SITE PLAN FOR:

KWIK STAR #1756

3215 6TH STREET
WAUKEE, IOWA

SITE LOCATION MAP
NOT TO SCALE



SITE AERIAL MAP
NOT TO SCALE



DRAWING INDEX

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C804	FIXTURE CUTSHEETS

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.

JOHN PATRICK BECKER, P.E. — DATE

LICENSE NUMBER 25523
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026
PAGES OR SHEETS COVERED BY THIS SEAL:
C001, C010, C100–C101, C180–C181, C200–C202
C300–C301, C400–C401, C500–C501, C600–C603

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

RYAN LINDHOLM, L.A. — DATE

MY LICENSE RENEWAL DATE IS JUNE 30, 2026
PAGES OR SHEETS COVERED BY THIS SEAL:
C700

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1626 OAK STREET
LA CROSSE, WI 54602–2107
CONTACT: EMILY HELWIG
PH: (608) 791–7443

GEOTECH:
TERRACON
600 SW 7TH STREET, SUITE M
DES MOINES, IA 50309
CONTACT: CASH STURGEON
EMAIL: CASH.STURGEON@TERRACON.COM
PH. (515) 244–3184

CIVIL ENGINEER:
CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
CONTACT: NICOLE NEAL
EMAIL: NICOLEN@CDA–ENG.COM
PH. (515) 369–4400

ARCHITECT:
VANTAGE ARCHITECTS
750 3RD STREET N SUITE F
LACROSSE, WI 54601
PH. (608) 784–2729

SURVEYOR:
CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
CONTACT: MIKE BROONER
EMAIL: MIKEB@CDA–ENG.COM
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TITLE SHEET

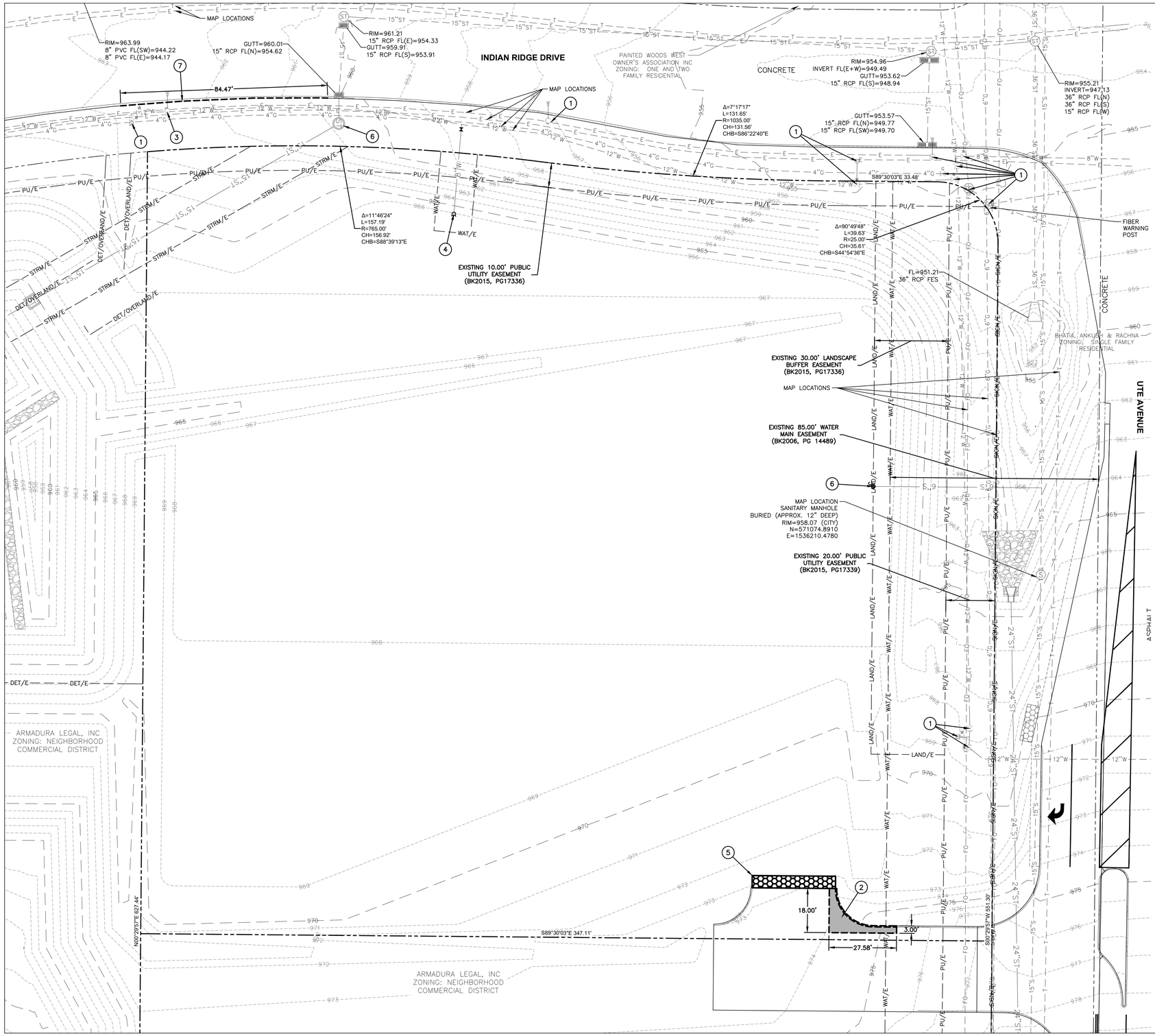
LH G3 STORE
WITH 10 MPD

CTH 22/UTE AVE
WAUKEE, IOWA
LAT 41.56572, LONG -93.88148

#	DATE	DESCRIPTION
	06MAY25	CITY SUBMITTAL #1
	20MAY25	CITY SUBMITTAL #2
	10JUN25	CITY SUBMITTAL #3
	30JUN25	CITY SUBMITTAL #4
	15JULY25	CITY SUBMITTAL #5

DRAWN BY KMW
SCALE GRAPHIC
PROJ. NO. 2504.281
DATE 30JUN25
SHEET C001

DRAWING PHASE



DEMOLITION NOTES

1. PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER OR ENGINEER AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
2. PRIOR TO DEMOLITION, CONTRACTOR SHALL NOTIFY IN WRITING (48 HRS NOTICE) THE FOLLOWING:
   A. CITY
   B. APPROPRIATE UTILITY COMPANIES
   C. OWNER
   D. CIVIL DESIGN ADVANTAGE
   E. ARCHITECT
3. DO NOT DISTURB EXISTING UTILITIES UNLESS OTHERWISE NOTED. COORDINATE REMOVAL OR ABANDONMENT OF ALL UTILITIES WITH THE APPROPRIATE UTILITY SUPPLIER AND REGULATORY AGENCIES.
4. PROTECT EXISTING UTILITIES THAT ARE TO REMAIN. THE LOCATIONS OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLAN MAY BE PRESENT.
5. BACKFILL ALL EXCAVATIONS WITH COHESIVE MATERIAL COMPACTED TO 95% MAXIMUM STANDARD PROCTOR DRY DENSITY AND MOISTURE RANGE OF OPTIMUM MOISTURE TO 4% ABOVE OPTIMUM MOISTURE. TESTING OF BACKFILL TO BE BY A GEOTECHNICAL ENGINEER EMPLOYED BY THE OWNER. IN THE EVENT OF A TEST FAILURE, ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR.
6. FIELD VERIFY EXISTING GRADES AND LOCATION OF EXISTING UTILITIES, CONDUIT, LINES, POLES, TREES, PAVING, BUILDING AND OTHER SITE FEATURES PRIOR TO DEMOLITION AND IMMEDIATELY INFORM THE ENGINEER AND/OR OWNER OF ANY DISCREPANCIES.
7. DEMOLITION NOTES AS SHOWN ON THE PLAN ARE NOT ALL INCLUSIVE. CONTRACTOR TO ABANDON IN PLACE OR REMOVE AND DISPOSE OF ALL EXISTING SITE IMPROVEMENTS ABOVE AND BELOW GROUND TO COMPLY WITH THE GENERAL INTENT OF THIS DOCUMENT.
8. ALL CONSTRUCTION/DEMOLITION DEBRIS SHALL BE DISPOSED OF OFFSITE IN FULL COMPLIANCE WITH CURRENT ENVIRONMENTAL REGULATIONS.
9. CONSTRUCTION LIMITS SHALL BE CONFINED TO THE SITE BOUNDARY AS NOTED. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.

TRAFFIC CONTROL NOTES

1. 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.
2. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. 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.
4. THE CONTRACTOR SHALL COORDINATE HIS TRAFFIC CONTROL WITH OTHER CONSTRUCTION PROJECTS IN THE AREA.
5. SIDEWALK CLOSED SIGNS REQUIRED FOR ALL SIDEWALK CLOSURES.
6. 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.
7. 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.

KEYNOTE LEGEND

1. PROTECT IN PLACE
2. REMOVE AND DISPOSE OF PCC PAVEMENT; SAWCUT FULL DEPTH
3. REMOVE AND RELOCATE LIGHT POLE
4. REMOVE AND DISPOSE OF HYDRANT
5. REMOVE AND DISPOSE OF TRM
6. ADJUST TO FINISHED GRADE
7. GRIND CURB FLUSH

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DEMOLITION PLAN

LH G3 STORE
WITH 10 MPD

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SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	30JUN25
SHEET	C010

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SITE PLAN

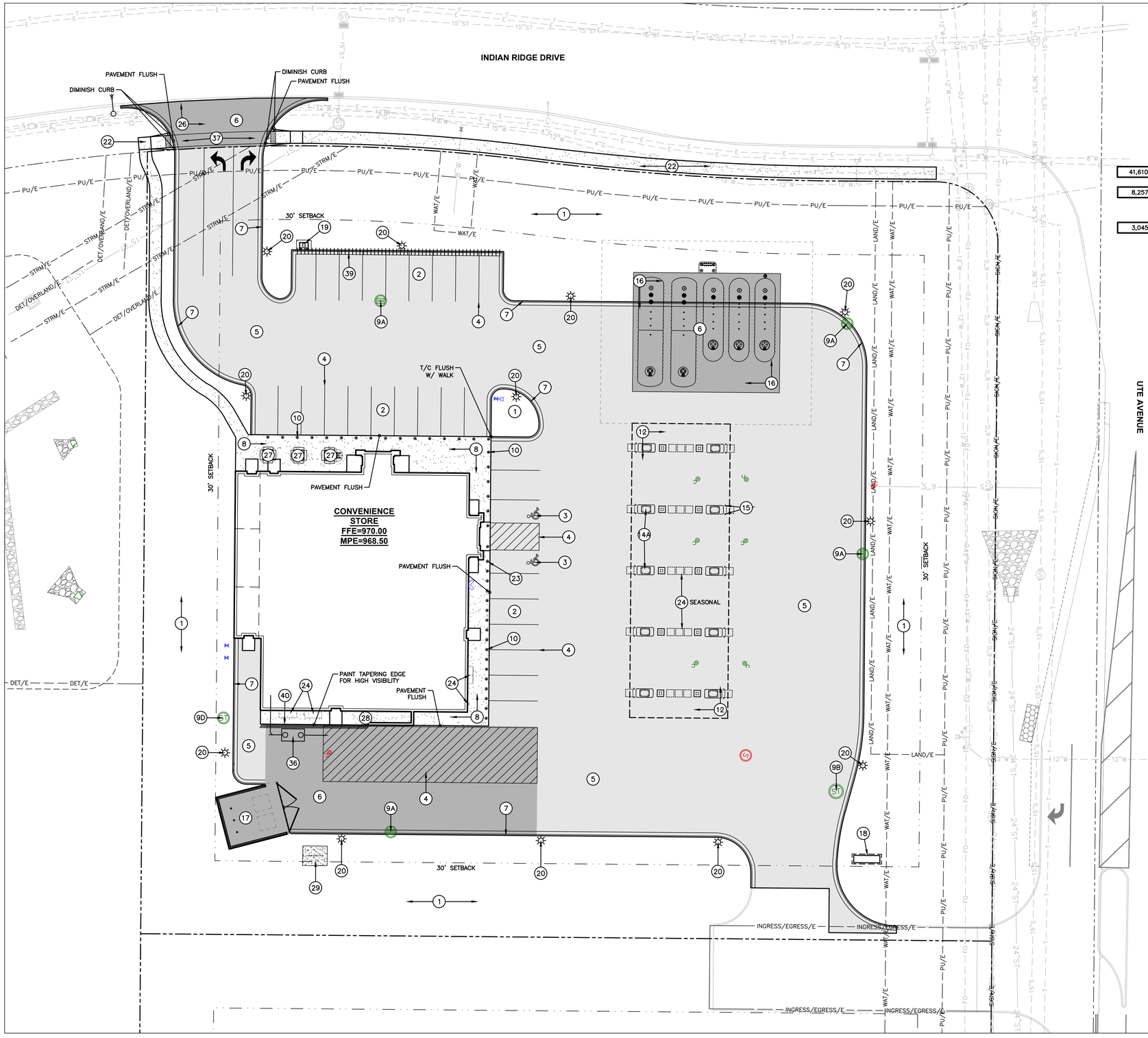
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SHEET	C100

DRAWING PHASE



KEYNOTE LEGEND

1. LANDSCAPE AREA. SEE SHEET C700
2. OFF-STREET PARKING STALLS STRIPING – 4" WIDE STALL LINES, USE HIGH VISIBILITY WHITE PAINT. SPACES PROVIDED
   (20) SERVICE POINTS
   (0) DIESEL POINTS
   (27) 9'-0"X 20'-0"(MIN.) GENERAL PARKING
   (2) 8'-0"X 20'-0" ACCESSIBLE PARKING WITH
   (1) 11'-0"X 20'-0" LOADING ZONE
   (0) 11'-0"X 20'-0" VACUUM STALLS WITH
   (0) 5'-0"X 20'-0" LOADING ZONE
   (0) 15'-0"X 60'-0" OVERSIZED STALLS
3. A.D.A. ACCESSIBLE PARKING SPACE WITH LOADING ZONE. PROVIDE APPROPRIATE STRIPING AND PAVEMENT MARKINGS.
4. 4" WIDE, HIGH VISIBILITY, PAVEMENT STRIPING, LANE MARKINGS AND TEXT. COLOR: HC MARKINGS– BLUE, ALL OTHERS– YELLOW.
5. 41,610 SF — 6" DEPTH (MIN.) CONCRETE SLAB–ON–GRADE WITH #3 REBAR, 3' O.C. CONCRETE SEALER: TK–26UV
6. 8,257 SF — 8" DEPTH (MIN.) CONCRETE SLAB–ON–GRADE WITH #4 REBAR, 3' O.C. CONCRETE SEALER: TK–26UV
7. B6–12 CONCRETE CURB AND GUTTER PER DETAIL 6/C500.
8. 3,045 SF — 6" INTEGRAL CONCRETE CURB/ WALK. SEE DETAIL 5/C500 FOR NON–FLUSH SECTIONS. CONCRETE SEALER: TK–26UV
9. STORM STRUCTURE. SEE SHEETS C300–C401 FOR FURTHER STORM SEWER INFORMATION.
   A. CATCH BASIN CURB INLET PER DETAIL 2/C500
   B. MANHOLE, FRAME AND COVER PER DETAIL 3/C501
   D. OIL SKIMMER CATCH BASIN PER DETAIL ON SHEET C301
10. 30" HT., 6" DIA. CONCRETE FILLED PIPE BOLLARD PER DETAIL 11/C500.
12. 40'–0"X 120'–0" DISPENSER ISLAND CANOPY. VERIFY SIZE, PLACEMENT, COLUMN AND FOOTING SIZE WITH CANOPY AND STRUCTURAL PLANS. COLUMNS TO BE BRICKED FROM GRADE TO CANOPY DECK. CANOPY GRAPHICS PER OWNER.
14. CONCRETE ISLANDS W/ 6" EXPOSURE WITH FUEL DISPENSERS. DISPENSER PER OWNER.
    A. 3'–6"X 7'–0"
15. 36" HT., 6" DIA. CONCRETE FILLED PIPE BOLLARD PER DETAIL 10/C500.
16. UNDERGROUND FUEL STORAGE TANKS PER OWNER. PROVIDE PIPING AND VENTING PER OWNER'S SPECIFICATIONS.
17. EXTERNAL TRASH ENCLOSURE TO MATCH BUILDING. SEE ARCHITECTURAL DETAILS.
18. KWIK TRIP TRADEMARK SIGN (VERIFY LOCATION WITH SIGN PERMIT)
19. 'FREE AIR' COMPRESSOR. PROVIDE SIGNAGE PER OWNER.
20. SITE AREA LIGHT WITH CONCRETE BASE PER DETAIL 12/C500
22. 4" DEPTH CONCRETE WALK PER DETAIL 9/C500
23. HC PVC BOLLARD SLEEVE PER OWNER. VAN ACCESS SIGNAGE AT 60" HT. STALL PARKING AT 60" HT.
24. OUTDOOR MERCHANDISING AREA
26. 8" CONCRETE APPROACH
27. PICNIC TABLE PER OWNER. PROVIDE 1 HC. ACCESS TABLE SPACE. PROVIDE TRASH CONTAINER PER OWNER.
28. EXTERIOR DELIVERY 'TOTE' STORAGE WITH SCREEN WALL
29. ELECTRICAL TRANSFORMER
36. GREASE INTERCEPTOR
37. 5' WIDE, 8" DEPTH CONCRETE SIDEWALK. PROVIDE PEDESTRIAN ACCESS THROUGH APPROACH LOCATIONS. WALK TO MEET ADA STANDARDS
39. REJECT GUTTER– TIP GUTTER AWAY FROM FACE OF CURB FOR SHEET FLOW
40. PAINT TAPERING EDGE FOR HIGH VISIBILITY

PAVEMENT THICKNESS

1. SIDEWALKS	4" P.C.C.	
2. LIGHT DUTY PAVING	6" P.C.C.	
3. HEAVY DUTY PAVING	8" P.C.C.	

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SITE KEYNOTE PLAN

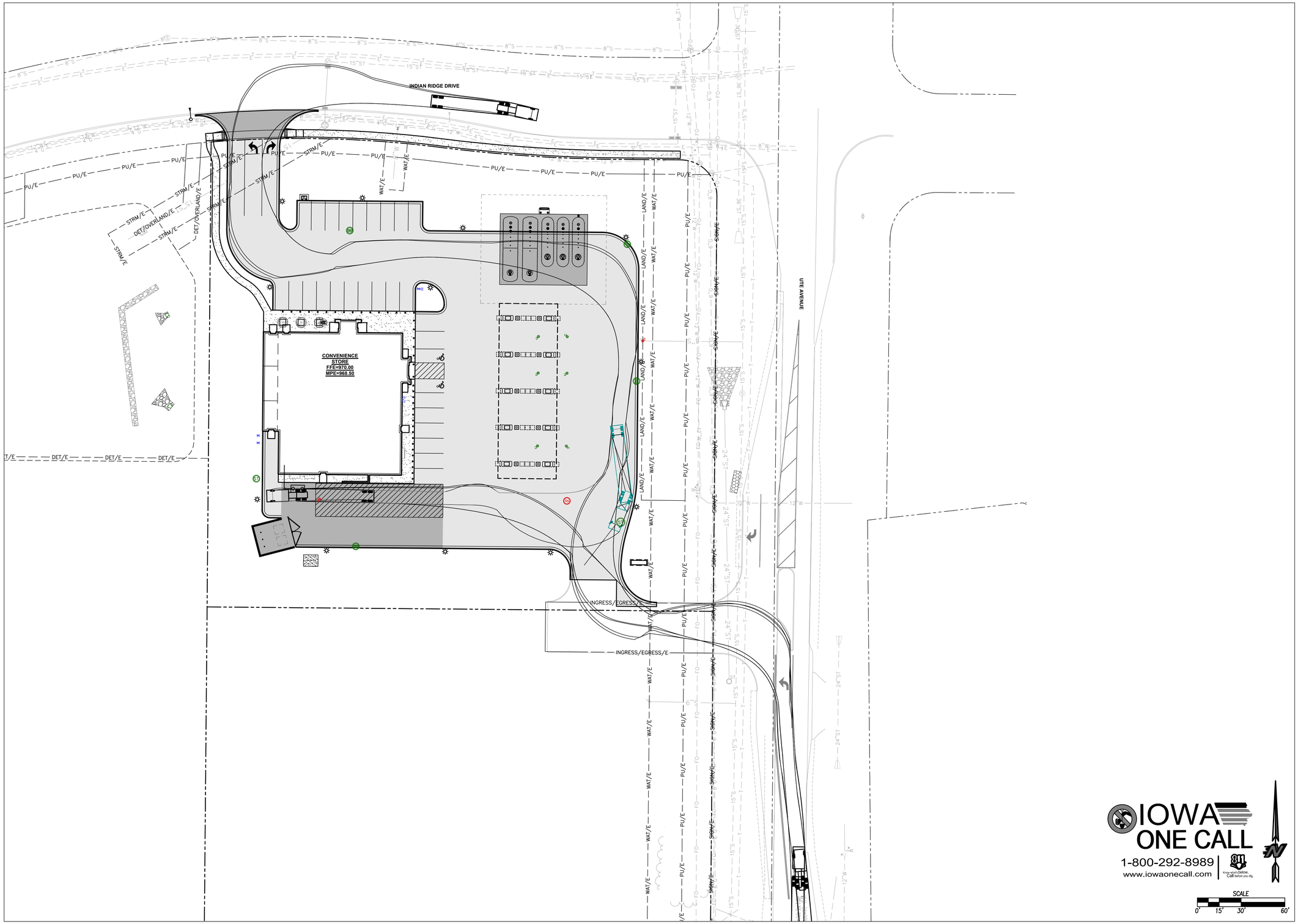
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SITE CIRCULATION

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SHEET	C180

DRAWING PHASE



GENERAL NOTES

1. THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND 2025 EDITIONS OF THE WAUKEE STANDARD SPECIFICATIONS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
2. ALL WORK SHALL COMPLY WITH ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
3. 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.
4. 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.
5. ONE WEEK PRIOR TO CONSTRUCTION WITHIN CITY R.O.W. OR ANY CONNECTION TO PUBLIC SEWERS CONTRACTOR SHALL NOTIFY THE CITY'S CONSTRUCTION DIVISION.
6. ALL CONSTRUCTION WITHIN PUBLIC R.O.W./ EASEMENTS, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE CITY'S STANDARDS.
7. REMOVE ALL DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY AND PRIOR TO ANY RAIN EVENT.
8. ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
9. DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY.
10. 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.
11. 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.
12. 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.
13. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT, INCLUDING STAGING OF CONSTRUCTION DETAILS.
14. 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.
15. ALL PERMITS AND ADDITIONAL FEES REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACTOR BID.

LAYOUT NOTES

1. PLAN PREPARED FROM AN ALTA/ACSM LAND TITLE SURVEY BY: CIVIL DESIGN ADVANTAGE.
2. CURBS ARE DIMENSIONED TO FACE OF CURB.
3. CONVENIENCE STORE AND ISLAND COMPLEXES ARE ALIGNED PARALLEL/ PERPENDICULAR TO THE EAST PROPERTY LINE UNLESS OTHERWISE INDICATED ON THIS PLAN.
4. UNLESS SHOWN OTHERWISE ON THIS DRAWING, CONTRACTOR SHALL PROVIDE CONTROL JOINTS, CONSTRUCTION JOINTS, AND EXPANSION JOINTS IN SLAB ON GRADE, SIDEWALKS AND DRIVES.
   CONTROL JOINT MAXIMUM DISTANCE: WALKS– 8' O.C., ALL OTHERS– 10' O.C. SAW CUT CONTROL JOINTS MINIMUM ONE–QUARTER CONCRETE THICKNESS.
   EXPANSION JOINT MAXIMUM DISTANCE: WALKS– 24' O.C., ALL OTHERS– 40' O.C. DOWEL ALL EXPANSION JOINTS– MAXIMUM 24" O.C.
5. CONCRETE IN ISLAND COMPLEX SHALL BE SMOOTH BROOM FINISHED.
6. EXTERIOR CONCRETE SURFACES TO BE SEALED. CONCRETE SEALER:
   APR 15– OCT 31 USE: TK–26UV
   NOV 1– DEC 31 USE: TK–290
7. EXPANSION JOINTS SHALL BE DECK–O–FOAMED AND CAULKED WITH SL1

CONSTRUCTION NOTES

1. CONSTRUCTION FENCING TO BE INSTALLED AROUND ENTIRE CONSTRUCTION SITE. COORDINATE WITH OWNER FOR FENCING AND GATE LOCATIONS AND APPROPRIATE SIGNAGE INSTALLATION.
2. APPROVED FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED AS SOON AS CONSTRUCTION COMMENCES. IF PAVING IS NOT INSTALLED PRIOR TO BUILDING CONSTRUCTION COMMENCING AFTER FOOTING INSTALLED, AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING TO EXTEND WITHIN 100 FEET OF ALL PORTIONS OF THE EXTERIOR WALLS SHALL BE PROVIDED AND COMPLY WITH THE REQUIREMENTS OF SECTION 503.2 OF THE IFC.

SITE DATA

ZONING DISTRICT:	C–1A NEIGHBORHOOD COMMERCIAL DISTRICT
SITE AREA:	2.51 ACRES / 109,268 SF
EX. IMPERVIOUS:	1 %
EX. PERVIOUS:	99 %
PARKING REQUIREMENTS	
PARKING REQUIRED	46 SPACES (5 PER 1,000 SF OF GFA)
PARKING PROVIDED	27 STANDARD SPACES 2 ACCESSIBLE SPACES 20 SERVICE POINTS
TOTAL	49 SPACES
BUILDING:	
BUILDING AREA	9,176 SF
BUILDING HEIGHTS	
CONVENIENCE STORE	24.5 FEET (MAX HEIGHT: 2 STORIES OR 40 FEET)
CANOPY	20 FEET
BUILDING SETBACKS	
FRONT YARD	30 FEET
SIDE YARD	NO MINIMUM EXCEPT WHEN ADJACENT TO ANY R DISTRICT, THE MINIMUM SIDE YARD SETBACK SHALL BE 30 FEET
REAR YARD	30 FEET
LOT 1:	
PROPOSED GREEN AREA:	47,852 SF
PROPOSED HARD COVER:	61,416 SF
PAVED AREA:	52,240 SF
BUILDING AREA:	9,176 SF
REQUIRED OPEN SPACE:	21,854 SF (20%)
PROVIDED OPEN SPACE:	47,852 SF (44%)

LEGAL DESCRIPTION

A PART OF OUTLOT 'Y', PAINTED WOODS WEST PLAT 1, AN OFFICIAL PLAT IN THE CITY OF WAUKEE, DALLAS COUNTY, IOWA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID OUTLOT 'Y'; THENCE SOUTH 83°39'31" WEST ALONG THE SOUTH LINE OF SAID OUTLOT 'Y', 349.60 FEET; THENCE NORTH 00°29'57" EAST, 627.43 FEET TO THE NORTHERLY LINE OF SAID OUTLOT 'Y'; THENCE EASTERLY ALONG SAID NORTHERLY LINE AND A CURVE CONCAVE SOUTHERLY WHOSE RADIUS IS 765.00 FEET, WHOSE ARC LENGTH IS 157.19 FEET AND WHOSE CHORD BEARS SOUTH 88°39'13" EAST, 156.92 FEET; THENCE EASTERLY ALONG SAID NORTHERLY LINE AND A CURVE CONCAVE NORTHERLY WHOSE RADIUS IS 1035.00 FEET, WHOSE ARC LENGTH IS 131.65 FEET AND WHOSE CHORD BEARS SOUTH 86°22'40" EAST, 131.56 FEET; THENCE SOUTH 89°30'03" EAST ALONG SAID NORTHERLY LINE, 33.48 FEET; THENCE SOUTHEASTERLY ALONG THE NORTHEASTERLY LINE OF SAID OUTLOT 'Y' AND A CURVE CONCAVE SOUTHWESTERLY WHOSE RADIUS IS 25.00 FEET, WHOSE ARC LENGTH IS 39.63 FEET AND WHOSE CHORD BEARS SOUTH 44°54'36" EAST, 35.61 FEET; THENCE SOUTH 00°29'57" WEST ALONG THE EAST LINE OF SAID OUTLOT 'Y', 551.30 FEET TO THE POINT OF BEGINNING AND CONTAINING 4.80 ACRES (209,149 SQUARE FEET).

THE PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

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PH. (608) 781-8988
FAX (608) 781-8960

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

SITE DIMENSION PLAN

LH G3 STORE
WITH 10 MPD

CTH 22/UTE AVE
WAUKEE, IOWA
LAT 41.56572, LONG -93.88148

#	DATE	DESCRIPTION
	06MAY25	CITY SUBMITTAL #1
	20MAY25	CITY SUBMITTAL #2
	10JUN25	CITY SUBMITTAL #3
	30JUN25	CITY SUBMITTAL #4
	15JULY25	CITY SUBMITTAL #5

DRAWN BY	KMW
SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	30JUN25
SHEET	C181

DRAWING PHASE



GRADING NOTES

NOTE: CONTRACTOR TO OBTAIN COSESCO EXCAVATION PERMIT PRIOR TO BEGINNING SITE WORK.

CONSTRUCTION NOTE:

CONSTRUCTION FENCING TO BE INSTALLED AROUND ENTIRE CONSTRUCTION SITE. COORDINATE WITH OWNER FOR FENCING AND GATE LOCATIONS AND APPROPRIATE SIGNAGE INSTALLATION.

NOTE:

1. REFER TO OTHER PROJECT PLANS AND INFORMATION RELATED TO THIS PROJECT PRIOR TO BEGINNING ANY GRADING WORK.
2. PLAN PREPARED FROM ALTA/ACSM LAND TITLE SURVEY BY:

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

3. CONTRACTOR SHALL LOCATE ALL UTILITIES WHICH MAY AFFECT THIS WORK AND NOTIFY OWNER OF ANY CONFLICTS.
4. CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED ELEVATIONS PRIOR TO START OF CONSTRUCTION. VERIFY CRITICAL ELEVATIONS TO ENSURE CONFORMANCE WITH GRADING PLAN, PARTICULARLY WITH WALK AND/ OR PAVEMENTS TO REMAIN. MEET EXISTING GRADES ALONG STREETS, PROPERTY LINES AND DRIVEWAY ENTRANCES. RESTORE ALL EXISTING PAVEMENTS THAT REMAIN TO THEIR ORIGINAL, IF NOT BETTER CONDITION. NOTIFY OWNER OF ANY CONFLICTS.
5. AREAS NOT PAVED AND TO BE LANDSCAPED SHALL RECEIVE MINIMUM OF 8" DEPTH COMPACTED TOPSOIL.
6. CONTRACTOR SHALL COORDINATE GRADING AND INSTALLATION OF DRIVES IN R.O.W. WITH APPROPRIATE GOVERNMENT AGENCIES. OBTAIN APPROPRIATE PERMITS FOR GRADING AND DRAINAGE IN ALL R.O.W.
7. REFER TO OWNER'S SPECIFICATIONS FOR CURB, APPROACH, BITUMINOUS, AND CONCRETE PROFILES, AS WELL AS ADDITIONAL SITE STANDARDS RELATED TO THIS PROJECT.

FINISHED FLOOR ELEVATIONS

PROPOSED CONVENIENCE STORE
FINISHED ELEVATION = 970.00 FEET

BENCHMARK
BURY BOLT ON HYDRANT ● SW CORNER OF INDIAN RIDGE DRIVE & WOODLAND COURT.
ELEVATION=977.66

NOTE GRADING CONTRACTOR:

ANY PROPERTY IRONS THAT ARE DISTURBED IN THE GRADING PROCESS SHALL BE RESET BY A LICENSED LAND SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.

GRADING NOTES

1. PRIOR TO ANY GRADING, A COPY OF THE NPDES PERMIT SHALL BE PROVIDED TO THE CITY'S BUILDING DIVISION AND THE STORMWATER DEPARTMENT HAS APPROVED THE COSESCO PERMIT.
2. CONTRACTOR SHALL STRIP ALL DELETERIOUS MATERIAL. THE TOP 8" 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 MOST RECENT 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 T/3, TRANSVERSE T/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.

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

GRADE PLAN

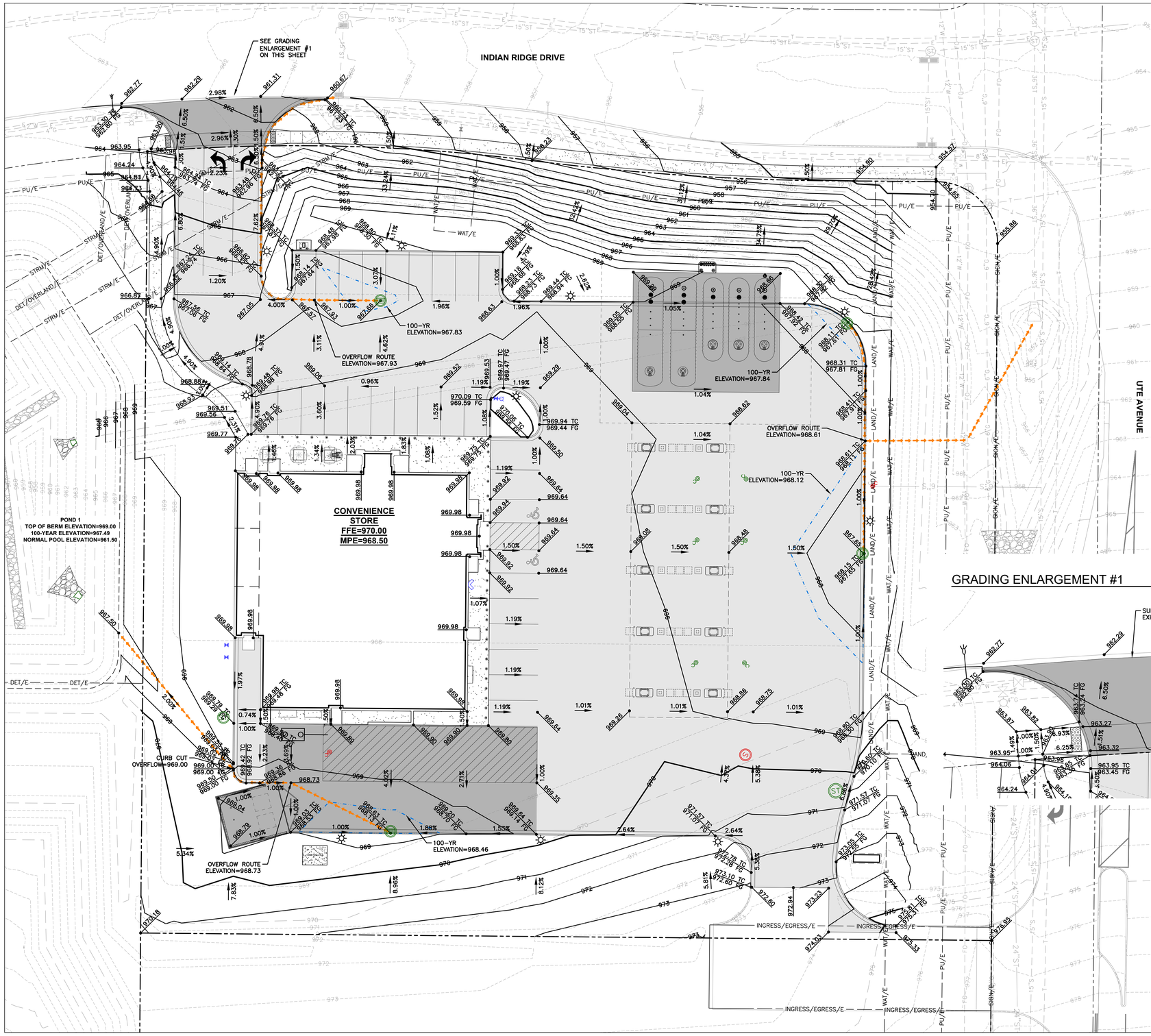
LH G3 STORE
WITH 10 MPD

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SHEET	C200

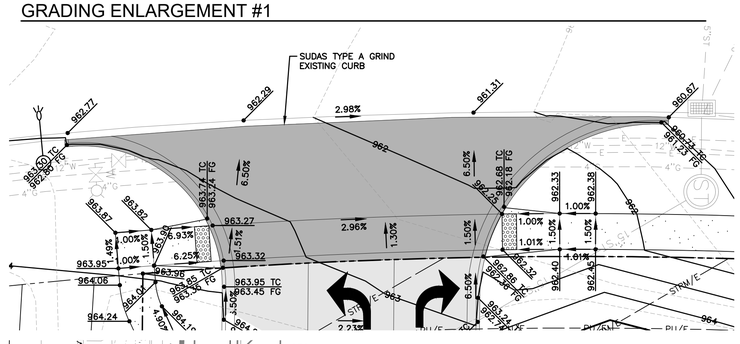
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GRADING LEGEND

TC:	TOP OF CURB
FG:	FORM GRADE
T/I:	TOP OF ISLAND

GRADING ENLARGEMENT #1



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GRADE PLAN DETAIL

LH G3 STORE
WITH 10 MPD

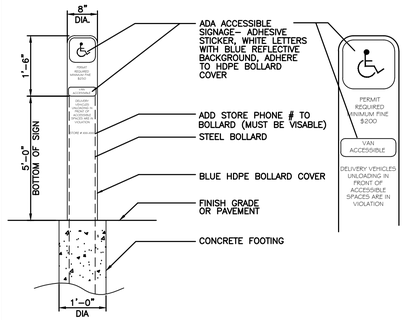
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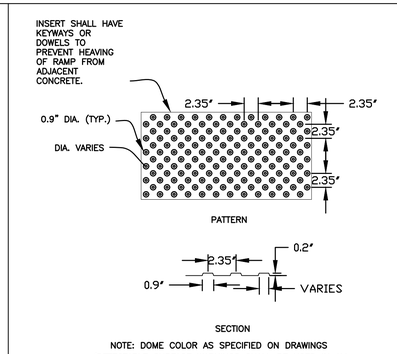
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SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	30JUN25
SHEET	C201

DRAWING PHASE

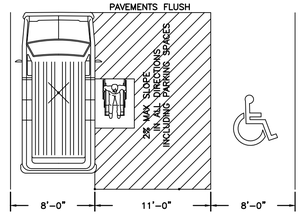




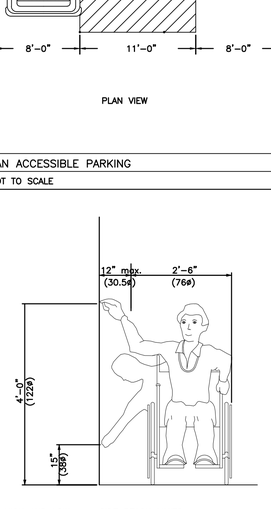
1	ADA BOLLARD SIGNAGE
C205	NOT TO SCALE

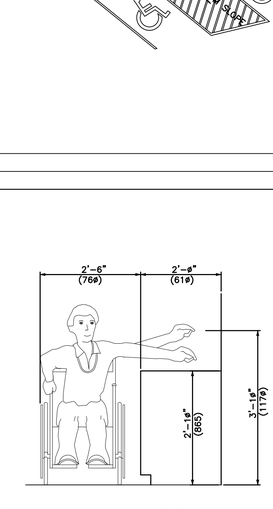


2	DETECTABLE WARNING INSERT(TRUNCATED DOMES)
C205	NOT TO SCALE

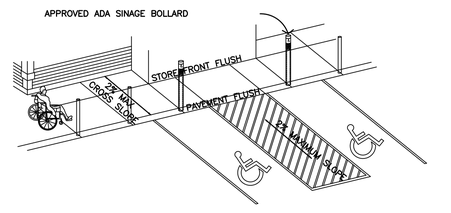


3	VAN ACCESSIBLE PARKING
C205	NOT TO SCALE





4	ACCESSIBLE REACH DIMENSIONS
C205	NOT TO SCALE



NOTES

1. REFER TO THE DOCUMENT FROM THE DEPARTMENT OF JUSTICE ON "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN". CONTRACTOR SHALL REFERENCE CURRENT A.D.A. GUIDELINES AND LOCAL REGULATIONS FOR SITE ACCESSIBILITY. IN ALL CASES THE MINIMUM REQUIREMENTS SHALL BE PROVIDED ON SITE TO ENSURE COMPLIANCE TO ALL REGULATIONS.
2. KWIK TRIP STANDARD ENTRANCE HAS AUTOMATIC DOOR OPENER SYSTEM DESIGNED TO COMPLY WITH ALL ACCESS CODES AND LAWS. ENTRANCE DOORS FOR ACCESSIBLE ROUTES WILL HAVE A MINIMUM CLEAR OPENING OF 32".
3. STORE FRONTS WILL PROVIDE FLUSH PAVEMENTS ALONG ACCESSIBLE ROUTES WITH PROTECTIVE SECURITY BOLLARDS INDICATED AND SPACED BETWEEN PARKING SURFACES AND BUILDING WALK PER PLAN.
4. NO OBJECTS OR DISPLAYS SHOULD PROTRUDE INTO THE MINIMUM CLEAR SPACE OF THE ACCESSIBLE ROUTES TO THE STORE ENTRANCE. THIS WILL INCLUDE SEASONAL DISPLAY VENDING AREAS AS WELL AS OTHER OUTDOOR STORAGE UNITS FOR PROPANE AND ICE, ETC.
5. PER A.D.A GUIDELINES– CLEAR WIDTH OF ACCESSIBLE ROUTES SHALL BE 36" AND PERMITTED TO BE REDUCED TO 32" FOR A LENGTH OF 24".
6. ACCESS ISLES SERVING WHEEL CHAIR LIFTS OR CHAIR ACCESS FROM VEHICLES ARE REQUIRED TO BE NEARLY LEVEL IN ALL DIRECTIONS TO PROVIDE SAFE TRANSFER OF WHEELCHAIRS TO AND FROM VEHICLES. THE EXCEPTION WOULD BE FOR DRAINAGE. MAXIMUM SLOPE FOR THE ACCESS ISLE IS 1:48. NO CURB RAMPS SHALL BE A PART OF THE ACCESS ISLE.
7. IDENTIFICATION SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY WITH THE DESIGNATION OF 1 "VAN ACCESSIBLE" IN EVERY 8 ACCESSIBLE SPACES ON SITE.

KEYNOTE LEGEND

1. ACCESSIBLE STALLS
   A. STRIPING – 4" WIDE STALL LINES, USE HIGH VISIBILITY BLUE PAINT (UNLESS ALTERNATE COLOR SPECIFIED BY LOCAL OR STATE CODES). SPACES PROVIDED (2) 8'–0"X 20'–0" ACCESSIBLE PARKING WITH (1) 11'–0"X 20'–0" LOADING ZONE
   B. ACCESSIBLE FUELING POINT AND DISPENSER AND VALET. VALET AND KEY PAD ON PUMP SHALL CONFORM TO ADA REACH DIMENSIONS AS SHOWN IN DETAIL. SEE NOTES FOR CONVENIENCE STORE ACCESSIBILITY.
2. PAVEMENTS FLUSH FOR ACCESSIBILITY.
3. PICNIC TABLE W/ ACCESSIBLE PLACEMENT PROVIDE OWNER. PROVIDE TRASH CONTAINER
4. ACCESSIBLE ROUTE TO STORE
5. CITY SIDEWALK
6. ACCESS THRU APPROACH
   MAX. 2% CROSS SLOPE (1:48)
7. CURB RAMP– RAMP SLOPE MAX 1:12
   SIDE FLARE SLOPE MAX. 1:10

CONVENIENCE STORE ACCESSIBILITY

1. AT LEAST 1 MPD (MULTI PRODUCT DISPENSER) COVERING ALL GRADES OF FUEL MUST BE ACCESSIBLE IN A 30X48" CLEAR LEVEL FLOOR AREA(CLF).
2. ALL PUMP CONTROLS SHALL BE < 48" (2010 STANDARD). WINDOW WASHER, PAPER TOWEL DISPENSER, LITERATURE, FIRE EXTINGUISHER, EMERGENCY FUEL STOPS, ETC. BE ACCESSIBLE 30"X48" CLF SPACE AND WITHIN A FORWARD OR SIDE APPROACH REACH RANGE.
3. PROVIDE ISA (INDUSTRY STANDARD ARCHITECTURE) AT EACH ACCESSIBLE FUEL POSITION ON FACE OF PUMP.
4. PROVIDE AT EACH ACCESSIBLE FUELING POSITION VISIBLE TO APPROACHING VEHICLES.
5. PROVIDE A SIGN AT EACH ACCESSIBLE FUELING POSITION WITH STORE TELEPHONE NUMBER, ADVISING AVAILABLE FUELING ASSISTANCE.
6. ANY PAY FUNCTION– I.E. AIR/VACUUM ETC. ARE REQUIRED TO HAVE AN ACCESSIBLE ROUTE TO STORE ENTRANCE. CONTROLS SHALL BE ACCESSIBLE 30"X48" CLF SPACE AND WITHIN A FORWARD OR SIDE APPROACH REACH RANGE.

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ACCESSIBILITY PLAN

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DRAWING PHASE

INDIAN RIDGE DRIVE

UTE AVENUE

CONVENIENCE STORE
FFE=970.00
MPE=968.50

NEW CB#8
48" INTK W/ TYPE Q CASTING (PRIVATE)
RIM=967.66
FL 6" (SE)=962.80
FL 15" (SW)=962.20

L-8
138 LF OF 15" HDPE (PRIVATE)
0.51%

L-9
75 LF OF 6" HDPE (PRIVATE)
4.27%

NEW CB#6
48" INTK (PRIVATE)
TC=968.11
FL 15" (S)=963.99

L-6
91 LF OF 15" HDPE (PRIVATE)
0.40%

NEW APRON#7
15" CMP APRON (PRIVATE) W/ CONCRETE FOOTING, APRON GUARD, AND 4 TONS CLASS E RIP-RAP
FL=961.50

ST-9
PRIVATE RD
FL=966.00

L-5D
11 LF OF 6" HDPE (PRIVATE)
1.00%

ST-5D
CD (PRIVATE)
FL=964.96

ST-5B
STORM CLEANOUT (PRIVATE)
RIM=968.54
FL 6" (W)=964.55
FL 6" (S)=964.45

ST-5C
STORM CLEANOUT (PRIVATE)
RIM=968.75
FL 6" (N)=964.85
FL 6" (S)=964.85
FL 6" (E)=964.75

L-5E
11 LF OF 6" HDPE (PRIVATE)
1.00%

L-5B
25 LF OF 6" HDPE (PRIVATE)
1.00%

20 LF OF 6" HDPE (PRIVATE)
1.00%
L-5C

ST-5A
STORM CLEANOUT (PRIVATE)
RIM=968.43
FL 6" (W)=964.20
FL 6" (N)=964.20
FL 6" (S)=964.20
FL 8" (E)=964.10

ST-5E
CD (PRIVATE)
FL=964.96

ST-5G
CD (PRIVATE)
FL=964.61

L-5G
11 LF OF 6" HDPE (PRIVATE)
1.00%

20 LF OF 6" HDPE (PRIVATE)
1.00%
L-5F

L-5A
47 LF OF 8" HDPE (PRIVATE)
1.00%

ST-5F
STORM CLEANOUT (PRIVATE)
RIM=968.66
FL 6" (N)=964.50
FL 6" (S)=964.50
FL 6" (E)=964.40

L-5H
11 LF OF 6" HDPE (PRIVATE)
1.00%

ST-5H
CD (PRIVATE)
FL=964.61

L-5I
50 LF OF 6" HDPE (PRIVATE)
1.00%

NEW CB#5
48" INTK (PRIVATE)
TC=968.15
FL 15" (N)=963.63
FL 8" (W)=963.63
FL 18" (S)=963.53

ST-5K
CD (PRIVATE)
FL=965.21

L-5K
11 LF OF 6" HDPE (PRIVATE)
1.00%

20 LF OF 6" HDPE (PRIVATE)
1.00%
L-5J

L-5
94 LF OF 18" HDPE (PRIVATE)
0.40%

ST-5J
STORM CLEANOUT (PRIVATE)
RIM=968.93
FL 6" (S)=965.10
FL 6" (N)=965.10
FL 6" (E)=965.00

L-5L
11 LF OF 6" HDPE (PRIVATE)
1.00%

ST-5I
STORM CLEANOUT (PRIVATE)
RIM=968.67
FL 6" (W)=964.80
FL 6" (N)=964.70

ST-5L
CD (PRIVATE)
FL=965.21

ST-2A
TEE (PRIVATE)
FL 6" (NE)=961.73

L-2B
27 LF OF 6" HDPE (PRIVATE)
15.62%

ST-2B
PRIVATE RD
FL=966.00

L-2C
12 LF OF 6" HDPE (PRIVATE)
4.17%

ST-2C
PRIVATE RD
FL=966.00

NEW APRON#1
18" CMP APRON (PRIVATE) W/ CONCRETE FOOTING, APRON GUARD, AND 5 TONS CLASS E RIP-RAP
FL=961.50

L-2
77 LF OF 24" HDPE (PRIVATE)
0.40%

NEW MH#2
48" MH (PRIVATE)
RIM=969.58
FL 24" (SE)=961.91
FL 6" (NE)=965.50
FL 24" (NW)=961.81

ST-3A
PRIVATE RD
FL=966.00

ST-3B
PRIVATE RD
FL=966.00

L-3B
54 LF OF 6" HDPE (PRIVATE)
2.04%

L-4
179 LF OF 18" HDPE (PRIVATE)
0.40%

L-3
80 LF OF 24" HDPE (PRIVATE)
0.40%

L-3A
49 LF OF 6" HDPE (PRIVATE)
2.24%

NEW MH#4
60" MH (PRIVATE)
(PRETREATMENT/WATER QUALITY STRUCTURE, REFER TO DETAIL)
RIM=970.46
FL 18" (N)=963.15
FL 18" (W)=963.05
SUMP=958.05

NEW CB#3
48" INTK (PRIVATE)
TC=968.63
FL 18" (E)=962.33
FL 6" (NE)=964.90
FL 6" (N)=964.90
FL 24" (NW)=962.23

INGRESS/EGRESS/E

3.75'
9.25'
8.00'
INSTALL 4 TONS CLASS E RIP-RAP

14.00'
12.00'
6.00'
INSTALL 5 TONS CLASS E RIP-RAP

ST-1 AND ST-7 REVETMENT

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STORM SEWER PLAN

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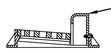
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DRAWING PHASE

STORM DRAINAGE

1. UNLESS OTHERWISE INDICATED, USE REINFORCED, PRECAST, CONCRETE MAINTENANCE HOLES AND CATCHBASINS CONFORMING TO ASTM C478, FURNISHED WITH WATER STOP RUBBER GASKETS AND PRECAST BASES. JOINTS FOR ALL PRECAST MAINTENANCE HOLE SECTIONS SHALL HAVE CONFINED, RUBBER "O"-RING GASKETS IN ACCORDANCE WITH ASTM C443. THESE JOINTS ARE NORMALLY USED IN SEWERS TO HOLD INFILTRATION AND EXFILTRATION TO A PRACTICAL MINIMUM AND ARE ADEQUATE FOR HYDROSTATIC HEADS UP TO 30'. THE INSIDE BARREL DIAMETER SHALL NOT BE LESS THAN 48 INCHES. SEE SUDAS STD. SW-401 FOR CIRCULAR STORM SEWER MANHOLES AND SUDAS STD. SW-502 FOR CIRCULAR SINGLE GRATE INTAKE CATCHBASINS.
2. INSTALL CATCHBASIN CASTINGS WITH SPECIFIED TOP ELEVATION REFER TO SW-603.



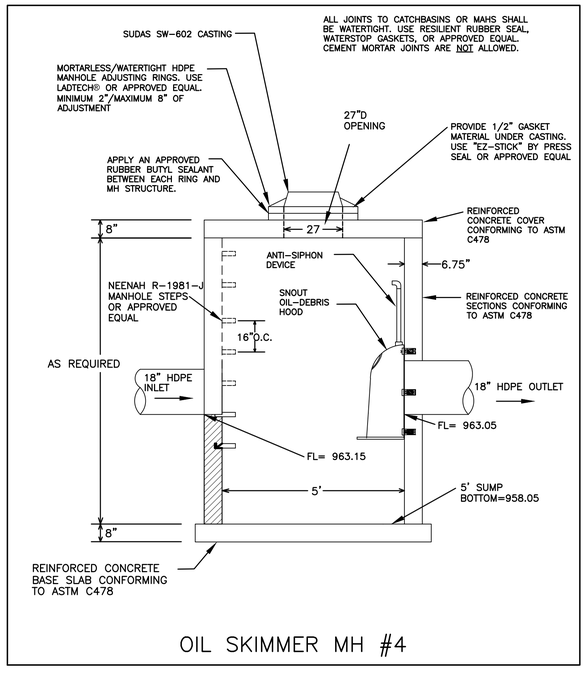
3. ALL JOINTS AND CONNECTIONS IN THE STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT. JOINTS BETWEEN CONCRETE STRUCTURES AND PIPING SHALL BE MADE WITH MECHANICAL JOINTS. USE APPROVED RESILIENT RUBBER SEALS OR WATERSTOP GASKETS IN ORDER TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, AND OTHER STRUCTURES IN CONFORMANCE WITH ASTM C923 OR AS OTHERWISE PERMITTED BY THE LOCAL AUTHORITY. CEMENT MORTAR JOINTS ARE PERMITTED ONLY FOR REPAIRS OR CONNECTIONS TO EXISTING LINES HAVING SUCH JOINTS, OR UNLESS OTHERWISE PERMITTED BY THE ADMINISTRATIVE AUTHORITY.
4. THE BUILDING SEWER STARTS 2 FEET OUTSIDE OF THE BUILDING. SEE UNIFORM PLUMBING CODE (UPC) PART 715.1. MATERIAL INSTALLED WITHIN 2 FEET OF THE BUILDING MUST BE OF MATERIALS APPROVED FOR USE INSIDE OF OR WITHIN THE BUILDING.
5. PVC PIPE (OUTSIDE OF THE BUILDING): USE SOLID-CORE, SDR-35, ASTM D3034 POLYVINYL CHLORIDE (PVC) PIPE FOR DESIGNATED PVC STORM SEWER SERVICES 4 TO 15-INCHES IN DIAMETER OUTSIDE OF THE BUILDING. USE SOLID-CORE, SDR-35, ASTM F679 POLYVINYL CHLORIDE (PVC) PIPE FOR DESIGNATED PVC STORM SEWER SERVICES 18 TO 27-INCHES IN DIAMETER OUTSIDE OF THE BUILDING. JOINTS FOR ALL STORM SEWER SHALL HAVE PUSH-ON JOINTS WITH ELASTOMERIC GASKETS. USE OF SOLVENT CEMENT JOINTS IS ALLOWED FOR BUILDING SERVICES. SOLVENT CEMENT JOINTS IN PVC PIPE MUST INCLUDE USE OF A PRIMER WHICH IS OF CONTRASTING COLOR TO THE PIPE AND CEMENT IN ACCORDANCE WITH UNIFORM PLUMBING CODE (UPC), PART 605.2.2. PIPE WITH SOLVENT CEMENT JOINTS SHALL BE JOINED WITH PVC CEMENT CONFORMING TO ASTM D2564. LAY ALL PVC PIPE ON A CONTINUOUS GRANULAR BED. INSTALLATION MUST COMPLY WITH ASTM D2321.
6. CLEANOUTS: INSTALL CLEANOUTS ON ALL ROOF DRAINS. CLEANOUTS SHALL BE INSTALLED AT EVERY WYE, SWEEP, AND BEND. INSTALL CLEANOUTS ON ALL STORM SEWER SERVICES IN ACCORDANCE WITH UPC PART 719.0 AND 1101.13. THE DISTANCE BETWEEN CLEANOUTS IN HORIZONTAL PIPING SHALL NOT EXCEED 100 FEET FOR PIPES 10-INCHES AND UNDER IN SIZE. CLEANOUTS SHALL BE OF THE SAME NOMINAL SIZE AS THE PIPES THEY SERVE. INSTALL A METER BOX FRAME AND SOLID LID (NEENAH R-1914-A, OR APPROVED EQUAL) OVER ALL CLEANOUTS. PROVIDE CLEANOUTS AT THE BASE OF THE ROOF LEADER CONNECTIONS AT THE GAS ISLAND PUMP STATIONS.
7. FITTINGS: PROVIDE DIRECTIONAL FITTINGS FOR THE STORM PIPING SERVING THE GAS ISLAND PUMP STATIONS. ALL CHANGES IN DIRECTION OF FLOW IN DRAIN PIPING SHALL BE MADE BY THE APPROPRIATE USE OF 45 DEGREE WYES, LONG OR SHORT SWEEP QUARTER BENDS, SIXTH, EIGHTH, OR SIXTEENTH BENDS, OR BY A COMBINATION OF THESE OR OTHER EQUIVALENT FITTINGS.
8. RCP: REINFORCED CONCRETE PIPE (RCP) AND FITTINGS SHALL CONFORM TO ASTM C76, DESIGN C, WITH CIRCULAR REINFORCING FOR THE CLASS OF PIPE SPECIFIED. USE CLASS IV RCP FOR PIPES 21" AND LARGER. USE CLASS V RCP FOR PIPES 18" AND SMALLER. JOINTS SHALL BE MADE UP OF CONCRETE SURFACES WITH A GROOVE ON THE SPIGOT FOR AN O-RING RUBBER GASKET (ALSO REFERRED TO AS A CONFINED O-RING TYPE JOINT) IN ACCORDANCE WITH ASTM C361. THESE JOINTS ARE NORMALLY USED IN GRAVITY SEWERS WHERE EXCEPTIONAL TIGHTNESS IS REQUIRED. THIS TYPE OF JOINT PROVIDES EXCELLENT INHERENT WATER TIGHTNESS IN BOTH THE STRAIGHT AND DEFLECTED POSITION AND MEETS ALL THE JOINT REQUIREMENTS OF ASTM C443.
9. RC APRONS: INSTALL A REINFORCED CONCRETE APRON ON THE FREE END OF ALL DAYLIGHTED RCP STORM SEWER PIPES. TIE THE LAST THREE SECTIONS (INCLUDING APRON) OF ALL DAYLIGHTED RCP STORM SEWER WITH A MINIMUM OF TWO TIE BOLT FASTENERS PER JOINT. THIS REQUIREMENT APPLIES TO BOTH UPSTREAM AND DOWNSTREAM PIPE INLETS AND OUTLETS. FOR CONCRETE CULVERTS, TIE ALL JOINTS. TIES TO BE USED ONLY TO HOLD THE PIPE SECTIONS TOGETHER, NOT FOR PULLING THE SECTIONS TIGHT. NUTS AND WASHERS ARE NOT REQUIRED ON INSIDE OF 675 MM (27 INCH) OR LESS DIAMETER PIPES.
10. GRATES ON HORIZONTAL PIPES: INSTALL SAFETY-TRASH GRATES ON ALL HORIZONTAL INLETS/OUTLETS GREATER THAN 6 INCHES IN DIAMETER. THE GRATES SHALL BE PLACED SO THAT THE RODS OR BARS ARE NOT MORE THAN 3 INCHES DOWNSTREAM OF THE INLET/OUTLET. RODS OR BARS SHALL BE SPACED SO THAT THE OPENINGS DO NOT PERMIT THE PASSAGE OF A 6-INCH SPHERE.
11. TESTING: TEST ALL PORTIONS OF STORM SEWER THAT ARE WITHIN 10 FEET OF BUILDINGS, WITHIN 10 FEET OF BURIED WATER LINES, WITHIN 50 FEET OF WATER WELLS, OR THAT PASS THROUGH SOIL OR WATER IDENTIFIED AS BEING CONTAMINATED IN ACCORDANCE WITH UPC PART 1107.0. TEST ALL FLEXIBLE STORM SEWER LINES FOR DEFLECTION AFTER THE SEWER LINE HAS BEEN INSTALLED AND BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE TEST FAILS, MAKE NECESSARY REPAIRS AND RETEST.
12. DRAINTILE: PERFORATED UNDER-DRAINS SHALL BE SLOTTED SINGLE WALL CORRUGATED HDPE. INSTALL DRAINTILE WITH HIGH PERMITTIVITY CIRCULAR KNIT POLYMERIC FILAMENT FILTER SOCK PER ASTM D6707-01.
13. USE SUDAS STD. SW-603 TYPE R CASTING WITH CURB INLET GRATE, OR APPROVED EQUAL, ON CB#3, CB#5, AND CB#6. CASTING SHALL INCLUDE THE "DUMP NO WASTE. DRAINS TO FRESH WATER." ENVIRONMENTAL NOTICE..
14. USE SUDAS STD. SW-602 CASTING WITH SELF-SEALING, SOLID, TYPE E LID, OR APPROVED EQUAL, ON ALL STORM SEWER MAINTENANCE HOLES. COVERS SHALL BEAR THE "STORM SEWER" LABEL.
15. TRACE WIRE: INSTALL LOCATING WIRES ON ALL CONDUCTIVE AND NON-CONDUCTIVE STORM SEWER, SANITARY SEWER, AND WATER LINES IN ACCORDANCE WITH THE MRWA TRACE WIRE SPECIFICATION GUIDE AND DETAILS (WWW.MRWA.COM/PDF/TRACERWIRESPECGUIDEFINALWEB9.PDF). USE #12 HDPE-INSULATED COPPER-CLAD STEEL WIRE RATED FOR UNDERGROUND SERVICE. THE COLOR OF THE INSULATING JACKET SHALL BE AS FOLLOWS: GROUND=RED, STORM SEWER=GREEN, SANITARY SEWER=GREEN, AND WATER LINES=BLUE. INSTALL THE WIRE ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. FASTEN THE WIRE TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS. DO NOT WRAP THE TRACE WIRE AROUND THE CORRESPONDING UTILITY. DO NOT CONNECT THE TRACE WIRE TO EXISTING CONDUCTIVE UTILITIES. USE COPPERHEAD DRYCONN 3-WAY OR LOCKING SNAKE BITE CONNECTORS RATED FOR UNDERGROUND DIRECT BURY APPLICATIONS OR APPROVED EQUAL AT ALL CROSSINGS OR SERVICE CONNECTIONS. TWIST ON CONNECTORS ARE NOT ALLOWED. TRACE WIRE MUST BE PROPERLY GROUNDED AT ALL DEAD ENDS AND SERVICES. INSTALL GRADE-LEVEL/IN-GROUND TRACE WIRE ACCESS BOXES AND DRIVE-IN MAGNESIUM GROUNDING ANODES AT ALL DEAD ENDS, SERVICES, AND FIRE HYDRANTS. TRACE WIRE ACCESS BOXES SHALL BE COLOR CODED AS FOLLOWS: STORM SEWER=GREEN, SANITARY SEWER=GREEN, AND WATER LINES=BLUE.
16. DETECTABLE WARNING TAPE: INSTALL DETECTABLE UNDERGROUND WARNING TAPE DIRECTLY ABOVE ALL UNDERGROUND UTILITIES AT A DEPTH OF 457 MM (18 INCHES) BELOW FINISHED GRADE, UNLESS OTHERWISE INDICATED. UNDERGROUND WARNING TAPE SHALL BE 3-INCHES WIDE WITH A MINIMUM 5.0 MIL OVERALL THICKNESS. TAPE SHALL BE MANUFACTURED USING A 0.8 MIL CLEAR VIRGIN POLYPROPYLENE FILM, REVERSE PRINTED AND LAMINATED TO A 0.35 MIL SOLID ALUMINUM FOIL CORE, AND THEN LAMINATED TO A 3.75 MIL CLEAR VIRGIN POLYETHYLENE FILM. THE ALUMINUM BACKING MAKES UNDERGROUND ASSETS EASY TO FIND USING A NON-FERROUS LOCATOR. TAPE SHALL BE PRINTED USING A DIAGONALLY STRIPED DESIGN FOR MAXIMUM VISIBILITY AND MEET THE APWA COLOR-CODE STANDARD FOR IDENTIFICATION OF BURIED UTILITIES. USE PRO-LINE SAFETY PRODUCTS (WWW.PROLINESAFETY.COM) DETECTABLE MARKING TAPE OR APPROVED EQUAL.
17. THE MINIMUM DEPTH OF COVER FOR BUILDING AND CANOPY ROOF DRAIN LEADERS WITHOUT INSULATION IS 4 FEET. INSULATE ROOF DRAIN LEADERS AT LOCATIONS WHERE THE DEPTH OF COVER IS LESS THAN 4 FEET. PROVIDE A MINIMUM INSULATION THICKNESS OF 2 INCHES. THE INSULATION MUST BE AT LEAST 4 FEET WIDE AND CENTERED ON THE PIPE. INSTALL THE INSULATION BOARDS 6 INCHES ABOVE THE TOPS OF THE PIPES ON MECHANICALLY COMPACTED AND LEVELED PIPE BEDDING MATERIAL. USE HIGH DENSITY, CLOSED CELL, RIGID BOARD MATERIAL EQUIVALENT TO DOW STYROFOAM HI-40 PLASTIC FOAM INSULATION.
18. INSTALL ALL PIPE WITH THE ASTM IDENTIFICATION NUMBERS ON THE TOP FOR INSPECTION. COMMENCE PIPE LAYING AT THE LOWEST POINT IN THE PROPOSED SEWER LINE. FIELD VERIFY THAT THERE IS POSITIVE DRAINAGE AT THE OUTFALL LOCATION. LAY THE PIPE WITH THE BELL END OR RECEIVING GROOVE END OF THE PIPE POINTING UPGRADE. WHEN CONNECTING TO AN EXISTING PIPE, UNCOVER THE EXISTING PIPE IN ORDER TO ALLOW ANY ADJUSTMENTS IN THE PROPOSED LINE AND GRADE BEFORE LAYING ANY PIPE. DO NOT LAY PIPES IN WATER OR WHEN THE TRENCH CONDITIONS ARE UNSUITABLE FOR SUCH WORK.
19. CLEAN SEDIMENT AND DEBRIS FROM SEWERS, SUMPS AND STORMWATER BASINS PRIOR TO FINAL OWNER ACCEPTANCE.
20. TELEVISE ALL EXISTING LINES PRIOR TO CONNECTION.
21. INSTALL FINGER DRAINS AT EACH AND EVERY PROPOSED CATCHBASIN (SEE DETAIL). FINGER DRAINS AROUND CATCH BASIN INLETS SHALL NOT BE INSTALLED BELOW THE CROWN OF THE STORM DRAIN PIPING.

HDPE REQUIREMENTS

1. INSTALL DUAL-WALL, SMOOTH INTERIOR, CORRUGATED HIGH-DENSITY POLYETHYLENE (HDPE) PIPE AT LOCATIONS INDICATED ON THE PLAN. HIGH-DENSITY POLYETHYLENE (HDPE) STORM SEWERS MUST MEET ASTM F714.
2. DUAL-WALL, SMOOTH INTERIOR, CORRUGATED HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M252 FOR PIPE SIZES 4-INCH TO 10-INCH DIAMETER. DUAL-WALL, SMOOTH INTERIOR, CORRUGATED HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2306 (VIRGIN PE MATERIAL) FOR PIPE SIZES 12-INCH TO 60-INCH DIAMETER.
3. ALL FITTINGS MUST COMPLY WITH ASTM STANDARD D3212.
4. WATER-TIGHT JOINTS MUST BE USED AT ALL CONNECTIONS INCLUDING STRUCTURES IN CONFORMANCE WITH ASTM F2510.
5. HDPE PIPES MUST BE LISTED AND LABELED.
6. HDPE PIPES MUST BE INSTALLED WITH A MINIMUM 10-FEET SEPARATION FROM WATER PIPING AND MAY NOT CROSS ABOVE WATER SERVICE LINES (SEE UPC SECTION 720.1).
7. HDPE PIPES MUST NOT BE INSTALLED WITHIN 10 FEET OF BUILDING. THE CONNECTION BETWEEN HDPE AND A DIFFERENT PIPE MATERIAL MUST BE MADE BY MEANS OF AN APPROVED TRANSITION COUPLING FOR THE SPECIFIC APPLICATION.
8. HDPE PIPE CONNECTIONS INTO ALL CONCRETE STRUCTURES MUST BE MADE WITH WATER TIGHT MATERIALS UTILIZING NYOPLAST "MANHOLE ADAPTORS" ALONG WITH PRESS-SEAL OR KOR-N-SEAL "WATERTIGHT CONNECTOR", CAST-A-SEAL "PRECAST WATERTIGHT CONNECTOR", OR APPROVED EQUALS. WHERE THE ALIGNMENT PRECLUDES THE USE OF THE ABOVE APPROVED WATERTIGHT METHODS, CONSEAL 231 WATERSTOP SEALANT, OR APPROVED EQUAL WILL ONLY BE ALLOWED AS APPROVED BY THE ADMINISTRATIVE AUTHORITY.
9. HDPE PIPE INSTALLATION MUST BE OPEN-TRENCH ON A CONTINUOUS GRANULAR BED PER ASTM D2321 AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. ALL SECTIONS OF THE CORRUGATED HDPE PIPE SHALL BE COUPLED IN ORDER TO PROVIDE WATER TIGHT JOINTS.
10. PERFORM DEFLECTION TESTS ON ALL HDPE PIPE AFTER THE SEWER LINES HAVE BEEN INSTALLED AND BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE TEST FAILS, MAKE NECESSARY REPAIRS AND PERFORM THE TEST AGAIN UNTIL ACCEPTABLE. SUPPLY THE MANDREL FOR DEFLECTION TESTING. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE BALL OR MANDREL SHALL BE CLEARLY STAMPED WITH THE DIAMETER. PERFORM THE TESTS WITHOUT MECHANICAL PULLING DEVICES.

UTILITY NOTES

1. 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.
2. FIELD VERIFY ELEVATIONS AND LOCATIONS OF ALL CONNECTIONS TO EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
3. PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETE.
4. BACKFILL ALL UTILITY TRENCHES ACCORDING TO THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS. MAINTAIN A MINIMUM OF 5.5' COVER OVER ALL WATERMAINS.
4. THE BUILDING SEWER STARTS 2 FEET OUTSIDE OF THE BUILDING. SEE UNIFORM PLUMBING CODE (UPC) PART 715.1. MATERIAL INSTALLED WITHIN 2 FEET OF THE BUILDING MUST BE OF MATERIALS APPROVED FOR USE INSIDE OF OR WITHIN THE BUILDING. REFER TO MEP PLANS FOR DESIGN FROM 2' OUTSIDE OF BUILDING FACE.
5. ADJUST ALL MANHOLES AND INTAKES TO FINISHED GRADES.
6. ALL SANITARY SEWER AND WATER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY'S PLUMBING CODE.
7. 18" MINIMUM VERTICAL CLEARANCE BETWEEN STORM SEWER AND SANITARY SEWER PIPES. 18" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND WATER MAIN.
8. MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER MAINS.
9. 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 CONTRACTORS 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.
10. ALL WATERMAIN WORK, PUBLIC OR PRIVATE SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS
11. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
12. 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.
13. OWNER IS RESPONSIBLE FOR MAINTENANCE OF ~~PRIVATE RETENTION FACILITIES AND~~ PRIVATE UTILITIES.
15. 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.



OIL SKIMMER MH #4

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

STORM SEWER NOTES & DETAILS

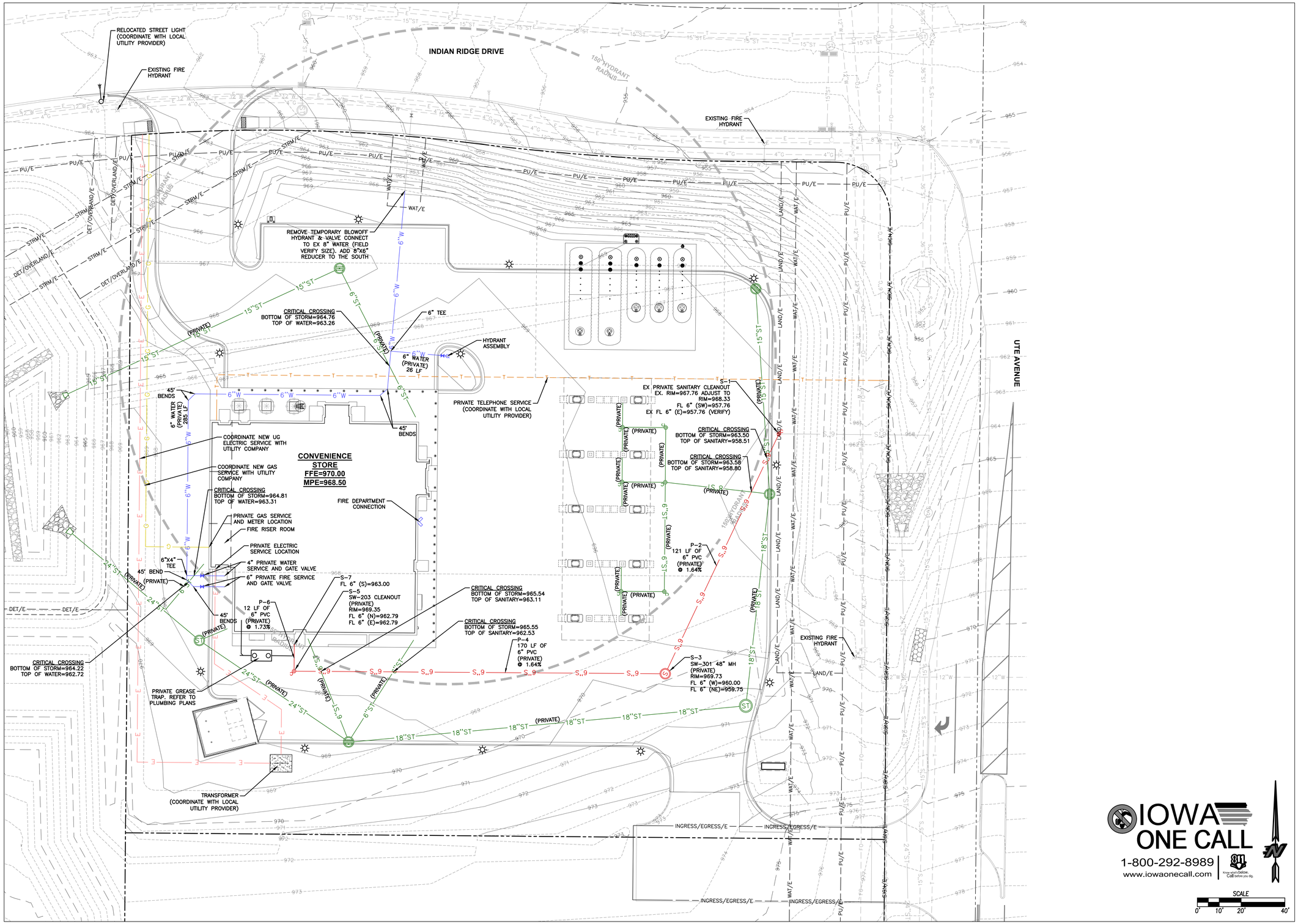
LH G3 STORE
WITH 10 MPD

CTH 22/UTE AVE
WAUKEE, IOWA
LAT 41.56572, LONG -93.88148

#	DATE	DESCRIPTION
	06MAY25	CITY SUBMITTAL #1
	20MAY25	CITY SUBMITTAL #2
	10JUN25	CITY SUBMITTAL #3
	30JUN25	CITY SUBMITTAL #4
	15JULY25	CITY SUBMITTAL #5

DRAWN BY	KMW
SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	30JUN25
SHEET	C301

DRAWING PHASE



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1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

SCALE
0' 10' 20' 40'

KWIK TRIP

KWIK STAR

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1626 OAK STREET
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URBANDALE, IA 50322
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UTILITY PLAN

LH G3 STORE
WITH 10 MPD

CTH 22/UTE AVE
WAUKEE, IOWA
LAT 41.56572, LONG -93.88148

#	DATE	DESCRIPTION
	06MAY25	CITY SUBMITTAL #1
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SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	30JUN25
SHEET	C400

DRAWING PHASE

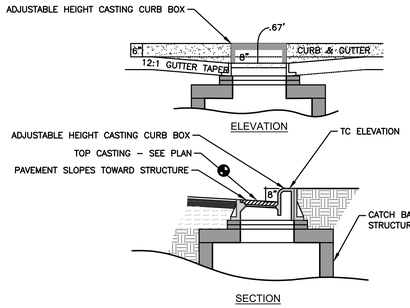
GENERAL NOTES

1. EXISTING BOUNDARY, LOCATION, TOPOGRAPHIC, AND UTILITY INFORMATION SHOWN ON THIS PLAN IS FROM A FIELD SURVEY BY CIVIL DESIGN ADVANTAGE. DATED 03/21/2023. THE ENGINEER IS NOT RESPONSIBLE FOR INACCURACIES RELATED TO THE SURVEY INFORMATION.
2. PERFORM ALL CONSTRUCTION WORK IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.
3. COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS. COMPLY WITH THE WORK SAFETY PRACTICES SPECIFIED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). OSHA PROHIBITS ENTRY INTO "CONFINED SPACES," SUCH AS MANHOLES AND INLETS (SEE 29 CFR SECTION 1910.146), WITHOUT UNDERTAKING CERTAIN SPECIFIC PRACTICES AND PROCEDURES. PERFORM EXCAVATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF O.S.H.A. 29 CFR, PART 1926, SUBPART P, EXCAVATIONS. TRENCHING STANDARDS REQUIRE PROTECTIVE SYSTEMS ON TRENCHES DEEPER THAN 5 FEET. BENCH OR SLOPE SIDEWALLS IN ORDER TO PROVIDE SAFE WORKING CONDITIONS AND STABILITY FOR THE PLACEMENT OF ENGINEERED FILL. DO NOT EXPOSE WORKERS TO THE DANGERS OF BEING STRUCK BY MATERIAL AND EQUIPMENT. KEEP SOIL AND OTHER MATERIALS AT LEAST 2 FEET FROM THE EDGE OF ANY TRENCHES. TRENCHES MUST BE INSPECTED BY A COMPETENT INDIVIDUAL, BE FREE OF STANDING WATER AND ATMOSPHERIC HAZARDS, AND HAVE A SAFE MEANS OF ENTERING AND EXITING BEFORE ALLOWING A WORKER TO ENTER. THE CONTRACTOR IS RESPONSIBLE FOR NAMING THE "COMPETENT INDIVIDUAL" IN ACCORDANCE WITH CFR 1926.6. SLOPING OR BENCHING FOR EXCAVATIONS GREATER THAN 20 FEET DEEP MUST BE APPROVED BY A REGISTERED PROFESSIONAL ENGINEER (WWW.OSHA.GOV).
4. SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR, WHO IS ALSO SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, AND FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
5. THE ENGINEER SHALL NOT HAVE CONTROL OVER, CHARGE OF, OR RESPONSIBILITY FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE ENGINEER'S REVIEW SHALL NOT CONSTITUTE APPROVAL OF SAFETY PRECAUTIONS OR OF ANY CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES.
6. EXAMINE ALL LOCAL CONDITIONS AT THE SITE, AND ASSUME RESPONSIBILITY AS TO THE GRADES, CONTOURS, AND THE CHARACTER OF THE EARTH, EXISTING CONDITIONS, AND OTHER ITEMS THAT MAY BE ENCOUNTERED DURING EXCAVATION WORK ABOVE OR BELOW THE EXISTING GRADES. REVIEW THE DRAWINGS, SPECIFICATIONS, AND GEOTECHNICAL REPORT CONCERNING THIS WORK AND BECOME FAMILIAR WITH THE ANTICIPATED SITE CONDITIONS.
7. REFER TO THE ARCHITECTURAL PLANS FOR BUILDING AND STOOP DIMENSIONS, SITE LAYOUT AND DIMENSIONS, PAVEMENT SECTIONS AND DETAILS, STRIPING, AND OTHER SITE FEATURES.
8. A LICENSED SURVEYOR SHALL PERFORM CONSTRUCTION STAKING. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE STAKING. VERIFY ALL PLAN AND DETAIL DIMENSIONS PRIOR TO CONSTRUCTION STAKING. STAKE THE LIMITS OF WALKWAYS AND CURBING PRIOR TO VALVEBOX, MAINTENANCE HOLE, AND CATCHBASIN INSTALLATION. ADJUST VALVEBOX AND MAINTENANCE HOLE LOCATIONS IN ORDER TO AVOID CONFLICTS WITH CURB AND GUTTER. ADJUST CATCHBASIN LOCATIONS IN ORDER TO ALIGN PROPERLY WITH CURB AND GUTTER.
9. PROVIDE TEMPORARY FENCES, BARRICADES, COVERINGS, AND OTHER PROTECTIONS IN ORDER TO PRESERVE EXISTING ITEMS TO REMAIN, AND TO PREVENT INJURY OR DAMAGE TO PERSON OR PROPERTY.
10. PROVIDE ALL TRAFFIC CONTROL REQUIRED IN ORDER TO CONSTRUCT THE PROPOSED IMPROVEMENTS. TRAFFIC CONTROL DESIGN AND ASSOCIATED GOVERNMENT APPROVALS ARE THE RESPONSIBILITY OF THE CONTRACTOR. COMPLY WITH LOCAL AUTHORITIES, THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD), AND THE IOWA DEPARTMENT OF TRANSPORTATION OFFICE OF DESIGN DESIGN MANUAL. IN THE TEMPORARY TRAFFIC CONTROL ZONE AFFECTS THE MOVEMENT OF PEDESTRIANS, PROVIDE ADEQUATE TEMPORARY PEDESTRIAN ACCESS AND WALKWAYS. IF THE TEMPORARY TRAFFIC CONTROL ZONE AFFECTS AN ACCESSIBLE AND DETECTABLE PEDESTRIAN FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE IN ACCORDANCE WITH THE PROVISIONS FOR PEDESTRIAN AND WORKER SAFETY CONTAINED IN PART 6 OF THE MUTCD.
11. CONNECT TO EXISTING SANITARY SEWER MH'S BY COREDRILLING. CONNECT TO EXISTING STORM SEWER MH'S BY EITHER SAWCUTTING OR COREDRILLING. USE SAWS OR DRILLS PROVIDING MINIMUM REACTION TO THE BLADE. MEET ALL CITY STANDARDS AND SPECIFICATIONS FOR THE THE CONNECTION. RECONSTRUCT INVERTS AFTER INSTALLATION. USE WATER STOP GASKETS IN ORDER TO PROVIDE WATERTIGHT SEALS WHEN PENETRATING A STRUCTURE WALL WITH A PIPE. TAKE MEASUREMENTS BEFORE BEGINNING CONSTRUCTION TO ENSURE THAT SERVICE CONNECTIONS DO NOT CUT INTO MAINTENANCE ACCESS STRUCTURE JOINTS OR PIPE BARREL JOINTS.
12. COMPLETELY REMOVE EXISTING CONCRETE AND MASONRY STRUCTURES THAT ARE LOCATED WITHIN THE PROPOSED BUILDING AND PAVEMENT EXPANSION AREAS. ALL OTHER EXISTING SEWER AND WATERMAIN PIPES THAT ARE TO BE ABANDONED SHALL EITHER BE REMOVED, OR COMPLETELY FILLED WITH SAND OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) ALSO KNOWN AS FLOWABLE CONCRETE FILL. BULKHEAD ENDS OF THE PIPE SEGMENT TO BE DECOMMISSIONED WITH CONCRETE. ALL OTHER EXISTING SANITARY SEWER AND STORM SEWER STRUCTURES TO BE ABANDONED IN PLACE SHALL BE ABANDONED AS FOLLOWS: (1) REMOVE CASTINGS, RINGS, AND TOP SECTIONS, (2) BULKHEAD ANY PIPE OPENINGS, (3) BREAK TWO 4–INCH DIAMETER HOLES IN THE BARREL AT THE BOTTOM OF THE STRUCTURES FOR DRAINAGE AND COVER THE HOLES WITH GEOTEXTILE FILTER FABRIC, AND (4) FILL THE STRUCTURES WITH SAND OR CLSM.
13. TESTING AND INSPECTIONS: COORDINATE TESTING AND INSPECTION WITH THE STATE HEALTH DEPARTMENT AND THE CITY PUBLIC WORKS DEPARTMENT. NO DRAINAGE OR PLUMBING WORK MAY BE COVERED PRIOR TO COMPLETING THE REQUIRED TESTS AND INSPECTIONS.
14. COORDINATE BUILDING UTILITY CONNECTION LOCATIONS AT 2 FT. OUT FROM THE PROPOSED BUILDING WITH THE INTERIOR PLUMBING CONTRACTOR PRIOR TO CONSTRUCTION. VERIFY WATER AND SEWER SERVICE LOCATIONS, SIZES, AND ELEVATIONS WITH THE MECHANICAL ENGINEER PRIOR TO CONSTRUCTION. COORDINATE CONSTRUCTION AND CONNECTIONS WITH THE MECHANICAL CONTRACTOR.
15. THE SUBSURFACE UTILITY INFORMATION SHOWN ON THIS PLAN IS UTILITY QUALITY LEVEL C. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38–02, ENTITLED "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA" BY THE FHA.
16. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN ARE FROM RECORD INFORMATION. THE ENGINEER DOES NOT GUARANTEE THAT ALL EXISTING UTILITIES ARE SHOWN OR, IF SHOWN, EXIST IN THE LOCATIONS INDICATED ON THE PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE FINAL VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES (INCLUDING WATER AND SEWER LINES AND APPURTENANCES). NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
17. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL UTILITY LOCATES. CONTACT UTILITY COMPANIES FOR LOCATIONS OF ALL PUBLIC AND PRIVATE UTILITIES WITHIN THE WORK AREA PRIOR TO BEGINNING CONSTRUCTION. CONTACT IOWA ONE CALL AT 1–800–292–8989 FOR EXACT LOCATIONS OF EXISTING UTILITIES AT LEAST 72 HOURS (NOT INCLUDING WEEKENDS AND HOLIDAYS) BEFORE BEGINNING ANY CONSTRUCTION. OBTAIN TICKET NUMBER AND MEET WITH REPRESENTATIVES OF THE VARIOUS UTILITIES AT THE SITE. PROVIDE THE OWNER WITH THE TICKET NUMBER INFORMATION. ONE CALL IS A FREE SERVICE THAT LOCATES MUNICIPAL AND UTILITY COMPANY LINES, BUT DOES NOT LOCATE PRIVATE UTILITY LINES. USE AN INDEPENDENT LOCATOR SERVICE OR OTHER MEANS IN ORDER TO OBTAIN LOCATIONS OF PRIVATE UTILITY LINES INCLUDING, BUT NOT LIMITED TO, UNDERGROUND ELECTRIC CABLES, TELEPHONE, TV, AND LAWN SPRINKLER LINES.
18. POTHOLE TO VERIFY THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES AT A SUFFICIENT NUMBER OF LOCATIONS IN ORDER TO ASSURE THAT NO CONFLICT WITH THE PROPOSED WORK EXISTS AND THAT SUFFICIENT CLEARANCE IS AVAILABLE.
19. WHERE EXISTING GAS, ELECTRIC, CABLE, OR TELEPHONE UTILITIES CONFLICT WITH THE WORK, COORDINATE THE ABANDONMENT, RELOCATION, OFFSET, OR SUPPORT OF THE EXISTING UTILITIES WITH THE APPROPRIATE LOCAL UTILITY COMPANIES. COORDINATE NEW GAS METER AND GAS LINE INSTALLATION, ELECTRIC METER AND ELECTRIC SERVICE INSTALLATION, CABLE SERVICE, AND TELEPHONE SERVICE INSTALLATION WITH THE LOCAL UTILITY COMPANIES.
20. WHEN WORKING NEAR EXISTING TELEPHONE OR ELECTRIC POLES, BRACE THE POLES FOR SUPPORT. WHEN WORKING AROUND EXISTING UNDERGROUND UTILITIES THAT BECOME EXPOSED, PROVIDE SUFFICIENT SUPPORT IN ORDER TO PREVENT EXCESSIVE STRESS ON THE EXISTING PIPING. THE LOCATION AND PRESERVATION OF EXISTING UNDERGROUND UTILITIES IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
21. TEMPORARY SUPPORT SYSTEMS ARE THE RESPONSIBILITY OF THE CONTRACTOR, WHO IS ALSO SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, AND FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE TEMPORARY SUPPORT SYSTEMS. TEMPORARY SUPPORT SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO, SHORING, SHEETING, BRACING, ANCHORAGES, EXCAVATION SUPPORT WALLS, DIRECTIONAL BORING, AUGER JACKING, SOIL STABILIZATION, AND OTHER METHODS OF PROTECTING EXISTING IMPROVEMENTS.
22. ARRANGE FOR AND SECURE SUITABLE DISPOSAL AREAS OFF–SITE. DISPOSE OF ALL EXCESS SOIL, WASTE MATERIAL, DEBRIS, AND ALL MATERIALS NOT DESIGNATED FOR SALVAGE. WASTE MATERIAL AND DEBRIS INCLUDES TREES, STUMPS, PIPE, CONCRETE, ASPHALTIC CONCRETE, CANS, OR OTHER WASTE MATERIAL FROM THE CONSTRUCTION OPERATIONS. OBTAIN THE RIGHTS TO ANY WASTE AREA FOR DISPOSAL OF UNSUITABLE OR SURPLUS MATERIAL EITHER SHOWN OR NOT SHOWN ON THE PLANS. ALL WORK IN DISPOSING OF SUCH MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THE WORK. ALL DISPOSAL MUST CONFORM TO APPLICABLE SOLID WASTE DISPOSAL PERMIT REGULATIONS. OBTAIN ALL NECESSARY PERMITS AT NO COST TO THE OWNER.
23. STORE AND PROTECT EXISTING SITE FEATURES THAT NEED TO BE REMOVED AND REPLACED IN CONNECTION WITH THE WORK. REPLACE DAMAGED OR STOLEN SITE FEATURES AT NO ADDITIONAL COST TO THE OWNER.
24. STRAIGHT LINE SAW–CUT EXISTING BITUMINOUS OR CONCRETE SURFACING AT THE PERIMETER OF PAVEMENT REMOVAL AREAS. USE SAWS THAT PROVIDE WATER TO THE BLADE. DO NOT ALLOW THE SLURRY PRODUCED BY THIS PROCESS TO BE TRACKED OUTSIDE OF THE IMMEDIATE WORK AREA OR DISCHARGED INTO THE SEWER SYSTEM. TACK AND MATCH ALL CONNECTIONS TO EXISTING BITUMINOUS PAVEMENT.
25. RELOCATE OVERHEAD POWER, TELEPHONE, AND CABLE LINES AS REQUIRED. SEAL AND REPORT ANY EXISTING UNUSED ON–SITE WELLS AND SEPTIC SYSTEMS.
26. ALL MATERIALS REQUIRED FOR THIS WORK SHALL BE NEW MATERIAL CONFORMING TO THE REQUIREMENTS FOR CLASS, KIND, GRADE, SIZE, QUALITY, AND OTHER DETAILS SPECIFIED HEREIN OR AS SHOWN ON THE PLANS. DO NOT USE RECYCLED OR SALVAGED AGGREGATE, ASPHALTIC PAVEMENT, CRUSHED CONCRETE, OR SCRAP SHINGLES. UNLESS OTHERWISE INDICATED, THE CONTRACTOR SHALL FURNISH ALL REQUIRED MATERIALS AND LABOR IN ORDER TO PERFORM THE CONSTRUCTION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND REGULATORY AGENCIES.
27. RECONSTRUCT DRIVEWAYS AND PATCH STREET TO MATCH EXISTING PAVEMENT SECTION AND GRADE. SOD RIGHT–OF–WAY. RESTORE THE PUBLIC RIGHT–OF–WAY AT TEMPORARY CONSTRUCTION ENTRANCE LOCATIONS. REPLACE ANY CONCRETE CURB AND GUTTER, BITUMINOUS PAVEMENT, SIDEWALK, OR VEGETATIVE COVER DAMAGED BY THE CONSTRUCTION ACTIVITY. RESTORE DAMAGED TURF WITH SOD WITHIN THE PUBLIC RIGHT–OF–WAY. THE WORK AREA SHOWN IS GENERAL AND MAY NEED TO BE ADJUSTED IN THE FIELD.
28. CUT TURF EDGES IN ORDER TO ALLOW FOR A UNIFORM STRAIGHT EDGE AT LOCATIONS WHERE NEW SOD MEETS EXISTING TURF. NO JAGGED OR UNEVEN EDGES ARE ALLOWED. REMOVE TOPSOIL AS REQUIRED AT JOINTS BETWEEN EXISTING AND NEW TURF IN ORDER TO ALLOW THE SURFACE OF THE NEW SOD TO BE FLUSH WITH THE EXISTING.
29. DOCUMENT EXISTING CONDITIONS (PHOTOGRAPHS, VIDEO, FIELD SURVEY, ETC.) IN ORDER TO ENABLE RESTORATION TO MATCH EXISTING CONDITIONS AND IN ORDER TO ENSURE THAT RESTORED AREAS HAVE POSITIVE DRAINAGE SIMILAR TO EXISTING CONDITIONS.
30. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES. PROVIDE AND MAINTAIN TEMPORARY DRAINAGE THROUGHOUT CONSTRUCTION UNTIL THE PERMANENT DRAINAGE SYSTEM AND STRUCTURES ARE IN PLACE AND OPERATIONAL. INSTALL TEMPORARY DITCHES, PIPING, PUMPS, OR OTHER MEANS AS NECESSARY IN ORDER TO INSURE PROPER DRAINAGE AT ALL TIMES. PROVIDE LOW POINTS AT BUILDING PADS OR ROADWAYS WITH POSITIVE OUTFALLS. DO NOT BLOCK DRAINAGE FROM OR DIRECT EXCESS DRAINAGE TO ADJACENT PROPERTY.
31. PROTECT ALL STRUCTURES AND LANDSCAPING NOT LABELED FOR DEMOLITION FROM DAMAGE DURING CONSTRUCTION. PROVIDE PROTECTIVE COVERINGS AND ENCLOSURES AS NECESSARY TO PREVENT DAMAGE TO EXISTING WORK THAT IS TO REMAIN. EXISTING WORK TO REMAIN MAY INCLUDE ITEMS SUCH AS TREES, SHRUBS, LAWNS, SIDEWALKS, DRIVES, CURBS, UTILITIES, BUILDINGS AND/OR OTHER STRUCTURES ON OR ADJACENT TO THE SITE. PROVIDE TEMPORARY FENCES AND BARRICADES AS REQUIRED FOR THE SAFE AND PROPER EXECUTION OF THE WORK AND THE PROTECTION OF PERSONS AND PROPERTY. PROVIDE BUILDING SURVEYS AND SEISMIC MONITORING IN LOCATIONS WHERE DEMOLITION, EXCAVATION, UNDERPINNING, PILE DRIVING, COMPACTING, OR SIMILAR WORK IS TO BE PERFORMED ADJACENT TO OR IN THE VICINITY OF EXISTING STRUCTURES. RETURN ANY ON–SITE OR OFF–SITE AREAS DISTURBED DIRECTLY OR INDIRECTLY DUE TO CONSTRUCTION TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION.
32. PROTECT SUB GRADES FROM DAMAGE BY SURFACE WATER RUNOFF.
33. FULL DESIGN STRENGTH IS NOT AVAILABLE IN BITUMINOUS PAVEMENT AREAS UNTIL THE FINAL LIFT OF ASPHALT IS COMPACTED INTO PLACE. PROTECT PAVEMENT AREAS FROM OVERLOADING BY DELIVERY TRUCKS, CONSTRUCTION EQUIPMENT, AND OTHER VEHICLES.
34. WHEN SAWING OR DRILLING CONCRETE OR MASONRY, USE SAWS THAT PROVIDE WATER TO THE BLADE. DO NOT ALLOW THE SLURRY PRODUCED BY THIS PROCESS TO BE TRACKED OUTSIDE OF THE IMMEDIATE WORK AREA OR DISCHARGED INTO THE SEWER SYSTEM.
35. ADJUST ALL PUBLIC AND PRIVATE STRUCTURES INCLUDING CURB STOPS, VALVE BOXES, MAINTENANCE HOLE CASTINGS, CATCHBASIN CASTINGS, CLEANOUT COVERS, AND SIMILAR ITEMS TO FINISHED GRADE. COMPLY WITH THE REQUIREMENTS OF EACH STRUCTURE'S OWNER. STRUCTURES BEING RESET IN PAVED AREAS MUST MEET THE OWNER'S REQUIREMENTS FOR TRAFFIC LOADING.
36. GRADING FOR ALL SIDEWALKS AND ACCESSIBLE ROUTES, INCLUDING DRIVEWAY CROSSINGS, SHALL CONFORM TO CURRENT STATE AND FEDERAL AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IN ACCORDANCE WITH ADA SECTION 403.3, SLOPES SHALL NOT EXCEED EXCEED 2% CROSS SLOPE OR 5% IN THE DIRECTION OF TRAVEL. SIDEWALK ACCESS TO EXTERNAL BUILDING DOORS SHALL BE ADA COMPLIANT. ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION.
37. CURB RAMPS ON ACCESSIBLE ROUTES SHALL COMPLY WITH SECTIONS 405 AND 406 OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG).
38. ACCESSIBLE PARKING SPACES SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY COMPLYING WITH ADA SECTION 703.7.2.1 PAINTED IN THE CENTER OF THE PARKING SPACE, 4–FT. HIGH. HATCH HANDICAPPED ACCESS AISLES WITH WHITE 4–INCH WIDE PAINTED STRIPES 18–INCHES ON CENTER AND AT 45 DEGREE ANGLES TO THE STALLS.
39. INSTALL ALL PIPE WITH THE ASTM IDENTIFICATION NUMBERS ON THE TOP FOR INSPECTION. COMMENCE PIPE LAYING AT THE LOWEST POINT IN THE PROPOSED SEWER LINE. FIELD VERIFY THAT THERE IS POSITIVE DRAINAGE AT THE OUTFALL LOCATION. LAY THE PIPE WITH THE BELL END OR RECEIVING GROOVE END OF THE PIPE POINTING UPGRADE. WHEN CONNECTING TO AN EXISTING PIPE, UNCOVER THE EXISTING PIPE IN ORDER TO ALLOW ANY ADJUSTMENTS IN THE PROPOSED LINE AND GRADE BEFORE LAYING ANY PIPE. DO NOT LAY PIPES IN WATER OR WHEN THE TRENCH CONDITIONS ARE UNSUITABLE FOR SUCH WORK.
40. OBTAIN AND PAY FOR ALL PERMITS, TESTS, INSPECTIONS, ETC. REQUIRED BY AGENCIES THAT HAVE JURISDICTION OVER THE PROJECT INCLUDING THE NPDES PERMIT FROM THE STATE. THE CONTRACTOR IS RESPONSIBLE FOR ALL BONDS, LETTERS OF CREDIT, OR SURETIES RELATED TO THIS WORK. DO NOT EXECUTE AND INSPECT WORK IN ACCORDANCE WITH ALL LOCAL AND STATE CODES, RULES, ORDINANCES, OR REGULATIONS PERTAINING TO THE PARTICULAR TYPE OF WORK INVOLVED.
41. MEASURE PIPE LENGTHS FROM CENTER–OF–STRUCTURE TO CENTER–OF–STRUCTURE, OR TO THE END OF APRONS.
42. OBTAIN PERMITS FROM THE CITY FOR WORK IN THE PUBLIC RIGHT–OF–WAY.
43. REFER TO THE GEOTECHNICAL REPORT FOR SOILS EVALUATION AND RECOMMENDATIONS.
44. TEST BORING DATA SHOWN ON THE PLANS WERE ACCUMULATED FOR DESIGNING AND ESTIMATING PURPOSES. THEIR APPEARANCE ON THE PLAN DOES NOT CONSTITUTE A GUARANTEE THAT CONDITIONS OTHER THAN THOSE INDICATED WILL NOT BE ENCOUNTERED.
45. THE MINIMUM SIZE FOR ROOF DRAIN, BUILDING AND CANOPY ROOF DRAIN LEADERS WITHOUT INSULATION IS 4 FEET. INSULATE ROOF DRAIN LEADERS AT LOCATIONS WHERE THE DEPTH OF COVER IS LESS THAN 4 FEET. PROVIDE A MINIMUM INSULATION THICKNESS OF 2 INCHES. THE INSULATION MUST BE AT LEAST 4 FEET WIDE AND CENTERED ON THE PIPE. INSTALL THE INSULATION BOARDS 6 INCHES ABOVE THE TOPS OF THE PIPES ON MECHANICALLY COMPACTED AND LEVELED PIPE BEDDING MATERIAL. USE HIGH DENSITY, CLOSED CELL, RIGID BOARD MATERIAL EQUIVALENT TO DOW STYROFOAM HI–40 PLASTIC FOAM INSULATION.
46. INSULATE UTILITY LINES AT LOCATIONS INDICATED ON THE PLANS. PROVIDE A MINIMUM INSULATION THICKNESS OF 4 INCHES. THE INSULATION MUST BE AT LEAST 4 FEET WDE AND CENTERED ON THE PIPE. INSTALL THE INSULATION BOARDS 6 INCHES ABOVE THE TOPS OF THE PIPES ON MECHANICALLY COMPACTED AND LEVELED PIPE BEDDING MATERIAL. USE HIGH DENSITY, CLOSED CELL, RIGID BOARD MATERIAL EQUIVALENT TO DOW STYROFOAM HIGHLOAD 40 POLYSTYRENE INSULATION. INDIVIDUAL INSULATION BOARD DIMENSIONS TYPICALLY MEASURE 4' WIDE BY 8' LONG BY 2" THK.
47. CONSTRUCT SANITARY SEWER, WATERMAIN, AND STORM SEWER UTILITIES IN ACCORDANCE WITH STATE AND CITY REQUIREMENTS.
48. THESE PLANS, PREPARED BY CIVIL DESIGN ADVANTAGE, DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF CIVIL DESIGN ADVANTAGE'S REGISTERED PROFESSIONAL ENGINEER HEREON SHALL NOT EXTEND TO OR BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
49. EXISTING UTILITIES SHOWN ON PLAN ARE LOCATED AS ACCURATELY AS POSSIBLE. HOWEVER, THE ENGINEER DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN, OR IF SHOWN ARE IN THE EXACT LOCATIONS INDICATED ON THE PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE FINAL VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES (INCLUDING WATER AND SEWER LINES AND APPURTENANCES) AND TO NOTIFY THE OWNERS OF THE UTILITIES A MINIMUM OF 48 WORKING HOURS BEFORE STARTING CONSTRUCTION IN A GIVEN AREA, REQUESTING LOCATION IN THE FIELD, AS EXACT AS POSSIBLE, OF ALL UTILITIES WHICH MAY BE AFFECTED BY THE CONSTRUCTION.
50. TRACE WIRE: INSTALL LOCATING WIRES ON ALL CONDUCTIVE AND NON–CONDUCTIVE STORM SEWER, SANITARY SEWER, AND WATER LINES IN ACCORDANCE WITH THE MRWA TRACE WIRE SPECIFICATION GUIDE AND DETAILS (WWW.MRWA.COM/PDF/TRACERWIRESPECGUIDEFINALWEB9.PDF). USE #12 HDPE–INSULATED COPPER–CLAD STEEL WIRE RATED FOR UNDERGROUND SERVICE. THE COLOR OF THE INSULATING JACKET SHALL BE AS FOLLOWS: GROUND=RED, STORM SEWER=GREEN, SANITARY SEWER=GREEN, AND WATER LINES=BLUE. INSTALL THE WIRE ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. FASTEN THE WIRE TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS. DO NOT WRAP THE TRACE WIRE AROUND THE CORRESPONDING UTILITY. DO NOT CONNECT THE TRACE WIRE TO EXISTING CONDUCTIVE UTILITIES. USE COPPERHEAD DRYCONN 3–WAY OR LOCKING SNAKE BITE CONNECTORS RATED FOR UNDERGROUND DIRECT BURY APPLICATIONS OR APPROVED EQUAL AT ALL CROSSINGS OR SERVICE CONNECTIONS. TWIST ON CONNECTORS ARE NOT ALLOWED. TRACE WIRE MUST BE PROPERLY GROUNDED AT ALL DEAD ENDS AND SERVICES. INSTALL GRADE–LEVEL/IN–GROUND TRACE WIRE ACCESS BOXES AND DRIVE–IN MAGNESIUM GROUNDING ANODES AT ALL DEAD ENDS, SERVICES, AND FIRE HYDRANTS. TRACE WIRE ACCESS BOXES SHALL BE COLOR CODED AS FOLLOWS: STORM SEWER=GREEN, SANITARY SEWER=GREEN, AND WATER LINES=BLUE.
51. DETECTABLE WARNING TAPE: INSTALL DETECTABLE UNDERGROUND WARNING TAPE DIRECTLY ABOVE ALL UNDERGROUND UTILITIES AT A DEPTH OF 457 MM (18 INCHES) BELOW FINISHED GRADE, UNLESS OTHERWISE INDICATED. UNDERGROUND WARNING TAPE SHALL BE 3–INCHES WIDE WITH A MINIMUM 5.0 MIL OVERALL THICKNESS. TAPE SHALL BE MANUFACTURED USING A 0.8 MIL CLEAR VIRGIN POLYPROPYLENE FILM, REVERSE PRINTED AND LAMINATED TO A 0.35 MIL SOLID ALUMINUM FOIL CORE, AND THEN LAMINATED TO A 3.75 MIL CLEAR VIRGIN POLYETHYLENE FILM. THE ALUMINUM BACKING MAKES UNDERGROUND ASSETS EASY TO FIND USING A NON–FERROUS LOCATOR. TAPE SHALL BE PRINTED USING A DIAGONALLY STRIPED DESIGN FOR MAXIMUM VISIBILITY AND MEET THE APWA COLOR–CODE STANDARD FOR IDENTIFICATION OF BURIED UTILITIES. USE PRO–LINE SAFETY PRODUCTS (WWW.PROLINESAFETY.COM) DETECTABLE MARKING TAPE OR APPROVED EQUAL.
52. SEE ARCHITECTURAL FOR BUILDING WATERPROOFING AND FOUNDATION DRAINAGE.
53. PLACE #3 REBAR AT 3' ON CENTER IN ALL 6" THICK CONCRETE PAVEMENT LOCATIONS. PLACE #4 REBAR AT 4' ON CENTER IN ALL 8" THICK CONCRETE PAVEMENT LOCATIONS.
54. PLACE #4 X 2'–0" TIE BAR AT 3' ON CENTER IN ALL CONCRETE CURB AND GUTTER.
55. PROVIDE AS–BUILTS IN ACCORDANCE WITH CITY AND WATERSHED DISTRICT REQUIREMENTS. RECORD AS–BUILT INFORMATION AS CONSTRUCTION PROGRESSES OR AT APPROPRIATE CONSTRUCTION INTERVALS. SECURE AND DELIVER TO THE OWNER AS–BUILT INFORMATION SHOWING LOCATIONS, TOP, AND INVERT ELEVATIONS OF MAINTENANCE HOLES, CATCHBASINS, CLEANOUTS, INLET AND OUTLET PIPES, VALVES, HYDRANTS, AND RELATED STRUCTURES. LOCATION TIES SHALL BE TO PERMANENT LANDMARKS OR BUILDINGS.
56. IN ORDER TO DOCUMENT AND VERIFY COMPLIANCE FOR ADEQUATE STORM WATER TREATMENT, PROVIDE A POST–CONSTRUCTION AS–BUILT SURVEY IN ACCORDANCE WITH CITY AND WATERSHED DISTRICT REQUIREMENTS FOR ALL STORM WATER INFRASTRUCTURE. THIS AS–BUILT SURVEY SHALL INCLUDE, BUT IS NOT LIMITED TO, LOCATIONS, TOP, AND INVERT ELEVATIONS OF MAINTENANCE HOLES, CATCHBASINS, CLEANOUTS; ALL BASIN/SWALE GRADES; PIPE INLETS, OUTLET PIPES AND STRUCTURES; EMERGENCY OVERFLOWS, ORIFICES, WEIRS; PIPE SIZES; DRAINTILE ELEVATIONS AND SIZES; PONDS, TANKS, INFILTRATION OR FILTRATION BASINS; AND ANY ASSOCIATED STORM WATER INFRASTRUCTURE.
57. TEST REPORTS REQUIRED FOR PROJECT CLOSE–OUT INCLUDE, BUT ARE NOT LIMITED TO: DENSITY TEST REPORTS, BACTERIOLOGICAL TESTS ON THE WATER SYSTEM, PRESSURE TESTS ON THE WATER SYSTEM, LEAK TESTS ON THE SEWER SYSTEM, DEFLECTION TESTS ON ALL HDPE PIPE, AND INFILTRATION TESTING AT THE STORM WATER INFILTRATION SITE.
58. REMOVING MARKINGS: MARKINGS THAT ARE NO LONGER APPLICABLE FOR ROADWAY CONDITIONS OR RESTRICTIONS AND THAT MIGHT CAUSE CONFUSION FOR THE ROAD USER SHALL BE REMOVED OR OBLITERATED TO BE UNIDENTIFIABLE AS A MARKING AS SOON AS PRACTICAL. PAVEMENT MARKING OBLITERATION SHALL REMOVE THE NON–APPLICABLE PAVEMENT MARKING MATERIAL, AND THE OBLITERATION METHOD SHALL MINIMIZE PAVEMENT SCARRING. PAINTING OVER EXISTING PAVEMENT MARKINGS WITH BLACK PAINT OR SPRAYING WITH ASPHALT SHALL NOT BE ACCEPTED AS A SUBSTITUTE FOR REMOVAL OR OBLITERATION.
59. COMPLETELY REMOVE MARKING FROM LOCATIONS SHOWN ON THE PLAN. USE ONE OR A COMBINATION OF AIR BLASTING, WATER BLASTING, AND GRINDING. PROVIDE A DUST CONTROL SYSTEM AND REMOVE ACCUMULATED SAND OR OTHER MATERIALS. COLLECT, HAUL, AND DISPOSE OF DUST OR RESIDUE FROM REMOVALS.
60. INSTALL A CONCRETE SQUARE (MH BOXOUT) AROUND MHS PER THE SUDAS DETAIL PV–103 OR PV–201.

WATER DISTRIBUTION SYSTEM

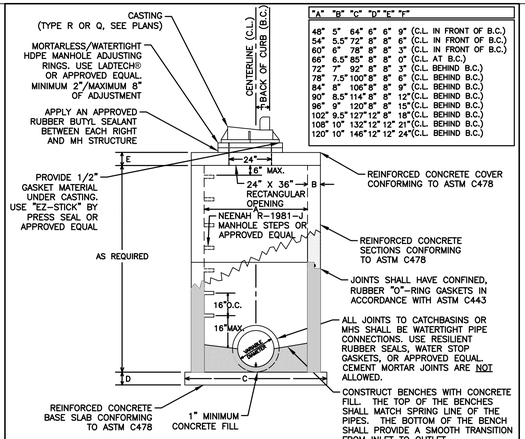
1. BRING ALL SITE UTILITIES TO 2' OUTSIDE OF THE BUILDING LINE WITH THE EXCEPTION OF THE WATER SERVICE. EXTEND WATER SERVICE INTO THE BUILDING AND UP TO THE FLANGE FOR THE WATER METER.
2. SEPARATION OF WATER AND SEWER: CONSTRUCT SEWER AND WATER SERVICES IN ACCORDANCE WITH UNIFORM PLUMBING CODE (UP

NOTE: THIS CURB CONSTRUCTION DETAIL IS TO BE USED AT LOW POINTS WHEN INDICATED ON PLAN.



1 CURBLINE DETAIL CATCHBASIN CURB/ PAVMENT LOW POINTS

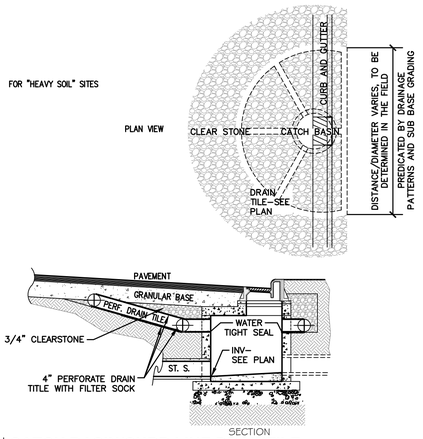
C500 | NOT TO SCALE



"A"	"B"	"C"	"D"	"E"	"F"
48"	5"	64"	6"	6"	9" (C.L. IN FRONT OF B.C.)
54"	5.5"	72"	8"	8"	6" (C.L. IN FRONT OF B.C.)
60"	6"	78"	8"	8"	3" (C.L. IN FRONT OF B.C.)
66"	6.5"	85"	8"	8"	0" (C.L. AT B.C.)
72"	7"	92"	8"	8"	3" (C.L. BEHIND B.C.)
78"	7.5"	100"	8"	8"	6" (C.L. BEHIND B.C.)
84"	8"	106"	8"	8"	9" (C.L. BEHIND B.C.)
90"	8.5"	114"	8"	8"	12"(C.L. BEHIND B.C.)
96"	9"	120"	8"	8"	15"(C.L. BEHIND B.C.)
102"	9.5"	127"	12"	8"	18"(C.L. BEHIND B.C.)
108"	10"	132"	12"	12"	21"(C.L. BEHIND B.C.)
120"	10"	146"	12"	12"	24"(C.L. BEHIND B.C.)

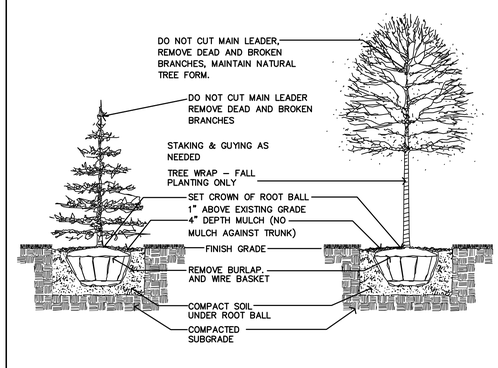
2 STANDARD STORM CATCHBASIN

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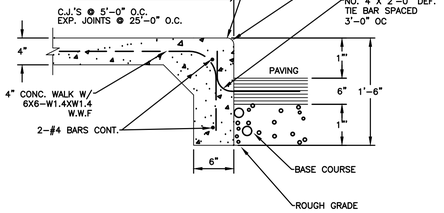
3 CATCH BASIN/CURB LINE DRAINTILE

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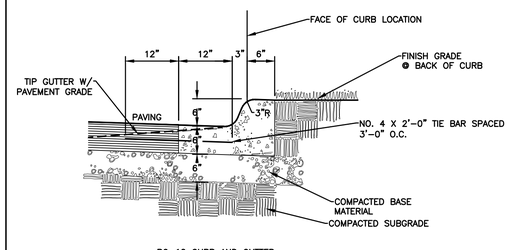
4 PLANTING DETAIL

C500 | NOT TO SCALE



5 SIDEWALK/ CURB DETAIL

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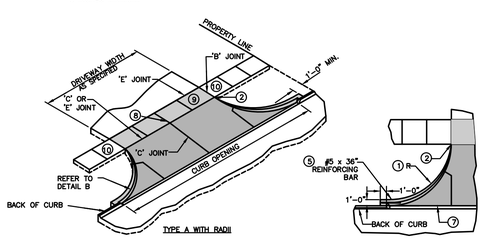


B6–12 CURB AND GUTTER

6 CONCRETE CURB DETAIL

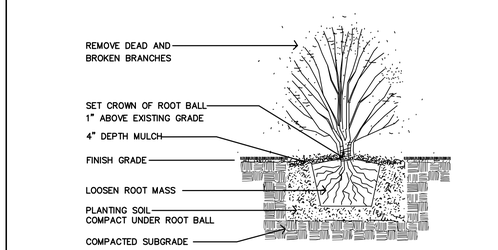
C500 | SCALE: 3/4" = 1'–0"

1. DRIVEWAY RADIUS (R).
2. TRANSITION THE CURB HEIGHT TO 0 INCHES AT END OF TAPER/RADIUS OR AT THE FRONT EDGE OF SIDEWALK. DO NOT EXTEND RAISED CURB ACROSS SIDEWALK.
3. PAVEMENT THICKNESS. RESIDENTIAL: 6 INCHES MINIMUM. COMMERCIAL AND INDUSTRIAL: 7 INCHES MINIMUM.
4. SIDEWALK THICKNESS THROUGH DRIVEWAY TO MATCH THICKNESS OF DRIVEWAY.
5. CENTER REINFORCING BAR VERTICALLY IN THE PAVEMENT.
6. MATCH THICKNESS OF ADJACENT ROADWAY, 8 INCHES MINIMUM.
7. PROVIDE 'E' JOINT AT BACK OF CURB UNLESS 'B' JOINT IS SPECIFIED.
8. FOR ALLEYS, INVERT THE PAVEMENT CROWN 2% TOWARD CENTER OF ALLEY.
9. 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.
10. IF CROSS SLOPE OF ADJACENT SIDEWALK PANEL EXCEEDS 2.0%, REMOVE AND REPLACE TO TRANSITION FROM EXISTING SIDEWALK TO SIDEWALK THROUGH DRIVEWAY. IF ELEVATION CHANGE REQUIRES A CURB RAMP, COMPLY WITH FIGURE 7030.205; VERIFY NEED FOR DETECTABLE WARNING PANEL WITH ENGINEER.



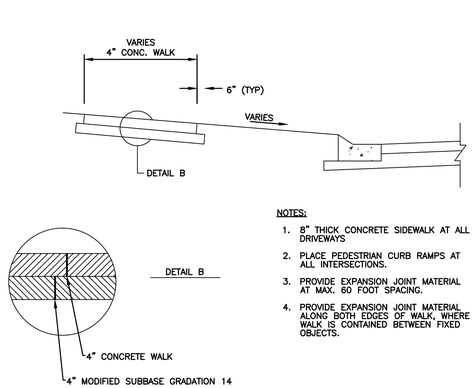
7 CONCRETE DRIVEWAY TYPE A

C500 | NOT TO SCALE



8 PLANTING DETAIL

C500 | NOT TO SCALE

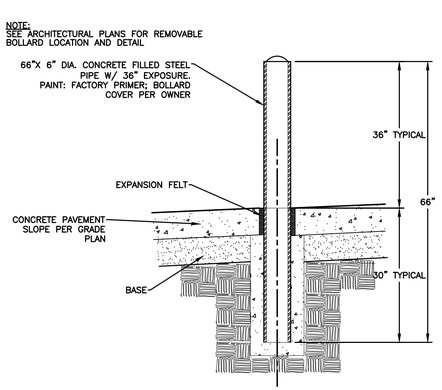


NOTES:

1. 8" THICK CONCRETE SIDEWALK AT ALL DRIVEWAYS
2. PLACE PEDESTRIAN CURB RAMPS AT ALL INTERSECTIONS.
3. PROVIDE EXPANSION JOINT MATERIAL AT MAX. 60 FOOT SPACING.
4. PROVIDE EXPANSION JOINT MATERIAL ALONG BOTH EDGES OF WALK, WHERE WALK IS CONTAINED BETWEEN FIXED OBJECTS.

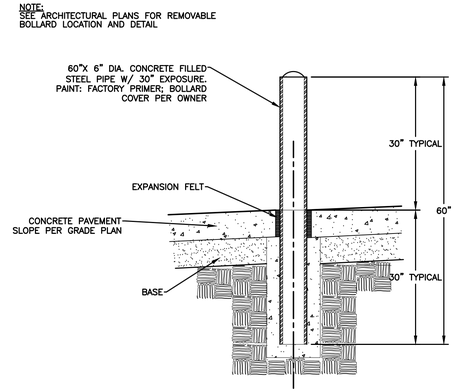
9 CONCRETE WALK/ PAD DETAIL

C500 | NOT TO SCALE



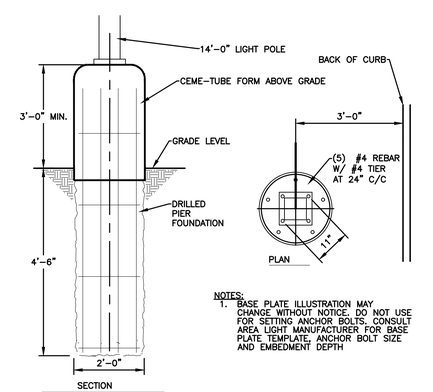
10 36" HEIGHT PIPE BOLLARD

C500 | SCALE: 3/8" = 1'–0"



11 30" HEIGHT PIPE BOLLARD

C500 | SCALE: 3/8" = 1'–0"



NOTES:

1. BASE PLATE ILLUSTRATION MAY CHANGE WITHOUT NOTICE. DO NOT USE FOR SETTING ANCHOR BOLTS. CONSULT AREA LIGHT MANUFACTURER FOR BASE PLATE TEMPLATE, ANCHOR BOLT SIZE AND EMBEDMENT DEPTH

12 ROUND AREA LIGHT FOUNDATION

C500 | SCALE: 1/2"=1'0"

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FAX (608) 781-8960

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

SITE PLAN DETAILS

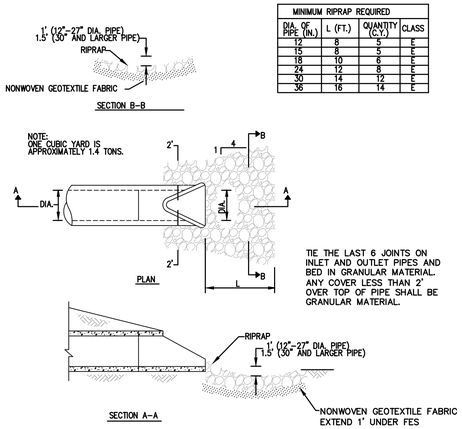
LH G3 STORE
WITH 10 MPD

CTH 22/UTE AVE
WAUKEE, IOWA
LAT 41.56572, LONG -93.88148

#	DATE	DESCRIPTION
	06MAY25	CITY SUBMITTAL #1
	20MAY25	CITY SUBMITTAL #2
	10JUN25	CITY SUBMITTAL #3
	30JUN25	CITY SUBMITTAL #4
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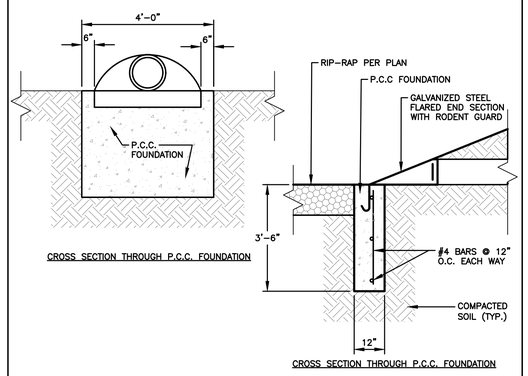
DRAWN BY	KMW
SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	30JUN25
SHEET	C500

DRAWING PHASE

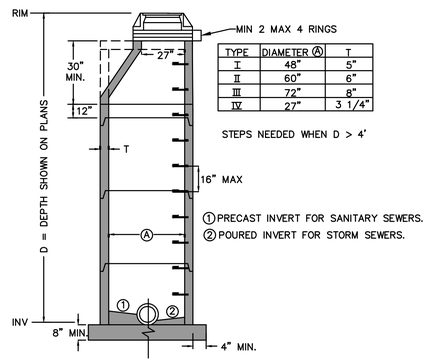


MINIMUM RIPRAP REQUIRED			
DIA. OF PIPE (IN.)	L (FT.)	QUANTITY (C.Y.)	CLASS
12	8	5	E
15	8	5	E
18	10	6	E
24	12	8	E
30	14	12	E
36	16	14	E

1 | RIP RAP DETAIL FOR FLARED END SECTIONS
C501 | NOT TO SCALE



2 | METAL FLARED END SECTION W/ FOOTING
C501 | NOT TO SCALE

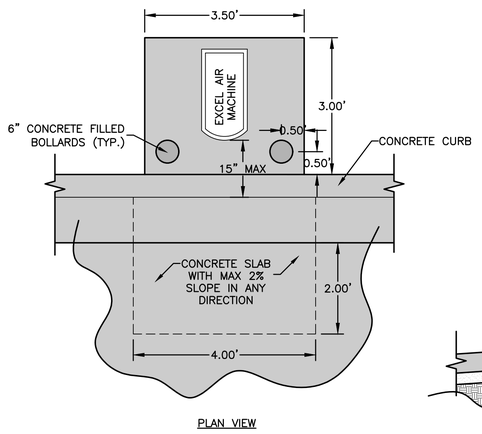


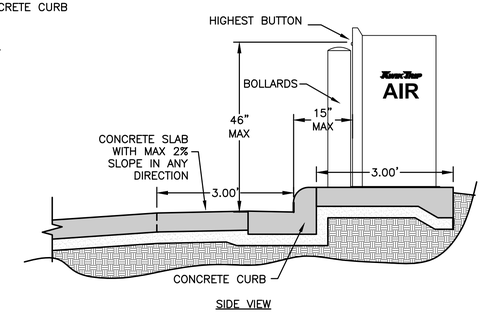
TYPE	DIAMETER Ⓐ	T
I	48"	5"
II	60"	6"
III	72"	8"
IV	27"	3 1/4"

STEPS NEEDED WHEN D > 4'

① PRECAST INVERT FOR SANITARY SEWERS.
② POURED INVERT FOR STORM SEWERS.

3 | PRECAST REINFORCE CONC. MANHOLE
C501 | NOT TO SCALE





4 | AIR COMPRESSOR
C501 | NOT TO SCALE

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SITE PLAN DETAILS

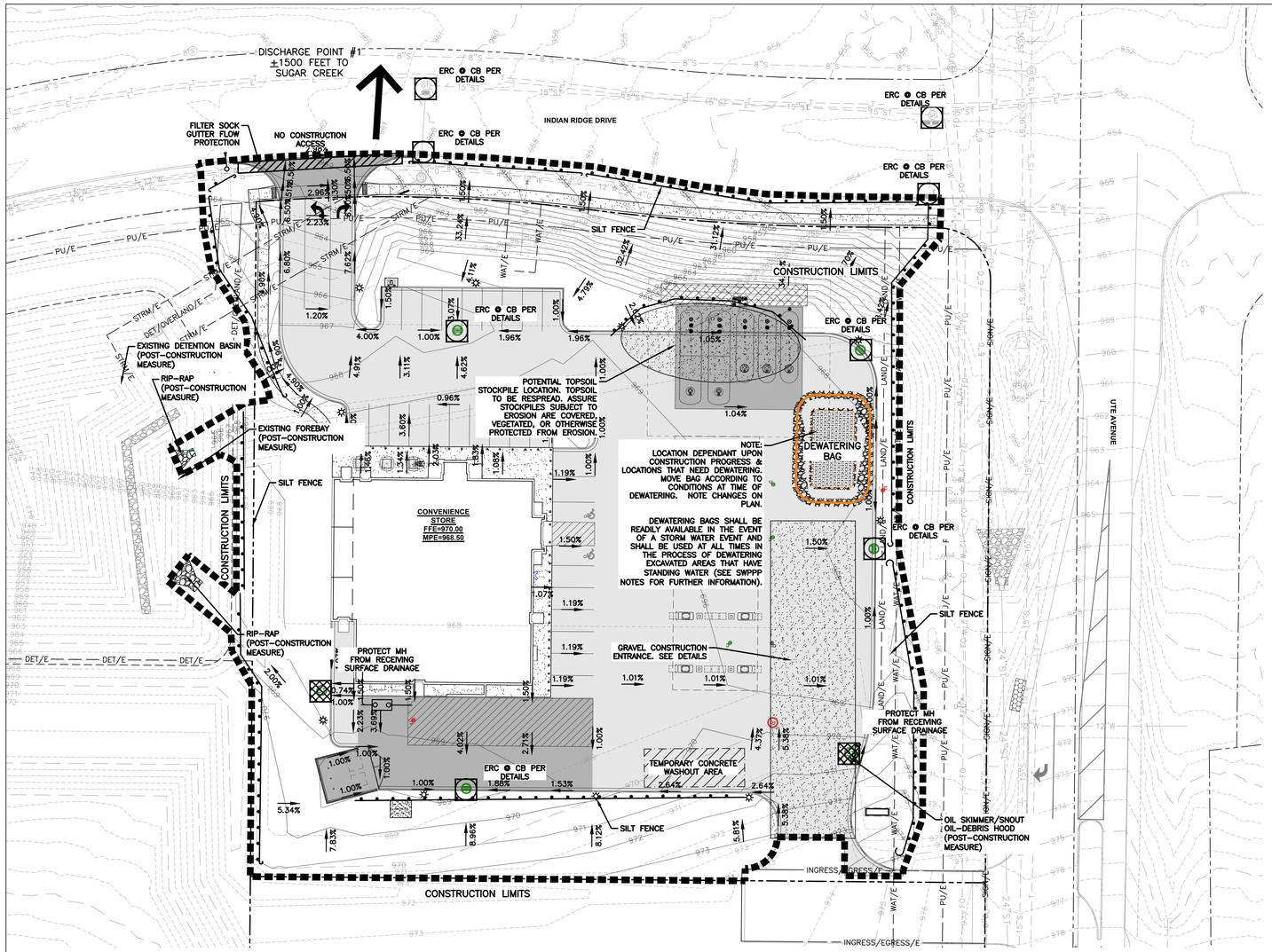
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SCALE	GRAPHIC
PROJ. NO.	2504.281
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SHEET	C501

DRAWING PHASE



SITE AERIAL MAP

NOT TO SCALE



ESTIMATED PRELIMINARY EROSION CONTROL QUANTITIES
(ACTUAL QUANTITIES SUBJECT TO CHANGE)

ITEM	QUANTITY	
CONSTRUCTION-ENTRANCE	667	SQ. YD.
SILT-SACK-QTY	10	TOTAL STRUCTURES
EROSION-CONTROL-BLANKET	77	SQ. YD.
RIP-RAP	10	CU. YD.
SILT-FENCE	887	L. FT.
ROCK-FILTRATION-DIKE	0	L. FT.
BIO-ROLL	78	L. FT.
SOD	1	AC
SEED-SUDAS-TYPE-4	2.5	AC

NOTE: FOR MAINTENANCE PURPOSES CONTRACTOR SHALL ALL SUFFICIENT QUANTITIES FOR REPAIR AND REPLACEMENT OF EROSION CONTROL DEVICES THROUGHOUT ALL PHASES OF THE PROJECTS CONSTRUCTION.

PROJECT DATA

PROJECT START DATE	SPRING '26
PROJECT COMPLETION DATE	WINTER '26
SITE AREA DATA	
TOTAL SITE AREA	109,268 SF
PRE-CONSTRUCTION IMPERVIOUS AREA	1,286 SF
POST-CONSTRUCTION IMPERVIOUS AREA	61,433 SF
APPROX. AREA OF LAND DISTURBANCE	106,654 SF (2.45 AC)
SITE RUNOFF COEFFICIENT (CN)	
PRE-CONSTRUCTION	58
POST-CONSTRUCTION	94
SOIL DATA	
SURFACE SOIL	SEE GEOTECH REPORT
SUB-SURFACE SOIL	SEE GEOTECH REPORT
DEPTH OF GROUND WATER	SEE GEOTECH REPORT
DOWN-STREAM TRIBUTARY	SUGAR CREEK

CONSTRUCTION SEQUENCE

USE SOD AS PERMANENT STABILIZATION AND SEED FOR TEMPORARY CONTROL

*INSTALL EROSION/SEDIMENT CONTROL MEASURES
*INSTALL STORMWATER MANAGEMENT AND/OR POND/SEDIMENT BASINS
*INSTALL STORM SEWER
*INSTALL STRUCTURES
*INSTALL PAVEMENTS
*INSTALL SMALL UTILITIES (GAS, ELECTRIC, PHONE, CABLE, ETC.)
*INSTALL LAWN/ LANDSCAPE
*FLUSH STORM SEWER
*REMOVE EROSION CONTROL MEASURES ONLY AFTER ALL PAVEMENTS HAVE BEEN INSTALLED AND ALL SOILS HAVE BEEN STABILIZED

EROSION CONTROL BLANKET ON SIDE SLOPES OF 3:1 OR GREATER DOUBLE NETTED LIGHT DUTY

ALL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AND CONSTRUCTED IN ACCORDANCE TO STATE AND DNR TECHNICAL STANDARDS

-ALL SILT FENCE MUST BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE CITY PRIOR TO ANY SITE WORK.

-SITE EROSION CONTROL MEASURES MUST BE IN PLACE AT ALL TIMES. SHOULD DEVICES BE REMOVED FOR WORK ACCESS, THEY SHALL BE REINSTALLED AT THE END OF EACH WORK DAY UNTIL PAVEMENTS HAVE BEEN INSTALLED AND ALL LANDSCAPE AREAS HAVE BEEN MULCHED AND SODDED. SEEDED AREAS MUST EXHIBIT MINIMUM OF 70% SOIL COVERAGE.

-REFER TO THE SWPPP PLAN NOTES AND DETAIL SHEETS C601-603 FOR MORE INFORMATION.

CONTACT EMILY HELWIG
KWIK TRIP INC
1626 OAK STREET
LACROSSE, WI 54602
608-791-7443

OWNER CERTIFICATION

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

NAME (PRINTED OR TYPED): _____
TITLE: _____
SIGNATURE: _____
DATE: _____
NAME OF COMPANY, IF APPLICABLE: _____
ADDRESS: _____
CITY, STATE, ZIP CODE: _____
TELEPHONE NUMBER: _____
ADDRESS OF THE SITE: _____

SWPPP DESIGN CERTIFICATION STATEMENT

THESE PLANS MEET ALL CURRENT MINIMUM MANDATORY REQUIREMENTS OF THE IDNR FOR SWPPPS IN CONNECTION WITH THE ISSUANCE OF A NPDES GENERAL PERMIT NO.2, AS STATED IN THE SUMMARY GUIDANCE FOR THE PERMIT.

THIS PLAN COMPLIES WITH THE MINIMUM MANDATORY REQUIREMENTS OF THE JOINT APPLICATION FORM, PROTECTING IOWA WATERS; IOWA DEPARTMENT OF NATURAL RESOURCES AND THE U.S. ARMY CORPS OF ENGINEERS.

I HEREBY CERTIFY THAT THIS PLAN COMPLIES WITH ALL OTHER APPLICABLE STATE OR FEDERAL PERMIT REQUIREMENTS IN EXISTENCE AT THE TIME OF THE APPLICATION AND ALL REQUIREMENTS OF THE CITY CODE FOR CONSTRUCTION.

NAME: JOHN P. BECKER
TITLE: LICENSED PROFESSIONAL ENGINEER

CONTRACTOR/SUBCONTRACTOR CERTIFICATION

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE AS PART OF THIS CERTIFICATION. FURTHER, BY MY SIGNATURE, I UNDERSTAND THAT I AM BECOMING A CO-PERMITTEE, ALONG WITH THE OWNER(S) AND OTHER CONTRACTORS AND SUBCONTRACTORS SIGNING SUCH CERTIFICATIONS, TO THE IOWA DEPARTMENT OF NATURAL RESOURCES NPDES GENERAL PERMIT NO. 2 FOR "STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FOR CONSTRUCTION ACTIVITIES" AT THE IDENTIFIED SITE. AS A CO-PERMITTEE, I UNDERSTAND THAT I, AND MY COMPANY, ARE LEGALLY REQUIRED UNDER THE CLEAN WATER ACT AND THE CODE OF IOWA, TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE STORM WATER POLLUTION PREVENTION PLAN DEVELOPED UNDER THIS NPDES PERMIT AND THE TERMS OF THE NPDES PERMIT."

NAME (PRINTED OR TYPED): _____
TITLE: _____
SIGNATURE: _____
DATE: _____
NAME OF CONTRACTING FIRM: _____
ADDRESS: _____
CITY, STATE, ZIP CODE: _____
TELEPHONE NUMBER: _____
ADDRESS OF THE SITE: _____

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

SCALE
0' 15' 30' 60'

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EROSION CONTROL PLAN

LH G3 STORE
WITH 10 MPD

CTH 22/UTE AVE
WAUKEE, IOWA
LAT 41.56572, LONG -93.88148

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DRAWN BY	KMW
SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	30JUN25
SHEET	C600

DRAWING PHASE

GENERAL STORMWATER POLLUTION PREVENTION

APPLY FOR AND OBTAIN ALL NECESSARY PERMITS.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP): THE SWPPP INCLUDES THIS NARRATIVE, PLAN SHEETS C601–603, AND THE STORMWATER MANAGEMENT CALCULATIONS. KEEP A COPY OF THE SWPPP, ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS AT THE SITE DURING THE CONSTRUCTION. DURING THE CONSTRUCTION PROCESS THE SWPPP WILL HAVE TO BE AMENDED TO REFLECT THE CHANGES PERFORMED BY THE CONTRACTOR. THE OWNER SHALL BE AWARE OF THE AMENDMENTS PRIOR TO CHANGES MADE IN THE SWPPP. ALL NOTES, PHOTOGRAPHS, RECORDED DATES, SKETCHES, REFERENCES, AND DIAGRAMS WILL HAVE TO BE RECORDED AND MADE AVAILABLE AS PART OF THE SWPPP PERMIT.

INDIVIDUAL(S) PREPARING THE SWPPP FOR THE PROJECT, OVERSEEING IMPLEMENTATION OF THE SWPPP, REVISING AND AMENDING THE SWPPP, AND AT LEAST ONE INDIVIDUAL ON THE PROJECT PERFORMING INSTALLATION, INSPECTION, MAINTENANCE, AND REPAIRS OF BMP'S MUST BE TRAINED. THE TRAINING MUST BE DONE BY A LOCAL, STATE, FEDERAL AGENCIES; PROFESSIONAL ORGANIZATION; OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, OR PERMANENT STORMWATER MANAGEMENT. TRAINING INFORMATION AND THOSE CERTIFIED MUST BE NOTED IN THE SWPPP. DOCUMENTATION OF THIS INFORMATION MUST BE INCLUDED IN THE SWPPP OR MADE AVAILABLE WITHIN 72 HOURS. ALL TRAINED INDIVIDUALS MUST BE IDENTIFIED, INCLUDING DESIGNER, INSTALLER AND INSPECTOR.

RESPONSIBLE PARTIES: THE CONTRACTOR MUST DESIGNATE A PERSON KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPS WHO WILL OVERSEE THE IMPLEMENTATION OF THE SWPPP, AND THE INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS BEFORE AND DURING CONSTRUCTION.

CONTACT EMILY HELWIG
KWIK TRIP INC
1626 OAK STREET
LACROSSE, WI 54602
608–791–7443

THE OWNER IS RESPONSIBLE FOR IDENTIFYING WHO WILL HAVE RESPONSIBILITY FOR THE LONG TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEMS.

SITE INVESTIGATION, INSTALLATION, IMPEMENTATION

1. PRIOR TO ANY WORK, CONTRACTOR SHALL VISIT THE SITE, DOCUMENT EXISTING CONDITIONS AS NECESSARY (PHOTOS, NOTES, ETC) AND NOTE EXISTING DRAINAGE PATTERNS ON AND OFF SITE THAT ARE RELATED TO THE PROJECT. THESE NOTES SHALL BE PART OF THE SWPPP.

2. INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES INCLUDING SILT FENCE, ROCK CONSTRUCTION ENTRANCE(S), EROSION CONTROL BERMS, ROCK FILTERS, SILT SACKS, ROCK /EARTH BERMS, AND SEDIMENTATION BASINS. PROTECT ALL RECEIVING WATERS, CATCH BASINS, DITCHES, INLETS ETC. IN AND AROUND THE SITE. ALL PROTECTIVE AND PREVENTATIVE MEASURES MUST BE IN PLACE AND INSPECTED PRIOR TO BEGINNING SITE CLEARING, GRADING, OR OTHER LAND–DISTURBING ACTIVITY.

3. PRIOR TO BEGINNING SITE CLEARING AND GRADING, PROTECT ALL STORM SEWER INLETS THAT RECEIVE RUNOFF FROM DISTURBED AREAS. IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE AND ENTERING THE DOWNSTREAM STORM SEWER SYSTEM, SEAL ALL STORM SEWER INLETS THAT ARE NOT NEEDED FOR SITE DRAINAGE DURING CONSTRUCTION. PROTECT ALL OTHER STORM SEWER INLETS BY INSTALLING SEDIMENT CONTROL DEVICES, SUCH AS SILT SACKS, OR ROCKED FILTRATION LOGS/WEIRS. STRAW BALES OR FABRIC UNDER THE GRATES ARE NOT ACCEPTABLE FORMS OF INLET PROTECTION. PROTECT NEW STORM SEWER INLETS AS THEY ARE COMPLETED. MAINTAIN STORM SEWER INLET PROTECTION IN PLACE UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLETS ARE STABILIZED.

4. BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES EXIT THE CONSTRUCTION SITE WHEN AT ALL POSSIBLE CONTRACTOR SHALL DESIGNATE ONLY ONE ACCESS POINT FOR VEHICLES ENTERING AND EXITING THE SITE. THE ROCK ON THE ENTRANCE WILL HAVE TO BE INSPECTED DAILY AND REPLACED OR ROCK SUPPLEMENTED BY THE CONTRACTOR WHEN OVER 50% OF THE VOIDS IN THE ROCK ARE FILLED. A CLEANING STATION SHOULD BE MADE AVAILABLE TO DRIVERS AND VISIBLY SIGNED TO SEE. PROVIDE SHOVELS, BROOMS AND/OR HOSE WITH A WASH OUT AREA SO SOILS CAN BE REMOVED FROM VEHICLES ON SITE.

5. AVOID ENTIRE REMOVAL OF TREES AND SURFACE VEGETATION ALL AT ONCE WHENEVER POSSIBLE AS THIS LIMITS THE AMOUNT OF SITE SUSCEPTIBLE TO EROSION. SCHEDULE CONSTRUCTION ZONES AND NOTE THIS ON THE SWPPP IN ORDER TO EXPOSE THE SMALLEST PRACTICAL AREA OF SOIL AT ANY GIVEN TIME. UTILIZE VEGETATION REMOVED BY ON SITE GRINDING AND MULCHING AND USING THIS MATERIAL TO PROTECT THE SOIL FROM EROSION.

6. AREAS THAT DISCHARGE TO SPECIAL OR IMPAIRED WATERS: STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THIS REQUIREMENT DOES NOT APPLY TO THOSE AREAS THAT ARE CURRENTLY BEING USED FOR MATERIAL STORAGE ON A DAILY BASIS OR FOR THOSE AREAS ON WHICH GRADING, SITE BUILDING, OR OTHER CONSTRUCTION ACTIVITIES ARE ACTIVELY UNDERWAY. PROVIDE TEMPORARY COVER ON ALL STACKED TOPSOIL PILES, AND OTHER AREAS OF STOCKPILED EXCAVATED MATERIAL IN ORDER TO PREVENT SOIL EROSION AND RAPID RUNOFF DURING THE CONSTRUCTION PERIOD. STOCKPILES CAN BE MULCHED, COVERED WITH POLY OR FABRIC, AND OR SEEDED DURING PROLONGED EXPOSURE. PROLONGED PERIODS OF OPEN, BARE EARTH WITHOUT GRASS COVER WILL NOT BE PERMITTED. STABILIZE ALL DISTURBED GREENSPACE AREAS (NOT PAVED) WITH A MINIMUM OF 8" TOPSOIL IMMEDIATELY AFTER FINAL SUBGRADE COMPLETION. SEED AND MULCH, OR SOD AND PROTECT THESE AREAS IMMEDIATELY AFTER COMPLETION OF FINAL GRADING WORK (WEATHER PERMITTING). STABILIZE ALL DISTURBED AREAS TO BE PAVED USING EARLY APPLICATION OF GRAVEL BASE. STABILIZE THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH THAT CONVEYS WATER FROM THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE CONSTRUCTION SITE, WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR WITHIN 200 FEET FROM THE POINT OF DISCHARGE TO ANY SURFACE WATER. STABILIZE TEMPORARY OR PERMANENT DRAINAGE DITCHES IMMEDIATELY AFTER CONNECTING TO A SURFACE WATER. PROTECT OUTFALLS MINIMUM OF 200 FEET DOWN STREAM AND TO THE SIDE OF THE DISCHARGE POINT. ADDITIONAL SETTLING "POTS" ACHIEVED BY FILTER LOGS OR FILTERED STICK BALES STAKED IN THE CHANNEL WILL DISSIPATE THE WATER ENERGY. PROVIDE PIPE OUTLETS WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION IMMEDIATELY FOLLOWING CONNECTION TO A SURFACE WATER.

7. RECEIVING WATERS – IT IS THE CONTRACTORS RESPONSIBILITY TO INSPECT THE SITE DISCHARGE POINT AS WELL AS DOWNSTREAM TO THE RECEIVING BODY OF WATER (POND, LAKE, STREAM, ETC.) ON A REGULAR BASIS INCLUDING AFTER EACH STORM EVENT AND DOCUMENT IF ANY DIFFERENCES OR CHANGES IN NORMAL IN DISCHARGE AND IF MATERIAL IS LEAVING THE CONSTRUCTION SITE. IF SO IT SHALL BE DOCUMENTED AND REMOVED IMMEDIATELY.

NOTE: ALL EROSION AND SEDIMENT CONTROL DEVICES WILL BE CHECKED BY THE CONTRACTOR AFTER EACH STORM EVENT AND BE MAINTAINED, OR IMPROVED UPON AFTER EVERY STORM EVENT TO ENSURE ADEQUATE PERFORMANCE.

POLLUTION CONTROL

1. DESIGNATE A CONCRETE WASH–OUT AND TRUCK WASH AREA:
   MAKE IT VISIBLE IN THE FIELD TO VEHICLE OPERATORS AND NOTE THIS ON THE SWPPP.

   A. WHEN WASHOUTS OCCUR ON THE SITE, CONCRETE WASHOUT WATER MUST BE CONTAINED IN A LEAK–PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. LIQUID AND SOLID WASTES MAY NOT TOUCH THE GROUND AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS.

   B. LIMIT EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES TO A DEFINED AREA PREFERABLY BEFORE THE CONSTRUCTION ACCESS/EXIT POINT. WASH VEHICLES ONLY ON AN AREA STABILIZED WITH STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. CONTAIN RUNOFF AND PROPERLY DISPOSE OF WASTE. ENGINE DEGREASING IS PROHIBITED.

2. SOLID WASTE: ALL MATERIALS HAULED OFF–SITE SHALL BE SECURED TO PREVENT LITTERING. DUMPSTERS SHALL BE COVERED TO PREVENT STORM WATER CONTAMINATION. PROPERLY DISPOSE OF COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION AND DEMOLITION DEBRIS, AND OTHER WASTES IN COMPLIANCE WITH STATE OF IOWA REQUIREMENTS.

3. HAZARDOUS MATERIALS: PROPERLY DISPOSE OF ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE DEBRIS, CLEANING WASTES, OIL, GASOLINE, PAINT, WASTEWATER, TOXIC MATERIALS, AND HAZARDOUS MATERIALS) OFF–SITE. DO NOT ALLOW WASTE AND UNUSED BUILDING MATERIALS TO BE CARRIED BY RUNOFF INTO A RECEIVING CHANNEL OR STORM SEWER SYSTEM. PROPERLY STORE OIL, GASOLINE, PAINT, AND OTHER HAZARDOUS MATERIALS IN ORDER TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGE. INCLUDE SECONDARY CONTAINMENT. RESTRICT ACCESS TO STORAGE AREAS IN ORDER TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS MATERIALS MUST BE IN COMPLIANCE WITH PCA REGULATIONS.

4. MACHINERY: AND MECHANIZED EQUIPMENT THAT LEAKS WASTE SHALL HAVE A PROTECTIVE BARRIER OR CONTAINMENT UNDER THE DEVICE ADEQUATE TO CONTAIN THE WASTE. PROPERLY DISPOSE OF THE WASTE.

5. EMERGENCY SPILL STATION: CONTRACTOR SHALL LOCATE AND SIGN AN EMERGENCY SPILL STATION THAT HAS NECESSARY CONTAINMENT OR CLEANUP DEVICES FOR ALL WORKERS TO ACCESS.

6. SANITARY WASTES: SANITARY WASTES GENERATED ON SITE SHALL BE TREATED AND DISPOSED IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.

EROSION CONTROL

APPLY NECESSARY MOISTURE TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.

CONTRACTOR SHALL UTILIZE COARSELY GROUND WOOD AND TREE MULCHES TO COVER EXPOSED SOILS. MULCHES SHALL BE STORED ON SITE TO SUPPLEMENT AND USE IN PROBLEM AREAS DURING ALL PHASES OF THE CONSTRUCTION PROJECT.

CONTRACTOR SHALL USE STAR TACK OR OTHER ORGANIC SUBSTANCES IN SITUATIONS TO PREVENT SOIL FROM ERODING AWAY BY WIND OR RAIN.

WHENEVER POSSIBLE CONTRACTOR SHALL GRADE AREAS OF SOIL TO LIMIT POTENTIAL OF EROSION, TO INCLUDE TRACKING PERPENDICULAR TO FALL LINE OF GRADES AS WELL AS DIVERTING WATER FLOWS FROM PROBLEMATIC AREAS ON THE SITE.

SEEDING, FIBER BLANKETS, POLY/TARPS OR COVER MULCHES, DISKED MULCHES AND COMPOST CAN BE USED TO COVER TEMPORARILY EXPOSED AREAS FROM WIND AND RAIN. OTHER METHODS BY THE CONTRACTOR SHALL BE DOCUMENTED IN THE SWPPP.

SEDIMENT CONTROL

INLET SEDIMENT CONTROL PROTECTION DEVICES:
PUBLIC STREET INTAKES REQUIRE INLET PROTECTION TO BE BELOW GRADE.

THE FOLLOWING AREA APPROVED INLET SEDIMENT CONTROL DEVICES:

A. ROAD DRAIN TOP SLAB MODEL RD 23 (FITS ROUGH OPENING FOR 2'X3' INLET), ROAD DRAIN TOP SLAB MODEL RD 27 (FITS ROUGH OPENING FOR 27" INLET), OR ROAD DRAIN TOP SLAB MODEL CG 3067 (FITS NEENAH CASTING WITH 35–1/4"X17–3/4" DIMENSIONS)
MANUFACTURED BY:
WIMCO
799 THEIS DRIVE
SHAKOPEE, MN, 55379
PHONE (952) 233–3055
OR APPROVED EQUAL

B. SILT SACK MANUFACTURED BY:
ACF ENVIRONMENTAL
2831 CARDWELL ROAD
RICHMOND, VA, 23234
PHONE (800) 448–3636
OR APPROVED EQUAL

C. INFRASAFE SEDIMENT CONTROL BARRIER. INSTALL GEOTEXTILE SOCK ON THE OUTSIDE OF THE BARRIER IN ORDER TO TRAP ADDITIONAL FINES. STANDARD FRAMES ARE AVAILABLE TO FIT 24" TO 30" DIAMETER AND 2'X3' OPENINGS.
DISTRIBUTED BY:
ROYAL ENTERPRISES AMERICA
20622 FOREST BOULEVARD
STACY, MN, 55079
PHONE (651) 462–2130
OR APPROVED EQUAL

D. RIDGE BAG ROCK LOG. USE ROCK LOGS ONLY FOR CURB INLETS AFTER PAVEMENT IS IN PLACE.
MANUFACTURED BY RED BARN RIDGE, 3135
COUNTY ROAD 136, SAINT CLOUD, MN, 35301
PHONE (320) 253–3744
OR APPROVED EQUAL

E. INFLATABLE DRAIN PLUGS BY INTERSTATE PRODUCTS WWW.INTERSTATEPRODUCTS.COM OR APPROVED EQUAL

RIPRAP:
PLACE STONES OF AT LEAST 5 LBS OR GREATER THAT CONFORM TO IOWA DOT SECTION 4130 ON 225 MM (9 INCH) THICK LAYER OF FILL STONE GRADATION NUMBER 34 AT LOCATIONS INDICATED ON THE PLAN IN ACCORDANCE WITH IOWA DOT ARTICLES 4130.01 AND 4130.05. INSTALL TWO LAYERS OF NON–WOVEN FILTER FABRIC BENEATH THE GRANULAR FILTER MATERIAL CONFORMING TO IOWA DOT SECTION 4131. AT PIPE OUTFALLS THE DISCHARGE LOCATION MAY BE INTO A RECEIVING STREAM OR AN EXISTING STORM SEWER SYSTEM (OPEN CHANNEL OR CLOSED CONDUIT). REFER TO SECTION 4A–4 FOR THE CONCEPT PLAN. CONSULT WITH A DRAINAGE ENGINEER BEFORE PLANNING TO DISCHARGE TO AN UNDEFINED SWALE, DITCH, OR STREAM.

SILT FENCE:
INSTALL SILT FENCE ALONG THE CONTOUR (ON A LEVEL HORIZONTAL PLANE) WITH THE ENDS TURNED UP (J–HOOKS) IN ORDER TO HELP POND WATER BEHIND THE FENCE. INSTALL THE SILT FENCE ON THE UPHILL SIDE OF THE SUPPORT POSTS. PROVIDE A POST SPACING OF 1.2 M (4 FEET) OR LESS. DRIVE POSTS AT LEAST 0.6 M (2 FEET) INTO THE GROUND. ANCHOR THE SILT FENCE FABRIC IN A TRENCH AT LEAST 152 MM (6 INCHES) DEEP AND 152 MM (6 INCHES) WIDE DUG ON THE UPSLOPE SIDE OF THE SUPPORT POSTS. LAY THE FABRIC IN THE TRENCH AND THEN BACKFILL AND COMPACT WITH A VIBRATORY PLATE COMPACTOR. MAKE ANY SPLICES IN THE FABRIC AT A FENCE POST. AT SPLICES, OVERLAP THE FABRIC AT LEAST 152 MM (6 INCHES), FOLD IT OVER, AND SECURELY FASTEN IT TO THE FENCE POST. SILT FENCE SUPPORTING POSTS SHALL BE 51 MM (2 INCH) SQUARE OR LARGER HARDWOOD, PINE, OR STANDARD T– OR U–SECTION STEEL POSTS. T– OR U–SECTION STEEL POSTS SHALL WEIGH NOT LESS THAN 1.8602 KG PER METER (1.25 LB PER LINEAL FOOT). POSTS SHALL HAVE A MINIMUM LENGTH OF 1524 MM (5 FEET). POSTS SHALL HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC AND PREVENT SLIPPAGE. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF IOWA DOT SPECIFICATION FOR PRE–ASSEMBLED SILT FENCE, FURNISHED IN A CONTINUOUS ROLL IN ORDER TO AVOID SPLICES. GEOTEXTILE FABRIC SHALL BE UNIFORM IN TEXTURE AND APPEARANCE AND HAVE NO DEFECTS, FLAWS, OR TEARS. THE FABRIC SHALL CONTAIN SUFFICIENT ULTRAVIOLET (UV) RAY INHIBITOR AND STABILIZERS TO PROVIDE A MINIMUM TWO–YEAR SERVICE LIFE OUTDOORS. FABRIC COLOR SHALL BE INTERNATIONAL ORANGE. IN HIGH TRAFFIC AREAS CONTRACTOR SHALL REINFORCE SILT FENCE WITH WIRE FENCING AND METAL POSTS. EXTREME CIRCUMSTANCES WILL REQUIRE TEMPORARY CONCRETE MEDIAN SECTIONS TO SUPPORT MATERIAL BACKING OF STOCK PILED SOIL OR FILLED EARTH.

STOCKPILES:
INSTALL SILT FENCE, OR OTHER EFFECTIVE SEDIMENT CONTROLS, AROUND ALL TEMPORARY SOIL STOCKPILES FOR SOIL AND MATERIALS PRESERVED ON SITE. LOCATE SOIL OR DIRT STOCKPILES CONTAINING MORE THAN 10 CUBIC YARDS OF MATERIAL SUCH THAT THE DOWNSLOPE DRAINAGE LENGTH IS NO LESS THAN 8 M (25 FEET) FROM THE TOE OF THE PILE TO A ROADWAY OR DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN FOURTEEN DAYS, STABILIZE THE STOCKPILES BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT FENCE BARRIERS AROUND THE PILES. DURING STREET REPAIR, COVER CONSTRUCTION SOIL OR DIRT STOCKPILES LOCATED CLOSER THAN 8 M (25 FEET) TO A ROADWAY OR DRAINAGE CHANNEL WITH TARPS, AND PROTECT STORM SEWER INLETS WITH SILT SACKS OR STAKED SILT FENCE. DO NOT STOCK PILE SOIL OR MATERIAL NEAR CATCH BASINS OR DRAINAGE WAYS.

TEMPORARY ROCK CONSTRUCTION ENTRANCE:
USE 25 MM (1 INCH) TO 50 MM (2 INCH) DIAMETER ROCK, USE IOWA DOT 4122, GRADATION 13, MACADAM CRUSHED STONE IN A LAYER AT LEAST 152 MM (6 INCHES) THICK ACROSS THE ENTIRE WIDTH OF THE ENTRANCE. EXTEND THE ROCK ENTRANCE AT LEAST 15 M (50 FEET) INTO THE CONSTRUCTION ZONE. MAINTAIN THE ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED ROADWAYS. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS REQUIRED. CLOSE ENTRANCES NOT PROTECTED BY TEMPORARY ROCK CONSTRUCTION ENTRANCES TO ALL CONSTRUCTION TRAFFIC.

DEWATERING:
IF DEWATERING IS REQUIRED AND SUMP PUMPS ARE USED, ALL PUMPED WATER MUST BE DISCHARGED THROUGH AN EROSION CONTROL FACILITY (TEMPORARY SEDIMENTATION BASIN, GRIT CHAMBER, SAND FILTER, UPFLOW CHAMBER, HYDRO–CYCLONE, SWIRL CONCENTRATOR, DEWATERING BAG OR OTHER APPROPRIATE FACILITY) PRIOR TO LEAVING THE CONSTRUCTION SITE. PROPER ENERGY DISSIPATION MUST BE PROVIDED AT THE OUTLET OF THE PUMP SYSTEM. DISCHARGE CLEAR WATER ONLY. TO ACHIEVE BETTER SEPARATION OF THE MATERIAL SUSPENDED IN THE WATER A BIODEGRADABLE NOT TOXIC FLOCCULANT AGENT MAY BE REQUIRED.

IF THE CONTRACTOR DETERMINES THAT DEWATERING WILL BE NECESSARY, A DEWATERING PLAN MAY HAVE TO BE SUBMITTED TO THE WATERSHED AND/OR DNR BY THE CONTRACTOR FOR APPROVAL. A TRENCH PERMIT MAY ALSO HAVE TO BE SUBMITTED AND WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. WATER PUMPED FROM THE SITE SHALL BE PUMPED AND TREATED FOR WATER QUALITY PER WATERSHED AND/OR DNR.

FOR MORE INFORMATION AND MATERIALS ON DEWATERING GO TO BY INTERSTATE PRODUCTS WWW.INTERSTATEPRODUCTS.COM

INSPECTION - MAINTENANCE - DAILY RECORD - AMEND THE SWPPP PLAN

1. INSPECT ALL EROSION AND SEDIMENT CONTROL DEVICES, STABILIZED AREAS, AND INFILTRATION AREAS ON A DAILY BASIS UNTIL LAND–DISTURBING ACTIVITY HAS CEASED. THEREAFTER, INSPECT AT LEAST ON A WEEKLY BASIS UNTIL VEGETATIVE COVER IS ESTABLISHED. REMOVE ACCUMULATED SEDIMENT DEPOSITS FROM BEHIND EROSION AND SEDIMENT CONTROL DEVICES AS NEEDED. DO NOT ALLOW SEDIMENT TO ACCUMULATE TO A DEPTH OF MORE THAN ONE–THIRD OF THE HEIGHT OF THE EROSION AND SEDIMENT CONTROL DEVICES. IMMEDIATELY REPLACE DETERIORATED, DAMAGED, ROTTED, OR MISSING EROSION CONTROL DEVICES. DOCUMENT INSPECTIONS AND DATES OF RAINFALL EVENTS. MAINTAIN A WRITTEN LOG OF ALL INSPECTION, MAINTENANCE, AND REPAIR ACTIVITIES RELATED TO EROSION AND SEDIMENT CONTROL FACILITIES. ALL NONFUNCTIONAL BMPS MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPS WITHIN 24 HOURS AFTER DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.

2. ALL INSPECTIONS AND MAINTENANCE ACTIVITIES MUST BE RECORDED IN WRITING DAILY IN A DETAILED RECORD (NOTES, PHOTOGRAPHS, SKETCHES, ETC., AND KEPT WITH THE SWPPP.

3. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO ADJACENT PROPERTY, PAVEMENT AREAS, SIDEWALKS, STREETS, AND ALLEYS. REMOVAL SHALL BE ON A DAILY BASIS THROUGHOUT THE DURATION OF THE CONSTRUCTION. CLEAN PAVED ROADWAYS BY SHOVELING OR WET–SWEEPING. DO NOT DRY SWEEP. IF NECESSARY, SCRAPE PAVED SURFACES IN ORDER TO LOOSEN COMPACTED SEDIMENT MATERIAL PRIOR TO SWEEPING. HAUL SEDIMENT MATERIAL TO A SUITABLE DISPOSAL AREA. STREET WASHING IS ALLOWED ONLY AFTER SEDIMENT HAS BEEN REMOVED BY SHOVELING OR SWEEPING.

4. ALL SOIL HAULED FROM THE SITE SHALL BE ACCOUNTED FOR AND DOCUMENTED IN THE SWPPP. ITS FINAL DESTINATION AND HOW THE SOIL HAS BEEN STORED AND STABILIZED.

5. MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED (HARD–SURFACED AREAS PAVED AND VEGETATION ESTABLISHED IN GREENSPACE). REPAIR ANY RILLING, GULLY FORMATION, OR WASHOUTS. AFTER FINAL ESTABLISHMENT OF PERMANENT STABILIZATION, REMOVE ALL TEMPORARY SYNTHETIC, STRUCTURAL, AND NONBIODEGRADABLE EROSION AND SEDIMENT CONTROL DEVICES AND ANY ACCUMULATED SEDIMENTS. DISPOSE–OF OFF SITE. RESTORE PERMANENT SEDIMENTATION BASINS TO THEIR DESIGN CONDITION IMMEDIATELY FOLLOWING STABILIZATION OF THE SITE.

6. CLEAN SEDIMENTATION BASINS, STORM SEWER CATCH BASINS, DITCHES, AND OTHER DRAINAGE FACILITIES AS REQUIRED IN ORDER TO MAINTAIN THEIR EFFECTIVENESS. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED, AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 OF THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.

7. INSPECT INFILTRATION AREAS TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITIES IS ACCUMULATING. REMOVE SEDIMENT IMMEDIATELY ENSURING SUBSOILS ARE NOT COMPACTED BY MACHINERY.

8. EVERY VEHICLE SHALL NOT TRACK MATERIAL OFF–SITE. CLEAN THE WHEELS OF CONSTRUCTION VEHICLES IN ORDER TO REMOVE SOILS BEFORE THE VEHICLES LEAVE THE CONSTRUCTION SITE. WASH VEHICLES ONLY ON AN AREA STABILIZED WITH STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

9. REINFORCE EROSION CONTROL FACILITIES IN AREAS WHERE CONCENTRATED FLOWS OCCUR (SUCH AS SWALES, DITCHES, AND AREAS IN FRONT OF CULVERTS AND CATCH BASINS) BY BACKING THEM WITH SNOW FENCE, WIRE MESH, OR STIFF PLASTIC MESH REINFORCEMENT UNTIL PAVING AND TURF ESTABLISHMENT OPERATIONS HAVE BEEN COMPLETED. POSTS FOR THE REINFORCING FENCE SHALL BE 100 MM (4 INCH) DIAMETER STANDARD STEEL FENCE POSTS WEIGHING NOT LESS THAN 0.59 KG (1.3 LBS) PER LINEAL FOOT, WITH A MINIMUM LENGTH OF 762 MM (30 INCHES) PLUS BURIAL DEPTH. SPACE POSTS FOR THE REINFORCING FENCE AT INTERVALS OF 3 M (10 FEET) OR LESS. DRIVE POSTS FOR THE REINFORCING FENCE AT LEAST 0.6 M (2 FEET) INTO THE GROUND.

GENERAL SOIL STABILIZATION

(SEE LANDSCAPE PLAN FOR MORE INFORMATION)

ESTABLISHMENT OF LAWN, PRAIRIE/WILDFLOWER AND/OR PLANT BED AREAS WILL BE NOTED ON THE LANDSCAPE PLAN TO ENSURE STABILIZATION OF SOILS, RESTAKING OF SOD WHERE APPLICABLE, PROPER WATERING AND MULCH MAINTENANCE WILL BE REQUIRED. INSPECT SEEDED OR SODDED AREAS ON A TIMELY DAY–TO–DAY BASIS. IN THE EVENT OF A SEEDING FAILURE, RESEED AND REMULCH THE AREAS WHERE THE ORIGINAL SEED HAS FAILED TO GROW AND PERFORM ADDITIONAL WATERING AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER. SPECIAL MAINTENANCE PROVISIONS FOR WILD AND PRAIRIE GRASS SEEDED AREAS AS NOTED IN THE LANDSCAPE PLAN. PROMPTLY REPLACE ALL SOD THAT DRIES OUT TO THE POINT WHERE IT IS PRESUMED DEAD AND ALL SOD THAT HAS BEEN DAMAGED, DISPLACED, WEAKENED, OR HEAVILY INFESTED WITH WEEDS AT NO ADDITIONAL COST TO THE OWNER.

SOIL STABILIZATION:
SOILS MUST BE STABILIZED IMMEDIATELY WHEN CLEARING, GRADING OR EXCAVATING PROCESSES HAVE CEASED PERMANENTLY OR IF WORK WILL NOT RESUME FOR FOURTEEN (14) DAYS IN ACCORDANCE TO THE 0/14 DAY RULE OUTLINED BY THE NPDES GENERAL PERMIT NO.2 GUIDELINES

TOP SOIL PRESEVATION:
MINIMIZE SOIL COMPACTION WHERE ALLOWABLE AND PRESERVE ALL POSSIBLE TOP SOIL IN ACCORDANCE TO NPDES GENERAL PERMIT NO.2 GUIDELINES.

SEEDBED PREPARATION, TEMPORARY:
TILL THE SOIL TO A MINIMUM DEPTH OF 5 INCHES WITH A DISK, HARROW, OR FIELD CULTIVATOR.

SEED PREPARATION:
IN AREAS TO BE TEMPORARILY SEEDED, USE INTRODUCED SEED MIXTURES, IOWA DOT TYPE 4 (URBAN TEMPORARY EROSION CONTROL MIXTURE) OR TYPE 5 (RURAL TEMPORARY EROSION CONTROL MIXTURE). FOR TEMPORARY SEEDING PREPARE BY TILLING THE SOIL TO A MINIMUM DEPTH OF 5 INCHES WITH A DISK, HARROW, OR FIELD CULTIVATOR.

A. THOROUGHLY MIX ALL SEED SPECIFIED FOR THE CONTRACT PRIOR TO PLACING THE SEED IN THE SEED HOPPER. PROVIDE 48 HOURS NOTICE PRIOR TO MIXING THE SEED, AND GIVE THE ENGINEER AN OPPORTUNITY TO WITNESS THE SEED MIXING. THE MIXING OF A CERTIFIED BLUE TAG SEED MIX AT AN APPROVED (BY IOWA CROP IMPROVEMENT ASSOCIATION) SEED CONDITIONER'S FACILITY NEED NOT BE WITNESSED.

B. TREAT ALL LEGUME SEED WITH A COMMERCIAL STICKING AGENT TO BE APPLIED PRIOR TO APPLICATION OF INOCULANT, OR AS A MIXTURE WHEN THE STICKING AGENT IS COMPATIBLE WITH OTHER MATERIALS. A STICKING AGENT IS NOT REQUIRED IF A LIQUID FORMULATION OF INOCULANT IS USED. USE MECHANICAL MIXING EQUIPMENT TO APPLY STICKING AGENT AND INOCULANT ON SEED QUANTITIES OVER 50 POUNDS.

C. INOCULATE ALL LEGUMES WITH A STANDARD PRODUCT HUMUS CULTURE BEFORE BEING MIXED WITH OTHER SEEDS FOR SOWING.

D. INOCULATE ALL LEGUMES WITH A STANDARD CULTURE AT THE RATE SPECIFIED BY THE MANUFACTURER OF THE INOCULANT ACCORDING TO IOWA DOT ARTICLE 4169.04. DO NOT EXPOSE INOCULATED SEED TO DIRECT SUNLIGHT FOR MORE THAN 30 MINUTES. RE–INOCULATE SEED THAT IS NOT SOWN WITHIN 8 HOURS AFTER INOCULATION PRIOR TO USE. PRE–INOCULATED SEED WITH MANUFACTURER'S RECOMMENDED PROTECTIVE COATING MAY BE USED IN LIEU OF SEED WITH CONTRACTOR–APPLIED INOCULANT.

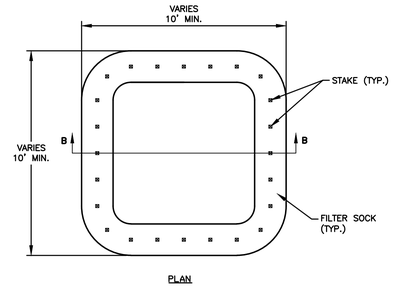
E. WHEN THE GRAVITY OR CYCLONE SEEDER IS USED FOR APPLICATION OF SEED, INOCULATE LEGUME SEED ACCORDING TO THE MANUFACTURER'S RECOMMENDED PROCEDURES, BEFORE MIXING WITH OTHER GRASS SEEDS FOR SOWING. FURNISH AND APPLY INOCULANT.

SEED APPLICATION, TEMPORARY:
A. ON AREAS ACCESSIBLE TO FIELD MACHINERY, SOW SEED WITH AN ENDGATE CYCLONE SEEDER.

B. ON AREAS INACCESSIBLE TO FIELD MACHINERY, THE USE OF HAND–OPERATED CYCLONE SEEDERS WILL BE ALLOWED, BUT NO OTHER HAND–OPERATED SEEDING METHODS WILL BE ACCEPTED.

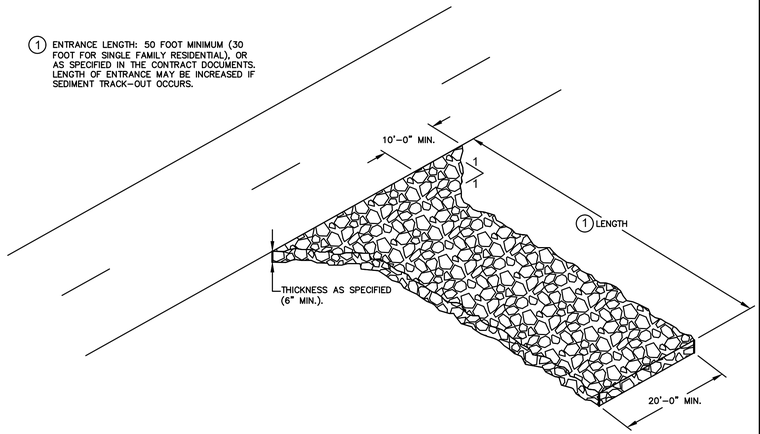
C. COVER THE SEED AND FERTILIZER BY LIGHTLY TILLING THE SEEDED AREA WITH A DISK, RIGID HARROW, SPRING TOOTH HARROW, OR FIELD CULTIVATOR.

FOR ADDITIONAL REFERENCE SEE SUDAS STANDARD SPECIFICATIONS DIVISION 9 – SITE WOR

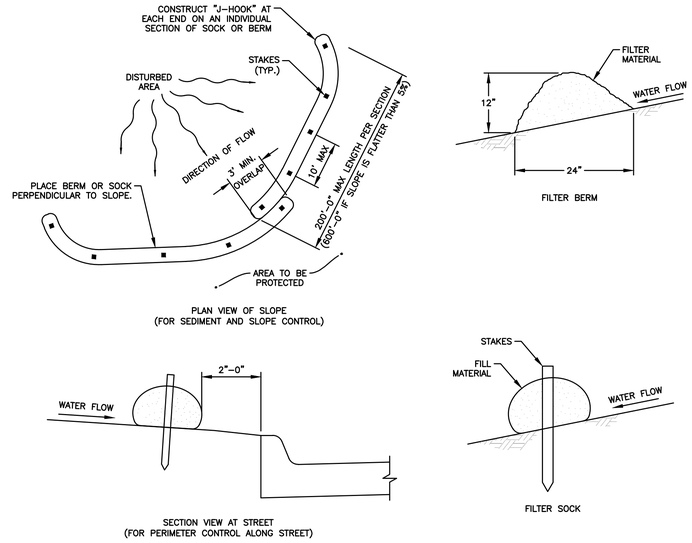


NOTES:
1. ACTUAL LAYOUT AND LOCATION TO BE DETERMINED IN FIELD BY THE CONTRACTOR.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 75% FULL.

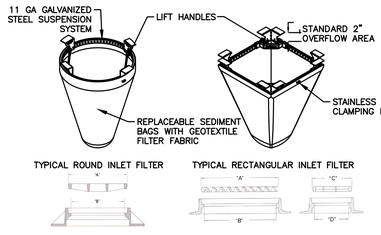
1 | CONCRETE WASHOUT
C602 | NOT TO SCALE



2 | ROCK CONSTRUCTION ENTRANCE
C602 | NOT TO SCALE



3 | FILTER SOCK
C602 | NOT TO SCALE



1. INDENTIFY YOUR FRAME STYLE AND SIZE

STYLE	FRAME STYLE AND SIZE	Frame P/N:
ROUND	Small Round (up to 20.0" dia grates (A) dim)	625RD
	Med Round (20.1" – 26.0" dia grates (A) up to 25" dia openings (B))	626MD
	Large Round (26.1" - 32.0" dia grates (A) up to 30" openings (B))	632RD
	XL Round (32.1" dia – 39" dia grates (A) up to 37" dia openings (B))	626XLRD
RECT/ SQUARE	Small Rect / Square (up to 16" (B) x 16" (D) openings or 64" perimeter)	625SQ
	Med Rect / Square (up to 24" (B) x 24" (D) openings or 96" perimeter)	626MSQ
	Large Rect / Square (up to 30" (B) x 24" (D) openings or 220" perimeter)	632LSQ
	XL Rect / Square (side by side 2-pc set to fit up to 48" (B) x 36" (D) openings)	626LSQ
CURB/SQ HOOD	Small Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	625CB
	Med Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	626MCB
	Large Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	632LCB
	XL Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	626XLCB
NYLOPLAST	12" diameter Nyloplast castings (Stainless Steel Framing standard)	621NY
	15" diameter Nyloplast castings (Stainless Steel Framing standard)	621SNY
	18"diameter Nyloplast castings (Stainless Steel Framing standard)	621RNY
	24" diameter Nyloplast castings (Stainless Steel Framing standard)	622NY
	30" diameter Nyloplast castings (Stainless Steel Framing standard)	623NY

SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL SIZE

Nominal Bag Size	Solids Storage (Cu.Ft)	Filtered Flow Rate at 50% Max (CFS) FX (Woven)	FX–S (NonWoven)
Small	1.6	1.2	0.9
Medium	2.1	1.7	1.3
Large	3.8	2.7	1.9
XL	4.2	3.6	2.6

2. SELECT YOUR BAG PART NUMBER

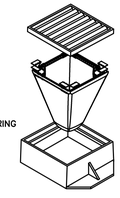
FLEXSTORM FILTER BAGS	(22" depth) STD Bag P/N	(12" depth) Short Bag P/N	Clean Water Flow Rate (GPM/SqFt)	Min A O.S. (US Sieve)
FX- Standard Woven Bag	FX	FX-S	200	80
IL- IDOT Non-Woven Bag	IL	IL-S	145	70

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER

Frame P/N from Step 1. | Filter Bag P/N from Step 2.

NOTES:
1. ALL FRAMING IS CONSTRUCTED OF CORROSION RESISTANT STEEL (ZINC PLATED OR GALVANIZED) FOR 7 YEAR MINIMUM SERVICE LIFE.
2. UPON ORDERING CONFIRMATION OF THE DOT CALLOUT, PRECAST OR CASTING MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED TO CONFIGURE AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER. PART NUMBER ALONE IS NOT SUFFICIENT.
3. FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT WWW.INLETFILTERS.COM

INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE



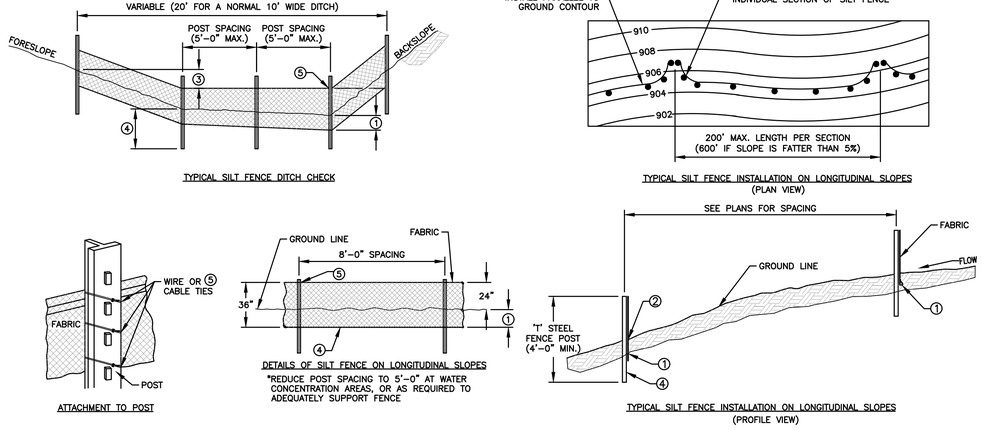
ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC
A DIVISION OF ADS, INC.
WWW.INLETFILTERS.COM
(866) 287–8655 PH
(630) 355–3477 FX
INFO@INLETFILTERS.COM

SIZE	DWG NO	REV
C	IPP Flexstorm Specification A	
SCALE	SHEET 1 OF 1	

4 | INLET PROTECTION
C602 | NOT TO SCALE

GENERAL NOTES:
INSTALL SILT FENCE ACCORDING TO THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS AND AT LOCATIONS SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE JURISDICTIONAL ENGINEER.

1. INSERT 12 IN. OF FABRIC A MINIMUM OF 6 IN. DEEP (FABRIC MAY BE FOLDED BELOW THE GROUND LINE)
2. COMPACT GROUND BY DRIVING ALONG EACH SIDE OF THE SILT FENCE AS REQUIRED TO SUFFICIENTLY SECURE THE FABRIC IN THE TRENCH TO PREVENT PULLOUT AND FLOW UNDER THE FENCE.
3. IN DITCHES, EXTEND SILT FENCE UP SIDE SLOPE SO THE BOTTOM ELEVATION AT THE END OF THE FENCE IS A MINIMUM OF 2 IN. HIGHER THAN THE TOP OF THE FENCE IN THE LOW POINT OF THE DITCH.
4. STEEL POSTS TO BE EMBEDDED 20 IN. UNLESS OTHERWISE ALLOWED BY THE JURISDICTIONAL ENGINEER.
5. SECURE TOP OF ENGINEERING FABRIC TO STEEL POSTS USING WIRE OR PLASTIC TIES (50 LB. MIN.). SEE DETAILS OF "ATTACHMENT TO POSTS."



5 | SILT FENCE
C602 | NOT TO SCALE

KWIK TRIP
KWIK STAR

KWIK TRIP, Inc.
P.O. BOX 2107
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EROSION CONTROL DETAILS

LH G3 STORE
WITH 10 MPD

CTH 22/UTE AVE
WAUKEE, IOWA
LAT 41.56572, LONG -93.88148

#	DATE	DESCRIPTION
	06MAY25	CITY SUBMITTAL #1
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DRAWN BY	KMW
SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	30JUN25
SHEET	C602

DRAWING PHASE

CONTRACTOR/SUBCONTRACTOR CERTIFICATION

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE AS PART OF THIS CERTIFICATION. FURTHER, BY MY SIGNATURE, I UNDERSTAND THAT I AM BECOMING A CO-PERMITTEE, ALONG WITH THE OWNER(S) AND OTHER CONTRACTORS AND SUBCONTRACTORS SIGNING SUCH CERTIFICATIONS, TO THE IOWA DEPARTMENT OF NATURAL RESOURCES NPDES GENERAL PERMIT NO. 2 FOR "STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FOR CONSTRUCTION ACTIVITIES" AT THE IDENTIFIED SITE. AS A CO-PERMITTEE, I UNDERSTAND THAT I, AND MY COMPANY, ARE LEGALLY REQUIRED UNDER THE CLEAN WATER ACT AND THE CODE OF IOWA, TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE STORM WATER POLLUTION PREVENTION PLAN DEVELOPED UNDER THIS NPDES PERMIT AND THE TERMS OF THE NPDES PERMIT."

NAME (PRINTED OR TYPED):

TITLE:

SIGNATURE:

DATE:

NAME OF CONTRACTING FIRM:

ADDRESS:

CITY, STATE, ZIP CODE:

TELEPHONE NUMBER:

ADDRESS OF THE SITE:

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NAME OF CONTRACTING FIRM:

ADDRESS:

CITY, STATE, ZIP CODE:

TELEPHONE NUMBER:

ADDRESS OF THE SITE:

OWNER CERTIFICATION

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

NAME (PRINTED OR TYPED):

TITLE:

SIGNATURE:

DATE:

NAME OF COMPANY, IF APPLICABLE:

ADDRESS:

CITY, STATE, ZIP CODE:

TELEPHONE NUMBER:

ADDRESS OF THE SITE:

KWIK TRIP

KWIK STAR

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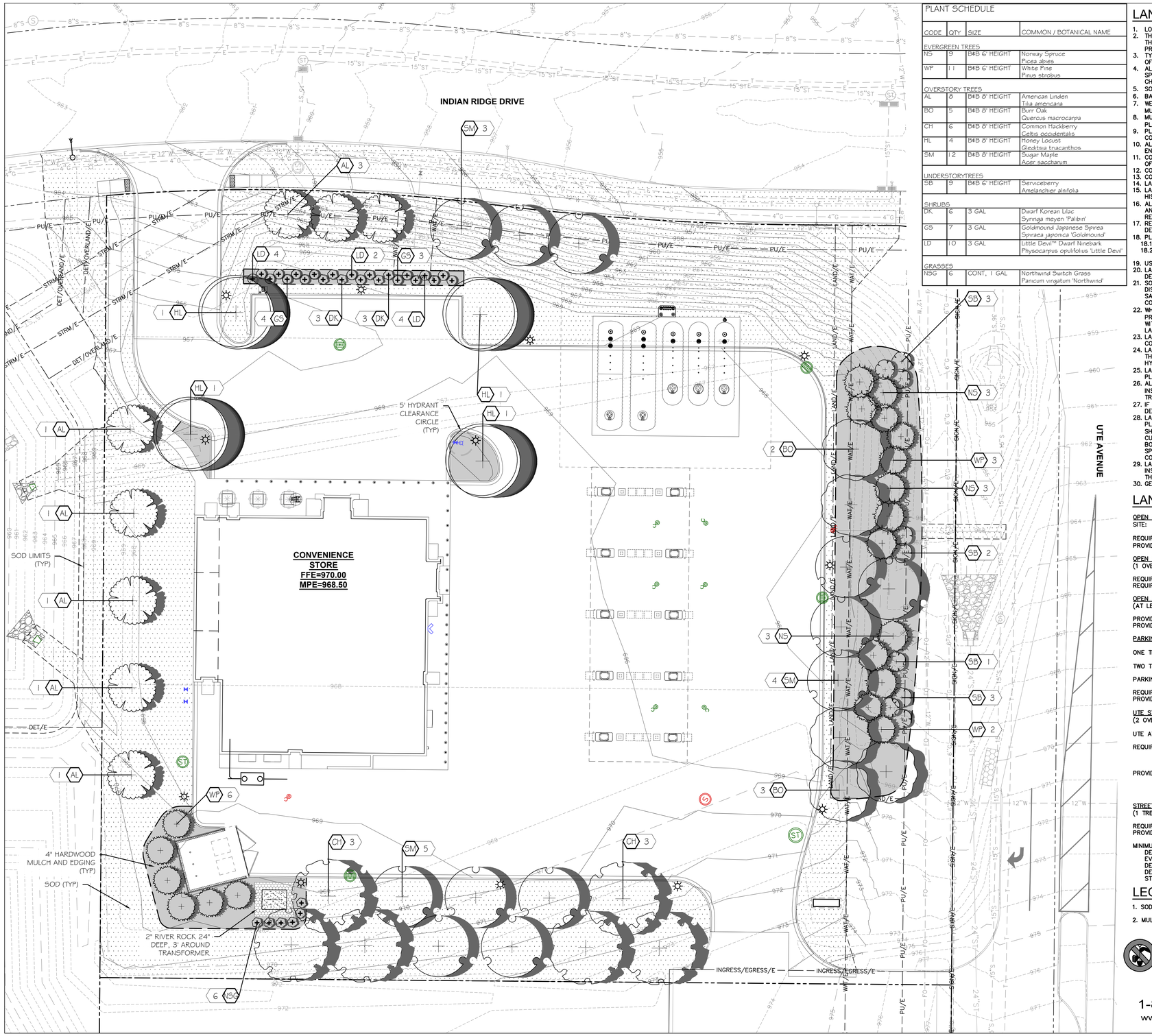
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DRAWN BY	KMW
SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	30JUN25
SHEET	C603

DRAWING PHASE



PLANT SCHEDULE

CODE	QTY	SIZE	COMMON / BOTANICAL NAME
EVERGREEN TREES			
NS	9	B&B 6' HEIGHT	Norway Spruce *Picea abies*
WP	11	B&B 6' HEIGHT	White Pine *Pinus strobus*
OVERSTORY TREES			
AL	8	B&B 8' HEIGHT	American Linden *Tilia americana*
BO	5	B&B 8' HEIGHT	Burr Oak *Quercus macrocarpa*
CH	6	B&B 8' HEIGHT	Common Hackberry *Celtis occidentalis*
HL	4	B&B 8' HEIGHT	Honey Locust *Gleditsia triacanthos*
SM	12	B&B 8' HEIGHT	Sugar Maple *Acer saccharum*
UNDERSTORY TREES			
SB	9	B&B 6' HEIGHT	Serviceberry *Amelanchier alnifolia*
SHRUBS			
DK	6	3 GAL	Dwarf Korean Lilac *Syringa meyeri 'Palibin'*
GS	7	3 GAL	Goldmound Japanese Spirea *Spiraea japonica 'Goldmound'*
LD	10	3 GAL	Little Devil™ Dwarf Ninebark *Physocarpus opulifolius 'Little Devil'*
GRASSES			
NSG	6	CONT, 1 GAL	Northwind Switch Grass *Panicum virgatum 'Northwind'*

LANDSCAPE NOTES

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND 2025 EDITION OF THE WAUKEE STANDARD SPECIFICATIONS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
3. TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1
4. 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.
5. SOD ALL DISTURBED AREAS (SEE PLAN).
6. BACKFILL TO TOP OF CURB. (MINUS 1 1/2" FOR SOD, IF REQ.)
7. WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
8. MULCH SHALL BE PLACED AROUND ALL TREES, SHRUBS AND IN ALL PLANTING BEDS TO A (MIN) DEPTH OF 4".
9. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
10. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY AND PRIOR TO A RAIN EVENT.
11. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE.
12. CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN TO OWNER, IF REQUESTED, FOR APPROVAL.
13. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR PLANTING IN ALL R.O.W.
14. LANDSCAPE CONTRACTOR SHALL VERIFY ALL UTILITIES WHICH MAY EFFECT HIS WORK.
15. LANDSCAPE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHERS AT SITE AND COMPLETE HIS WORK PER OWNERS CONSTRUCTION SCHEDULE.
16. ALL PLANT MATERIALS SHALL BE GUARANTEED ONE (1) FULL YEAR UPON TOTAL COMPLETION AND ACCEPTANCE BY OWNER, WITH ONE TIME REPLACEMENT AT APPROPRIATE TIME OR UPON REQUEST OF OWNER.
17. REPLACEMENT TOPSOIL SHALL BE CLEAN, FREE OF STONES, WEEDS, AND OTHER UNDESIRABLE DEBRIS.
18. PLANTING SOIL MIX (INCIDENTAL COST ITEM)
    - 18.1. MIX 1 I.B. 5-20-20 COMMERCIAL FERTILIZER PER CU. YD. TOPSOIL
    - 18.2. THOROUGHLY MIX 1-PART SAND AND 1-PART PEAT MOSS WITH 5-PARTS FERTILIZER AND TOP SOIL.
19. USE PLANTING SOIL AT ALL LOCATIONS PER DETAILS THIS SHEET.
20. LANDSCAPE CONTRACTOR SHALL VERIFY TOPSOIL DEPTH AND NOTIFY OWNER OF ANY DEFICIENCY.
21. SOD SHALL BE CULTURED WITH PREDOMINATELY KENTUCKY BLUEGRASS SEED OF RECENT DISEASE RESISTANT INTRODUCTIONS. NO GUARANTEE ON SOD EXCEPT ANY SOD NOT SATISFACTORY AT TIME OF COMPLETION INSPECTION SHALL BE PROMPTLY REPLACED PRIOR TO COMPLETION OF JOB. STAKE SOD ON SLOPES 3:1 AND GREATER.
22. WHERE EXISTING CONCRETE/ ASPHALT AREAS ARE TO BE REPLACED WITH LANDSCAPING, PROVISIONS SHOULD BE TAKEN TO COORDINATE EXCAVATION OF SUBSOIL TO A DEPTH OF 2' WITH GRADING CONTRACTOR. REPLACE WITH COMPACTED TOPSOIL. ALL AREAS TO BE LANDSCAPED AND SODDED SHALL BE GRADED SMOOTH AND EVEN.
23. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR SODDING ALL AREAS WHICH ARE DISTURBED BY CONSTRUCTION INCLUDING ALL R.O.W. AND ADJACENT PROPERTIES.
24. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PROVIDING BLANKET ON ALL SEEDED AREAS THAT ARE SLOPED. MULCH APPLICATION FOR ALL OTHER SEEDED AREAS SHALL BE EITHER HYDROMULCH OR DISKED STRAW DEPENDING ON SEED TYPE, APPLICATION, AND OWNER REQUEST.
25. LANDSCAPE CONTRACTOR TO INSTALL 'VALLEY VIEW', "BLACK DIAMOND" EDGING AROUND ALL PLANTING BEDS AS SHOWN ON THIS PLAN.
26. ALL MULCH TO BE FINELY SHREDDED HARDWOOD ORGANIC BARK MULCH. NO DYED MULCHES. INSTALL 4" DEPTH. NO FILTER FABRIC BENEATH ORGANIC MULCHES. NO EDGING AROUND ALL TREES OUTSIDE SHRUB BEDS.
27. IF SPECIFIED; ALL GRAVEL MULCH SHALL BE 1"+ DIA. WASHED "RIVER ROCK". INSTALL 4" DEPTH WITH APPROVED WEED FABRIC BARRIER IF INDICATED PLAN.
28. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR IRRIGATION SYSTEM INSTALLATION PER IRRIGATION PLAN. DESIGN SHALL BE APPROVED BY OWNER PRIOR TO INSTALLATION. IRRIGATION DESIGN SHOULD ENCOMPASS ALL LANDSCAPE AREAS WITH SOD AND/ OR PLANTINGS, FROM CURB TO CURB. R.O.W. SHOULD BE IRRIGATED FROM SPRINKLER HEADS LOCATED WITHIN PROPERTY BOUNDARY. CARE SHOULD BE TAKEN IN VICINITY OF ALL WALKS AND DRIVES TO MINIMIZE OVER SPRAY. COORDINATE INSTALLATION OF ALL PVC SLEEVE UNDER DRIVE AREAS WITH GENERAL CONTRACTOR.
29. LANDSCAPE CONTRACTOR SHALL CLEAN ALL PAVEMENT AREAS AFTER ALL LANDSCAPE INSTALLATION IS COMPLETE AND ACCEPTED BY OWNER AND DAILY AS DEEMED NECESSARY BY THE CITY.
30. GENERAL CONTRACTOR TO SWEEP PAVEMENT AREAS PRIOR TO TURN OVER TO OWNER.

LANDSCAPE REQUIREMENTS

OPEN SPACE REQUIREMENTS

SITE: 2.51 ACRES (109,268 SF)

REQUIRED OPEN SPACE: 21,854 SF (20%)
PROVIDED OPEN SPACE: 47,852 SF (44%)

OPEN SPACE LANDSCAPING REQUIREMENTS
(1 OVERSTORY TREE AND 1 SHRUB PER 1,000 SF OF REQUIRED OPEN SPACE)

REQUIRED TREES: 22 OVERSTORY TREES
REQUIRED SHRUBS: 22 SHRUBS

OPEN SPACE LANDSCAPING PROVIDED
(AT LEAST 25% OF TREES REQUIRED ON THE SITE SHALL BE EVERGREEN TREES)

PROVIDED TREES: 22 TREES
PROVIDED SHRUBS: 23 SHRUBS

PARKING ISLAND LANDSCAPING REQUIREMENTS

ONE TREE IN EACH 10' X 17' ISLAND

TWO TREES IN EACH 10' X 34' ISLAND

PARKING ISLANDS: 4

REQUIRED TREES: 4 TREES
PROVIDED TREES: 4 TREES

UTE STREET 30' BUFFER REQUIREMENTS
(2 OVERSTORY TREES, 3 EVERGREENS AND 2 UNDERSTORY TREES PER 50 LINEAR FEET OF BUFFER)

UTE AVENUE STREET FRONTAGE: 233'

REQUIRED LANDSCAPING: 9 OVERSTORY TREES
9 UNDERSTORY TREES
14 EVERGREEN TREES

PROVIDED LANDSCAPING: 9 OVERSTORY TREES
9 UNDERSTORY TREES
14 EVERGREEN TREES

STREETSCAPE INFO
(1 TREE EVERY 40 LINEAR FEET OF STREET BETWEEN PARKING AND RIGHT OF WAY)

REQUIRED OVERSTORY TREES: 6 TREES
PROVIDED OVERSTORY TREES: 6 TREES

MINIMUM SIZE FOR REQUIRED PLANTINGS

DECIDUOUS OVERSTORY TREES	8 FEET
EVERGREEN OVERSTORY TREES	6 FEET
DECIDUOUS UNDERSTORY TREES	6 FEET
DECIDUOUS AND EVERGREEN SHRUBS	2 FEET
STREET TREES	12 FEET

LEGEND

1. SOD
2. MULCH

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SCALE
0' 10' 20' 40'

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LANDSCAPE PLAN

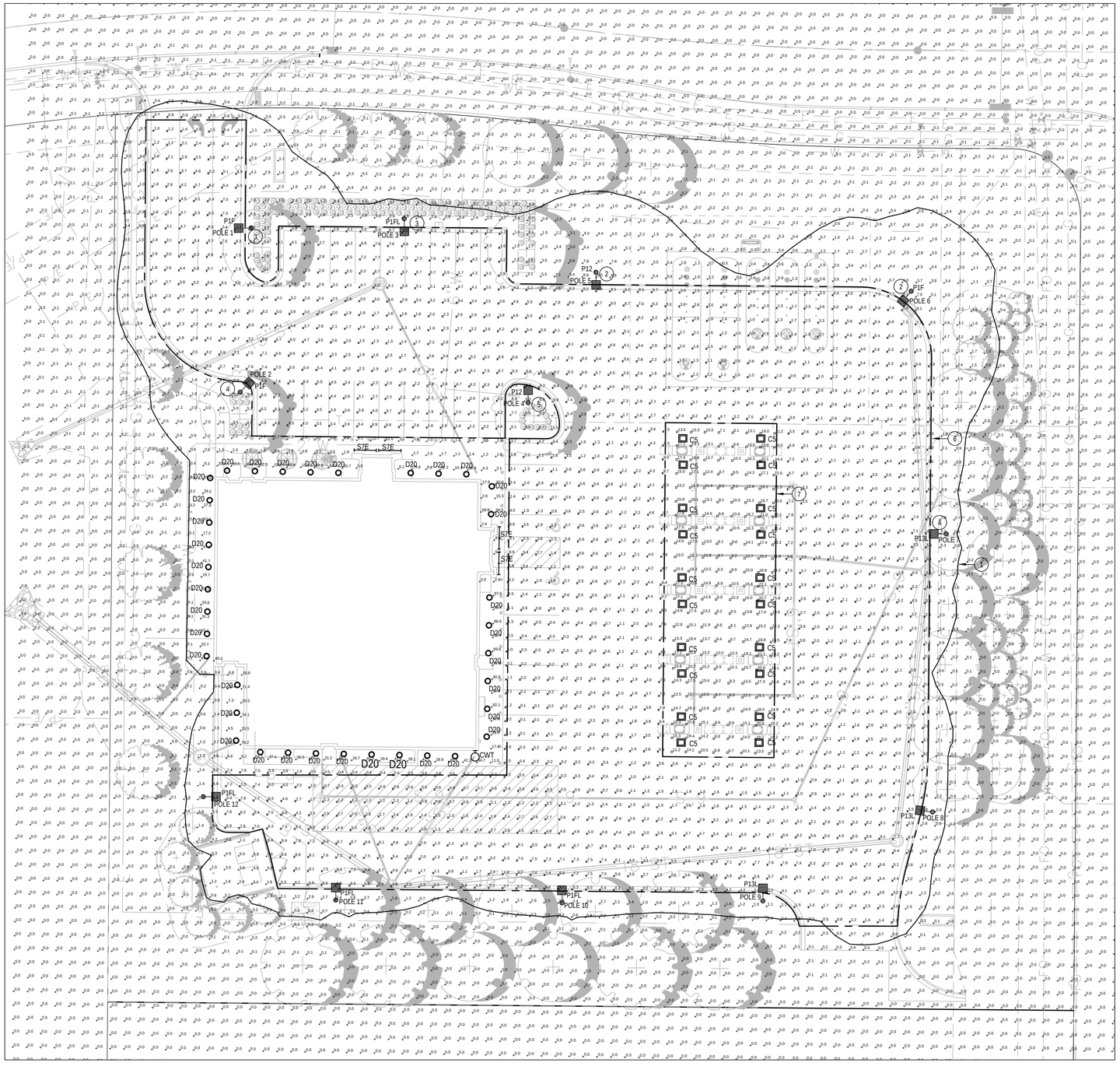
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DRAWN BY	KMW
SCALE	GRAPHIC
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SHEET	C700

DRAWING PHASE



PHOTOMETRIC SITE PLAN AT 5FT ABOVE GRADE (FOR CITY CODE COMPLIANCE)

SCALE: 1" = 20'-0"

STATISTICS ZONE CALCULATIONS

PARKING LOT ONLY (FUEL CANOPY IS EXCLUDED IN STATS):
AVERAGE: 3.6
MAXIMUM: 9.7
MINIMUM: 0.1

FUEL CANOPY:
AVERAGE: 14.0
MAXIMUM: 21.1
MINIMUM: 6.7

FIXTURE QUANTITIES

D20 - 36
S7E - 4
C5 - 20
CWT - 1
P12 - 2
P13L - 3
P1F - 3
P1FL - 4

PROVIDE (12) 19' POLES.

FIXTURE SYMBOLS:

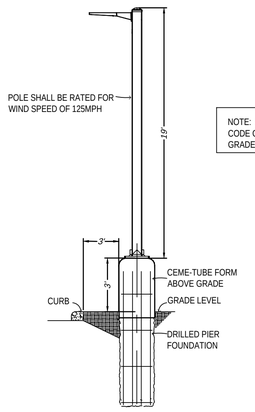
- LED LIGHT MOUNTED UNDER FUEL CANOPIES
- LED STRIP LIGHT MOUNTED IN GABLE
- RECESSED LED DOWNLIGHT
- POLE MOUNTED LED FIXTURE
- WALL MOUNTED LED FIXTURE

GENERAL NOTES:

1. FOOTCANDLE LEVELS SHOWN ON THIS PLAN ARE CALCULATED AT 5'-0" ABOVE GRADE LEVEL.
2. ALL POLES SHALL BE INSTALLED A MINIMUM OF 3'-0" FROM BACK OF CURB TO EDGE OF POLE BASE UNLESS NOTED.
3. POLE THAT ARE LOCATED AT CORNER OF ISLAND SHALL BE A MINIMUM OF 6'-0" FROM BACK OF CURB TO EDGE OF POLE BASE. POLES THAT MUST BE INSTALLED LESS THAN 6'-0" FROM BACK OF CURB TO EDGE OF POLE BASE SHALL HAVE PROTECTIVE BOLLARDS INSTALLED AROUND THE POLE BASE. COORDINATE WITH KWIK TRIP PRIOR TO INSTALLATION.

KEYED NOTES:

1. 0.5 FOOTCANDLE CONTOUR LINE.
2. CONTRACTOR SHALL INSTALL POLE MOUNT FIXTURE 12'-0" FROM THE OVER DIG OF UNDERGROUND FUEL TANK TO EDGE OF POLE BASE.
3. CONTRACTOR SHALL POLE MOUNT FIXTURE 2'-0" FROM BACK OF CURB TO EDGE OF POLE BASE TO AVOID LANDSCAPE.
4. CONTRACTOR SHALL POLE MOUNT FIXTURE 5'-0" FROM BACK OF CURB TO EDGE OF POLE BASE.
5. CONTRACTOR SHALL POLE MOUNT FIXTURE 8'-0" FROM BACK OF CURB TO EDGE OF POLE BASE.
6. PHOTOMETRIC STATISTICS ZONE BOUNDARY FOR PARKING LOT. FUEL CANOPY IS EXCLUDED FROM THE STATISTICS ZONE. SEE STATISTICS ZONE CALCULATIONS ON THIS PAGE.
7. PHOTOMETRIC STATISTICS ZONE BOUNDARY FOR FUEL CANOPY. SEE STATISTICS ZONE CALCULATIONS ON THIS PAGE.



NOTE: SPECIAL POLE HEIGHT OF 19'-0" TO COMPLY WITH CITY CODE OF MAX 10 FOOT CANDLES AT 5'-0" ABOVE FINISHED GRADE IN PARKING LOT.

LOT LIGHT ELEVATION DETAIL

NOT TO SCALE

FIXTURE TYPES:

D20 - RECESSED LED DOWNLIGHT GOTHAM EVO-35/30-8AR-WD-120-TRW

S7E - LED STRIP LIGHT MOUNTED IN GABLE LITHONIA TZL1N-L96-10000LM-FST-MVOLT FIXTURES ARE SHOWN DIMMED DOWN TO 60%.

C5 - LSI LIGHTING: SCV-LED-15L-SC-UNV-DIM-50-WHT MOUNTED UNDER GAS CANOPY FIXTURES ARE SHOWN DIMMED DOWN TO 40%.

CWT - LED WALL PACK LSI LIGHTING: XPWS3-FT-LED-48-350-CW-UE-BLK FOOTCANDLES CALCULATED AT MOUNTING HEIGHT OF 8'-6" AFG.

P12 - LSI LIGHTING: MRS-LED-18L-SIL-2-UNV-50-70CRI-WHT

P13L - LSI LIGHTING: MRS-LED-18L-SIL-3-UNV-50-70CRI-WHT-IL

P1F - LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT

P1FL - LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT-IL

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ALAN M. CZARNECKI
E-46172
DOUSMAN, WI
PROFESSIONAL ENGINEER
05-07-25

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PHOTOMETRIC SITE PLAN - AT 5'-0" ABOVE GRADE LEVEL (FOR CITY CODE COMPLIANCE)

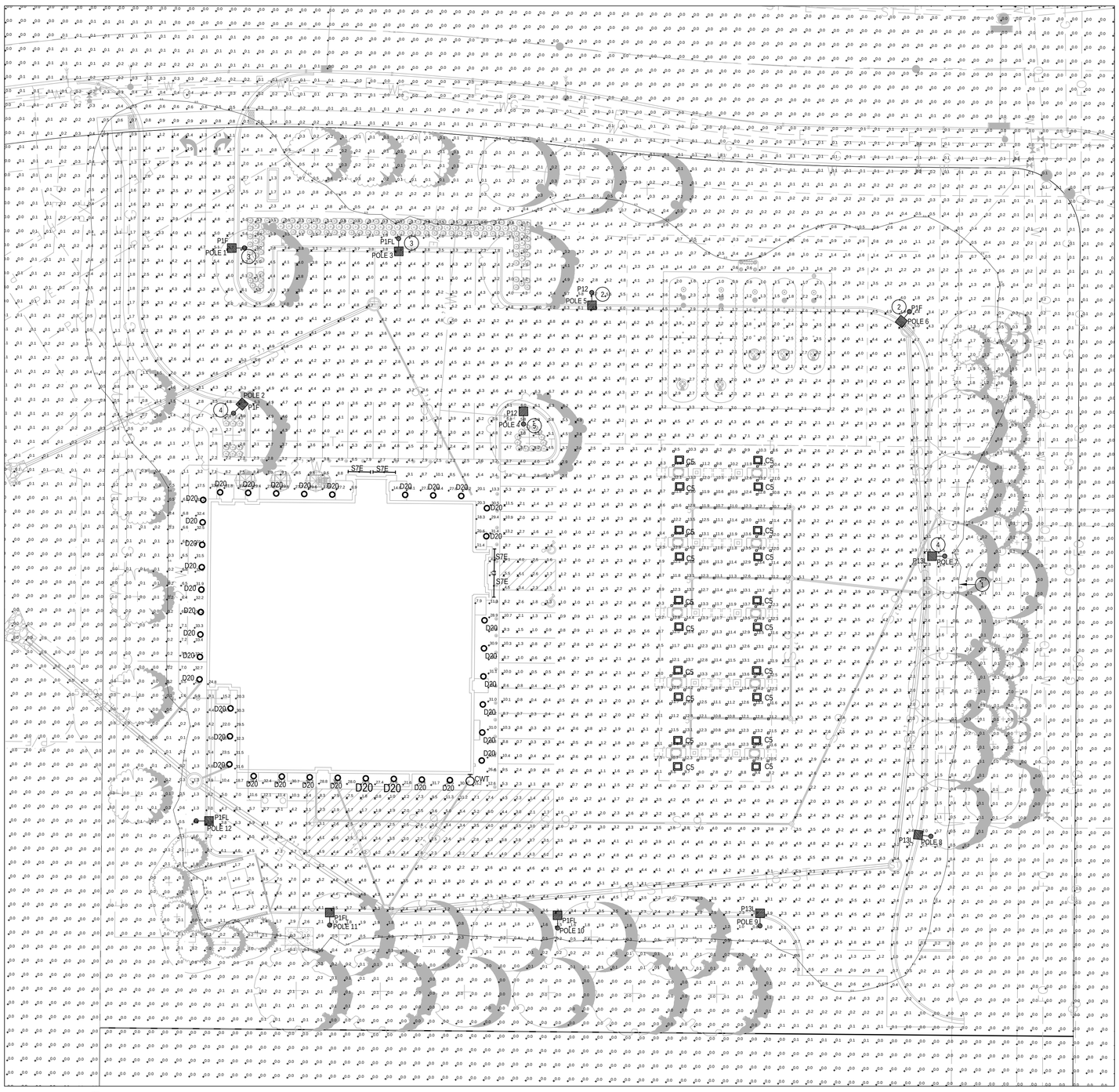
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DRAWN BY	DLC
SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	24APR.2025
SHEET	C800

DRAWING PHASE



PHOTOMETRIC SITE PLAN - AT GRADE LEVEL (FOR INFORMATION ONLY)

SCALE: 1" = 20'-0"

FIXTURE QUANTITIES

D20 - 36
S7E - 4
C5 - 20
CWT - 1
P12 - 2
P13L - 3
P1F - 3
P1FL - 4

PROVIDE (12) 19' POLES.

FIXTURE TYPES:

D20 - RECESSED LED DOWNLIGHT GOTHAM EVO-35/30-8AR-WD-120-TRW

S7E - LED STRIP LIGHT MOUNTED IN GABLE LITHONIA TZL1N-L96-10000LM-FST-MVOLT
FIXTURES ARE SHOWN DIMMED DOWN TO 60%.

C5 - LSI LIGHTING: SCV-LED-15L-SC-UNV-DIM-50-WHT MOUNTED UNDER GAS CANOPY
FIXTURES ARE SHOWN DIMMED DOWN TO 40%.

CWT - LED WALL PACK LSI LIGHTING: XPWS3-FT-LED-48-350-CW-UE-BLK
FOOTCANDLES CALCULATED AT MOUNTING HEIGHT OF 8'-6" AFG.

P12- LSI LIGHTING: MRS-LED-18L-SIL-2-UNV-50-70CRI-WHT

P13L- LSI LIGHTING: MRS-LED-18L-SIL-3-UNV-50-70CRI-WHT-IL

P1F- LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT

P1FL- LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT-IL

FIXTURE SYMBOLS:

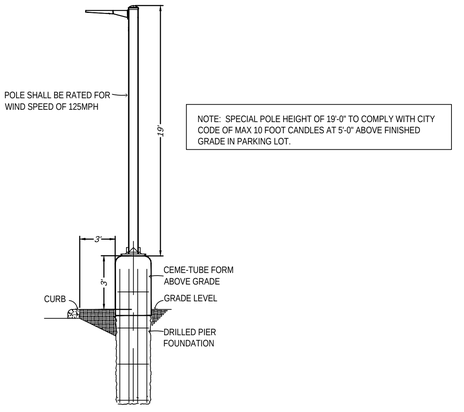
- LED LIGHT MOUNTED UNDER FUEL CANOPIES
- LED STRIP LIGHT MOUNTED IN GABLE
- RECESSED LED DOWNLIGHT
- POLE MOUNTED LED FIXTURE
- WALL MOUNTED LED FIXTURE

GENERAL NOTES:

1. FOOTCANDLE LEVELS SHOWN ON THIS PLAN ARE CALCULATED AT GRADE LEVEL.
2. ALL POLES SHALL BE INSTALLED A MINIMUM OF 3'-0" FROM BACK OF CURB TO EDGE OF POLE BASE UNLESS NOTED.
3. POLE THAT ARE LOCATED AT CORNER OF ISLAND SHALL BE A MINIMUM OF 6'-0" FROM BACK OF CURB TO EDGE OF POLE BASE. POLES THAT MUST BE INSTALLED LESS THAN 6'-0" FROM BACK OF CURB TO EDGE OF POLE BASE SHALL HAVE PROTECTIVE BOLLARDS INSTALLED AROUND THE POLE BASE. COORDINATE WITH KWIK TRIP PRIOR TO INSTALLATION.

KEYED NOTES:

1. 0.5 FOOTCANDLE CONTOUR LINE.
2. CONTRACTOR SHALL INSTALL POLE MOUNT FIXTURE 12'-0" FROM THE OVER DIG OF UNDERGROUND FUEL TANK TO EDGE OF POLE BASE.
3. CONTRACTOR SHALL POLE MOUNT FIXTURE 2'-0" FROM BACK OF CURB TO EDGE OF POLE BASE TO AVOID LANDSCAPE.
4. CONTRACTOR SHALL POLE MOUNT FIXTURE 5'-0" FROM BACK OF CURB TO EDGE OF POLE BASE.
5. CONTRACTOR SHALL POLE MOUNT FIXTURE 8'-0" FROM BACK OF CURB TO EDGE OF POLE BASE.



NOTE: SPECIAL POLE HEIGHT OF 19'-0" TO COMPLY WITH CITY CODE OF MAX 10 FOOT CANDLES AT 5'-0" ABOVE FINISHED GRADE IN PARKING LOT.

LOT LIGHT ELEVATION DETAIL

NOT TO SCALE

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E-36572
DOUSMAN, WI
PROFESSIONAL ENGINEER
05-07-25

2025-0195.10

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KWIK STAR

KWIK TRIP, Inc.
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LA CROSSE, WI 54602-2107
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FAX (608) 781-8960

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

PHOTOMETRIC SITE PLAN - AT GRADE LEVEL (FOR INFORMATION ONLY)

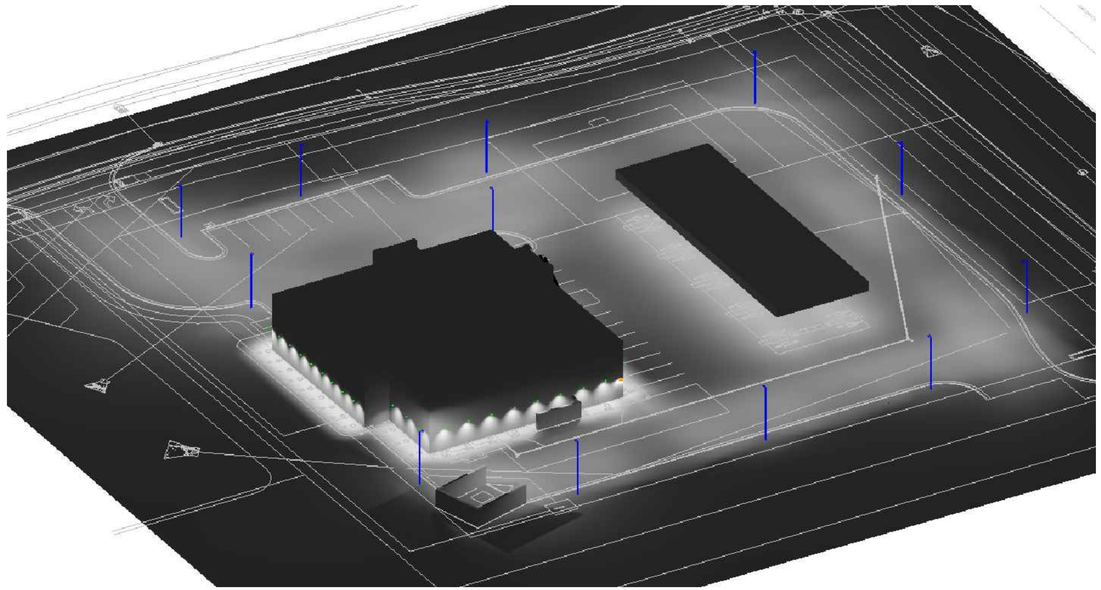
LH G3 STORE
WITH 10 MPD

CTH 22/UTE AVE
WAUKEE, IOWA
LAT 41.56572, LONG -93.88148

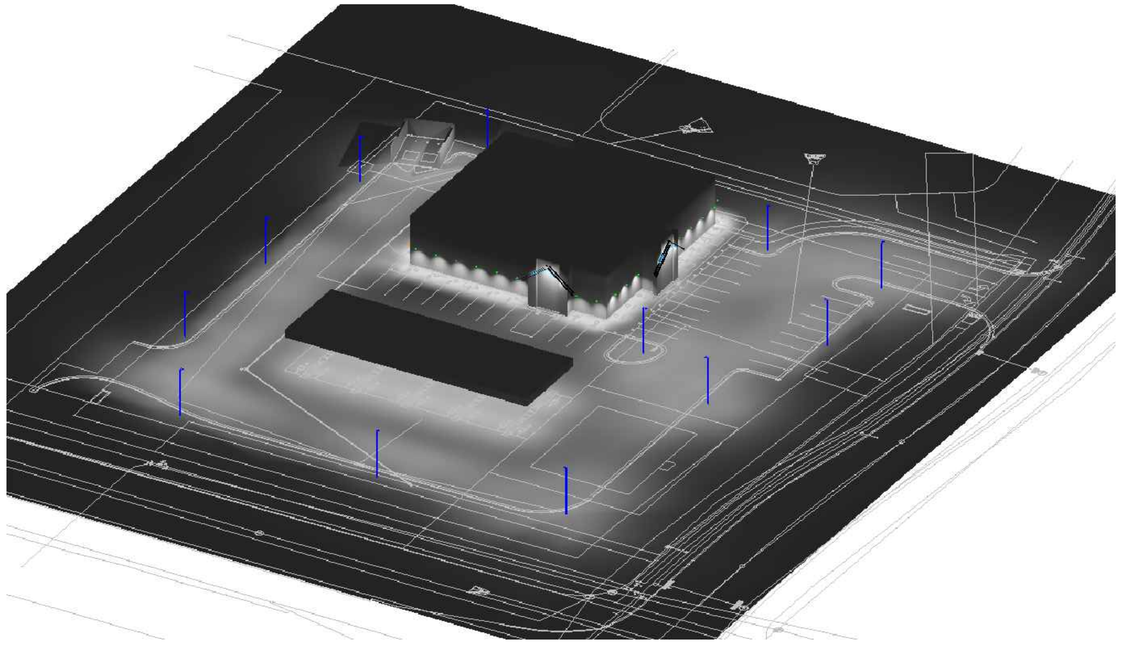
#	DATE	DESCRIPTION
	24APR25	INTERNAL REVIEW

DRAWN BY	DLC
SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	24APR.2025
SHEET	C801

DRAWING PHASE



PHOTOMETRIC RENDERING PLAN - 5FT ABOVE GRADE
NOT TO SCALE



PHOTOMETRIC RENDERING PLAN - 5FT ABOVE GRADE
NOT TO SCALE

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PH: (515) 369-4400

PHOTOMETRIC RENDERING PLANS - 5FT ABOVE GRADE

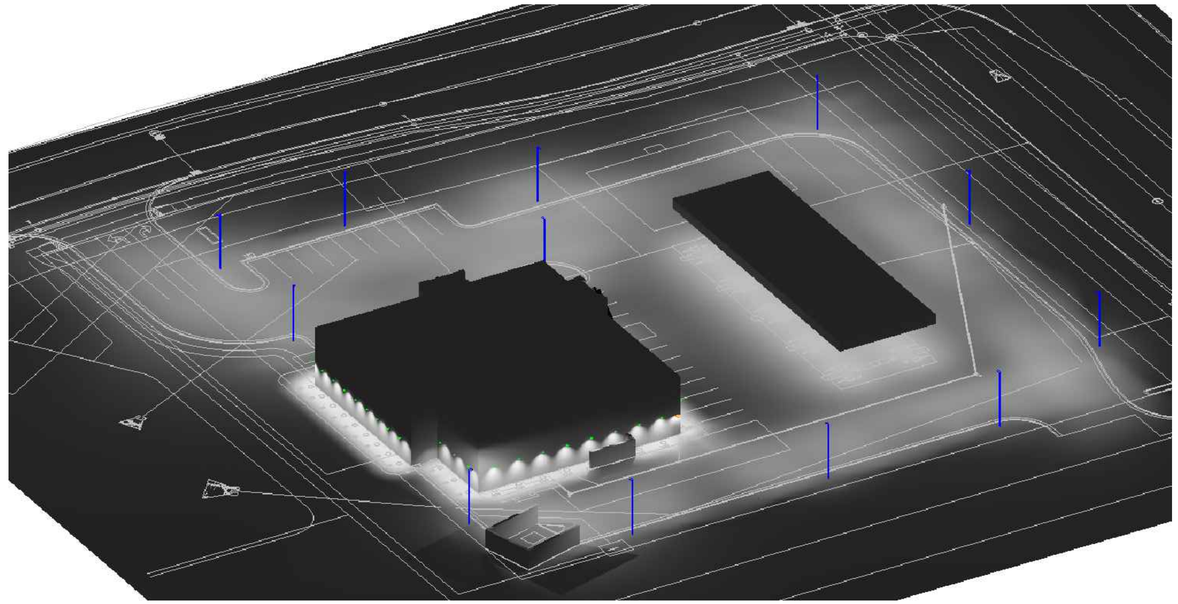
LH G3 STORE
WITH 10 MPD

CTH 22/UTE AVE
WAUKEE, IOWA
LAT 41.56572, LONG -93.88148

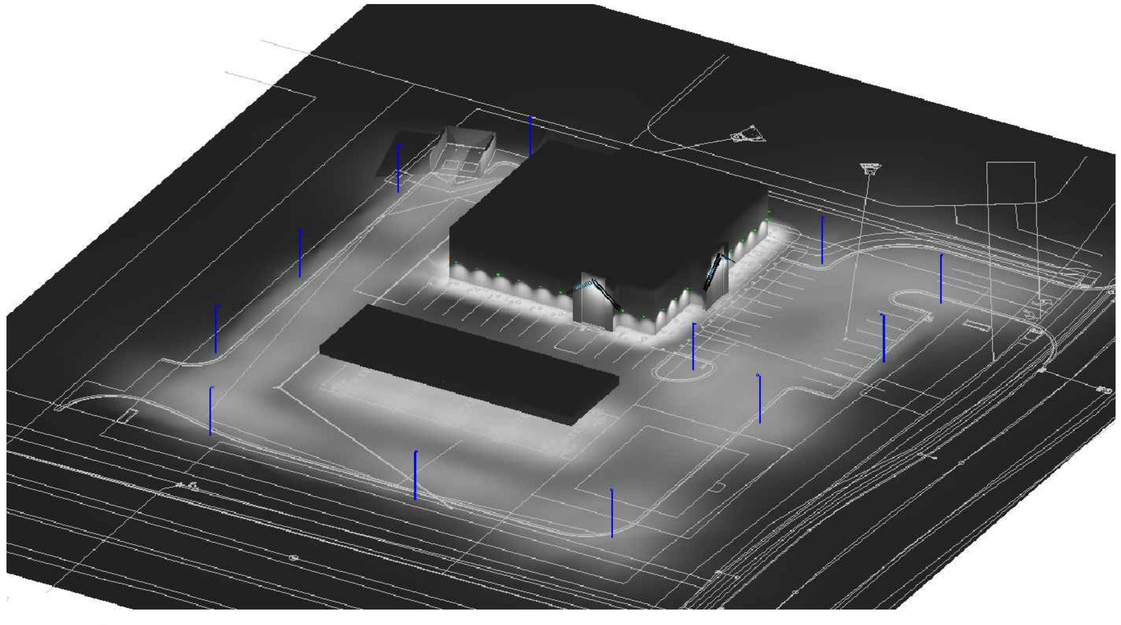
#	DATE	DESCRIPTION
	24APR25	INTERNAL REVIEW

DRAWN BY	DLC
SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	24APR.2025
SHEET	C802

DRAWING PHASE



PHOTOMETRIC RENDERING PLAN - AT GRADE LEVEL
NOT TO SCALE



PHOTOMETRIC RENDERING PLAN - AT GRADE LEVEL
NOT TO SCALE

KWIK TRIP

KWIK STAR

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CIVIL DESIGN ADVANTAGE
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PHOTOMETRIC RENDERING PLANS - AT GRADE LEVEL

LH G3 STORE
WITH 10 MPD

CTH 22/UTE AVE
WAUKEE, IOWA
LAT 41.56572, LONG -93.88148

#	DATE	DESCRIPTION
	24APR25	INTERNAL REVIEW

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DRAWN BY	DLC
SCALE	GRAPHIC
PROJ. NO.	2504.281
DATE	24APR.2025
SHEET	C803

DRAWING PHASE

gotham | E V O

Multiple Layers of Light

Luminaire Type: D20

Catalog Number: EVO8-35/30-8AR-WD-120-TF

General Illumination Round Downlight — 8"



Feature Set

- Bounding Ray™ optical design
- Unitized optics mechanically attach the light engine to the lower reflector for complete optical alignment.
- 45° cutoff to source and source image
- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional
- Fixtures are wet location, covered ceiling
- Available with 10% dimming, 1% dimming, or dim to dark
- Batwing distribution with feathered edges provides even illumination on horizontal and vertical surfaces

Distribution

very narrow 0.13 BIR | narrow 0.7 BIR | medium 0.9 BIR | medium wide 1.0 BIR | wide 1.2 BIR

Superior Perfonance

Nominal Lumens	2000	2500	3000
Delivered Lumens	2,287	2,964	3,398
Wattage	31.6	41.1	47.1
Efficacy	72.5	72	72.2

Coordinated Apertures | Multiple Layers of Light



General Illumination Layer | EVO



High Center Beam Layer | Incito



EVO + Incito — Multiple Layers of Light



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LITHONIA LIGHTING

Catalog Number	TZL1N-L96-10000LM-FST-MVOLT
Notes	
Type	S7E

LED Striplight

ZL1N

24", 48" and 96" Lengths



FEATURES & SPECIFICATIONS

INTENDED USE — Built on the compact, low-profile Z strip channel, this LED strip offers long maintenance-free life, several color temperatures, lumen outputs and lengths. Ideal for new construction and retrofit applications in TI and TR lengths. Ideal for uplight and downlight in commercial, retail, manufacturing, warehouse, care and display applications. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** Click here for Acrylic/Polycarbonate Compatibility table for suitable uses.

CONSTRUCTION — Compact-design channel and cover are formed from code-gauge cold-rolled steel. Easy to install row aligner included for continuous row mounting.

Finish: Paint options include high-gloss, baked-white enamel (WH), galvanized (GALV), matte black (MB) and smoke gray (SKGY). After fabrication, five-stage iron phosphate pre-treatment ensures superior paint adhesion and rust resistance.

OPTICS — Standard diffuse snap-on/snap-off lens eliminates pixels, improves uniformity and minimizes glare. L (L06) option available.

ELECTRICAL — L70=60,000hours. Utilizes high-output LEDs integrated on a two-layer circuit board, ensuring cool-running operation. Optional internal pluggable wiring harness for reduced labor cost in row mounting applications. See FST_ ordering information on page 5 | Electronic LED driver is rated for 75 input watts maximum (see Operational Data on page two for actual wattage consumption), **multi-volt input and 0-10V dimming standard.** This fixture is designed to withstand a maximum line surge of 2.5kV at 0.75kA combination wave for indoor locations, for applications requiring higher level of protection additional surge protection must be provided.

LEDs provide nominal 80 CRI at 3000 K, 3500 K,4000 K, or 5000 K.

Lumen output up to 2,800 lumens per foot. In 86°F (30°C) ambient environments. Luminaire should be installed in applications where ambient temperatures do not exceed 86°F (30°C).

INSTALLATION — Tool-less channel cover for easy installation.

Fixture may be surface mounted (with or without 23PAL hanger), pendant or stem mounted with appropriate mounting options. Three-point aligner locks in place for easy continuous row mounting.

LISTINGS — CSA certified to US and Canadian safety standards. For use in damp locations between -40°F (-40°C) and 86°F (30°C).

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 to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/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.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or XPoint™ Wireless control networks marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

Catalog # : _____ Project : _____

Prepared By : _____ Date : _____

FIXTURE TYPE "CF" :SCV-LED-23L-SCFT-UNV-DIM-50-WHT

Scottsdale Vertex™ (SCV)

Petroleum Canopy LED Luminaire



OVERVIEW	
Lumen Package	9,000 – 24,000
Wattage Range	66 – 192
Efficacy Range (LPW)	119 – 156
Weight lbs(kg)	15 (6.8)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged low-profile die-cast aluminum housing, optical unit, and driver cover.
- Below canopy access to optical chamber and driver housing for serviceability.
- IP66 rated optical unit protects integral components from dust and water.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.
- A single fastener secures access door to driver and key components and provides quick & easy access to the electrical compartment for servicing.
- Shipping weight: 15 lbs in carton.

Optical System

- Proprietary silicone refractor optics provide exceptional coverage and uniformity in symmetrical or Combination Forward Throw distributions.
- State-of-the-art silicone optics deliver industry leading optical control with an integrated gasket to provide an IP66 rated sealed optical chamber in one component.
- Silicone optical material does not yellow or crack with age and provides a minimum light transmittance of 93%.
- Available in 5000K, and 4000K (+/- 275K) color temperatures.
- Minimum CRI of 70.

Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F) when mounted to Steel/Aluminum surfaces for 10L, 13L, & 15L Lumen Packages, +45°C for 20L Lumen Package, and +40°C for 23L Lumen Package. If mounted to a non-metallic surface, reduce ambient by 5°C.
- Power factor: >0.90
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs are mounted to (4) circuit boards to maximize heat dissipation
- Driver components are fully encased in potting material for moisture resistance. Driver complies with FCC standards.

Hazardous Localton

- Designed for lighter than air fuel applications. Product is suitable for Class 1 Division 2 with all lumen packages and distributions only when properly installed per LSI installation instructions. Models with optional controls are not approved for Class 1, Division 2 applications.

T5 Temperature Classification – The surface temperature of this fixture will not rise above 100°C., within a 40°C ambient.

Gas Groups A,B,C, and D – Group A: Acetylene / Group B: Hydrogen / Group C: Propane and Ethylene / Group D: Benzene, Butane, Methane & Propane.

Installation

- Installs in a 12" or 16" deck pan.
- Four fasteners are provided with the fixture for using deck, metallic canopy substrates only when classified as suitable for use by installing professional otherwise suitable fasteners should be provided by others.
- Unit is designed to quickly retrofit into existing Scottsdale (4") hole.
- Aluminum locking collar and gasket are included and required for complete seal and support of canopy deck.
- Retrofit panels are available for existing Encores, Richmond, 2x2 Universal, and more.

Warranty

- LSI LED Fixtures carry a 5-year warranty or 10-year warranty with registration for petroleum applications only (contact your LSI representative for details).

Listings

- Listed to UL 1598 and UL 8750.
- RoHS Compliant.
- Meets Buy American Act requirements.
- State of California Title 24 Compliant with IMSBT or ALSC/ALSCS option.
- IP66 Rated Optical Unit per IEC 60598.
- 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.

Catalog # : _____ Project : _____

Prepared By : _____ Date : _____

FIXTURE TYPE "P13", MRS-LED-18L-SIL-3-UNV-50-70CRI-WHT
FIXTURE TYPE "P13L", MRS-LED-18L-SIL-3-UNV-50-70CRI-WHT-IL
FIXTURE TYPE "P1F", MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT
FIXTURE TYPE "P1FL", MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT-IL

Mirada Small Area (MRS)

Outdoor LED Area Light



IP66 IK08

OVERVIEW	
Lumen Package	6,000 – 30,000
Wattage Range	39 – 209
Efficacy Range (LPW)	112 – 163
Weight lbs(kg)	20 (9.1)
Control Options	IMSBT, ALB, ALS, 7-Pin, PCI

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 27 lbs in carton.

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated seal.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in distribution types 2, 3, 4, 5W, FT, and LC/RC.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93-95%.
- Zero uplight.
- Available in 5000K, 4000K, and 3000K color temperatures per ANSI C78.377
- Minimum CRI of 70.
- Integral louver (IL) and integral half louver (IH) options available for enhanced backlight control.

Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 VAC) Input 50/60 Hz or optional High Voltage (347-480 VAC).
- L70 Calculated Life: >60k Hours
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 30L lumen packages rated to +40°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Driver is fully encased in potting material for moisture resistance and complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls

- Optional Integral passive Infrared Bluetooth™ motion and photocell sensor. Fixtures operate independently and can be commissioned via IOS or Android configuration app.
- LSI's AirLinx™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7.

Installation

- Designed to mount to square or round poles.
- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes LSI's traditional B3 drill pattern.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet locations.
- IP66 rated Luminaire per IEC 60598-1.
- 3G rated for ANSI C136.31 high vibration applications are qualified.
- IK08 rated luminaire per IEC 66262 mechanical impact code
- 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.

gotham | E V O

8" General Illumination Round Downlight

A+ Capable options indicated by this color background.

DesignRight Quick Ship Program: Options in green text qualify for the QuickShip — Electronics go down with a ship to ship. Refer to DesignRight Electronics section for complete program details. Maximum Order Quantity: 100 every 30 for Online or Phones.

Luminaire Type: D20

Catalog Number: EVO8-35/30-8AR-WD-120-TF

EXAMPLE: EVO8 35/30 AR MWD LSS 277 E2T

Series	Color Temperature	Nominal Lumen Values	Reflector & Flange Color	Trim Style	Distribution	Finish	Voltage
EVO8	27/ 2700 K 30/ 3000 K 35/ 3500 K 40/ 4000 K 50/ 5000 K	20 2000 lumens 25 2500 lumens 30 3000 lumens	AR Clear PR Powder WTB Wheat GR Gold WH White BK* Black WRAIN* Matte Anti-microbial	(blank) Self-flanged	VWD Very Narrow (0.5 BIR) WD Narrow (0.7 BIR) MD Medium (0.9 BIR) MWD Medium wide (1.0 BIR) WD Wide (1.2 w/ 480)	LSS Semi-specular LD Matte-diffuse LS Specular	120 277 347*

Driver¹	Control Interface	Options
EZ10 0-10V driver dims to 10% EZ1 0-10V driver dims to 1% EZ1D eldoLED 0-10V ECODriver. Linear dimming to 10% min. EZ1 eldoLED 0-10V ECODriver. Linear dimming to 1% min. EZ1B eldoLED 0-10V ECODriver. Logarithmic dimming to <1%. Refer to XPoint tech sheet. ED8A² eldoLED SOLOdrive 0-10V. Logarithmic dimming to <1%. ED10² eldoLED POWERdrive DMX with ROM (remote device management). Square Law dimming to <1%. Includes termination resistor. ECOSC² Lutron® Hi-Lume® 2-wire forward-phase driver. 120V only. Minimum dimming level 1%. ECOD² Lutron Ecosystem digital Hi-Lume 1% soft-on, fade to black. Maximum 2500 lumens.	NLTD² nLight® dimming pack interface NLTED²,⁴,⁵,⁶ nLight® dimming pack interface, emergency circuit NLTAIR2²,⁵ nLight® Air enabled NLTAIRE2²,⁴,⁵,⁶ nLight® AIR Dimming Pack Wireless Controls. Controls features on emergency circuit EXA1 eldoLED 0-10V ECODriver. Linear dimming to 1%. Refer to XPoint tech sheet. EXAB eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. Refer to XPoint tech sheet.	SF Single fuse. Specify 120V or 277V. TRW² White painted flange TRBL² Black painted flange EL Two Emergency battery pack, 10W, with integral test switch ELR Two Emergency battery pack, 10W, with remote test switch ELSD Emergency battery pack, 10W, with self-diagnostics, integral test switch ELRSD Emergency battery pack, 10W, with self-diagnostics, remote test switch E10WCP Two Emergency battery pack, 10W Constant Power, CA Title 20 compliant with integral test switch E10WCPR Emergency battery pack, 10W Constant Power, CA Title 20 compliant with remote test switch NHP² nLight® Lumen Compensation BSTR Redraw generator transfer device. Specify 120W or 277V. HSCRI High CRI (90+) CP² Chicago Plenum. Specify 120V or 277V. RRL_ RELOC® Heady Luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Available only with RRLA, RRLB, RRLAE, and RRLC12S. Refer to RRL spec sheet on www.acuitybrands.com for RELOC product specifications. Allows ceiling access required.

Individual Controls³	Paint finish
LBX2U 360° low-mount motion sensor, pre-wired ⁴	WH White
LBMS2U 360° low-mount motion sensor with dimming, pre-wired ⁴	GALV Galvanized
LBP2U 360° low-mount motion sensor with photocell, pre-wired ⁴	MB Matte black
LBMHS2U 360° low-mount motion sensor, dimming & switching phases, pre-wired ⁴	SKGY Smoke gray
Cord sets:⁵	
CS1W Straight plug, 120V	
CS2W Twist-lock, 120V	
CS7W Straight plug, 277V	
CS77W Twist-lock, 277V	
CS230W Twist-lock, 347V	
CS97W Twist-lock, 480V	
CS93W 600V SOOW white cord, no plug (no voltage required)	

FOOTNOTES:
1 – Consult factory for HV with AirLink Synapse Wireless Control System.
2 – XPOINT is field configurable via the LSI app that can be downloaded from your smartphone's native app store.
3 – Ideal for 8' to 12' openings.
4 – Ideal for 9' openings.
5 – Not available in HV.

Color temperature	Color rendering index
30K 3000 K	80CRI 80 CRI
35K 3500 K	90CRI 90 CRI
40K 4000 K	
50K 5000 K	

Options	
PLR_ Plug-in wiring⁶	
PLRVLWG Plug-in wiring, low voltage⁶	
E7W Emergency battery pack, 7W CA Title 20 Noncompliant⁷	
2E7W Two Emergency battery pack, 7W CA Title 20 Noncompliant⁷	
E10WLCP Emergency battery pack, 10W Linear Constant Power, Certified in CA Title 20 MAEDBS⁷	
2E10WLCP Two Emergency battery pack, 10W Linear Constant Power, Certified in CA Title 20 MAEDBS⁷	
E15WLCP Emergency battery pack, 15W Linear Constant Power, Certified in CA Title 20 MAEDBS⁷	
OUTEND Cord exit end-cap	
Wireless Controls³	
NLTAIR2 PCS10P10 nLight Air Generation 2 Fixture mount, L10R sensor low mount 360°	
NLTAIR2 PIR SSR10ROM nLight Air Generation 2 Fixture mount, L10R sensor low mount 360°, UL924 Emergency operation⁸	

Accessories: Order as separate catalog number.			
HCAV Hanger chain, 36"	ZL8L24 57W SRM	24" symmetric reflector, white finish	
ZACHV Aircraft cable 10' (one pair)	ZL8L24 60W GPL WH	40" symmetric reflector with uplight, white finish	
ZLANGBKT Lumen-60™ angle bracket for shelf or ledge mounting only	ZL8L24 60W SRM WH	40" symmetric reflector, white finish	
SQ_ Store kit, 2" increments up to 48"	ZL8L24 48 ASY WH	48" asymmetric reflector, white finish	
WPPSD nLight® switching/dimming module	ZL8L24 51W GPL WH	48" symmetric reflector with uplight, white finish	
eFP20D nLight® Air switching/dimming module	ZL8L24 51W SRM WH	48" symmetric reflector, white finish	
LCSB Sensor Switch™ L10R occupancy sensor ⁹	ZL8L24 51W SRM WH	92" symmetric reflector with uplight, white finish	
ZSPRG For 15/16" T-grid only	ZL8L24 51W SRM WH	92" symmetric reflector, white finish	
WG24 24" wireguard, white ¹⁰	ZL8L24 96W GPL WH	96" symmetric reflector with uplight, white finish	
WG48 48" wireguard, white ¹⁰,¹¹	ZL8L24 96W SRM WH	96" symmetric reflector, white finish	
ZL8L24 57W GPL WH 24" symmetric reflector with uplight, white finish	ZL8L96 UNIVERSAL REFL ALIGNER	Universal reflector aligners, quantity 1	

Notes
1 Not available with 347V, 480V or Batteries
2 Optional. Reflectors ship separately.
3 See Operational Data on page 2 for actual lumens.
4 Utilizes step-down transformer.
5 See ordering information on pages 4 and 5 and E2WL specification sheet for more configurations. When choosing Sensor and PCR for same fixture, consult the factory.
6 Not available with cord sets.
7 NYR17 only. Not available with cord sets with plugs. Battery Spec sheet needed for more information.
8 Not available with 10,000LM and 14,000LM packages.
9 NYR17 only.
10 Available with NYR17, 347V and 480V only. This sensor configuration is suitable for minimum ambient temperature of 14°F (-10°C). See page 6 for low temperature option providing -4°F (-20°C) minimum ambient. Sensors come preserved, they must be snapped into place at time of installation.
11 Cantilevered back of fixture when 50/70CRI option is specified. Must specify voltage (not required when ordering CSW/HV).
12 Not compatible with reflector
13 Order 2 for tandem double length fixtures (T2LW).

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ACCESSORIES — order as separate catalog numbers (shipped separately)

SC44	Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SC44 10D. Refer to TECH-180.
CTA4-8 TK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 7"). Adds ~4" to fixture height.
GUIDE	Vandal-resistant trim accessory. Refer to TECH-200.
ISD RC	0-10V wireless dimmer. Refer to ISD-RC.

ORDERING NOTES

1. Not available with finishes.
2. Not available with GZ10, GZ1, EL or ELR options.
3. Supplied with factory installed step down transformer.
4. Refer to TECH-240 for compatible dimmers.
5. Not available with nLight® and XPoint® options.
6. Must specify voltage 120V or 277V.
7. For use with different reflector finish only (i.e. AR, PR, WTR, GR options). Not available with WH reflector.
8. For use with different reflector finish only (i.e. AR, PR, WTR, GR options). Not available with BR (black reflector).
9. For dimensional changes, refer to TECH-140. Not available with 347V.
10. For use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
11. Fixture begins at 80% light level. Must be specified with eldoLED drivers and NLT or NLTER.
12. Not available with ELR, EXA1 or EXAB.
13. Not available DALI or DMX drivers. Not available with CP or NBO options. Not recommended for metal ceiling installations.

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gotham

ZL1N LED Striplight

TZL1N-L96-10000LM-FST-MVOLT

A+ Capable options indicated by this color background.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative. **Example:** ZL1N L48 3000LM FST MVOLT 40K 80CRI WH

Series	Length	Reflectors²	Nominal lumens²	Diffuser	Voltage
ZL1N LED striplight	L24 24"¹	(blank) Less reflector	1000LM 1,000 lumens	FST L-Lens	MVOLT 120-277V
	L48 48"	ASR Asymmetric	2500LM 2,500 lumens	SOL FST Straight blade louver with snap-on frosted, diffuse	120 120V
		SMR Symmetric	3500LM 3,500 lumens		208 208V
	L66 66"¹	(blank) Less reflector	3000LM 3,000 lumens		240 240V
	L48 48"	ASR Asymmetric (148 only)	5000LM 5,000 lumens		277 277V
		SMR Symmetric	7000LM 7,000 lumens		347 347V³
T2LTN LED striplight	L92 92"	(blank) Less reflector	6000LM 6,000 lumens		480 480V³
	L96 96"	SMR Symmetric	10000LM 10,000 lumens		
			14000LM 14,000 lumens		

Color temperature	Color rendering index	Options		Paint finish
30K 3000 K	80CRI 80 CRI	PLR_ Plug-in wiring⁴	**Individual Controls⁵**	WH White
35K 3500 K	90CRI 90 CRI	PLRVLWG Plug-in wiring, low voltage⁴	LBX2U 360° low-mount motion sensor, pre-wired ⁶	GALV Galvanized
40K 4000 K		E7W Emergency battery pack, 7W CA Title 20 Noncompliant⁷	LBMS2U 360° low-mount motion sensor with dimming, pre-wired ⁶	MB Matte black
50K 5000 K		2E7W Two Emergency battery pack, 7W CA Title 20 Noncompliant⁷	LBP2U 360° low-mount motion sensor with photocell, pre-wired ⁶	SKGY Smoke gray
		E10WLCP Emergency battery pack, 10W Linear Constant Power, Certified in CA Title 20 MAEDBS⁷	LBMHS2U 360° low-mount motion sensor, dimming & switching phases, pre-wired ⁶	
		2E10WLCP Two Emergency battery pack, 10W Linear Constant Power, Certified in CA Title 20 MAEDBS⁷	**Cord sets:⁸**	
		E15WLCP Emergency battery pack, 15W Linear Constant Power, Certified in CA Title 20 MAEDBS⁷	CS1W Straight plug, 120V	
		OUTEND Cord exit end-plate of fixture	CS2W Twist-lock, 120V	
		Wireless Controls⁵	CS7W Straight plug, 277V	
		NLTAIR2 PCS10P10 nLight Air Generation 2 Fixture mount, L10R sensor low mount 360°	CS77W Twist-lock, 277V	
		NLTAIR2 PIR SSR10ROM nLight Air Generation 2 Fixture mount, L10R sensor low mount 360°, UL924 Emergency operation⁹	CS230W Twist-lock, 347V	
			CS97W Twist-lock, 480V	
			CS93W 600V SOOW white cord, no plug (no voltage required)	

Accessories: Order as separate catalog number.			
HCAV Hanger chain, 36"	ZL8L24 57W SRM WH	24" symmetric reflector, white finish	
ZACHV Aircraft cable 10' (one pair)	ZL8L24 60W GPL WH	40" symmetric reflector with uplight, white finish	
ZLANGBKT Lumen-60™ angle bracket for shelf or ledge mounting only	ZL8L24 60W SRM WH	40" symmetric reflector, white finish	
SQ_ Store kit, 2" increments up to 48"	ZL8L24 48 ASY WH	48" asymmetric reflector, white finish	
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WG24 24" wireguard, white ¹¹	ZL8L96 UNIVERSAL REFL ALIGNER	Universal reflector aligners, quantity 1	
WG48 48" wireguard, white ¹¹,¹²			
ZL8L24 57W GPL WH 24" symmetric reflector with uplight, white finish			

Notes
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2 Optional. Reflectors ship separately.
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Scottsdale Vertex SCV Petroleum

FIXTURE TYPE "CF" :SCV-LED-23L-SCFT-UNV-DIM-50-WHT

ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: **SCV LED 13L SC UNV DIM 50 WHT IMSBT2**

Family / Size	LED Gen	Lumen Package	Distribution	Voltage	Driver	Color Temperature	Finish	Controls
SCV - Petroleum Canopy Luminaire	LED	10L - 10000 Lumens 13L - 13000 Lumens 15L - 15000 Lumens 20L - 20000 Lumens 23L - 23000 Lumens	SC - Standard Symmetric FXL - 20000 Lumens SCFT - Combination Standard Symmetric and Forward Throw	UNIV - 120-277V HV - 347-480V	DIM - Dims to 10% (0 to 10V dimming)	40 - 4000K 50 - 5000K	WHT - White BLK - Black BRZ - Bronze	Blank - NONE ALSC - AirLink Synapse Wireless Control System¹ ALSCD - AirLink Synapse Wireless Control System with Sensor¹ ALSCS1 - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' mounting height)² ALSCS2 - AirLink Blue Wireless Motion & Photo Sensor Controller (25-40' mounting height)² IMSBT1 - Integral Bluetooth™ Motion and Photocell Sensor 8 - 24' mounting height ³ ⁵ IMSBT2 - Integral Bluetooth™ Motion and Photocell Sensor 25 - 40' mounting height ³ ⁵

FIXTURE TYPE "CF"

Accessory Ordering Information

Description	Order Number
Retrofit Panel Kit - EC / ECTA / ECF to SCV, for 18" Deck Panel with larger openings⁴	617405
Retrofit Panel Kit - EC / ECTA / ECF to SCV, for 13" Deck Panel⁴	678811
Retrofit Panel Kit - RVCU Richmond to SCV	617406
Retrofit Panel Kit - UNIV Universal 2x2 to SCV	617407
Retrofit 2x2 Corner Panel Blank (no holes)	357392
Retrofit RIC Cover Panel Blank (no holes)	364702
39" X 39" Beauty Plate Kit (with 4" Center hole)	557180WHT

Description	Order Number
39" X 39" Beauty Plate Kit (with 4" Center hole)	561180WHT
Junction Box	687481
Kit - Hole Plugs and Sealant (enough for 25 retrofits)	1320540
Rectangular Top Plate Kit (includes top plate and sealant)	678291WHT
Surface Mount Box	673400
Retrofit RI - CRUCIRUS to SCV	687482

FOOTNOTES:
1 – Consult factory for HV with AirLink Synapse Wireless Control System.
2 – IMSBT is field configurable via the LSI app that can be downloaded from your smartphone's native app store.
3 – Ideal for 8' to 12' openings.
4 – Ideal for 9' openings.
5 – Not available in HV.

PERFORMANCE

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DELIVERED LUMENS

Drive Current	3000K CCT			4000K CCT			5000K CCT			Wattage
	Delivered Lumens	Efficiency	BUG Ratings	Delivered Lumens	Efficiency	BUG Ratings	Delivered Lumens	Efficiency	BUG Ratings	
10L	8723	132	B3-U0-G1	10218	156	B3-U0-G1	10306	156	B3-U0-G1	66
13L	10921	130	B3-U0-G1	12780	153	B3-U0-G1	12903	153	B3-U0-G1	84
15L	12984	125	B3-U0-G1	15209	150	B3-U0-G1	15411	150	B3-U0-G1	103
20L	17145	132	B3-U0-G1	20083	153	B4-U0-G2	20141	155	B4-U0-G2	130
23L	19338	126	B4-U0-G2	22652	149	B4-U0-G2	22150	152	B4-U0-G2	153
23L (SCFT)	22778	119	B3-U0-G3	24581	128	B4-U0-G3	24281	127	B3-U0-G3	192

*LEDs are frequently updated therefore values are nominal.

ELECTRICAL DATA*

Lumen Level	120V	208V	240V	277V	347V	480V
10L	0.55	0.32	0.28	0.24	0.19	0.14
13L	0.70	0.41	0.35	0.30	0.24	0.18
15L	0.86	0.50	0.43	0.37	0.30	0.21
20L	1.09	0.63	0.54	0.47	0.38	0.27
23L (SC)	1.27	0.73	0.64	0.55	0.44	0.32
23L (SCFT)	1.60	0.92	0.80	0.69	0.55	0.40

*Electrical data at 25°C (77°F)

SC DISTRIBUTION RECOMMENDED LUMEN MAINTENANCE¹

Ambient Temperature °C	Lumen Multiplier				
	0 hrs.²	25K hrs.²	50K hrs.²	75K hrs.²	100K hrs.²
25	1