

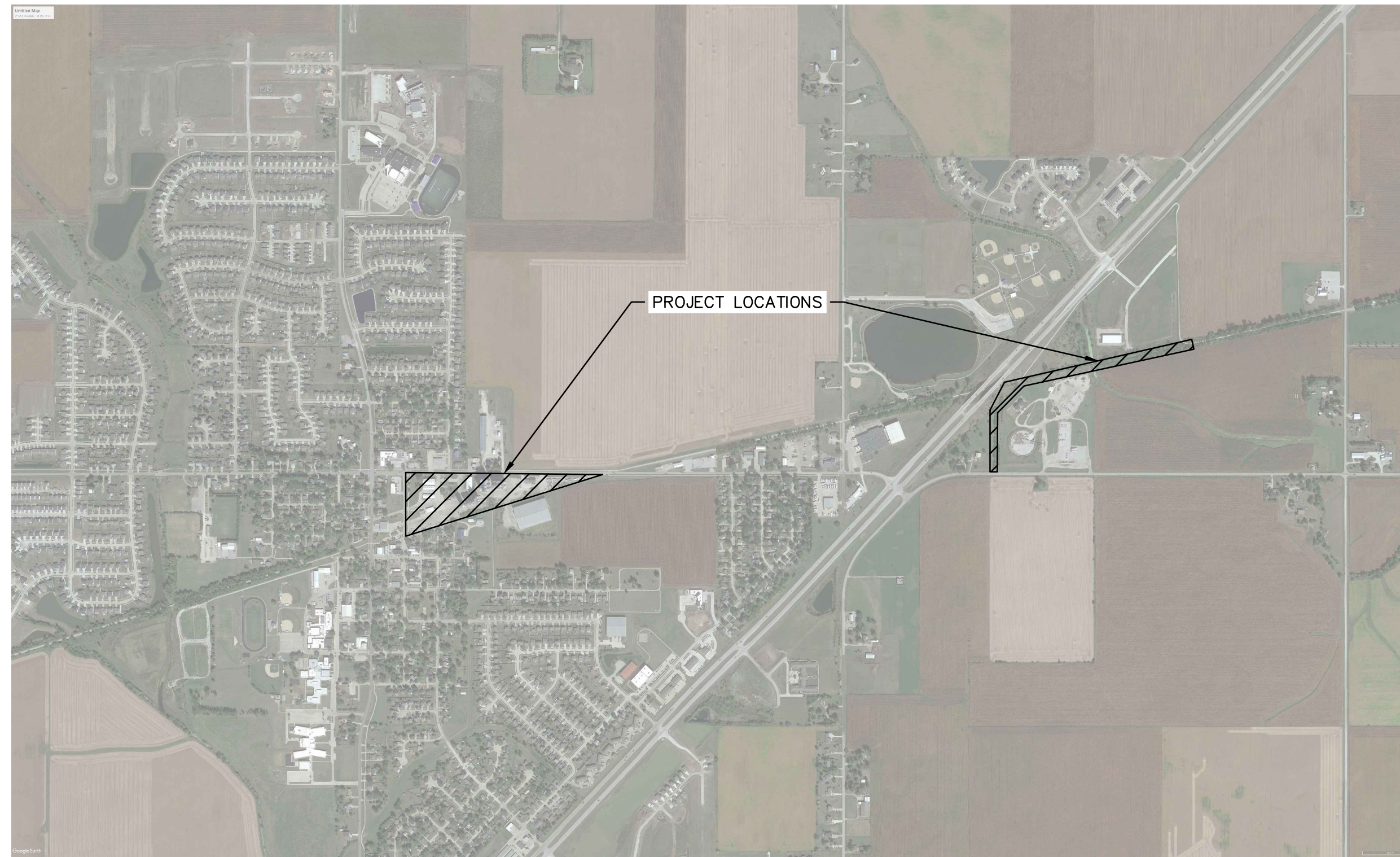
CHACHIQUA VALLEY TRAIL REDESIGN, FOOD TRUCK PARK, & LINCOLN ST EXTENSION

BONDURANT, IA
DECEMBER 2023

LEGEND

- CHECK VALVE
- BENCHMARK
- CURB STOP
- FIRE HYDRANT
- FIBER OPTIC BOX
- GRATE INLET
- LIGHT POLE
- BEEHIVE INLET
- POWER POLE
- STORM DRAIN MANHOLE
- SIGN
- SANITARY SEWER MANHOLE
- TELEPHONE RISER
- WATER MANHOLE
- WATER VALVE
- POST
- ACCESS ROAD

- BORDER
- CENTER
- CHAIN LINK FENCE
- COMMUNICATIONS
- CONTOURS (EXISTING)
- CONTOURS (PROPOSED)
- EASEMENT
- ELECTRICAL LINE
- EROSION CONTROL FENCE
- FIBER OPTIC
- GAS LINE
- LIMITS OF CONSTRUCTION
- POWER OVERHEAD
- POWER UNDERGROUND
- PROPERTY LINE
- SANITARY SEWER
- SECTION LINE
- SILT FENCE
- STORM SEWER
- TELEPHONE LINE
- WATER LINE



VICINITY MAP
NOT TO SCALE

SHEET LIST TABLE	
NUMBER	DESCRIPTION
C0.1	COVER SHEET
C1.1-4	SITE LAYOUT
C2.1-5	DETAILS
C3.1-2	DEMOLITION PLAN
C4.1-2	GRADING & EROSION CONTROL
C5.1-5	ROAD P&P
C6.1-12	BIKE TRAIL P&P
C7.1	ARBORETUM
C8.1	UTILITY PLAN
C8.2-2	STORM PLAN
C9.1-4	PARKING LOTS & PLAZA
C10.1-8	ROAD & TRAIL CROSS-SECTIONS

TABLE OF QUANTITIES THE CROSSINGS (WEST SITE)			
NO.	DESCRIPTION	UNIT	QUANTITY
1	MOBILIZATION	LS	1
2	TRAFFIC CONTROL	LS	1
3	EARTHWORK	LS	1
4	EROSION CONTROL	LS	1
5	CLEARING AND GRUBBING	LS	1
6	REMOVE BIKE TRAIL PAVEMENT	SY	100
7	REMOVE PARKING/STREET PAVEMENT	SY	1385
8	7" CONCRETE PAVEMENT W/ 6" CURB	SY	5930
9	12" ROAD SUBGRADE PREP	SY	6675
10	7" PARKING LOT PAVEMENT	SY	1750
11	12" PARKING LOT SUBGRADE PREP	SY	1750
12	PAVEMENT STRIPING	LF	2400
13	PARKING LOT PERMEABLE PAVER SYSTEMS	SY	2500
14	PLAZA PERMEABLE PAVER SYSTEM	SY	900
15	6" BIKE TRAIL PAVEMENT	SY	2232
16	12" BIKE TRAIL SUBGRADE PREP	SY	2515
17	TYPE BA CURB INLET	EA	2
18	24" NYLOPLAST DRAIN BASIN	EA	5
19	15" FLARED END SECTION	EA	1
20	24" FLARED END SECTION	EA	2
21	30" FLARED END SECTION	EA	1
22	CURB FLUME	EA	3
23	15" STORM PIPE	LF	440
24	24" STORM PIPE	LF	220
25	30" STORM PIPE	LF	55
26	TAP EXISTING STORM STRUCTURE	EA	2
27	2" ELECTRICAL CONDUIT	LF	1900
28	PICNIC TABLES	EA	18
29	BIKE RACKS	EA	3
30	ROAD SIGNAGE	EA	14
31	BIKE TRAIL SIGNAGE	EA	10
32	OVERSTORY TREES	EA	20
33	ORNAMENTAL TREES	EA	20

(EAST SITE)			
NO.	DESCRIPTION	UNIT	QUANTITY
1	MOBILIZATION	LS	1
2	TRAFFIC CONTROL	LS	1
3	EARTHWORK	LS	1
4	EROSION CONTROL	LS	1
5	CLEARING AND GRUBBING	LS	1
6	REMOVE BIKE TRAIL PAVEMENT	SY	490
7	REMOVE EXISTING BRIDGE	LS	1
8	REMOVE CONCRETE GRAIN DUMP	LS	1
9	6" BIKE TRAIL PAVEMENT	SY	3565
10	12" BIKE TRAIL SUBGRADE PREP	SY	4015
11	24" FLARED END SECTION	EA	2
12	24" STORM PIPE	LF	60
13	45' PRE-FAB BRIDGE	LS	1
14	BRIDGE ABUTMENTS	EA	2
15	RIPRAP	TN	12
16	BIKE TRAIL SIGNAGE	EA	14

PROJECT: CEE: 4850
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REVISION:

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CITY OF BONDURANT
BONDURANT, IA

SHEET NAME
COVER SHEET

SHEET NO.
C0.1



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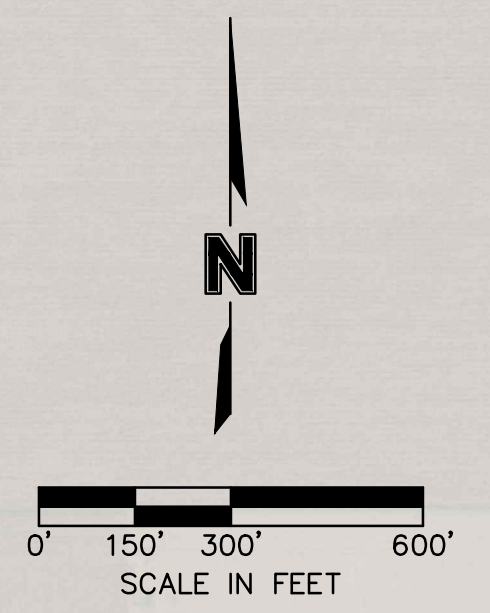
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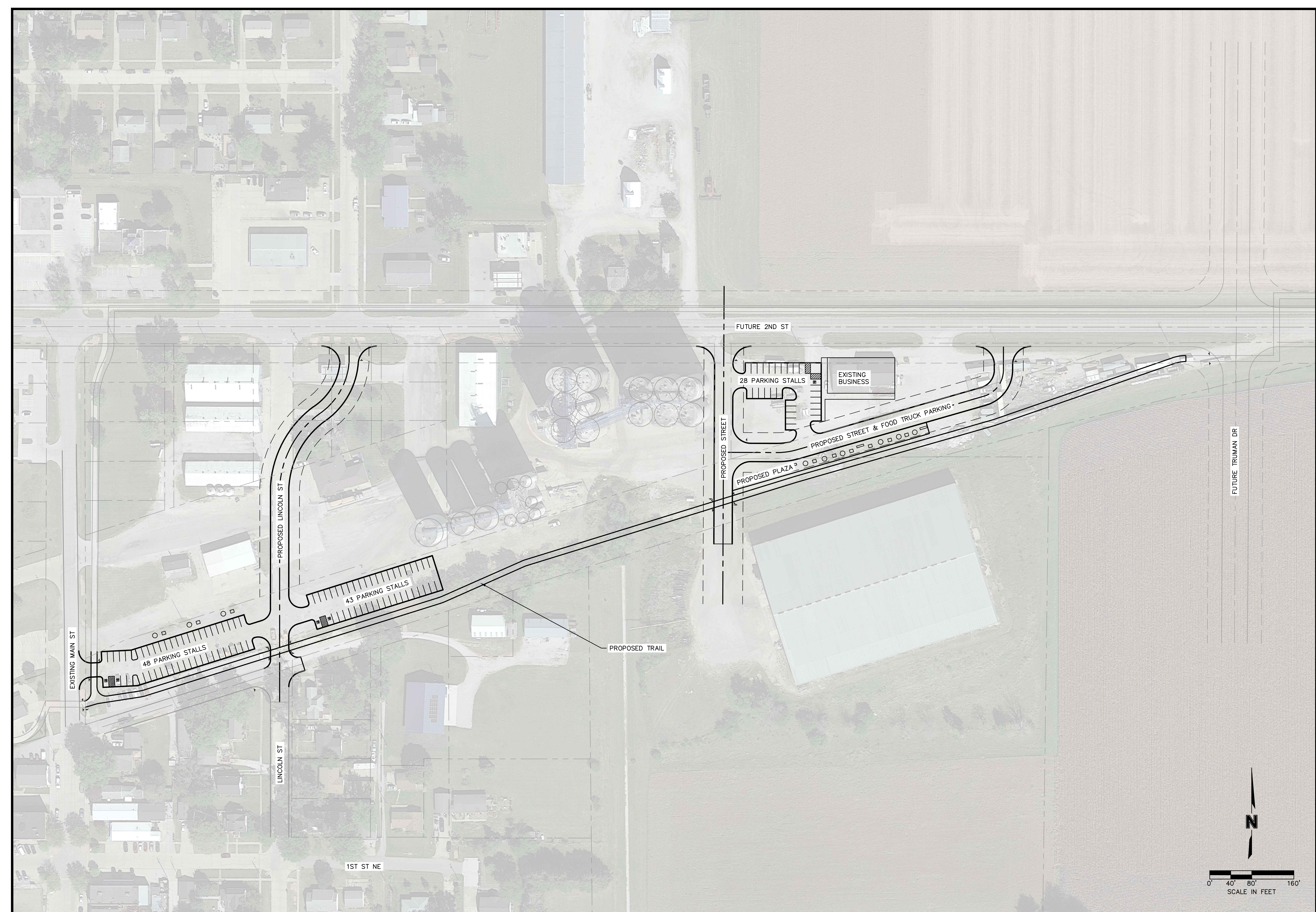
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SHEET NAME
 SITE LAYOUT

SHEET NO.
C1.1





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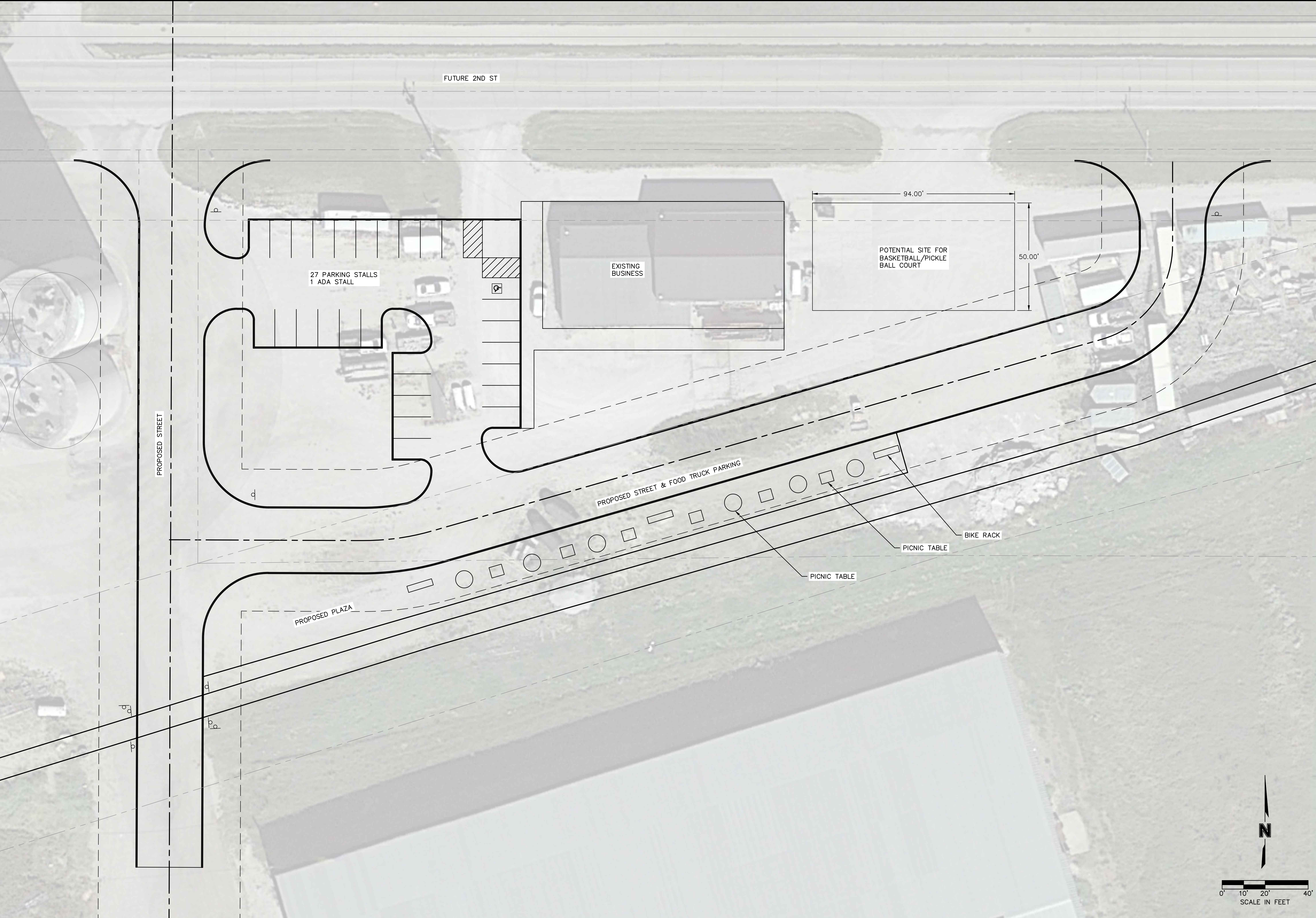
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SHEET NAME
 SITE LAYOUT

SHEET NO.
C1.2



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SHEET NAME
 SITE LAYOUT

SHEET NO.
C1.3



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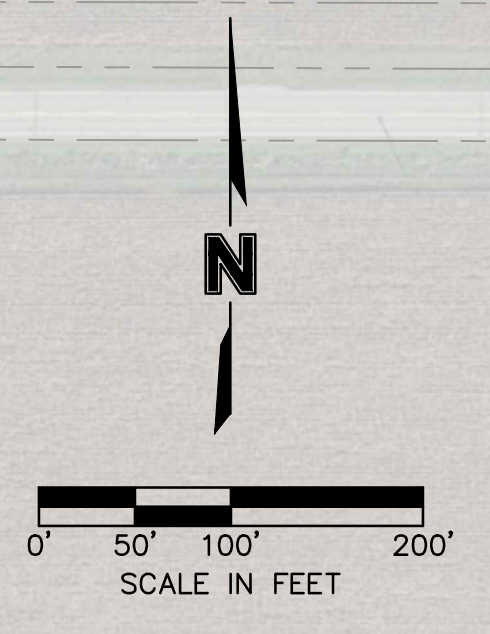
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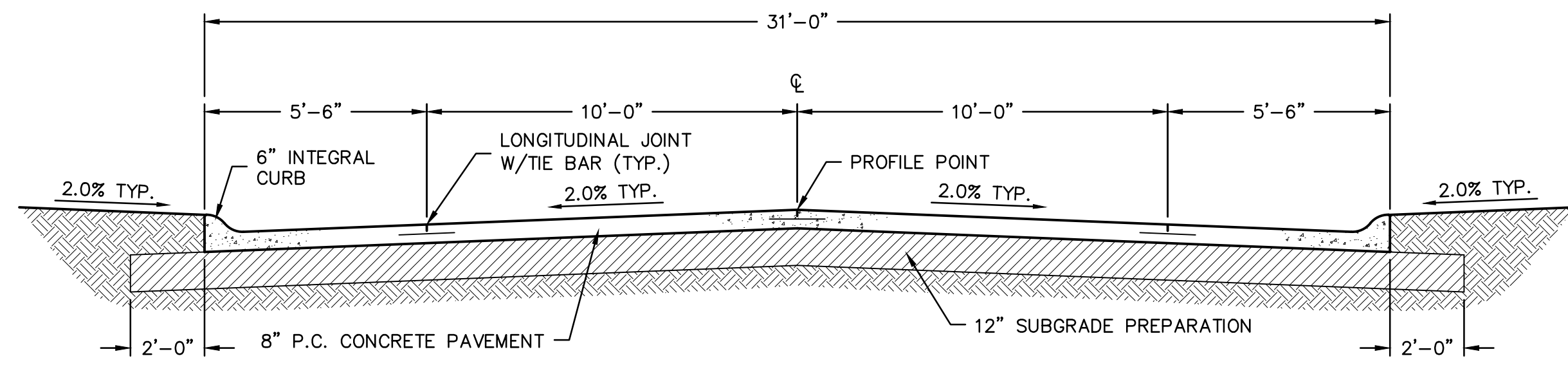
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 BONDURANT, IA

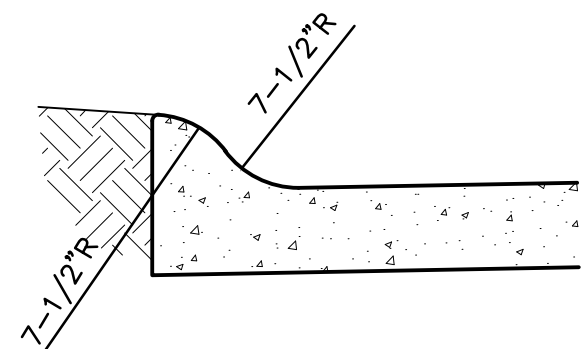
SHEET NAME
 SITE LAYOUT

SHEET NO.
C1.4

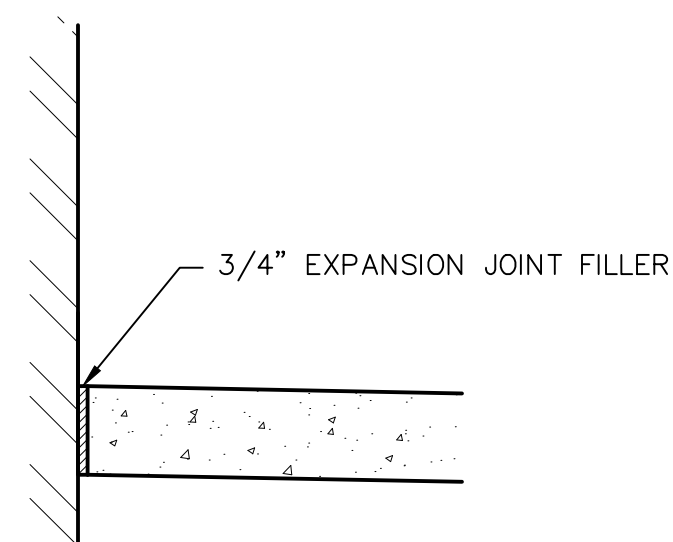




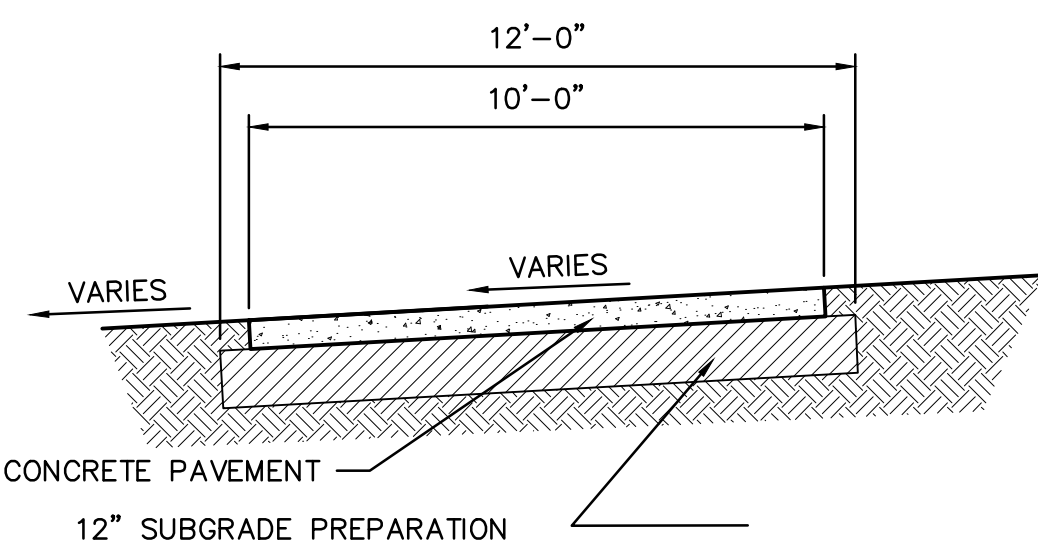
31' B-B TYPICAL SECTION
NOT TO SCALE



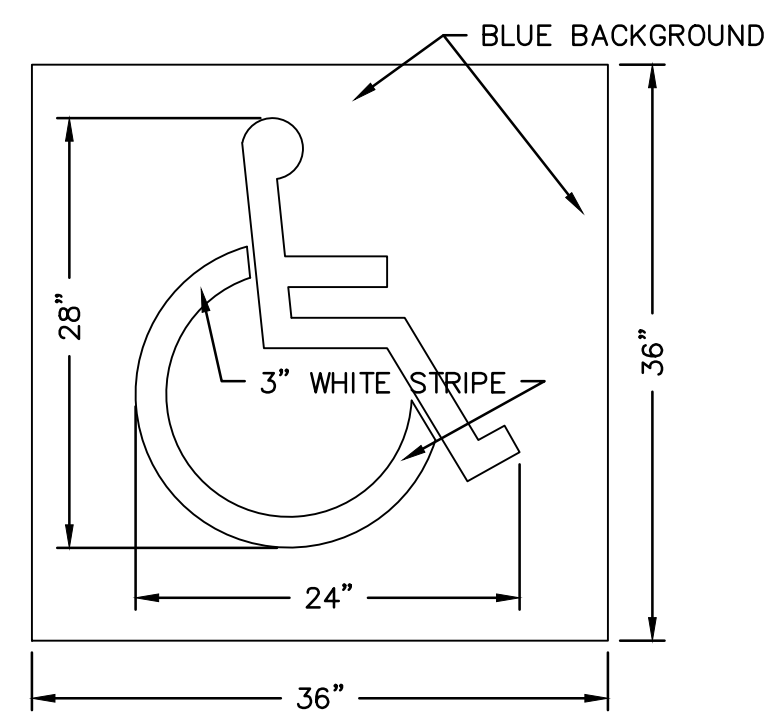
INTEGRAL CURB
NOT TO SCALE



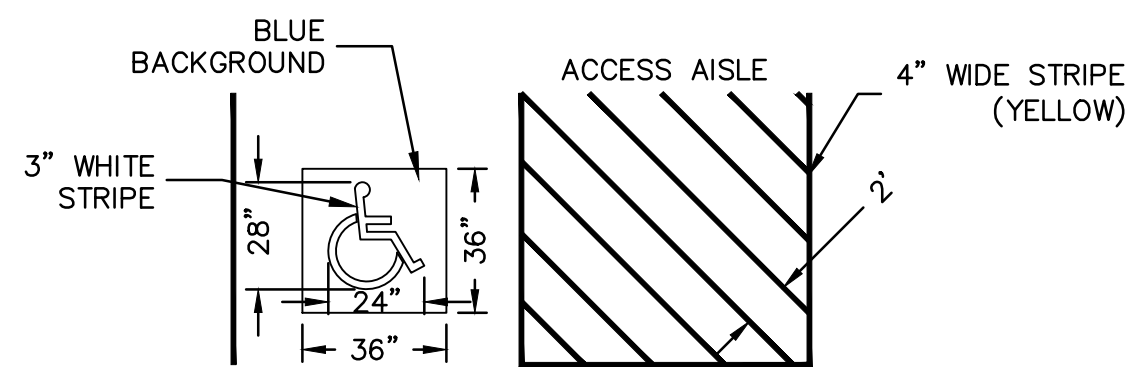
TYPICAL SIDEWALK/BUILDING DETAIL
NOT TO SCALE



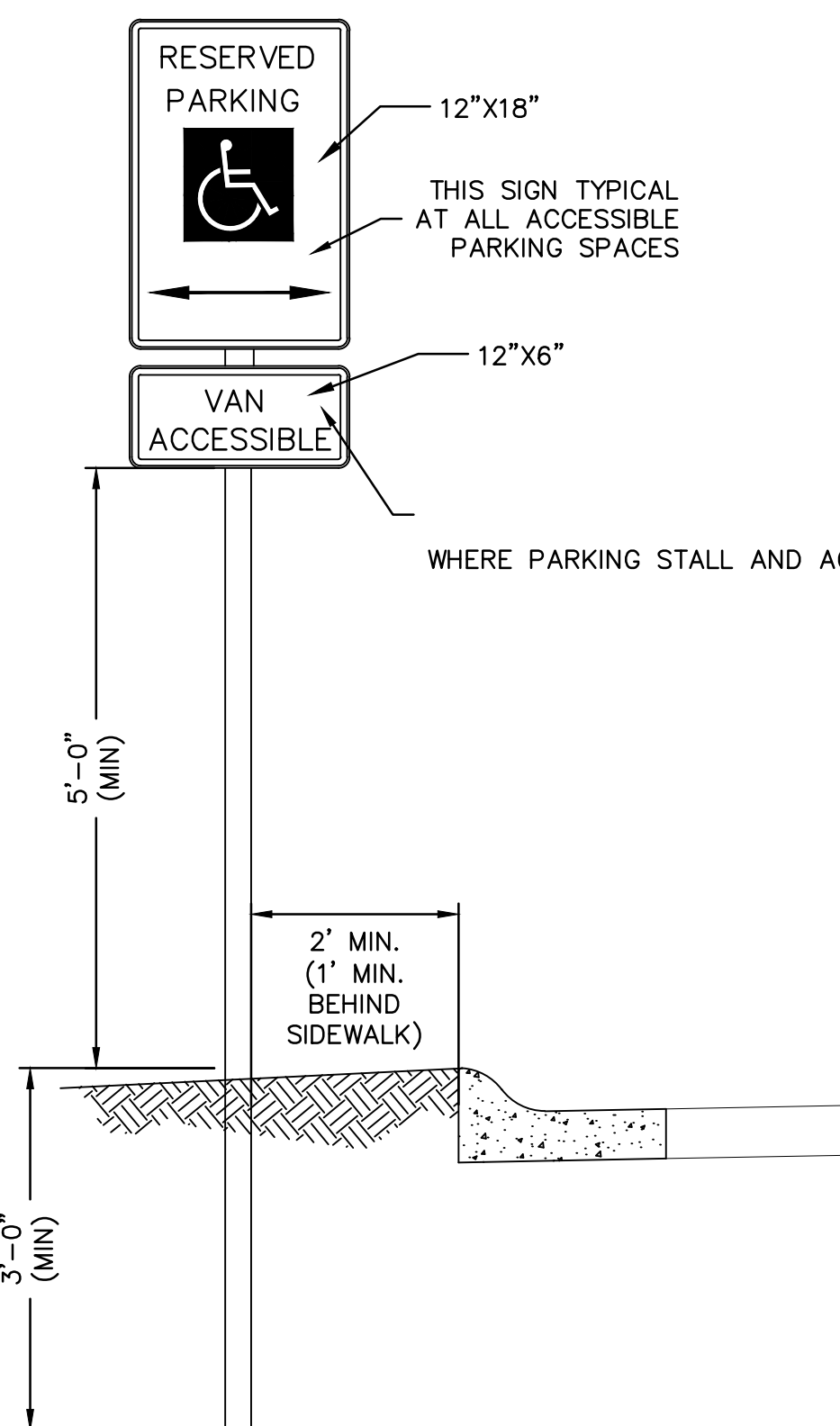
TYPICAL 10' BIKE TRAIL
NOT TO SCALE



ACCESSIBLE PARKING SYMBOL
LOCATE AT EDGE OF PARKING SPACE

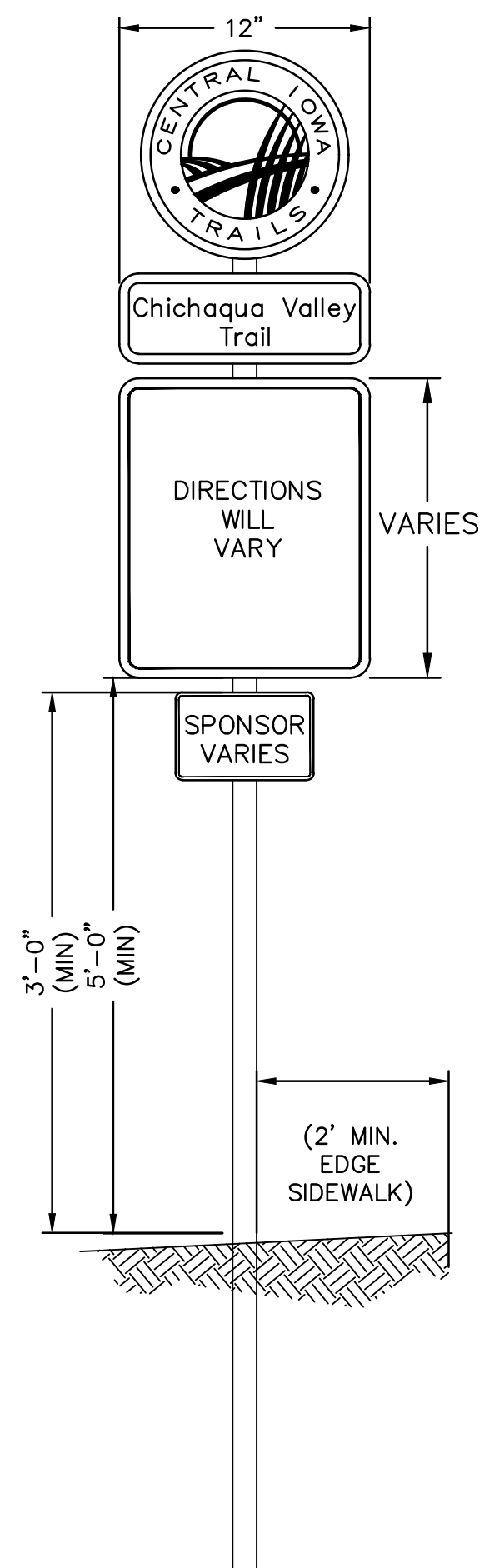


ACCESSIBLE PARKING SYMBOL

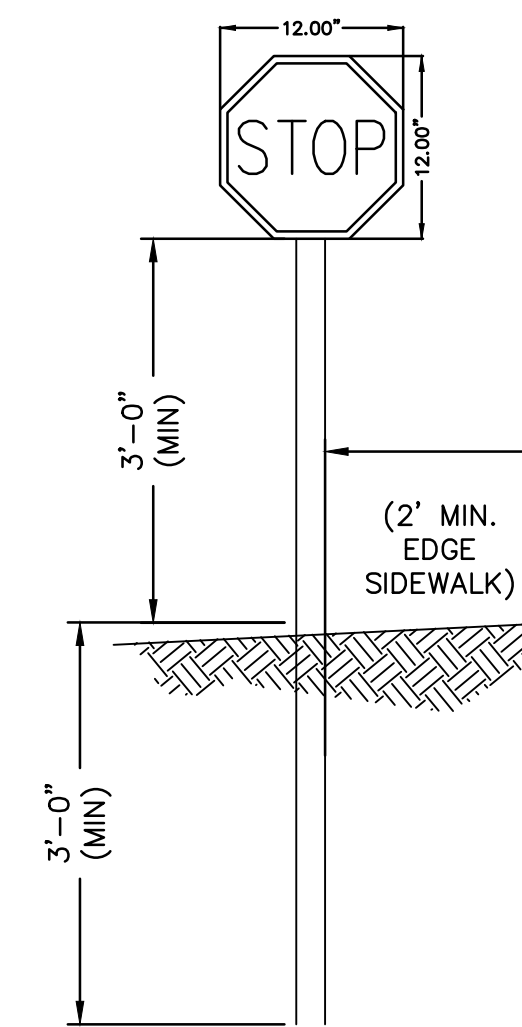


ADA SIGN
NOT TO SCALE

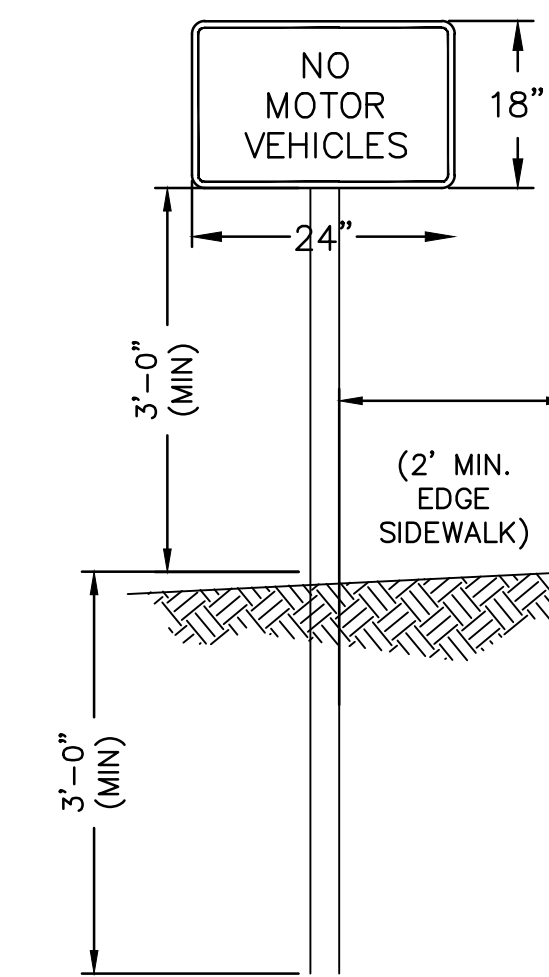
THIS SIGN TYPICAL AT ALL ACCESSIBLE PARKING SPACES WHERE PARKING STALL AND ACCESS AISLE WIDTH COMBINE = 16' OR GREATER



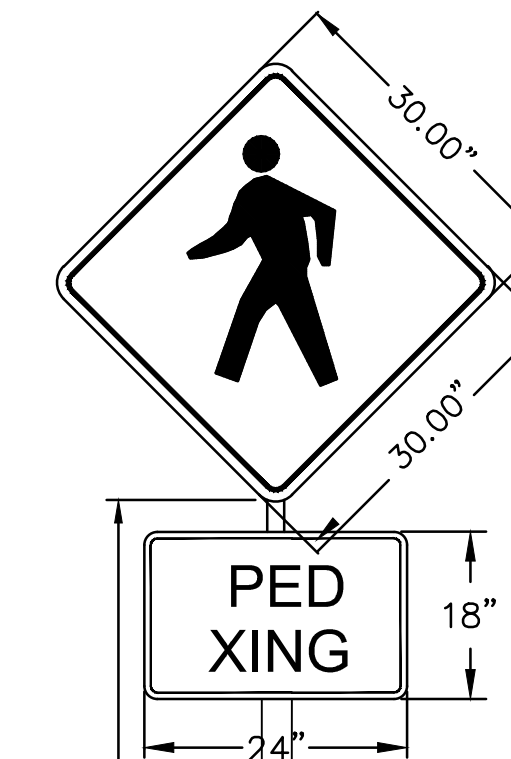
DIRECTIONAL SIGN
NOT TO SCALE



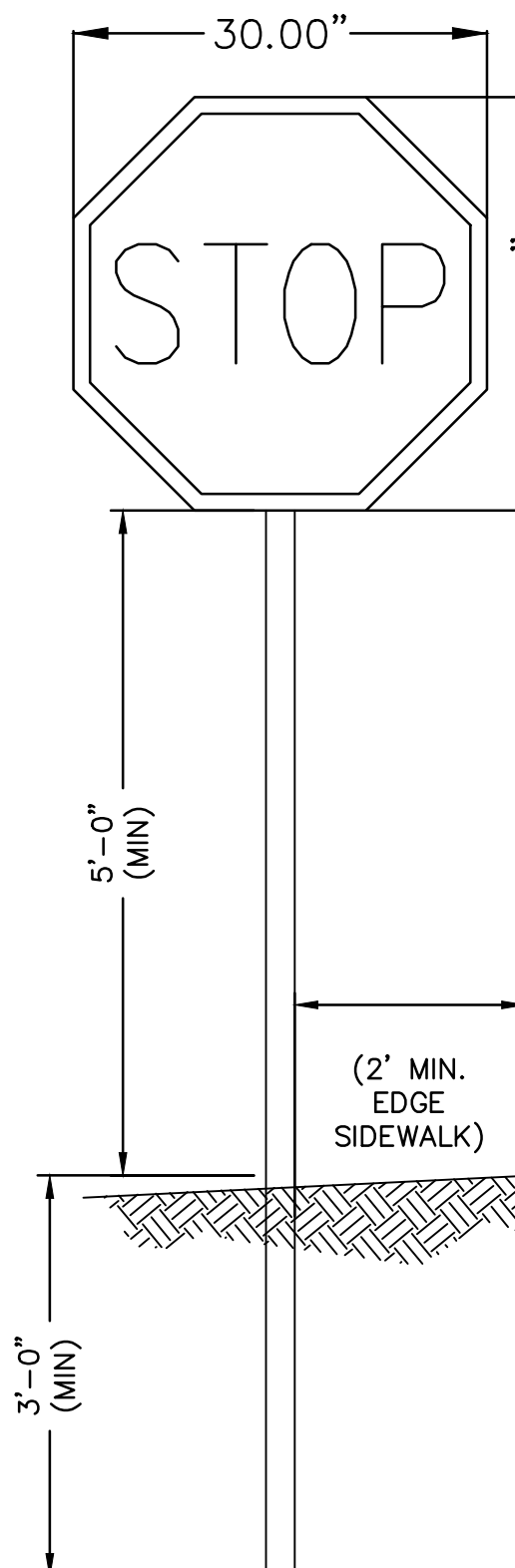
BIKE TRAIL STOP SIGN
NOT TO SCALE



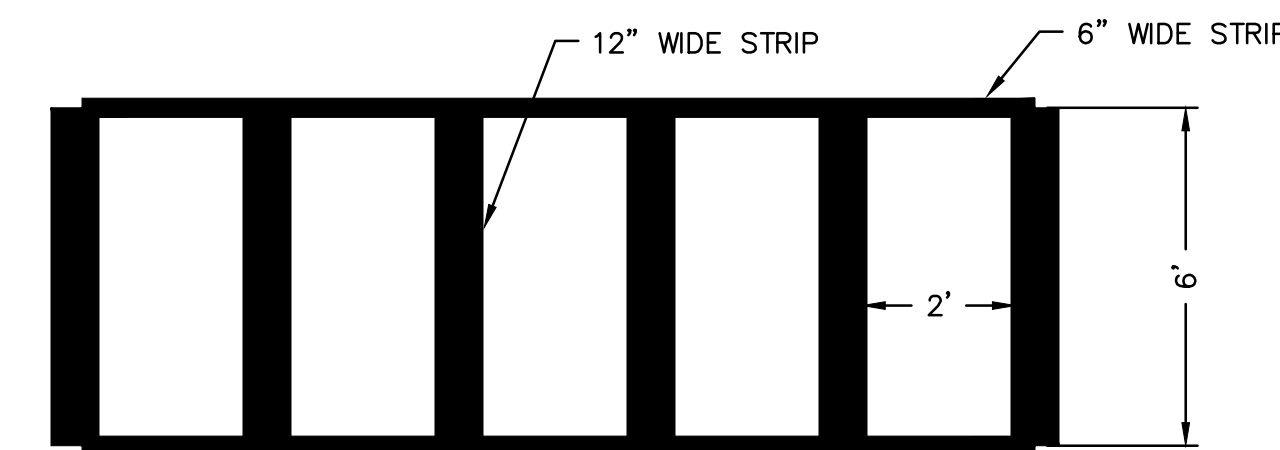
NO MOTOR VEHICLES SIGN
NOT TO SCALE



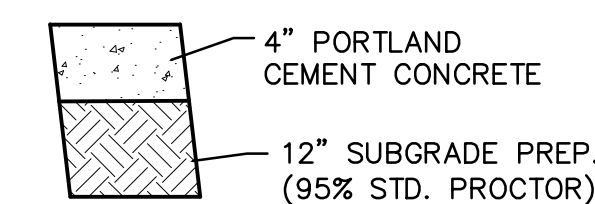
PEDESTRIAN CROSSING SIGN
NOT TO SCALE



STOP SIGN
NOT TO SCALE



CROSSWALK STRIPING DETAIL
NOT TO SCALE



SIDEWALK CONCRETE
TYP. SECTION
NOT TO SCALE

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DETAILS
BONDURANT, IA

SHEET NAME

DETAILS

SHEET NO.

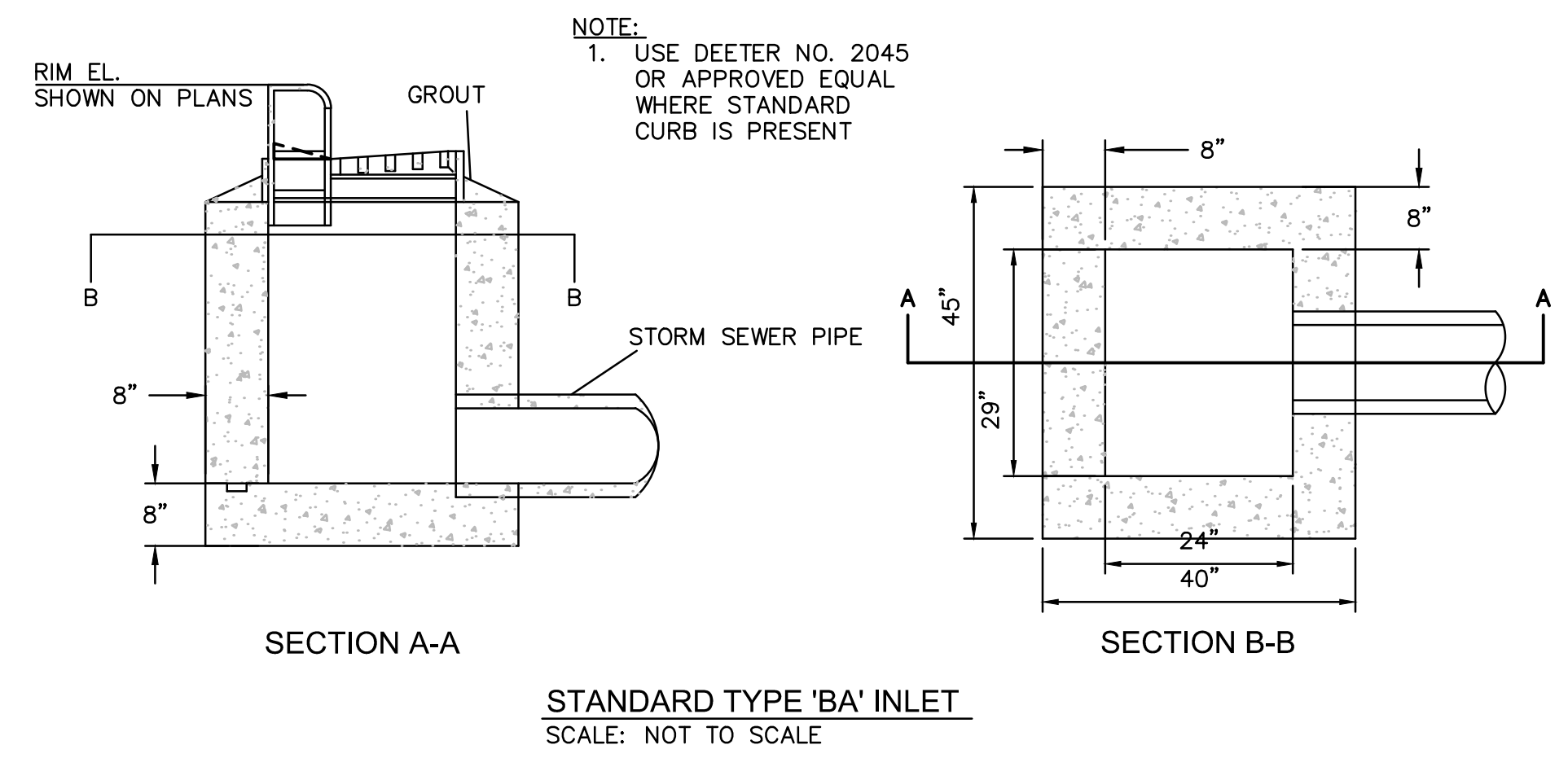
C2.1

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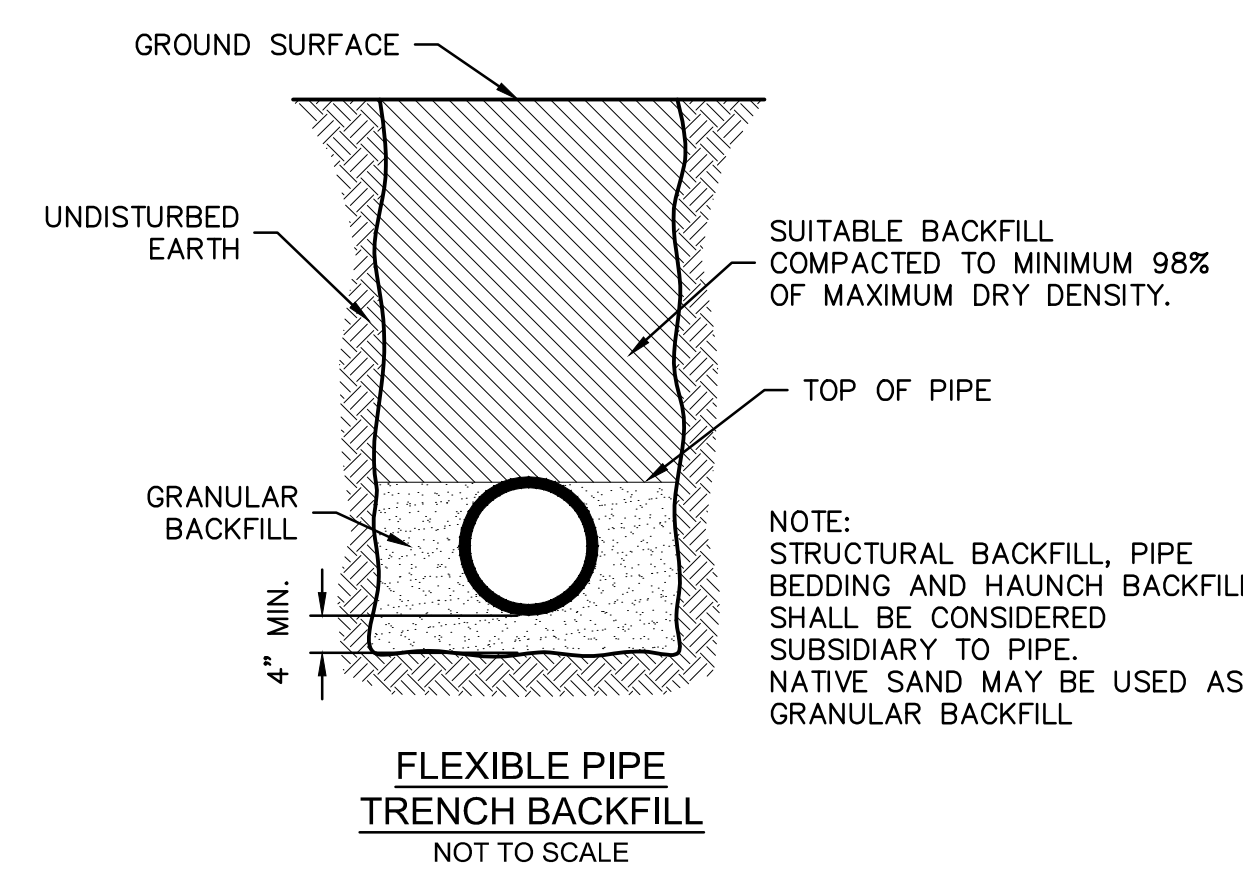
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 DETAILS
 BONDURANT, IA

SHEET NAME
 DETAILS
 SHEET NO.

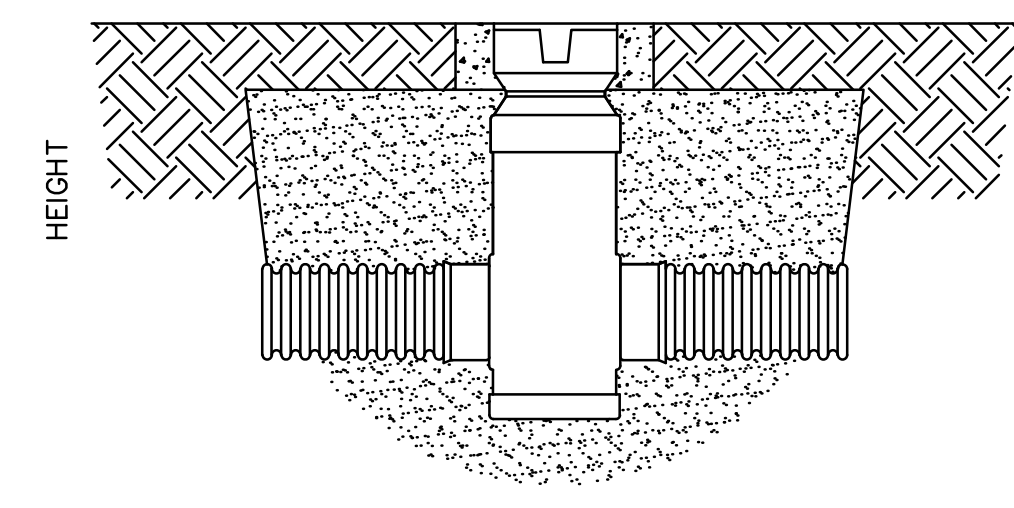
C2.2



STANDARD TYPE 'BA' INLET
 SCALE: NOT TO SCALE

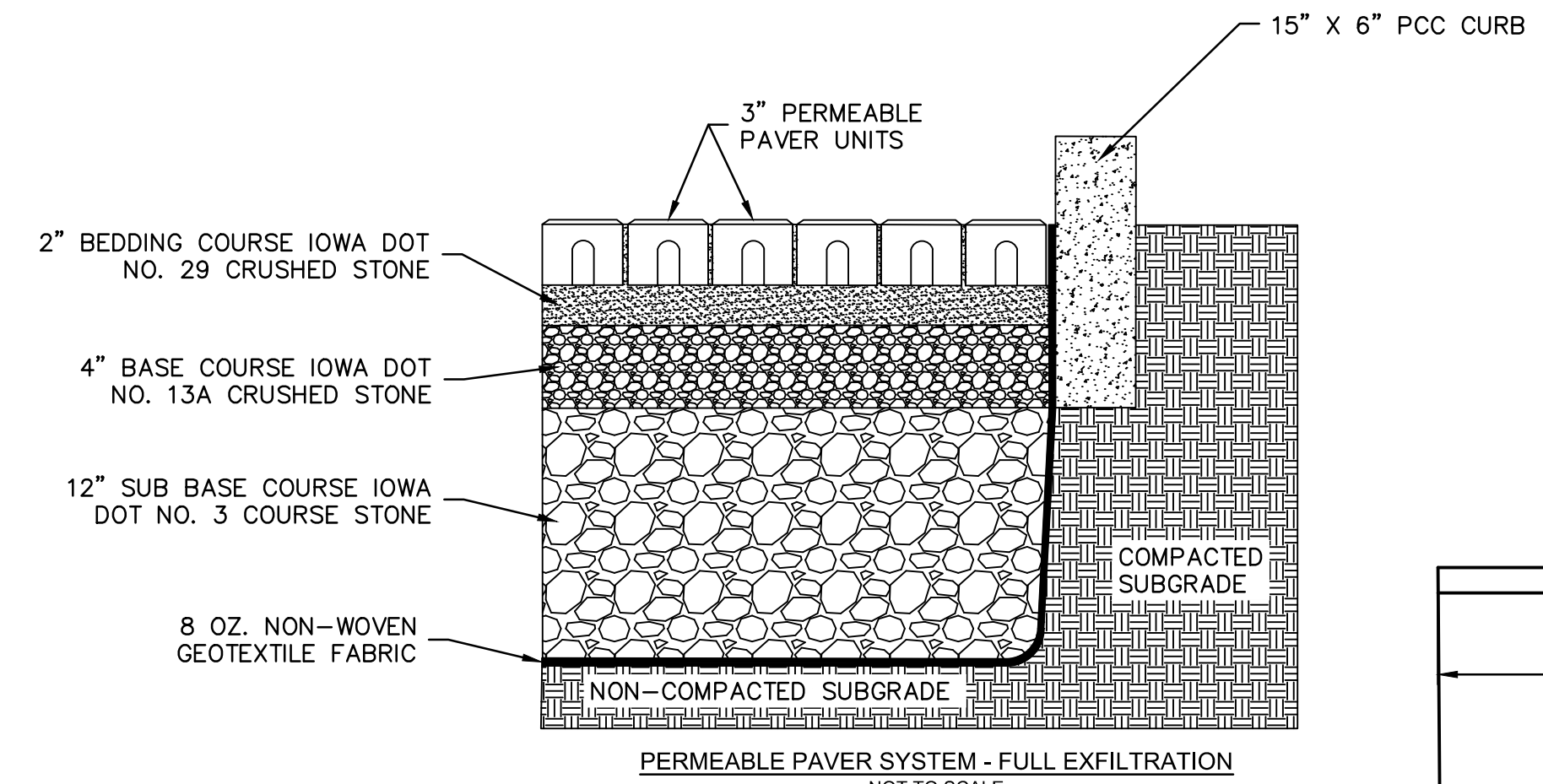


FLEXIBLE PIPE TRENCH BACKFILL
 NOT TO SCALE

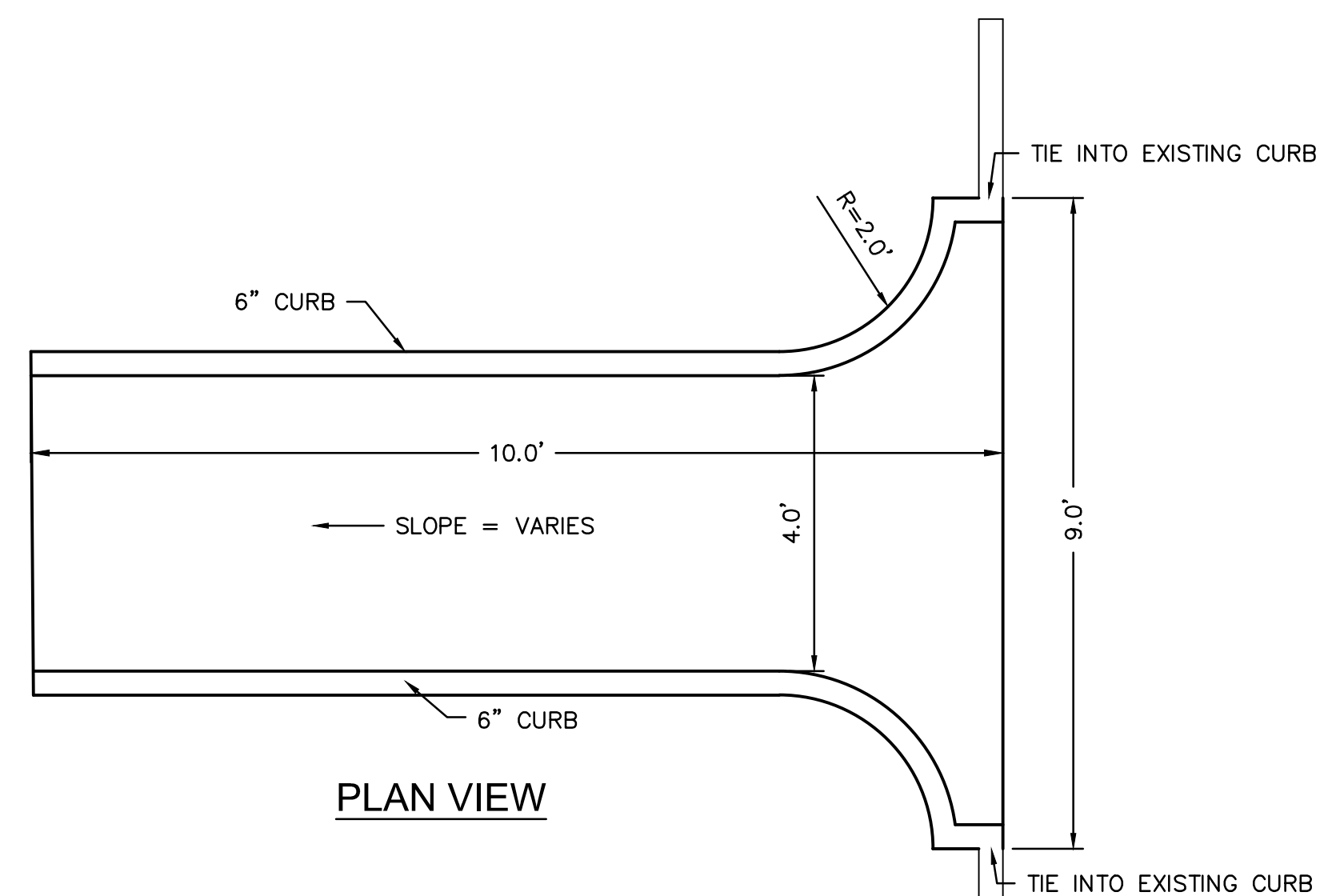


DRAIN BASIN DETAIL
 NOT TO SCALE

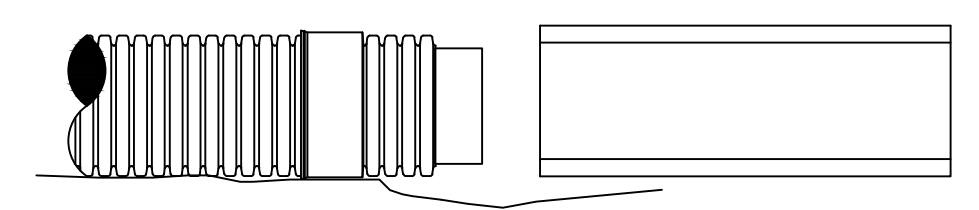
- NOTES:
1. BACKFILL MATERIAL SHALL BE CRUSHED STONE OR GRAVEL MATERIAL MEETING CLASS 1 OR 2 AS SPECIFIED IN ASTM D2321.
 2. SUITABLE BACKFILL COMPACTED TO MINIMUM 92% OF MAXIMUM DRY DENSITY UNDER TURF AREAS AND 95% UNDER PAVEMENT (98% AT TOP 12" UNDER PAVEMENT)



PERMEABLE PAVER SYSTEM - FULL EXFILTRATION
 NOT TO SCALE

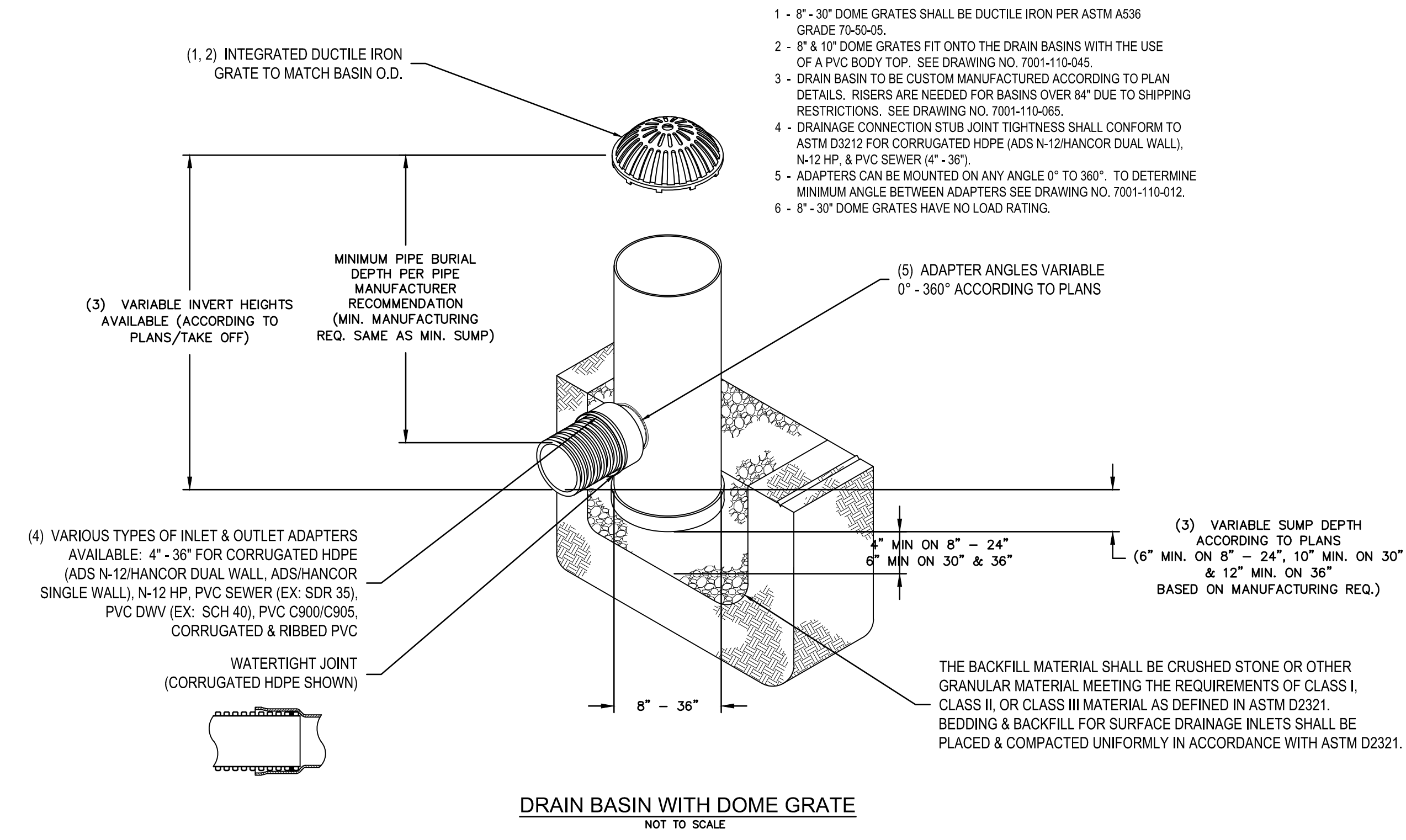


PLAN VIEW

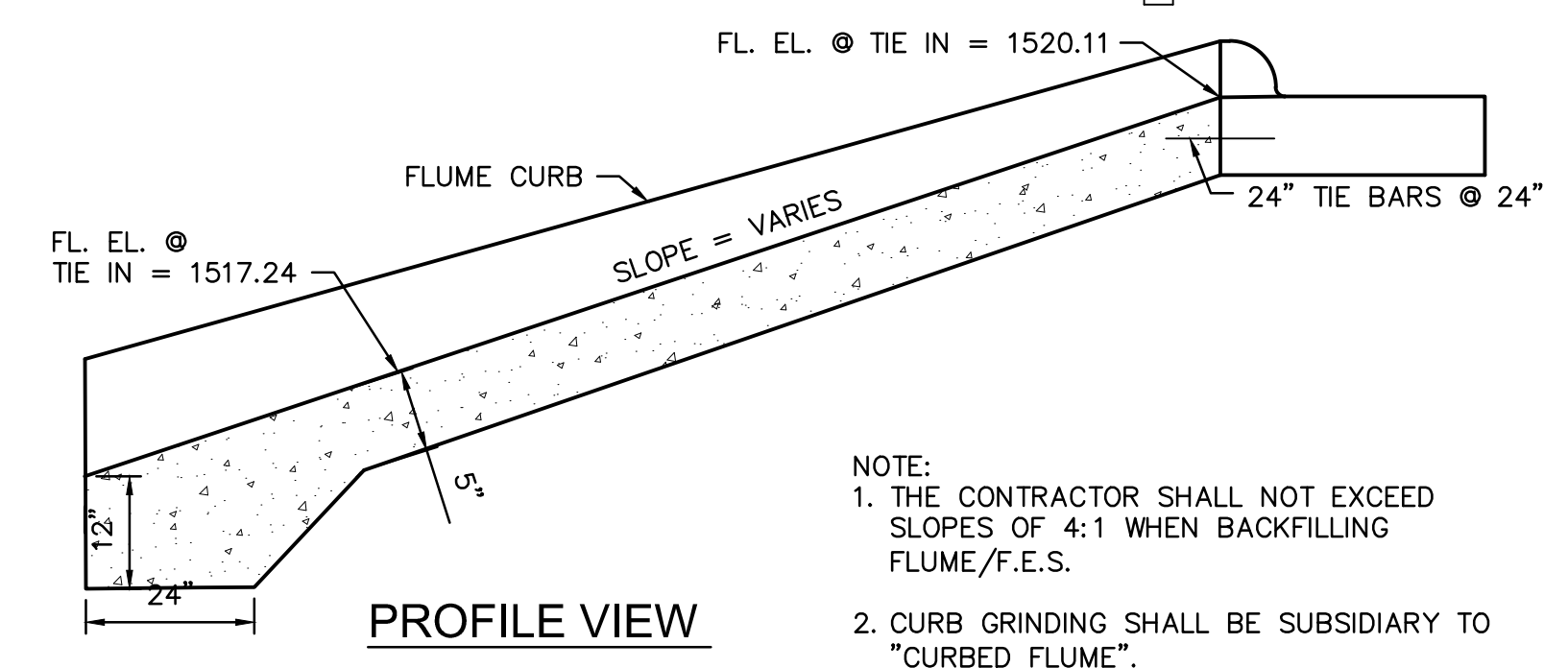


HDPE TO CONCRETE DETAIL
 NOT TO SCALE

- NOTES:
1. COUPLER NOT REQUIRED IF USING BELLED CONCRETE PIPE/FLARED END.
 2. DOUBLE WIDE MARMAC COUPLER, OR APPROVED EQUAL, MAY BE USED IN PLACE OF CONCRETE COLLAR.



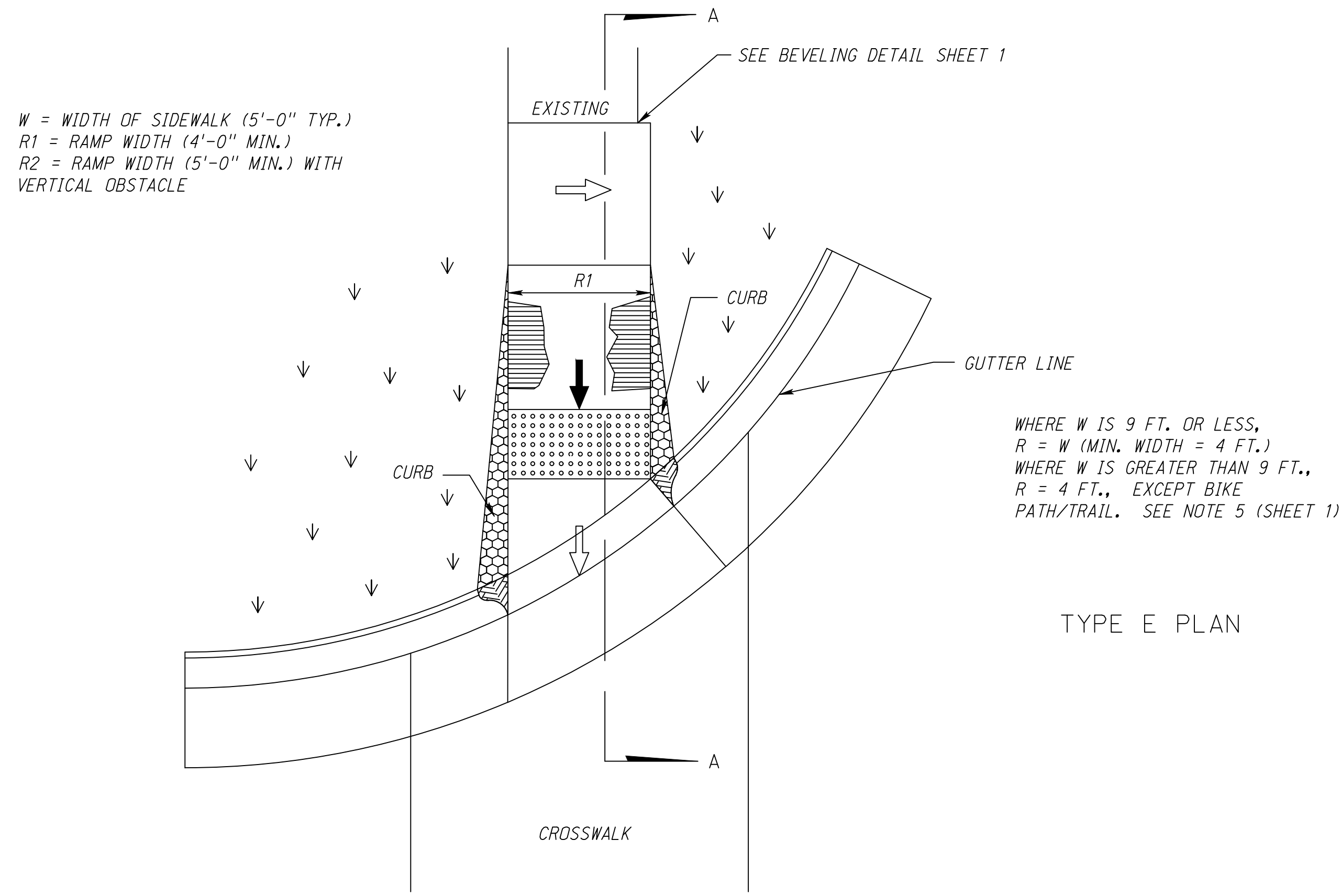
DRAIN BASIN WITH DOME GRATE
 NOT TO SCALE



PROFILE VIEW

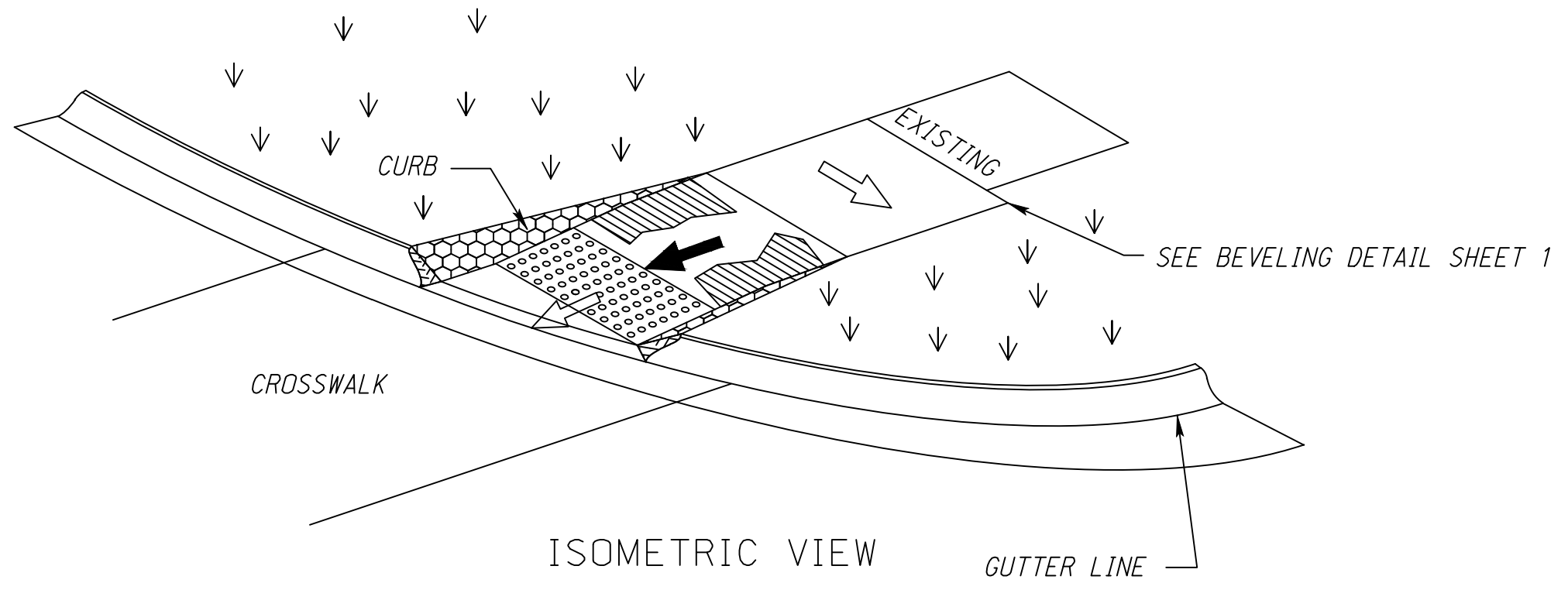
FLUME STRUCTURE B
 NOT TO SCALE

- NOTE:
1. THE CONTRACTOR SHALL NOT EXCEED SLOPES OF 4:1 WHEN BACKFILLING FLUME/F.E.S.
 2. CURB GRINDING SHALL BE SUBSIDIARY TO "CURBED FLUME".

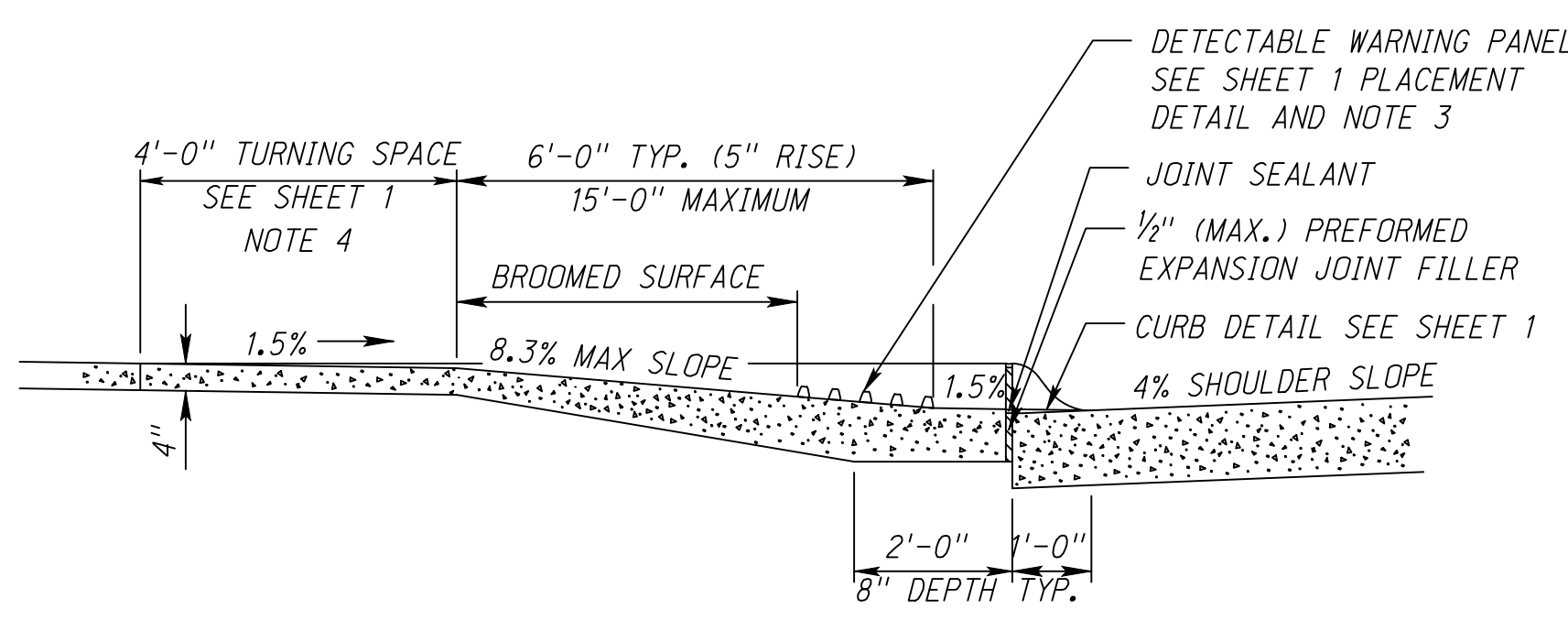


WHERE W IS 9 FT. OR LESS,
R = W (MIN. WIDTH = 4 FT.)
WHERE W IS GREATER THAN 9 FT.,
R = 4 FT., EXCEPT BIKE
PATH/TRAIL. SEE NOTE 5 (SHEET 1)

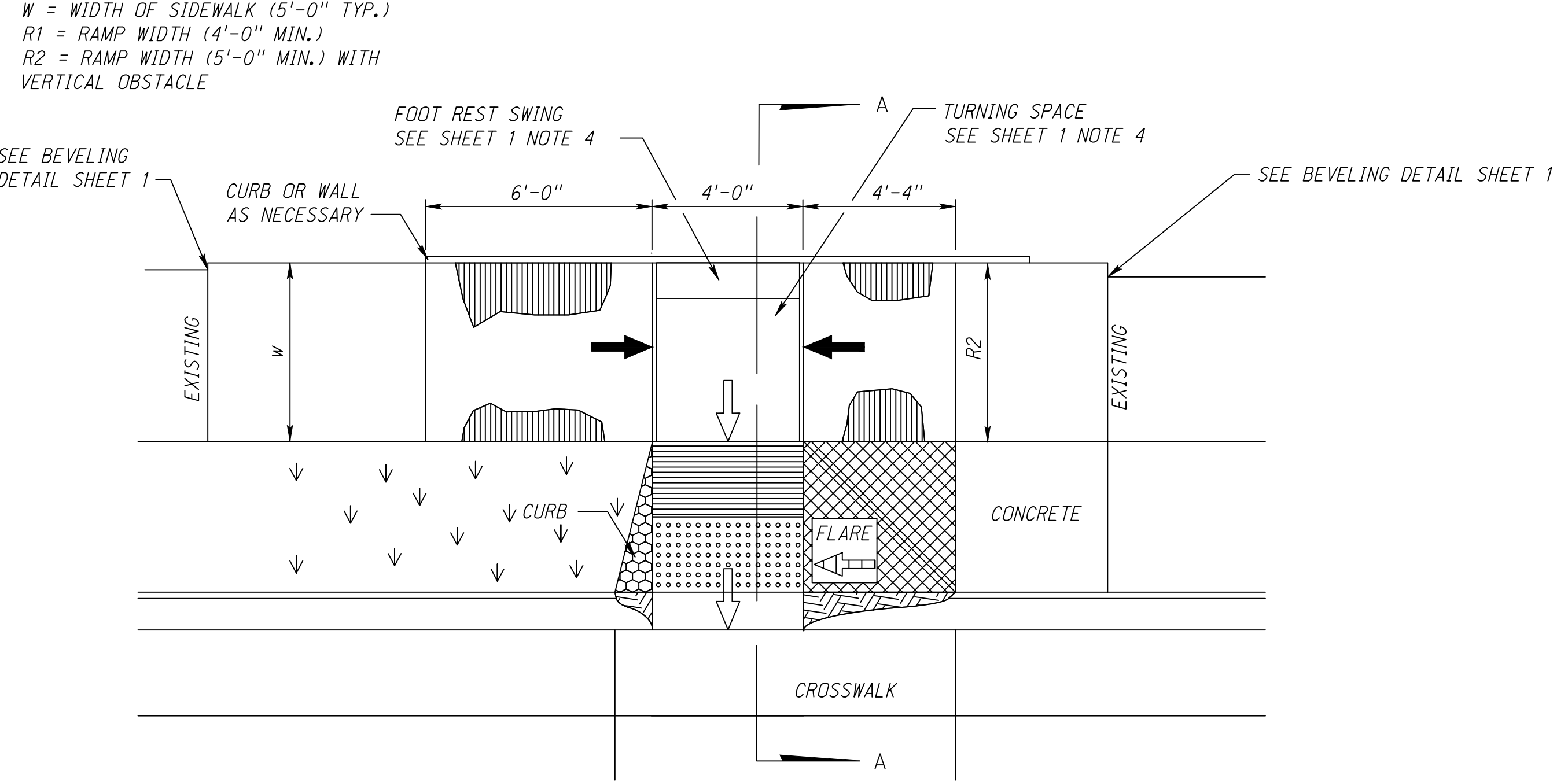
TYPE E PLAN



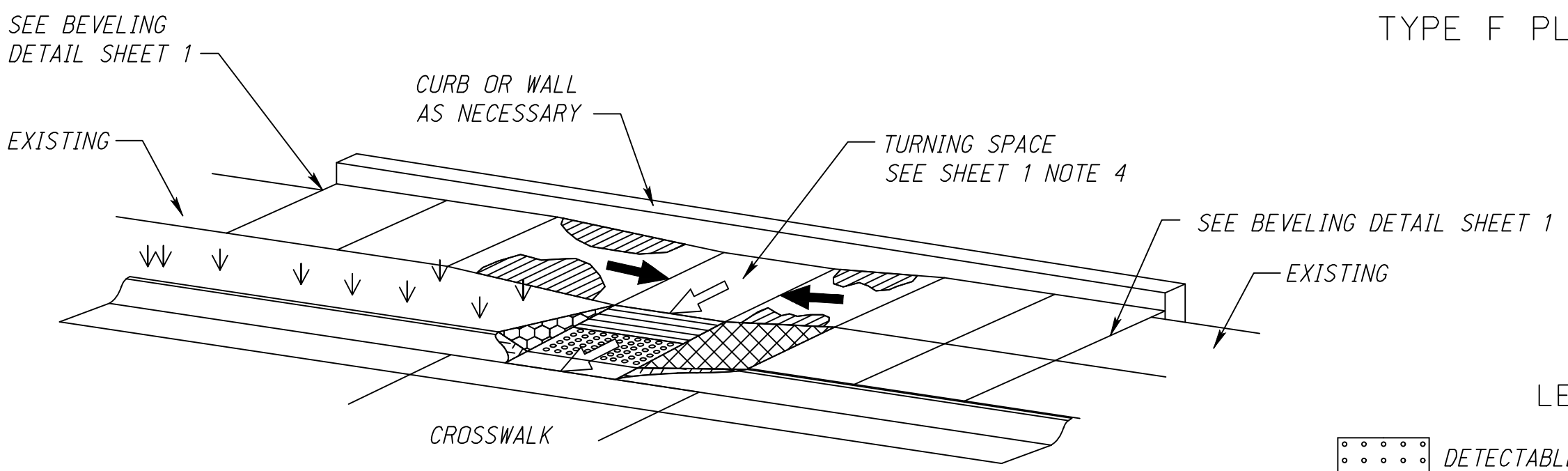
ISOMETRIC VIEW



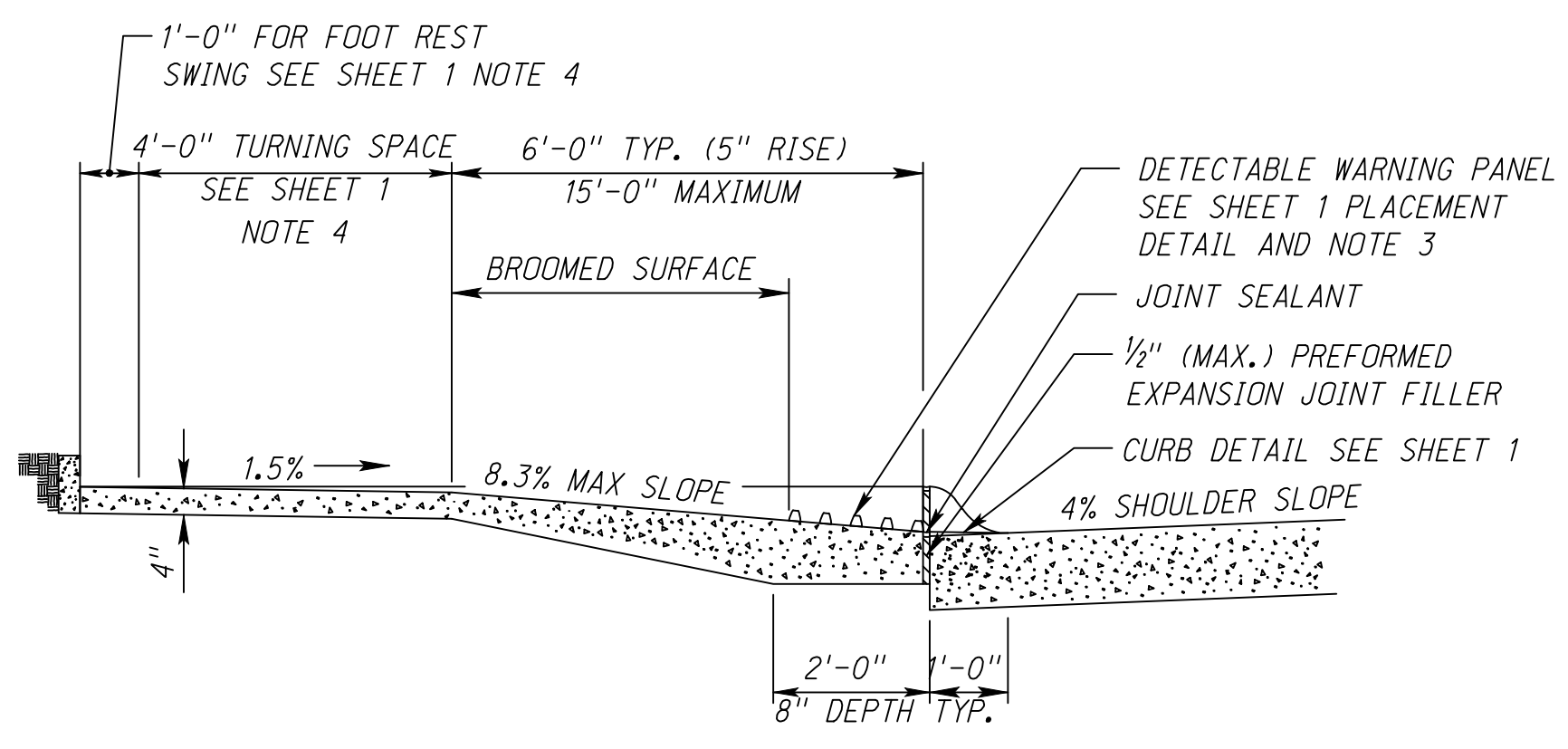
TYPE E CROSS SECTION
SECTION A-A



TYPE F PLAN



ISOMETRIC VIEW



TYPE F CROSS SECTION
SECTION A-A

- LEGEND
- DETECTABLE WARNING PANEL (DWP)
 - BROOMED CURB RAMP WHEN 5% TO 8.3%
 - RAMP FLARE
 - GRASS OR NON WALKING SURFACE
 - CURB TRANSITION
 - CURB FACE SLOPE 1 VERT. : 2 HORIZ.

SLOPE LEGEND

	SIDEWALK/TURNING SPACE AND RAMP CROSS SLOPE 1.5% TYPICAL, 2.0% MAX. SLOPE
	RAMP RUNNING SLOPE 8.0% TYPICAL, 8.3% MAX. SLOPE
	FLARE 90° TO RAMP 9.0% TYPICAL, 10.0% MAX. SLOPE

THE CONTRACTOR SHOULD ACCOUNT FOR CONSTRUCTION TOLERANCES TO PREVENT EXCEEDING THE MAXIMUM SLOPES. ANY SLOPES EXCEEDING THE MAXIMUMS SHALL NOT BE ACCEPTED WITHOUT PRIOR APPROVAL FROM THE PROJECT MANAGER.

W = WIDTH OF SIDEWALK (5'-0" TYP.)
R1 = RAMP WIDTH (4'-0" MIN.)
R2 = RAMP WIDTH (5'-0" MIN.) WITH
VERTICAL OBSTACLE

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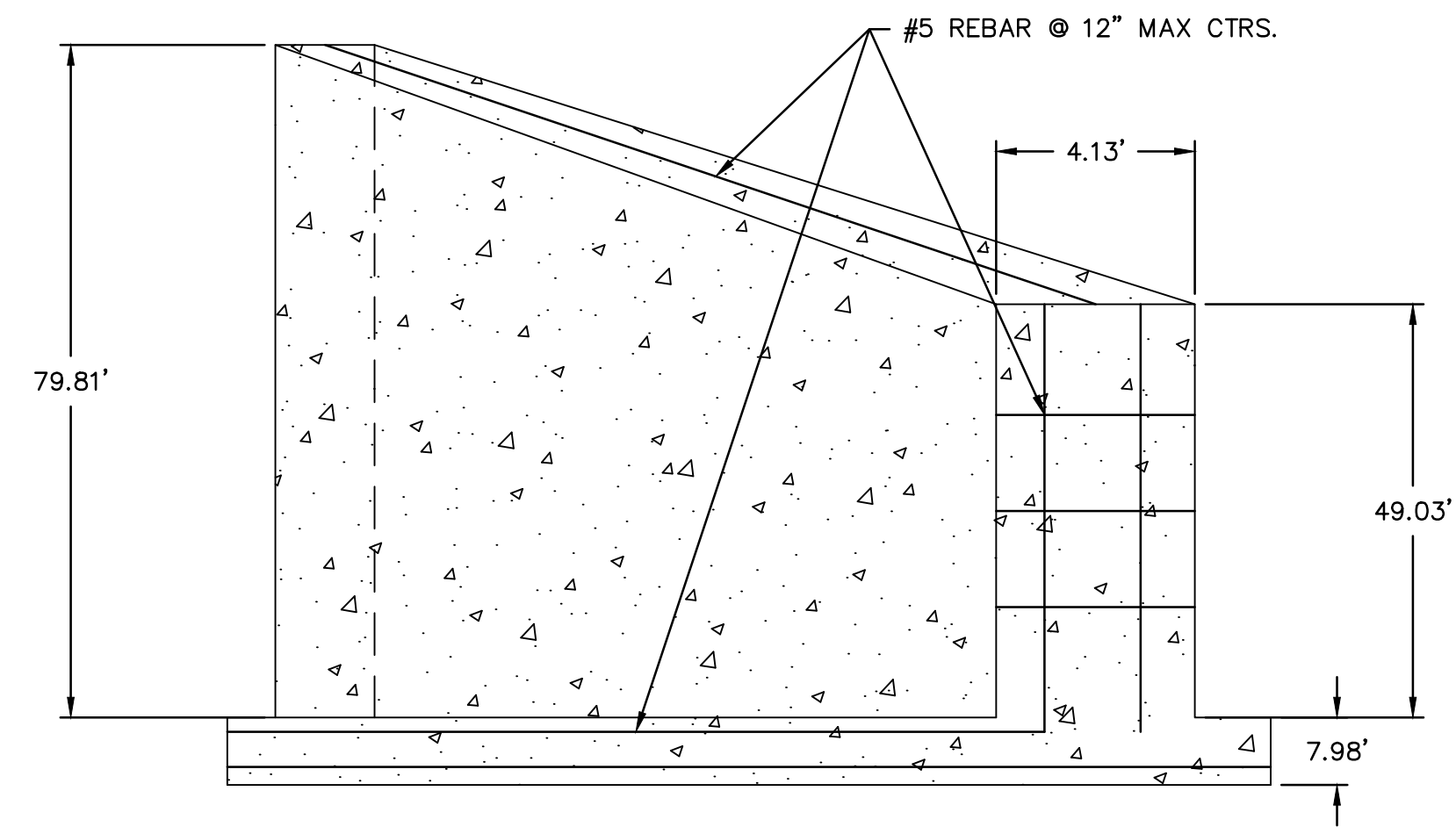
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SHEET NAME
DETAILS

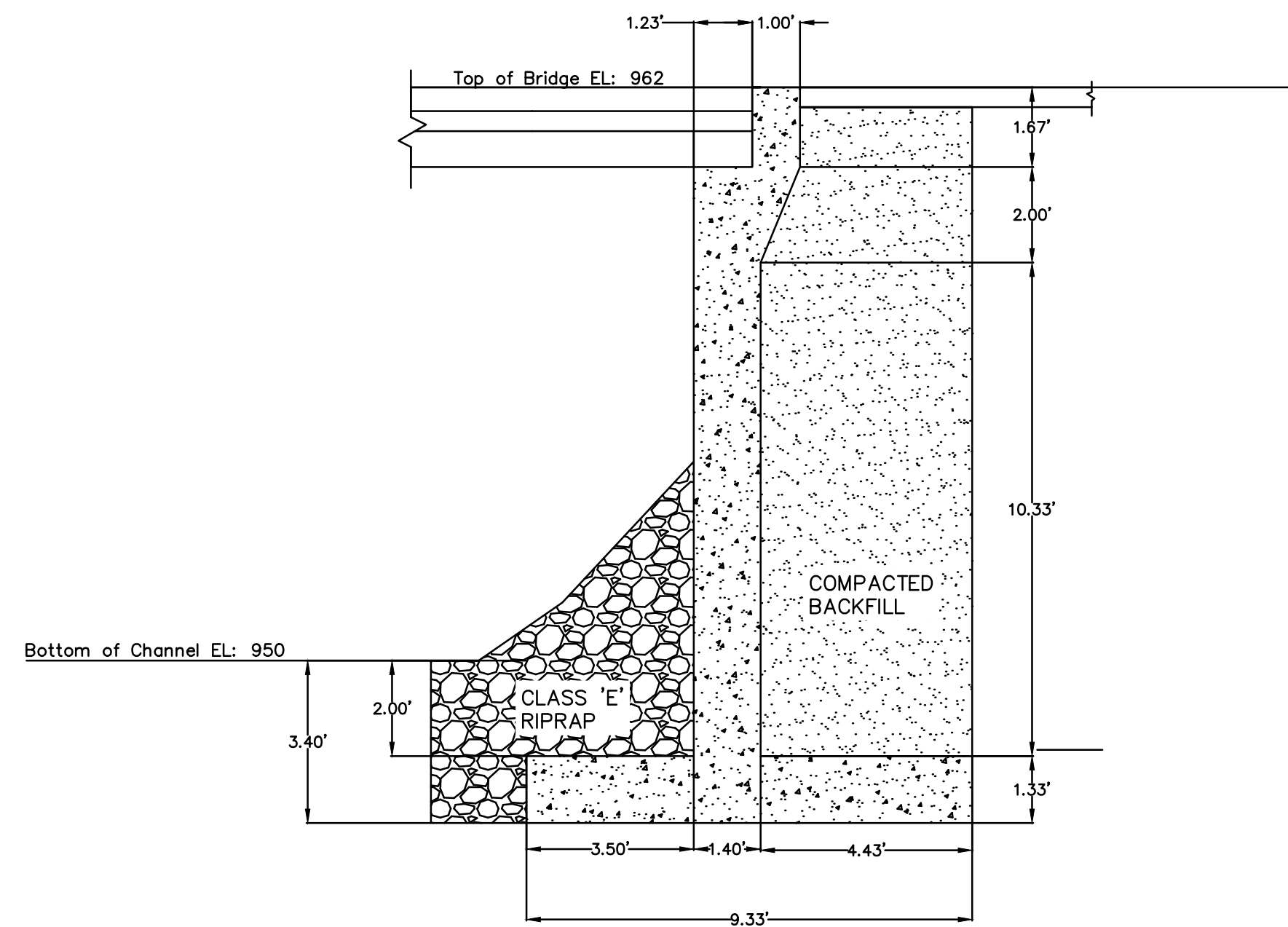
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C2.3



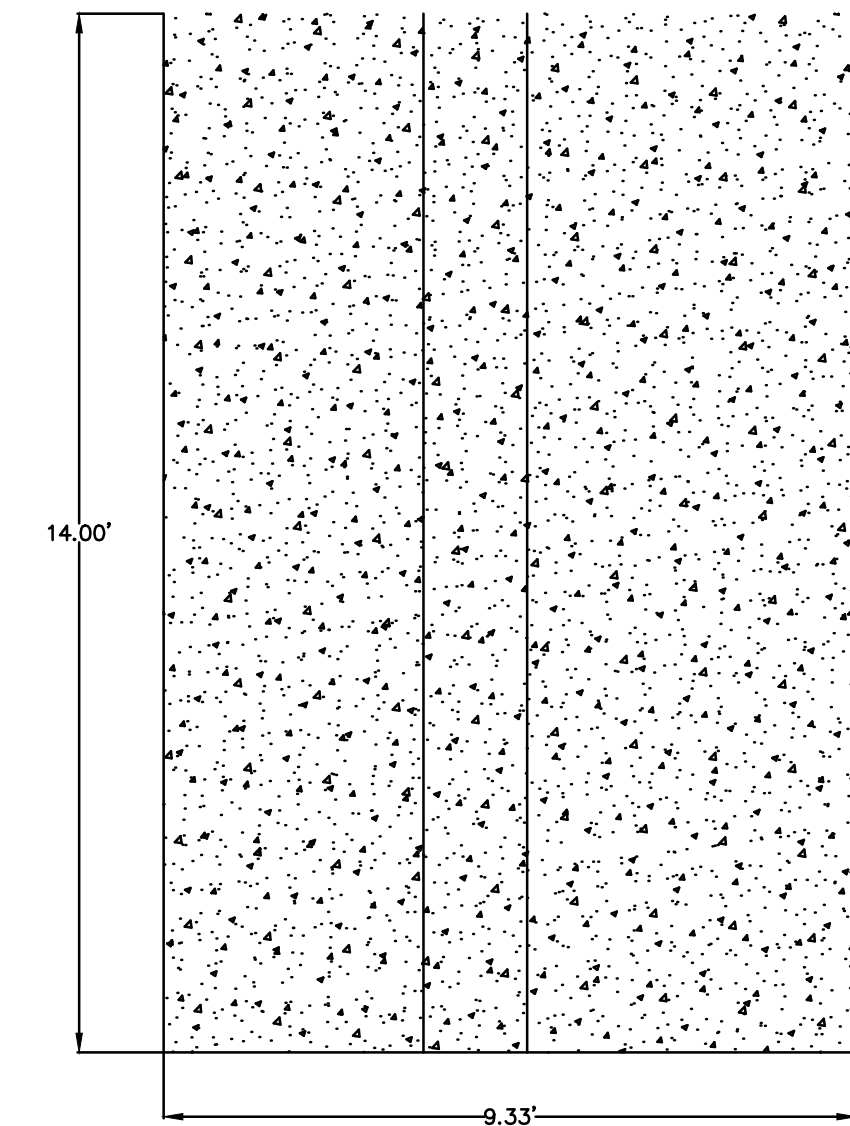
SECTION VIEW

ABUTMENT WING WALLS
NOT TO SCALE

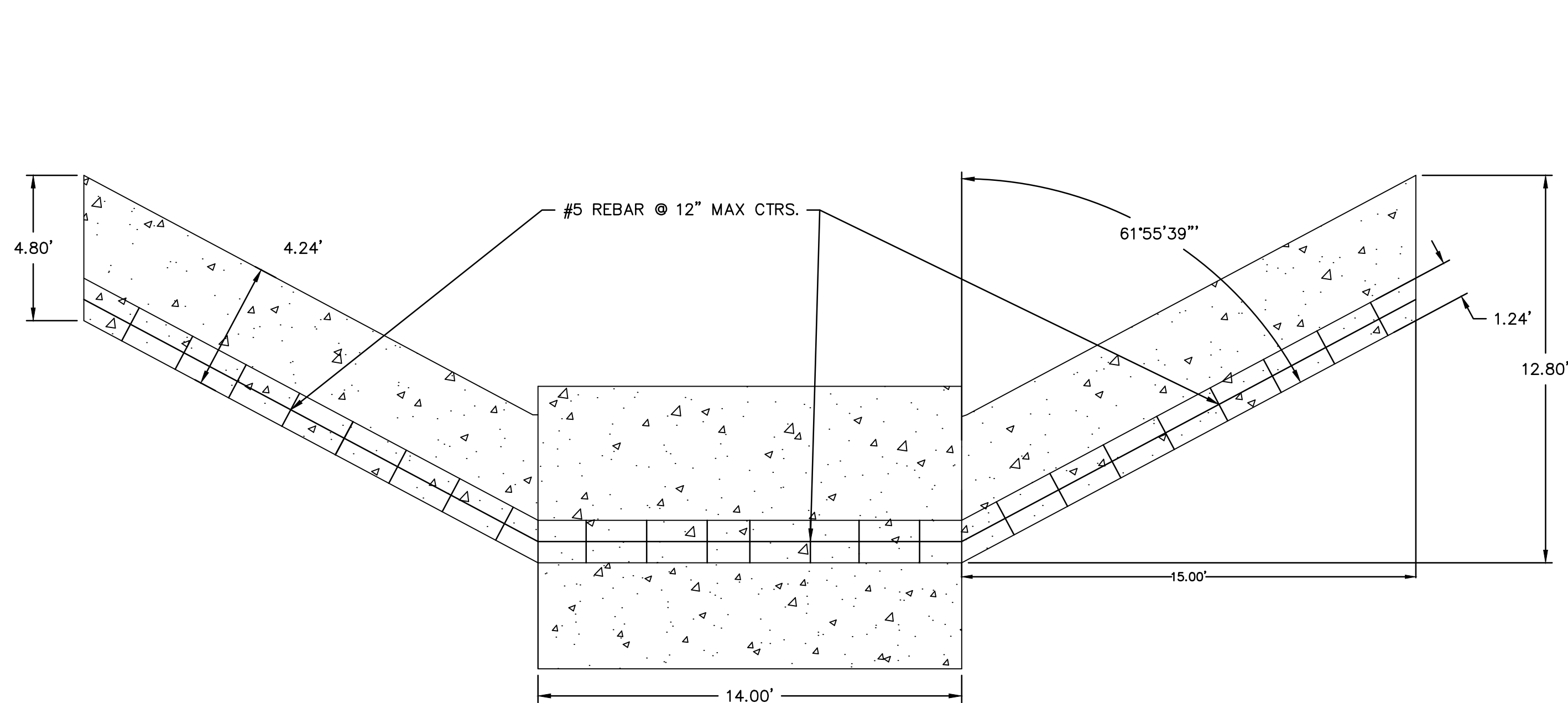


SECTION VIEW

BRIDGE ABUTMENT
NOT TO SCALE

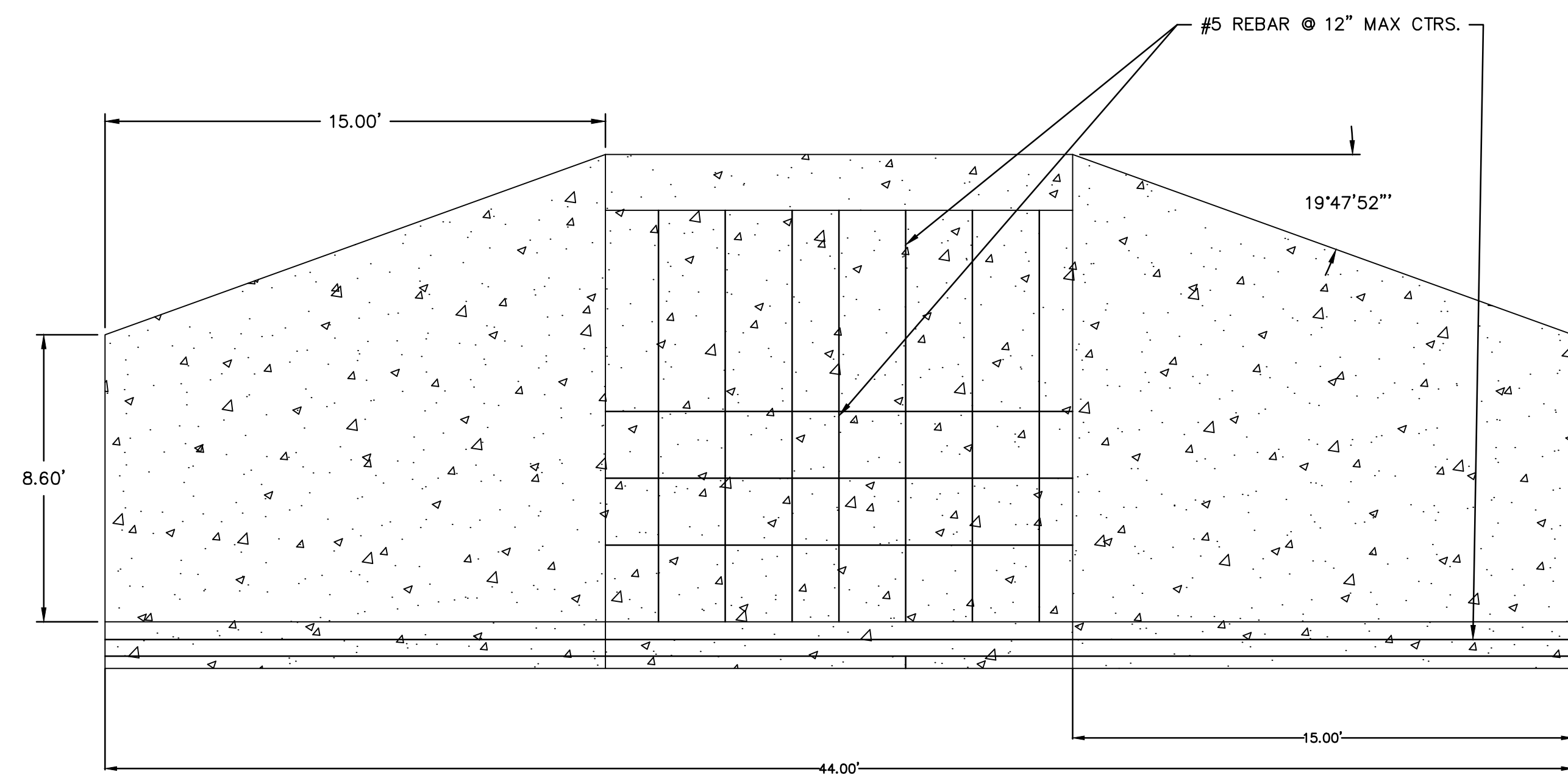


PLAN VIEW



PLAN VIEW

ABUTMENT WING WALLS
NOT TO SCALE



FRONT ELEVATION

ABUTMENT WING WALLS
NOT TO SCALE

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DETAILS
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SHEET NAME

ABUTMENTS

SHEET NO.

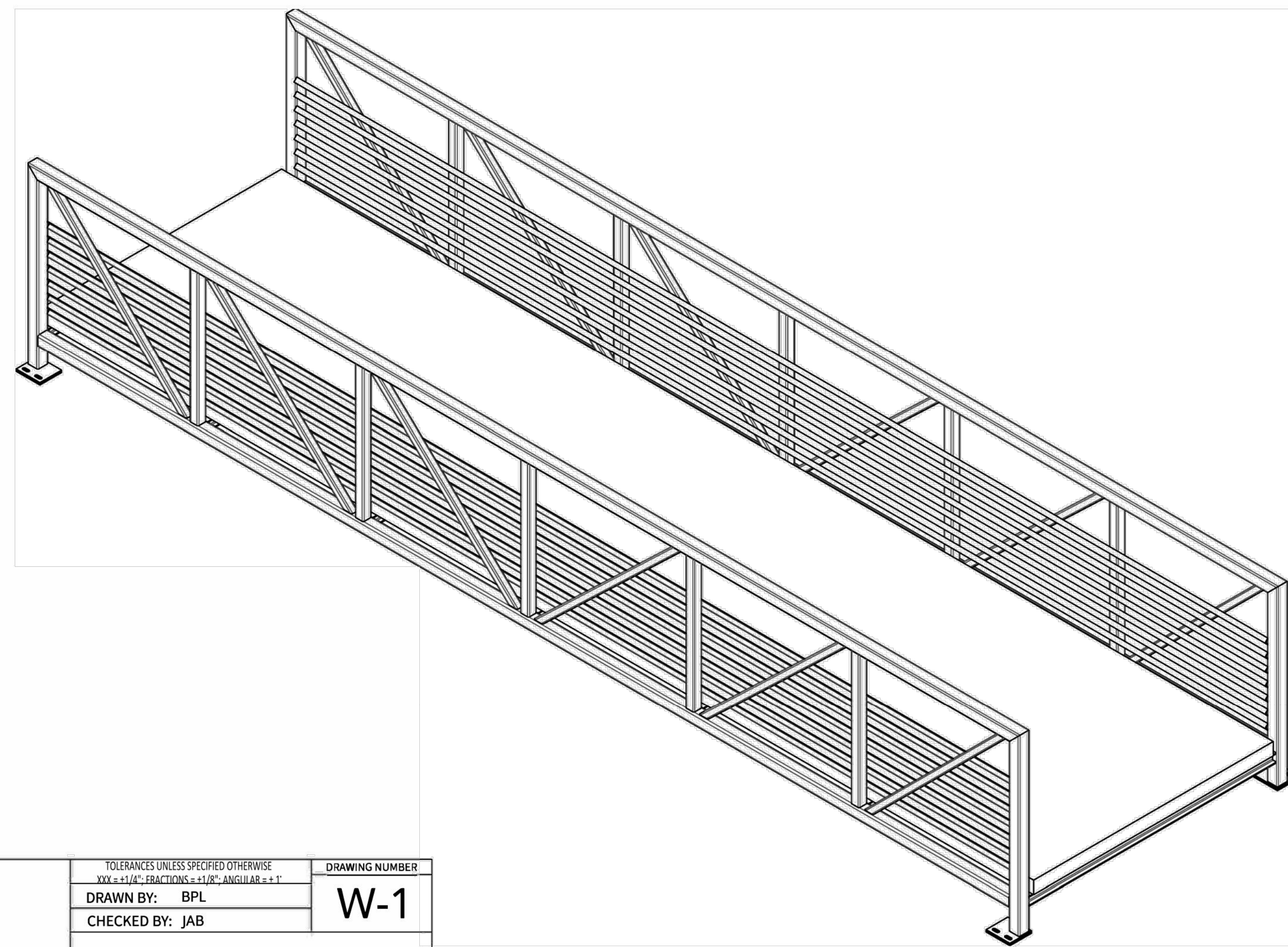
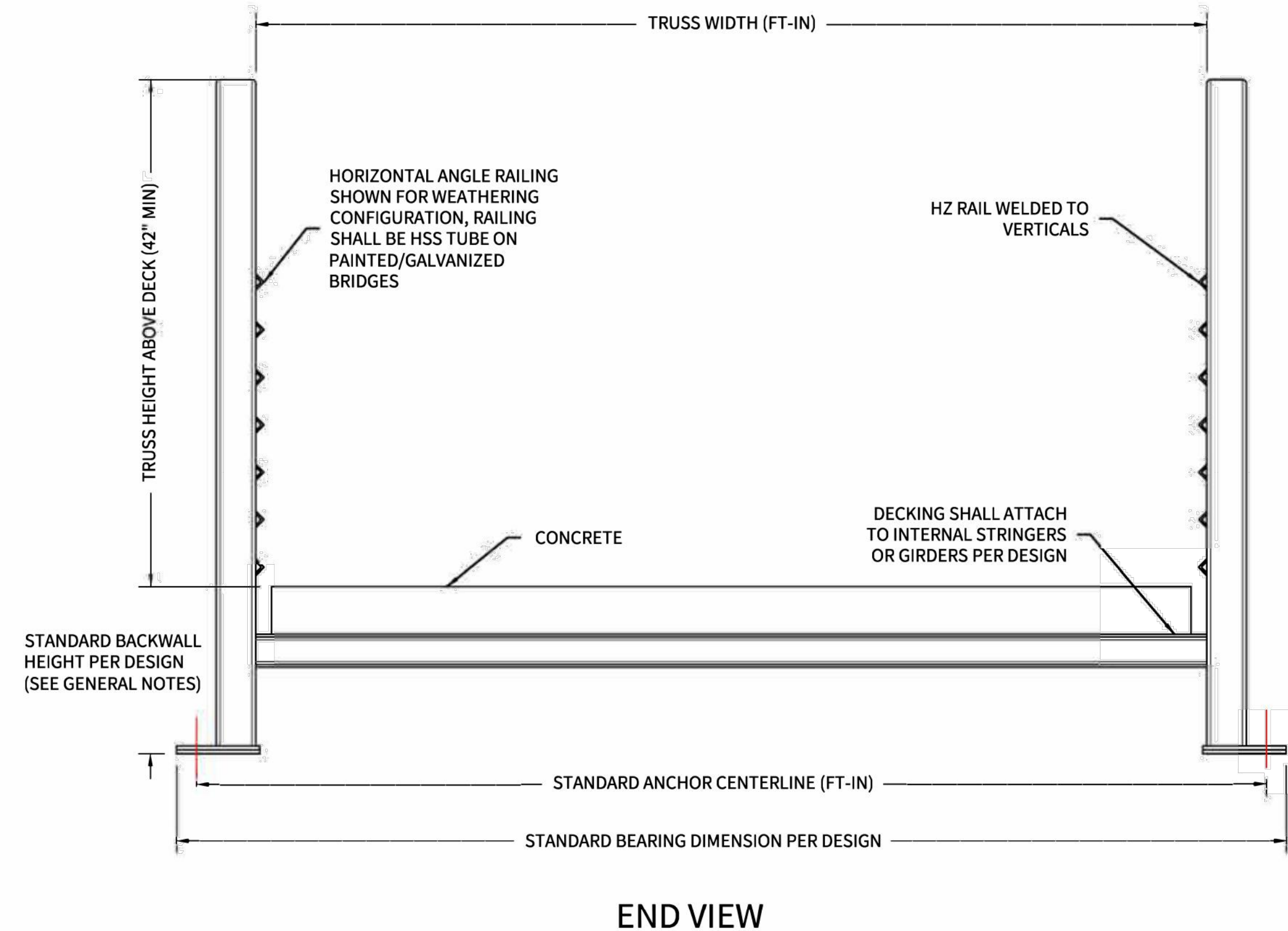
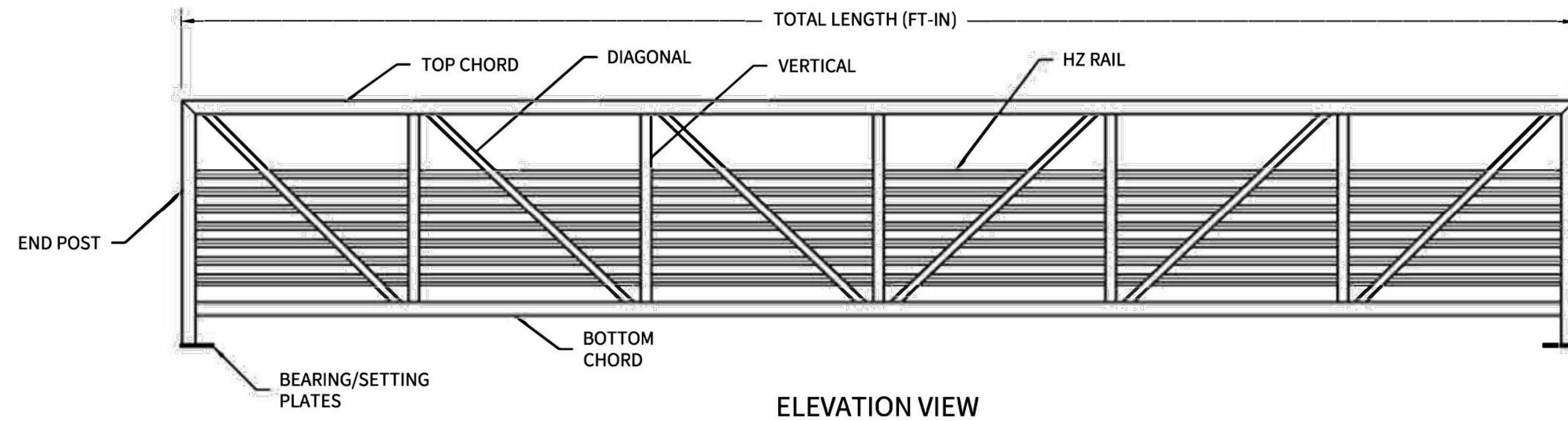
C2.4

GENERAL NOTES:

1. THE PRIMARY FUNCTION OF THIS STRUCTURE IS TO CARRY PEDESTRIANS & BICYCLISTS
2. SLIDE PLATES SHALL BE MADE FROM UHMW AND ARE GENERALLY SHIPPED LOOSE FROM BRIDGE; BRIDGE ENDS SHALL BE CONSTRUCTED AT THE SAME ELEVATION
3. BRIDGES SHALL BE DESIGNED FOR BOLTED FIELD SPLICES LOCATED ON THE BRIDGE SO AS TO PRODUCE A STRUCTURE WHICH CAN BE ECONOMICALLY SHIPPED AND ERECTED
4. BRIDGES SHALL HAVE VERTICAL CAMBER TO OFFSET ANY DEAD LOAD DEFLECTIONS GREATER THAN 1/4"
5. UNPAINTED WEATHERING STEEL BRIDGES WHICH ARE NOT TO BE PAINTED SHALL BE FABRICATED FROM HIGH STRENGTH, LOW ALLOY, AND ATMOSPHERIC CORROSION RESISTANT ASTM A847 SQUARE AND RECTANGULAR TUBING AND ASTM A588 PLATE AND STRUCTURAL SHAPES
6. PAINTED STEEL BRIDGES SHALL BE FABRICATED FROM ASTM A36 OR A572 AND TUBULAR SECTIONS FROM ASTM A500 GR B OR GR C AND SHALL UTILIZE A TWO-COAT EPOXY & POLY SYSTEM
7. GALVANIZED STEEL BRIDGES SHALL BE FABRICATED FROM ASTM A36 OR A572 AND TUBULAR SECTIONS FROM ASTM A500 GR B OR GR C AND SHALL INCORPORATE WEEP HOLES FOR PROPER DRAINAGE
8. ALUMINUM BRIDGES SHALL BE FABRICATED FROM 6061-T6 FOR ALL STRUCTURAL COMPONENTS AND MAY USE ANY 6XXX SERIES ALLOY FOR NON-STRUCTURAL COMPONENTS AND DECKING
9. SHOP WELDING SHALL CONFORM TO AWS D1.1-STEEL OR D1.2-ALUMINUM
10. ALL ELECTRICAL AND LIGHT HARDWARE INSTALLATION AND DESIGN ARE PROVIDED BY OTHERS UNLESS OTHERWISE SPECIFIED
11. STANDARD BACKWALL HEIGHT PER DESIGN:
 - <50' BRIDGES SHALL HAVE A STANDARD BACKWALL HEIGHT OF 18"-20"
 - 50'-120' BRIDGES SHALL HAVE A STANDARD BACKWALL HEIGHT OF 24"
 - >120' BRIDGES SHALL HAVE A STANDARD BACKWALL HEIGHT OF 30"

*SHIPPING CONFIGURATIONS SHALL VARY BASED ON DESIGN
 *THIS DRAWING IS PROPERTY OF BRIDGE BROTHERS, CREATED FOR ILLUSTRATION PURPOSES ONLY, AND MUST NOT BE USED FOR MANUFACTURING PURPOSES W/O THE EXPRESS WRITTEN CONSENT OF BRIDGE BROTHERS

BRIDGE DESIGN LOAD: 10,000 LB. 2-AXLE VEHICLE



DETAIL PROVIDED BY BRIDGE BROTHERS:
 USE BRIDGE BROTHERS DESIGN OR APPROVED EQUAL



CUSTOMER:
 CUSTOMER NAME
 CUSTOMER LOCATION

PROJECT NAME

PROJECT LOCATION

PO # N/A

TOLERANCES UNLESS SPECIFIED OTHERWISE XXX = +1/4"; FRACTIONS = +1/8"; ANGULAR = +1°		DRAWING NUMBER
DRAWN BY: BPL	CHECKED BY: JAB	W-1
PRATT, HZ RAIL, CONCRETE DECKING		
DRAWING NOT TO SCALE	SHT. 1 OF 1	

PROJECT:	CEE: 4850
DATE:	December 23
DRAWN BY:	JDU
REVISION:	

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING
 4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S. CAPITOL ST.
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@uiowa.edu

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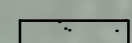
CVT REDESIGN

DETAILS
 BONDURANT, IA

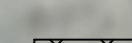
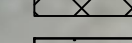
SHEET NAME
 PRE-FAB BRIDGE

SHEET NO.
C2.5



LEGEND
 PROPOSED REMOVALS
 PROPOSED CONCRETE



LEGEND
 PROPOSED REMOVALS
 PROPOSED CONCRETE

*ALL EXISTING RAILS AND RAIL TIES THROUGHOUT THE RAILROAD CORRIDOR SHALL BE REMOVED BY THE CONTRACTOR

PROJECT:	CEE: 4850
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CVT REDESIGN
 DEMOLITION PLAN
 BONDURANT, IA

SHEET NAME
 DEMOLITION PLAN

SHEET NO.
C3.1

PROJECT: CEE: 4850
 DATE: December 23
 DRAWN BY: JDU
 REVISION:

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CVT REDESIGN
 DEMOLITION PLAN
 BONDURANT, IA

SHEET NAME
 DEMOLITION PLAN

SHEET NO.
C3.2



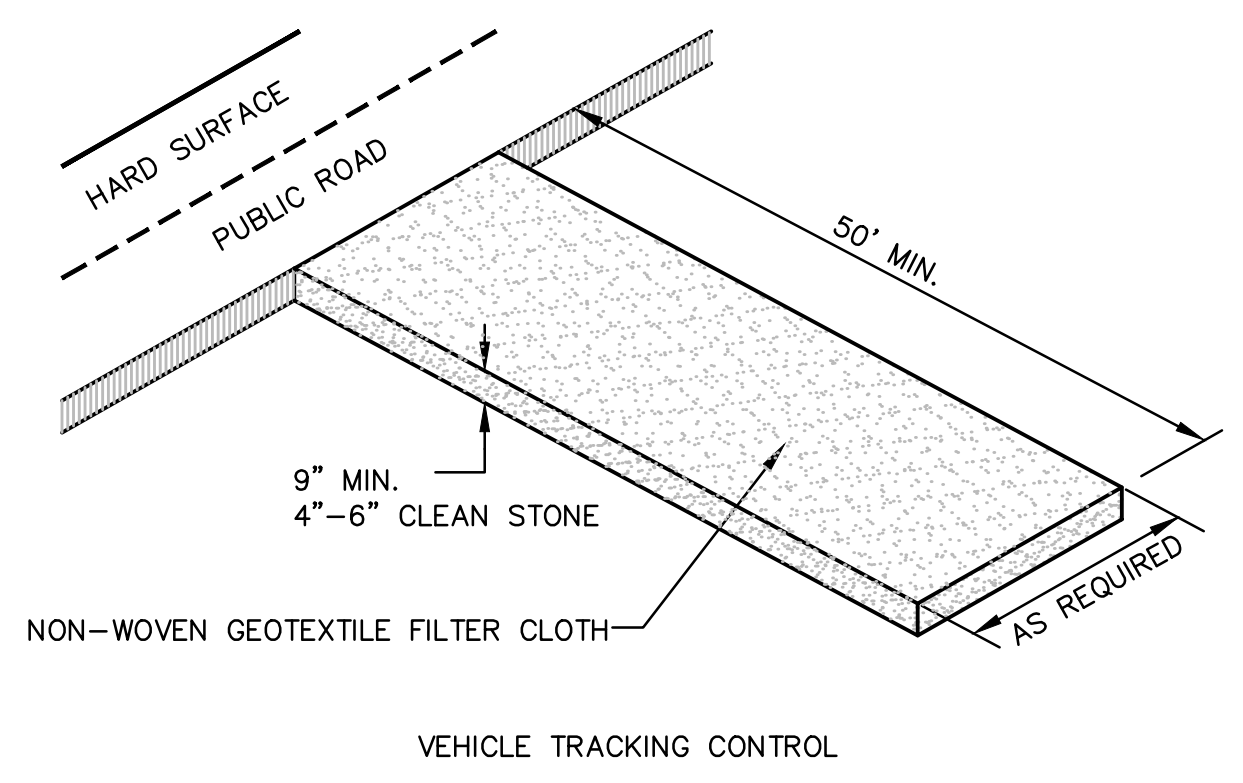
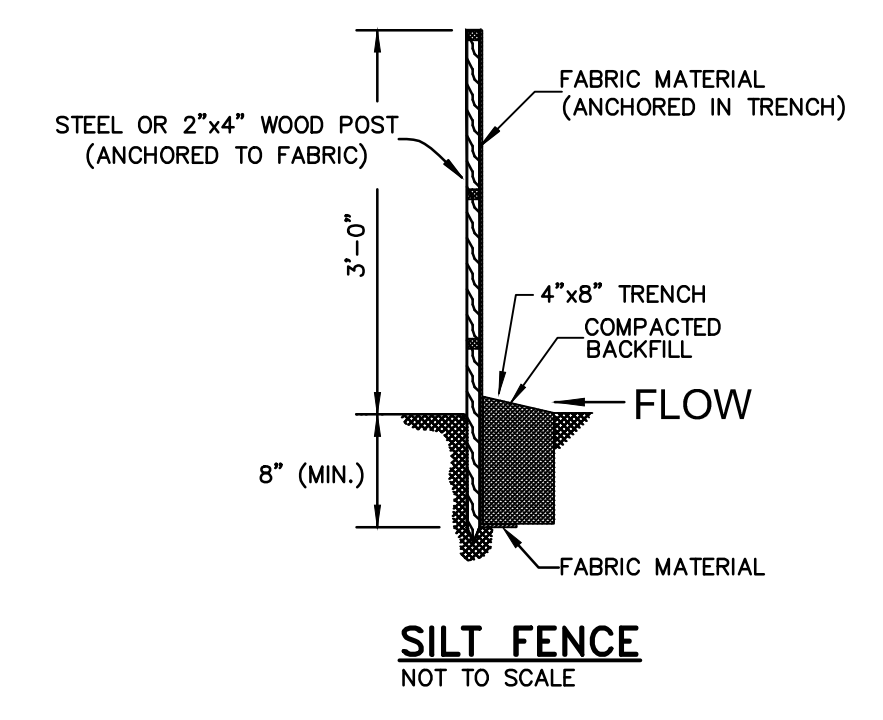
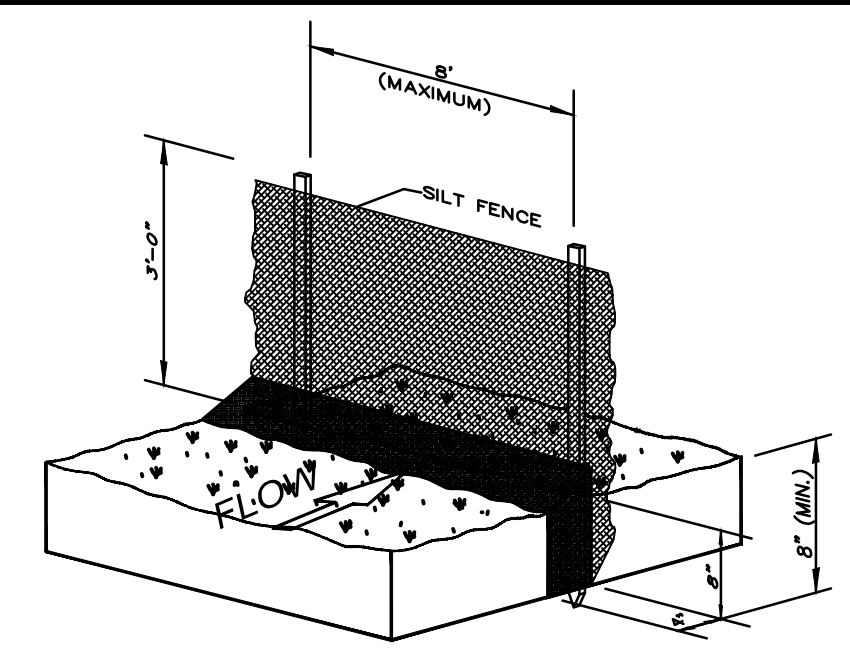
*ALL EXISTING RAILS AND RAIL TIES THROUGHOUT THE RAILROAD CORRIDOR SHALL BE REMOVED BY THE CONTRACTOR

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CVT REDESIGN
 GRADING PLAN
 BONDURANT, IA

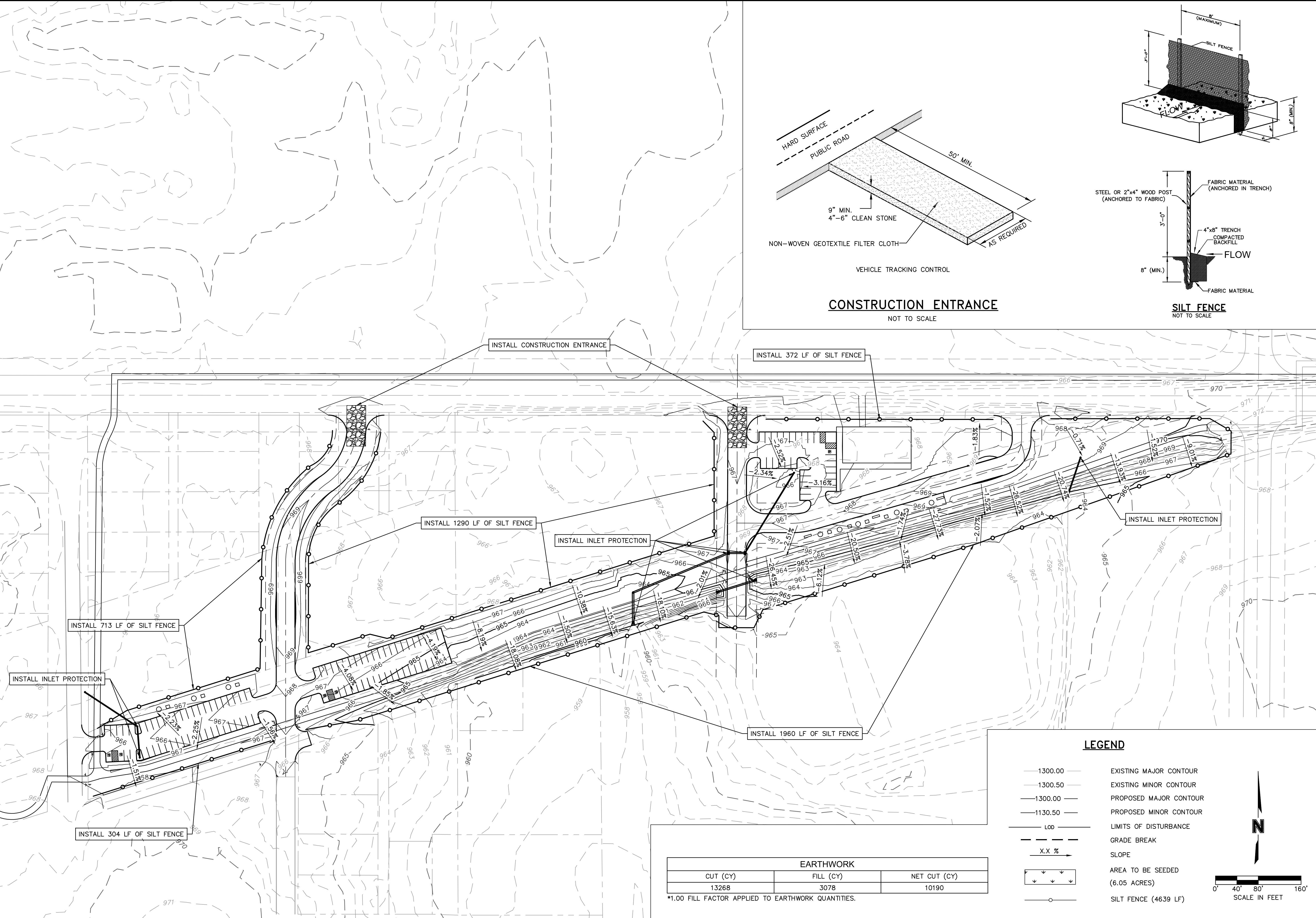
SHEET NAME
 GRADING & EROSION CNTL

SHEET NO.
C4.1

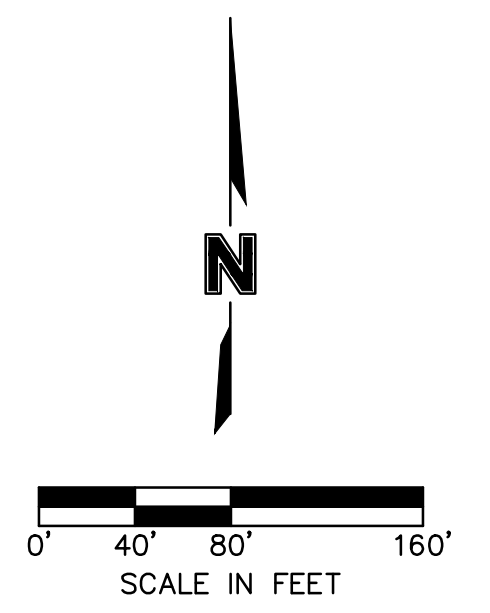


CONSTRUCTION ENTRANCE
 NOT TO SCALE

SILT FENCE
 NOT TO SCALE



- LEGEND**
- 1300.00 — EXISTING MAJOR CONTOUR
 - 1300.50 — EXISTING MINOR CONTOUR
 - 1300.00 — PROPOSED MAJOR CONTOUR
 - 1130.50 — PROPOSED MINOR CONTOUR
 - LOD — LIMITS OF DISTURBANCE
 - - - GRADE BREAK
 - X.X % SLOPE
 - ▭ AREA TO BE SEEDED (6.05 ACRES)
 - SILT FENCE (4639 LF)



EARTHWORK		
CUT (CY)	FILL (CY)	NET CUT (CY)
13268	3078	10190

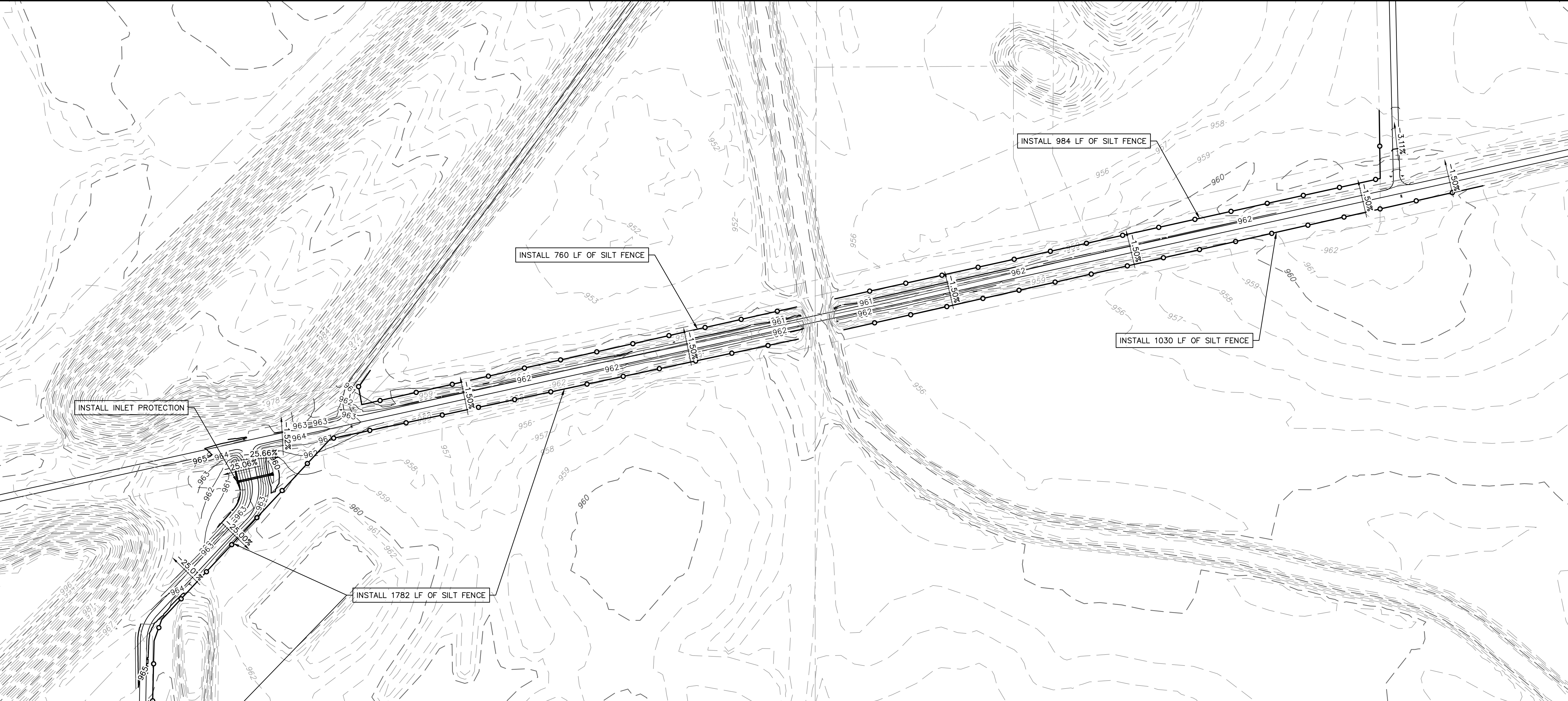
*1.00 FILL FACTOR APPLIED TO EARTHWORK QUANTITIES.

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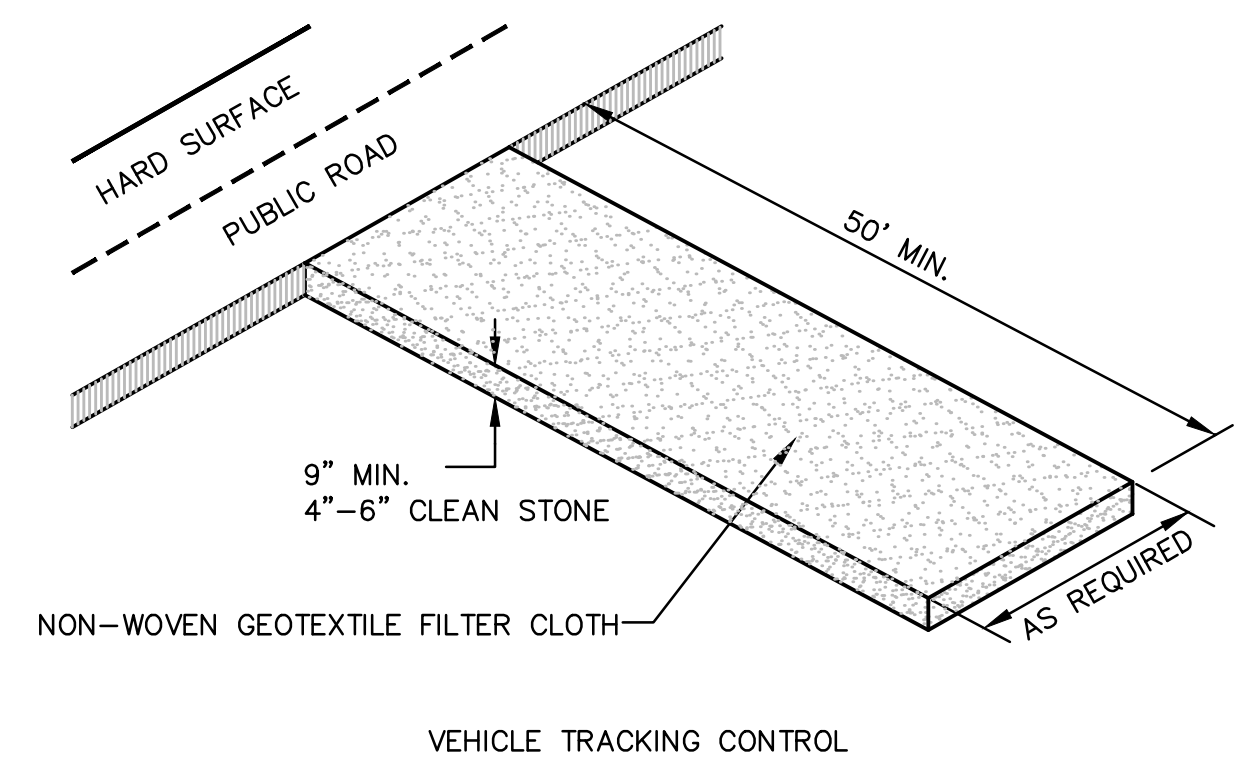
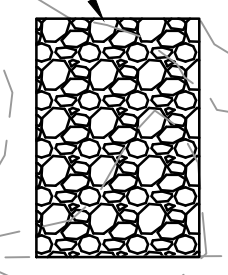
CVT REDESIGN
 GRADING PLAN
 BONDURANT, IA

SHEET NAME
 GRADING & EROSION CNTL

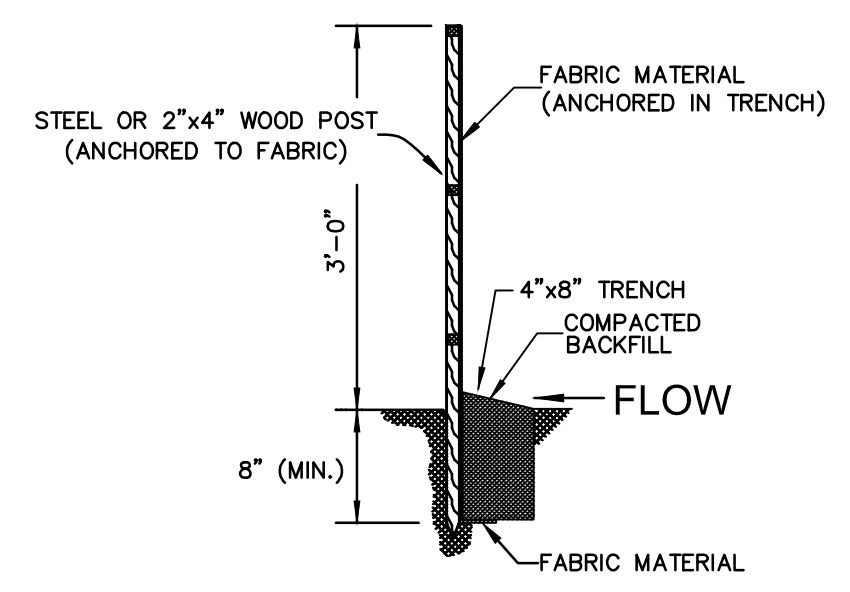
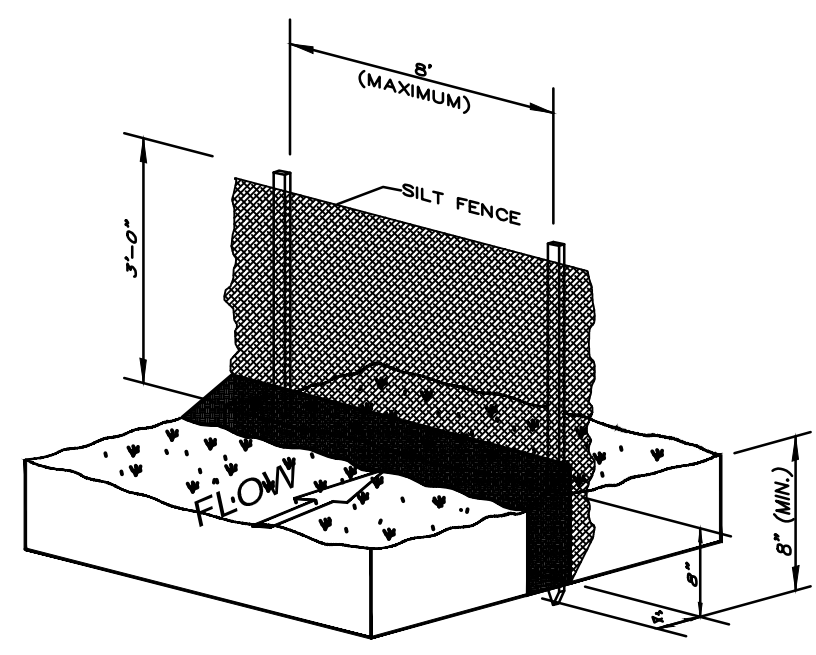
SHEET NO.
C4.2



USE & MAINTAIN EXISTING LANDUS SITE ENTRANCE



CONSTRUCTION ENTRANCE
 NOT TO SCALE



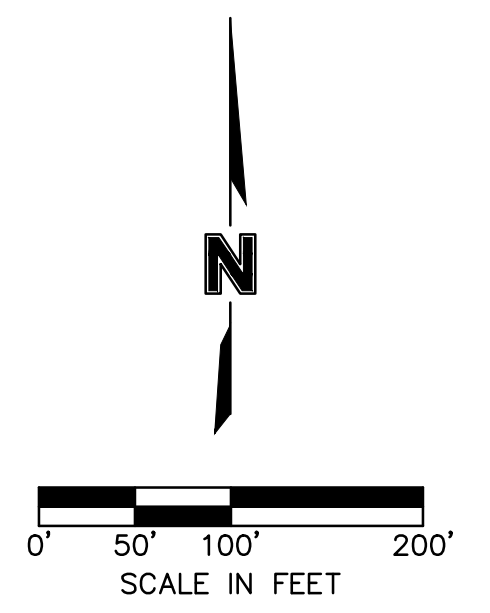
SILT FENCE
 NOT TO SCALE

EARTHWORK		
CUT (CY)	FILL (CY)	NET FILL (CY)
310	3088	2778

*1.00 FILL FACTOR APPLIED TO EARTHWORK QUANTITIES.

LEGEND

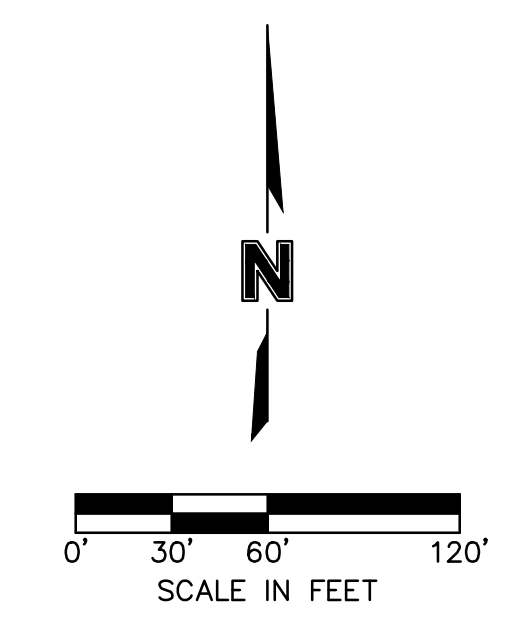
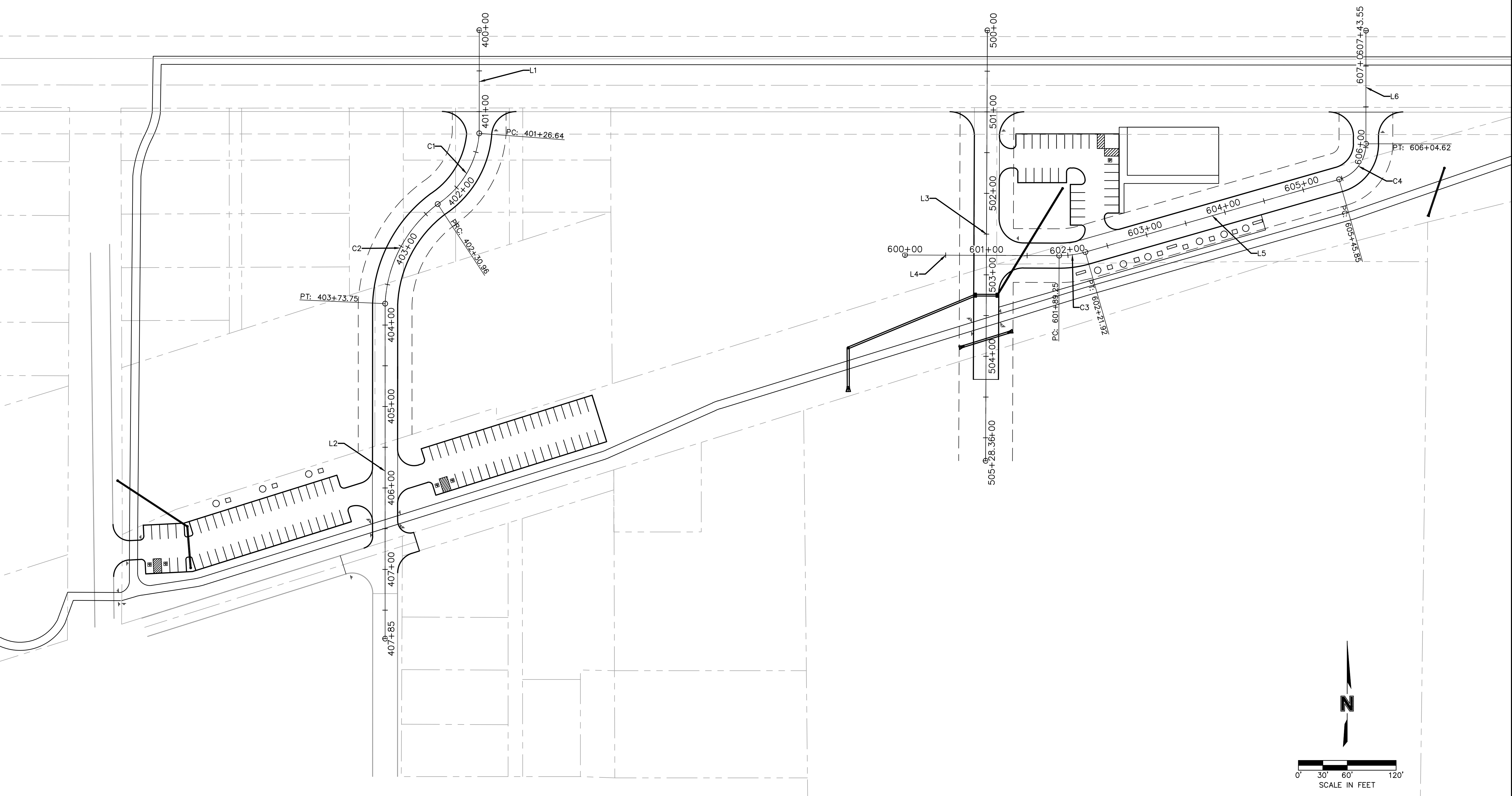
- 1300.00 — EXISTING MAJOR CONTOUR
- 1300.50 — EXISTING MINOR CONTOUR
- 1300.00 — PROPOSED MAJOR CONTOUR
- 1130.50 — PROPOSED MINOR CONTOUR
- LOD — LIMITS OF DISTURBANCE
- - - GRADE BREAK
- X.X % SLOPE
- ↓ ↓ ↓ AREA TO BE SEED (1.45 ACRES)
- SILT FENCE (4170 LF)



LINCOLN ST									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		400+00.00 401+26.64	620525.6250 620398.9839	1651267.6182 1651267.5527	126.64'	S0°01'47"W			
C1	PC= PI= PT=	401+26.64 401+82.75 402+30.96	620398.9839 620343.0355 620312.1486	1651267.5527 1651263.3271 1651216.4861	104.32'	S30°27'33"W	52°16'48"	56.11'	114.33'
C2	PC= PI= PT=	402+30.96 403+07.38 403+73.75	620312.1486 620266.2636 620189.9140	1651216.4861 1651155.3702 1651152.0068	142.79'	S27°48'43"W	50°34'44"	76.42'	161.75'
L2		403+73.75 407+85.00	620189.9140 619778.6648	1651152.0068 1651152.0097	411.25'	S0°00'01"E			

STORAGE SHED ST									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L3		500+00.00 505+28.36	620525.3017 619996.9496	1651891.4688 1651889.2817	528.36'	S0°14'14"W			

FOOD TRUCK ST									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L4		600+00.00 601+89.25	620249.6291 620248.8457	1651790.3268 1651979.5791	189.25'	S89°45'46"E			
C3	PC= PI= PT=	601+89.25 602+05.70 602+21.92	620248.8457 620248.7777 620253.3011	1651979.5791 1651996.0222 1652011.8309	32.67'	N82°08'05"E	16°12'18"	16.44'	115.50'
L5		602+21.92 605+45.85	620253.3011 620342.4138	1652011.8309 1652323.2651	323.93'	N74°01'56"E			
C4	PC= PI= PT=	605+45.85 605+80.14 606+04.62	620342.4138 620351.8464 620386.1347	1652323.2651 1652356.2305 1652356.2482	58.77'	N37°01'51"E	74°00'09"	34.29'	45.50'
L6		606+04.62 607+43.55	620386.1347 620525.0620	1652356.2482 1652356.2647	138.93'	N0°00'24"E			



PROJECT: CEE: 4850
 DATE: December 23
 DRAWN BY: JDJ
 REVISION:

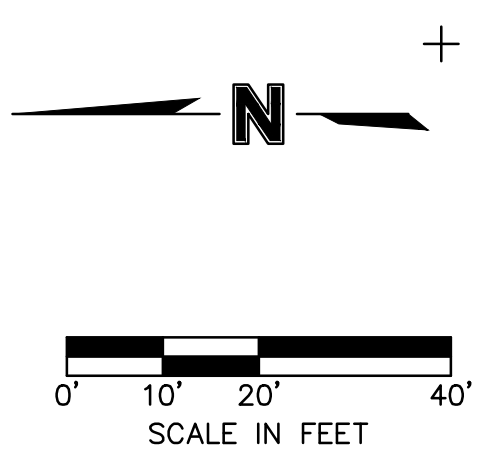
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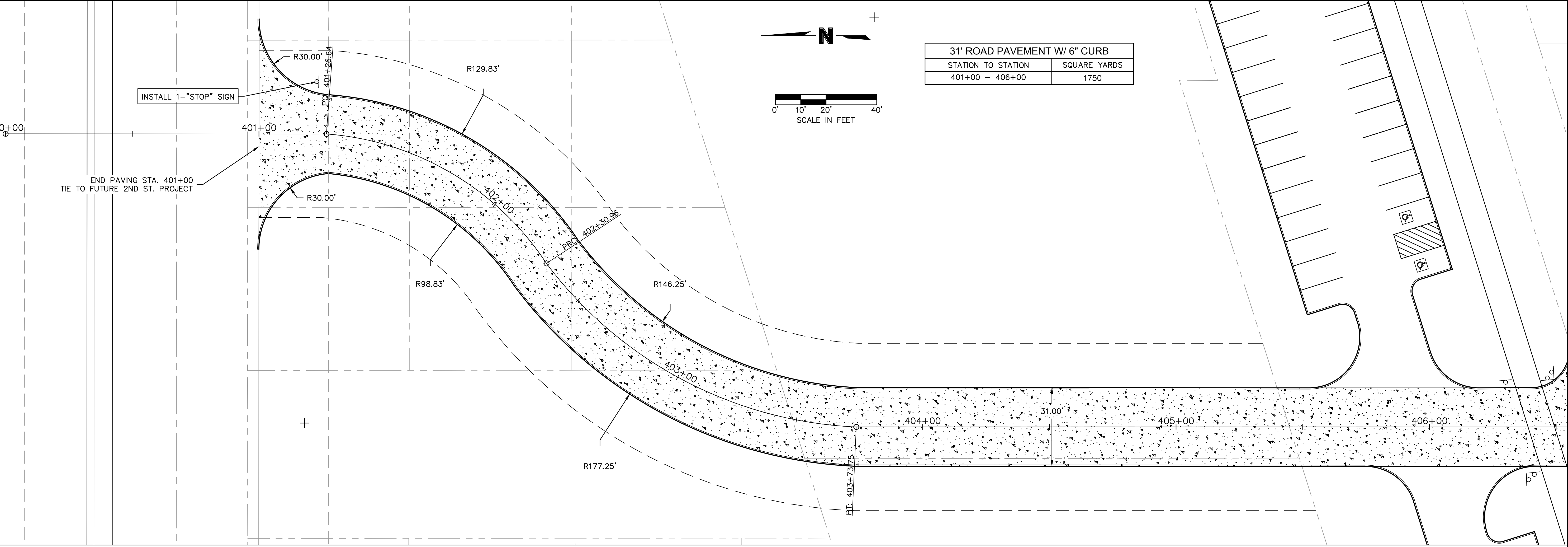
CVT REDESIGN
 CITY OF BONDURANT
 BONDURANT, IA

SHEET NAME
 ROAD PLAN AND PROFILE

SHEET NO.
C5.1



31' ROAD PAVEMENT W/ 6" CURB	
STATION TO STATION	SQUARE YARDS
401+00 - 406+00	1750

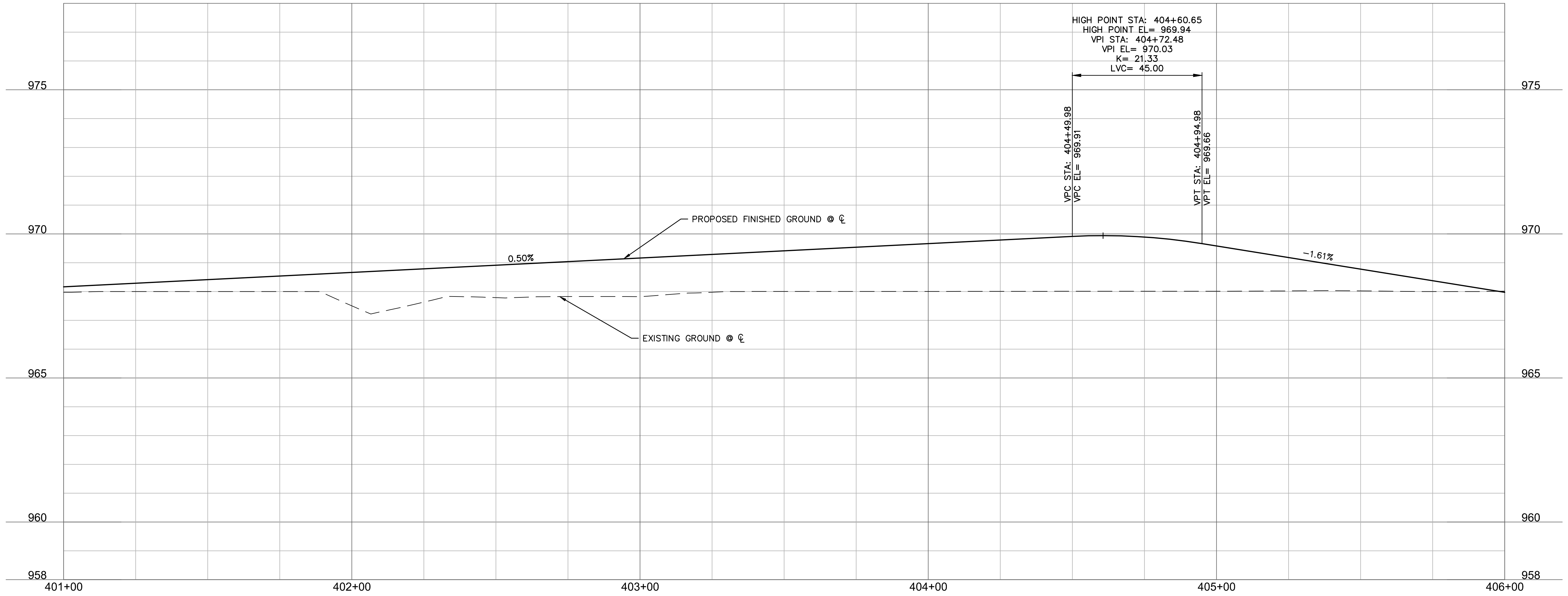


END PAVING STA. 401+00
TIE TO FUTURE 2ND ST. PROJECT

INSTALL 1-"STOP" SIGN

PROV 402+30.96

PT: 403+73.75



PROJECT: CEE: 4850
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CITY OF BONDURANT
BONDURANT, IA

SHEET NAME
ROAD PLAN
AND PROFILE

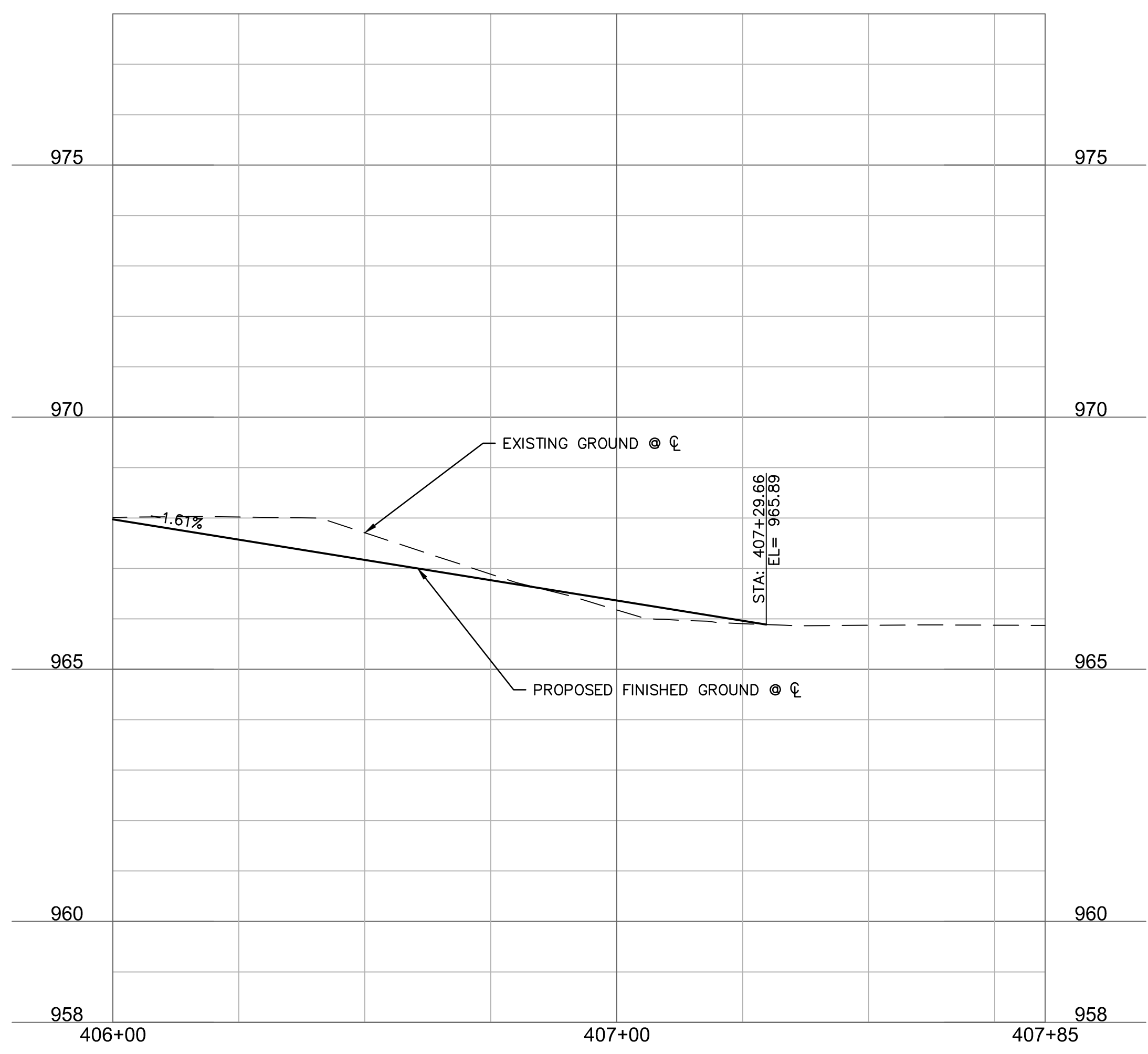
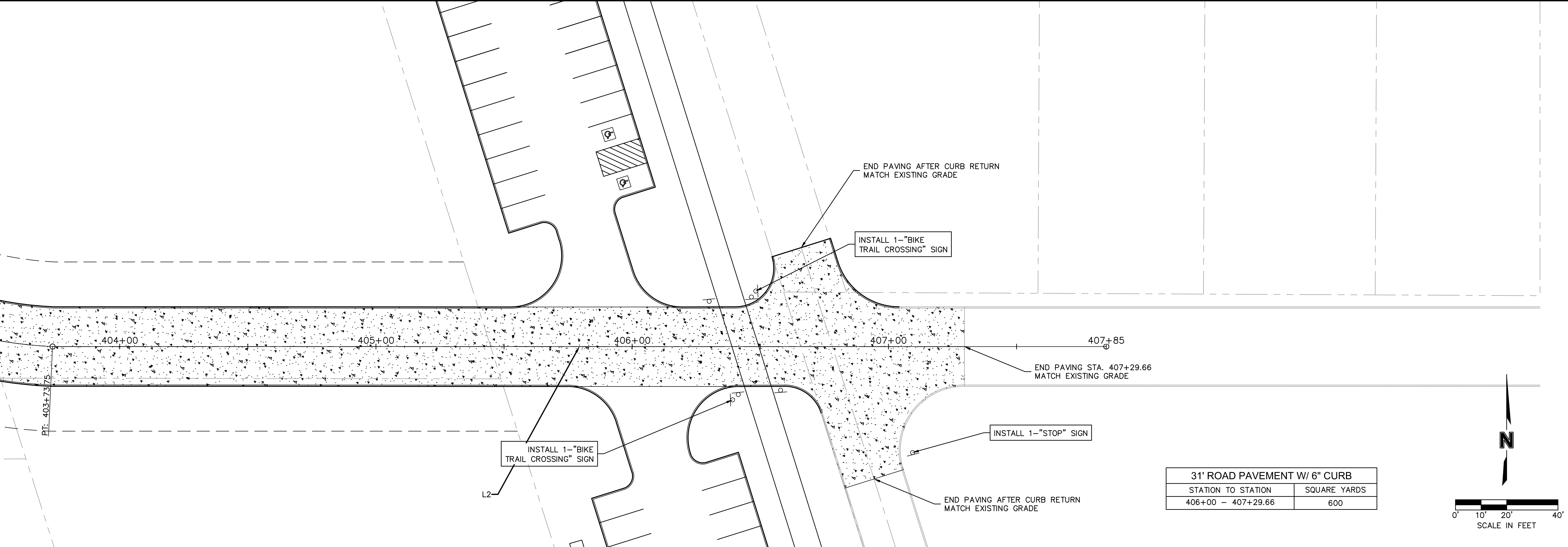
SHEET NO.
C5.2

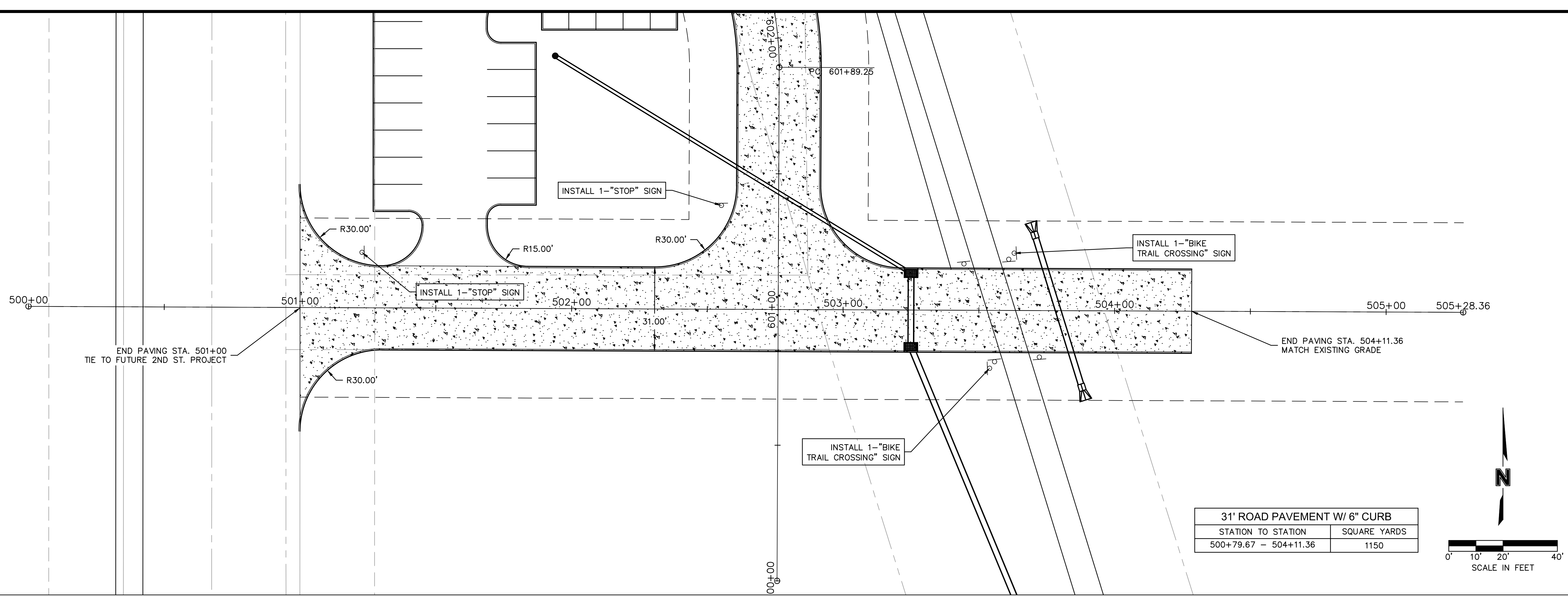
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CVT REDESIGN
 CITY OF BONDURANT
 BONDURANT, IA

SHEET NAME
 ROAD PLAN AND PROFILE

SHEET NO.
C5.3

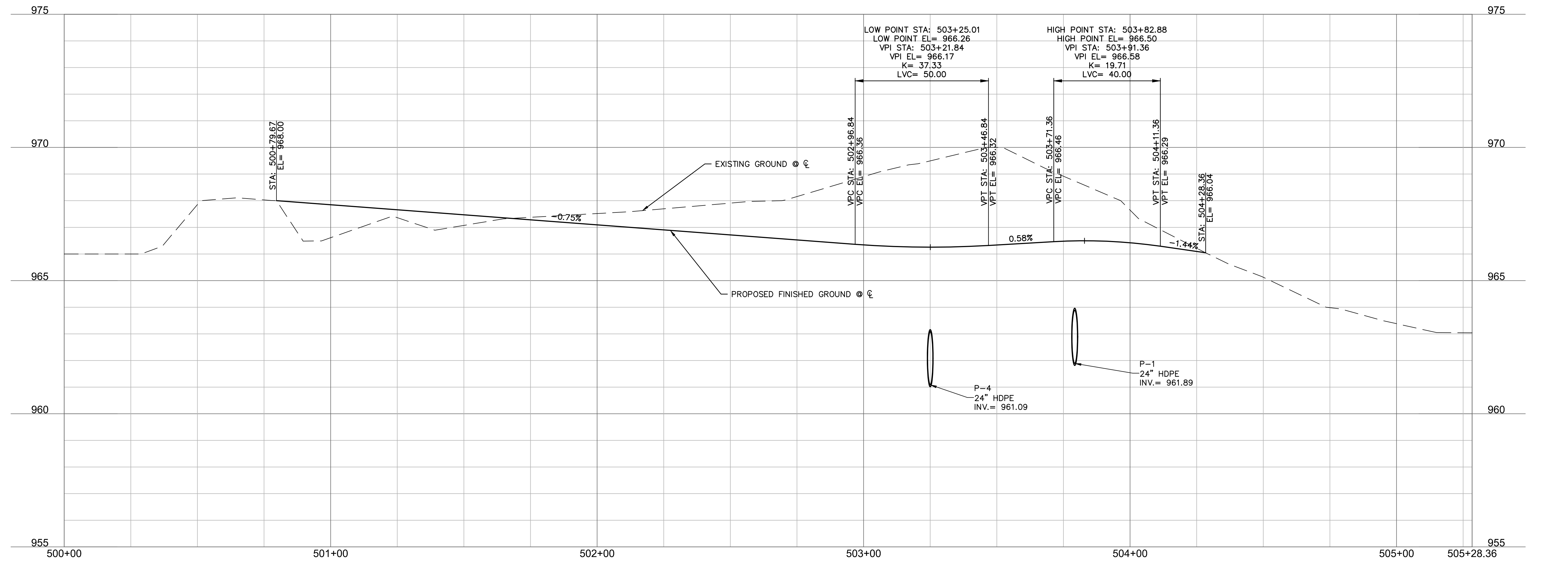
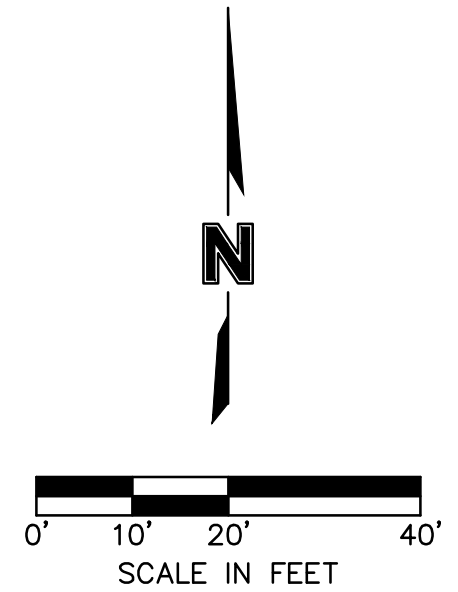




PROJECT: CEE: 4850
 DATE: December 23
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31' ROAD PAVEMENT W/ 6" CURB	
STATION TO STATION	SQUARE YARDS
500+79.67 - 504+11.36	1150

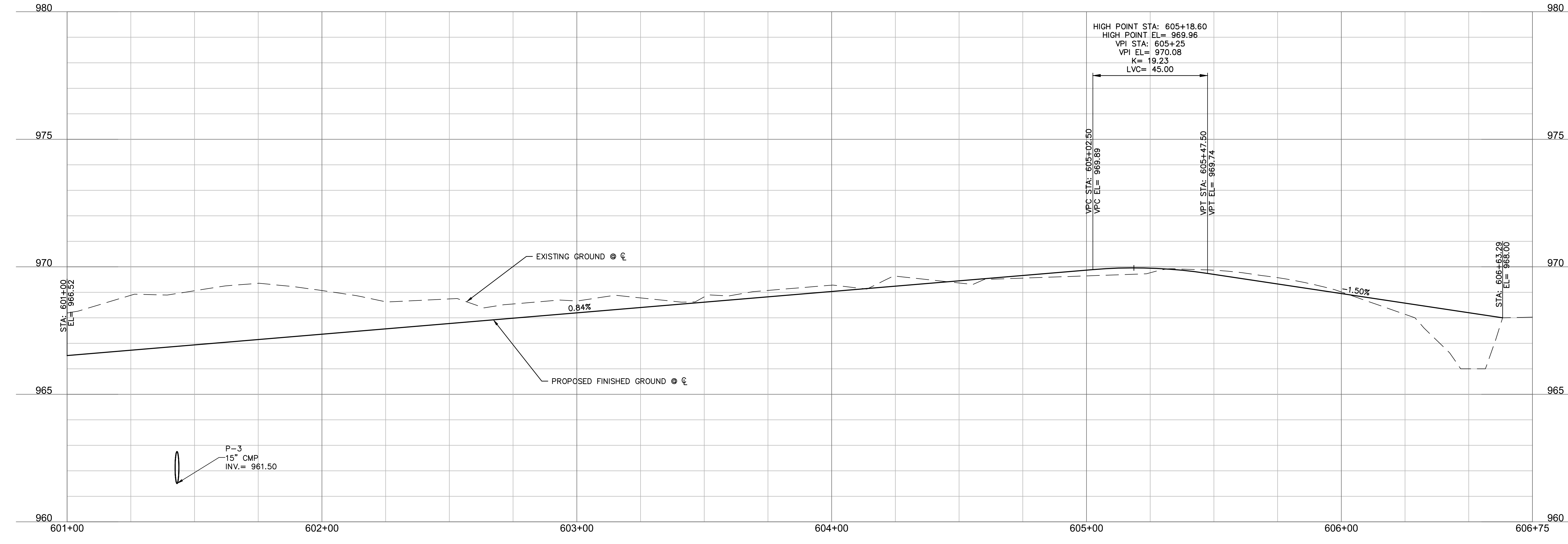
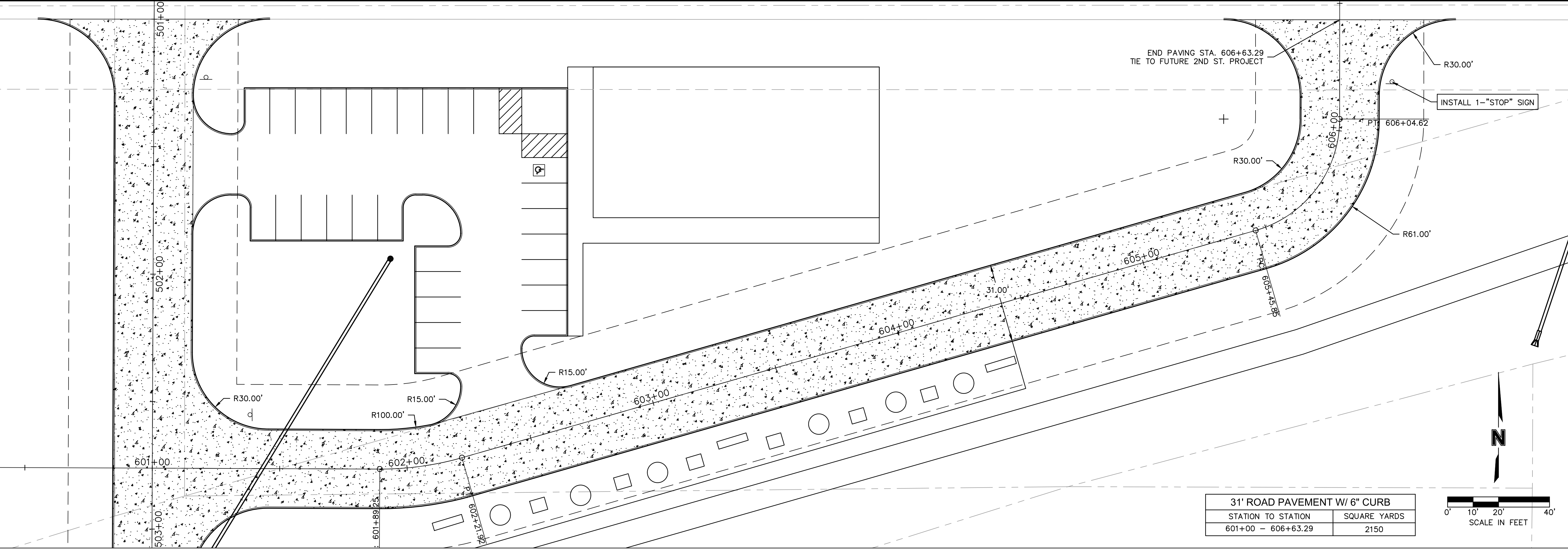


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CVT REDESIGN
 CITY OF BONDURANT
 BONDURANT, IA

SHEET NAME
 ROAD PLAN AND PROFILE

SHEET NO.
C5.4



PROJECT: CEE: 4850
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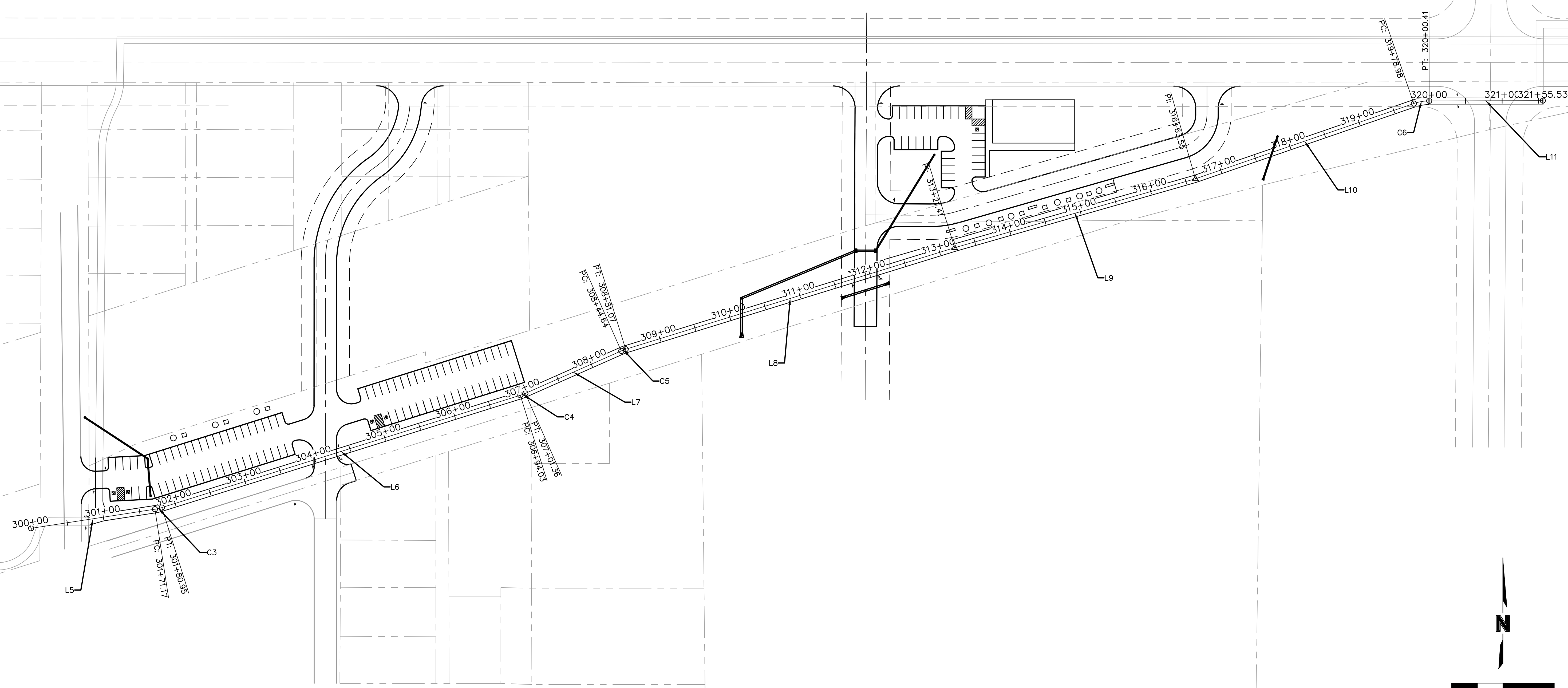
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CVT REDESIGN
CITY OF BONDURANT
BONDURANT, IA

SHEET NAME
ROAD PLAN AND PROFILE

SHEET NO.
C5.5

DT EAST-WEST									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L5		300+00.00 301+71.17	619821.1753 619847.2971	1650750.0046 1650919.1681	171.17'	N81°13'19"E			
C3	PC= PI= PT=	301+71.17 301+76.07 301+80.95	619847.2971 619848.0452 619849.5114	1650919.1681 1650924.0126 1650928.6901	9.79'	N76°54'33"E	8°37'32"	4.90'	65.00'
L6		301+80.95 306+94.03	619849.5114 620002.9729	1650928.6901 1651418.2769	513.07'	N72°35'47"E			
C4	PC= PI= PT=	306+94.03 306+97.70 307+01.36	620002.9729 620004.0707 620005.5557	1651418.2769 1651421.7791 1651425.1355	7.33'	N69°21'52"E	6°27'49"	3.67'	65.00'
L7		307+01.36 308+44.64	620005.5557 620063.5295	1651425.1355 1651556.1631	143.28'	N66°07'58"E			
C5	PC= PI= PT=	308+44.64 308+47.86 308+51.07	620063.5295 620064.8324 620065.7828	1651556.1631 1651559.1078 1651562.1845	6.43'	N69°29'01"E	6°42'05"	3.22'	55.00'
L8		308+51.07 313+21.41	620065.7828 620204.5952	1651562.1845 1652011.5643	470.33'	N72°50'03"E			
L9		313+21.41 316+63.55	620204.5952 620298.7185	1652011.5643 1652340.5099	342.15'	N74°01'56"E			
L10		316+63.55 319+78.98	620298.7185 620401.4893	1652340.5099 1652638.7219	315.42'	N70°59'05"E			
C6	PC= PI= PT=	319+78.98 319+89.79 320+00.41	620401.4893 620405.0127 620405.0361	1652638.7219 1652648.9456 1652659.7594	21.43'	N80°25'50"E	18°53'28"	10.81'	65.00'
L11		320+00.41 321+55.53	620405.0361 620405.3718	1652659.7594 1652814.8835	155.12'	N89°52'34"E			



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BONDURANT, IA

SHEET NAME
BIKE TRAIL PLAN AND PROFILE

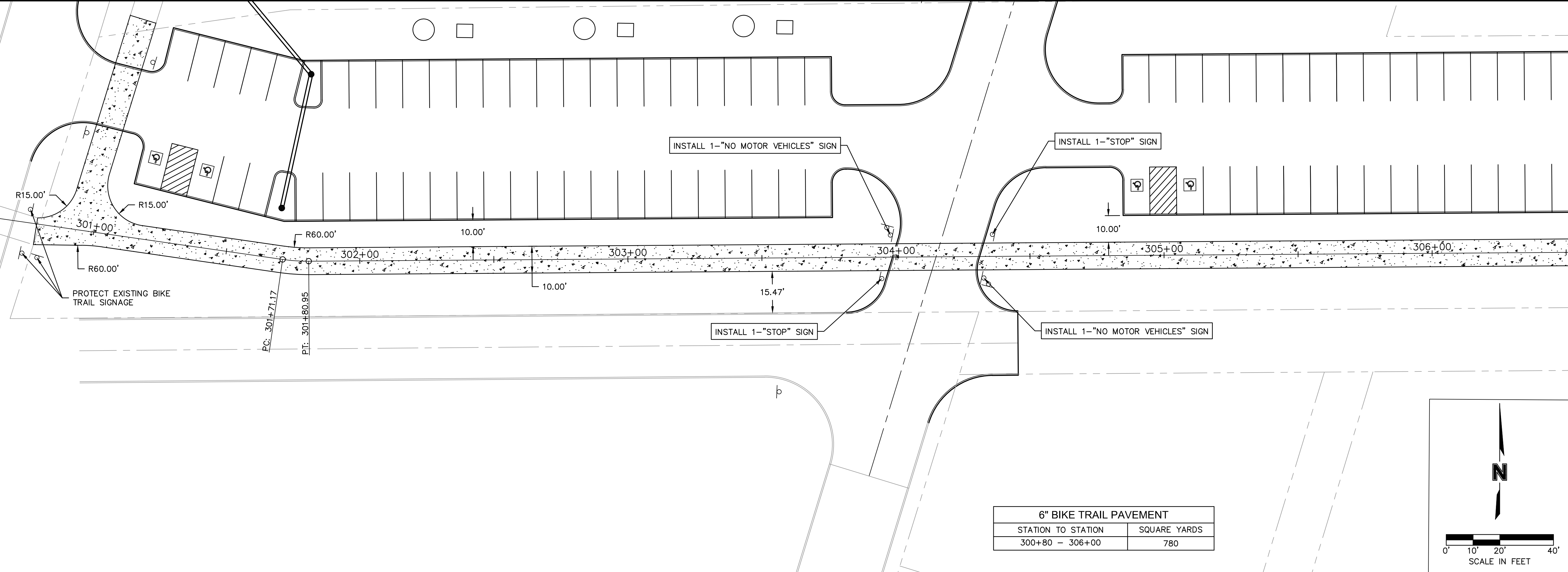
SHEET NO.
C6.1

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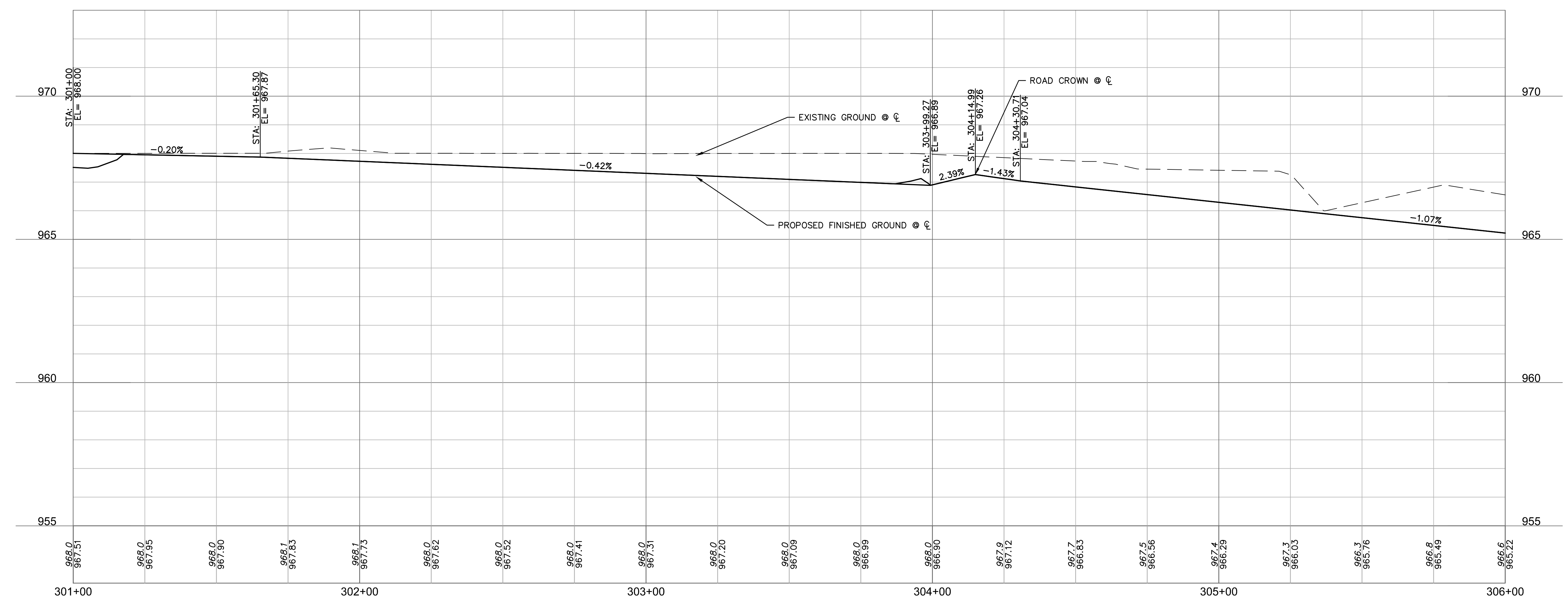
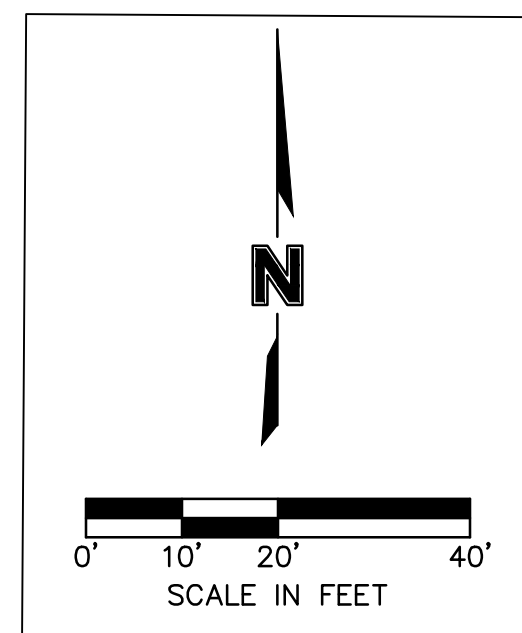
CVT REDESIGN
 CITY OF BONDURANT
 BONDURANT, IA

SHEET NAME
 BIKE TRAIL PLAN AND PROFILE

SHEET NO.
C6.2



6" BIKE TRAIL PAVEMENT	
STATION TO STATION	SQUARE YARDS
300+80 - 306+00	780



PROJECT: CEE: 4850
 DATE: December 23
 DRAWN BY: JDU
 REVISION:

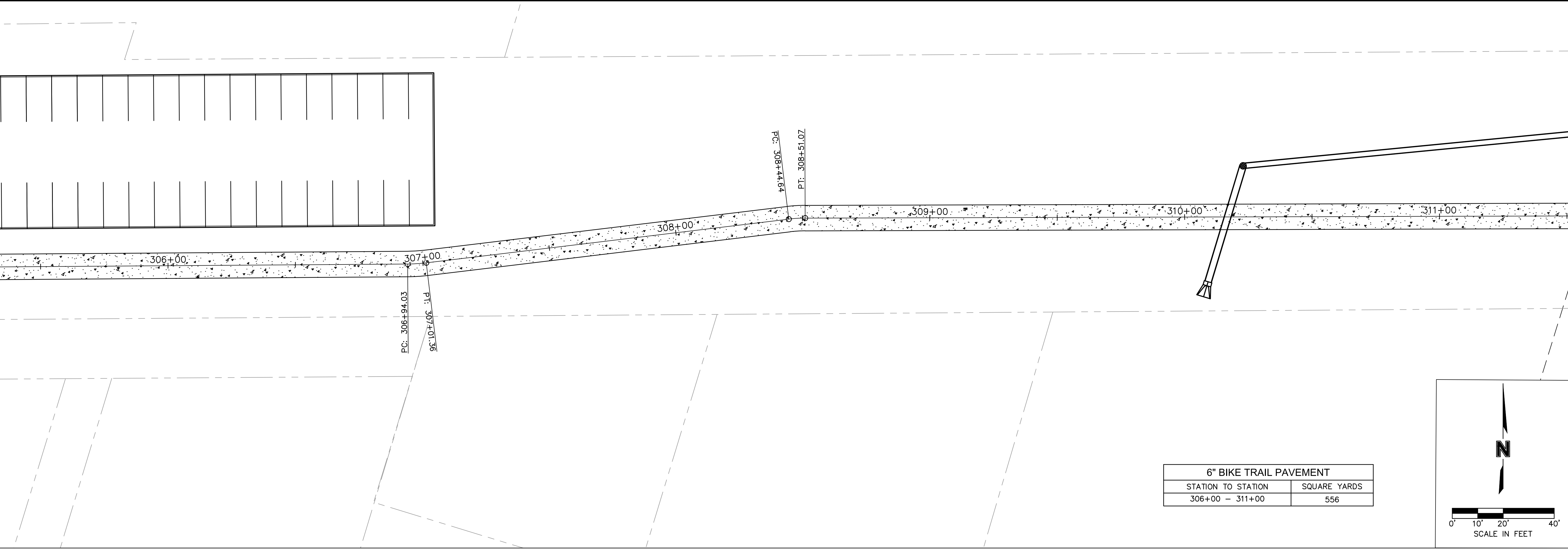
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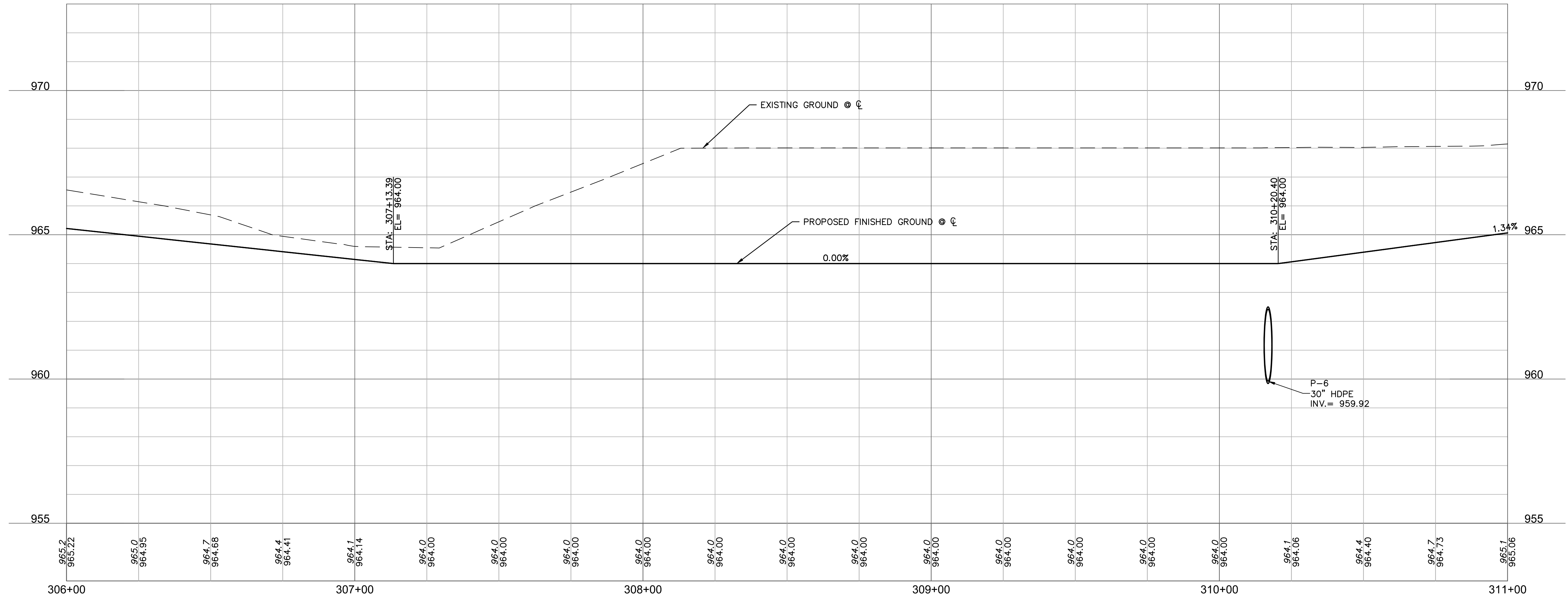
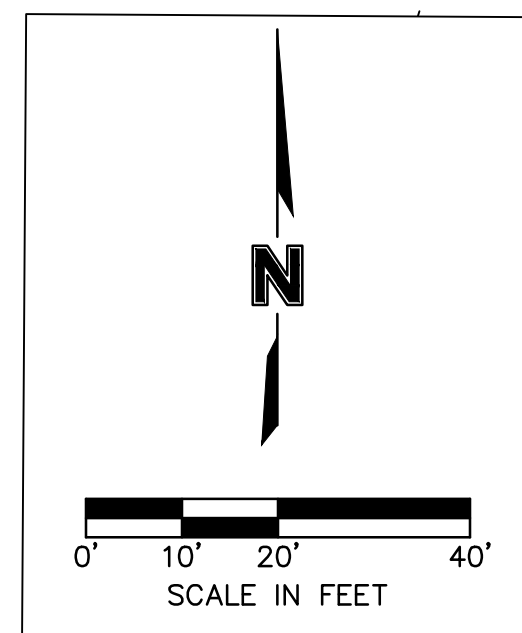
CVT REDESIGN
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 BONDURANT, IA

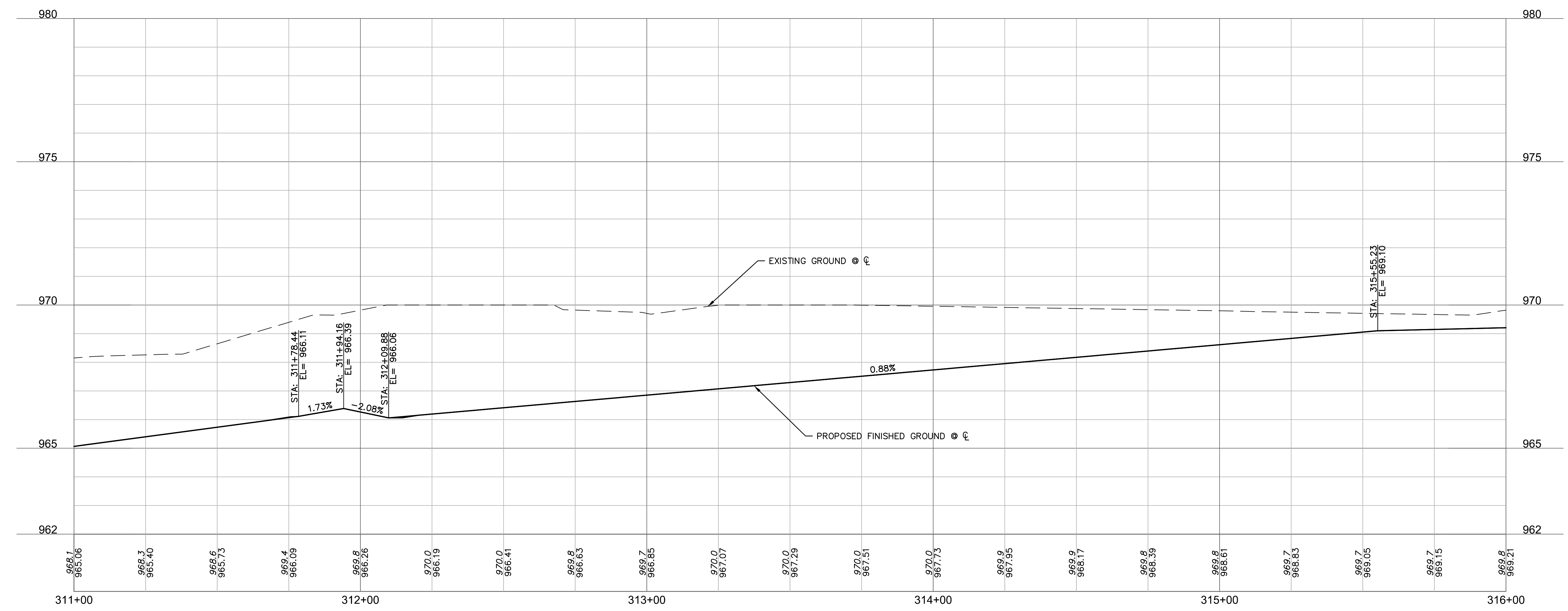
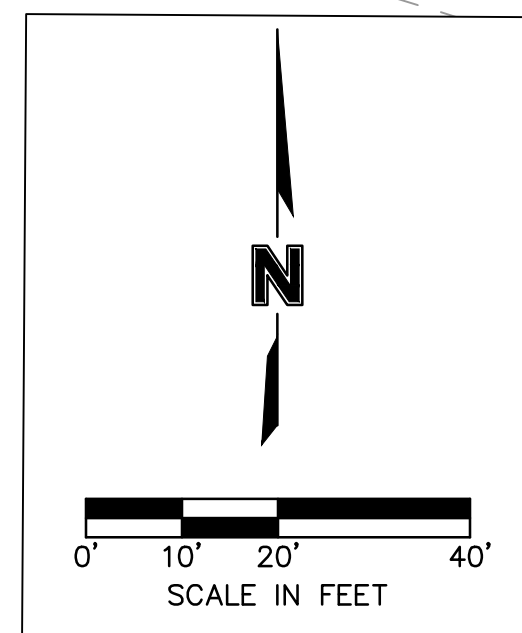
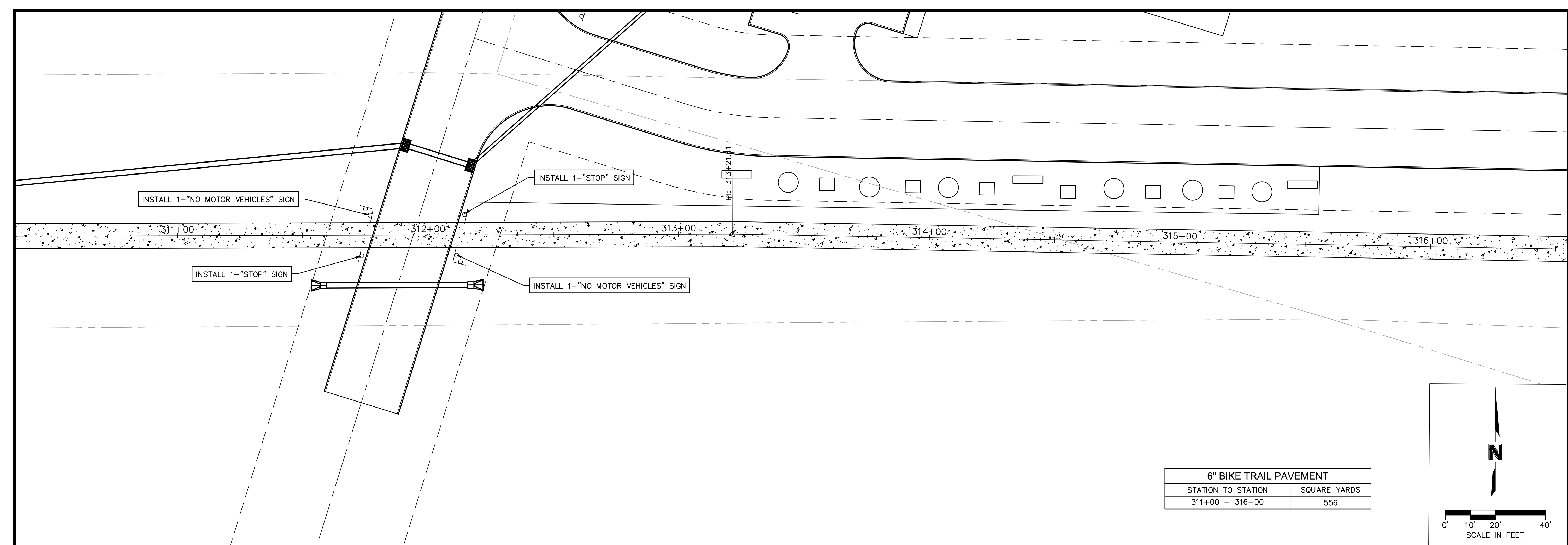
SHEET NAME
 BIKE TRAIL PLAN AND PROFILE

SHEET NO.
C6.3



6" BIKE TRAIL PAVEMENT	
STATION TO STATION	SQUARE YARDS
306+00 - 311+00	556





PROJECT: CEE: 4850
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 REVISION:

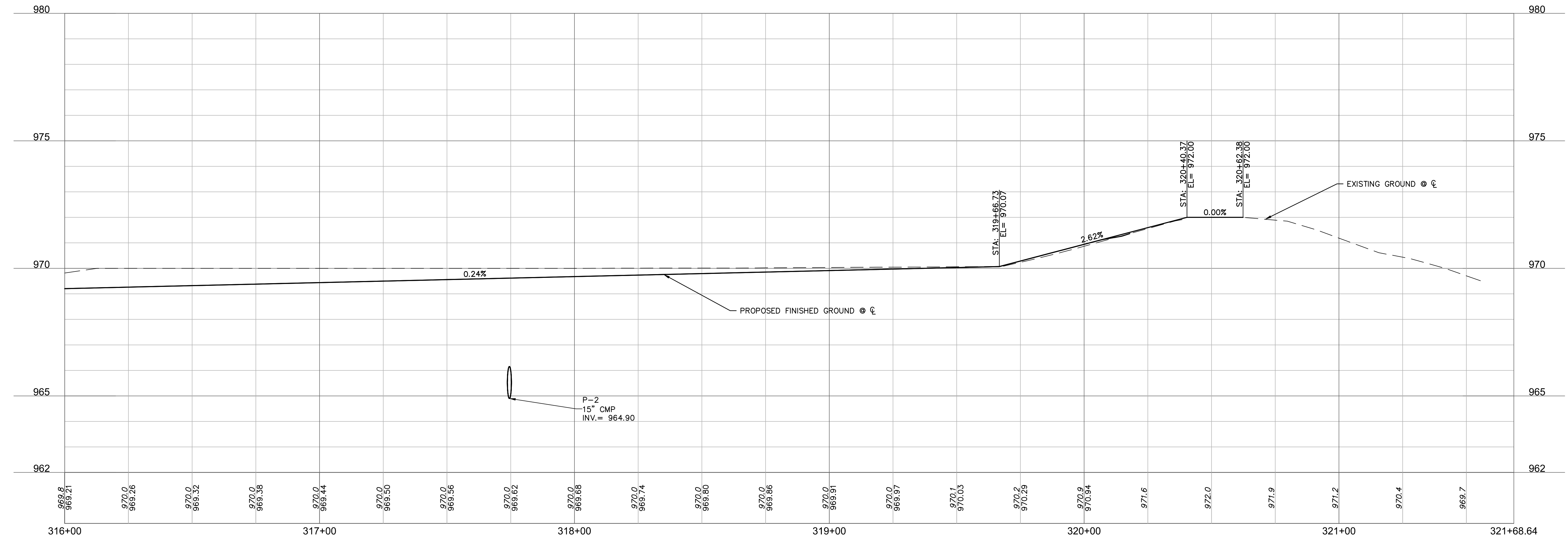
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 FAX: 319.335.5660
 EMAIL: civil-hawks@uiowa.edu

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CVT REDESIGN
 CITY OF BONDURANT
 BONDURANT, IA

SHEET NAME
 BIKE TRAIL PLAN
 AND PROFILE

SHEET NO.
C6.4



PROJECT: CEE: 4850
 DATE: December 23
 DRAWN BY: JDU
 REVISION:

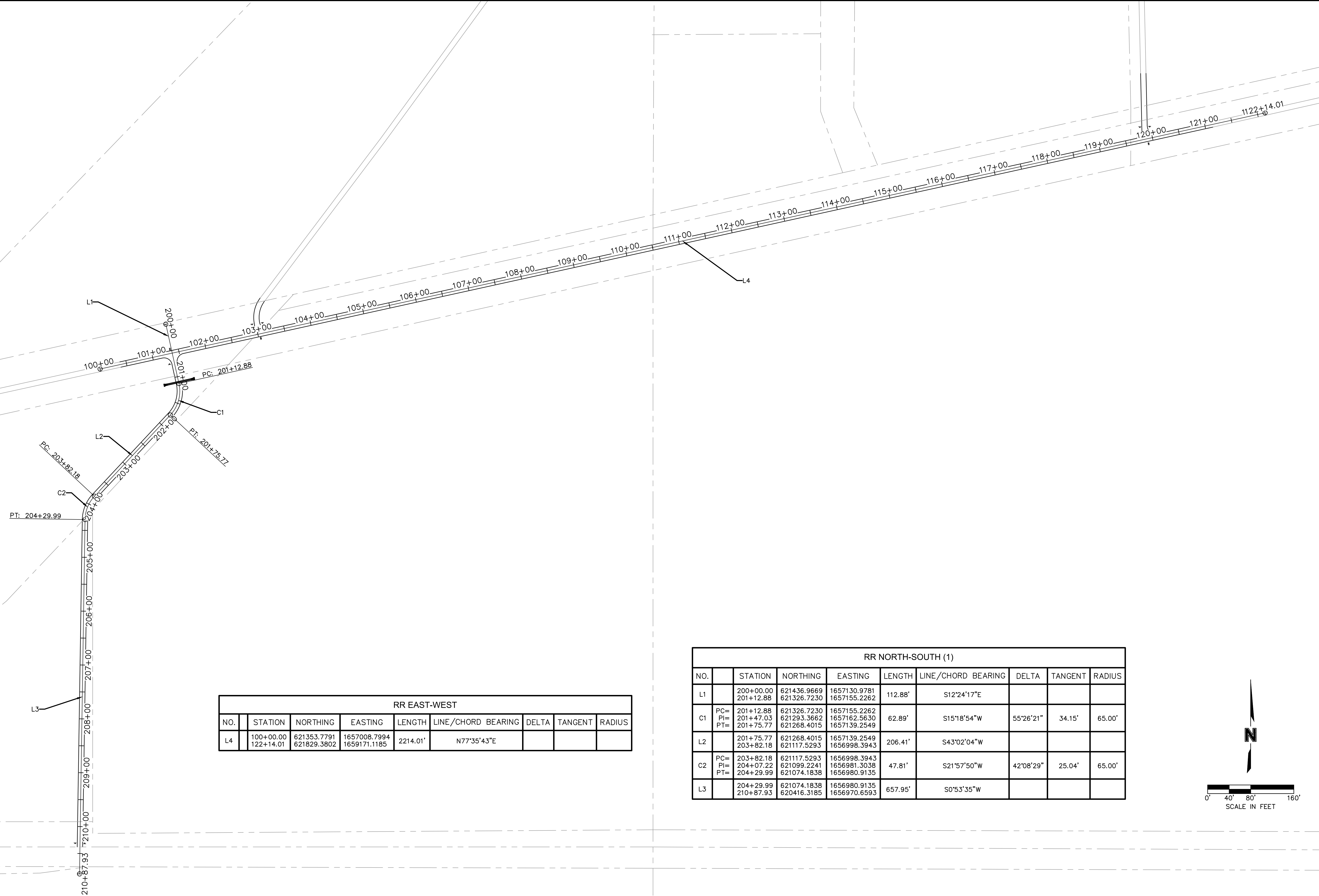
THE UNIVERSITY OF IOWA
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 4105 SEAMANS CENTER FOR THE
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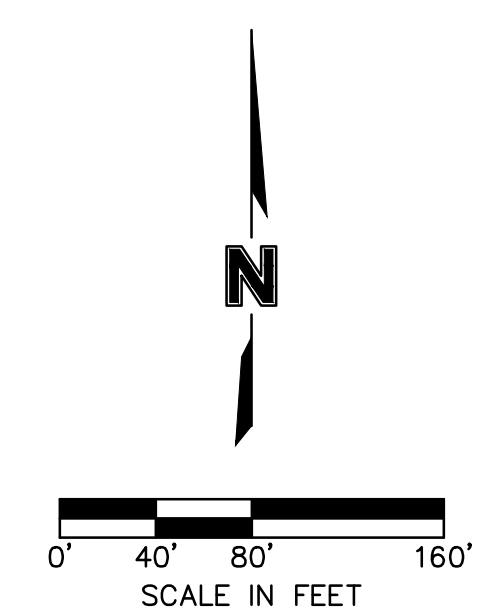
SHEET NAME
 BIKE TRAIL PLAN AND PROFILE

SHEET NO.
C6.5



RR EAST-WEST								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L4	100+00.00 122+14.01	621353.7791 621829.3802	1657008.7994 1659171.1185	2214.01'	N77°35'43"E			

RR NORTH-SOUTH (1)									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		200+00.00 201+12.88	621436.9669 621326.7230	1657130.9781 1657155.2262	112.88'	S12°24'17"E			
C1	PC= PI= PT=	201+12.88 201+47.03 201+75.77	621326.7230 621293.3662 621268.4015	1657155.2262 1657162.5630 1657139.2549	62.89'	S15°18'54"W	55°26'21"	34.15'	65.00'
L2		201+75.77 203+82.18	621268.4015 621117.5293	1657139.2549 1656998.3943	206.41'	S43°02'04"W			
C2	PC= PI= PT=	203+82.18 204+07.22 204+29.99	621117.5293 621099.2241 621074.1838	1656998.3943 1656981.3038 1656980.9135	47.81'	S21°57'50"W	42°08'29"	25.04'	65.00'
L3		204+29.99 210+87.93	621074.1838 620416.3185	1656980.9135 1656970.6593	657.95'	S0°53'35"W			



PROJECT: CEE: 4850
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SHEET NAME
 BIKE TRAIL PLAN AND PROFILE

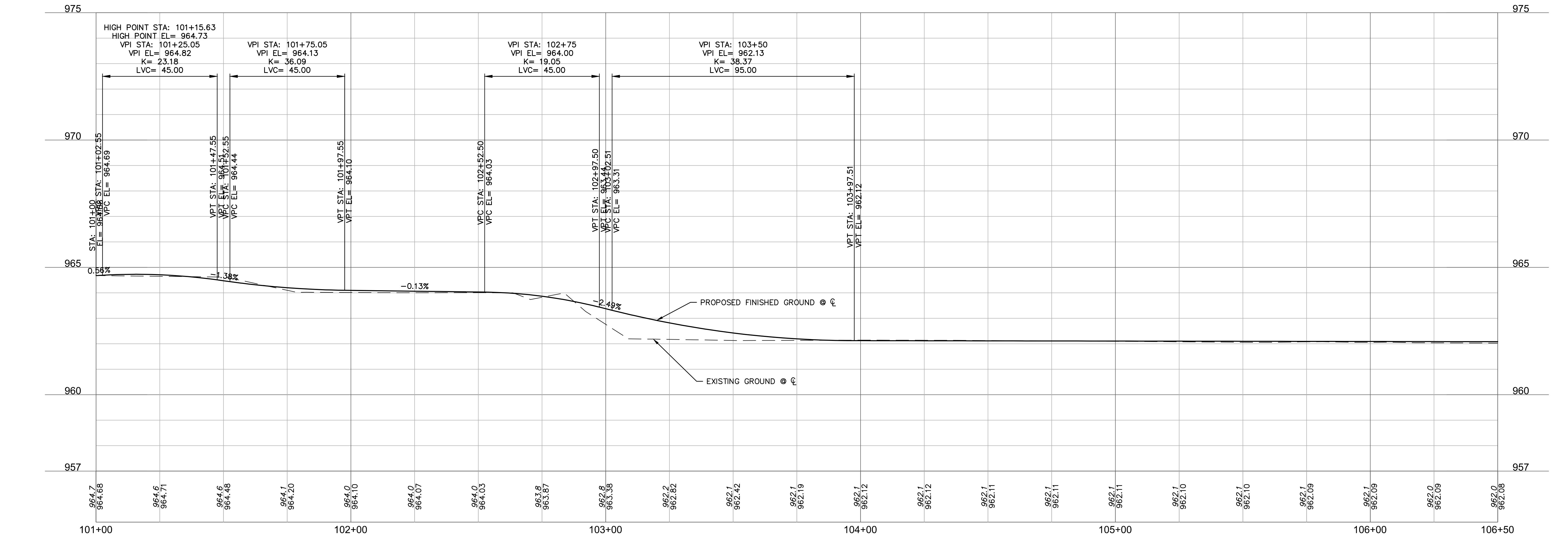
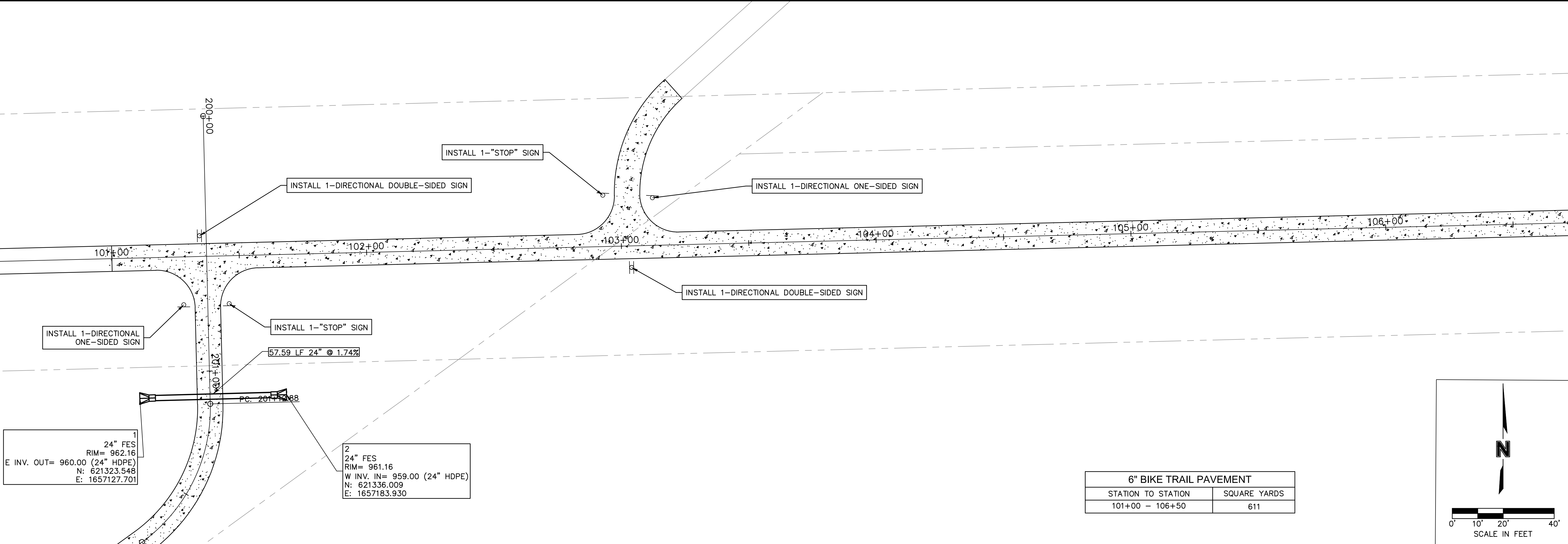
SHEET NO.
C6.6

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 CITY OF BONDURANT
 BONDURANT, IA

SHEET NAME
 BIKE TRAIL PLAN AND PROFILE

SHEET NO.
C6.7



6" BIKE TRAIL PAVEMENT	
STATION TO STATION	SQUARE YARDS
101+00 - 106+50	611

1
 24" FES
 RIM= 962.16
 E INV. OUT= 960.00 (24" HDPE)
 N: 621323.548
 E: 1657127.701

2
 24" FES
 RIM= 961.16
 W INV. IN= 959.00 (24" HDPE)
 N: 621336.009
 E: 1657183.930

PROJECT: CEE: 4850
 DATE: December 23
 DRAWN BY: JDU
 REVISION:

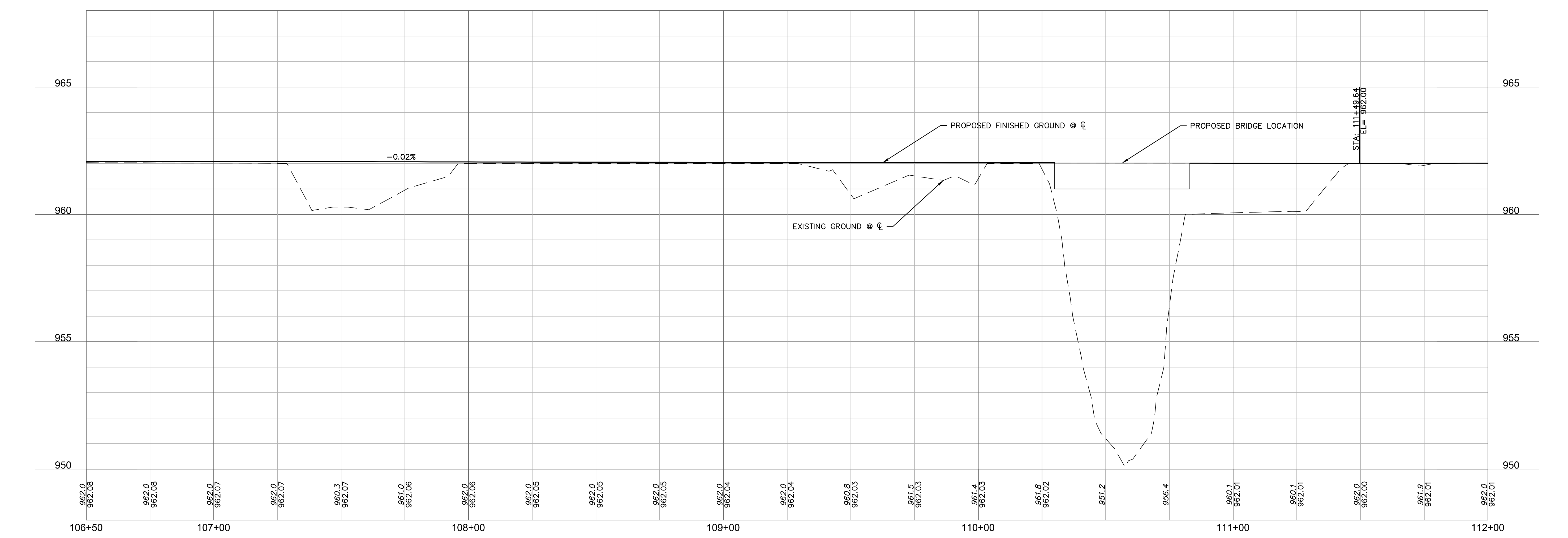
THE UNIVERSITY OF IOWA
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 BONDURANT, IA

SHEET NAME
 BIKE TRAIL PLAN AND PROFILE

SHEET NO.
C6.8



PROJECT: CEE: 4850
 DATE: December 23
 DRAWN BY: JDU
 REVISION:

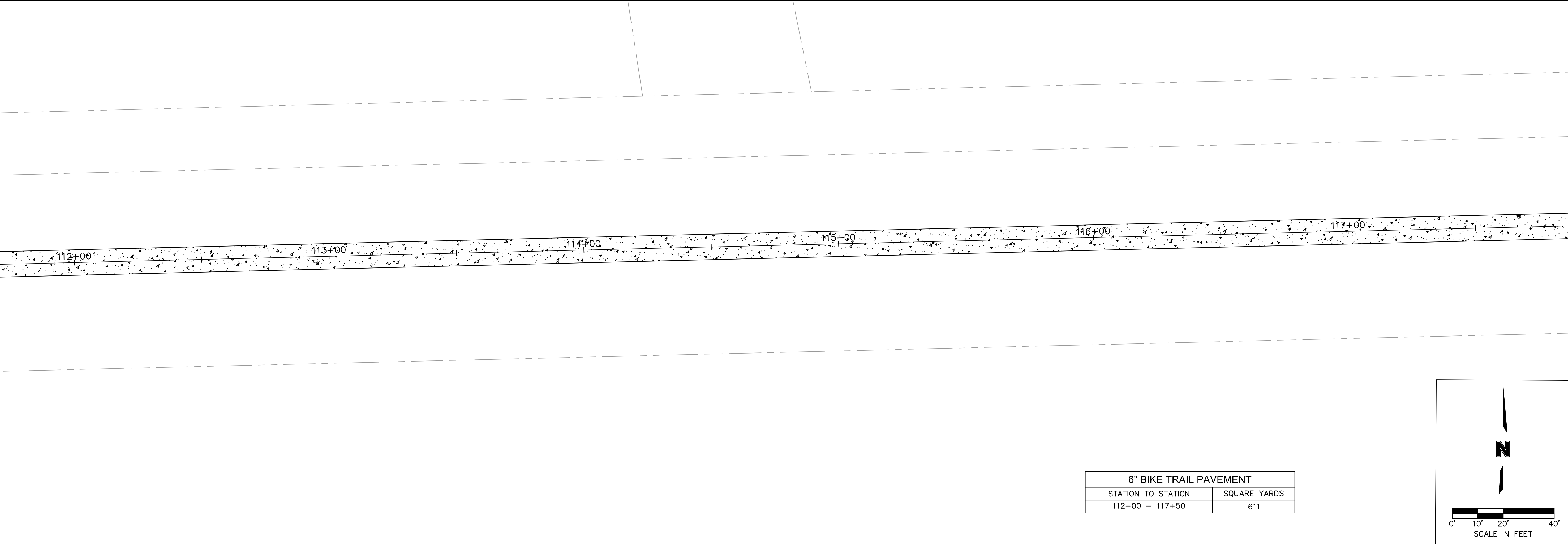
THE UNIVERSITY OF IOWA
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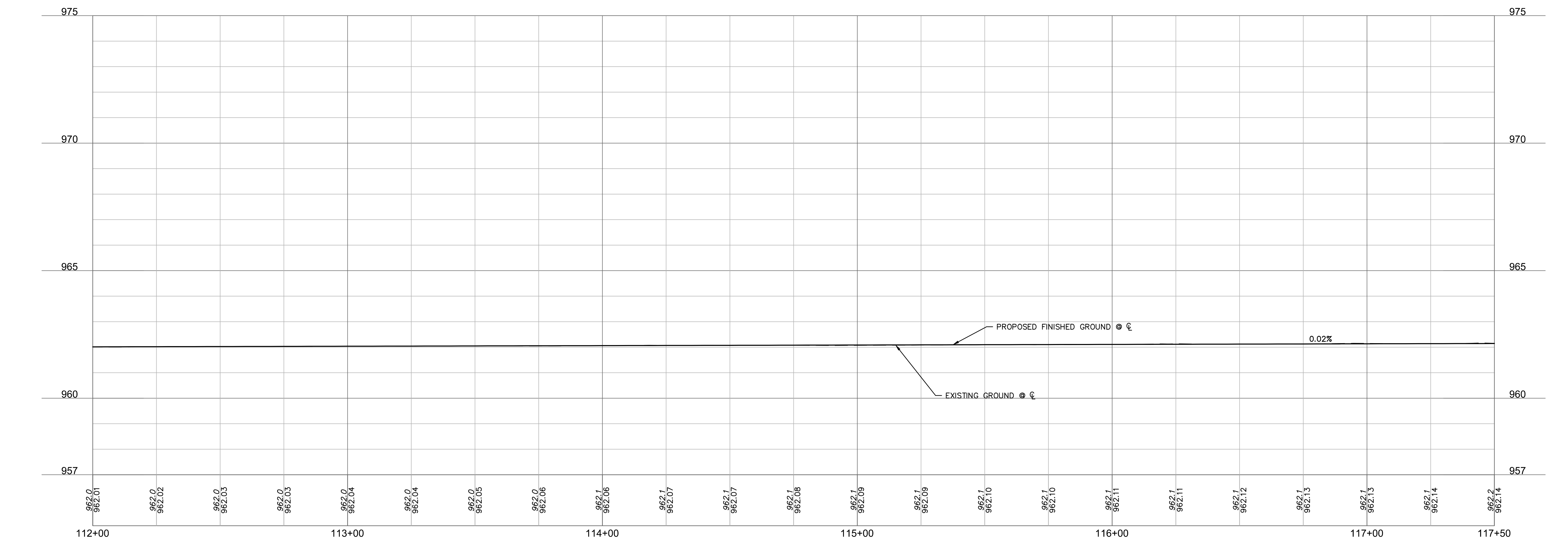
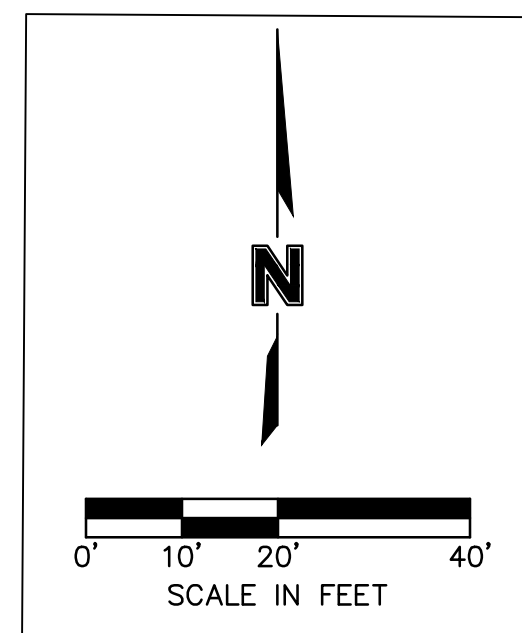
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 BONDURANT, IA

SHEET NAME
 BIKE TRAIL PLAN AND PROFILE

SHEET NO.
C6.9



6" BIKE TRAIL PAVEMENT	
STATION TO STATION	SQUARE YARDS
112+00 - 117+50	611



PROJECT: CEE: 4850
 DATE: December 23
 DRAWN BY: JDU
 REVISION:

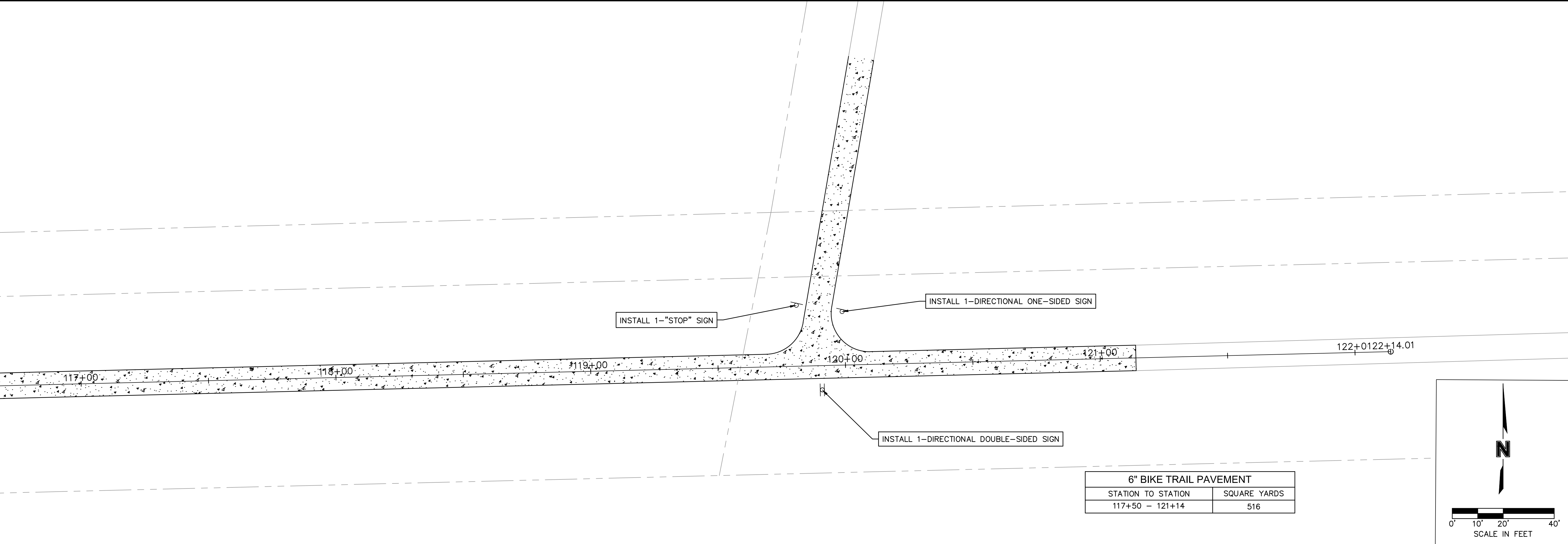
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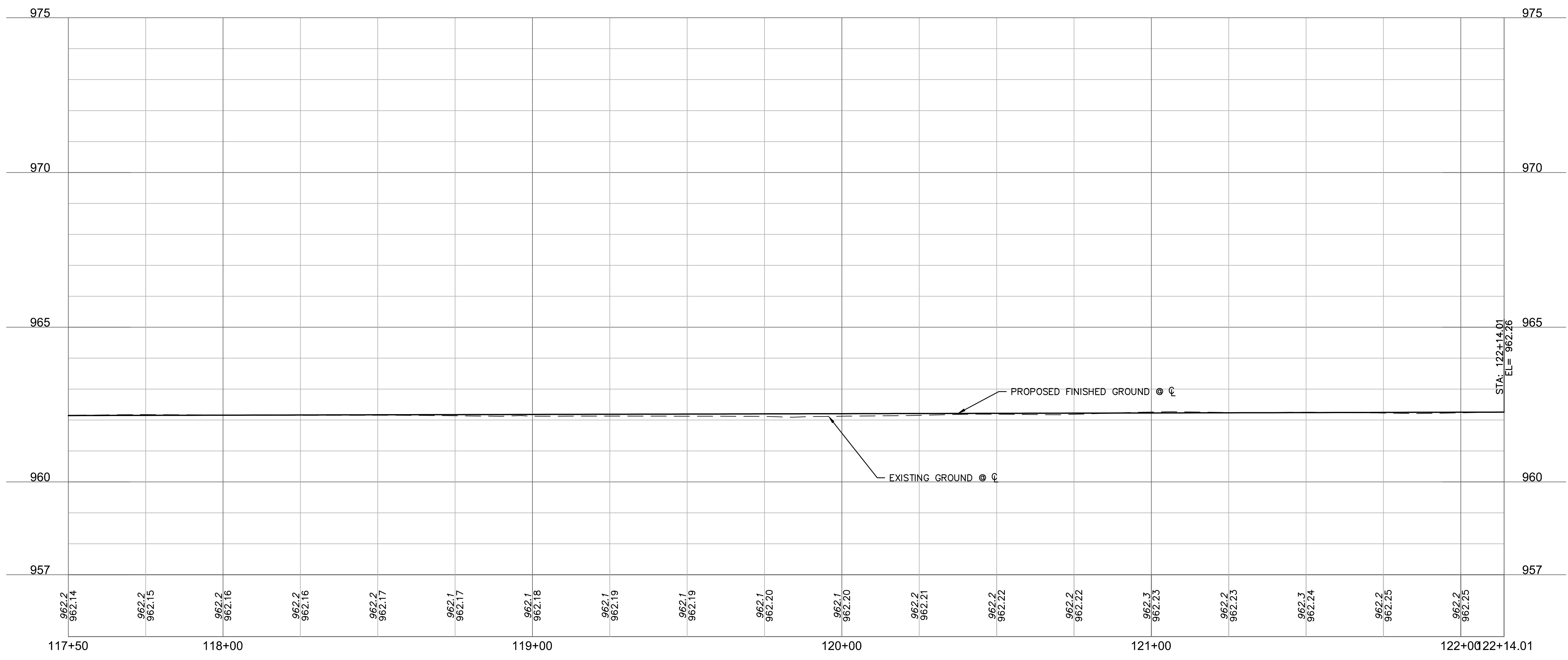
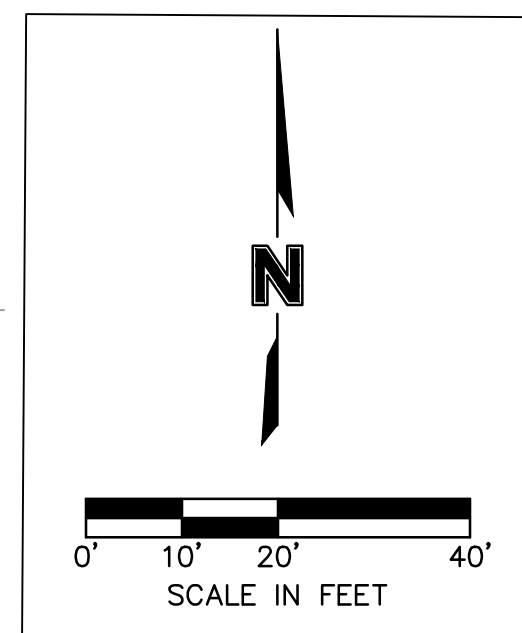
CVT REDESIGN
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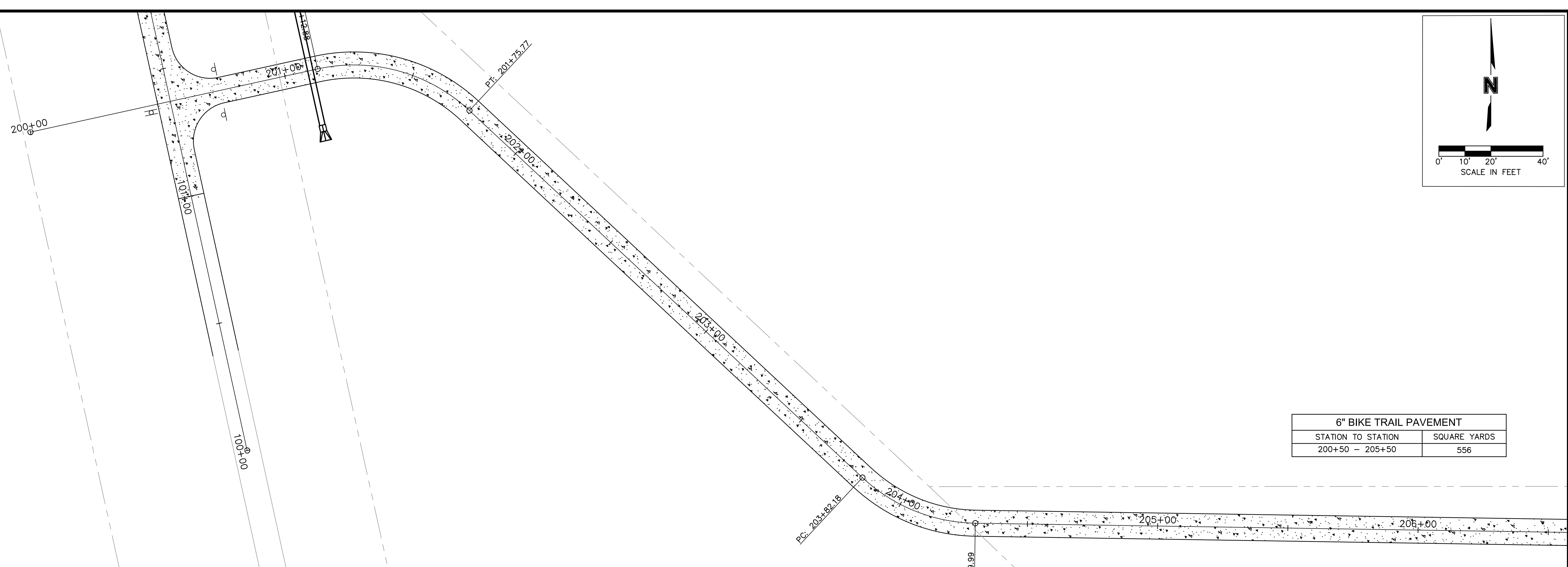
SHEET NAME
 BIKE TRAIL PLAN AND PROFILE

SHEET NO.
C6.10

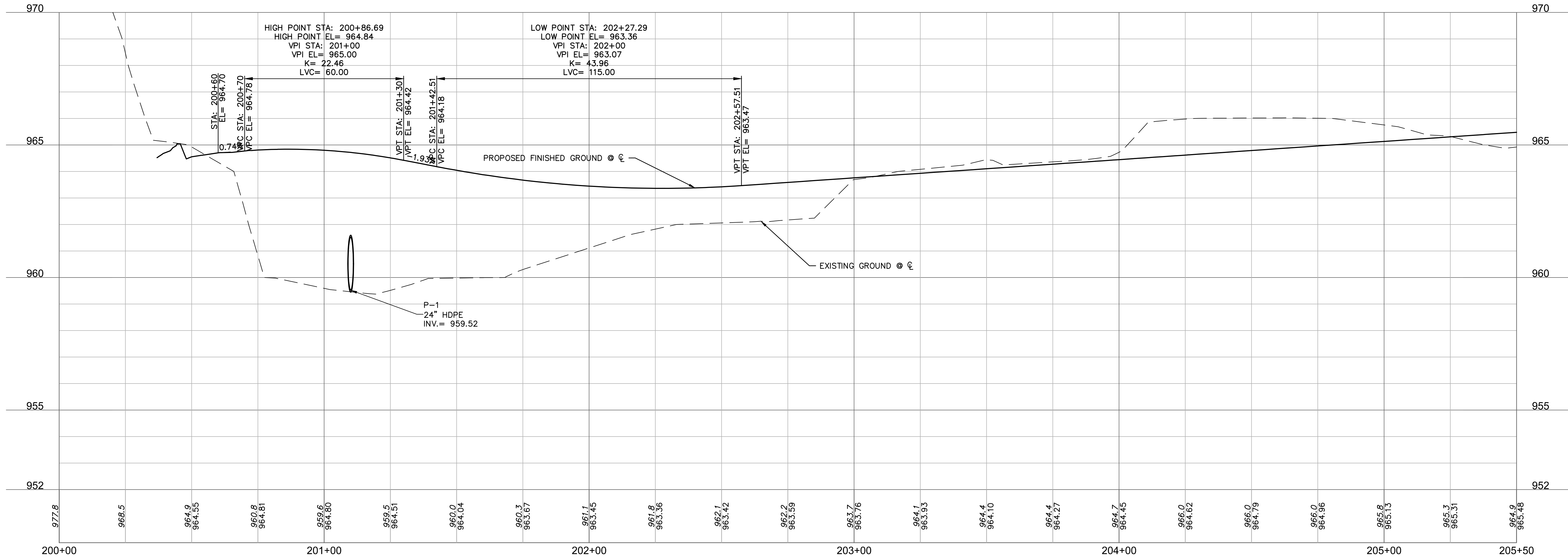


6" BIKE TRAIL PAVEMENT	
STATION TO STATION	SQUARE YARDS
117+50 - 121+14	516





6" BIKE TRAIL PAVEMENT	
STATION TO STATION	SQUARE YARDS
200+50 - 205+50	556



PROJECT: CEE: 4850
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SHEET NAME
 BIKE TRAIL PLAN AND PROFILE

SHEET NO.
C6.11

PROJECT: CEE: 4850
 DATE: December 23
 DRAWN BY: JDU
 REVISION:

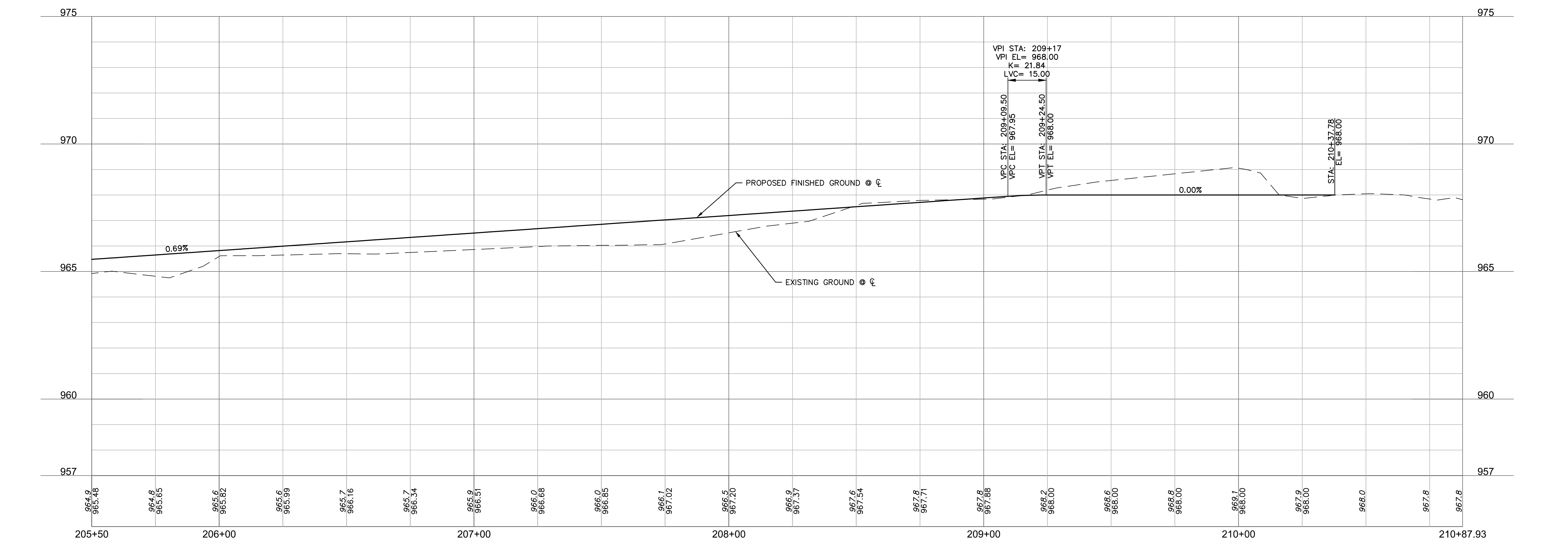
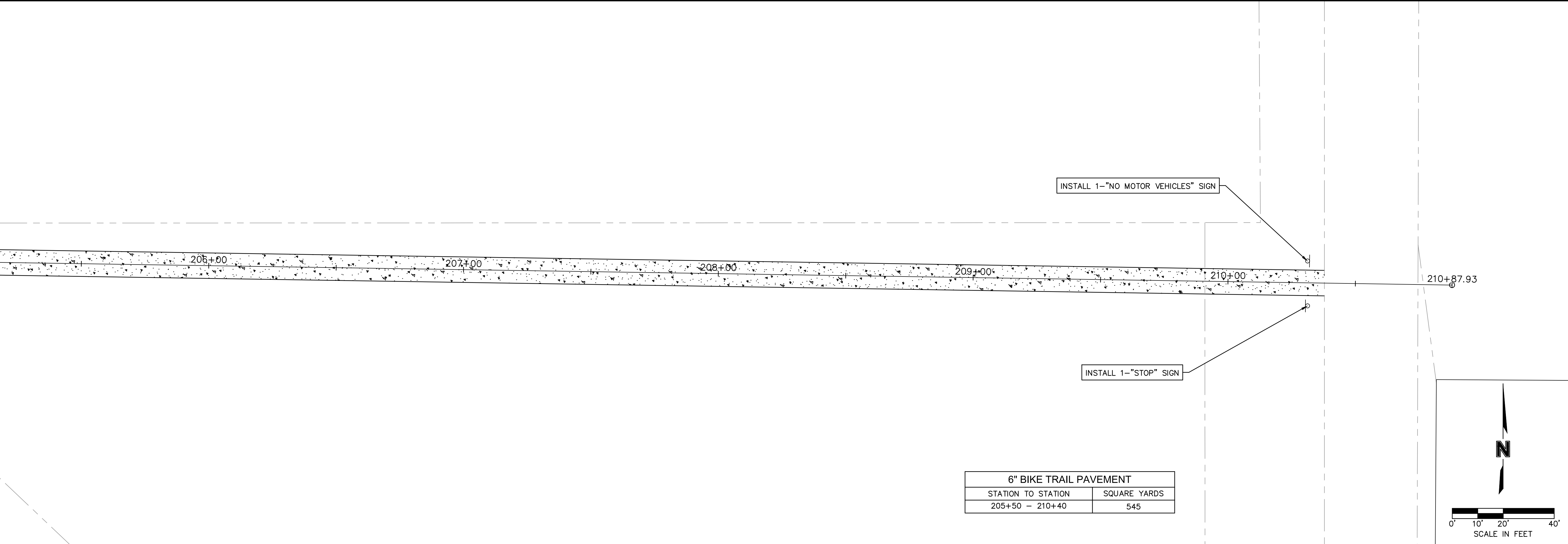
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 BONDURANT, IA

SHEET NAME
 BIKE TRAIL PLAN AND PROFILE

SHEET NO.
C6.12

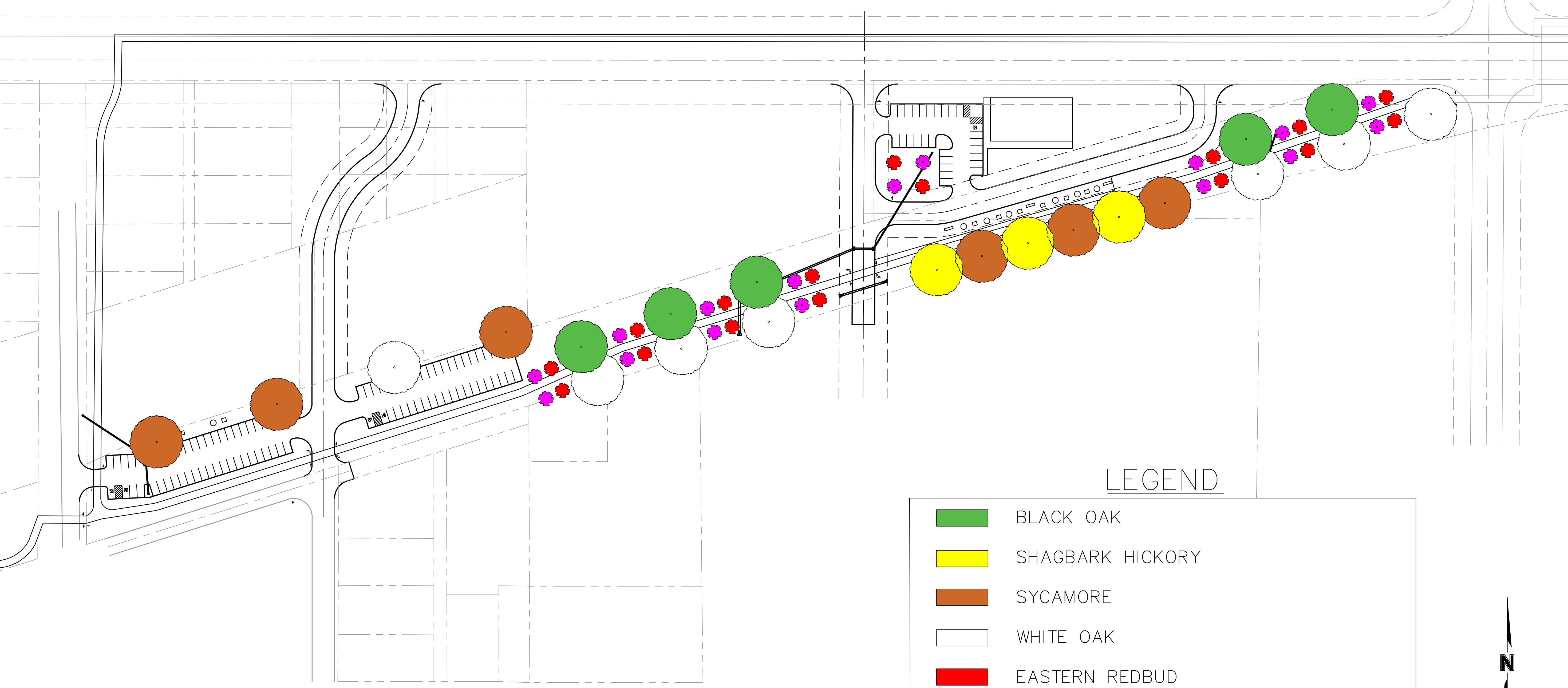


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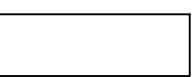


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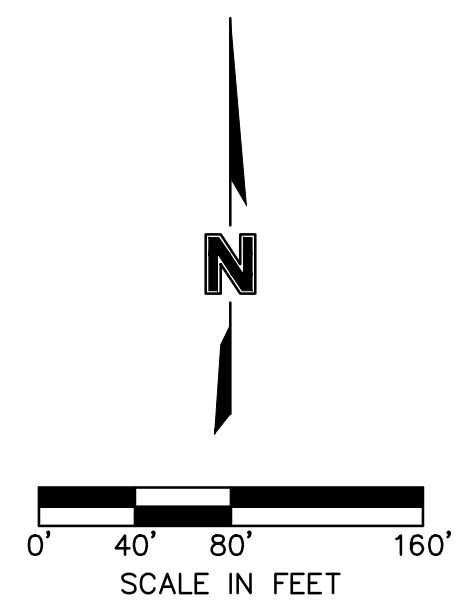
SHEET NAME
 ARBORETUM

SHEET NO.
C7.1



LEGEND

	BLACK OAK
	SHAGBARK HICKORY
	SYCAMORE
	WHITE OAK
	EASTERN REDBUD
	PRAIRIE CRABAPPLE

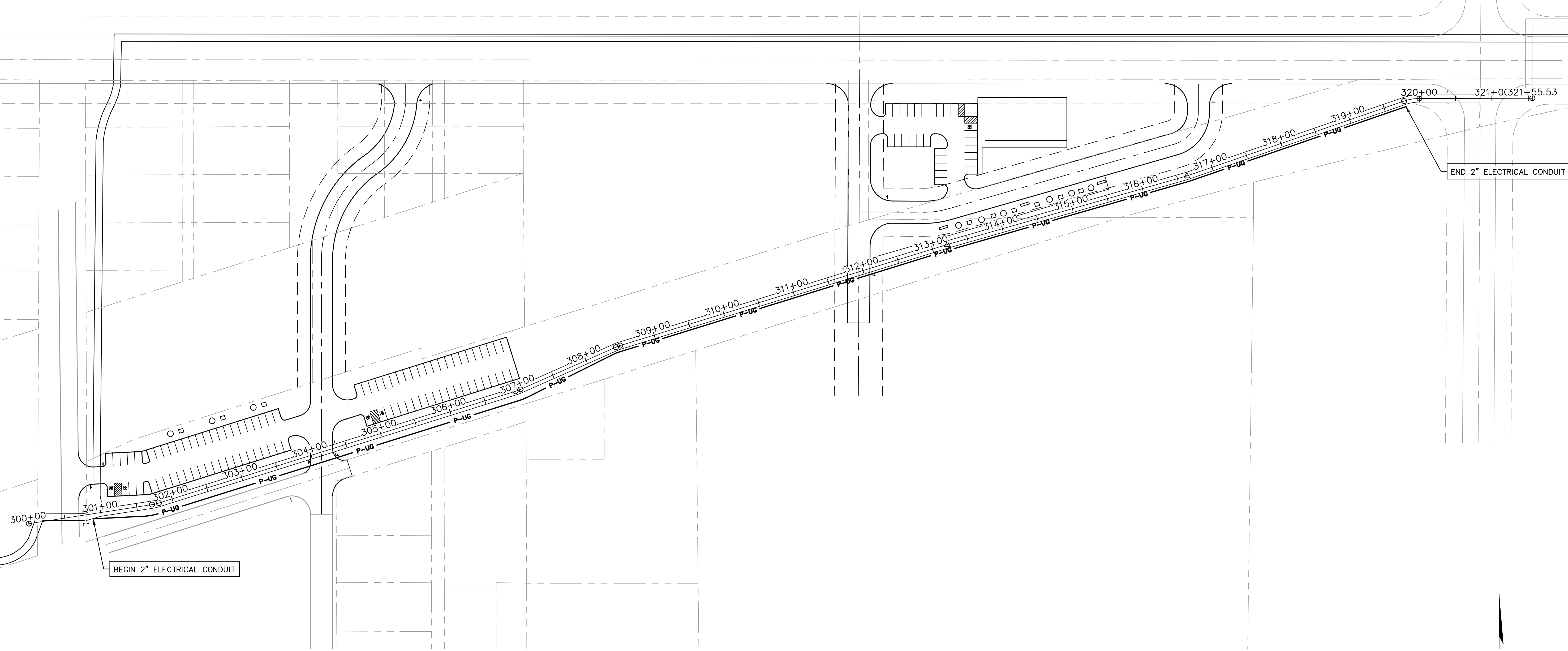


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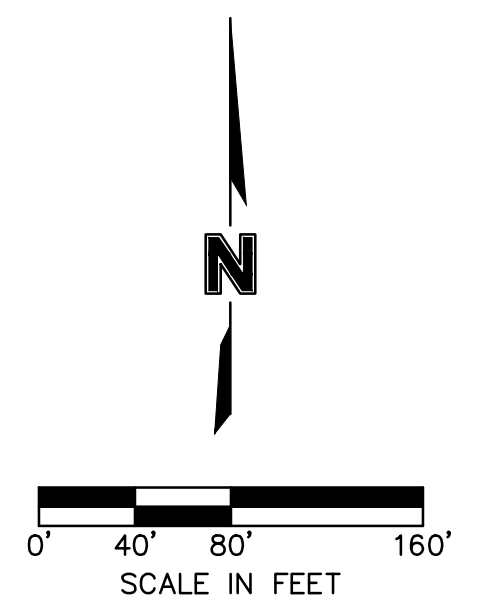
SHEET NAME
 UTILITY PLAN

SHEET NO.
C8.1



INSTALL 2" ELECTRICAL CONDUIT	
LENGTH	DESCRIPTION
1900'	STA. 301+00 TO STA. 320+00

* 2" ELECTRICAL CONDUIT TO BE INSTALLED 8' SOUTH OF BIKE TRAIL @ 3' DEPTH
 ** ELECTRICAL SERVICES AND PEDESTALS TO BE COORDINATED BY CITY; CONTRACTOR TO COORDINATE INSTALLATION OF THESE ITEMS WITH CITY

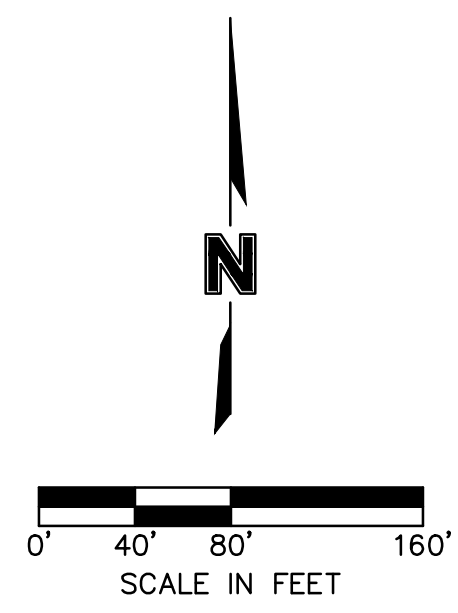
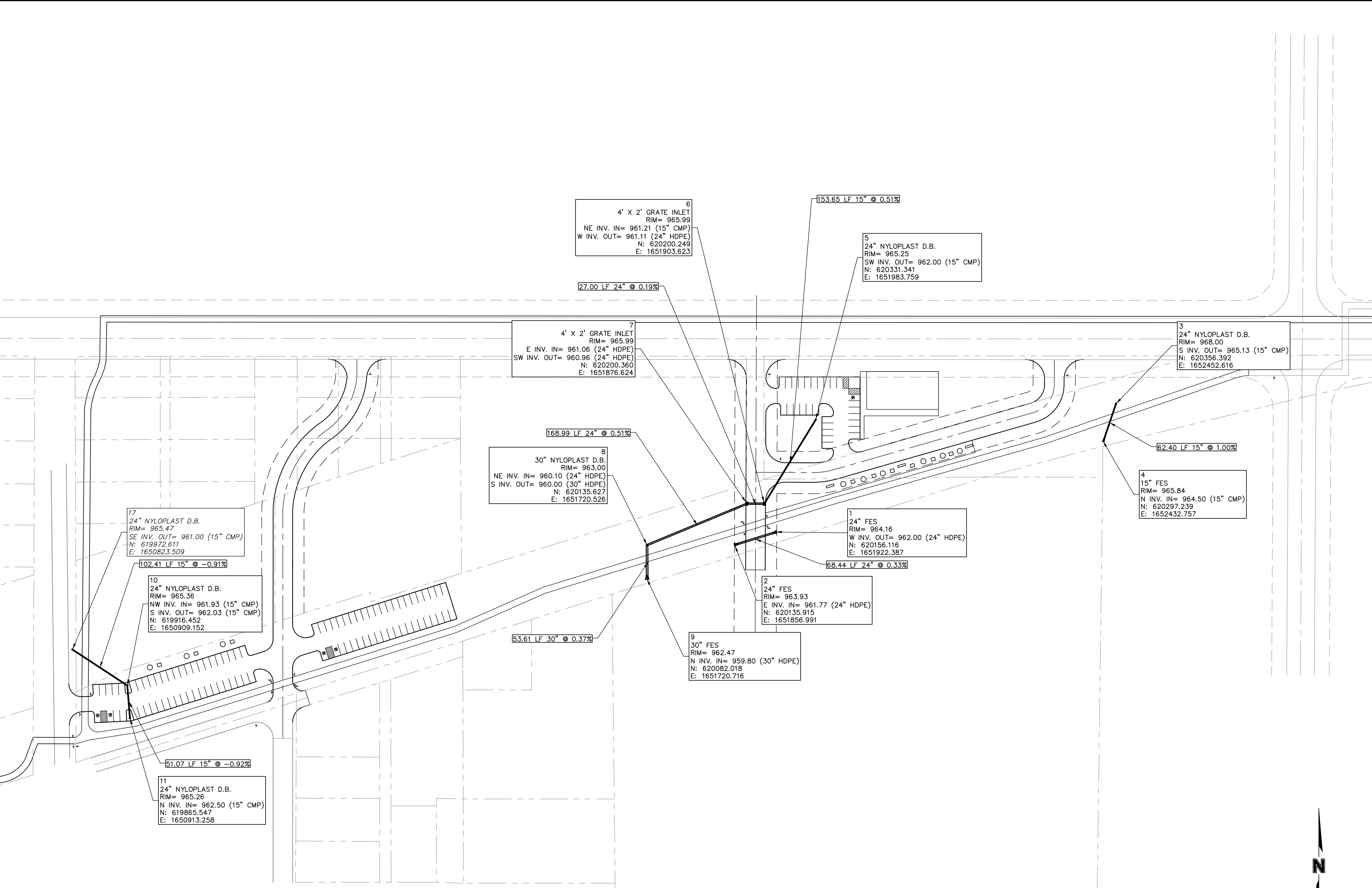


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 CITY OF BONDURANT
 BONDURANT, IA

SHEET NAME
 STORM PLAN

SHEET NO.
C8.2



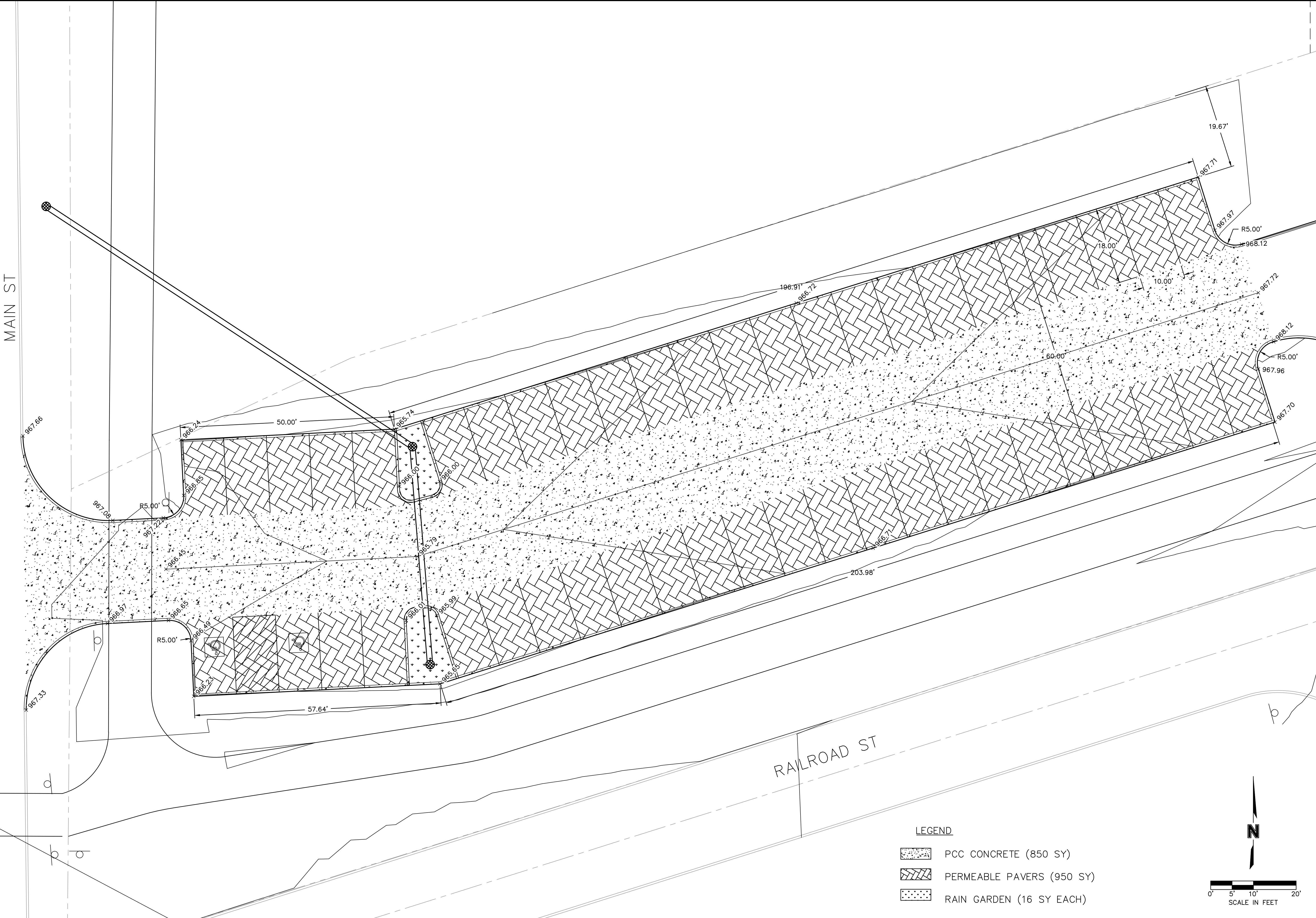
PROJECT:	CEE: 4850
DATE:	December 23
DRAWN BY:	JDU
REVISION:	

THE UNIVERSITY OF IOWA
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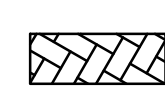
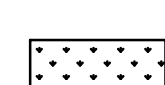
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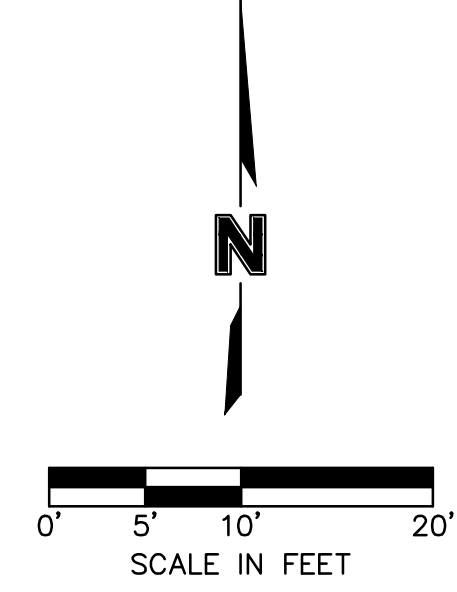
CVT REDESIGN
 DETAILS
 BONDURANT, IA

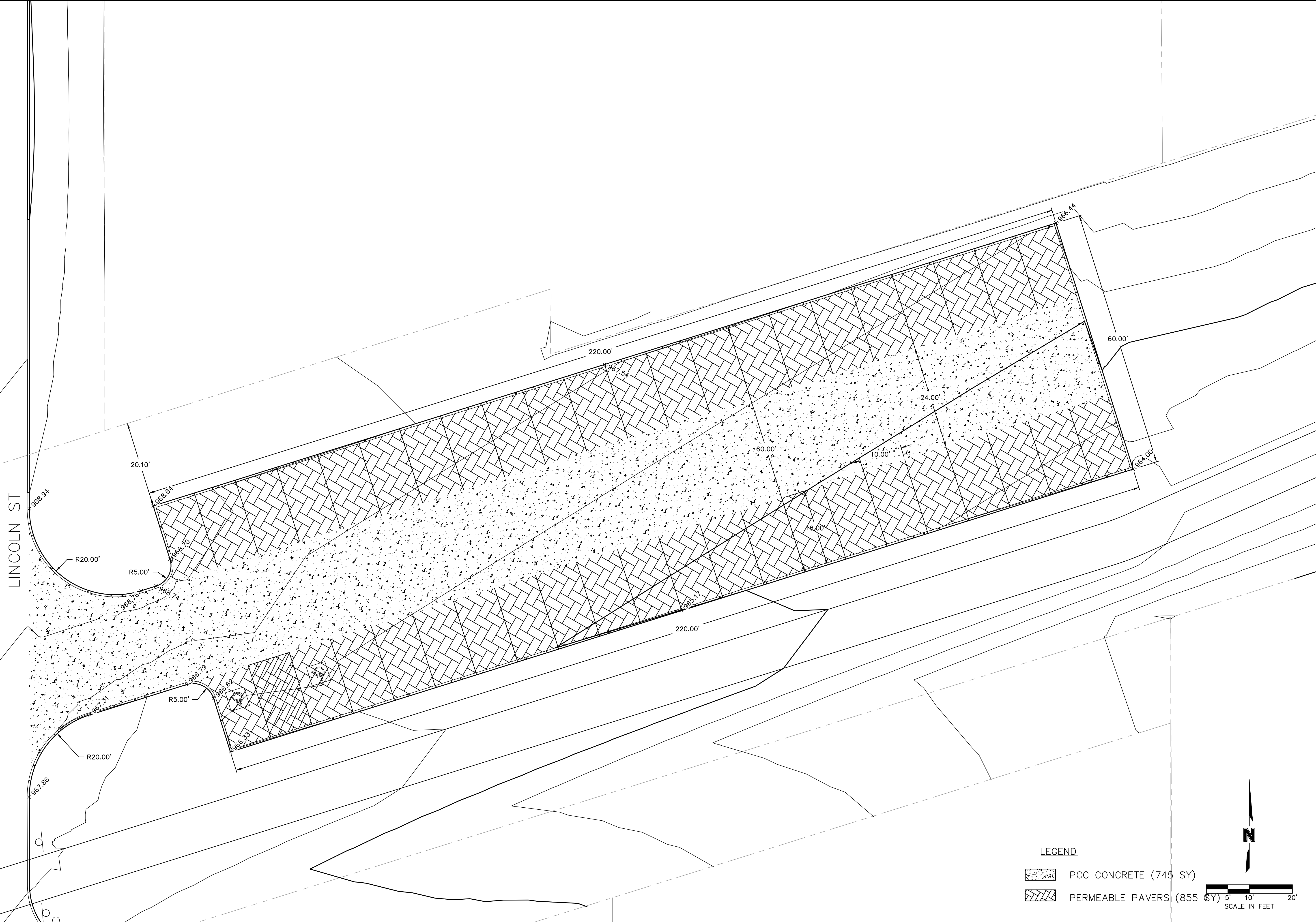
SHEET NAME
 PARKING LOT
 SHEET NO.
C9.1



LEGEND

-  PCC CONCRETE (850 SY)
-  PERMEABLE PAVERS (950 SY)
-  RAIN GARDEN (16 SY EACH)





LINCOLN ST

PROJECT:	CEE: 4850
DATE :	December 23
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 DETAILS
 BONDURANT, IA

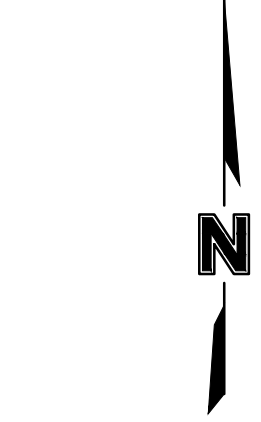
SHEET NAME	PARKING LOT
SHEET NO.	C9.2

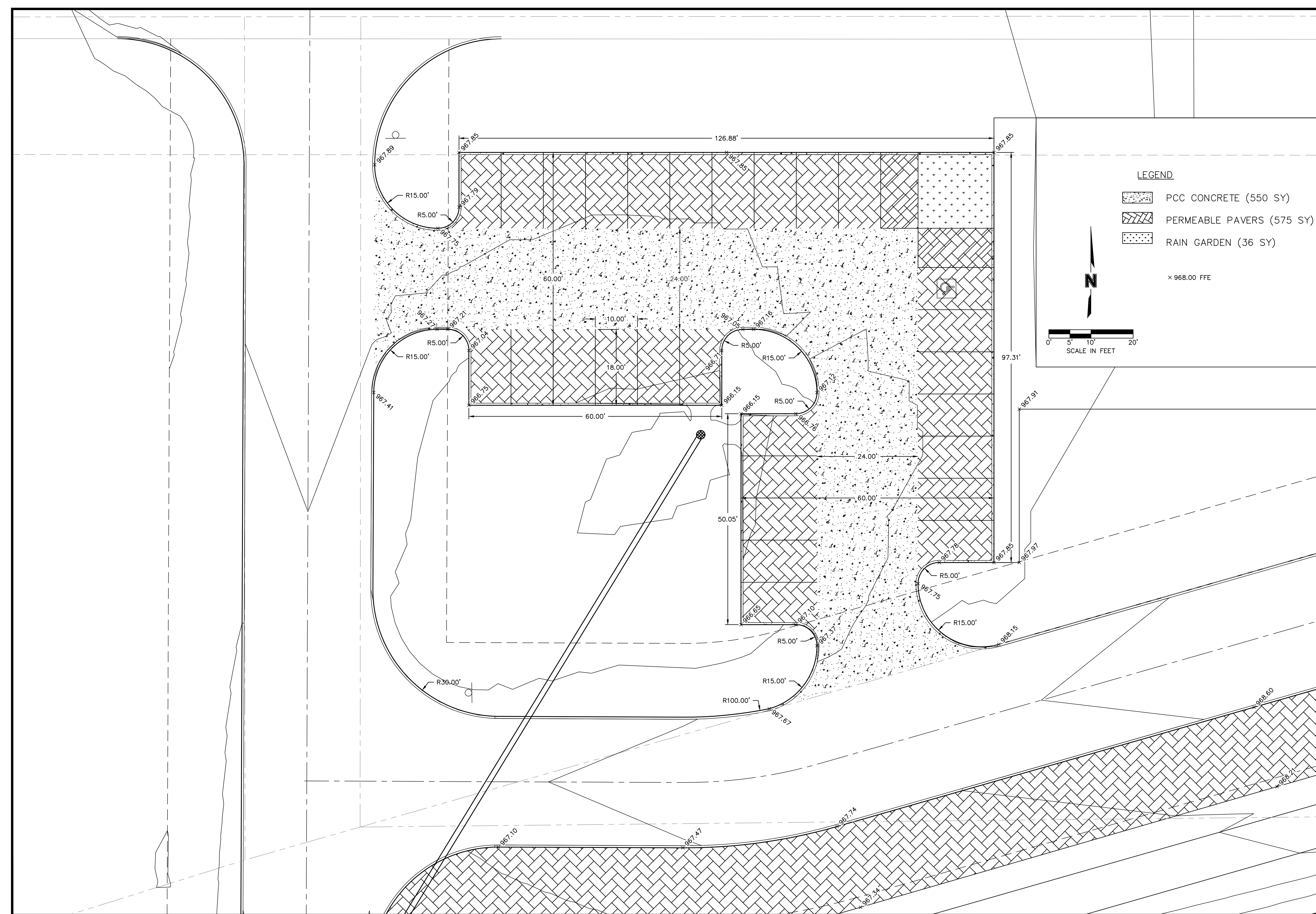
LEGEND

PCC CONCRETE (745 SY)




PERMEABLE PAVERS (855 SY)

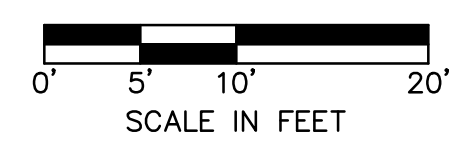
5' 10' 20'
 SCALE IN FEET





LEGEND

-  PCC CONCRETE (550 SY)
 -  PERMEABLE PAVERS (575 SY)
 -  RAIN GARDEN (36 SY)
- x 968.00 FFE



PROJECT: CEE: 4850
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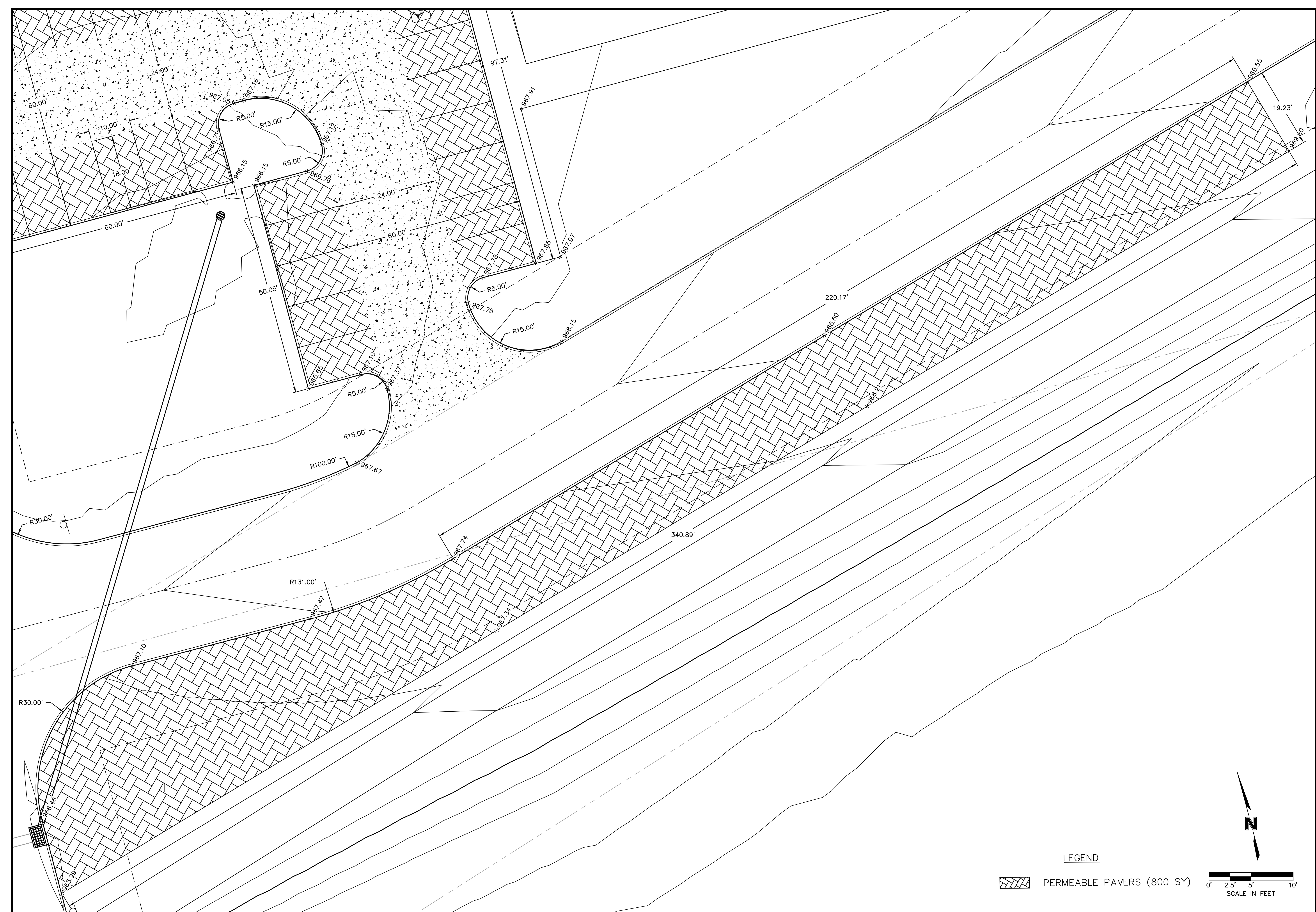
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DETAILS
 BONDURANT, IA

SHEET NAME
 PARKING LOT

SHEET NO.
C9.3



PROJECT:	CEE: 4850
DATE:	December 23
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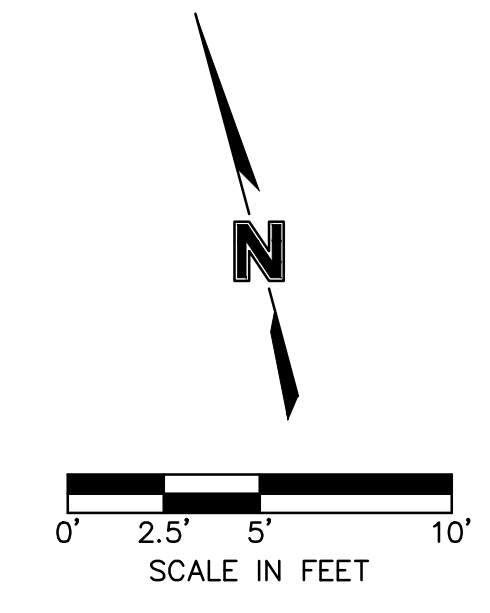
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 BONDURANT, IA

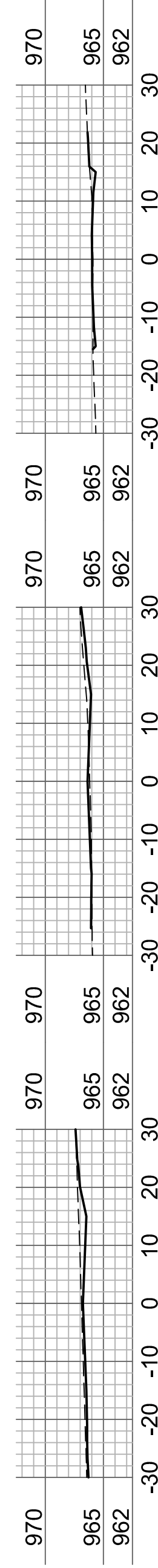
SHEET NAME
 PLAZA

SHEET NO.
C9.4

LEGEND

 PERMEABLE PAVERS (800 SY)

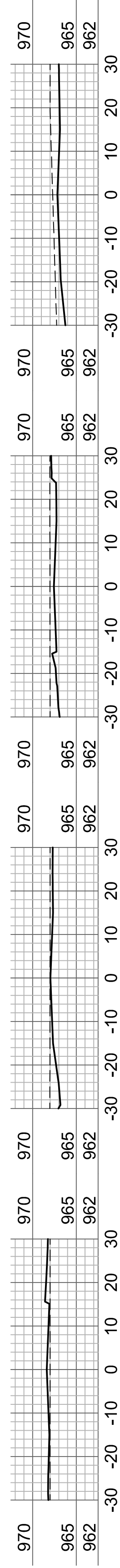




406+75

407+00

407+25

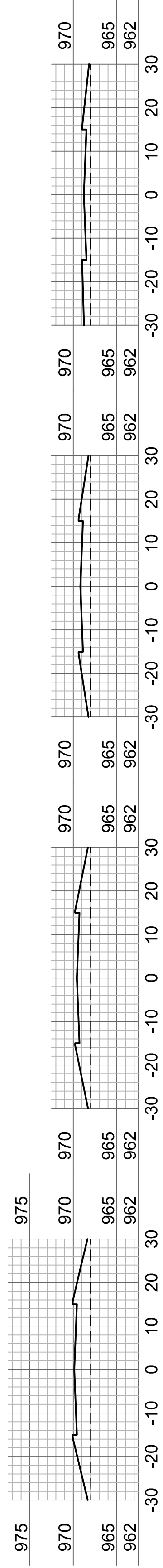


405+75

406+00

406+25

406+50

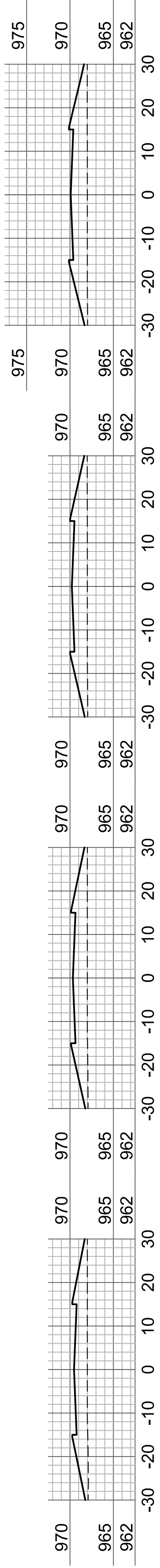


404+75

405+00

405+25

405+50

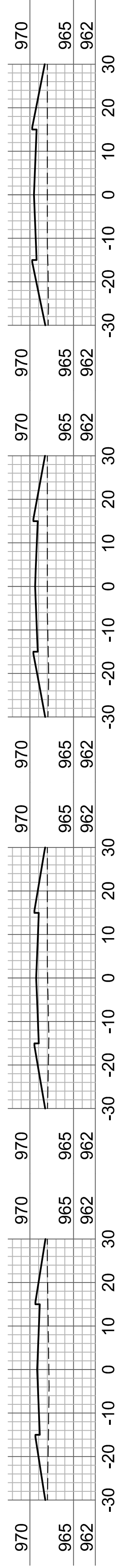


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404+00

404+25

404+50

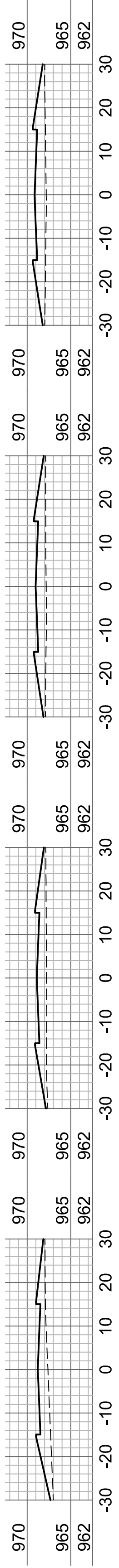


403+02.36

403+25

403+50

403+73.75

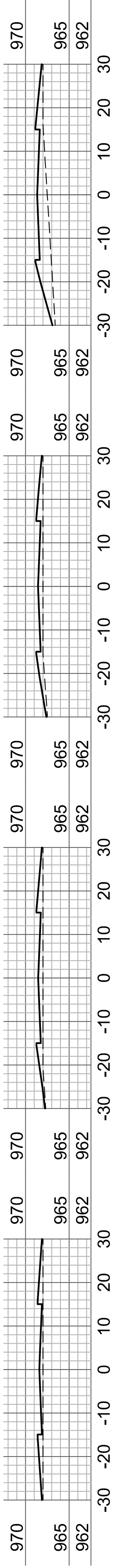


402+25

402+50

402+75

403+00

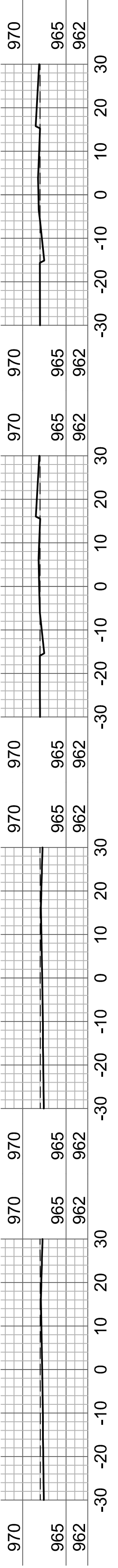


401+50

401+75

401+78.80

402+00



401+00

401+00.02

401+25

401+26.64

SHEET NO.

SHEET NAME

LINCOLN ST X'S

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PHONE: 319.335.5647
FAX: 319.335.5660
EMAIL: civil-hawks@iowa.edu

PROJECT:

CEE: 4850

DATE :

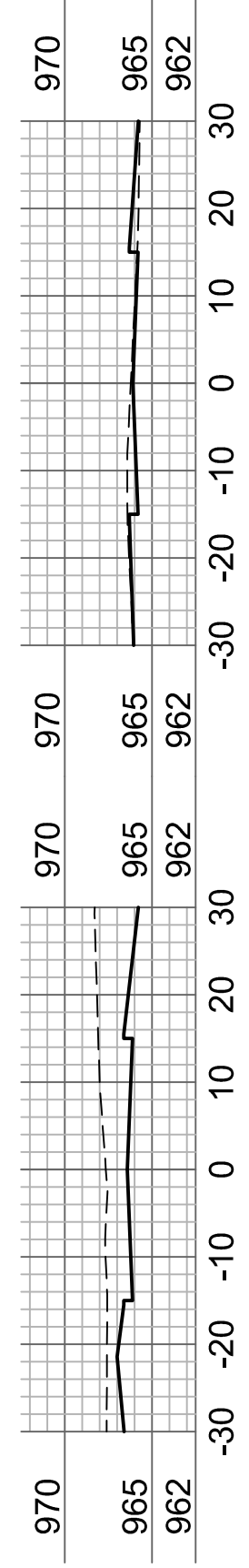
December 23

DRAWN BY:

JDU

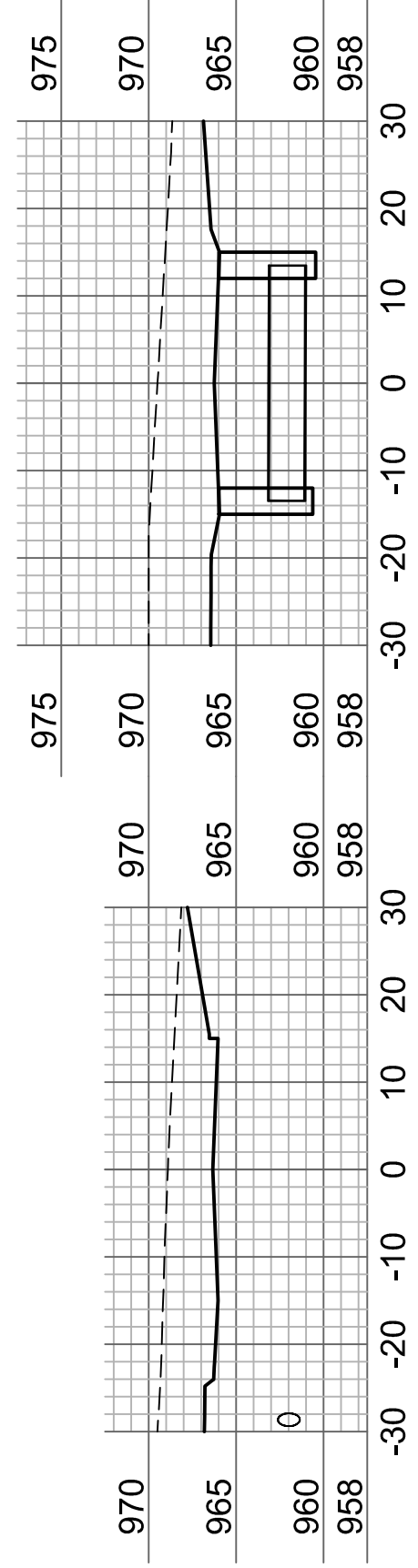
REVISION:

C10.1



504+00

504+25

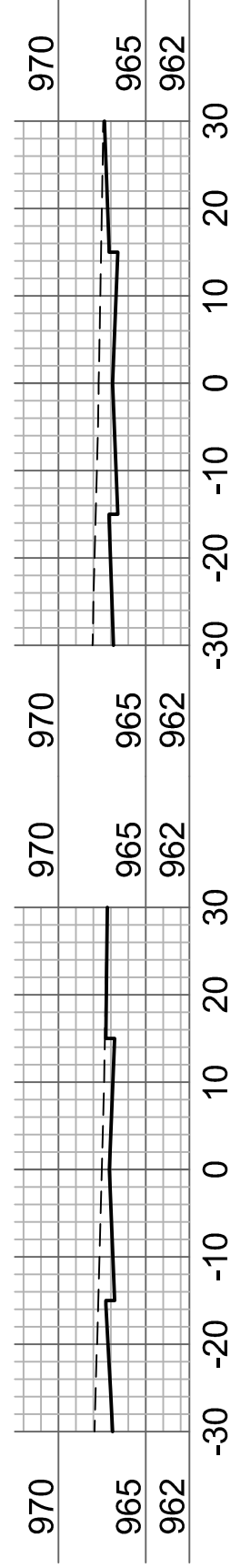


503+00

503+25

503+50

503+75

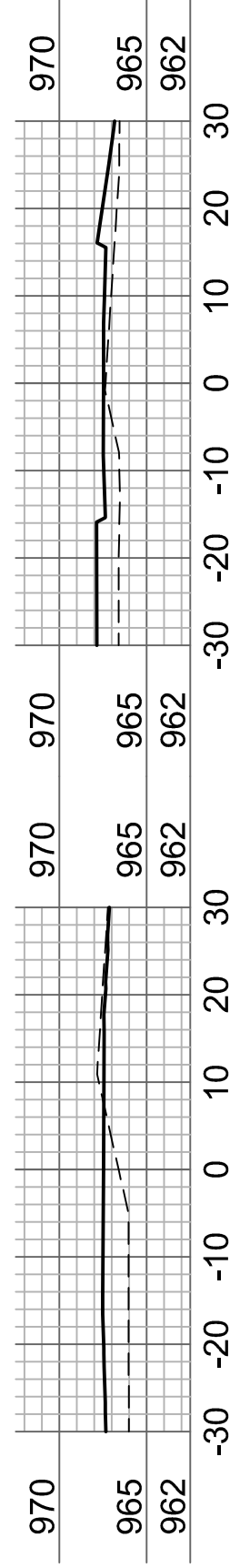


502+00

502+25

502+50

502+75



501+00

501+25

501+50

501+75

SHEET NO.

C10.2

SHEET NAME

STORAGE ST X'S

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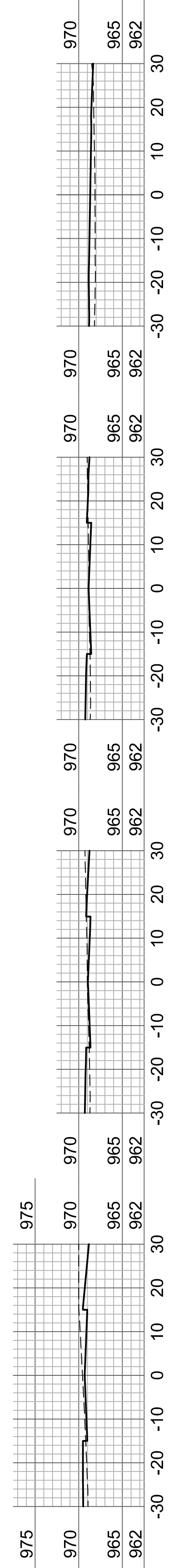
4105 SEAMANS CENTER FOR THE
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PHONE: 319.335.5660
FAX: 319.335.5660
EMAIL: civil-hawks@iowa.edu

PROJECT: CEE: 4850

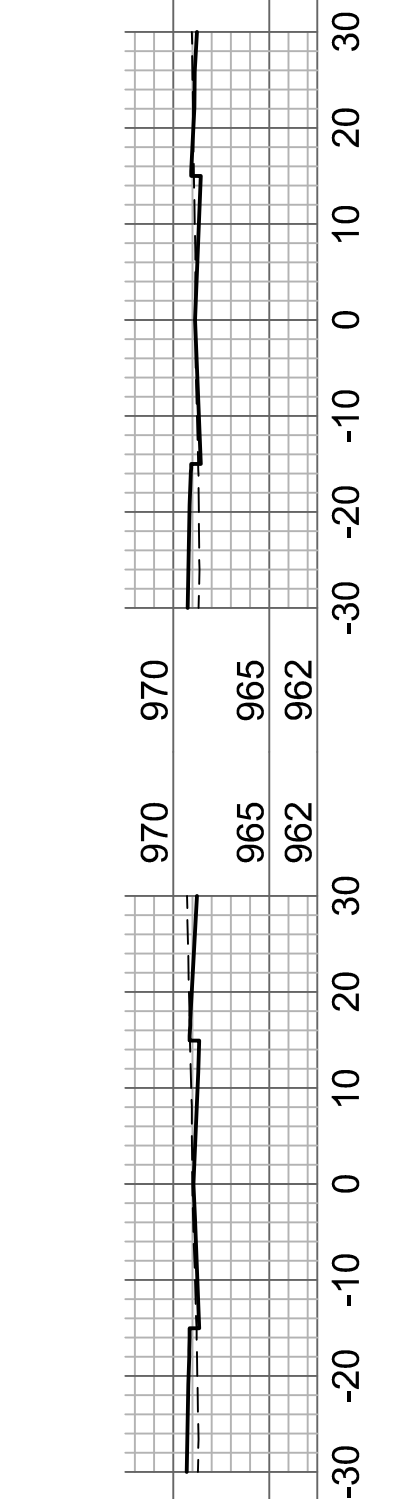
DATE : December 23

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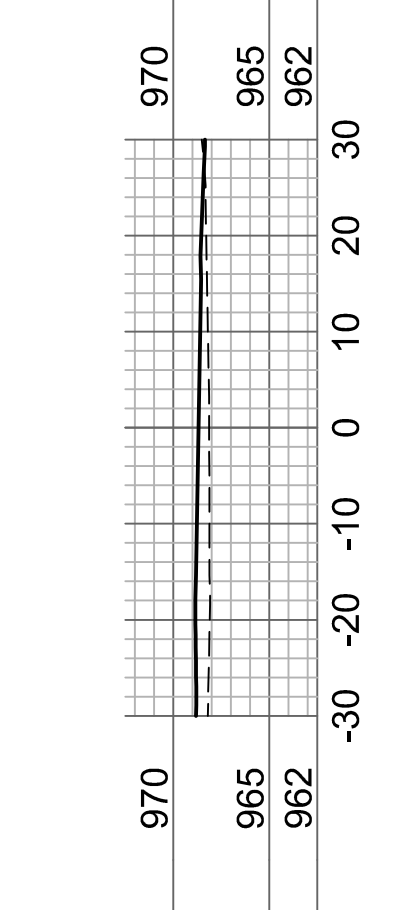
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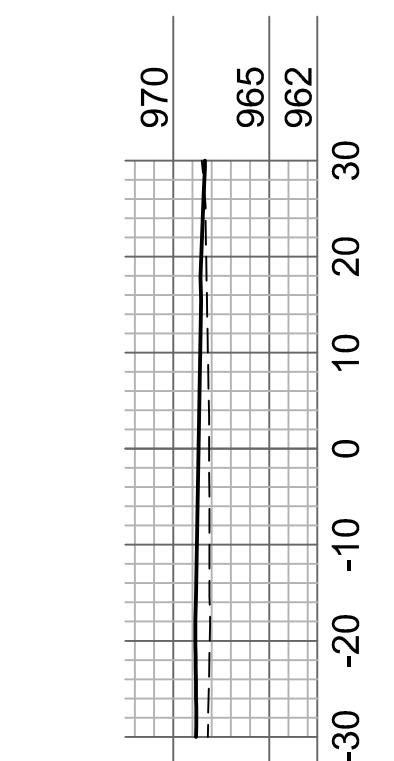
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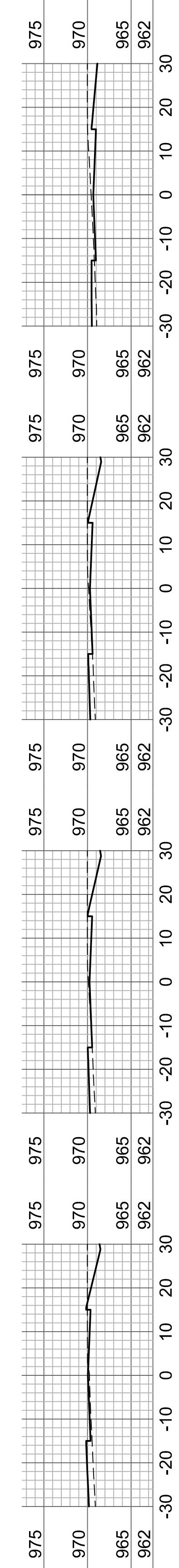
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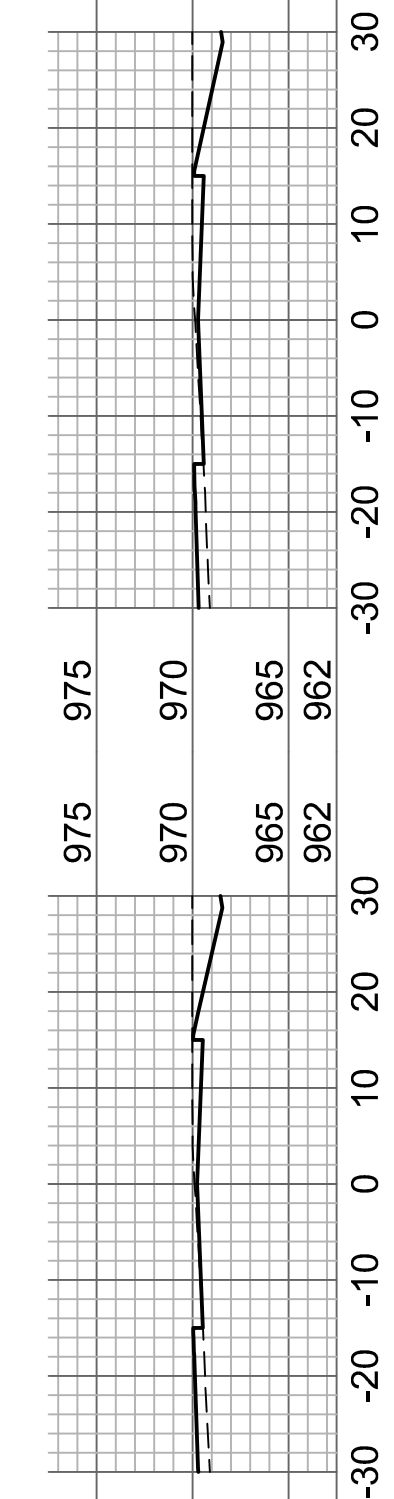
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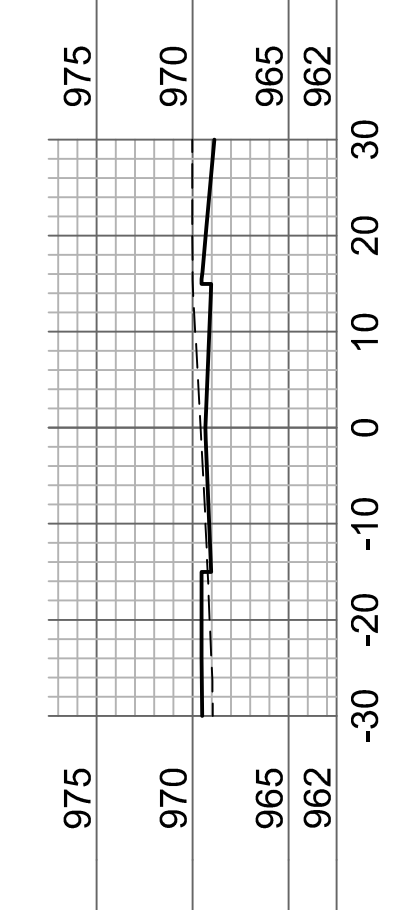
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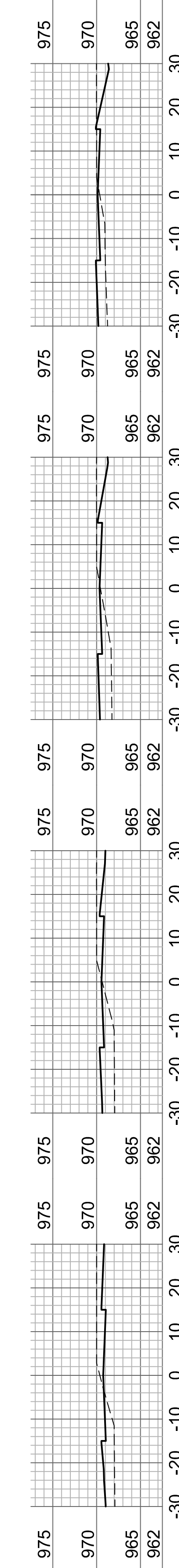
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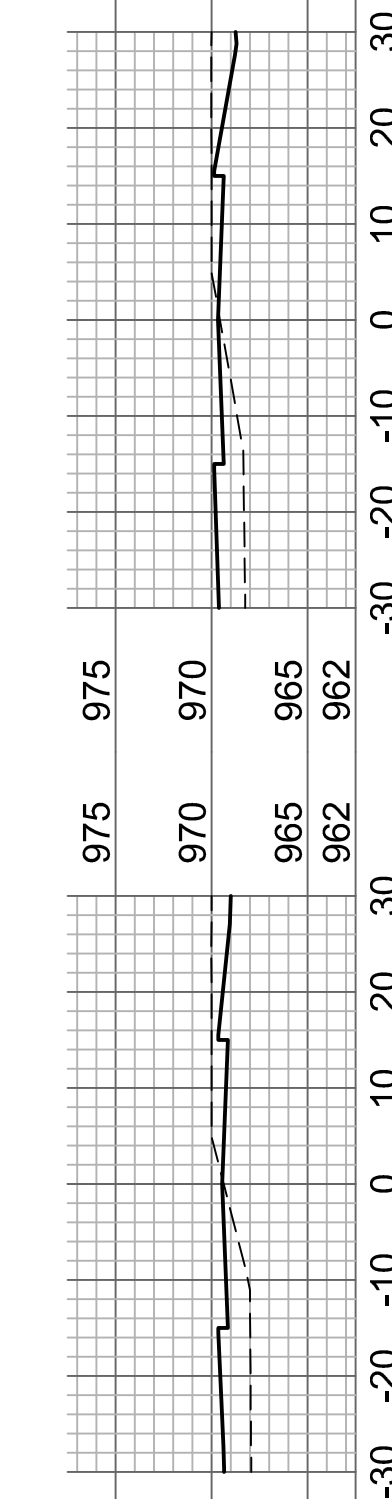
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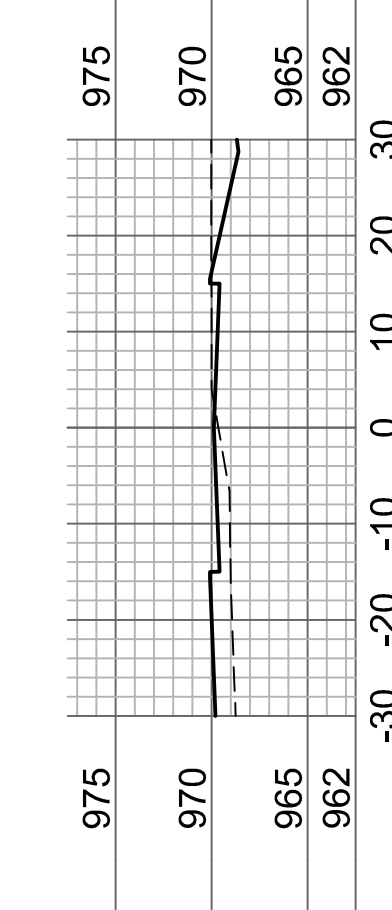
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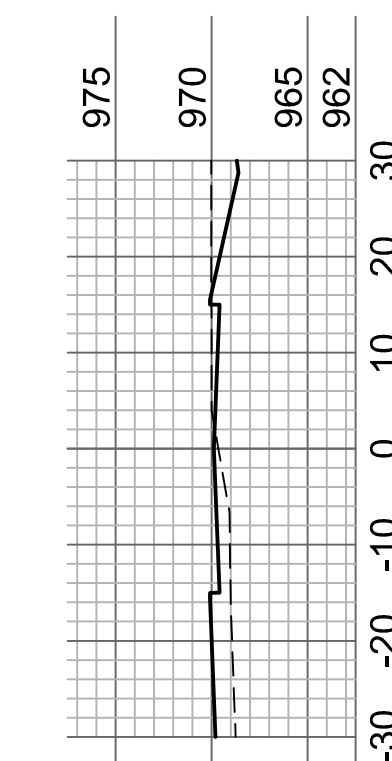
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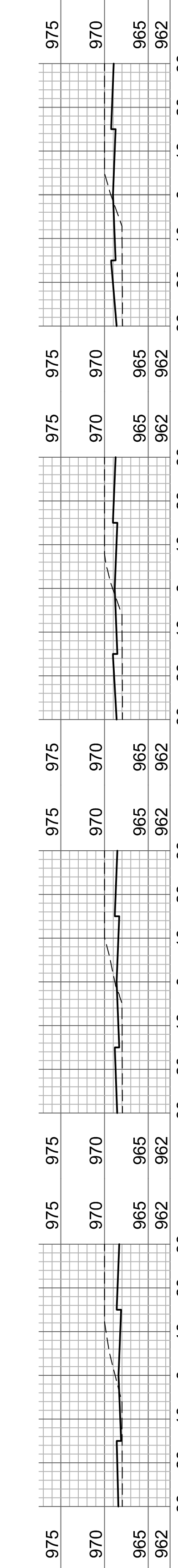
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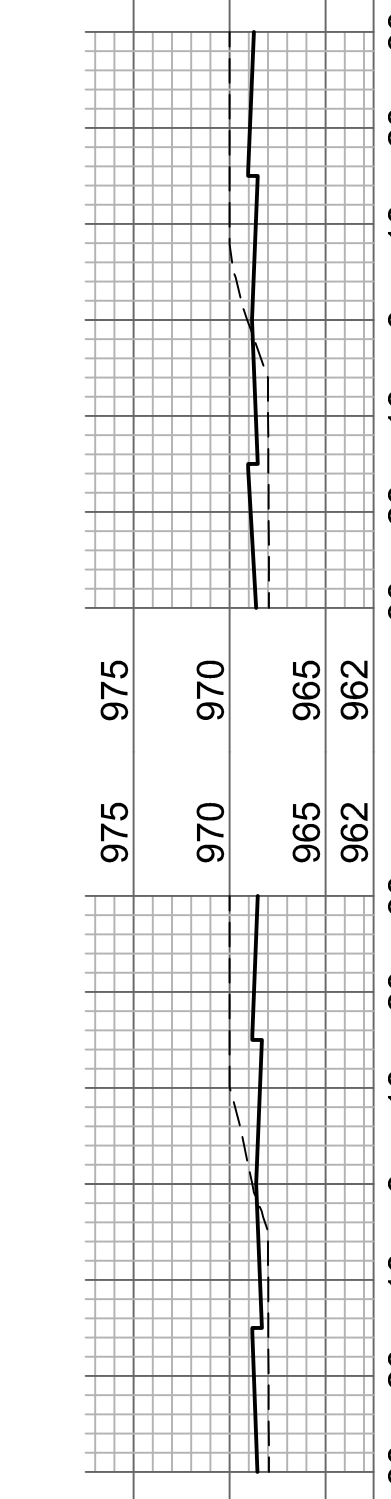
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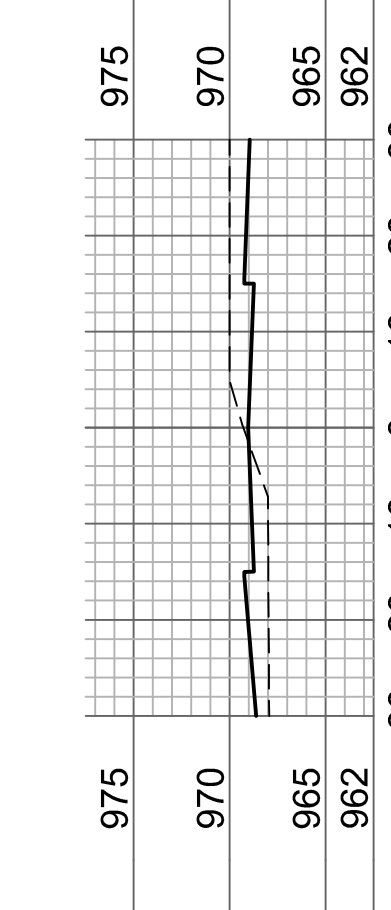
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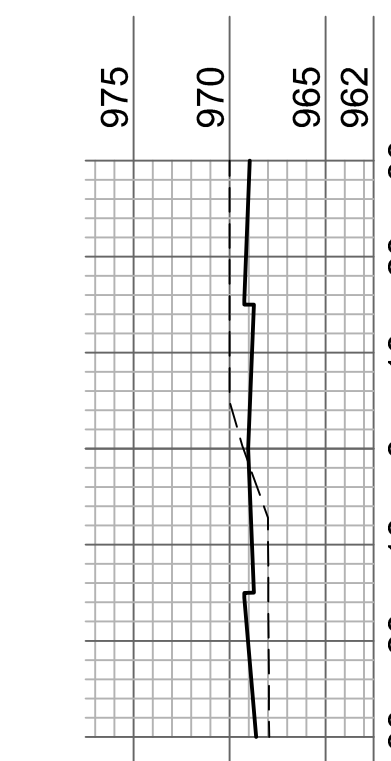
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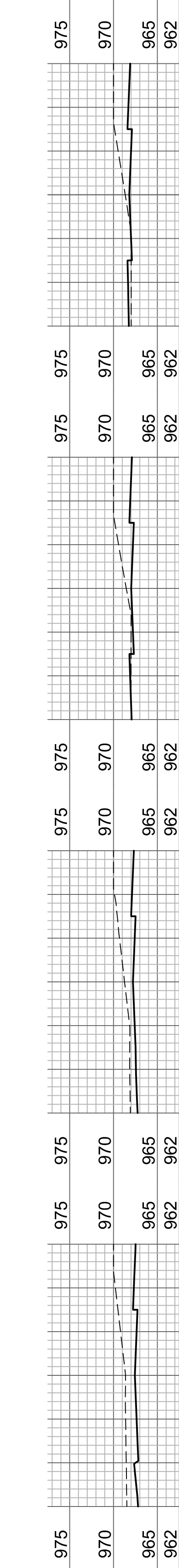
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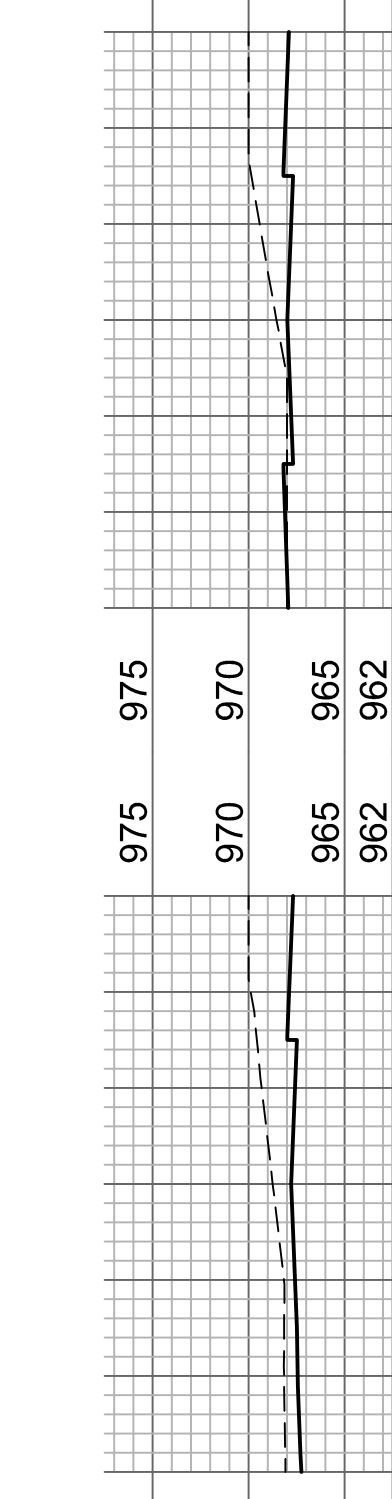
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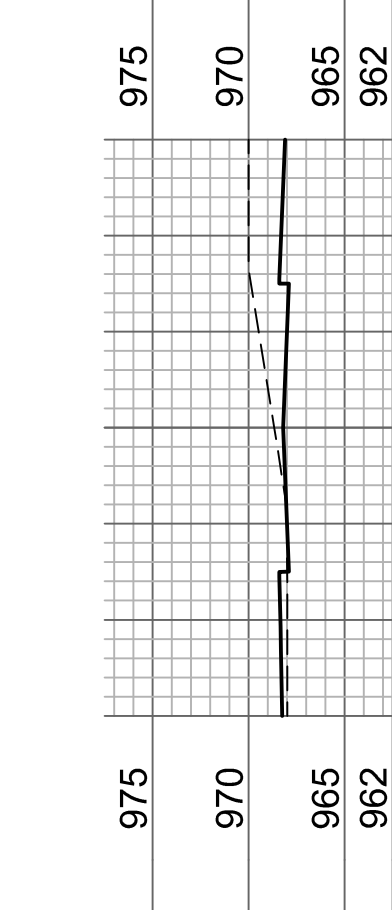
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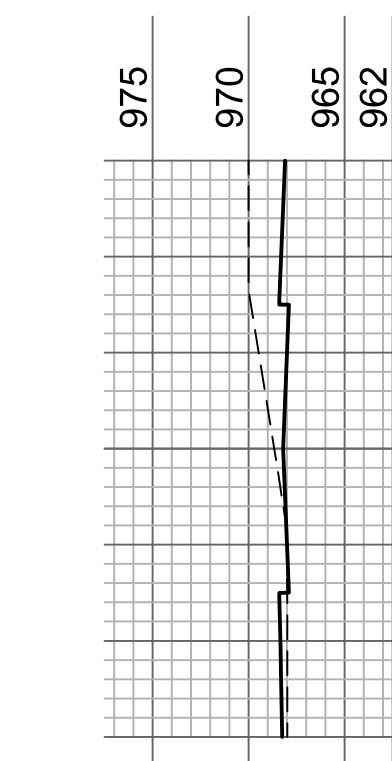
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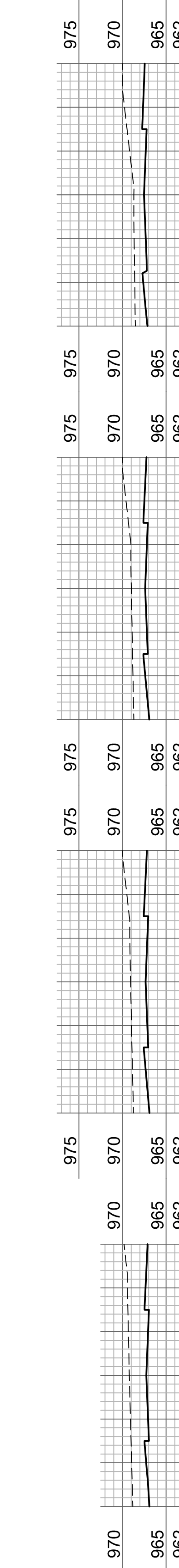
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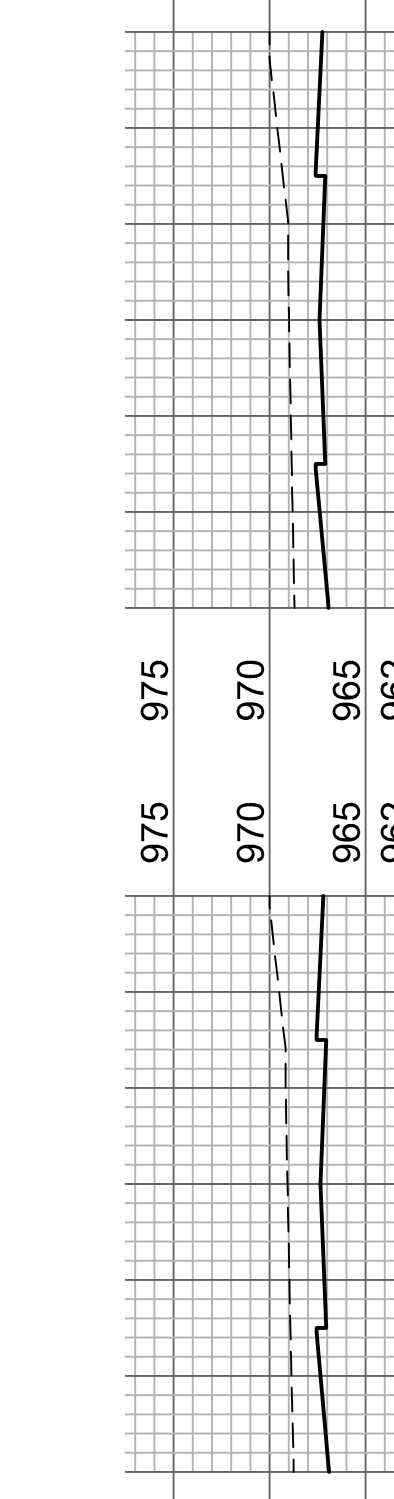
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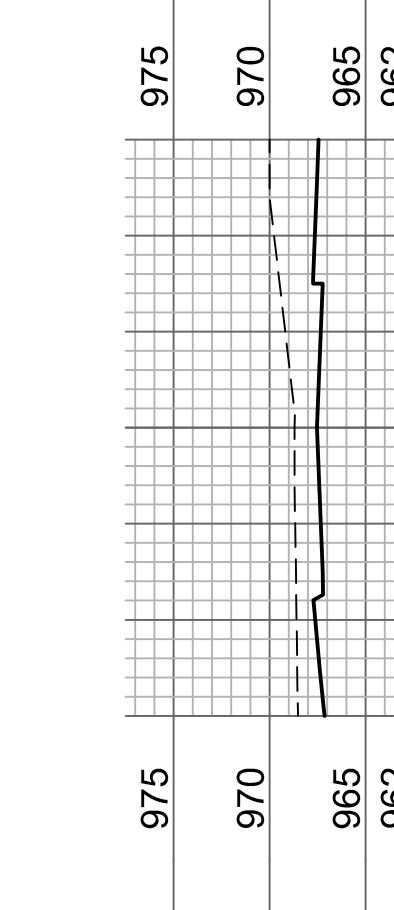
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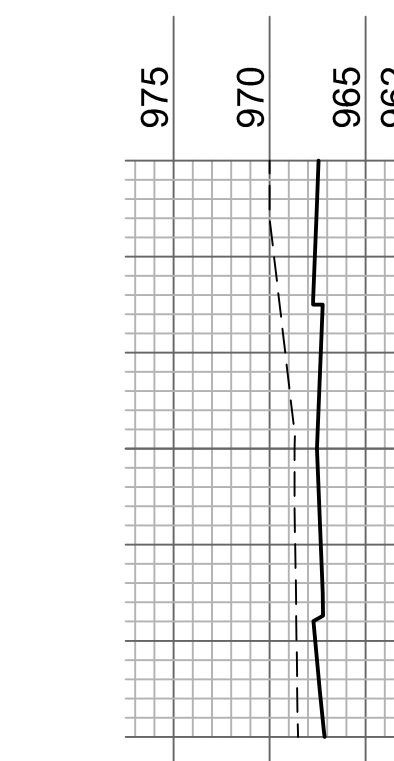
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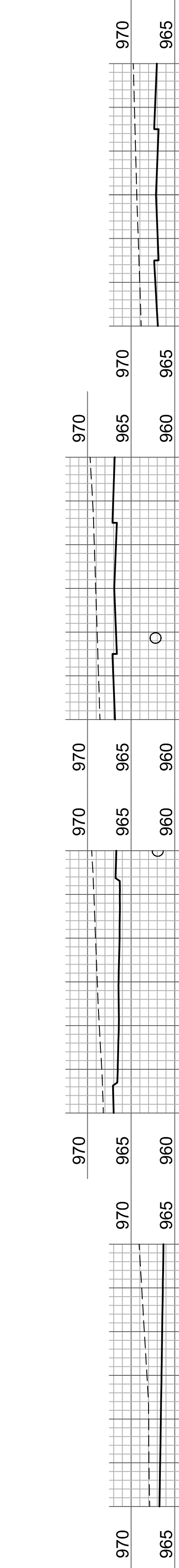
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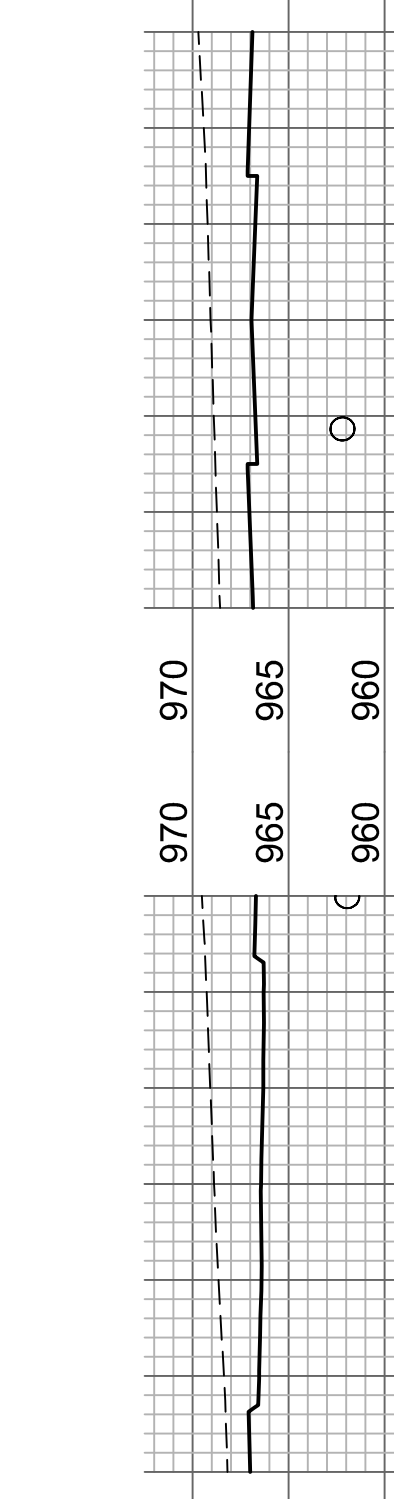
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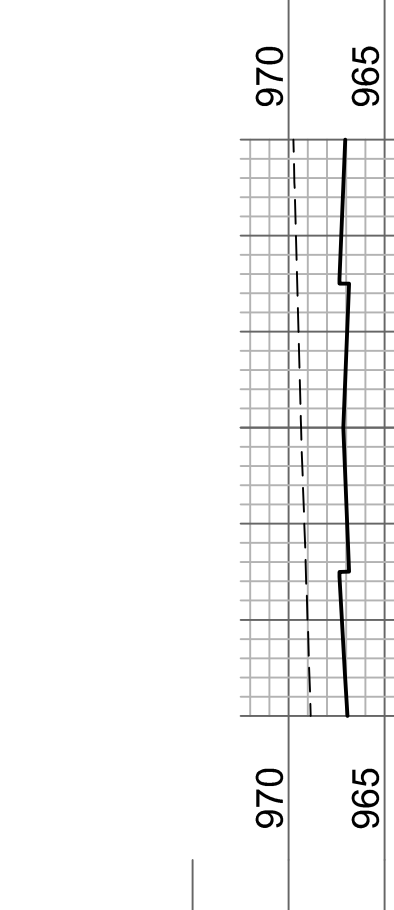
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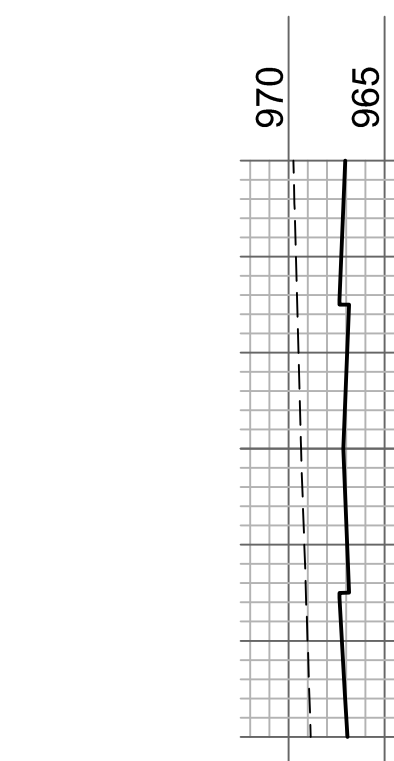
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SHEET NO.
C10.3

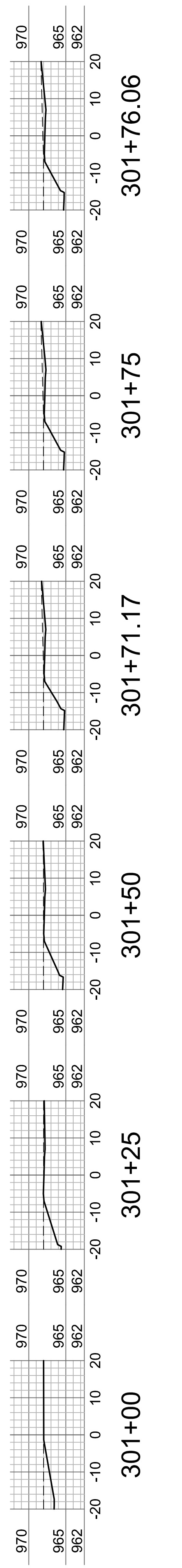
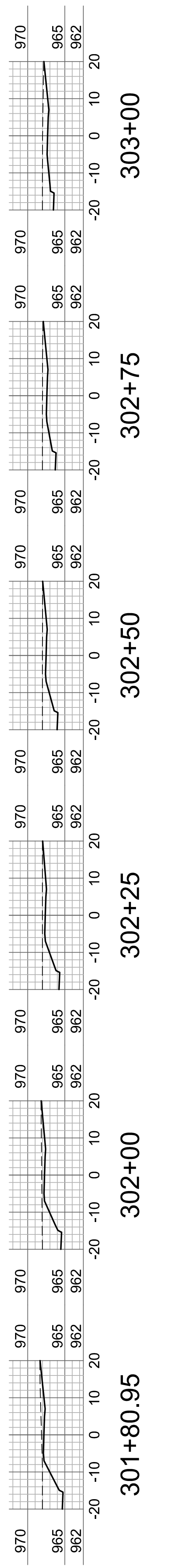
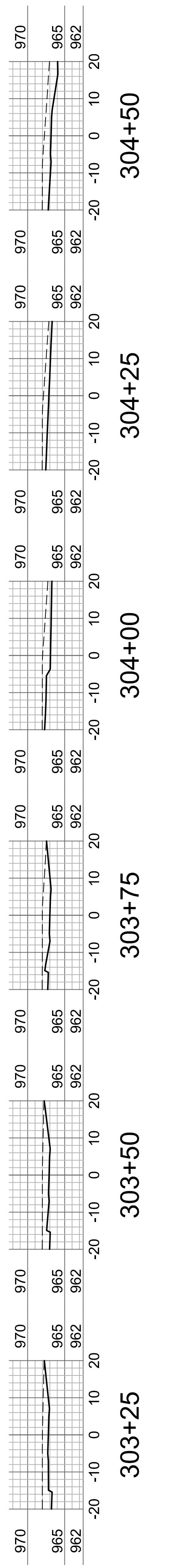
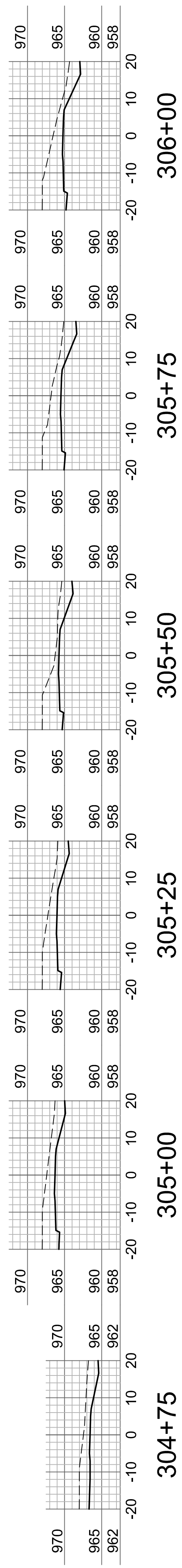
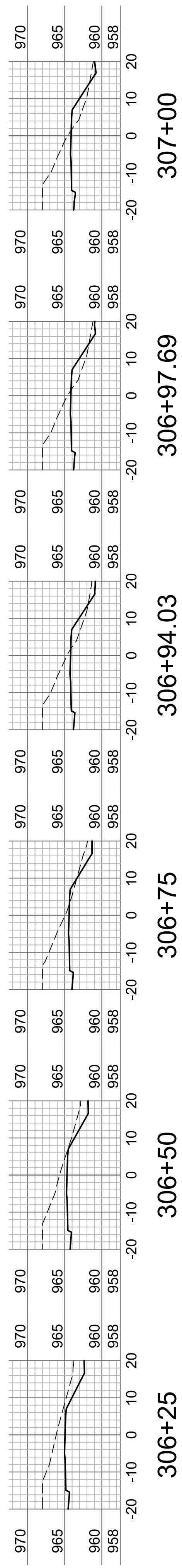
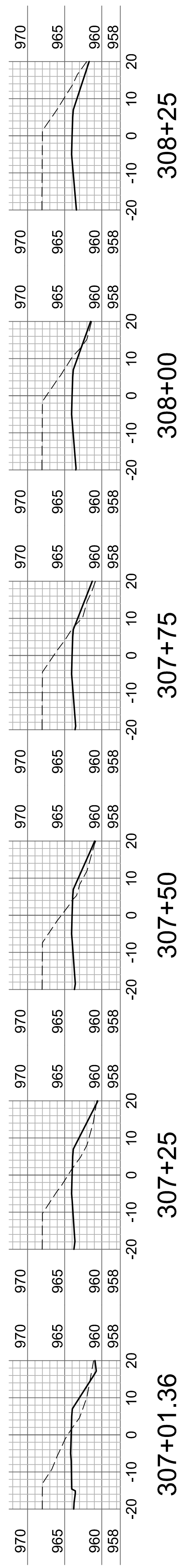
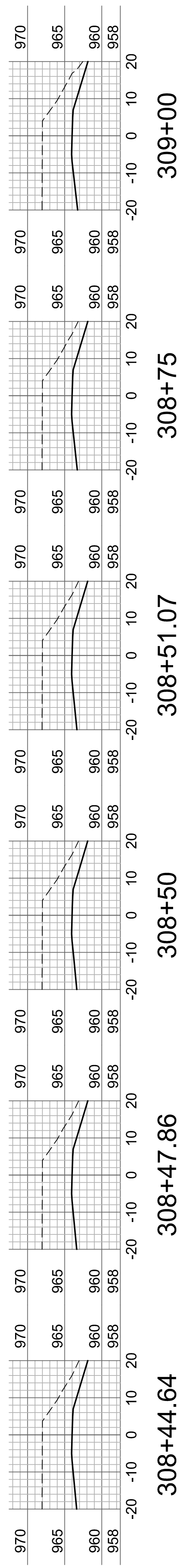
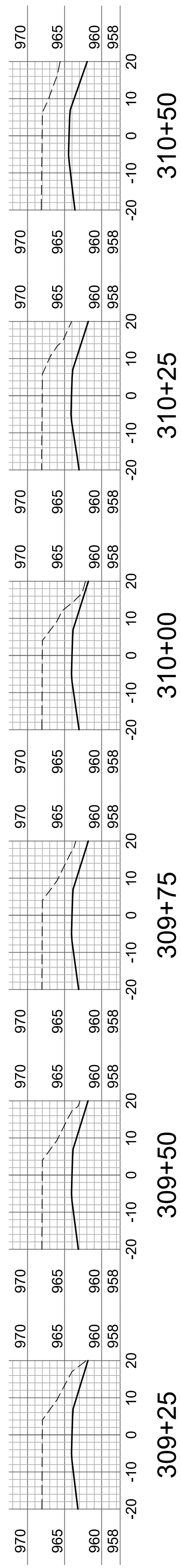
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PHONE: 319.335.5647
FAX: 319.335.5660
EMAIL: civil-hawks@iowa.edu

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C10.4

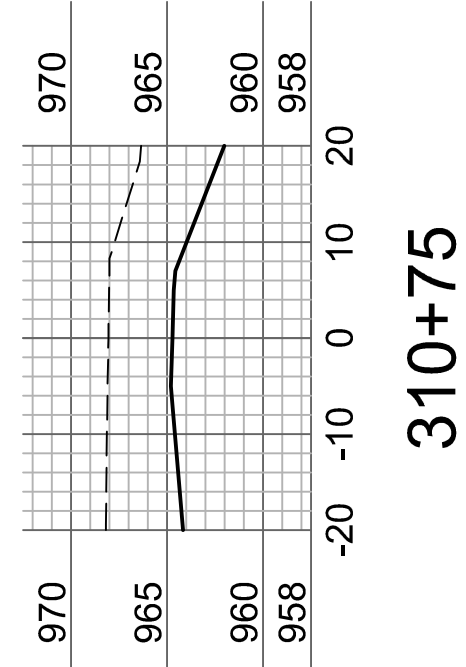
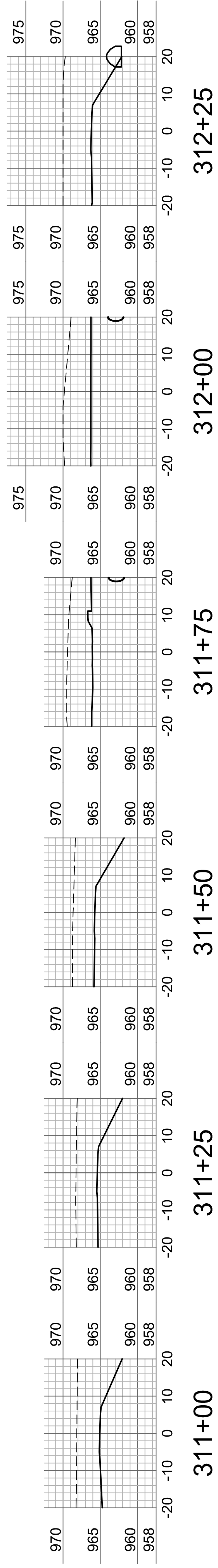
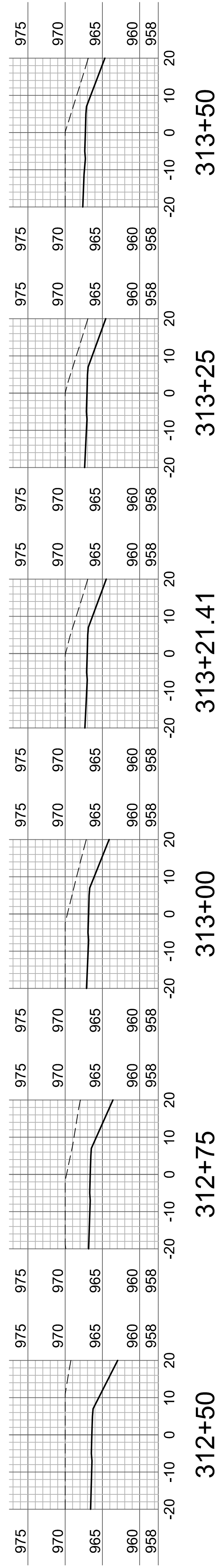
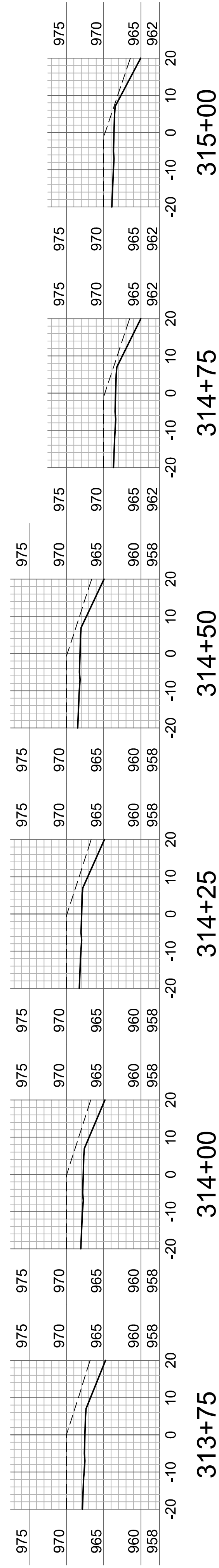
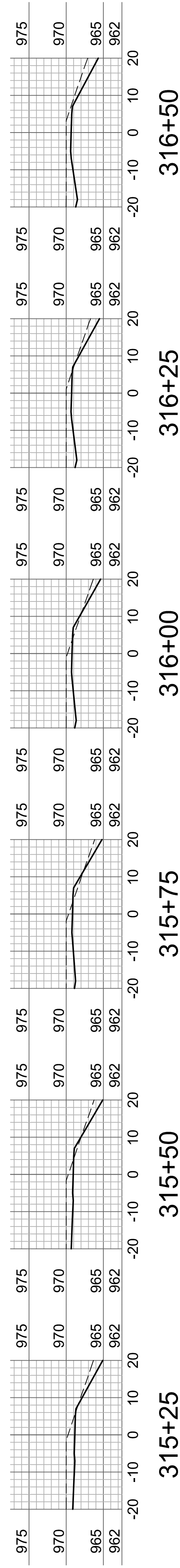
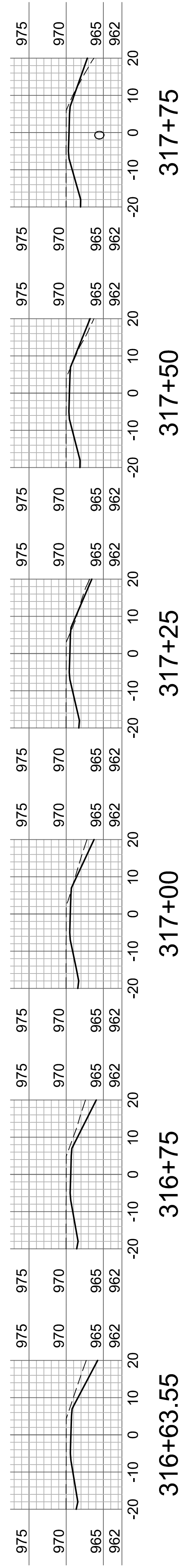
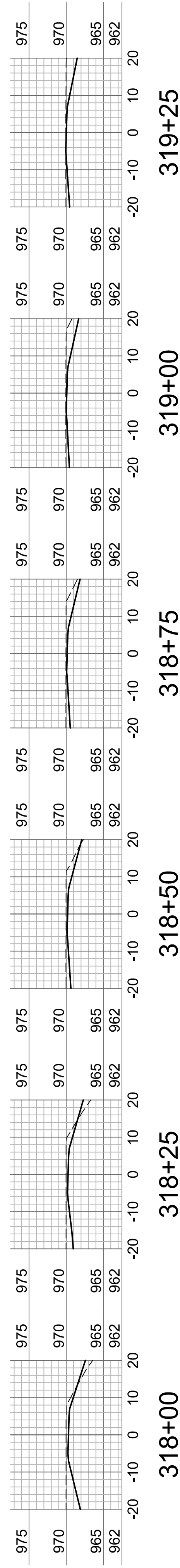
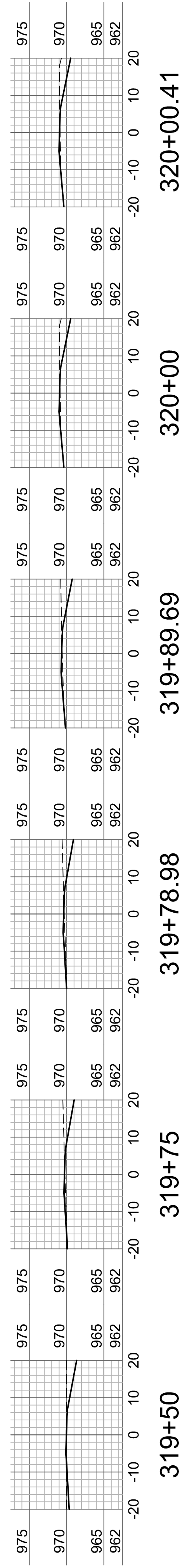
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C10.5

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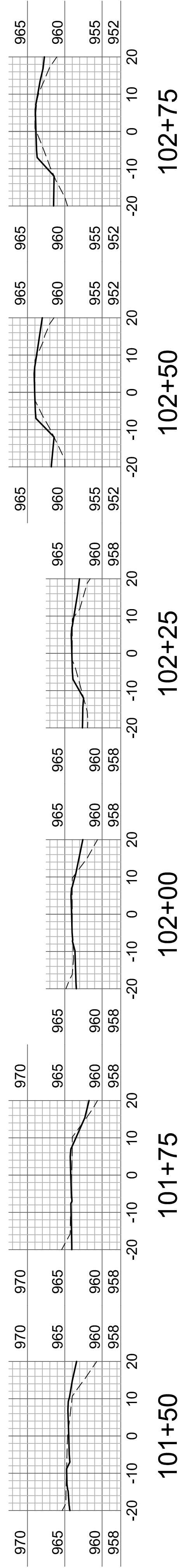
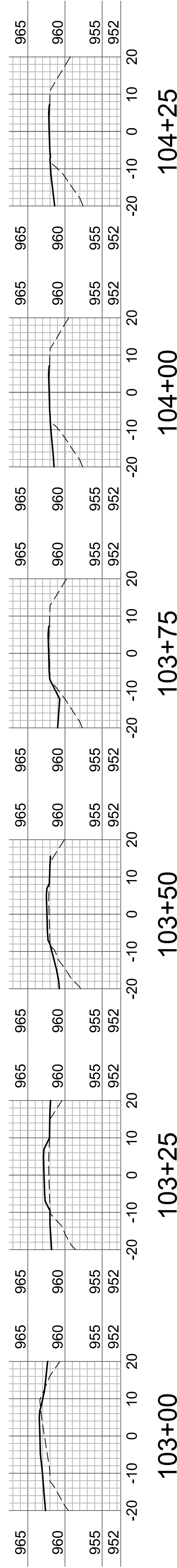
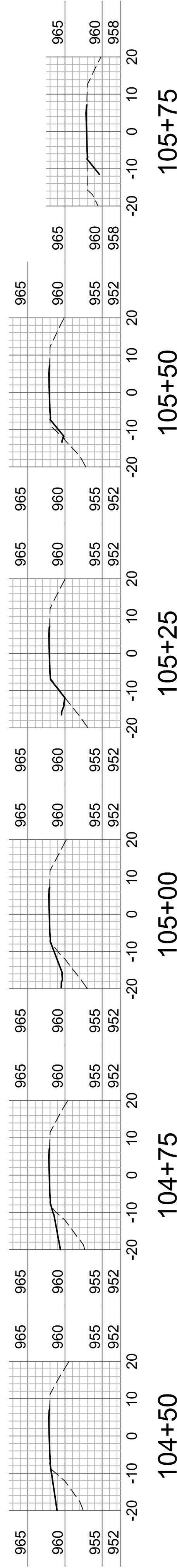
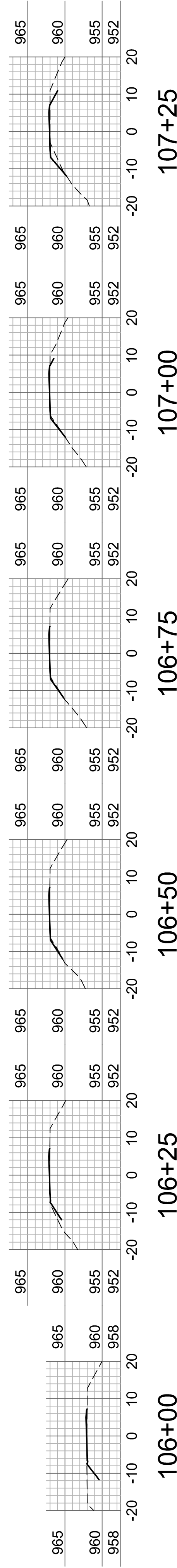
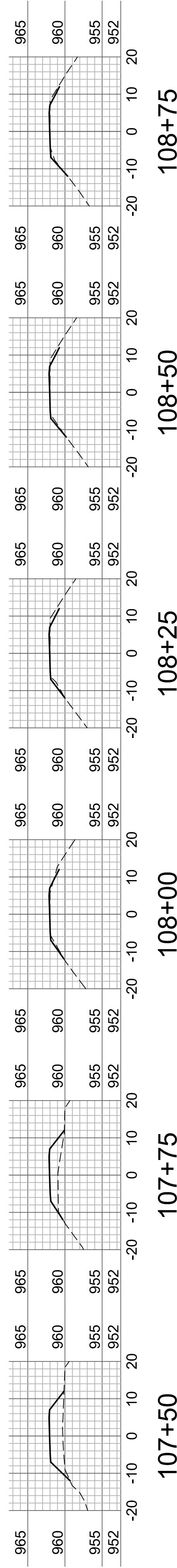
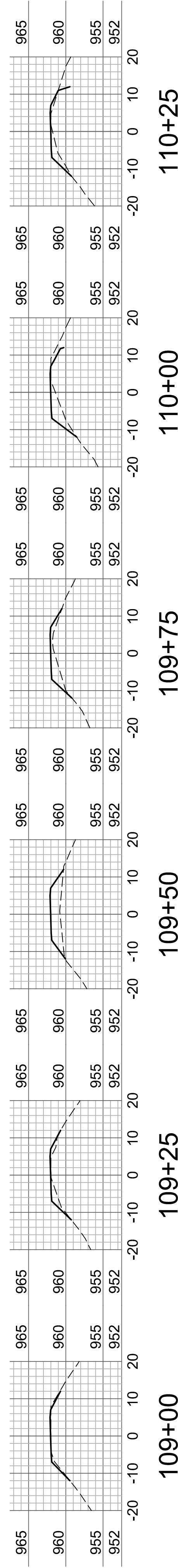
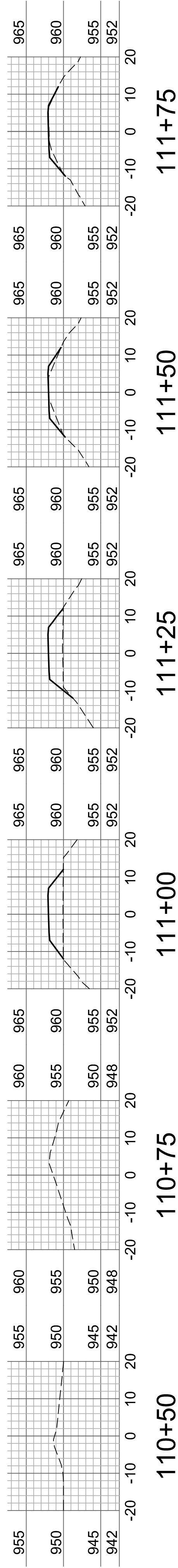
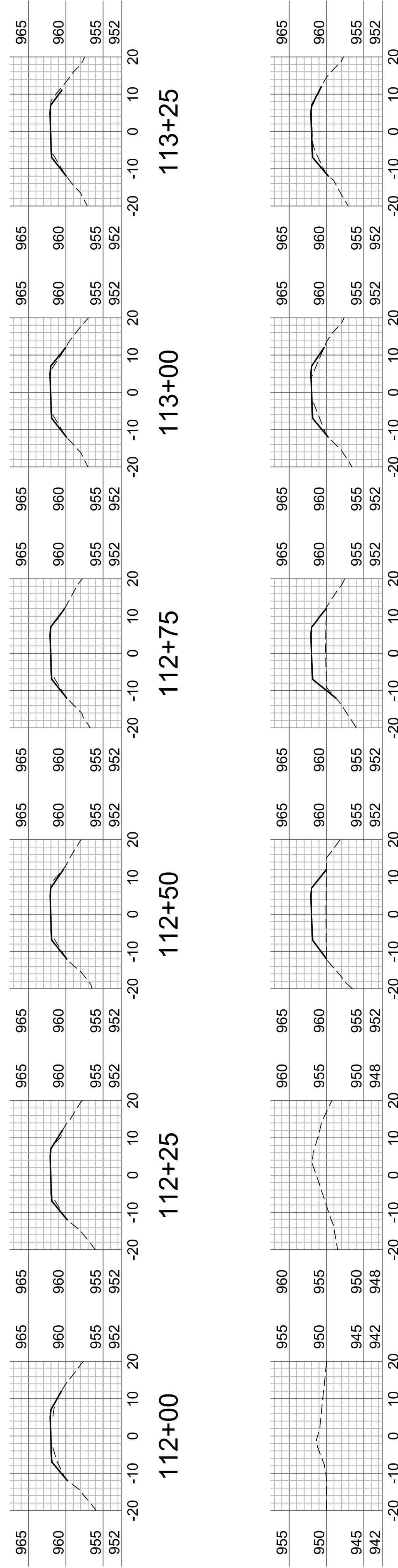
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C10.6

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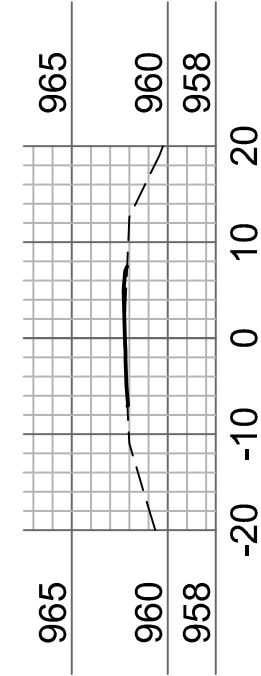
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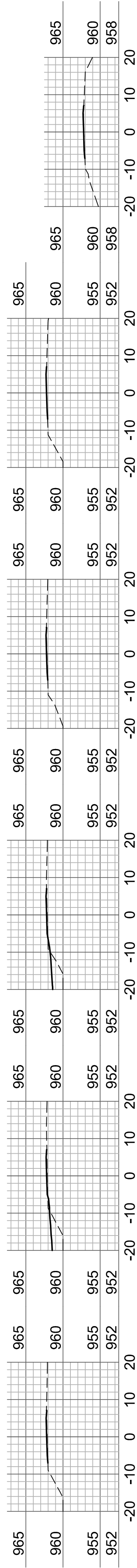
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121+00



119+50

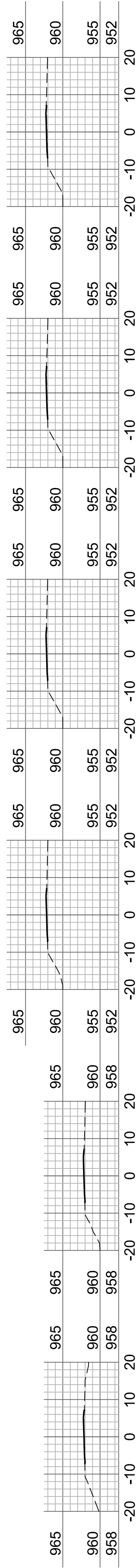
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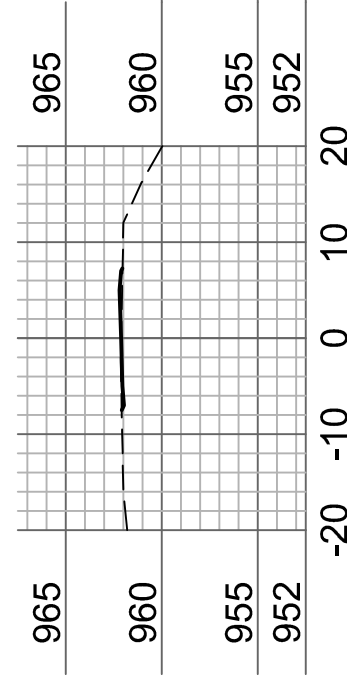
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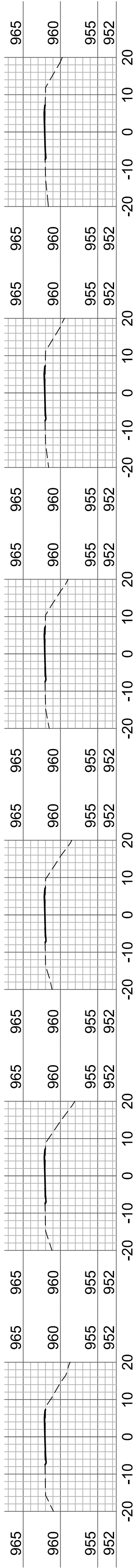
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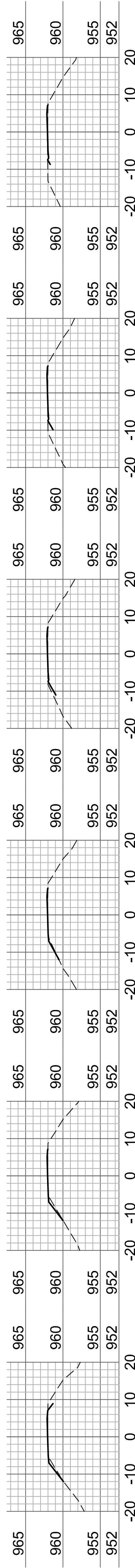
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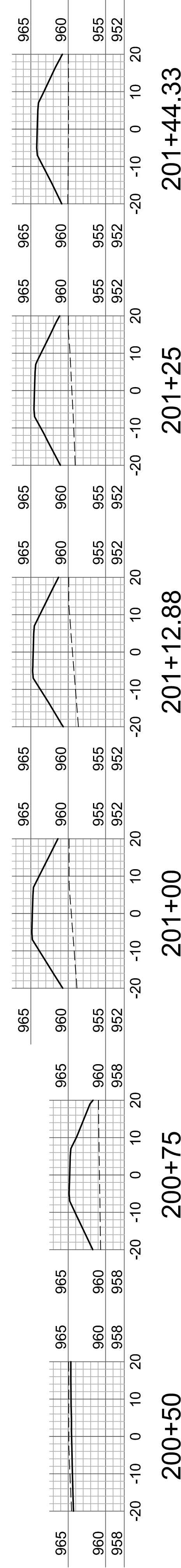
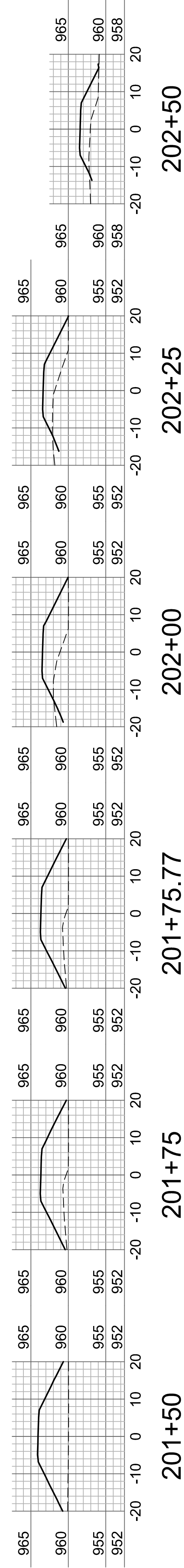
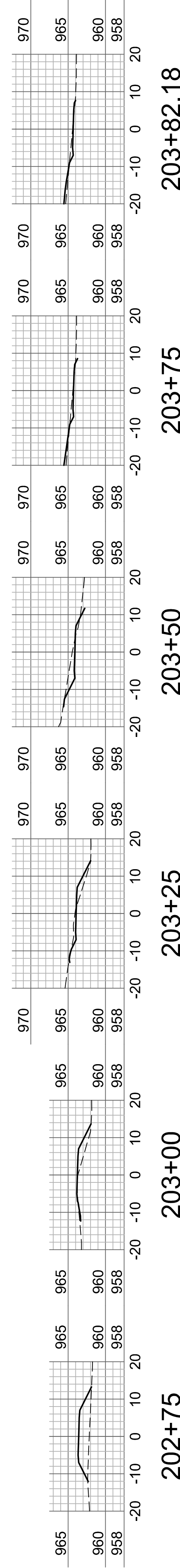
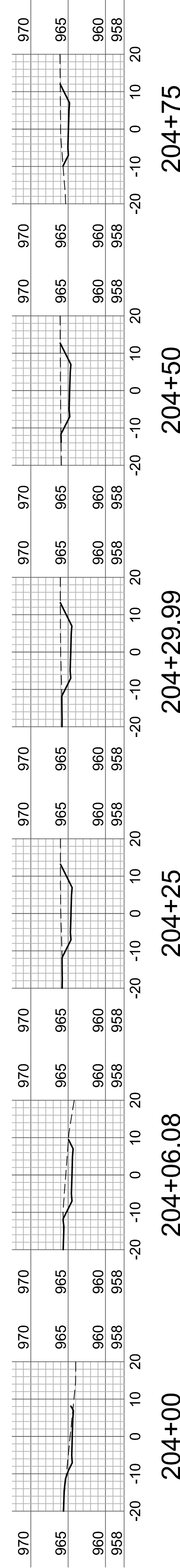
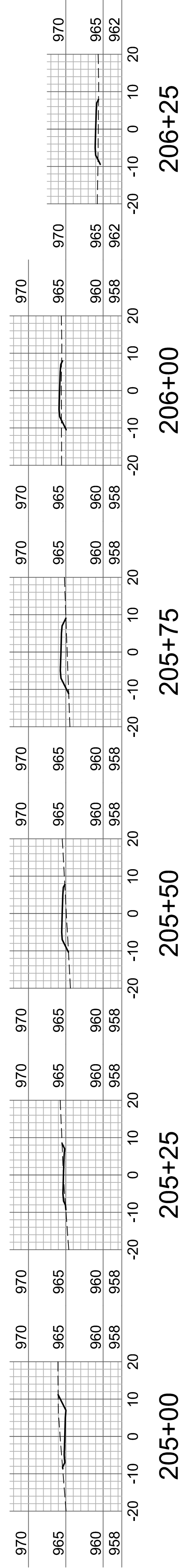
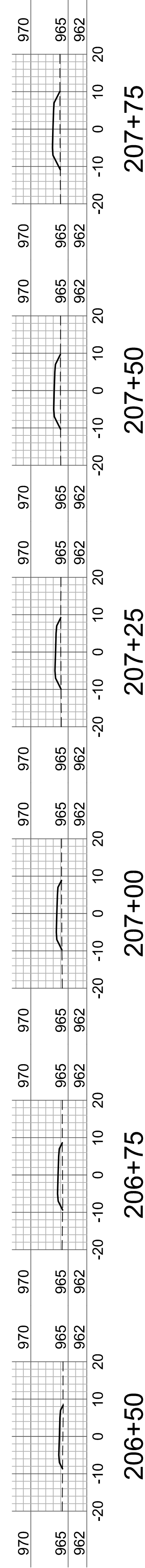
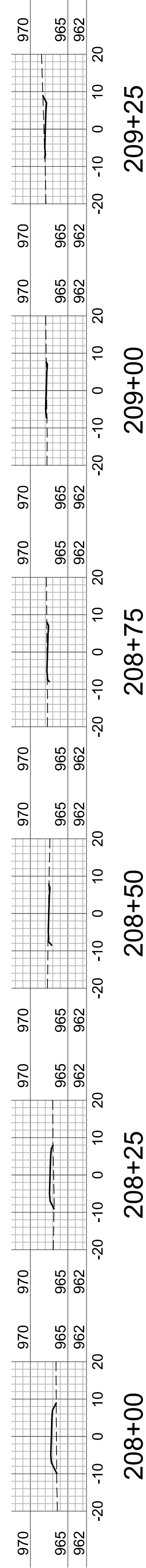
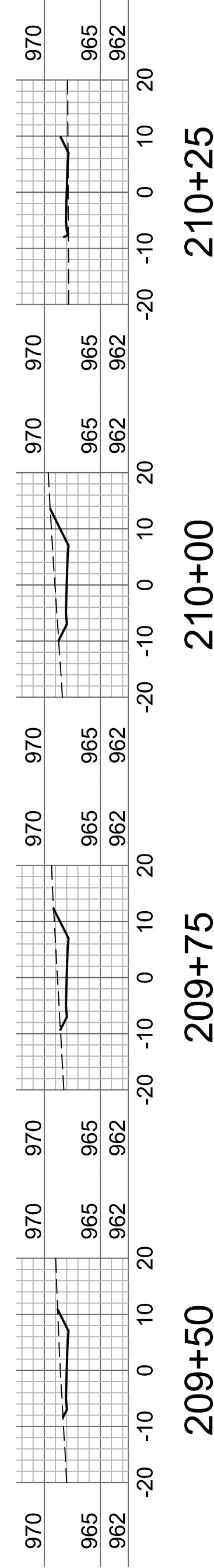
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