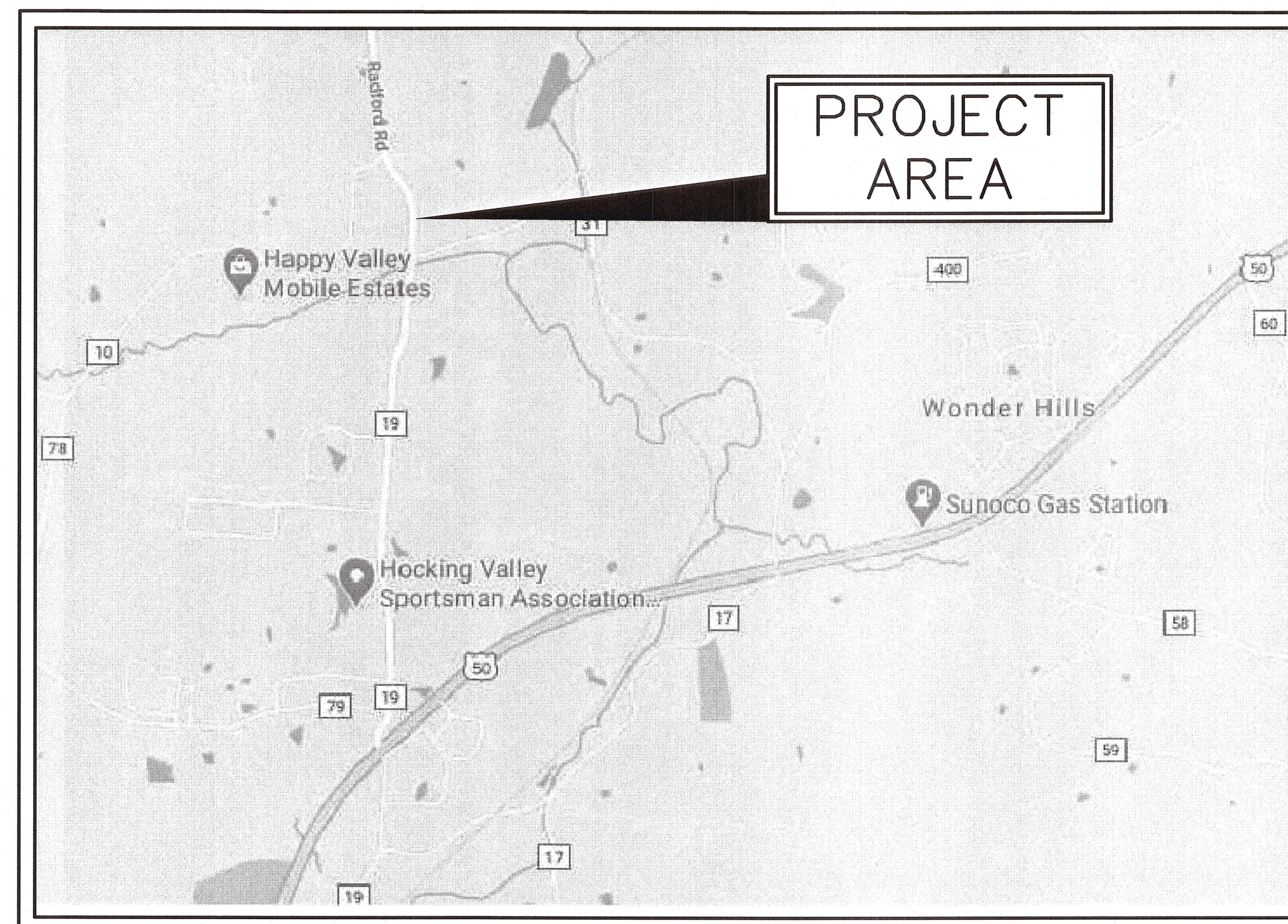


ATHENS COUNTY, OHIO
ATHENS COUNTY
U.S. 50 SANITARY SEWER
IMPROVEMENTS PHASE 5
2020

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LOCATION MAP
NOT TO SCALE

COMMISSION MEMBERS:
LENNY ELIASON
CHRIS CHMIEL
CHARLIE ADKINS
DIRECTOR: RICH KASLER
CLERK: JOANN ROCKHOLD

PROJECT NO. 173409673

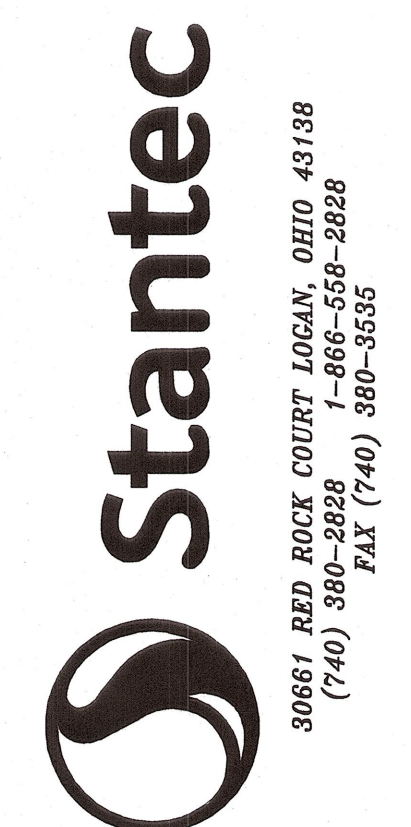
T-01

ATHENS COUNTY, OHIO
ATHENS COUNTY COMMISSIONERS
U.S. 50
SANITARY SEWER IMPROVEMENTS

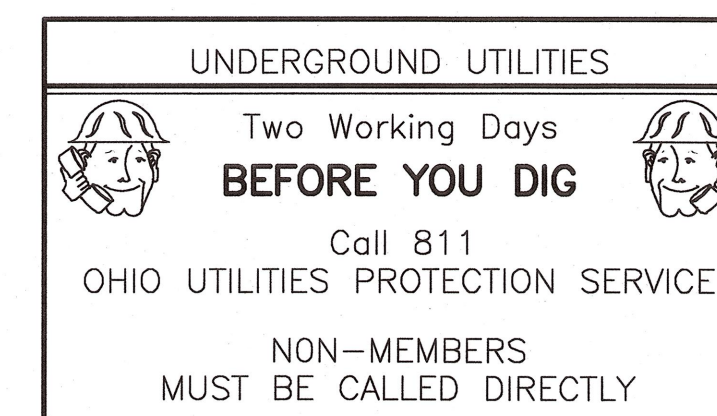
PHASE 5
TITLE SHEET



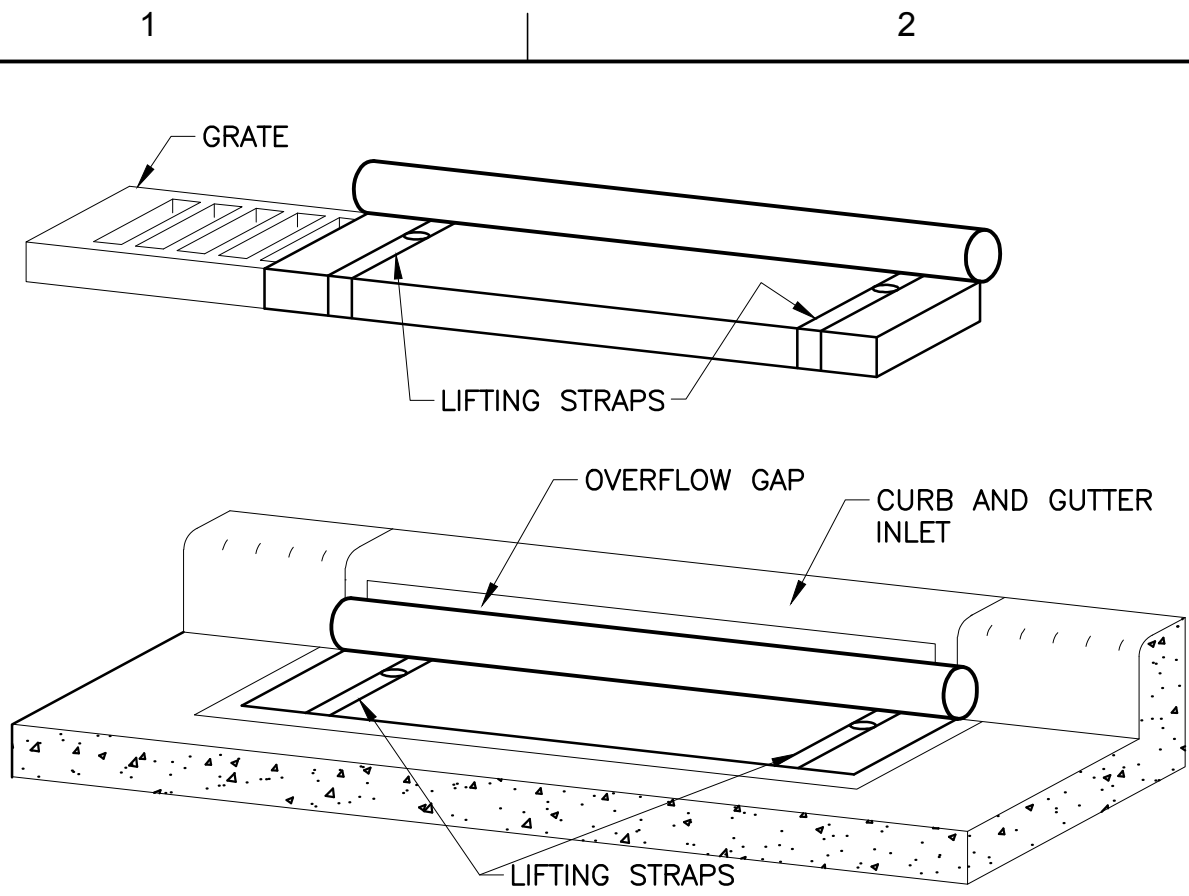
DATE 3/22/21
GARY D. SILCOTT, JR., P.E. E63906



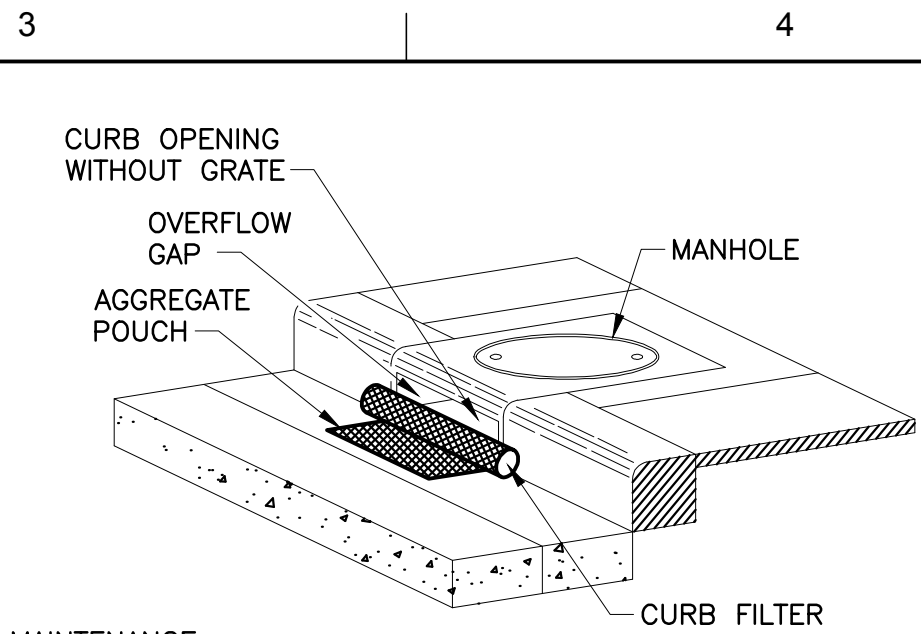
DESIGN GDS
DRAWN JJB
SCALE: NONE



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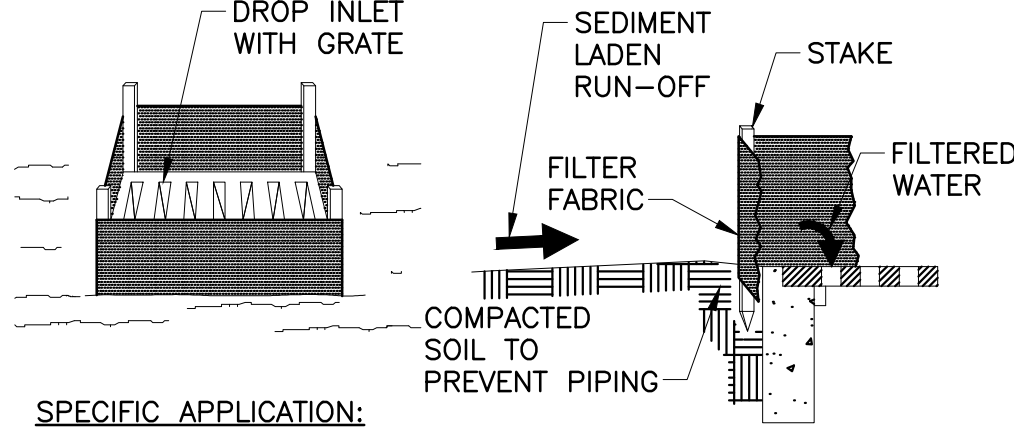


CURB INLET PROTECTION - WITH GRATE
SCALE: NONE



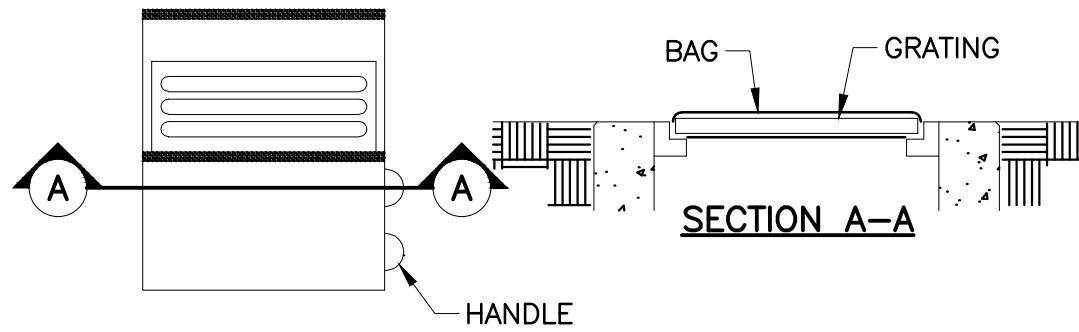
MAINTENANCE:
REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM THE SURFACE AND VICINITY OF THE UNIT AFTER EACH STORM EVENT
IF USING OPTION OIL ABSORBENTS, REMOVE AND REPLACE ABSORBENTS WHEN THEY NEAR SATURATION.

CURB INLET PROTECTION - WITHOUT GRATE
SCALE: NONE



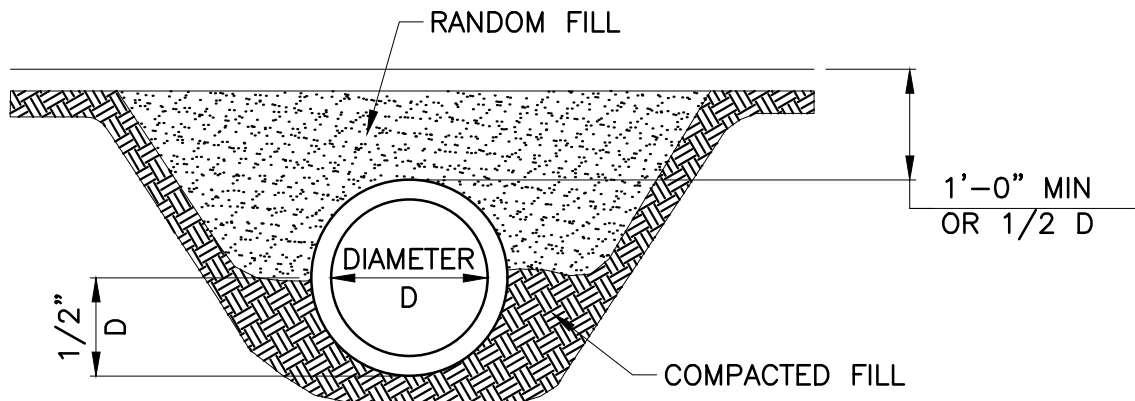
SPECIFIC APPLICATION:
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 CFS) ARE TYPICAL. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET AND HIGHWAY MEDIANS.

CATCH BASIN PROTECTION - FILTER FABRIC
SCALE: NONE



MAINTENANCE:
WITH A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL REMOVE SILT AND OTHER DEBRIS OFF SURFACE AFTER EACH EVENT.

CATCH BASIN PROTECTION
SCALE: NONE



SECTION VIEW

NOTES:
MINIMUM DIAMETER FOR ANY CULVERT IS 12"; OTHERWISE CULVERT SHALL BE SIZED FOR ANTICIPATED PEAK FLOW. PLACE CULVERT SO BOTTOM IS AT SAME LEVEL AS BOTTOM OF DITCH OR ADJOINING SLOPE. CULVERTS SHALL BE PLACED WITH A SLOPE OF 2 TO 4%. LOWER END SHALL BE AT LEAST 2" BELOW UPPER END.
EXTEND CULVERT 12" BEYOND BASE OF ROAD FILL ON BOTH SIDES. FIRMLY PACK FILL AROUND CULVERT, ESPECIALLY THE BOTTOM HALF.
PROVIDE SUITABLE OUTLET PROTECTION* AND, WHERE APPROPRIATE, INLET PROTECTION.
INSPECT CULVERT WEEKLY: REMOVE ANY FLOW OBSTRUCTIONS AND MAKE NECESSARY REPAIRS IMMEDIATELY.
THIS DETAIL MAY BE USED FOR DITCH RELIEF CULVERTS AND FOR CROSSINGS OF ROADSIDE DITCHES. IT IS NOT APPROPRIATE FOR STREAM CROSSINGS.
* FOR STEEP SLOPE (>2H:1V) OUTFALLS, A MINIMUM 20 FOOT LONG R-5 APRON IS RECOMMENDED FOR TEMPORARY ACCESS ROADS WHERE THE RECOMMENDED CULVERT SPACING IS USED. FOR PERMANENT ACCESS ROADS, A MINIMUM R-6 ROCK SIZE IS RECOMMENDED.

DITCH RELIEF CULVERT
SCALE: NONE

PROJECT MANAGER Gary D. Silcott P.E.				
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	173409673

1	2	3	4	5	6	7	8
<p>5. <u>MAINTAINING TRAFFIC DURING HOLIDAYS AND SPECIAL EVENTS</u> NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING DESIGNATED HOLIDAYS OR SPECIAL EVENTS. THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. CONTACT THE COUNTY FOR EVENT DATES, LOCATIONS, AND SCHEDULE. HOLIDAYS WILL CONSIST OF CHRISTMAS, NEW YEARS, FOURTH OF JULY, MEMORIAL DAY, LABOR DAY, AND THANKSGIVING.</p> <p>6. THE CONTRACTOR SHALL MAINTAIN ALL PERMANENT TRAFFIC CONTROLS NOT IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROLS THROUGHOUT THIS PROJECT. PERMANENT TRAFFIC CONTROLS MAY BE TEMPORARILY RELOCATED OR COVERED, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED, OR IMPROPERLY PLACED SIGNS.</p> <p>7. ANY WORK DONE BY THE COUNTY, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF TEMPORARY TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTORS' EXPENSE.</p> <p>8. THE ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE IN PLACE, OR UNTIL TEMPORARY TRAFFIC CONTROLS APPROVED BY THE ENGINEER, ARE INSTALLED. THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE STOP, YIELD, ONE WAY, DO NOT ENTER, RESTRICTED TURN SIGNS AND ALL STREET NAME SIGNS. OTHER CRITICAL SIGNS MAY BE NOTED ON THE PLANS AS WELL. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.</p>		<p>3. TYPE C STEADY-BURN OR TYPE D 360-DEGREE STEADY-BURN WARNING LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS, AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT. ONLY 42" REFLECTORIZED CHANNELIZING DEVICES (CONES) SHALL BE PERMITTED FOR NIGHTTIME WORK WITH THE APPROVAL OF THE TTC COORDINATOR PER O.D.O.T. STANDARDS.</p> <p>4. A FLASHING ARROW PANEL (48" X 96"-TYPE C) SHALL BE USED IN LANE CLOSURES AS PER THE OHIO MANUAL.</p> <p>5. ALL TRENCHES WITHIN THE ROAD RIGHT OF WAY SHALL BE BACKFILLED OR SECURELY PLATED PER 2013 STD. DWG. 1441 DURING NON-WORKING HOURS.</p> <p>6. ALL EXISTING TRAFFIC LANES SHALL BE FULLY OPEN TO TRAFFIC AT ALL TIMES ON: REFER TO MOT TABLE FOR TRAFFIC PATTERNS.</p> <p>7. TWO-WAY, TWO-LANE (ONE-LANE EACH DIRECTION) TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF EXISTING, PROPOSED, OR TEMPORARY PAVEMENT PER FIGURE 6H-32 TYPICAL APPLICATION 32 (TA-32) OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.</p> <p>8. TWO-WAY, ONE-LANE TRAFFIC MAY BE MAINTAINED DURING CONSTRUCTION OPERATIONS ON REFER TO TABLE ON SHEET 75, PER FIGURE 6H-10 (TA-10) OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.</p>		<p>3. PERMANENT STRIPING OR CLASS I TEMPORARY STRIPING SHALL BE INSTALLED NO LATER THAN FOURTEEN (14) CALENDAR DAYS AFTER THE FINAL PAVING COURSE IS COMPLETED. THE PAVING CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE STRIPING CONTRACTOR TO INSURE THE PERMANENT STRIPING IS INSTALLED WITHIN THE FOURTEEN (14) CALENDAR DAY LIMIT.</p>			
<p><u>ITEM 614 - MAINTAINING TRAFFIC, LUMP SUM:</u></p> <p>ALL COSTS THAT CONSIST OF MAINTAINING AND PROTECTING VEHICULAR AND PEDESTRIAN TRAFFIC ACCORDING TO THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD), AND PER THE REQUIREMENTS DESIGNATED IN THE PLAN INCLUDING ALL LAW ENFORCEMENT OFFICER (LEO) AND FLAGGER HOURS SHALL BE INCLUDED IN THE LUMP SUM ITEM 614.</p> <p>IN ADDITION TO THE REQUIREMENTS HEREIN, AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, A UNIFORMED LAW ENFORCEMENT OFFICER (LEO) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC UNDER THE FOLLOWING CONDITIONS:</p> <ul style="list-style-type: none">• WORK WITHIN A SIGNALIZED INTERSECTION, DEFINED AS THE AREA BOUNDED BY THE REAR X-WALK LINES• WHEN FLAGGING WITHIN THE INTERSECTION OF TWO ARTERIAL ROADWAYS• WHEN SPECIFIED IN THE MAINTENANCE OF TRAFFIC PLAN OR AS WHEN DIRECTED BY THE PROJECT ENGINEER• WHEN SHIFTING TRAFFIC LEFT OF CENTER, THROUGH A SIGNALIZED INTERSECTION, WITHOUT SHIFTING SIGNAL HEADS <p>A FLAGGER SHALL BE UTILIZED TO ASSIST IN CONTROLLING TRAFFIC WHILE EQUIPMENT IS ENTERING OR EXITING AN INTERSECTION OR WORK ZONE. THE CONTRACTOR MAY UTILIZE HIS OWN FLAGGER OR LEO UNDER PAY ITEM 614 MAINTAINING TRAFFIC, LUMP SUM.</p> <p>FLAGGERS AND LEO'S SHALL BE EQUIPPED ACCORDING TO THE STANDARDS FOR FLAGGING TRAFFIC CONTAINED IN THE OMUTCD. FLAGGING OPERATIONS PERFORMED BY LEO'S OR DESIGNATED FLAGGERS SHALL ONLY BE PERMITTED AS LONG AS ALL TRAFFIC CONTROL IS IN PLACE ACCORDING TO FIGURE 6H-10 (TA-10) IN THE OHIO MANUAL. PATROL CARS SHALL NOT BE USED IN FLAGGING OPERATIONS.</p> <p>IF THE CONTRACTOR WISHES TO UTILIZE LEO'S WITH OR WITHOUT PATROL CARS FOR TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE.</p> <p>LEO'S SHALL BE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. LEO'S SHALL NOT HAVE THE AUTHORITY TO CHANGE, EDIT OR MODIFY ANY MAINTENANCE OF TRAFFIC SCHEME WITHOUT THE PERMISSION OF THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR PROJECT ENGINEER UNLESS AN EMERGENCY DEVELOPS.</p> <p>IF A SAFETY HAZARD DEVELOPS, A LEO MAY BE ASSIGNED BY THE COUNTY AT THE CONTRACTOR'S EXPENSE.</p> <p><u>ITEM 614 - LAW ENFORCEMENT OFFICER (LEO) WITH PATROL CAR, AS PER PLAN</u></p> <p>IN ADDITION TO LEO AND FLAGGER HOURS INCLUDED IN ITEM 614 MAINTAINING TRAFFIC, LUMP SUM, THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER OR AN ACCEPTABLE REPRESENTATIVE FOR THE COUNTY THE OFFICIAL PATROL CAR WITH TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL BE PAID FOR THIS BID ITEM ONLY IF DIRECTED BY THE ENGINEER.</p>		<p>THE CONTRACTOR SHALL CONTACT OHIO UTILITY PROTECTION SERVICE (OUPS) TO LOCATE AND MARK ALL UNDERGROUND TRAFFIC CONTROL CABLES PRIOR TO THE BEGINNING OF ANY WORK WITHIN 450 FEET OF ANY SIGNALIZED INTERSECTION(S) OR WITHIN ANY POSTED AREA WHERE THE DEPARTMENT HAS UNDERGROUND CABLE.</p> <p>9. THE ROADWAY OR ANY SECTION OF ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL ALL TEMPORARY, NON-REFLECTIVE, BLACKOUT TAPE HAS BEEN COMPLETELY REMOVED FROM NON-CONFLICTING PERMANENT PAVEMENT MARKINGS FOR THAT AREA OF THE ROADWAY, OR UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. THIS IS SUPPLEMENTAL AND SHALL BE PAID FOR THROUGH THE 614-LUMP SUM.</p> <p>10. WHENEVER YELLOW CENTERLINES OR TURN-LANE LINES ARE PAVED OVER, REMOVED, OR OTHERWISE UNSERVICEABLE, THE CONTRACTOR SHALL INSTALL CLASS II TEMPORARY STRIPING (MINIMUM 4' LONG SEGMENTS). TEMPORARY PAINT SHALL BE USED ON ALL MILLED SURFACES. TEMPORARY TAPE SHALL BE USED ON ALL FINAL COURSES OF ASPHALT. PAINT OR TAPE MAY BE USED ON INTERMEDIATE COURSES OF ASPHALT. IF APPROVED BY THE ENGINEER, DRUMS WITH STEADY BURNING TYPE C OR TYPE D 360 DEGREE WARNING LIGHTS AND "KEEP RIGHT" SIGNS MAY BE SUBSTITUTED FOR CENTERLINE MARKINGS.</p> <p>11. CLASS II TEMPORARY STRIPING (MINIMUM 4' LONG SEGMENTS) SHALL BE AS PER ITEM 614 - WORK ZONE PAVEMENT MARKING AND SHALL BE PLACED WITHIN ONE (1) FOOT LONGITUDINAL TOLERANCE OF THE PERMANENT STRIPE(S). ALL TEMPORARY STRIPING NOT TO WITHIN ONE (1) FOOT TOLERANCE SHALL BE REMOVED AND REPLACED IN THE PROPER LOCATION BY THE CONTRACTOR. CLASS II TEMPORARY STRIPING SHALL BE OF THE APPROPRIATE COLOR AND SPACED A MAXIMUM OF FORTY (40) FEET CENTER TO CENTER.</p>		<p><u>RAISED PAVEMENT MARKER SPACING:</u> NORMAL: CENTERLINES 80' TWO-WAY YELLOW LANE LINES 80' TWO-WAY WHITE/RED EDGE LINES 80' ONE-WAY WHITE CHANNELIZING LINES 20' TWO-WAY WHITE/RED TWO WAY LEFT TURN LANE 40' BOTH SIDES TWO-WAY YELLOW</p> <p><u>APPROACH TO STOP OR SIGNAL:</u> (MEASURED FROM STOPLINE OR RADIUS TANGENT POINT) EDGE LINES 12@20' / 9@40' / 5@80' LANE LINES 12@20' / 9@40' / 80' NORMAL SPACING CENTERLINES 12@20' / 9@40' / 80' NORMAL SPACING</p> <p><u>THROUGH STREET APPROACH:</u> EDGE LINE 11@80' ONE-WAY WHITE LANE LINE 21@40'/ 80' NORMAL SPACING TWO-WAY WHITE/RED CENTERLINE 21@40'/80' NORMAL SPACING TWO-WAY YELLOW <u>DEPARTURE FROM THROUGH STREET, SIGNAL OR STOP CONDITION</u> LANE LINE 5@80' TWO-WAY WHITE/RED EDGE LINE 5@80' ONE-WAY WHITE</p> <p><u>TWO-WAY LEFT TURN:</u> (STOP CONDITION OR APPROACH TO A SIGNAL) APPROACH 2WLT MARKINGS 12@20'/ NORMAL SPACING BOTH SIDES TWO-WAY YELLOW</p>			
		<p><u>EXISTING PERMANENT TRAFFIC CONTROL:</u></p> <p>1. ANY WORK DONE BY THE COUNTY, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF PERMANENT TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTORS' EXPENSE.</p> <p>2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING CONSTRUCTION. PERMANENT TRAFFIC CONTROL NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY.</p> <p>3. THE CONTRACTOR SHALL REPLACE ALL PAVEMENT MARKINGS, INCLUDING RAISED PAVEMENT MARKERS (RPM) SHOWN IN CONFLICT, REMOVED DUE TO CONSTRUCTION OR MAINTENANCE OF TRAFFIC SET UP, DESTROYED, OR RENDERED UNSERVICEABLE BY THE PROJECT ENGINEER. RPM REPLACEMENT SHALL BE PER THE REQUIREMENTS LISTED ON THIS SHEET. ALL PAVEMENT MARKING MATERIALS SHALL BE REPLACED IN-LIKE KIND IF NOT SHOWN IN THE PLAN OR PERMIT INCLUDING RAISED PAVEMENT MARKERS. ALL PAVEMENT MARKINGS SHALL BE REPLACED IN FULL. NO PARTIAL LENGTH OR SECTIONS OF PAVEMENT MARKINGS SHALL BE REPLACED WITHOUT REMOVING THE ENTIRE MARKING BY USE OF THE WATER BLAST METHOD. REMOVAL BY ABRASIVE WHEEL GRINDING SHALL ONLY BE APPROVED BY THE PUBLIC SERVICE PAVEMENT MARKING MANAGER.</p>		<p>1. SEE GENERAL POLICY AND PROCEDURE ON STREET SELECTION FOR RAISED PAVEMENT MARKERS DATED 1/1/2014 OR LATEST.</p> <p>2. EDGE LINE RPMS FALL WITHIN THE LIMITS OF A DRIVEWAY, THEY ARE TO BE RELOCATED LONGITUDINALLY A MAXIMUM OF TEN PERCENT (10%) OF THE NORMAL SPACING. IF RELOCATION IS STILL WITHIN DRIVEWAY LIMITS, THE EFFECTED RPM SHALL NOT BE INSTALLED.</p> <p>3. RPM'S SHALL NOT BE INSTALLED OVER PAVEMENT MARKING WITHOUT THE ENGINEER'S APPROVAL.</p> <p>4. WHITE EDGE LINE RPMS SHALL NOT BE INSTALLED ADJACENT TO CURBS EVEN IF EDGE LINE EXISTS.</p> <p>5. RPMS SHALL NOT BE INSTALLED WITHIN INTERSECTIONS.</p> <p>6. RPMS SHALL NOT BE INSTALLED ON BRIDGE DECKS.</p> <p>7. RPMS SHALL NOT BE INSTALLED ON DOTTED LINES. DOTTED LINE LENGTHS (2'LINE WITH 6' SPACE) OR (3'LINE WITH 9'SPACE)</p> <p>8. DIVERGING TAPERS (RETURNS) SHALL HAVE A MINIMUM OF THREE (3) EVENLY SPACED TWO-WAY YELLOW RPM'S IF NORMAL SPACING DOES NOT PROVIDE FOR AT LEAST THREE.</p> <p>9. RPM'S SHALL NOT BE PLACED WITHIN CROSSWALKS, SCHOOL SYMBOLS OR RAIL ROAD MARKINGS.</p> <p>10. RPM'S SHALL NOT BE PLACED WITHIN ROUND-ABOUTS.</p>			
<p><u>TEMPORARY TRAFFIC CONTROL:</u></p> <p>1. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO CLOSURE OF A ROADWAY. THE MESSAGE SHALL ADVISE THE MOTORIST OF THE DATES, TIMES, AND DURATION OF THE CLOSURE. THE PCMS SHALL REMAIN IN PLACE FOR 7 DAYS AFTER THE START OF THE CLOSURE.</p> <p>2. A TTC PLAN (TTCP) INCLUDING PEDESTRIAN CONTROL SHALL BE SUBMITTED TO THE THE COUNTY AT THE PRE-CONSTRUCTION MEETING OR A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO BEGINNING WORK. COPIES OF THE APPROVED TTCP SHALL BE GIVEN TO THE PROJECT ENGINEER AND KEPT ON SITE ALONG WITH THE STREET CLOSURE/OCCUPANCY PERMIT.</p>		<p><u>EXISTING PERMANENT TRAFFIC CONTROL:</u></p> <p>1. ALL OVERHEAD CABLE, AND DOWN GUYS OR BACK GUYS SHALL NOT BLOCK ANY PORTION OF A TRAFFIC SIGNAL, TRAFFIC CONTROL SIGN, OR OTHER TRAFFIC CONTROL DEVICE SUCH THAT VISIBILITY OR OPERATION OF THE TRAFFIC CONTROL DEVICE IS IMPAIRED.</p> <p>2. ALL PERMANENT PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS AS SHOWN ON THIS PLAN SHALL BE INSTALLED BY THE CONTRACTOR AT THE PROJECTS EXPENSE. THE PROJECT ENGINEER SHALL BE NOTIFIED TO DIRECT APPROPRIATE PERSONNEL A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE INSTALLATION OF PERMANENT MARKINGS TO INSPECT AND APPROVE THE PAVEMENT MARKING LAYOUT PRIOR TO PLACING THE PERMANENT MARKINGS.</p>					

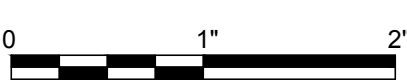


30661 RED ROCK COURT, LOGAN, OHIO 43138
(740) 380-2828 1-866-558-2828
FAX (740) 380-3333

PROJECT MANAGER Gary D. Silcott P.E.			
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER 173409673

ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5

GENERAL NOTES




FILENAME	00G-03.dwg	SHEET
SCALE	NONE	00G-03

1		2		3		4		5		6		7		8									
ITEM	DESCRIPTION	EST. QUAN	UNIT	05C-01	05C-02	05C-03	05C-04	05C-05	05C-06	05C-07	05C-08	05C-09	05C-10	05C-11	05C-12	05C-13	05C-14	05C-15	06C-01	06C-02	06C-03	06C-04	06C-05
1	Clearing and Grubbing	1	LS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Temporary Erosion and Sediment Control	1	LS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	6" Asphalt Concrete Base	986.36	CY	25.92	5	62.91	45.74	83.93	136.27	0.92	33.14	29.07	62.8	34.63	19.48	48.33	83.33	10.5	127.59	101.71	75.09	0	0
4	2" Asphalt Concrete Surface	162.10	CY	0	1.4	19.11	0	0	0	0	11.05	9.69	20.93	11.54	6.61	0	0	0	22.84	33.9	25.03	0	0
5	1.75" Type 2 Int. -County Roads	146.54	CY	7.56	0	1.62	13.34	25.42	39.74	0.27	0	0	0	0	0	14.09	24.3	2.98	17.22	0	0	0	0
6	1.25" Type 1 Surf. - County Roads	105.00	CY	5.4	0	1.15	9.53	18.16	28.93	0.19	0	0	0	0	0	10.07	17.36	2.18	12.03	0	0	0	0
7	D/W Repair 304 Base	2.22	CY	0	0	0	0	0	0	0	0	0	2.22	0	0	0	0	0	0	0	0	0	0
8	D/W Repair Asphalt Surface	0.74	CY	0	0	0	0	0	0	0	0	0	0.74	0	0	0	0	0	0	0	0	0	0
9	D/W Repair Concrete	34.44	SY	0	0	0	0	0	0	0	0	11.11	23.33	0	0	0	0	0	0	0	0	0	0
10	D/W Repair Gravel	40.19	CY	0	0	0	0	2.47	0.44	34.81	0	0	2.47	0	0	0	0	0	0	0	0	0	0
11	STD Manhole	59	EA	3	4	4	2	4	4	4	2	5	3	2	3	0	0	0	6	4	2	4	3
12	Drop Manhole	7	EA	0	0	1	0	1	3	0	0	0	1	0	1	0	0	0	0	0	0	0	0
13	4" Force Main	3011.00	LF	0	0	0	0	0	0	0	0	0	0	0	0	1322	1500	189	0	0	0	0	0
14	4" Force Main (HDD)	178.00	LF	0	0	0	0	0	0	0	0	0	0	0	0	178	0	0	0	0	0	0	0
15	8" SDR -35 Sanitary Sewer	14998.66	LF	477	1000	950	494.07	1066.5	1471.81	1112.54	377.55	849.62	943.68	447.41	799.48	0	0	0	1297	940	666	1250	856
16	8" Sanitary Sewer (HDD)	794.77	LF	326.98	0	0	0	333.79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
17	6" SDR-35 Sanitary Lateral	2553.00	LF	0	92	155	136	126	214	70	184	96	225	156	148	0	0	0	344	317	290	0	0
18	Wyes	159.00	EA	0	2	6	7	7	11	4	5	6	9	6	6	0	0	0	28	33	29	0	0
19	Residental Grinder Pump	5	EA	0	0	1	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0
20	1 1/4" FM for GP	974.00	LF	0	0	305	0	0	0	0	0	529	140	0	0	0	0	0	0	0	0	0	0
21	Lift Station	1	EA	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Rip Rap	3.63	CY	0	0.99	0.33	0	0.66	0.33	0	0	0.66	0.33	0	0.33	0	0	0	0	0	0	0	0
23	6" and Smaller Pipe Replacement	95	LF	0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
24	12" Pipe Replacement	10	LF	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0
25	24" Pipe Replacement	10	LF	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0
26	Construction Layout	1	LS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Air Release Valve	1.00	EA	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
28	Seeding and Mulching	23498.23	SY	391.00	2156.00	1276.24	915.00	1384.44	1634.34	2472.31	419.50	1477.75	2098.66	497.12	1465.11	833.33	833.33	210	0	0	753.33	2777.77	1903.00
29	Fertilizer	2.11	Ton	0.04	0.19	0.11	0.08	0.12	0.15	0.22	0.04	0.13	0.19	0.04	0.13	0.07	0.07	0.02	0.00	0.00	0.07	0.25	0.17
30	Compacted Granular Backfill	15862.78	CY	429.63	62.77	1101.84	787.12	1251.24	2811.28	533.32	336.82	559.17	1497.42	999.92	173.92	416	416	59	2443.81	951.14	1032.38	0	0
31	Guardrail Remove and Repalce	20.00	LF	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

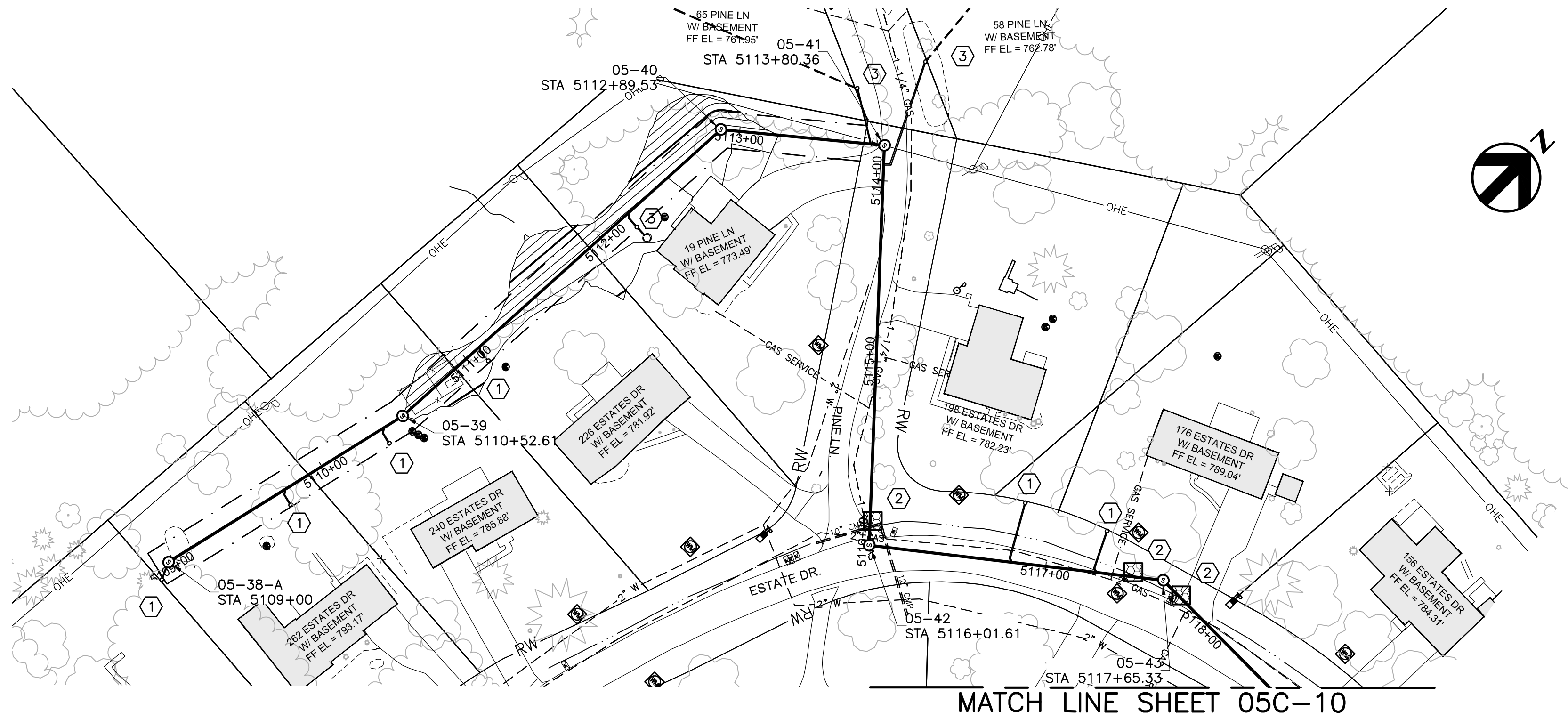
PROJECT MANAGER Gary D. Silcott P.E.		
ISSUE	DATE	DESCRIPTION
PROJECT NUMBER		173409673

ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5

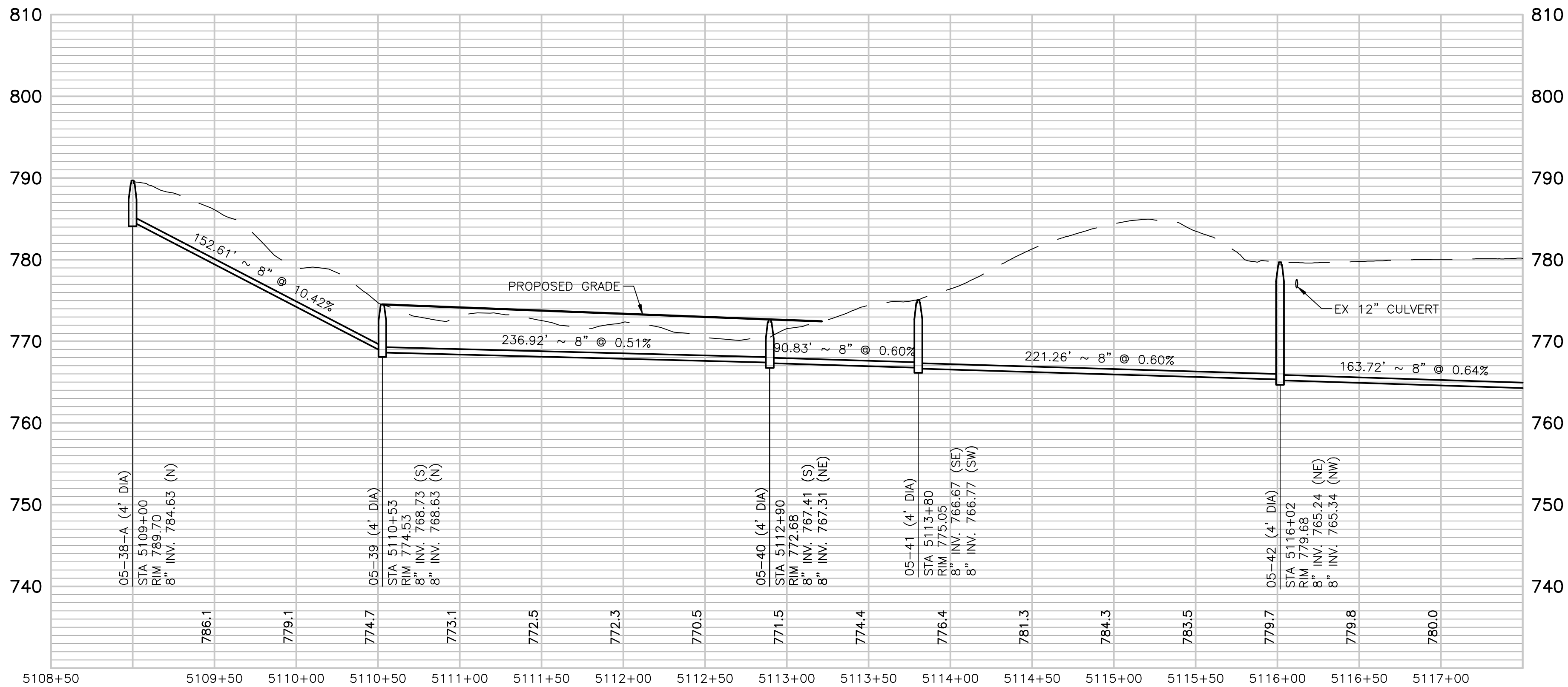


FILENAME
00G-04 Site 5-6.dwg
SCALE
NONE

SHEET
00G-04



- CODING NOTES:**
- ① GRAVITY SEWER LATERAL
 - ② SEE RIPRAP DETAIL, SHT. ER-01
 - ③ GRINDER PUMP REQUIRED

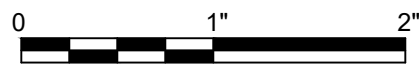


ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	Gary D. Silcott P.E.
PROJECT NUMBER	173409673

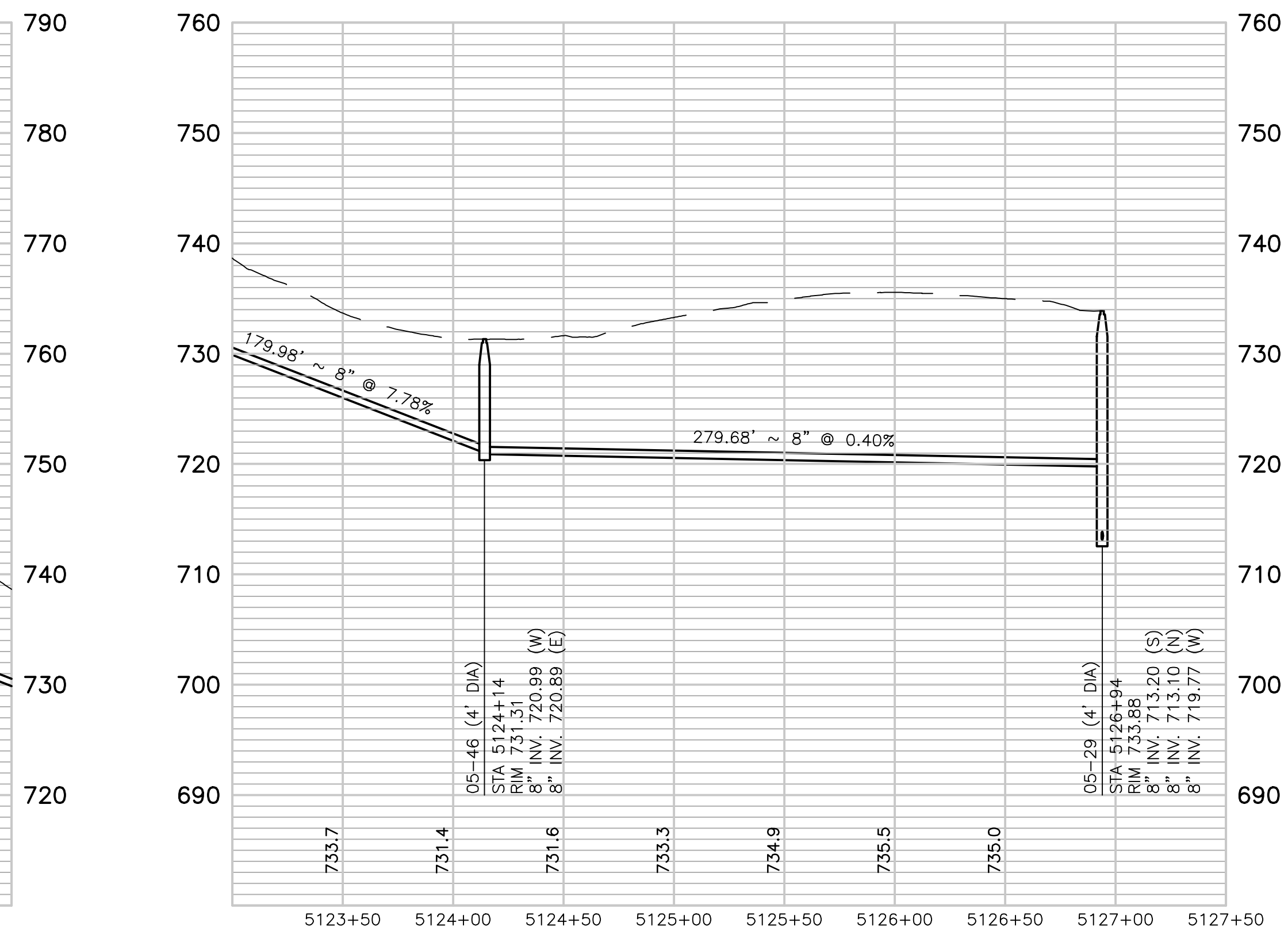
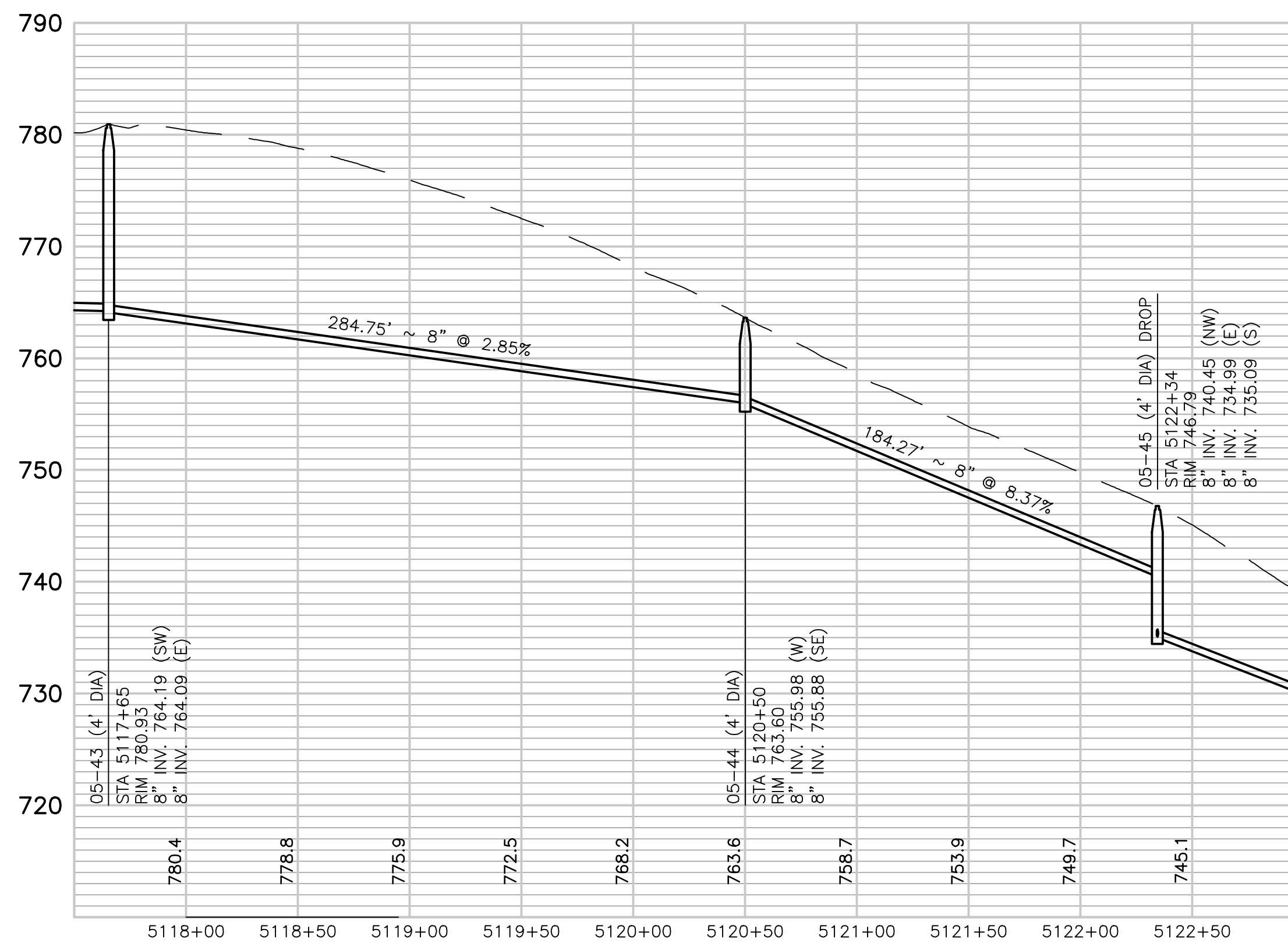
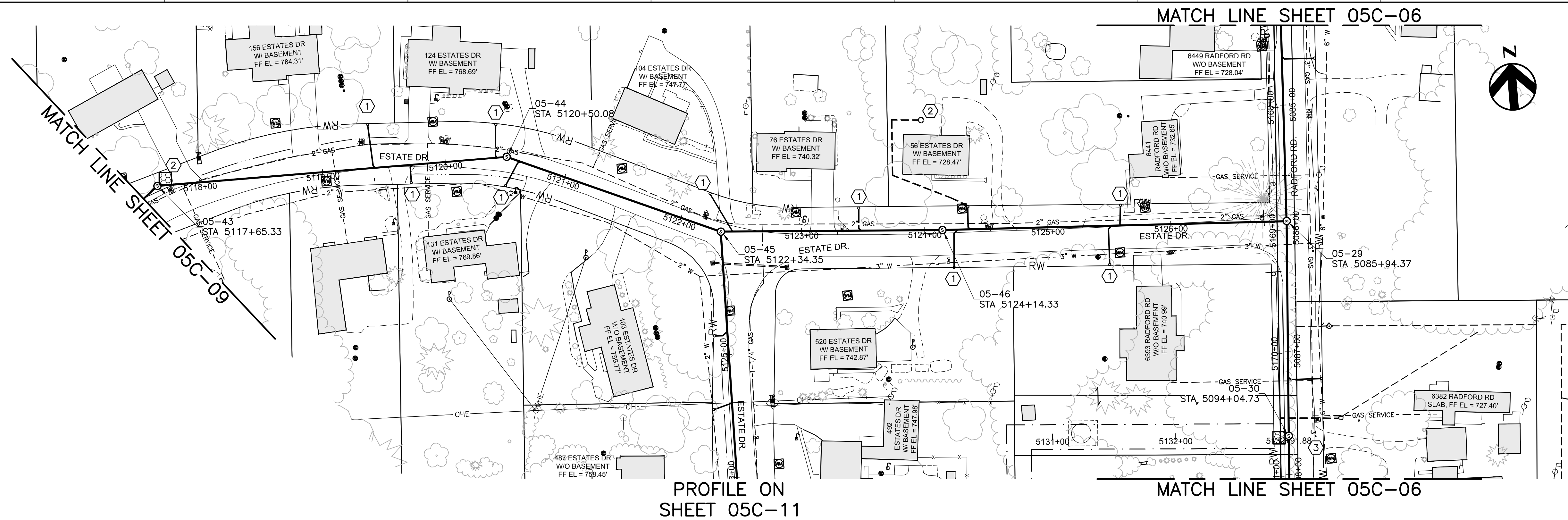
**ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5
STA 5108+50 TO STA 5117+50**

**BAKER RD LIFT STATION
ML2-BR3**



FILENAME | 05C-01.dwg
SCALE | 1"=50'

SHEET
05C-09



30681 RED ROCK COURT, LOGAN, OHIO 43138
(740) 380-2828 1-866-558-2828
FAX (740) 380-3535

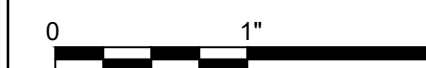
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER Gary D. Silcott P.E.

PROJECT NUMBER 173409673

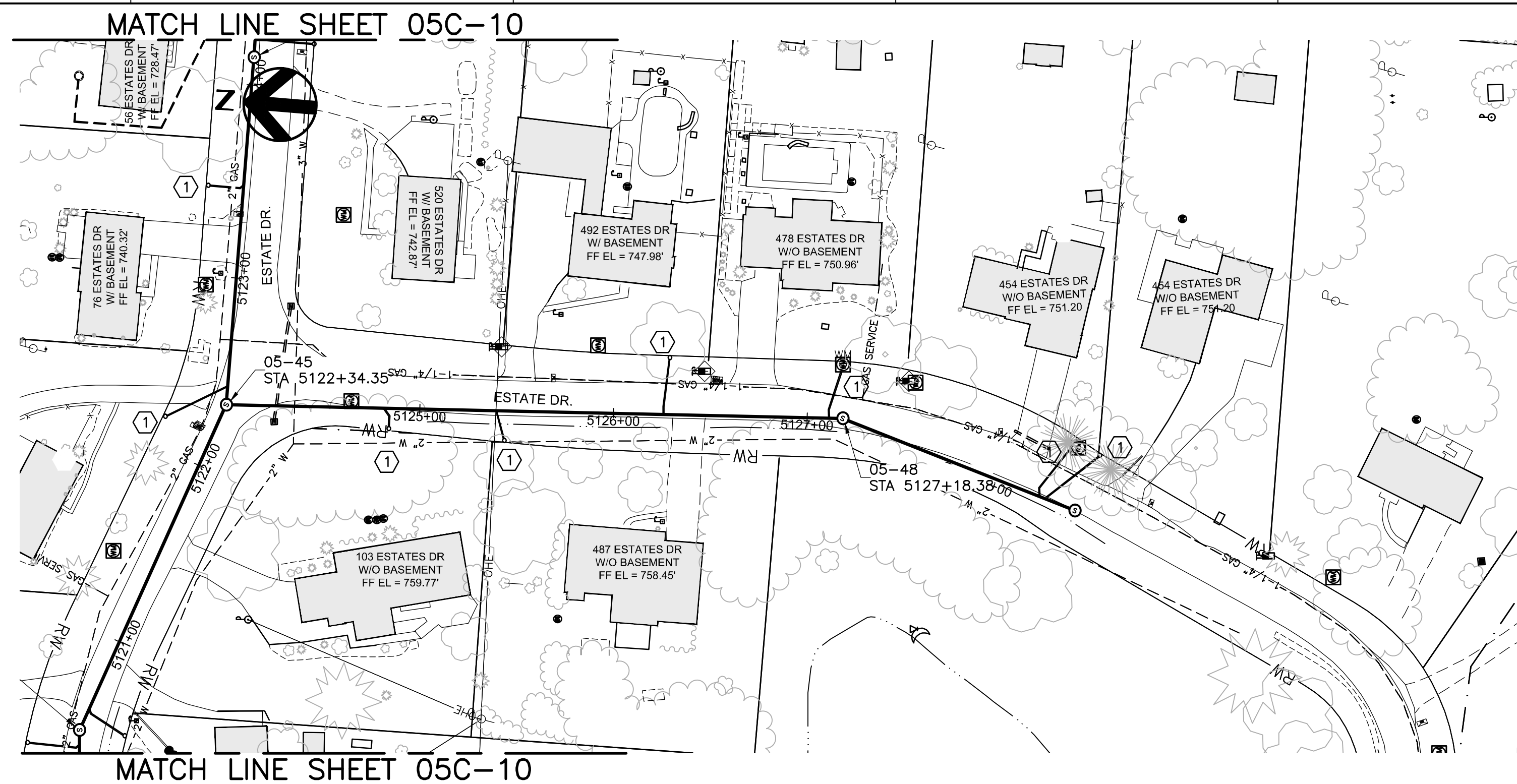
ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5
STA 5117+50 TO STA 5127+50

BAKER RD LIFT STATION
ML2-BR3



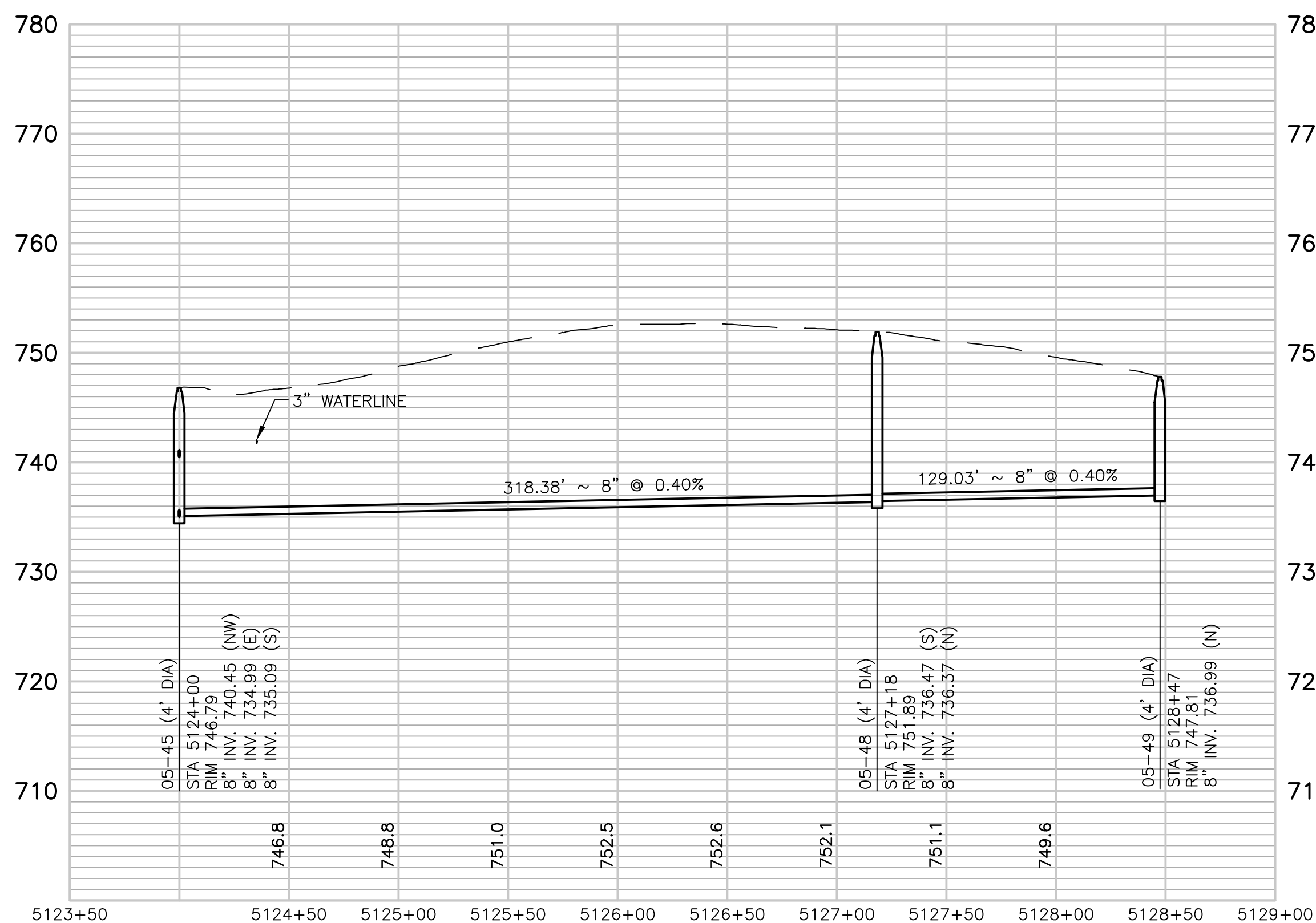
FILENAME 05C-01.dwg
SCALE 1"=50'

SHEET
05C-10



CODED NOTES:

- ① GRAVITY SEWER LATERAL
② SEE RIPRAP DETAIL, SHT. ER-01



30681 RED ROCK COURT, LOGAN, OHIO 43138
(740) 380-2828 1-866-558-2828
FAX (740) 380-3535

ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER Gary D. Silcott P.E.

PROJECT NUMBER
173409673

ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5
STA 5123+50 TO STA 5129+00

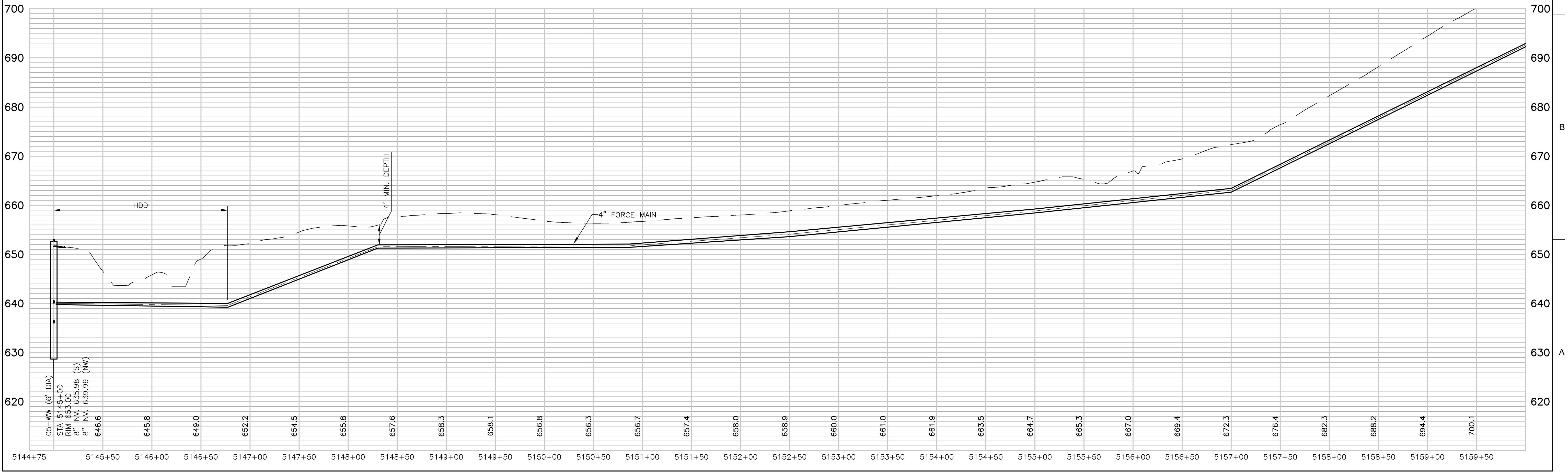
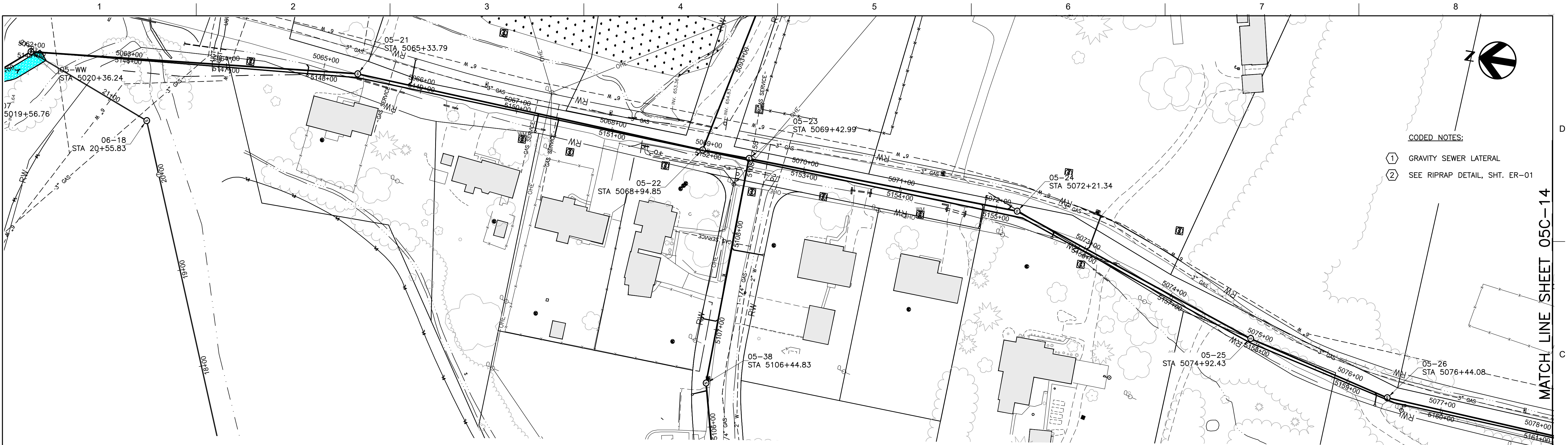
BAKER RD LIFT STATION
ML2-BR3-TB2 AND
ML2-BR3-TR3



FILENAME 05C-01.dwg
SCALE 1"=50'

SHEET

05C-11

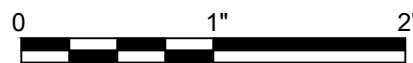


ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	Gary D. Silcott P.E.
PROJECT NUMBER	173409673

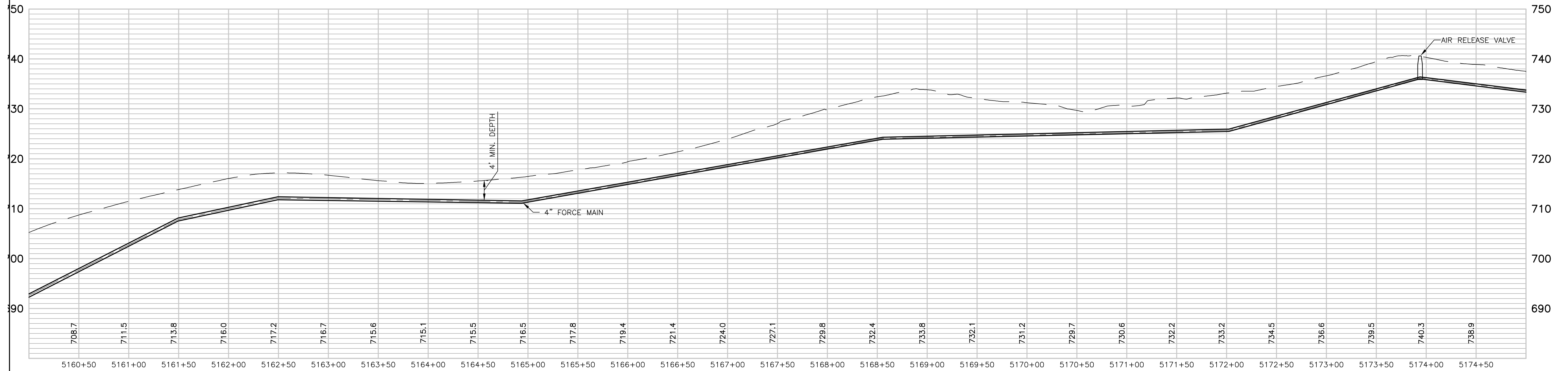
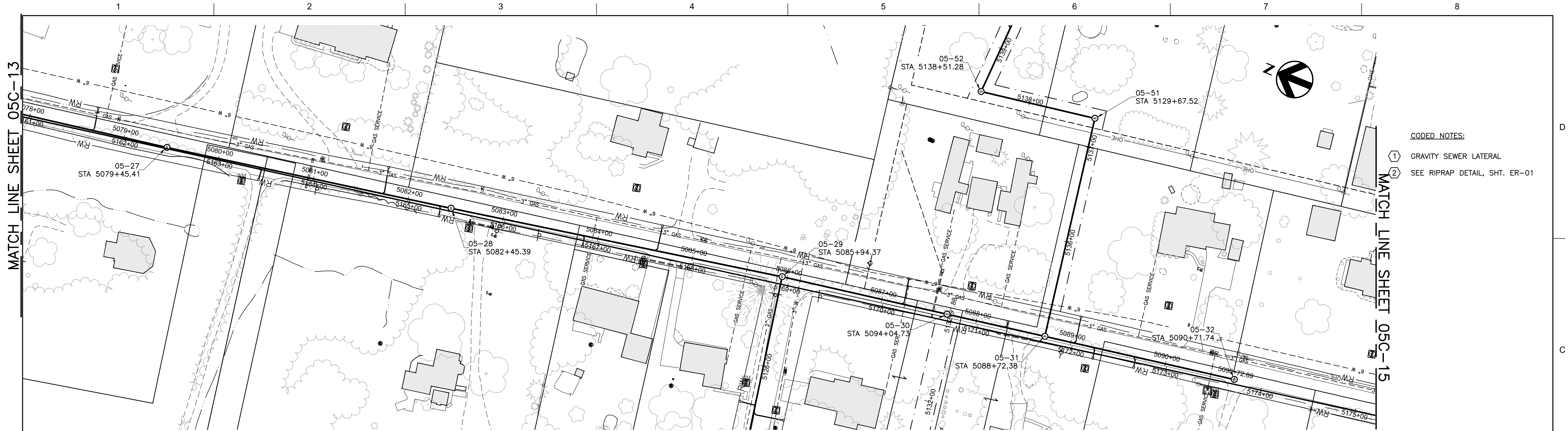
ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5
STA 5145+00 TO STA 5160+00

BAKER RD LIFT STATION
FORCE MAIN



FILENAME | 05C-01.dwg
SCALE | 1"=50'

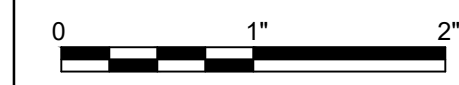
SHEET
05C-13



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	Gary D. Silcott P.E.
PROJECT NUMBER	173409673

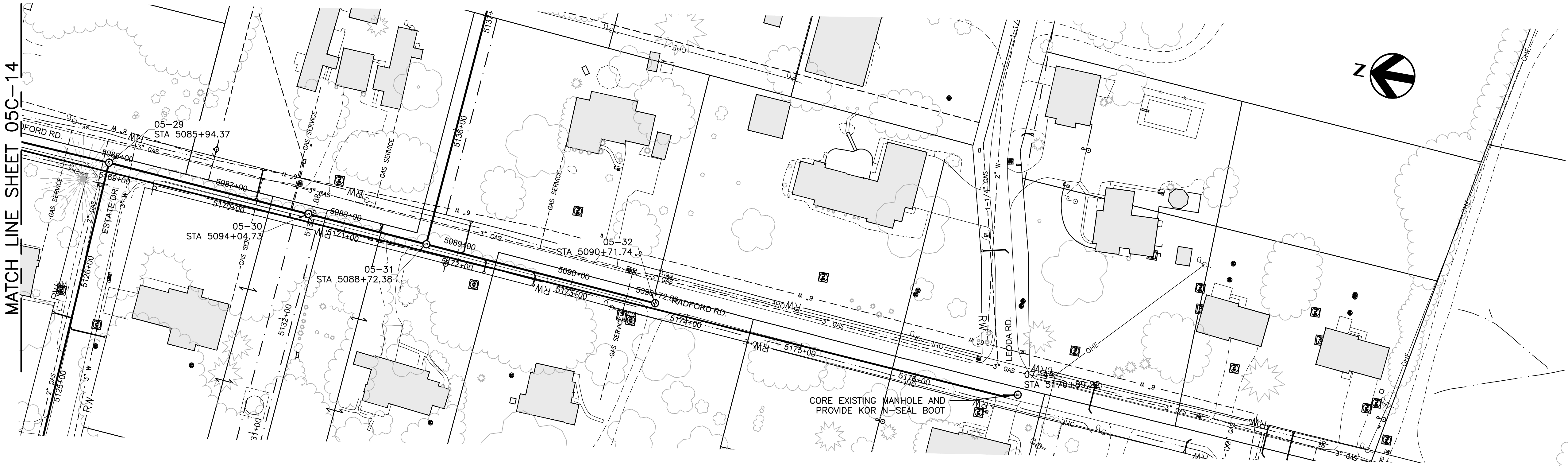
ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5
STA 5160+00 TO STA 5175+00



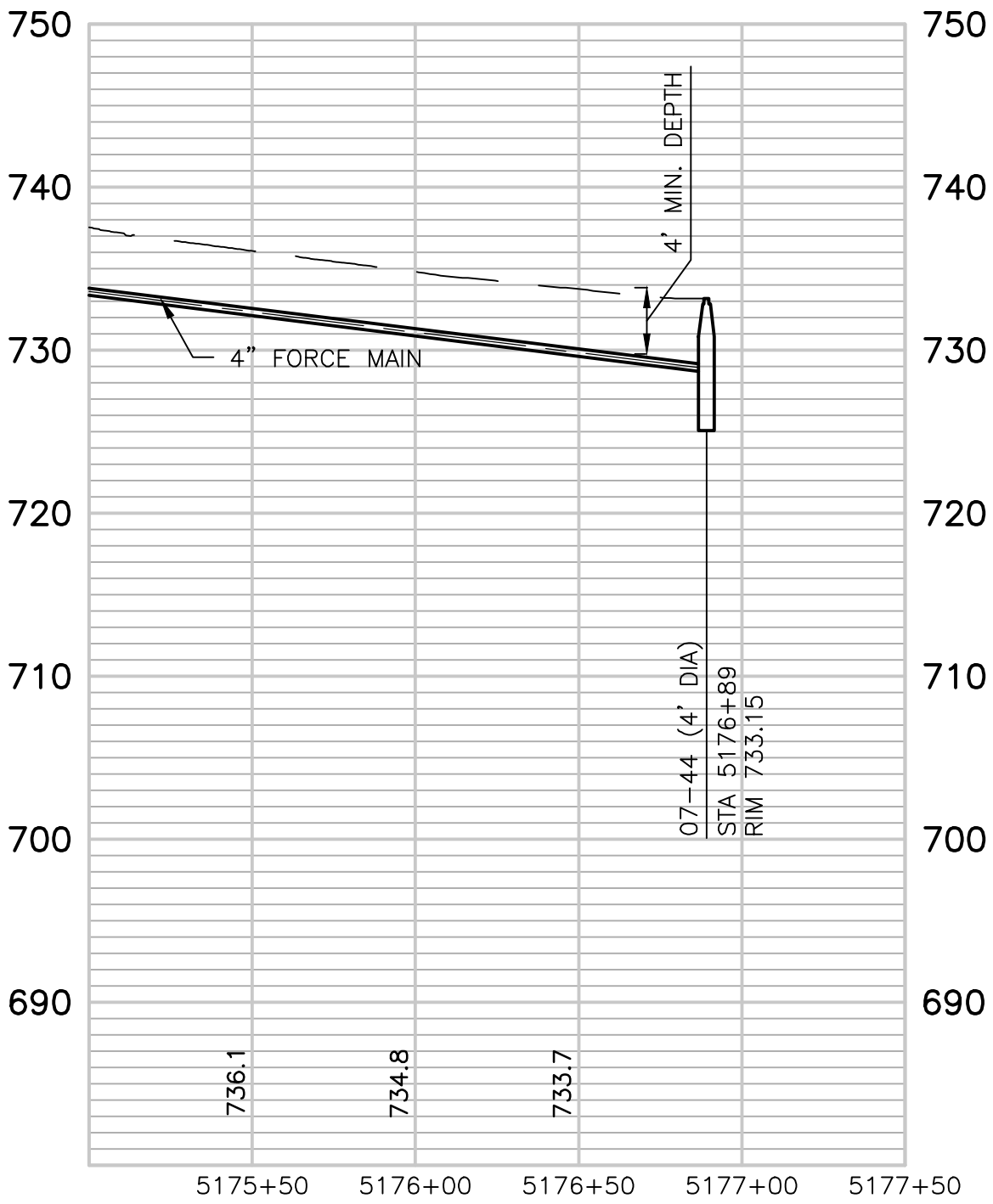
BAKER RD LIFT STATION
FORCE MAIN

FILENAME | 05C-01.dwg
SCALE | 1"=50'

SHEET
05C-14



- CODED NOTES:
- 1 GRAVITY SEWER LATERAL
 - 2 SEE RIPRAP DETAIL, SHT. ER-01

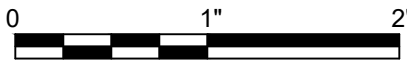


ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	Gary D. Silcott P.E.
PROJECT NUMBER	173409673

ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5
STA 5175+00 TO STA 5177+50

BAKER RD LIFT STATION
FORCE MAIN



FILENAME 05C-01.dwg
SCALE 1"=50'

SHEET
05C-15



STRUCTURE TABLE			
STRUCTURE IDENTIFICATION	NORTHING	EASTING	RIM
06-WW	472920.12	2064922.80	654.41
06-18	473406.57	2067010.44	648.25
06-16	473243.48	2066584.31	649.96
06-15	473100.50	2066210.74	649.99
06-17	473386.46	2066957.89	650.00
06-14	472957.52	2065837.17	650.56
06-12	472716.10	2065197.61	651.52
06-13	472814.54	2065463.60	651.37
06-19	473535.97	2065079.99	667.29
06-21	473507.16	2065716.08	664.63
06-20	473543.03	2065358.16	665.89
06-08	472999.71	2065104.56	656.94
06-11	472697.72	2065083.13	650.94
06-03	473008.65	2064646.32	655.91
06-04	472998.93	2064885.31	655.80
06-02	473248.97	2064666.06	657.23
06-07	473247.95	2064905.76	658.21
06-01	473489.30	2064685.80	660.73
06-09	473361.48	2065132.95	661.59
06-06	473496.97	2064926.22	664.25



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ISSUE	DATE	DESCRIPTION

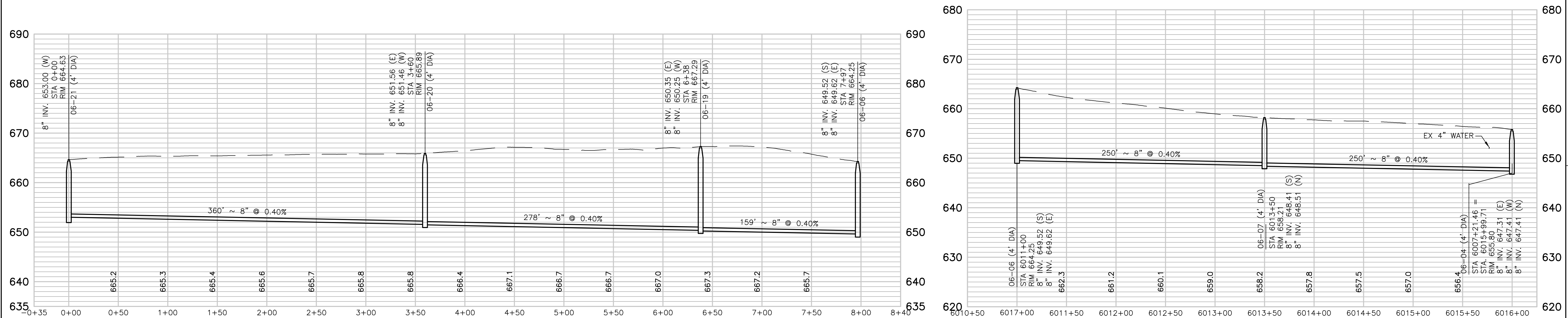
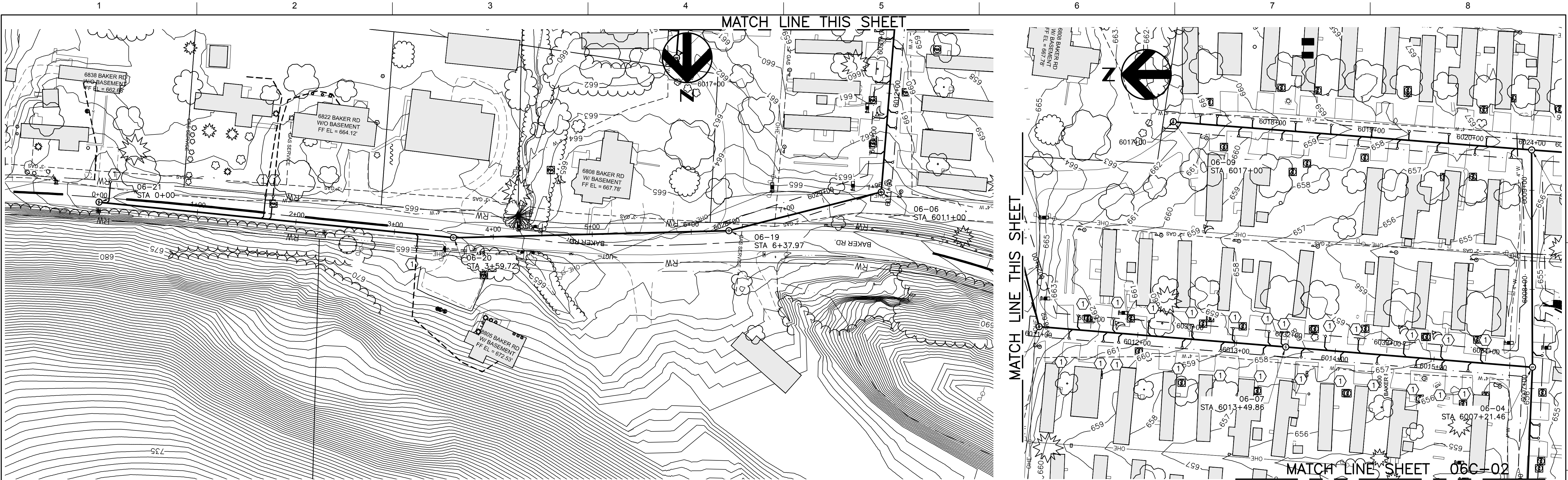
PROJECT MANAGER	Gary D. Silcott P.E.
PROJECT NUMBER	173409673

ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5



FILENAME	06C-00.dwg	SHEET
SCALE	1"=200'	06C-00

HAPPY VALLEY MOBILE ESTATES LIFT STATION
SHEET INDEX AND STRUCTURE TABLE



30661 RED ROCK COURT, LOGAN, OHIO 43138
(740) 380-2828 1-866-558-2828
FAX (740) 380-3333

REVISION 1		

PROJECT MANAGER	Gary D. Silcott P.E.
JJB	04/05/21
PROJECT NUMBER	173409673

ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5
STA 0+00 TO 8+00
&
STA 6017+00 TO 6016+00

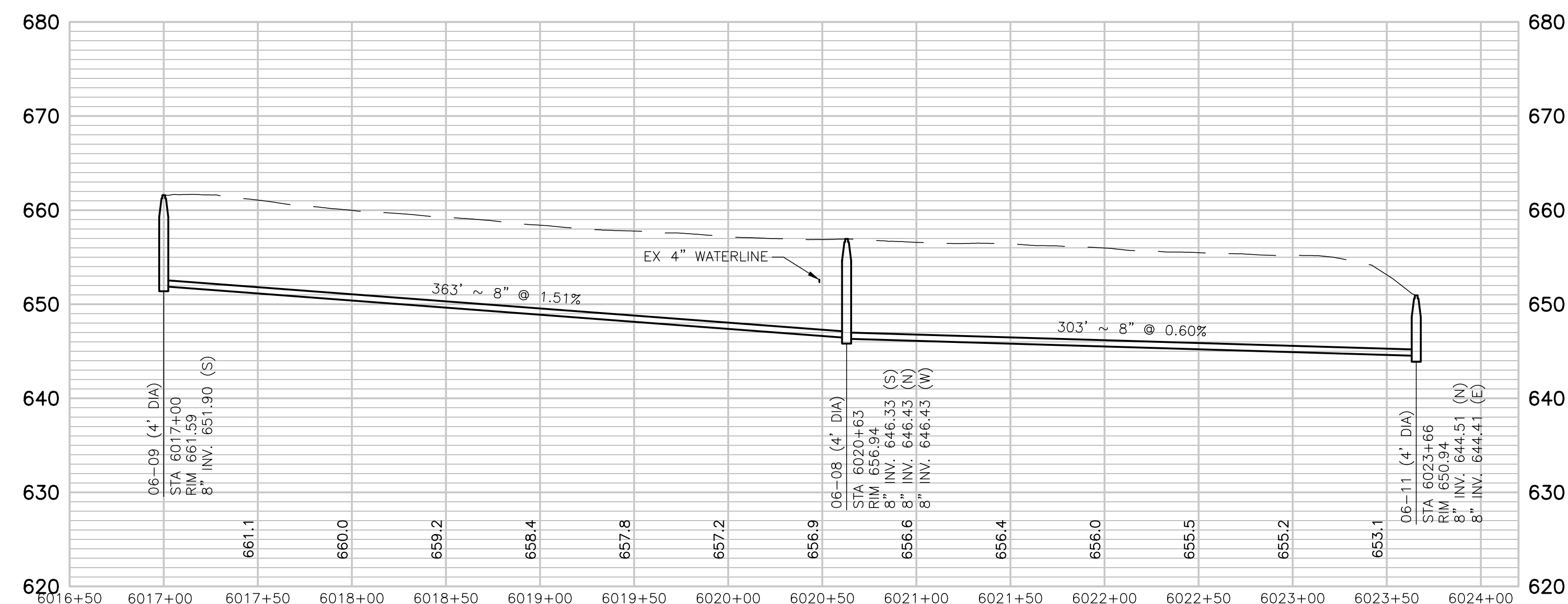
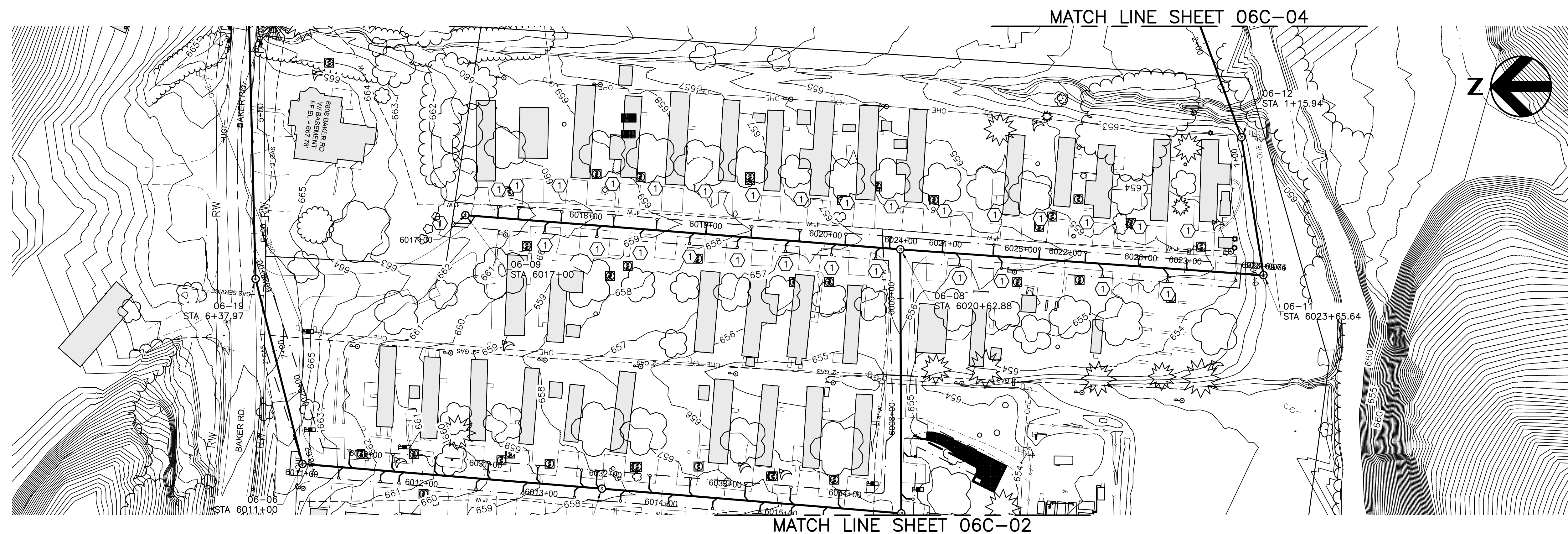
HAPPY VALLEY MOBILE ESTATES
ML1



FILENAME	06C-01.dwg
SCALE	1"=50'

SHEET

06C-01



30661 RED ROCK COURT, LOGAN, OHIO 43138
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REVISION 1			PROJECT MANAGER	Gary D. Silcott P.E.
			JJB	04/05/21
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	173409673

PROJECT MANAGER Gary D. Silcott P.E.

JJB	04/05/21
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PROJECT NUMBER	173409673
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**ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5
STA 6017+00 TO 6023+66**

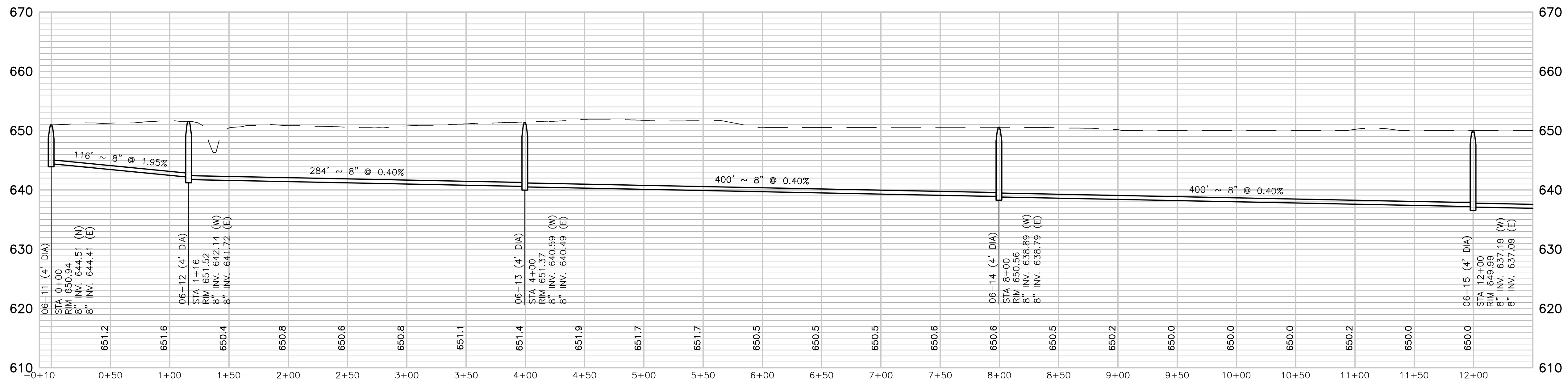
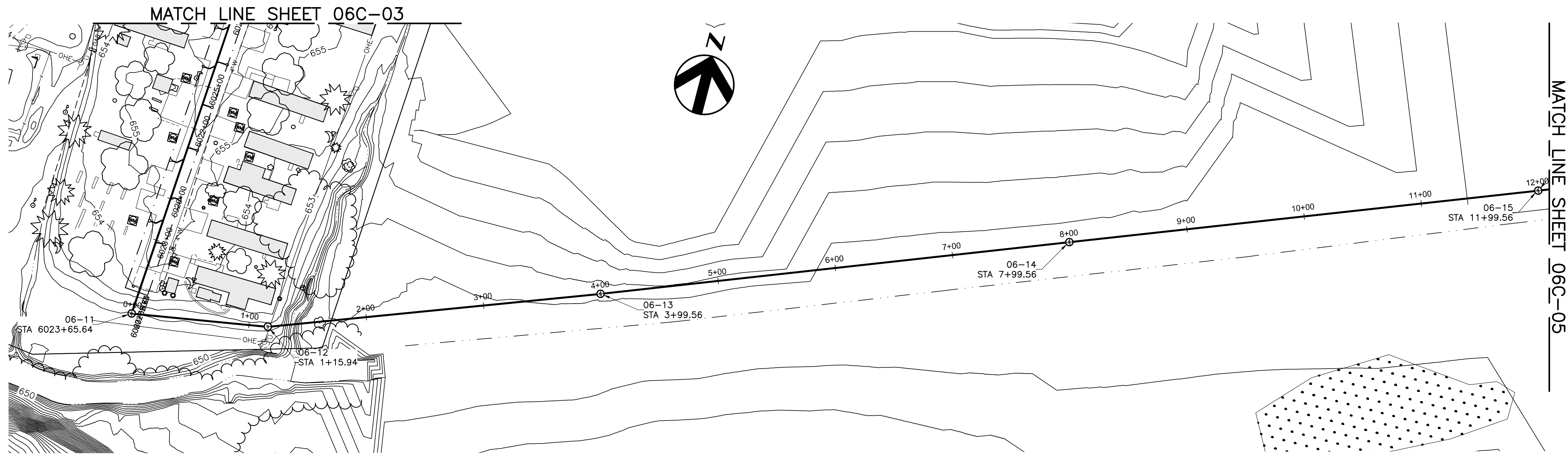
**HAPPY VALLEY MOBILE ESTATES
ML1-BR2**



2"	FILENAME	06C-01.dwg
	SCALE	1"=50'

| SHEET

06C-03

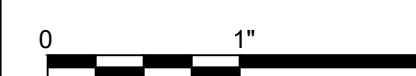


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FAX (740) 380-3333

			PROJECT MANAGER Gary D. Silcott P.E.	
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	173409673

ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5
STA 0+00 TO 12+00

HAPPY VALLEY MOBILE ESTATES
ML3



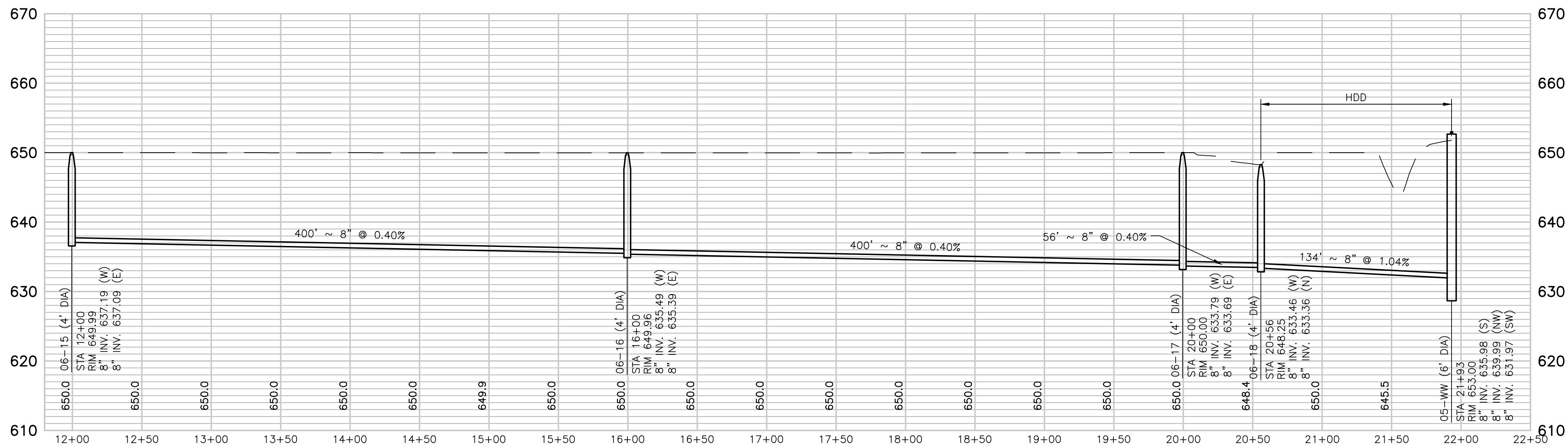
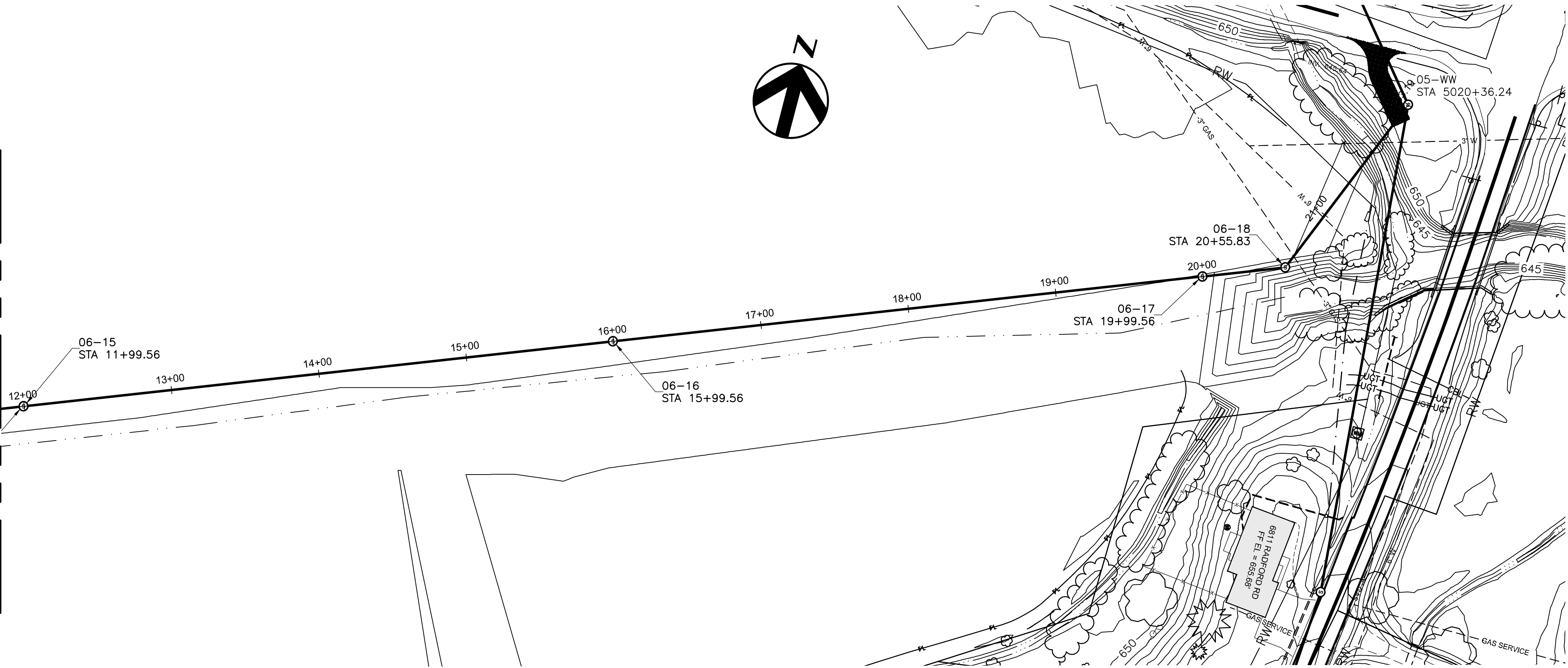
FILENAME
SCALE

06C-01.dwg
1"=50'

SHEET

06C-04

MATCH LINE SHEET 06C-04



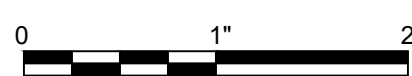
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ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	Gary D. Silcott P.E.
PROJECT NUMBER	173409673

ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5
STA 12+00 TO 21+93

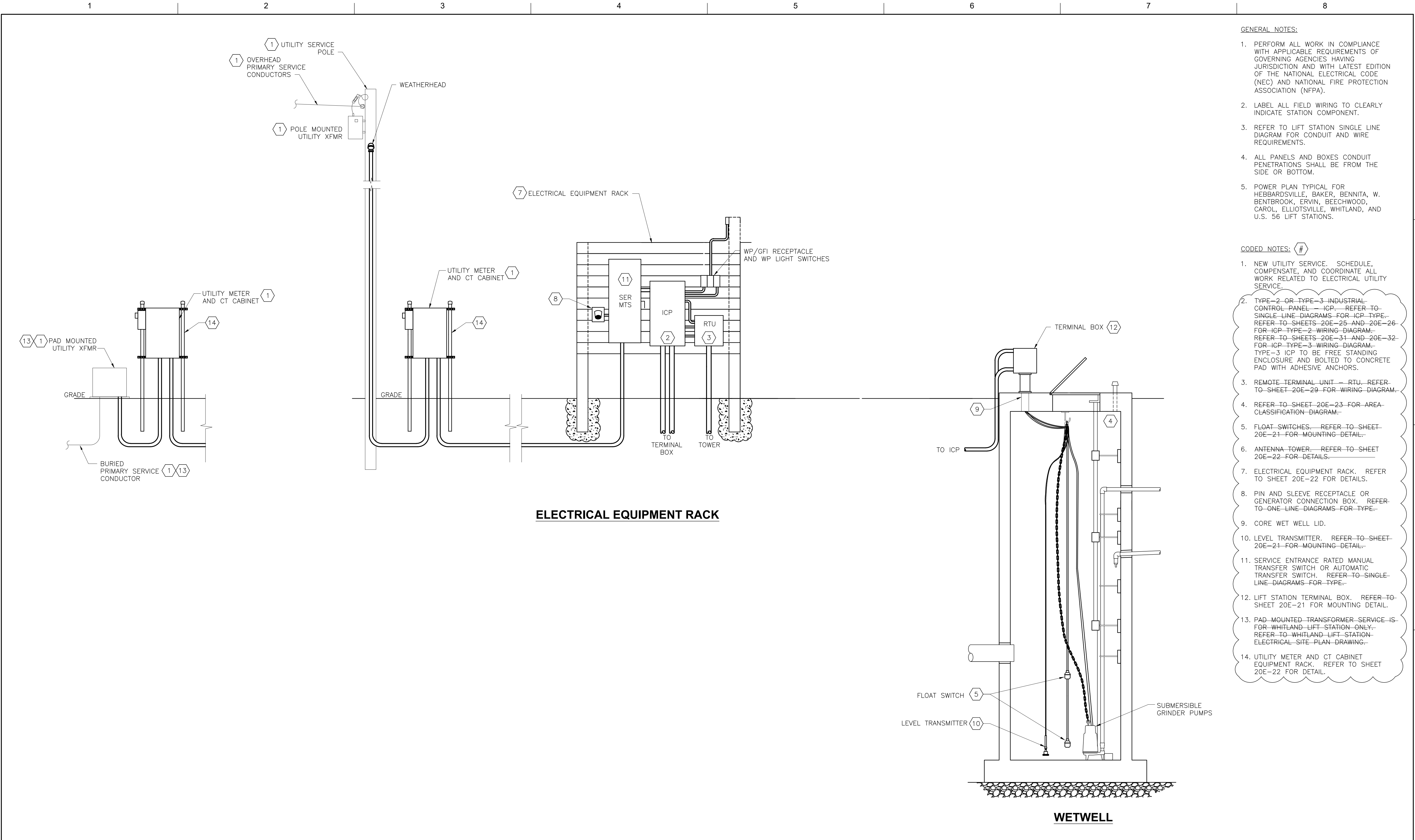
HAPPY VALLEY MOBILE ESTATES
ML3



FILENAME	06C-01.dwg
SCALE	1"=50'

SHEET

06C-05



GENERAL NOTES:

1. PERFORM ALL WORK IN COMPLIANCE WITH APPLICABLE REQUIREMENTS OF GOVERNING AGENCIES HAVING JURISDICTION AND WITH LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).
2. LABEL ALL FIELD WIRING TO CLEARLY INDICATE STATION COMPONENT.
3. REFER TO LIFT STATION SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE REQUIREMENTS.
4. ALL PANELS AND BOXES CONDUIT PENETRATIONS SHALL BE FROM THE SIDE OR BOTTOM.
5. POWER PLAN TYPICAL FOR HEBBARDSVILLE, BAKER, BENNITA, W. BENTBROOK, ERVIN, BEECHWOOD, CAROL, ELLIOTSVILLE, WHITLAND, AND U.S. 56 LIFT STATIONS.

CODED NOTES: (#)

1. NEW UTILITY SERVICE. SCHEDULE, COMPENSATE, AND COORDINATE ALL WORK RELATED TO ELECTRICAL UTILITY SERVICE.
2. TYPE-2 OR TYPE-3 INDUSTRIAL CONTROL PANEL - ICP. REFER TO SINGLE LINE DIAGRAMS FOR ICP TYPE. REFER TO SHEETS 20E-25 AND 20E-26 FOR ICP TYPE-2 WIRING DIAGRAM. REFER TO SHEETS 20E-31 AND 20E-32 FOR ICP TYPE-3 WIRING DIAGRAM. TYPE-3 ICP TO BE FREE STANDING ENCLOSURE AND BOLTED TO CONCRETE PAD WITH ADHESIVE ANCHORS.
3. REMOTE TERMINAL UNIT - RTU. REFER TO SHEET 20E-29 FOR WIRING DIAGRAM.
4. REFER TO SHEET 20E-23 FOR AREA CLASSIFICATION DIAGRAM.
5. FLOAT SWITCHES. REFER TO SHEET 20E-21 FOR MOUNTING DETAIL.
6. ANTENNA TOWER. REFER TO SHEET 20E-22 FOR DETAILS.
7. ELECTRICAL EQUIPMENT RACK. REFER TO SHEET 20E-22 FOR DETAILS.
8. PIN AND SLEEVE RECEPTACLE OR GENERATOR CONNECTION BOX. REFER TO ONE LINE DIAGRAMS FOR TYPE.
9. CORE WET WELL LID.
10. LEVEL TRANSMITTER. REFER TO SHEET 20E-21 FOR MOUNTING DETAIL.
11. SERVICE ENTRANCE RATED MANUAL TRANSFER SWITCH OR AUTOMATIC TRANSFER SWITCH. REFER TO SINGLE LINE DIAGRAMS FOR TYPE.
12. LIFT STATION TERMINAL BOX. REFER TO SHEET 20E-21 FOR MOUNTING DETAIL.
13. PAD MOUNTED TRANSFORMER SERVICE IS FOR WHITLAND LIFT STATION ONLY. REFER TO WHITLAND LIFT STATION ELECTRICAL SITE PLAN DRAWING.
14. UTILITY METER AND CT CABINET EQUIPMENT RACK. REFER TO SHEET 20E-22 FOR DETAIL.

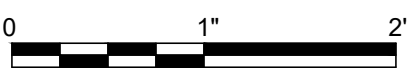


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REVISED PER STANTEC		
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER		Gary D. Silcott P.E.
JJB		10-05-20
PROJECT NUMBER		173409673

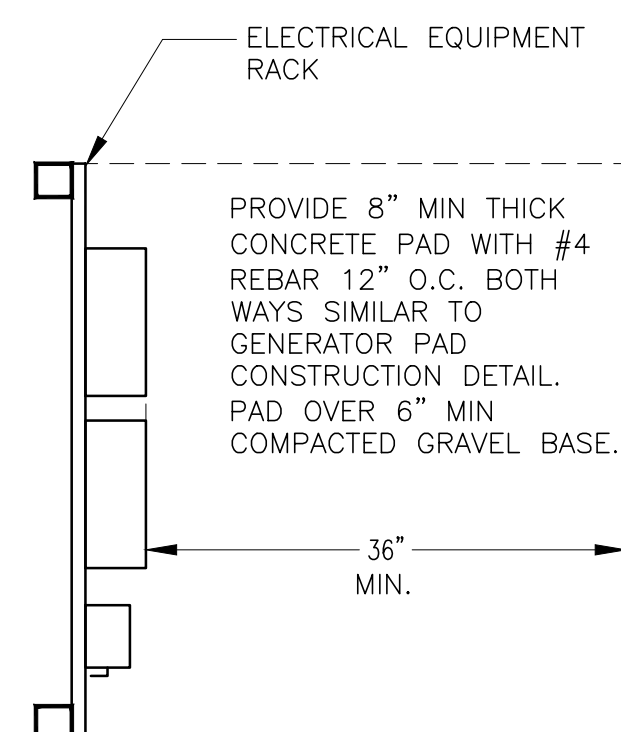
ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5



277/480V 3Ø
LIFT STATION
POWER PLAN

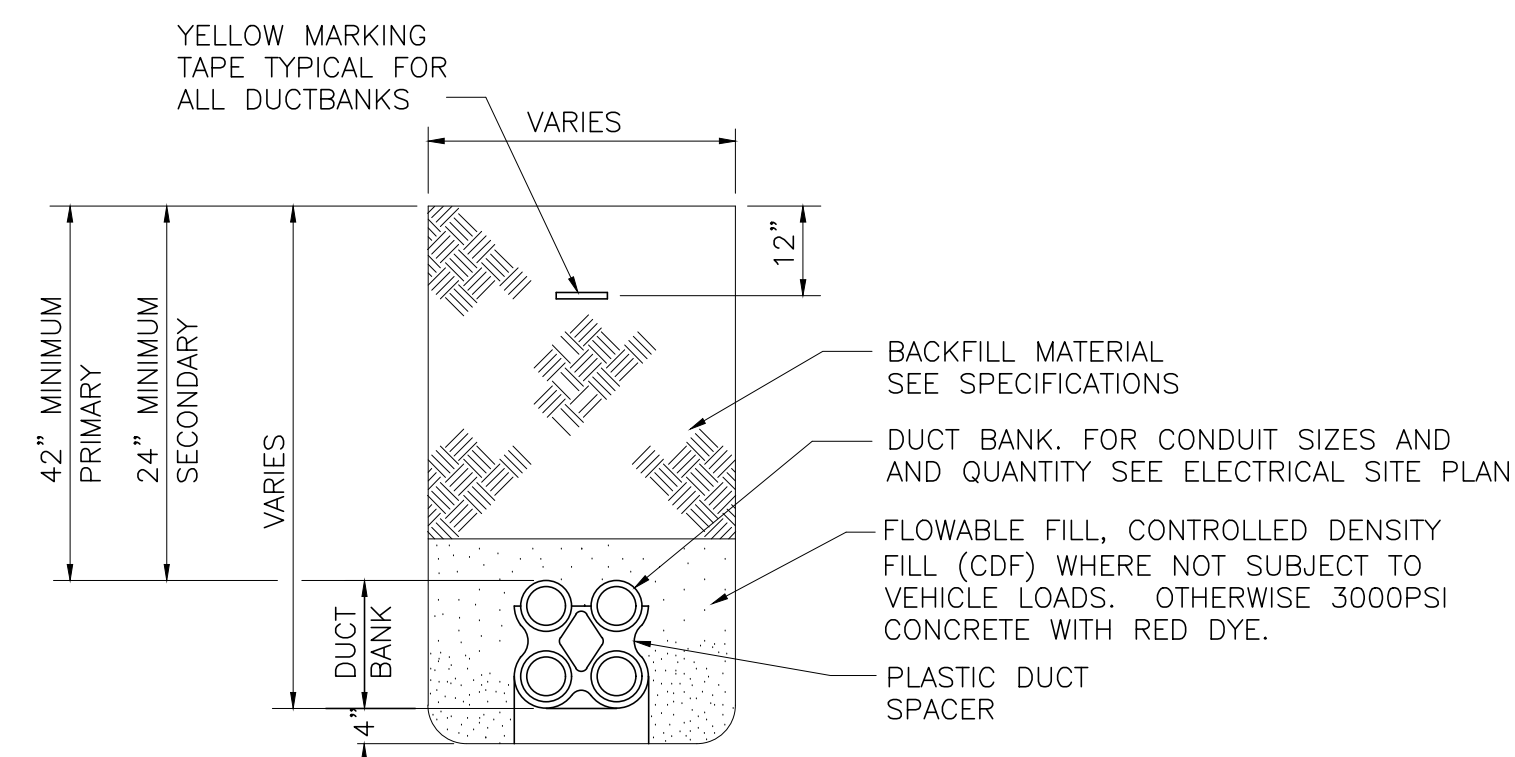
FILENAME	20E-20.dwg
SCALE	NONE

SHEET
20E-01



ELECTRICAL EQUIPMENT RACK DETAIL

NO SCALE

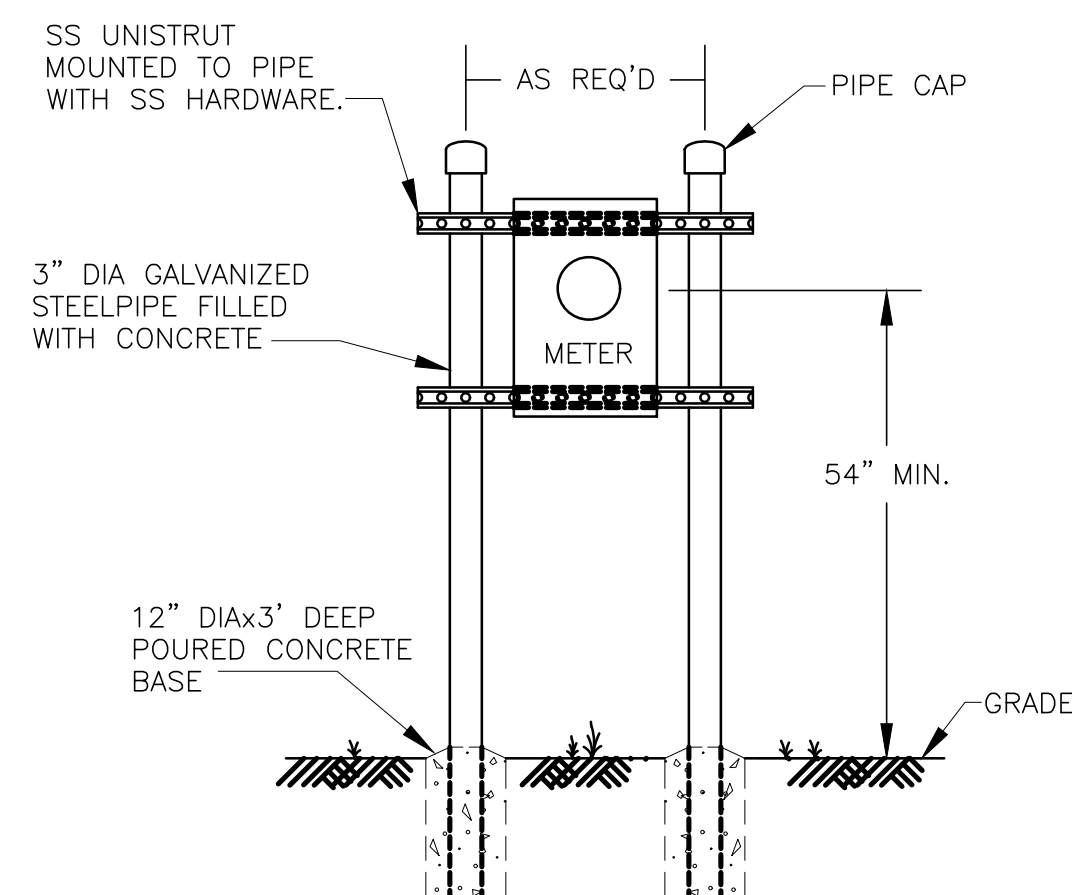


NOTES:

1. PROVIDE PLASTIC DUCT SPACERS AT A MINIMUM OF 8' INTERVALS. SECURE DUCT TO SPACERS AND ANCHOR EACH SPACER.
2. ALL SPARE DUCTS SHALL BE PLUGGED WITH A STANDARD DUCT PLUG FITTING.

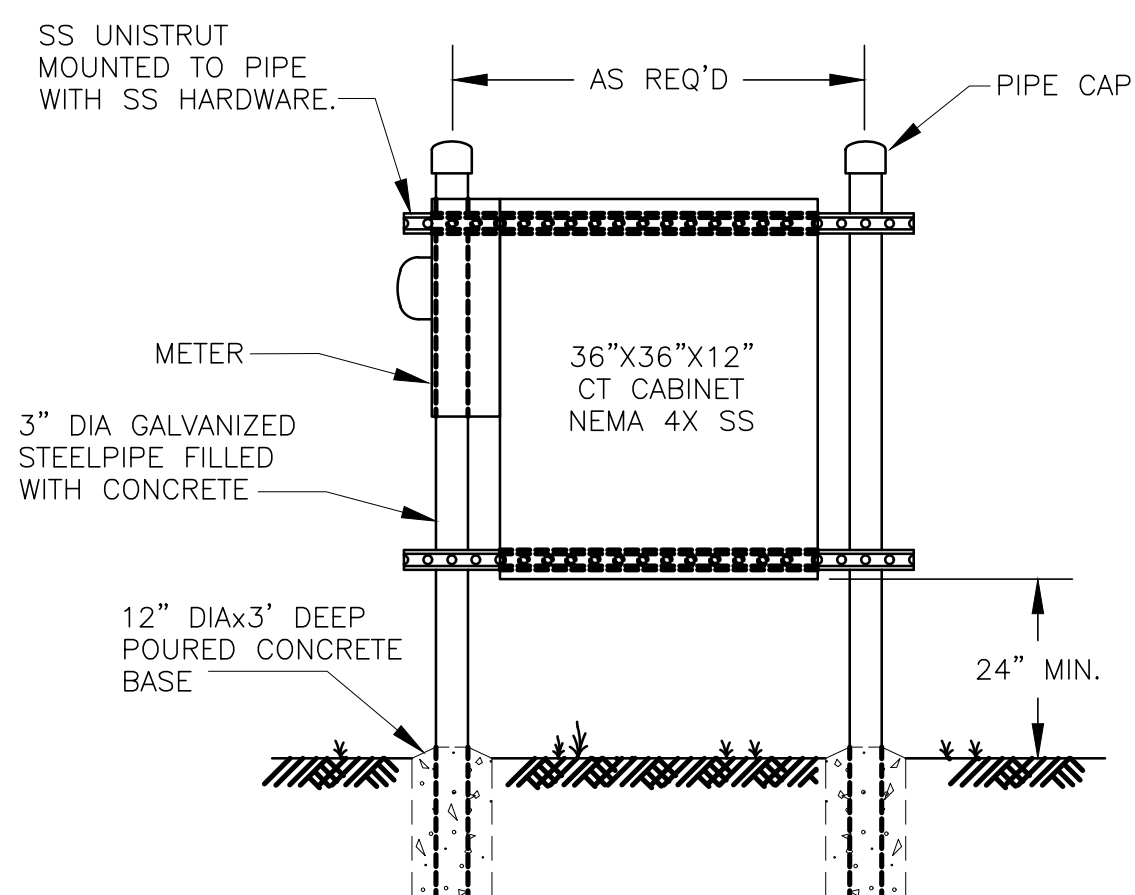
TRENCHING DETAIL

NO SCALE



UTILTIY METER EQUIPMENT RACK

NO SCALE



UTILTIY METER AND CT CABINET EQUIPMENT RACK

NO SCALE

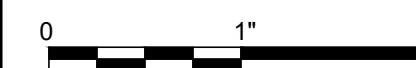


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REVISED PER STANTEC			PROJECT MANAGER	Gary D. Silcott P.E.
			JJB	10-05-20
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	173409673

**ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5**

ELECTRICAL DETAILS I



FILENAME

SCALE

20E-22.dwg

NONE

| SHEET

20E-02

1

2

3

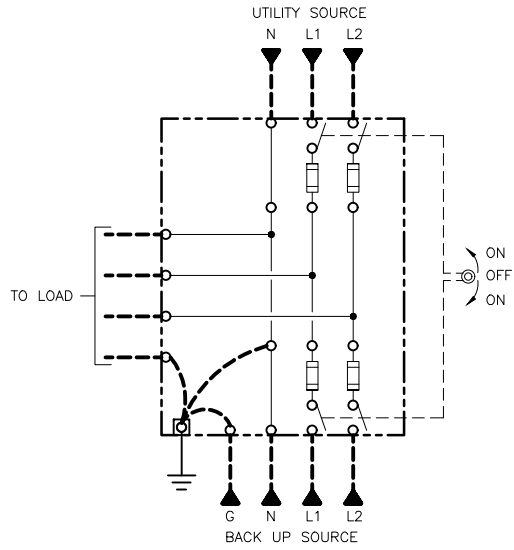
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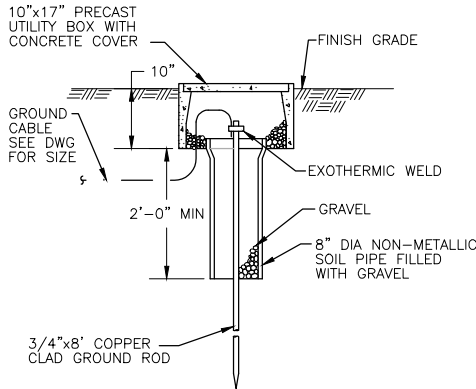
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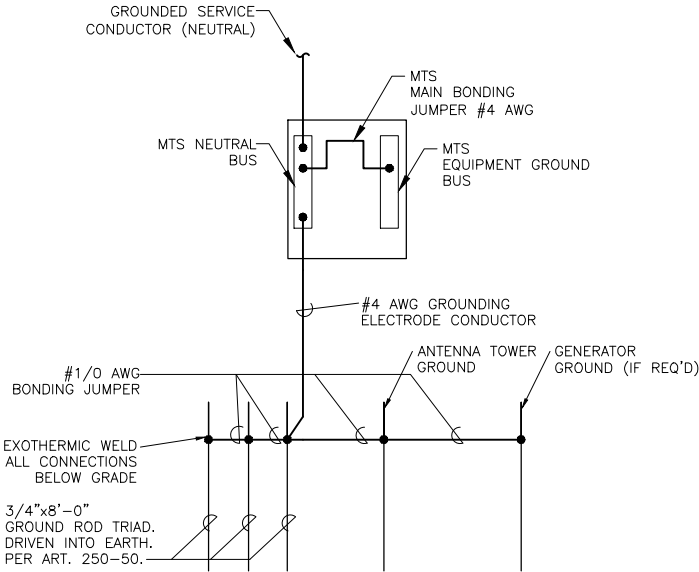
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120/240V MTS SCHEMATIC DIAGRAM
NO SCALE

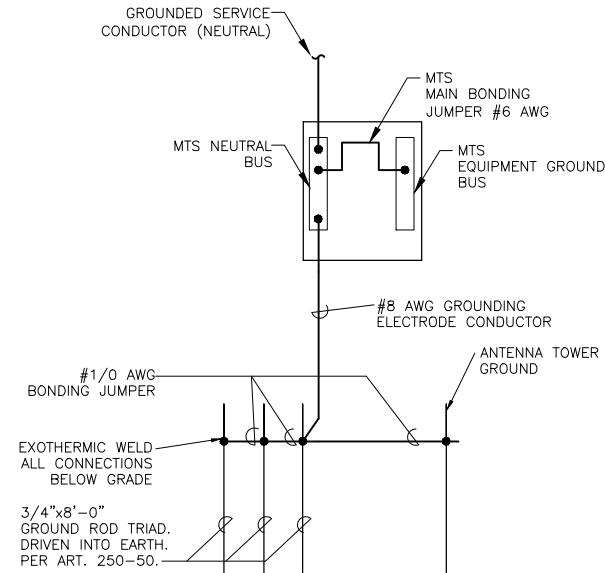


GROUND ROD AND TEST WELL DETAIL
NO SCALE



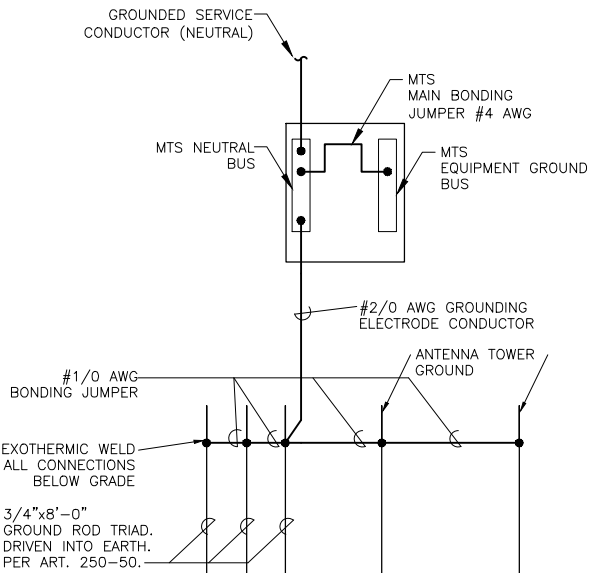
GROUNDING ELECTRODE AND BONDING CONDUCTORS PER
ARTICLE 250 OF N.E.C. AS REQUIRED

GROUNDING AND BONDING DIAGRAM
(200A SERVICE)
NO SCALE



GROUNDING ELECTRODE AND BONDING CONDUCTORS PER
ARTICLE 250 OF N.E.C. AS REQUIRED

GROUNDING AND BONDING DIAGRAM
(100A SERVICE)
NO SCALE



GROUNDING ELECTRODE AND BONDING CONDUCTORS PER
ARTICLE 250 OF N.E.C. AS REQUIRED

GROUNDING AND BONDING DIAGRAM
(500A SERVICE)
NO SCALE



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FAX (740) 380-3553

PROJECT MANAGER Gary D. Silcott P.E.				
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	173409673

ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5



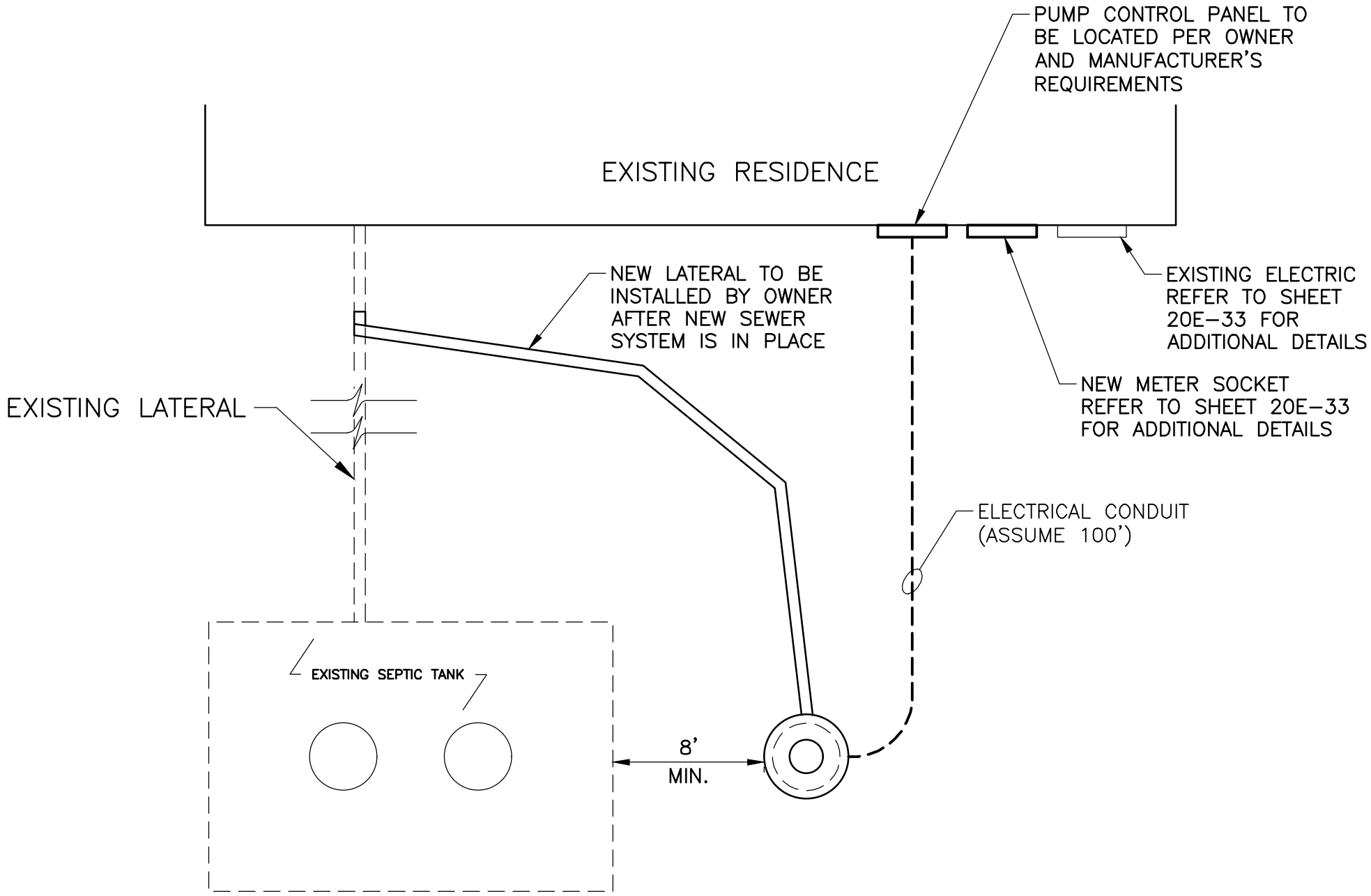
ELECTRICAL
DETAILS II

FILENAME	20E-23.dwg
SCALE	NONE

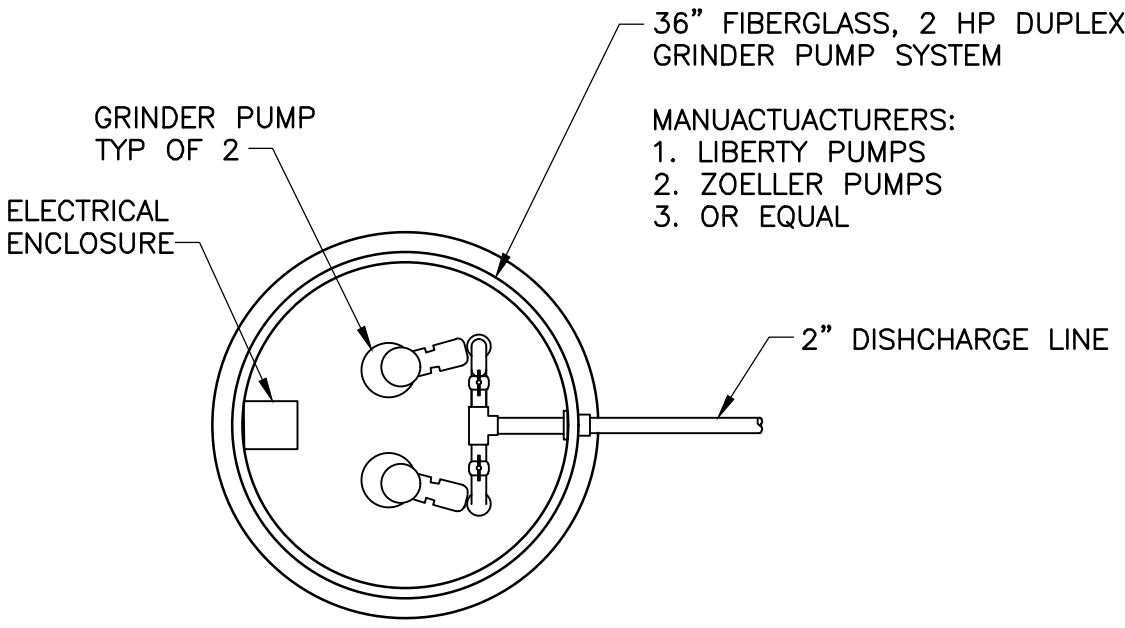
SHEET

20E-03

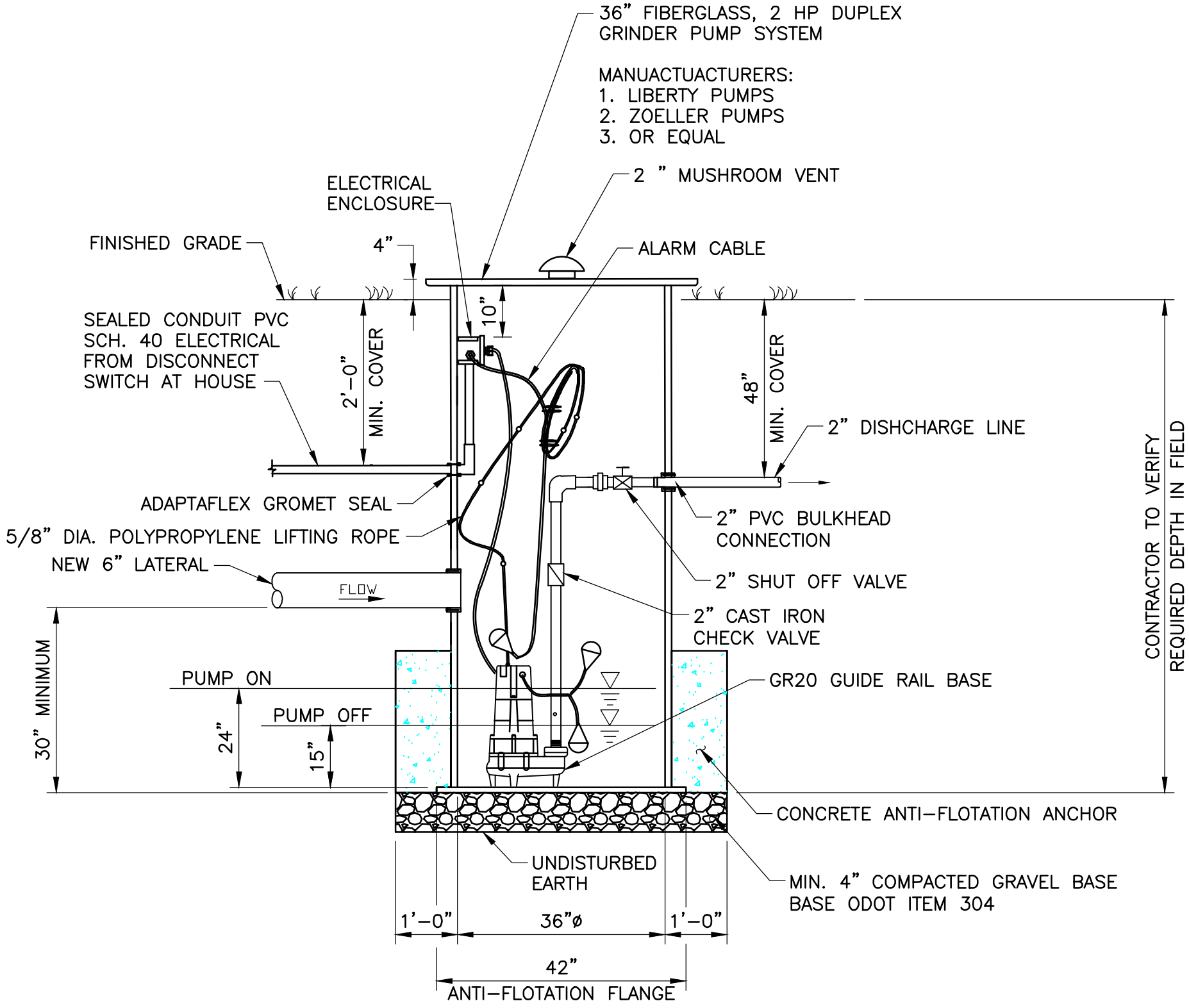
GRINDER PUMP LIST					
	Name	Parcel No.	Street No	Address	Plan Sheet
1	Bolin, Steven K. & Kathryn J	A010010054201	7700	Edria Ln.	05C-03
2	Beam, W John III & Pamela C	A010250303600	19	Pine Ln.	05C-10
3	Corrigan, David E & Jennifer L C	A010010037000	65	Pine Ln.	05C-10
4	Rothman, William J & Linda K	A010010036900	58	Pine Ln.	05C-10
5	Wince, Leon C & Jean E	A010250304500	56	Estates Dr.	05C-11



TYPICAL SITE PLAN
SCALE: NONE



TYPICAL GRINDER PUMP PLAN
SCALE: NONE



TYPICAL GRINDER PUMP SECTION
SCALE: NONE



30661 RED ROCK COURT, LOGAN, OHIO 43138
(740) 380-2828 1-866-558-2828
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ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	Gary D. Silcott P.E.
PROJECT NUMBER	173409673

**ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5**

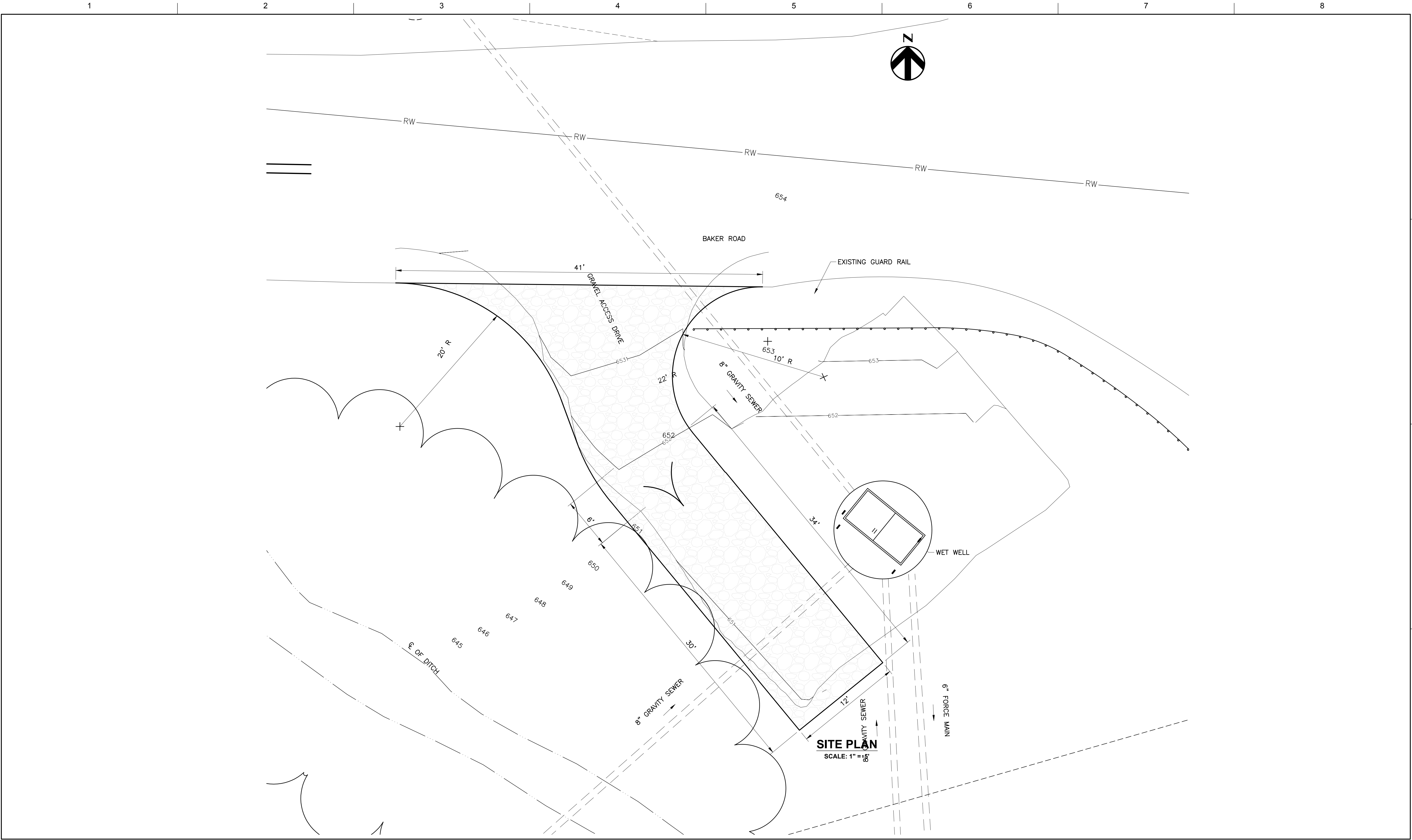
GRINDER PUMP DETAILS



FILENAME	22C-01.dwg
SCALE	AS NOTED

SHEET

20G-01



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ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	Gary D. Silcott P.E.
PROJECT NUMBER	173409673

ATHENS COUNTY
U.S. 50 SANITARY SEWER IMPROVEMENTS
PHASE 5

BAKER LIFT STATION SITE PLAN
AND DETAILS



FILENAME	22C-01.dwg
SCALE	AS NOTED

SHEET	22C-05
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The lift station wet well shall be constructed of standard precast concrete O-ring joint manhole sections and bottoms as provided by United Precast or equivalent and/or as modified herewith. A padlock shall be provided by the Contractor matching the owner's standard. The Ductile Iron Pipe in the wet well shall be AWWA 151 or ANSI A21.51, Class 53 Ductile Iron Pipe with flanged or mechanical joints. Fittings shall be AWWA C 110, Class 250. Material and equipment meeting the requirements listed herein shall be provided and installed along with all necessary accessories to provide a complete serviceable facility. The Contractor shall submit six (6) copies of all shop and equipment drawings for approval prior to ordering or installing any equipment or materials. Two submersible sewage pumps shall be provided. Each unit shall be capable of pumping ① gallons per minute at ② feet total dynamic head, while operating on ③ volts, cycle, ④ phase power. The pump speed shall not exceed ⑤ rpm. The pumps and discharge piping shall be designed to pass solids up to 3 inches in diameter. Pump and motor case shall be made from heavy close-grain cast iron with stainless steel shaft and fittings. The impeller shall be of the solids-handling type designed to pump raw sewage and wastewater. Each motor shall have two mechanical seals installed in tandem with an oil chamber between pump and motor. Motor shall have built-in thermal over-temperature protection with automatic reset. The motor shall be sized to be non-overloading throughout the curve exclusive of the service factor. The inner seal chamber of each pump shall have two moisture sensing probes. Each pump shall have sufficient multi-conductor cable, with ground wire, power leads, thermal detector leads, and moisture sensor leads. Pumps shall be Gorman Rupp, Usenco or approved equivalent, and supplied with manufacturer's standard five (5) year minimum warranty.

Scope : Work covered by this specification shall include all labor and material required to extend electric and telephone services to the proposed lift station(s). It is the intent of this specification that the Contractor also provide incidental items that may not be delineated herein but are required for a complete and operable system.

Existing Conditions : The Contractor shall visit the site and become familiar with all existing conditions which may affect his work and he must consider same as part of his bid. No additional compensation will be allowed for the Contractor's failure to become aware of existing conditions.

Permit and Inspection : The Contractor is required to obtain and pay for all permits and inspections required in the prosecution of this contract. The Contractor is also required to hold a valid Qualification Certificate as issued by the State of Ohio, Department of Industrial Relations, Ohio Construction Industry Examining Board. In the event that there is no local inspecting authority, the Contractor shall procure a Certificate of Plan Approval and necessary inspection from the State of Ohio, Department of Industrial Relations, Division of Factory and Building Inspection as required by law.

Codes : All electrical work for this project shall be installed in accordance with the latest editions of the National Electric Code (NEC) and all state and local codes. Said codes shall be considered the minimum standard for materials and methods not otherwise covered in this specifications.

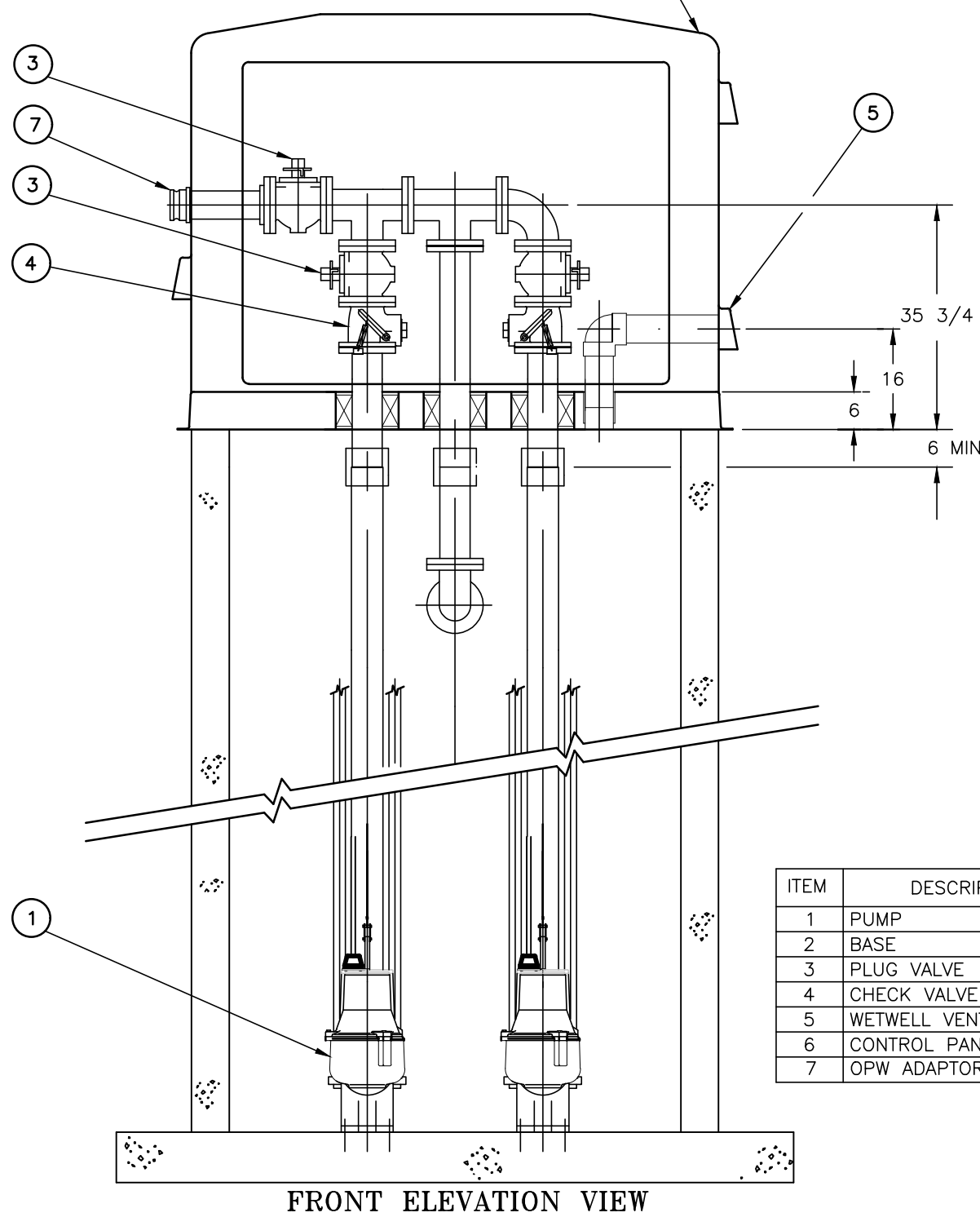
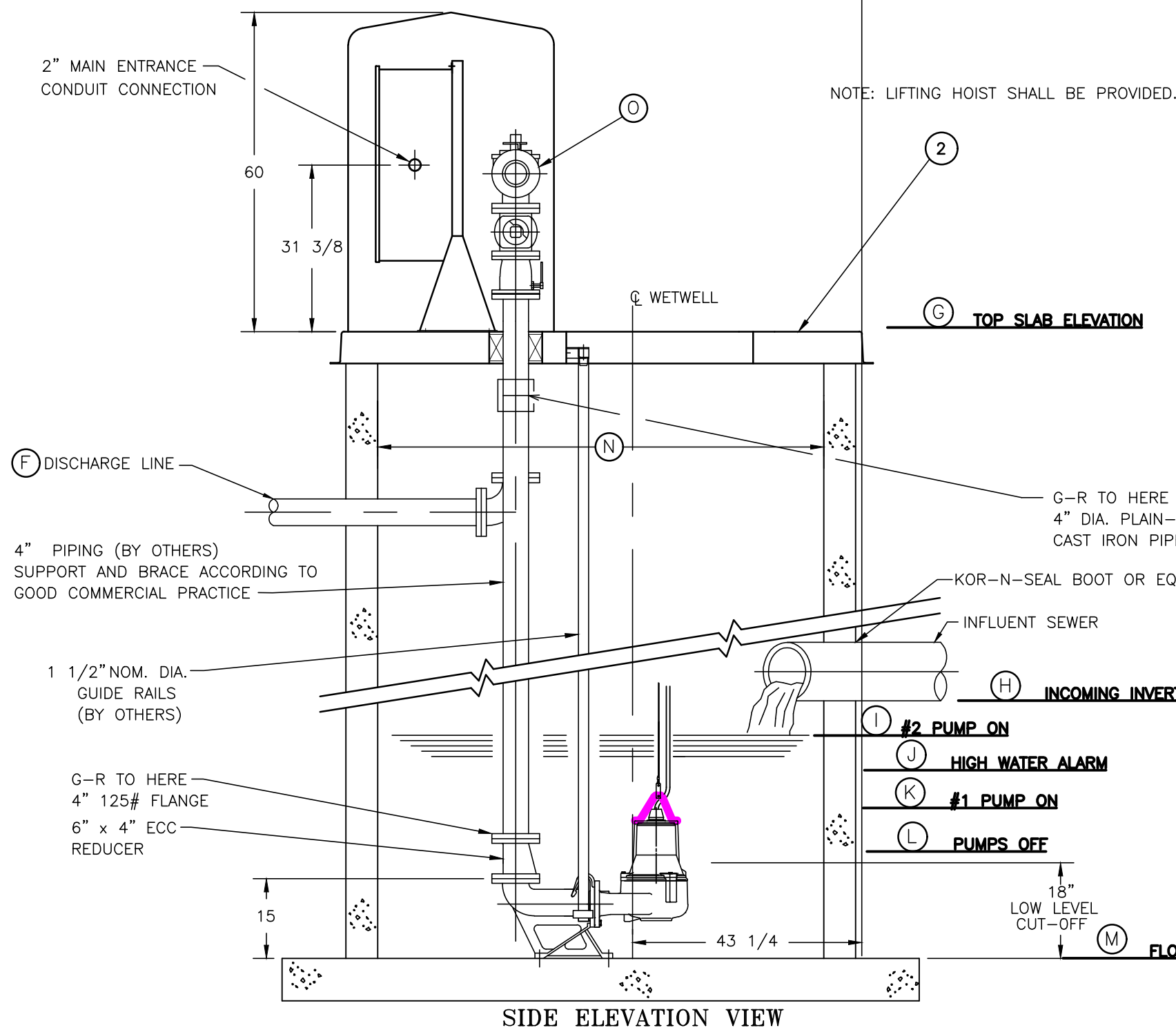
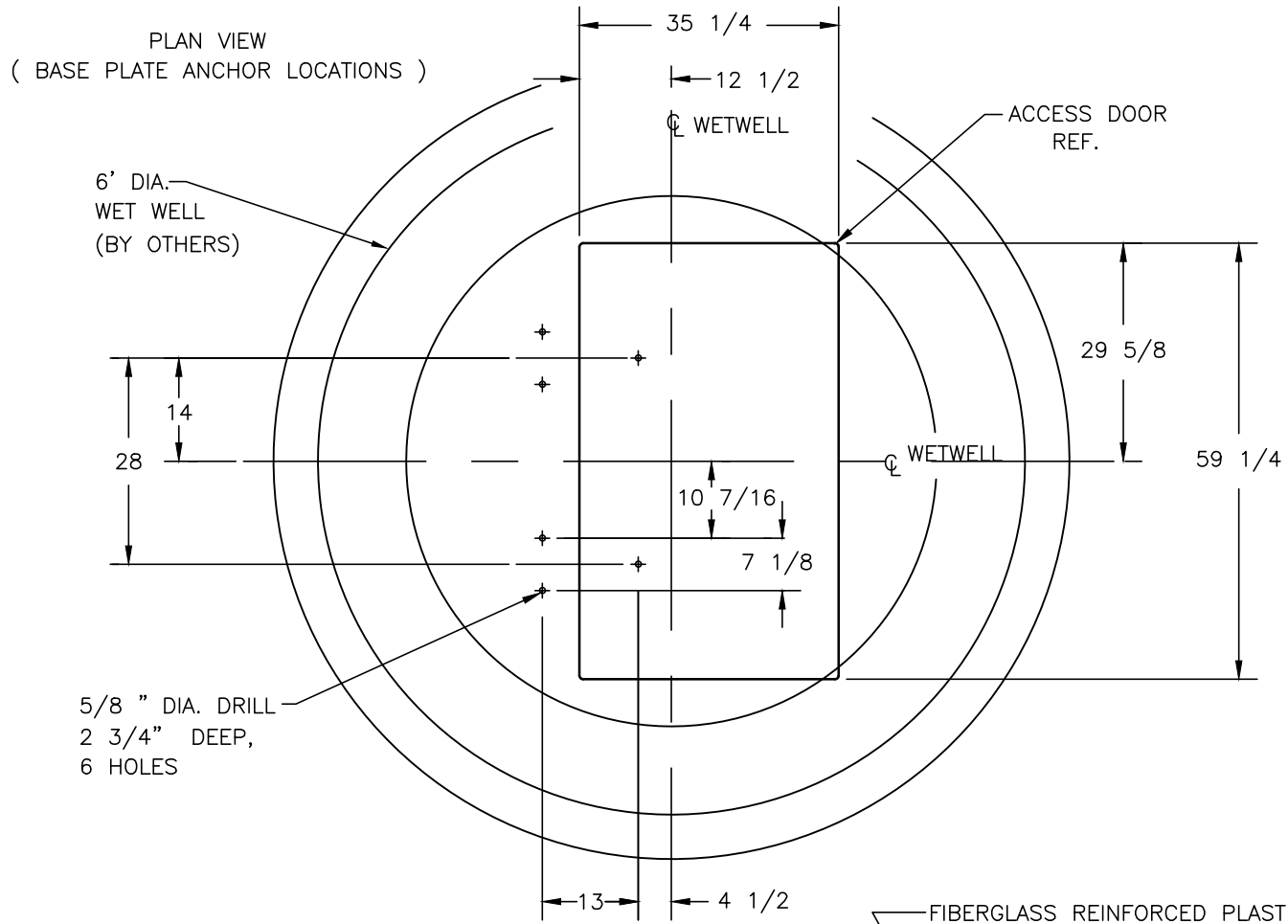
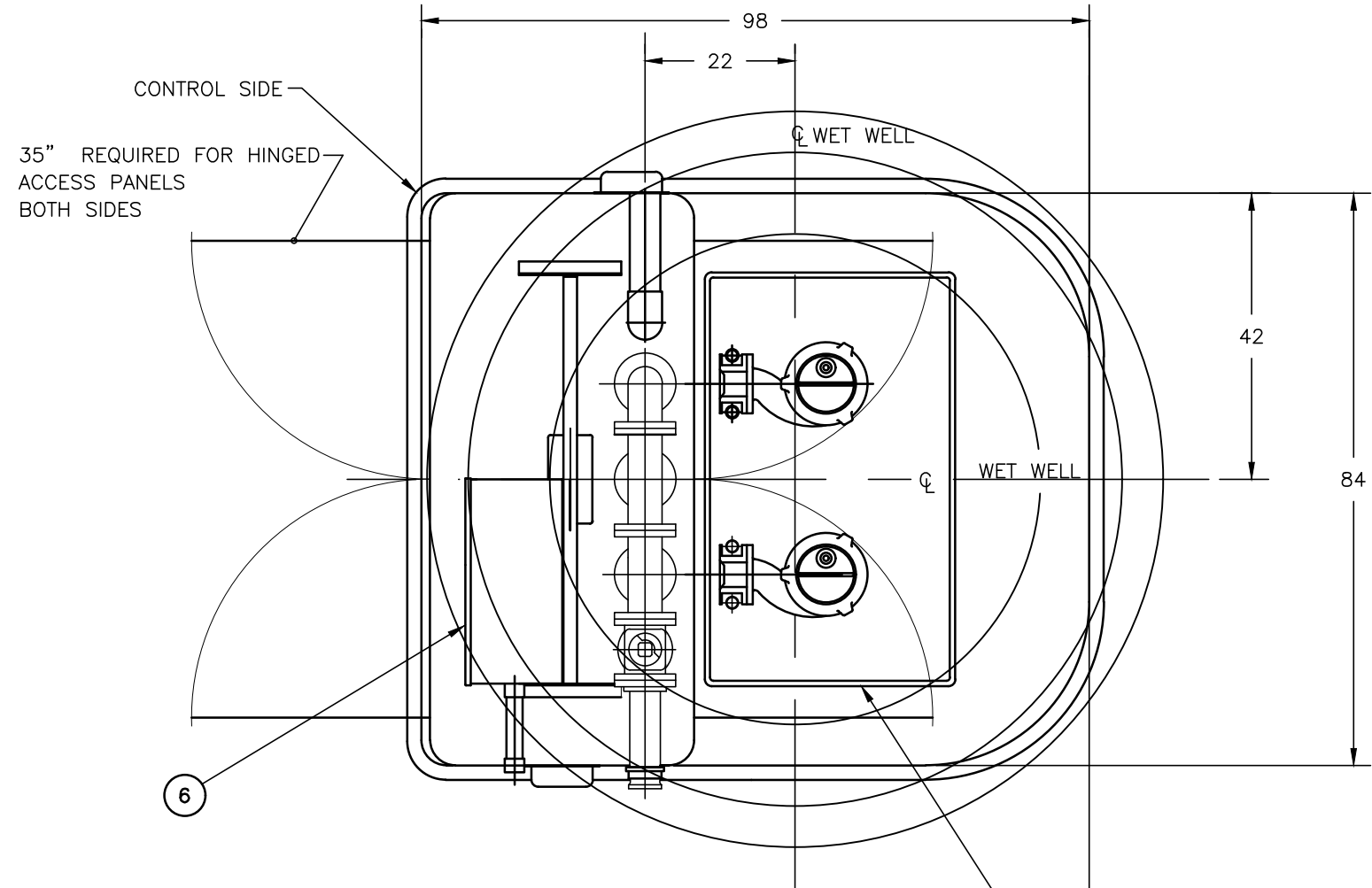
Grounding : Ground all electrical equipment furnished or connected under this contract in accordance with Article 250 of the NEC.

Size all grounding conductors as required by the appropriate tables in said article.

Conduit : All wiring shall be installed in conduit. Rigid galvanized steel conduit shall be used for above grade wiring and schedule 40 PVC may be used for wiring installed below grade.

Wire : All wire shall be stranded copper with THHN insulation. Conductors sizes shall be selected so that the maximum voltage drop does not exceed 3% of the nominal service voltage for the entire length of the circuit involved. Calculations shall be based on resistance values stated in Chapter 9 of NEC. Minimum control power wire shall be 14 ga. Minimum control circuit wire shall be 16 ga. All control wire shall be Type MTH or THW, 600V.

Service Disconnect : Furnish and install a service entrance rated (per Article 230-66 NEC), NEMA 3R, fused disconnect switch at the lift station site. Provide one class RK-5 and one additional spare fuse for each fuse holder in said disconnect. Service disconnect and fuses shall be sized appropriately for the voltage and load to which they are connected. Fuses shall comply with other requirements listed in this specification. A surge arrester shall be installed on the load side of service entrance disconnect. The service disconnect shall be pad lockable in the off and on position. Service disconnect is not furnished as part of the packaged lift station.



ITEM	DESCRIPTION	MAT'L & SIZE
1	PUMP	CAST IRON
2	BASE	CAST CONCRETE/FIBERGLASS ENCAPSULATED
3	PLUG VALVE	CAST IRON 4"
4	CHECK VALVE	CAST IRON 4"
5	WETWELL VENT	PVC 4"
6	CONTROL PANEL	STAINLESS STEEL
7	OPW ADAPTOR	ALUMINUM 4"

SINGLE LINE DIAGRAM
NOT TO SCALE

Manual Transfer Switch : Provide a double throw NEMA 3R manual transfer switch with the same number of poles and voltage rating as the aforementioned service disconnect. The amperage rating shall be the same as the service disconnect or stand-by generator output, which ever is the higher. If the transfer switch selection is based on the output of the generator, it shall be fused with the same type and size fuses used in the service disconnect. Manual Transfer Switch is not furnished as part of the packaged lift station.

Generator Receptacle : Furnish and install a generator receptacle compatible with the owner's stand-by generator. If the owner does not presently have a stand-by generator, provide a receptacle and mating plug of the same voltage, amperage and number of poles as the service disconnect. The generator receptacle and plug shall be suitable for reverse service. Generator receptacle is not furnished as part of the packaged lift station.

Power Company : The service entrance equipment, conductors and installation shall be in accordance with the local electric utility company requirements. The Contractor shall provide all labor and material not furnished by said utility company.

Telephone Company : Contractor shall provide an empty conduit with pull wire, grounding and telephone terminal interface as required by the local telephone company for installation of the telephone circuit to the proposed telephone dialer or telemetering.

Control Panel : The pump control panel shall be fabricated by a company with at least five (5) years experience in the manufacturing of similar control panels and shall comply with the following:

1. The enclosure will be NEMA ① stainless steel and be UL listed. The selector switches, pilot lights, elapsed time totalizers, push buttons, duplex GFI receptacle and other through the panel components shall be mounted in a dead front swing out panel housed within the enclosure. Motor circuit protectors, circuit breakers, starters, relays, transformer, alternator and terminal strips will be mounted on a sub-panel behind the aforementioned swing out panel.
2. Motor circuit protectors shall be provided for each pump motor and a circuit breaker for the control power transformer. They shall be of the proper ampacity for the load to which they are connected and have operating mechanisms extending through the dead front swing out panel.
3. Control power transformer size shall be 3KVA sized for the sum of all loads connected including the mentioned duplex receptacle. Provide separate fusing or circuit breakers for the control circuit and the duplex receptacle.
4. Motor starters shall be soft start type & properly sized for the motors they serve and shall be NEMA rated with interchangeable overload heaters. IEC starters and adjustable trip overload relays are not approved and shall not be substituted.
5. Selector switches, push buttons and pilot lights shall be NEMA style 30.5 mm oilite series. IEC or miniature series are not acceptable. Pilot lights shall be push-to-test transformer type with #755 or 1866 lamps.
6. In accordance with the requirements of "Ten State Standards," provide intrinsically safe relays for all wetwell float switches. Low current interpose relays shall be wired to the output of the intrinsically safe relays for transient protection of said relays. All other relays shall be NEMA rated.
7. Provide an alternator to automatically alternate pump operation. In addition to the automatic alternator, provide a three position selector switch to override said alternator and manually select the lead and lag pumps.
8. Control and interconnecting wiring shall be copper, type MTW, neatly bundled and in plastic wireway. Provide insulated crimp lugs as required. Terminals with more than one wire each must be approved for that purpose.
9. Integral motor thermal protection and pump seal failure detectors shall be included as part of the pump package. And shall be wired in accordance with the pump manufacturer's recommendation.
10. Elapsed time totalizers shall be provided for each pump motor. They shall be non-resetable hour meters and wired parallel to the holding coil of the motor starter.
11. Provide audible and visual alarms to indicate high level in the wet well. Include the necessary relays and push buttons to silence the audible alarm while maintaining the visual alarm until the alarm condition has been corrected.
12. The level controller shall be Nema 4X G-R "EP 2000 or equal, capable of operating as air bubbler, submersible transducer, ultrasonic transmitter or floats, unless otherwise specified. Level controller will utilize the air bubbler to monitor the wet - well water level and permit the operator to read and set level set points from the controller. Under no circumstances should changing levels require entrance to the wet well unless floats are being utilized. Level controller shall operate on 12VDC and retain memory using a lithium-ion battery. Level controller shall utilize a digital back lit LCD screen and membrane type switches, and capable of controlling 8 set points.

Float Switches : Furnish and install (1) float switch in the wet well for redundant high water alarm at the level indicated on the contract drawings. Float switches shall be mercury tube type encapsulated in polyurethane resin with an outer seal of vinyl and equal to Buskirk and Owens #1900 or #1901. Float switch shall be suspended via anchor and pvc chain and wired in parallel to the primary level control system.

Terminal Box : Connection of pump power cables to the control panel shall be accomplished by extending through the station floor and directly into the panel without the use of a separate junction box. Penetrations through the station floor shall be sealed around cables with compression type cable seals. A Nema 4X junction box shall be provided for connection of the redundant high water alarm float cables complete with compression cable seal. Compression cable seals shall provide necessary cable strain relief.

Wet well : Furnish and install appropriately sized strain relief for pump cords. Strain relief shall be installed to facilitate easy removal of the Strain relief shall be installed to facilitate easy removal of the pumps or floats without entering the wet well.

Fuses : Provide and install Class RK-5 fuses for each fused disconnect. Fuses shall be sized in accordance with the requirements of the NEC. Provide 3 spare fuses of each size installed and deliver same to the owner's representative.

Fasteners and Hardware : All fasteners and hardware for this installation shall be galvanized or stainless steel. Use P-1000 galvanized Unistrut or equal for mounting the disconnect at the well site. The use of perforated and/or painted structural materials is prohibited.

Telephone Dialer : Furnish and install a Sensaphone 1400, Verbatim, or approved equivalent telephone dialer to monitor fault conditions at the proposed lift station. Connect power and telephone circuits to said dialer through an Isotel FDC0023 surge protector. Provide programming and battery back-up as directed by the Engineer. Install the telephone dialer and surge protection along with a Daytona 2E919 strip heater, a Daytona 2E552 thermostat, a duplex GFI outlet, and a heavy duty touch tone telephone in an adequately sized NEMA 4 stainless steel enclosure. The enclosure shall be pad lockable with hinged cover. Dialer/Telemetry is not furnished as part of the packaged lift station. The package lift station manufacturer shall provide the following control contacts for Dialer/Telemetry interface; high water alarm, Pump 1 and Pump 2 "Run", & low water alarm.

LIFT STATION DATA	PLAN VIEW SHEET NUMBER	PUMP SIZE G.P.M. ①	TOTAL DYNAMIC HEAD ②	LIFT STATION VOLTAGE ③	LIFT STATION PHASE ④	PUMP MAXIMUM R.P.M. ⑤	DISCHARGE PIPING SIZE ⑥	TOP SLAB ELEVATION ⑦	INCOMING INVERT(S) ⑧	No. 2 PUMP ON ⑨	HIGH WATER ALARM ⑩	No. 1 PUMP ON ⑪	PUMPS OFF ⑬	FLOOR BOTTOM ELEVATION ⑭	LIFT STATION DIAMETER ⑮	BYPASS DIAMETER ⑯
SITE 05	05C-01	80	120	480	3 ①	1750	4"	653.00	631.97 635.98 639.99	631.75	631.50	630.50	629.00	627.50	6'-0"	3"

PROJECT NO. 173409673

LS-01

ATHENS COUNTY, OHIO
ATHENS COUNTY COMMISSIONERS
U.S. 50
SANITARY SEWER IMPROVEMENTS

LIFT STATION DETAILS

UNDERGROUND UTILITIES
Two Working Days
BEFORE YOU DIG
Call 811 (Toll free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

REVISIONS

BY	DESCRIPTION
DATE	

Stantec

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(740) 380-2626 FAX (740) 380-5535

DESIGN GDS
DRAWN JJB
SCALE AS SHOWN

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