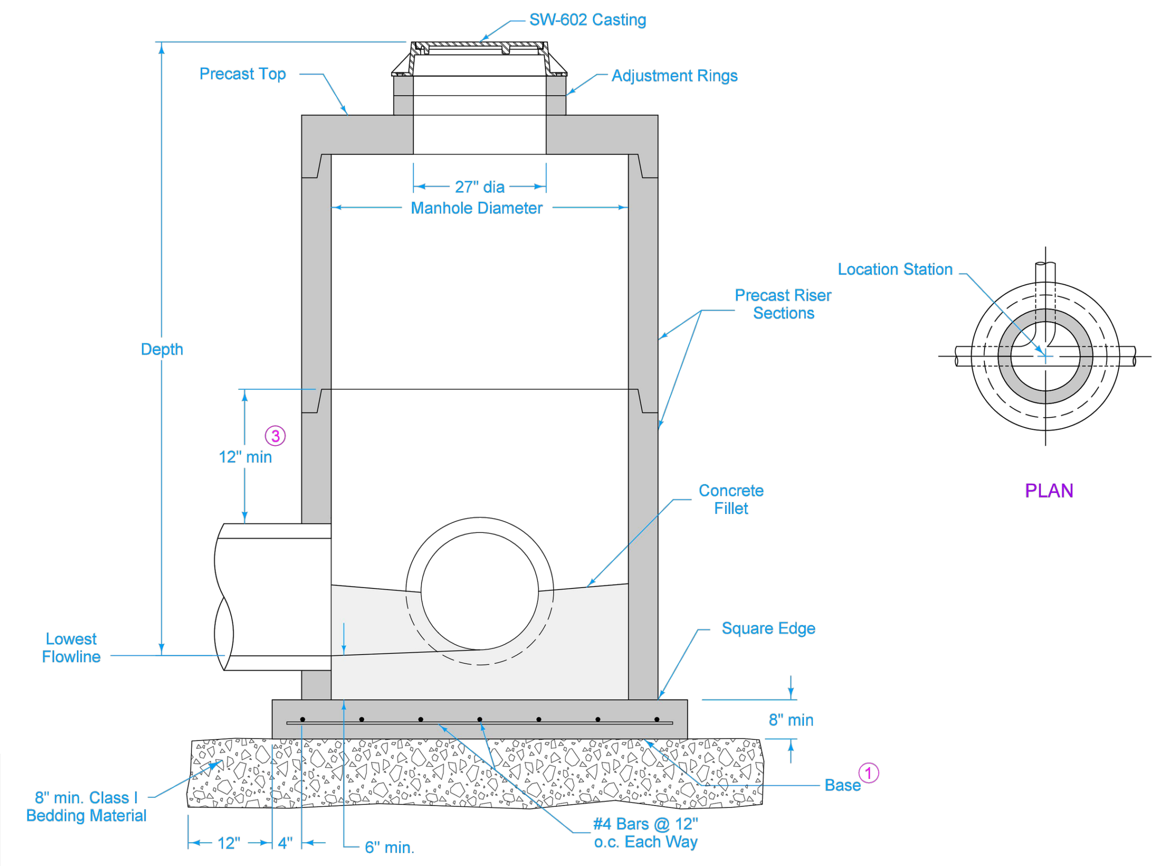
Install infiltration barrier.

1. For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.
2. 12 inch minimum riser height above all pipe openings.
3. When specified, provide an eccentric flat top In Lieu of eccentric cone section.

Manhole Diameter (inches)	Maximum Pipe Diameter ① (inches) for 2 Pipes	
	At 180° Separation	At 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

SUDAS | IOWA DOT | REVISION 5 10-18-22 | FIGURE 6010.301 | STANDARD ROAD PLAN | SW-301 | SHEET 1 of 1
REVISIONS: Added circle note 3.
SUDAS DIRECTOR / DESIGN METHODS ENGINEER
CIRCULAR SANITARY SEWER MANHOLE
FIGURE 6010.301 SHEET 1 OF 1

CIRCULAR STORM SEWER MANHOLE (SW-401)



TYPICAL SECTION

If manhole depth exceeds 20 feet, install steps.

1. Cast-in-place base shown. If base is precast integral with bottom riser, the footprint of the base is not required to extend beyond the outer edge of the riser.
2. For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.
3. 12 inch minimum riser height above all pipe openings.

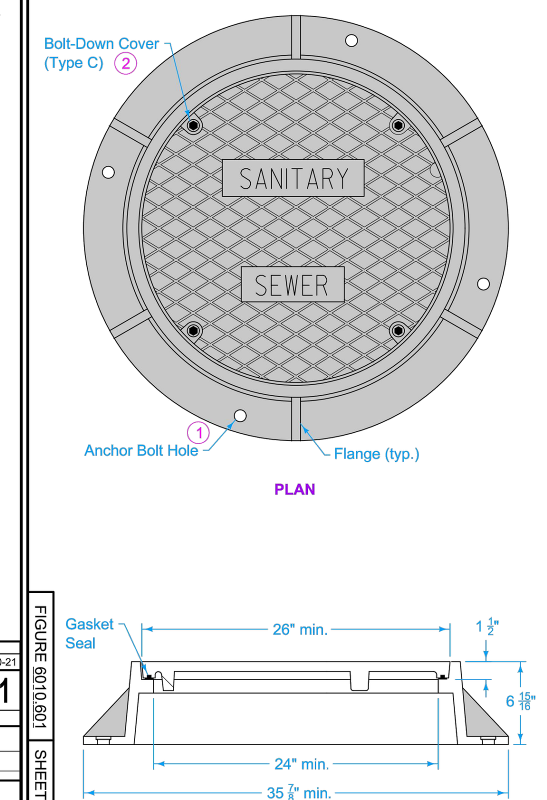
Manhole Diameter (inches)	Maximum Pipe Diameter ② (inches) for 2 Pipes	
	At 180° Separation	At 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

SUDAS | IOWA DOT | REVISION 3 04-20-21 | FIGURE 6010.401 | STANDARD ROAD PLAN | SW-401 | SHEET 1 of 1
REVISIONS: Added manhole depth note.
SUDAS DIRECTOR / DESIGN METHODS ENGINEER
CIRCULAR STORM SEWER MANHOLE
FIGURE 6010.401 SHEET 1 OF 1

CASTINGS FOR SANITARY SEWER MANHOLES (SW-601, Sheet 1 of 2)

TYPE A
Two-piece fixed casting

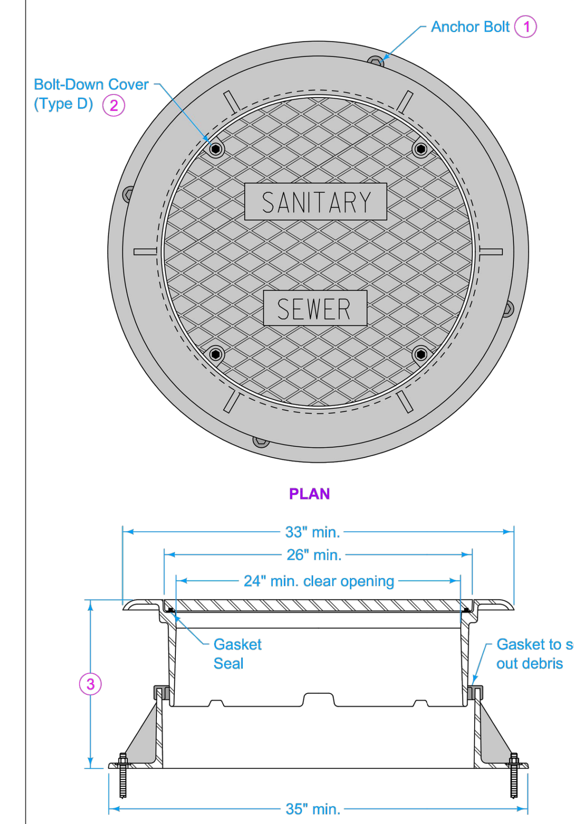
TYPE C
Two-piece fixed casting with bolt-down cover ②



TYPICAL SECTION

TYPE B: HMA
Three-piece floating casting for use in HMA paving

TYPE D: HMA
Three-piece floating casting with bolt-down cover for use in HMA paving ②



TYPICAL SECTION

Frame Notes:
Size, spacing, and number of lugs and flanges may vary.

Cover Notes:
Roughness pattern and text style may vary.
Minimum one concealed pickhole.

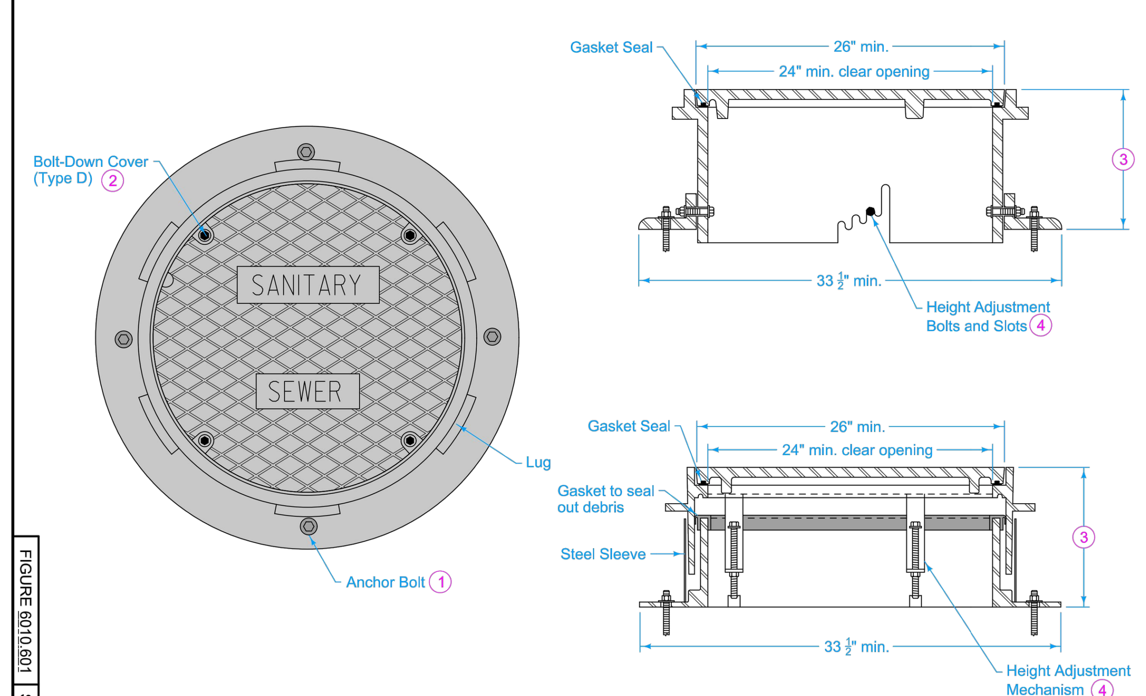
1. Anchor the lower frame of all three-piece castings to the manhole structure. When specified in the contract documents, anchor the frame of two-piece castings to the manhole structure. If casting frame does not include anchor holes or slots, drill four 7/8 inch diameter holes, equally spaced around the frame.
2. If specified, furnish bolt down frame and cover with four 1/2 inch minimum diameter stainless steel, hex nut, recessed cap screws. Secure cover with screws, washers, and rubber gasket seals.
3. Casting height varies. Minimum adjustment range of 4 inches.

SUDAS | IOWA DOT | REVISION 4 04-21-20 | FIGURE 6010.601 | STANDARD ROAD PLAN | SW-601 | SHEET 1 of 2
REVISIONS: Add option for 3-piece HMA casting.
SUDAS DIRECTOR / DESIGN METHODS ENGINEER
CASTINGS FOR SANITARY SEWER MANHOLES
FIGURE 6010.601 SHEET 1 OF 2

CASTINGS FOR SANITARY SEWER MANHOLES (SW-601, Sheet 2 of 2)

TYPE B: PCC
Three-piece floating casting for use in PCC paving and PCC boxouts

TYPE D: PCC
Three-piece floating casting with bolt-down cover for use in PCC paving and PCC boxouts



TYPICAL SECTION ⑤

Frame Notes:
Size, spacing, and number of lugs and flanges may vary.

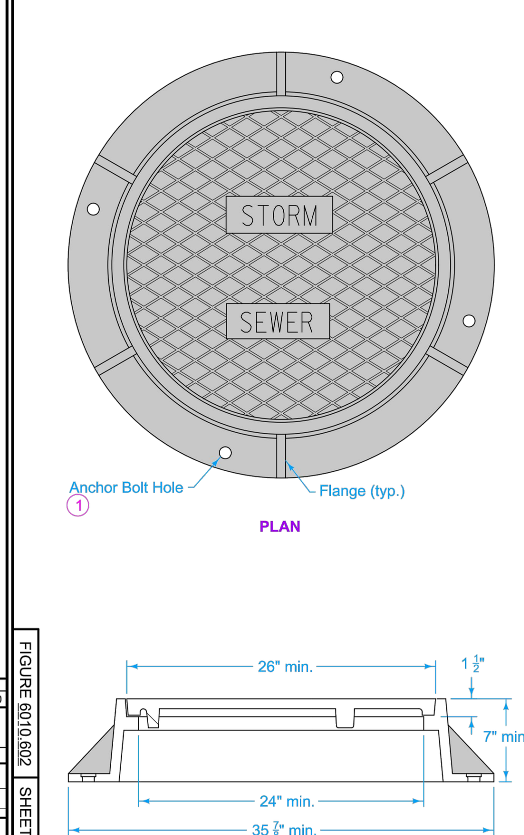
Cover Notes:
Roughness pattern and text style may vary.
Minimum one concealed pickhole.

1. Anchor the lower frame of all three-piece castings to the manhole structure. When specified in the contract documents, anchor the frame of two-piece castings to the manhole structure. If casting frame does not include anchor holes or slots, drill four 7/8 inch diameter holes, equally spaced around the frame.
2. If specified, furnish bolt down frame and cover with four 1/2 inch minimum diameter stainless steel, hex nut, recessed cap screws. Secure cover with screws, washers, and rubber gasket seals.
3. Casting height varies. Minimum adjustment range of 4 inches.
4. Set casting at proper grade using the adjustment slots or adjustment mechanism. Remove bolts or mechanism upon completion of paving.
5. Height adjustment method may vary; two options are shown.

SUDAS | IOWA DOT | REVISION 4 04-21-20 | FIGURE 6010.601 | STANDARD ROAD PLAN | SW-601 | SHEET 2 of 2
REVISIONS: Add option for 3-piece HMA casting.
SUDAS DIRECTOR / DESIGN METHODS ENGINEER
CASTINGS FOR SANITARY SEWER MANHOLES
FIGURE 6010.601 SHEET 2 OF 2

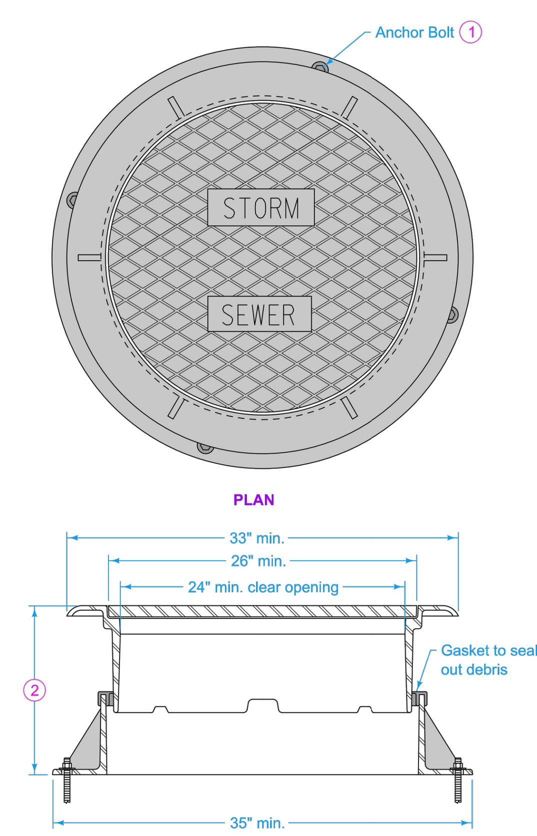
CASTINGS FOR STORM SEWER MANHOLES (SW-602, Sheet 1 of 3)

TYPE E
Two-piece fixed casting



TYPICAL SECTION

TYPE F: HMA
Three-piece floating casting for use in HMA paving



TYPICAL SECTION

Frame Notes:
Size, spacing, and number of lugs and flanges may vary.

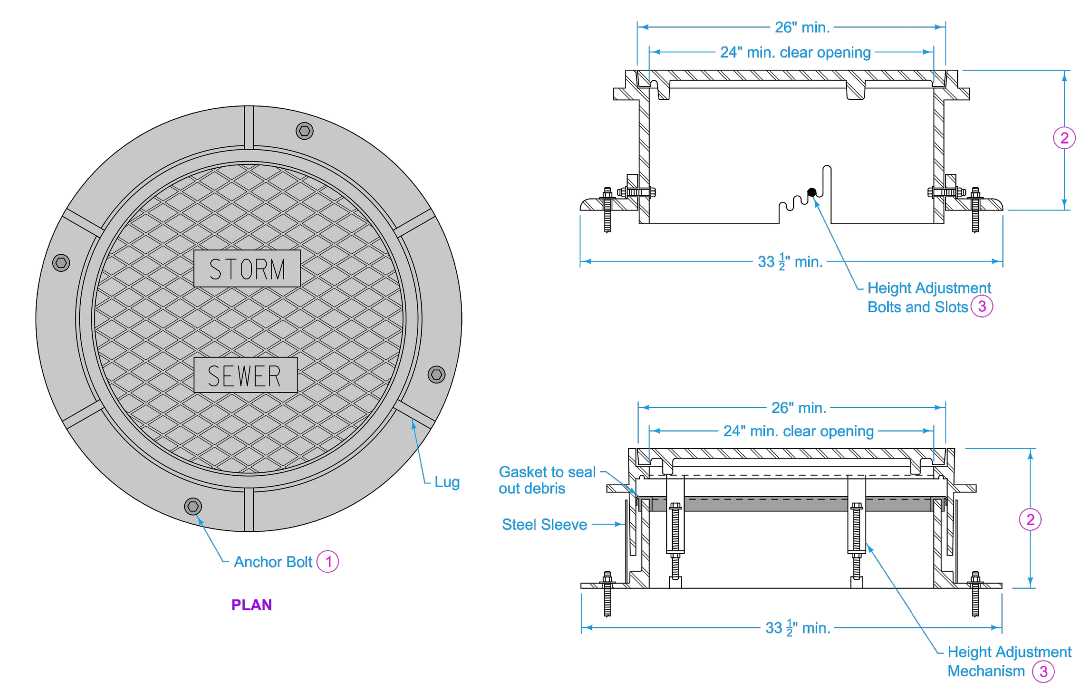
Cover Notes:
Roughness pattern and text style may vary.
Minimum one pickhole.

1. Anchor the lower frame of all three-piece castings to the manhole structure. When specified in the contract documents, anchor the frame of two-piece castings to the manhole structure. If casting frame does not include anchor holes or slots, drill four 7/8 inch diameter holes, equally spaced around the frame.
2. Casting height varies. Minimum adjustment range of 4 inches.

SUDAS | IOWA DOT | REVISION 4 04-21-20 | FIGURE 6010.602 | STANDARD ROAD PLAN | SW-602 | SHEET 1 of 3
REVISIONS: Add option for 3-piece HMA casting.
SUDAS DIRECTOR / DESIGN METHODS ENGINEER
CASTINGS FOR STORM SEWER MANHOLES
FIGURE 6010.602 SHEET 1 OF 3

CASTINGS FOR STORM SEWER MANHOLES (SW-602, Sheet 2 of 3)

TYPE F: PCC
Three-piece floating casting for use in PCC paving and PCC boxouts



TYPICAL SECTION ④

Frame Notes:
Size, spacing, and number of lugs and flanges may vary.

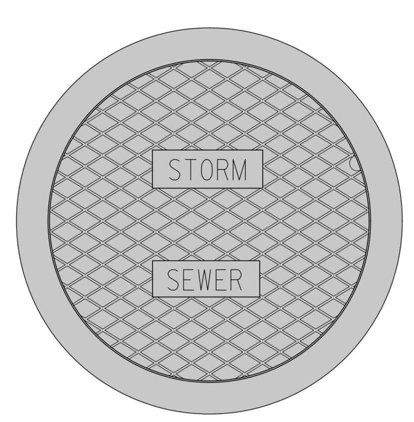
Cover Notes:
Roughness pattern and text style may vary.
Minimum one pickhole.

1. Anchor the lower frame of all three-piece castings to the manhole structure. When specified in the contract documents, anchor the frame of two-piece castings to the manhole structure. If casting frame does not include anchor holes or slots, drill four 7/8 inch diameter holes, equally spaced around the frame.
2. Casting height varies. Minimum adjustment range of 4 inches.
3. Set casting at proper grade using the adjustment slots or adjustment mechanism. Remove bolts or mechanism upon completion of paving.
4. Height adjustment method may vary; two options are shown.

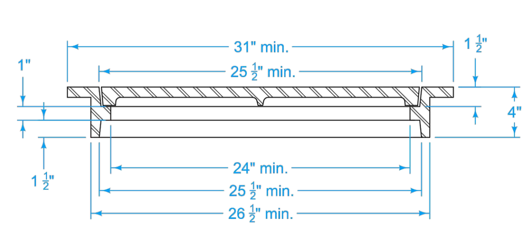
SUDAS | IOWA DOT | REVISION 4 04-21-20 | FIGURE 6010.602 | STANDARD ROAD PLAN | SW-602 | SHEET 2 of 3
REVISIONS: Add option for 3-piece HMA casting.
SUDAS DIRECTOR / DESIGN METHODS ENGINEER
CASTINGS FOR STORM SEWER MANHOLES
FIGURE 6010.602 SHEET 2 OF 3

CASTINGS FOR STORM SEWER MANHOLES (SW-602, Sheet 3 of 3)

TYPE G
Two piece fixed casting



PLAN

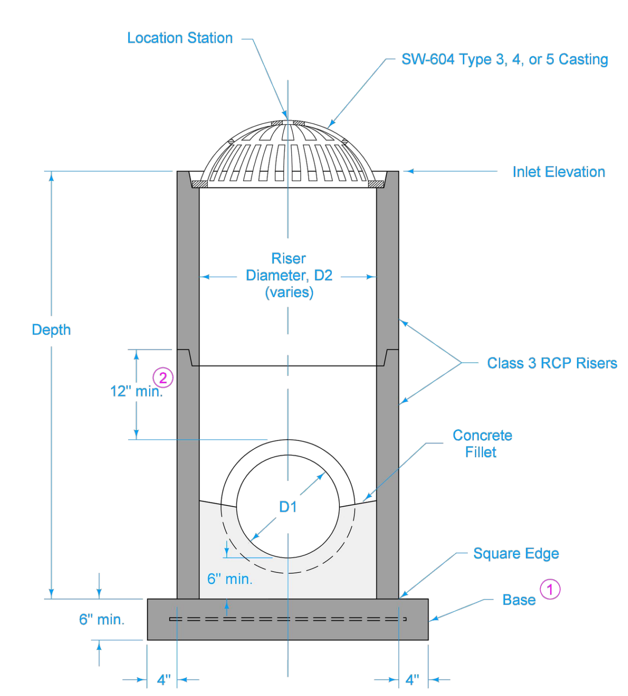


TYPICAL SECTION

Cover Notes:
Roughness pattern and text style may vary.
Minimum one pickhole.

SUDAS | IOWA DOT | REVISION 4 04-21-20 | FIGURE 6010.602 | STANDARD ROAD PLAN | SW-602 | SHEET 3 of 3
REVISIONS: Add option for 3-piece HMA casting.
SUDAS DIRECTOR / DESIGN METHODS ENGINEER
CASTINGS FOR STORM SEWER MANHOLES
FIGURE 6010.602 SHEET 3 OF 3

CIRCULAR AREA INTAKE (SW-512, Sheet 1 of 2)



TYPICAL SECTION

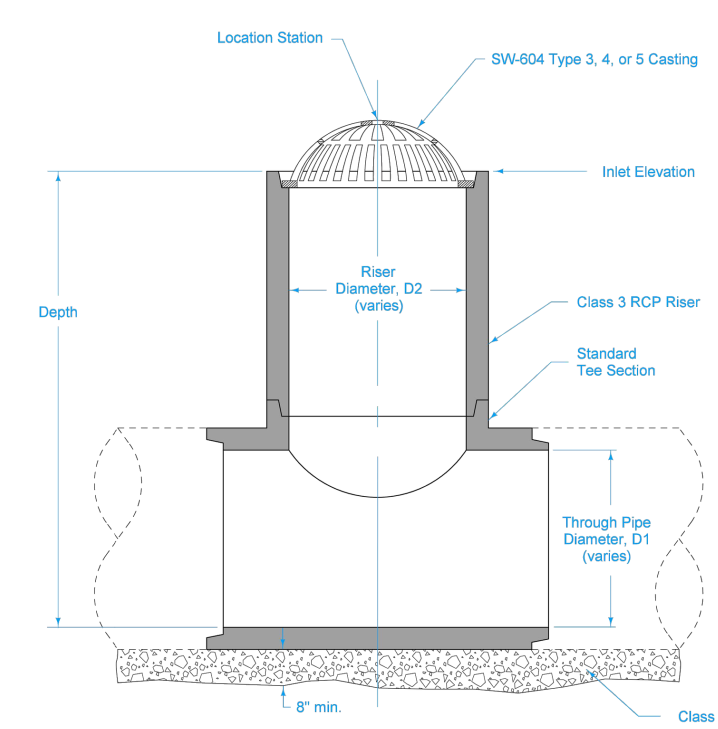
CASE 1

1. Precast (shown) or cast-in-place base:
   - Precast: 6 inch thick concrete with #6 welded wire mesh on 4 inch centers (WWF 4" x 4"). Center mesh vertically within base.
   - Cast-in-place: 8 inch thick non-reinforced concrete.
2. 12 inch minimum riser height above all pipes.

INTAKE SIZE - CASE 1	
Outlet Pipe Diameter, D1	Minimum Riser Diameter, D2
12"	18"
15"	24"
18"	24"
21"	30"
24"	30"
27"	36"

SUDAS | IOWA DOT | REVISION 4 04-21-20 | FIGURE 6010.512 | STANDARD ROAD PLAN | SW-512 | SHEET 1 of 2
REVISIONS: Changed 1 to I on Bedding Material.
SUDAS DIRECTOR / DESIGN METHODS ENGINEER
CIRCULAR AREA INTAKE
FIGURE 6010.512 SHEET 1 OF 2

CIRCULAR AREA INTAKE (SW-512, Sheet 2 of 2)



TYPICAL SECTION

CASE 2

3. Minimum riser diameter is 18 inches.

INTAKE SIZE - CASE 2	
Through Pipe Diameter, D1	Maximum ③ Riser Diameter, D2
18"	18"
21"	18"
24"	24"
27"	24"
30"	30"
36" or more	36"

SUDAS | IOWA DOT | REVISION 4 04-21-20 | FIGURE 6010.512 | STANDARD ROAD PLAN | SW-512 | SHEET 2 of 2
REVISIONS: Changed 1 to I on Bedding Material.
SUDAS DIRECTOR / DESIGN METHODS ENGINEER
CIRCULAR AREA INTAKE
FIGURE 6010.512 SHEET 2 OF 2

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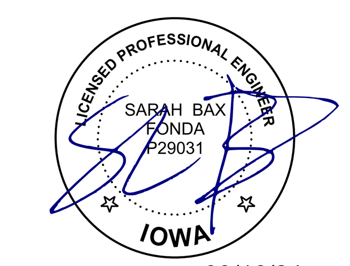
COUNTRY CLUB GLEN PLAT 13
PRELIMINARY PLAT AND SITE PLAN
NW 161st STREET & HICKMAN ROAD/US HWY 6
CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

No.	Description	Date
1	STARBUCKS 2ND REVIEW	04/10/24
2	DEVELOPMENT REVIEW	04/17/24
3	DEVELOPMENT REVIEW RE-SUBMITTAL	07/19/24
4	DEVELOPMENT REVIEW RESPONSE	08/20/24
5	DEVELOPMENT REVIEW RESUBMITTAL	09/16/24



09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

Drawn By/Checked By:	MW/SBF
Project Number	2303492
Permit	08-20-24
Bid	-- -- --

DETAILS

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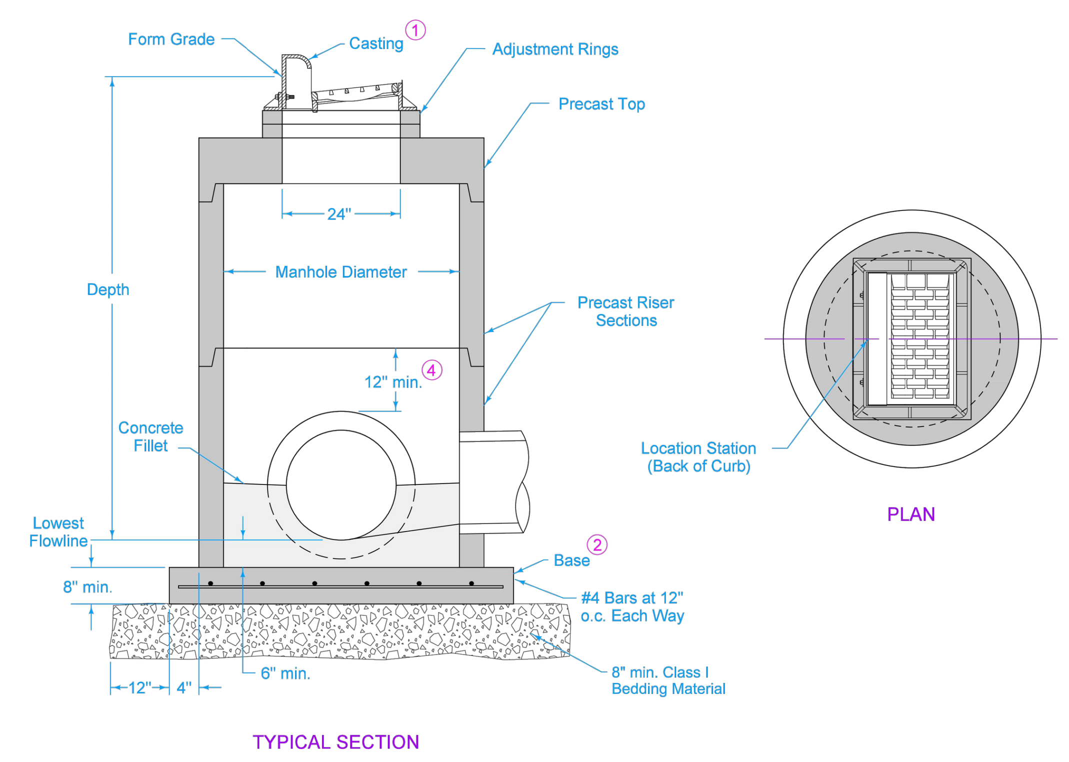
C5.1

CIRCULAR SINGLE GRATE INTAKE (SW-502)



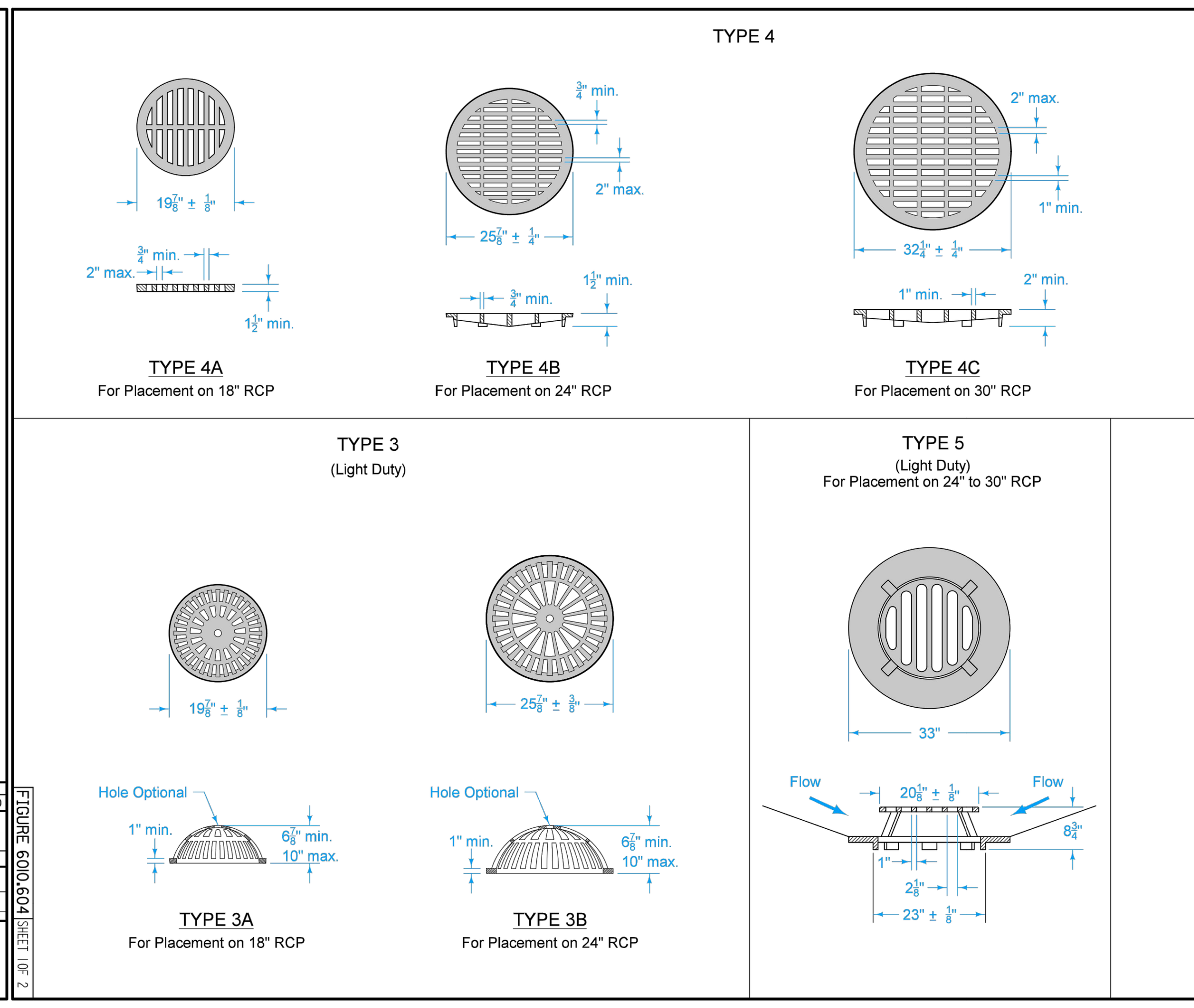
Refer to SW-514 for boxout details.

1. SW-603 Type R unless Type Q is specified in the contract documents.
2. Cast-in-place base shown. Base may be square. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.
3. For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.
4. 12 inch minimum riser height above all pipes.

Manhole Diameter (inches)	Maximum Pipe Diameter (3) (inches) for 2 Pipes at 180° Separation	at 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

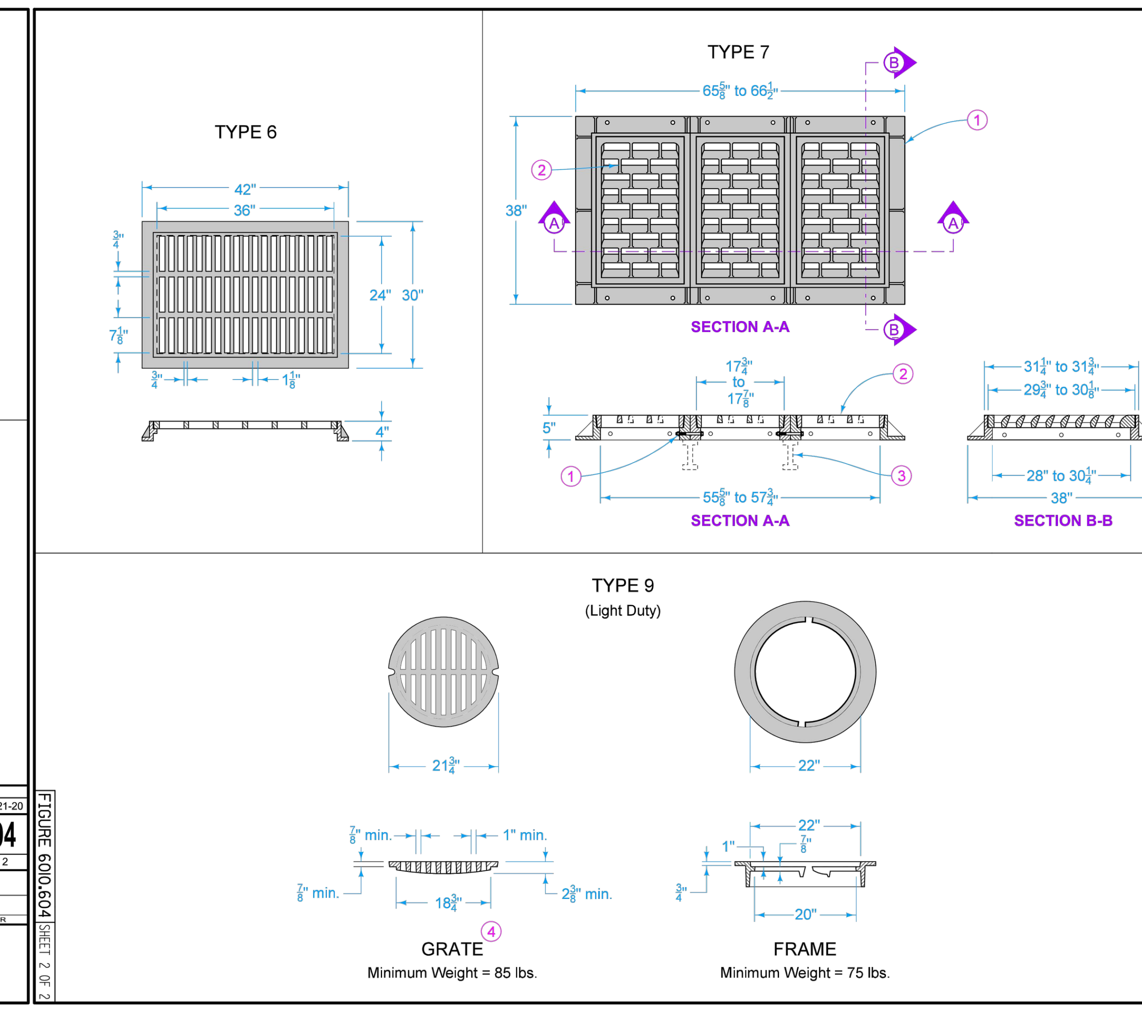
SUDAS | IOWADOT | REVISION 1 04-21-20 | SW-502
FIGURE 6010.502 | STANDARD ROAD PLAN | SHEET 1 of 1
REVISIONS: Added Class I Bedding Material.
SUDAS DIRECTOR | DESIGN METHODS ENGINEER
CIRCULAR SINGLE GRATE INTAKE
FIGURE 6010.502 SHEET 1 OF 1

CASTINGS FOR AREA INTAKES (SW-604, Sheet 1 of 2)



SUDAS | IOWADOT | REVISION 3 04-21-20 | SW-604
FIGURE 6010.604 | STANDARD ROAD PLAN | SHEET 1 of 2
REVISIONS: Added Type 7 casting. Modified circle notes.
SUDAS DIRECTOR | DESIGN METHODS ENGINEER
CASTINGS FOR AREA INTAKES
FIGURE 6010.604 SHEET 1 OF 2

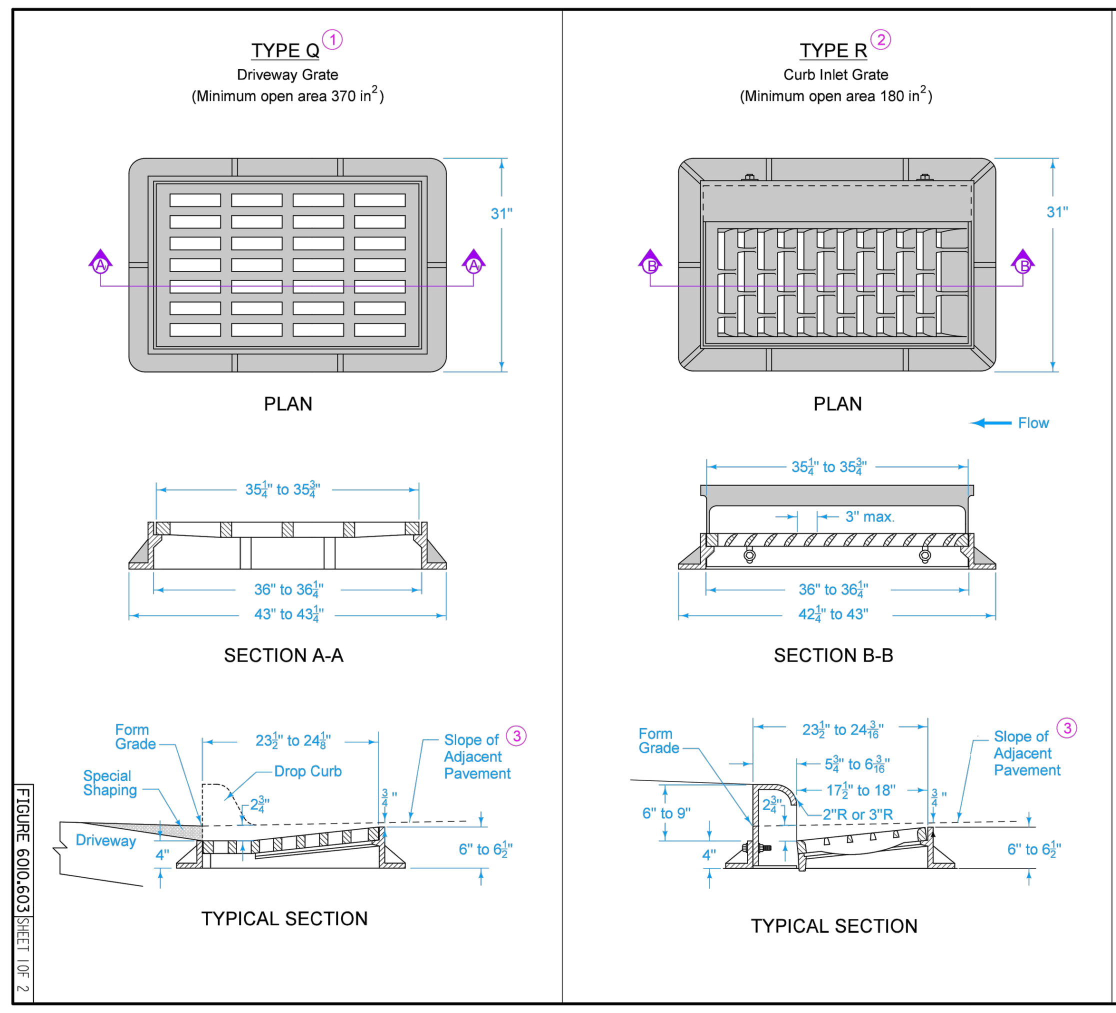
CASTINGS FOR AREA INTAKES (SW-604, Sheet 2 of 2)



1. Frame provided in three segments (two ends and one center). Bolt segments together as specified by the casting manufacturer.
2. Provide bicycle safe, vane style grates with a minimum open area of 4 square feet. At low points, grates with vanes facing both directions will be allowed.
3. If required by casting manufacturer, provide support beam under all frame joints. Modify structure walls as required to provide pocket for beam.
4. Cast grate without locking lugs so it may be used in an inverted position.

SUDAS | IOWADOT | REVISION 3 04-21-20 | SW-604
FIGURE 6010.604 | STANDARD ROAD PLAN | SHEET 2 of 2
REVISIONS: Added Type 7 casting. Modified circle notes.
SUDAS DIRECTOR | DESIGN METHODS ENGINEER
CASTINGS FOR AREA INTAKES

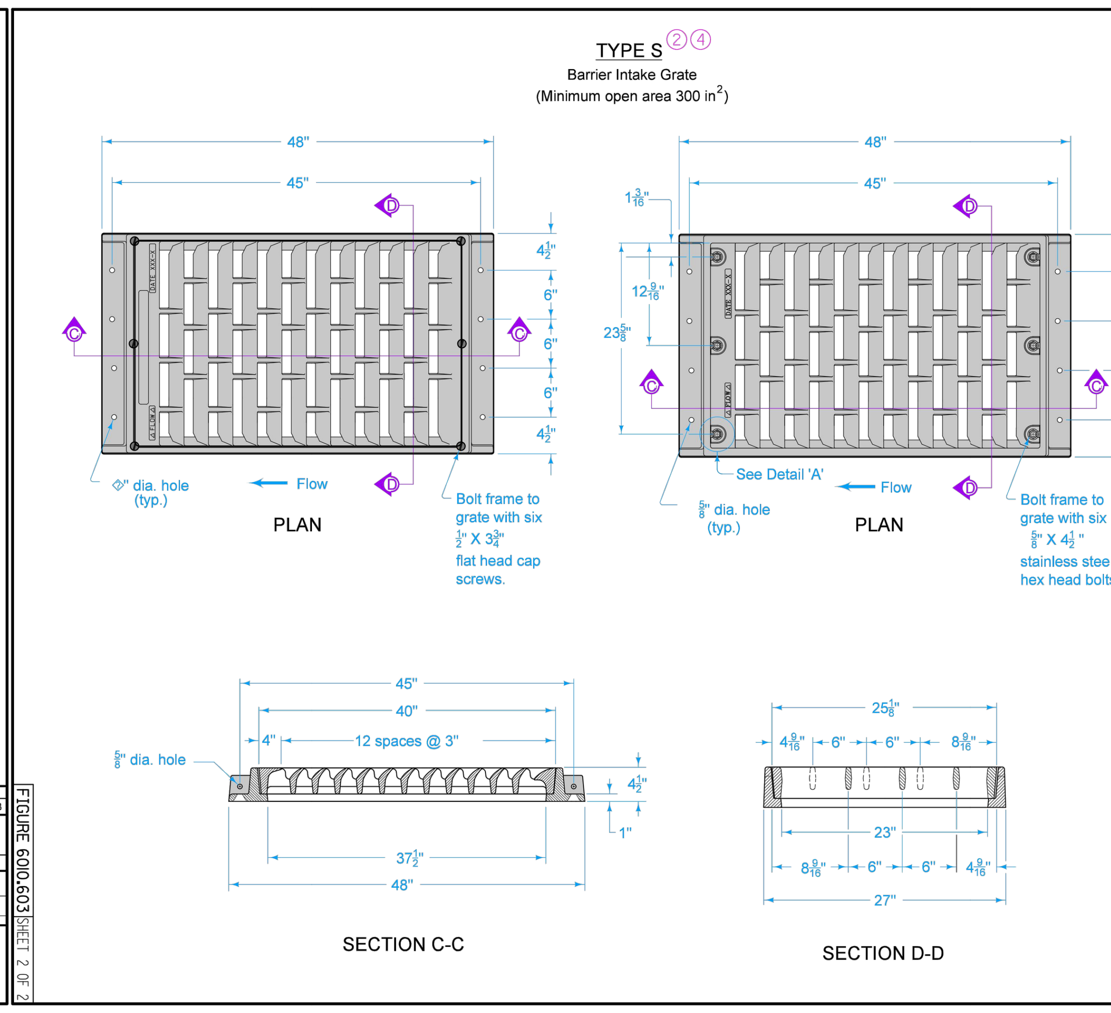
CASTINGS FOR GRATE INTAKES (SW-603, Sheet 1 of 2)



1. For use at curb drops for driveways. Use only when specified in the contract documents.
2. Provide bicycle-safe vane-style grate. At low points, grates with vanes facing both directions of flow are allowed.
3. For details of boxout pavement, refer to SW-514.

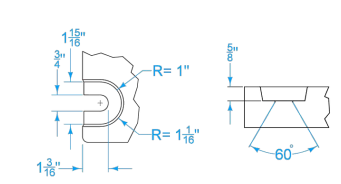
SUDAS | IOWADOT | REVISION 6 10-16-18 | SW-603
FIGURE 6010.603 | STANDARD ROAD PLAN | SHEET 1 of 2
REVISIONS: Corrected typo on page two that said SHEET 1 of 2.
SUDAS DIRECTOR | DESIGN METHODS ENGINEER
CASTINGS FOR GRATE INTAKES
FIGURE 6010.603 SHEET 1 OF 2

CASTINGS FOR GRATE INTAKES (SW-603, Sheet 2 of 2)



2. Provide bicycle-safe vane-style grate. At low points, grates with vanes facing both directions of flow are allowed. The Contractor has the choice of which Type S Grate to use.
4. Use ductile iron frame castings meeting the requirements of ASTM A 536.

Frame minimum weight = 220 lbs.
Grate minimum weight = 340 lbs.

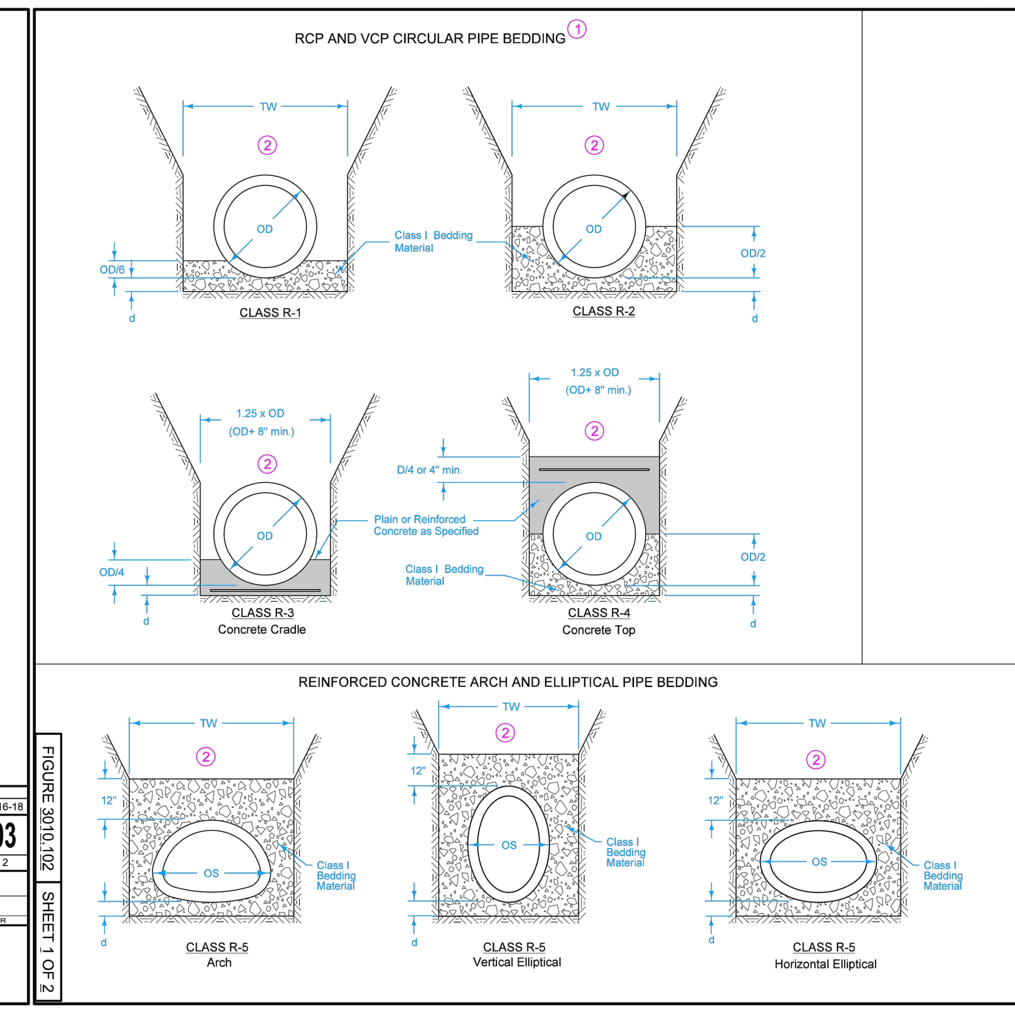


DETAIL'A'
Bolt Slot Detail

SUDAS | IOWADOT | REVISION 6 10-16-18 | SW-603
FIGURE 6010.603 | STANDARD ROAD PLAN | SHEET 2 of 2
REVISIONS: Corrected typo on page two that said SHEET 1 of 2.
SUDAS DIRECTOR | DESIGN METHODS ENGINEER
CASTINGS FOR GRATE INTAKES
FIGURE 6010.603 SHEET 2 OF 2

RIGID GRAVITY PIPE TRENCH BEDDING (SW-102, Sheet 1 of 2)

DO NOT USE ON PRIMARY ROADWAYS



Refer to sheet 2 for bury depth restrictions.

1. Use Bedding Class R-1 or R-2 unless specified otherwise.
2. Place remainder of bedding and backfill materials as specified in the contract documents.

Key

OD = Outside diameter of pipe
OS = Outside span of pipe
TW = Trench width at top of pipe: Min. = OD+18 inches; Max.= 1.25xOD+12 inches OR 54 inches (whichever is greater)
d = Depth of bedding material below pipe: OD/8 or OS/8, OR 4 inches (whichever is greater)

SUDAS | IOWADOT | REVISION 4 04-20-21 | SW-102
FIGURE 3010.102 | STANDARD ROAD PLAN | SHEET 1 of 2
REVISIONS: Added note DO NOT USE ON PRIMARY ROADWAYS.
SUDAS DIRECTOR | DESIGN METHODS ENGINEER
RIGID GRAVITY PIPE TRENCH BEDDING
FIGURE 3010.102 SHEET 1 OF 2

RIGID GRAVITY PIPE TRENCH BEDDING (SW-102, Sheet 2 of 2)

ALLOWABLE BURY DEPTH

CLASS III RCP

Pipe Diameter (in)	Class R-1 Bedding	Class R-2 Bedding	Class R-3 & R-4 Bedding: No Steel	As=0.4%	As=1.0%
12	7'	10'	15'	19'	27'
15	8'	10'	16'	19'	27'
18	8'	11'	16'	20'	40'
21	8'	11'	18'	26'	40'
24	8'	12'	23'	36'	40'
27	10'	15'	30'	40'	40'
30	11'	15'	29'	40'	40'
33	11'	15'	28'	40'	40'
36	11'	15'	27'	40'	40'
42	11'	15'	26'	38'	40'
48	11'	15'	26'	36'	40'
54	11'	15'	25'	34'	40'
60	11'	15'	25'	33'	40'
66	11'	15'	24'	32'	40'
72	11'	15'	24'	32'	40'

As = Area of Steel Reinforcing

CLASS IV RCP

Pipe Diameter (in)	Class R-1 Bedding	Class R-2 Bedding	Class R-3 & R-4 Bedding: No Steel	As=0.4%	As=1.0%
12	12'	15'	23'	28'	40'
15	12'	16'	23'	30'	40'
18	13'	16'	29'	40'	40'
21	13'	18'	40'	40'	40'
24	16'	23'	40'	40'	40'
27	19'	30'	40'	40'	40'
30	19'	29'	40'	40'	40'
33	19'	28'	40'	40'	40'
36	19'	28'	40'	40'	40'
42	18'	27'	40'	40'	40'
48	18'	26'	40'	40'	40'
54	18'	25'	40'	40'	40'
60	18'	25'	40'	40'	40'
66	18'	25'	40'	40'	40'
72	18'	24'	40'	40'	40'

As = Area of Steel Reinforcing

CLASS V RCP

Pipe Diameter (in)	Class R-1 Bedding	Class R-2 Bedding	Class R-3 & R-4 Bedding: No Steel	As=0.4%	As=1.0%
12	18'	23'	35'	40'	40'
15	19'	24'	40'	40'	40'
18	19'	30'	40'	40'	40'
21	25'	40'	40'	40'	40'
24	34'	40'	40'	40'	40'
27	40'	40'	40'	40'	40'
30	40'	40'	40'	40'	40'
33	40'	40'	40'	40'	40'
36	40'	40'	40'	40'	40'
42	37'	40'	40'	40'	40'
48	35'	40'	40'	40'	40'
54	33'	40'	40'	40'	40'
60	32'	40'	40'	40'	40'
66	31'	40'	40'	40'	40'
72	31'	40'	40'	40'	40'

As = Area of Steel Reinforcing

EXTRA STRENGTH VCP

Pipe Dia. (in)	Bedding Class R-1	R-2	R-3 & R-4: No Steel	As=0.4%	As=1.0%
6	25'	30'	30'	30'	30'
8	20'	26'	30'	30'	30'
10	18'	23'	30'	30'	30'
12	16'	20'	30'	30'	30'
15	15'	19'	28'	30'	30'
18	14'	18'	30'	30'	30'
21	15'	22'	30'	30'	30'
24	18'	28'	30'	30'	30'
27	20'	30'	30'	30'	30'
30	19'	29'	30'	30'	30'
33	20'	30'	30'	30'	30'
36	20'	30'	30'	30'	30'
39	19'	29'	30'	30'	30'
42	18'	26'	30'	30'	30'

As = Area of Steel Reinforcing

CONCRETE ARCH PIPE

Pipe Size (in x in)	Equiv. Dia. (in)	Pipe Class A-III	A-IV
18 x 11	15	6'	11'
22 x 13	18	6'	11'
26 x 15	21	6'	13'
29 x 18	24	7'	15'
36 x 22	30	8'	15'
44 x 27	36	8'	14'
51 x 31	42	8'	15'
58 x 36	48	8'	15'
65 x 40	54	8'	15'
73 x 45	60	8'	14'
88 x 54	72	9'	14'

Based on Class R-5 bedding

HORIZONTAL ELLIPTICAL RCP

Pipe Size (in x in)	Equiv. Dia. (in)	Pipe Class HE-III	HE-IV
14 x 23	18	12'	22'
19 x 30	24	15'	29'
22 x 34	27	15'	28'
24 x 38	30	15'	27'
27 x 42	33	15'	27'
29 x 45	36	15'	26'
32 x 49	39	15'	26'
34 x 54	42	15'	25'
38 x 60	48	15'	25'
43 x 68	54	15'	24'
48 x 76	60	15'	24'
53 x 83	66	15'	24'
58 x 91	72	15'	24'
63 x 98	78	15'	23'
68 x 106	84	15'	23'

Based on Class R-5 bedding

VERTICAL ELLIPTICAL RCP

Pipe Size (in x in)	Equiv. Dia. (in)	Pipe Class VE-III	VE-IV	VE-V	VE-VI
23 x 14	18	10'	15'	22'	33'
30 x 19	24	10'	16'	34'	40'
34 x 22	27	11'	20'	40'	40'
38 x 24	30	12'	23'	40'	40'
42 x 27	33	15'	30'	40'	40'
45 x 29	36	15'	29'	40'	40'
49 x 32	39	15'	29'	40'	40'
54 x 34	42	15'	28'	40'	40'
60 x 38	48	15'	27'	40'	40'
68 x 43	54	15'	27'	40'	40'
76 x 48	60	15'	26'	40'	40'
83 x 53	66	15'	25'	40'	40'
91 x 58	72	15'	25'	40'	40'
98 x 63	78	15'	25'	40'	40'
106 x 68	84	15'	24'	40'	40'

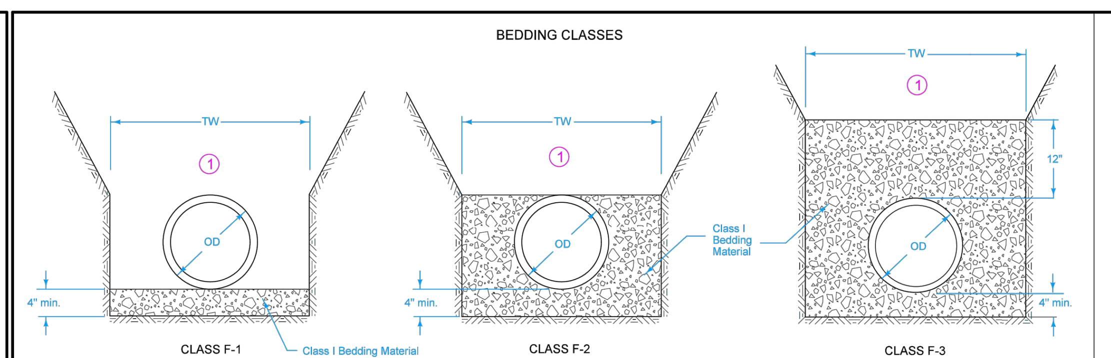
Based on Class R-5 bedding

SUDAS | IOWADOT | REVISION 4 04-20-21 | SW-102
FIGURE 3010.102 | STANDARD ROAD PLAN | SHEET 2 of 2
REVISIONS: Added note DO NOT USE ON PRIMARY ROADWAYS.
SUDAS DIRECTOR | DESIGN METHODS ENGINEER
RIGID GRAVITY PIPE TRENCH BEDDING
FIGURE 3010.102 SHEET 2 OF 2

FLEXIBLE GRAVITY PIPE TRENCH BEDDING (SW-103)

DO NOT USE ON PRIMARY ROADWAYS

BEDDING CLASSES



1. Place remainder of bedding and backfill materials as specified in the contract documents.
2. Minimum depth of bury 12 inches or as specified by the manufacturer.

ALLOWABLE BEDDING CLASSES

PIPE MATERIAL	STORM SEWER	SANITARY SEWER
Ductile Iron	F-1, F-2, F-3	F-1, F-2, F-3
HDPE	F-2, F-3	Not allowed
Polypropylene	F-2, F-3	F-3
PVC	F-2, F-3	F-3

Key

OD = Outside diameter of pipe
TW = Trench width at top of pipe: Min. = OD+18 inches OR 1.25xOD+12 inches (whichever is greater)

ALLOWABLE BURY DEPTH (2)

PVC PIPE

Pipe Diameter (in)	ASTM D 3034 Solid Wall SDR 23.5	ASTM D 3034 Solid Wall SDR 26	ASTM D 3034 Solid Wall SDR 35	ASTM F 679 Solid Wall SDR 35	ASTM F 949 Corrug. Exterior	ASTM F 1803 Closed Profile	ASTM D 2680 Composite (Truss Type)
8	30'	28'	24'	---	24'	---	32'
10	30'	28'	24'	---	24'	---	32'
12	30'	28'	24'	---	24'	---	32'
15	30'	28'	24'	---	24'	---	32'
18	---	---	---	24'	24'	---	---
21	---	---	---	24'	24'	24'	---
24	---	---	---	24'	24'	24'	---
27	---	---	---	24'	---	24'	---
30	---	---	---	24'	24'	24'	---
33	---	---	---	24'	---	---	---
36	---	---	---	24'	24'	24'	---
42	---	---	---	24'	---	24'	---
48	---	---	---	24'	---	24'	---
54	---	---	---	---	---	24'	---
60	---	---	---	---	---	24'	---

DUCTILE IRON, AWWA C151, CLASS 52

Pipe Diameter (in)	Class F-1 Bedding	Class F-2 Bedding	Class F-3 Bedding
4	40'	40'	40'
6	40'	40'	40'
8	40'	40'	40'
10	40'	40'	40'
12	37'	40'	40'
14	31'	40'	40'
16	28'	37'	40'
18	25'	34'	40'
20	23'	32'	40'
24	20'	29'	38'
30	18'	23'	31'
36	18'	22'	30'
42	17'	21'	29'
48	16'	19'	27'
54	16'	19'	27'

HDPE PIPE

Pipe Diameter (in)	AASHTO M 294
12	8'
15	9'
18	9'
24	9'
30	9'
36	9'
42	8'
48	8'
54	8'
60	8'

POLYPROPYLENE PIPE

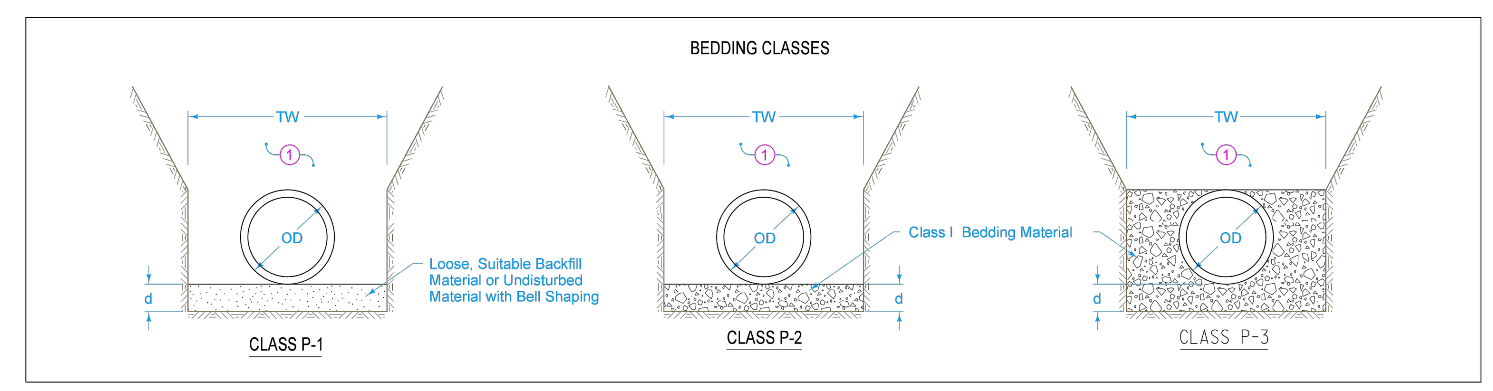
Pipe Diameter (in)	ASTM F 2764
12	24'
15	25'
18	22'
24	20'
30	22'
36	21'
42	22'
48	23'
54	21'
60	21'

SUDAS | IOWADOT | REVISION 4 04-20-21 | SW-103
FIGURE 3010.103 | STANDARD ROAD PLAN | SHEET 1 of 1
REVISIONS: Added note DO NOT USE ON PRIMARY ROADWAYS.
SUDAS DIRECTOR | DESIGN METHODS ENGINEER
FLEXIBLE GRAVITY PIPE TRENCH BEDDING
FIGURE 3010.103 SHEET 1 OF 1

PRESSURE PIPE TRENCH BEDDING (SW-104)

DO NOT USE ON PRIMARY ROADWAYS

BEDDING CLASSES



ALLOWABLE BURY DEPTH

DUCTILE IRON, AWWA C151, CLASS 52

Pipe Diameter (inches)	Class P-1 Bedding	Class P-2 Bedding	Class P-3 Bedding
4	40'	40'	40'
6	40'	40'	40'
8	40'	40'	40'
10	36'	40'	40'
12	31'	40'	40'
14	26'	40'	40'
16	23'	37'	40'
18	20'	34'	40'
20	18'	32'	40'
24	16'	29'	38
30	13'	23'	31'
36	13'	22'	30'
42	13'	21'	29'
48	13'	19'	27'
54	13'	19'	27'

PVC, AWWA C900, DR18

Pipe Diameter (inches)	Class P-1 Bedding	Class P-2 Bedding	Class P-3 Bedding
4	19'	23'	40'
6	19'	23'	40'
8	19'	23'	40'
10	19'	23'	40'
12	19'	23'	40'
14	19'	23'	40'
16	19'	23'	40'
18	19'	23'	40'
20	19'	23'	40'
24	19'	23'	40'

1. Place remainder of bedding and backfill material as specified in the contract documents.

Key

OD = Outside diameter of pipe
TW = Trench width at top of pipe: Min. = OD+18 inches OR 1.25xOD+12 inches (whichever is greater)
d = Depth of bedding material below pipe: Min. = OD/8 OR 4 inches (whichever is greater)

SUDAS | IOWADOT | REVISION 3 04-20-21 | SW-104
FIGURE 3010.104 | STANDARD ROAD PLAN | SHEET 1 of 1
REVISIONS: Added note DO NOT USE ON PRIMARY ROADWAYS.
SUDAS DIRECTOR | DESIGN METHODS ENGINEER
PRESSURE PIPE TRENCH BEDDING
FIGURE 3010.104 SHEET 1 OF 1

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COUNTRY CLUB GLEN PLAT 13
PRELIMINARY PLAT AND SITE PLAN
NW 161st STREET & HICKMAN ROAD/US HWY 6
CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

No.	Description	Date
1	STARBUCKS 2ND REVIEW	04/10/24
2	DEVELOPMENT REVIEW	04/17/24
3	DEVELOPMENT REVIEW RE-SUBMITTAL	07/19/24
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5	DEVELOPMENT REVIEW RESUBMITTAL	09/16/24

09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

Drawn By/Checked By:	MW/SBF
Project Number	2303492
Permit	08-20-24
Bid	-- -- --

DETAILS

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C5.2

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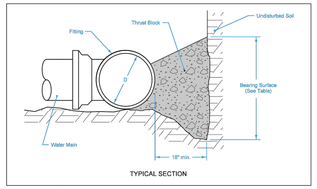
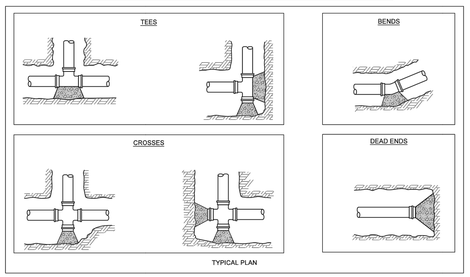


TYPICAL SECTION



TYPICAL PLAN

Extend thrust blocks to undisturbed soil. Excavation into trench wall may be necessary.

Form vertical surfaces of poured concrete thrust blocks except on bearing surface.

Encase all fittings in polyethylene wrap. Do not allow concrete to directly contact joints or fitting bolts.

Diameter of Pipe, D (inches)	MINIMUM BEARING SURFACE (sf)				
	Bends				Tees and Dead Ends
	11½°	22½°	45°	90°	
4	1	1	2	4	3
6	1	2	4	8	6
8	2	4	7	14	10
10	3	6	11	21	15
12	4	8	16	29	21
14	5	11	21	39	28
16	7	14	27	50	36
18	9	17	34	63	45
20	11	21	42	78	55
24	15	31	60	111	78
30	24	47	92	171	120
36	34	67	132	244	173

Minimum surface area based on water pressure of 150 psi and allowable soil pressure of 1,000 psf.

SUDAS	IOWA DOT	REVISIONS 1	10-18-10
FIGURE 5010.101	STANDARD ROAD PLAN	WM-101 SHEET 1 of 2	

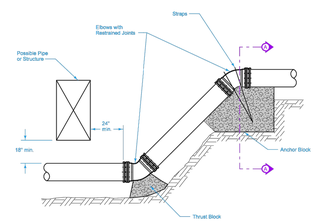
REVISIONS: Replaced Iowa DOT and SUDAS logos with new logos.

Thomas J. Schiegel 10/18/2010
PLANS ENGINEER DATE

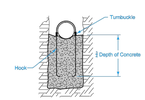
THRUST BLOCKS

FIGURE 5010.101 SHEET 1 OF 2

CHANGES IN PIPE DEPTH



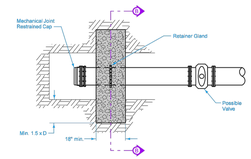
ELEVATION



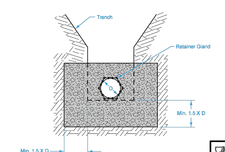
SECTION A-A

DEAD ENDS (ALTERNATE METHOD)

Use only when allowed by the Engineer, or when specified in the contract documents.



PLAN



SECTION B-B

SUDAS	IOWA DOT	REVISIONS 1	10-18-10
FIGURE 5010.101	STANDARD ROAD PLAN	WM-101 SHEET 2 of 2	

REVISIONS: Replaced Iowa DOT and SUDAS logos with new logos.

Thomas J. Schiegel 10/18/2010
PLANS ENGINEER DATE

THRUST BLOCKS

FIGURE 5010.101 SHEET 2 OF 2

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12 Sumner Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100

COUNTRY CLUB GLEN PLAT 13
PRELIMINARY PLAT AND SITE PLAN
NW 161st STREET & HICKMAN ROAD/US HWY 6
CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

No.	Description	Date
1	STARBUCKS 2ND REVIEW	04/10/24
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4	DEVELOPMENT REVIEW RESPONSE	08/20/24
5	DEVELOPMENT REVIEW RESUBMITTAL	09/16/24

LICENSED PROFESSIONAL ENGINEER
SARAH BAX FONDA
P29031
IOWA
09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

Drawn By/Checked By:	MW/SBF
Project Number	2303492
Permit	08-20-24
Bid	-- -- --

DETAILS - WATER

CALL BEFORE YOU
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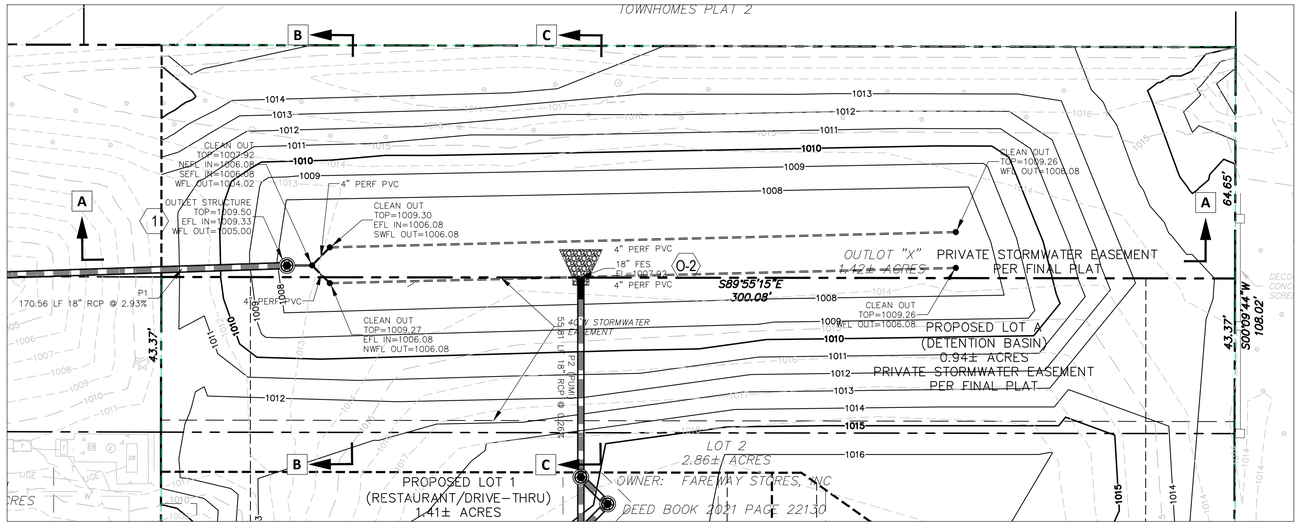
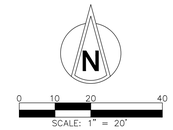
811 or 1-800-292-8989
IOWA ONE-CALL SYSTEM, INC.

THE TOPOGRAPHIC INFORMATION IN THIS PLAN SET IS BASED OFF AN ALTA/NSPS LAND TITLE SURVEY PROVIDED BY CLAPSADDLE-GARBER ASSOCIATES, INC. ON FEBRUARY 20, 2024.

C5.3

K:\GROUP CARE\LEADERS REAL ESTATE\PROJECTS\CLIVE IA - STARBUCKS 2303492\CIVIL CONSTRUCTION DOCUMENTS\D - CONSTRUCTION DETAILS.DWG

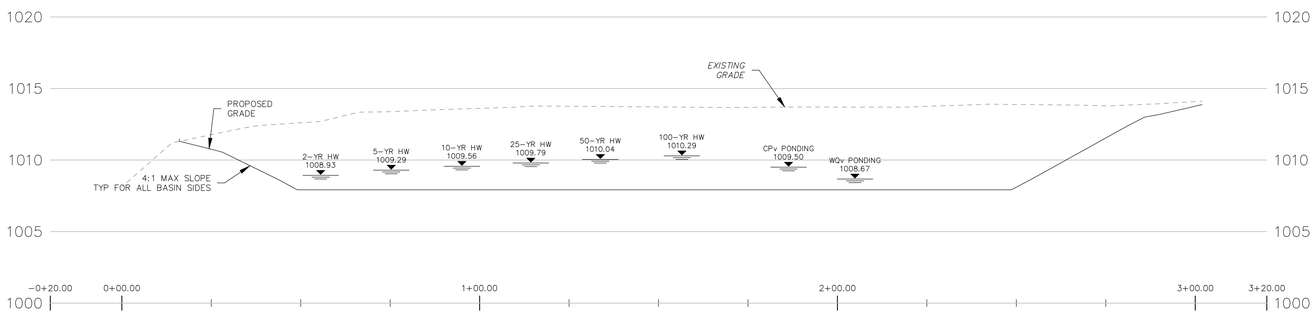


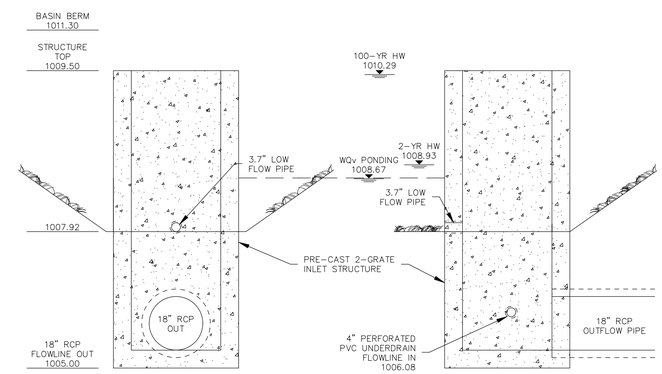


	2-Year 24-hr	5-Year 24-hr	10-Year 24-hr	25-Year 24-hr	50-Year 24-hr	100-Year 24-hr
Post-Development Runoff (cfs)	1.277	1.786	2.244	4.824	6.987	8.315
Pre-Development Runoff (cfs)	2.424	4.129	5.803	8.568	11.040	13.720
Difference (cfs)	-1.147	-2.343	-3.559	-3.744	-4.053	-5.405

	Detention Basin High Water					
	2-Year 24-Hour	5-Year 24-Hour	10-Year 24-Hour	25-Year 24-Hour	50-Year 24-Hour	100-Year 24-Hour
Detention Basin High Water (Elev)	1008.93	1009.29	1009.56	1009.79	1010.04	1010.29
Detention Basin Berm (Elev)	1011.30					
Freeboard (ft)	2.37	2.01	1.74	1.51	1.26	1.01
Detention Basin Lowest Elevation (Elev)	1007.92					
Max Water Depth (ft)	1.01	1.37	1.64	1.87	2.12	2.37

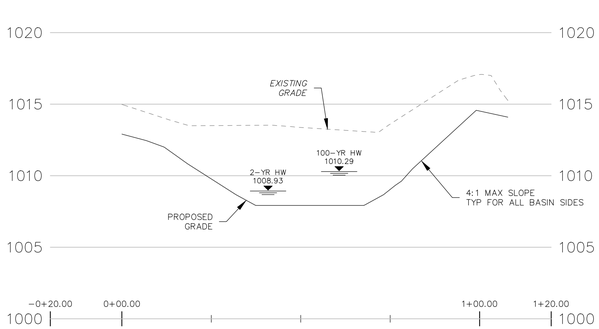
A—A





1 C7.0 DETENTION BASIN OUTLET STRUCTURE DETAIL
NO SCALE

B—B



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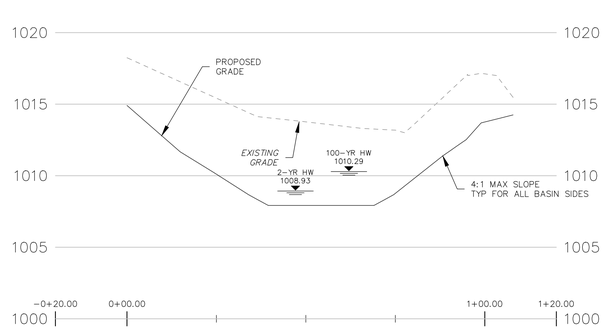

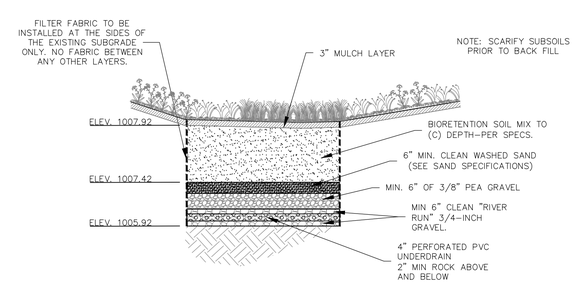

2 C7.0 BIORETENTION TYPICAL SECTION
NO SCALE

PROFILE SCALE:

1"=5'

1"=20'

NOTE: CONTRACTOR/OWNER MUST DEMONSTRATE THAT THE BIORETENTION CELL DRAWS DOWN IN 24 HOURS OR LESS BASED AFTER 1.25" RAINFALL. IF THIS RAINFALL DEPTH OR SIMILAR DOES NOT OCCUR AFTER INSTALLATION OF PRACTICE AND FINAL CLOSEOUT, DRAWDOWN MAY BE DEMONSTRATED BY SUPPLYING THE WQv TO THE PRACTICE. SUPPLIED WATER MUST BE CLEA. CITY OF CLIVE INSPECTION IS REQUIRED PRIOR TO BACKFILL OF THE PRACTICE WITH FILTER MATERIAL.

LEGEND	
PROPOSED GRADE	————
EXISTING GRADE	- - - - - - - -

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IOWA ONE-CALL SYSTEM, INC.

THE TOPOGRAPHIC INFORMATION IN THIS PLAN SET IS BASED OFF AN ALTA/NSPS LAND TITLE SURVEY PROVIDED BY CLAPSADDLE-GARBER ASSOCIATES, INC. ON FEBRUARY 20, 2024.

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COUNTRY CLUB GLEN PLAT 13
PRELIMINARY PLAT AND SITE PLAN
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CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

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LICENSED PROFESSIONAL ENGINEER
SARAH BAX FONDA
P29031
IOWA
09/16/24

PROFESSIONAL OF RECORD
Sarah Bax Fonda
License No. P29031
Expiration Date 12/31/25

Drawn By/Checked By:	MW/SBF
Project Number	2303492
Permit	08-20-24
Bid	-- -- --

DETENTION BASIN
PLAN AND DETAILS

C7.0

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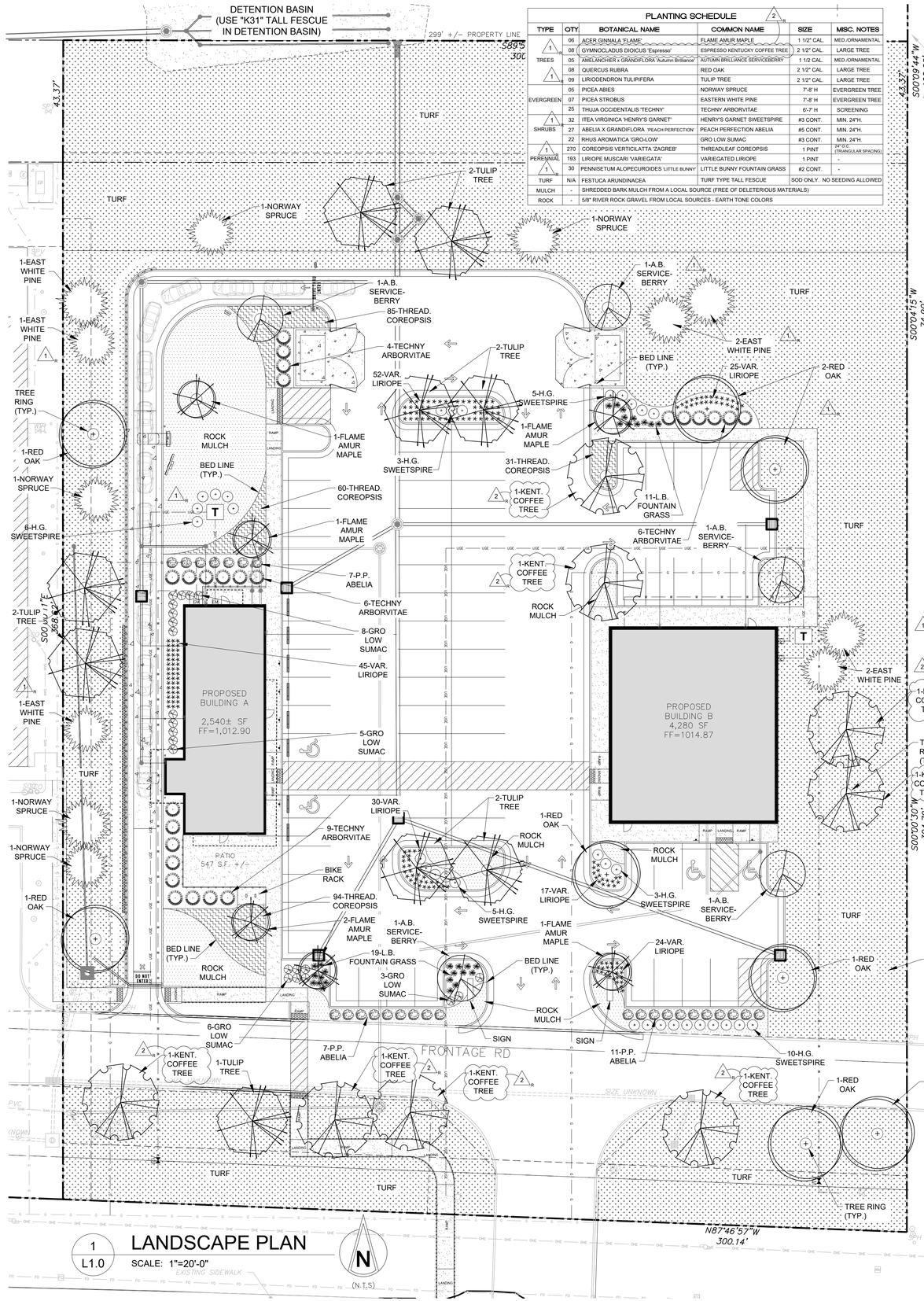

1 L1.0 LANDSCAPE PLAN

SCALE: 1"=20'-0"

(N.T.S)

PLANTING SCHEDULE

TYPE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	MISC. NOTES
TREES	06	ACER GINNALA 'FLAME'	FLAME AMUR MAPLE	1 1/2" CAL.	MED./ORNAMENTAL
	08	GYMNOCLADUS DIOICUS 'Espresso'	ESPRESSO KENTUCKY COFFEE TREE	2 1/2" CAL.	LARGE TREE
	05	AMELANCHER x GRANDIFLORA 'Autumn Brilliance'	AUTUMN BRILLIANCE SERVICEBERRY	1 1/2 CAL.	MED./ORNAMENTAL
	08	QUERCUS RUBRA	RED OAK	2 1/2" CAL.	LARGE TREE
	09	LIRIODENDRON TULIPIFERA	TULIP TREE	2 1/2" CAL.	LARGE TREE
EVERGREEN	05	PICEA ABIES	NORWAY SPRUCE	7'-8' H	EVERGREEN TREE
	07	PICEA STROBUS	EASTERN WHITE PINE	7'-8' H	EVERGREEN TREE
	25	THUJA OCCIDENTALIS 'TECHNY'	TECHNY ARBORVITAE	6'-7' H	SCREENING
SHRUBS	32	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	#3 CONT.	MIN. 24"H.
	27	ABELIA X GRANDIFLORA 'PEACH PERFECTION'	PEACH PERFECTION ABELIA	#5 CONT.	MIN. 24"H.
	22	RHUS AROMATICA 'GRO-LOW'	GRO LOW SUMAC	#3 CONT.	MIN. 24"H.
PERENNIAL	270	COREOPSIS VERTICILATTA 'ZAGREB'	THREADLEAF COREOPSIS	1 PINT	24" O.C. (TRIANGULAR SPACING)
	193	LIRIOPE MUSCARI 'VARIEGATA'	VARIEGATED LIRIOPE	1 PINT	-
	30	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#2 CONT.	-
TURF	N/A	FESTUCA ARUNDINACEA	TURF TYPE TALL FESCUE	SOD ONLY. NO SEEDING ALLOWED	
MULCH	-	SHREDDED BARK MULCH FROM A LOCAL SOURCE (FREE OF DELETERIOUS MATERIALS)			
ROCK	-	5/8" RIVER ROCK GRAVEL FROM LOCAL SOURCES - EARTH TONE COLORS			

SITE TREE CALCULATIONS:

SITE - LOT 1: 61,570 SF OR 1.41 ACRES

OPEN SPACE (C-4 ZONING): 25% OF AREA
61,570 SF x 25% = 15,393 SF OPEN SPACE REQ'D.
22,882 SF OPEN SPACE PROVIDED

SITE TREES REQ'D: 1.5 TREES PER 1,000 SF OF OPEN SPACE
15,393 / 1000 x 1.5 = 23.08 OR 23 TREES REQUIRED
50% TREES TO BE OVERSTORY DECIDUOUS TREES
23 x 50% = 12 OVERSTORY DECIDUOUS TREES REQ'D.
25% TREES TO BE EVERGREEN TREES
23 x 25% = 6 EVERGREEN TREES REQ'D.
25% TREES (REMAINING) ORNAMENTAL, OVERSTORY OR EVERGREEN TREES
23 x 25% = 6 ORNAMENTAL, OVERSTORY OR EVERGREEN TREES REQUIRED

SITE - LOT 2: 42,402 SF OR 0.97 ACRES

OPEN SPACE (C-4 ZONING): 25% OF AREA
42,402 SF x 25% = 10,600 SF OPEN SPACE REQ'D.
20,591 SF OPEN SPACE PROVIDED

SITE TREES REQ'D: 1.5 TREES PER 1,000 SF OF OPEN SPACE
10,600 / 1000 x 1.5 = 15.90 OR 16 TREES REQUIRED
50% TREES TO BE OVERSTORY DECIDUOUS TREES
16 x 50% = 8 OVERSTORY DECIDUOUS TREES REQ'D.
25% TREES TO BE EVERGREEN TREES
16 x 25% = 4 EVERGREEN TREES REQ'D.
25% TREES (REMAINING) ORNAMENTAL, OVERSTORY OR EVERGREEN TREES
16 x 25% = 4 ORNAMENTAL, OVERSTORY OR EVERGREEN TREES REQUIRED

SITE - OUTLOT X: 21,285 SF OR 0.49 ACRES

OPEN SPACE (C-4 ZONING): 25% OF AREA
21,285 SF x 25% = 5,321 SF OPEN SPACE REQ'D.
21,285 SF OPEN SPACE PROVIDED

SITE TREES REQ'D: 1.5 TREES PER 1,000 SF OF OPEN SPACE
5,321 / 1000 x 1.5 = 7.98 OR 8 TREES REQUIRED
50% TREES TO BE OVERSTORY DECIDUOUS TREES
8 x 50% = 4 OVERSTORY DECIDUOUS TREES REQ'D.
25% TREES TO BE EVERGREEN TREES
8 x 25% = 2 EVERGREEN TREES REQ'D.
25% TREES (REMAINING) ORNAMENTAL, OVERSTORY OR EVERGREEN TREES
8 x 25% = 2 ORNAMENTAL, OVERSTORY OR EVERGREEN TREES REQUIRED

SITE TREES REQUIRED:
24 OVERSTORY DECIDUOUOS TREES
12 EVERGREEN TREES
12 ORNAMENTAL TREES

SITE TREES PROVIDED:
25 OVERSTORY DECIDUOUOS TREES
12 EVERGREEN TREES
11 ORNAMENTAL TREES

SITE TREE PLANTING SIZES:

OVERSTORY TREES: 2 1/2" CALIPER (DBH)
EVERGREEN TREES: 6' HT.
ORNAMENTAL TREES: 1 1/2" CALIPER (DBH)

10 L1.0 LANDSCAPE CALCULATIONS

SCALE: N.T.S.

LANDSCAPE SPECIALTY NOTES:

1. CONVERSION OF ALL ASPHALT AND GRAVEL AREAS TO LANDSCAPE SHALL BE DONE IN THE FOLLOWING MANNER:

A. REMOVE ALL ASPHALT, GRAVEL AND COMPACTED EARTH TO A DEPTH OF
24"-30" DEPENDING ON THE DEPTH OF SUB BASE AND DISPOSE OF OFF SITE.
B. REPLACE EXCAVATED MATERIAL W/ GOOD, MEDIUM TEXTURED PLANTING SOIL (LOAM OR LIGHT YELLOW CLAY) TO A MIN. OF 2" ABOVE TOP OF CURB AND SIDEWALK. ADD 4"-6" OF TOPSOIL AND CROWN TO A MIN. OF 6" ABOVE ADJACENT CURB AND WALK AFTER EARTH SETTLING, UNLESS NOTED OTHERWISE ON THE PLANS.
C. IF CONVERSION TO LANDSCAPE OCCURS IN AN EXISTING (OR BETWEEN) LANDSCAPE AREAS, REPLACE EXCAVATED MATERIAL TO 4"-6" BELOW ADJACENT EXISTING GRADE W/ GOOD MEDIUM TEXTURED PLANTING SOIL (LOAM OR LIGHT YELLOW CLAY) AND ADD 4"-6" OF TOPSOIL TO MEET EXISTING GRADES AFTER EARTH SETTLING.

6 L1.0 SPECIALTY NOTES

SCALE: N.T.S.

FOR ALL OTHER SITE IMPROVEMENTS SEE CIVIL DRAWINGS

REPAIR AND/OR REPLACE ALL AREAS DISTURBED BY CONSTRUCTION WITH NEW SOD. SEE SCHEDULE

COORDINATE LOCATION OF IRRIGATION CONTROLLERS W/ OWNERS

LOW USE IRRIGATION SYSTEM TO BE PROVIDED FOR ALL PLANTINGS. PROVIDE UNDERPAVEMENT CONDUITS AS REQUIRED FOR PROPER INSTALLATION

ALL TREES TO BE INSTALLED IN 4' DIA. MULCH RING UNLESS LOCATED IN PLANTING BED - SEE PLAN

ALL AREAS NOT INDICATED TO RECEIVE ROCK MULCH OR TURF TO RECEIVE SHREDDED BARK MULCH AT DEPTH OF 3"-4" MIN.

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

(A) PROVIDE LAWN IRRIGATION SYSTEM CONSISTING OF MINI JETS, MISTERS, POP-UP RISERS, ADJUSTABLE BUBBLERS, ADJUSTABLE SPRAYERS, DRIPPER NOZZLES (EMITTERS), BACKFLOW PREVENTERS, AUTOMATIC CONTROL VALVES, TIMER, CONTROLLERS AND ALL RELATED ACCESSORIES FOR THE AREAS INDICATED ON THE DRAWINGS AND AS REQUIRED TO COMPLY WITH LOCAL CODES AND REGULATIONS. LAWN IRRIGATION CONTRACTOR SHALL PAY ALL ONE-TIME FEES AND CHARGES RELATED TO THIS WORK, INCLUDING WATER SUPPLY AND METERING. COORDINATE WITH THE WATER COMPANY AS REQUIRED FOR SERVICE ARRANGEMENTS. LAWN IRRIGATION CONTRACTOR SHALL PROVIDE ALL WORK, INCLUDING ALL POWER AND CONTROL WIRING, TESTING, ADJUSTING, AND START-UP AS REQUIRED FOR A COMPLETE, PROPERLY FUNCTIONING SYSTEM.

(B) IRRIGATION EQUIPMENT SHALL BE MANUFACTURED BY "RAINBIRD", "TORO", "HUNTER", "NETAFIM TECHNOLOGIES" OR OTHER EQUIVALENT APPROVED BY THE OWNER'S REPRESENTATIVE. INSTALLATION SHALL BE AS DESIGNED AND RECOMMENDED BY THE MANUFACTURER'S AUTHORIZED REPRESENTATIVE AND SHALL BE PERFORMED BY A COMPANY SPECIALIZING AND EXPERIENCED IN THIS TYPE OF WORK.

(C) WATER SUPPLIES SHALL BE TAKEN FROM THE UNDERGROUND SITE WATER SUPPLY MAIN (WITH SEPARATE METERING) OR FROM THE BUILDING'S INTERNAL WATER SUPPLY (WITHOUT SEPARATE METERING) AS REQUIRED BY LOCAL CODES AND WATER COMPANY REGULATIONS. LAWN IRRIGATION CONTRACTOR SHALL PROVIDE ALL WORK AND PAY ONE-TIME FEES AND CHARGES ASSOCIATED WITH THE IRRIGATION SYSTEM WATER SUPPLY SERVICE. PROVIDE BACKFLOW PREVENTION AS REQUIRED TO COMPLY WITH LOCAL CODES.

(D) ALL CONTROL VALVES SHALL BE MANUFACTURED BY "RAINBIRD", "TORO", "HUNTER" OR "IRRITROL" AND SHALL BE INSTALLED IN CONCRETE, FIBERGLASS OR CAST IRON VALVE BOXES WITH HEAVY DUTY, VANDAL-PROOF COVERS. SET BOXES FLUSH WITH FINAL GRADES.

(E) EXCEPT AS OTHERWISE REQUIRED BY CODES, MAIN SUPPLY PIPING SHALL BE SCHEDULE 40 PVC WITH SOLVENT CEMENTED JOINTS, AND BRANCH PIPING SHALL BE SDR 26, CLASS 160, PVC 1120 AND/OR SECTION 15C AND/OR LOCAL CODES. THREADED ADAPTORS AND THREADED PIPE FOR PVC SHALL BE SCHEDULE 80, MINIMUM. SOLVENT FOR PVC JOINTS SHALL BE NSF APPROVED AND PER PIPE MANUFACTURER'S RECOMMENDATIONS. MINIMUM PIPE SIZE SHALL BE 1/2".

(F) THE IRRIGATION SYSTEM SHALL BE ZONED AS REQUIRED TO PROVIDE THE MOST ECONOMICAL LAYOUT AND PIPE SIZING. THE SYSTEM SHALL BE DESIGNED AND ZONED TO BE COMPATIBLE WITH A MINIMUM 1" WATER METER SIZE, UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE.

(G) ALL VALVES AND QUICK COUPLERS SHALL BE LOCATED 12" MIN. FROM SIDEWALKS, CURBS, ASPHALT AREAS, CONCRETE PAVING, ETC. (SLOPES EXCLUDED). THE LAWN IRRIGATION CONTRACTOR SHALL INSTALL QUICK COUPLERS AT +/- 150 FEET O.C. THROUGHOUT THE ENTIRE PROJECT.

(H) BACKFLOW PREVENTOR SHALL BE ONE OF THE FOLLOWING TYPES (AS REQUIRED BY CITY/MUNICIPALITY): REDUCED PRESSURE ZONE BREAKER ASSEMBLY, REDUCED PRESSURE TYPE VACUUM BREAKER ASSEMBLY OR AN INLINE ANTI-SIPHON VALVE BACKFLOW PREVENTER.

(I) ALL EXTERIOR WIRING SHALL BE DIRECT BURIAL CABLE OR SHALL BE IN SCHEDULE 40 PVC CONDUIT. MINIMUM WIRE SHALL BE 18 GAUGE FOR LOW VOLTAGE CONTROL WIRING WITH SIZE INCREASE FOR LONGER RUNS AS REQUIRED TO LIMIT VOLTAGE DROP FOR PROPER OPERATION. PROVIDE 120 VOLT POWER SUPPLY TO THE CONTROLLER. MOUNT CONTROLLER IN THE POWER ROOM OR LOCATION AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

(J) SLEEVES SHALL BE INSTALLED BY THE LAWN IRRIGATION CONTRACTOR. LAWN IRRIGATION CONTRACTOR SHALL COORDINATE LOCATIONS AND SIZE OF SLEEVES WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION OF WALKS, WALLS, CURBS, DRIVES, ETC. (WHERE AND IF REQUIRED)

(K) BACKFILL SHALL BE CLEAN MATERIALS FREE OF ROCKS LARGER THAN 2" AND SHALL BE COMPACTED TO PREVENT NOTICEABLE SETTLEMENT AND IRREGULARITIES.

(L) LAWN IRRIGATION CONTRACTOR SHALL KEEP THE PREMISES CLEAN AND FREE OF EXCESS EQUIPMENT, MATERIALS AND RUBBISH INCIDENTAL TO THE JOB DURING THE INSTALLATION. UPON COMPLETION OF INSTALLATION AND BEFORE FINAL ACCEPTANCE, THE LAWN IRRIGATION CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT AND DEBRIS RESULTING FROM THIS WORK. ALL PAVED AREAS SHALL BE BROOM CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

(M) IRRIGATION SYSTEM SHALL BE CLEANED DURING INSTALLATION BY FLUSHING ALL COMPONENTS BEFORE FINAL INSTALLATION TO ENSURE THAT NO DIRT/DEBRIS HAVE ENTERED THE SYSTEM. AFTER FLUSHING ALL PIPING SHALL BE PRESSURE TESTED UNTIL PROVEN LEAK-FREE. FLUSHING AND PRESSURE TESTING SHALL BE COORDINATED WITH INSTALLATION OF PLANTINGS TO PREVENT DAMAGE TO BOTH PLANTS AND PIPING SYSTEM.

(N) AFTER ALL SPRINKLER HEADS AND PLANTINGS ARE INSTALLED, ADJUST SYSTEM FOR OPTIMUM COVERAGE AND COORDINATION WITH PLANTINGS. ADJUST ALL VALVES, ALIGNMENTS, AND COVERGE FOR OPTIMUM PERFORMANCE FOR FINAL APPROVAL BY THE OWNER'S REPRESENTATIVE.

(O) IF REQUIRED, IRRIGATION SYSTEM SHALL BE WINTERIZED BY PERSONNEL FAMILIAR WITH SIMILAR IRRIGATION SYSTEMS.

(P) IRRIGATION SYSTEM FILTER(S) SHALL BE PERIODICALLY CHECKED AND FLUSHED CLEAN TO REMOVE DEBRIS. AT INITIAL SYSTEM START-UP FILTER SHALL BE CHECKED EVERY DAY FOR THE FIRST (3) THREE DAYS.

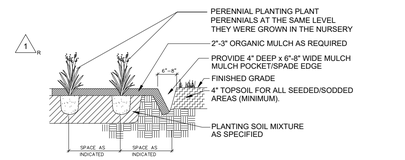
(Q) LAWN IRRIGATION CONTRACTOR SHALL RECOMMEND AND SET THE PROGRAM ON THE CONTROLLER, PROVIDE THOROUGH, DETAILED OPERATING INSTRUCTIONS FOR THIS SPECIFIC SYSTEM, AND GIVE VERBAL OPERATING INSTRUCTIONS TO THE OWNER'S OPERATING PERSONNEL.

(R) LAWN IRRIGATION CONTRACTOR SHALL PROVIDE LAYOUT AND SHOP DRAWINGS FOR APPROVAL BY STATE AND LOCAL BUILDING OFFICIALS AND/OR OTHER AGENCIES. LAWN IRRIGATION CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS RELATED TO THIS WORK AND SUBMIT COPIES OF SAME FOR THE OWNER'S RECORDS.

NOTE: AN AFFIDAVIT ON THE PLAN STATING THAT ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND INSTALLED BY A LICENSED IRRIGATOR.

9 L1.0 LOW USE IRRIGATION NOTES AND SPEC'S.

SCALE: N.T.S.



7 L1.0 PERENNIAL BEDS

SCALE: N.T.S.

LANDSCAPE MAINTENANCE NOTES:

PRUNE EXISTING SHRUBS TO REMOVE DEAD, DAMAGED AND DISEASED WOOD AND RESHAPE TO NATURAL HABIT. REMOVE ALL SUCKER GROWTH AT GROUND LEVEL.

CHECK ALL PLANTINGS FOR DISEASE OR INSECT PROBLEMS. APPLY APPROPRIATE CONTROL WHERE NECESSARY FOLLOWING ALL APPLICATION DIRECTIONS AND PRECAUTIONS.

REPLACE ALL PLANT MATERIALS WHICH APPEAR TO BE SICKLY, DAMAGED OR MISSHAPEN IN FORM.

FERTILIZE ALL BEDS WITH A 12:1 RATIO (ANALYSIS 5:10:5) AT A RATE OF 10-15 POUNDS PER 1000 SQUARE FEET. FERTILIZE ALL ESTABLISHED TURF AREAS AS WELL. DO NOT FERTILIZE NEWLY SEEDED TURF AREAS EXCEPT WITH A QUALITY STARTER FERTILIZER.

PATCH AND REPAIR ALL TURF AREAS WHERE REQUIRED WITH MATCHING SEED AND A STARTER FERTILIZER. APPLY BROADLEAF-WEED HERBICIDE TO ESTABLISHED TURF AREAS ONLY. FOLLOW HERBICIDE APPLICATION DIRECTIONS. DO NOT ALLOW HERBICIDE TO DRIFT ONTO SHRUB BEDS OR NEIGHBORING PLANTINGS. IF TURF DISEASES ARE PRESENT, APPLY FUNGICIDE. AERATE ALL TURF AREAS. REMOVE THATCH FROM ALL BERMUDA AND ZOYSIA AREAS.

PLANTING SPECIFICATIONS AND GENERAL NOTES:

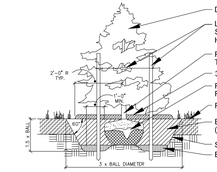
1. PLANTING BED PREPARATION: ALL MASS PLANTING BEDS SHALL BE TILLED TO A MINIMUM DEPTH OF 16". AMENDMENTS (LEAF MOLD OR SPHAGNUM PEAT MOSS) SHALL BE APPLIED DURING CULTIVATION. ALL BEDS ARE TO BE GRADED SMOOTH BEFORE PLANTING. PLANT GROUNDCOVER TO WITHIN 12" OF TREES OR SHRUBS. REMOVE ALL STONES LARGER THAN 2", ALL STICKS, ROOTS, RUBBISH AND ANY OTHER EXTRANEOUS MATERIALS.
2. BACKFILL SOIL: USE SOIL EXCAVATED FROM PLANTING HOLES AND PROVIDE AMENDMENTS (1 PART LEAF MOLD OR SPHAGNUM PEAT MOSS AND 3 PARTS EXCAVATED SOIL). ALL NEW TOPSOIL USED SHALL BE FREE OF WEEDS AND OTHER FOREIGN VEGETATION, AS WELL AS, STONES LARGER THAN 2", ALL STICKS, ROOTS, RUBBISH AND ANY OTHER EXTRANEOUS MATERIALS.
3. FERTILIZATION: ALL PLANT MATERIALS SHALL BE FERTILIZED UPON INSTALLATION WITH DRIED BONE MEAL OR OTHER SPECIFIED FERTILIZER MIXED IN IN WITH THE PLANTING SOIL PER THE MANUFACTURER'S INSTRUCTIONS. UNLESS NOTED OTHERWISE.
4. MULCH MATERIAL: DOUBLE SHREDDED HARDWOOD BARK MULCH. MASS MULCH ALL PLANTING BEDS TO 3"-4" DEPTH.
5. FERTILIZER: JUMP-SHOT ROOT STIMULATOR AS MANUFACTURED BY GORDON OR APPROVED EQUAL, SHALL BE APPLIED TO THE SOIL BACKFILL OF EACH PLANT DURING INSTALLATION.
6. ALL PLANT MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMEN.
AND SHRUB WILL BE REQUIRED, EXCEPT FOR LOSSES CAUSED BY CONTRACTOR'S ERRORS.
7. LANDSCAPE CONTRACTOR SHALL GUARANTEE NEW PLANT MATERIALS THROUGH ONE CALENDAR YEAR FROM THE DATE OF OWNER ACCEPTANCE WITH ALL REPLACEMENTS TO BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
8. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ON-GOING MAINTENANCE OF ALL NEWLY INSTALLED MATERIALS UNTIL TIME OF OWNER ACCEPTANCE. ANY ACTS OF VANDALISM OR DAMAGE WHICH MAY OCCUR PRIOR TO OWNER ACCEPTANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. WARRANTY FOR LANDSCAPE MATERIALS SHALL BEGIN ON THE DATE OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE AFTER THE COMPLETION OF PLANTING OF ALL LANDSCAPE MATERIALS. NO PARTIAL ACCEPTANCE WILL BE CONSIDERED. LANDSCAPE CONTRACTOR SHALL PROVIDE A WRITTEN REQUEST FOR THE OWNER'S ACCEPTANCE INSPECTION. REMOVE AND REPLACE DEAD PLANT MATERIAL (25% = DEAD) IMMEDIATELY UNLESS REQUIRED TO PLANT IN THE SUCCEEDING PLANTING SEASON. A LIMIT OF ONE REPLACEMENT OF EACH TREE
10. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP OF SITE AT THE COMPLETION OF LANDSCAPING EACH DAY. AT ALL TIMES SHALL THE SIDEWALKS BE MAINTAINED CLEAN AND FREE OF DEBRIS. REMOVE SURPLUS SOIL AND WASTE MATERIAL, TRASH AND DEBRIS FROM THE SITE AND LEGALLY DISPOSE OF SAME IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.
11. ALL PLANTS TO BE INSTALLED AS PER PLANTING DETAILS. PLANT MATERIALS ARE TO BE PLANTED IN THE SAME RELATIONSHIP TO GRADE AS WAS GROWN IN NURSERY CONDITIONS. IF WET, CLAY SOILS OR POOR DRAINING SOILS ARE EVIDENT, PLANT HIGHER. REMOVE ALL TWINE, WIRE AND BURLAP FROM TOP 1/3 OF ROOT BALL AND FROM TREE TRUNKS.
12. ALL MULCH RINGS AND SHRUB BEDS IN LAWN AREAS SHALL BE EDGED WITH A MANICURED EDGE AS INDICATED.
13. MULCHING AND WATERING OF ALL PLANTS & TREES SHALL BE IMMEDIATELY OR WITHIN 16 HOURS AFTER INSTALLATION.

2 L1.0 SPECIFICATIONS AND NOTES

SCALE: N.T.S.

8 L1.0 TREES - EVERGREEN

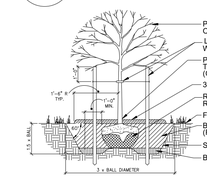
SCALE: N.T.S.



GENERAL NOTES:
1. IF ROOTBALL IS WRAPPED IN NON-BIODEGRADEABLE BURLAP, REMOVE ENTIRE WRAP AFTER PLACED IN PIT.
2. WHEN BACKFILLING PLANT PIT, PLACE PLANTING SOIL IN TWO LIFTS. AFTER FIRST LIFT, PUDDLE SOIL IN WITH WATER TO REMOVE ALL AIR POCKETS. PLACE SECOND LIFT AND REPEAT. CONTINUE TO PUDDLE AND FILL AS NECCESSARY.
3. PROVIDE TREE STAKES AT INITIAL INSTALLATION. REMOVE STAKES AND WIRES AFTER ONE (1) YEAR OF GROWTH.

5 L1.0 TREES

SCALE: N.T.S.



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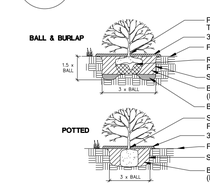
4 L1.0 EDGING

SCALE: N.T.S.



GENERAL NOTES:
1. PRUNE ROOTS IF BALL IS ROOTBOUND.
2. REMOVE ALL CONTAINERS AND NON-BIODEGRADEABLE BURLAP.
3. WHEN BACKFILLING PLANT PIT, PLACE PLANTING SOIL IN TWO LIFTS. AFTER FIRST LIFT, PUDDLE SOIL IN WITH WATER TO REMOVE ALL AIR POCKETS. PLACE SECOND LIFT AND REPEAT. CONTINUE TO PUDDLE AND FILL AS NECCESSARY.

3 L1.0 SHRUBS

SCALE: N.T.S.

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LEADERS REAL ESTATE
NW 161st STREET & HICKMAN ROAD/US HWY 6
CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

No.	Description	Date
-	STARBUCKS 2ND REVIEW	04/10/24
-	DEVELOPMENT REVIEW	04/17/24
-	DEVELOPMENT REVIEW RESPONSE	07/18/24
1	DEVELOPMENT REVIEW RESPONSE	08/20/24
2	DEVELOPMENT REVIEW RESUBMITTAL	09/16/24

PROFESSIONAL OF RECORD

Drawn By/Checked By:	MAM/MAM
Project Number	2303492
Permit	xx/xx/24
Bid	xx/xx/24

LANDSCAPE PLAN AND DETAILS

L1.0

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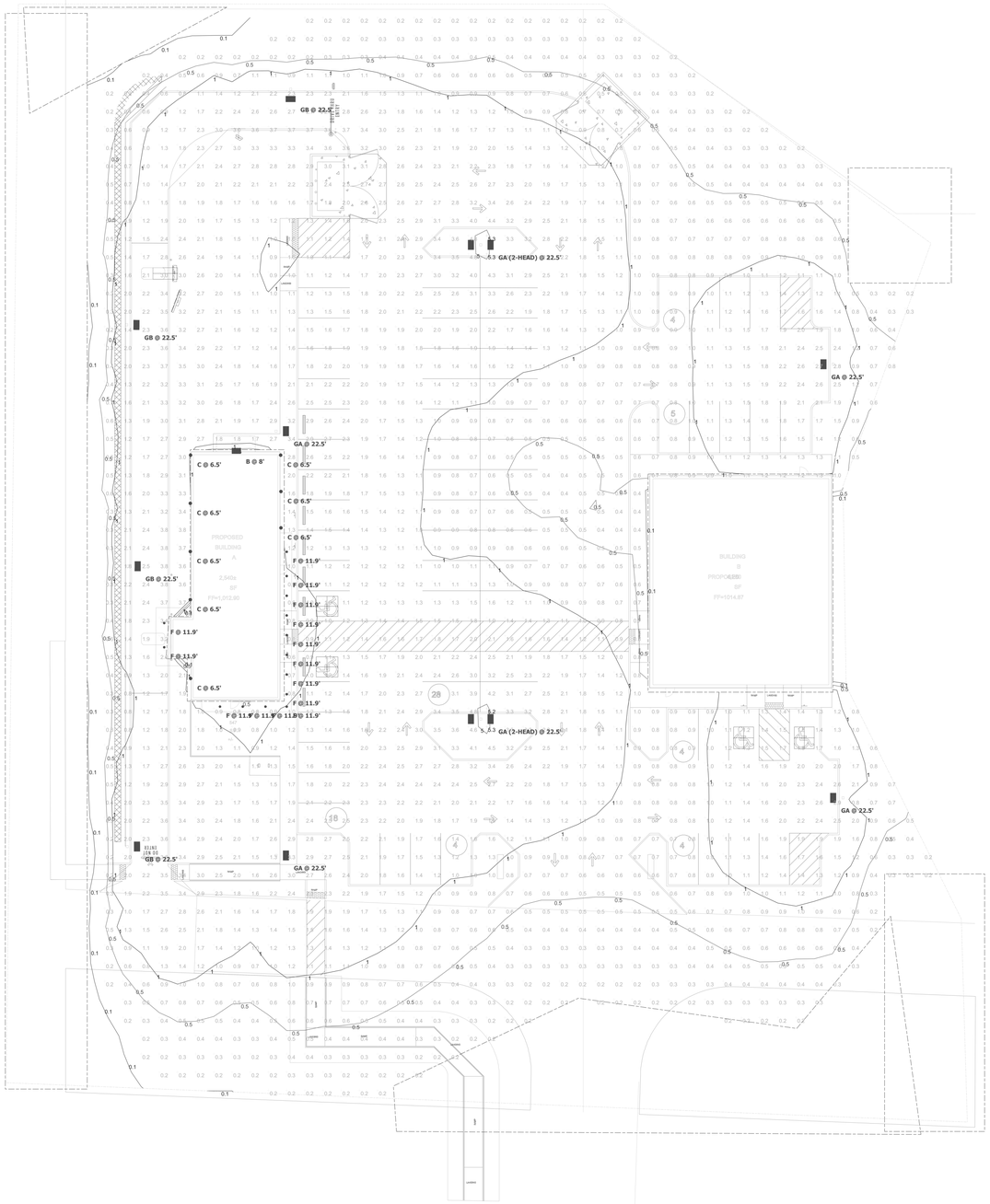

Plan View
Scale - 1" = 20ft

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.3 fc	5.3 fc	0.2 fc	26.5:1	6.5:1

Image

Symbol	Label	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Notes
	B	0	Lithonia Lighting	WST LED P2 40K VF MVOLT	WST LED, Performance package 2, 4000 K, visual comfort forward throw, MVOLT	1	3469	0.9	25	BUILDING MOUNTED LIGHT SHOWN BUT NOT INCLUDED IN SITE CALCULATION
	C	0	KICHLER	258377-1 MOD#:11251/CP133537	LED WALL CYLINDER	1	574	0.9	14.7	BUILDING MOUNTED LIGHT SHOWN BUT NOT INCLUDED IN SITE CALCULATION
	F	0	Lithonia Lighting	WF4 LED 40K	4" MATTE WHITE LED ULTRA-THIN WAFER DOWNLIGHT, 4000K CCT, LEXTAR LED	1	770	0.9	10	BUILDING MOUNTED LIGHT SHOWN BUT NOT INCLUDED IN SITE CALCULATION
	GA	4	Lithonia Lighting	DSX0 LED P5 40K T4M MVOLT	DSX0 LED P5 40K T4M MVOLT	1	11433	0.9	89	
	GA (2-HEAD)	2	Lithonia Lighting	DSX0 LED P5 40K T4M MVOLT	DSX0 LED P5 40K T4M MVOLT	1	11433	0.9	178	
	GB	4	Lithonia Lighting	DSX0 LED P5 40K BLC MVOLT	DSX0 LED P5 40K BLC MVOLT	1	9576	0.9	89	

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STARBUCKS -
COUNTRY CLUB GLEN
PLAT 1, LOT 3
CLIVE, IA 50325

Date
07/18/24

CONSTR. DOC. & REVISIONS

No.	Description
	Development Review Response

LICENSED PROFESSIONAL ENGINEER
WILLIAM J. KINNEY
P19107
IOWA
09/16/24

Professional of Record:

William J. Kinney
P19107
12/31/25

Drawn/Checked	JCB/ WJK
Project Number	2303492
Preliminary Plans	2/28/24
Pre-App	7/18/24
Permit	9/12/24

ELECTRICAL SITE PHOTOMETRICS PLAN

E201

9/12/2024 3:37:58 PM

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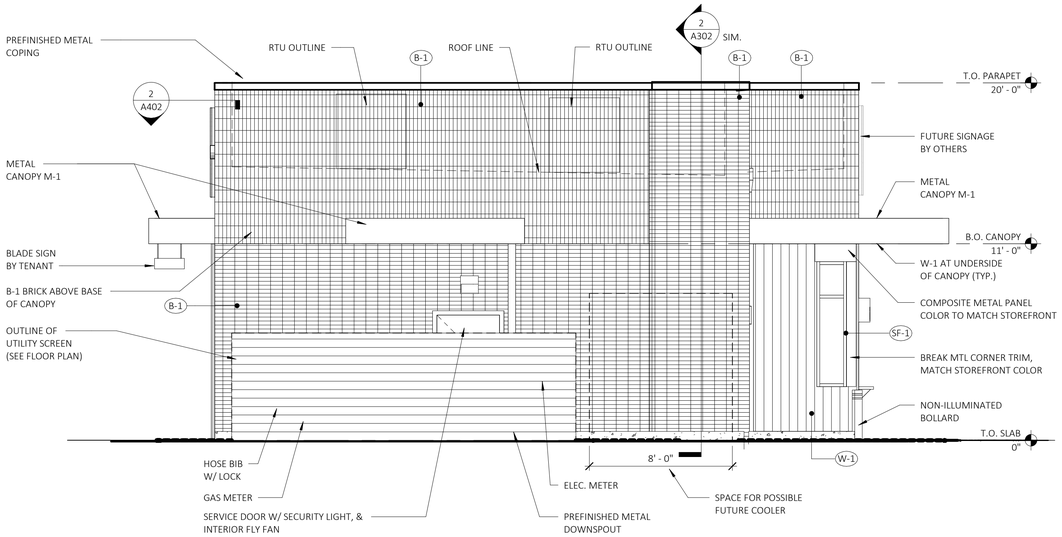


2 A201 NORTH ELEVATION

SCALE: 1/4" = 1'-0"

EXTERIOR FINISH SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	COLOR-	REMARKS
B-1	BRICK VENEER	ACME BRICK	DTP707 SADDLEBROOK MOD 569723	STACK BOND FROM BASE TO BOTTOM OF CANOPY. SOLDIER COURSING FROM BASE OF CANOPY TO TOP OF WALL
M-1	BREAK METAL TRIM	LOCALLY SOURCED	COLOR TO MATCH STOREFRONT FRAMING - STATUARY BRONZE	METAL CANOPY TRIM
PFM-1	METAL COPING	LOCALLY SOURCED	SW 9087 SMOKEY BEIGE	PRE-FINISHED
SF-1	STOREFRONT	KAWNEER	STATUARY BRONZE	ANODIZED
UTILITY SCREEN	ALUM. FENCE PANELS	NORTWOOD 716-808-0380	BRAZIL IPE	WPC LOUVER
W-1	WOOD CLADDING	NEW TECH 832-810-3970	BRAZILIAN IPE BELGIAN BOARD UH58	BELGIAN BOARD - FACADE & UNDERSIDE OF CANOPY.

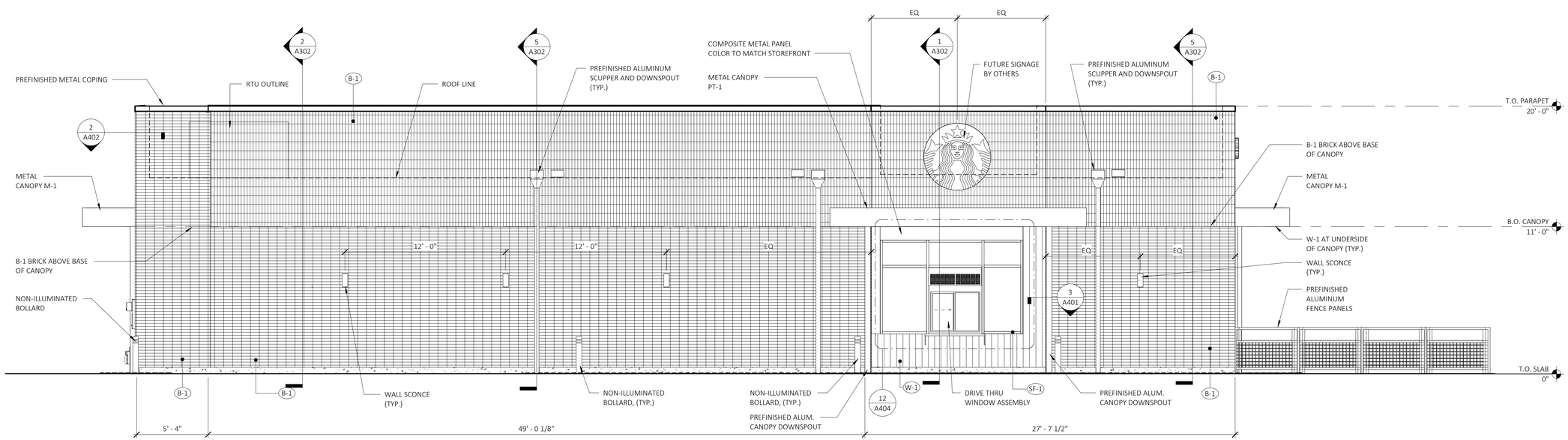
1

EXTERIOR FINISH SF/PERCENTAGE BREAKDOWN:

2

NORTH ELEVATION:
- TOTAL SF = 621.26SF
- B-1 = 601.45 SF = 95%
- W-1 = 48.78 SF = 5%

WEST ELEVATION:
- TOTAL SF = 1494.5 SF
- B-1 = 1432.23 SF = 96%
- W-1 = 74.5 SF = 4%



1 A201 WEST ELEVATION

SCALE: 1/4" = 1'-0"

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STARBUCKS -
STARBUCKS
COUNTRY CLUB GLEN
PLAT 1, LOT 3
CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

No.	Description	Date
1	DEVELOPMENT REVIEW RESPONSE	08/20/24
2	DEVELOPMENT REVIEW RESUBMITTAL	09/16/22

CASCO DIVERSIFIED CORPORATION
ARCHITECTURAL
LICENSE #:04365

LICENSED PROFESSIONAL ARCHITECT
MICHAEL SCOTT SUNDERMEYER
No. 08358
IOWA
9/16/24

Professional of Record:
MICHAEL S.
SUNDERMEYER
LICENSE #: ARC08358
EXP. DATE: 06/30/25

Drawn/Checked	JMT/MSD
Project Number	2303492
Owner Review	9/12/24
Pre-App	7/18/24
Starbucks 2nd Review	4/10/24

EXTERIOR ELEVATIONS

A201

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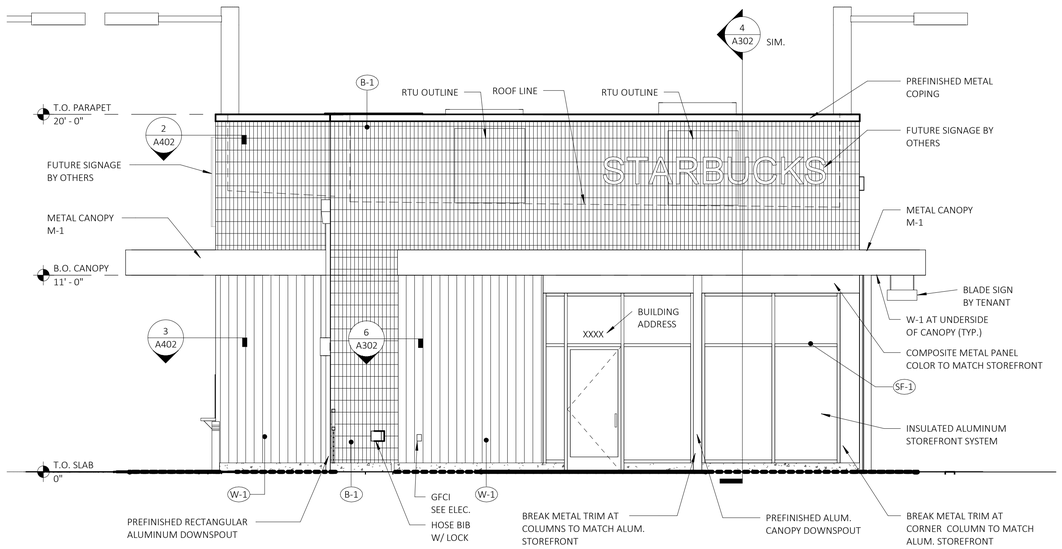


2 A202 SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

EXTERIOR FINISH SCHEDULE				
MARK	DESCRIPTION	MANUFACTURER	COLOR-	REMARKS
B-1	BRICK VENEER	ACME BRICK	DTP707 SADDLEBROOK MOD 569723	STACK BOND FROM BASE TO BOTTOM OF CANOPY. SOLDIER COURSING FROM BASE OF CANOPY TO TOP OF WALL
M-1	BREAK METAL TRIM	LOCALLY SOURCED	COLOR TO MATCH STOREFRONT FRAMING - STATUARY BRONZE	METAL CANOPY TRIM
PFM-1	METAL COPING	LOCALLY SOURCED	SW 9087 SMOKEY BEIGE	PRE-FINISHED
SF-1	STOREFRONT	KAWNEER	STATUARY BRONZE	ANODIZED
UTILITY SCREEN	ALUM. FENCE PANELS	NORTWOOD 716-808-0380	BRAZIL IPE	WPC LOUVER
W-1	WOOD CLADDING	NEW TECH 832-810-3970	BRAZILIAN IPE BELGIAN BOARD UH58	BELGIAN BOARD - FACADE & UNDERSIDE OF CANOPY.

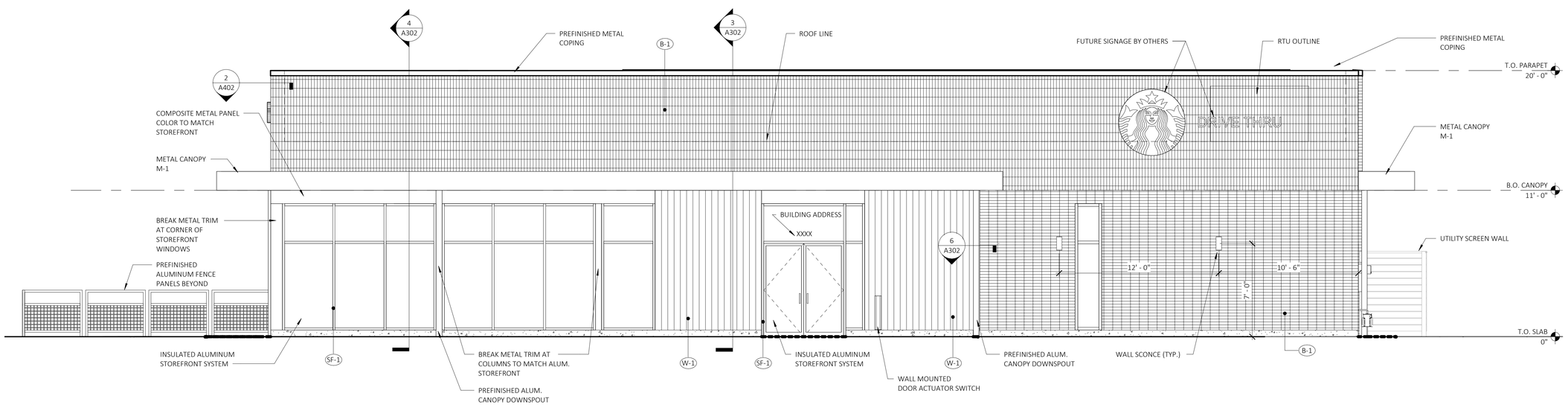
1

EXTERIOR FINISH SF/PERCENTAGE BREAKDOWN:

2

SOUTH ELEVATION:
- Total SF = 457.06 SF
- B-1 SF = 304.44 SF = 67%
- W-1 = 152.40 = 33%

EAST ELEVATION:
- TOTAL SF = 1078.4 SF
- B-1 = 906.27 SF = 84%
- W-1 = 175.04 SF = 16%



1 A202 EAST ELEVATION

SCALE: 1/4" = 1'-0"

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COUNTRY CLUB GLEN
PLAT 1, LOT 3
CLIVE, IA 50325

CONSTR. DOC. & REVISIONS

No.	Description	Date
1	DEVELOPMENT REVIEW RESPONSE	08/20/24
2	DEVELOPMENT REVIEW RESUBMITTAL	09/16/22

CASCO DIVERSIFIED CORPORATION
ARCHITECTURAL
LICENSE #:04365

LICENSED PROFESSIONAL ARCHITECT
MICHAEL SCOTT SUNDERMEYER
No. 08358
IOWA
9/16/24

Professional of Record:
MICHAEL S.
SUNDERMEYER
LICENSE #: ARC08358
EXP. DATE: 06/30/25

Drawn/Checked	JMT/MSD
Project Number	2303492
Owner Review	9/12/24
Pre-App	7/18/24
Starbucks 2nd Review	4/10/24

EXTERIOR ELEVATIONS

A202

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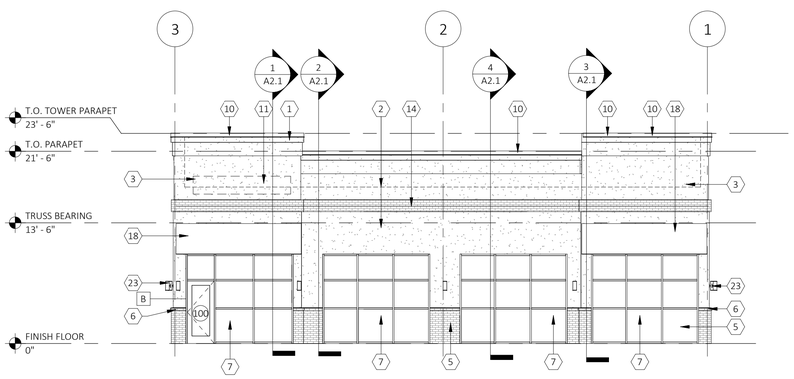
ELEVATION KEYED NOTES

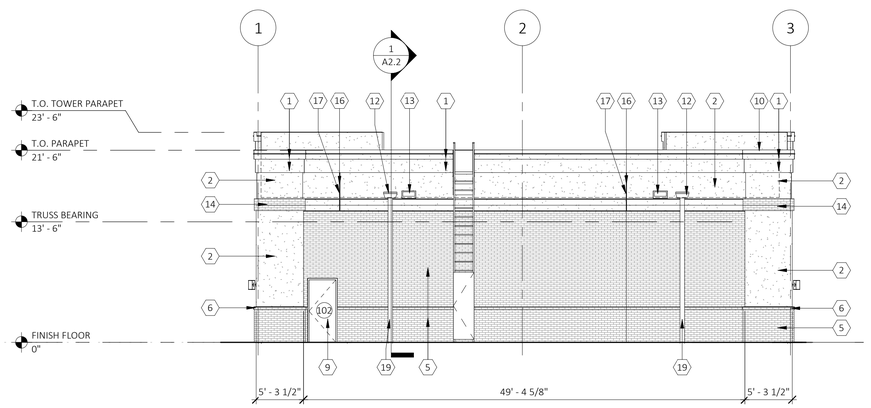
1	EIFS CORNICE, REFER TO WALL SECTION FOR ADDITIONAL INFORMATION. COLOR: SW7566 "WESTHIGHLAND WHITE" OR EQUAL. VERIFY COLOR WITH OWNER PRIOR TO PURCHASE AND INSTALLATION
2	EIFS, REFER TO WALL SECTION FOR ADDITIONAL INFORMATION. COLOR: SW9087 "SMOKEY BEIGE" OR EQUAL. VERIFY COLOR WITH OWNER PRIOR TO PURCHASE AND INSTALLATION.
3	EIFS, REFER TO WALL SECTION FOR ADDITIONAL INFORMATION. COLOR: SW9089 "LLAMA WOOL" OR EQUAL. VERIFY COLOR WITH OWNER PRIOR TO PURCHASE AND INSTALLATION.
5	BRICK VENEER. REFER TO WALL SECTION FOR ADDITIONAL INFORMATION. MANUF.: ACME, COLOR: SADDLEBROOK, STYLE: DTP707.
6	CAST STONE CAP, COLOR TO MATCH EIFS CORNICE.
7	CLEAR ANODIZED ALUMINUM STOREFRONT, REFER TO 2/A3.0 FOR DETAILS. VERIFY COLOR WITH OWNER PRIOR TO PURCHASE AND INSTALLATION.
8	CLEAR ANODIZED ALUMINUM FRAME WINDOW, REFER TO 2/A3.0 FOR DETAILS. VERIFY COLOR WITH OWNER PRIOR TO PURCHASE AND INSTALLATION.
9	METAL DOOR AND FRAME PAINTED, REFER TO DOOR SCHEDULE ON A3.0 FOR ADDITIONAL INFORMATION. COLOR TO MATCH ADJACENT EIFS.
10	PREFINISHED METAL CAP FLASHING, COLOR TO MATCH ADJACENT EIFS.
11	APPROXIMATE LOCATION OF FUTURE SIGNAGE, UNDER SEPARATE PERMIT.
12	6" H. X 16" W. PRIMARY SCUPPER OPENING WITH SCUPPER AND 6" SQUARE DOWNSPOUT, SEE DETAIL 7/A2.3. COLOR TO MATCH ADJACENT WALL.
13	6" H. X 16" W. OVERFLOW SCUPPER OPENING, SEE DETAIL 9/A2.3. COLOR TO MATCH ADJACENT WALL.
14	BRICK VENEER DOUBLE SOLDIER COURSE. COLOR TO MATCH BRICK VENEER BASE. REFER TO WALL SECTIONS FOR ADDITIONAL INFORMATION.
16	1" EIFS VERTICAL REVEAL. REFER TO 1/A2.4 FOR DETAIL.
17	EIFS CONTROL JOINTS AT 24'-0" O.C. MAXIMUM. REFER TO 1/A2.4 FOR DETAIL.
18	APPROXIMATE LOCATION OF AWNING. CENTER AWNING ABOVE EACH WINDOW OR DOOR. COLOR TO BE SW7050 "USEFUL GRAY"
19	PRE-FINISHED METAL DOWNSPOUT AND COLLECTOR HEAD. COLOR TO MATCH ADJACENT BRICK. REFER TO 7/A2.2.
20	ROOF ACCESS LADDER WITH LOCKABLE SECURITY GATE. COLOR TO MATCH ADJACENT BRICK.
21	HOUSE POWER PANEL FOR SITE LIGHTING. SEE ELECTRICAL DRAWINGS.
22	GAS METERS AND PIPING, REFER TO MECHANICAL DRAWINGS FOR INFORMATION.
23	WALL SCONCE LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.



1 A1.1 FRONT (SOUTH) ELEVATION

SCALE: 1/8" = 1'-0"

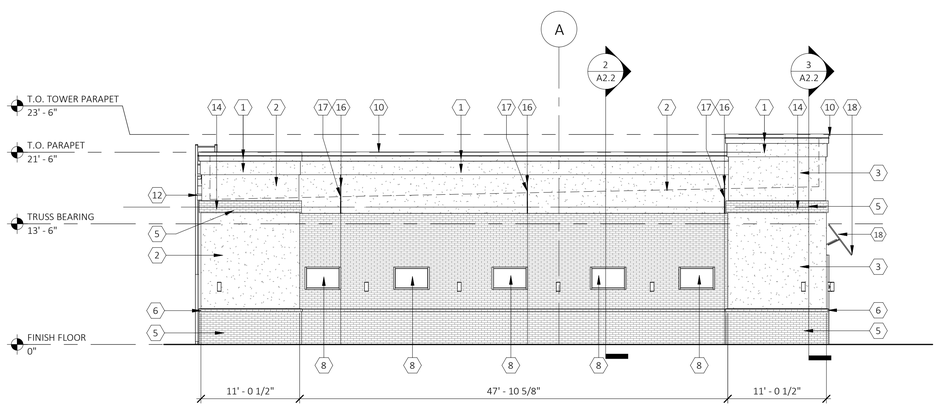
EXTERIOR FINSIH SF/PERCENTAGE BREAKDOWN:
TOTAL SF: 1326.35 SF
KEYNOTE 1 EIFS: 124.30 SF = 9%
KEYNOTE 2 EIFS: 236.38 SF = 18%
KEYNOTE 5 BRICK: 402.48 SF = 30%
KEYNOTE 6: 3.32 SF = 1%
KEYNOTE 7: 480.08 SF = 6%
KEYNOTE 14: 79.79 SF = 36%



2 A1.1 REAR (NORTH) ELEVATION

SCALE: 1/8" = 1'-0"

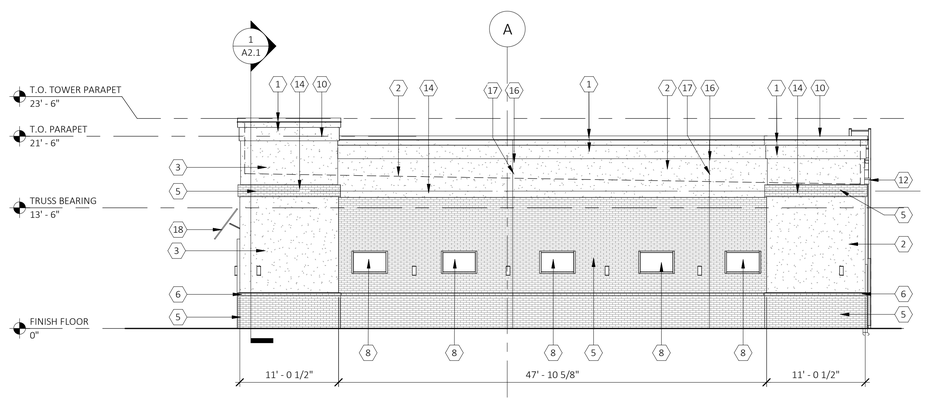
EXTERIOR FINSIH SF/PERCENTAGE BREAKDOWN:
TOTAL SF: 1265.30 SF
KEYNOTE 1 EIFS: 124.37 SF = 10%
KEYNOTE 2 EIFS: 353.69 SF = 28%
KEYNOTE 5 BRICK: 748.45 SF = 59%
KEYNOTE 6: 14.90 SF = 1%
KEYNOTE 9: 23.89 SF = 2%



3 A1.1 LEFT SIDE (WEST) ELEVATION

SCALE: 1/8" = 1'-0"

EXTERIOR FINSIH SF/PERCENTAGE BREAKDOWN:
TOTAL SF: 1,445.56.86 SF
KEYNOTE 1 EIFS: 145.45 SF = 10%
KEYNOTE 2/3 EIFS: 530.01 SF = 37%
KEYNOTE 5 BRICK: 751.73 SF = 52%
KEYNOTE 6: 18.37 SF = 1%



4 A1.1 RIGHT SIDE (EAST) ELEVATION

SCALE: 1/8" = 1'-0"

EXTERIOR FINSIH SF/PERCENTAGE BREAKDOWN:
TOTAL SF: 1496.80 SF
KEYNOTE 1 EIFS: 145.45 SF = 10%
KEYNOTE 2/3 EIFS: 530.07 SF = 35%
KEYNOTE 5 BRICK: 752.91 SF = 51%
KEYNOTE 6: 18.37 SF = 1%
KEYNOTE 8: 50.00 SF = 3%

CASCO
CASCO DIVERSIFIED CORPORATION
12 Sunset Drive, Suite 100, St. Louis, MO 63143 T: 314-821-1100

MIXED USE BUILDING
COUNTRY CLUB GLEN
PLAT 1, LOT 3
CLIVE, IA 50327

No.	Description	Date
1	DEVELOPMENT REVIEW RESPONSE	08/20/24

CONSTR. DOC. & REVSIONS

CASCO DIVERSIFIED CORPORATION
ARCHITECTURAL
LICENSE #: 04365

Professional of Record:
MICHAEL SCOTT
SUNDERMEYER
LICENSE #: ARC08358
EXP. DATE: 06/30/25

Drawn/Checked	DAA /MSD
Project Number	2403976
Preliminary Plans	2/28/24
Pre-App	3/xx/24
Development Review	7/18/24

EXTERIOR ELEVATIONS

A1.1

8/20/2024 11:50:02 AM

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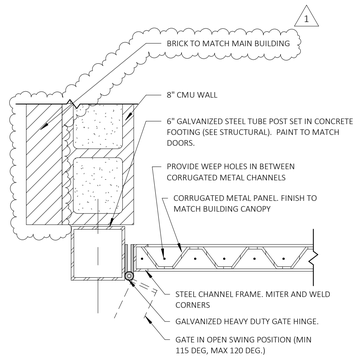
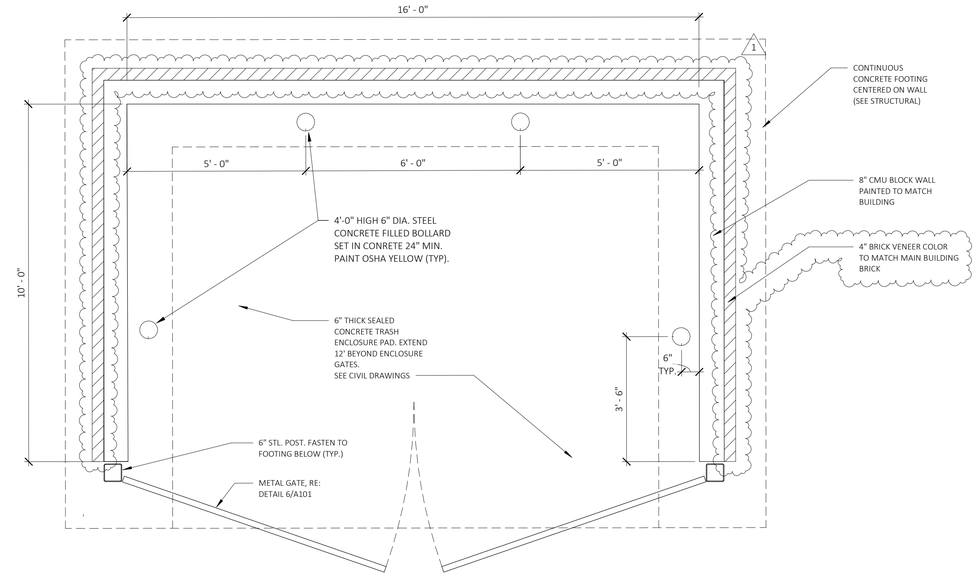
GENERAL NOTES

1. DIMENSIONS ARE TO ROUGH FACE OF CMU, OR CENTER LINE OF STRUCTURE UNLESS OTHERWISE INDICATED.



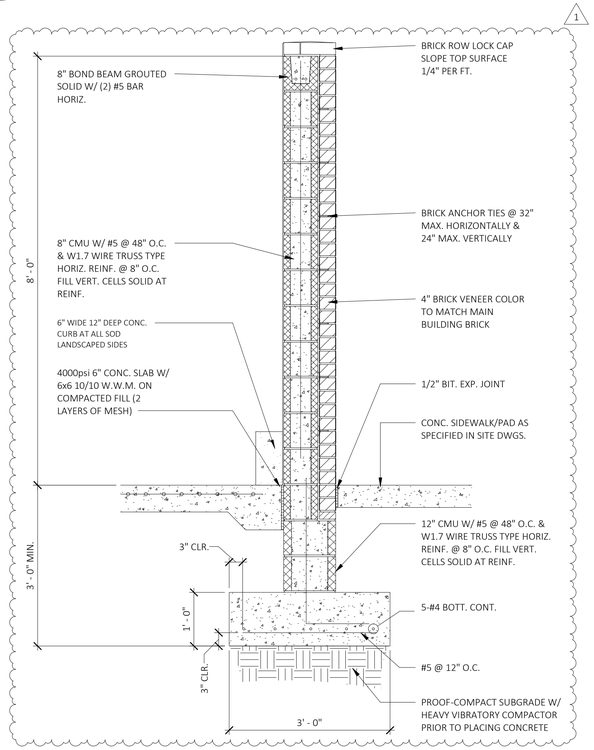
3 A4.0 TRASH ENCLOSURE GATE DETAIL

SCALE: 1 1/2" = 1'-0"



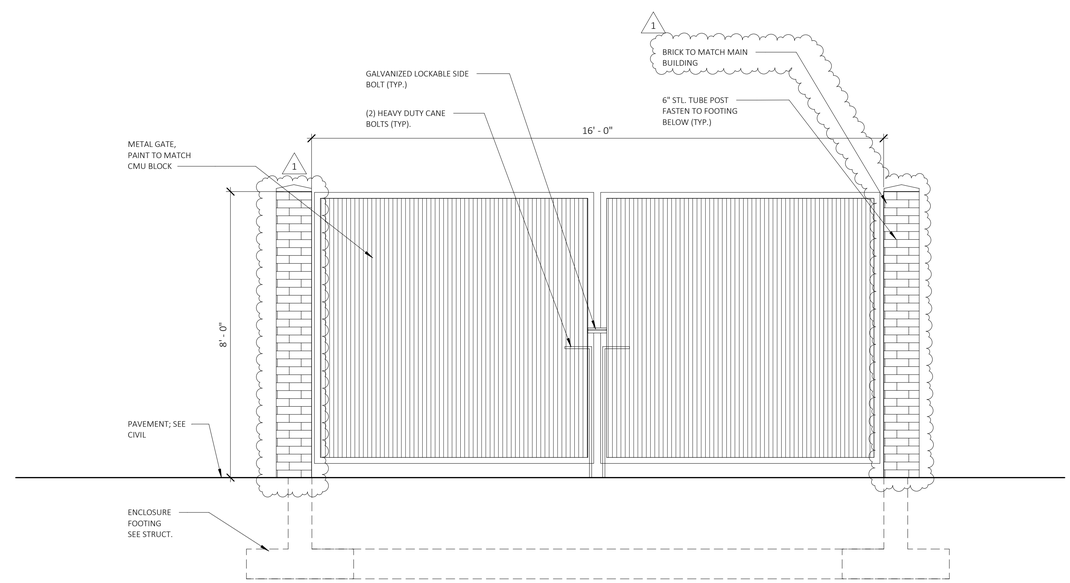
1 A4.0 TRASH ENCLOSURE PLAN

SCALE: 1/2" = 1'-0"



6 A4.0 SECTION AT TRASH ENCLOSURE Copy 1

SCALE: NOT TO SCALE



2 A4.0 TRASH ENCLOSURE GATE ELEVATION

SCALE: 1/2" = 1'-0"

CASCO
CASCO DIVERSIFIED CORPORATION
12 Sarnen Drive, Suite 100, St. Louis, MO 63141 T: 314-821-1100

MIXED USE BUILDING
COUNTRY CLUB GLEN
PLAT 1, LOT 3
CLIVE, IA 50327

No.	Description	Date
1	DEVELOPMENT REVIEW RESPONSE	08/20/24

CONSTR. DOC. & REVISIONS

CASCO DIVERSIFIED CORPORATION
ARCHITECTURAL
LICENSE #: 04365

Professional of Record:
MICHAEL SCOTT
SUNDERMEYER
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EXP. DATE: 06/30/25

Drawn/Checked	DAA /MSD
Project Number	2403976
Preliminary Plans	2/28/24
Pre-App	3/xx/24
Development Review	7/18/24

TRASH ENCLOSURE DETAILS

A4.0

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SHERWOOD

STARBUCKS

DRIVE THRU

DRIVE THRU

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SPECIFICATIONS

Certifications/Qualifications

ADA Compliant	No
Prop65	No
Dark Sky Compliant	No
Location Rating	Wet
	kichler.com/warranty

Dimensions

Height	12"
Width	5"
Height From Center Of Wall Opening (Spec Sheet)	6.25"
Extension	6.5"
Weight	3.075 LBS
Canopy Height	5"
Canopy Width	5"
Canopy Depth	1.35"

Electrical

Input Voltage	120-277 V

Light Source

Light Source	Integrated LED
Lamp Included	Integrated
# Of Bulbs/LED Modules	2
Max Or Nominal Watt	15 W
Max Wattage/Range	15
Dimmable	Yes

Photometrics

Color Rendering Index	90
Color Temperature Range	3000 K
Delivered Lumens	550
Delivered Efficacy (Lumens/Watt)	37

Mounting/Installation

Interior/Exterior	Exterior Product
Mounting Style	WALL MOUNT
Modular	No
Lead Wire Length	6

FIXTURE ATTRIBUTES

Housing/Glass

Primary Material	Aluminum
Shade Included	No
Shade Dimensions	4.50 DIA X 12.25

Product/Ordering Information

Sku	11251BKT30
Finish	Textured Black
UPC	783927453103

Finishes

- Textured Architectural Bronze
- Textured Black

ALSO IN THIS FAMILY

LITHONIA LIGHTING®

Catalog Number	WF54 LED 40K
Notes	
Type	F

FEATURES & SPECIFICATIONS

INTENDED USE — The 4" Wafer™ LED Downlight with Switchable White provides high-quality light output and efficiency featuring a switch for easy color temperature adjustment - while eliminating the need for recessed housings. The innovative, slim design allows for easy retrofit, remodel or new construction installation from below the ceiling. The Wafer LED downlight is wet location listed – making it ideal for use in a breadth of outdoor residential, hospitality, commercial and multifamily applications. The LED module maintains at least 70% light output for 50,000 hours.

CONSTRUCTION — Aluminum die cast outer frame. Durable, powder coat paint to prevent rust. FT4 plenum rated cable connector to connect from module to remote driver box. IC rated driver with convenience and value of two remote selectable color temperature options, each with a setting choice to chose either 2700K, 3000K, and 3500K or 3000K, 4000K, and 5000K using the switch. The isolated driver integrated inside steel remote box with four 7/8" knockouts with slots for pryout. Suitable for pulling wires with the 12 cubic-inch wiring compartment to accommodate up to (6) 14 gauge insulated conductors; making the Wafer LED Downlights much easier to wire in 2in/2out (plus ground) daisy-chain applications and contractor friendly.

INSTALLATION — Ideal for shallow ceiling plenum; no housing required. Steel spring clip for easy installation. 4" cut out template is provided to ensure a correct sized hole is cut into ceiling for proper installation of the trim. Size of hole should not exceed 4 1/4 inches for this product. Suitable for installation in t-grid and drop ceiling applications. 3" plenum space required for installation of the remote driver box.

OPTICS — Edge-lit LED technology uses light guided plate to distribute light. Polycarbonate lens provides even illumination throughout the space.

ELECTRICAL — Connect directly to 120V Class-2 (CAN ICES-005 (B) / NMB-005 (B))LED driver. High efficient driver with power factor > 0.9. Ambient operating temperature: -40°F (-40°C) to +104°F (+40°C). Dimming down to 10% with most standard incandescent dimers (see list of approved dimmers). Replaces 65W incandescent for 750 lumens..

LISTINGS — CSA certified to US and Canadian safety standards. ENERGY STAR® certified. Wet location. Air Tight certified in accordance with ASTM E283-2004. NOM Certified. Can be used to comply with California Title 24 Part 6 High Efficacy LED light Source Requirements.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:
www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

Wafer LED Recessed Downlight

WF4

4" LED Switchable White Color Temperature

IC/Non-IC
New Construction/Remodel

WET LOCATION™ DIMMABLE LED ENERGY STAR TITLE 24 PART 6

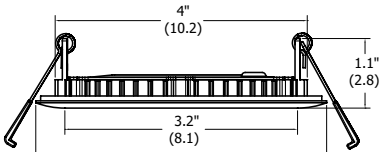
Matte black

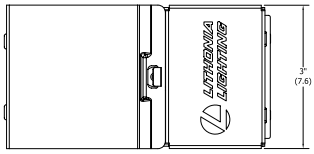
Brushed nickel

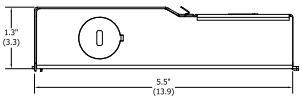
Oil-rubbed bronze

Specifications

Aperture:	3.2 (8.1)
Ceiling opening:	4.2 (10.7)
Overlap trim:	4.7 (12.0)
Height:	1.1 (2.8)







All dimensions are inches (centimeters) unless otherwise indicated.

ORDERING INFORMATION For shortest lead times, configure product using **standard options (shown in bold).**

Example: WF4 LED 30K40K50K 90CRI MW

WF4	LED					
Series	**Lamp**	**CCT/W/Lumens[1]**		**CRI**	**Finish**	
WF4 4" wafer-thin LED downlight	**LED** LED	**27K30K35K**	2700K/10.5W/730L	**90CRI** 90CRI	**MW**	Matte White
			3000K/10.5W/800L		**MB**	Matte Black
			3500K/10.5W/780L		**BN**	Brush Nickel
		30K40K50K	3000K/10.5W/750L		**ORB**	Oil-Rubbed Bronze
			4000K/10.5W/810L			
			5000K/10.5W/790L			

Accessories: *Order as separate catalog number.*

WF8643 Pan U	Universal new construction pan
WFJB U	Remodel joist bar
WFEXC6 SW3PIN FT4	3-Pin 6ft Cable
WFEXC10 SW3PIN FT4	3-Pin 10ft Cable
WFEXC20 SW3PIN FT4	3-Pin 20ft Cable
WF4GR MW JZ	4" round oversized trim ring

WF8643 New Construction Pan

Remodel Joist Bar

WFEXC6 Cable

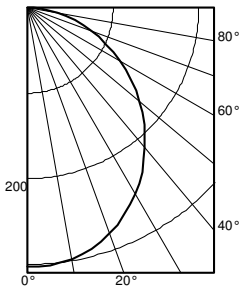
Notes

1 Total system delivered lumens.

PHOTOMETRICS

Distribution Curve | **Distribution Data** | **Output Data** | **Coefficient of Utilization** | **Illuminance Data at 30" Above Floor for a Single Luminaire**

WF4 LED 30K40K50K, 4000 K LEDs, input watts: 11, delivered lumens: 840, LM/W=76, test no. ISF 36826P5



	Ave	Lumens
0	303	
5	302	29
15	291	82
25	267	123
35	234	146
45	193	148
55	148	132
65	102	100
75	57	60
85	16	18
90	0	

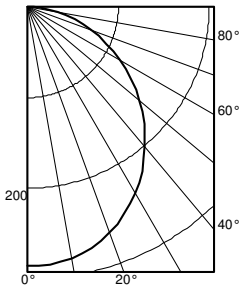
Zone	Lumens	% Lamp
0° - 30°	233.9	27.8
0° - 40°	379.9	45.2
0° - 60°	660.5	78.7
0° - 90°	839.7	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	839.7	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	104	99	96	101	98	94	97	94	91
2	90	84	78	88	82	77	85	80	75
3	79	71	65	78	70	64	75	68	63
4	70	62	55	69	61	54	67	59	54
5	63	54	47	62	53	47	60	52	46
6	57	48	41	56	47	41	54	46	41
7	51	43	36	51	42	36	49	42	36
8	47	38	33	46	38	32	45	38	32
9	43	35	29	43	35	29	41	34	29
10	40	32	27	39	32	27	38	31	26

		50% beam - 63.5°		10% beam - 108.5°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	10.0	6.8	5.0	15.3	1.0
10.0	5.4	9.3	2.7	20.8	0.5
12.0	3.4	11.7	1.7	26.4	0.3
14.0	2.3	14.2	1.1	31.9	0.2
16.0	1.7	16.7	0.8	37.5	0.2

WF4 LED 30K40K50K, 5000 K LEDs, input watts: 10, delivered lumens: 791, LM/W=79, test no. ISF 36826P6



	Ave	Lumens
0	285	
5	285	27
15	274	77
25	252	116
35	221	138
45	181	140
55	140	125
65	96	95
75	54	57
85	15	17
90	0	

Zone	Lumens	% Lamp
0° - 30°	220.5	27.8
0° - 40°	358.1	45.2
0° - 60°	622.6	78.7
0° - 90°	791.6	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	791.6	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	104	99	96	101	98	94	97	94	91
2	90	84	78	88	82	77	85	80	75
3	79	71	65	78	70	64	75	68	63
4	70	62	55	69	61	54	67	59	54
5	63	54	47	62	53	47	60	52	46
6	57	48	41	56	47	41	54	46	41
7	51	43	36	51	42	36	49	42	36
8	47	38	33	46	38	32	45	38	32
9	43	35	29	43	35	29	41	34	29
10	40	32	27	39	32	27	38	31	26

		50% beam - 63.5°		10% beam - 108.5°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	9.4	6.8	4.7	15.3	0.9
10.0	5.1	9.3	2.5	20.8	0.5
12.0	3.2	11.7	1.6	26.4	0.3
14.0	2.2	14.2	1.1	31.9	0.2
16.0	1.6	16.7	0.8	37.5	0.2

ENERGY DATA

WF4 LED 27K30K35K			
Color Temperature	2700K	3000K	3500K
Lumens	730	800	780
CRI	90	90	90
Rated wattage	10.7	10.1	10.4
Lu/Watts	68.2	79.2	75.0
Min. starting temp	-40°C (-40°F)	-40°C (-40°F)	-40°C (-40°F)
EMI/RFI	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B
Sound rating	Class A Standards	Class A Standards	Class A Standards
Input voltage	120V	120V	120V
Min. power factor	0.97	0.97	0.97
Input frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input power	120V	120V	120V
Input current	0.09A	0.09A	0.09A

WF4 LED 30K40K50K			
Color Temperature	3000K	4000K	5000K
Lumens	750	810	790
CRI	90	90	90
Rated wattage	10.6	10.6	10.1
Lu/Watts	70.8	76.4	78.2
Min. starting temp	-40°C (-40°F)	-40°C (-40°F)	-40°C (-40°F)
EMI/RFI	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B
Sound rating	Class A Standards	Class A Standards	Class A Standards
Input voltage	120V	120V	120V
Min. power factor	0.97	0.97	0.97
Input frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input power	120V	120V	120V
Input current	0.09A	0.09A	0.09A

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WST LED

Architectural Wall Sconce

Buy American

Catalog Number	WST LED-P2-40K-VF-MVOLT-PE-DDBXD
Notes	
Type	FF

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

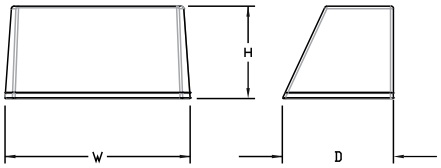
Luminaire

Height: 8-1/2" *(21.59 cm)*

Width: 17" *(43.18 cm)*

Depth: 10-3/16" *(25.9 cm)*

Weight: 20 lbs *(9.1 kg)*



Introduction

The WST LED is designed with the specifier in mind. The traditional, trapezoidal shape offers a soft, non-pixilated light source for end-user visual comfort. For emergency egress lighting, the WST LED offers six battery options, including remote. For additional code compliance and energy savings, there is also a Bi-level motion sensor option. With so many standard and optional features, three lumen packages, and high LPW, the WST LED is your "go to" luminaire for most any application.

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: WST LED P1 40K VF MVOLT DDBTXD

WST LED

Series	Performance Package	Color temperature	Distribution	Voltage		Mounting
WST LED	P1 1,500 Lumen package P2 3,000 Lumen package P3 6,000 Lumen package	27K 2700 K 30K 3000 K 40K 4000 K 50K 5000 K	VF Visual comfort forward throw VW Visual comfort wide	MVOLT[1] 120[2] 208[2] 240[2]	277[2] 347[2] 480[2]	**Shipped included** (blank) Surface mounting bracket PBBW Premium surface-mounted back box[3,4] **Shipped separately** BBW Surface-mounted back box[3]

Options

NLTAIR2 PIR	nLIGHT AIR Wireless enabled motion/ambient sensor for 8'-15' mounting heights[5,6,7]
NLTAIR2 PIRH	nLIGHT AIR Wireless enabled motion/ambient sensor for 15'-30' mounting heights[5,6,7]
PE	Photoelectric cell, button type[8]
PER	NEMA twist-lock receptacle only (controls ordered separate)[9]
PER5	Five-wire receptacle only (controls ordered separate)[9]
PER7	Seven-wire receptacle only (controls ordered separate)[9]
PIR	Motion/Ambient Light Sensor, 8-15' mounting height[5,6]
PIR1FC3V	Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[5,6]
PIRH	180° motion/ambient light sensor, 15-30' mounting height[5,6]
PIRH1FC3V	Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[5,6]
SF	Single fuse (120, 277, 347V)[2]
DF	Double fuse (208, 240, 480V)[2]
DS	Dual switching[10]
DMG	0-10V dimming extend out back of housing for external control (control ordered separate)[11]
E7WH	Emergency battery backup, Non CEC compliant (7W)[7]
E7WC	Emergency battery backup, CA Title 20 Noncompliant (cold, 7W)[7,12]
E7WHR	Remote emergency battery backup, CA Title 20 Noncompliant (remote 7W)[7,13]
E20WH	Emergency battery pack 18W constant power, Certified in CA Title 20 MAEDBS[7]
E20WC	Emergency battery pack -20°C 18W constant power, Certified in CA Title 20 MAEDBS[7,12]
E23WHR	Remote emergency battery backup, CA Title 20 Noncompliant (remote 20W)[7,12,14]
LCE	Left side conduit entry[15]
RCE	Right side conduit entry[15]
BAA	Buy America(n) Act Compliant

Shipped separately

RBPW	Retrofit back plate[3]
VG	Vandal guard[15]
WG	Wire guard[15]

Finish *(required)*

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DSSXD	Sandstone
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white
DSSTXD	Textured sandstone

See Accessories and Notes on next page.

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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Values calculated according to IESNA TM-21-11 methodology and valid up to 40°C.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.95	>0.92	>0.87

Electrical Load

Performance package	System Watts	Current (A)					
		120	208	240	277	347	480
P1	11	0.1	0.06	0.05	0.04	---	---
	14	---	---	---	---	0.04	0.03
P1 DS	14	0.12	0.07	0.06	0.06	---	---
P2	25	0.21	0.13	0.11	0.1	---	---
	30	---	---	---	---	0.09	0.06
P2 DS	25	0.21	0.13	0.11	0.1	---	---
P3	50	0.42	0.24	0.21	0.19	---	---
	56	---	---	---	---	0.16	0.12
P3 DS	52	0.43	0.26	0.23	0.21	---	---

Motion Sensor Default Settings

Option	Dimmed State	High Level (when triggered)	Photocell Operation	Ramp-up Time	Dwell Time	Ramp-down Time
*PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	3 sec	5 min	5 min
PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	3 sec	5 min	5 min

*for use with site wide Dusk to Dawn control

PER Table

Control	PER (3 wire)	PER5 (5 wire)		PER7 (7 wire)		
			Wire 4/Wire5		Wire 4/Wire5	Wire 6/Wire7
Photocontrol Only (On/Off)	✓	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM	⊘	✓	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM with Motion	⊘	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
Futureproof*	⊘	⚠	Wired to dimming leads on driver	✓	Wired to dimming leads on driver	Wires Capped inside fixture
Futureproof* with Motion	⊘	⚠	Wired to dimming leads on driver	✓	Wired to dimming leads on driver	Wires Capped inside fixture

✓ Recommended

⊘ Will not work

⚠ Alternate

*Futureproof means: Ability to change controls in the future.

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Performance Package	System Watts (MVOLT[1])	Dist. Type	27K (2700K, 70 CRI)					30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	12W	VF	1,494	0	0	0	125	1,529	0	0	0	127	1,639	0	0	0	137	1,639	0	0	0	137
		VW	1,513	0	0	0	126	1,548	0	0	0	129	1,659	0	0	0	138	1,660	0	0	0	138
P2	25W	VF	3,163	1	0	1	127	3,237	1	0	1	129	3,469	1	0	1	139	3,468	1	0	1	139
		VW	3,201	1	0	0	128	3,276	1	0	0	131	3,512	1	0	0	140	3,512	1	0	0	140
P3	50W	VF	6,025	1	0	1	121	6,165	1	0	1	123	6,609	1	0	1	132	6,607	1	0	1	132
		VW	6,098	1	0	1	122	6,240	1	0	1	125	6,689	1	0	1	134	6,691	1	0	1	134

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D-Series Size 0

Legacy LED Area Luminaire

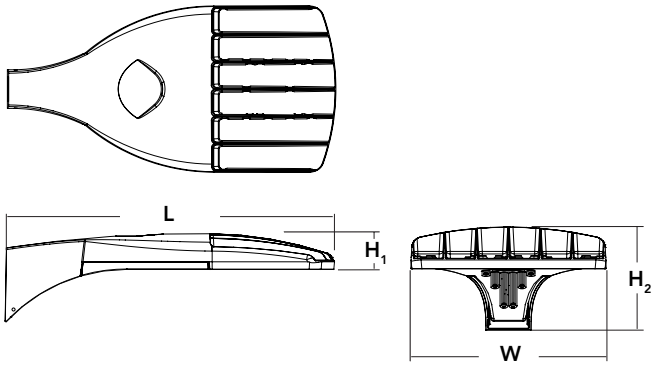
Buy American

Catalog Number	DSX0 LED-P5-40K-T4M-MVOLT-RPA-HS-DDBXD
Notes	
Type	GA, GB

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	0.95 ft² (.09 m²)
Length:	26" (66.0 cm)
Width:	13" (33.0 cm)
Height$_1$:	3" (7.62 cm)
Height$_2$:	7" (17.8 cm)
Weight (max):	16 lbs (7.25 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 70% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD G1

DSX0 LED

Series

DSX0 LED

LEDs

Forward optics

P1	P5
P2	P6
P3	P7[1]
P4[1]	

Rotated optics

P10[2]	P12[2]
P11[2]	P13[1,2]

Color temperature

30K	3000 K
40K	4000 K
50K	5000 K

Distribution

T1S	Type I short (Automotive)
T2S	Type II short
T2M	Type II medium
T3S	Type III short
T3M	Type III medium
T4M	Type IV medium
TFTM	Forward throw medium
T5VS	Type V very short[3]
T5S	Type V short[3]
T5M	Type V medium[3]
T5W	Type V wide[3]
BLC	Backlight control[4]
LCCO	Left corner cutoff[4]
RCCO	Right corner cutoff[4]

Voltage

MVOLT	(120V-277V)[5,6]
XVOLT	(277V-480V)[7,8,9]
120[6]	
208[6]	
240[6]	
277[6]	
347[6]	
480[6]	

Mounting

Shipped included

SPA	Square pole mounting
RPA	Round pole mounting[10]
WBA	Wall bracket[3]
SPUMBA	Square pole universal mounting adaptor[11]
RPUMBA	Round pole universal mounting adaptor[11]

Shipped separately

KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish)[12]

Control options

Shipped installed

NLTAIR2	nLight AIR generation 2 enabled[13,14]
PIRHN	Network, high/low motion/ambient sensor[15]
PER	NEMA twist-lock receptacle only (control ordered separate)[16]
PER5	Five-pin receptacle only (control ordered separate)[16,17]
PER7	Seven-pin receptacle only (leads exit fixture) (control ordered separate)[16,17]
DMG	0-10V dimming extend out back of housing for external control (control ordered separate)[18]
PIR	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[19,20]
PIRH	High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[19,20]
PIR1FC3V	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[19,20]
PIRH1FC3V	High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[19,20]
FAO	Field adjustable output[19,21]

Other options

Shipped installed

HS	House-side shield[22]
SF	Single fuse (120, 277, 347V)[6]
DF	Double fuse (208, 240, 480V)[6]
L90	Left rotated optics[2]
R90	Right rotated optics[2]
DDL	Diffused drop lens[22]
HA	50°C ambient operations[1]
BAA	Buy America(n) Act Compliant

Shipped separately

BS	Bird spikes[23]
EGS	External glare shield

Finish *(required)*

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white

Generation *(required)*

G1	Generation 1

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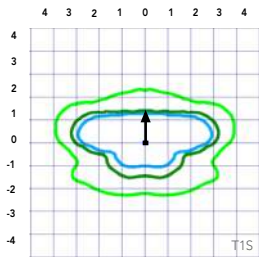
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 0 homepage.

Isofootcandle plots for the DSX0 LED P6 40K G1. Distances are in units of mounting height (20').

LEGEND

- 0.1 fc
- 0.5 fc
- 1.0 fc



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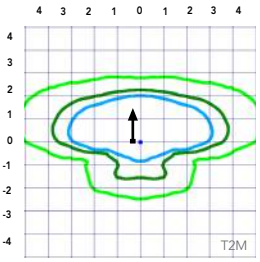

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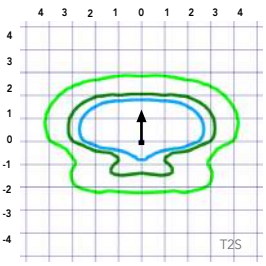

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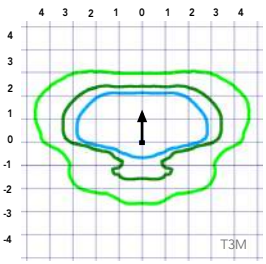

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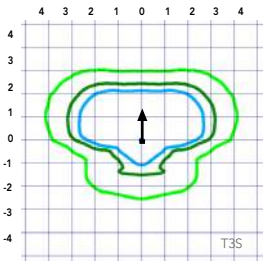

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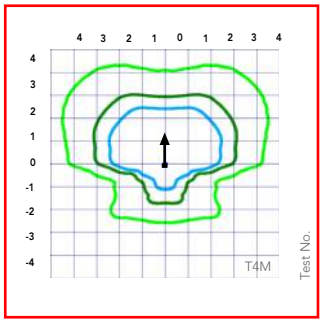

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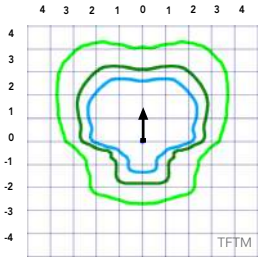

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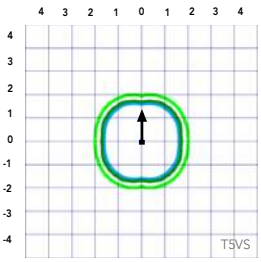

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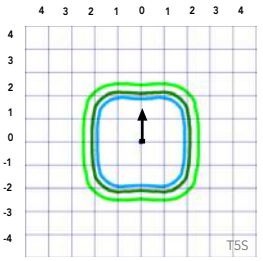

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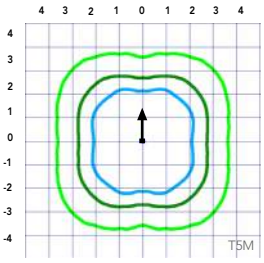

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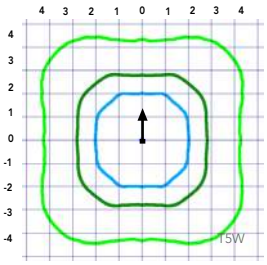
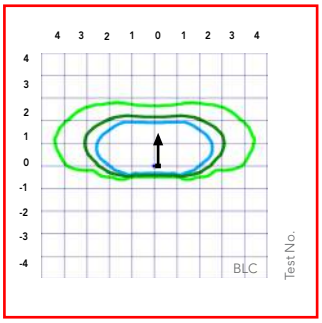


Test No. LTL23451P25 tested in accordance with IESNA LM-79-08.



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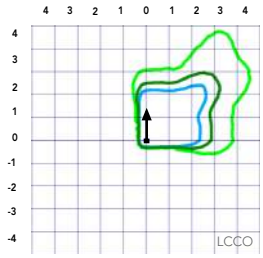

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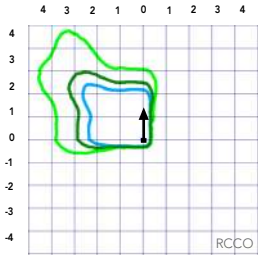

Test No.

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Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

Power Package	LED Count	Drive Current	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P5	40	700	89W	T1S	10,831	2	0	2	122	11,668	2	0	2	131	11,816	2	0	2	133
				T2S	10,876	2	0	2	122	11,716	2	0	2	132	11,864	2	0	2	133
				T2M	10,820	2	0	2	122	11,656	2	0	2	131	11,803	2	0	2	133
				T3S	10,849	2	0	2	122	11,687	2	0	2	131	11,835	2	0	2	133
				T3M	10,532	2	0	2	118	11,346	2	0	2	127	11,490	2	0	2	129
				T4M	10,613	2	0	3	119	11,434	2	0	3	128	11,578	2	0	3	130
				TFTM	10,842	2	0	2	122	11,680	2	0	2	131	11,828	2	0	2	133
				T5VS	11,276	3	0	1	127	12,148	3	0	1	136	12,302	3	0	1	138
				T5S	11,286	3	0	1	127	12,158	3	0	1	137	12,312	3	0	1	138
				T5M	11,257	4	0	2	126	12,127	4	0	2	136	12,280	4	0	2	138
				T5W	11,344	4	0	3	127	12,221	4	0	3	137	12,375	4	0	3	139
				BLC	8,890	1	0	2	100	9,576	1	0	2	108	9,698	1	0	2	109
				LCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81
				RCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81
P6	40	1050	134W	T1S	14,805	3	0	3	110	15,949	3	0	3	119	16,151	3	0	3	121
				T2S	14,865	3	0	3	111	16,014	3	0	3	120	16,217	3	0	3	121
				T2M	14,789	3	0	3	110	15,932	3	0	3	119	16,134	3	0	3	120
				T3S	14,829	2	0	3	111	15,975	3	0	3	119	16,177	3	0	3	121
				T3M	14,396	3	0	3	107	15,509	3	0	3	116	15,705	3	0	3	117
				T4M	14,507	2	0	3	108	15,628	3	0	3	117	15,826	3	0	3	118
				TFTM	14,820	2	0	3	111	15,965	3	0	3	119	16,167	3	0	3	121
				T5VS	15,413	4	0	1	115	16,604	4	0	1	124	16,815	4	0	1	125
				T5S	15,426	3	0	1	115	16,618	4	0	1	124	16,828	4	0	1	126
				T5M	15,387	4	0	2	115	16,576	4	0	2	124	16,786	4	0	2	125
				T5W	15,506	4	0	3	116	16,704	4	0	3	125	16,915	4	0	3	126
				BLC	12,151	1	0	2	91	13,090	1	0	2	98	13,255	1	0	2	99
				LCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74
				RCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74
P7	40	1300	166W	T1S	17,023	3	0	3	103	18,338	3	0	3	110	18,570	3	0	3	112
				T2S	17,092	3	0	3	103	18,413	3	0	3	111	18,646	3	0	3	112
				T2M	17,005	3	0	3	102	18,319	3	0	3	110	18,551	3	0	3	112
				T3S	17,051	3	0	3	103	18,369	3	0	3	111	18,601	3	0	3	112
				T3M	16,553	3	0	3	100	17,832	3	0	3	107	18,058	3	0	3	109
				T4M	16,681	3	0	3	100	17,969	3	0	3	108	18,197	3	0	3	110
				TFTM	17,040	3	0	3	103	18,357	3	0	4	111	18,590	3	0	4	112
				T5VS	17,723	4	0	1	107	19,092	4	0	1	115	19,334	4	0	1	116
				T5S	17,737	4	0	2	107	19,108	4	0	2	115	19,349	4	0	2	117
				T5M	17,692	4	0	2	107	19,059	4	0	2	115	19,301	4	0	2	116
				T5W	17,829	5	0	3	107	19,207	5	0	3	116	19,450	5	0	3	117
				BLC	13,971	2	0	2	84	15,051	2	0	2	91	15,241	2	0	2	92
				LCCO	10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68
				RCCO	10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68

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September 20, 2024

Re: 15935 HICKMAN RD - Site Plan and Preliminary Plat for Mixed Development at 15935 Hickman Road

Dear Property Owner:

Casco Civil, on behalf of Leaders Real Estate, has submitted a Site Plan and Preliminary Plat to the City of Clive to create two separate parcels that contain a drive-thru coffee shop and a general retail building generally located north of Hickman Road and East of NW 161st Street.

The Clive Planning and Zoning Commission will tentatively receive public input on this application during their meeting at 5:30 p.m., Oct 03, 2024. You may attend this meeting in person in the Council Chambers at 1900 NW 114th Street, Clive, IA 50325, or virtually via Zoom. Zoom Meeting ID and call-in number will be published on the agenda for the meeting. Meeting agendas are available on the City's website at http://www.cityofclive.com/connect/boards_and_commissions/

As a neighboring property owner, you are being notified and invited to present your views concerning this application, either verbally by virtually attending the meeting, or in writing. Written comments must be received by the City prior to the Planning and Zoning Commission meeting. Written comments should be addressed to the City of Clive, City Planner, 1900 NW 114th Street, Clive, IA 50325 or by email at the address below.

Following the Planning and Zoning Commission's review and recommendation, the City Council will make a determination on this application. The public meeting has been tentatively scheduled for 6:00 p.m., on Oct 10, 2024, also to be hosted in person at the above address and virtually via Zoom. Zoom Meeting ID and call-in number will be published on the agenda for the meeting. City Council meeting agendas are available on the City's website at http://www.cityofclive.com/connect/city_council/

If you know of any interested parties who have not received a copy of this letter, we would appreciate it if you would inform them of the time, date and place of the Planning and Zoning Commission's meeting and City Council's meeting. If you have any questions concerning this application or if you would like additional information, please call the Community Development Department at (515) 223-6221.

Sincerely,

Kathryn Purvis

KPURVIS@CITYOFCLIVE.COM

LOCATION MAP

MEISNER, BARBARA A
15816 SHERIDAN AVE
CLIVE, IA 50325

BLIZEK, AMORITA M
15842 SHERIDAN AVE
CLIVE, IA 50325

FRUHLING FAMILY, LLC
15844 SHERIDAN AVE
CLIVE, IA 50323

LARSEN, WAYNE E
15846 SHERIDAN AVE
CLIVE, IA 50325

DAGGS, STEPHEN E & CAROL A JTRS
15848 SHERIDAN AVE
CLIVE, IA 50325

GRAHAM, LEROY & LINDA LIVING TRUST 4/17/2019
15880 SHERIDAN AVE
CLIVE, IA 50325

BARKER, MARY JO
15882 SHERIDAN AVE
CLIVE, IA 50325

GEHRING, PAMELA Q
15884 SHERIDAN AVE
CLIVE, IA 50325

PIERCE, STEVEN JOINT REVOCABLE TRUST 3/9/2015 GOLDIN, REBECCA JOINT REVOCABLE TRUST 3/9/2015
15886 SHERIDAN AVE
CLIVE, IA 50325

MYERS PROPERTIES, INC
16000 HICKMAN RD
CLIVE, IA 50325

IRMITER, REBECCA L TRUST 11/11/2016
16018 SHERIDAN AVE
CLIVE, IA 50325

HOLLIS, MELISSA & JASON JTRS
16026 SHERIDAN AVE
CLIVE, IA 50325

MERKEL, KAROL
16034 SHERIDAN AVE
CLIVE, IA 50325

WAKNITZ, LONNIE M & LINDA S JTRS
16042 SHERIDAN AVE
CLIVE, IA 50325

BRACEWELL, DENNIS L
16050 SHERIDAN AVE
CLIVE, IA 50325

NOSBISCH, DIANE
16058 SHERIDAN AVE
CLIVE, IA 50325

RANDLES, SANDRA J
16066 SHERIDAN AVE
CLIVE, IA 50325

WELLIK, MAYNARD J & JANE M JTRS
16074 SHERIDAN AVE
CLIVE, IA 50325

ROHDEN, JAMES & SUSAN REVOCABLE TRUST
16082 SHERIDAN AVE
CLIVE, IA 50325

RACETTE, GREG & TERESA JTRS
16090 SHERIDAN AVENUE
CLIVE, IA 50325

KWIK TRIP, INC
1626 OAK ST
LA CROSSE, WI 54602

CHURCH AT DEERFIELD POINTE, LLC
211 N ROBINSON 8TH FLOOR
OKLAHOMA CITY, OK 73102

MCCARTAN FAMILY TRUST
2407 NW 160TH CT
CLIVE, IA 50325

SCHUTT, JANET KLEEN LIVING TRUST
2413 NW 160TH COURT
CLIVE, IA 50325

SIEMAN, LORETTA J JOINT REVOCABLE TRUST U/A DTD 02/03/2023
2414 NW 160TH CT
CLIVE, IA 50325

BRITTON, SUSAN M
2427 NW 160TH CT
CLIVE, IA 50325

SMITH, MIKE A & JENNIFER L JTRS
3960 INDIAN RIDGE DR
WAUKEE, IA 50263

COUNTRY CLUB POINTE LLC
495 ALICE'S RD STE A
WAUKEE, IA 50263

KING, SCOTT M
50 W DOUGLAS #1100
FREEPORT, IL 61032

DARALEE LLC
542 462ND AVE
GRINNELL, IA 50112

COUNTRY CLUB POINTE TOWNHOMES
OWNERS ASSOCIATION
6205 MILLS CIVIC PKWY, STE 201
WEST DES MOINES, IA 50266

RYAN, BONNYE L
640 SE DRIFTWOOD LN
WAUKEE, IA 50263

FAREWAY STORES, INC
715 8TH ST
BOONE, IA 50036

STATE OF IOWA
800 LINCOLN WAY
AMES, IA 50010

Kathryn Purvis

From: Kathryn Purvis
Sent: Tuesday, September 24, 2024 3:42 PM
To: Marie McCartan
Subject: RE: Questions on preliminary plat of 15935 Hickman Rd

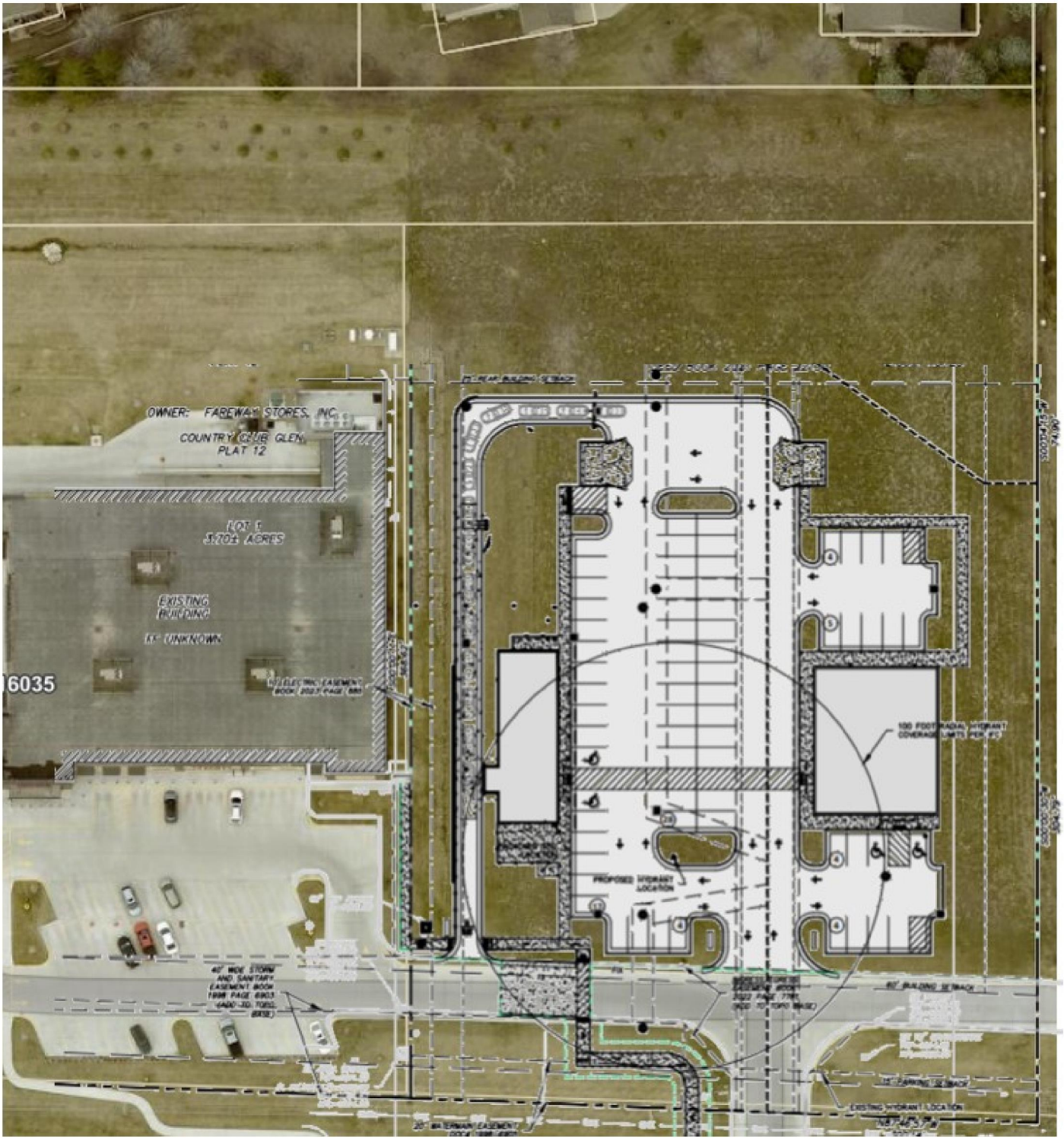
Good Afternoon Marie,

Thank you for reaching out. Below is a general presentation of the site layout for the items in question. The greenspace to the north is proposed for stormwater detention, very similar to the faraway site to the west. The drive-thru and coffee shop are located on the left side of the photo and the general flex office/retail space is to the right.

A restaurant would not be considered a retail use by Clive ordinance or proposed as part of this project. Our zoning consideration for "retail" is limited to typical shop establishments and office could be medical office or professional offices, however, there is not a proposed tenant for the retail/office building at this time.

A full set of the proposed plans are available by following this link to our website: https://www.cityofclive.com/project_detail_T51_R1130.php

General aerial of the site with the proposed buildings:



Let me know if you have further questions or comments/concerns you would like addressed by staff or the applicant at the upcoming meeting.

Thank you!

-----Original Message-----
From: Marie McCartan <marieemccartan@gmail.com>
Sent: Tuesday, September 24, 2024 3:07 PM
To: Kathryn Purvis <kpurvis@cityofclive.com>
Subject: Questions on preliminary plat of 15935 Hickman Rd

Kathryn,

Just received the letter on the above preliminary plat.

Couple of questions:

Do you have any aerial drawings of the location of the coffee shop and drive-thru. And do you have a proposed drawing of the retail space and parking.

Also, is a restaurant called a retail business?

Thank you,

Marie McCartan
2407 NW 160th Ct.
Clive, IA 50325
515/240-0338
marieemccartan@gmail.com

Kathryn Purvis

From: Kathryn Purvis
Sent: Wednesday, September 25, 2024 12:58 PM
To: Marie McCartan
Subject: RE: Quick question

Hi Marie-

Yes, we require all dumpsters to be enclosed with a solid material. These are proposed to be brick material to match the building with metal gates, and are proposed to be 8 feet tall in order to fully obscure the visibility of the dumpsters.

Both buildings are proposed to be one story in height.

I'm glad to hear your thoughts on the project! Please let me know if you have any other questions or explanations of what is being proposed, I'm happy to help!

-----Original Message-----
From: Marie McCartan <marieemccartan@gmail.com>
Sent: Wednesday, September 25, 2024 12:51 PM
To: Kathryn Purvis <kpurvis@cityofclive.com>
Subject: Quick question

On the dumpster / waste disposal units. Is there a fence around the dumpsters and how high will it be? Will both buildings be one-story?

I think the plan looks good. I live directly north of this area.

Thanks,
M

Marie McCartan
2407 NW 160th Ct.
Clive, IA 50325
marieemccartan@gmail.com

Community Development
1900 NW 114th Street
Clive, IA 50325
515.223.6221
cityofclive.com

September 25, 2024
September 9, 2024

Steve Dahms/ Sarah Fonda
15935 Hickman Rd
Clive, IA
Permit # STP24-000005 / Project #: 24-000537

Dear Ms. Fonda/ Mr. Dahms,

Please find revised comments in response to the updated submittal dated 9/16/2024, for the above referenced project.

Cover Page/General

1. Construction Drawings application and plan set are specifically for the public improvements and public utility extensions of the project. No other items should be included. Any items related to the stormwater detention areas or private piping need to be addressed on the Site Plan.

   RESPONSE: The team will work with the City to ensure an appropriate set of drawings is submitted for a Construction Drawing Application.

2. Please update any reference to your proposed outlot to Outlot A, and references to the existing outlot owned by Fareway to Outlot X. There are some inconsistencies throughout the site plan and preliminary plat.

   RESPONSE: Revised as requested.

   The sheets where Outlot A and Outlot X are housed on separate sheets titles Outlot A as Proposed Lot A. Please update to "Outlot A".

3. Temporary construction easements for the sidewalk extension on the Fareway property and the stormwater detention area within the existing Outlot X. A copy of these easements must be provided to staff prior to any grading or construction activity.

   RESPONSE: Shown and labeled as requested.

   Outlot X should also be labeled with a temporary construction easement which will need to be provided to staff prior to any grading or construction activity.

Grading Plan: Sheets C3.0 and C3.1

1. Slopes are shown at 3:1 in the grassed swale on the west side of the site. All slopes need to be stable and mowable.

   RESPONSE: The swale along the westernmost property line has been removed.

   A swale is required on the west end of the property so that runoff is not released undetained to the property to the west. Provide a swale with maximum 4:1 slopes.

   RESPONSE: The swale is still intact, it has just been raised to allow for a smaller retaining wall. All slopes on the site have been revised to less than 4:1 slope and labels have been added to demonstrate compliance. Neither the existing, nor the proposed swale is "detaining" water due to the size of the outfall pipe. A barracuda unit has been added downstream of the swale to assist in adequately treating the runoff from the swale and the southern part of the drive thru lane.

   Provide spot elevations on the west edge of the property in proximity to the CL callouts for the swale. The Fareway site plan established a ~1008 elevation near the shared property line and a 1008.5 FFE. The swale CL should be at minimum 6" below the FFE for Fareway; spot elevations are intended to confirm.

Utility Plan: Sheets C4.0, C4.1, C4.2, C4.3 and C4.4

1. Following up on discussions related to the water service to the dumpster enclosure, please revise the plan to direct drainage from the dumpster enclosure west into the grassed area at an approximately 2% slope. Be advised, if any fats/oils/grease concerns are raised once the tenant is operational additional storm inlet protection may be required.

   RESPONSE: The dumpster will now drain to the green space to allow for infiltration to occur prior to runoff.

   Please add the water line back to the utility pages to the trash enclosure.

   Please address either the cut outs in the curb or the removal of the back curb to allow drainage through the green space for treatment.

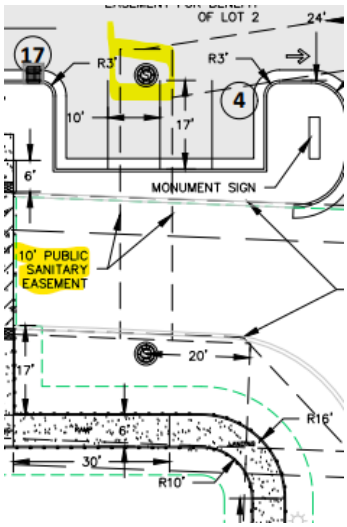
2. Please provide the following easements:

   a. 40' Public Sanitary Sewer Easement to 20 feet past the manhole located on lot 1(building A). The provided sanitary sewer easement (public) is not the correct size on the plans (marked as 10 feet). Please update the easement the extend to both manholes with the requested sizing above.

      RESPONSE: A dimension has been added to the plans to demonstrate compliance.

      a. The 40' measurement is required to be extended north to manhole B, which should be a public manhole as it is still considered a public extension.

      b. Please update the 10-foot easement currently listed to 40 feet. This should also include a 20 foot extension past the manhole. A visual has been provided for this item to explain the comment area in question.



~~b. Shared water easement (private) for the line on lot 1 that benefits lot 2 (east line). Staff apologizes for not catching this easement need on the last review.~~ No longer needed due to realignment of water services

~~**RESPONSE: Shown and labeled as requested.**~~

3. Please identify and provide call-outs for all utility critical crossings.

   RESPONSE: The plan view does not allow adequate space for additional call-outs of utility crossings. All crossings have been detailed in the utility profiles. If required, an additional sheet can be provided with plan view notes.

   Please provide a separate sheet that shows the plan view notes for the critical crossings as there are many on the site to verify.

   Please add the elevations for the crossings of the gutter storm sewer connections over the water services for buildings A and B.

   Please provide the detail for the additional structural supports for the Storm Sewer/ Sanitary Sewer Critical Crossing points that are less than 18".

4. Private fire hydrant is required within 100 ft of FDC connection. Existing hydrant is not capable of fulfilling this requirement.

   RESPONSE: Hydrant added between Buildings A & B.

   Private hydrant to be protected from vehicle impact either by locating the hydrant in the center of the island or installing bollards per IFC section 312.

5. **Page C4.2:**
   a. **Please update the service lines/water mains over 2 inches in diameter to be cast iron and not copper. Please add a note that these services will need to be tested and passed by the City of Clive before going into service.**
   b. **Please exchange the hydrant call out to reference the City of Clive standards for installation over Des Moines Water Works**

Landscape Plan: Sheet L1.0

1. **The trees on the west edge of the property appear to be withing the western swale. Adjust trees to not obstruct the drainage by keeping them out of the center line and containing mulch with edging to avoid stormwater backups in the swale.**

Architectural and Building Specifications: Sheets A101, A201, A202, A1.1, and A4.0

1. Updates to the buildings meet the request for further architectural detail; however, percentages of primary materials are required to be 60% for all facades as well as the overall building total. Glazing is not included in the square footage of overall façade measurements for materials and the percentages should be adjusted accordingly (storefront can be removed from the base area). A list of considered materials and their tier is attached to this letter. Please include searchable code and color for all materials in the schedule.

   RESPONSE: See sheet A201-Exterior Elevations and A202-Extieror Elevations for updated exterior material breakdowns.

   Please provide the same updates for Building B. Some of the facades do not meet the 60% minimum primary material. Eifs is not a primary material. All architectural pages are required with each submittal regardless of if there are changes on that page as the project includes both buildings.

2. Further comments may be provided during the building plan review process. Additional exit doors may be needed based on occupancy and travel distances.

   RESPONSE: Acknowledged.

Photometric Plan: Sheets E5.0 and E5.1

1. Please verify if there are proposed building mounted lighting. If so, please include a fixture specification sheet for what is proposed. Building mounted lighting does not need to be reflected on the photometric analysis.

   RESPONSE: Building mounted lighting was placed and labeled on the photometrics sheet, but not included in the site lighting photometrics calculations. Fixture cutsheets will be submitted with the drawing set.

   Fixture specification sheets are required at site plan phase for both buildings so that the construction sets have something to be matched to. The specification sheets provided address the previous request by staff. Please add the specification sheets and building lighting locations on the photometric plan for building B.

   Please remove the excess lighting sheets. The site plan only requires pages E102, and the specification sheets for the building lighting for both buildings. All other pages are specific to the Starbucks building and do not provide information for the site plan as a whole, so they are best saved for the building plans.

Stormwater Management Plan

1. **SWMP: Proposed conditions**

   RESPONSE: Calculations have been provided to demonstrate adequate recharge and

channel protection volume(s). The entire site grading has been adjusted to ensure adequate drainage patterns and swales allowing for the treatment of runoff prior to entering the public system.

a. It is not acceptable to leave 25% of the site untreated. Revise plan conditions to treat the entire site; exceptions may be made for minimal open space along the property line. In particular, the driveway and parking lot on the west end of the site need to be treated.

   RESPONSE: A new manhole and barracuda unit will be installed inline downstream of the area inlet which intakes the swale and the southern portion of the drive-thru lane to adequately treat the runoff. Details of the specified unit have been provided on C5.0.

   The drainage area containing the western swale, southwestern driveway, and frontage road is yet undetained and therefore does not meet the New Development stormwater requirements. It is not acceptable to leave 25% of the site undetained.

   Staff understands that full detention of this area may not be physically feasible given other site constraints. Revise and resubmit a practice, or set of practices, that demonstrates reasonable effort to meet stormwater compliance for this area. In the narrative, include any conflicts (such as other utility easements, ability to connect to existing inverts, issues with sufficient cover, etc.) that may aid in the determination for an exception for this drainage area.

b. Bioretention system: The bottom of the bioretention features is at elev. 1000.50'. The geotechnical report indicates that the long-term static water table ranged from 1004' down to 999', suggesting that the subdrain at the bottom of the practice would constantly be draining the site. ISWMM recommends a separation distance of 2 ft. No borings were taken in the detention basin area. Revise and resubmit.

   RESPONSE: The system has been redesigned to accommodate an assumption of a 1004' water table near the detention basin.

   C7.0 Bioretention system: It is unclear what the depth of bioretention soil is in the given detail. Revise and resubmit so that staff can determine whether the detail matches the conditions proposed in the stormwater report.

   Report: ISWMMM minimum depth of amended soil is 18". Revise and resubmit.

c. **SWMP: The CPv requirements are for extended detention, not necessarily storage. Run a report for the 1- year (CPv) event. The qo/qi calculations are for initial sizing; the final routing with your orifices etc. needs to have a 24-48 hr drawdown for the CPv. The 2-year appears to draw down in about 20 hours, which may imply some outlet or grading changes to achieve the CPv release rate.**

Items that will be needed with additional submittals outside of the preliminary plat and site plan :

Long-term BMP Maintenance Plan:

1. **IA: update description to match number of proposed separators. Include area behind trash enclosure for cleanup.**
2. **Appendix E: Appendix E - reconcile the reporting form with the checklists from Appendix C. These don't need to be separate documents; as given they're mostly redundant. Staff recommends inserting the description and general items from Appendix C into the inspection form of Appendix E, so that an operator can take the map and Appendix E into the field and know what his duties are.**
3. **Include drainage arrows on grading plan or spot elevations to clarify ambiguous open space. Specifically, the open space east of the parking lot and proposed Building B should drain towards the basin, the only exception being areas immediately adjacent to the frontage road.**
4. **C3.1 100-year HWL on C 3.1 does not match that listed on C7.0 or in report. Revise and resubmit.**
5. **C3.1 Label the overflow path and include spot elevations.**
6. **C3.1 include the stage-storage table from the report on this sheet for verification during as-builts.**
7. **C4.0 P4 is listed in stormwater report as having pipefull velocity in excess of 15 fps. The maximum allowable pipe velocity per SUDAS on interior collection pipes is 15 fps. Revise and resubmit.**
8. **C7.0 Detention Basin Outlet Structure needs to have some sort of grate for safety purposes.**
9. **C7.0 or other: the footprint area of the bioretention is unclear. Revise and resubmit.**
10. **C 7.0 label depth of soil mix so that it can be verified against the stormwater management report.**
11. **C7.2 and Model: Model subbasins 14-20 do not appear to be included in the flow quantity calculations. Revise and resubmit. If basins are represented, provide key tying model sub-basins to drainage areas indicated in Sheet C7.2 proposed drainage area map**

12. L1.0 staff has concerns about establishing the tall fescue in the bioretention area without being able to take the growing areas 'offline' during the establishment area. The fescue seed is likely to wash out of the system. If blanket is to be applied, include callout for another sheet (similar to the standpipe)

Construction Drawings:

1. A separate application and plan set detailing the public approvements are required

2. Submittal is advised as soon as possible as the approval can run simultaneously with the site plan approvals. Otherwise, construction drawings must be approved before the submittal of a final plat.

Due at time of grading permit request:

1. Temporary construction easement for the sidewalk between 15935 Hickman and 16035 Hickman (Fareway)
2. Temporary construction easement for the Stormwater Detention Basin in Outlot X between 15935 Hickman, 15925 Hickman, and 16035 Hickman(Fareway).

Due at time of Final Plat submittal:

4. Please identify the Clive benchmark on the final plat. Nearby benchmarks are BM#30 at NW 156th Street and Hawthorn Drive; BM#31 at NW 156th Street and Boston Pkwy; and BM#32 at Berkshire Pkwy and Sheridan Ave.

1. Public Easement documents for :
    a. 40' Sanitary Sewer Easement
    b. 24' Ingress/Egress Easement
    c. Stormwater Management Facility Maintenance Covenant and Permanent Easement Agreement for Outlot A

2. Private easement documents for :
    a. Sanitary sewer service for the benefit of Lot 2
    b. Storm sewer service for the benefit of Lot 2
    c. Private detention/stormwater easement for Outlot A
    d. Updated detention/stormwater easement for existing Outlot X
    e. Any additional easements that may be requested by franchise utilities, e.g. gas and electric services.

3. General final plat documents:
    a. Title Opinion
    b. Approval of the Subdivision name
    c. Mortgage consent to plat
    d. Proprietor consent to plat
    e. Treasurer's Certificate
    f. Address list

Please submit the next plan that addresses the above comments with all pages and updated visual renderings as they may be referenced during the upcoming public meetings. This project is currently on course to be presented at the October 3rd Planning and Zoning meeting. The agenda with the online attendance link will be provided September 27th. Please feel free to contact me via email at kpurvis@cityofclive.com or at 515-867-5074 if you have questions or need additional information. If staff collaboration is needed to provide a satisfactory solution to any of the above comments, please let me know so I can coordinate that meeting as soon as possible.

Sincerely,

Kathryn Purvis
Planner

Staff Report

TO: Planning and Zoning Commission members
FROM:
Kathryn Purvis, Planner

DATE: October 3, 2024
RE: Chapter 14: Landscaping Ordinance Update Discussion

Staff has identified a need to review the Parking and Landscape/open space ordinances as the City enters its last phases of new development and prepares for a focus on redevelopment of existing sites. The two chapters were highlighted as needing to be addressed together, as there is often overlap in the requirements and space on a site to house appropriate landscaping, required open space, and provide the right amount of parking. Additionally, the recent redevelopment of sites in the City has further supported that these chapters heavily influence the realistic ability of existing sites to conform to today's requirements. These redevelopment sites struggled with providing required parking and landscaping measures, resulting in applicants requesting variances and staff to approve landscaping that did not meet the minimum standards due to a sheer lack of space for the required plantings to exist. Finally, the health of new tree plantings has had a noted decline, requiring consistent replanting, particularly regarding evergreen varieties which make up a majority of the current Landscape Buffer required plantings.

This is the first in a series of discussions that will guide staff to draft ordinance updates that are in keeping with the identity of Clive, while addressing the need for reform in the face of redevelopment. During this discussion, staff will ask for guidance on Landscape Buffers related to minimum requirements for dimensions, quantity, and plant varieties.

Attachments:
1. Landscape Ordinance Updates

Landscape & Open Space Requirements: Buffer Discussion

Planning & Zoning Commission

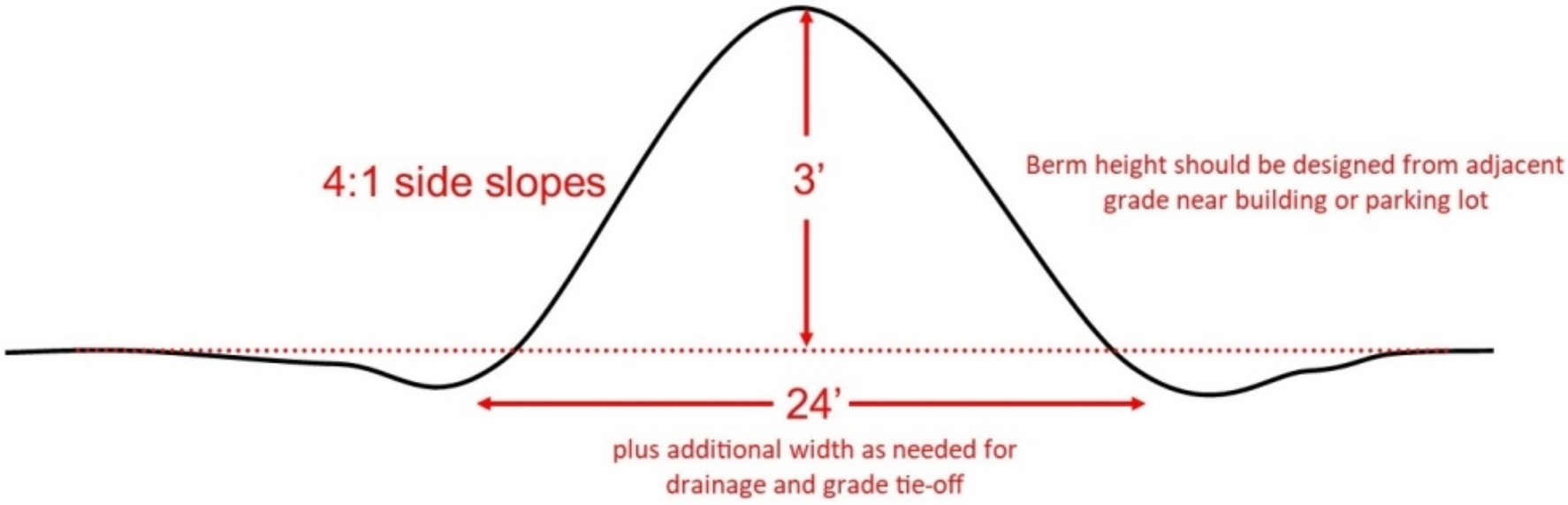
October 3, 2024

Buffers Required

- R-3 and R-4 Districts adjacent to other R Districts
- C and M Districts adjacent to R Districts
- M Districts adjacent to C Districts
- TC Districts
- Double frontage lots in R and M Districts on rear lot line

Buffers Required

- Buffers require a 3-4 ft high berm (some exceptions)
- Fences not required (some exceptions)



Current Requirements: Buffer Dimensions

- Various districts have 20, 30, 50, and 65 ft buffer widths
- C and M Districts adjacent to R Districts:
  - 50 ft and 65 ft wide buffers, respectively
  - Buffer widths more intense than majority of the metro
  - Building setbacks also increased to 75 ft
- Primrose Park is only R District adjacent to an M District and is separated by railroad right-of-way (100 ft) – M District has 0’ rear setback

Current Requirements: Buffer Plantings

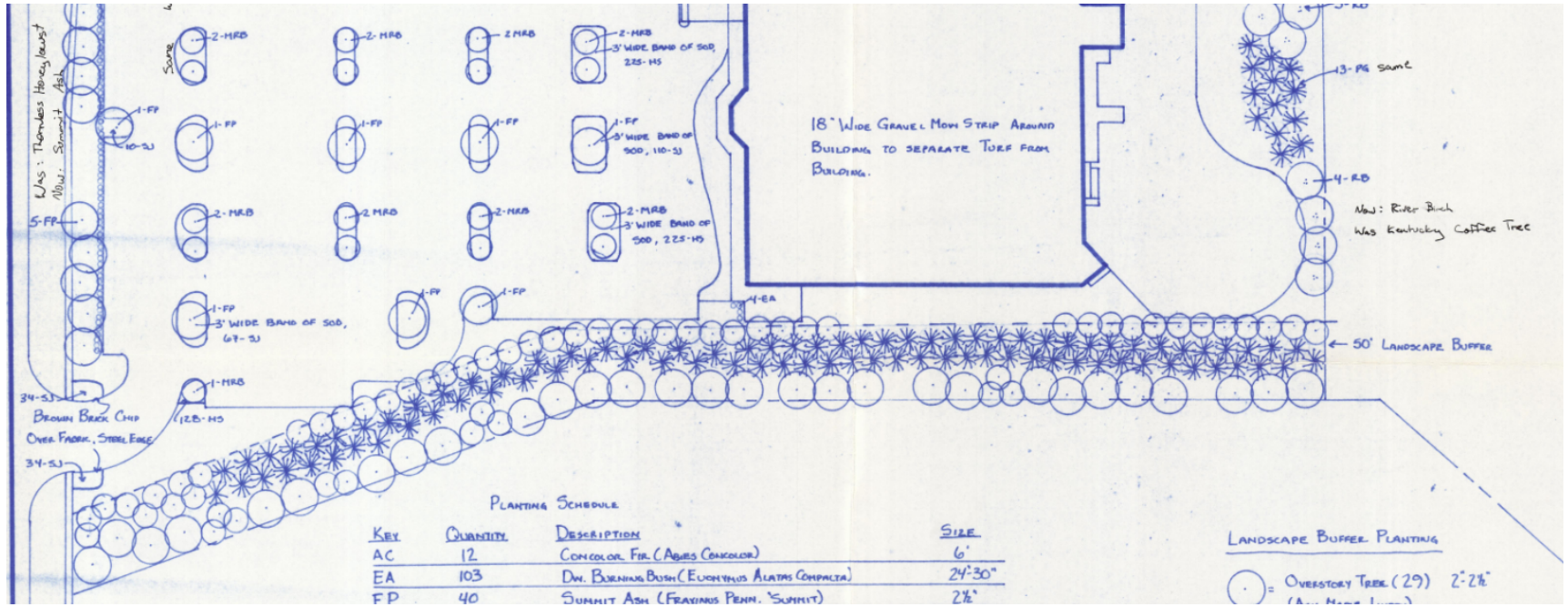
- Current quantity calculation intended an “insta-buffer”
- Planting quantity calculated per 30 linear ft (by buffer width)
  - 20 ft = 1 overstory, 1 evergreen, 1 ornamental, 9 shrubs
  - 30 ft = 1 overstory, 2 evergreen, 1 ornamental
  - 50 ft = 1 overstory, 3 evergreen, 2 ornamental
  - 65 ft = 2 overstory, 4 evergreen, 2 ornamental

Staff Observations

- Stormwater detention and buffers often compete for space - conflicts will increase with redevelopment
- Concerns with tree health for the intensity required – trees forced to be too close together
- 50 to 100 ln ft is more common calculation than 30 ln ft
- Evergreens consistently failing at planting and over time

Case Study 1: NFM

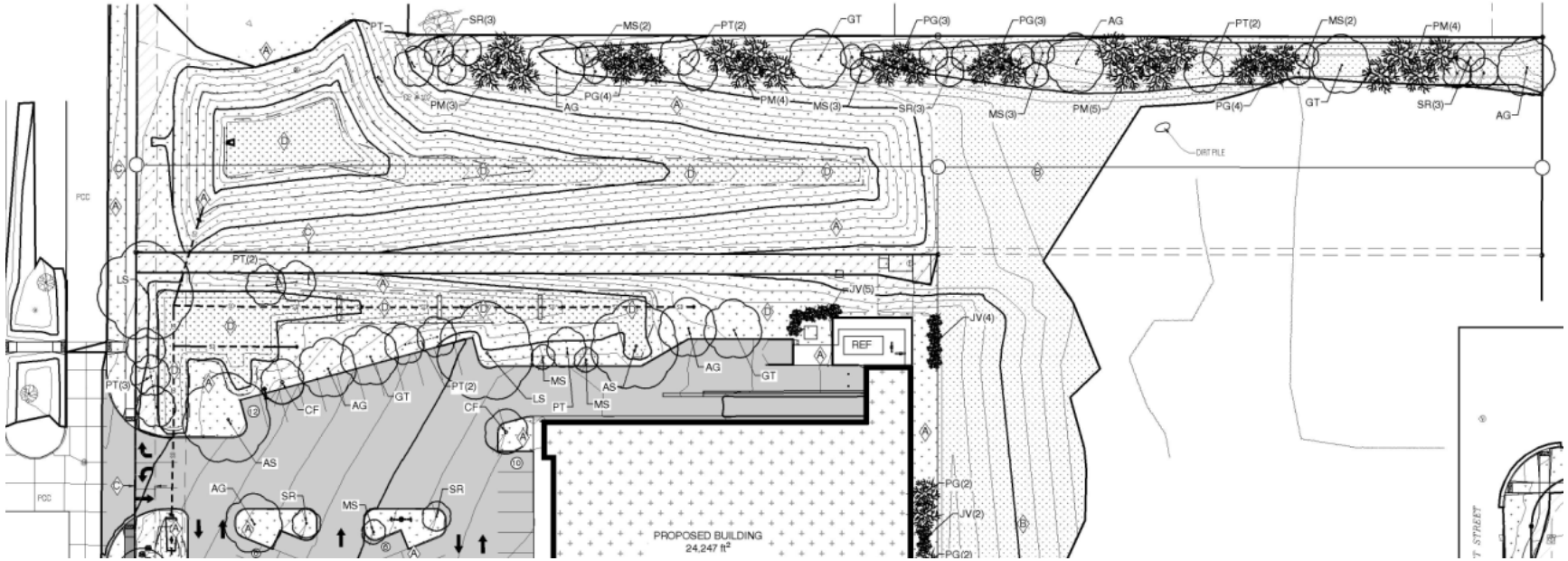
- Original Dahl's site plan has 50' buffer with 150 trees (2002)
- NFM removed ~35 trees, replanted ~45 trees in buffer (2018)
- Kum & Go replanted ~21 trees in buffer (2020)



Case Study 1: NFM

Case Study 2: Fareway Hickman Road (2022)

- 25’ of required 50’ buffer was planted with the townhome development
- Fareway only required to plant ½ the trees required for the 50’ buffer
- Number of required trees was 17 trees fewer than what the 30’ buffer would have required
- Plantings are spread over 35’ of buffer depth due to berm grade requirements



Case Study 2: Fareway Hickman Road (2022)

Discussion

- Should the landscape buffer requirement be eliminated for properties adjacent to railroad right-of-way, similar to setback reductions?
- Should a buffer be required when C or M Districts are across the street from an R District? Does street type matter?
- Should the C and M District buffers be combined?
- Should the buffer widths be reduced?

Discussion, continued

- Should the required buffer tree quantity be reduced to provide more growing space for trees?
- Should the number and/or ratio of required evergreens be reduced?
- Should shrubs and similar plantings be allowed to replace a portion of the evergreen requirements?

Memo

TO: Mayor and Council members
FROM: Amanda Grutzmacher, Senior Planner
DATE: October 3, 2024
RE: 2025 Meeting Dates

SYNOPSIS:
At the September meeting, the Commission discussed the need to change the monthly meeting date. The first Tuesday of the month is the date that has been determined to work the best. The 2025 Development and Rezoning schedules based off the first Tuesday of the month are attached.

Attachments:
1. Development Schedule
2. Rezoning Schedule

Community Development
1900 NW 114th St.
Clive, IA 50325
(515) 223-6221
www.cityofclive.com

2025 DEVELOPMENT SCHEDULE

Meeting dates are tentative based on application completeness and project complexity. A project will not be placed on a meeting agenda until all required items have been submitted and staff comments have been addressed.

Development projects only need to be considered at one City Council meeting. Typically, projects proceed to the next Council meeting following Planning and Zoning Commission consideration. Projects with pending comments after the Planning & Zoning Commission meeting should expect to be presented during the 2nd City Council meeting to allow time for applicant revisions.

Application Due by 8:00 A.M.	Staff Review Comments Sent	First Revisions Due	Revised Staff Comments Sent	Neighborhood Notification Sent	Planning & Zoning Packets Delivered	Planning & Zoning Meeting	City Council Submittal Due (1st)	City Council Meeting (1st)	City Council Submittal Due (2nd)	City Council Meeting (2nd)
Nov 22	Dec 06	Dec 13	Dec 20	Dec 24	Jan 03	Jan 07	Jan 15	Jan 23	Feb 05	Feb 13
Dec 20	Jan 03	Jan 10	Jan 17	Jan 21	Jan 31	Feb 04	Feb 05	Feb 13	Feb 19	Feb 27
Jan 17	Jan 31	Feb 07	Feb 14	Feb 18	Feb 28	Mar 04	Mar 05	Mar 13	Mar 19	Mar 27
Feb 14	Feb 28	Mar 07	Mar 14	Mar 18	Mar 28	Apr 01	Apr 02	Apr 10	Apr 16	Apr 24
Mar 21	Apr 04	Apr 11	Apr 18	Apr 22	May 02	May 06	May 14	May 22	Jun 04	Jun 12
Apr 18	May 02	May 09	May 16	May 20	May 30	Jun 03	Jun 04	Jun 12	Jun 18	Jun 26
May 16	May 30	Jun 06	Jun 13	Jun 17	Jun 27	Jul 01	Jul 02	Jul 10	Jul 16	Jul 24
Jun 20	Jul 04	Jul 11	Jul 18	Jul 22	Aug 01	Aug 05	Aug 06	Aug 14	Aug 20	Aug 28
Jul 18	Aug 01	Aug 08	Aug 15	Aug 19	Aug 29	Sep 02	Sep 03	Sep 11	Sep 17	Sep 25
Aug 22	Sep 05	Sep 12	Sep 19	Sep 23	Oct 03	Oct 07	Oct 15	Oct 23	Nov 05	Nov 13
Sep 19	Oct 03	Oct 10	Oct 17	Oct 21	Oct 31	Nov 04	Nov 05	Nov 13	Dec 03	Dec 11
Oct 17	Oct 31	Nov 07	Nov 14	Nov 18	Nov 28	Dec 02	Dec 03	Dec 11	Dec 31	Jan 08

Community Development
1900 NW 114th St.
Clive, IA 50325
(515) 223-6221

2025 REZONING SCHEDULE

Meeting dates are tentative based on application completeness and project complexity. Zoning applications cannot be received and filed until a complete submittal is made. Consideration of the rezoning will not be placed on a meeting agenda until all required items have been submitted and staff comments have been addressed.

Application Due by 12:00 p.m.	Draft Comments Sent	Revisions Due by 12:00 p.m.	City Council Receive and File Date/Set Public Hearing	Neighborhood Notification Sent	Planning and Zoning Meeting	City Council 1st Consideration	City Council 2nd Consideration	City Council 3rd Consideration
Oct 31	Nov 14	Nov 21	Dec 12	Dec 24	Jan 07	Jan 23	Feb 13	Feb 27
Dec 12	Dec 26	Jan 02	Jan 23	Jan 21	Feb 04	Feb 13	Feb 27	Mar 13
Jan 02	Jan 16	Jan 23	Feb 13	Feb 18	Mar 04	Mar 13	Mar 27	Apr 10
Jan 30	Feb 13	Feb 20	Mar 13	Mar 18	Apr 01	Apr 10	Apr 24	May 08
Mar 27	Apr 10	Apr 17	May 08	Apr 22	May 06	May 22	Jun 12	Jun 26
Apr 10	Apr 24	May 01	May 22	May 20	Jun 03	Jun 12	Jun 26	Jul 10
May 01	May 15	May 22	Jun 12	Jun 20	Jul 01	Jul 10	Jul 24	Aug 14
Jun 12	Jun 26	Jul 03	Jul 24	Jul 22	Aug 05	Aug 14	Aug 28	Sep 11
Jul 03	Jul 17	Jul 24	Aug 14	Aug 19	Sep 02	Sep 11	Sep 25	Oct 09
Aug 14	Aug 28	Sep 04	Sep 25	Sep 23	Oct 07	Oct 23	Nov 13	Dec 11
Sep 11	Sep 25	Oct 02	Oct 23	Oct 21	Nov 04	Nov 13	Dec 11	*Jan 08*
Oct 02	Oct 16	Oct 23	Nov 13	Nov 18	Dec 02	Dec 11	*Jan 08*	*Jan 22*