

Notice of Meeting
Polk City | Planning and Zoning Commission (P&Z)

May 15, 2023 | 6:00 pm
City Hall | Council Chambers

Public Meeting participation in person or via phone
Call in #515-726-3598 Participant Code 535355

Public Members can provide comments directly to support@polkcivia.gov
***any comments received before the time of the meeting will be made a part of the minutes**

IF YOU WISH TO ADDRESS THE COMMISSION DURING THE MEETING please contact the City Clerk by 6pm on the date of the meeting by email at jcoffin@polkcivia.gov with your name and address for the record. You will be recognized for five minutes of comment.

Broadcast live and playback will be available at <https://www.youtube.com/c/polkciviagovchannel>

Tentative Meeting Agenda

Deanna Triplett | Chair

Justin Vogel | Vice Chair

P&Z Commission Members: Ron Hankins | Krista Bowersox | Doug Ohlfest | Amber Pringnitz | Doug Sires

1. Call to Order
2. Roll Call
3. Approval of Agenda
4. Public Comments
5. Approval of P&Z Commission Meeting minutes for April 17, 2023
6. Recommend Council approve the Plat of Survey and Site Plan for Ace Hardware
7. Reports & Particulars
 Council Liaison, City Manager, Staff, and Commission
8. Adjourn until June 19, 2023

MEETING MINUTES
The City of Polk City
Planning and Zoning Commission
6:00 p.m., Monday, April 17, 2023

Polk City, Planning and Zoning Commission (P&Z) held a meeting at 6:00 p.m., on April 17, 2023, in City Hall Council Chambers.

The agenda was posted at the City Hall office as required by law.

These tentative minutes reflect all action taken at the meeting.

1. **Call to Order** | Vice Chair Vogel called the meeting to order at 6:00 p.m.
2. **Roll Call** | Hankins, Bowersox, Vogel, Triplett (joined via zoom 6:05pm), Ohlfest, Pringnitz, Sires | In attendance
3. **Approval of Agenda**
MOTION: A motion was made by Hankins and seconded by Pringnitz to approve the agenda.
MOTION CARRIED UNANIMOUSLY
4. **Public Comments** | None
5. **Approval of Meeting Minutes**
MOTION: A motion was made by Bowersox and seconded by Pringnitz to approve P&Z Commission Meeting Minutes for March 20, 2023.
MOTION CARRIED UNANIMOUSLY
6. **MOTION:** A motion was made by Hankins and seconded by Sires to recommend Council approve the Site Plan for On With Life subject to Engineering and Staff comments and recommendations dated April 13, 2023.
MOTION CARRIED UNANIMOUSLY
7. **MOTION:** A motion was made by Hankins and seconded by Ohlfest to recommend Council approve the consolidation of the current U-1 to GF zoning districts into a new GF-1 zoning district
MOTION CARRIED UNANIMOUSLY
8. **Reports & Particulars**
 - Council Member Dvorak thanked the P&Z Members for their work on the commission
 - City Manager Huisman said although the City continues to receive inquiries about the Commercial lot near S 3rd Street and Hickory Way, the City has yet to receive any submittals regarding a site plan there
 - Commission Member Sires asked about the City-Wide Clean-Up event and City Clerk Coffin reported that it is scheduled for April 24th. Sires asked for a report on the Downtown Assessment and City Manager Huisman provided details regarding the Iowa Economic Development Association (IEDA) involvement and process. She indicated that she would share the final report with the commission once it is received in the next couple of months and also thanked Sires and Ohlfest for participating.
9. **Adjournment**
MOTION: A motion was made by Bowersox and seconded by Ohlfest to adjourn at 6:29 p.m.
MOTION CARRIED UNANIMOUSLY
Next Meeting Date – Monday May 15, 2023

Attest:

Jenny Coffin - City Clerk

SITE PLAN REVIEW

Date: May 12, 2023
 Project: Ace Hardware Site Plan

Prepared by: Kathleen Connor
 Travis Thornburgh, P.E.
 Project No.: 123.0568.01

GENERAL INFORMATION:

Owner/ Applicant:	Kimberley Development Corp.
Requested Action:	Approval of Site Plan and POS
Location	Outlot Z, Crossroads at the Lakes Plat 1
Size:	2.113 acres
Zoning:	Planned Unit Development (PUD)
Proposed Use:	Hardware and Paint Store



BACKGROUND:

The subject property was rezoned to Planned Unit Development (PUD) on June 13, 2016. A Revised P.U.D. Master Plan for Crossroads at the Lakes was approved on October 13, 2017 which defined this property as Lot 83. Per the Revised P.U.D. Master Plan, Lot 83 shall comply with all C-2 regulations, except as follows:

- Automotive sales, service, and repairs; car washes, adult entertainment, convenience stores, gas stations and lumber yards are not permitted uses on this lot.
- Offices and/or residential uses are permitted on the second floor of this lot.
- A 30' buffer is required on the eastern and northern property line of this lot.
- A landscape buffer consisting of a berm with trees and shrubs, along with a 20' parking setback north of the back of curb, shall be provided to screen the commercial building from the townhomes south of Hickory Way,

The subject property was later platted as Outlot Z of Crossroads at the Lakes Plat 1 which requires the developer to replat the property in order to create a buildable lot. Plat improvements included construction of Hickory Way and Willow Way, both as private streets. Plat 1 also included extension of public water mains, sanitary sewers, and storm sewers along with a storm water management facility that serves the entire subdivision.

DESCRIPTION:

On behalf of Ace Hardware, Kimberley Development Corp. proposes construction of a new retail building to be located on the Outlot in front of Crossroads Townhomes on S. 3rd Street. The project will include a one-story building, facing S. 3rd Street, that is 15,200 sq. ft. in size. The building will be constructed of a combination of brown-tone brick and dry-vit that will need to conform to the Architectural Design Standards' requirement for 60% brick on the west side, facing the public street, and 50% brick on the north, south, and east sides.

The developer proposes outdoor merchandising areas along the west side of the proposed building. These outdoor merchandising areas will contain a propane exchange area along with lawn care, landscape products, snow maintenance products, and similar seasonal items.

The parking lot will have access from both Willow Way and Hickory Way. Parking will be provided on three sides of the building.

The 10' wide trail has been already been paved along S. 3rd Street and a 4' sidewalk will be constructed along Willow Way to provide connectivity for the townhomes. Buffer trees will be planted in the existing 30' wide buffer easement on the north and east side of this parcel. Additional trees will be planted along both streets and on the east side of the parking lot. Existing trees will be protected within the 30' landscape buffer easement adjacent to the townhomes in Crossroads at the Lakes Plat 1.

Detention has been provided in the existing basins that serve all of the Crossroads at the Lakes subdivision. Water service and sanitary sewer service was extended to the site as part of the Crossroads at the Lakes Plat 1 development. Private storm sewers were constructed with said plat to provide access to the storm water management facility.

REVIEW COMMENTS: Pursuant to our review of Submittal #3 of the Plat of Survey and Site Plan for conformance to applicable city code, we offer the following comments.

1. Provide shrubs on the south side of the parking lot, west of the Hickory Way driveway, to provide screening for the townhomes on the south, particularly since the berm is only one foot high in this area.
2. On the photometric plan, please revise the mounting height of the parking lot lights to be no more than 20'. Revise lighting calculations as required.

RECOMMENDATION:

Based on the satisfactory resolution of each of the above Review Comments, staff recommends approval of the Site Plan and Plat of Survey for Ace Hardware, subject to:

1. Planning & Zoning Commission recommendations, if any, shall be addressed prior to this Site Plan or Plat of Survey moving forward to Council.
2. No temporary or permanent Certificate of Occupancy will be issued for Ace Hardware until all site plan elements are complete, including landscaping, or an Agreement to Complete with surety is supplied to the City.
3. Payment in full of all fees to the City of Polk City.

INDEX LEGEND

LOCATION: OUTLOT 'Z', CROSSROADS AT THE LAKES PLAT 1
POLK CITY, POLK COUNTY, IOWA

REQUESTOR: KIMBERLEY DEVELOPMENT CORPORATION

PROPRIETOR: KIMBERLEY DEVELOPMENT CORPORATION
POB 369
ANKENY, IA 50021-0369

SURVEYOR: LOUIS M. KELEHAN

COMPANY: CIVIL DESIGN ADVANTAGE

PREPARED BY & RETURN TO: CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE
URBANDALE, IOWA 50322
PH: 515-369-4400

AREA RIGHT RESERVED
FOR RECORDING STAMP

PLAT OF SURVEY

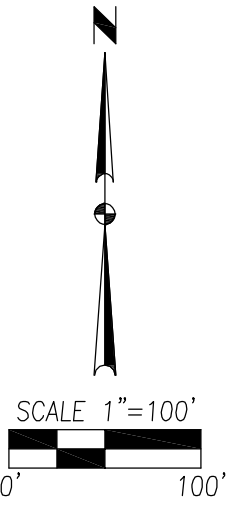
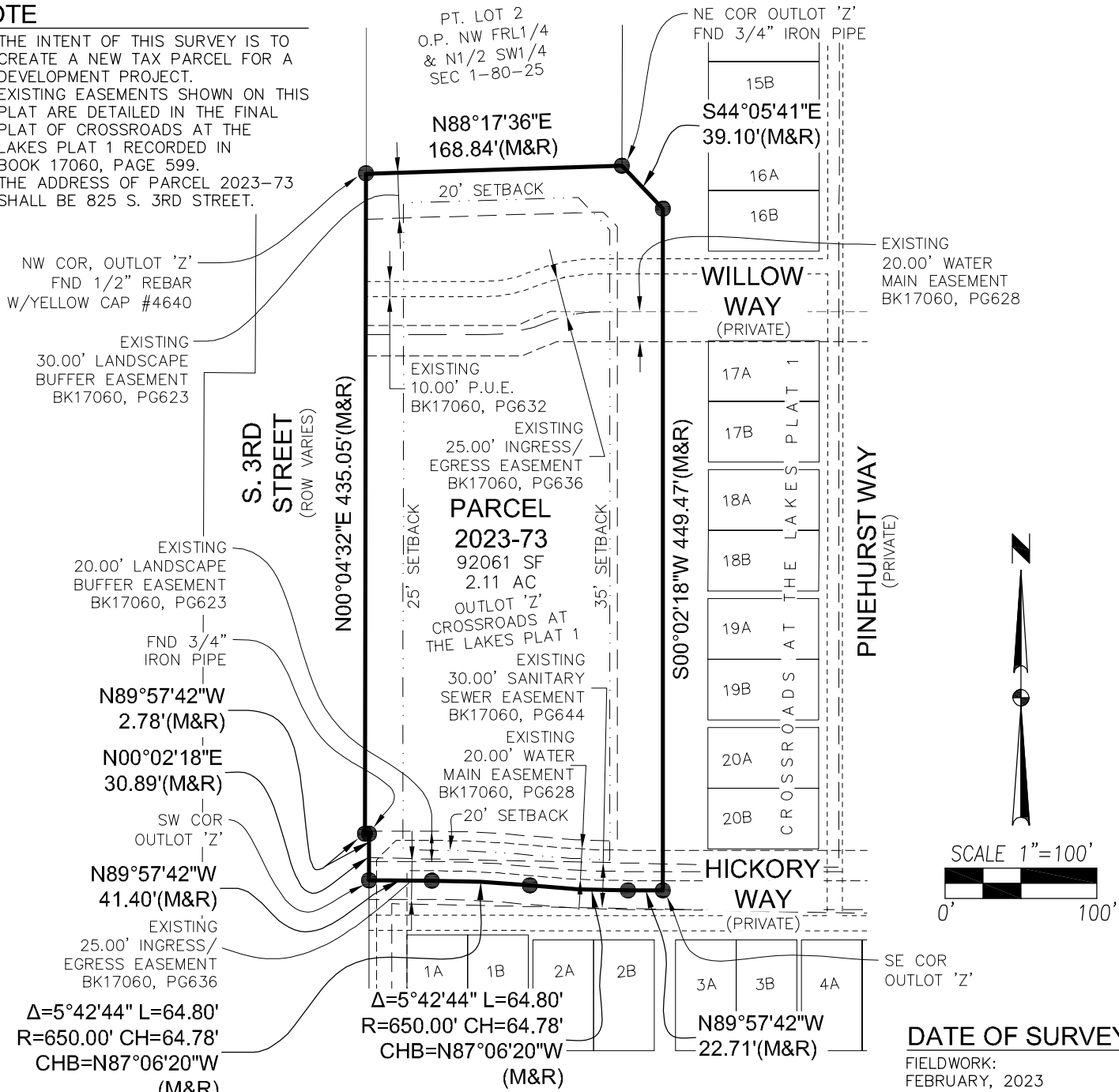
PARCEL 2023-73 LEGAL DESCRIPTION

OUTLOT 'Z', CROSSROADS AT THE LAKES PLAT 1, AN OFFICIAL PLAT IN THE CITY OF POLK CITY, POLK COUNTY, IOWA.

THE PROPERTY CONTAINS 2.11 ACRES (92,061 SQUARE FEET) AND IS SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

NOTE

1. THE INTENT OF THIS SURVEY IS TO CREATE A NEW TAX PARCEL FOR A DEVELOPMENT PROJECT.
2. EXISTING EASEMENTS SHOWN ON THIS PLAT ARE DETAILED IN THE FINAL PLAT OF CROSSROADS AT THE LAKES PLAT 1 RECORDED IN BOOK 17060, PAGE 599.
3. THE ADDRESS OF PARCEL 2023-73 SHALL BE 825 S. 3RD STREET.



DATE OF SURVEY
FIELDWORK:
FEBRUARY, 2023

LEGEND

	FOUND	SET
SECTION CORNER AS NOTED	▲	△
1/2" REBAR, YELLOW CAP PLASTIC #18660 (UNLESS OTHERWISE NOTED)	●	○
MEASURED BEARING & DISTANCE	M	
RECORDED BEARING & DISTANCE	R	
DEEDED BEARING & DISTANCE	D	
ARC LENGTH	AL	
CENTERLINE	---	
SECTION LINE	---	
EASEMENT LINE	---	
PROPERTY BOUNDARY	---	

LOUIS M. KELEHAN
REGISTERED PROFESSIONAL LAND SURVEYOR
IOWA
LICENSE NUMBER 18660

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

LOUIS M. KELEHAN, R.L.S. DATE _____
LICENSE NUMBER 18660
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2023
PAGES OR SHEETS COVERED BY THIS SEAL: _____
THIS SHEET _____

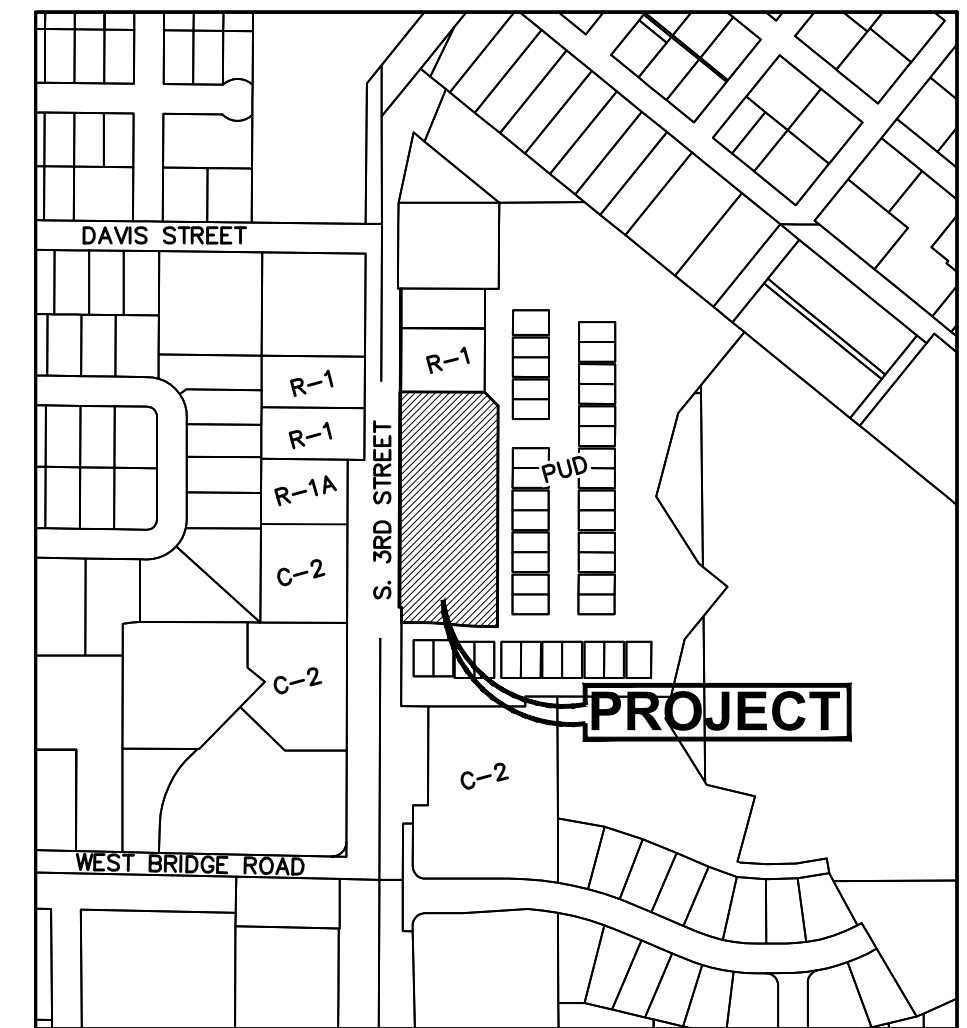
SITE PLAN FOR:

ACE HARDWARE

825 S. 3RD STREET, POLK CITY, IOWA

VICINITY MAP

NOT TO SCALE



POLK CITY, IOWA

OWNER / DEVELOPER

KIMBERLEY DEVELOPMENT CORPORATION
 CONTACT: JORDAN KRAMER
 2785 N. ANKENY BLVD.
 ANKENY, IA 50023
 PH: (515) 963-8335

ENGINEER

CIVIL DESIGN ADVANTAGE, LLC
 CONTACT: ERIN OLLENDIKE
 4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PH. (515) 369-4400
 FX. (515) 369-4410

SURVEYOR

CIVIL DESIGN ADVANTAGE, LLC
 CONTACT: CHARLIE MCGLOTHLEN
 4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PH. (515) 369-4400
 FX. (515) 369-4410

DATE OF SURVEY

MARCH 1, 2023

BENCHMARKS

SET BM: BURY BOLT ON HYDRANT AT THE SE CORNER OF WILLOW & 3RD ST. ELEVATION=939.72

CHECK BM: BURY BOLT ON HYDRANT AT THE NW CORNER OF HWY 415 & 3RD ST. ELEVATION=932.79

CONSTRUCTION SCHEDULE

ANTICIPATED START DATE = SPRING 2023
 ANTICIPATED FINISH DATE = DECEMBER 2023

SUBMITTAL DATES

-SITE PLAN SUBMITTAL TO CITY #1: 04/19/2023
 -SITE PLAN SUBMITTAL TO CITY #2: 05/02/2023
 -SITE PLAN SUBMITTAL TO CITY #3: 05/11/2023

LEGAL DESCRIPTION

OUTLOT 'Z', CROSSROADS AT THE LAKES PLAT 1, AN OFFICIAL PLAT IN THE CITY OF POLK CITY, POLK COUNTY, IOWA.

THE PROPERTY CONTAINS 2.11 ACRES (92,061 SQUARE FEET) AND IS SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

ZONING

P.U.D. IN ACCORDANCE WITH THE REVISED P.U.D. MASTER PLAN FOR CROSSROADS AT THE LAKES.

NOTES:

- THIS PARCEL SHALL COMPLY WITH ALL C-2 REGULATIONS UNLESS SPECIFICALLY WAIVED ON SAID P.U.D. MASTER PLAN. AUTOMOTIVE SALES, SERVICE AND REPAIRS; CAR WASHES, ADULT ENTERTAINMENT, CONVENIENCE STORES, GAS STATIONS AND LUMBER YARDS SHALL NOT BE ALLOWED.
- OFFICES AND/OR RESIDENTIAL USES ARE PERMITTED ON THE SECOND FLOOR.

PROJECT SITE ADDRESS

825 S. 3RD STREET

DEVELOPMENT SUMMARY

AREA: 2.11 ACRES (92,061 SF)

SETBACKS:

FRONT = 25'
 SIDE = 0' (ADJACENT TO COMMERCIAL)
 SIDE = 20' (ADJACENT TO RESIDENTIAL)
 REAR = 35'
 PARKING = 0' EXCEPT ADJACENT TO S. 3RD STREET (5')

OPEN SPACE REQUIRED:

13,810 SF (15%)

OPEN SPACE CALCULATION:

TOTAL SITE = 92,061 SF (2.11 AC)
 BUILDING = 15,380 SF
 PARKING AREAS = 10,987 SF
 DRIVEWAYS = 24,096 SF
 SIDEWALK = 5,143 SF
 OPEN SPACE PROVIDED = 36,455 SF (39%)

PRINCIPAL USE:

HARDWARE AND PAINT RETAIL STORE

NUMBER OF STORIES:

1-STORY BUILDING

BUILDING HEIGHT:

22'-0" (TOP OF PARAPHET WALL)

BUILDING FOOTPRINT:

TOTAL BUILDING = 15,380 SF

PARKING REQUIREMENTS:

SALES OF GOODS WITH LOW-VOLUME TRAFFIC GENERATION
 1 / 400 SF

TOTAL REQUIRED:

15,380 SF / 400 SF = 39 SPACES

TOTAL PROVIDED:

= 71 SPACES (3 ADA SPACES)

NOTES

THERE SHALL BE NO OUTDOOR STORAGE OR MERCHANDISING OTHER THAN IN LOCATIONS SPECIFICALLY DESIGNATED FOR SUCH PURPOSE ON THIS SITE PLAN.

INDEX OF SHEETS

NO.	DESCRIPTION
1	COVER SHEET
2	DIMENSION PLAN
3-5	GRADING PLAN
6	UTILITY PLAN
7	EROSION AND SEDIMENT CONTROL PLAN
8	LANDSCAPE PLAN

GENERAL LEGEND

PROPOSED

PROJECT BOUNDARY	—————
LOT LINE	-----
SECTION LINE	-----
CENTER LINE	-----
RIGHT OF WAY	---R/W---
PERMANENT EASEMENT	---P/E---
TEMPORARY EASEMENT	---T/E---
TYPE SW-501 STORM INTAKE	
TYPE SW-503 STORM INTAKE	
TYPE SW-505 STORM INTAKE	
TYPE SW-506 STORM INTAKE	
TYPE SW-513 STORM INTAKE	
TYPE SW-401 STORM MANHOLE	
TYPE SW-402 STORM MANHOLE	
TYPE SW-301 SANITARY MANHOLE	
STORM/SANITARY CLEANOUT	
WATER VALVE	
FIRE HYDRANT ASSEMBLY	
SIGN	
DETECTABLE WARNING PANEL	
STORM SEWER STRUCTURE NO.	
STORM SEWER PIPE NO.	
SANITARY SEWER STRUCTURE NO.	
SANITARY SEWER PIPE NO.	
SANITARY SEWER WITH SIZE	
SANITARY SERVICE	
STORM SEWER	
STORM SERVICE	
WATERMAIN WITH SIZE	
WATER SERVICE	
SAWCUT (FULL DEPTH)	
SILT FENCE	
USE AS CONSTRUCTED	(U.A.C.)
FINISH GRADE AT HYDRANT	(F.G.H.)
FINISH FLOOR ELEVATION	FFE
TOP OF WALL	TW
FINISHED GRADE AT WALL	BW
DOWNSPOUT LOCATION	DS
TOP OF CURB	TC
FORM GRADE	FG

EXISTING

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



UTILITY WARNING

ANY UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN.



CIVIL DESIGN ADVANTAGE
 4121 NW URBANDALE DRIVE, URBANDALE, IOWA 50322
 PH: (515) 369-4400 Fax: (515) 369-4410
 2212.847

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

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

THE 2023 EDITION OF SUDAS STANDARD SPECIFICATIONS, AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.

THIS DESIGN SPECIFICALLY PREPARED FOR USE AT THE LOCATION SHOWN. USE IN ANY OTHER MANNER EXCEEDS THE INTENDED PURPOSE OF THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS.

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

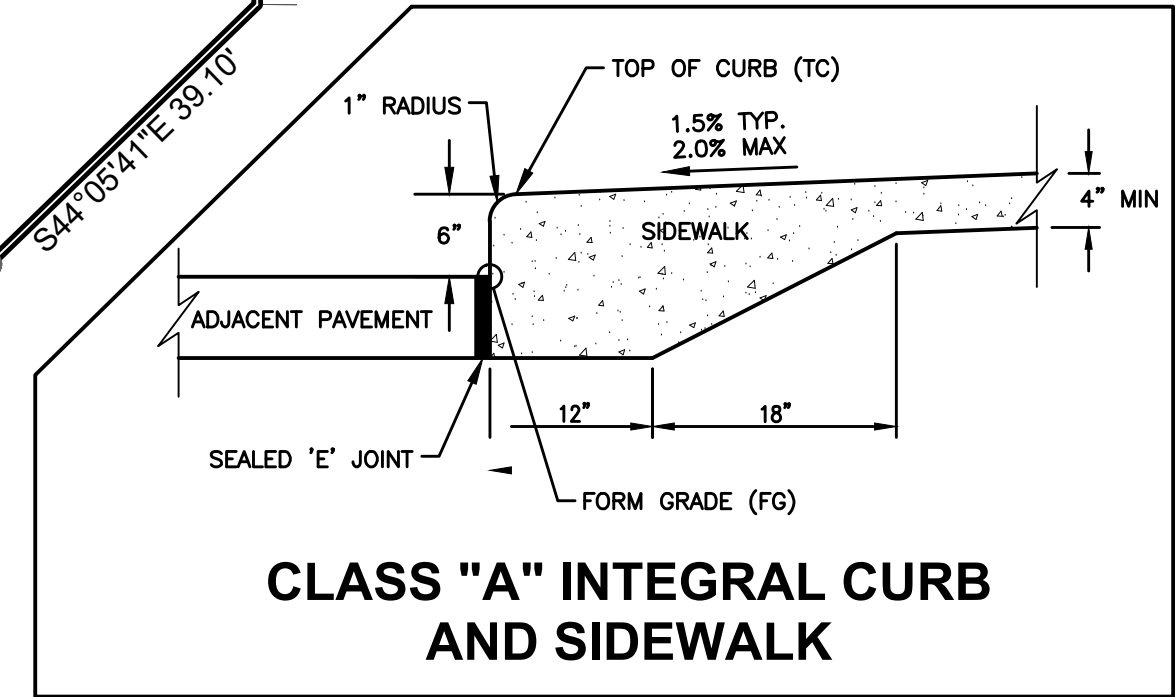
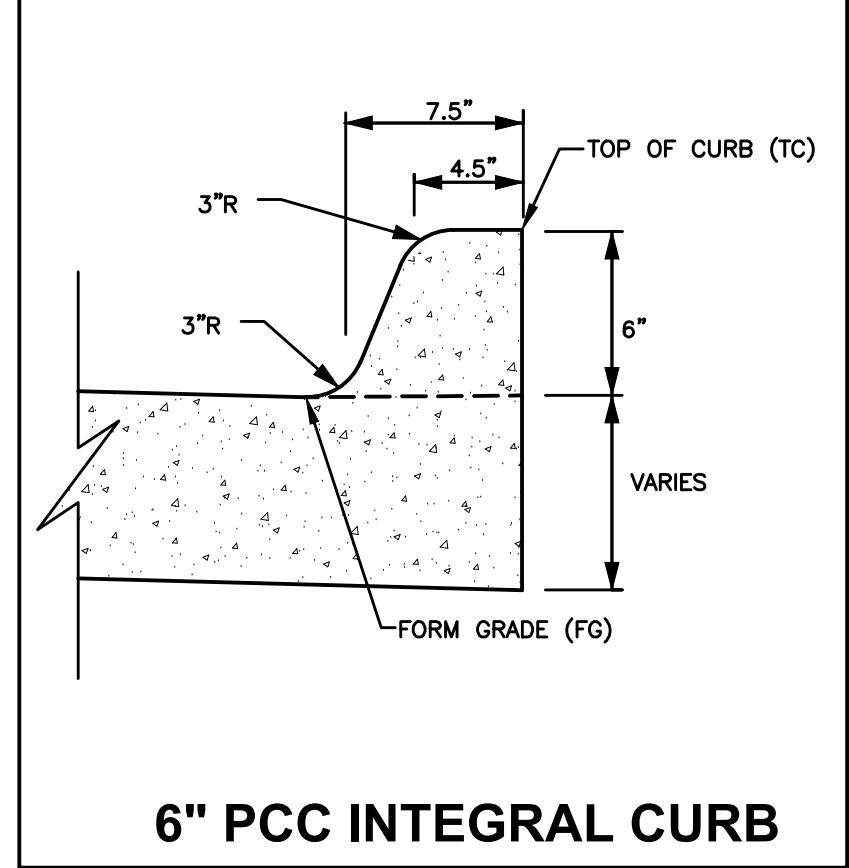
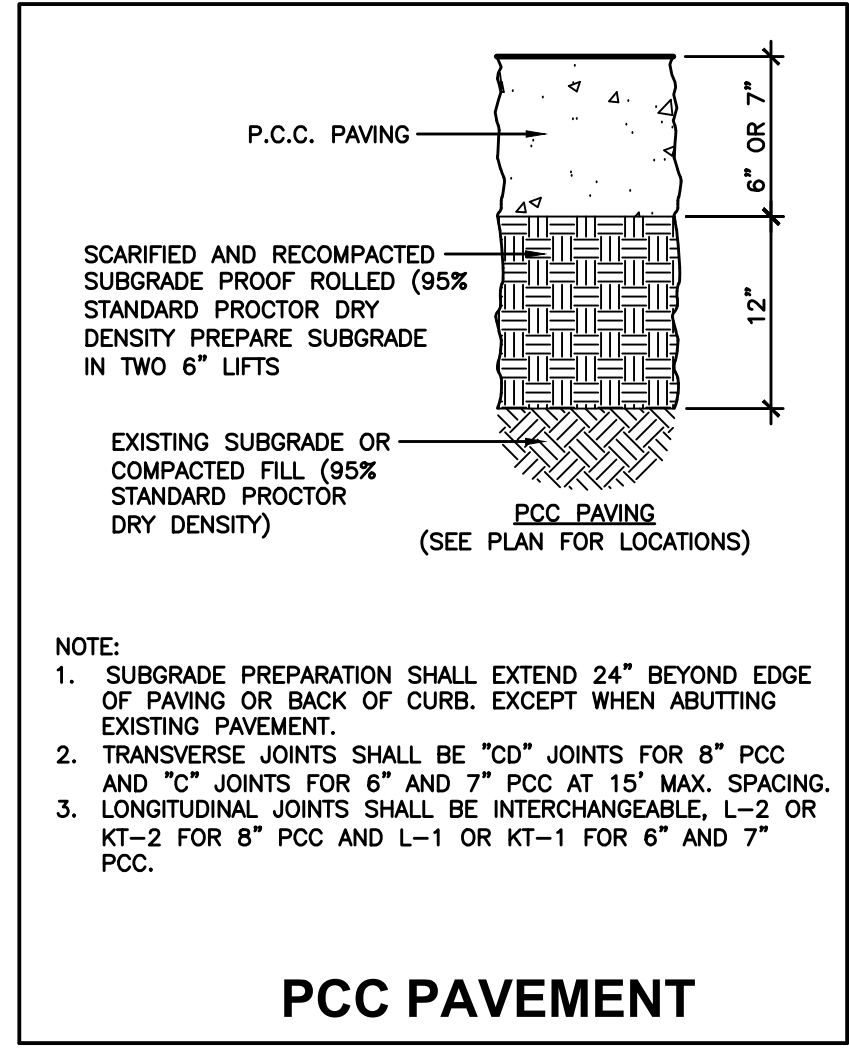
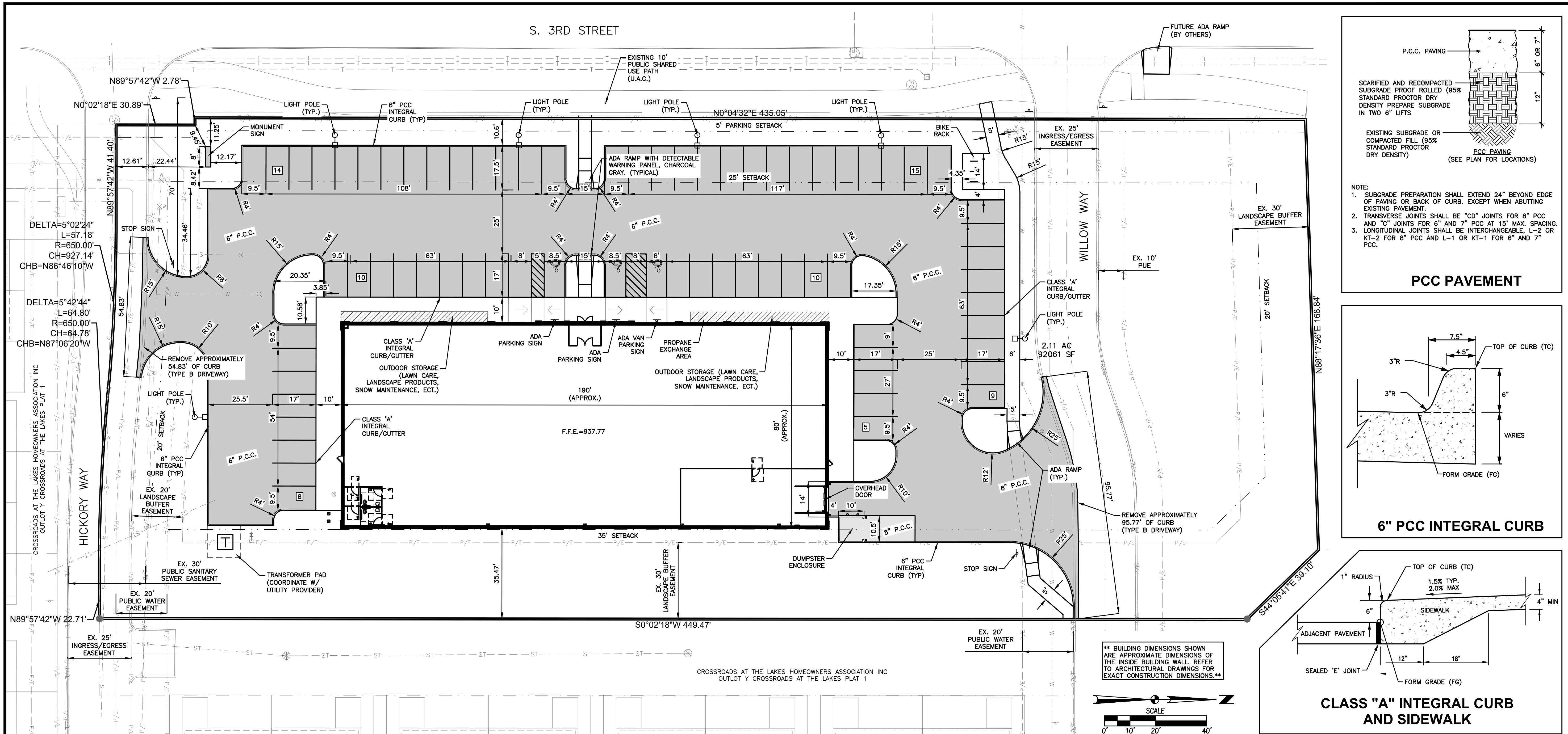
ERIN OLLENDIKE, P.E. DATE _____

PRELIMINARY
 NOT FOR CONSTRUCTION

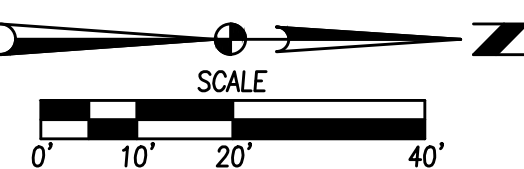
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2023
 PAGES OR SHEETS COVERED BY THIS SEAL: _____
 SHEETS 1-7

ACE HARDWARE

S. 3RD STREET



** BUILDING DIMENSIONS SHOWN ARE APPROXIMATE DIMENSIONS OF THE INSIDE BUILDING WALL. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT CONSTRUCTION DIMENSIONS.**



GENERAL NOTES

- THE 2023 EDITION OF THE SDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
- ALL WORK SHALL COMPLY WITH ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
- ALL WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
- PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER, ENGINEER, AND/OR ARCHITECT, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
- ONCE WORK PRIOR TO CONSTRUCTION WITHIN CITY R.O.W. OR ANY CONNECTION TO PUBLIC SEWERS CONTRACTOR SHALL NOTIFY THE CITY'S CONSTRUCTION DIVISION.
- ALL CONSTRUCTION WITHIN PUBLIC R.O.W./ EASEMENTS, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE CITY'S STANDARDS. ALL DIMENSIONS ARE TO BACK OF CURB, BUILDING FACE OR PROPERTY LINE UNLESS OTHERWISE NOTED.
- CONTRACTOR TO VERIFY BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.
- PLACE 3/4 INCH EXPANSION JOINT BETWEEN ALL P.C.C. PAVEMENT/SIDEWALKS AND BUILDING. PLACE 1/2 INCH EXPANSION JOINT BETWEEN SIDEWALKS AND P.C.C. PAVEMENT.
- REMOVE ALL DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY.
- ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
- DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY.
- THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
- THE CONTRACTOR MAY BE REQUIRED TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY, AS DIRECTED BY THE ENGINEER OR THE CITY.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT, INCLUDING STAGING OF CONSTRUCTION DETAILS.
- CONCRETE REMOVAL FOR DRIVEWAY APPROACHES SHALL BE REMOVED TO THE NEAREST TRANSVERSE JOINT. CONTRACTOR SHALL VERIFY REMOVAL LIMITS WITH CITY'S CONSTRUCTION INSPECTOR PRIOR TO ANY CONCRETE REMOVAL.
- ALL SCOUR STOP SHALL BE INSTALLED BY A CERTIFIED CONTRACTOR ACCORDING TO SCOUR STOP PRODUCT SPECIFICATIONS.
- ALL PERMITS AND ADDITIONAL FEES REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACTOR BID.
- THE MAXIMUM SIGN AREA FOR EACH TENANT SHALL BE BASED UPON THE WIDTH OF THEIR INDIVIDUAL SPACE AS A PERCENTAGE OF THE TOTAL WIDTH OF THE BUILDING, EXCLUSIVE OF AWNING, TIMES 100 SQUARE FEET. NO MORE THAN 100 SQUARE FEET OF SIGNAGE SHALL BE ALLOCATED TO THE ENTIRE BUILDING. FOR EXAMPLE, IF THE RESTAURANT HAS 64 LF OF FRONTAGE OUT OF THE TOTAL 140.55 LF FOR THE ENTIRE BUILDING, THEY ARE ENTITLED TO UP TO 45.5 SQ FT OF SIGNAGE. (45.54 x 100 = 45.5 SQ FT)
- SIGNAGE ON THE AWNING, IF ANY, SHALL BE CONSIDERED AS PART OF THE ALLOWABLE SIGNAGE.
- ALL DAMAGED SIDEWALKS SHALL BE REMOVED AND REPLACED PRIOR TO BUILDING OCCUPANCY.
- ALL PROPOSED DETECTABLE WARNING PANELS SHOWN ON THIS PLAN SHALL BE CHARCOAL GREY COLOR.
- STORMWATER DETENTION HAS ALREADY BEEN PROVIDED IN AN OFFSITE REGIONAL BASIN.

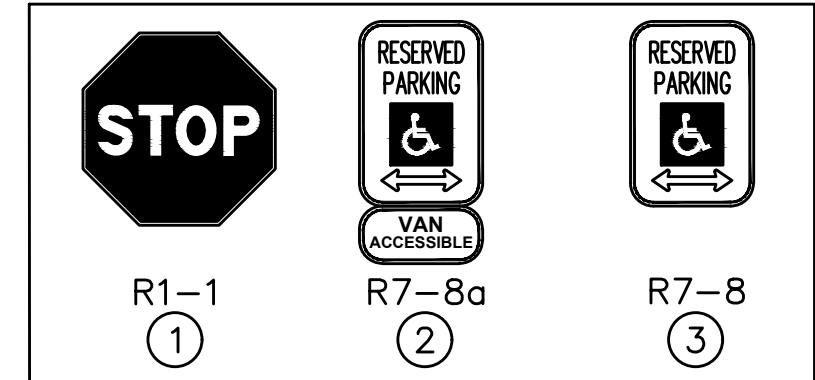
TRAFFIC CONTROL NOTES

- ALL APPLICABLE CITY PERMITS, INCLUDING BUT NOT LIMITED TO CLOSURE PERMITS, SHALL BE OBTAINED PRIOR TO ANY CONSTRUCTION WITHIN CITY R.O.W. OR LANE CLOSURES.
- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE 2009 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- PERMANENT SIGNING THAT CONVEYS A MESSAGE CONTRARY TO THE MESSAGE OF TEMPORARY SIGNING AND NOT APPLICABLE TO THE WORKING CONDITIONS SHALL BE COVERED BY THE CONTRACTOR WHEN DIRECTED BY THE CITY.
- THE CONTRACTOR SHALL COORDINATE HIS TRAFFIC CONTROL WITH OTHER CONSTRUCTION PROJECTS IN THE AREA.
- SIDEWALK CLOSED SIGNS REQUIRED FOR ALL SIDEWALK CLOSURES.
- THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR TO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.
- ALL SIGNING AND LANE STRIPING WILL NEED TO COMPLY WITH MUTCD. MAINTENANCE AND REPLACEMENT OF THE SIGNING AND STRIPING WILL BE THE RESPONSIBILITY OF THE APPLICANT.

PAVEMENT THICKNESS

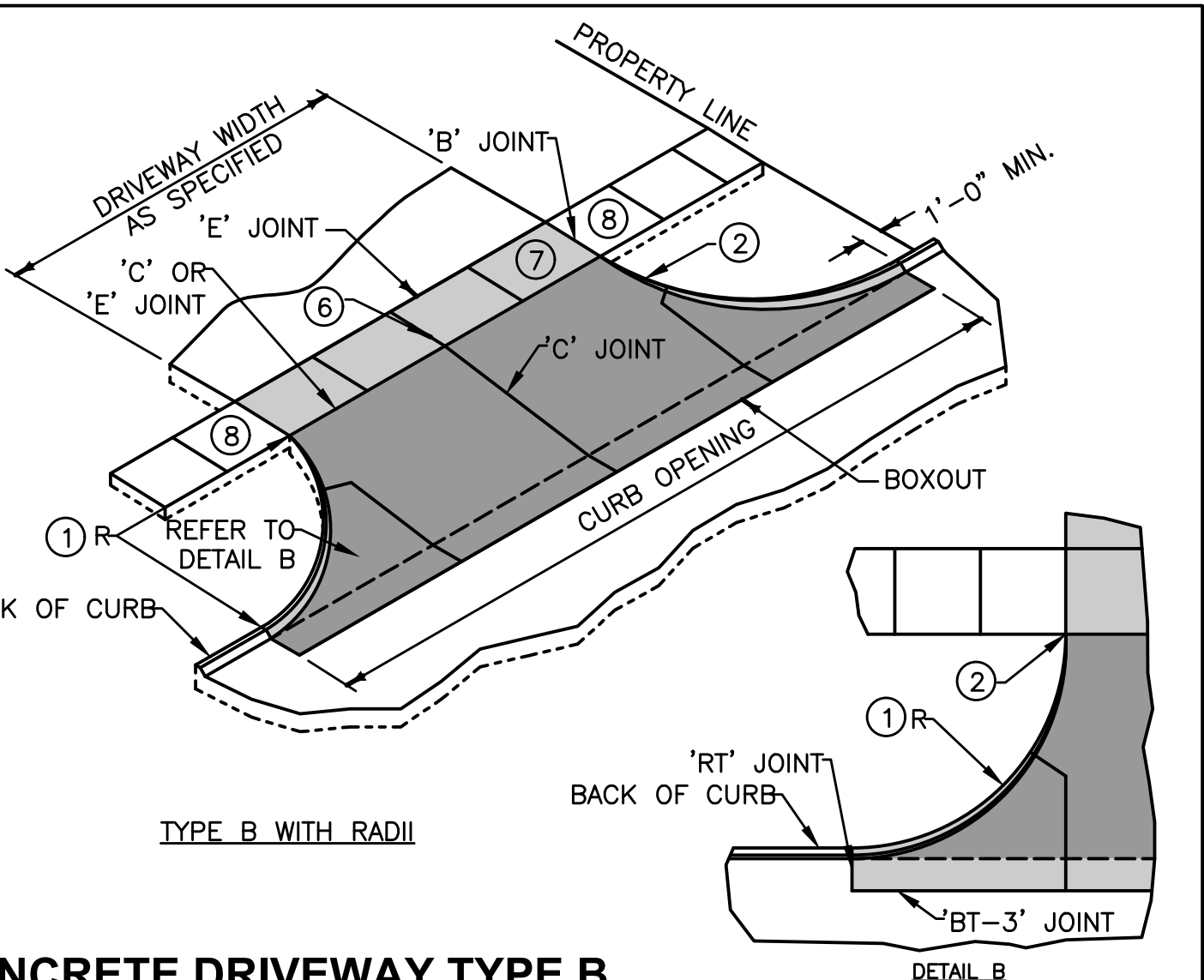
- | | |
|---------------------------------------|-------|
| 1. SIDEWALKS | 4\"/> |
| 2. PARKING LOT | 6\"/> |
| 3. DUMPSTER ENCLOSURE & FRONT 20 FEET | 8\"/> |

SIGN LEGEND



CONCRETE DRIVEWAY TYPE B

- DRIVEWAY RADIUS (R). RESIDENTIAL: 10 FOOT MINIMUM, 15 FOOT MAXIMUM. COMMERCIAL AND INDUSTRIAL: AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- TRANSITION THE CURB HEIGHT TO 0 INCHES AT END OF TAPER/RADIUS OR AT THE FRONT EDGE OF SIDEWALK. DO NOT EXTEND RAISED CURB CROSS SIDEWALK.
- PAVEMENT THICKNESS. RESIDENTIAL: 6 INCHES MINIMUM. COMMERCIAL AND INDUSTRIAL: 7 INCHES MINIMUM.
- SIDEWALK THICKNESS THROUGH DRIVEWAY TO MATCH THICKNESS OF DRIVEWAY.
- IF LONGITUDINAL JOINT IS LOCATED 48 INCHES OR LESS FROM THE BACK OF CURB, EXTEND BOXOUT TO JOINT LINE. FULL DEPTH SAW CUT IS STILL REQUIRED.
- FOR ALLEYS, INVERT THE PAVEMENT CROWN 2% TOWARD THE CENTER OF THE ALLEY.
- TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%. IF SPECIFIED IN THE CONTRACT DOCUMENTS, CONSTRUCT THE SIDEWALK THROUGH THE DRIVEWAY 5 FEET WIDE TO SERVE AS A PASSING SPACE.
- IF CROSS SLOPE OF ADJACENT SIDEWALK PANEL EXCEEDS 2.0%, REMOVE AND REPLACE TO TRANSITION FROM EXISTING SIDEWALK TO SIDEWALK THROUGH DRIVEWAY. IF THE ELEVATION CHANGE REQUIRES A CURB RAMP, COMPLY WITH FIGURE 7030.205; VERIFY NEED FOR DETECTABLE WARNING PANEL WITH ENGINEER.
- TRANSITION STREET CURB AT MINIMUM 1:1 SLOPE TO MEET DRIVEWAY CURB



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REVISIONS

DATE	DESCRIPTION
05/11/2023	05/02/2023
05/02/2023	05/02/2023
05/02/2023	05/02/2023

THIRD SUBMITTAL
 SECOND SUBMITTAL
 FIRST SUBMITTAL

4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO
 ENGINEER: TECH: MST

CIVIL DESIGN ADVANTAGE

POLK CITY, IOWA

ACE HARDWARE

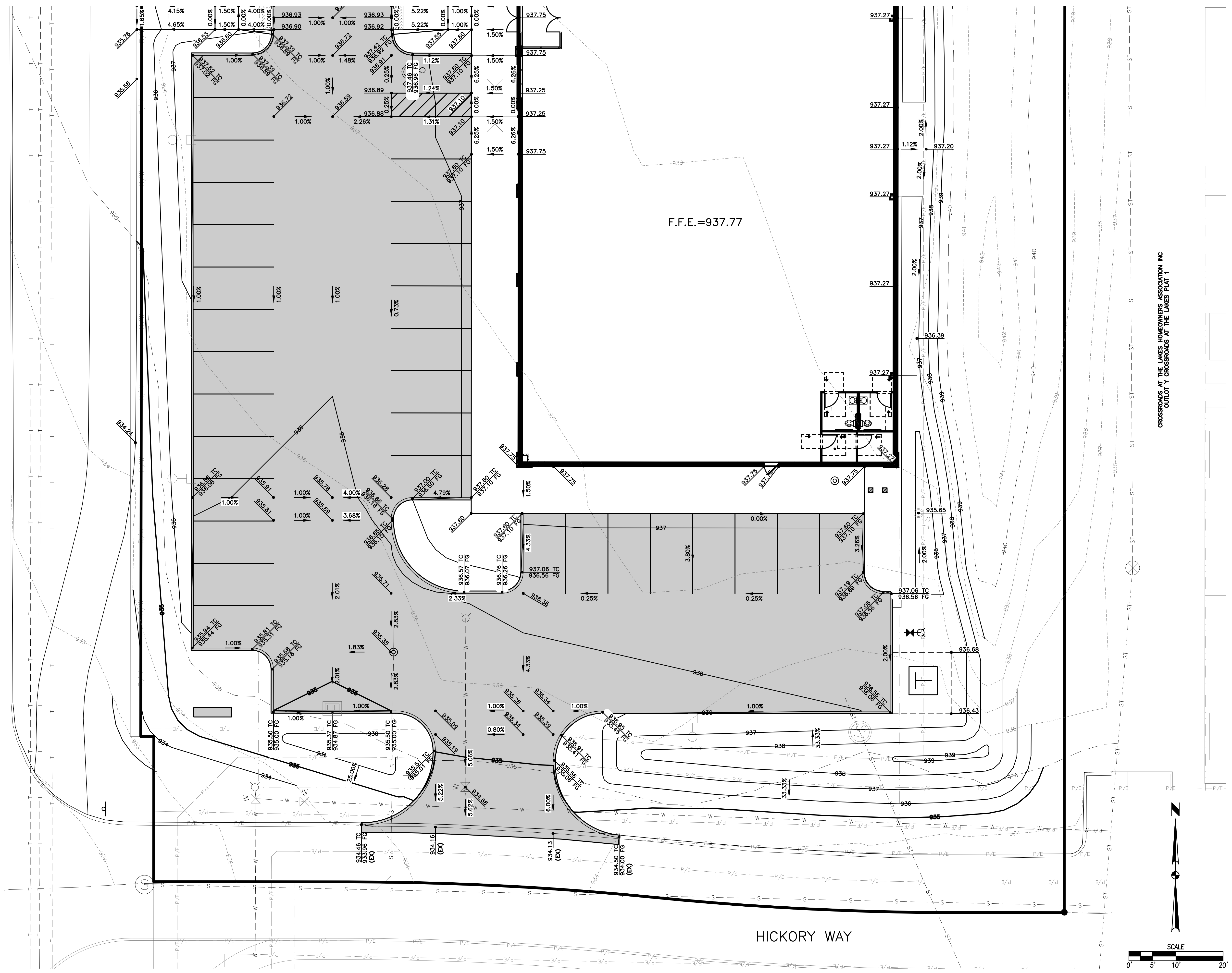
DIMENSION PLAN

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JJM HOLDINGS LLC
LOT 35 EDGEWATER POINTE PLAT 2

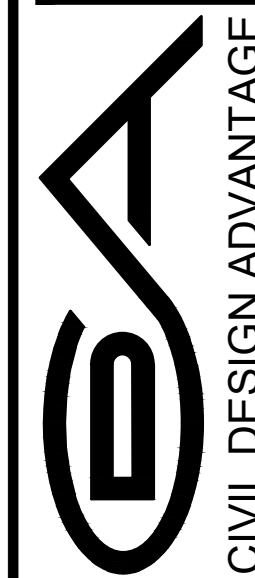
S. 3RD STREET



CROSSROADS AT THE LAKES HOMEOWNERS ASSOCIATION INC
OUTLOT 1 CROSSROADS AT THE LAKES PLAT 1

ACE HARDWARE GRADING PLAN

3
8
2212 847



POLK CITY, IOWA
CIVIL DESIGN ADVANTAGE

4121 NW URBANDALE DRIVE
URBANDALE, IOWA 50322
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO ENGINEER: TECH: MST

REVISIONS

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SECOND SUBMITTAL	05/02/2023
FIRST SUBMITTAL	04/19/2023

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UNM. HOLDINGS, LLC
 LOT 35 EDGEWATER POINTE PLAT 2

S. 3RD STREET

WILLOW WAY

F.F.E.=937.77

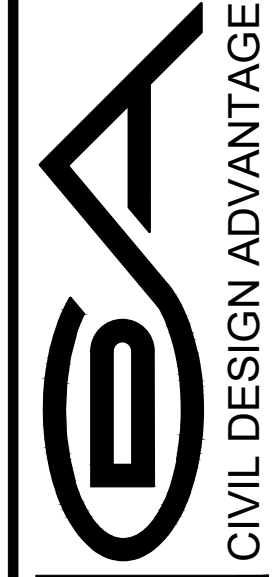


CROSSROADS AT THE LAKES HOMEOWNERS ASSOCIATION INC
 OUTLET Y CROSSROADS AT THE LAKES PLAN 1

ACE HARDWARE
GRADING PLAN

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POLK CITY, IOWA



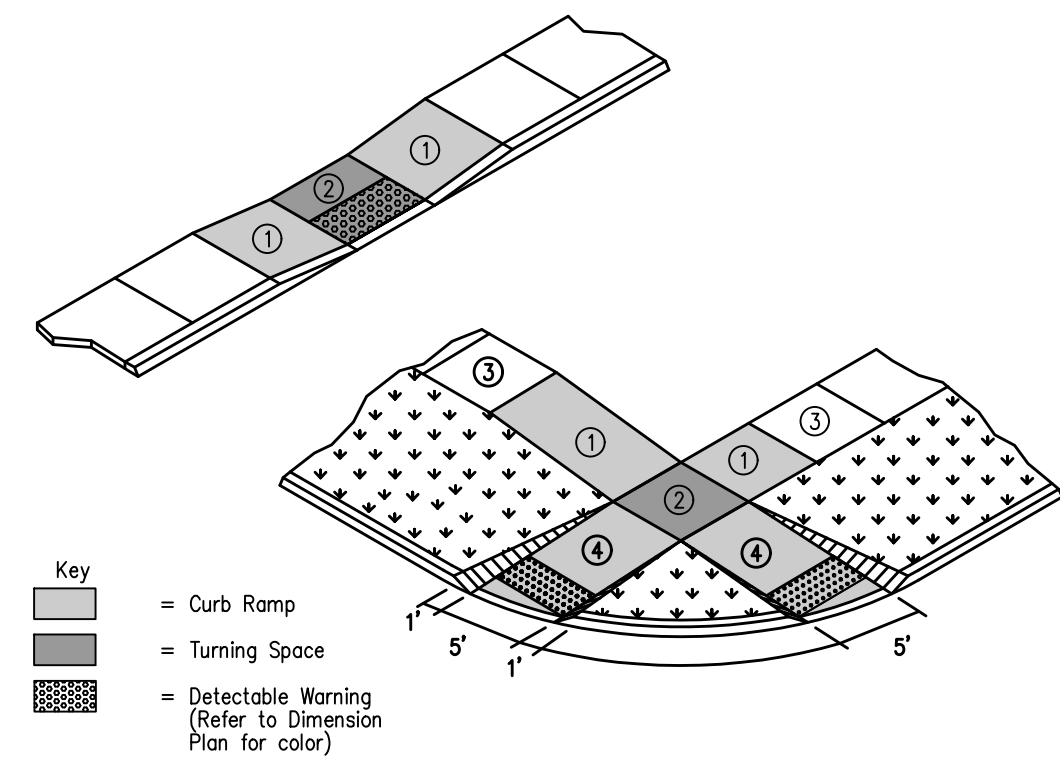
CIVIL DESIGN ADVANTAGE
 ENGINEER: EKO ENGINEER: TECH: MST
 4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400 FAX: (515) 369-4410

REVISIONS	DATE
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GRADING NOTES

1. PRIOR TO ANY GRADING, A COPY OF THE NPDES PERMIT SHALL BE PROVIDED TO THE CITY'S BUILDING DIVISION.
2. CONTRACTOR SHALL STRIP ALL DELETERIOUS MATERIAL. THE TOP 6" OF TOPSOIL IS TO BE STOCKPILED AND RESPREAD AFTER GRADING IS COMPLETE. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A SUITABLE TOPSOIL STOCKPILE SITE.
3. EXCAVATION SHALL BE IN ACCORDANCE WITH THE 2023 EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS, IF APPLICABLE.
4. MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
5. ALL SPOT ELEVATIONS ARE FORM GRADE (FG) OR TOP OF FINISHED SURFACES UNLESS OTHERWISE NOTED.
6. SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS.
7. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
8. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
9. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
10. REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR DETAILS ON EROSION CONTROL.
11. FINAL FINISH GRADING TO BE APPROVED BY THE ARCHITECT AND CIVIL ENGINEER. MATCH EXISTING GRADES AT THE INTERFACE OF NEW AND EXISTING GRADES OR PAVING.
12. SIDEWALKS:
MAINTAIN 1% MINIMUM AND 5% MAXIMUM LONGITUDINAL SLOPES ON ALL PAVED WALKWAYS. ALL WALKS TO HAVE 2.0% MAXIMUM TRANSVERSE SLOPE IN THE DIRECTION OF NATURAL DRAINAGE. SAW CUT JOINTS AS SOON AS CONCRETE HAS SET. SAW CUTS TO BE 1/8" TO 1/4" WIDE; DEPTH: LONGITUDINAL 1/3, TRANSVERSE 1/4.
13. THE GRADING OF THE DETENTION FACILITY, INSTALLATION OF THE STORM SEWER SYSTEM (IF APPLICABLE), AND THE INSTALLATION OF THE ORIFICE PLATE (IF APPLICABLE) SHALL BE COMPLETED AND FUNCTIONAL PRIOR TO ANY INCREASE IN IMPERVIOUS SURFACES WITHIN THE SITE OR THE PREVIOUSLY MENTIONED ITEMS SHALL BE GRADED/ INSTALLED AS SOON AS PRACTICAL.
14. DISTURBED AREA = 1.72 ACRES

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



CURB RAMPS OUTSIDE OF INTERSECTION RADIUS

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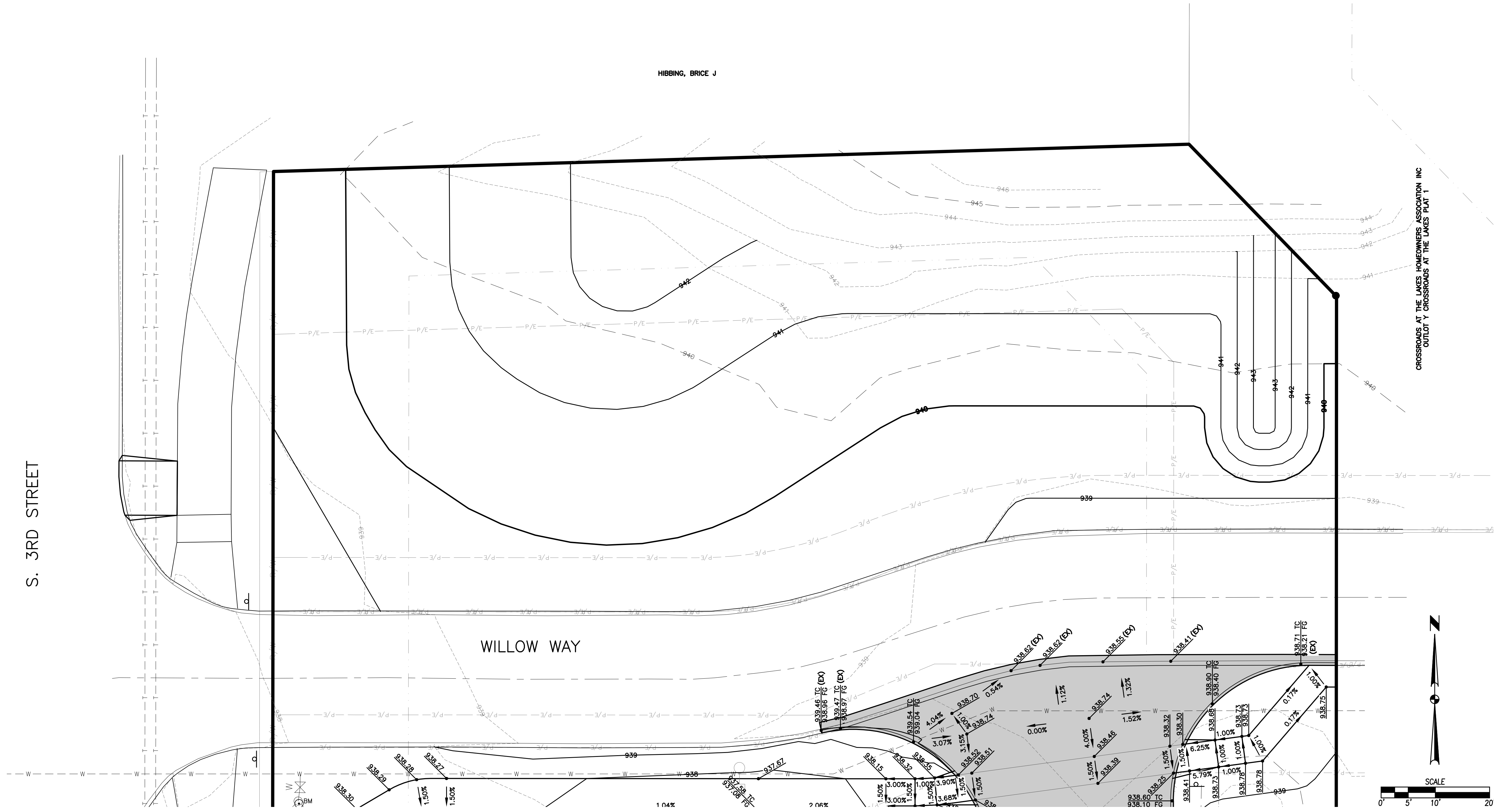
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S. 3RD STREET

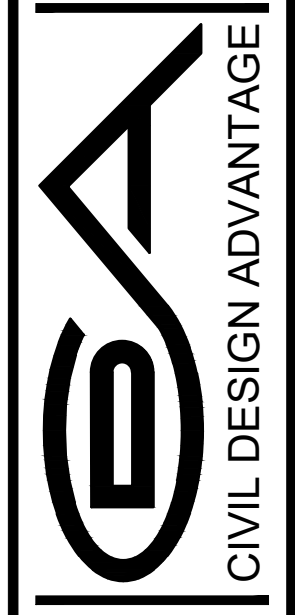
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WILLOW WAY

CROSSROADS AT THE LAKES HOMEOWNERS ASSOCIATION INC
OUTLET 7 CROSSROADS AT THE LAKES PLAT 1



4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400 FAX: (515) 369-4410
 ENGINEER: EKO ENGINEER: TECH: MST

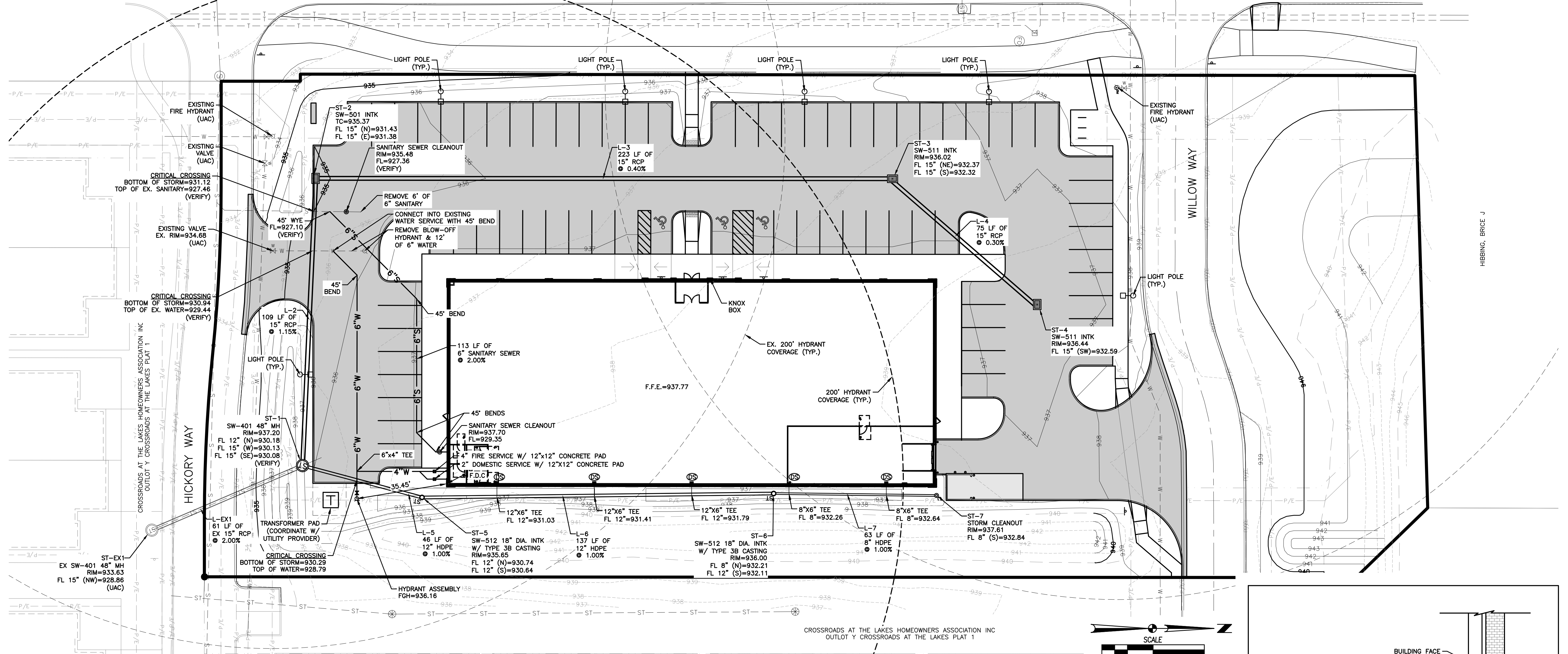


ACE HARDWARE
GRADING PLAN

2212 847

REVISIONS	DATE
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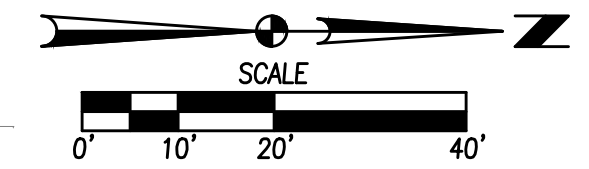
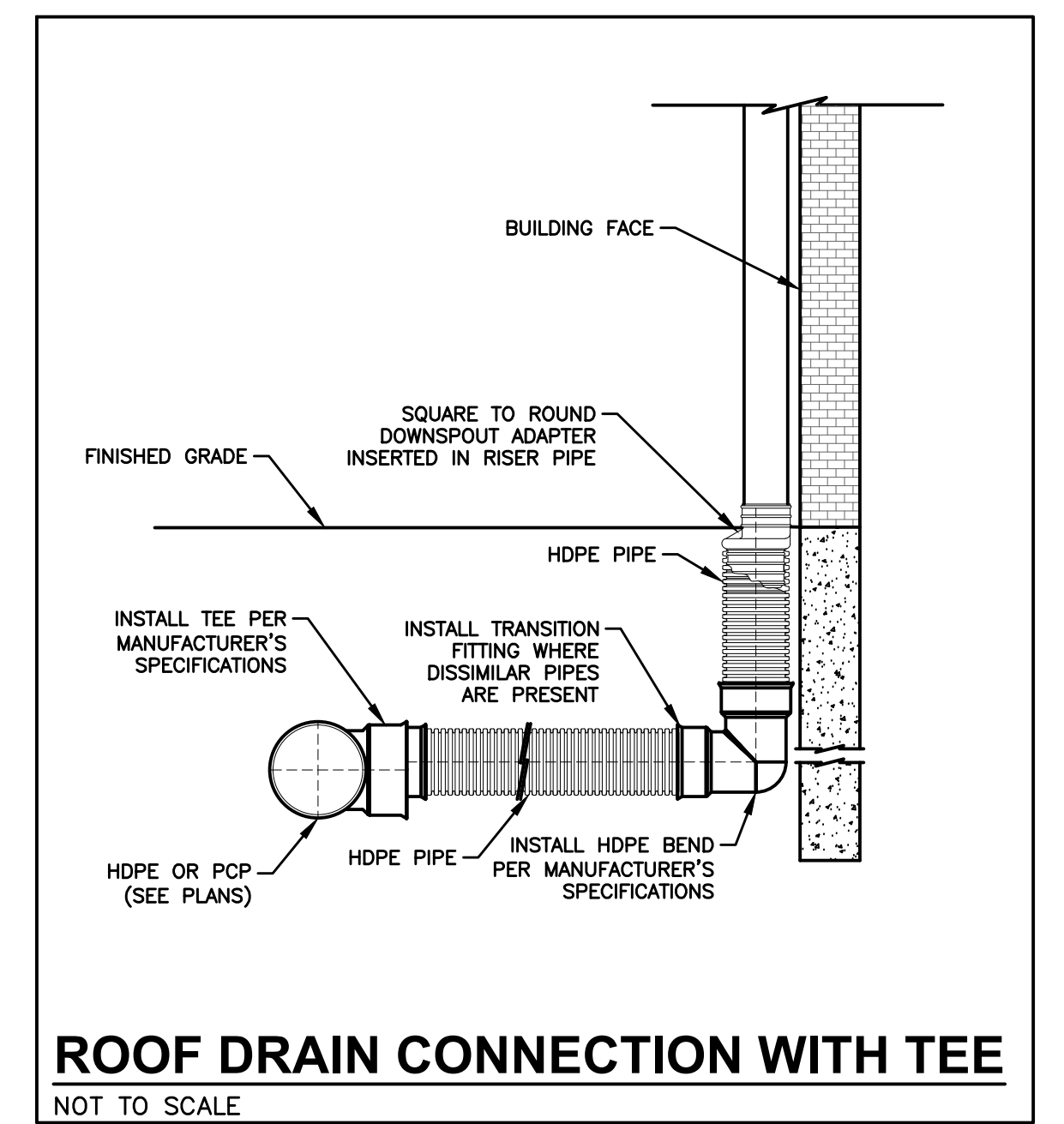
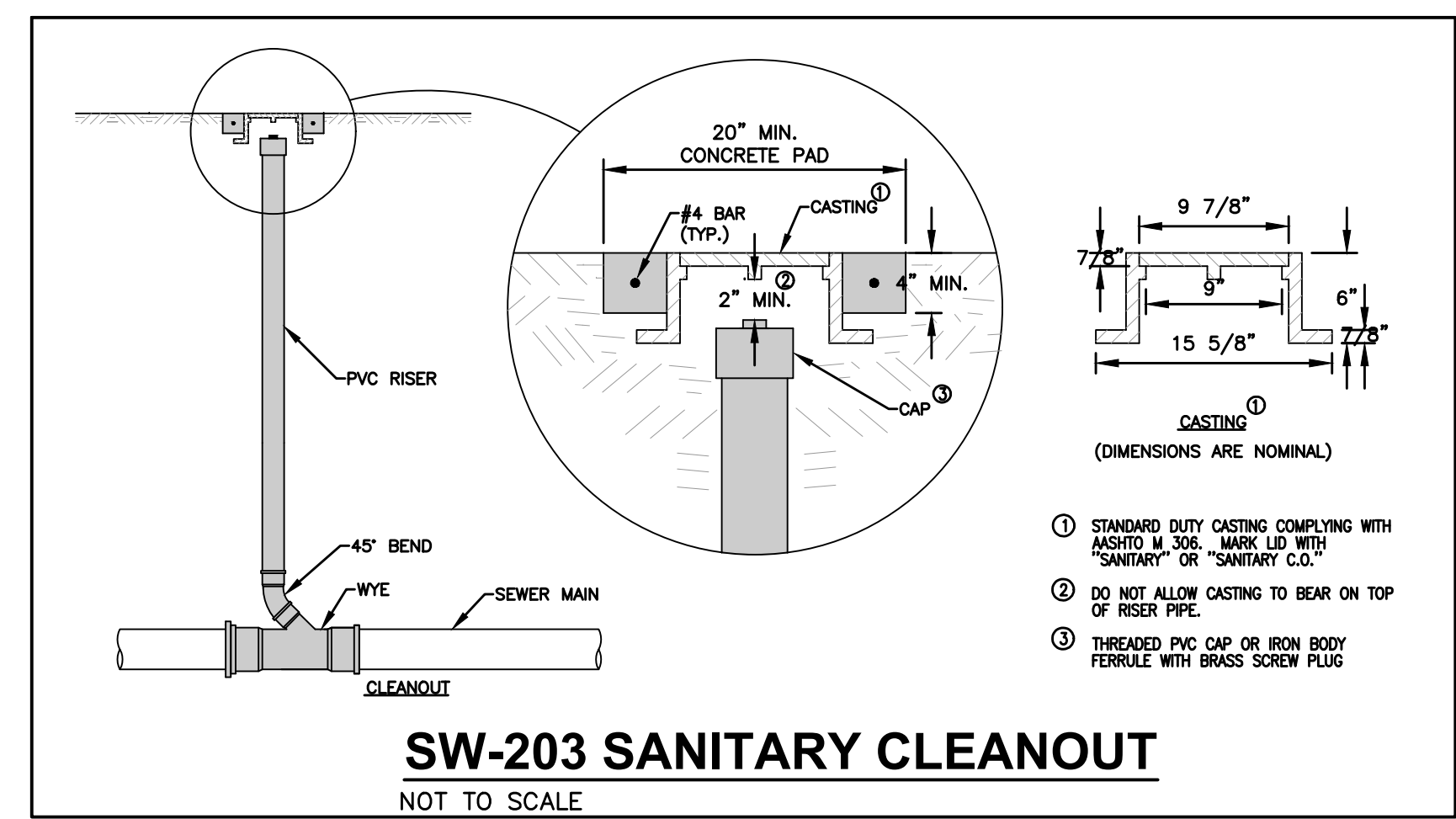
S. 3RD STREET



UTILITY NOTES

- REFER TO MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR UTILITY SERVICE SIZES AND EXACT LOCATIONS. REFER TO ELECTRICAL PLANS FOR ELECTRIC AND TELEPHONE SERVICE CONSTRUCTION DETAILS. REFER TO MECHANICAL PLANS FOR GAS SERVICE CONSTRUCTION DETAILS.
- FIELD VERIFY ELEVATIONS AND LOCATIONS OF ALL CONNECTIONS TO EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETE.
- BACKFILL ALL UTILITY TRENCHES ACCORDING TO THE 2023 EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS. MAINTAIN A MINIMUM OF 5.5' COVER OVER ALL WATERMAINS.
- ALL UTILITIES SHALL BE STUBBED TO 5 FEET FROM BUILDINGS. REFER TO MEP PLANS FOR DESIGN FROM 5' OUTSIDE OF BUILDING FACE.
- ADJUST ALL MANHOLES AND INTAKES TO FINISHED GRADES.
- ALL SANITARY SEWER AND WATER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY'S PLUMBING CODE.
- 18" MINIMUM VERTICAL CLEARANCE BETWEEN STORM SEWER AND SANITARY SEWER PIPES. 18" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND WATER MAIN.
- MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER MAINS.
- WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK. THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT 800-292-8989 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
- ALL WATERMAIN WORK, PUBLIC OR PRIVATE SHALL BE DONE IN ACCORDANCE WITH THE 2023 EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
- PRIVATE UTILITIES TO BE INSTALLED PER THE CITY'S STANDARD CONSTRUCTION SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2012 UNIFORM PLUMBING CODE. CONTACT BUILDING INSPECTION A MINIMUM OF 24 HOURS IN ADVANCE FOR UTILITY INSTALLATION INSPECTIONS.
- OWNER IS RESPONSIBLE FOR MAINTENANCE OF PRIVATE RETENTION FACILITIES AND PRIVATE UTILITIES.
- CONTRACTOR SHALL PREVENT ENTRY OF MUD, DIRT, DEBRIS AND OTHER MATERIAL INTO NEW AND EXISTING SEWER SYSTEMS. SHOULD ANY CONTAMINATION OCCUR DURING CONSTRUCTION, THE CONTRACTOR SHALL CLEAN AT NO COST TO THE OWNER. INSTALL SILT FENCE AT ALL PERMANENT STORM SEWER INLETS.
- BUILDING WILL BE SPRINKLED.
- ALL SERVICES SHALL BE BURIED AND CONSTRUCTED UNDERGROUND. OVERHEAD SERVICES WILL NOT BE ALLOWED.
- MECHANICAL UNITS FOR THIS BUILDING WILL BE ROOF MOUNTED. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND SORRENING.

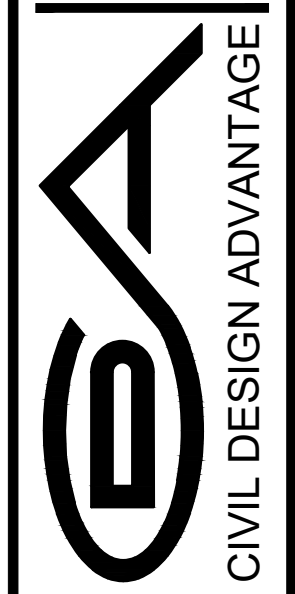
Ⓢ DOWN SPOUT LOCATION



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PLOT DATE: 5/11/2023 10:33 AM
PLOT BY: JMM

REVISIONS	DATE
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4121 NW URBANDALE DRIVE
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POLK CITY, IOWA

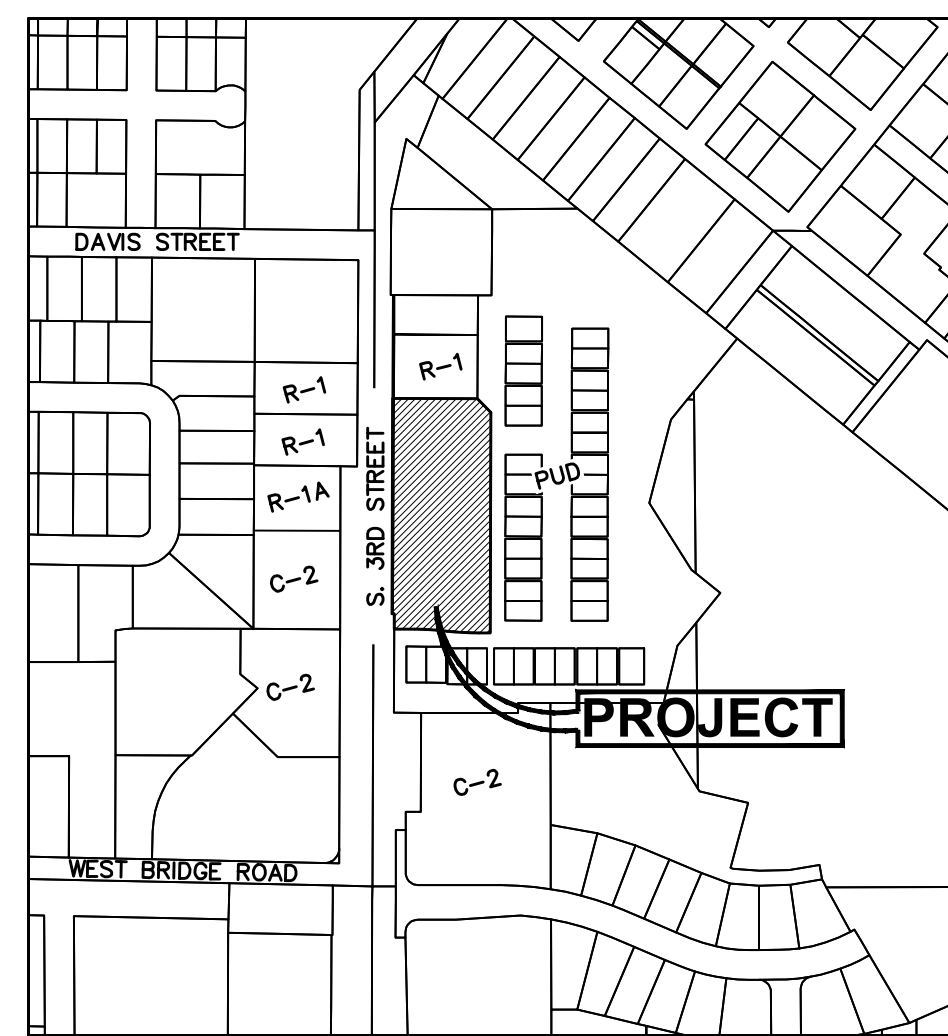
**ACE HARDWARE
UTILITY PLAN**

ACE HARDWARE

EROSION AND SEDIMENT CONTROL PLAN

VICINITY MAP

NOT TO SCALE



POLK CITY, IOWA

STABILIZATION QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	973
2	SEEDING, FERTILIZING, AND MULCHING	AC	0.59
3	INLET PROTECTION DEVICES	EA	3
4	CONCRETE WASHOUT PIT	EA	1

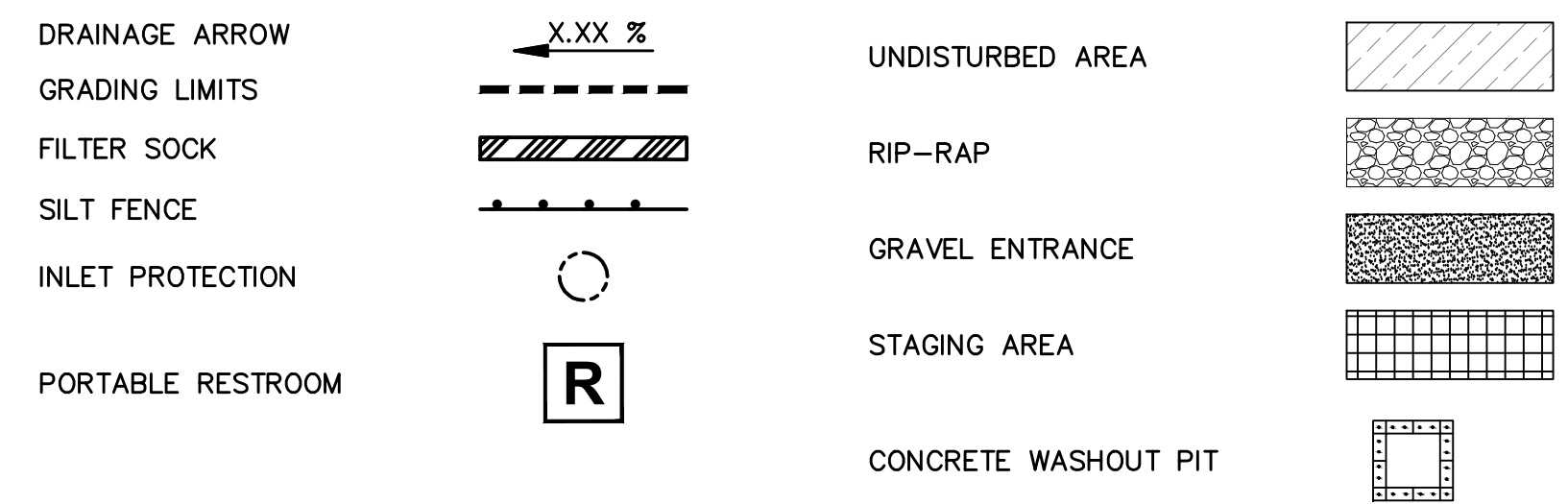
DISCHARGE POINT SUMMARY

DISCHARGE POINT #1 TO AN UNKNOWN TRIBUTARY OF BIG CREEK ±1.100 FT
 TOTAL AREA DISTURBED TO DISCHARGE POINT 1.71 ACRES
 STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT) 6,156 CU FT
 VOLUME PROVIDED IN SILT FENCE (973 LF @ 9 CU FT/LF OF FENCE) 8,757 CU FT
 TOTAL VOLUME PROVIDED 8,757 CU FT

NOTES:

- IF DEWATERING IS NEEDED FOR ANY REASON, DISCHARGE OF WATER OFFSITE IS TO CONFORM WITH THE GENERAL PERMIT #2 REQUIREMENT.
- DISTURBED AREAS SHALL BE TEMPORARILY SEEDED OR MULCHED IMMEDIATELY WHENEVER CLEARING, GRADING, EXCAVATING, OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
- STORM SEWERS AND DRAINAGE WAYS SHALL BE PROTECTED FROM CONCRETE SLURRY PRODUCED BY SAWCUTTING AND CONCRETE GRINDING.
- TREE PROTECTION FENCE SHALL BE INSTALLED AND INSPECTED BY A POLK CITY CONSTRUCTION OBSERVER PRIOR TO CONSTRUCTION STARTING.

SWPPP LEGEND

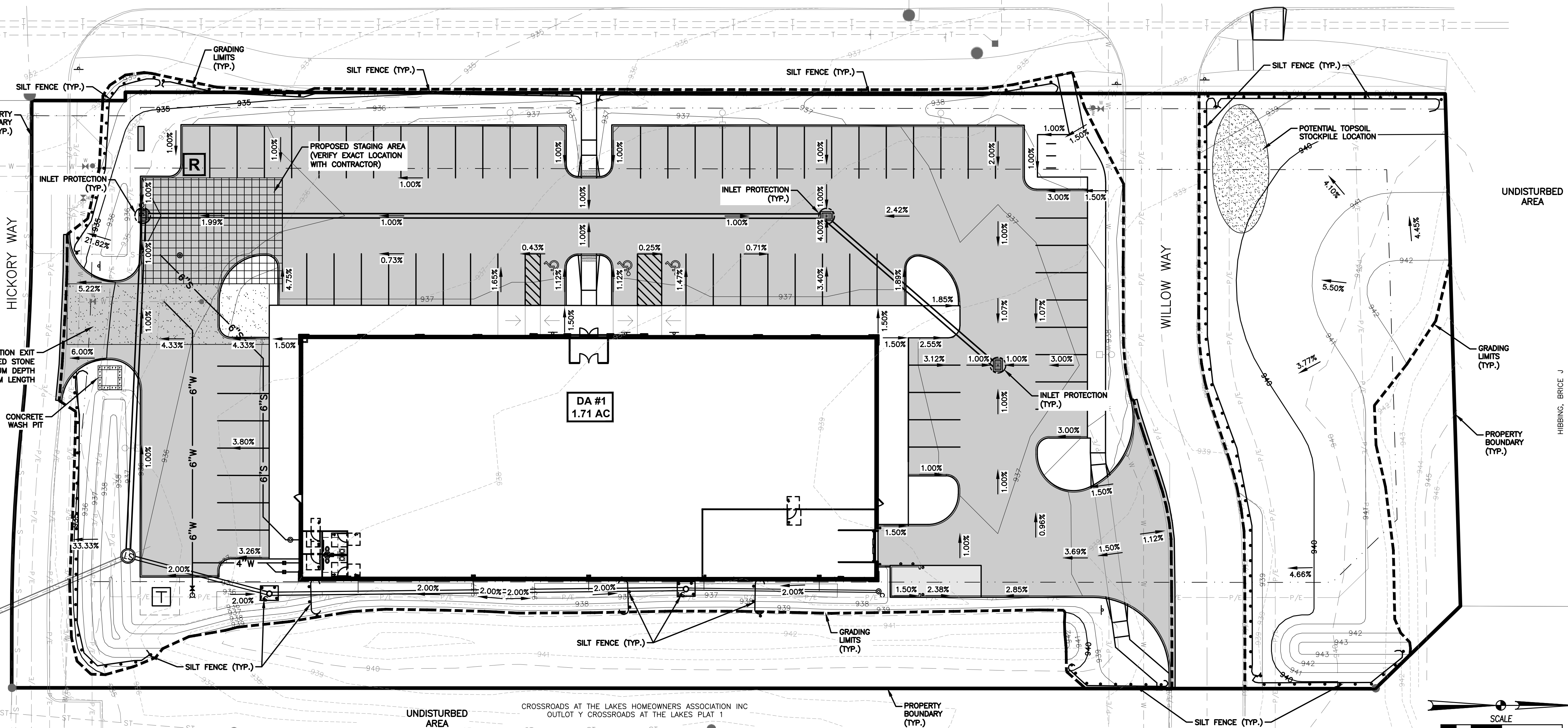


JJM HOLDINGS LLC
 LOT 35 EDGEWATER POINTE PLAT 2

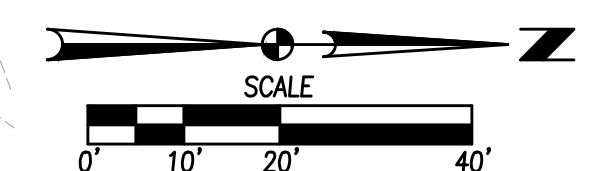
S. 3RD STREET

UNDISTURBED AREA

BERTELSEN, MARY



DISCHARGE POINT #1
 ±1100 FEET TO AN
 UNNAMED TRIBUTARY
 OF BIG CREEK



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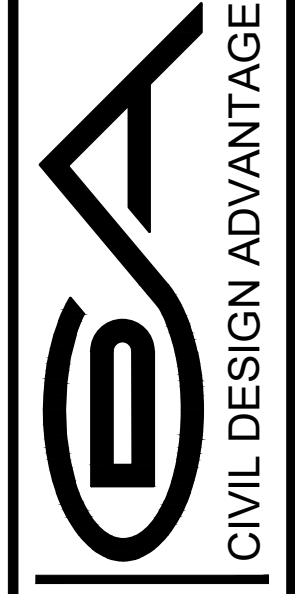
ACE HARDWARE
 CIVIL DESIGN ADVANTAGE
 POLK CITY, IOWA

EROSION AND SEDIMENT CONTROL PLAN

7/8
 2212.847

DATE	05/11/2023
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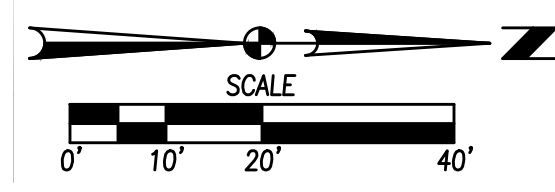
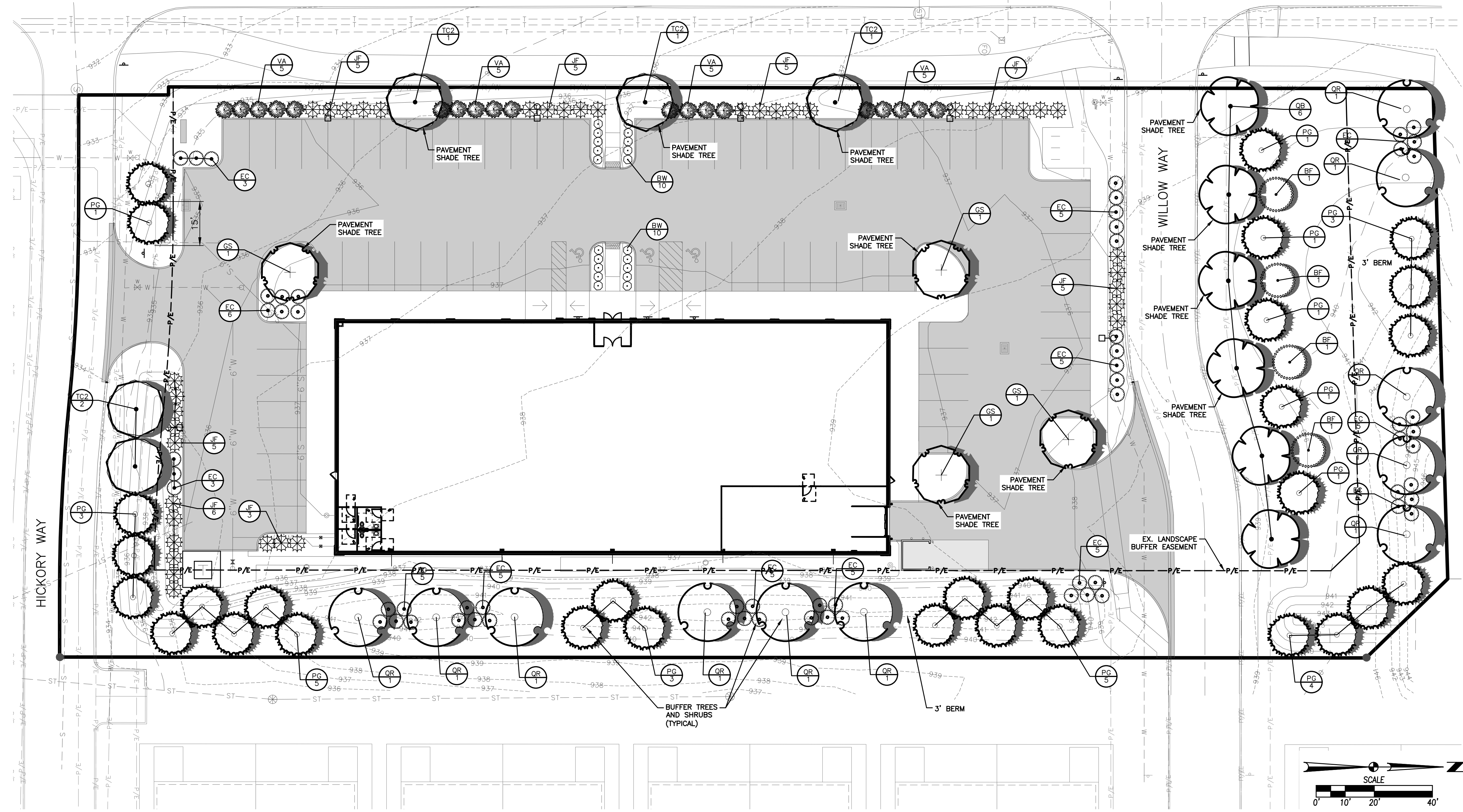
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CIVIL DESIGN ADVANTAGE
 POLK CITY, IOWA

ACE HARDWARE
LANDSCAPE PLAN

S. 3RD STREET



LANDSCAPE REQUIREMENTS

OPEN SPACE	= 92,061 SF
LOT AREA	= 13,810 SF (15%)
OPEN SPACE REQUIRED	= 36,455 SF (39%)
2 TREES AND 6 SHRUBS PER 3,000 SF OF REQ. OPEN SPACE	
TREES REQUIRED	= 10 TREES
SHRUBS REQUIRED	= 28 SHRUBS
TREES PROVIDED	= 11 TREES
SHRUBS PROVIDED	= 29 SHRUBS
PARKING LOT / PRIVATE ROAD LANDSCAPING	
20% OF PAVEMENT SHALL BE SHADED	
PAVEMENT	= 35,954 SF (INCLUDES EXISTING)
35,954 x 20%	= 7,191 SF
REQUIRED (7,191 SF / 700)	= 11 TREES
TREES PROVIDED	= 11 TREES
BUFFER	
TREES PROVIDED	= 38 TREES
SHRUBS PROVIDED	= 40 SHRUBS
3' BERM	
TOTAL TREES PROVIDED	= 60 TREES

SCREENING

- NORTH**
- 20' TYPE 'B'
 - 3' OPAQUE SCREEN WITH INTERMITTENT VISUAL OBSTRUCTION TO A HEIGHT OF 20 FEET. NO OPENINGS SHALL BE MORE THAN TEN FEET IN WIDTH.
- EAST**
- 20' TYPE 'B' SCREEN
 - 3' OPAQUE SCREEN WITH INTERMITTENT VISUAL OBSTRUCTION TO A HEIGHT OF 20 FEET. NO OPENINGS SHALL BE MORE THAN TEN FEET IN WIDTH.
- WEST**
- 20' TYPE 'B' SCREEN
 - 3' OPAQUE SCREEN WITH INTERMITTENT VISUAL OBSTRUCTION TO A HEIGHT OF 20 FEET. NO OPENINGS SHALL BE MORE THAN TEN FEET IN WIDTH.

LANDSCAPE NOTES

- LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
- THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
- TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1
- ALL PLANT MATERIAL SHALL BE HEALTHY SPECIMENS WITHOUT DEFORMITIES, VOIDS, AND OPEN SPACES, WITH WELL DEVELOPED BRANCH AND ROOT SYSTEMS; TRUE TO HEIGHT, SHAPE AND CHARACTER OF GROWTH OF THE SPECIES OR VARIETY.
- SEED (TYPE 1) OR SOD ALL DISTURBED AREAS AS DIRECTED BY OWNER.
- BACKFILL TO TOP OF CURB. (MINUS 1 1/2" FOR SOD, IF REQ.)
- WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
- SHREDDED HARDWOOD MULCH SHALL BE PLACED AROUND ALL TREES, SHRUBS AND IN ALL PLANTING BEDS TO A (MIN) DEPTH OF 3".
- ALL EDGING SHALL BE SPADE CUT EDGE.
- PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
- ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
- CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
- CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN TO OWNER, IF REQUESTED, FOR APPROVAL.
- ALL PLANTING BEDS SHALL HAVE ROCK MULCH.

PLANT SCHEDULE				
EVERGREEN TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
PG	30	Colorado Blue Spruce	<i>Picea pungens 'Glauca'</i>	B&B, 6' HEIGHT
ORNAMENTAL TREES				
BF	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
BF	4	Dakota Pinnacle® Asian White Birch	<i>Betula platyphylla 'Fargo'</i>	B&B, 6' HEIGHT
OVERSTORY TREES				
GS	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
GS	4	Skyline Honey Locust	<i>Gleditsia triacanthos 'Skyline'</i>	B&B, 8' HEIGHT
QB	6	Swamp White Oak	<i>Quercus bicolor</i>	B&B, 8' HEIGHT
QR	11	Red Oak	<i>Quercus rubra</i>	B&B, 8' HEIGHT
TC2	5	Littleleaf Linden	<i>Tilia cordata</i>	B&B, 8' HEIGHT
SHRUBS				
BW	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
BW	20	Wintergreen Boxwood	<i>Buxus microphylla 'Wintergreen'</i>	15" HT
EC	62	Compact Burning Bush	<i>Euonymus alatus 'Compactus'</i>	24" HT.
JF	41	Sea Green Juniper	<i>Juniperus chinensis 'Sea Green'</i>	24" HT.
VA	19	American Cranberrybush	<i>Viburnum trilobum</i>	36" HT.

COMMENT: DRAWING
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RIESBERG GROUP DESIGN

Grimes, Iowa
riesberggroup@gmail.com
Phone: 515-202-3386

MEMBER



AMERICAN INSTITUTE OF BUILDING DESIGN

Project ID:
23-2269

Drawn by: KMR

REVIEW SET

Rev. Date : 04-14-23

Rev. Date : 05-04-23

Rev. Date : 05-11-23

Rev. Date :

Rev. Date :

Rev. Date :

Rev. Date :

BID SET:

Date :

PERMIT SET:

Date :

New Retail Building For:
Ace Hardware
Project Location:
825 South 3rd Street
Polk City, Iowa

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Cover Page

A.0-0

Scale: As indicated

DRAWING LIST	
A.0-0	Cover Page
A.0-1	Cover Page -Rendering
A.0-2	Code Review Areas & Occupancy
A.0-3	Code Review Separation
A.0-4	Accessibility Standards
A.0-7	Schedules
A.0-8	Wall Types
A.1-0	Elevations
A.1-1	Elevations
A.2-1	First Floor Plan
A.3-1	First Floor Reflected Ceiling Plan
A.5-0	Building Sections
A.5-1	Building Sections
A.5-2	Wall Sections
A.6.0	Details



NOT FOR CONSTRUCTION
THESE PLANS HAVE NOT BEEN APPROVED FOR FINAL CONSTRUCTION
PLEASE CALL OR SEE OWNER FOR UPDATED PLANS

NOTE: THIS DRAWING AND ELEVATION VIEWS ARE AN ARTISTIC INTERPRETATION OF THE GENERAL APPEARANCE OF THE DESIGN. VERIFY WITH BUILDER FOR FINAL MATERIAL AND COLORS

VICINITY LOCATION

PROJECT LOCATION

APPLICABLE CODES	
City of Polk City, Iowa	
1. BUILDING CODE	2018 INTERNATIONAL BUILDING CODE (IBC) WITH LOCAL AMENDMENTS
2. FIRE CODE	2018 INTERNATIONAL FIRE CODE WITH LOCAL AMENDMENTS
3. MECHANICAL CODE	2021 INTERNATIONAL MECHANICAL CODE WITH LOCAL AMENDMENTS
4. ELECTRICAL CODE	2020 NATIONAL ELECTRICAL CODE (NEC) WITH STATE AMENDMENTS
5. PLUMBING CODE	2021 UNIFORM PLUMBING CODE (UPC) WITH LOCAL AMENDMENTS
6. ENERGY CODE	2012 INTERNATIONAL ENERGY AND CONSERVATION CODE, WITH LOCAL AND STATE AMENDMENTS
7. FUEL GAS CODE	
8. ICC/ANSI 117.1 2009 (ADA STANDARDS)	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
FIRE ALARM AND SUPPRESSION PLANS TO BE SUBMITTED TO FIRE MARSHALL OFFICE FOR REVIEW AND APPROVAL	

PROJECT TEAM	
ARCHITECTURAL DRAFTING	
COMPANY NAME	Riesberg Group Design
COMPANY ADDRESS	Grimes, IA
PHONE:	515-202-3386
FAX:	
MECHANICAL CONTRACTOR	
COMPANY NAME	-
COMPANY ADDRESS	-
PHONE:	-
FAX:	-
STRUCTURAL	
COMPANY NAME	
COMPANY ADDRESS	
PHONE:	
FAX:	
CIVIL ENGINEER	
COMPANY NAME	Civil Design Advantage
COMPANY ADDRESS	3405 SE Crossroads Drive Suite G Grimes, Iowa
PHONE:	
FAX:	515-369-4400
HVAC/PLUMBING/ELECTRICAL/ DESIGN/ENERGY REVIEW	
COMPANY NAME	-
COMPANY ADDRESS	-
PHONE:	-
FAX:	-
ABBREVIATIONS	
SPRINKLER SYSTEMS CONTRACTOR	PROJECT TEAM
COMPANY NAME	-
COMPANY ADDRESS	-
PHONE:	-
FAX:	-
PLUMBING CONTRACTOR	ARCHITECTURAL DRAFTING
COMPANY NAME	-
COMPANY ADDRESS	-
PHONE:	-
FAX:	-

ABBREVIATIONS																																																																																																																																														
ABV: Above	DP: Dampproofing																																																																																																																																													
ADDL: Additional	DTL: Detail																																																																																																																																													
ADH: Adhesive	DIA: Diameter																																																																																																																																													
ADJ: Adjustable	DIM: Dimension																																																																																																																																													
AF: Above Finish Floor	DW: Dishwasher																																																																																																																																													
AGS: Aggregate	DIV: Division																																																																																																																																													
AHJ: Authority Having Jurisdiction	DR: Door																																																																																																																																													
A/C: Air Conditioning	DH: Double Hung																																																																																																																																													
ALT: Alternate	DS: Downspout																																																																																																																																													
ALUM: Aluminum	DRWR: Drawer																																																																																																																																													
ANC: Anchor, Anchorage	DT: Drain Tile																																																																																																																																													
AS: Anchor Bolt	DWG: Drawing																																																																																																																																													
ANOD: Anodized	D: Nail Size																																																																																																																																													
APX: Approximate	EW: Each Way																																																																																																																																													
APT: Apartment	E: East																																																																																																																																													
ARCH: Architect (architectural)	EL: Elevation																																																																																																																																													
ASPH: Asphalt	ELEV: Elevation																																																																																																																																													
AUTO: Automatic	EQ: Equal																																																																																																																																													
AVE: Avenue	EQP: Equipment																																																																																																																																													
AVR: Average	EXCV: Excavate																																																																																																																																													
AWN: Awning	EXH: Exhaust																																																																																																																																													
BSMT: Basement	EXIST: Existing																																																																																																																																													
BM: Beam	EXT: Exterior																																																																																																																																													
BVC: Beveled	FOC: Face of Concrete																																																																																																																																													
BITUM: Bituminous	FOF: Face of Finish																																																																																																																																													
BLK: Block	FOM: Face of Masonry																																																																																																																																													
BLKG: Blocking	FOSS: Face of Studs																																																																																																																																													
BLW: Blow	FOW: Face of Wall																																																																																																																																													
BLVD: Boulevard	FBD: Fiberboard																																																																																																																																													
BTW: Between	FCB: Fiber Cement Board																																																																																																																																													
BD: Board	FGL: Fiberglass																																																																																																																																													
BOT: Bottom	FIN: Finish																																																																																																																																													
BUILD: Building	FIE: Finished Floor Elevation																																																																																																																																													
BUR: Built Up Roofing	FA: Fire Alarm																																																																																																																																													
B/O: By Others	FE: Fire Extinguisher																																																																																																																																													
BO: Bottom Of	FPL: Fireplace																																																																																																																																													
BR: Bedroom	FLR: Floor																																																																																																																																													
CAB: Cabinet	FLOR: Fluorescent																																																																																																																																													
CALC: Calculation	FT: Foot, Feet																																																																																																																																													
CD: Cabinet Door	FTG: Footing																																																																																																																																													
CG: Corner Guard	FND: Foundation																																																																																																																																													
CP: Cast-in-Place (Concrete)	FRM: Fram(D), (ing)																																																																																																																																													
CL: Cantilene	FBO: Furnished by Others																																																																																																																																													
CO: Clean Out	FUR: Furred																																																																																																																																													
CONTR: Contract (or)	GA: Gage, Gauge																																																																																																																																													
COORD: Coordinate	GL: Gallon																																																																																																																																													
CRPT: Carpet	GL Glass, Glazing																																																																																																																																													
CIP: cast-in-place	GL: Galvanized Iron																																																																																																																																													
CLK: Caulking	GLBK: Glass Block																																																																																																																																													
CAS: Casement	GLB: Glue Laminated Beam																																																																																																																																													
CB: Catch Basin	GT: Groat																																																																																																																																													
CLG: Ceiling	GRD: Grade, Grading																																																																																																																																													
CT: Ceramic Tile	GWB: Gypsum Wall Board																																																																																																																																													
CR: Circle	HWD: Hardware																																																																																																																																													
CLR: Clear	HDR: Header																																																																																																																																													
COL: Column	HTG: Heating																																																																																																																																													
CONC: Concrete	HVAC: Heating, Ventilation-Air Conditioning																																																																																																																																													
CMU: Concrete Masonry Unit	HT: Height																																																																																																																																													
CONST: Construction	HC: Hollow Core																																																																																																																																													
CONT: Continuous	HOR: Horizontal																																																																																																																																													
CJT: Control Joint	HB: Hose Bib																																																																																																																																													
CORR: Corrugated																																																																																																																																														
CUFT: Cubic Foot																																																																																																																																														
CUYD: Cubic Yard																																																																																																																																														
IN: Inch	INCL: Include	INS: Insulate	INT: Interior	INV: Invert	JNT: Joint	JST: Joist	KL: Kin Dried	KIT: Kitchen	LB: Pound	LAM: Laminated(d)	LAV: Lavatory	L: Length	LQ: Length Overall	LT: Light	LF: Live Load	LL: Live Load	LVL: Laminated Veneer Lumber	LVR: Lower	MFR: Manufacturer	MO: Masonry Opening	MAX: Maximum	MAS: Masonry	MECH: Mechanical(s)	MED: Medium	MDF: Medium Density Fiberboard	MIR: Mirror	MDO: Medium Density Overlay	MR: Member	MBR: Membrane	MTL: Metal	MWK: Millwork	MIN: Minimum	MISC: Miscellaneous	MOD: Module	MLD: Moulding	MLB: Micro Laminated Beam	NOM: Nominal	N: North	NIC: Not in Contract	NTS: Not To Scale	NO, #: Number	O: Non-Operable Window Section	OP: Opaque	OPG: Opening	OSP: Oriented Strand Board	OD: Outside Diameter	PMT: Painted	PBD: Particle Board	PRT: partition	PVMT: Pavement	PERF: Perforate(d)	PLAS: Plaster	PLAM: Plastic Laminate	PLT: Plate	PLYWD: Plywood	PCC: Precast Concrete	PCF: Pounds Per Cubic Foot	PUP: Pounds Per Linear Foot	PSF: Pounds Per Square Foot	PSI: Pounds Per Square Inch	PBF: Prefabricated	PRF: Preformed	PT: Pressure Treated	PL: Property Line	L: Length	PH: Toilet Paper Hanger	QTY: Quantity	QT: Quarry Tile	RAD: Radius	REF: Reference	RFL: Reflected(live),(or)	REFR: Ref	REG: Register	RE: Reinforced	REQD: Required	RA: Return Air	REV: Revision	R: Riser	RD: Roof	RBS: Rod and Shelf	RF: Roofing	RM: Room	RO: Rough Opening	SCH: Schedule	SCN: Screen	SECT: Section	SGD: Sliding Glass Door	SHTH: Sheathing	SHT: Sheet	SH: Shed, Sheling	SIM: Similar	SKL: Skylight	S: South	SLB: Slab	SLS: Sliding(ing)	SPE: Specification	SO: Square	STD: Standard	STV: Stove	STL: Steel	STR: Structural	SA: Supply Air	SC: Solid Core	SW: Shear Wall	SS: Stainless Steel	SYS: System	TEMP: Tempered	TK: Tight Knot	T&G: Tongue and Groove	T/O: Top of	TCC: Top of Concrete	TOW: Top of Wall	TB: Towel Bar	T: Treed	TS: Tubular Steel	TYP: Typical	UL: Underwriters Laboratory	UNF: Unfinished	UNO: Unless Noted Otherwise	VB: Vapor Barrier	VAR: Varnish	VF: Verify in Field	VER: Vener	VERT: Vertical	VG: Vertical Grain	VIN: Vinyl Sheet	W: West	WC: Water Closet	WH: Water Heater	WH: Water Heater	WP: Water Proofing	WR: Weather Resistant	WRB: Weather Resisive Barrier	WVF: Welded Wire Fabric	WWM: Welded Wire Mesh	W: West	WIK: Window	WO: Without	W: With	WD: Wood	WO: Window	X: Operable Window Section

MISC. SYMBOLS

- +— FROST PROOF HOSE BIB
- FLOOR LINE ABOVE
- STRUCTURAL BEAM / HEADER OR GIRDER TRUSS
- LOAD BEARING WALL
- SOLID BLOCKING FROM CONCENTRATED LOAD
- ✕ CONCENTRATED LOAD FROM ABOVE. SOLID BLOCK TO FOUNDATION OR BEAM HEADER BELOW.
- ☁ SMOKE DETECTOR
- ☑ CARBON MONOXIDE AND SMOKE DETECTOR COMBO

**DRAWING SYMBOLS
LEGEND**

- CEILING TAG
A 9'-1 1/8" → CEILING HEIGHT
→ CEILING TYPE IN LEGEND
- DOOR TAG
○ DOOR → DOOR CALLOUT IN SCHEDULE
1'-0" → DOOR WIDTH
- STAIR TAG
20R @ 7 1/2" → RISER HEIGHT PER TREAD
→ # OF RISER
- WINDOW TAG
11 → WINDOW CALL OUT IN SCHEDULE
→ WINDOW SIZE (INCHES)
Type Name → HEADER HGT FROM FLOOR DECKING
→ WINDOW SILL HGT FROM FLOOR DECKING
→ ROUGH FRAMING OPENING

- ELEVATION REFERENCE**
- 1 View Name → NAME AND SCALE OF ELEVATION
A101 1/8" = 1'-0"
 - DETAIL REFERENCE ON PAGE
 - INDICATES PAGE NUMBER SECTION CAN BE FOUND ON

- BUILDING SECTION REFERENCE**
- INDICATES DIRECTION SECTION IS LOOKING
 - INDICATES PAGE NUMBER SECTION CAN BE FOUND ON

PAPER SCALE:
24" X 36" SHEET (D SIZE) = SCALE ON PLAN



RIESBERG GROUP DESIGN
 Grimes, Iowa
 riesberggroup@gmail.com
 Phone: 515-202-3386



Project ID:
 23-2269

Drawn by: KMR

REVIEW SET

Rev. Date : 04-14-23
Rev. Date : 05-04-23
Rev. Date : 05-11-23
Rev. Date :
Rev. Date :
Rev. Date :

BID SET:

Date :

PERMIT SET:

Date :

New Retail Building For:
Ace Hardware

Project Location:
 825 South 3rd Street
 Polk City, Iowa

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Cover Page
-Rendering

A.0-1

Scale:



RIESBERG GROUP DESIGN
 Grimes, Iowa
 riesberggroup@gmail.com
 Phone: 515-202-3386

MEMBER
A I
B D
 AMERICAN INSTITUTE OF
 BUILDING DESIGN

Project ID:
 23-2269

Drawn by: KMR

REVIEW SET
 Rev. Date : 04-14-23
 Rev. Date : 05-04-23
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Project Location:
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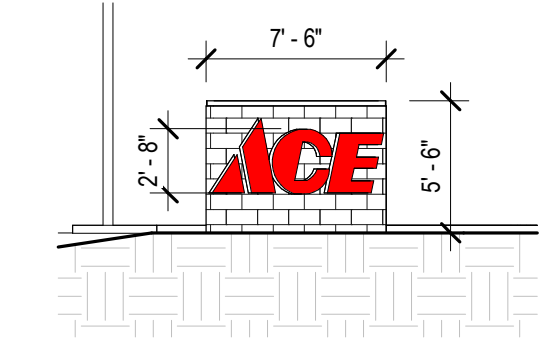
Elevations

A.1-0

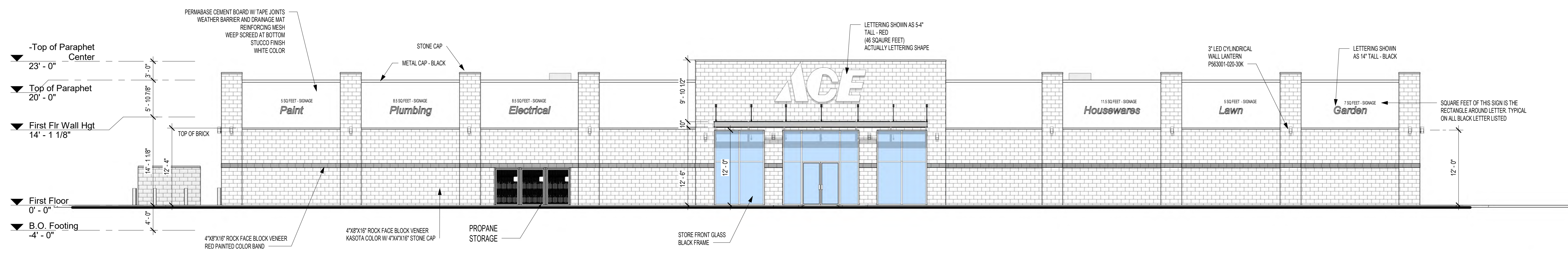
Scale: 1/8" = 1'-0"

GENERAL ELEVATION NOTES:

1. ALL HORIZONTAL TRANSITIONS BETWEEN DIFFERENT MATERIALS SHALL BE FLASHED CONTINUOUS FROM UP BEHIND UPPER MATERIAL AND EXTEND OVER TO EXTERIOR FACE OF LOWER MATERIAL WITH DRIP EDGE.
2. FLASHING TO BE INSTALLED AT WALL AND ROOF INTERSECTIONS AND WHEREVER THERE'S A CHANGE IN ROOF SLOPE DIRECTION AND ROOF OPENINGS.
3. ANY RETURNS OR BLIND ELEVATIONS NOT SHOWN SHALL BE SIMILAR IN MATERIAL AND MAKEUP TO ADJACENT CONDITIONS OR OTHER SIMILAR CONDITIONS.
4. CALK & SEAL ALL TRANSITION CONTROL EXPANSION AT ALL EXTERIOR MATERIALS.
5. INSULATE AND SEAL TO ENSURE ADEQUATE AIR INFILTRATION BARRIER AROUND ALL EXTERIOR PENETRATIONS TO PREVENT WATER AND PIPE FREEZING.
6. GROUND LINES SHOWN FOR REFERENCE ONLY AND VARY DEPENDING ON SITE CONDITIONS.



3 Monument Sign
 A.1-0 1/8" = 1'-0"

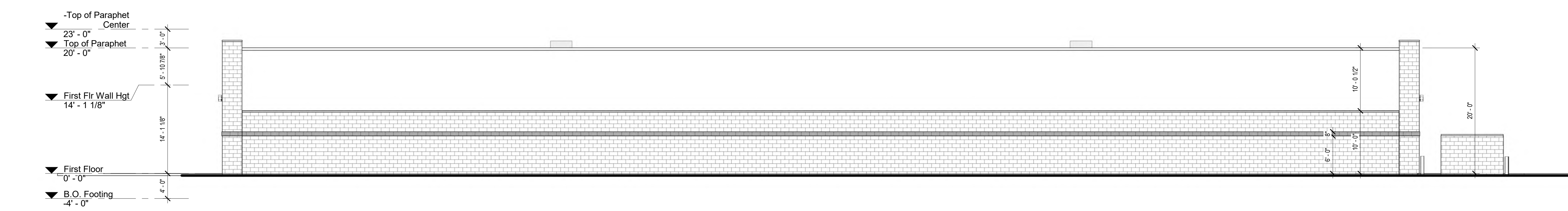


1 WEST ELEVATION
 A.1-0 1/8" = 1'-0"

TOTAL SIGNAGE AREA:
 BLACK LETTER = 45.5
 RED LETTER = 46
 TOTAL SQ FEET = 91.5 SQUARE FEET

Exterior Wall Covering Material - Estimate

MATERIAL TYPE	MATERIAL SF	MATERIAL %	MATERIAL ELEVATION
8x16 Brick	2004 SF	51.3%	East Elevation
Stucco	1901 SF	48.7%	East Elevation
8x16 Brick	954 SF	55.6%	North Elevation
Stucco	762 SF	44.4%	North Elevation
8x16 Brick	843 SF	53.0%	South Elevation
Stucco	747 SF	47.0%	South Elevation
8x16 Brick	2916 SF	61.0%	West Elevation
Stucco	1864 SF	39.0%	West Elevation



2 EAST ELEVATION
 A.1-0 1/8" = 1'-0"



RIESBERG GROUP DESIGN
 Grimes, Iowa
 riesberggroup@gmail.com
 Phone: 515-202-3386



Project ID:
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Drawn by: KMR

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BID SET:

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New Retail Building For:
Ace Hardware
Project Location:
 825 South 3rd Street
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Elevations

A.1-1

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

GENERAL NOTES:

ROOF TRUSSES.
 WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. THE DESIGN AND MANUFACTURE OF METAL-PLATED WOOD TRUSS SHALL COMPLY WITH ANSITP1.
 REFER TO TRUSS MANUFACTURER TRUSS DESIGN DRAWINGS FOR THE FOLLOWING:
 A. TRUSS BEARING REQUIREMENTS
 B. HANGERS CONNECTION FOR TRUSS TO TRUSS CONNECTION
 C. MULTIPLY PLY TRUSS NAILING
 D. TRUSS UPLIFT FOR TRUSS TIE DOWNS REQUIREMENTS

TRUSS BRACING. TRUSSES SHALL BE BRACED TO PREVENT ROTATION AND PROVIDE LATERAL STABILITY. REFER TO THE INDIVIDUAL TRUSS DESIGN DRAWINGS AND SBC'S BCSI GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.

FLASHING
 1. FLASHING SHALL BE INSTALLED IN MANNER THAT PREVENTS MOISTURE FROM ENTERING THE WALL AND ROOF THROUGH JOINTS IN COPING, THROUGH MOISTURE PERMEABLE MATERIALS AND AT INTERSECTION WITH PARAPET WALLS AND OTHER PENETRATIONS THROUGH THE ROOF PLANE.
 2. FLASHING SHALL BE INSTALLED AT WALL AND ROOF INTERSECTIONS, WHEREVER THERE IS A CHANGE IN ROOF OR DIRECTION AND AROUND ROOF OPENINGS.

ROOFING UNDERLAYMENT
 1. UNDERLAYMENT FOR ASPHALT SHINGLES, CLAY, AND CONCRETE TILE, METAL ROOF SHINGLES, MINERAL SURFACED ROLL ROOFING, SLATE AND SLATE-TYPE SHINGLES, WOOD SHINGLES AND METAL ROOF PANELS SHALL CONFORM TO THE APPLICABLE STANDARDS LISTED IN THIS CHAPTER.
 2. UNDERLAYMENT MATERIALS REQUIRED TO COMPLY WITH ASTM D 226, D 1970, D 4869 AND D 6757 SHALL BEAR A LABEL, INDICATING COMPLIANCE. UNDERLAYMENT SHALL BE ATTACHED IN ACCORDANCE WITH TABLE R906.1.1(2)

ICE BARRIERS.
 IF AREAS WHERE THERE HAS BEEN A HISTORY OF ICE FORMING ALONG EAVES CAUSING BACKUP OF WATER AS DESIGNATED IN TABLE R301.2(1), AN ICE BARRIER SHALL BE INSTALLED. THE ICE BARRIER SHALL CONSIST OF TWO LAYERS OF UNDERLAYMENT OR SELF-ADHERING POLYMER-MODIFIED BITUMEN SHEET SHALL BE USED IN PLACE OF NORMAL UNDERLAYMENT AND EXTEND NOT LESS THAN 24" INSIDE THE EXTERIOR WALL. ON ROOFS OVER 8/12, THE ICE BARRIER SHALL BE APPLIED NOT LESS THAN 36".

ROOFING MATERIAL
 WHERE CALLED OUT ON PLANS, ASPHALT SHINGLES CAN BE USED ON ROOF SLOPES OF 2/12 OR GREATER. FOR SLOPES FROM 2/12 UP TO 4/12, DOUBLE UNDERLAYMENT APPLICATION IS REQUIRED IN ACCORDANCE WITH SECTION R906.1.1

A. SQUARE FOOTAGE LISTED IN SCHEDULE IS TAKEN FROM EXPOSED SURFACE OF THE ROOF AS SEEN FROM TOP VIEW.
 1. AREA UNDER VALLEY THAT MAY BE SHEATHED WITH OSB IS NOT INCLUDED.
 2. NO WASTE FACTOR HAS BEEN ADDED TO THESE NUMBER.

ROOF VENTILATION.
 ENCLOSED ATTIC AND ENCLOSED RAFTER SPACES FORMED WHERE CEILING ARE APPLIED DIRECTLY TO THE UNDERSIDE OF THE ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. REQUIRED VENTILATION OPENINGS SHALL BE DIRECTLY TO THE OUTSIDE AIR.

A. THE SQUARE FOOTAGE OF ATTIC SPACE IN THE SCHEDULE IS TAKEN FROM THE OUTSIDE OF BUILDING AND DOES NOT INCLUDE COVERED ROOF AREA IN PORCHES/DECKS THAT ARE NOT CONDITION OR ENCLOSED.
 B. INSTALL A BALANCED SYSTEM OF INTAKE AND EXHAUST VENTILATION (50% INTAKE & 50% EXHAUST) ABOVE CALCULATION ARE FOR EXHAUST ONLY
 C. INSTALL VENTS AT SAME HEIGHT IN COMMON ROOF ZONES
 D. SEPARATE SPACES/ZONES WITH POLY OR OTHER DRAFTSTOPPING MATERIAL

GENERAL ELEVATION NOTES:

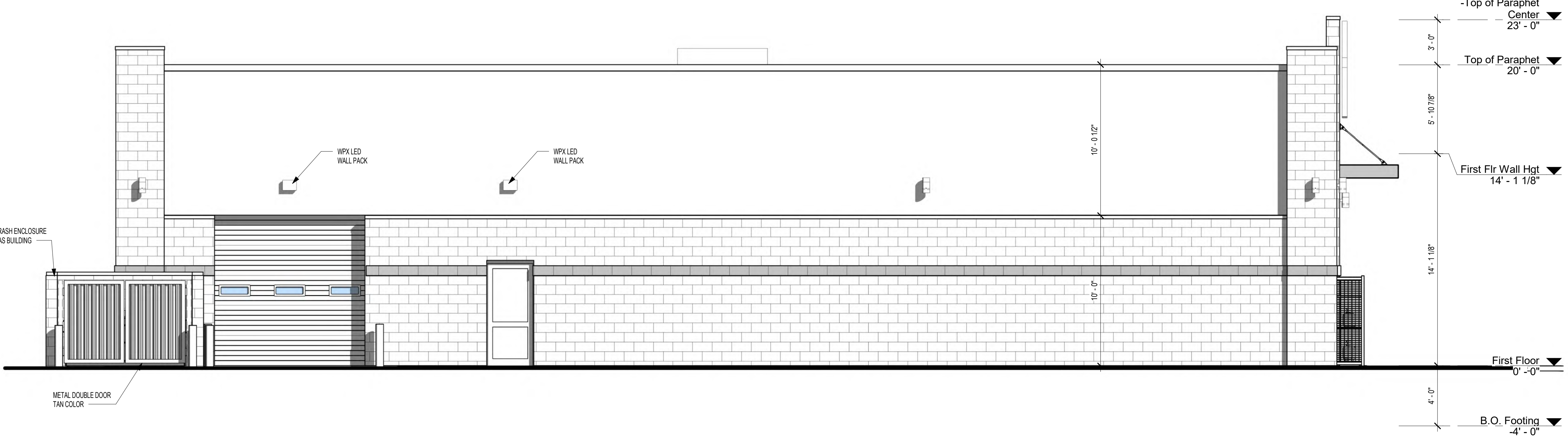
1. ALL HORIZONTAL TRANSITIONS BETWEEN DIFFERENT MATERIALS SHALL BE FLASHED CONTINUOUS FROM UP BEHIND UPPER MATERIAL AND EXTEND OVER TO EXTERIOR FACE OF LOWER MATERIAL WITH DRIP EDGE.
 2. FLASHING TO BE INSTALLED AT WALL AND ROOF INTERSECTIONS AND WHEREVER THERE'S A CHANGE IN ROOF SLOPE DIRECTION AND ROOF OPENINGS.
 2. ANY RETURNS OR BLIND ELEVATIONS NOT SHOWN SHALL BE SIMILAR IN MATERIAL AND MAKEUP TO ADJACENT CONDITIONS OR OTHER SIMILAR CONDITIONS.
 3. CAULK & SEAL ALL TRANSITION CONTROL-EXPANSION AT ALL EXTERIOR MATERIALS.
 4. INSULATE AND SEAL TO ENSURE ADEQUATE AIR INFILTRATION BARRIER AROUND ALL EXTERIOR PENETRATIONS TO PREVENT WATER AND PIPE FREEZING.
 5. GROUND LINES SHOWN FOR REFERENCE ONLY AND VARY DEPENDING ON SITE CONDITIONS
 6. UNFINISHED ATTIC SPACES TO BE FILLED WITH INSULATION TO MEET CODES

GENERAL DRAFTSTOPPING

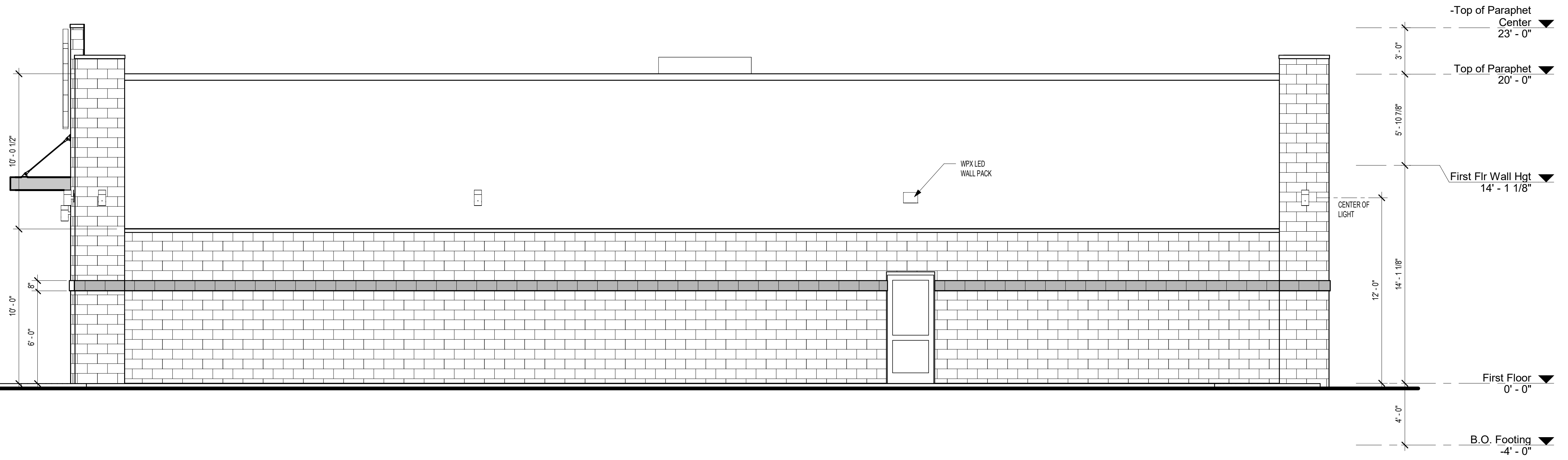
1. DRAFTSTOPPING IN FLOORS SHALL BE INSTALLED TO SUBDIVIDE FLOOR/CEILING ASSEMBLIES - SHALL BE LOCATED ABOVE AND IN-LINE WITH THE DWELLING UNIT AND SLEEPING UNIT SEPARATIONS
 2. DRAFTSTOPPING IN ATTICS SHALL BE INSTALLED TO SUBDIVIDE ATTIC SPACES AND CONCEALED ROOF SPACES - SHALL BE LOCATED ABOVE AND IN-LINE WITH THE SLEEPING UNIT AND DWELLING UNIT SEPARATION WALLS THAT DO NOT EXTEND TO THE UNDERSIDE OF THE ROOF SHEATHING ABOVE AND EXTEND THROUGH OVERHANGS. - EXCEPTION 1 - WHERE CORRIDOR WALLS PROVIDE A SEPARATION, DRAFTSTOPPING IS ONLY REQUIRED ABOVE ONE OF THE CORRIDOR WALLS. - EXCEPTION 3 - R-2 THAT DO NOT EXCEED 4 STORIES ABOVE GRADE. THE ATTIC SPACE SHALL BE DIVIDED INTO AREAS NOT EXCEEDING 3,000 SF OR ABOVE EVERY 2 UNITS, WHICHEVER IS SMALLER.
 3. DRAFTSTOPPING MATERIAL SHALL BE NO LESS THAN 1/2" GYPSBOARD OR 3/8" OSB.
 4. OPENING IN THE DRAFTSTOPPING SHALL BE PROTECTED BY SELF CLOSING DOORS WITH AUTOMATIC LATCHES CONSTRUCTED AS REQUIRED FOR DRAFTSTOPPING PARTITIONS.

ACCESS TO UNOCCUPIED SPACES:

1. CRAWL SPACE BE PROVIDED WITH NO LESS THAN 1 ACCESS OPENING - MIN SIZE IS 18" X 24"
 2. ALL OPENING TO ANY ATTIC SPACE SHOULD NOT LESS THAN 20" X 30" WITH MIN 30" CLEARANCE ABOVE ATTIC OPENING.



1 NORTH ELEVATION
 A.1-1 1/4" = 1'-0"



2 SOUTH ELEVATION
 A.1-1 1/4" = 1'-0"



RIESBERG GROUP DESIGN

Grimes, Iowa
riesberggroup@gmail.com
Phone: 515-202-3386

MEMBER



AMERICAN INSTITUTE OF BUILDING DESIGN

Project ID:
23-2269

Drawn by: KMR

REVIEW SET

Rev. Date : 04-14-23
Rev. Date : 05-04-23
Rev. Date : 05-11-23
Rev. Date :
Rev. Date :
Rev. Date :

BID SET:

Date :

PERMIT SET:

Date :

New Retail Building For:
Ace Hardware

Project Location:
825 South 3rd Street
Polk City, Iowa

RIESBERG GROUP DESIGN IS NOT A LICENSED ARCHITECT OR ENGINEER. THESE PLANS ARE PROVIDED ON AN "AS IS" BASIS. THE OWNER AND/OR CONTRACTOR RELEASES IT'S OWNER / EMPLOYEES FROM ANY CLAIMS OR LAWSUIT THAT MAY ARISE DURING CONSTRUCTION. CAREFULLY INSPECT ALL DIMENSION, STRUCTURE AND DETAILS IN THESE DOCUMENTS & NOTIFY RIESBERG GROUP DESIGN AND ANY DISCREPANCIES.

First Floor Plan

A.2-1

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

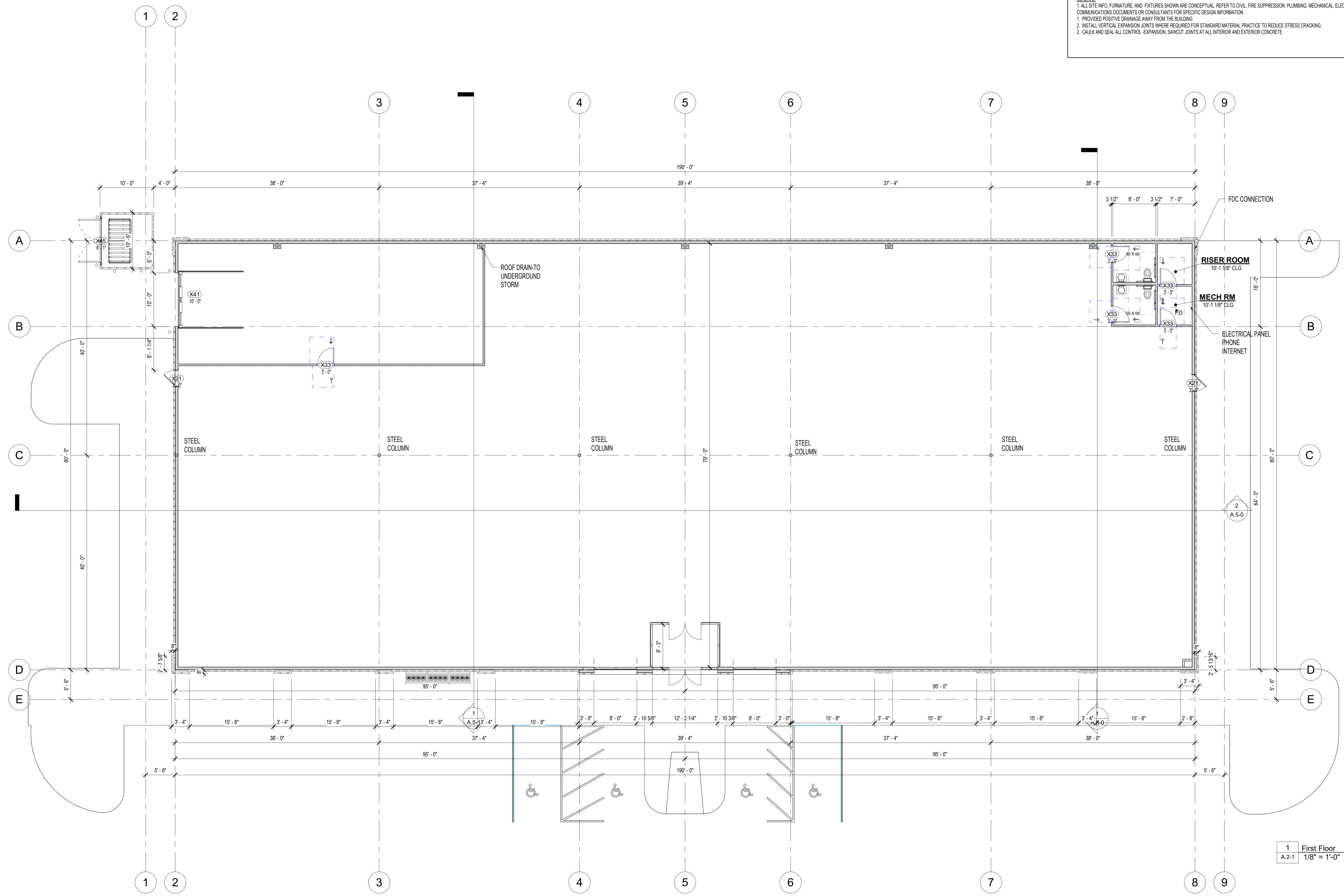
GENERAL FLOOR PLAN NOTES

DIMENSION ON PLAN:

- EXTERIOR DIMENSIONS ARE FROM THE OUTSIDE OF SHEATHING TO OUTSIDE OF SHEATHING OR FROM FACE OF MASONRY TO FACE OF MASONRY.
- INTERIOR DIMENSIONS ARE FROM THE FACE OF STUD TO FACE OF STUD.
- CEILING HEIGHT NOTES ARE FROM TOP OF FLOOR DECKING TO BOTTOM OF CEILING FRAMING MATERIAL.
- PORCH / DECK HEIGHTS NOTED ARE TAKEN FROM TOP OF MAIN FLOOR DECK AND NOT FROM DECK OR CONCRETE HGT. (UNLESS NOTED)

GENERAL:

- ALL SITE INFO, FURNITURE, AND FIXTURES SHOWN ARE CONCEPTUAL. REFER TO CIVIL, FIRE SUPPRESSION, PLUMBING, MECHANICAL, ELECTRICAL, COMMUNICATIONS DOCUMENTS OR CONSULTANTS FOR SPECIFIC DESIGN INFORMATION.
- PROVIDED POSITIVE DRAINAGE AWAY FROM THE BUILDING.
- INSTALL VERTICAL EXPANSION JOINTS WHERE REQUIRED FOR STANDARD MATERIAL PRACTICE TO REDUCE STRESS CRACKING.
- CAULK AND SEAL ALL CONTROL - EXPANSION, SAWCUT JOINTS AT ALL INTERIOR AND EXTERIOR CONCRETE.



1 First Floor
A.2-1 1/8" = 1'-0"



RIESBERG GROUP DESIGN

Grimes, Iowa
riesberggroup@gmail.com
Phone: 515-202-3386



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23-2269

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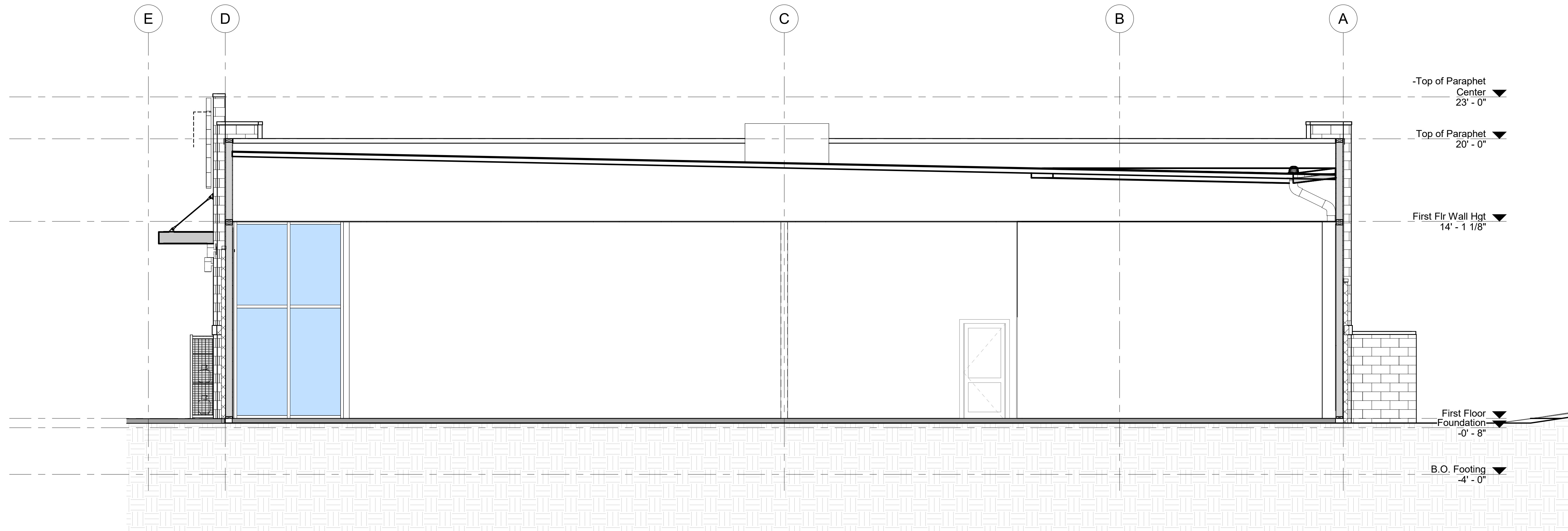
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Building Sections

A.5-0

Scale: As indicated



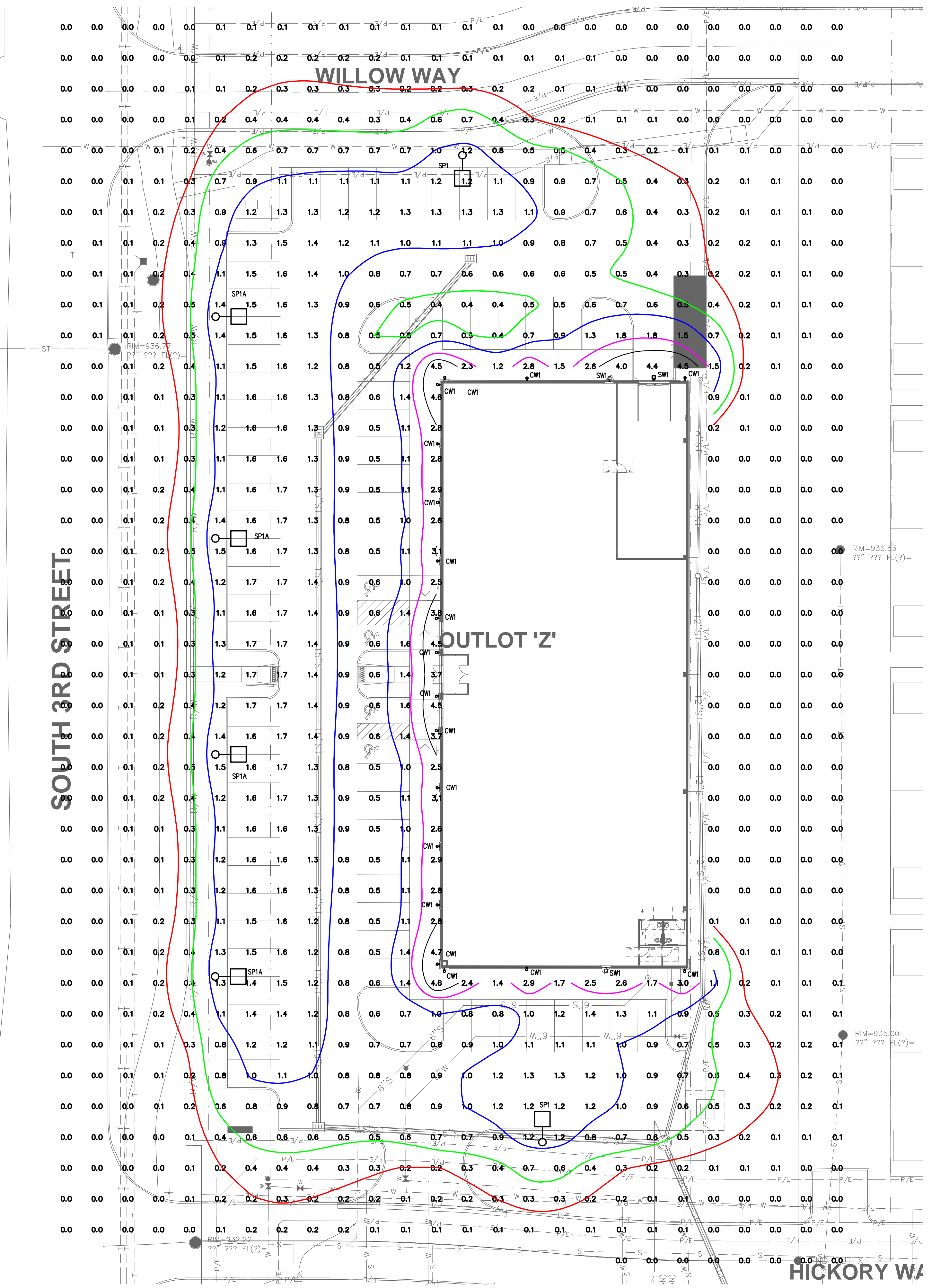
1 Section 2
A.5-0 1/4" = 1'-0"



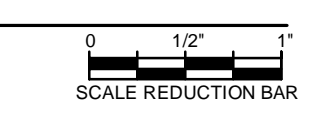
2 Section 3
A.5-0 1/8" = 1'-0"

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	LAMP	DESCRIPTION	BALLAST	MOUNTING	MODEL	MODEL #	INPUT WATTS	VOLTS	QUANTITY	DEFAULT ELEVATION
CW1	-	(1) 44-Nichig 3000K, NF2L797GR1-V	3" Wall Mount Cylinder - Dark Bronze	ELECTRONIC	CEILING	PROGRESS, P563000-147-30K	PROGRESS, P563000-147-30K	24.1	120V 1P 2W	18	12'-0"
SP1	○	(1)	D-Series Size 1 Area Luminaire P1 Performance Package 4000K CCT 80 CRI Type 2 Medium	ELECTRONIC	CEILING	Lithonia Lighting, DSX1 LED P1 40K 80CRI T2M	Lithonia Lighting, DSX1 LED P1 40K 80CRI T2M	50.9	120V 1P 2W	2	23'-0"
SPIA	○	(1)	D-Series Size 1 Area Luminaire P1 Performance Package 4000K CCT 80 CRI Type 2 Medium HouseSide Shield	ELECTRONIC	CEILING	Lithonia Lighting, DSX1 LED P1 40K 80CRI T2M HS	Lithonia Lighting, DSX1 LED P1 40K 80CRI T2M HS	50.9015	120V 1P 2W	4	23'-0"
SW1	⬢	(1)	WPX1 LED wallpack 1500lm 3000K color temperature 120-277 Volt	ELECTRONIC	CEILING	Lithonia Lighting, WPX1 LED P1 30K Invert	Lithonia Lighting, WPX1 LED P1 30K Invert	11.49	120V 1P 2W	3	12'-0"



SITE PHOTOMETRICS PLAN
 1" = 20' - 0"
 NORTH



PROJECT	ACE HARDWARE	DATE	5/05/23	CLIENT	KIMBERLY DEVELOPMENT
	825 S. 3RD STREET		2302		
DRAWING	DESIGNED	DATE	5/05/23	CLIENT	KIMBERLY DEVELOPMENT
	DRAWN		5/05/23		
REVIEWED	DESIGNED	DATE	5/05/23	CLIENT	KIMBERLY DEVELOPMENT
	REVIEWED		5/05/23		
FILE	DESIGNED	DATE	5/05/23	CLIENT	KIMBERLY DEVELOPMENT
	FILE		5/05/23		

BREWER ENGINEERING CONSULTANTS, PLC
 905 WASHINGTON AVE SE - BONDPLANT, IOWA 50005
 515-587-8808 - FAX 515-587-8816 - www.brewer-engr.com

PROJECT: ACE HARDWARE
 825 S. 3RD STREET
 POLK CITY, IOWA

DRAWING NO. **ME1.0**



D-Series Size 1 LED Area Luminaire

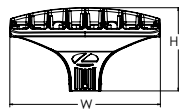
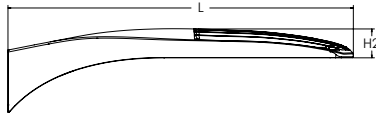
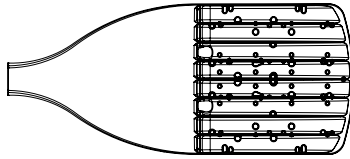


Catalog Number
Notes
Type

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

Specifications

EPA:	0.69 ft ² (0.06 m ²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.4 kg)



Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED	Series	LEDs	Color temperature ²	Color Rendering Index ²	Distribution	Voltage	Mounting
DSX1 LED	Forward optics	P1 P6	(this section 70CRI only) 30K 3000K	70CRI	AFR Automotive front row	T5M Type V medium	MVOLT (120V-277V) ⁴ HVOLT (347V-480V) ^{5,6} XVOLT (277V - 480V) ^{7,8} Shipped included SPA Square pole mounting (#8 drilling) RPA Round pole mounting (#8 drilling) SPA5 Square pole mounting #5 drilling ⁹ RPA5 Round pole mounting #5 drilling ⁹ SPA8N Square pole mounting #8 drilling WBA Wall bracket ¹⁰ MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)
		P2 P7	40K 4000K	70CRI	T1S Type I short	T5LG Type V low glare	
		P3 P8	50K 5000K	70CRI	T2M Type II medium	T5W Type V wide	
		P4 P9	(this section 80CRI only, extended lead times apply)	80CRI	T3M Type III medium	BLC3 Type III backlight control ³	
		P5			T3LG Type III low glare ³	BLC4 Type IV backlight control ³	
		Rotated optics	P10 ¹ P12 ¹	27K 2700K	80CRI	T4M Type IV medium	
	P11 ¹ P13 ¹		30K 3000K	80CRI	T4LG Type IV low glare ³	RCCO Right corner cutoff ³	
			35K 3500K	80CRI	TFTM Forward throw medium		
			40K 4000K	80CRI			
			40K 4000K	80CRI			
			50K 5000K	80CRI			

Control options	Other options	Finish (required)
Shipped installed NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc. ^{11, 12, 20, 21} PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc. ^{13, 20, 21} PER NEMA twist-lock receptacle only (controls ordered separate) ¹⁴ PER5 Five-pin receptacle only (controls ordered separate) ^{14, 21}	PER7 Seven-pin receptacle only (controls ordered separate) ^{14, 21} FAO Field adjustable output ^{15, 21} BL30 Bi-level switched dimming, 30% ^{16, 21} BL50 Bi-level switched dimming, 50% ^{16, 21} DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) ¹⁷ DS Dual switching ^{18, 19, 21}	Shipped installed SPD20KV 20KV surge protection HS Houseside shield (black finish standard) ²² L90 Left rotated optics ¹ R90 Right rotated optics ¹ CCE Coastal Construction ²³ HA 50°C ambient operation ²⁴ Shipped separately EGSR External Glare Shield (reversible, field install required, matches housing finish) BSDB Bird Spikes (field install 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



Ordering Information

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) ²⁵
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) ²⁵
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) ²⁵
DSHORT SBK	Shorting cap ²⁵
DSX1HS P#	House-side shield (enter package number 1-13 in place of #)
DSXRPA (FINISH)	Round pole adapter (#8 drilling, specify finish)
DSXSPA5 (FINISH)	Square pole adapter #5 drilling (specify finish)
DSXRPA5 (FINISH)	Round pole adapter #5 drilling (specify finish)
DSX1EGSR (FINISH)	External glare shield (specify finish)
DSX1BSDB (FINISH)	Bird spike deterrent bracket (specify finish)

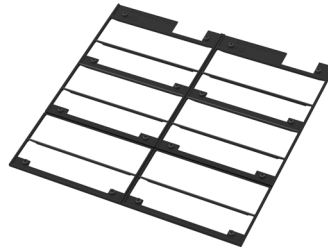
NOTES

- Rotated optics available with packages P10, P11, P12 and P13. Must be combined with option L90 or R90.
- 30K, 40K, and 50K available in 70CRI and 80CRI. 27K and 35K only available with 80CRI. Contact Technical Support for other possible combinations.
- T3LG, T4LG, BLC3, BLC4, LCCO, RCCO not available with option HS.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
- HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
- HVOLT not available with package P1 and P10 when combined with option NLTAIR2 PIRHN or option PIR.
- XVOLT operates with any voltage between 277V and 480V (50/60 Hz).
- XVOLT not available in packages P1 or P10.
- SPA5 and RPA5 for use with #5 drilling only (Not for use with #8 drilling).
- WBA cannot be combined with Type 5 distributions plus photocell (PER).
- NLTAIR2 and PIRHN must be ordered together. For more information on nLight AIR2 visit this [link](#).
- NLTAIR2 PIRHN not available with other controls including PIR, PER, PER5, PER7, FAO, BL30, BL50, DMG and DS. NLTAIR2 PIRHN not available with P1 and P10 using HVOLT. NLTAIR2 PIRHN not available with P1 and P10 using XVOLT.
- PIR not available with NLTAIR2 PIRHN, PER, PER5, PER7, FAO BL30, BL50, DMG and DS. PIR not available with P1 and P10 using HVOLT. PIR not available with P1 and P10 using XVOLT.
- PER/PER5/PER7 not available with NLTAIR2 PIRHN, PIR, BL30, BL50, FAO, DMG and DS. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
- FAO not available with other dimming control options NLTAIR2 PIRHN, PIR, PER5, PER7, BL30, BL50, DMG and DS.
- BL30 and BL50 are not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, FAO, DMG and DS.
- DMG not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, BL30, BL50, FAO and DS.
- DS not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, BL30, BL50, FAO and DMG.
- DS requires (2) separately switched circuits. DS provides 50/50 fixture operation via (2) different sets of leads using (2) drivers. DS only available with packages P8, P9, P10, P11, P12 and P13.
- Reference Motion Sensor Default Settings table on page 4 to see functionality.
- Reference Controls Options table on page 4.
- HS not available with T3LG, T4LG, BLC3, BLC4, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
- CCE option not available with option BS and EGSR. Contact Technical Support for availability.
- Option HA not available with performance packages P4, P5, P7, P8, P9 and P13.
- Requires luminaire to be specified with PER, PER5 or PER7 option. See Controls Table on page 4.

Shield Accessories



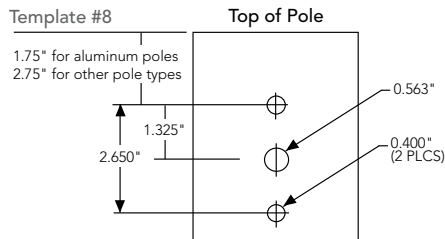
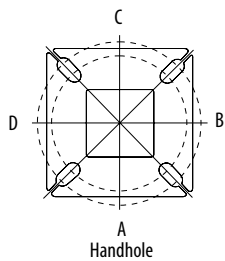
External Glare Shield (EGSR)



House Side Shield (HS)

Drilling

HANDHOLE ORIENTATION



Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS
Minimum Acceptable Outside Pole Dimension							
SPA	#8	3.5"	3.5"	3.5"	3.5"		3.5"
RPA	#8	3"	3"	3"	3"	3"	3"
SPA5	#5	3"	3"	3"	3"		3"
RPA5	#5	3"	3"	3"	3"	3"	3"
SPA8N	#8	3"	3"	3"	3"		3"

DSX1 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 with SPA	0.69	1.38	1.23	1.54	---	1.58
DSX1 with SPA5, SPA8N	0.70	1.40	1.30	1.66	---	1.68
DSX1 with RPA, RPA5	0.70	1.40	1.30	1.66	1.60	1.68
DSX1 with MA	0.83	1.66	1.50	2.09	2.09	2.09

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [homepage](#).

Isofootcandle plots for the DSX1 LED P9 40K 70CRI. Distances are in units of mounting height (25').



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	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°C	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.95
50,000	0.90
100,000	0.81

FAO Dimming Settings

FAO Position	% Wattage	% Lumen Output
8	100%	100%
7	93%	95%
6	80%	85%
5	66%	73%
4	54%	61%
3	41%	49%
2	29%	36%
1	15%	20%

*Note: Calculated values are based on original performance package data. When calculating new values for given FAO position, use maximum published values by package listed on specification sheet (input watts and lumens by optic type).

Electrical Load

	Performance Package	LED Count	Drive Current (mA)	Wattage	Current (A)					
					120V	208V	240V	277V	347V	480V
Forward Optics (Non-Rotated)	P1	30	530	51	0.42	0.24	0.21	0.18	0.15	0.11
	P2	30	700	68	0.56	0.33	0.28	0.24	0.20	0.14
	P3	30	1050	104	0.85	0.49	0.43	0.37	0.29	0.21
	P4	30	1250	125	1.03	0.60	0.52	0.45	0.36	0.26
	P5	30	1400	142	1.15	0.66	0.58	0.50	0.40	0.29
	P6	40	1250	167	1.38	0.79	0.69	0.60	0.48	0.34
	P7	40	1400	188	1.54	0.89	0.77	0.67	0.53	0.38
	P8	60	1100	216	1.80	1.04	0.90	0.78	0.62	0.45
	P9	60	1400	279	2.31	1.33	1.15	1.00	0.80	0.58
Rotated Optics (Requires L90 or R90)	P10	60	530	101	0.84	0.49	0.42	0.37	0.29	0.21
	P11	60	700	135	1.12	0.65	0.56	0.49	0.39	0.28
	P12	60	1050	206	1.72	0.99	0.86	0.74	0.59	0.43
	P13	60	1400	279	2.30	1.33	1.15	1.00	0.79	0.57

LED Color Temperature / Color Rendering Multipliers

	70 CRI		80CRI		90CRI	
	Lumen Multiplier	Availability	Lumen Multiplier	Availability	Lumen Multiplier	Availability
5000K	102%	Standard	92%	Extended lead-time	71%	(see note)
4000K	100%	Standard	92%	Extended lead-time	67%	(see note)
3500K	100%	(see note)	90%	Extended lead-time	63%	(see note)
3000K	96%	Standard	87%	Extended lead-time	61%	(see note)
2700K	94%	(see note)	85%	Extended lead-time	57%	(see note)

Note: Some LED types are available as per special request. Contact Technical Support for more information.

Motion Sensor Default Settings

Option	Unoccupied Dimmed Level	High Level (when occupied)	Photocell Operation	Dwell Time	Ramp-up Time	Dimming Fade Rate
PIR	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min
NLTAIR2 PIRHN	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min

Controls Options

Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS (not available on DSX0)	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PERS or PER7	Twist-lock photocell receptacle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire. Cannot be used with other controls options that need the 0-10V leads.
PIR	Motion sensor with integral photocell. Sensor suitable for 8' to 40' mounting height.	Luminaires dim when no occupancy is detected.	Acuity Controls rSBG	Cannot be used with other controls options that need the 0-10V leads.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Elypse.	nLight Air rSBG	nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRITY Pro app. Cannot be used with other controls options that need the 0-10V leads.
BL30 or BL50	Integrated bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output	BLC device provides input to 0-10V dimming leads on all drivers providing either 100% or dimmed (30% or 50%) control by a secondary circuit	BLC UVOLT1	BLC device is powered off the 0-10V dimming leads, thus can be used with any input voltage from 120 to 480V



Performance Data

Lumen Output

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

Forward Optics																			
Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K					40K					50K				
					(3000K, 70 CRI)					(4000K, 70 CRI)					(5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	51W	30	530	T1S	7,776	1	0	2	153	8,104	1	0	2	159	8,262	1	0	2	162
				T2M	7,203	1	0	3	142	7,507	2	0	3	147	7,653	2	0	3	150
				T3M	7,287	1	0	3	143	7,594	1	0	3	149	7,742	1	0	3	152
				T3LG	6,509	1	0	1	128	6,783	1	0	1	133	6,916	1	0	1	136
				T4M	7,395	1	0	3	145	7,707	1	0	3	151	7,857	1	0	3	154
				T4LG	6,726	1	0	1	132	7,010	1	0	1	138	7,146	1	0	1	140
				TFTM	7,446	1	0	3	146	7,760	1	0	3	152	7,912	1	0	3	155
				T5M	7,609	3	0	2	149	7,930	3	0	2	156	8,084	3	0	2	159
				T5W	7,732	3	0	2	152	8,058	4	0	2	158	8,215	4	0	2	161
				T5LG	7,631	3	0	1	150	7,953	3	0	1	156	8,108	3	0	1	159
				BLC3	5,300	0	0	2	104	5,524	0	0	2	109	5,631	0	0	2	111
				BLC4	5,474	0	0	3	108	5,705	0	0	3	112	5,816	0	0	3	114
				RCCO	5,348	0	0	2	105	5,573	0	0	2	109	5,682	0	0	2	112
				LCCO	5,348	0	0	2	105	5,573	0	0	2	109	5,682	0	0	2	112
				AFR	7,776	1	0	2	153	8,104	1	0	2	159	8,262	1	0	2	162
				P2	68W	30	700	T1S	9,997	1	0	2	147	10,418	1	0	2	154	10,621
T2M	9,260	2	0					3	137	9,651	2	0	3	142	9,839	2	0	3	145
T3M	9,368	2	0					3	138	9,763	2	0	3	144	9,953	2	0	3	147
T3LG	8,368	1	0					2	123	8,721	1	0	2	129	8,891	1	0	2	131
T4M	9,507	2	0					3	140	9,909	2	0	3	146	10,102	2	0	3	149
T4LG	8,647	1	0					2	128	9,012	1	0	2	133	9,187	1	0	2	136
TFTM	9,573	2	0					3	141	9,977	2	0	3	147	10,172	2	0	3	150
T5M	9,782	4	0					2	144	10,195	4	0	2	150	10,393	4	0	2	153
T5W	9,940	4	0					2	147	10,360	4	0	2	153	10,562	4	0	2	156
T5LG	9,810	3	0					1	145	10,224	3	0	1	151	10,423	3	0	1	154
BLC3	6,814	0	0					2	101	7,101	0	0	2	105	7,240	0	0	2	107
BLC4	7,038	0	0					3	104	7,334	0	0	3	108	7,477	0	0	3	110
RCCO	6,875	1	0					2	101	7,165	1	0	2	106	7,305	1	0	2	108
LCCO	6,875	1	0					2	101	7,165	1	0	2	106	7,305	1	0	2	108
AFR	9,997	1	0					2	147	10,418	1	0	2	154	10,621	1	0	2	157
P3	102W	30	1050					T1S	14,093	2	0	2	138	14,687	2	0	2	144	14,973
				T2M	13,055	2	0	3	128	13,605	2	0	3	133	13,871	2	0	3	136
				T3M	13,206	2	0	4	129	13,763	2	0	4	135	14,031	2	0	4	137
				T3LG	11,797	2	0	2	115	12,294	2	0	2	120	12,534	2	0	2	123
				T4M	13,403	2	0	4	131	13,968	2	0	4	137	14,241	2	0	4	139
				T4LG	12,190	2	0	2	119	12,704	2	0	2	124	12,952	2	0	2	127
				TFTM	13,496	2	0	4	132	14,065	2	0	4	138	14,339	2	0	4	140
				T5M	13,790	4	0	2	135	14,371	4	0	2	141	14,652	4	0	2	143
				T5W	14,013	4	0	3	137	14,605	4	0	3	143	14,889	4	0	3	146
				T5LG	13,830	3	0	2	135	14,413	3	0	2	141	14,694	3	0	2	144
				BLC3	9,606	0	0	2	94	10,011	0	0	2	98	10,206	0	0	2	100
				BLC4	9,921	0	0	3	97	10,340	0	0	3	101	10,541	0	0	3	103
				RCCO	9,692	1	0	2	95	10,101	1	0	2	99	10,298	1	0	2	101
				LCCO	9,692	1	0	2	95	10,101	1	0	2	99	10,298	1	0	2	101
				AFR	14,093	2	0	2	138	14,687	2	0	2	144	14,973	2	0	2	147

Performance Data

Lumen Output

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

Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K					40K					50K								
					(3000K, 70 CRI)					(4000K, 70 CRI)					(5000K, 70 CRI)								
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW				
P4	124W	30	1250	T1S	16,416	2	0	3	132	17,109	2	0	3	138	17,442	2	0	3	141				
				T2M	15,207	3	0	4	123	15,849	3	0	4	128	16,158	3	0	4	130				
				T3M	15,383	2	0	4	124	16,032	2	0	4	129	16,345	2	0	4	132				
				T3LG	13,742	2	0	2	111	14,321	2	0	2	116	14,600	2	0	2	118				
				T4M	15,613	2	0	4	126	16,272	2	0	4	131	16,589	2	0	4	134				
				T4LG	14,200	2	0	2	115	14,799	2	0	2	119	15,087	2	0	2	122				
				TFTM	15,721	2	0	4	127	16,384	2	0	4	132	16,703	2	0	4	135				
				T5M	16,063	4	0	2	130	16,741	4	0	2	135	17,067	4	0	2	138				
				T5W	16,324	5	0	3	132	17,013	5	0	3	137	17,344	5	0	3	140				
				T5LG	16,110	3	0	2	130	16,790	4	0	2	135	17,117	4	0	2	138				
				BLC3	11,190	0	0	3	90	11,662	0	0	3	94	11,889	0	0	3	96				
				BLC4	11,557	0	0	3	93	12,044	0	0	3	97	12,279	0	0	4	99				
				RCCO	11,291	1	0	3	91	11,767	1	0	3	95	11,996	1	0	3	97				
				LCCO	11,291	1	0	3	91	11,767	1	0	3	95	11,996	1	0	3	97				
				AFR	16,416	2	0	3	132	17,109	2	0	3	138	17,442	2	0	3	141				
				P5	138W	30	1400	T1S	18,052	2	0	3	131	18,814	2	0	3	136	19,180	2	0	3	139
								T2M	16,723	3	0	4	121	17,428	3	0	4	126	17,768	3	0	4	129
T3M	16,917	3	0					4	122	17,630	3	0	4	128	17,974	3	0	4	130				
T3LG	15,111	2	0					2	109	15,749	2	0	2	114	16,055	2	0	2	116				
T4M	17,169	3	0					5	124	17,893	3	0	5	130	18,242	3	0	5	132				
T4LG	15,615	2	0					2	113	16,274	2	0	2	118	16,591	2	0	2	120				
TFTM	17,288	2	0					4	125	18,017	2	0	5	130	18,368	3	0	5	133				
T5M	17,664	5	0					3	128	18,410	5	0	3	133	18,768	5	0	3	136				
T5W	17,951	5	0					3	130	18,708	5	0	3	135	19,073	5	0	3	138				
T5LG	17,716	4	0					2	128	18,463	4	0	2	134	18,823	4	0	2	136				
BLC3	12,305	0	0					3	89	12,824	0	0	3	93	13,074	0	0	3	95				
BLC4	12,709	0	0					4	92	13,245	0	0	4	96	13,503	0	0	4	98				
RCCO	12,416	1	0					3	90	12,940	1	0	3	94	13,192	1	0	3	95				
LCCO	12,416	1	0					3	90	12,940	1	0	3	94	13,192	1	0	3	95				
AFR	18,052	2	0					3	131	18,814	2	0	3	136	19,180	2	0	3	139				
P6	165W	40	1250					T1S	21,031	2	0	3	127	21,918	2	0	3	133	22,345	2	0	3	135
								T2M	19,482	3	0	4	118	20,303	3	0	4	123	20,699	3	0	4	125
				T3M	19,708	3	0	5	119	20,539	3	0	5	124	20,939	3	0	5	127				
				T3LG	17,604	2	0	2	107	18,347	2	0	2	111	18,704	2	0	2	113				
				T4M	20,001	3	0	5	121	20,845	3	0	5	126	21,251	3	0	5	129				
				T4LG	18,191	2	0	2	110	18,959	2	0	2	115	19,328	2	0	2	117				
				TFTM	20,140	3	0	5	122	20,989	3	0	5	127	21,398	3	0	5	129				
				T5M	20,579	5	0	3	125	21,447	5	0	3	130	21,865	5	0	3	132				
				T5W	20,912	5	0	3	127	21,795	5	0	3	132	22,219	5	0	3	134				
				T5LG	20,638	4	0	2	125	21,509	4	0	2	130	21,928	4	0	2	133				
				BLC3	14,335	0	0	3	87	14,940	0	0	3	90	15,231	0	0	3	92				
				BLC4	14,805	0	0	4	90	15,430	0	0	4	93	15,731	0	0	4	95				
				RCCO	14,464	1	0	3	88	15,074	1	0	3	91	15,368	1	0	3	93				
				LCCO	14,464	1	0	3	88	15,074	1	0	3	91	15,368	1	0	3	93				
				AFR	21,031	2	0	3	127	21,918	2	0	3	133	22,345	2	0	3	135				

Performance Data

Lumen Output

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

Forward Optics																							
Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K					40K					50K								
					(3000K, 70 CRI)					(4000K, 70 CRI)					(5000K, 70 CRI)								
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW				
P7	184W	40	1400	T1S	22,741	2	0	3	123	23,700	2	0	3	129	24,162	3	0	3	131				
				T2M	21,066	3	0	4	114	21,955	3	0	4	119	22,383	3	0	4	121				
				T3M	21,311	3	0	5	116	22,210	3	0	5	120	22,642	3	0	5	123				
				T3LG	19,036	2	0	2	103	19,839	2	0	3	108	20,226	2	0	3	110				
				T4M	21,628	3	0	5	117	22,541	3	0	5	122	22,980	3	0	5	125				
				T4LG	19,671	2	0	2	107	20,501	2	0	3	111	20,900	2	0	3	113				
				TFTM	21,778	3	0	5	118	22,697	3	0	5	123	23,139	3	0	5	125				
				T5M	22,252	5	0	3	121	23,191	5	0	3	126	23,643	5	0	3	128				
				T5W	22,613	5	0	3	123	23,567	5	0	4	128	24,027	5	0	4	130				
				T5LG	22,317	4	0	2	121	23,258	4	0	2	126	23,712	4	0	2	129				
				BLC3	15,501	0	0	3	84	16,155	0	0	4	88	16,470	0	0	4	89				
				BLC4	16,010	0	0	4	87	16,685	0	0	4	90	17,010	0	0	4	92				
				RCCO	15,641	1	0	3	85	16,301	1	0	3	89	16,619	1	0	3	90				
				LCCO	15,641	1	0	3	85	16,301	1	0	3	89	16,619	1	0	3	90				
				AFR	22,741	2	0	3	123	23,700	2	0	3	129	24,162	3	0	3	131				
				P8	216W	60	1100	T1S	28,701	3	0	3	133	29,912	3	0	4	139	30,495	3	0	4	141
								T2M	26,587	3	0	5	123	27,709	3	0	5	128	28,249	3	0	5	131
T3M	26,895	3	0					5	125	28,030	3	0	5	130	28,576	3	0	5	132				
T3LG	24,025	3	0					3	111	25,038	3	0	3	116	25,526	3	0	3	118				
T4M	27,296	3	0					5	127	28,448	3	0	5	132	29,002	3	0	5	134				
T4LG	24,826	3	0					3	115	25,873	3	0	3	120	26,378	3	0	3	122				
TFTM	27,485	3	0					5	127	28,645	3	0	5	133	29,203	3	0	5	135				
T5M	28,084	5	0					4	130	29,269	5	0	4	136	29,839	5	0	4	138				
T5W	28,539	5	0					4	132	29,743	5	0	4	138	30,323	5	0	4	141				
T5LG	28,165	4	0					2	131	29,354	4	0	2	136	29,926	4	0	2	139				
BLC3	19,563	0	0					4	91	20,388	0	0	4	94	20,786	0	0	4	96				
BLC4	20,205	0	0					5	94	21,057	0	0	5	98	21,468	0	0	5	99				
RCCO	19,740	1	0					4	91	20,572	1	0	4	95	20,973	1	0	4	97				
LCCO	19,740	1	0					4	91	20,572	1	0	4	95	20,973	1	0	4	97				
AFR	28,701	3	0					3	133	29,912	3	0	4	139	30,495	3	0	4	141				
P9	277W	60	1400					T1S	34,819	3	0	4	126	36,288	3	0	4	131	36,996	3	0	4	134
								T2M	32,255	3	0	5	116	33,616	3	0	5	121	34,271	3	0	5	124
				T3M	32,629	3	0	5	118	34,006	3	0	5	123	34,668	3	0	5	125				
				T3LG	29,146	3	0	3	105	30,376	3	0	4	110	30,968	3	0	4	112				
				T4M	33,116	3	0	5	120	34,513	3	0	5	125	35,185	3	0	5	127				
				T4LG	30,119	3	0	3	109	31,389	3	0	4	113	32,001	3	0	4	116				
				TFTM	33,345	3	0	5	120	34,751	3	0	5	125	35,429	3	0	5	128				
				T5M	34,071	5	0	4	123	35,509	5	0	4	128	36,201	5	0	4	131				
				T5W	34,624	5	0	4	125	36,084	5	0	4	130	36,788	5	0	4	133				
				T5LG	34,170	5	0	3	123	35,612	5	0	3	129	36,306	5	0	3	131				
				BLC3	23,734	0	0	4	86	24,735	0	0	4	89	25,217	0	0	4	91				
				BLC4	24,513	0	0	5	88	25,547	0	0	5	92	26,045	0	0	5	94				
				RCCO	23,948	1	0	4	86	24,958	1	0	4	90	25,445	1	0	4	92				
				LCCO	23,948	1	0	4	86	24,958	1	0	4	90	25,445	1	0	4	92				
				AFR	34,819	3	0	4	126	36,288	3	0	4	131	36,996	3	0	4	134				

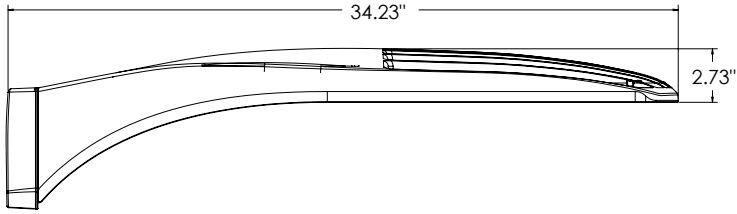
Performance Data

Lumen Output

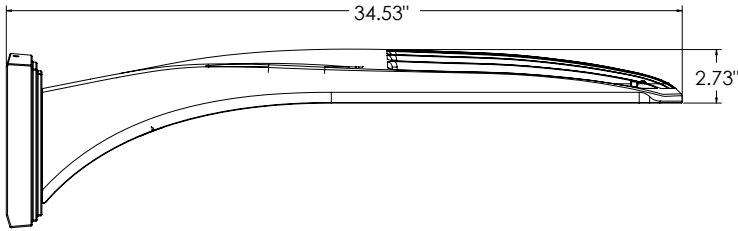
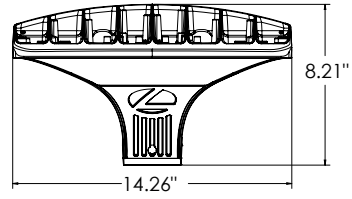
Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

Rotated Optics																			
Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K					40K					50K				
					(3000K, 70 CRI)					(4000K, 70 CRI)					(5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P10	101W	60	530	T1S	15,164	3	0	3	150	15,803	3	0	3	156	16,112	3	0	3	159
				T2M	14,047	4	0	4	139	14,640	4	0	4	145	14,925	4	0	4	147
				T3M	14,208	4	0	4	140	14,807	4	0	4	146	15,096	4	0	4	149
				T3LG	12,693	3	0	3	125	13,229	3	0	3	131	13,487	3	0	3	133
				T4M	14,420	4	0	4	142	15,028	4	0	4	148	15,321	4	0	4	151
				T4LG	13,115	3	0	3	129	13,668	3	0	3	135	13,934	3	0	3	138
				TFTM	14,522	4	0	4	143	15,134	4	0	4	149	15,429	4	0	4	152
				T5M	14,836	4	0	2	146	15,462	4	0	2	153	15,763	4	0	2	156
				T5W	15,076	4	0	3	149	15,712	5	0	3	155	16,019	5	0	3	158
				T5LG	14,879	3	0	2	147	15,507	3	0	2	153	15,809	3	0	2	156
				BLC3	10,335	3	0	3	102	10,771	4	0	4	106	10,981	4	0	4	108
				BLC4	10,674	4	0	4	105	11,124	4	0	4	110	11,341	4	0	4	112
				RCCO	10,429	1	0	2	103	10,869	1	0	2	107	11,080	1	0	2	109
				LCCO	10,429	1	0	2	103	10,869	1	0	2	107	11,080	1	0	2	109
				AFR	15,164	3	0	3	150	15,803	3	0	3	156	16,112	3	0	3	159
P11	135W	60	700	T1S	19,437	4	0	4	144	20,257	4	0	4	150	20,651	4	0	4	153
				T2M	18,005	4	0	4	133	18,765	4	0	4	139	19,131	4	0	4	142
				T3M	18,211	4	0	4	135	18,980	4	0	4	141	19,350	4	0	4	143
				T3LG	16,270	3	0	3	121	16,957	3	0	3	126	17,287	4	0	4	128
				T4M	18,483	4	0	4	137	19,263	5	0	5	143	19,638	5	0	5	146
				T4LG	16,810	3	0	3	125	17,519	3	0	3	130	17,861	3	0	3	132
				TFTM	18,614	4	0	4	138	19,399	4	0	4	144	19,777	5	0	5	147
				T5M	19,017	5	0	3	141	19,819	5	0	3	147	20,205	5	0	3	150
				T5W	19,325	5	0	3	143	20,140	5	0	3	149	20,533	5	0	3	152
				T5LG	19,072	4	0	2	141	19,876	4	0	2	147	20,264	4	0	2	150
				BLC3	13,247	4	0	4	98	13,806	4	0	4	102	14,075	4	0	4	104
				BLC4	13,682	4	0	4	101	14,259	4	0	4	106	14,537	4	0	4	108
				RCCO	13,367	1	0	3	99	13,931	1	0	3	103	14,203	1	0	3	105
				LCCO	13,367	1	0	3	99	13,931	1	0	3	103	14,203	1	0	3	105
				AFR	19,437	4	0	4	144	20,257	4	0	4	150	20,651	4	0	4	153
P12	206W	60	1050	T1S	27,457	4	0	4	133	28,616	4	0	4	139	29,174	4	0	4	142
				T2M	25,436	5	0	5	124	26,509	5	0	5	129	27,025	5	0	5	131
				T3M	25,727	5	0	5	125	26,812	5	0	5	130	27,335	5	0	5	133
				T3LG	22,984	4	0	4	112	23,954	4	0	4	116	24,421	4	0	4	119
				T4M	26,110	5	0	5	127	27,212	5	0	5	132	27,742	5	0	5	135
				T4LG	23,747	4	0	4	115	24,749	4	0	4	120	25,231	4	0	4	123
				TFTM	26,295	5	0	5	128	27,404	5	0	5	133	27,938	5	0	5	136
				T5M	26,864	5	0	4	130	27,997	5	0	4	136	28,543	5	0	4	139
				T5W	27,299	5	0	4	133	28,451	5	0	4	138	29,006	5	0	4	141
				T5LG	26,942	4	0	2	131	28,078	4	0	2	136	28,626	4	0	2	139
				BLC3	18,714	4	0	4	91	19,504	4	0	4	95	19,884	4	0	4	97
				BLC4	19,327	5	0	5	94	20,143	5	0	5	98	20,535	5	0	5	100
				RCCO	18,883	1	0	4	92	19,680	1	0	4	96	20,064	1	0	4	97
				LCCO	18,883	1	0	4	92	19,680	1	0	4	96	20,064	1	0	4	97
				AFR	27,457	4	0	4	133	28,616	4	0	4	139	29,174	4	0	4	142
P13	276W	60	1400	T1S	34,436	5	0	5	125	35,889	5	0	5	130	36,588	5	0	5	133
				T2M	31,900	5	0	5	116	33,246	5	0	5	121	33,894	5	0	5	123
				T3M	32,265	5	0	5	117	33,626	5	0	5	122	34,282	5	0	5	124
				T3LG	28,826	4	0	4	105	30,042	4	0	4	109	30,628	4	0	4	111
				T4M	32,746	5	0	5	119	34,128	5	0	5	124	34,793	5	0	5	126
				T4LG	29,782	4	0	4	108	31,039	4	0	4	113	31,644	5	0	4	115
				TFTM	32,978	5	0	5	120	34,369	5	0	5	125	35,039	5	0	5	127
				T5M	33,692	5	0	4	122	35,113	5	0	4	127	35,797	5	0	4	130
				T5W	34,238	5	0	4	124	35,682	5	0	4	129	36,378	5	0	4	132
				T5LG	33,789	5	0	3	122	35,215	5	0	3	128	35,901	5	0	3	130
				BLC3	23,471	5	0	5	85	24,461	5	0	5	89	24,937	5	0	5	90
				BLC4	24,240	5	0	5	88	25,262	5	0	5	92	25,755	5	0	5	93
				RCCO	23,683	1	0	4	86	24,682	1	0	4	89	25,163	1	0	4	91
				LCCO	23,683	1	0	4	86	24,682	1	0	4	89	25,163	1	0	4	91
				AFR	34,436	5	0	5	125	35,889	5	0	5	130	36,588	5	0	5	133

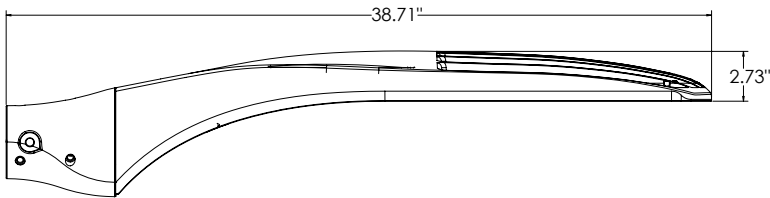
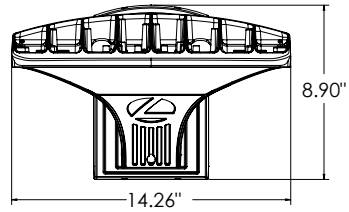
Dimensions



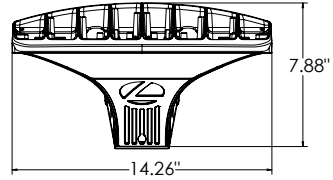
DSX1 with RPA, RPA5, SPA5, SPA8N mount
Weight: 36 lbs



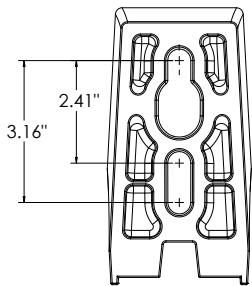
DSX1 with WBA mount
Weight: 38 lbs



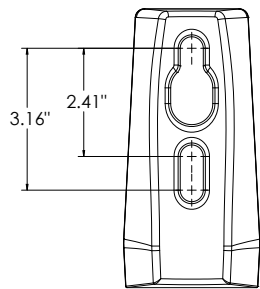
DSX1 with MA mount
Weight: 39 lbs



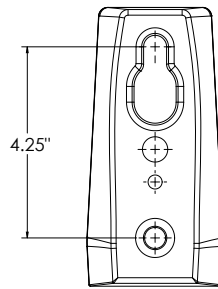
SPA (STANDARD ARM)



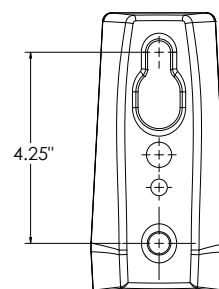
RPA



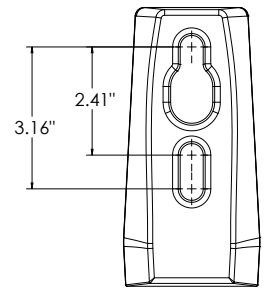
SPA5



RPA5

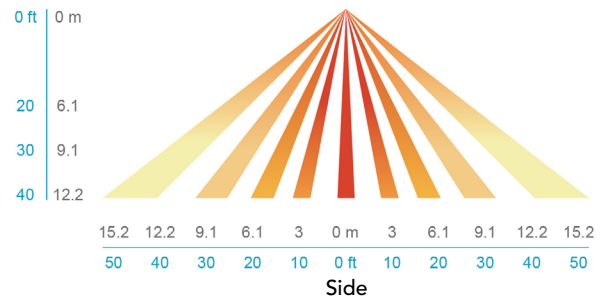
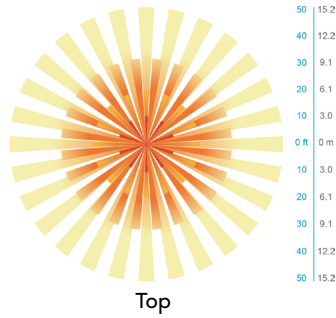


SPA8N



nLight Sensor Coverage Pattern

NLTAIR2 PIRHN



FEATURES & SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing driver compartment is completely sealed against moisture and environmental contaminants (IP66). Vibration rated per ANSI C136.31 for 3G for SPA and MA. 1.5G for mountings RPA, RPA5, SPA5 and SPA8N. Low EPA (0.69 ft²) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

Coastal Construction (CCE)

Optional corrosion resistant construction is engineered with added corrosion protection in materials and/or pre-treatment of base material under super durable paint. Provides additional corrosion protection for applications near coastal areas. Finish is salt spray tested to over 5,000 hours per ASTM B117 with scribe rating of 10. Additional lead-times may apply.

OPTICS

Precision-molded proprietary silicone lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. 80CRI configurations are also available. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L81/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensor with on-board photocells feature field-adjustable programming and are suitable for mounting heights up to 40 feet. Control option BL features a bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output.

nLIGHT AIR CONTROLS

The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaires can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclipse. Additional information about nLight Air can be found here.

INSTALLATION

Integral mounting arm allows for fast mounting using Lithonia standard #8 drilling and accommodates pole drilling's from 2.41 to 3.12" on center. The standard "SPA" option for square poles and the "RPA" option for round poles use the #8 drilling. For #5 pole drillings, use SPA5 or RPA5. Additional mountings are available including a wall bracket (WBA) and mast arm (MA) option that allows luminaire attachment to a 2 3/8" horizontal mast arm.

LISTINGS

UL listed to meet U.S. and Canadian standards. UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP66 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

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.

Cylinders

Wall Mounted • Wet Location Listed PROGRESS LED



Description:

Sleek, 3" LED cylindrical wall lantern with up/downlight in elegant Antique Bronze finish. Die-cast aluminum wall brackets and heavy-duty aluminum framing. Fade and chip-resistant. UL listed for wet locations. Can be used indoor or outdoor.

Specifications:

- Clear glass lens
- 3" LED wall mount up/downlight cylinder
- This sleek, contemporary cylinder is ideal for indoor or outdoor applications
- An Antique Bronze finish complements a variety of exteriors
- Warm white, 3000K, color temperature, 90 CRI
- 1484 lumens, 62 lumens per watt (delivered)
- Die Cast Aluminum construction with durable powder coated finish
- Dimmable to 10% brightness with many Forward Phase (Triac) and Reverse Phase (ELV) dimmers
- Energy Star Qualified
- Meets California T24 JA8-2016.
- Dimmable to 10% brightness (See Dimming Notes)
- Back plate covers a standard 4" recessed outlet box: 4.378 in W., 4.378 in ht., 0.86 in depth
- Mounting strap for outlet box included
- 6 in of wire supplied

Performance:

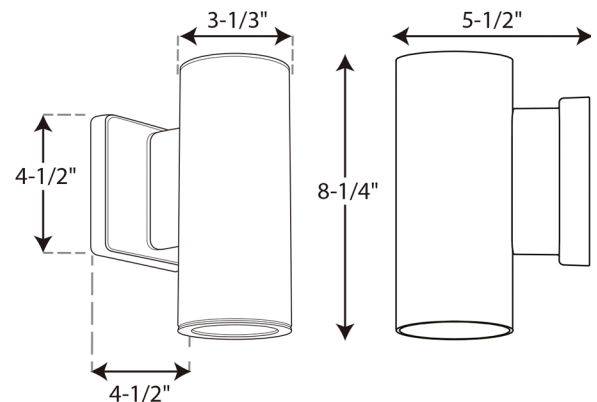
Number of Modules	2
Input Power	12 W
Input Voltage	120 V
Input Frequency	60 Hz
Lumens/LPW (Delivered)	1,484/62 (LM-79)
CCT	3000 K
CRI	90 CRI
Life (hours)	50000 (L70/TM-21)
EMI/RFI	FCC Title 47, Part 15, Class B
Max. Operating Temp	40 °C
Warranty	5-year Limited Warranty
Labels	CSA Wet Location Listed
	ENERGY STAR® qualified
	Meets California Title 24 JA8-2016

P563001-020-30K



Dimensions:

Width: 4-1/2 in
 Height: 8-1/4 in
 Depth: 5-1/2 in
 H/CTR: 5 in

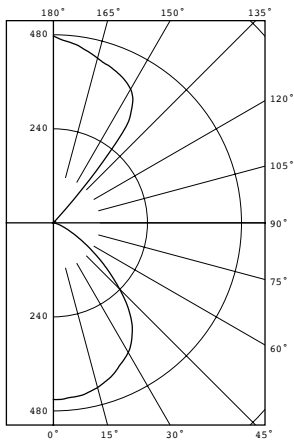


Photometrics:

P563001-020-30K

ELECTRICAL DATA	P563001-020-30K
Input Voltage	120 V
Input Frequency	60 Hz
Input Current	0.202 A
THD	<20%
EMI/RFI	FCC Title 47, Part 15, Class B
Operating Temperature	-10 °C
Dimming	Yes*
Over-voltage, over-current, short-circuit protected	
*See Dimming Notes for more information	

P563001-020-30K
 LED Light Engine: 3000 K 90 CRI
 System Wattage: 24
 Fixture delivered lumens: 1484
 Fixture Efficacy: 62
 Spacing Criteria: 1.25



CANDELA DISTRIBUTION

DEG	CANDELA	LUMENS
0	451	
5	448	43
15	435	123
25	401	185
35	350	218
45	239	183
55	113	103
65	39	40
75	10	12
85	1	1
90	0	
95	0	0
105	1	1
115	1	1
125	4	3
135	6	16
145	345	198
155	412	190
165	435	123
175	463	44
180	477	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0-30	351	23.6
0-40	568	38.3
0-60	855	57.6
0-90	908	61.2
90-120	2	0.1
90-130	6	0.4
90-150	220	14.8
90-180	576	38.8
0-180	1484	100.0

Test 17.02586 Test Date 10/10/17



P563001-020-30K

Dimming Notes:

P563001-020-30K is designed to be compatible with many Triac/Forward Phase ELV/Reverse Phase controls.

The following is a partial list of known compatible dimmer controls.

Dimming Controls:

Lutron_Diva DVELV-300P

Lutron_Caseta Wireless

Leviton_SureSlide 6672

Lutron_Ariadni AYCL-153P

Lutron_Toggler TGCL-153PH-WH

Dimming capabilities will vary depending on the dimmer control, load, and circuit installation.

Always refer to dimmer manufacturer instructions or a controls specialist for specific requirements.

Dimmer control brand names where identified above are trade names or registered trademarks of each respective company.



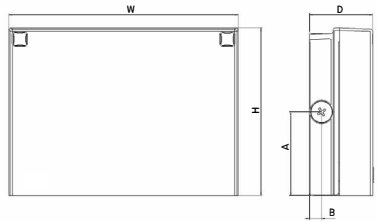
WPX LED Wall Packs



Catalog Number
Notes
Type

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

Specifications



Front View

Side View

Luminaire	Height (H)	Width (W)	Depth (D)	Side Conduit Location		Weight
				A	B	
WPX1	8.1" (20.6 cm)	11.1" (28.3 cm)	3.2" (8.1 cm)	4.0" (10.3 cm)	0.6" (1.6 cm)	6.1 lbs (2.8kg)
WPX2	9.1" (23.1 cm)	12.3" (31.1 cm)	4.1" (10.5 cm)	4.5" (11.5 cm)	0.7" (1.7 cm)	8.2 lbs (3.7kg)
WPX3	9.5" (24.1 cm)	13.0" (33.0 cm)	5.5" (13.7 cm)	4.7" (12.0 cm)	0.7" (1.7 cm)	11.0 lbs (5.0kg)

Introduction

The WPX LED wall packs are energy-efficient, cost-effective, and aesthetically appealing solutions for both HID wall pack replacement and new construction opportunities. Available in three sizes, the WPX family delivers 1,550 to 9,200 lumens with a wide, uniform distribution.

The WPX full cut-off solutions fully cover the footprint of the HID glass wall packs that they replace, providing a neat installation and an upgraded appearance. Reliable IP66 construction and excellent LED lumen maintenance ensure a long service life. Photocell and emergency egress battery options make WPX ideal for every wall mounted lighting application.

Ordering Information

EXAMPLE: WPX2 LED 40K MVOLT DDBXD

Series	Color Temperature	Voltage	Options	Finish
WPX1 LED P1	30K 3000K	MVOLT 120V - 277V	(blank) None	DDBXD Dark bronze
WPX1 LED P2	40K 4000K	347 347V ³	E4WH Emergency battery backup, CEC compliant (4W, 0°C min) ²	DWHXD White
WPX2 LED	50K 5000K		E14WC Emergency battery backup, CEC compliant (14W, -20°C min) ²	DBLXD Black
WPX3 LED			PE Photocell ³	Note : For other options, consult factory.

Note: The lumen output and input power shown in the ordering tree are average representations of all configuration options. Specific values are available on request.

NOTES

- All WPX wall packs come with 6kV surge protection standard, except WPX1 LED P1 package which comes with 2.5kV surge protection standard. Add SPD6KV option to get WPX1 LED P1 with 6kV surge protection. Sample nomenclature: WPX1 LED P1 40K MVOLT SPD6KV DDBXD
- Battery pack options only available on WPX1 and WPX2.
- Battery pack options not available with 347V and PE options.

FEATURES & SPECIFICATIONS

INTENDED USE

The WPX LED wall packs are designed to provide a cost-effective, energy-efficient solution for the one-for-one replacement of existing HID wall packs. The WPX1, WPX2 and WPX3 are ideal for replacing up to 150W, 250W, and 400W HID luminaires respectively. WPX luminaires deliver a uniform, wide distribution. WPX is rated for -40°C to 40°C.

CONSTRUCTION

WPX feature a die-cast aluminum main body with optimal thermal management that both enhances LED efficacy and extends component life. The luminaires are IP66 rated, and sealed against moisture or environmental contaminants.

ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs and LED lumen maintenance of L90/100,000 hours. Color temperature (CCT) options of 3000K, 4000K and 5000K with minimum CRI of 70. Electronic drivers ensure system power factor >90% and THD <20%. All luminaires have 6kV surge protection (Note: WPX1 LED P1 package comes with a standard surge protection rating of 2.5kV. It can be ordered with an optional 6kV surge protection). All photocell (PE) operate on MVOLT (120V - 277V) input.

Note: The standard WPX LED wall pack luminaires come with field-adjustable drive current feature. This feature allows tuning the output current of the LED drivers to adjust the lumen output (to dim the luminaire).

INSTALLATION

WPX can be mounted directly over a standard electrical junction box. Three 1/2 inch conduit ports on three sides allow for surface conduit wiring. A port on the back surface allows poke-through conduit wiring on surfaces that don't have an electrical junction box. Wiring can be made in the integral wiring compartment in all cases. WPX is only recommended for installations with LEDs facing downwards.

LISTINGS

CSA Certified to meet U.S. and Canadian standards. Suitable for wet locations. IP66 Rated. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

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/CustomerResources/Terms_and_conditions.aspx.

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.



Performance Data

Electrical Load

Luminaire	Input Power (W)	120V	208V	240V	277V	347V
WPX1 LED P1	11W	0.09	0.05	0.05	0.04	0.03
WPX1 LED P2	24W	0.20	0.12	0.10	0.09	0.07
WPX2	47W	0.39	0.23	0.20	0.17	0.14
WPX3	69W	0.58	0.33	0.29	0.25	0.20

Projected LED Lumen Maintenance

Data references the extrapolated performance projections in a 25°C ambient, based on 6,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	50,000	75,000	100,000
Lumen Maintenance Factor	>0.94	>0.92	>0.90

Lumen Output

Luminaire	Color Temperature	Lumen Output
WPX1 LED P1	3000K	1,537
	4000K	1,568
	5000K	1,602
WPX1 LED P2	3000K	2,748
	4000K	2,912
	5000K	2,954
WPX2	3000K	5,719
	4000K	5,896
	5000K	6,201
WPX3	3000K	8,984
	4000K	9,269
	5000K	9,393

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

Ambient	Ambient	Lumen Multiplier
0°C	32°F	1.05
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

HID Replacement Guide

Luminaire	Equivalent HID Lamp	WPX Input Power
WPX1 LED P1	100W	11W
WPX1 LED P2	150W	24W
WPX2	250W	47W
WPX3	400W	69W

Emergency Egress Battery Packs

The emergency battery backup is integral to the luminaire — no external housing or back box is required. The emergency battery will power the luminaire for a minimum duration of 90 minutes and deliver minimum initial output of 550 lumens. Both battery pack options are CEC compliant.

Battery Type	Minimum Temperature Rating	Power (Watts)	Controls Option	Ordering Example
Standard	0°C	4W	E4WH	WPX2 LED 40K MVOLT E4WH DDBXD
Cold Weather	-20°C	14W	E14WC	WPX2 LED 40K MVOLT E14WC DDBXD

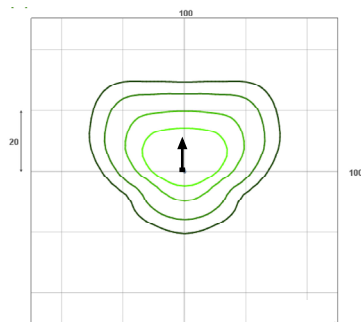
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting [WPX LED](#) homepage. Tested in accordance with IESNA LM-79 and LM-80 standards

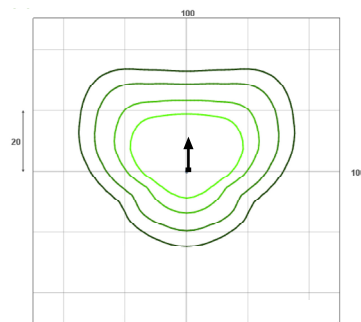
LEGEND

	0.1 fc
	0.2 fc
	0.5 fc
	1.0 fc

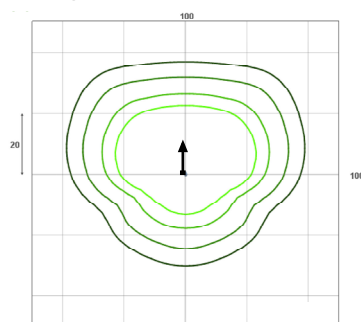
WPX1 LED P1



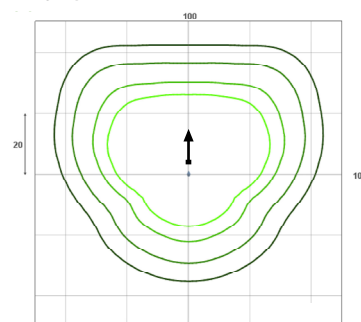
WPX1 LED P2



WPX2 LED

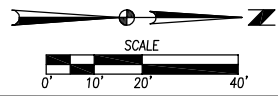
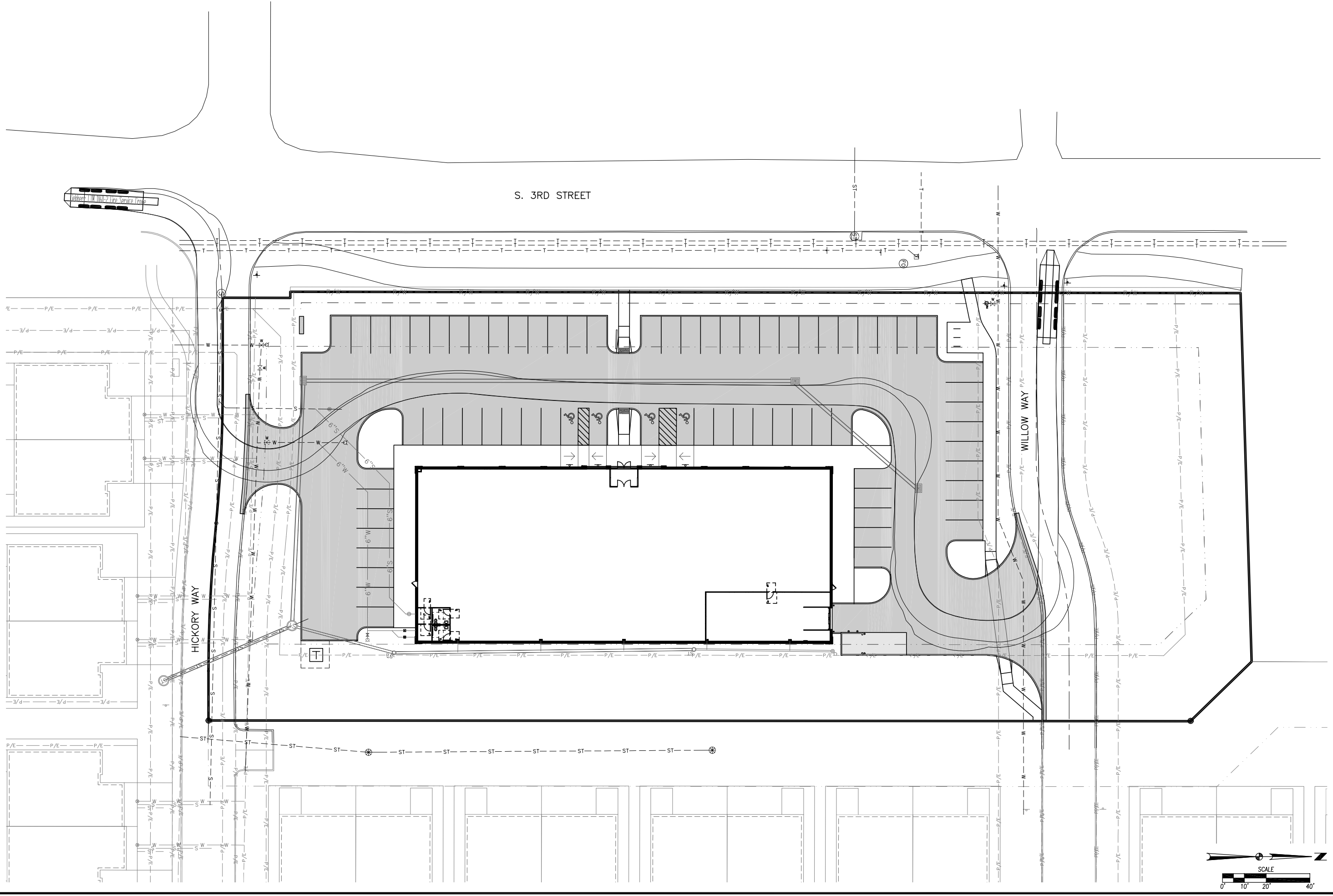


WPX3 LED



Mounting Height = 12 Feet.

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PLOT DATE: 5/22/2023 2:26 PM
DRAWN BY: GAGE HEROLD
CHECKED BY: GAGE HEROLD
ENCL:



ACE HARDWARE

FIRE TRUCK TURNING MOVEMENTS

POLK CITY, IOWA



CIVIL DESIGN ADVANTAGE

ENGINEER: EKO

ENGINEER: GH

4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
PHONE: (515) 369-4400

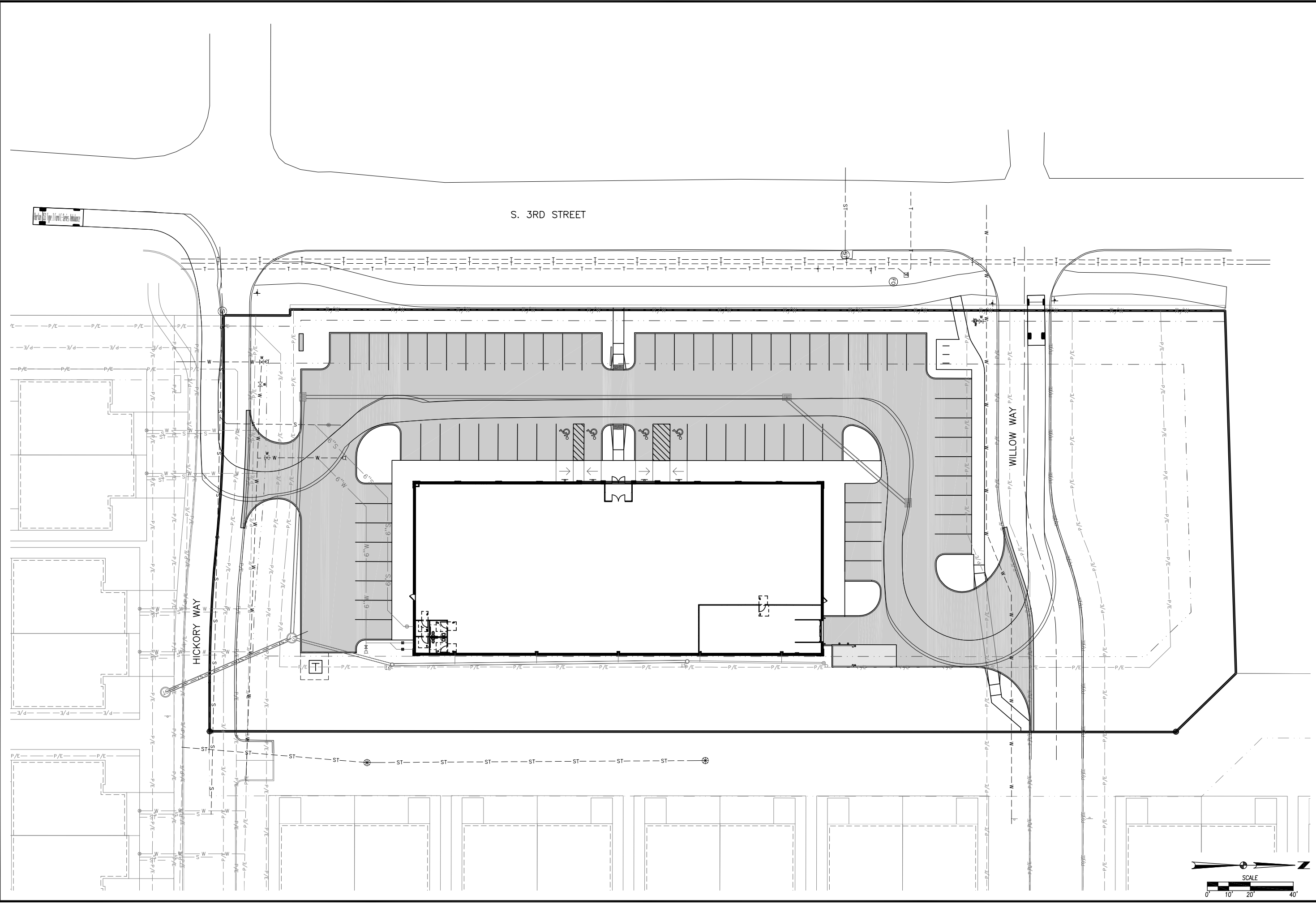
REVISIONS

DATE

PREPARED

05/02/2023

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 PLOTTED BY: GAGE HEROLD
 DATE: 5/22/2023 2:27 PM
 ENC:



<p>ACE HARDWARE AMBULANCE TURNING MOVEMENTS</p>		<p>4121 NW URBANDALE DRIVE URBANDALE, IA 50322 PHONE: (515) 369-4400</p>	<p>REVISIONS</p>	<p>DATE</p>
<p>POLK CITY, IOWA</p>		<p>CIVIL DESIGN ADVANTAGE</p>	<p>ENGINEER: EKO</p>	<p>PREPARED</p>
<p>2212.847</p>		<p>ENGINEER: GH</p>	<p>05/02/2023</p>	<p>05/02/2023</p>

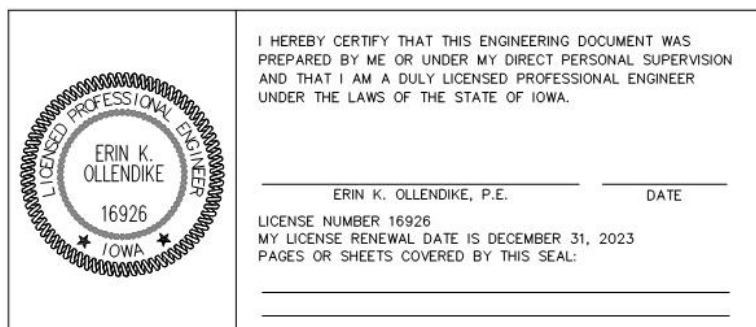
May 3, 2023

Chelsea Huisman
 City of Polk City
 112 3rd Street
 Polk City, Iowa 50226

RE: Ace Hardware Site Plan
 Traffic Memo

The Ace Hardware project consists of the construction of a 15,380 square foot single story building to be utilized as a hardware store. The building will be constructed in one phase and sits on approximately 2.11 acres. The facility will have two entrances off Hickory Way and Willow Way which are private roadways owned and maintained by an association. These private drives funnel out to S. 3rd Street which is a major collector roadway through Polk City. Using the tables in the ITE Trip Generation book, 11th Edition, this site will generate the updated estimated AM peak, PM peak, and average daily traffic shown in the table below.

Land Use	ITE Code	Quantity	Unit	Average Daily Trips	AM Peak Trips	PM Peak Trips
Hardware/Paint Store	816	15.3	kSF	124	15	46
Total				124	15	46



Ace Hardware - Polk City
 Traffic Memo
 Trip Generation
 5/3/2023

From ITE 11th Edition:

Hardware/Paint Store

Total


ITE Code	Area, ksf	# of Units	Average Daily		AM peak		PM peak	
			Rate	Trips	Rate	Trips	Rate	Trips
816	15.3		8.07	124	0.92	15	2.98	46
Total			124		15		46	

ACE HARDWARE

STORM WATER MANAGEMENT PLAN POLK CITY, IOWA

CDA PROJECT NO. 2212.847



 <p>ERIN K. OLLENDIKE LICENSE NUMBER 16926 IOWA</p>	<p>I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.</p> <p>PRELIMINARY NOT FOR CONSTRUCTION</p> <p>ERIN K. OLLENDIKE, P.E. _____ DATE _____ LICENSE NUMBER 16926 MY LICENSE RENEWAL DATE IS DECEMBER 31, 2023 PAGES OR SHEETS COVERED BY THIS SEAL: ALL SHEETS _____</p>
--	--

CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE,
URBANDALE, IA 50322
(515) 369-4400

PREPARED BY: CIVIL DESIGN ADVANTAGE, LLC
PREPARED ON: APRIL 19, 2023
REVISED ON: MAY 02, 2023



PROJECT: Ace Hardware JOB NO. 2212.847 Page of Pages
 SUBJECT: Stormwater Calculations DATE: 05/03/23 COMP. BY: GH OK'D BY:

Project Description:

Existing Site Conditions

The proposed site is located at 825 S. 3rd Street and contains 2.11 acres. The site was mass graded with Crossroads At The Lakes Plat 1 and is slated for commercial uses. Refer to the Storm Water Management Plan titled "Crossroads At The Lakes Plat 1" detailed analysis of the existing site conditions.

Proposed Site Conditions

Proposed site improvements include a commercial building, parking, and associated utilities. Stormwater for the entire property will be conveyed via overland flowage and storm sewer to an existing detention basin installed with Crossroads At The Lakes Plat 1. Refer to the Storm Water Management Plan titled "Crossroads At The Lakes Plat 1" detailed analysis of the post-developed site conditions of the surrounding area.

Storm Water Analysis:

Storm Sewer Analysis

Storm sewer pipes were designed to convey the 100-year post-developed storm event with overflow paths defined to provide routing for larger storm events. The Rational Method was used to determine the flow rate for each drainage area and the Manning's equation was used to size the pipes.

Detention Analysis

Refer to the Storm Water Management Plan titled "Crossroads At The Lakes Plat 1" detailed analysis of the detention calculations.

Detention Summary

DB 2 (Ex. Area= 6.62 AC - Proposed Area = 6.82 AC) (Refer to Appendix for Additional Calculations)

Rainfall Return Frequency (Yrs)	Existing Runoff, cfs	(Allowable Release), cfs *	Post-Developed Runoff Release, cfs	Plat 1 Curve Number	Actual Curve Number
5	9.00	46.82	45.14	89	87
100	27.84	105.65	79.09		

* Includes routing of all offsite areas associated with DB 2.

Composite Curve Number (CN) Calculations - C Soils

Drainage Area ID	Open Space CN	Open Space Area, SF	Impervious CN	Impervious Area, SF	Total Area, SF	Total Area, Acres	Composite CN
DB 2	74	135435	98	161645	297080	6.82	87

*Calculations show that the calculated composite curve number is below the assumed curve shown in the original report. Therefore, the detention provided within the basin is adequate for this site plan.

Assumptions:

- * See attached Hydrologic Soil Map in the Appendix. For this analysis, Hydrologic Soil Group C will be used.
- * Assumed a 10 minute time of concentration for storm sewer design.
- * The runoff coefficients and curve numbers used to determine flow rates for the site are listed in the following tables.

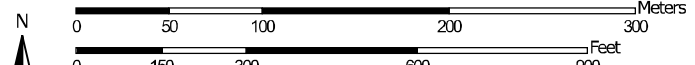
Land Use or Surface Characteristics	C Soils
	<u>100-yr</u>
Open Space - Good Condition	0.55
Impervious	0.98

Cover Type	C Soils
Open Space - Good Condition	74
Impervious	98

Hydrologic Soil Group—Polk County, Iowa



Map Scale: 1:4,060 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils

Soil Rating Polygons

	A
	A/D
	B
	B/D
	C
	C/D
	D
	Not rated or not available

Soil Rating Lines

	A
	A/D
	B
	B/D
	C
	C/D
	D
	Not rated or not available

Water Features

	Streams and Canals
--	--------------------

Transportation

	Rails
	Interstate Highways
	US Routes
	Major Roads
	Local Roads

Background

	Aerial Photography
--	--------------------

Soil Rating Points

	A
	A/D
	B
	B/D

C

	C
	C/D
	D
	Not rated or not available

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Iowa
 Survey Area Data: Version 18; Sep 22, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Polk County, Iowa (IA153)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
108	Wadena loam, 0 to 2 percent slopes	B	0.4	0.8%
108B	Wadena loam, 2 to 6 percent slopes	B	0.4	0.8%
259	Biscay clay loam, 0 to 2 percent slopes	C/D	6.1	11.6%
L107	Webster clay loam, Bemis moraine, 0 to 2 percent slopes	C/D	1.5	2.8%
L168F	Hayden loam, Bemis moraine, 22 to 40 percent slopes	C	7.5	14.0%
L236B	Lester loam, Bemis moraine, 2 to 6 percent slopes	C	26.4	49.6%
L236C2	Lester loam, Bemis moraine, 6 to 10 percent slopes, moderately eroded	C	10.8	20.4%
Totals for Area of Interest			53.1	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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DATE: 5/2/2023 11:31 AM
COMMENT:
ENCL:

SOUTH 3RD STREET

HICKORY WAY

WILLOW WAY

DA 2
0.35 AC

DA 3
0.19 AC

DA 4
0.28 AC

DA 6
0.27 AC

DA 7
0.14 AC

DA 5
0.05 AC

ST-2

ST-3

ST-4

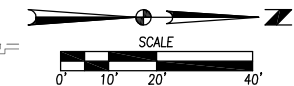
ST-1

ST-5

ST-6

ST-7

ST-EX1



ACE HARDWARE

STORM SEWER MAP

2212.847



POLK CITY, IOWA

ENGINEER: EKO

ENGINEER: GH

4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
PHONE: (515) 369-4400

REVISIONS

DATE

FIRST SUBMITTAL

04/19/2023



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Dr Urbandale, Iowa 50322

PROJECT: Ace Hardware JOB NO. 2212.847 Page of Pages

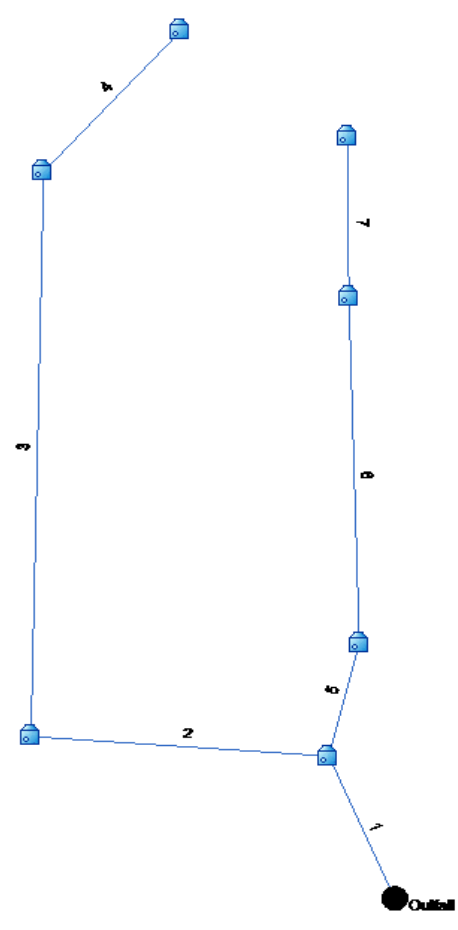
SUBJECT: Stormwater Calculations DATE: 05/02/23 COMP. BY: GH OK'D BY:

Hydraulic Grade Line

Plan Pipes Inlets Results

Summary DOT Inlet FL-DOT Calc Cost > MyReport ...

Line No.	Line ID	Flow Rate (cfs)	Line Size (Rise x Span) (in)	Line Type	Line Length (ft)	Invert Elev. Down (ft)	Invert Elev. Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor Loss (ft)	HGL Junct (ft)	Dn Str Line No.
1	EX1	10.62	15	Cir	61.001	928.86	930.08	2.00	930.06	931.64*	1.06	932.70	Outfall
2	2	6.91	15	Cir	109.000	930.13	931.44	1.20	932.70	933.94*	0.49	934.44	1
3	3	3.93	15	Cir	223.000	931.49	932.38	0.40	934.44	935.26*	0.11	935.37	2
4	4	2.28	15	Cir	75.000	932.43	932.66	0.31	935.37	935.47*	0.05	935.52	3
5	5	3.71	12	Cir	46.000	930.18	930.64	1.00	932.70	933.12*	0.11	933.23	1
6	6	3.45	12	Cir	137.000	930.74	932.11	1.00	933.23	934.32*	0.04	934.37	5
7	7	1.26	8	Cir	63.001	932.21	932.84	1.00	934.37	934.95*	0.20	935.16	6





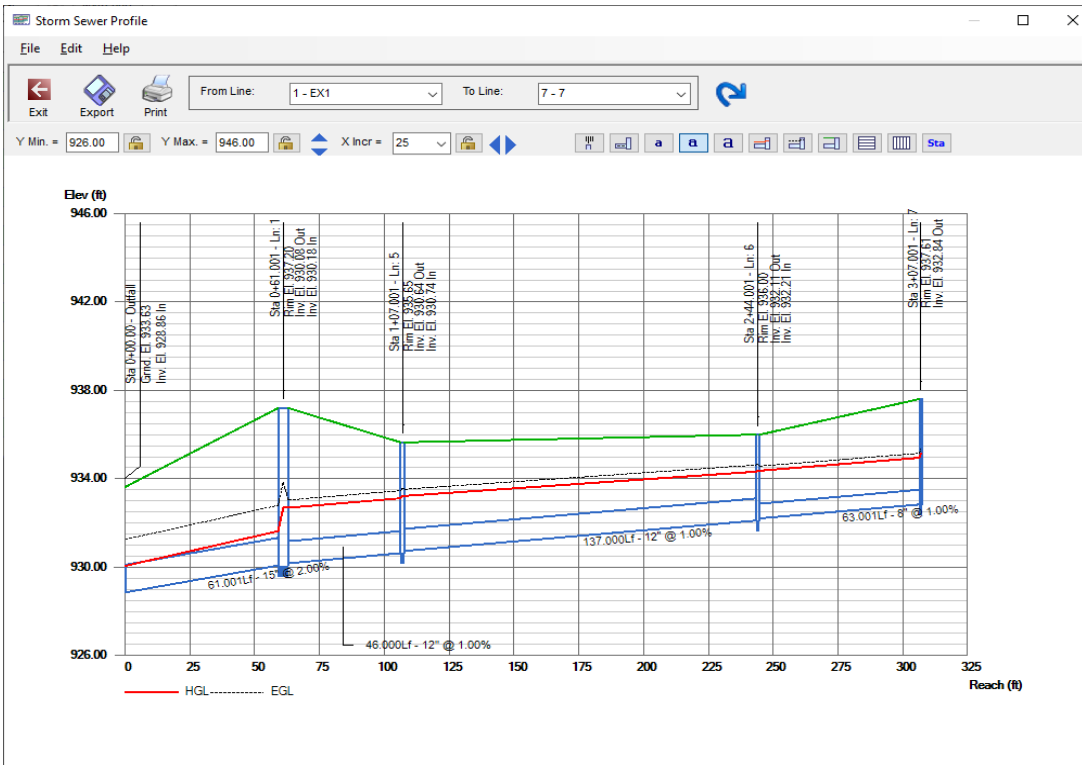
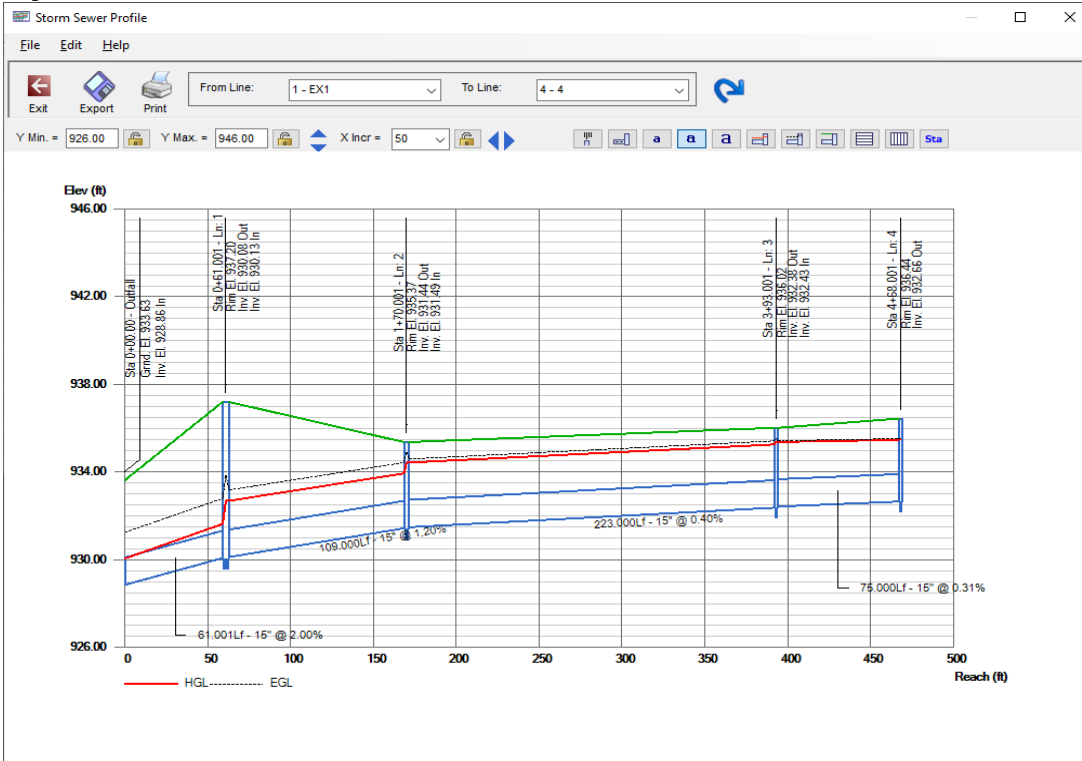
CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Dr Urbandale, Iowa 50322

PROJECT: Ace Hardware JOB NO. 2212.847 Page of Pages

SUBJECT: Stormwater Calculations DATE: 05/02/23 COMP. BY: GH OK'D BY:

Hydraulic Grade Line





PROJECT: Ace Hardware JOB NO. 2212.847 Page of Pages
SUBJECT: 100-Year Elevation DATE: 05/02/23 DESIGNED: GH CHECKED:

INTAKE CAPACITY CALCULATIONS

EQUATIONS

DA 2 Runoff

$Q = C * I * A$	
C =	0.97
I =	9.15
A =	0.33
Q =	2.93

1. ORIFICE: $Q = 0.67 A_g (2gd)^{0.5}$ (SUDAS Equation 2C-3.12)

WHERE - Q = flow, cfs
 A_g = Clear opening of the grate, ft²
g = gravitational constant (32.16 ft/s²)
d = average depth across the grate, ft

2. WEIR: $Q = 3.0 P d^{1.5}$ (SUDAS Equation 2C-3.11)

WHERE - Q = flow, cfs
P = Perimeter of the grate disregarding the side against the curb, ft
d = average depth across the grate, ft

CALCULATIONS

1. Solve for required head given flow and open area for casting using Orifice Equation:

LOCATION: **ST - 2**

INPUT: $Q_{100} = 2.93$ cfs (From Rational Equation)
 $A_g = 1.95$ sq. ft. (Open Area of Casting)

Required Depth at Grate: $d = 0.078$ ft.

2. Solve for required head given flow and open perimeter of casting using Weir Equation:

LOCATION: **ST - 2**

INPUT: $Q_{100} = 2.93$ cfs (From Rational Equation)
 $P = 5.86$ ft. (Open Perimeter of Casting)

Required Depth at Grate: $d = 0.303$ ft.

GOVERNING EQUATION: **Weir Equation**
Required Depth = 0.303 ft = 4 inches

The 100-year elevation is 934.87 + 0.30 = 935.17
The 100-year elevation is less than the overflow elevation of 935.19; therefore, ponding depth ok.



PROJECT: Ace Hardware JOB NO. 2212.847 Page of Pages
SUBJECT: 100-Year Elevation DATE: 05/02/23 DESIGNED: GH CHECKED:

INTAKE CAPACITY CALCULATIONS

EQUATIONS

DA 3 Runoff

$Q = C * I * A$	
C =	0.97
I =	9.15
A =	0.19
Q =	1.69

1. ORIFICE: $Q = 0.67 A_g (2gd)^{0.5}$ (SUDAS Equation 2C-3.12)

WHERE - Q = flow, cfs
 A_g = Clear opening of the grate, ft²
g = gravitational constant (32.16 ft/s²)
d = average depth across the grate, ft

2. WEIR: $Q = 3.0 P d^{1.5}$ (SUDAS Equation 2C-3.11)

WHERE - Q = flow, cfs
P = Perimeter of the grate disregarding the side against the curb, ft
d = average depth across the grate, ft

CALCULATIONS

1. Solve for required head given flow and open area for casting using Orifice Equation:

LOCATION: **ST - 3**

INPUT: $Q_{100} = 1.69$ cfs (From Rational Equation)
 $A_g = 2.62$ sq. ft. (Open Area of Casting)

Required Depth at Grate: $d = 0.014$ ft.

2. Solve for required head given flow and open perimeter of casting using Weir Equation:

LOCATION: **ST - 3**

INPUT: $Q_{100} = 1.69$ cfs (From Rational Equation)
 $P = 9.91$ ft. (Open Perimeter of Casting)

Required Depth at Grate: $d = 0.148$ ft.

GOVERNING EQUATION: **Weir Equation**
Required Depth = 0.148 ft = 2 inches

The 100-year elevation is 936.02 + 0.15 = 936.17
The 100-year elevation is less than the overflow elevation of 936.80; therefore, ponding depth ok.



PROJECT: Ace Hardware JOB NO. 2212.847 Page of Pages
SUBJECT: 100-Year Elevation DATE: 05/02/23 DESIGNED: GH CHECKED:

INTAKE CAPACITY CALCULATIONS

EQUATIONS

DA 4 Runoff

$Q = C * I * A$	
C =	0.89
I =	9.15
A =	0.29
Q =	2.36

1. ORIFICE: $Q = 0.67 A_g (2gd)^{0.5}$ (SUDAS Equation 2C-3.12)

WHERE - Q = flow, cfs
A_g = Clear opening of the grate, ft²
g = gravitational constant (32.16 ft/s²)
d = average depth across the grate, ft

2. WEIR: $Q = 3.0 P d^{1.5}$ (SUDAS Equation 2C-3.11)

WHERE - Q = flow, cfs
P = Perimeter of the grate disregarding the side against the curb, ft
d = average depth across the grate, ft

CALCULATIONS

1. Solve for required head given flow and open area for casting using Orifice Equation:

LOCATION: **ST - 4**

INPUT: Q₁₀₀ = **2.36** cfs (From Rational Equation)
A_g = **2.62** sq. ft. (Open Area of Casting)

Required Depth at Grate: d = 0.028 ft.

2. Solve for required head given flow and open perimeter of casting using Weir Equation:

LOCATION: **ST - 4**

INPUT: Q₁₀₀ = **2.36** cfs (From Rational Equation)
P = **9.91** ft. (Open Perimeter of Casting)

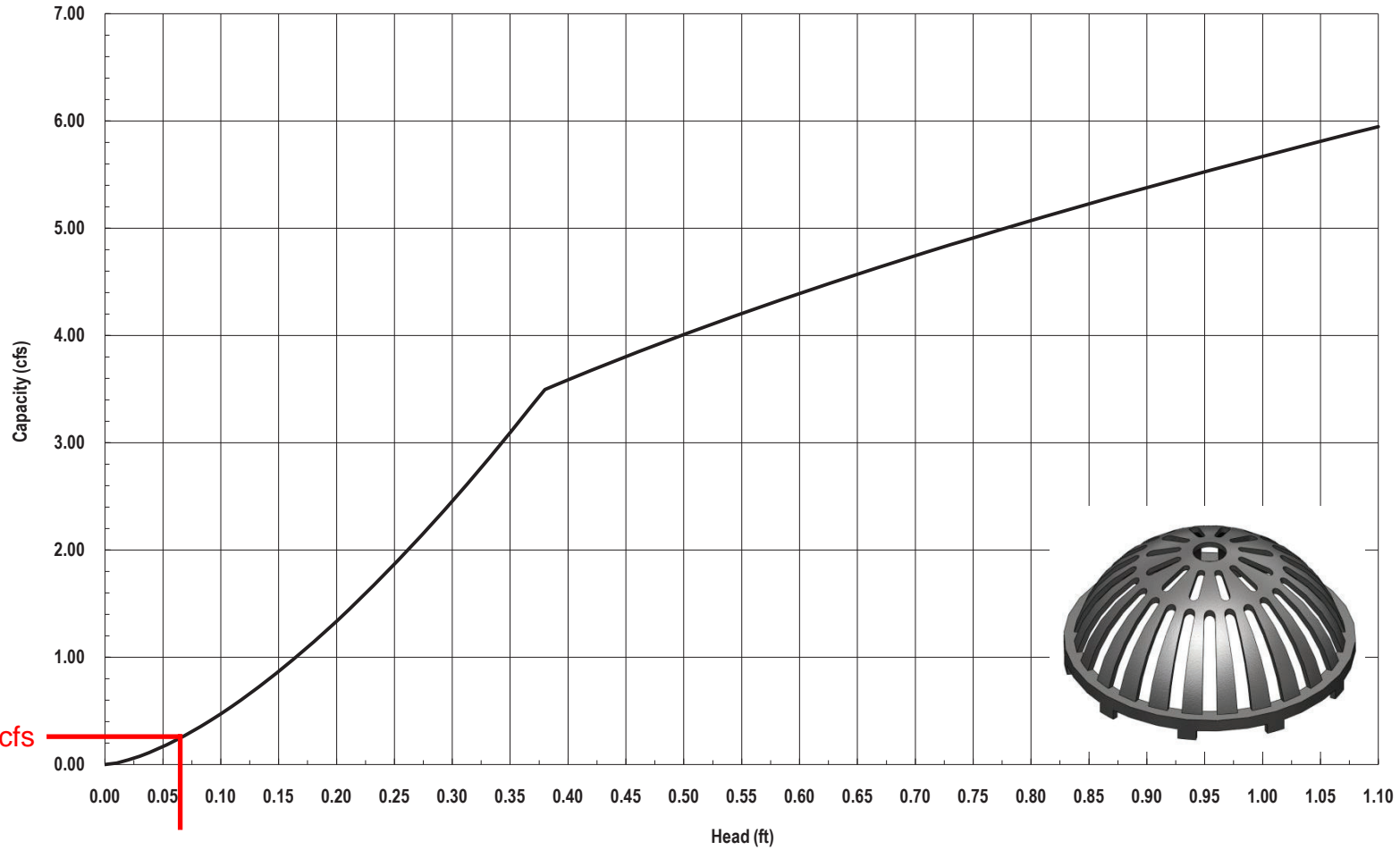
Required Depth at Grate: d = 0.185 ft.

GOVERNING EQUATION: **Weir Equation**
Required Depth = 0.185 ft = 2 inches

The 100-year elevation is 936.44 + 0.18 = 936.62
The 100-year elevation is less than the overflow elevation of 936.92; therefore, ponding depth ok.

ST-5

Nyloplast 18" Dome Grate Inlet Capacity Chart



Q100 = 0.25 cfs

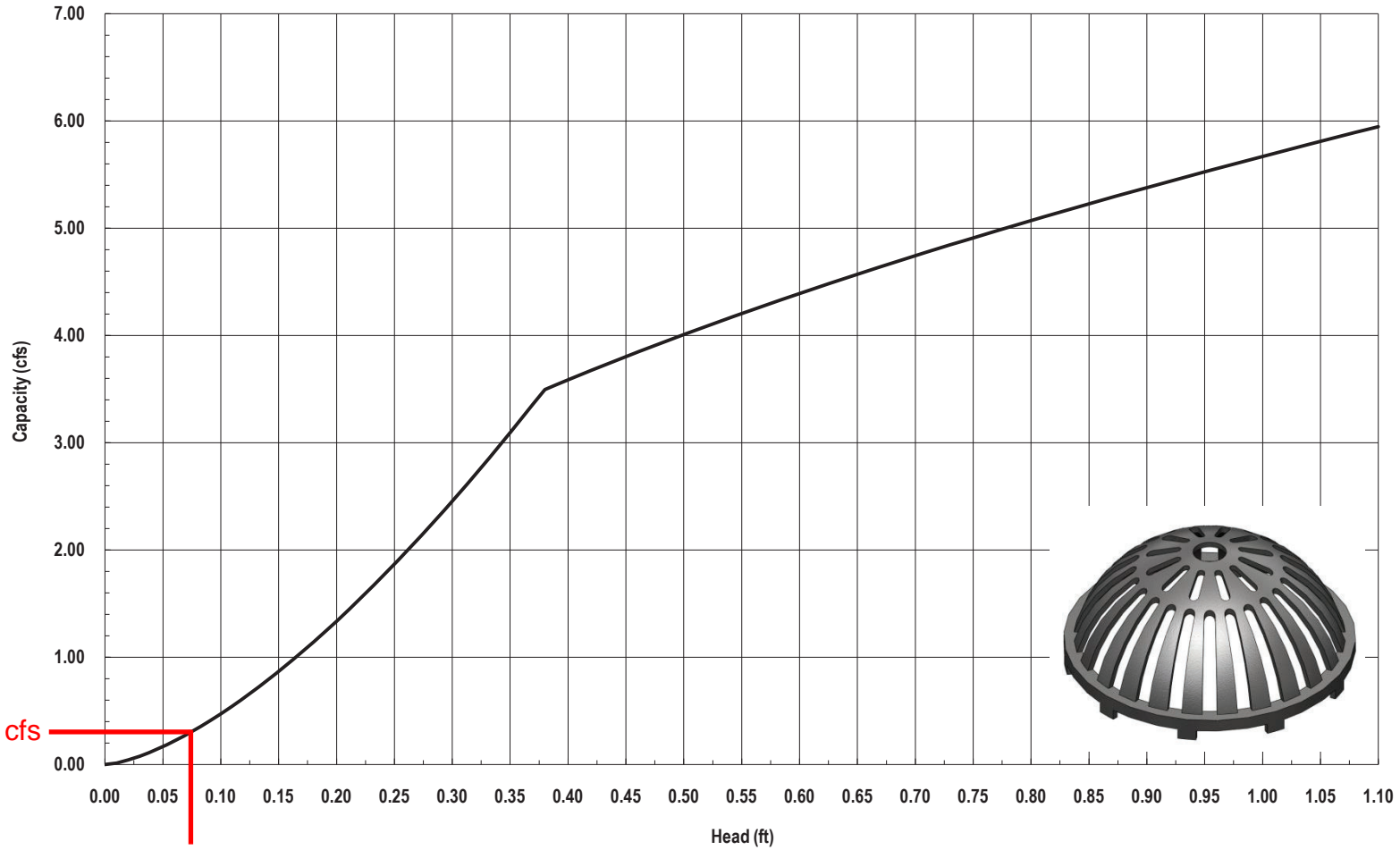
100-Year Elevation = 935.65 + 0.06 = 935.71



3130 Verona Avenue • Buford, GA 30518
(866) 888-8479 / (770) 932-2443 • Fax: (770) 932-2490
© Nyloplast Inlet Capacity Charts June 2012

ST-6

Nyloplast 18" Dome Grate Inlet Capacity Chart



Q100 = 0.30 cfs

100-Year Elevation = 936.00 + 0.08 = 936.08



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APPENDIX



CROSSROADS AT THE LAKES PLAT 1

STORM WATER MANAGEMENT PLAN POLK CITY, IOWA

CDA PROJECT NO. 1707.369

	<p>I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.</p> <p><i>Erin K. Ollendike</i> 10-10-17 _____ ERIN K. OLLENDIKE, P.E. DATE</p> <p>MY LICENSE RENEWAL DATE IS DECEMBER 31, 2017 PAGES OR SHEETS COVERED BY THIS SEAL: ALL SHEETS _____ _____</p>
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CIVIL DESIGN ADVANTAGE
3405 SE Crossroads Drive, Suite G
GRIMES, IOWA 50111
(515) 369-4400

PREPARED BY: CIVIL DESIGN ADVANTAGE, LLC
PREPARED ON: JULY 28, 2017
REVISED ON: AUGUST 15, 2017
REVISED ON: OCTOBER 10, 2017



PROJECT: Crossroads at the Lakes Plat 1 JOB NO. 1707.369 Page of Pages
SUBJECT: Stormwater Calculations DATE: 10/10/17 COMP. BY: JMM OK'D BY:

Project Description:

Existing Site Conditions

Crossroads at the Lakes Plat 1 is located directly east of the W Bridge Road and S 3rd Street Intersection in Polk City, Iowa. The site currently consists of woodland, open space and a single family home along the west side of the site. The property is slated for single family residential, townhomes and commercial uses. An existing high point bisects the site from the southeast corner of the property to the northwest corner of the property forcing storm water associated with DB 1 EX to discharge to the north and east and storm water associated with DB 2 EX to discharge to the south and west. Refer to the attached time of concentration, existing drainage map and Hydraflow Hydrographs analysis for detailed analysis of the existing site conditions.

Proposed Site Conditions

Proposed site improvements consist of 1 commercial lot to be developed at a future date, 38 townhome lots, roadways and associated utilities. Proposed grades generally follow existing drainage patterns throughout the overall site. Storm water will be collected in a series of low points along the proposed private streets and in the rear yards of the townhome lots. One dry-bottom detention basin (POND 2) will be constructed with this plat to provided detention for the townhomes and commercial lot associated with DB 2.

Offsite Conditions

Refer to the Storm Water Management Plan titled "Detention Pond Drainage Calculations for Bridge Pointe" dated July 2, 2014 for calculations regarding the revised detention basin located on the west side of S. 3rd Street

Storm Water Analysis:

Detention Analysis

The existing site was analyzed in order to ensure that the on-site 5- and 100-year post-developed release rates of the contributing drainage areas are at or below the on-site 5- and 100-year existing release rates respectively. Off-site flows are allowed to pass-through the detention basin without being detained, however, the detention basin (POND 2) will be restricted as much as possible in order to reduce the amount of flow contributing to future downstream drainage basins. The ultimate outlet of the site at full-build out will be restricted by an existing 36" RCP at the west end of Whispering Pine Ave along the eastern property boundary of the overall Crossroads at the Lakes property. The current analysis of POND 2 will provide detention for the proposed townhomes and commercial lot associated with DB 2. POND 2 will need to be re-analyzed as the future development to the south occurs. Composite curve numbers have been calculated for post-developed drainage areas associated with DB 2.

Detention associated with DB 1 will be provided in a future plat. The existing area was analyzed in order to ensure that the on-site 5- and 100-year post-developed release rates of the contributing drainage areas are at or below the on-site 5- and 100-year existing release rates for the proposed condition. DB 1 will be re-analyzed in the future once the detention basin associated with DB 1 has been constructed. Composite curve numbers have been calculated for post-developed drainage areas associated with DB 1.

DB 1 UNDISTURBED is undisturbed area within the Crossroads at the Lakes Plat 1 property that was not included in calculations to determine existing or post-developed release rates.



PROJECT: Crossroads at the Lakes Plat 1 JOB NO. 1707.369 Page of Pages
SUBJECT: Stormwater Calculations DATE: 10/10/17 COMP. BY: JMM OK'D BY:

Storm Water Analysis:

Detention Summary

DB 1 (EXISTING AREA = 5.28 AC - PROPOSED AREA = 5.08 AC)

Rainfall Return Frequency (Yrs)	Existing Runoff, cfs	(Allowable Release), cfs	Post-Developed Runoff Release, cfs *
5	4.11	4.11	4.51
100	12.86	12.86	11.62

* Detention will be provided for DB 1 in a future plat. No temporary detention will be provided for the 5-year storm in order to prevent a point discharge into the existing wooded area.

DB 2 (EXISTING AREA = 6.62 AC - PROPOSED AREA = 6.82 AC)

Rainfall Return Frequency (Yrs)	Existing Runoff, cfs	(Allowable Release), cfs *	Post-Developed Runoff Release, cfs
5	9.00	46.82	45.14
100	27.84	105.65	79.09

* Includes routing of all offsite areas associated with DB 2.

Detention Basin Summary

	Pool WSE	100-yr WSE Elevation	Detention Overflow Elevation	Detention Freeboard, Feet	100-year Release Rate, cfs	100-year detention volume, cf ³	Pond Depth, Feet
POND 2	901.00	911.95	914.10	2.15	79.09	61,879	13.10



PROJECT: Crossroads at the Lakes Plat 1 JOB NO. 1707.369 Page of Pages

SUBJECT: Stormwater Calculations DATE: 10/10/17 COMP. BY: JMM OK'D BY:

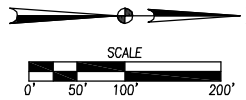
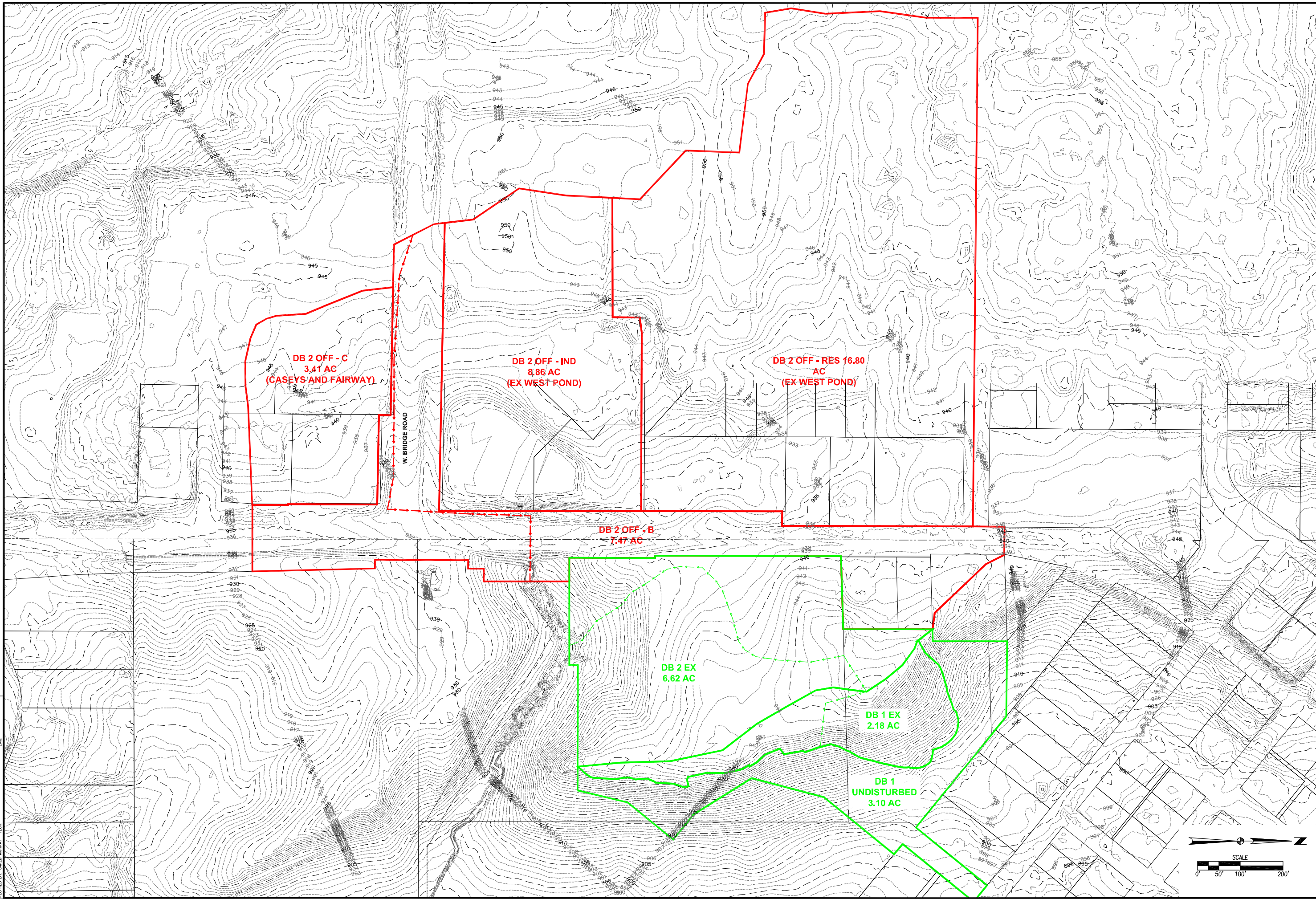
Assumptions:

- * See attached Hydrologic Soil Map in this section. For this analysis, Hydrologic Soil Group C will be used.
- * Assumed a 15 minute time of concentration for post-developed detention analysis.
- * Assumed a 10 minute time of concentration for storm sewer analysis.

Cover Type	C Soils
Open Space - Good Condition	74
Woods - Good Condition	70
Impervious	98
Commercial	94

Land Use or Surface Characteristics	C Soils	
	5-yr	100-yr
Impervious	0.95	0.98
Lawns	0.35	0.55
Commercial	0.85	0.90

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PLOTTER: 10/10/2017 8:04 AM
PLOT BY: JACOB MURRAY TECH: ENK



CROSSROADS AT THE LAKES PLAT 1
EXISTING DRAINAGE MAP

POLK CITY, IOWA

ESA
CIVIL DESIGN ADVANTAGE

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

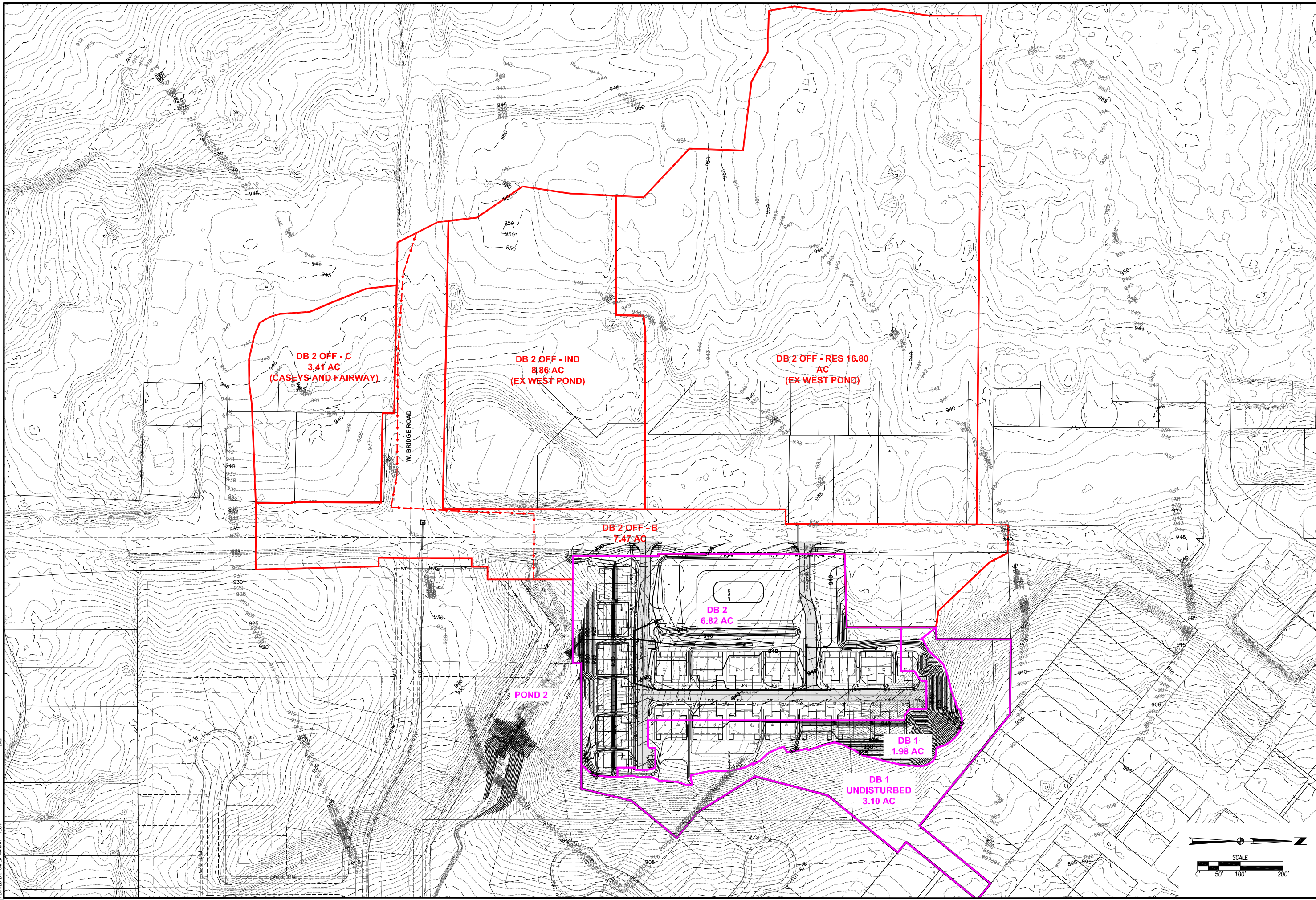
ENGINEER: EKO

REVISIONS	DATE

TECH: _____

1707.369

FILE: H:\1707\1707249\DWG\1707249-31W.DWG COMMENTS:
PLOTTER: 10/10/2017 8:04 AM ENCL:
PLOTTER: ARCO MURRAY TECH:



DB 2 OFF - C
3.41 AC
(CASEYS AND FAIRWAY)

DB 2 OFF - IND
8.86 AC
(EX WEST POND)

DB 2 OFF - RES 16.80
AC
(EX WEST POND)

DB 2 OFF - B
7.47 AC

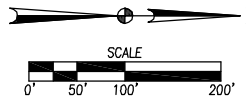
DB 2
6.82 AC


DB 1
1.98 AC

DB 1
UNDISTURBED
3.10 AC

POND 2

W. BRIDGE ROAD



1	1	1707.369	POLK CITY, IOWA	 CIVIL DESIGN ADVANTAGE	3405 S.E. CROSSROADS DRIVE, SUITE G GRIMES, IOWA 50111 PHONE: (515) 369-4400 FAX: (515) 369-4410	REVISIONS	DATE
					ENGINEER: EKO	TECH:	

Comment Response Letter

Ace Hardware Site Plan

May 11, 2023

1. The west elevation, with only 56% brick, does not meet the 60% requirement. Revise architectural elevations to meet the 60% brick requirement.
 - **See attached elevations.**
2. Provide additional details on proposed signage to illustrate the area in square feet that each proposed sign will occupy on the building face. Based on the building length along S. 3rd Street, the combined total of all signage cannot exceed 100 SF, including both the ACE sign and product signage on the front of the building.
 - **Signage has been provided on the architectural drawings.**
3. Show and label all exterior building-mounted wall lights and soffit lights on the architectural elevations.
 - **See attached elevations.**
4. Label materials, including color, of the trash enclosure and screening gate on the north elevation.
 - **See attached elevations.**
5. Revise added hydrant location to be located outside the building fall zone (1.5 times the height of the building).
 - **Hydrant has been relocated.**
6. Open space plantings appear to be calculated incorrectly. 13,810 SF of required open space, when divided by 3,000, equates to 4.6 “units” which results in a requirement for 10 trees and 28 shrubs rather than 11 trees and 18 shrubs as noted on the plan (Based on 2 trees and 6 shrubs per “unit”).
 - **Item has been modified.**
7. The Landscape plan provides for a total of 54 trees, however only 13 of those trees are located outside required buffers to provide shade for the parking lot. Provide a separate plan demonstrating that the 32 trees and 40 shrubs notes as “Buffer Trees” will actually fulfill the Type “B” buffer requirement. This will ensure that required buffer trees are not “double counted” as both open space and buffer trees.
 - **All calculations have been broken out to show that we are planting a total of 60 trees to meet the requirement.**
8. Provide shrubs on the south side of the parking lot, west of the Hickory Way driveway, to provide screening for the townhomes on the south, particularly since the berm is only one foot high in this area.
 - **Additional shrubs have been provided.**
9. Provide details for proposed monument sign, including materials, dimensions, and type of lighting. If the monument sign will have uplighting, show lighting and required landscape screening on the landscape plan.
 - **There is no lighting on the monument sign. A detail has been provided in the architectural drawings.**

10. On photometric sheet, mark up cut sheets for all lighting fixtures, specifying the wattage, mounting height, and attachments as applicable. Max wattage is as follows:
 - a. Parking Lot: 70 watt LED max
 - b. Wall Packs: 28 watt LED max
 - c. Soffit Lights: 17.5 watt LED max, no visible bulbs
 - **See attached lighting information**