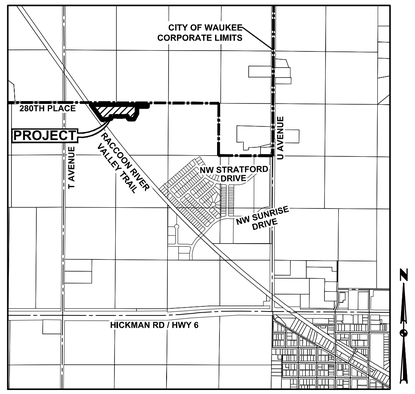
CONSTRUCTION PLANS FOR:

STRATFORD CROSSING PLAT 10

WAUKEE, IOWA

VICINITY MAP

NOT TO SCALE



WAUKEE, IOWA

OWNER

STRATFORD CROSSING, LLC
9550 HICKMAN ROAD, SUITE 100
CLIVE, IOWA 50325
CONTACT: BILL SPENCER

DEVELOPER

LANDMARK DEVELOPMENT SERVICES
9550 HICKMAN ROAD, SUITE 100
CLIVE, IOWA 50325
CONTACT: BILL SPENCER

ENGINEER

CIVIL DESIGN ADVANTAGE
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
CONTACT: ERIN OLLENDIKE
EMAIL: ERINO@CDA-ENG.COM
PH. (515) 369-4400
FX. (515) 369-4410

SURVEYOR

CIVIL DESIGN ADVANTAGE
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
CONTACT: CHARLIE MCGLOTHLEN
EMAIL: CHARLIEM@CDA-ENG.COM
PH. (515) 369-4400
FX. (515) 369-4410

ZONING

R-2 – ONE AND TWO FAMILY RESIDENTIAL DISTRICT

DATE OF SURVEY

SEPTEMBER 15, 2017

SUBMITTAL DATES

FIRST SUBMITTAL:	02/03/2021
SECOND SUBMITTAL:	03/16/2021
THIRD SUBMITTAL:	04/06/2021
FOURTH SUBMITTAL:	05/25/2021
FINAL SUBMITTAL:	06/08/2021
ASBUILT SUBMITTAL:	08/12/2022

BENCHMARKS

BENCHMARK #1
USGS MONUMENT ALUMINUM ROD WITH CAP STAMPED G121 AND NGS ACCESS COVER 3" DEEP. EAST SIDE OF R AVE. (R16) 0.1 MILES SOUTH OF 300TH STREET.
ELEVATION=1032.83

BENCHMARK #2
PK NAIL 3' NORTH OF CENTERLINE EASTBOUND HIGHWAY 6 AT THE SE CORNER OF SW SE
ELEVATION=1040.27

BULK REGULATIONS

R-2: ONE- AND TWO- FAMILY RESIDENTIAL DISTRICT

FRONT YARD: 30 FEET
SIDE YARD: A TOTAL OF 15 FEET – ONE SIDE MAY BE REDUCED TO NOT LESS THAN 7 FEET
REAR YARD: 30 FEET

UTILITY WARNING

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

CONSTRUCTION SCHEDULE

ANTICIPATED START DATE: MARCH 2021
ANTICIPATED FINISH DATE: SEPTEMBER 2021

NOTES

1. ANY CHANGES PROPOSED TO THE CONSTRUCTION DRAWINGS DURING CONSTRUCTION SHALL BE APPROVED IN WRITING BY THE WAUKEE ENGINEERING DEPARTMENT.
2. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES MADE DURING CONSTRUCTION THAT HAVE NOT BEEN GRANTED APPROVAL IN WRITING BY THE WAUKEE ENGINEERING DEPARTMENT.
3. THE RESULTS OF THE GEOTECHNICAL REPORT, BY THIELE GEOTECH, INC. (PN 02.17120.0) DATED JANUARY 25, 2018, HAVE BEEN PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT. THE CONSTRUCTION DRAWINGS ARE SUBJECT TO ANY CHANGES REQUIRED BY THE REPORT.

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2–4	TYPICAL SECTIONS AND DETAILS
5	QUANTITIES, GENERAL, AND REFERENCE NOTES
6	HYDRANT COVERAGE AND LANDSCAPE PLAN
7–10	GRADING PLAN
11–12	EROSION AND SEDIMENT CONTROL PLAN
13–26	SANITARY AND STORM SEWER PLAN AND PROFILE
27–34	WATER MAIN PLAN AND PROFILE
35–38	INTERSECTION DETAILS

AS-BUILT DRAWINGS

AS-BUILT PLANS ARE BASED ON SURVEYED INVERT ELEVATIONS AND INFORMATION SUPPLIED BY THE CONTRACTOR. CIVIL DESIGN ADVANTAGE TAKES NO RESPONSIBILITY FOR UNAUTHORIZED CHANGES TO THE PLANS WITHOUT CITY/OWNER KNOWLEDGE. FIELD VERIFICATION OF UTILITIES OR OTHER PLAN ELEMENTS IS ALWAYS RECOMMENDED.

LEGAL DESCRIPTION

A PART OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER AND A PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER, ALL IN SECTION 29, TOWNSHIP 79 NORTH, RANGE 26 WEST OF THE FIFTH PRINCIPAL MERIDIAN IN THE CITY OF WAUKEE, DALLAS COUNTY, IOWA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID NORTHEAST QUARTER OF THE NORTHWEST QUARTER; THENCE NORTH 89°57'24" EAST ALONG THE NORTH LINE OF SAID NORTHEAST QUARTER OF THE NORTHWEST QUARTER, 1104.58 FEET TO THE NORTHWEST CORNER OF STREET LOT 'A', STRATFORD CROSSING PLAT 7, AN OFFICIAL PLAT; THENCE SOUTH 00°02'36" EAST ALONG THE WEST LINE OF SAID STREET LOT 'A', 60.00 FEET; THENCE SOUTH 89°57'24" WEST, 331.60 FEET; THENCE SOUTH 00°02'36" EAST, 221.82 FEET; THENCE SOUTH 28°00'57" WEST, 204.96 FEET; THENCE SOUTH 89°57'24" WEST, 165.87 FEET; THENCE NORTH 28°40'23" WEST, 51.28 FEET; THENCE NORTH 12°58'40" WEST, 55.98 FEET; THENCE SOUTH 84°52'11" WEST, 195.00 FEET; THENCE NORTHERLY ALONG A CURVE CONCAVE EASTERLY WHOSE RADIUS IS 400.00 FEET, WHOSE ARC LENGTH IS 10.34 FEET AND WHOSE CHORD BEARS NORTH 04°23'23" WEST, 10.34 FEET; THENCE SOUTH 86°21'02" WEST, 135.00 FEET; THENCE NORTH 00°02'36" WEST, 10.97 FEET; THENCE SOUTH 87°31'27" WEST, 195.58 FEET; THENCE SOUTHERLY ALONG A CURVE CONCAVE EASTERLY WHOSE RADIUS IS 730.00 FEET, WHOSE ARC LENGTH IS 66.67 FEET AND WHOSE CHORD BEARS SOUTH 05°05'32" EAST, 66.65 FEET; THENCE SOUTH 82°17'29" WEST, 284.62 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF THE FORMER CHICAGO AND NORTHWESTERN TRANSPORTATION COMPANY RAILROAD; THENCE NORTHWESTERLY ALONG SAID NORTHERLY LINE AND A CURVE CONCAVE NORTHEASTERLY WHOSE RADIUS IS 22868.31 FEET, WHOSE ARC LENGTH IS 595.73 FEET AND WHOSE CHORD BEARS NORTH 36°18'52" WEST, 595.71 FEET TO THE NORTH LINE OF SAID NORTHWEST QUARTER OF THE NORTHWEST QUARTER; THENCE NORTH 89°57'24" EAST ALONG SAID NORTH LINE, 680.20 FEET TO THE POINT OF BEGINNING AND CONTAINING 12.78 ACRES (556,913 SQUARE FEET). THE PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

GENERAL LEGEND

PROPOSED		EXISTING	
PROPERTY BOUNDARY		SANITARY MANHOLE	(S)
SECTION LINE		WATER VALVE BOX	WV
CENTER LINE		FIRE HYDRANT	
RIGHT OF WAY	R/W	WATER CURB STOP	CS
BUILDING SETBACK		WELL	WELL
PERMANENT EASEMENT	P/E	STORM SEWER MANHOLE	(ST)
TEMPORARY EASEMENT	T/E	STORM SEWER SINGLE INTAKE	
TYPE SW-501 STORM INTAKE		STORM SEWER DOUBLE INTAKE	
TYPE SW-502 STORM INTAKE		FLARED END SECTION	
TYPE SW-503 STORM INTAKE		DECIDUOUS TREE	
TYPE SW-505 STORM INTAKE		CONIFEROUS TREE	
TYPE SW-506 STORM INTAKE		DECIDUOUS SHRUB	
TYPE SW-512 STORM INTAKE	ST	CONIFEROUS SHRUB	
TYPE SW-513 STORM INTAKE	ST	ELECTRIC POWER POLE	
TYPE SW-401 STORM MANHOLE	(ST)	GUY ANCHOR	
TYPE SW-402 STORM MANHOLE	ST	STREET LIGHT	
FLARED END SECTION		POWER POLE W/ TRANSFORMER	
TYPE SW-301 SANITARY MANHOLE	(S)	UTILITY POLE W/ LIGHT	
STORM/SANITARY CLEANOUT		ELECTRIC BOX	E
WATER VALVE		ELECTRIC TRANSFORMER	E
FIRE HYDRANT ASSEMBLY		ELECTRIC MANHOLE OR VAULT	(E)
SIGN		TRAFFIC SIGN	
DETECTABLE WARNING PANEL		TELEPHONE JUNCTION BOX	T
WATER CURB STOP		TELEPHONE MANHOLE/VAULT	(T)
STORM SEWER STRUCTURE NO.	ST-10	TELEPHONE POLE	
STORM SEWER PIPE NO.	L-10	GAS VALVE BOX	G
SANITARY SEWER STRUCTURE NO.	S-10	CABLE TV JUNCTION BOX	TV
SANITARY SEWER PIPE NO.	P-10	CABLE TV MANHOLE/VAULT	(TV)
SANITARY SEWER		MAIL BOX	M
SANITARY SERVICE	S	BENCHMARK	BM
STORM SEWER		SOIL BORING	SB
STORM SERVICE	ST	UNDERGROUND TV CABLE	TV
WATERMAIN WITH SIZE	8"W	GAS MAIN	G
WATER SERVICE	W	FIBER OPTIC	FO
SAWCUT (FULL DEPTH)		UNDERGROUND TELEPHONE	T
SILT FENCE		OVERHEAD ELECTRIC	OE
USE AS CONSTRUCTED	(UAC)	UNDERGROUND ELECTRIC	E
MINIMUM OPENING ELEVATION	MOE	FIELD TILE	TILE
		SANITARY SEWER WITH SIZE	8"S
		STORM SEWER WITH SIZE	15"ST
		WATER MAIN WITH SIZE	8"W

ALL CONSTRUCTION SHALL CONFORM TO THE PROJECT SPECIFICATIONS AND THE SOILS REPORT PREPARED BY THIELE GEOTECH, INC. (PN 02.17120.0) DATED JANUARY 25, 2018.

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

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

THE MOST RECENT EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2021 EDITION OF SUDAS STANDARD SPECIFICATIONS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.

CIVIL DESIGN ADVANTAGE
3405 SE CROSSROADS DR. SUITE G GRIMES, IOWA 50111
PH: (515) 369-4400 Fax: (515) 369-4410

PROJECT NO. 2101.016

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

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

ERIN K. OLLENDIKE, P.E. — DATE: 08/12/2022

LICENSE NUMBER 16926
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2023
PAGES OR SHEETS COVERED BY THIS SEAL:
ALL SHEETS

LICENSED PROFESSIONAL ENGINEER — ERIN K. OLLENDIKE — 16926 — IOWA

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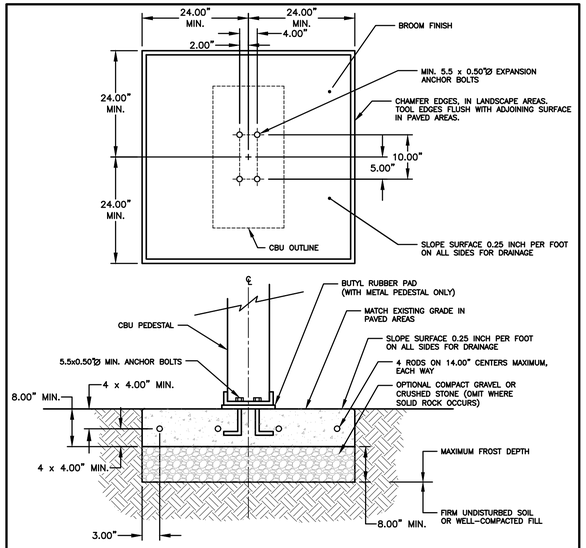
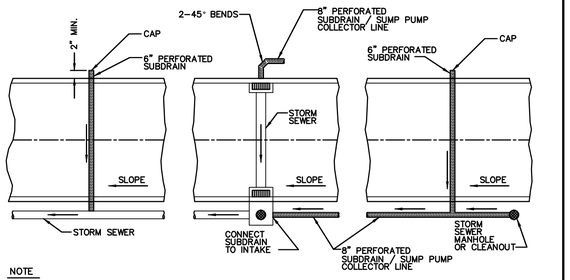


NOTES:
1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS, CONTAIN 4% MIN. – 6% MAX. AIR ENTRAINMENT AND BE PLACED WITH A 3.50" – 4.00" SLUMP IN ACCORDANCE WITH ACI 301.
2. REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615, GRADE 60.
3. EXPANSION BOLTS SHALL BE EQUIVALENT TO THE FOLLOWING PROVIDERS:
   A. HILTI KWIK BOLT (WWW.USHILTI.COM) II–1/2" DIAMETER X 5–1/2" OVERALL LENGTH, GALVANIZED, CATALOG # 000–453–696 KB II 12–512, STAINLESS STEEL: CATALOG # 000–454–744. ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 3–1/2".
   B. ITW RAMSET REDHEAD TRUBOLT (WWW.RAMSET–REDHEAD.COM) GALVANIZED, 1/2" DIAMETER X 7" OVERALL LENGTH; CATALOG NUMBER: WS–1270G. ENSURE THAT MIN. EMBEDMENT IS CONCRETE IS AT LEAST 4–1/8".
   C. RAWL STUD (WWW.RAWL.COM) GALVANIZED, 1/2" X 5–1/2" OVERALL LENGTH; CATALOG NUMBER: 7724. ENSURE THAT MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4".

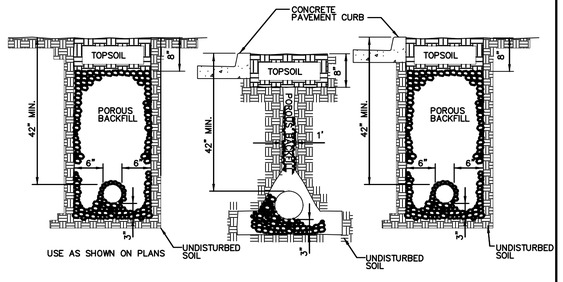
MAILBOX CLUSTER PAD DETAIL

NOT TO SCALE



NOTE

CORE DRILL ALL STORM SEWER AND PLACE NON–SHRINK GROUT COLLAR AT CONNECTION.

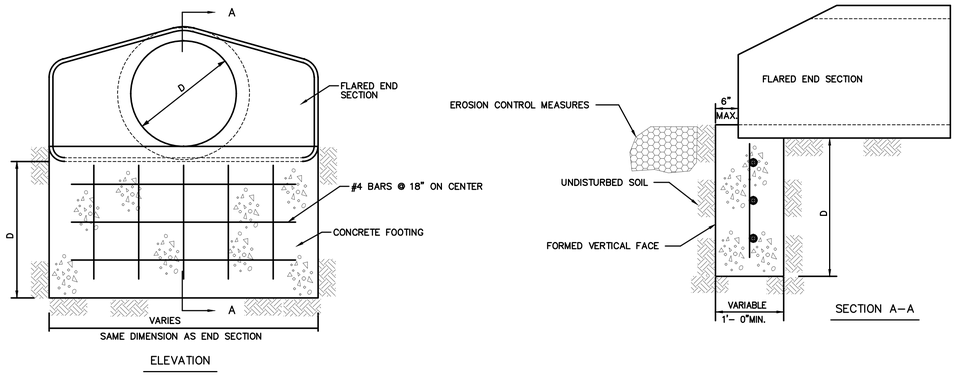


BACK AND SIDE YARD

NOTES

1. SLOPE SUBDRAINS TO DRAIN.
2. 6" BACK OF CURB SUBDRAINS AND ALL BACK AND SIDE YARD SUBDRAINS; USE PEA GRAVEL FOR POROUS BACKFILL.
3. DIRECT PERFORATIONS DOWN FOR SUBDRAINS AND UP FOR SUMP PUMP COLLECTOR LINES.

6" PERFORATED SUBDRAIN



NOTES:
1. D=DIFFERENCE IN ELEVATION BETWEEN FLARED END INVERT AND DRAINAGE WAY CHANNEL FLOW LINE 300 FT DOWNSTREAM OF FLARED END; MINIMUM D=42"
2. INSTALL 3' WIDE CLAY WATERSTOP AT FLARED END SECTION PIPE JOINT.
3. TRASH GUARDS ARE NOT ALLOWED ON PIPES 48" OR LARGER.

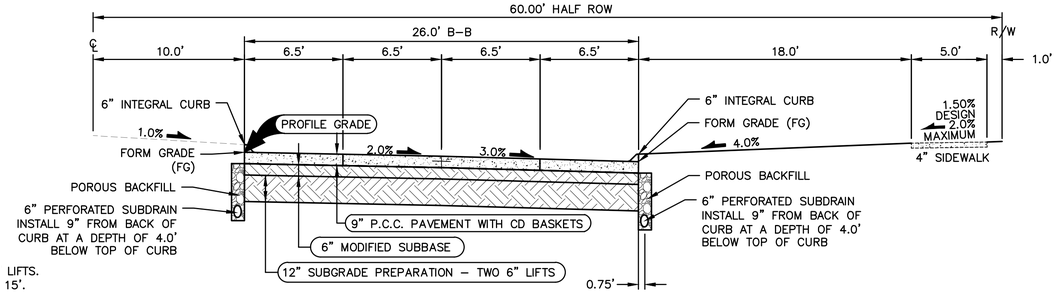
REINFORCING BAR LIST

D	W	Mark	Size	Length	Count
12"	2'–4"	4f1	4	2'–0"	3
		4f2	4	3'–8"	2
15"	2'–10"	4f1	4	2'–6"	3
		4f2	4	3'–8"	2
18"	3'–5"	4f1	4	3'–1"	3
		4f2	4	3'–8"	3
24"	4'–6"	4f1	4	4'–2"	3
		4f2	4	3'–8"	3
30"	5'–7"	4f1	4	5'–3"	3
		4f2	4	3'–8"	4
36"	6'–8"	4f1	4	6'–4"	3
		4f2	4	3'–8"	5
42"	7'–3"	4f1	4	6'–11"	3
		4f2	4	3'–8"	5

D	W	Mark	Size	Length	Count
48"	7'–10"	4f1	4	7'–6"	3
		4f2	4	3'–8"	6
54"	8'–5"	4f1	4	8'–1"	3
		4f2	4	3'–8"	6
60"	8'–11"	4f1	4	8'–7"	3
		4f2	4	3'–8"	6
66"	8'–11"	4f1	4	8'–7"	3
		4f2	4	3'–8"	6
72"	10'–0"	4f1	4	9'–8"	3
		4f2	4	3'–8"	7
78"	10'–7"	4f1	4	10'–3"	3
		4f2	4	3'–8"	7
84"	11'–1"	4f1	4	10'–9"	3
		4f2	4	3'–8"	8

RCP APRON FOOTING DETAIL

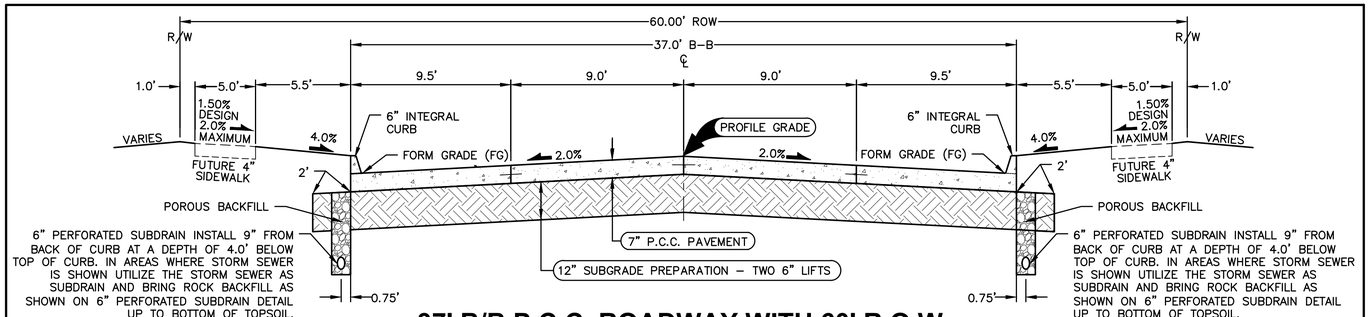
NOT TO SCALE



NOTES:
1. PREPARE SUBGRADE IN 2 – 6" LIFTS.
2. MAXIMUM CD JOINT SPACING IS 15'.

NW DOUGLAS PARKWAY (PARTIAL BUILD) WITH 60' HALF R.O.W.

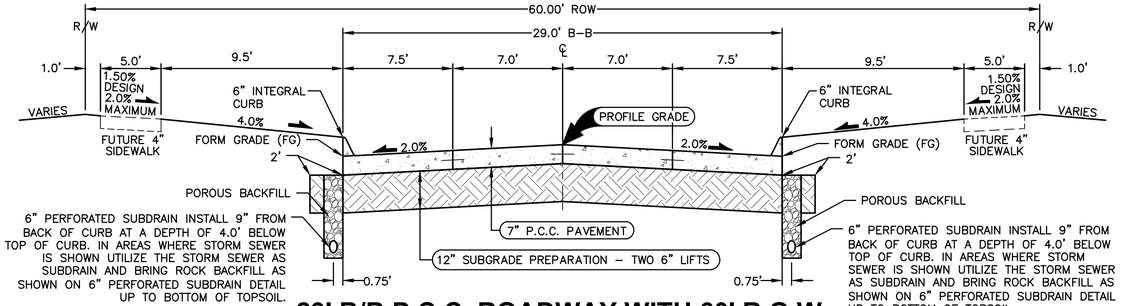
NOT TO SCALE



NOTES:
1. PREPARE SUBGRADE IN 2 – 6" LIFTS.
2. MAXIMUM C JOINT SPACING IS 15'.

37' B/B P.C.C. ROADWAY WITH 60' R.O.W.

NOT TO SCALE — **NW GEORGETOWN DRIVE**



NOTES:
1. PREPARE SUBGRADE IN 2 – 6" LIFTS.
2. MAXIMUM C JOINT SPACING IS 15'.

29' B/B P.C.C. ROADWAY WITH 60' R.O.W.

NOT TO SCALE — **NW GEORGETOWN DRIVE/NW BULL RUN COURT/ NW CONCORD LANE**

REVISIONS	DATE
ASBUILT SUBMITTAL	08/12/2022
FINAL SUBMITTAL	06/08/2021
FOURTH SUBMITTAL	05/25/2021
THIRD SUBMITTAL	04/06/2021
SECOND SUBMITTAL	03/16/2021
FIRST SUBMITTAL	02/03/2021

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO | EI: JWM TECH: BDH

CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

TYPICAL SECTIONS AND DETAILS

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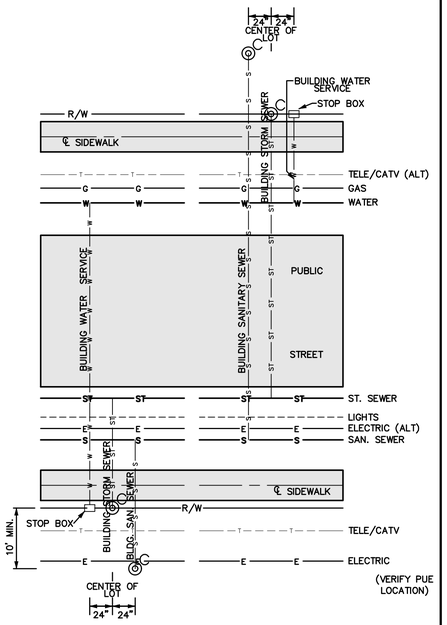
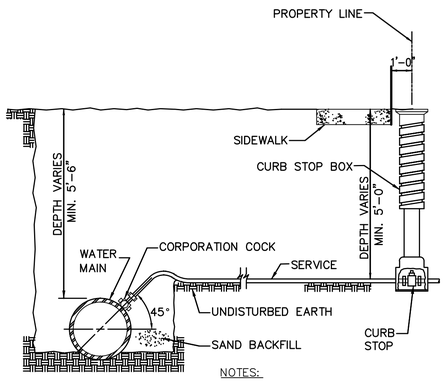


CITY OF WAUKEE
UTILITY SERVICE LOCATIONS

NOT TO SCALE

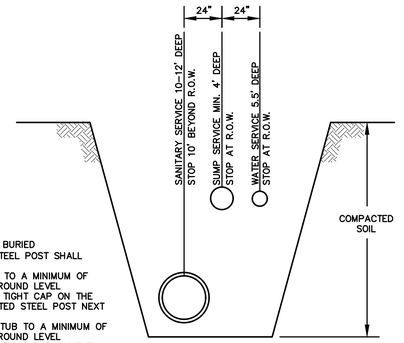


NOTES:

1. TERMINATE CURB STOP BOX ROD 1'-6" BELOW FINISHED GRADE.

WATER SERVICE CONNECTION

NOT TO SCALE

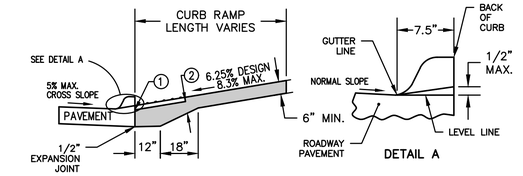


NOTES:

1. PLACE ONE 6' STEEL POST BURIED 3' AT WATER CURB BOX. STEEL POST SHALL BE PAINTED BLUE.
2. BRING SUMP SERVICE STUB TO A MINIMUM OF 1-FOOT ABOVE FINISHED GROUND LEVEL ELEVATION. INSTALL WATER TIGHT CAP ON THE END. PLACE A GREEN PAINTED STEEL POST NEXT TO THE STUB.
3. BRING SANITARY SERVICE STUB TO A MINIMUM OF 1-FOOT ABOVE FINISHED GROUND LEVEL ELEVATION. INSTALL WATER TIGHT CAP ON THE END. PLACE A RED PAINTED STEEL POST NEXT TO THE STUB.

SERVICE LOCATION DETAIL

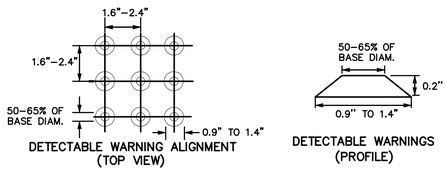
NOT TO SCALE



① INSTALL A 24 INCH WIDE (MIN.) STRIP OF DETECTABLE WARNINGS AT THE BACK OF CURB. EXTEND THE DETECTABLE WARNINGS ACROSS THE FULL WIDTH OF THE RAMP.

② PROVIDE A MINIMUM OF 6 INCHES OF CONCRETE BELOW THE DETECTABLE WARNING PANEL.

NOTE:
ALL TRUNCATED DOMES SHALL BE CAST IRON.



DETECTABLE WARNING DETAIL

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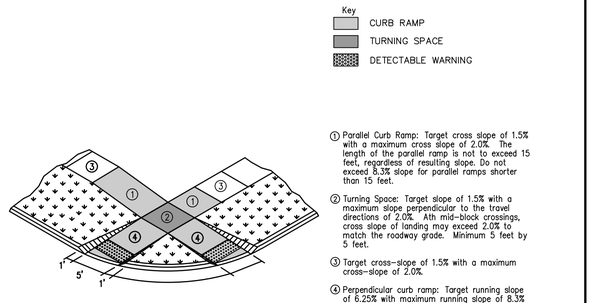


① Parallel Curb Ramp: Target cross slope of 1.5% with a maximum cross slope of 2.0%. The length of the parallel ramp is not to exceed 15 feet, regardless of resulting slope. Do not exceed 8.3% slope for parallel ramps shorter than 15 feet.

② Turning Space: Target slope of 1.5% with a maximum slope perpendicular to the travel directions of 2.0%. Ath mid-block crossings, cross slope of landing may exceed 2.0% to match the roadway grade. Minimum 5 feet by 5 feet.

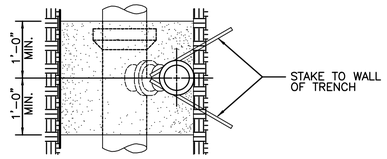
③ Target cross-slope of 1.5% with a maximum cross-slope of 2.0%.

④ Perpendicular curb ramp: Target running slope of 6.25% with maximum running slope of 8.3%

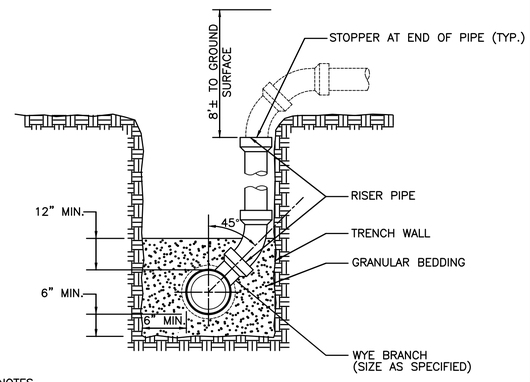
The minimum pavement depth for ramps and landings shall be 6-inches.

CURB RAMPS OUTSIDE OF INTERSECTION RADIUS

NOT TO SCALE



PLAN



NOTES

1. INSTALL RISER TO BEAR FIRMLY AGAINST UNDISTURBED WALL OF TRENCH. STAKE RISER PIPE IN PLACE PRIOR TO BACK-FILLING TO PREVENT MOVEMENT OF PIPE
2. NOTCH WALL OF TRENCH TO RECEIVE PIPE WHERE POSSIBLE.

SECTION

SANITARY SEWER SERVICE RISER

NOT TO SCALE

INTEGRAL 6" STANDARD SPOT ELEVATION REFERENCE DETAIL

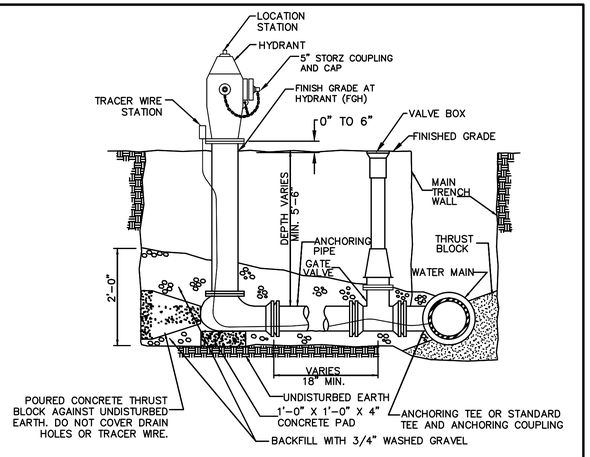
NOT TO SCALE

INSTALLATION NOTE:

1. MAILBOX PADS TO BE INSTALLED WITH THE PLAT IMPROVEMENTS.
2. CLUSTER MAILBOX TO BE LOCATED ON THE NO PARKING/STREET LIGHT SIDE OF STREET.
3. DO NOT LOCATE AT INTERSECTION.
4. LOCATE NEAR SHARED PROPERTY LINE PER APPROVED PLAN.
5. DETERMINE SIDEWALK SIDE OF MAILBOX PAD ELEVATION ASSUMING CONSTANT 4% SLOPE FROM BACK OF CURB TO SIDEWALK SIDE OF MAILBOX PAD. RESULTING SLOPE FROM BACK OF CURB TO STREET SIDE OF MAILBOX PAD WILL BE GREATER THAN 4%. FOR EXAMPLE, FOR A 29' WIDE PAVEMENT WITH A 60' WIDE R.O.W. AND A 2% MAILBOX PAD CROSS SLOPE, THE RESULTING SLOPE FROM THE BACK OF CURB TO THE STREET SIDE OF MAILBOX PAD IS 6.2%.

MAILBOX PAD DETAIL

NOT TO SCALE



NOTES

1. MINIMUM SIZE FOR PIPING. VALVES AND FITTINGS FROM WATER MAIN TO HYDRANT INLET: 6".
2. PROVIDE TRACER WIRE AND TRACER WIRE STATION.
3. WRAP HYDRANT, PIPE AND FITTINGS WITH POLYETHYLENE ENCASEMENT.

HYDRANT ASSEMBLY DETAIL

NOT TO SCALE

REVISIONS	DATE
ASBUILT SUBMITTAL	08/12/2022
FINAL SUBMITTAL	06/08/2021
FOURTH SUBMITTAL	05/25/2021
THIRD SUBMITTAL	04/06/2021
SECOND SUBMITTAL	03/16/2021
FIRST SUBMITTAL	02/03/2021

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GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO | EI: JWM TECH: BDH

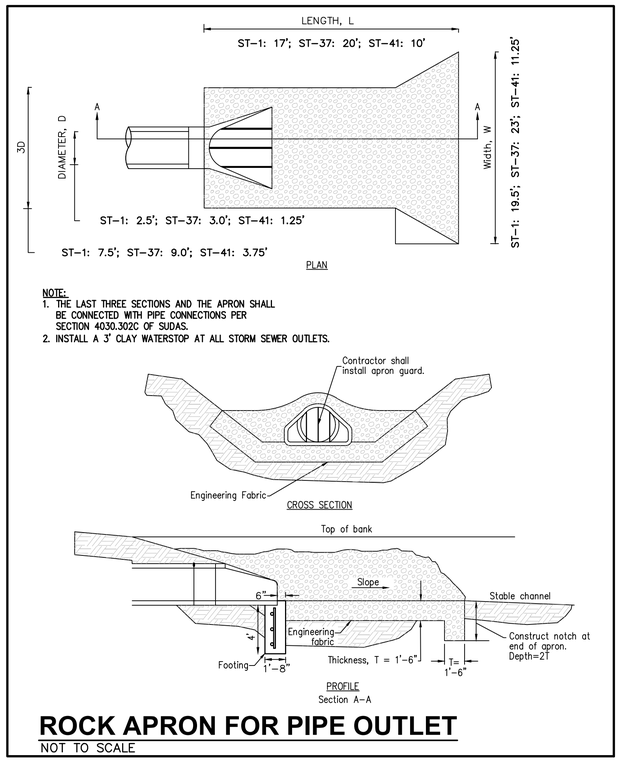
CIVIL DESIGN ADVANTAGE

WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

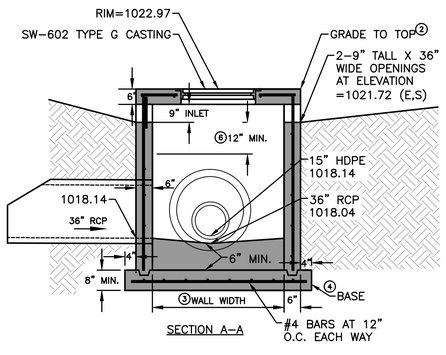
DETAILS

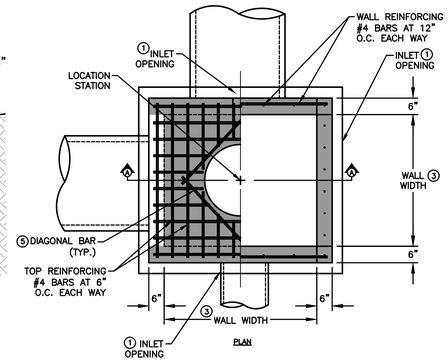
FILE: H:\2021\2101016\DWG\CD\3\2101016-CDH_SET-1AB-ASBUILDING
PLOTTED: 8/5/2022 3:54 PM
PLOTTED BY: MAX EVANS
COMMENT:
ENG:
TECH:



ROCK APRON FOR PIPE OUTLET

NOT TO SCALE





STRUCTURE MAY BE BUILT WITH OPENINGS ON ANY OR ALL SIDES. PROVIDE OPENINGS AND ORIENTATION AS SPECIFIED IN THE CONTRACT DOCUMENTS.

ADJACENT WALLS MAY HAVE DIFFERENT WIDTHS BASED UPON PIPE CONFIGURATION, BUT STRUCTURE MUST BE RECTANGULAR.

① CONSTRUCT INLET OPENINGS WITH 15-INCH #4 EPOXY-COATED BARS AT 8 INCHES ON CENTER. EMBED BARS A MINIMUM OF 3 INCHES INTO WALLS AND TOP AT ALL OPENINGS. CONSTRUCT 2 INLET OPENING 9" TALL AND 36" WIDE.

② GRADE TO INLET ELEVATION ON OPEN SIDES. GRADE TO TOP ELEVATION ON CLOSED SIDES.

③ WALL WIDTHS VARY WITH PIPE DIA. PROVIDE 6 INCHES OF WALL WIDTH (MINIMUM) EACH SIDE OF PIPE OPENING. MINIMUM WALL WIDTH IS 36 INCHES. MAXIMUM WALL WIDTH IS 72 INCHES.

④ CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.

⑤ INSTALL FOUR #4 DIAGONAL BARS AT ALL PIPE OPENINGS.

⑥ 12" MINIMUM WALL HEIGHT ABOVE ALL PIPES.

⑦ CORNER PIER REQUIRED BETWEEN OPENINGS OF TWO ADJACENT WALLS. EXTEND WALL REINFORCING VERTICALLY THROUGH PIER. INSTALL ONE ADDITIONAL 15-INCH #4 BAR IN PIER.

4' X 4' SW-513 INTAKE (ST-39)

NOT TO SCALE

REINFORCING BAR LIST									
Mark	Size	Location	Shape	Count		Length		Spacing	
				6" Wall	8" Wall	6" Wall	8" Wall	6" Wall	8" Wall
4t1	4	Top	——	6	6	3'-8"	4'-0"	See Detail	See Detail
4t2	4	Top	——	6	6	5'-8"	5'-10"	10 1/2"	11 1/2"
4t3	4	Top	——	4	4	8'-2"	8'-6"	See Detail	See Detail
4t4	4	Top	——	12	12	3'-8"	4'-0"	10 1/4"	10 1/2"
4b1	4	Base	——	10	10	4'-2"	4'-6"	11 1/2"	12"
4b2	4	Base	——	6	6	8'-8"	9'-0"	10"	10 3/4"
4w1	4	Short Walls	——	Varies	Varies	3'-8"	4'-0"	12"	12"
4w2	4	Long Walls	——	Varies	Varies	8'-2"	8'-6"	12"	12"
4w3	4	Walls	——	24	24	Wall Height minus 4"		12"	12"

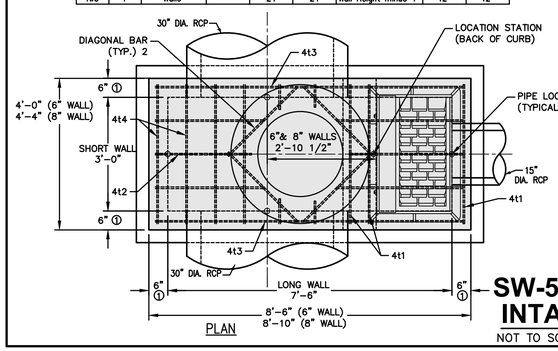
MAXIMUM PIPE DIAMETERS		
Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	15"	18"
Long Wall	42"	42"

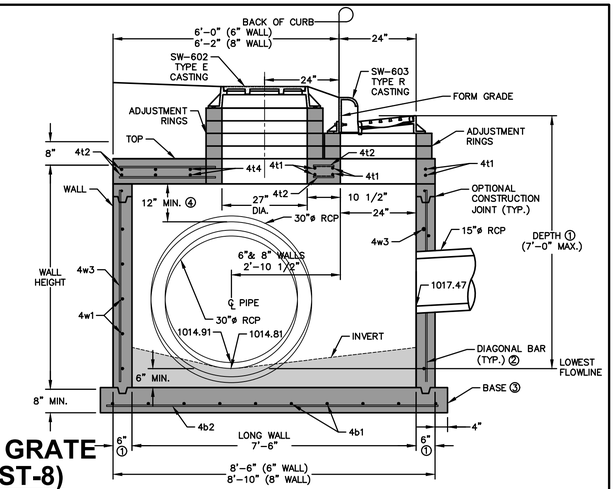
① USE 8" WALL OPTION FOR INTAKE DEPTHS GREATER THAN 7'-0" AND LESS THAN 10'-0".

② INSTALL FOUR #4 DIAGONAL BARS AT MANHOLE OPENING AND AT ALL PIPE OPENINGS.

③ CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF THE BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.

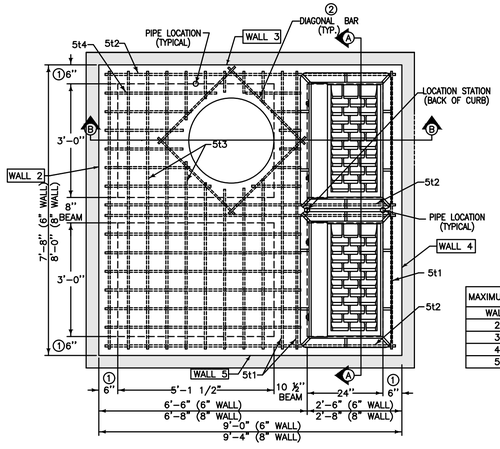
④ 12 INCH MINIMUM WALL HEIGHT ABOVE ALL PIPES.

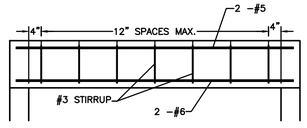


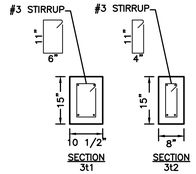


SW-503 MODIFIED SINGLE GRATE INTAKE WITH MANHOLE (ST-8)

NOT TO SCALE







MAXIMUM PIPE DIAMETERS	
WALL	MAX. DIA.
2	48"
3	36"
4	48"
5	36"

REINFORCING BAR LIST									
MARK	SIZE	LOCATION	SHAPE	COUNT		LENGTH		SPACING	
				6" WALL	8" WALL	6" WALL	8" WALL	6" WALL	8" WALL
3t1	3	TOP	▭	7	7	3'-2"*	3'-2"*	12"	12"
3t2	3	TOP	▭	8	8	2'-10"*	2'-10"*	10 ⅞"	10 ⅞"
5b1	5	BASE	——	9	9	7'-10"	8'-2"	12 ¾"	12 ¾"
5b2	5	BASE	——	9	9	8'-2"	8'-4"	11 ¾"	12 ¾"
6w1	6	WALLS	——	30	30	WALL HEIGHT MINUS 4"		12"	12"
6w2	6	WALLS	——	VARIES	VARIES	7'-8"	8'-0"	12"	12"
6w3	6	WALLS	——	VARIES	VARIES	7'-4"	7'-8"	12"	12"
5t1	5	TOP	——	4	4	7'-4"	7'-8"	SEE DETAIL	SEE DETAIL
5t2	5	TOP	——	6	6	7'-8"	8'-0"	SEE DETAIL	SEE DETAIL
5t3	5	TOP	——	18	18	7'-4"	7'-8"	6 ⅜"	6 ¾"
5t4	5	TOP	——	24	24	5'-2"	5'-4"	5 ¾"	6"
6t1	6	TOP	——	2	2	7'-4"	7'-8"	SEE DETAIL	SEE DETAIL
6t2	6	TOP	——	2	2	7'-8"	8'-0"	SEE DETAIL	SEE DETAIL

① USE 8" WALL OPTION FOR INTAKE DEPTHS GREATER THAN 7'-0" AND LESS THAN 10'-0".

② INSTALL FOUR #4 DIAGONAL BARS AT MANHOLE OPENING AND AT ALL PIPE OPENINGS.

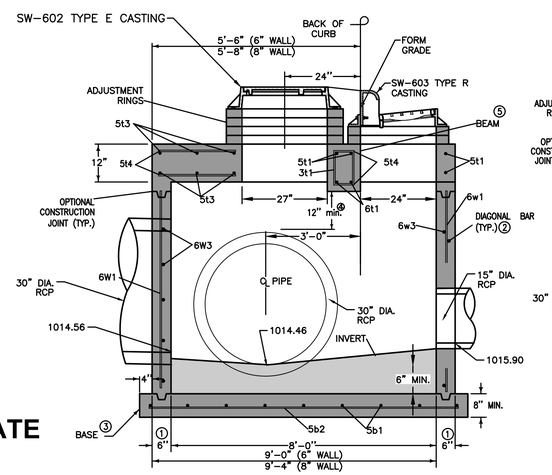
③ CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.

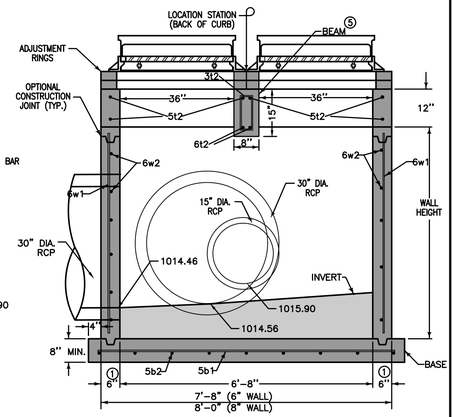
④ 12 INCH MINIMUM WALL HEIGHT ABOVE ALL PIPES.

⑤ CONSTRUCT 8"X15" AND 10 ½"X15" P.C. CONCRETE BEAMS INTEGRAL WITH 12" P.C. CONCRETE FLAT TOP.

SW-506 MODIFIED DOUBLE GRATE INTAKE WITH MANHOLE (ST-3)

NOT TO SCALE





REVISIONS	DATE
ASBUILT SUBMITTAL	08/12/2022
FINAL SUBMITTAL	06/08/2021
FOURTH SUBMITTAL	05/25/2021
THIRD SUBMITTAL	04/06/2021
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GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO | EI: JWM TECH: BDH
CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

DETAILS

WAUKEE, IOWA

FILE: I:\2021\2101016\DWG\CIT\2101016-COV-DET-TAB-ASBUILT.DWG
PLOT DATE: 8/12/2022 2:34 PM
PLOTTED BY: MAX EVANS
COMMENT:
ENG:
TECH:

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
1	COMBINED CLEARING AND GRUBBING	AC	38.56
2	STRIPPING, SALVAGING AND SPREAD TOPSOIL	LS	1
3	CLASS 10 EXCAVATION	LS	1
4	SUBGRADE PREPARATION	SY	10,195
5	SANITARY SEWER GRAVITY MAIN, 8" DIA	LF	2,997
6	SANITARY SEWER SERVICE STUB, 4" DIA	EA	65
7	SUBDRAIN, 6" PERFORATED PVC	LF	3,380
8	STORM SEWER, TRENCHED, 8" HDPE	LF	367
9	STORM SEWER, TRENCHED, 15" HDPE	LF	532
10	STORM SEWER, TRENCHED, 15" RCP	LF	653
11	STORM SEWER, TRENCHED, 18" RCP	LF	64
12	STORM SEWER, TRENCHED, 24" RCP	LF	225
13	STORM SEWER, TRENCHED, 30" RCP	LF	459
14	STORM SEWER, TRENCHED, 36" RCP	LF	86
15	STORM SEWER, TRENCHED, 60" RCP	LF	1,161
16	STORM SEWER SERVICE STUB, 4" DIA	EA	22
17	STORM SEWER, 15" CMP APRON W/ FOOTING & APRON GUARD	EA	1
18	STORM SEWER, 15" RCP APRON W/ FOOTING & APRON GUARD	EA	2
19	STORM SEWER, 18" RCP APRON W/ FOOTING & APRON GUARD	EA	1
20	STORM SEWER, 24" RCP APRON W/ APRON GUARD	EA	1
21	STORM SEWER, 30" RCP APRON W/ APRON GUARD	EA	1
22	STORM SEWER, 36" RCP APRON W/ APRON GUARD	EA	2
23	STORM SEWER, 60" RCP APRON W/ FOOTING	EA	2
24	STORM SEWER, 60" RCP, 45° BEND	EA	1
25	WATER MAIN, 8" DIA	LF	1,453
26	WATER SERVICE STUB, 1" DIA	EA	22
27	VALVE, 8" DIA	EA	7
28	WATER MAIN, 12" DIA	LF	1,715
29	VALVE, 12" DIA	EA	3
30	FIRE HYDRANT ASSEMBLY	EA	10
31	TEMPORARY FIRE HYDRANT ASSEMBLY	EA	3
32	TEMPORARY FIRE HYDRANT ASSEMBLY (RELOCATE)	EA	1
33	MANHOLE, SW-301, 48" (SANITARY SEWER)	EA	13
34	MANHOLE, SW-401, 48" (STORM SEWER)	EA	2
35	MANHOLE, SW-401, 60" (STORM SEWER)	EA	2
36	MANHOLE, SW-401, 72" (STORM SEWER)	EA	1
37	MANHOLE, SW-401, 96" (STORM SEWER)	EA	5
38	INTAKE, SW-501	EA	4
39	INTAKE, SW-503	EA	2
40	INTAKE, SW-503, MODIFIED	EA	1
41	INTAKE, SW-505	EA	5
42	INTAKE, SW-506	EA	2
43	INTAKE, SW-506, MODIFIED	EA	1
44	INTAKE, NYLOPLAST 24" DIA. W/ DOME GRATE INLET	EA	3
45	PAVEMENT, 7" P.C.C.	SY	4,962
46	PAVEMENT, 9" P.C.C.	SY	4,058
47	6" MODIFIED SUBBASE	SY	4,058
48	PAVEMENT, 4" P.C.C. SIDEWALK	SY	942
49	PAVEMENT, 6" P.C.C. SIDEWALK RAMPS	SY	105
50	DETECTABLE WARNING PANELS	SF	168
51	SEEDING, FERTILIZING, AND MULCHING	AC	36.60
52	PERMANENT ROAD CLOSURE, URBAN, SI-182	EA	10
53	PERMANENT ROAD CLOSURE, URBAN, SI-182 (RELOCATE)	EA	5
54	TRAFFIC CONTROL	LS	1
55	EROSION CONTROL	LS	1
56	SANITARY SEWER CLEANOUT	EA	65
57	STORM SEWER CLEANOUT	EA	31
58	MAILBOX PAD	EA	3
59	RIPRAP	TONS	55

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND TO THE 2021 EDITION OF SUDAS STANDARD SPECIFICATIONS. THE WAUKEE STANDARD SPECIFICATIONS SHALL GOVERN IF ANY DISCREPANCIES.
2. 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.
3. 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.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING HIS EQUIPMENT ON THE PAVEMENT OR SIDEWALK. PAVEMENT REPLACEMENT SHALL COMPLY WITH THE WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN ALL SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT. INCLUDING STAGING OF CONSTRUCTION DETAILS.
6. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE PROPOSED AND EXISTING RIGHT OF WAY, CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY (48 HRS NOTICE) THE FOLLOWING:
   A. CITY OF WAUKEE ENGINEERING DEPARTMENT
   B. APPROPRIATE UTILITY COMPANIES
   C. OWNER
   D. CIVIL DESIGN ADVANTAGE

   * 48 HOUR NOTICE SHALL BE GIVEN TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO WEEKEND AND HOLIDAY WORK.

ESTIMATE REFERENCE INFORMATION

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM NO.	DESCRIPTION
	THE MOST RECENT EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2021 EDITION OF SUDAS STANDARD SPECIFICATIONS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.
	ALL REFERENCES TO SECTIONS AND FIGURES ARE TO THE SUDAS STANDARD SPECIFICATIONS. CITY OF WAUKEE STANDARD DETAILS SHALL GOVERN IF ANY DISCREPANCIES.
1	CLEAR AND GRUB ALL AREAS AFFECTED BY GRADING OPERATIONS. THE CONTRACTOR SHALL FIELD VERIFY CLEARING AND GRUBBING NEEDS PRIOR TO BIDDING. INCLUDES REMOVAL OF ANY EXISTING FIELD FENCE. ALL MATERIAL THAT IS REMOVED FROM THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR. INCLUDED REMOVAL OF EXISTING CROPS FOR CONSTRUCTION OF TEMPORARY ACCESS. DO NOT DISTURB CROPS OUTSIDE OF THE PROJECT LIMITS. AREA SHOWN FOR REFERENCE ONLY.
2	STRIP, SALVAGE AND RE-SPREAD TOPSOIL PER SECTION 2010 OF SUDAS STANDARD SPECIFICATIONS OR PROVIDE THE CITY WITH A TOPSOIL PRESERVATION PLAN. TOPSOIL TO BE RESPREAD SHALL BE FREE OF ROCK AND DEBRIS AND BE SUITABLE FOR THE GROWTH OF GRASS. COORDINATE LOCATION OF STOCKPILE WITH OWNER.
3	EXCAVATION INCLUDES ALL WORK NECESSARY TO ACHIEVE PROPER GRADES AS SHOWN IN THE PLANS. NO PAYMENT FOR OVERHAUL SHALL BE ALLOWED.
4	REFER TO SHEET 2 FOR TYPICAL LOCATIONS AND THICKNESS.
5	SANITARY SEWER SHALL BE PVC TRUSS PIPE. ANY CONNECTIONS TO EXISTING SANITARY SEWER SHALL BE CONSIDERED INCIDENTAL. REFER TO FIG. 3010.101 AND 3010.103 FOR PIPE EMBEDMENT DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. EXISTING SANITARY SEWER WILL NEED TO BE RETESTED AFTER SADDLE WYE INSTALLATION.
5-16	REFER TO FIGURE 3010.102 FOR TRENCH BEDDING AND BACKFILL ZONE DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. CONNECTIONS TO EXISTING STORM SEWER PIPE AND STRUCTURES SHALL BE CONSIDERED INCIDENTAL. WRAP ALL PIPE JOINTS IN ENGINEERING FABRIC. CLEAN AND TELEVISE SANITARY AND STORM SEWER PRIOR TO PAVING AND PROVIDE TELEVISING REPORT TO CITY IN HARD COPY AND DISC FORMAT. TELEVISING SHALL BE CONSIDERED INCIDENTAL. ALL STORM SEWER PIPE THAT CROSSES OVER WATERMAIN SHALL HAVE O-RING GASKETS JOINT RATED AT 13 PSI OR GREATER. O-RING GASKET JOINTS SHALL BE INSTALLED ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WATER TO THE SEWER IS AT LEAST 10 FEET.
6,16,26	REFER TO DETAILS ON SHEETS 2, 3 AND PLAN AND PROFILE SHEETS FOR LOCATION AND DEPTH. STORM SEWER SERVICES TYING INTO EXISTING RCP PIPE ARE TO BE CORE DRILLED.
17-23	THE LAST THREE SECTIONS AND APRON SHALL BE CONNECTED WITH PIPE CONNECTORS. REFER TO FIG. 4030.221 - RCP APRON SECTION FOOTING FOR FOOTING CONSTRUCTION DETAILS. APRON GUARD REQUIRED ON ALL APRONS. RCP APRON FOOTING, PIPE APRON GUARD AND PIPE CONNECTORS TO BE CONSIDERED INCIDENTAL. INSTALL CLAY WATERSTOPS AT ALL RCP APRONS, MIN. 3' LONG.
25-32	REFER TO FIG. 3010.101 AND FIG. 3010.104 FOR TRENCH BEDDING AND BACKFILL ZONE DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. REFER TO FIG. 5010.101 FOR THRUST BLOCK DETAILS. REFER TO FIG. 5010.102 FOR TRACER SYSTEM DETAILS. ALL FITTINGS, POLYETHYLENE WRAP, THRUST BLOCKS, AND TRACER WIRE SYSTEM SHALL BE CONSIDERED INCIDENTAL.
30	REFER TO FIG. 5020.201 - FIRE HYDRANT ASSEMBLY FOR FIRE HYDRANT CONSTRUCTION DETAILS. INCLUDES ANCHORING TEE, ANCHORING ELBOW, GATE VALVE, VALVE BOX, ANCHORING PIPE, ANCHORING COUPLING, ELBOWS, 5" STORZ FITTINGS, POLYETHYLENE WRAP, THRUST BLOCK AND TRACER WIRE SYSTEM AND FIRE HYDRANT.
31-32	REFER TO WATERMAIN PLAN AND PROFILE SHEETS FOR LOCATIONS OF HYDRANTS. ANY RELOCATED FIRE HYDRANTS ARE TO INCLUDE 5-INCH STORZ FITTINGS.
33	REFER TO FIG.6010.301 - CIRCULAR SANITARY SEWER MANHOLE (SW-301) FOR CONSTRUCTION DETAILS. CASTINGS IN PAVEMENT SHALL BE TYPE B RING AND COVER. WHEN CASTINGS ARE NOT IN PAVEMENT, INSTALL MANHOLE CONE SECTION, MANHOLE STEPS, AND RING/COVER CASTING SUCH THAT SEPARATION IS MAINTAINED BETWEEN MANHOLE COVERS AND PAVED AREAS (BACK OF CURB, SIDEWALK PAVEMENT, SIDEWALK APPROACHES/RAMPS). ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED.
34-37	REFER TO FIG. 6010.401 - CIRCULAR STORM SEWER MANHOLE (SW-401) FOR CONSTRUCTION DETAILS. MANHOLE INSIDE DIAMETERS GREATER THAN 48" SHALL BE CONSIDERED INCIDENTAL.

ESTIMATE REFERENCE INFORMATION

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM NO.	DESCRIPTION
38-43	REFER TO FIG. 6010.514 - BOXOUTS FOR GRATE INTAKES. REFER TO FIG. 6010.603 - CASTINGS FOR GRATE INTAKES FOR TYPE R GRATE DETAILS AND FIG. 6010.602 - CASTINGS FOR STORM SEWER MANHOLES FOR TYPE E CASTING DETAILS. THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR INTAKE CASTINGS IS 6". THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR MANHOLE CASTINGS IS 12".
38	REFER TO FIG. 6010.501 - SINGLE GRATE INTAKE (SW-501) FOR CONSTRUCTION DETAILS.
39	REFER TO FIG. 6010.503 - SINGLE GRATE INTAKE WITH MANHOLE (SW-503) FOR CONSTRUCTION DETAILS.
41	REFER TO FIG. 6010.505 - DOUBLE GRATE INTAKE (SW-505) FOR CONSTRUCTION DETAILS
42	REFER TO FIG. 6010.506 - DOUBLE GRATE INTAKE WITH MANHOLE (SW-506) FOR CONSTRUCTION DETAILS.
45-46	REFER TO FIG. 7010.101 - JOINTS (PV-101) FOR JOINT DETAILS. MAXIMUM C JOINT SPACING IS 15 FEET.
49	REFER TO FIG. 7030.204 - GENERAL SIDEWALK AND ACCESSIBLE RAMP DETAILS AND FIG. 7030.208 - CURB RAMPS WITHIN INTERSECTION RADIUS FOR CLASS B OR C SIDEWALK FOR CONSTRUCTION DETAILS. DETECTABLE WARNING PANELS TO BE CAST IRON WITH A NATURAL FINISH. ACCESSIBLE CURB RAMPS INCLUDING TURNING SPACES SHALL BE 6" THICK P.C.C.
50	REFER TO SHEET 3 FOR CONSTRUCTION DETAILS. ALL TRUNCATED DOMES SHALL BE CAST IRON WITH A NATURAL FINISH COLOR.
51	THE SITE SEEDING SHALL CONFORM TO THE SPECIFICATION FOR TYPE (1) PERMANENT LAWN MIXTURE AND TYPE (4) URBAN TEMPORARY EROSION CONTROL SEED MIXTURE. SEEDING QUANTITIES -TYPE 1 PERMANENT LAWN MIXTURE = 0.90 AC -TYPE 4 URBAN TEMPORARY EROSION CONTROL MIXTURE = 35.70 AC
52-53	REFER TO PLAN AND PROFILE SHEETS FOR LOCATIONS. REFER TO IDOT STANDARD ROAD PLAN SI-182 FOR CONSTRUCTION DETAILS. EACH LOCATION CONSISTS OF FIVE SIGNS WITH POSTS PER SI-182.
54	ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ROAD BARRICADES AT END OF EXISTING PAVEMENTS UNTIL THE PROJECT IS ACCEPTED. THE MESSAGE BOARD WILL BE REQUIRED AT LEAST 1 WEEK IN ADVANCE OF ANY LANE CLOSURES.
55	REFER TO SHEET 11-12 OF THE CONSTRUCTION DRAWINGS FOR EROSION AND SEDIMENT CONTROLS. REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR SPECIFIC DETAILS.
56-57	REFER TO SANITARY AND STORM SEWER PLAN AND PROFILE SHEETS FOR LOCATIONS.
58	REFER TO SHEETS 2 AND 3 FOR CONSTRUCTION DETAILS. MAILBOX PADS ARE LOCATED BETWEEN LOTS 14/15.

8. PRIOR TO CONSTRUCTION, THE PROJECT MANAGER SHALL CONTACT THE WAUKEE ENGINEERING DEPARTMENT AND SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST ONE WEEK PRIOR TO THE ANTICIPATED START OF CONSTRUCTION.
9. SPECIAL CARE SHALL BE TAKEN WHEN FORMING AT INTERSECTIONS SO THE PROFILES SHOWN ON THE PLANS AND THE ELEVATIONS SHOWN ON THE INTERSECTION DETAILS ARE OBTAINED. SHORT LENGTHS OF FORMS OR FLEXIBLE FORMS MAY BE NECESSARY AT THESE LOCATIONS.
10. TO OBTAIN THE CORRECT FORM GRADES AT LOW POINTS WHERE INTAKES ARE LOCATED, THE CONTRACTOR MUST EXERCISE ADDITIONAL CARE WHEN PAVING FULL WIDTH PAVEMENTS. THIS MAY REQUIRE POURING ONE HALF OF THE PAVEMENT AT A TIME OR OTHER METHODS APPROVED BY THE ENGINEER.
11. THE CONTRACTOR MAY BE REQUIRED AS DIRECTED BY THE ENGINEER OR THE CITY, TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY. THIS SHALL BE INCIDENTAL TO THE BID ITEM TRAFFIC CONTROL. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ROAD BARRICADES AT END OF EXISTING PAVEMENTS UNTIL THE PROJECT IS ACCEPTED.
12. PLAN AND PROFILE SHEETS INCLUDED IN THE PROJECT ARE FOR THE PURPOSE OF ALIGNMENT, LOCATION AND SPECIFIC DIRECTIONS FOR WORK TO BE PERFORMED UNDER THIS CONTRACT. IRRELEVANT DATA ON THESE SHEETS IS NOT TO BE CONSIDERED A PART OF THIS CONTRACT.
13. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
14. THE CONTRACTOR IS REQUIRED TO BE FAMILIAR WITH AND COMPLY WITH OSHA STANDARDS. NOTHING WITHIN THESE PLANS SHALL RELIEVE THE CONTRACTOR OF THIS REQUIREMENT.
15. ALL MATERIAL TESTING SHALL BE CONSIDERED INCIDENTAL TO OTHER CONSTRUCTION.
16. 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.
17. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. (MUTCD)
18. ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
19. SIDEWALKS, ACCESSIBLE CURB RAMPS AND SIDEWALK RAMPS INCLUDING RAISED TRUNCATED DOME AND DETECTABLE WARNINGS AND WARNING PANELS SHALL BE DESIGNED AND INSTALLED TO THE LATEST P.R.O.W.A.G. AND A.D.A. REQUIREMENTS.
20. PLACE 3/4" EXPANSION JOINT BETWEEN ALL P.C.C. PAVEMENT/SIDEWALKS AND BUILDINGS. PLACE 1/2" EXPANSION JOINT BETWEEN SIDEWALKS AND P.C.C PAVEMENT. THE PCC RAMP JOINT LOCATED AT THE BACK OF CURB AND ALL EXPANSION JOINTS SHALL BE SEALED.
21. REMOVE DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY AND BEFORE RAIN EVENTS.
22. DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE R.O.W.
23. ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
24. IN THE EVENT OF A DISCREPANCY BETWEEN DETAILED PLANS AND QUANTITIES, THE DETAILED PLANS SHALL GOVERN.
25. ALL FIELD TILES ENCOUNTERED SHALL BE REPAIRED AND CONNECTED TO STORM SEWERS WHERE POSSIBLE. LOCATIONS SHALL BE PROVIDED TO THE ENGINEER FOR NOTATION ON AS-BUILTS.
26. ALL CONSTRUCTION STAKING TO BE COMPLETED UNDER THE DIRECTION OF A LICENSED ENGINEER OR LAND SURVEYOR. ALL CURB DROPS AND SIDEWALK/SHARED USE PATH SHALL ALSO BE STAKED UNDER THE DIRECTION OF A LICENSED ENGINEER OR LAND SURVEYOR
27. THE CONTRACTOR SHALL SUBMIT A LIST OF CONSTRUCTION MATERIALS TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
28. A GEOTECHNICAL ENGINEER SHALL BE ONSITE DURING CONSTRUCTION AND FOR PROOF ROLLING TO INSPECT SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE GEOTECHNICAL ENGINEER IS PRESENT. A COPY OF ALL REPORTS AND FINDINGS REQUIRING ALTERATION FROM THE APPROVED PLAN SET IS TO BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT FOR REVIEW AND DISCUSSION PRIOR TO COMMENCING WITH PAVING WITHIN THE PROJECT.
29. THE CONTRACTOR SHALL COORDINATE ALL EXISTING PUBLIC UTILITY CONNECTIONS WITH THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
30. ALL TESTING SHALL BE COMPLETED ACCORDING TO THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE WAUKEE ENGINEERING DEPARTMENT SHALL BE PRESENT TO WITNESS ALL TESTING.
31. AS-BUILTS SHALL BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT INCLUDING ALL UTILITIES AND AS-BUILT GRADES FOR DRAINAGE SWALES, OVERFLOWS, ACCESSIBLE RAMPS AND DETENTION FACILITIES. THE CONTRACTOR SHALL PROVIDE INFORMATION TO THE DESIGN ENGINEER FOR INCLUSION ON THE RECORD AS-BUILT DRAWINGS.
32. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING AND TELEVISING ALL STORM AND SANITARY SEWERS. THE CITY OF WAUKEE ENGINEERING DEPARTMENT SHALL WITNESS AND APPROVE ALL CLEANING AND TELEVISING PRIOR TO PAVING. A COPY OF THE VIDEOS AND A HARD COPY OF THE INSPECTION REPORT SHALL BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT. ALL SANITARY SEWER MANHOLES ARE TO BE VACUUM TESTED.
33. ALL FIRE HYDRANTS INCLUDING ANY RELOCATED HYDRANTS SHALL HAVE 5-INCH STORZ FITTINGS.
34. ALL PROPOSED PEDESTRIAN CROSSINGS SHALL BE INSTALLED AS PART OF THE PLAT IMPROVEMENTS.
35. ALL CONNECTIONS TO EXISTING MANHOLES ARE TO BE CORE DRILLED AND USE A LINK SEAL.
36. ANY FIELD FENCE LOCATED WITHIN THE PROPERTY IS TO BE REMOVED.
37. ALL EXISTING AND PROPOSED MANHOLES SHALL HAVE A MINIMUM OF 1 - 4" ADJUSTING RING TO ALLOW FOR FUTURE ADJUSTMENT SHOULD THE STRUCTURE END UP IN A DRIVEWAY.
38. THE RESULTS OF THE GEOTECHNICAL EXPLORATION ARE TO BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT AND THE PLAN IS SUBJECT TO ANY CHANGES REQUIRED BY THE REPORT.
39. THIS SITE WILL HAVE SAWCUTTING AND CONCRETE GRINDING SO PROTECTION OF STORM SEWERS AND DRAINAGE WAYS FROM SLURRY WILL NEED TO OCCUR FOR ALL OFFSITE DISCHARGE.

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PLOTTED: 6/9/2022 3:24 PM
PLOTTED BY: MAX EVANS
COMMENT:
ENG:
TECH:

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ENGINEER: EKO | EI: JWM TECH: BDH

REVISIONS	DATE
ASBUILT SUBMITTAL	06/12/2022
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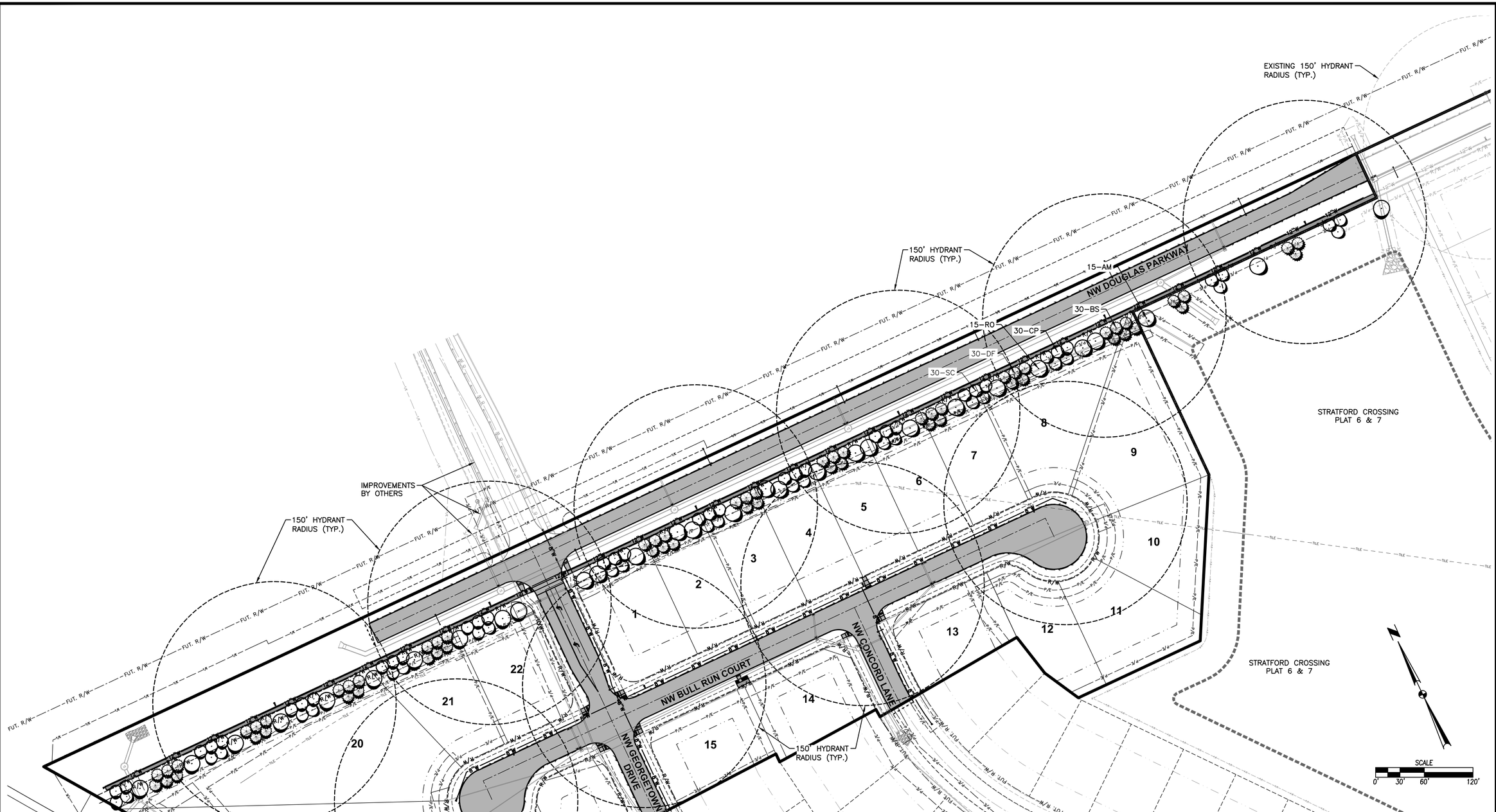
THIRD SUBMITTAL	04/06/2021
SECOND SUBMITTAL	03/16/2021
FIRST SUBMITTAL	02/03/2021

CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

QUANTITIES, GENERAL NOTES AND BID ITEM REFERENCE NOTES

WAUKEE, IOWA



LANDSCAPE NOTES

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
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. WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING
6. SHREDDED HARDWOOD MULCH SHALL BE PLACED AROUND ALL TREES TO A (MIN) DEPTH OF 3".
7. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
8. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
9. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.

BUFFER REQUIREMENTS

1 OVERSTORY TREE, 2 EVERGREEN TREES AND 2 ORNAMENTAL TREES PER 50 LF (LOT FRONTAGE)
1 OVERSTORY TREE, 2 EVERGREEN TREES AND 2 ORNAMENTAL TREES PER 150 LF (POND FRONTAGE)

LOT FRONTAGE (1,350 LF)		POND FRONTAGE (330 LF)	
OVERSTORY TREES REQUIRED	=27	OVERSTORY TREES REQUIRED	=3
EVERGREEN TREES REQUIRED	=54	EVERGREEN TREES REQUIRED	=6
ORNAMENTAL TREES REQUIRED	=54	ORNAMENTAL TREES REQUIRED	=6
OVERSTORY TREES PROVIDED	=27	OVERSTORY TREES PROVIDED	=3
EVERGREEN TREES PROVIDED	=54	EVERGREEN TREES PROVIDED	=6
ORNAMENTAL TREES PROVIDED	=54	ORNAMENTAL TREES PROVIDED	=6

PLANT SCHEDULE

CODE	QTY			SIZE	COND
AM	15	AUTUMN BLAZE MAPLE	ACER RUBRUM 'AUTUMN BLAZE'	1.5" CAL	B&B
CP	30	CHANTICLEER PEAR	PYRUS CALLERYANA 'GLENS'S FORM'	1.5" CAL	B&B
PS	30	COLORADO BLUE SPRUCE	PICEA PUNGENS	6' HT.	B&B
RO	15	RED OAK	QUERCUS RUBRA	2" CAL	B&B
DF	30	DOUGLAS FIR	PSEUDOTSGA MENZIESII	6' HT.	B&B
SC	30	SPRING SNOW CRAB	MALUS X 'SPRING SNOW'	1.5" CAL	B&B

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CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10
HYDRANT COVERAGE AND LANDSCAPE PLAN
WAUKEE, IOWA

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PLOTTED BY: MAX EVANS
COMMENT: ENG

NO OFFSITE GRADING OR UTILITY WORK CAN OCCUR UNTIL EASEMENTS ARE OBTAINED FROM THE PROPERTY OWNER.

CONTRACTOR TO REMOVE FIELD TILE IF ENCOUNTERED DURING CONSTRUCTION. ENSURE THE PIPE IS NOT FLOWING WATER PRIOR TO REMOVAL

THIS DITCH IS CREATED TO TEMPORARILY DRAIN WATER FROM THE WEST. IN A FUTURE PHASE OF DEVELOPMENT THE DITCH WILL BE FILLED IN AND THE GRADE WILL BE 2% OR GREATER.

DURING 100-YEAR STORM WATER OVERFLOWS NORTHEAST TO PROPOSED INTAKE. ELEVATION OF 1022.56 REPRESENTS OVERFLOW ELEVATION LIMITS

100-YEAR ELEVATION =1019.00

GRADING LIMITS (TYP.)

PROPERTY BOUNDARY

100-YEAR ELEVATION =1017.63

NW DOUGLAS PARKWAY

OVERFLOW ELEVATION= ~~1020.83~~ 1020.92

OVERFLOW ELEVATION= ~~1022.56~~ 1022.55

OVERFLOW ELEVATION= ~~1024.00~~ 1023.55

DURING 100-YEAR STORM WATER OVERFLOWS NORTH TO TEMPORARY DRAINAGE SWALE. ELEVATION OF 1024.00 REPRESENTS OVERFLOW ELEVATION LIMITS

35.00' OVERLAND FLOWAGE EASEMENT

15.00' OVERLAND FLOWAGE EASEMENT

SWALE CENTERLINE DISTANCE VARIES FROM LOT LINE

RACCOON RIVER VALLEY TRAIL

100-YEAR ELEVATION =1022.21

OVERFLOW ELEVATION =~~1023.76~~ 1023.75

OVERFLOW ELEVATION =~~1026.31~~ 1026.35

SWALE CENTERLINE DISTANCE VARIES FROM LOT LINE

17.00' OVERLAND FLOWAGE EASEMENT

OVERFLOW PATH (TYP.)

22.00' OVERLAND FLOWAGE EASEMENT

OVERLAND FLOWAGE EASEMENT

OVERFLOW PATH (TYP.)

17.00' OVERLAND FLOWAGE EASEMENT

NW GEORGETOWN DRIVE

20 MOE= 1027.35

21 MOE= 1024.00

22 MOE= 1024.00

1 MOE= 1021.90

2 MOE= 1021.90

3 MOE= 1019.50

4 MOE= 1019.50

5 MOE= 1019.50

30' SETBACK

100-YEAR ELEVATION =1023.15

OVERFLOW ELEVATION =~~1023.48~~ 1023.47

OVERFLOW ELEVATION =~~1023.57~~ 1023.68

MAILBOX PAD REFER TO DETAIL 'B'

NW BULL RUN COURT

OVERFLOW ELEVATION =~~1021.41~~ 1021.36

100-YEAR ELEVATION =1021.33

19 MOE= 1027.35

16 MOE= 1024.90

15 MOE= 1021.80

14 MOE= 1021.80

15.00' OVERLAND FLOWAGE EASEMENT

10.00' OVERLAND FLOWAGE EASEMENT

SWALE CENTERLINE LOCATED 5' FROM LOT LINE

100-YEAR ELEVATION =1021.20

100-YEAR ELEVATION =1021.15

NW CONCORD LANE

18 MOE= 1027.35

17 MOE= 1024.90

OVERLAND FLOWAGE EASEMENT

OVERFLOW ELEVATION =~~1023.84~~ 1023.73

OVERFLOW PATH (TYP.)

REFER TO DETAIL 'A'

100-YEAR ELEVATION =1023.44

PROPERTY BOUNDARY

OVERFLOW ELEVATION =~~1022.30~~ 1022.30

100-YEAR ELEVATION =1021.33

FUTURE STRATFORD DEVELOPMENT

GRADING LIMITS (TYP.)

SWALE CENTERLINE DISTANCE VARIES FROM LOT LINE

FUTURE STRATFORD DEVELOPMENT

THIS DITCH IS CREATED TO TEMPORARILY DRAIN WATER FROM THE NORTH. IN A FUTURE PHASE OF DEVELOPMENT THE DITCH WILL BE FILLED IN AND THE GRADE WILL BE 2% OR GREATER.

GRADING NOTES

1. IT IS THE APPLICANT'S RESPONSIBILITY TO PROVIDE THE WAUKEE ENGINEERING DEPARTMENT WITH A CERTIFIED AS-BUILT GRADING PLAN PRIOR TO ACCEPTANCE OF IMPROVEMENTS.
2. REMOVE ANY FARM FENCING ON THE PROPERTY AS PART OF THE IMPROVEMENTS.
3. EXISTING TOPOGRAPHIC SURVEY SHOWN AT BOUNDARY OF EXISTING PLATS IS SHOWN AS THE DESIGN GRADES FROM STRATFORD CROSSING PLATS 6-7. ACTUAL CONDITIONS MAY DIFFER FROM WHAT IS SHOWN.

AREA OF DISTURBANCE = 38.73 AC

N

SCALE 0' 20' 40' 80'

REVISIONS	DATE
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THIRD SUBMITTAL	04/06/2021
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FIRST SUBMITTAL	02/03/2021

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CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

GRADING PLAN ASBUILT

WAUKEE, IOWA

7 / 38

2101.016

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PLOT DATE: 6/2/2022 3:25 PM
PLOTTED BY: MAX EVANS
COMMENT:
ENG:

NW DOUGLAS PARKWAY

NW GEORGETOWN DRIVE

NW BULL RUN COURT

NW CONCORD LANE

100-YEAR ELEVATION =1019.00

GRADING LIMITS (TYP.)

PROPERTY BOUNDARY

100-YEAR ELEVATION =1017.63

100-YEAR ELEVATION =1015.68

OVERFLOW ELEVATION= ~~1019.00~~ 1018.99

OVERFLOW ELEVATION= ~~1022.56~~ 1022.55

OVERFLOW ELEVATION= ~~1020.83~~ 1020.92

OVERLAND FLOWAGE EASEMENT

OVERFLOW PATH (TYP.)

17.00' OVERLAND FLOWAGE EASEMENT

20.00' OVERLAND FLOWAGE EASEMENT

OVERFLOW ELEVATION= ~~1018.50~~ 1018.52

SWALE CENTERLINE DISTANCE VARIES FROM LOT LINE

100-YEAR ELEVATION =1015.52

100-YEAR POND ELEVATION =1014.41

OVERFLOW ELEVATION= ~~1018.00~~ 1018.02

STRATFORD CROSSING PLAT 6 & 7

1 MOE= 1021.90

2 MOE= 1021.90

3 MOE= 1019.50

4 MOE= 1019.50

5 MOE= 1019.50

6 MOE= 1019.50

7 MOE= 1019.50

8 MOE= 1019.50

9 MOE= 1016.50

10 MOE= 1016.50

11 MOE= 1016.50

12 MOE= 1016.50

13 MGS= 1019.18

14 MOE= 1021.80

15 MOE= 1021.80

30' SETBACK

100-YEAR ELEVATION =1021.33

OVERFLOW ELEVATION =~~1023.48~~ 1023.47

OVERFLOW ELEVATION =~~1023.57~~ 1023.68

MAILBOX PAD REFER TO DETAIL 'B'

OVERFLOW ELEVATION =~~1021.41~~ 1021.36

20.00' OVERLAND FLOWAGE EASEMENT

10.00' OVERLAND FLOWAGE EASEMENT

SWALE CENTERLINE LOCATED 5' FROM LOT LINE

100-YEAR ELEVATION =1021.20

100-YEAR ELEVATION =1021.15

PROPERTY BOUNDARY

OVERFLOW PATH (TYP.)

REFER TO DETAIL 'A'

100-YEAR ELEVATION =1023.44

OVERFLOW ELEVATION ~~1022.30~~ 1022.30

FUTURE STRATFORD DEVELOPMENT

THIS DITCH IS CREATED TO TEMPORARILY DRAIN WATER FROM THE NORTH. IN A FUTURE PHASE OF DEVELOPMENT THE DITCH WILL BE FILLED IN AND THE GRADE WILL BE 2% OR GREATER.

FUTURE OVERFLOW ELEVATION= 1020.80

GRADING LIMITS (TYP.)

CONTRACTOR TO REMOVE FIELD TILE IF ENCOUNTERED DURING CONSTRUCTION. ENSURE THE PIPE IS NOT FLOWING WATER PRIOR TO REMOVAL.

STRATFORD CROSSING PLAT 6 & 7

SCALE 0' 20' 40' 80'

DETAIL 'A' (1"=5') (FULL SIZE)

DETAIL 'B' (1"=5') (FULL SIZE)

REVISIONS	DATE
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FIRST SUBMITTAL	02/03/2021

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CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

GRADING PLAN ASBUILT

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PLOTTED BY: MAX EVANS | PLOTTED: 8/12/2022 3:30 PM
COMMENT: ENG.

GRADING LIMITS (TYP.)

STRATFORD CROSSING PLAT 6 & 7

100-YEAR POND ELEVATION =1014.41

THIS DITCH IS CREATED TO TEMPORARILY DRAIN WATER FROM THE SITE. IN A FUTURE PHASE OF DEVELOPMENT THE DITCH WILL BE FILLED IN AND THE GRADE WILL BE 2% OR GREATER.

FUTURE STRATFORD DEVELOPMENT

FUTURE STRATFORD DEVELOPMENT

STRATFORD CROSSING PLAT 9

FUTURE OVERFLOW ELEVATION =1020.80

THIS DITCH IS CREATED TO TEMPORARILY DRAIN WATER FROM THE NORTHWEST. IN A FUTURE PHASE OF DEVELOPMENT THE DITCH WILL BE FILLED IN AND THE GRADE WILL BE 2% OR GREATER.

THIS DITCH IS CREATED TO TEMPORARILY DRAIN WATER FROM THE SOUTHWEST. IN A FUTURE PHASE OF DEVELOPMENT THE DITCH WILL BE FILLED IN AND THE GRADE WILL BE 2% OR GREATER.

CONTRACTOR TO REMOVE FIELD TILE IF ENCOUNTERED DURING CONSTRUCTION. ENSURE THE PIPE IS NOT FLOWING WATER PRIOR TO REMOVAL.

GRADING LIMITS (TYP.)

RACCOON RIVER VALLEY TRAIL

SCALE 0' 20' 40' 80'

REVISIONS	DATE
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FINAL SUBMITTAL	06/08/2021
FOURTH SUBMITTAL	05/25/2021
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SECOND SUBMITTAL	03/16/2021
FIRST SUBMITTAL	02/03/2021

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CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

GRADING PLAN ASBUILT

WAUKEE, IOWA

9 / 38

2101.016

FILE: H:\2021\2101016\Civil\GA'S\2101016-GRADING-ASBUILT.DWG
PLOT DATE: 8/12/2022 3:24 PM
PLOTTED BY: MAX EVANS
COMMENT:
ENG:
TECH:

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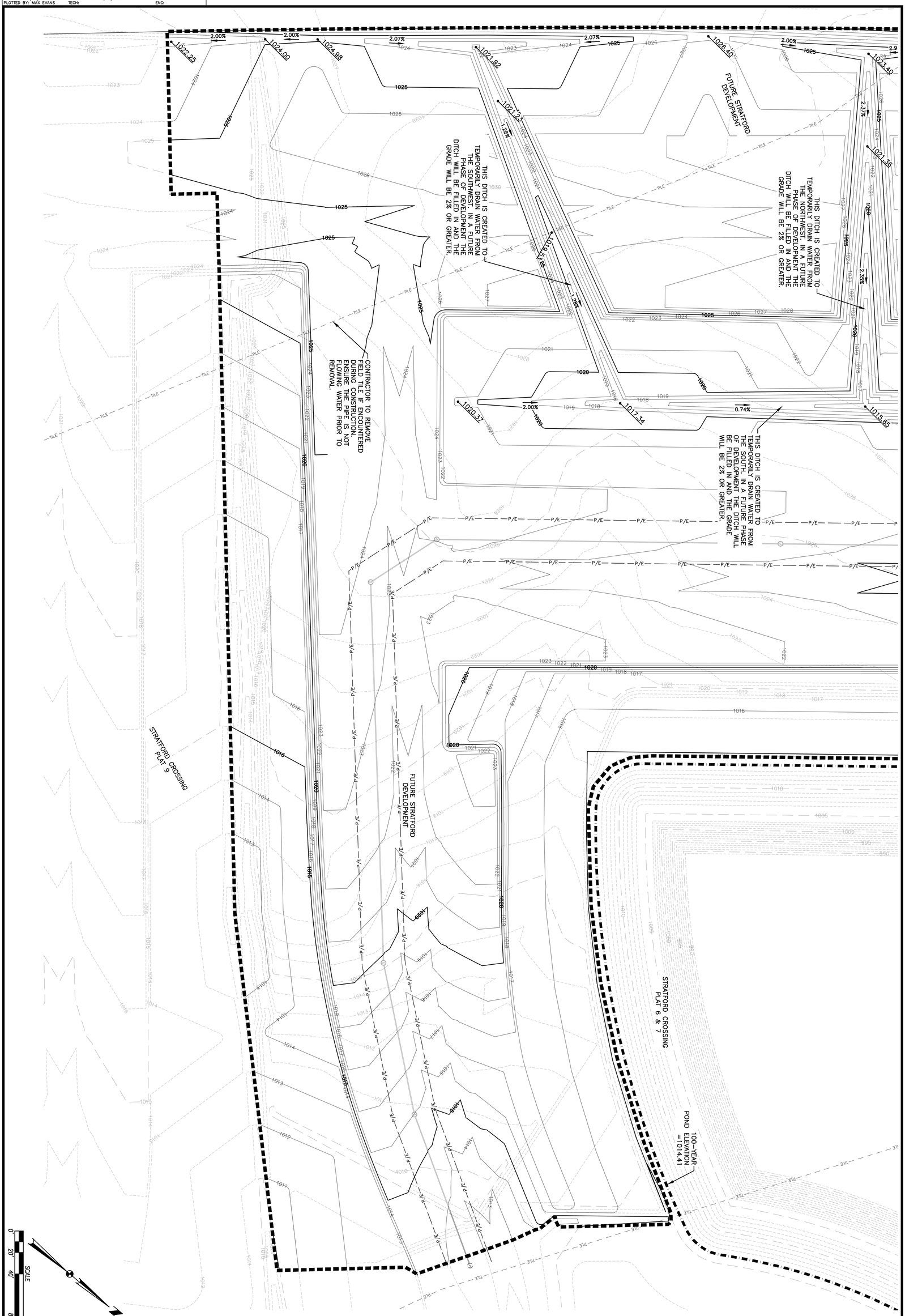
PLOTTED BY: MAX EVANS TECH: ENG:



STRATFORD CROSSING PLAT 10

GRADING PLAN ASBUILT

WAUKEE, IOWA

CIVIL DESIGN ADVANTAGE
3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO
EI: JWM TECH: BDH

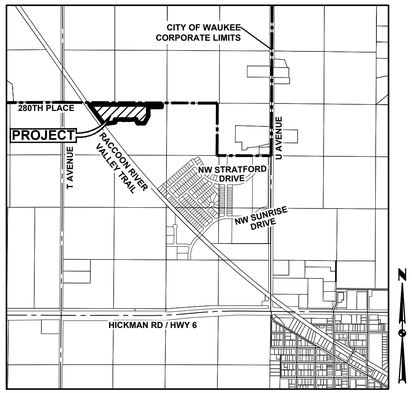
REVISIONS	DATE
ASBUILT SUBMITTAL	08/12/2022
FINAL SUBMITTAL	06/08/2021
FOURTH SUBMITTAL	05/25/2021
THIRD SUBMITTAL	04/06/2021
SECOND SUBMITTAL	03/16/2021
FIRST SUBMITTAL	02/03/2021

STRATFORD CROSSING PLAT 10

EROSION AND SEDIMENT CONTROL PLAN

VICINITY MAP

NOT TO SCALE



WAUKEE, IOWA

SWPPP LEGEND

- DRAINAGE ARROW (X.XX %)
- GRADING LIMITS
- FILTER SOCK
- SILT FENCE
- DITCH CHECK
- INLET PROTECTION
- PORTABLE RESTROOM (R)
- CONCRETE WASHOUT PIT
- AREA TO BE SEEDED
- STRAW MAT
- UNDISTURBED AREA
- RIP–RAP
- GRAVEL ENTRANCE
- STAGING AREA
- TEMPORARY SEDIMENT BASIN (TSB #)

DISCHARGE POINT SUMMARY

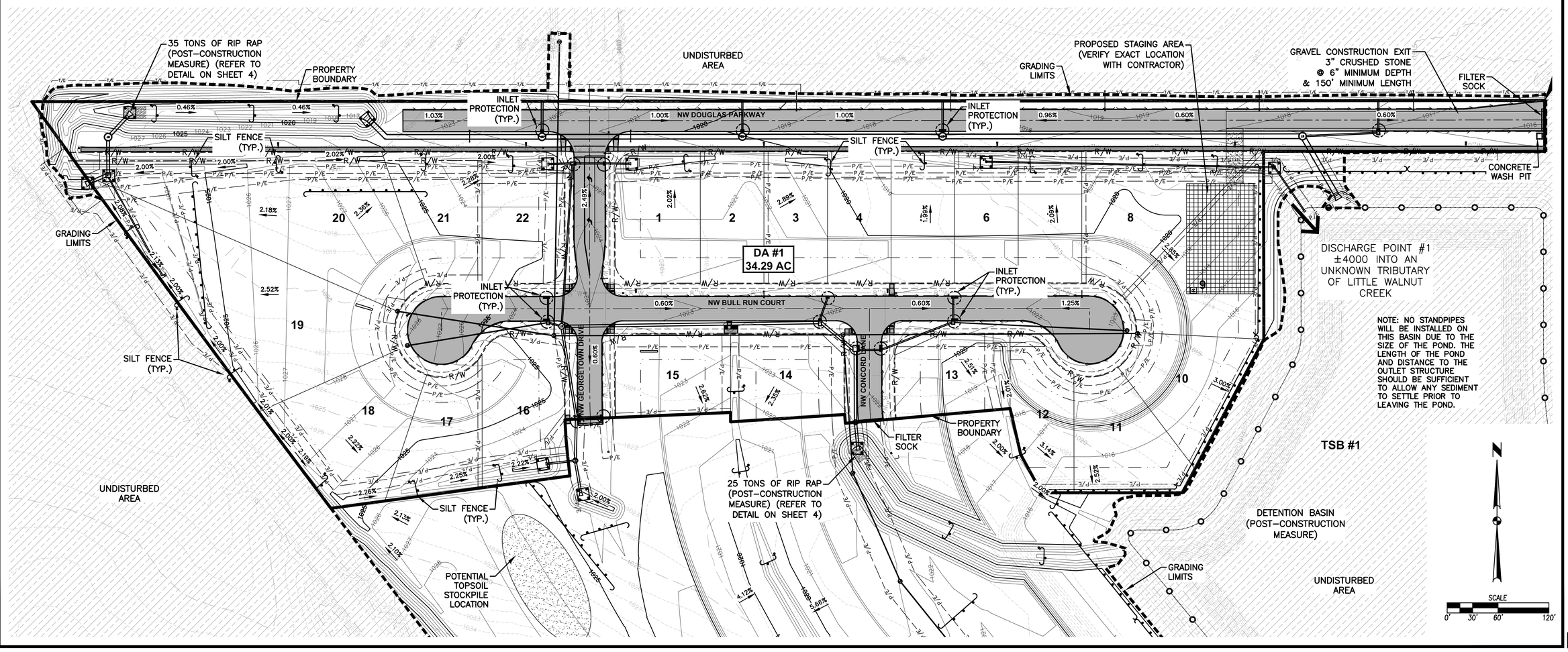
DISCHARGE POINT #1 TO LITTLE WALNUT CREEK ±4000 FT	
TOTAL AREA DISTURBED TO DISCHARGE POINT	34.29 ACRES
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)	123,444 CU FT
VOLUME PROVIDED IN SILT FENCE (2510 LF @ 4.5 CU FT/LF OF FENCE)	11,295 CU FT
VOLUME PROVIDED IN DITCH CHECK (1500 LF @ 15.0 CU FT/LF)	22,500 CU FT
VOLUME PROVIDED IN EXISTING TSB #1	761,652 CU FT
TOTAL VOLUME PROVIDED	795,445 CU FT
DISCHARGE POINT #2 TO LITTLE WALNUT CREEK ±5200 FT	
TOTAL AREA DISTURBED TO DISCHARGE POINT	4.44 ACRES
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)	15,984 CU FT
VOLUME PROVIDED IN SILT FENCE (890 LF @ 4.5 CU FT/LF)	4,005 CU FT
VOLUME PROVIDED IN DITCH CHECK (1100 LF @ 15.0 CU FT/LF)	16,500 CU FT
TOTAL VOLUME PROVIDED	20,505 CU FT

STABILIZATION QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	6,000
2	FILTER SOCK	LF	85
3	PERMANENT SEED – TYPE 1	AC	0.90
4	TEMPORARY SEED – TYPE 4	AC	35.70
5	INLET PROTECTION DEVICES	EA	16
6	CONCRETE WASHOUT PIT	EA	1
7	RIP–RAP, CLASS E	TON	165

NOTES:

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



3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
EI: JWM TECH: BDH
ENGINEER: EKO
CIVIL DESIGN ADVANTAGE

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FIRST SUBMITTAL	02/03/2021

STRATFORD CROSSING PLAT 10
EROSION AND SEDIMENT CONTROL PLAN
WAUKEE, IOWA

11 / 38

2101.016

FILE: R:\2021\210101\6\DWG\210101_SWPPP.DWG
PLOT DATE: 8/12/2022 3:37 PM
PLOTTED BY: MAX EVANS
COMMENT: ENG:
TECH:

POTENTIAL TOPSOIL STOCKPILE LOCATION

GRADING LIMITS

UNDISTURBED AREA

DISCHARGE POINT #1
±4000 INTO AN UNKNOWN TRIBUTARY OF LITTLE WALNUT CREEK

TSB #1

DETENTION BASIN
(POST–CONSTRUCTION MEASURE)

SILT FENCE (TYP.)

DA #1
34.16 AC

DA #2
4.44 AC

POTENTIAL TOPSOIL STOCKPILE LOCATION

DISCHARGE POINT #2
±5200 INTO AN UNKNOWN TRIBUTARY OF LITTLE WALNUT CREEK

UNDISTURBED AREA

GRADING LIMITS

SILT FENCE (TYP.)

SCALE
0' 30' 60' 120'

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GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: JWM TECH: BDH

CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

EROSION AND SEDIMENT CONTROL PLAN

WAUKEE, IOWA

12/38

2101.016

FILE: H:\2021\2101016\Users\2101016-SWPPP.DWG
REF: XX-XXX-XXXX
PLOTTED BY: MAX EVANS PLOTTED: 8/12/2022 3:37 PM COMMENT:
TECH: ENG:

REFER TO SHEET 15 FOR P-13, L-14 AND L-18 PLAN AND PROFILE.

REFER TO SHEET 27 FOR WATERMAIN PLAN AND PROFILE.

LOT 20 | LOT 21 | LOT 22 | LOT 1 | LOT 2 | LOT 3 | LOT 19 | LOT 16 | LOT 15 | LOT 14 | LOT 18 | LOT 17

30' SETBACK

60' ROW, 37' B-B

29' B-B, 60' ROW

STA 333+63 RIM= 1028.82 FL= 1024.82 (MIN.)
STA 333+55 RIM= 1029.05 FL= 1019.05 (MIN.)
CRITICAL CROSSING BOTTOM OF WATER=1022.56 TOP OF SANITARY=1017.75
STA 334+09 RIM= 1027.88 FL= 1017.88 (MIN.)
STA 334+11 RIM= 1027.61 FL= 1023.61 (MIN.)
STA 334+81 RIM= 1024.95 FL= 1020.95 (MIN.)
STA 334+79 RIM= 1025.22 FL= 1015.22 (MIN.)
CRITICAL CROSSING BOTTOM OF STORM=1016.50 TOP OF WATER=1015.00 (INSTALL GASKETED JOINTS ON STORM SEWER)
SW-203 SUBDRAIN CLEANOUT STA 336+09 RIM= 1023.86 FL= 1019.86 (MIN.)
STA 336+68 RIM= 1024.15 FL= 1014.15 (MIN.)
STA 336+70 RIM= 1023.94 FL= 1019.94 (MIN.)
STA 337+41 RIM= 1023.71 FL= 1013.71 (MIN.)
STA 337+43 RIM= 1023.50 FL= 1019.50 (MIN.)
STA 338+16 RIM= 1023.26 FL= 1013.26 (MIN.)
STA 338+18 RIM= 1023.05 FL= 1019.05 (MIN.)

334+00 | 335+00 | 336+00 | 54+00 | 337+00 | 338+00 | 339+00

5' SIDEWALK (FUTURE)

6" SUBDRAIN FL=1019.50
6" SUBDRAIN FL=1018.33
6" SUBDRAIN FL=1024.46

CRITICAL CROSSING BOTTOM OF STORM=1018.41 TOP OF SANITARY=1012.47
CRITICAL CROSSING BOTTOM OF STORM=1017.25 TOP OF SANITARY=1012.00
CRITICAL CROSSING BOTTOM OF STORM=1015.88 TOP OF WATER=1014.38 (INSTALL GASKETED JOINTS ON STORM SEWER)
CRITICAL CROSSING BOTTOM OF STORM=1020.40 TOP OF SANITARY=1013.75

STREET LIGHT (TYP)

NW BULL RUN COURT (7" PCC)

15.0' PANEL

30.0' SANITARY SEWER EASEMENT

STA 333+35 RIM= 1029.33 FL= 1019.33 (MIN.)
STA 333+45 RIM= 1029.15 FL= 1025.15 (MIN.)

STA 334+91 RIM= 1024.58 FL= 1020.58 (MIN.)
STA 334+93 RIM= 1024.82 FL= 1014.82 (MIN.)

SANITARY SEWER EASEMENT

NW GEORGETOWN DRIVE (7" PCC)

STA 335+75.00 (NW BULL RUN COURT)
STA 54+45.00 (NW GEORGETOWN DRIVE)
55+00

15.0' SANITARY SEWER EASEMENT

MAILBOX PAD

CRITICAL CROSSING BOTTOM OF STORM=1014.40 TOP OF SANITARY=1009.96
CRITICAL CROSSING BOTTOM OF STORM=1014.34 TOP OF SANITARY=1009.79

CRITICAL CROSSING BOTTOM OF WATER=1017.69 TOP OF SANITARY=1011.59
STA 336+15 RIM= 1024.36 FL= 1014.36 (MIN.)

10' OVERLAND FLOWAGE EASEMENT

10' P.U.E.

STA 333+63 RIM= 1028.43 FL= 1024.43 (MIN.)
STA 333+58 RIM= 1028.61 FL= 1018.61 (MIN.)
STA 334+11 RIM= 1027.58 FL= 1023.58 (MIN.)
STA 334+13 RIM= 1027.78 FL= 1017.78 (MIN.)

10.0' SNOW STORAGE EASEMENT

STORM SEWER EASEMENT

PC 55+44.94

SHEET INDEX

SCALE 0' 10' 20' 40'

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ENGINEER: EKO
CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

STRATFORD CROSSING PLAT 10
SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

FILE: H:\2021\2101016\DWG\03\2101016-PNP-ASBUILT.DWG
PLOT DATE: 8/12/2022 3:39 PM
PLOTTED BY: MAX EVANS
COMMENT:
DNG:

S-12: 83° 88°
ST-10: 77° 86° 115° 82°
S-11: 94° 86°
S-9: 180°

1035 | 1030 | 1025 | 1020 | 1015 | 1010 | 1005

STA 333+48.40, 2.89' R
SW-301 48" MH
RIM=~~1029.30~~ 1029.55
FL 8" (E)=~~1017.37~~ 1017.45

STA 333+59.98, 43.38' R
SW-401 48" MH
RIM=~~1028.46~~ 1028.74
FL 8" (E)=~~1024.28~~ 1024.17

STA 335+24.00, 14.50' R
SW-506 MOD. INTK
TC=~~1023.50~~ 1023.29
FL 15" (N)=~~1018.75~~ 1018.58
FL 8" (W)=~~1019.00~~ 1018.71
FL 15" (E)=~~1018.65~~ 1018.43

STA 335+32.78, 31.80' R
SW-301 48" MH
RIM=~~1023.25~~ 1023.97
FL 8" (N)=~~1011.66~~ 1011.16
FL 8" (W)=~~1011.51~~ 1011.15
FL 8" (E)=~~1011.41~~ 1011.06

STA 335+41.89, 20.79' R
SW-401 72" MH
TC=~~1023.60~~ RIM=1023.77
FL 24" (S)=~~1017.52~~ 1016.52
FL 15" (W)=~~1018.57~~ 1018.36
FL 15" (N)=~~1016.51~~ 1016.52
FL 30" (E)=~~1016.41~~ 1016.47

LP STA = 335+24.75
LP ELEV = 1023.28
VPI STA = 335+14
VPI ELEV = 1023.01
VC = 50'
K=9.53
VPC STA = 334+89
VPC ELEV = 1023.95
VPT STA = 335+39
VPT ELEV = 1023.39

-3.75%
1.49%
2.00%
-2.00%

STA 335+24.00, 14.50' L
SW-505 INTK
TC=~~1023.50~~ 1023.23
FL 15" (S)=~~1010.00~~ 1019.28

STA 335+24.00, 14.50' R
SW-506 INTK
TC=~~1023.50~~ 1023.29
FL 15" (N)=~~1018.75~~ 1018.58
FL 8" (W)=~~1019.00~~ 1018.71
FL 15" (E)=~~1018.65~~ 1018.43

STA 338+55.58, 14.50' L
SW-501 INTK
TC=~~1022.33~~ 1022.14
FL 15" (S)=~~1017.74~~ 1017.99

STA 338+46.63, 14.50' R
SW-503 MOD. INTK
TC=~~1022.39~~ 1022.21
FL 15" (N)=~~1017.47~~ 1017.69
FL 30" (W)=~~1014.91~~ 1015.14
FL 30" (SE)=~~1014.81~~ 1015.01

STA 338+90.50, 47.00' R
SW-506 MOD. INTK
TC=~~1021.55~~ 1021.39
FL 15" (E)=~~1015.30~~ 1015.92
FL 30" (NW)=~~1014.56~~ 1014.63
FL 30" (S)=~~1014.46~~ 1014.53

STA 338+74.00, 31.00' R
SW-301 48" MH
RIM=~~1021.80~~ 1021.77
FL 8" (E)=~~1009.36~~ 1009.06
FL 8" (W)=~~1009.36~~ 1009.02
FL 8" (S)=~~1009.13~~ 1008.86

PROPOSED GROUND
EXISTING GROUND
PROFILE GRADE

L-13: 165 LF OF 8" PVC @ ~~3.20%~~ 3.31%
L-11: 14 LF OF 15" RCP @ ~~0.60%~~ 0.50%
P-12: 183 LF OF 8" PVC @ ~~3.20%~~ 3.44%
L-12: 25 LF OF 15" RCP @ ~~1.00%~~ 2.80%
L-9: 27 LF OF 15" RCP @ ~~1.00%~~ 1.11%
L-10: 300 LF OF 30" RCP @ ~~0.50%~~ 0.44%
P-11: 338 LF OF 8" PVC @ ~~0.50%~~ 0.60%
L-8: 51 LF OF 30" RCP @ ~~0.50%~~ 0.75%

CRITICAL CROSSING BOTTOM OF WATER=1022.56 TOP OF SANITARY=1017.75
CRITICAL CROSSING BOTTOM OF STORM=1020.40 TOP OF SANITARY=1013.75
CRITICAL CROSSING BOTTOM OF STORM=1018.41 TOP OF SANITARY=1012.47
CRITICAL CROSSING BOTTOM OF STORM=1017.25 TOP OF SANITARY=1012.00
CRITICAL CROSSING BOTTOM OF STORM=1015.88 TOP OF WATER=1014.38 (INSTALL GASKETED JOINTS ON STORM SEWER)
CRITICAL CROSSING BOTTOM OF STORM=1014.40 TOP OF SANITARY=1009.96

0.60%

1020.22
1020.29 1027.29
1020.35 1025.41
1020.69 1023.60
1020.85 1023.65
1021.21 1023.55
1020.15 1023.35
1019.27 1023.05
1018.99 1022.75
1018.58 1022.45
1018.15 1022.15
1017.81 1021.85

334+00 | 335+00 | 336+00 | 337+00 | 338+00 | 339+00

REFER TO SHEET 16 FOR P-9 AND L-3 PLAN AND PROFILE.

REFER TO SHEET 28 FOR WATERMAIN PLAN AND PROFILE.

LOT 2 | LOT 3 | LOT 4 _ | LOT 5 | LOT 6 | LOT 7 | LOT 8 | LOT 9 | LOT 10 | LOT 11 | LOT 12 | LOT 13 | LOT 14

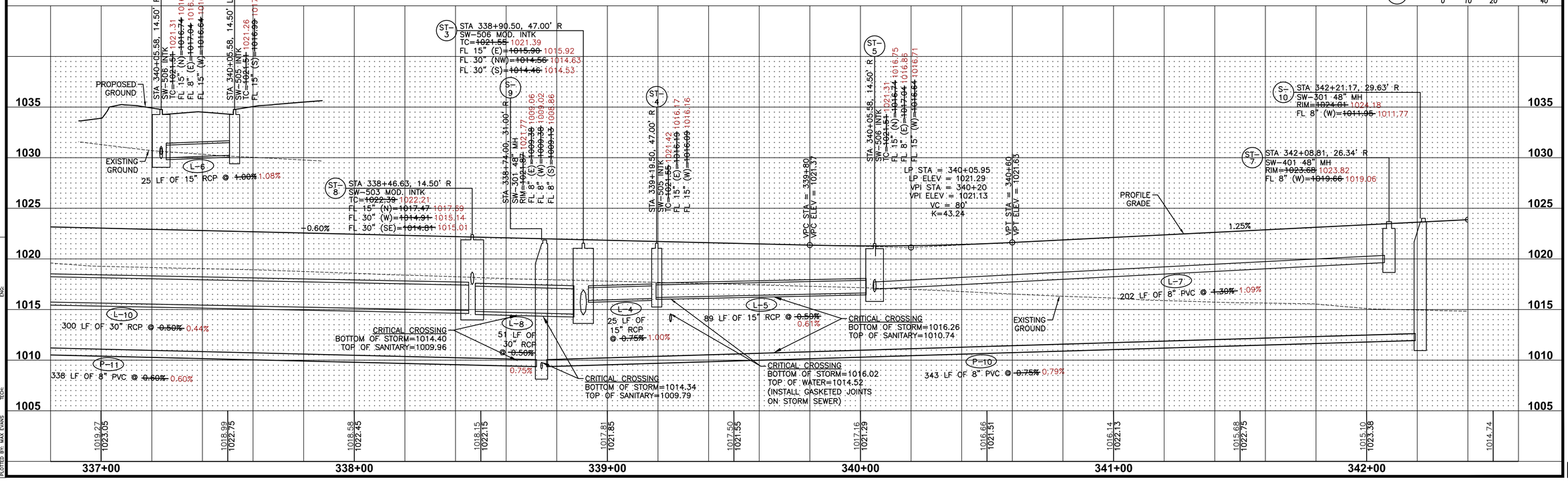
STA 337+41 RIM= 1023.71 FL= 1013.71 (MIN.)
STA 337+43 RIM= 1023.50 FL= 1019.50 (MIN.)
STA 338+16 RIM= 1023.26 FL= 1013.26 (MIN.)
STA 338+18 RIM= 1023.05 FL= 1019.05 (MIN.)
STA 338+91 RIM= 1022.82 FL= 1012.82 (MIN.)
STA 338+93 RIM= 1022.60 FL= 1018.60 (MIN.)
STA 339+66 RIM= 1022.37 FL= 1012.37 (MIN.)
STA 339+68 RIM= 1022.15 FL= 1018.15 (MIN.)
STA 340+41 RIM= 1022.35 FL= 1012.35 (MIN.)
STA 340+43 RIM= 1022.17 FL= 1018.17 (MIN.)
STA 341+16 RIM= 1023.24 FL= 1013.24 (MIN.)
STA 341+18 RIM= 1023.07 FL= 1019.07 (MIN.)
STA 341+83 RIM= 1023.96 FL= 1013.96 (MIN.)
STA 341+81 RIM= 1023.76 FL= 1019.76 (MIN.)
STA 342+25 RIM= 1024.28 FL= 1014.28 (MIN.)
STA 342+16 RIM= 1024.09 FL= 1020.09 (MIN.)
STA 342+24 RIM= 1024.05 FL= 1014.05 (MIN.)
STA 342+14 RIM= 1023.84 FL= 1019.84 (MIN.)
STA 341+08 RIM= 1022.96 FL= 1018.96 (MIN.)
STA 341+10 RIM= 1023.20 FL= 1013.20 (MIN.)
STA 341+74 RIM= 1023.51 FL= 1019.51 (MIN.)
STA 341+79 RIM= 1023.73 FL= 1013.73 (MIN.)

338+00 | 339+00 | 340+00 | 341+00 | 342+00 | 303+00

5' SIDEWALK (FUTURE)
6" SUBDRAIN FL=1018.33
6" SUBDRAIN FL=1017.51
6" SUBDRAIN FL=1017.51
6" SUBDRAIN FL=1019.68
15.0' PANEL
NW BULL RUN COURT (7" PCC)
STA 339+05.00 (NW BULL RUN COURT)
STA 302+00.00 (NW CONCORD LANE)
302+00
CRITICAL CROSSING
BOTTOM OF WATER=1015.32
TOP OF SANITARY=1010.43
29' B-B 60' ROW
STREET LIGHT (TYP)
MAILBOX PAD
15.0' SANITARY SEWER EASEMENT
CRITICAL CROSSING
BOTTOM OF STORM=1014.40
TOP OF SANITARY=1009.96
CRITICAL CROSSING
BOTTOM OF STORM=1014.34
TOP OF SANITARY=1009.79
30' SETBACK
10' P.U.E.
10' OVERLAND FLOWAGE EASEMENT
15' SANITARY SEWER EASEMENT
NW CONCORD LANE (7" PCC)
PC 302+99.94
29' B-B 60' ROW
CRITICAL CROSSING
BOTTOM OF STORM=1016.02
TOP OF WATER=1014.52
(INSTALL GASKETED JOINTS ON STORM SEWER)
6" SUBDRAIN FL=1017.55
STORM SEWER EASEMENT
SW-203 SUBDRAIN CLEANOUT
STA 339+38
RIM= 1021.79
FL= 1017.79 (MIN.)
CRITICAL CROSSING
BOTTOM OF STORM=1016.26
TOP OF SANITARY=1010.74
15.0' SANITARY SEWER EASEMENT
20' OVERLAND FLOWAGE EASEMENT
10' P.U.E.
30' SETBACK
10.0' SNOW STORAGE EASEMENT
30.0' SANITARY SEWER EASEMENT

SCALE 0' 10' 20' 40'

SHEET INDEX



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WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

FILE: H:\2021\2101\16\DWG\DOTS\2101616-PNP-ASBUILT.DWG
LAST SAVED: 8/12/2022 3:39 PM
PLOTTED BY: MAX EVANS
COMMENT:
ENG:
TECH:

REFER TO SHEET 29 FOR WATERMAIN PLAN AND PROFILE.

LOT 1 | LOT 22 | LOT 15 | LOT 16

NW DOUGLAS PARKWAY (9" PCC)

NW BULL RUN COURT (7" PCC)

NW GEORGETOWN DRIVE (7" PCC)

120' FUTURE ROW | 60' ROW 26' B-B | 70.00' ROW | 37.00' B-B | 29' B-B | 60' ROW

STA 429+83.56 (NW DOUGLAS PARKWAY)
STA 52+23.00 (NW GEORGETOWN DRIVE)

STA 335+75.00 (NW BULL RUN COURT)
STA 54+45.00 (NW GEORGETOWN DRIVE)

Δ = 39°17'43"
L = 480.08'
R = 700.00'
CH = 470.73'
CHB = S19°41'27"E

52+00 | 53+00 | 54+00 | 55+00 | 56+00

430+00 | 429+00 | 336+00 | 335+00

15.00' PUE

20.00' STORM SEWER EASEMENT

15.0' P.U.E.

15.0' WATERMAIN EASEMENT

10.00' PUE

20.0' STORM SEWER EASEMENT

STORM SEWER EASEMENT

SANITARY SEWER EASEMENT

25.00' SANITARY SEWER EASEMENT

25.0' LANDSCAPE EASEMENT

22.0' OVERLAND FLOWAGE EASEMENT

OVERLAND FLOWAGE EASEMENT

FUTURE ROAD AND SCHOOL IMPROVEMENTS (BY OTHERS)

STREET LIGHT (TYP)

RELOCATED ROAD CLOSURE SIGNS (TYPE SI-182)

INSTALL 6 SY OF 4" P.C.C.

CRITICAL CROSSING
BOTTOM OF STORM=1015.88
TOP OF WATER=1014.38
(INSTALL GASKETED JOINTS ON STORM SEWER)

CRITICAL CROSSING
BOTTOM OF STORM=1017.69
TOP OF WATER=1016.19
(INSTALL GASKETED JOINTS ON STORM SEWER)

CRITICAL CROSSING
BOTTOM OF STORM=1019.15
TOP OF SANITARY=1013.40

CRITICAL CROSSING
BOTTOM OF WATER=1016.60
TOP OF SANITARY=1013.45

CRITICAL CROSSING
BOTTOM OF STORM=1014.35
TOP OF SANITARY=1013.50

CRITICAL CROSSING
BOTTOM OF STORM=1015.28 (VERIFY)
TOP OF SANITARY=1014.05

CRITICAL CROSSING
BOTTOM OF STORM=1017.38
TOP OF SANITARY=1012.56

CRITICAL CROSSING
BOTTOM OF STORM=1016.50
TOP OF WATER=1015.00
(INSTALL GASKETED JOINTS ON STORM SEWER)

CRITICAL CROSSING
BOTTOM OF WATER=1017.69
TOP OF SANITARY=1011.59

CRITICAL CROSSING
BOTTOM OF STORM=1017.25
TOP OF SANITARY=1012.00

CRITICAL CROSSING
BOTTOM OF STORM=1018.41
TOP OF SANITARY=1012.47

SW-203 SUBDRAIN CLEANOUT
STA 54+11
RIM= 1024.25
FL= 1020.25 (MIN.)

SW-203 SUBDRAIN CLEANOUT
STA 54+11
RIM= 1024.17
FL= 1020.17 (MIN.)

SW-203 SUBDRAIN CLEANOUT
STA 54+84
RIM= 1023.99
FL= 1019.99 (MIN.)

SW-203 SUBDRAIN CLEANOUT
STA 54+84
RIM= 1023.97
FL= 1019.97 (MIN.)

STA 55+37
RIM= 1024.36
FL= 1014.36 (MIN.)

STA 55+39
RIM= 1024.16
FL= 1020.16 (MIN.)

6" SUBDRAIN FL=1018.52

6" SUBDRAIN FL=1019.58

ST-13 | ST-14 | ST-15 | ST-16 | ST-17 | ST-33 | ST-34 | ST-35 | ST-10 | ST-11 | ST-12 | ST-18 | ST-19 | ST-20 | ST-21 | ST-22

L-14 | L-15 | L-16 | L-17 | L-18 | L-19 | L-20 | L-21 | L-22 | L-33 | L-34 | L-35 | P-13

S-11

P-11

STA 52+74.21, 49.43' R
15" RCP APRON W/ FOOTING AND APRON GUARD
FL=~~1022.50~~ 1020.20

STA 52+73.50, 18.50' R
SW-503 INTK
TC=~~1022.52~~ 1022.50
FL 15" (W)=~~1018.02~~ 1018.03
FL 15" (E)=~~1017.55~~ 1017.60
FL 15" (S)=~~1017.45~~ 1017.42

STA 52+73.50, 18.50' L
SW-501 INTK
TC=~~1022.11~~ 1022.24
FL 15" (E)=~~1017.04~~ 1017.87
FL 15" (W)=~~1017.74~~ 1017.78

STA 52+73.88, 48.62' L
15" RCP APRON W/ FOOTING AND APRON GUARD
FL=~~1018.00~~ 1018.09

STA 55+74.66, 14.50' R
SW-506 INTK
TC=~~1023.50~~ 1023.25
FL 15" (E)=~~1018.01~~ 1018.44
FL 24" (S)=~~1018.51~~ 1018.33
FL 24" (N)=~~1018.41~~ 1018.32

STA 55+74.66, 14.50' L
SW-505 INTK
TC=~~1023.50~~ 1023.31
FL 15" (W)=~~1018.00~~ 1018.96

STA 56+22.05, 56.41' R
18" RCP APRON W/ FOOTING AND APRON GUARD
FL=~~1019.11~~ 1019.04

STA 56+22.05, 21.50' R
SW-401 60" MH
RIM=~~1024.00~~ 1023.57
FL 18" (W)=~~1018.95~~ 1018.81
FL 24" (S)=~~1018.95~~ 1018.81
FL 24" (N)=~~1018.85~~ 1018.75

STA 56+62.57, 20.39' R
24" RCP APRON
FL=~~1019.15~~ 1019.22

PROPOSED GROUND | EXISTING GROUND

28 LF OF 15" RCP @ ~~6.00%~~ 7.75% (LENGTH SHOWN INCLUDES APRON)

33 LF OF 15" RCP @ ~~0.50%~~ 0.55%

30 LF OF 15" RCP @ ~~0.55%~~ 0.73% (LENGTH SHOWN INCLUDES APRON)

25 LF OF 15" RCP @ ~~1.00%~~ 2.08%

33 LF OF 18" RCP @ ~~0.50%~~ 0.70% (LENGTH SHOWN INCLUDES APRON)

STA 51+30.00, 35.47' R
SW-301 48" MH
RIM=~~1023.33~~ 1023.40
FL 8" (S)=~~1013.37~~ 1012.78

STA 52+73.50, 18.50' R
SW-503 INTK
RIM=~~1022.52~~ 1022.50
FL 15" (W)=~~1018.02~~ 1018.03
FL 15" (E)=~~1017.55~~ 1017.60
FL 15" (S)=~~1017.45~~ 1017.42

STA 54+65.79, 33.11' R
SW-401 72" MH
RIM=~~1023.60~~ 1023.77
FL 24" (S)=~~1017.52~~ 1016.52
FL 15" (W)=~~1018.57~~ 1018.36
FL 15" (N)=~~1016.51~~ 1016.52
FL 30" (E)=~~1016.41~~ 1016.47

STA 54+76.80, 42.22' R
SW-301 48" MH
RIM=~~1023.96~~ 1023.97
FL 8" (N)=~~1011.66~~ 1011.16
FL 8" (W)=~~1011.51~~ 1011.15
FL 8" (E)=~~1011.41~~ 1011.06

STA 55+74.66, 14.50' R
SW-506 INTK
TC=~~1023.50~~ 1023.25
FL 15" (E)=~~1018.01~~ 1018.44
FL 24" (S)=~~1018.51~~ 1018.33
FL 24" (N)=~~1018.41~~ 1018.32

STA 56+22.05, 21.50' R
SW-401 60" MH
RIM=~~1024.00~~ 1023.57
FL 18" (W)=~~1018.95~~ 1018.81
FL 24" (S)=~~1018.95~~ 1018.81
FL 24" (N)=~~1018.85~~ 1018.75

HP STA = 53+83.27
HP ELEV = 1024.316
VPI STA = 53+50
VPI ELEV = 1024.57
VC = 100'
K=27.76

VPC STA = 53+00
VPC ELEV = 1023.07

VPT STA = 54+00
VPT ELEV = 1024.27

VPC STA = 55+26
VPC ELEV = 1023.51

LP STA = 55+74.45
LP ELEV = 1023.36
VPI STA = 55+76
VPI ELEV = 1023.20
VC = 100'
K=80.40

VPT STA = 56+26
VPT ELEV = 1023.53

3.00% | 3.50% | 1.50% | 3.00% | -0.60%

PROPOSED PROFILE GRADE (BY OTHERS)

EXISTING GROUND

PROFILE GRADE

FUTURE PROFILE GRADE

END PAVEMENT
TIE-IN STA=55+81.95
TIE-IN ELEV=1023.36

L-14 189 LF OF 15" RCP @ ~~0.50%~~ 0.48%

L-18 105 LF OF 24" RCP @ ~~0.85%~~ 1.71%

L-20 48 LF OF 24" RCP @ ~~0.70%~~ 0.90%

L-22 40 LF OF 24" RCP @ ~~0.50%~~ 1.03% (LENGTH SHOWN INCLUDES APRON)

P-13 343 LF OF 8" PVC @ ~~0.50%~~ 0.47%

PROVIDE ADDITIONAL PIPE SUPPORT PER SUDAS SECTION 3010.901

1035 | 1030 | 1025 | 1020 | 1015 | 1010 | 1005

1022.93 | 1022.00 | 1016.43 1021.62 | 1019.15 1023.07 | 1020.10 1024.12 | 1020.85 1024.27 | 1021.09 1023.96 | 1021.09 1023.66 | 1021.62 1023.40 | 1022.28 1023.40 | 1023.05 1023.68 | 1024.64 1024.00

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

ENGINEER: EKO | EI: JWM TECH: BDH

CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

FILE: H:\2021\2101016\DWG\PS\2101016-PRP-ASBUILT.DWG
PLOTTED: 4/12/2022 3:59 PM
PLOTTED BY: MAX EVANS
COMMENT:
ENG:
TECH:

LOT 6

LOT 5

LOT 4

LOT 3

LOT 13

LOT 14

340+00

339+00

301+00

302+00

303+00

304+00

305+00

30' SETBACK

15' SIDEWALK (FUTURE)

60' ROW
29' B-B

NW BULL RUN COURT (7" PCC)

NW CONCORD LANE (7" PCC)

STORM SEWER EASEMENT

STREET LIGHT (TYP)

STA 339+05.00 (NW BULL RUN COURT)
STA 302+00.00 (NW CONCORD LANE)

REFER TO SHEET 30 FOR WATERMAIN PLAN AND PROFILE.

Δ = 39°17'43"
L = 253.76'
R = 370.00'
CH = 248.81'
CHB = S19°41'27"E

CRITICAL CROSSING
BOTTOM OF STORM=1016.02
TOP OF WATER=1014.52
(INSTALL GASKETED JOINTS ON STORM SEWER)

CRITICAL CROSSING
BOTTOM OF STORM=1014.34
TOP OF SANITARY=1009.79

CRITICAL CROSSING
BOTTOM OF STORM=1014.40
TOP OF SANITARY=1009.96

STA 302+64
RIM= 1022.33
FL= 1012.33 (MIN.)

STA 302+66
RIM= 1022.16
FL= 1018.16 (MIN.)

STA 302+93
RIM= 1022.60
FL= 1018.60 (MIN.)

STA 302+95
RIM= 1022.83
FL= 1012.83 (MIN.)

STA 303+53
RIM= 1020.93
FL= 1010.93 (MIN.)

STA 303+79
RIM= 1024.03
FL= 1014.03 (MIN.)

6" SUBDRAIN
CAP END
STA 303+39
FL= 1018.89 (MIN.)

6" SUBDRAIN
FL=1017.55

5' SIDEWALK (FUTURE)

PC 304+99.94

15.0' WATERMAIN EASEMENT

RELOCATED ROAD CLOSURE SIGNS (TYPE SI-182)

INSTALL 20 TONS OF CLASS 'E' RIPRAP

20.0' STORM SEWER EASEMENT

PT 304+78.28

STA 304+18
RIM= 1024.07
FL= 1014.07 (MIN.)

STA 304+75
RIM= 1012.97
FL= 1002.97 (MIN.)

PT 305+33.70

STA 304+84
RIM= 1023.47
FL= 1013.47 (MIN.)

40.0' SANITARY SEWER EASEMENT

STA 305+53
RIM= 1022.78
FL= 1012.78 (MIN.)

STA 306+22
RIM= 1022.09
FL= 1012.09 (MIN.)

SHEET INDEX

SCALE
0' 10' 20' 40'

ST-3 STA 302+47.00, 14.50' R
SW-506 MOD. INTK
TC=~~1021.55~~ 1021.39
FL 15" (E)=~~1015.98~~ 1015.92
FL 30" (NW)=~~1014.56~~ 1014.63
FL 30" (S)=~~1014.46~~ 1014.53

S-9 STA 302+31.00, 31.00' R
SW-301 48" MH
RIM=~~1021.87~~ 1021.77
FL 8" (E)=~~1009.38~~ 1009.06
FL 8" (W)=~~1009.38~~ 1009.02
FL 8" (S)=~~1009.13~~ 1008.86

VPC STA = 302+34
VPC ELEV = 1021.38

VPT STA = 302+74
VPT ELEV = 1021.55

2.00% -2.00% -0.80%

ST-2 STA 303+32.79, 18.00' R
SW-401 60" MH
RIM=~~1022.90~~ 1023.12
FL 30" (N)=~~1013.04~~ 1013.88
FL 30" (S)=~~1013.74~~ 1013.87

LP STA = 302+46.91
LP ELEV = 1021.33
VPI STA = 302+54
VPI ELEV = 1021.22
VC = 40'
K=16.14

PROFILE GRADE

1.68%

END PAVEMENT
TIE-IN STA=303+32.79
TIE-IN ELEV=1022.54
TIE-IN STA = 303+46
TIE-IN ELEV = 1022.86

VPC STA = 303+06
VPC ELEV = 1022.66

ST-1 STA 303+63.95, 19.19' R
30" RCP APRON W/ APRON GUARD
FL=~~1013.50~~ 1013.71

S-8 STA 303+87.85, 31.00' R
SW-301 48" MH
RIM=~~1023.25~~ 1023.41
FL 8" (N)=~~1008.17~~ 1008.23
FL 8" (SE)=~~1008.07~~ 1007.93

HP STA = 304+02.62
HP ELEV = 1023.186
VPI STA = 303+90
VPI ELEV = 1023.50
VC = 100'
K=37.32

VPT STA = 304+40
VPT ELEV = 1023.00

FUTURE PROFILE GRADE

-1.00%

S-7 STA 305+17.08, 31.00' R
SW-301 48" MH
RIM=~~1022.96~~ 1023.06
FL 8" (NW)=~~1007.26~~ 1007.06
FL 8" (SE)=~~1007.16~~ 1006.99

EXISTING GROUND

L-3 82 LF OF 30" RCP @ ~~0.75%~~ 0.79%

L-2 31 LF OF 30" RCP @ ~~0.75%~~ 0.52%
(LENGTH SHOWN INCLUDES APRON)

P-9 160 LF OF 8" PVC @ ~~0.60%~~ 0.40%

P-8 135 LF OF 8" PVC @ ~~0.60%~~ 0.65%

P-7 218 LF OF 8" PVC @ ~~0.60%~~ 0.59%

1016.96	1017.09	1017.78 1021.82	1018.94 1021.33	1020.91 1021.99	1023.59 1022.82	1026.22 1023.19	1028.18 1022.90	1028.65 1022.40	1028.52 1021.90	1028.41 1021.40	1028.52 1020.90		

301+00 302+00 303+00 304+00 305+00 306+00

1030 1025 1020 1015 1010 1005 1000

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CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

WAUKEE, IOWA

16/38

2101.016

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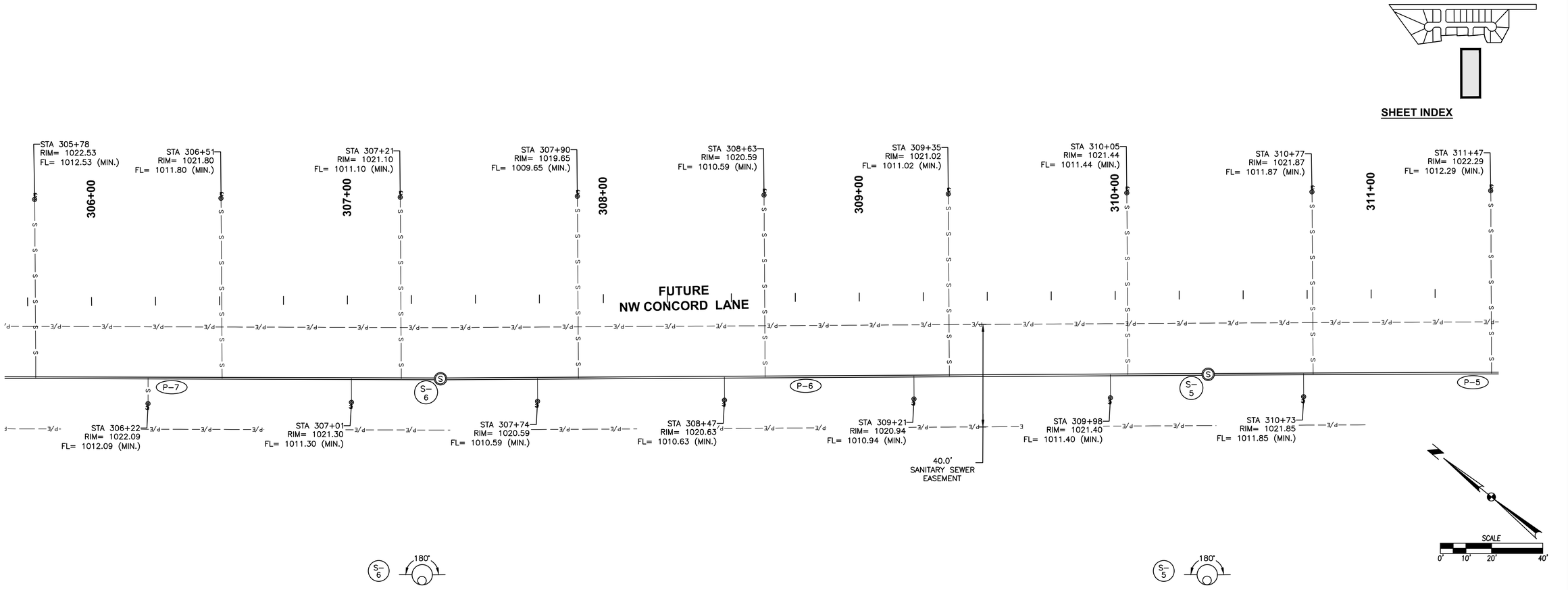

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CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER
PLAN AND PROFILE ASBUILT

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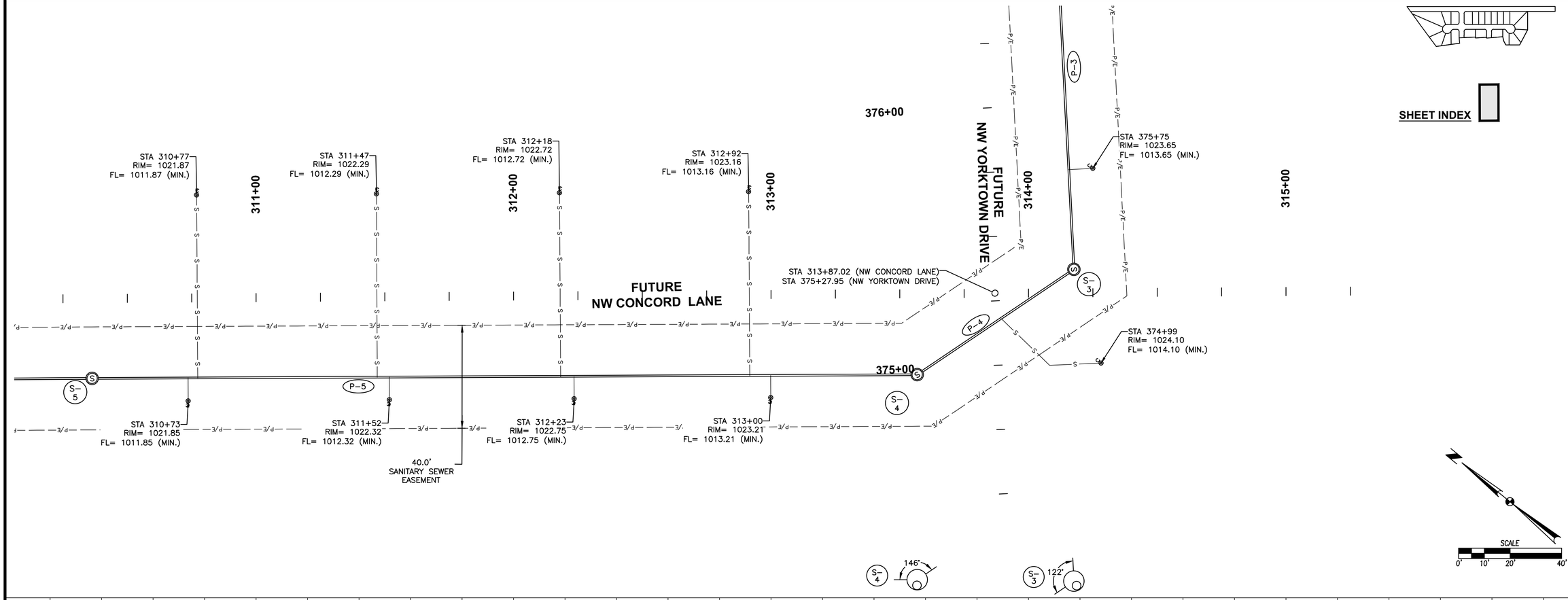

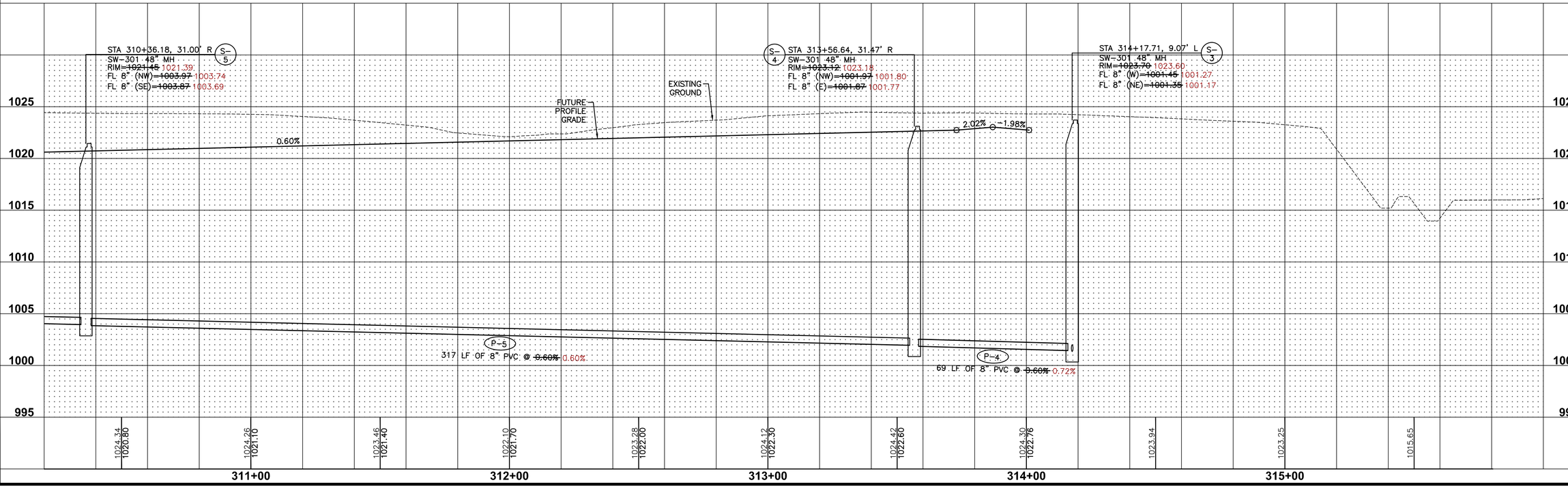

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CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER
PLAN AND PROFILE ASBUILT

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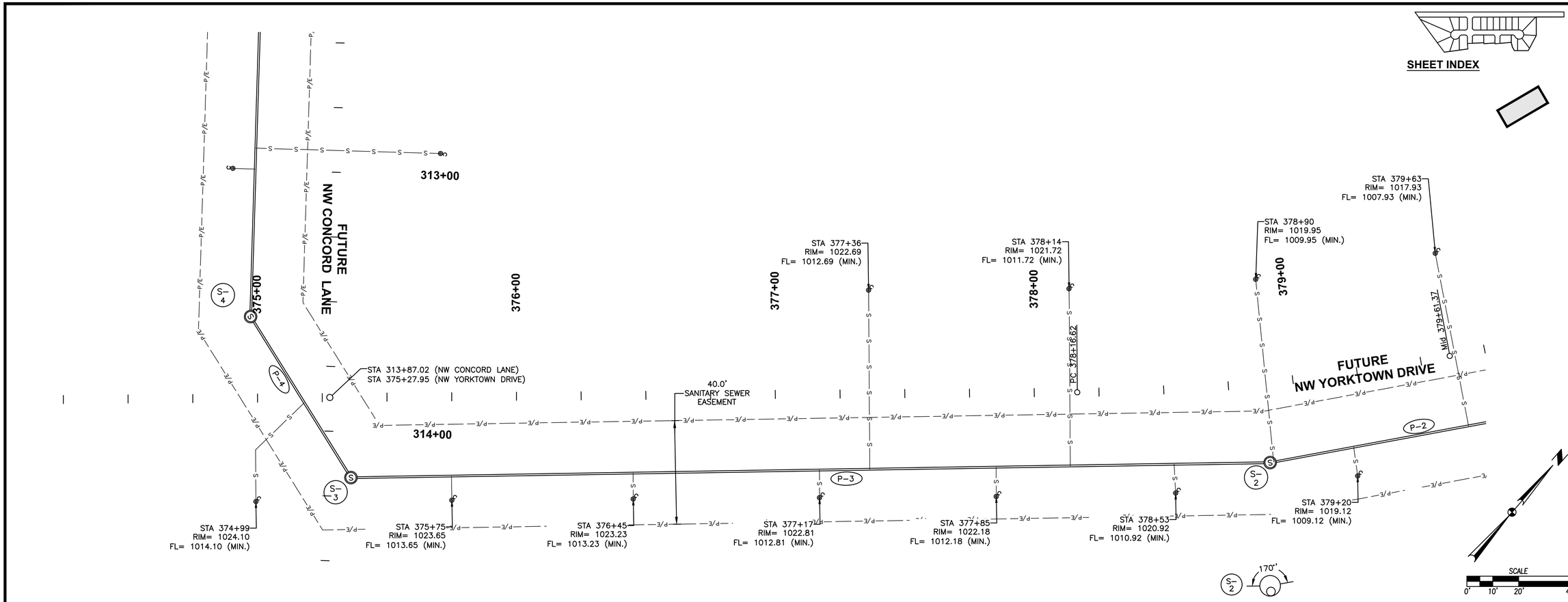

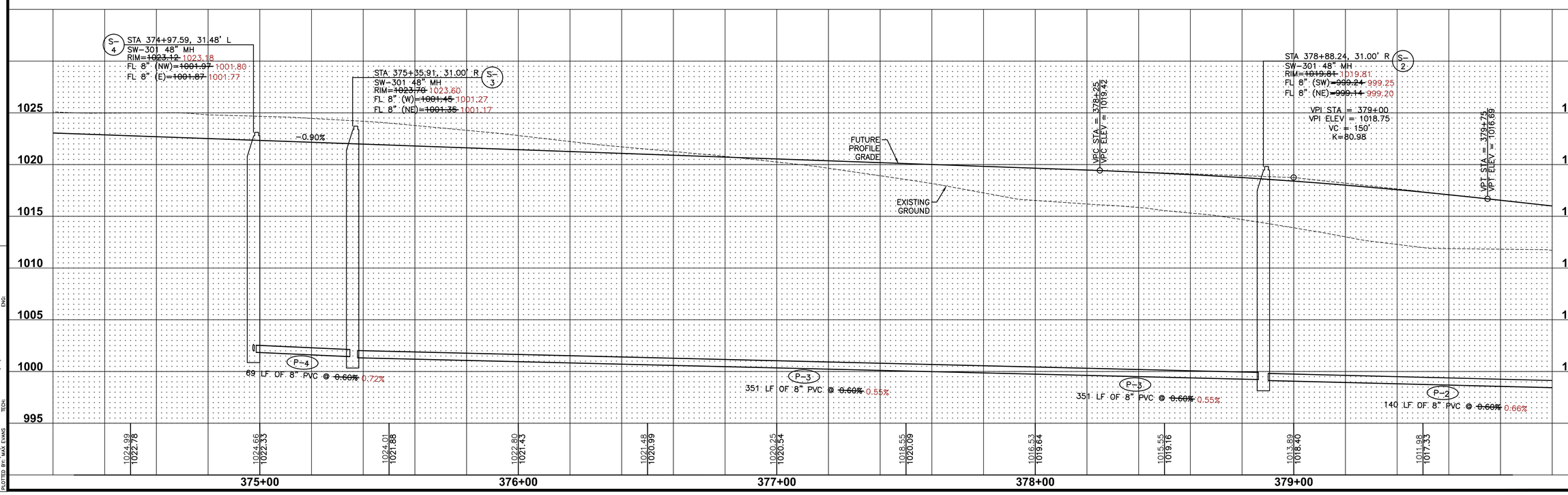

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WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

19/38

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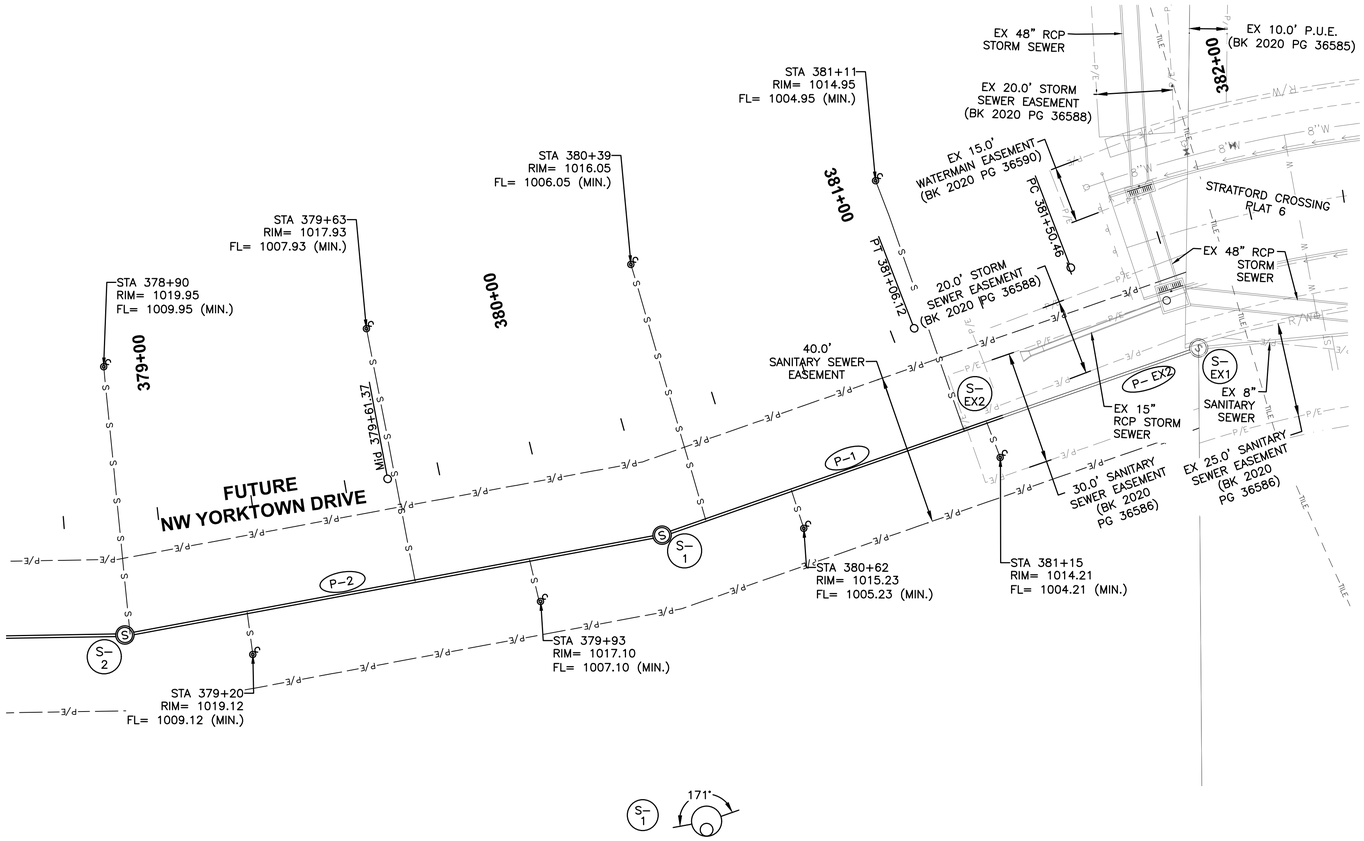

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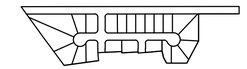

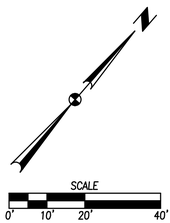

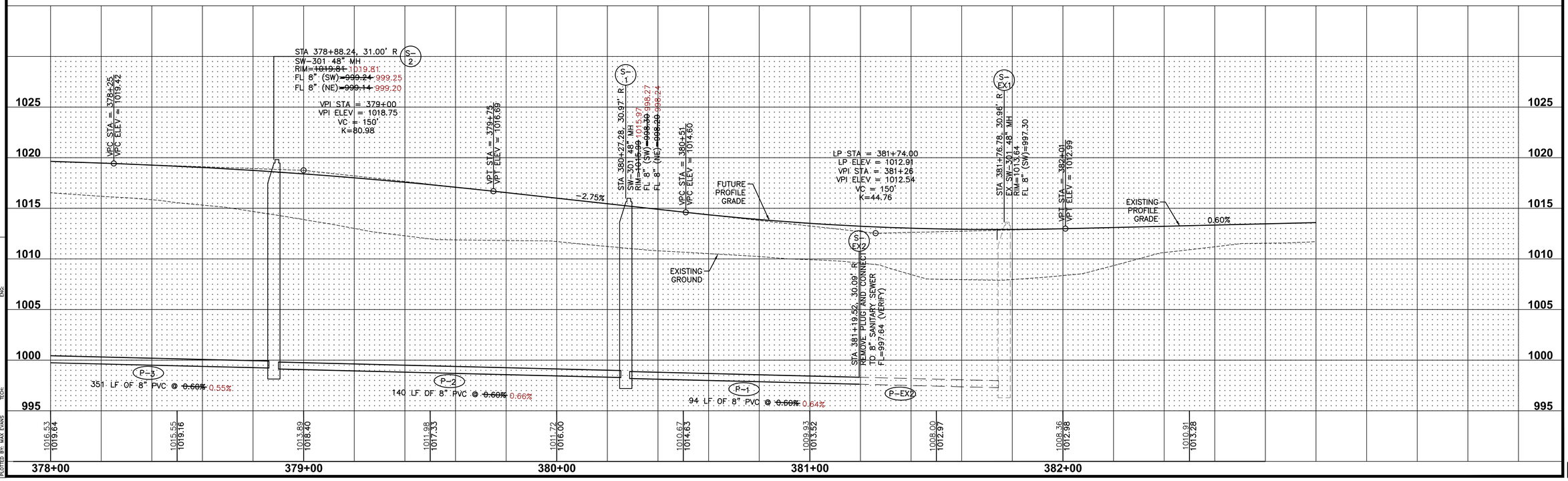

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CIVIL DESIGN ADVANTAGE

WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER
PLAN AND PROFILE ASBUILT

20/38

2101.016

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PLOTTED: 8/12/2022 3:41 PM
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COMMENT:
ENG:
TECH:

REFER TO SHEET 31 FOR WATERMAIN PLAN AND PROFILE.

423+00 424+00 425+00 426+00 427+00

RACCOON RIVER VALLEY TRAIL

25' TEMPORARY CONSTRUCTION EASEMENT

120' FUTURE ROW

60' ROW

INSTALL 35 TONS OF CLASS E RIP RAP

CRITICAL CROSSING
BOTTOM OF STORM=1017.51
TOP OF WATER=1016.01
INSTALL GASKETS JOINTS ON STORM SEWER

35' OVERLAND FLOWAGE EASEMENT

20.0' STORM SEWER EASEMENT

EXISTING STORM 30" APRON (PROTECT) FL=1018.76 (UAC)

30' TEMPORARY CONSTRUCTION EASEMENT

25.0' LANDSCAPE EASEMENT

OVERLAND FLOWAGE EASEMENT

15.00' PUE

10.00' PUE

OVERLAND FLOWAGE EASEMENT

LOT 20

5 RELOCATED ROAD CLOSURE SIGNS (TYPE SI-182)

SW-203 STORM CLEANOUT
STA 427+63
RIM= 1024.52
FL= 1020.52 (MIN.)

STA 427+63.36
BEGIN PAVEMENT

NW DOUGLAS PARKWAY (9" PCC)

STA 427+43.36, 41.97' R
INSTALL 45° BEND

SHEET INDEX

STA 423+89.40, 97.33' R
36" RCP APRON W/
FOOTING AND APRON GUARD
FL=~~1018.27~~ 1016.24

STA 424+15.69, 87.00' R
SW-513 5'X5' INTK W/
2 - 9"X36" OPENINGS
(E.S)=~~1021.72~~ 1021.63
RIM=~~1022.07~~ 1022.88
FL 36" (SW)=~~1018.14~~ 1018.06
FL 15" (SE)=~~1018.14~~ 1018.16
FL 36" (N)=~~1018.04~~ 1018.03

STA 424+15.62, 41.93' R
SW-401 96" MH
RIM=~~1027.50~~ 1026.90
FL 36" (S)=~~1017.79~~ 1017.76
FL 36" (NE)=~~1017.69~~ 1017.73

STA 424+42.52, 13.00' R
36" RCP APRON
W/ APRON GUARD W/
FOOTING AND APRON GUARD
FL=~~1017.46~~ 1017.56

PROPOSED GROUND

EXISTING GROUND

L-40
27 LF OF 36" RCP @ ~~0.51%~~ 0.67%
(LENGTH SHOWN INCLUDES APRON)

L-39
39 LF OF 36" RCP @ ~~0.65%~~ 0.69%

L-38
36 LF OF 36" RCP @ ~~0.65%~~ 0.47%
(LENGTH SHOWN INCLUDES APRON)

L-36
34 LF OF 60" RCP @ ~~0.55%~~ 0.57%
(LENGTH SHOWN INCLUDES APRON)

L-36A
181 LF OF 60" RCP @ ~~0.55%~~ 0.57%

SCALE 0' 10' 20' 40'

HP STA = 422+67.50
HP ELEV = 1028.162
VPI STA = 422+80
VPI ELEV = 1028.35
VC = 100'
K=62.50

FUTURE PROFILE GRADE

-1.00%

VPC STA = 423+38
VPC ELEV = 1027.78

LP STA = 424+15.62
LP ELEV = 1027.38
VPI STA = 424+00
VPI ELEV = 1027.15
VC = 125'
K=78.12

VPT STA = 424+62
VPT ELEV = 1027.52

-0.60%

VPC STA = 424+77
VPC ELEV = 1027.58

HP STA = 425+11.03
HP ELEV = 1027.701
VPI STA = 425+60
VPI ELEV = 1028.11
VC = 175'
K=64.22

FUTURE PROFILE GRADE

-2.13%

EXISTING GROUND

VPC STA = 427+00
VPC ELEV = 1025.13

STA 427+19.40, 18.00' R
60" RCP APRON
FL=~~1016.17~~ 1015.48

STA 427+43.36, 41.97' R
45° BEND
FL=~~1016.17~~ 1015.29

VPI STA = 427+50
VPI ELEV = 1024.07
VC = 100'
K=88.88

PROFILE GRADE

VPT STA = 428+00
VPT ELEV = 1023.57

1035 1030 1025 1020 1015 1010 1005

1025.00 1028.14 | 1023.52 1028.08 | 1021.76 1027.66 | 1021.11 1027.40 | 1020.51 1027.46 | 1020.44 1027.69 | 1020.98 1027.58 | 1021.46 1027.08 | 1022.53 1026.20 | 1023.02 1025.13 | 1021.65 1024.21 | 1020.01 1023.57

423+00 424+00 425+00 426+00 427+00 428+00

REVISIONS	DATE
ASBUILT SUBMITTAL	08/12/2022
FINAL SUBMITTAL	06/08/2021
FOURTH SUBMITTAL	05/25/2021
THIRD SUBMITTAL	04/06/2021
SECOND SUBMITTAL	03/16/2021
FIRST SUBMITTAL	02/03/2021

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

ENGINEER: EKO | EI: JWM TECH: BDH

CIVIL DESIGN ADVANTAGE

WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

21/38

2101.016

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PLOT DATE: 8/12/2022 3:41 PM
PLOTTED BY: MAX EVANS
COMMENT:
ENG:
TECH:

REFER TO SHEET 32 FOR WATERMAIN PLAN AND PROFILE.

5 RELOCATED ROAD CLOSURE SIGNS (TYPE SI-182)

SW-203 STORM CLEANOUT
STA 427+63
RIM= 1024.52
FL= 1020.52 (MIN.)

STA 427+63.36
BEGIN PAVEMENT

120' FUTURE ROW

25.00' SANITARY SEWER EASEMENT

FUTURE ROAD AND SCHOOL IMPROVEMENTS (BY OTHERS)

STA 429+83.56 (NW DOUGLAS PARKWAY)
STA 52+23.00 (NW GEORGETOWN DRIVE)

20' TEMPORARY CONSTRUCTION EASEMENT

STREET LIGHT (TYP)

NW DOUGLAS PARKWAY (9" PCC)

26' B-B

60' ROW

CRITICAL CROSSING
BOTTOM OF STORM=1014.35
TOP OF SANITARY=1013.50

CRITICAL CROSSING
BOTTOM OF STORM=1013.63
TOP OF WATER=1012.13
(INSTALL GASKETED JOINTS ON STORM SEWER)

CRITICAL CROSSING
BOTTOM OF WATER=1016.60
TOP OF SANITARY=1013.45

22.0' OVERLAND FLOWAGE EASEMENT

25.0' LANDSCAPE EASEMENT

15.0' P.U.E.

CRITICAL CROSSING
BOTTOM OF STORM=1019.15
TOP OF SANITARY=1013.40

NW GEORGETOWN DRIVE (7" PCC)

37' B-B

60' ROW

CRITICAL CROSSING
BOTTOM OF STORM=1017.69
TOP OF WATER=1016.19
(INSTALL GASKETED JOINTS ON STORM SEWER)

15.0' PUE

OVERLAND FLOWAGE EASEMENT

25.0' LANDSCAPE EASEMENT

LOT 22 | **LOT 1** | **LOT 2**

ST-33 STA 429+27.56, 41.99' R
SW-401 96" MH
RIM=~~1022.41~~ 1022.60
FL 60" (W)=~~1015.00~~ 1014.31
FL 24" (N)=~~1015.00~~ 1014.91
FL 60" (E)=~~1014.90~~ 1014.25

ST-34 STA 429+27.56, 36.00' R
SW-501 INTK
TC=~~1022.17~~ 1022.05
FL 24" (N)=~~1015.12~~ 1015.05
FL 24" (S)=~~1015.02~~ 1015.04

ST-30 STA 431+63.86, 42.00' R
SW-401 96" MH
RIM=~~1020.05~~ 1020.33
FL 60" (W)=~~1012.58~~ 1011.97
FL 15" (N)=~~1015.26~~ 1015.38
FL 60" (E)=~~1011.84~~ 1011.96

ST-31 STA 431+63.86, 36.00' R
SW-501 INTK
TC=~~1019.81~~ 1019.76
FL 15" (N)=~~1015.39~~ 1015.46
FL 15" (S)=~~1015.29~~ 1015.44

PROPOSED GROUND

EXISTING GROUND

ST-35 24" PLUG FL=1015.39

L-35 36 LF OF 24" RCP @ ~~0.75%~~ 0.94%

L-34 2 LF OF 24" RCP @ ~~0.75%~~ 6.50%

ST-33 15" PLUG FL=1015.73

L-32 34 LF OF 15" RCP @ ~~1.00%~~ 0.79%

L-31 3 LF OF 15" RCP @ ~~1.00%~~ 2.00%

ST-33 90° 90°

ST-30 90° 90°

SCALE 0' 10' 20' 40'

VPI STA = 427+50
VPI ELEV = 1024.07
VC = 100'
K=88.88

VPT STA = 428+00
VPT ELEV = 1023.57

PROFILE GRADE

STA 429+27.56, 41.99' R
SW-401 96" MH
RIM=~~1022.41~~ 1022.60
FL 60" (W)=~~1015.00~~ 1014.31
FL 24" (N)=~~1015.00~~ 1014.91
FL 60" (E)=~~1014.90~~ 1014.25

EXISTING GROUND

-1.00%

STA 431+63.86, 42.00' R
SW-401 96" MH
RIM=~~1020.05~~ 1020.33
FL 60" (W)=~~1012.58~~ 1011.97
FL 15" (N)=~~1015.26~~ 1015.38
FL 60" (E)=~~1011.84~~ 1011.96

VPC STA = 433+25
VPC ELEV = 1015.32

L-36A 181 LF OF 60" RCP @ ~~0.55%~~ 0.57%

L-36A 181 LF OF 60" RCP @ ~~0.55%~~ 0.57%

CRITICAL CROSSING
BOTTOM OF STORM=1014.35
TOP OF SANITARY=1013.50

PROVIDE ADDITIONAL PIPE SUPPORT PER SUDAS SECTION 3010.901

L-33 232 LF OF 60" RCP @ ~~1.00%~~ 0.98%

CRITICAL CROSSING
BOTTOM OF STORM=1013.63
TOP OF WATER=1012.13
(INSTALL GASKETED JOINTS ON STORM SEWER)

L-30 230 LF OF 60" RCP @ ~~0.70%~~ 0.71%

1035 1030 1025 1020 1015 1010 1005

1020.01 1023.57 | 1019.04 1023.07 | 1018.09 1022.57 | 1022.01 1022.07 | 1022.00 1021.57 | 1017.91 1021.07 | 1017.77 1020.57 | 1017.27 1020.07 | 1016.96 1019.57 | 1017.16 1019.07 | 1016.72 1018.57

428+00 | 429+00 | 430+00 | 431+00 | 432+00 | 433+00

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CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

WAUKEE, IOWA

FILE: H:\2021\2101016\DWG\CD'S\2101016-PNP-ASBUILT.DWG
PLOT DATE: 8/12/2022 3:42 PM
PLOTTED BY: MAX EVANS
COMMENT: ENG

REFER TO SHEET 25 FOR L-43 AND L-44 PLAN AND PROFILE.

REFER TO SHEET 33 FOR WATERMAIN PLAN AND PROFILE.

FUT. R/W

433+00 434+00 435+00 436+00 437+00 438+00

TIE SUBDRAIN INTO STORM SEWER FL=1012.63

ST-29

STREET LIGHT (TYP)

10' TEMPORARY CONSTRUCTION EASEMENT

SW-203 STORM CLEANOUT STA 436+03 RIM= 1019.73 FL= 1015.73 (MIN.)

SW-203 STORM CLEANOUT STA 436+05 RIM= 1019.73 FL= 1015.73 (MIN.)

120' FUTURE ROW

L-29

NW DOUGLAS PARKWAY
(9" PCC)

26' B-B

60' ROW

L-28

ST-28

ST

BP 300+00.00

300+00

L-30

ST-27

L-27

ST-24

L-25

CRITI
BOTT
TOP
(INST
ON S

R/W

3/d

25.0' LANDSCAPE BUFFER EASEMENT

20.0' OVERLAND FLOWAGE EASEMENT

ST-43

L-43

ST-42

ST-41

L-42

OVERLAND FLOWAGE EASEMENT

15.0' PRIVATE STORM SEWER EASEMENT

15.0' P.U.E.

10.0' P.U.E.

LOT 5 LOT 6 LOT 7 LOT 8 LOT 9

P/E

TILE

ST-27 STA 434+00.10, 42.00' R
SW-401 96" MH
RIM=~~1018.06~~ 1018.32
FL 60" (W)=~~1010.23~~ 1010.32
FL 18" (N)=~~1011.50~~ 1011.59
FL 60" (E)=~~1010.13~~ 1010.22

ST-28 STA 434+00.10, 36.00' R
SW-505 INTK
TC=~~1017.82~~ 1017.90
FL 18" (N)=~~1011.63~~ 1011.67
FL 18" (S)=~~1011.53~~ 1011.62

PROPOSED GROUND

ST-30
18" PLUG
FL=1011.97

EXISTING GROUND

L-29
34 LF OF 18" RCP @ ~~1.00%~~ 0.88%

L-28
3 LF OF 18" RCP @ ~~1.00%~~ 1.00%

90° 90°

ST-27

ST-24 101° 79°

SCALE 0 10' 20' 40'

SHEET INDEX

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GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

EI: JWM TECH: BDH

ENGINEER: EKO

CIVIL DESIGN ADVANTAGE

WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

1030 1025 1020 1015 1010 1005 1000

VPC STA = 433+25
VPC ELEV = 1018.32

LP STA = 434+00.16
LP ELEV = 1017.95
VPI STA = 434+00
VPI ELEV = 1017.57
VC = 150'
K=75.16

ST-27 STA 434+00.10, 42.00' R
SW-401 96" MH
RIM=~~1018.06~~ 1018.32
FL 60" (W)=~~1010.23~~ 1010.32
FL 18" (N)=~~1011.50~~ 1011.59
FL 60" (E)=~~1010.13~~ 1010.22

VPT STA = 434+75
VPT ELEV = 1018.32

1.00%

VPC STA = 435+26
VPC ELEV = 1018.82

HP STA = 436+03.50
HP ELEV = 1019.210
VPI STA = 435+88
VPI ELEV = 1019.44
VC = 125'
K=78.33

PROFILE GRADE

EXISTING GROUND

ST-24 STA 438+24.69, 42.00' R
SW-401 96" MH
RIM=~~1018.14~~ 1018.29
FL 15" (E)=~~1011.16~~ 1011.19
FL 60" (W)=~~1007.10~~ 1007.12
FL 60" (SE)=~~1007.06~~ 1007.09

L-30
230 LF OF 60" RCP @ ~~0.70%~~ 0.71%

L-27
418 LF OF 60" RCP @ ~~0.71%~~ 0.74%

L-25
84 LF OF 15" RCP @ ~~1.00%~~ 0.57%

1016.72 1018.57 | 1015.93 1018.11 | 1015.58 1017.95 | 1016.14 1018.11 | 1016.55 1018.57 | 1016.65 1019.03 | 1016.81 1019.21 | 1017.01 1019.07 | 1017.26 1018.77 | 1017.22 1018.47 | 1018.77 1018.17 | 1018.47 1017.87

433+00 434+00 435+00 436+00 437+00 438+00

COMMENT: ENG

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PLT DATE: 6/7/2022 3:56 PM
PLOTTED BY: MAX EVANS

REFER TO SHEET 25 FOR L-43 AND L-44 PLAN AND PROFILE.

REFER TO SHEET 34 FOR WATERMAIN PLAN AND PROFILE.

FUT. R/W

438+00 | 439+00 | 440+00 | 441+00 | 442+00

EX. OVERLAND FLOWAGE EASEMENT (BK 2020 36604)

END 10:1 TAPER STA 441+10.36, 0.50' RT FG= 16.59

BEGIN 10:1 TAPER STA 440+15.31, 10.00' RT FG= 16.88

STREET LIGHT (TYP)

120' FUTURE ROW

10.00' TEMPORARY CONSTRUCTION EASEMENT

EX. 20.00' STORM SEWER EASEMENT (PG 2020 BK 36605)

EX 30.00' SANITARY SEWER EASEMENT (BK 2020 PG 36586)

PC 442+91.87

Mid 443+21.82

SUBDRAIN FL=1010.28

STA 441+10.36 END PAVEMENT

ST-26

L-26

ST-25

26' B-B

60' ROW

NW DOUGLAS PARKWAY
(9" PCC)

REMOVE AND RELOCATE 5 ROAD CLOSURE SIGNS (TYPE SI-182)

EX 30" RCP STORM SEWER

(UAC)

EXISTING STORM SEWER

EX 8" SANITARY SEWER

SUBDRAIN FL=1013.36

CONNECT TO EX. SUBDRAIN

EX 36" RCP STORM SEWER

EX 15.0' PUE (BK 2020 PG 36602)

EX 25.0' LANDSCAPE EASEMENT (BK 2020 PG 36608)

L-27

ST-24

L-25

CRITICAL CROSSING
BOTTOM OF STORM=1006.48
TOP OF WATER=1004.98
(INSTALL GASKETED JOINTS ON STORM SEWER)

25.0' LANDSCAPE AND OVERLAND FLOWAGE EASEMENT

ST-42

L-42

20.0' STORM SEWER EASEMENT

EX. ELECTRIC EASEMENT BK 2020 PG 36609

10.0' PUE (BK 2020 PG 36602)

EX. 20.00' STORM SEWER EASEMENT (PG 2020 BK 36605)

EX 15.00' SANITARY SEWER EASEMENT (BK 2020

20.0' STORM SEWER EASEMENT

10.0' P.U.E.

ST-41

ST-23

ST-24

120'

63'

ST-25 STA 439+14.03, 36.00' R
SW-503 INTK
TC=~~1017.36~~ 1017.23
FL 15" (N)=~~1012.10~~ 1011.85
FL 15" (W)=~~1012.00~~ 1011.67

EXISTING GROUND

PROPOSED GROUND

ST-27
15" PLUG
FL=1012.44

L-26
34 LF OF 15" RCP @ ~~1.00%~~ 1.74%

ST-24 STA 438+24.69, 42.00' R
SW-401 96" MH
RIM=~~1018.14~~ 1018.29
FL 15" (E)=~~1011.16~~ 1011.19
FL 60" (W)=~~1007.16~~ 1007.12
FL 60" (SE)=~~1007.06~~ 1007.09

PROPOSED GROUND

ST-23 STA 438+67.44, 116.05' R
60" RCP APRON W/ FOOTING AND APRON GUARD
FL=~~1006.40~~ 1006.45

EXISTING GROUND

CRITICAL CROSSING
BOTTOM OF STORM=1006.48
TOP OF WATER=1004.98
(INSTALL GASKETED JOINTS ON STORM SEWER)

L-24
82 LF OF 60" RCP @ ~~0.80%~~ 0.78%
(LENGTH SHOWN INCLUDES APRON)

NORMAL POOL ELEVATION =1006.40

EXISTING GROUND

1030 | 1025 | 1020 | 1015 | 1010 | 1005 | 1000

ST-24 STA 438+24.69, 42.00' R
SW-401 96" MH
RIM=~~1018.14~~ 1018.29
FL 15" (E)=~~1011.16~~ 1011.19
FL 60" (W)=~~1007.16~~ 1007.12
FL 60" (SE)=~~1007.06~~ 1007.09

ST-25 STA 439+14.03, 36.00' R
SW-503 INTK
TC=~~1017.36~~ 1017.23
FL 15" (N)=~~1012.10~~ 1011.85
FL 15" (W)=~~1012.00~~ 1011.67

PROFILE GRADE

EXISTING GROUND

~0.60%

VPC STA = 440+75
VPC ELEV = 1018.52

LP STA = 441+17.86
LP ELEV = 1016.39
VPI STA = 441+50
VPI ELEV = 1016.07
VC = 150'
K=71.43

EXISTING PROFILE GRADE

1.50%

VPT STA = 442+25
VPT ELEV = 1017.20

L-27
418 LF OF 60" RCP @ ~~0.71%~~ 0.74%

L-25
84 LF OF 15" RCP @ ~~1.00%~~ 0.57%

1018.77 1018.17 | 1018.47 1017.87 | 1018.17 1017.57 | 1017.87 1017.27 | 1017.57 1016.97 | 1017.27 1016.67 | 1017.01 1016.42 | 1017.05 1016.47 | 1017.41 1016.87 | 1018.06 1017.57 | 1018.76 1018.32

438+00 | 439+00 | 440+00 | 441+00 | 442+00 | 443+00

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SCALE 0' 10' 20' 40'

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ENGINEER: EKO | EI: JWM TECH: BDH

CIVIL DESIGN ADVANTAGE

WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

2101.016

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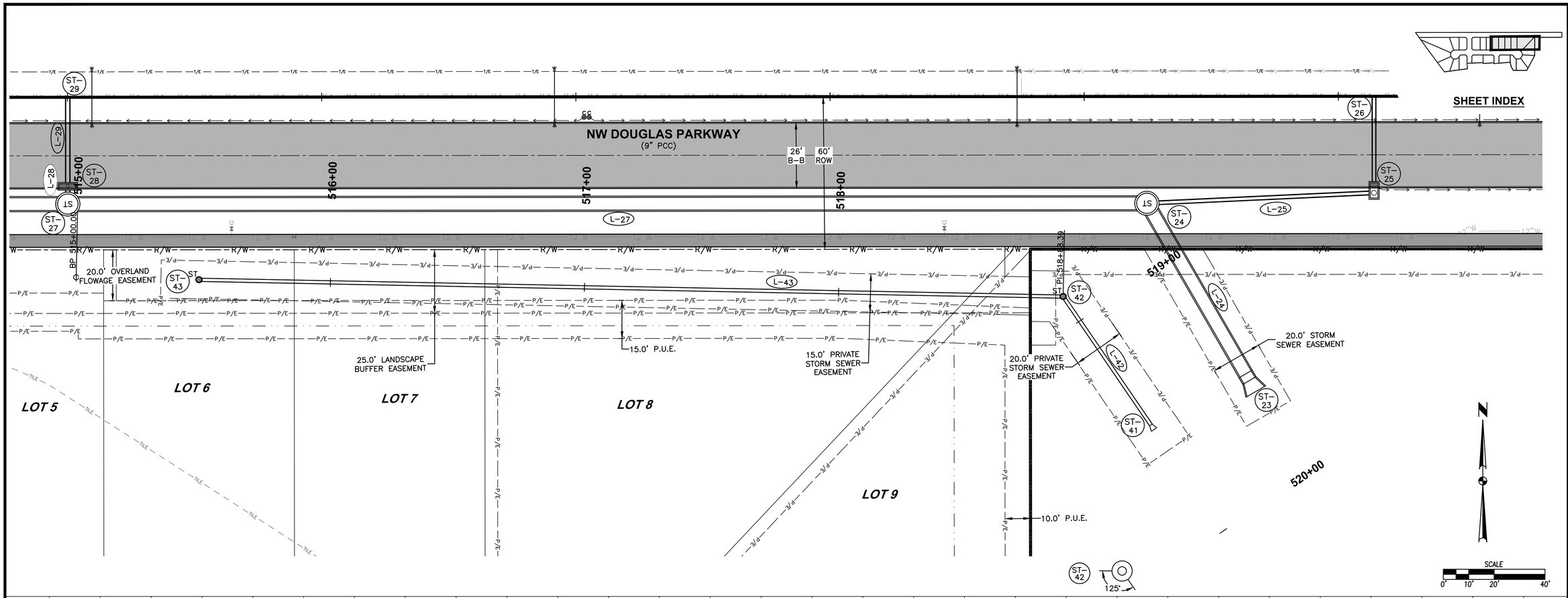

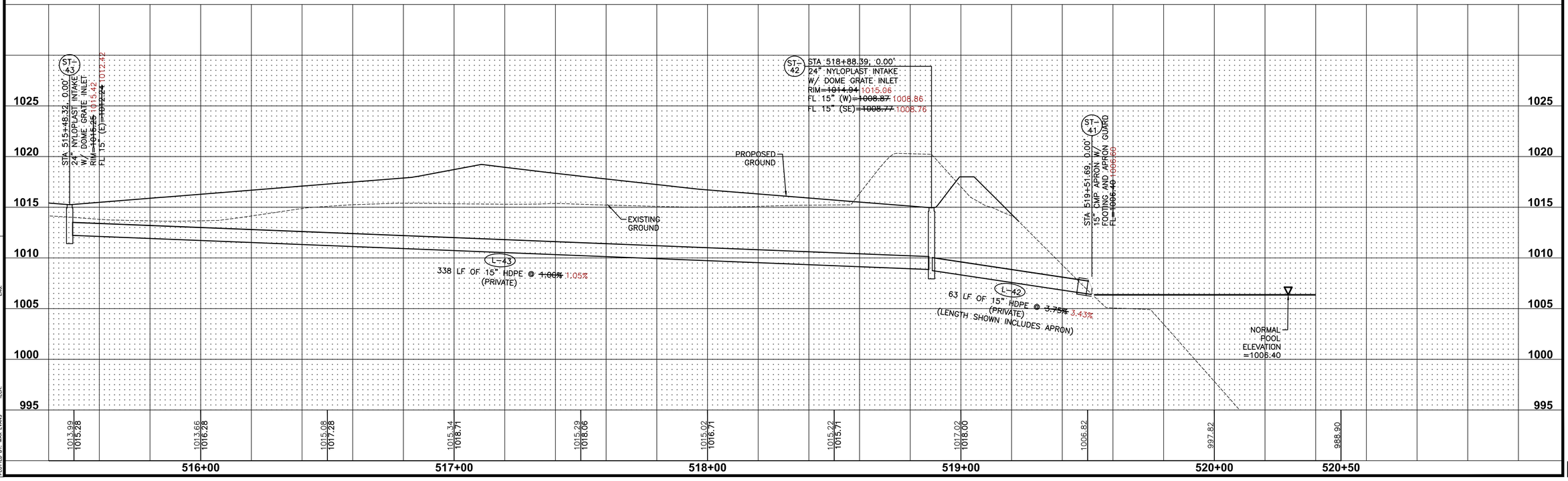

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CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

25/38

2101.016

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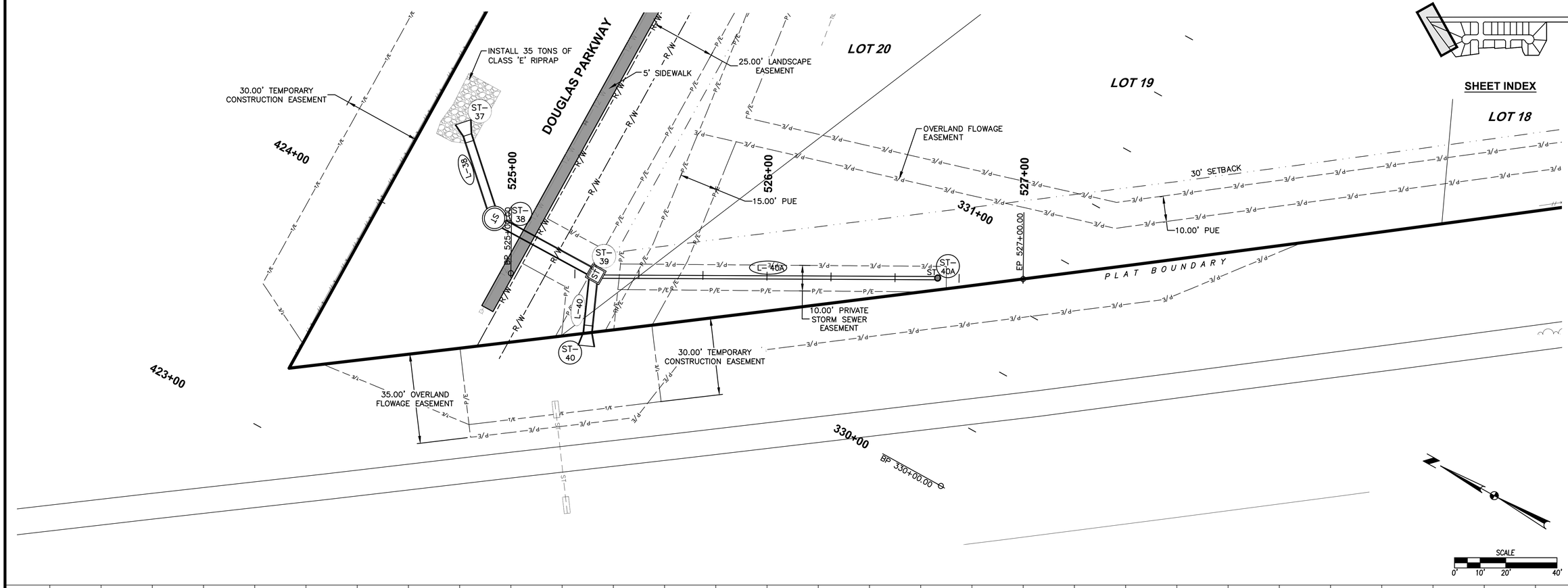

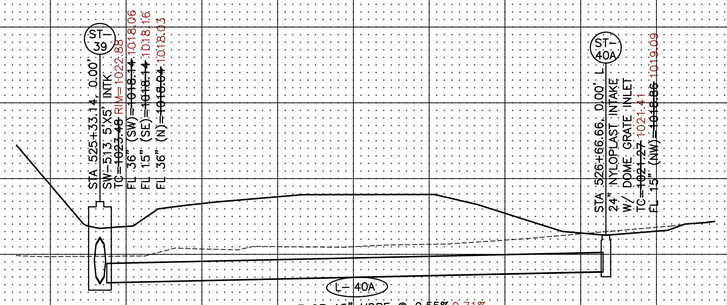

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CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

SANITARY AND STORM SEWER PLAN AND PROFILE ASBUILT

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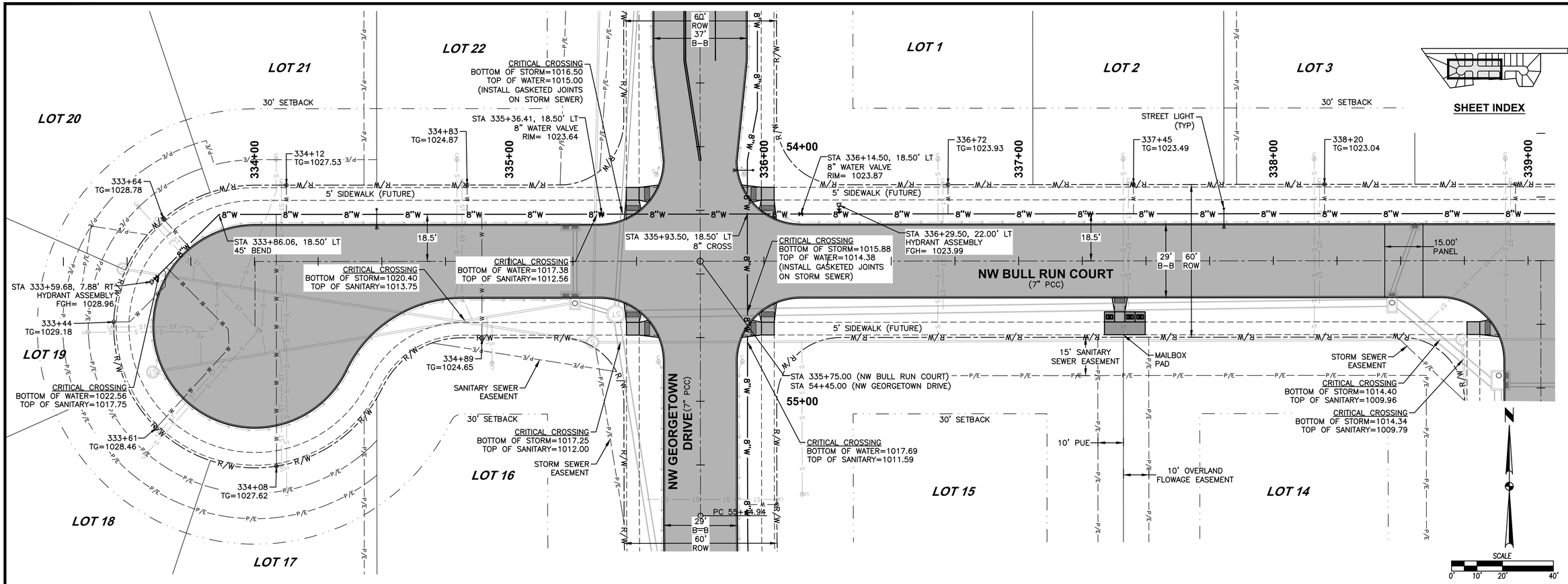

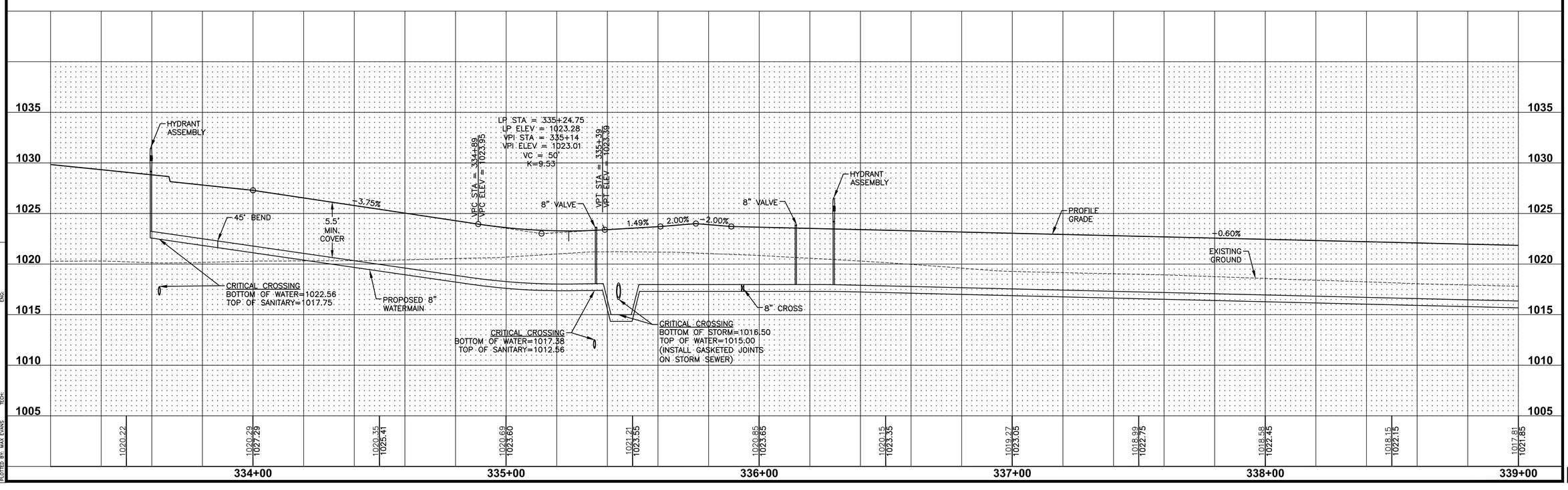

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CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

WATERMAIN PLAN AND PROFILE

WAUKEE, IOWA

27/38

2101.016

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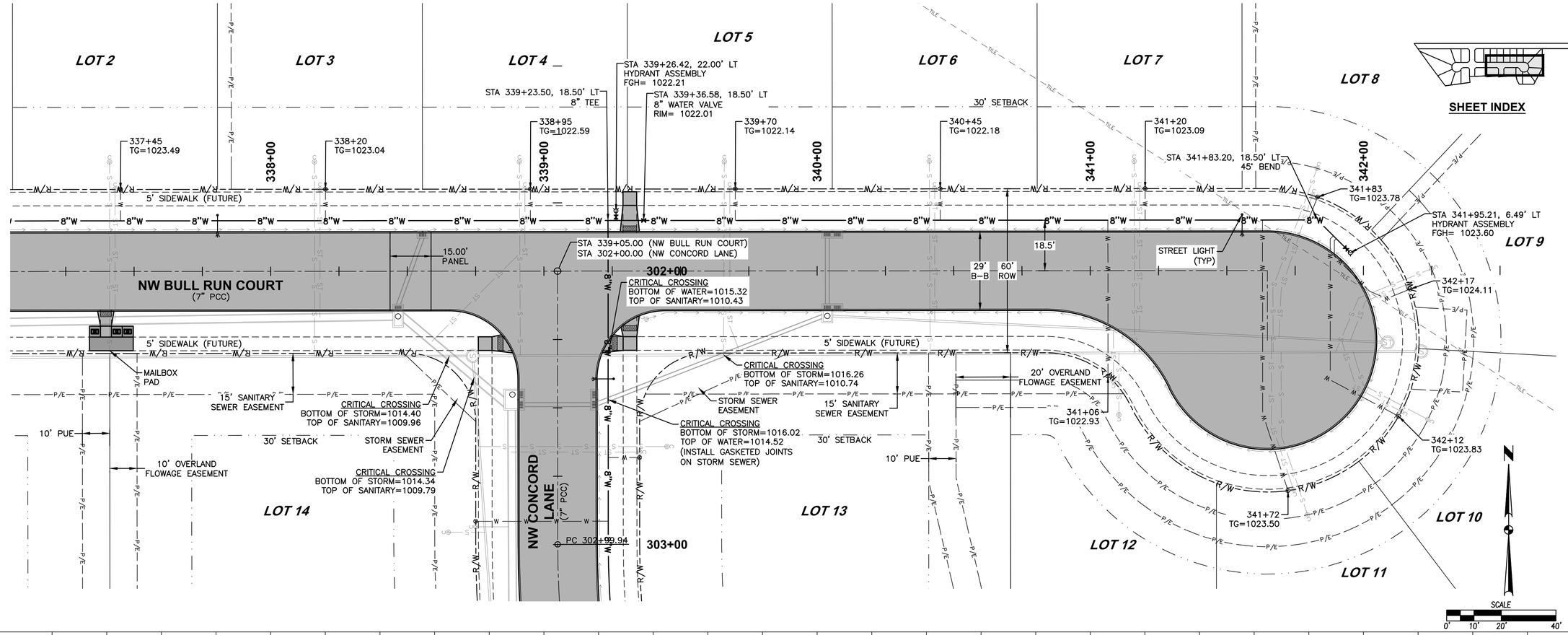

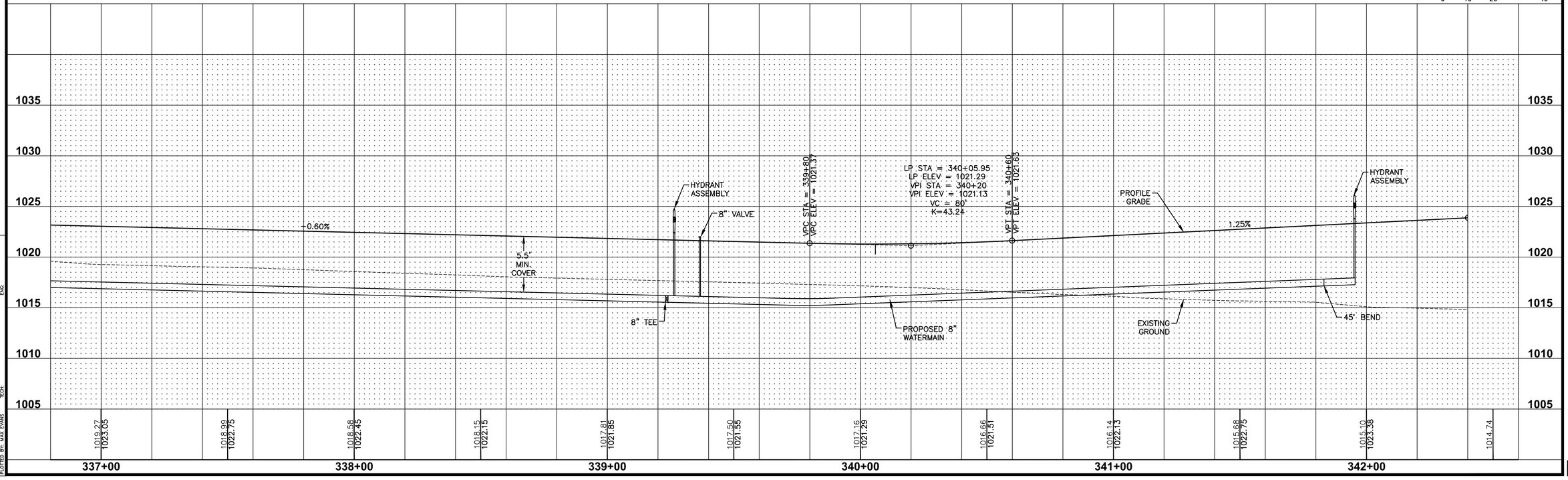

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CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

WATERMAIN PLAN AND PROFILE

WAUKEE, IOWA

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PLOTTED BY: MAX EVANS
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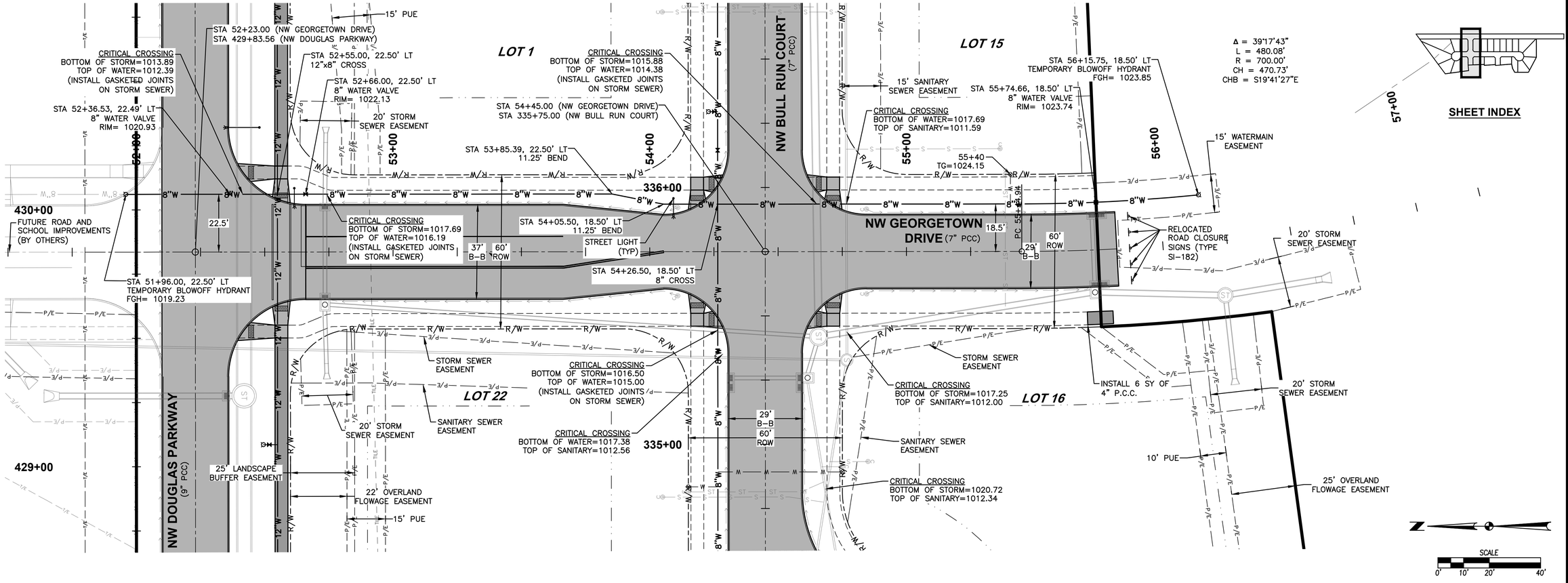

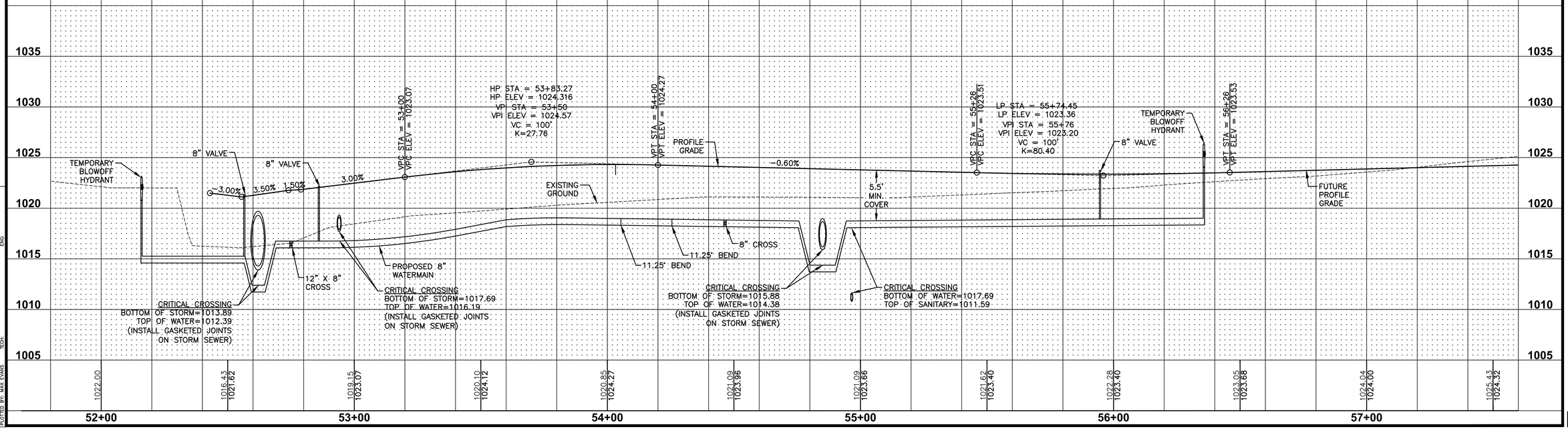

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GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: JWM TECH: BDH

CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

WATERMAIN PLAN AND PROFILE

WAUKEE, IOWA

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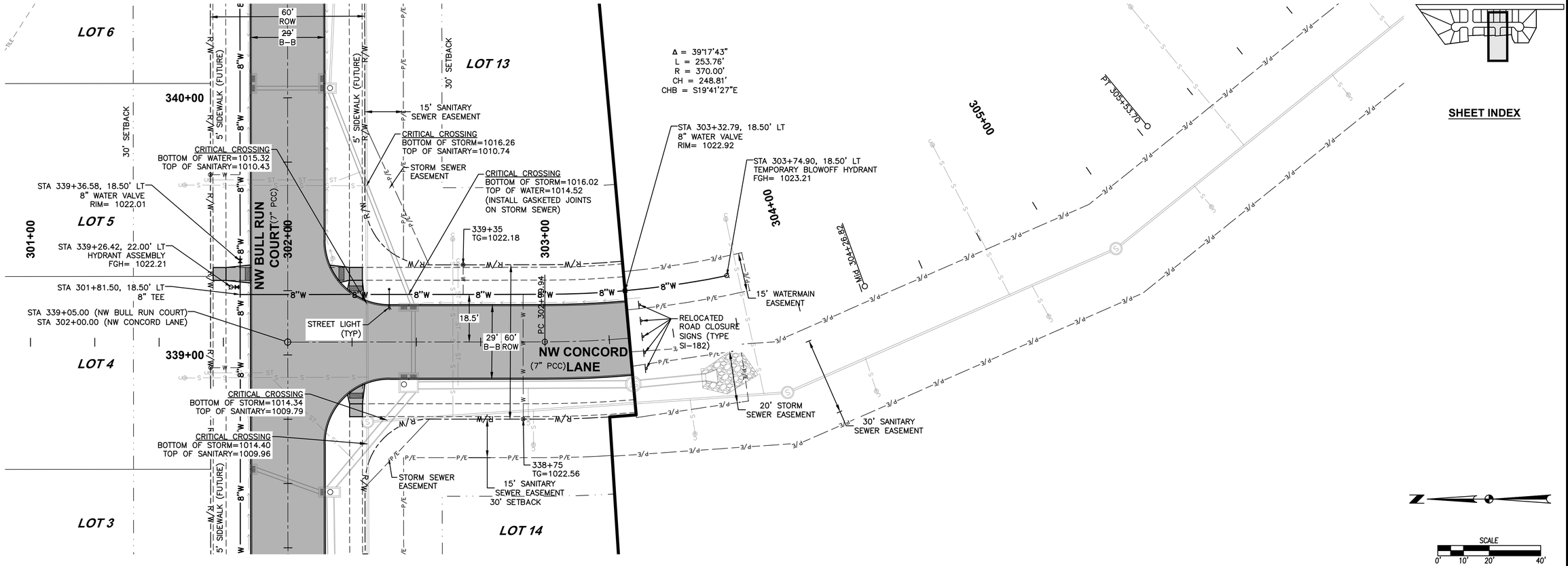

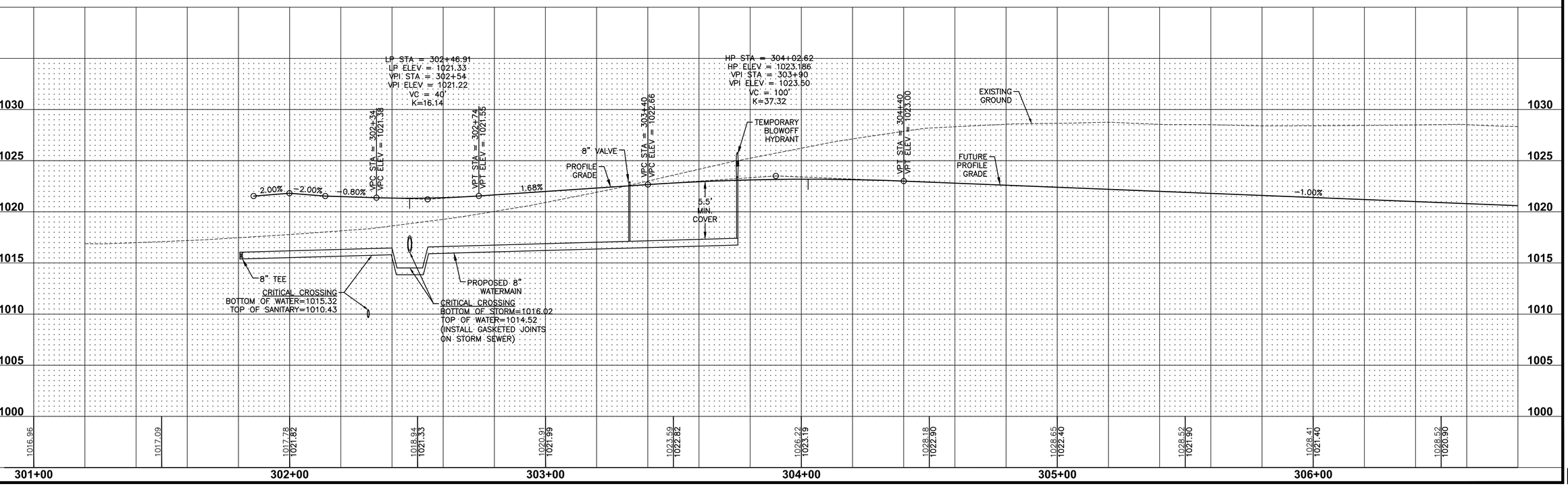

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STRATFORD CROSSING PLAT 10

WATERMAIN PLAN AND PROFILE

WAUKEE, IOWA

30/38

2101.016

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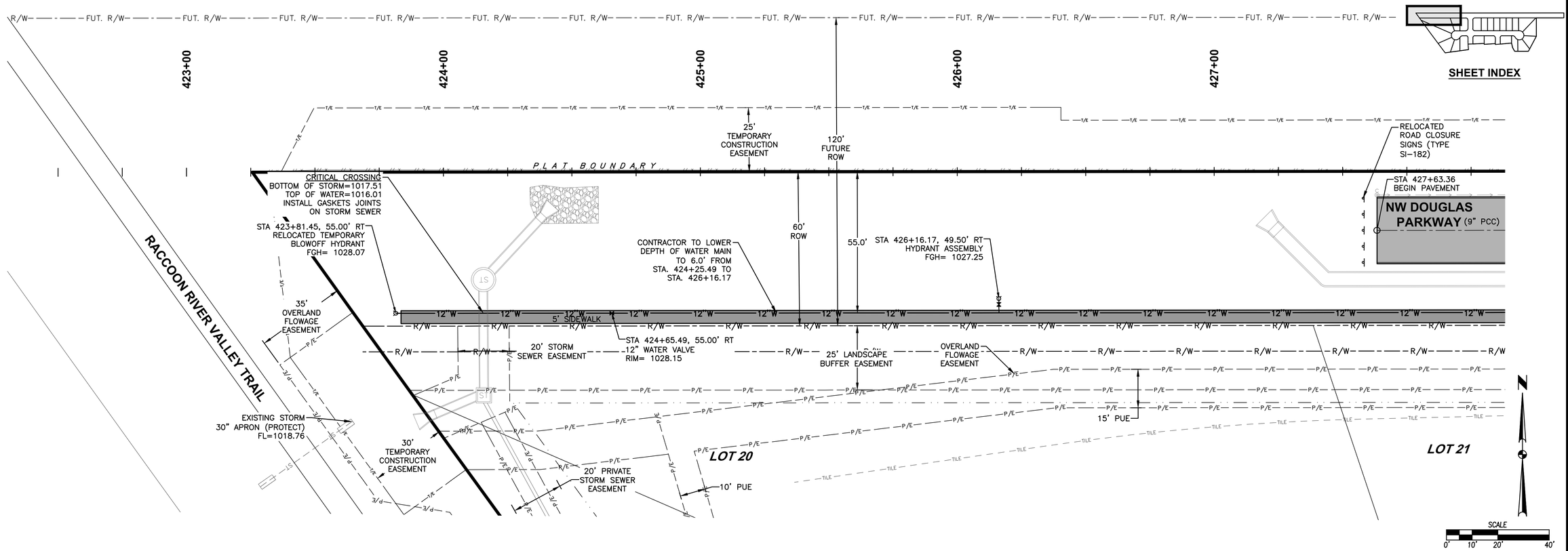

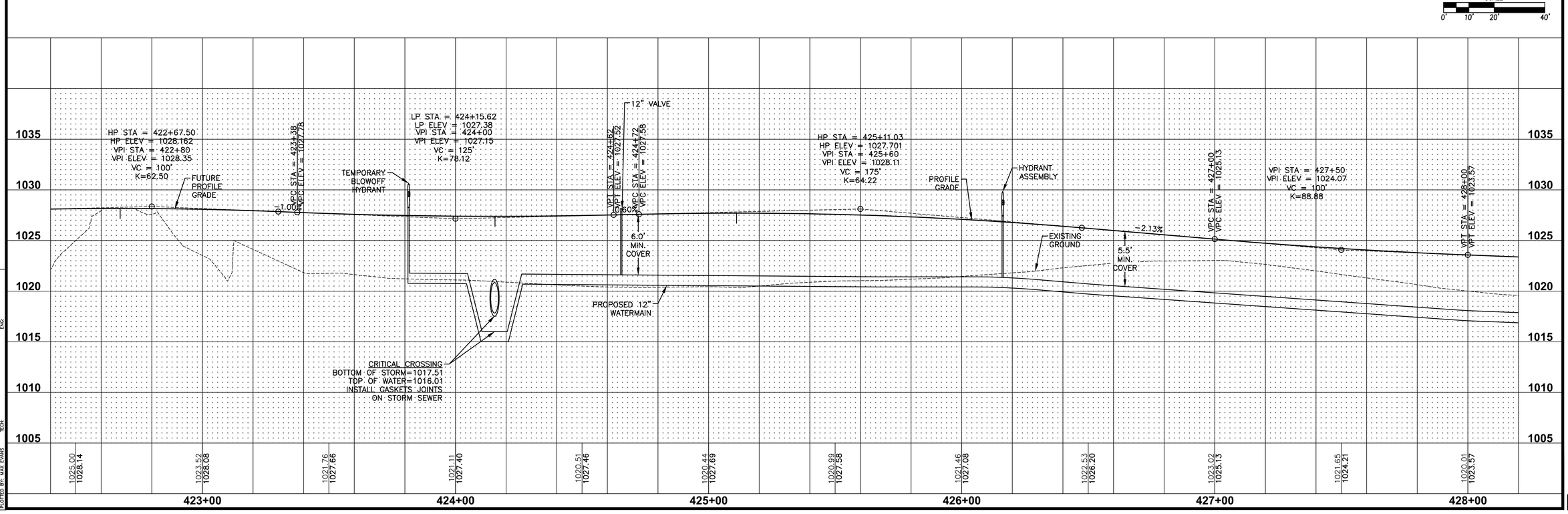

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CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

WATERMAIN PLAN AND PROFILE

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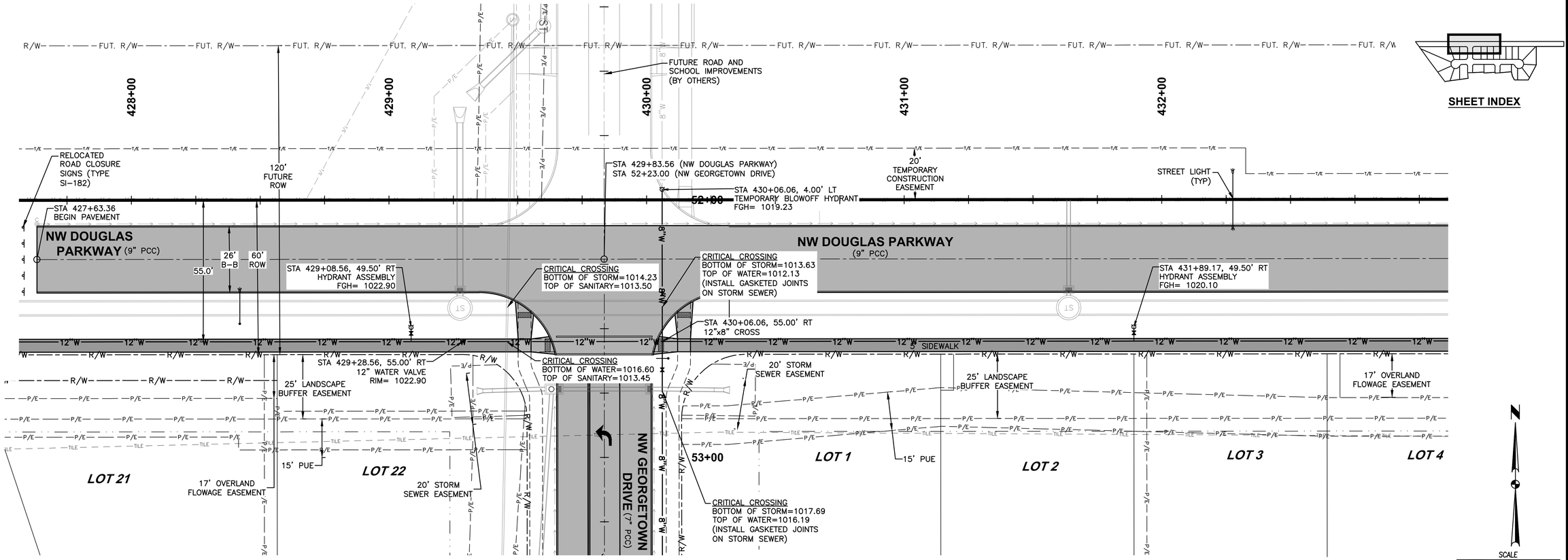

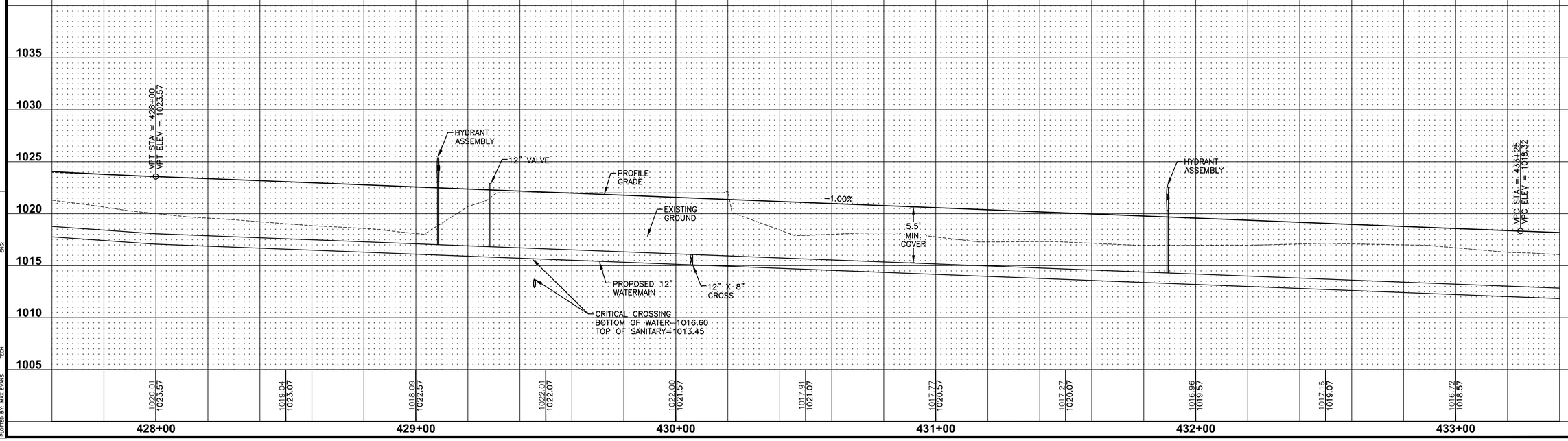

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WATERMAIN PLAN AND PROFILE

WAUKEE, IOWA

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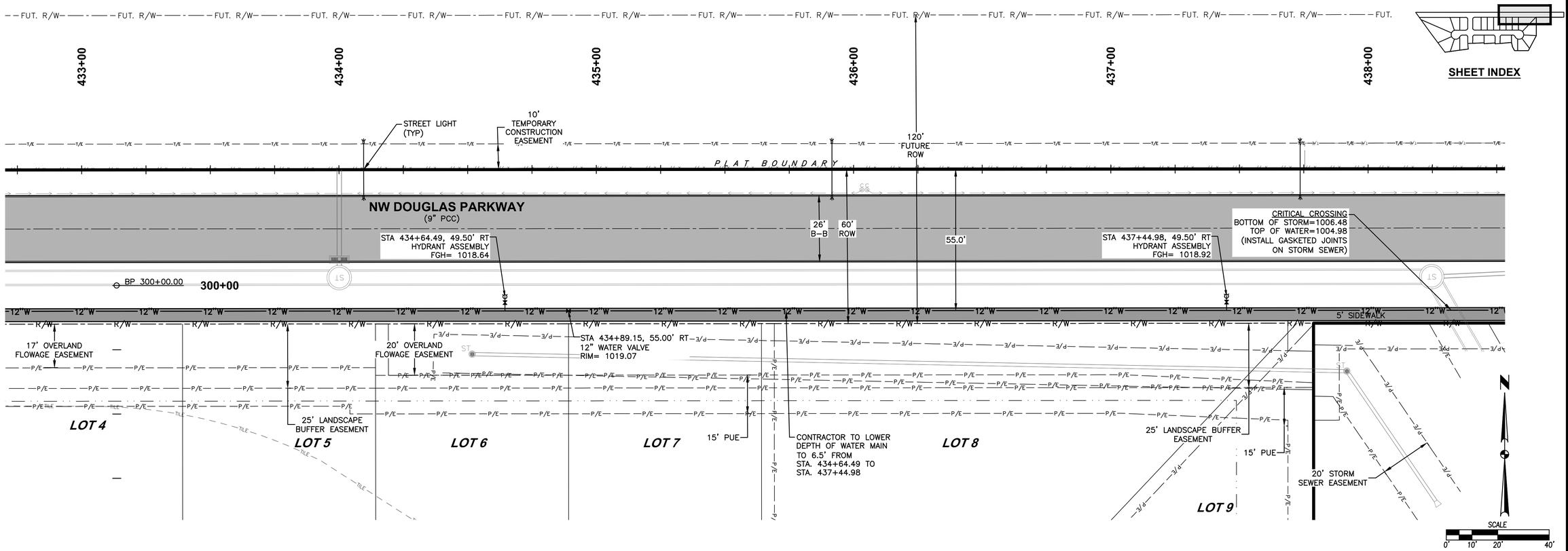

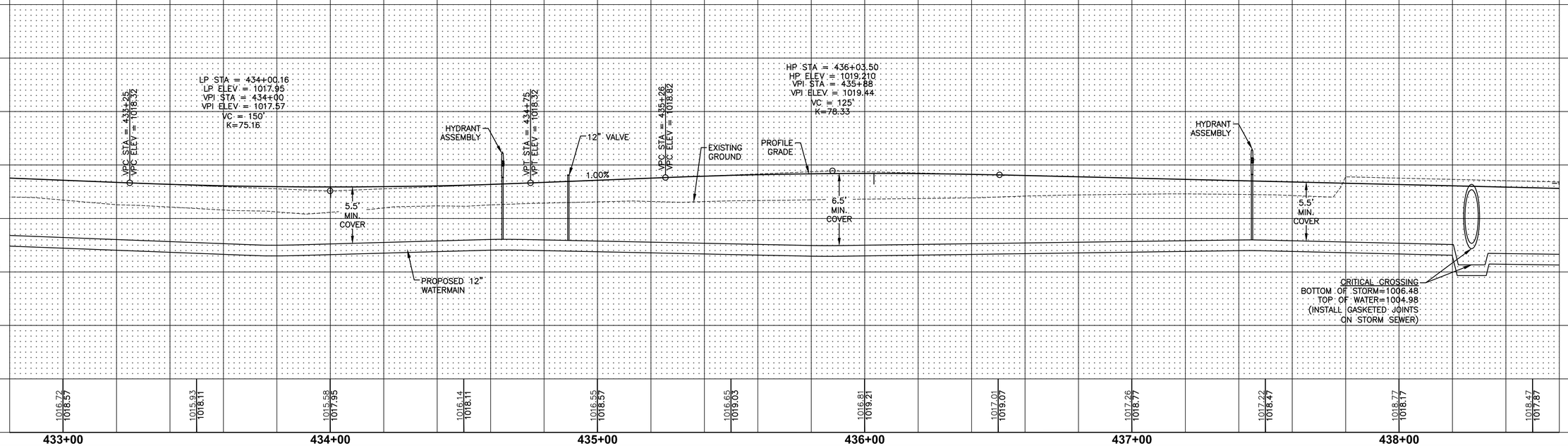

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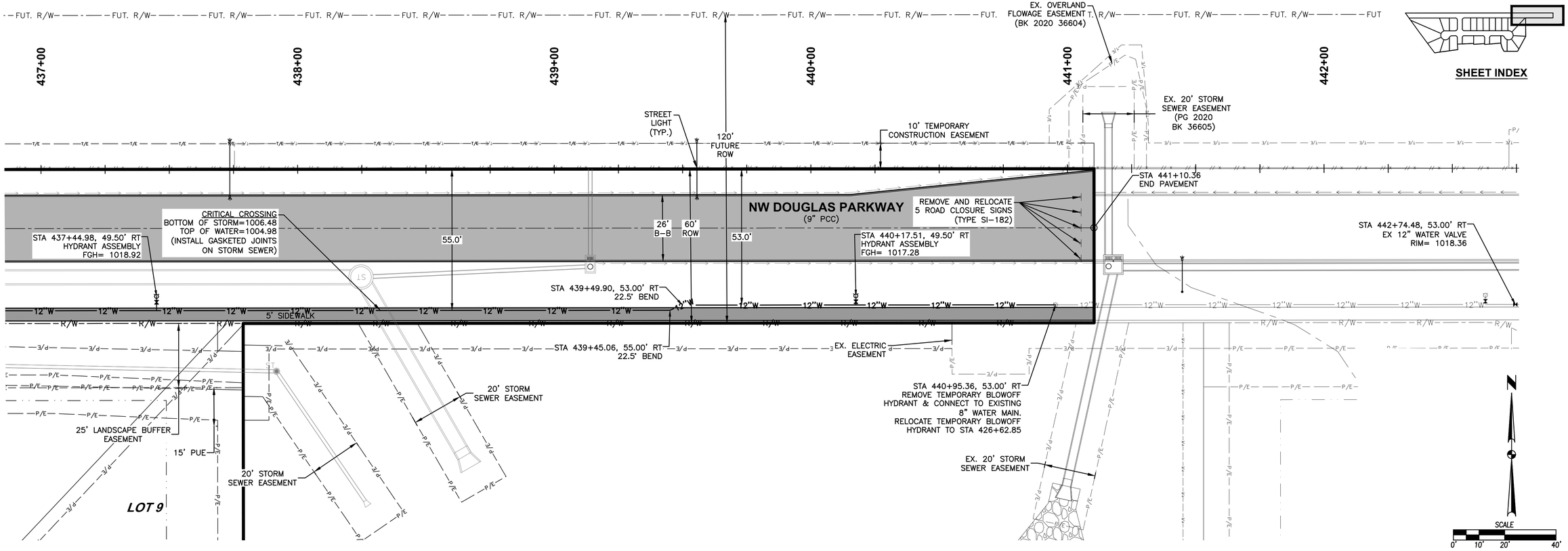

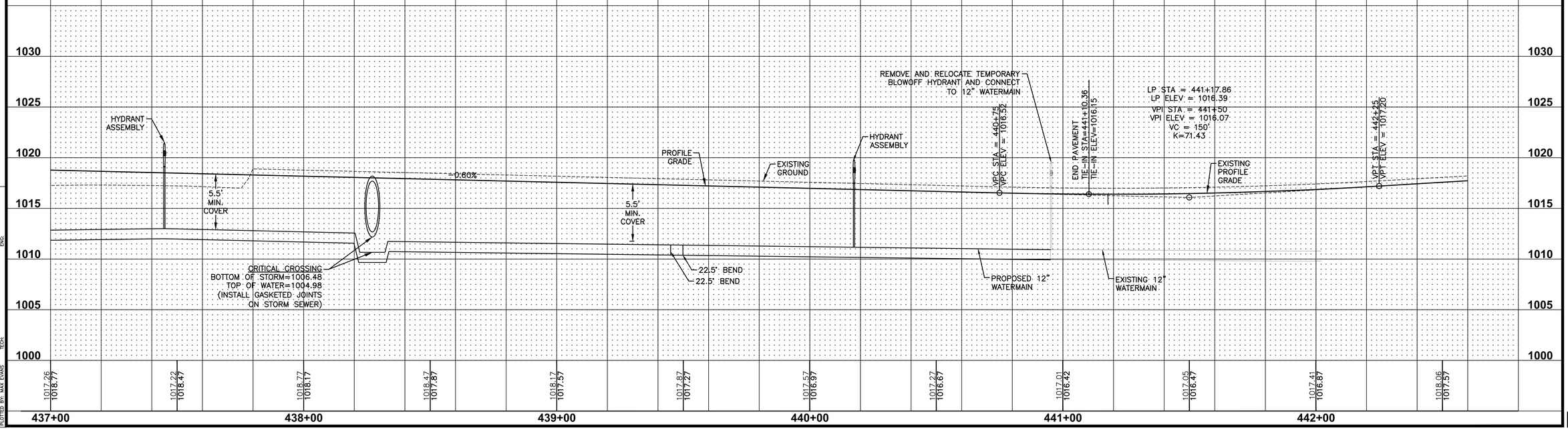

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NOTES:

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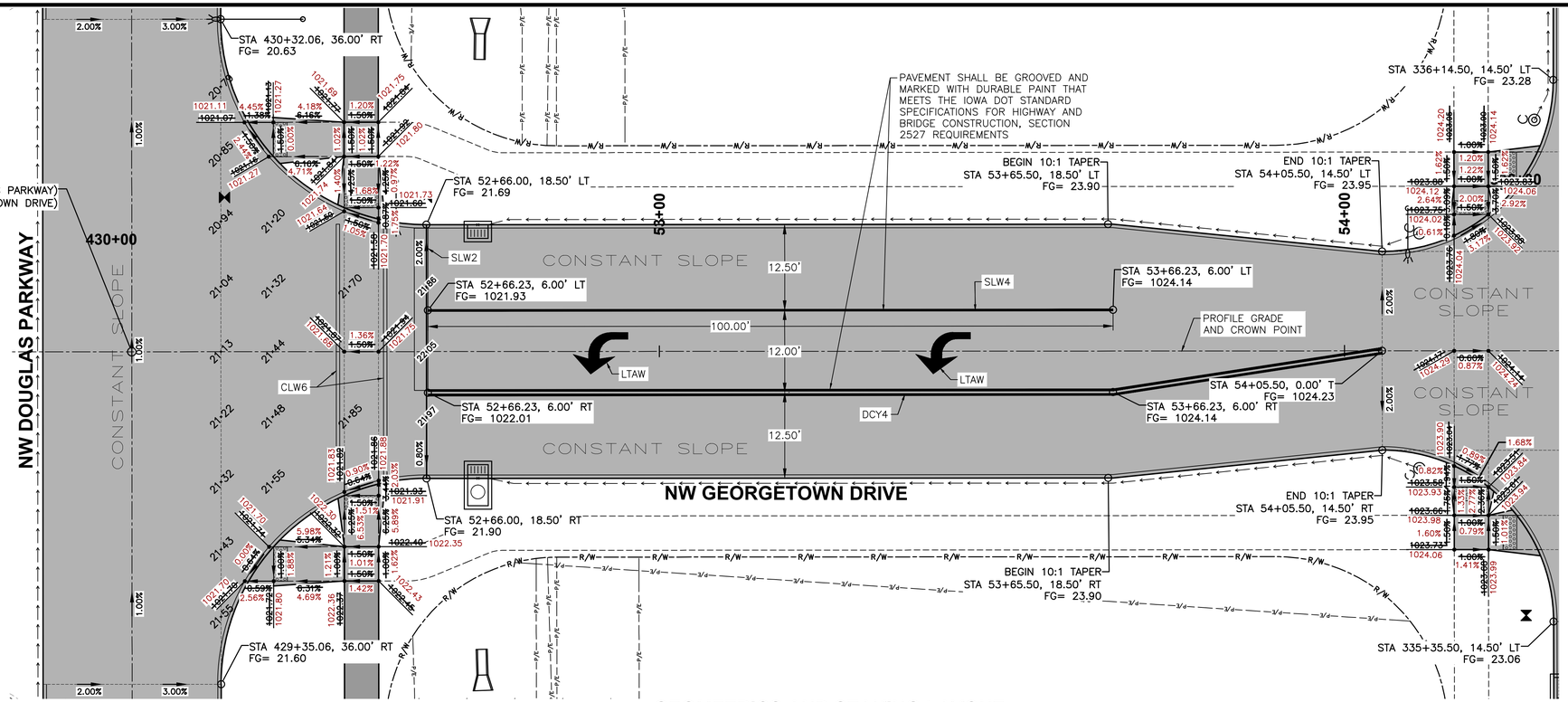
3. ADD 1000 TO FOUR DIGIT SPOT ELEVATIONS TO OBTAIN PROJECT DATUM.



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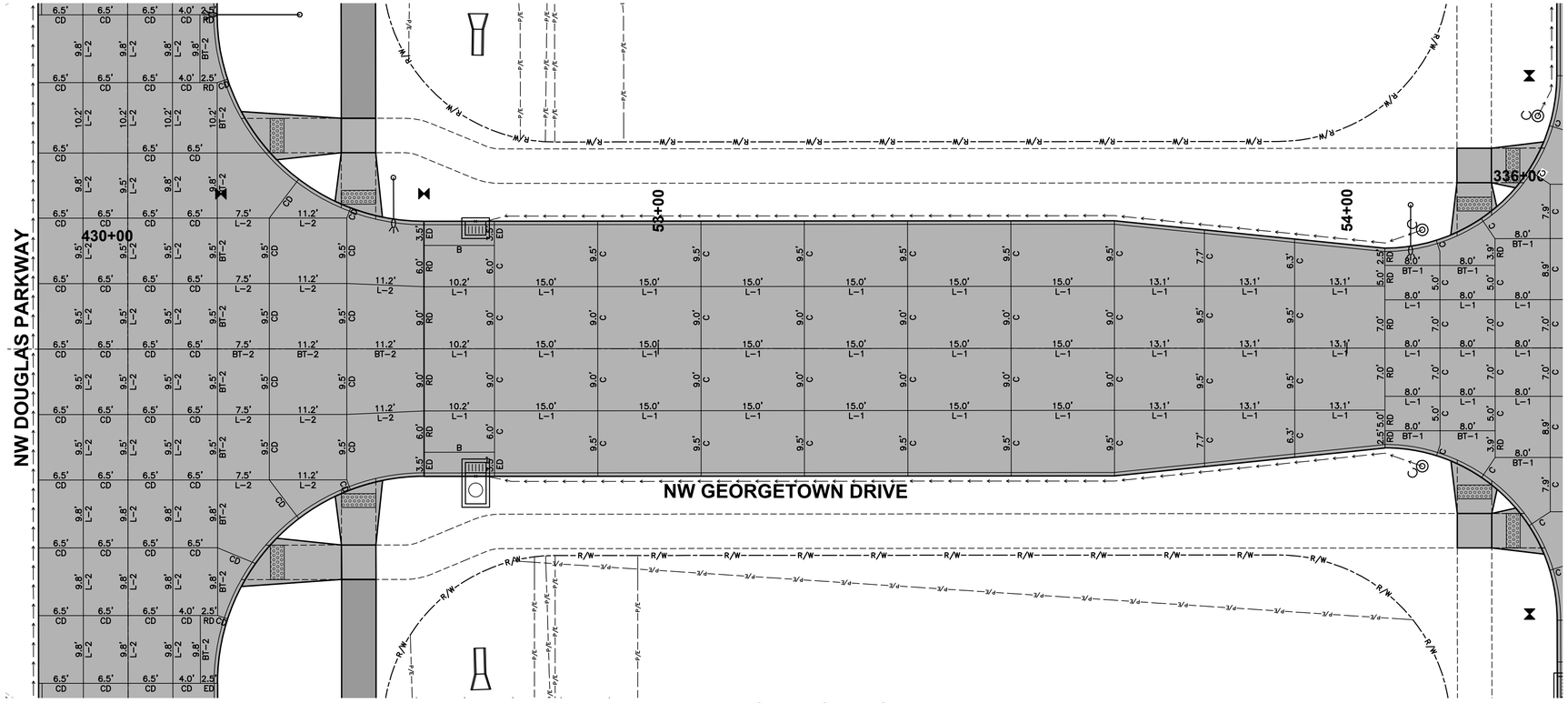

JOINTING LAYOUT

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CIVIL DESIGN ADVANTAGE

STRATFORD CROSSING PLAT 10

INTERSECTION DETAILS ASBUILT

WAUKEE, IOWA

SCALE 0' 5' 10' 20'

2101.016

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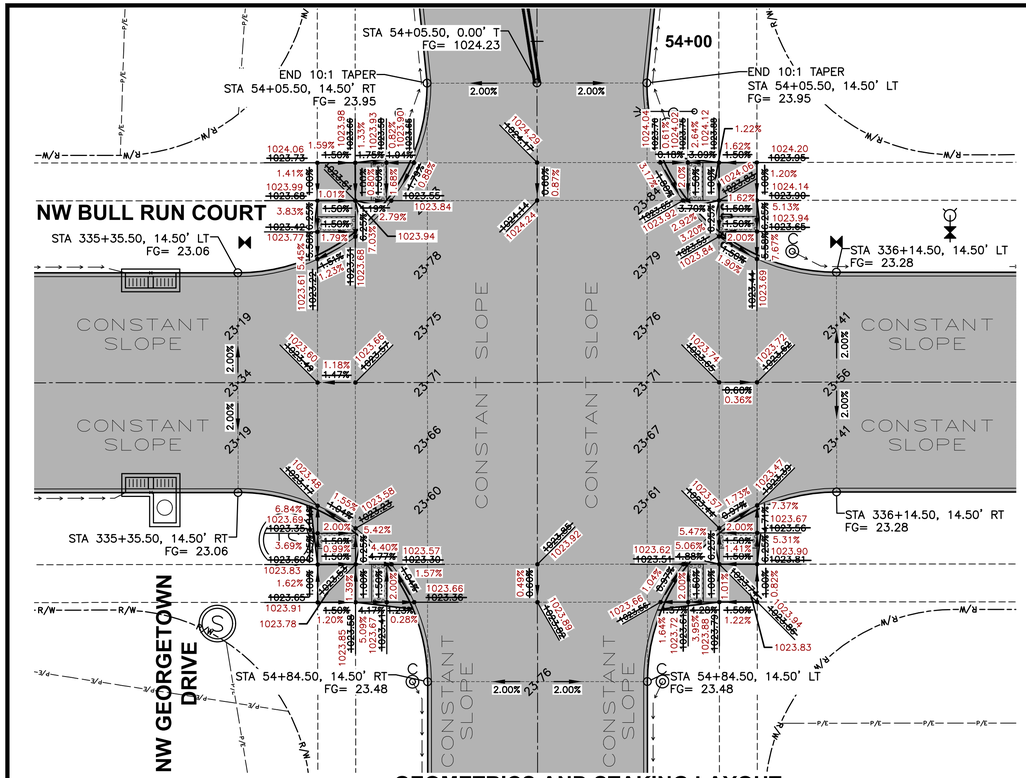

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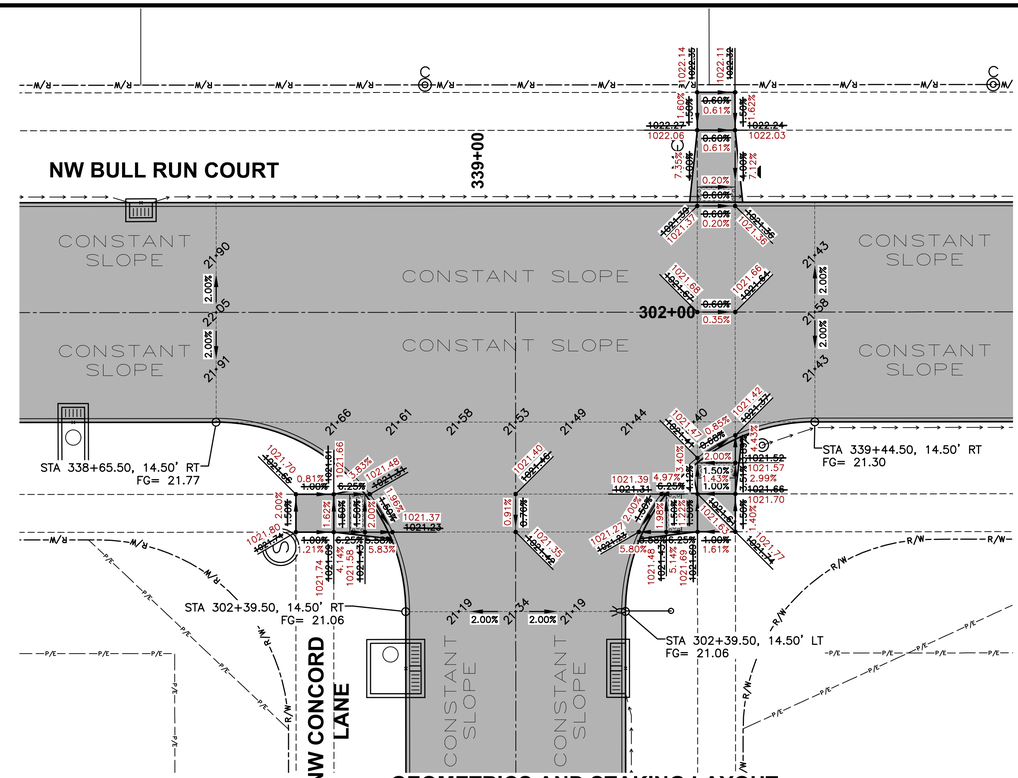

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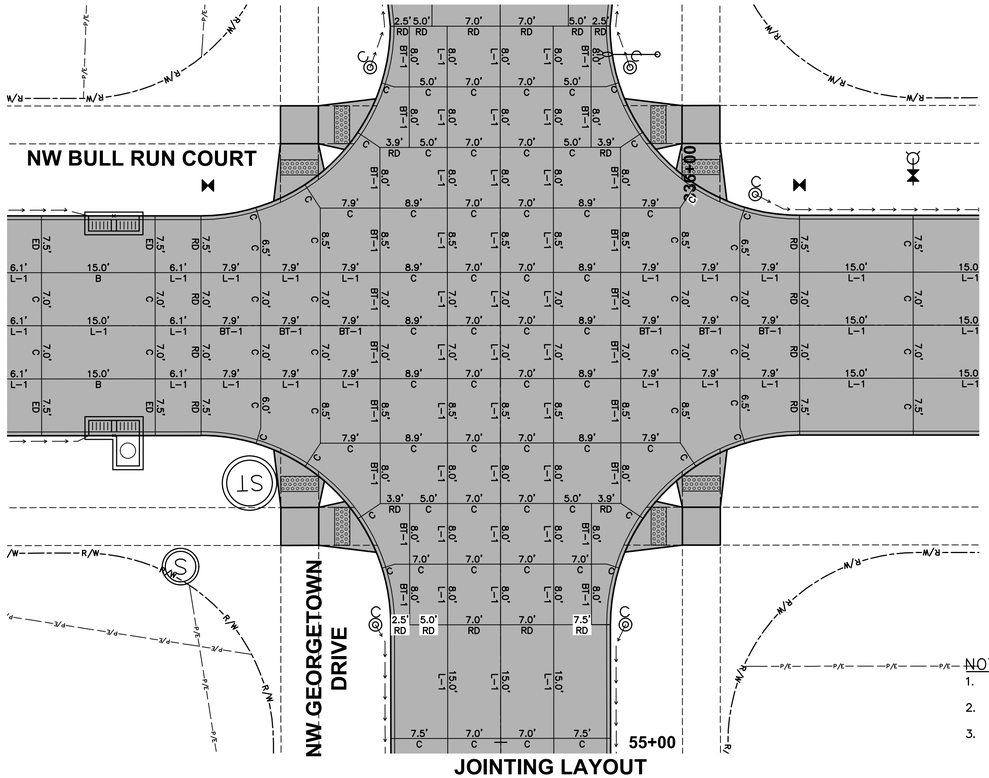

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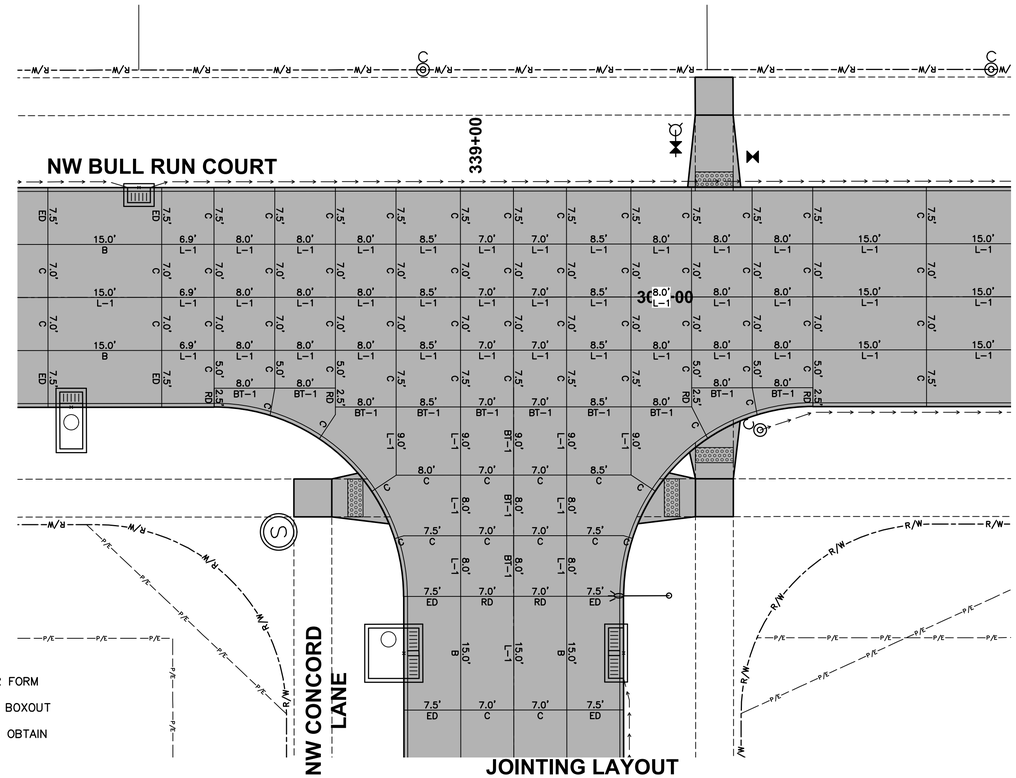

JOINTING LAYOUT

SCALE
0' 5' 10' 20'

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CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

STRATFORD CROSSING PLAT 10

INTERSECTION DETAILS ASBUILT

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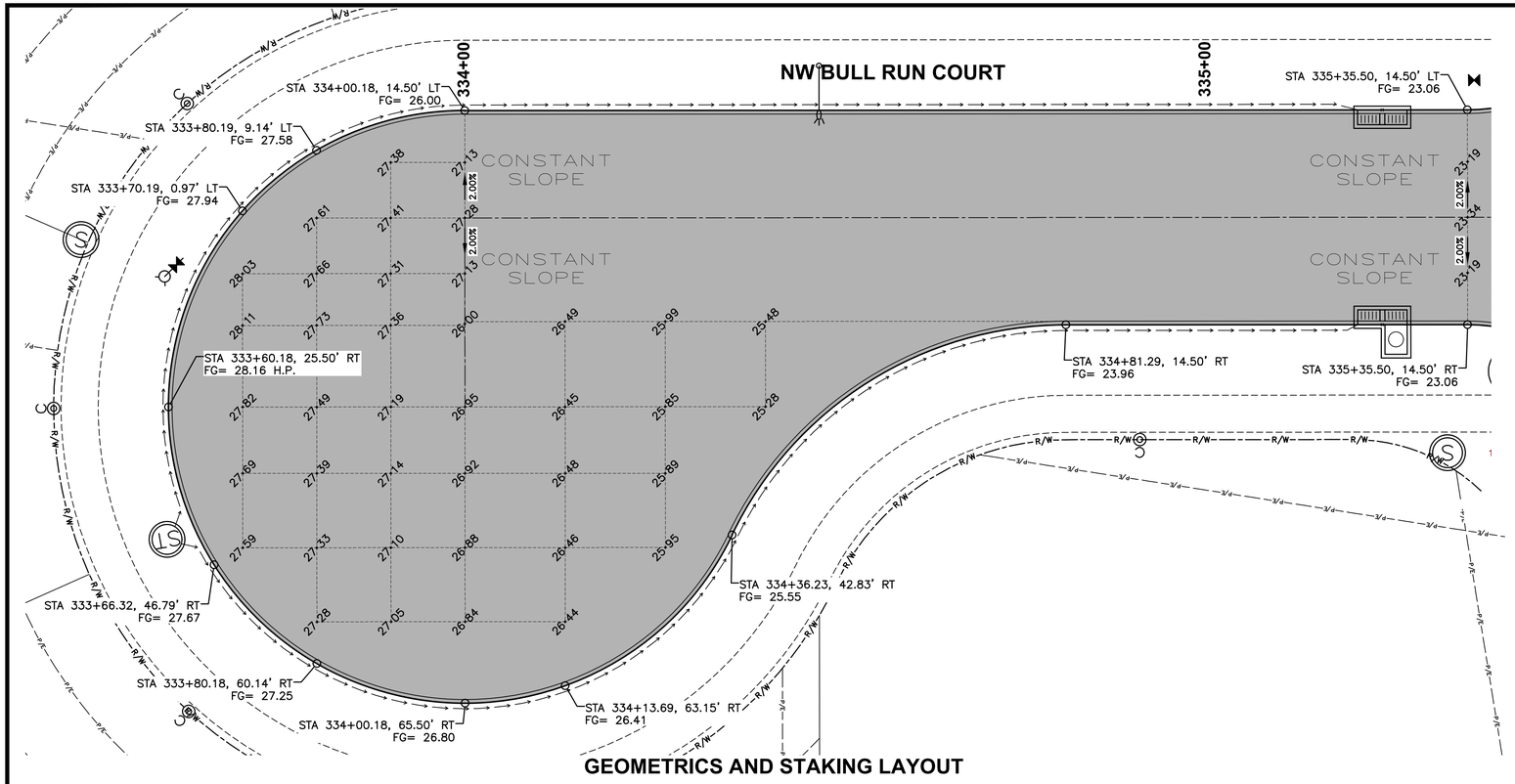

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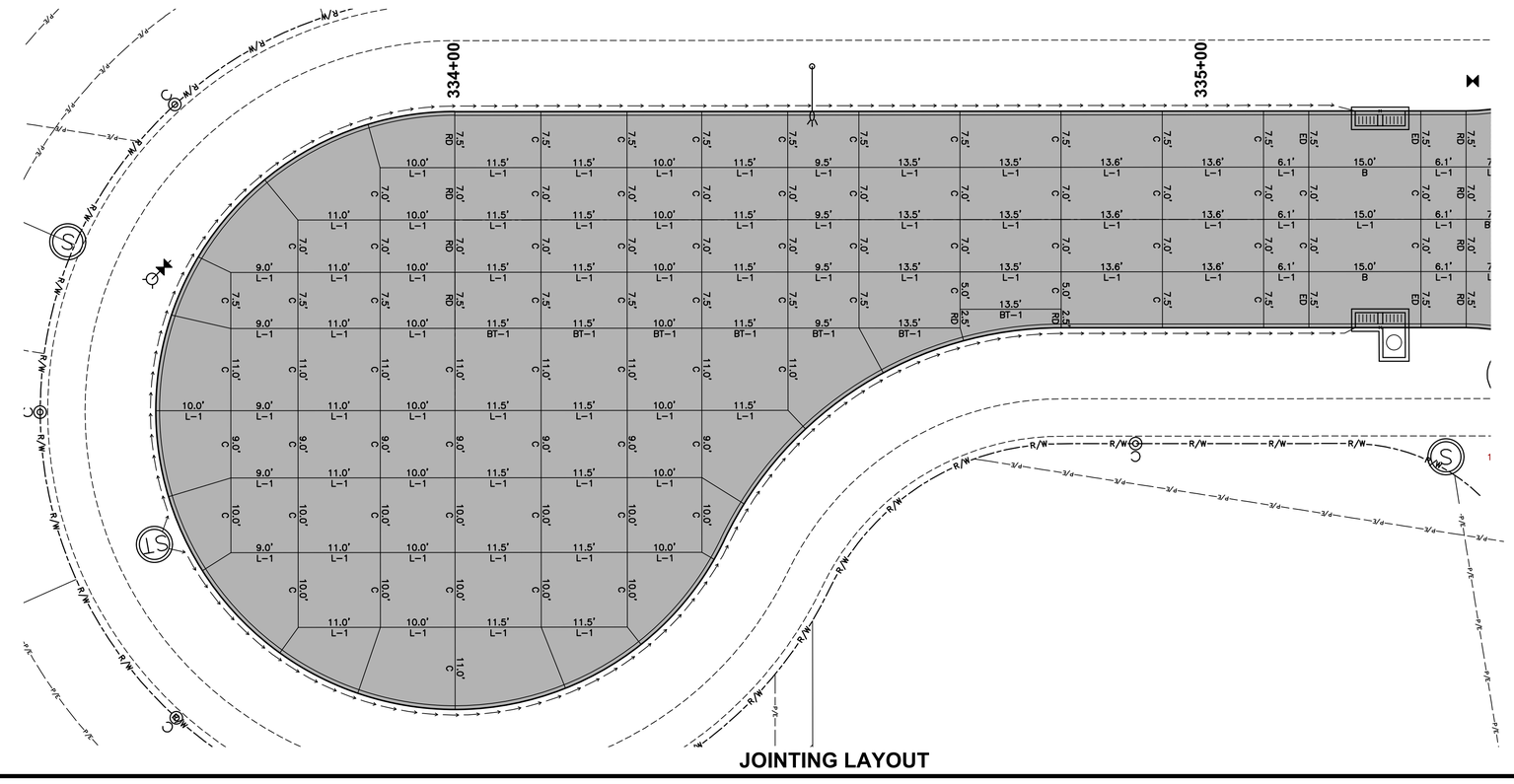

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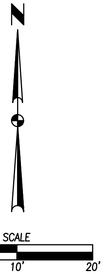

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STRATFORD CROSSING PLAT 10

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WAUKEE, IOWA

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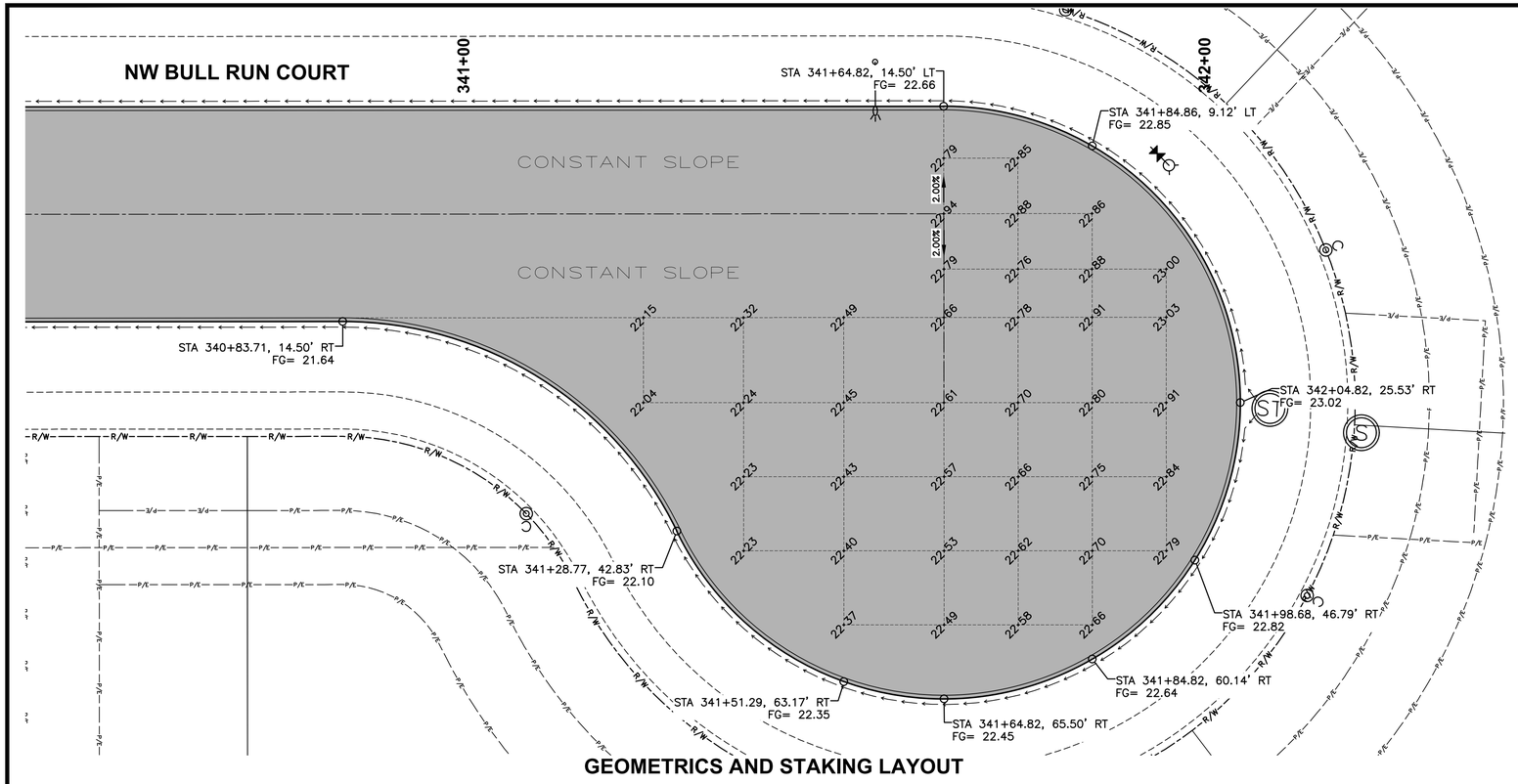

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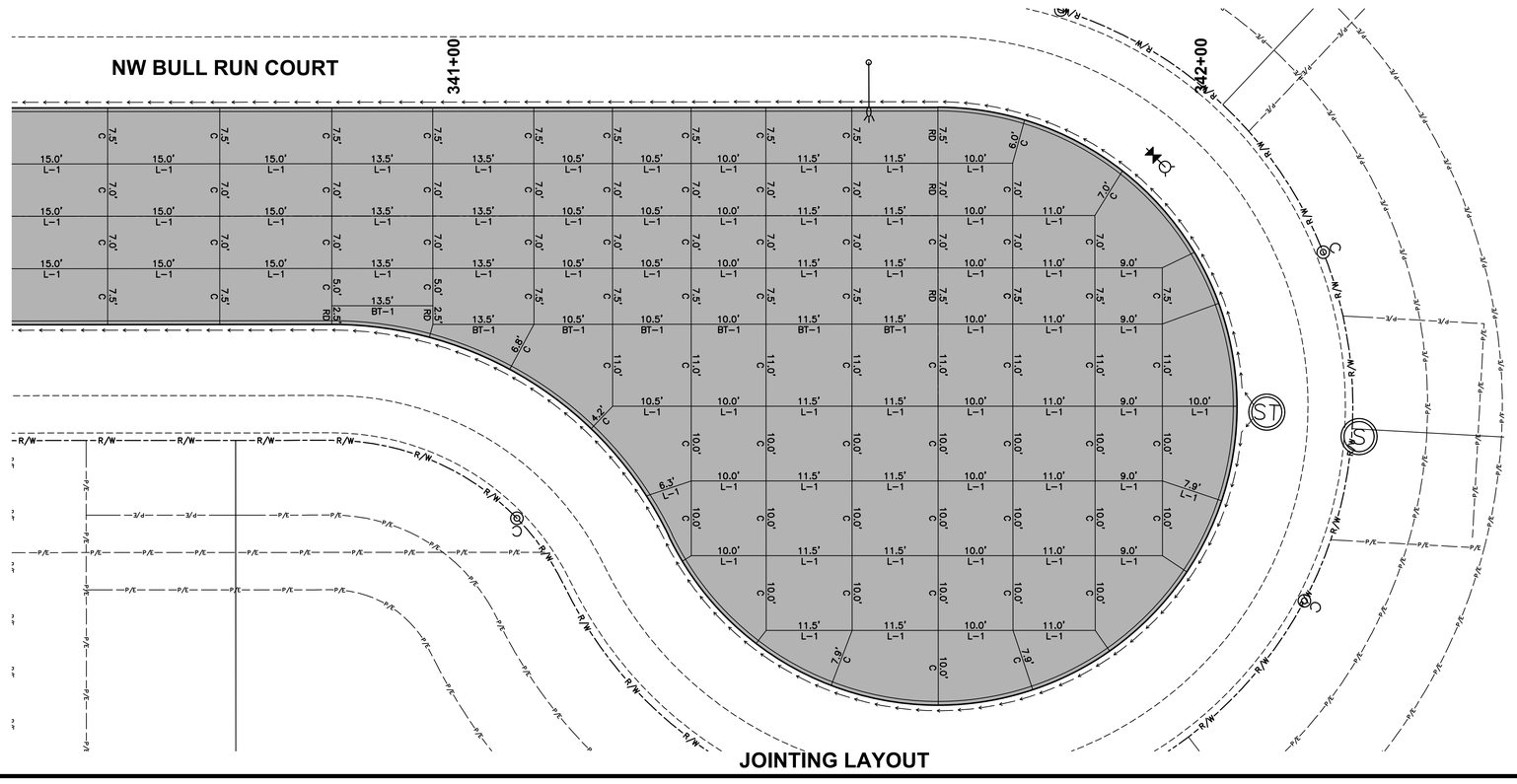

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CIVIL DESIGN ADVANTAGE

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