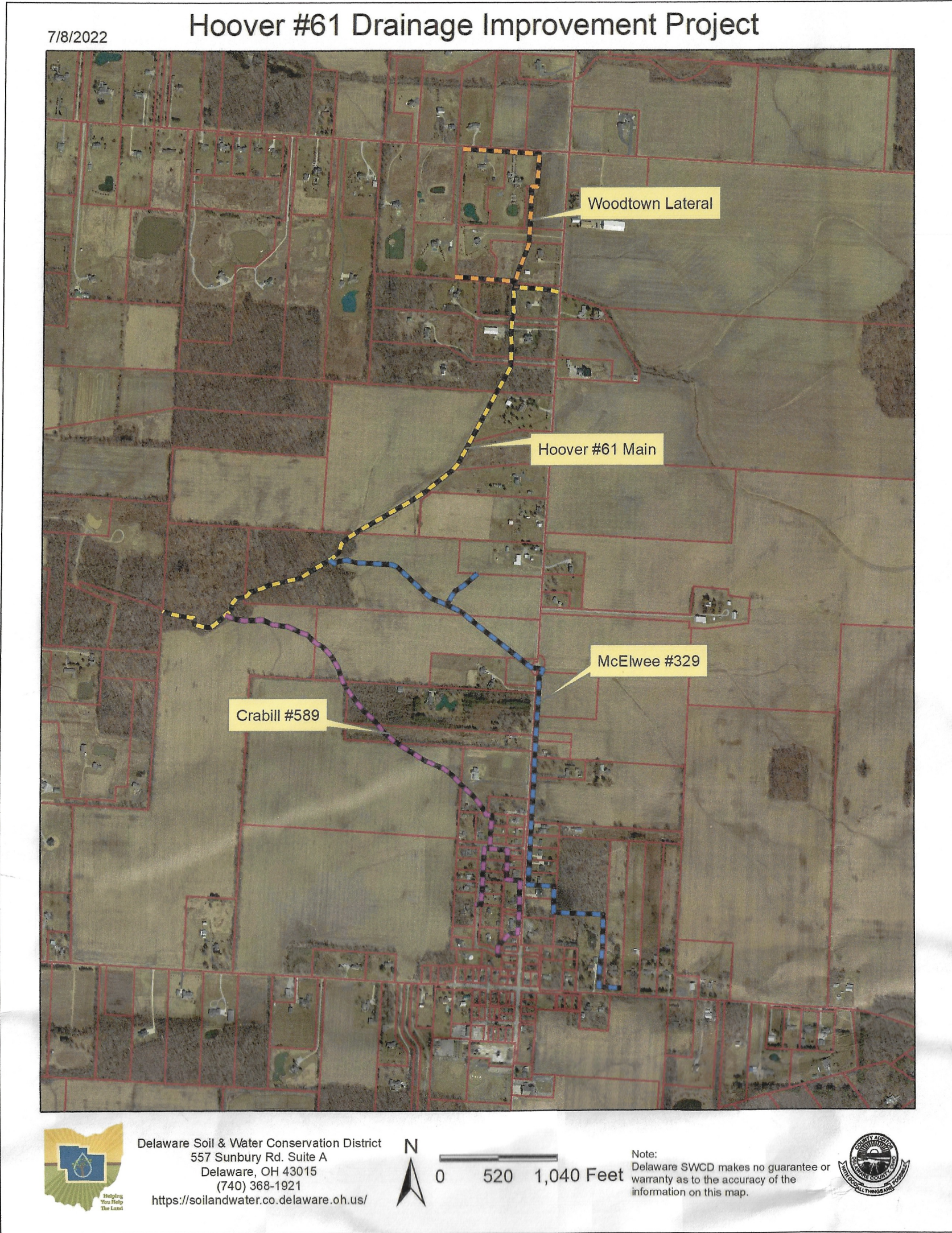


LOCATION MAP



STATE OF OHIO, DELAWARE COUNTY
DELAWARE COUNTY ENGINEER
HOOVER #61
DRAINAGE IMPROVEMENT PROJECT
DELAWARE COUNTY
HARLEM TOWNSHIP

INDEX OF SHEETS

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Crabill #589	12		

PROJECT DESCRIPTION

This project will include the improvement of surface drainage, the installation of subsurface drain, the destruction of existing subsurface drain tile, and the taking of temporary and permanent easements.

This project/improvement is being done pursuant to Ohio Revised Code Sections 6131 and 6137.

2023 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement. English units shall govern. Where noted, specifications of the USDA Natural Resources Conservation Service shall supplement the ODOT specifications.

BENCHMARK DESCRIPTION

BM# 1
The station is Top of Yellow Fire Hydrant at NW Corner of Woodtown Road and SR 605 S

Elevation: 1056.52'
Northing: 189496.8830'
Easting: 1882991.3690'

(Coordinates are NAD1983 Ohio State Plane North)

HOOVER #61 MAIN			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 582	Open Channel Restoration	575	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	2600	Square Yards

WOODTOWN LATERAL			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 410	Grade Stabilization Structure	1	Each
NRCS 606	10" Pipe, non-perforated (ODOT 707.33)	200	Lineal Feet
NRCS 606	10" Pipe, perforated (ODOT 707.33)	380	Lineal Feet
NRCS 606	8" Pipe, perforated (ODOT 707.33)	1878	Lineal Feet
NRCS 606	10" Animal Guard	1	Each
NRCS 606	Tile Inspection Well	13	Each
NRCS 608	Surface Drain - Swale	2484	Lineal Feet
ODOT 611	8" Pipe (707.33), Type A Installation, Brick Drive	40	Lineal Feet
ODOT 611	10" Pipe (707.33), Type A Installation, Gravel Drive	40	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	20	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Brick Drive	20	Lineal Feet
ODOT 611	10" Pipe (707.33), Type B Installation, Gravel Drive	20	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	11500	Square Yards

McELWEE #324 SECTION 1			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 468	Rock Lined Channel	250	Lineal Feet
NRCS 582	Open Channel Restoration	43	Lineal Feet
NRCS 606	18" Pipe, perforated (ODOT 707.33)	2070	Lineal Feet
NRCS 606	6" Pipe, perforated (ODOT 707.33)	2070	Lineal Feet
NRCS 606	18" Animal Guard	1	Each
NRCS 606	Tile Inspection Well	3	Each
NRCS 608	Surface Drain Grassed Waterway	1826	Lineal Feet
NRCS 620	Blind Inlet	1	Each
ODOT 202	Tile Destruction	2,138	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	9,300	Square Yards

McELWEE #324 SECTION 2			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 606	10" Pipe, perforated (ODOT 707.33)	700	Lineal Feet
NRCS 606	8" Pipe, perforated (ODOT 707.33)	3000	Lineal Feet
NRCS 606	Tile Inspection Well	15	Each
ODOT 452	Non-Reinforced Concrete Pavement Driveway Repair (including removal and disposal of existing pavement section)	2	Each
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	20	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Concrete Drive	40	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Gravel Drive	100	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	7,000	Square Yards

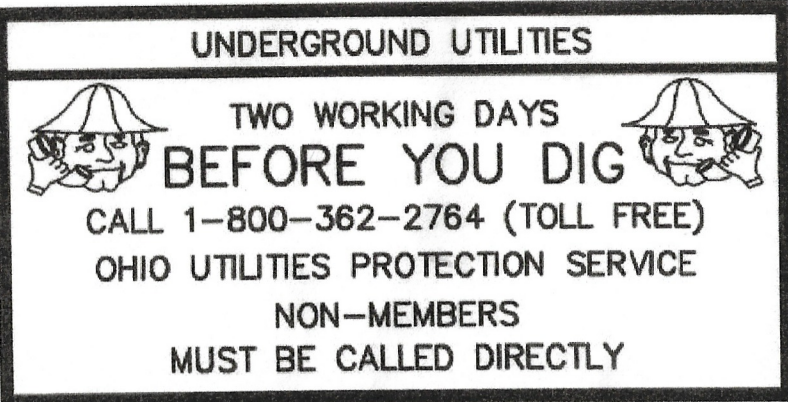
McELWEE #324 LATERAL #1			
Item	Description	Quantity	Unit
NRCS 606	8" Pipe, perforated (ODOT 707.33)	421	Lineal Feet
NRCS 606	Tile Inspection Well	1	Each
ODOT 659	Seeding & Mulching, Class 1, no anchoring	100	Square Yards

CRABILL #589 MAIN			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 468	Rock Lined Channel	156	Lineal Feet
NRCS 606	12" Pipe, perforated (ODOT 707.33)	1700	Lineal Feet
NRCS 606	12" Pipe, non-perforated (ODOT 707.33)	1681	Lineal Feet
NRCS 606	6" Pipe, perforated (ODOT 707.33)	1000	Lineal Feet
NRCS606	6" Pipe, non-perforated (ODOT 707.33)	281	Lineal Feet
NRCS 606	12" Animal Guard	1	Each
NRCS 606	Tile Inspection Well	9	Each
NRCS 608	Surface Drain Swale	725	Lineal Feet
ODOT 202	Tile Destruction	3381	Lineal Feet
ODOT 611	12" Pipe (707.33), Type B Installation, Asphalt Drive	40	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	6,000	Square Yards

CRABILL #589 LATERAL #1			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 606	8" Pipe, perforated (ODOT 707.33)	588	Lineal Feet
NRCS 606	Tile Inspection Well	7	Each
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	20	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	1,500	Square Yards

CRABILL #589 LATERAL #2			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 606	8" Pipe, perforated (ODOT 707.33)	1325	Lineal Feet
NRCS 606	Tile Inspection Well	11	Each
ODOT 452	Non-Reinforced Concrete Pavement Driveway Repair (including removal and disposal of existing pavement section)	1	Each
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	40	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Concrete Drive	20	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	3,200	Square Yards

CONSTRUCTION & MATERIAL SPECIFICATIONS				SUPPLEMENTAL SPECIFICATIONS
OHIO DEPARTMENT OF TRANSPORTATION		USDA NATURAL RESOURCES CONSERVATION SERVICE		
DELAWARE COUNTY ENGINEER		CONSTRUCTION		
601	Slope and Channel Protection	326	Clearing & Snagging	
611	Pipe Culverts, Sewers, Drains, & Drainage Structures	410	Grade Stabilization Structure	
659	Seeding & Mulching	468	Lined Waterway	SPECIAL PROVISIONS Tile Connection
707	Steel, Aluminum, and Plastic Pipe	484	Mulching	
		582	Open Channel Construction	
		606	Subsurface Drain	
		608	Grassed Waterway	
		610	Surface Drain	



PLAN JOINTLY PREPARED BY:

DELAWARE SOIL AND WATER
CONSERVATION DISTRICT
557A SUNBURY RD
DELAWARE, OHIO 43015
PHONE: (740)368-1921 EXT.4 FAX: (740)369-8321

DELAWARE COUNTY ENGINEER'S OFFICE
50 CHANNING STREET
DELAWARE, OHIO 43015
PHONE:(740) 833-2400 FAX: (740)833-2399

DESIGNED DJB 07/22 CHECKED
DRAWN DJB 07/22 REVIEWED

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT

NONE

HOOVER #61

DETAILS & NOTES

GENERAL CONSTRUCTION NOTES

1. The construction right-of-way for this project will be 75' right and left of the project centerline unless otherwise marked by the Construction Inspector. Certain items of work may require an extended right-of-way in order to properly complete them. This work should not be done without prior consent of the construction inspector., and any consent given will be specific to a particular item of work. Additional right-of-way for construction access may be identified and approved by the construction inspector as deemed necessary for the completion of the project. All areas disturbed by the construction activities which are outside of the critical path including but not limited to area used for staging, stockpiling of materials, and access will be cleaned and returned to its pre-construction state at the sole responsibility of the contractor as per the requirements of ODOT CMS 104.04.

2. The contractor will be responsible for ensuring that all relevant OSHA regulations are met prior to beginning any construction activities.

3. Temporary easements for construction access may be identified and approved by the construction inspector as deemed necessary for the completion of the project. Any access easement not connected to the work limits of the project will be returned to its pre-construction state at the sole responsibility of the contractor.

4. All ground disturbed by excavation shall be returned to its pre-construction vegetative state and grade unless otherwise directed by the plans and/or the construction inspector.

5. Spoil from excavation of the surface drain (NRCS #608) and open channel (NRCS #582) construction shall be exported from the site at the expense of the contractor. Payment for spoil and debris disposal will be considered as included in payment for NRCS #608 and NRCS #582 items. The contractor is free to negotiate with landowners to dispose of spoil and debris materials on-site provided that any disposal site is outside of the work limits for this project. Delaware County will not be considered party to any such agreements made between the contractor and landowners.

6. Unless otherwise noted on these plans or instructed by the construction inspector, debris from clearing and snagging within the typical cross sections is to be disposed of off-site by the contractor unless permission to place brush and logs adjacent to the construction right-of-way is granted by the landowners. Payment for hauling and disposal shall be considered part of payment for NRCS #326-Clearing and Snagging. For the purposes of on-site disposal, a log will be defined as "a section of a tree bole (the main trunk of the tree) at least 8 feet long, not containing a fork, sufficiently straight and sound enough to yield at least an 8-foot board. Anything not considered a log by the above definition will be considered brush.

7. Pipe quantities listed on the Plan and Profile views represent cumulative quantities for both perforated and non-perforated pipe. The quantity table shall be the reference for the specific amounts of perforated and non-perforated pipe. The applicable specification and the instructions of the construction inspector will govern the placement of each type of pipe. All lineal quantities of pipe shall be considered to be inclusive of all necessary elbows, couplers, and other fittings unless otherwise stated by these plans and/or the bid documents.

8. All lateral tile cut by the installation of the new tile shall be reconnected to the new tile at the point where they are cut or collected with a submain (size to be determined) and outletted into the new tile at the next downstream breather as specified by the construction inspector and per the requirements of NRCS #606-Subsurface Drain. Any connections made to any tile included on the Drainage Maintenance Program after completion of the project will require the approval of the Drainage Maintenance Department.

9. Seeding and Mulching will be done as per the specifications of ODOT #659 with the following stipulations/exceptions:

- Seed mixture to be used will be Class-Type #1.
- Soil testing will not be required.
- Liming will not be required.
- Compost will not be required.
- The use of straw mulch will be acceptable for the entire project.
- Watering will not be required.
- Mulch anchoring will not be required except where specified.

10. Linear alignments of all surface and subsurface features may be modified to fit site specific conditions at the discretion of the construction inspector.

11. The contractor shall contact the Delaware County Engineer's Office a minimum of seven (7) working days prior to beginning any work within the road right-of-way. It will be the sole responsibility of the contractor to secure any permits necessary for work within the road right-of-way.

12. All trees to be saved will be marked prior to the start of construction by the construction inspector. Markings will be done in the manner requested by the contractor. Unless specifically designated as "Save" or "Do not disturb" in the plans or by the construction inspector, remove all trees and stumps within the cross section under the lump sum bid for NRCS Item #326-Clearing and Snagging. Trees marked to be saved shall be protected with protective cover such as filter fabric or other suitable material. Replacement of any tree damaged or removed that was otherwise marked to be saved will be the responsibility of the contractor.

13. Scale bars as shown on the Plan Views shall be considered to be accurate for surveyed features including, but not necessarily limited to, project centerline, tile lines, and benchmark locations. Property lines, drive centerlines, building footprints, and road centerlines as shown on the Plan Views were derived from other sources and are shown for general reference only and should not be used to scale the location of any constructed feature.

14. Excavation will/may be required to verify design elevations including, but not limited to, existing subsurface drain inverts. These excavations will be considered incidental to the overall construction of the project per ODOT CMS 105.02.

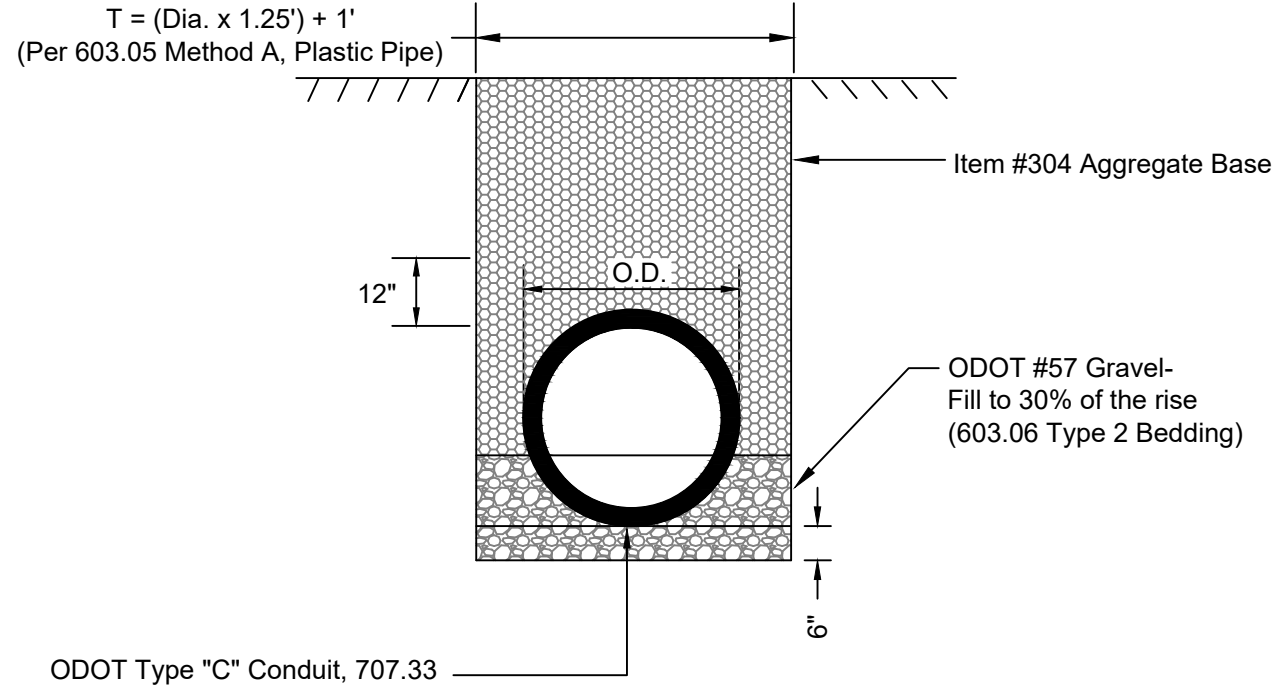
15. Utilities are to be potholed to verify location prior to any excavation activities.

Temporary & Permanent Easements

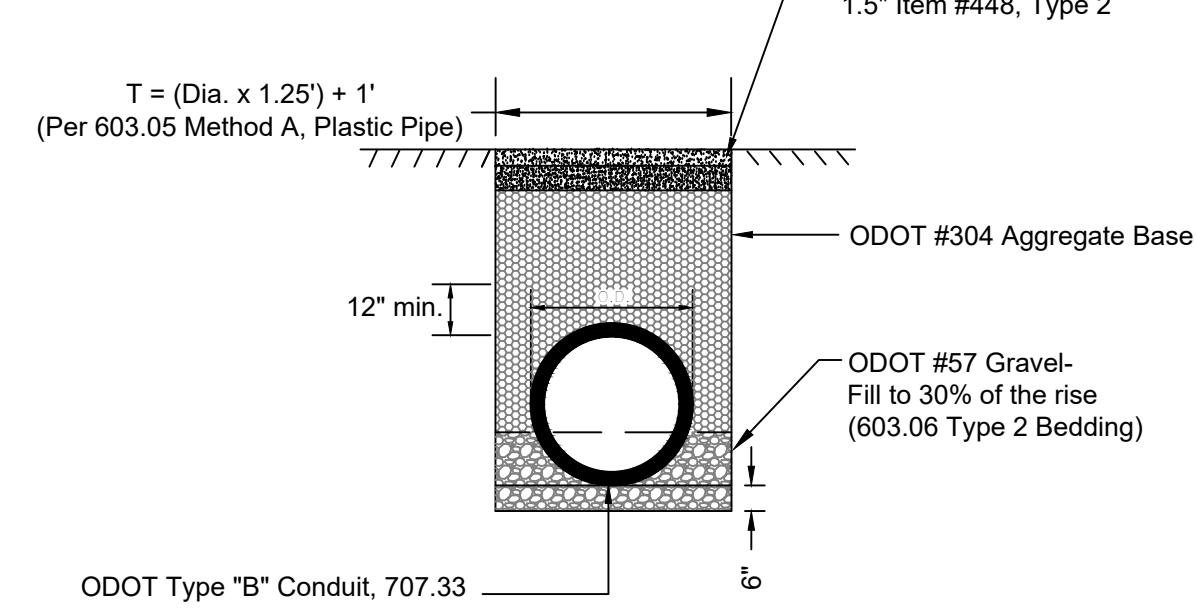
- The width of the temporary easement for construction shall be seventy-five feet as measured from the top of bank of the open channel, seventy-five feet as measured from the top of bank of the surface drain, and seventy-five feet as measured from the centerline of the subsurface drain where no surface drain cross-section is specified.
- A permanent easement will be established for maintenance and cleaning of the constructed improvement per ORC 6137.12. The width of the permanent easement will be based on the type of improvement constructed. For Open Channel and Surface Drain Swales, the permanent easement will be twenty-five feet from the top of bank on both sides of the channel, measured at right angles thereto. For closed ditches (subsurface drain installation only), the permanent easement shall be a maximum of eighty feet centered on the centerline of the improvement. The permanent easement for access shall be a maximum width of thirty feet and length as necessary to connect to the improvement as shown on these drawings.

SUBSURFACE DRAIN (NRCS #606)

STONE DRIVE, SINGLE PIPE
ODOT 611, TYPE "B" GRAVEL DRIVE, 707.33 INSTALLATION



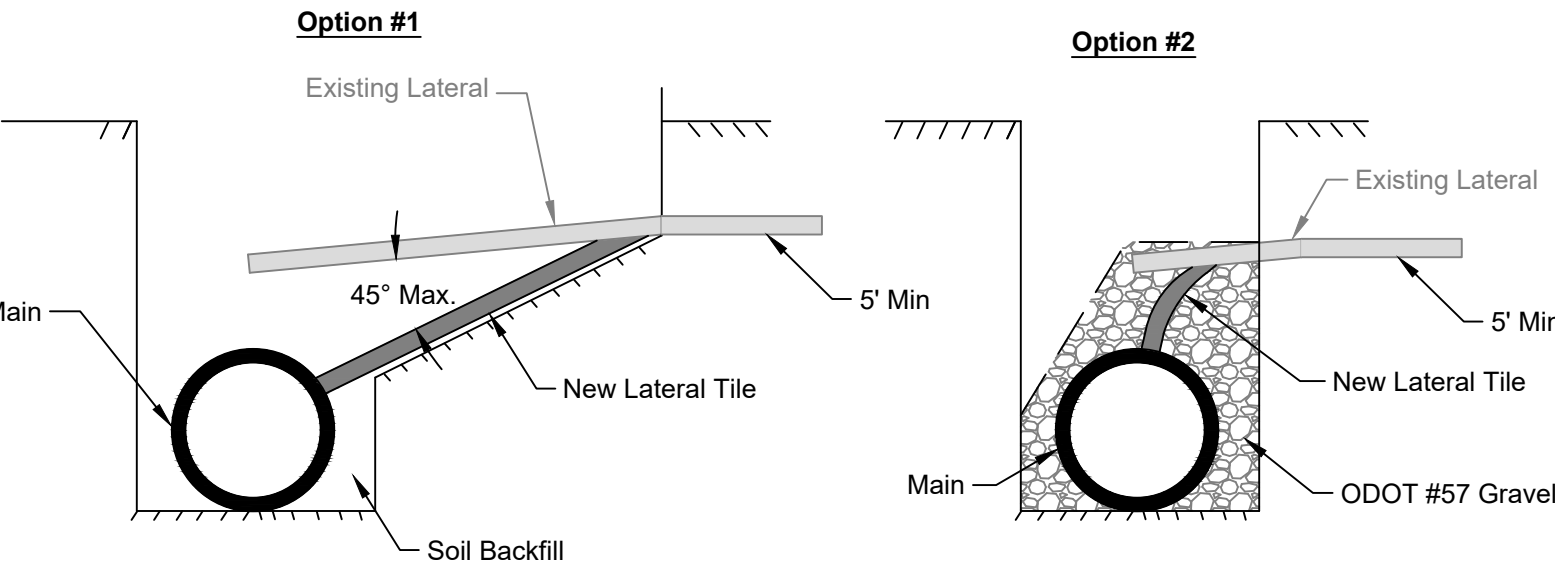
DRIVE CUT INSTALLATION DETAIL
ODOT 611, TYPE "B" , 707.33 INSTALLATION



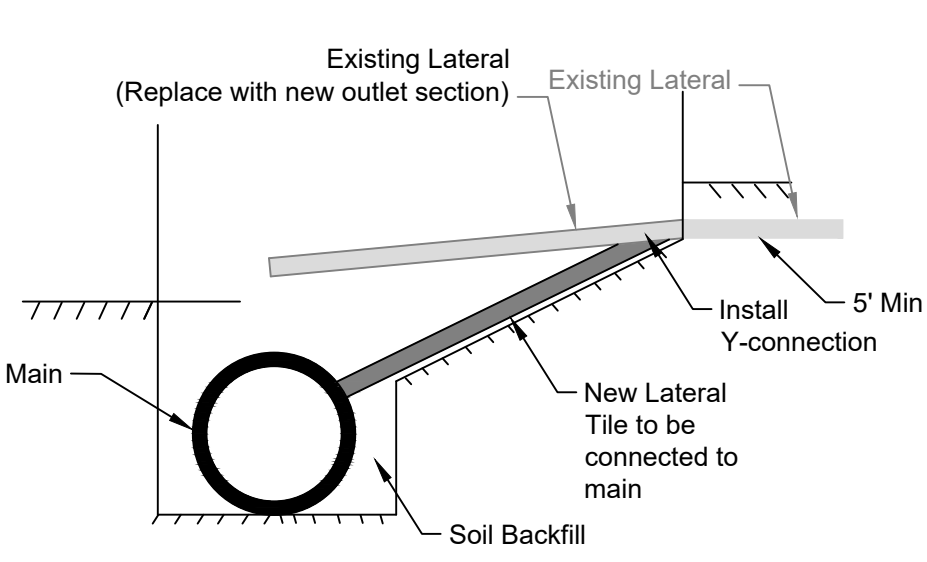
TYPICAL SUBSURFACE DRAIN LATERAL CONNECTION DETAILS (NRCS #606)

NOT TO SCALE

LATERALS WITH NO EXISTING SURFACE OUTLET

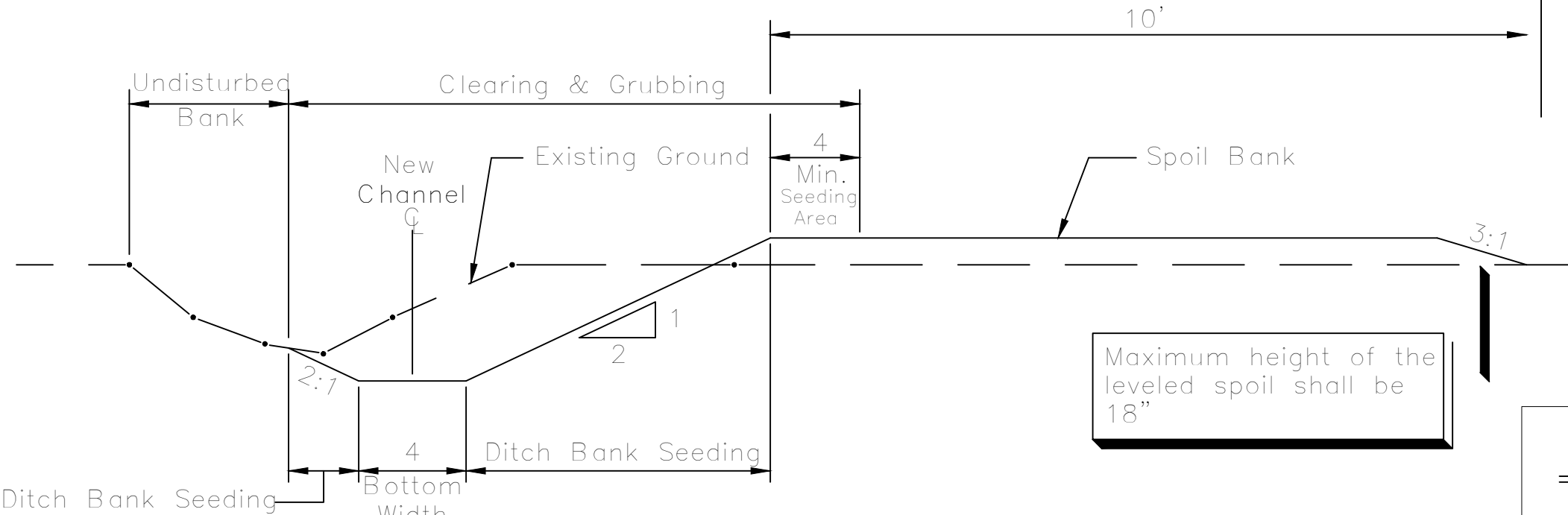


LATERALS WITH EXISTING SURFACE OUTLET



Open Channel (NRCS #582)

Applicable Stations
STA 131+50 -133+25
STA 100+75 -107+50



Typical One-Sided Construction Cross Section
Not to Scale

Surface Drain (NRCS 608)

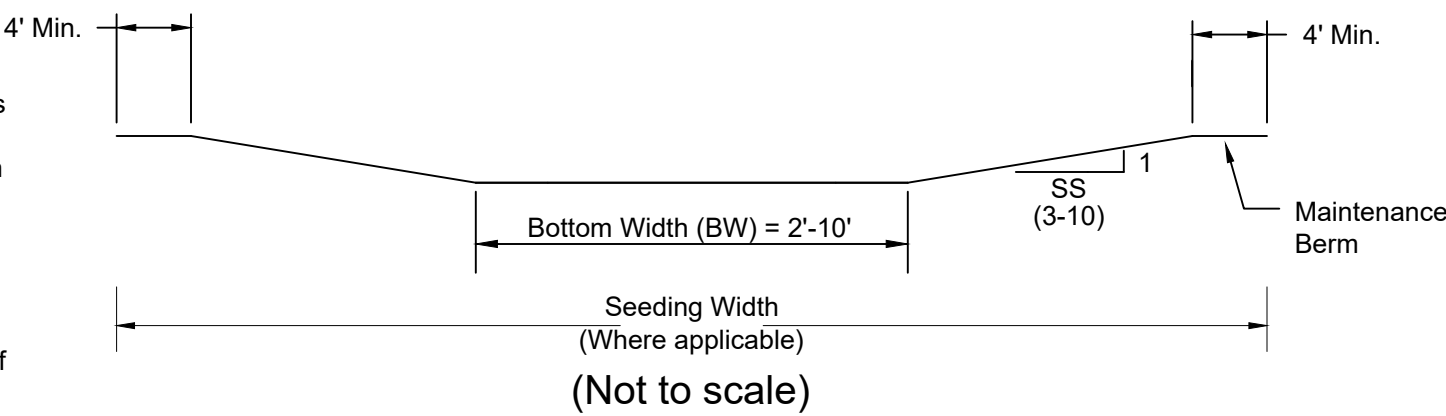
NOTES:

1. Where specified on the plans, the surface drain is to be seeded as stated in the construction notes and ODOT Specification #659. Any modifications to this seed mixture as stated in this Specification must be approved by the construction inspector prior to seed application.

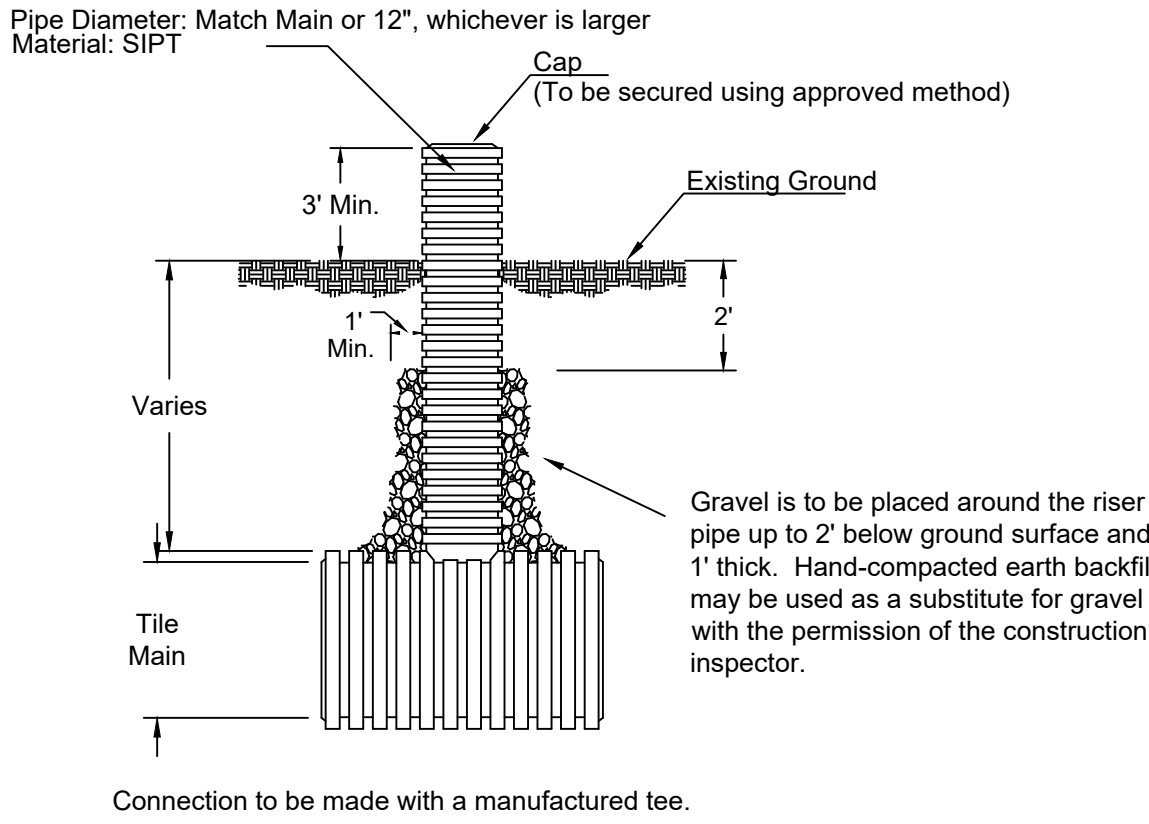
2. Side slopes may be modified to fit site specific conditions at the discretion of the construction inspector.

3. All spoil from within the typical surface drain cross section shall be disposed of according to the specifications of NRCS #608 - Surface Drainage Main.

TYPICAL SURFACE DRAIN SWALE CROSS SECTION



INSPECTION WELL DETAIL

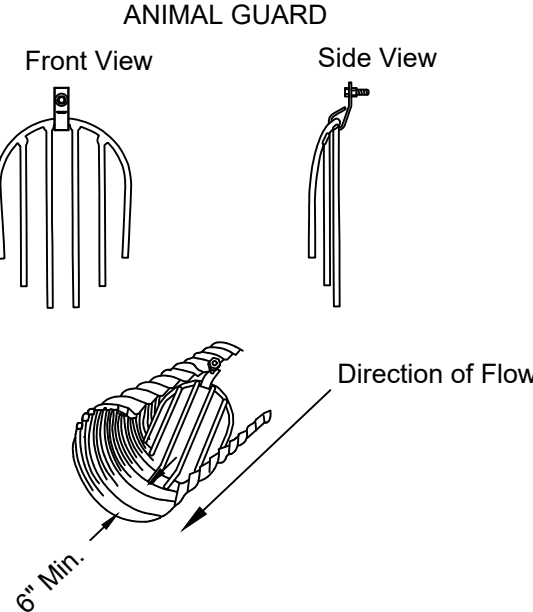


NOTES

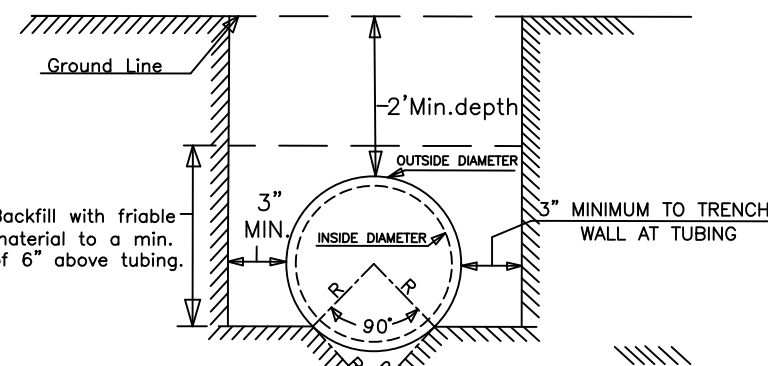
- All tile shall be placed according to the Typical Subsurface Drain Installation Detail and the requirements of NRCS Specification #606.
- Removal of residual lateral tile regardless of size and/or material shall be considered part of the payment for this item.
- All connections shall be done using manufactured connectors.
- Any quantity of gravel used to make connections utilizing Option #2 shall be considered part of the payment for this item. Determining the quantity of gravel needed for making connections using this option shall be the sole responsibility of the contractor. Cleanup of gravel stockpile areas shall be as per the requirements of ODOT CMS 104.04.
- The contractor shall note on a dedicated copy of the plans, as provided by the construction inspector, the station, size, material, and connection option used to make all lateral connections.
- Lateral types regarding having or not having a surface outlet will be marked by the construction inspector.

Hoover #61
DRAINAGE IMPROVEMENT PROJECT
ENGINEERING DRAWINGS

2
20



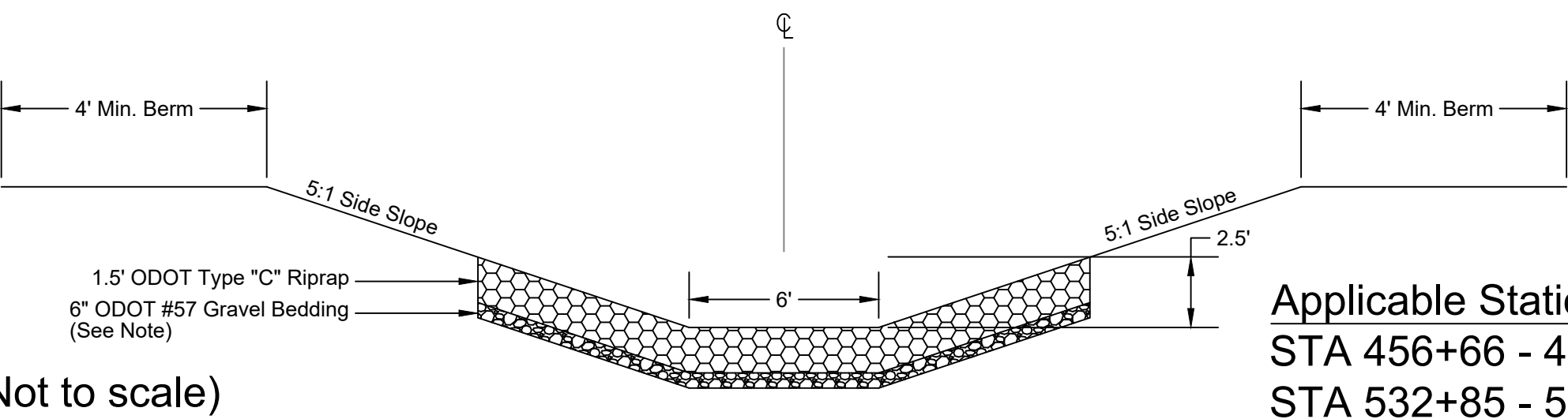
NRCS 606 PIPE
INSTALLATION DETAIL



Note: Use trapezoidal or semi-circular groove for tubing greater than 8" diameter. Trenching shall comply with OSHA Std.1926 Support P

Lined Waterway (NRCS #468)

TYPICAL ROCK LINED CHANNEL CROSS SECTION



Applicable Stations
STA 456+66 - 459+19
STA 532+85 - 533+81

NOTES:

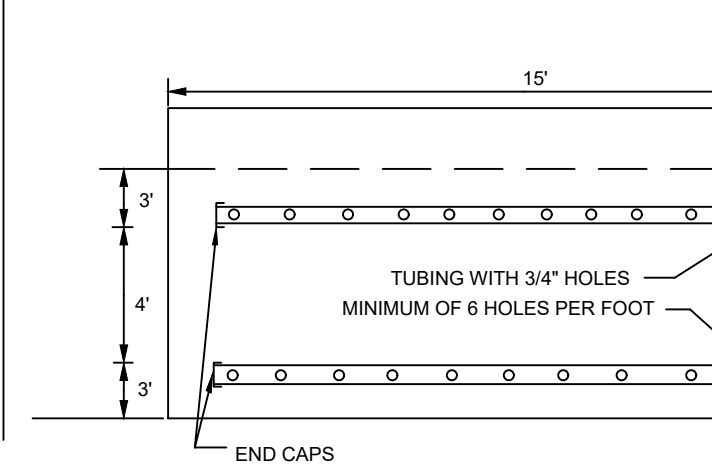
- Side Slopes and Berms to be seeded as stated in the construction notes and ODOT Specification #659. Any modifications to this seed mixture as stated in the Specification must be approved by the construction inspector prior to seed application.
- Side slopes above rock may be modified to fit site specific conditions at the discretion of the construction inspector.
- Placement of Geotextile fabric may be used as a substitute for the ODOT #57 gravel bedding at the discretion of the contractor. If Geotextile fabric is used, it must comply with the specifications of NRCS #561 - Heavy Use Area Protection (P. 4, Paragraph 3). Copies of this Specification are available upon request.
- Excavation necessary above the upper limit of rock placement to blend the 4:1 side slope to existing ground will be considered part of the per lineal foot payment for this item.

Blind Inlet (NRCS #620) - STA 438+40

(NOT TO SCALE)

Typical Plan View

SURFACE DRAIN TOP WIDTH



Typical Profile View

(NOT TO SCALE)

15' Total Length

Designed Gradeline of Surface Drain

Flow

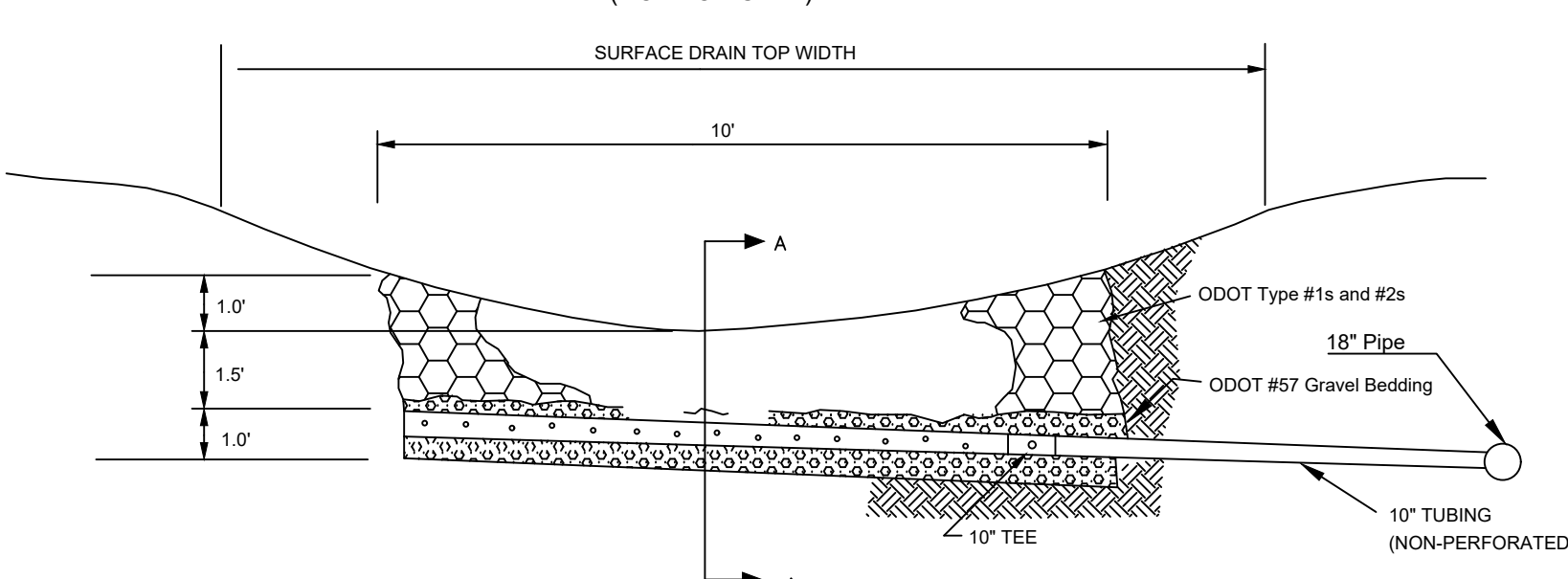
10" Tubing

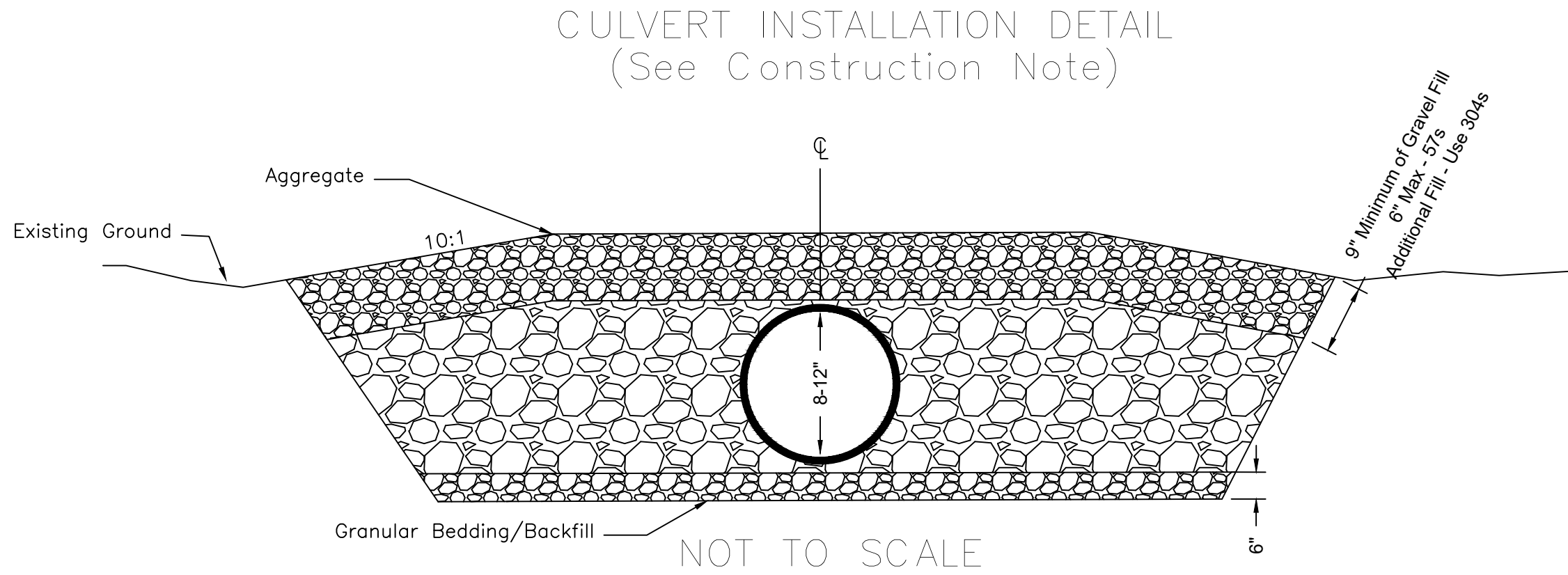
ODOT #57 Gravel Bedding

ODOT #1s and #2s

Typical Cross Section

(NOT TO SCALE)





CONSTRUCTION NOTE

Materials

- Conduit - corrugated HDPE plastic smooth lined pipe (double-wall) conforming to ODOT CMS 707.33.
- Granular bedding and backfill - coarse aggregate meeting AASHTO/ODOT #57 or #67 size or crushed limestone aggregate meeting ODOT CMS Item 304 or 411.

Excavation

The existing culvert shall be removed in its entirety, and included in this item for payment. The trench for the proposed culvert shall be excavated to a minimum width of 2 feet greater than the outside span of the culvert. The trench shall be excavated a minimum of 6 inches below the proposed elevation of the bottom of the culvert.

Bedding

Bedding for the culvert shall be 6 inches of granular material, and shall extend to the limits of the trench.

Laying Culvert

Except where otherwise directed by the Engineer for special conditions, the culvert shall be laid starting at the outlet end. For multiple barrel culverts, the minimum distance between the outside of adjacent barrels shall be 24"

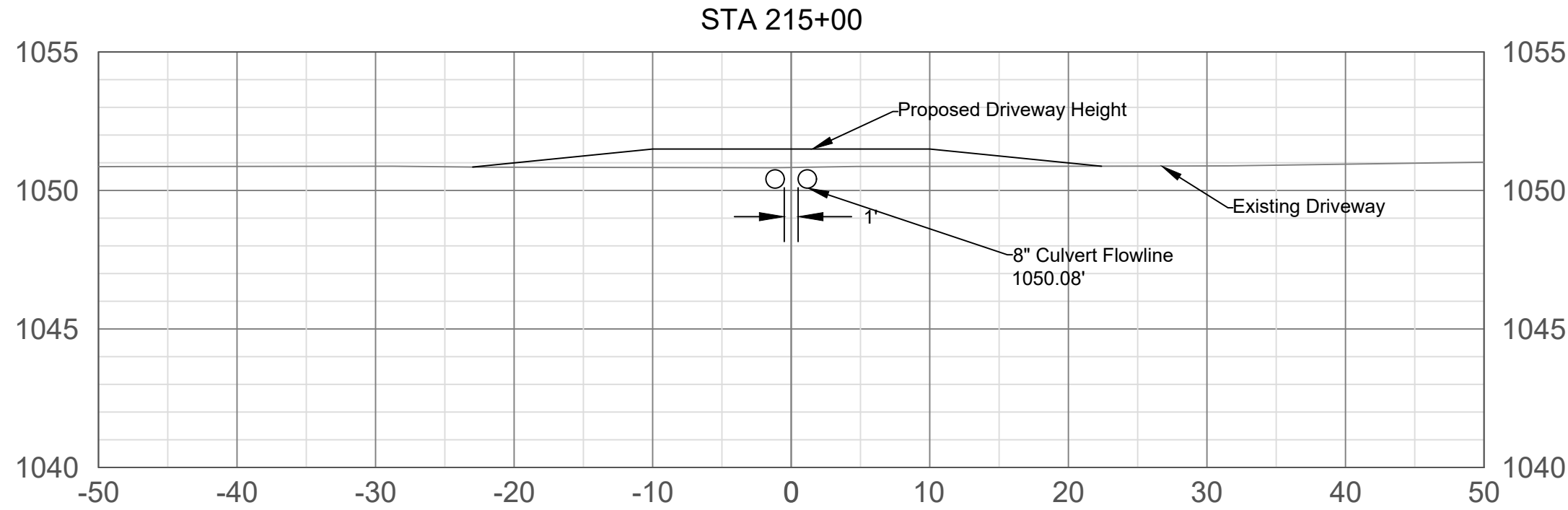
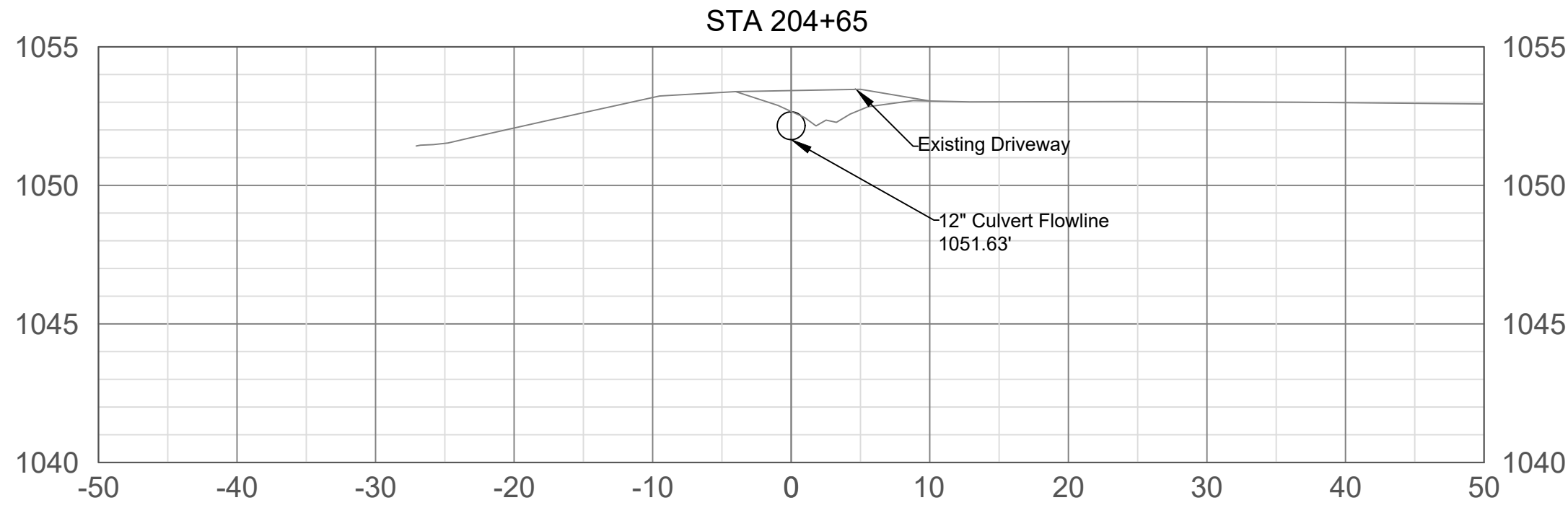
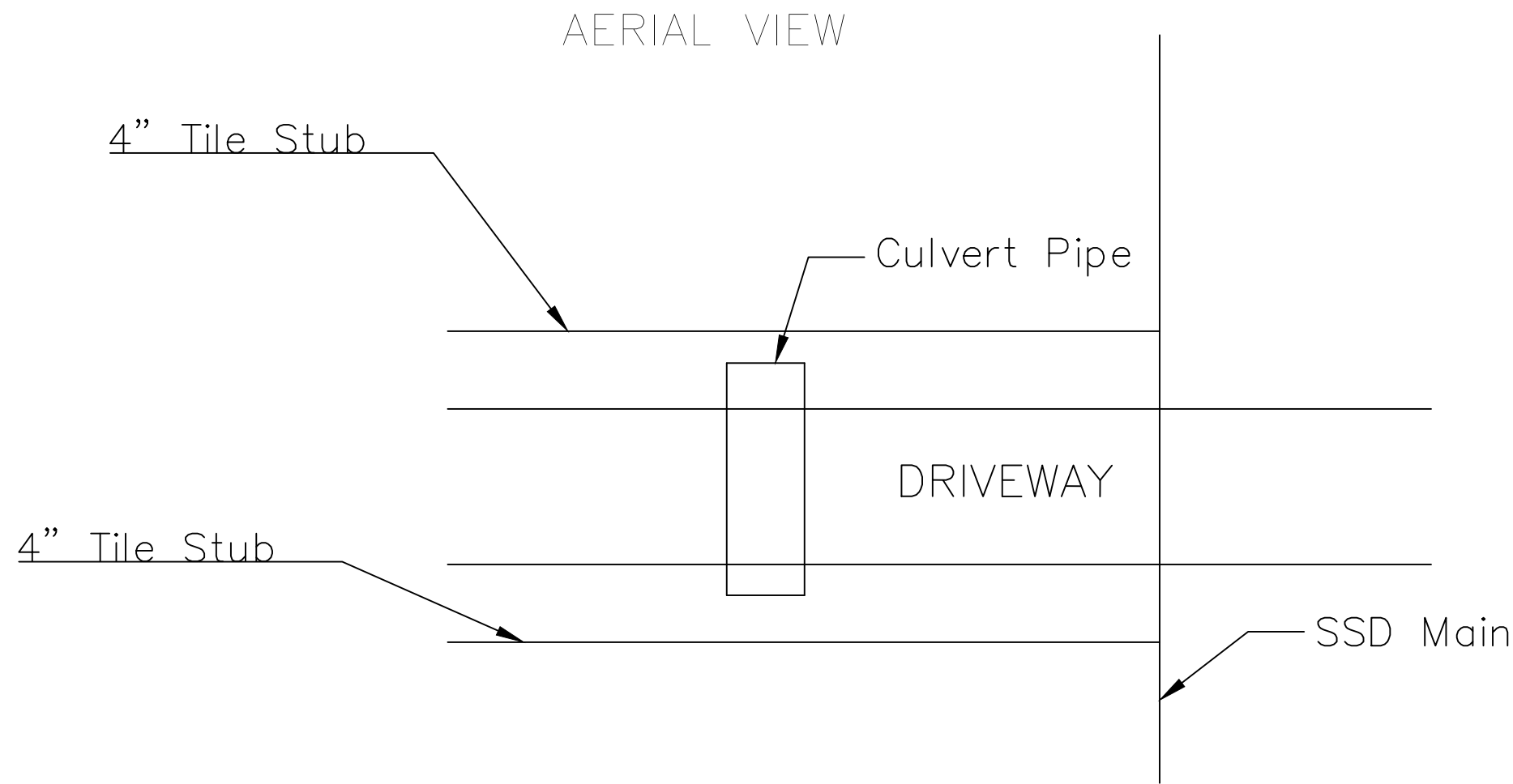
Joining Culvert Sections

The method of joining culvert sections shall be such that the ends are fully entered and the inner surfaces are reasonably flush and even. Bands or gasket joints shall be used according to manufacturer's recommendations. Conduit shall be inspected before any backfill is placed. Any sections found to be out of alignment, unduly settled, or damaged shall be taken up and relaid or replaced.

Backfilling

Granular backfill shall be placed in lifts not to exceed 8 inches up the sides of the culvert. Backfill shall be carefully compacted under the haunches of the pipe using mechanical compactors, spud bars or any other means approved by the Engineer.

When using #57 or #67 granular backfill, the material shall be compacted to approximately 85% of the original thickness. When using stabilized crushed aggregate, water shall be added as necessary to maintain optimum moisture content. Compaction shall be done by mechanical tampers, jumping-jacks, hand tools, or any other means approved by the Engineer, and shall be considered sufficient when 98-100 percent of AASHTO T 99 (Standard Proctor) has been achieved or the Engineer approves the backfill.



CULVERT DESIGN TABLE							
STA Entrance	STA Exit	Entrance Inv.	Exit Inv.	Size	Qty.	Material	Length
204+45	204+85	1051.65	1051.61'	12"	1	ODOT 707.33	40'
214+80	215+20	1050.10'	1050.06'	8"	2	ODOT 707.33	40'

HOOVER #61 MAIN

LEGEND

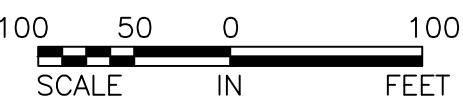
Existing SSD
Proposed Mains
Building
Septic System
Pond
Woodlands
Road
Driveway
Benchmark

Drainage Maintenance Note:
Drainage Maintenance extends downstream to STA 152+71
(Property Line of Parcel #31624001013000).

- CONSTRUCTION NOTES
- All General Construction Notes on P. 2 of 20 shall apply.
 - Details to be referenced on p. 2 of 20:
Typical One-Sided Open Channel Construction

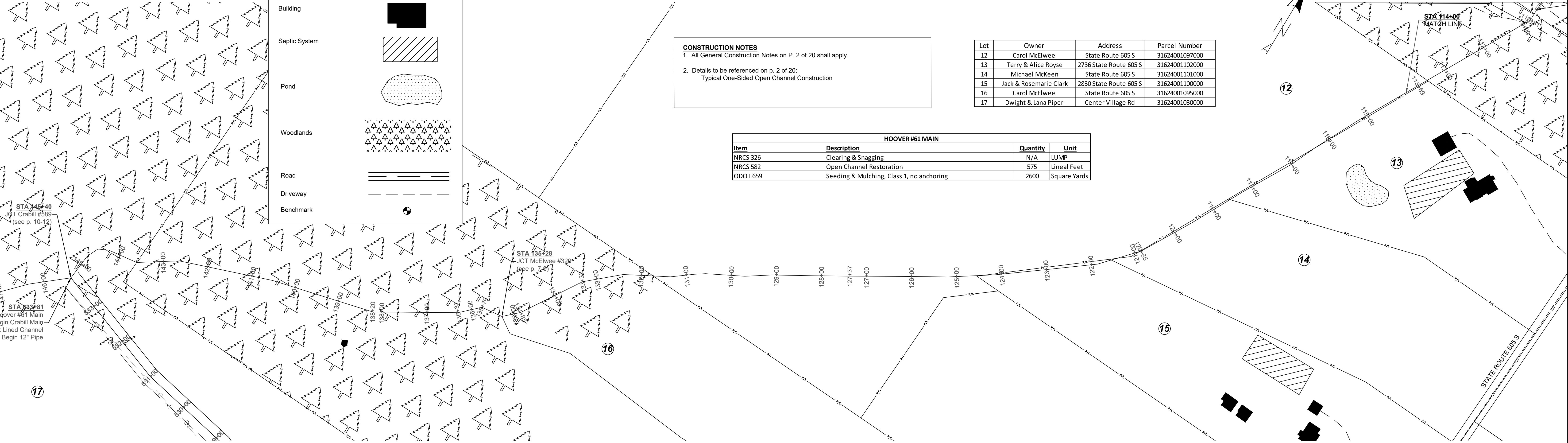
Lot	Owner	Address	Parcel Number
12	Carol McElwee	State Route 605 S	31624001097000
13	Terry & Alice Royse	2736 State Route 605 S	31624001102000
14	Michael McKeen	State Route 605 S	31624001101000
15	Jack & Rosemarie Clark	2830 State Route 605 S	31624001100000
16	Carol McElwee	State Route 605 S	31624001095000
17	Dwight & Lana Piper	Center Village Rd	31624001030000

HOOVER #61 MAIN			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 582	Open Channel Restoration	575	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	2600	Square Yards

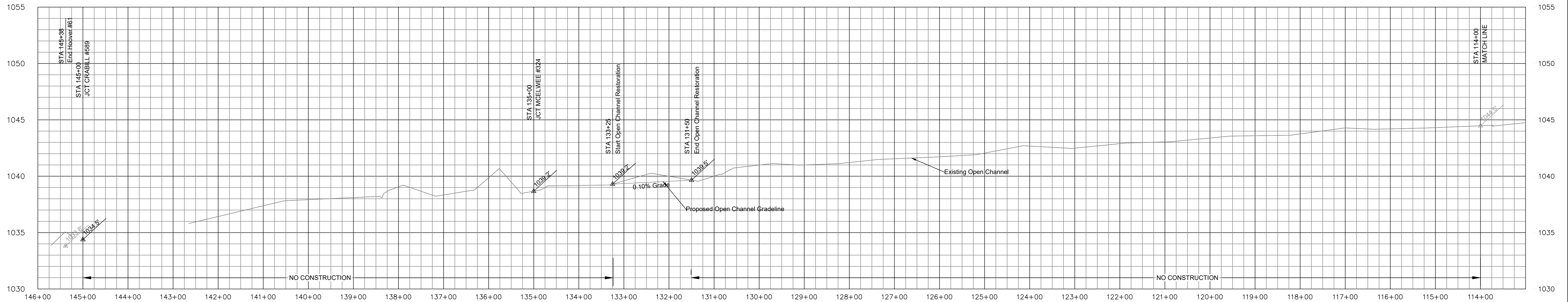


HOOVER #61
DRAINAGE IMPROVEMENT PROJECT
ENGINEERING DRAWINGS

4
20



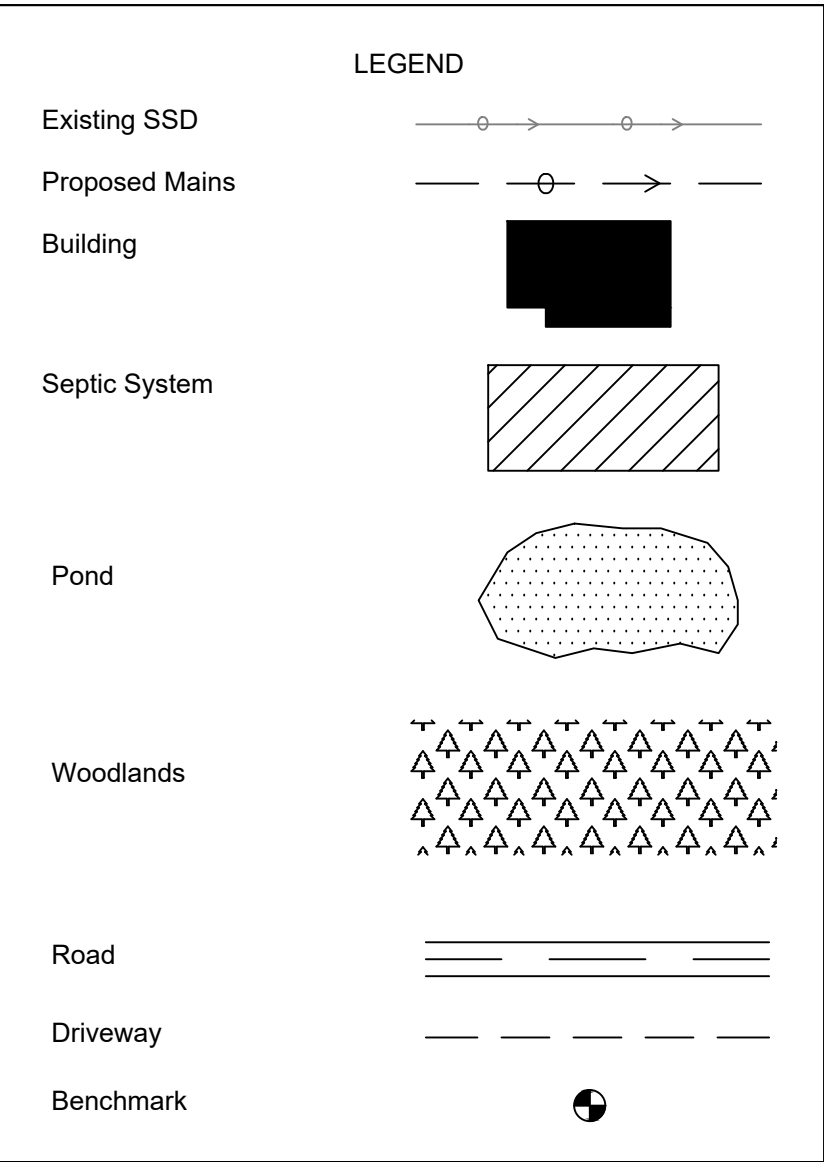
PROFILE



HOOVER #61 MAIN

HOOVER #61
DRAINAGE IMPROVEMENT PROJECT
ENGINEERING DRAWINGS

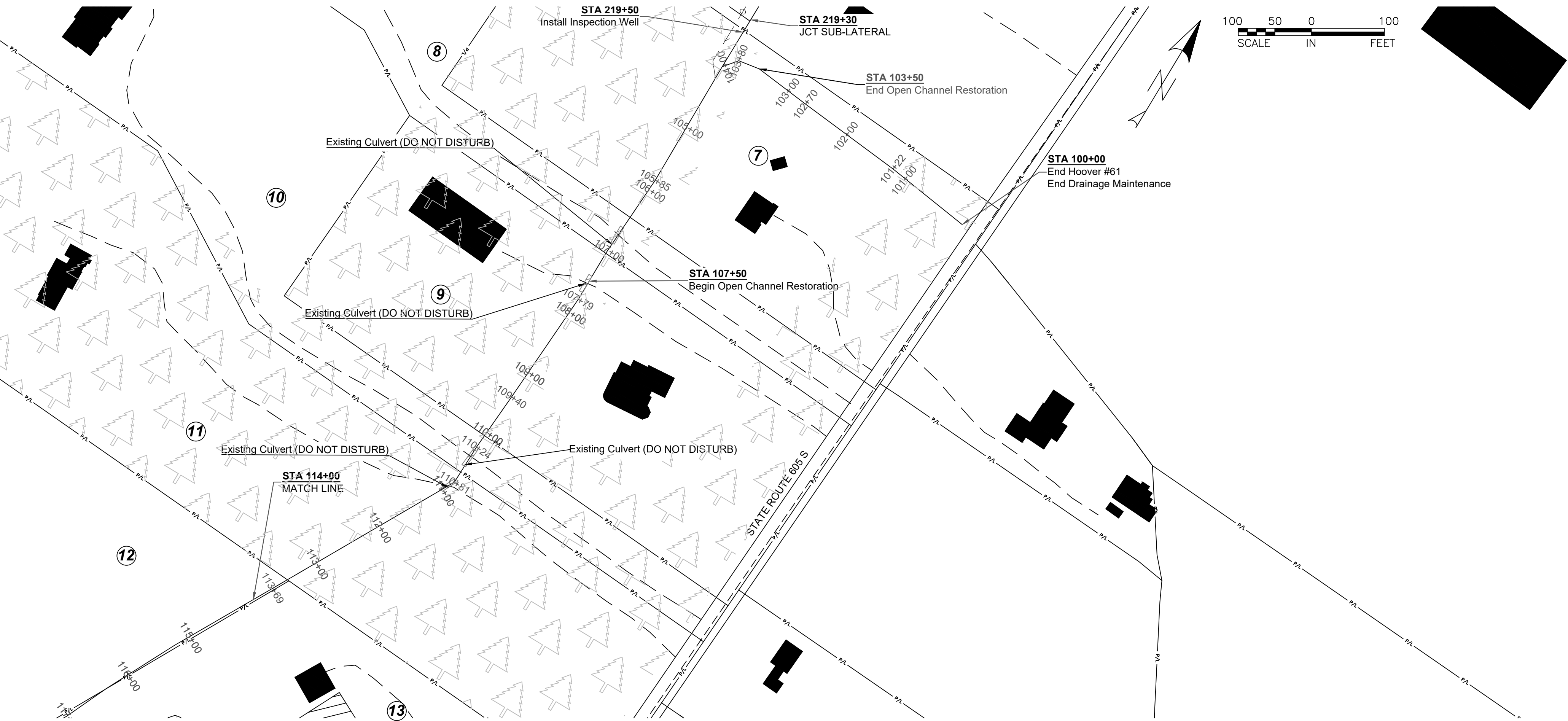
5
20



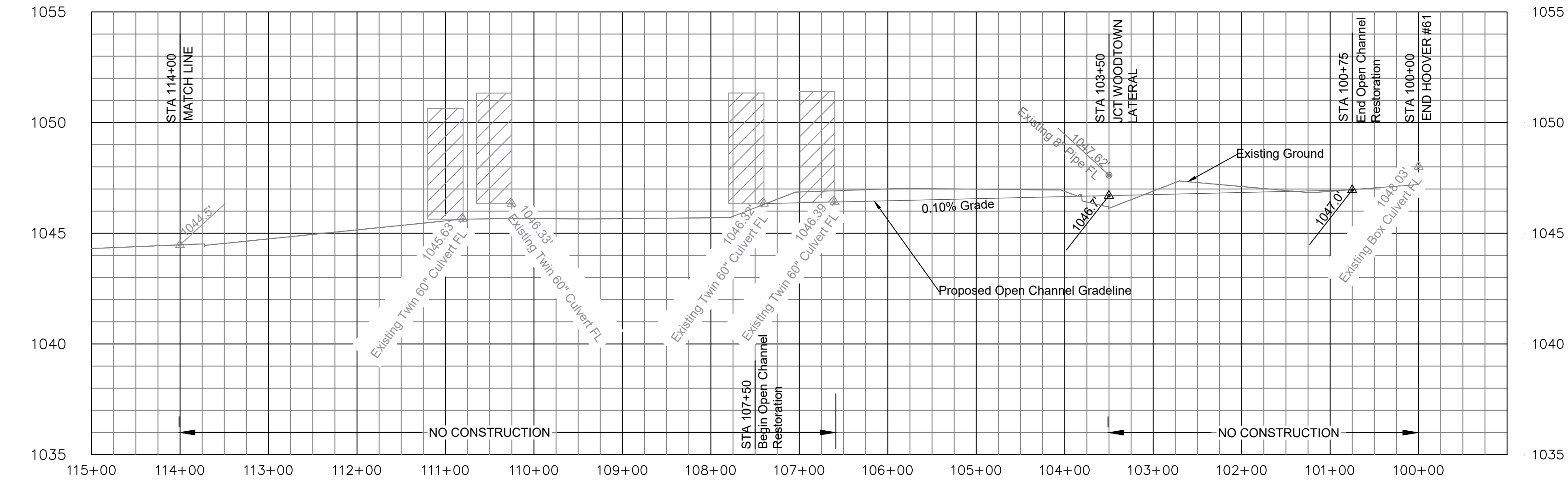
HOOVER #61 MAIN				
NRCS 326	Clearing & Snagging	LUMP	N/A	
NRCS 582	Open Channel Restoration	650	Lineal Feet	

Lot	Owner	Address	Parcel Number
7	Jameson & Courtney Park	2530 State Route 605 S	31624001108000
8	Andrew Burtner	2568 State Route 605 S	31624001107000
9	John & Tamra Henry	2590 State Route 605 S	31624001106000
10	Arthur & Allisa Savery	2640 State Route 605 S	31624001105000
11	Austin & Elizabeth Sullivan	2658 State Route 605 S	31624001103000
12	Carol McElwee	State Route 605 S	31624001097000
13	Terry & Alice Royse	2736 State Route 605 S	31624001102000

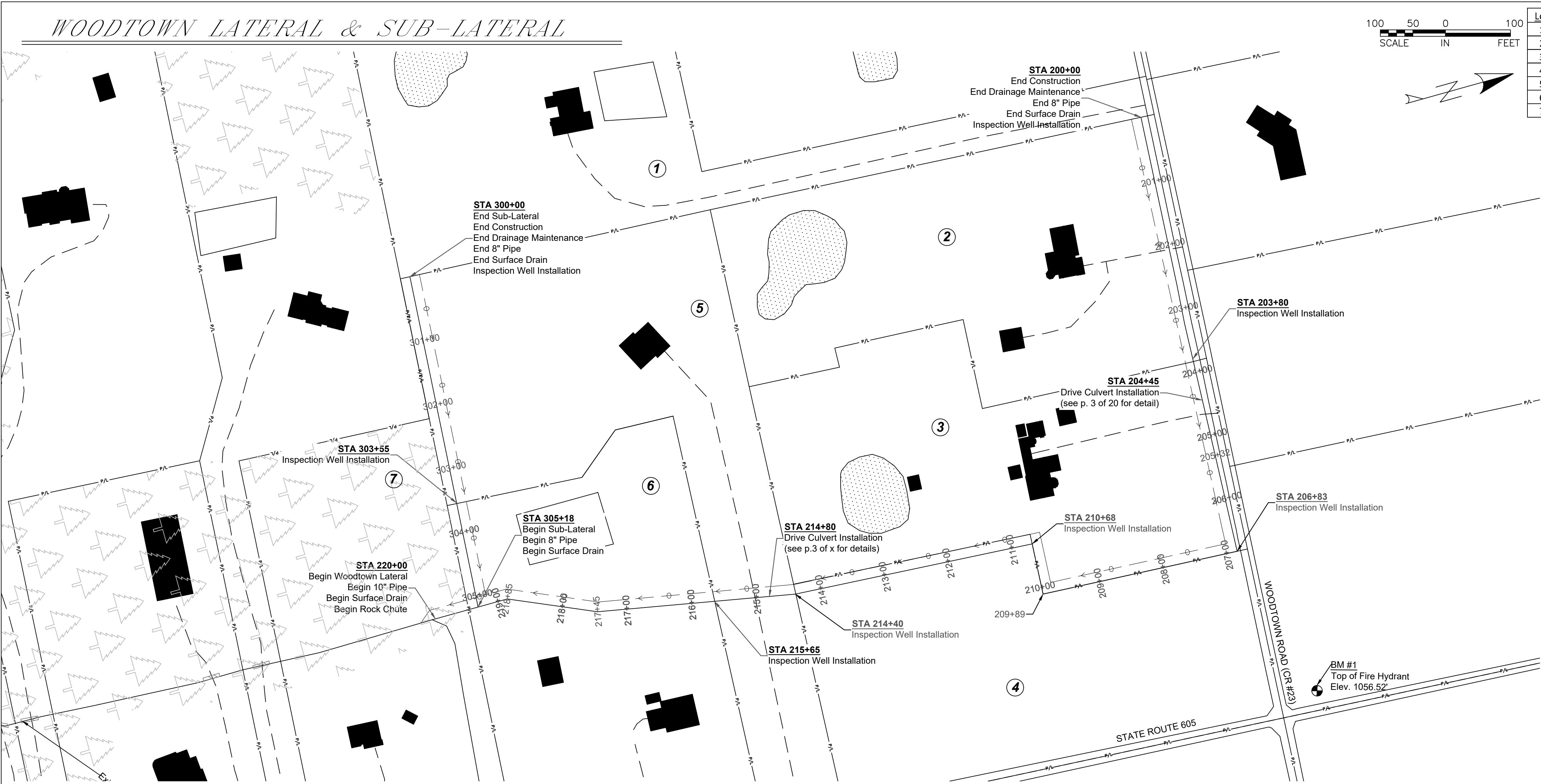
- CONSTRUCTION NOTES**
- All General Construction Notes on P. 2 of 8 shall apply.
 - Details to be referenced on p. 2 of 8:
Typical One-Sided Open Channel Construction
 - Existing Drive Culverts on Hoover #61 Open Channel at STA 106+60, STA 107+40, STA 110+25, and STA 110+75 are not to be disturbed as part of construction.



PROFILE



WOODTOWN LATERAL & SUB-LATERAL



Lot	Owner	Address	Parcel Number
1	Terry & Linda Payne	13590 Woodtown Rd	31621001066007
2	Tony & Christy Hill	13600 Woodtown Rd	31621001066005
3	Edgill Weaver & Michelle Powers	13688 Woodtown Rd	31621001066003
4	Lisa Conner	State Route 605 S	31621001066006
5	Julie Good	2424 State Route 605 S	31621001066000
6	Patrick Power & Sue Baumgardner	2464 State Route 605 S	31621001066004
7	Jameson & Courtney Park	2530 State Route 605 S	31624001108000

CONSTRUCTION NOTES

- All General Construction Notes on P. 2 of 6 shall apply.
- Clearing and snagging will be performed within the limits of the channel and swale construction as per the instructions in the General Construction Notes. All debris from clearing and snagging is to be exported from the site. Payment for export of debris shall be considered as incidental to payment for NRCS Item #326.
- Details to be referenced on p. 2 of 6:
 - Typical Surface Drain Cross Section
 - Typical Subsurface Drain Installation
 - Typical Subsurface Drain Lateral Connection
 - Outlet Pipe Installation w/ Animal Guard
 - Inspection Well Installation
- All spoil is to be exported from the site per General Construction Note #5. Payment for spoil export shall be considered as incidental to payment for NRCS Items #582 and #608.
- Written notice must be provided to any property owner affected by installation of the drive culverts a minimum of seven calendar days prior to commencing the installation. Copies of written notice must be provided to the Construction Supervisor upon delivery to the property owners. Drive culvert installations should be planned such as to be completed within one working day. Drives must be made accessible at the completion of a working day either by completion of the installation or by temporary plating.
- Per General Construction Note 15, utilities are to be potholed at the following location:
 - STA 200+00
 - STA 207+00

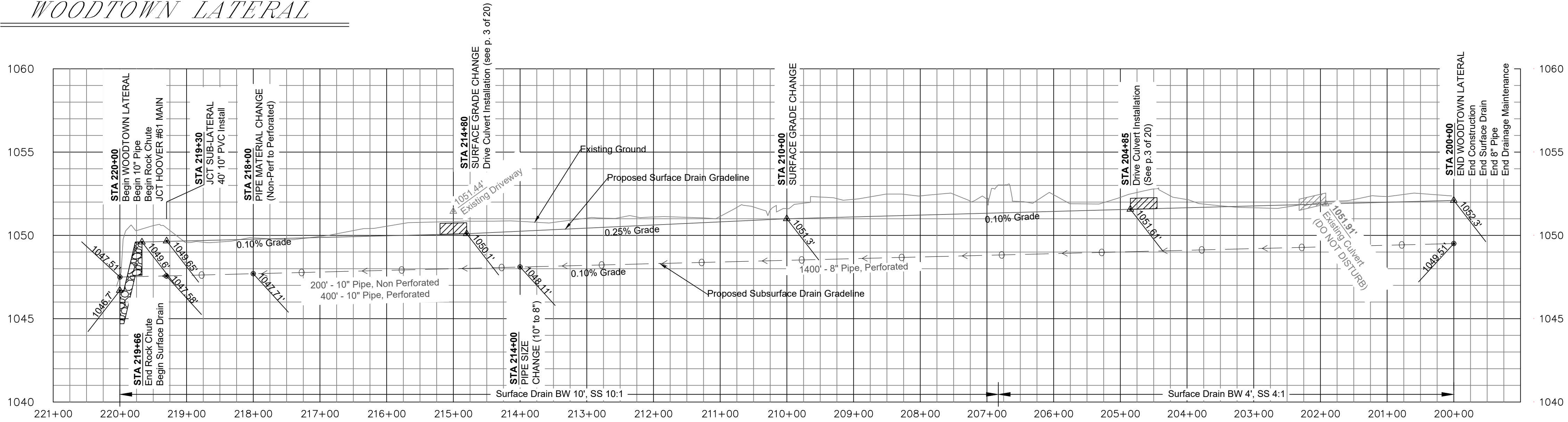
HOOVER #61
DRAINAGE IMPROVEMENT PROJECT
ENGINEERING DRAWINGS

6
20

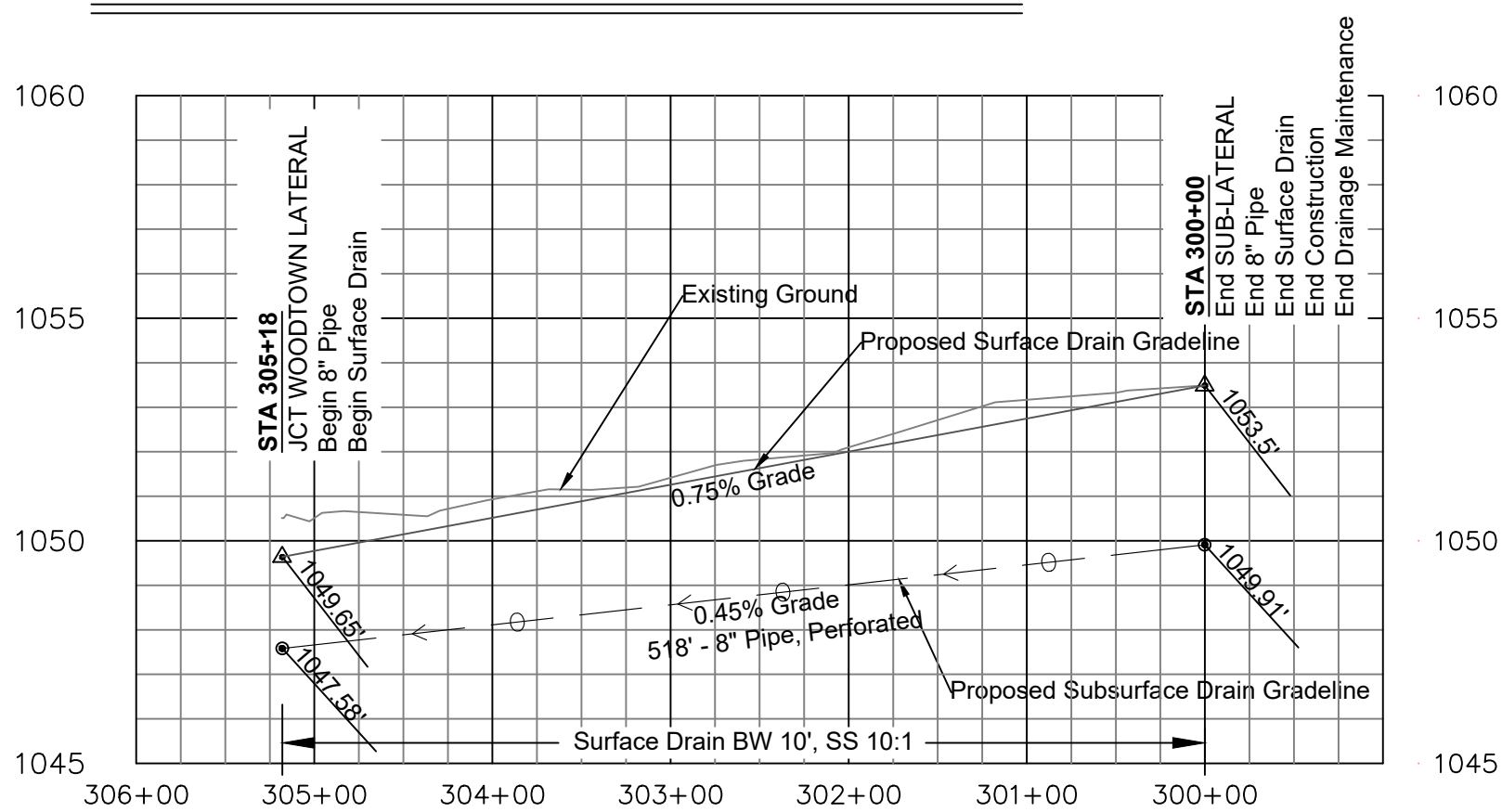
LEGEND	
Existing SSD	
Proposed Mains	
Building	
Septic System	
Pond	
Woodlands	
Road	
Driveway	
Benchmark	

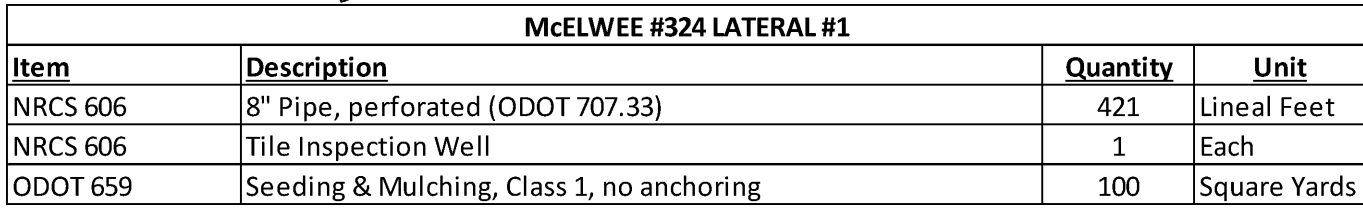
WOODTOWN LATERAL			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 410	Grade Stabilization Structure	1	Each
NRCS 606	10" Pipe, non-perforated (ODOT 707.33)	200	Lineal Feet
NRCS 606	10" Pipe, perforated (ODOT 707.33)	380	Lineal Feet
NRCS 606	8" Pipe, perforated (ODOT 707.33)	1878	Lineal Feet
NRCS 606	10" Animal Guard	1	Each
NRCS 606	Tile Inspection Well	13	Each
NRCS 608	Surface Drain - Swale	2484	Lineal Feet
ODOT 611	8" Pipe (707.33), Type A Installation, Brick Drive	40	Lineal Feet
ODOT 611	10" Pipe (707.33), Type A Installation, Gravel Drive	40	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	20	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Brick Drive	20	Lineal Feet
ODOT 611	10" Pipe (707.33), Type B Installation, Gravel Drive	20	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	11500	Square Yards

WOODTOWN LATERAL



SUB-LATERAL





CONSTRUCTION NOTES

1. All General Construction Notes on P. 2 of 6 shall apply.
2. Clearing and snagging will be performed within the limits of the channel and swale construction as per the instructions in the General Construction Notes. All debris from clearing and snagging is to be exported from the site. Payment for export of debris shall be considered as incidental to payment for NRCS Item #326.
3. Details to be referenced on p. 2 of 6:
 - Typical Surface Drain Cross Section
 - Typical Subsurface Drain Installation
 - Typical Subsurface Drain Lateral Connection
 - Outlet Pipe Installation w/ Animal Guard
 - Inspection Well Installation
4. All spoil is to be exported from the site per General Construction Note #5. Payment for spoil export shall be considered as incidental to payment for NRCS Items #582 and #608.
5. Written notice must be provided to any property owner affected by installation of the drive culverts a minimum of seven calendar days prior to commencing the installation. Copies of written notice must be provided to the Construction Supervisor upon delivery to the property owners. Drive culvert installations should be planned such as to be completed within one working day. Drives must be made accessible at the completion of a working day either by completion of the installation or by temporary piling.
6. Per General Construction Note 15, utilities are to be potholed at the following location:
 - STA 436+20
 - STA 437+00

100 50 0 100
SCALE IN FEET

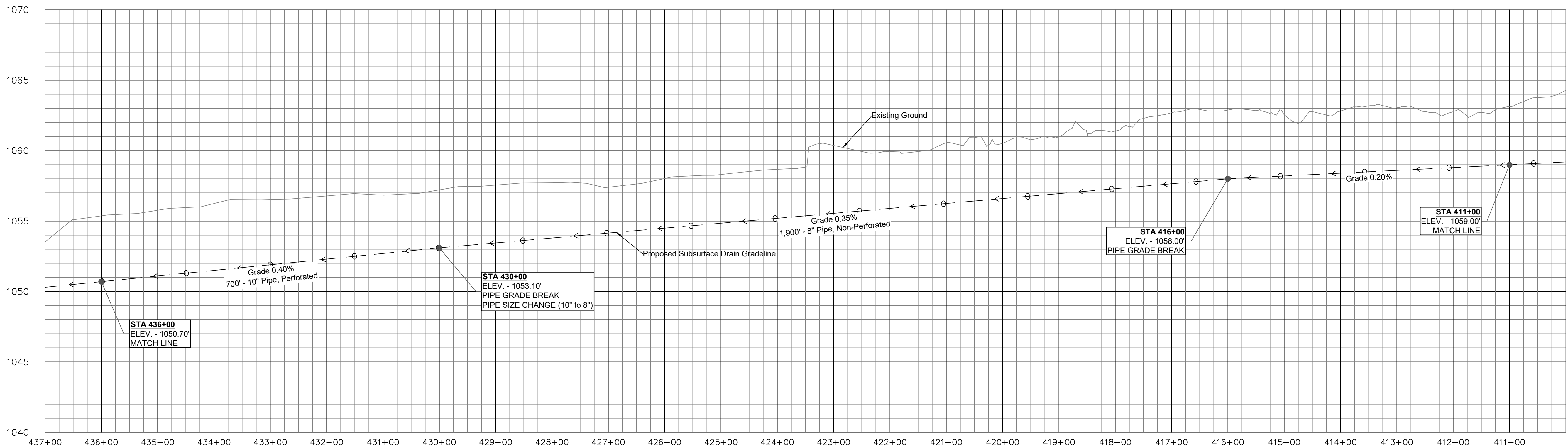
MCELWEE #324 SECTION 2			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 606	10" Pipe, perforated (ODOT 707.33)	700	Lineal Feet
NRCS 606	8" Pipe, perforated (ODOT 707.33)	3000	Lineal Feet
NRCS 606	Tile Inspection Well	15	Each
ODOT 452	Non-Reinforced Concrete Pavement Driveway Repair (including removal and disposal of existing pavement section)	2	Each
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	20	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Concrete Drive	40	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Gravel Drive	100	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	7,000	Square Yards

Inspection Well Installation Stations	
STA 400+00	
STA 401+70	
STA 413+00	
STA 414+20	
STA 417+70	
STA 419+00	
STA 420+12	
STA 421+24	
STA 422+35	
STA 423+46	
STA 427+50	
STA 429+30	
STA 430+80	
STA 431+55	
STA 432+95	
STA 437+00	
STA 438+48	
STA 339+65	
STA 445+77	

LEGEND	
Existing SSD	
Proposed Mains	
Building	
Septic System	
Pond	
Woodlands	
Road	
Driveway	
Benchmark	

Lot	Owner	Address	Parcel Number
16	Carol McElwee	State Route 605 S	31624001095000
18	Andrew & Melissa Feicht	2952 State Route 605 S	31624001095001
19	Carol McElwee	State Route 605 S	31624001094000
20	Kathleen Swift	State Route 605 S	31624001094002
21	Joyce McFadden	State Route 605 S	31613001020003
22	Joyce McFadden	State Route 605 S	31613001021000
23	Joyce McFadden	State Route 605 S	31613001020002
24	Joyce McFadden	3299 State Route 605 S	31613001020001
25	Jayson & Carole Harper	3341 State Route 605 S	31613001022000
26	John Duddy	3363 State Route 605 S	31613001023000
27	Erik Capwell	3441 State Route 605 S	31613001024000
28	Lynn Borden	3455 State Route 605 S	31613001026000
29	Christine Nash	3475 State Route 605 S	31613001027000
30	Myrtle Thompson	3501 State Route 605 S	31613001028000
31	Marie Gayheart	3519 State Route 605 S	31613001029000
32	Todd McFarland	3543 State Route 605 S	31613001030000
33	Todd McFarland	State Route 605 S	31613001031000
34	Adam & Michelle Bloom	13487 Center Village Rd	31613001046000
35	Christine Armbrust	13545 Center Village Rd	31613001047000
36	Fay & Corrine Bower	13581 Center Village Rd	31613001048000

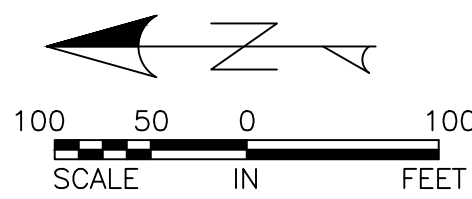
PROFILE



CONSTRUCTION NOTES

- All General Construction Notes on P. 2 of 6 shall apply.
- Clearing and snagging will be performed within the limits of the channel and swale construction as per the instructions in the General Construction Notes. All debris from clearing and snagging is to be exported from the site. Payment for export of debris shall be considered as incidental to payment for NRCS Item #326.
- Details to be referenced on p. 2 of 6:
 - Typical Surface Drain Cross Section
 - Typical Subsurface Drain Installation
 - Typical Subsurface Drain Lateral Connection
 - Outlet Pipe Installation w/ Animal Guard
 - Inspection Well Installation
- All spoil is to be exported from the site per General Construction Note #5. Payment for spoil export shall be considered as incidental to payment for NRCS Items #582 and #608.
- Written notice must be provided to any property owner affected by installation of the drive culverts a minimum of seven calendar days prior to commencing the installation. Copies of written notice must be provided to the Construction Supervisor upon delivery to the property owners. Drive culvert installations should be planned such as to be completed within one working day. Drives must be made accessible at the completion of a working day either by completion of the installation or by temporary plating.
- Per General Construction Note 15, utilities are to be potholed at the following location:
 - STA 414+70
 - STA 426+00
 - STA 437+00

MCELWEE #324

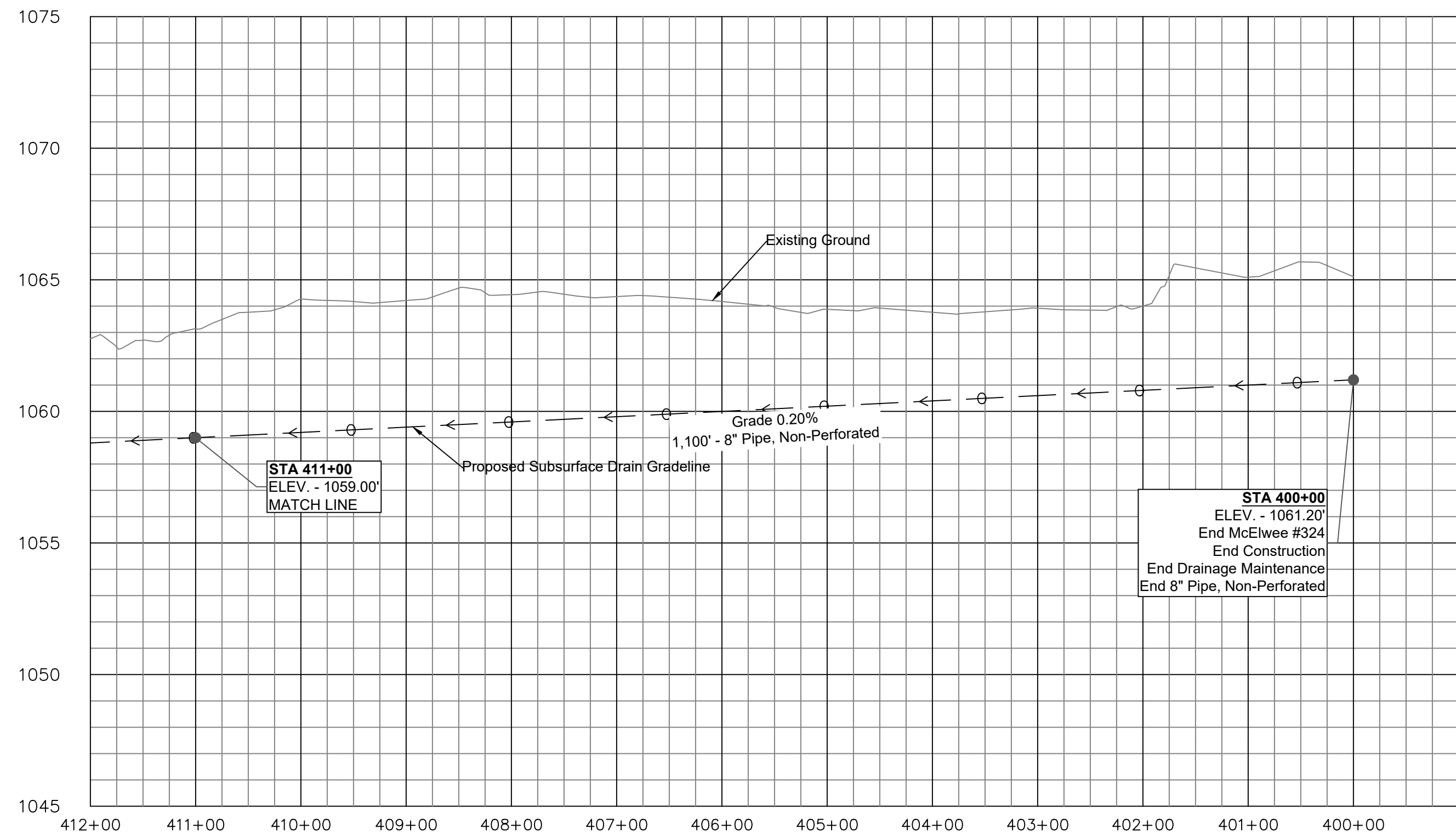


Inspection Well Installation Stations	
STA 400+00	
STA 401+70	
STA 413+00	
STA 414+20	
STA 417+70	
STA 419+00	
STA 420+12	
STA 421+24	
STA 422+35	
STA 423+46	
STA 427+50	
STA 429+30	
STA 430+80	
STA 431+55	
STA 432+95	
STA 437+00	
STA 438+48	
STA 339+65	
STA 445+77	

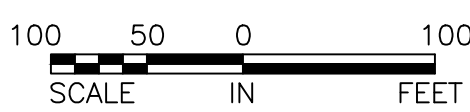
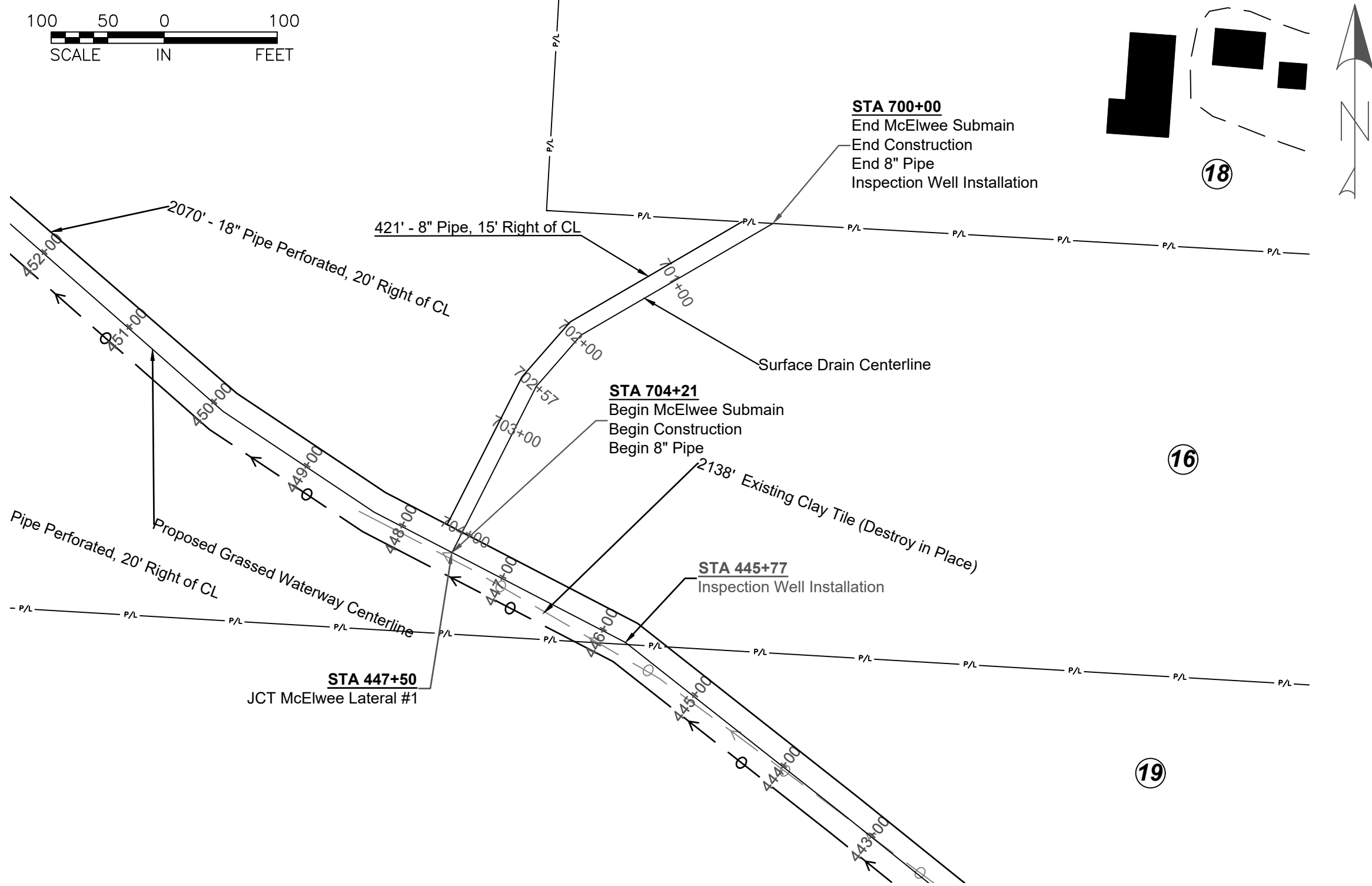
CONSTRUCTION NOTES

- All General Construction Notes on P. 2 of 6 shall apply.
- Clearing and snagging will be performed within the limits of the channel and swale construction as per the instructions in the General Construction Notes. All debris from clearing and snagging is to be exported from the site. Payment for export of debris shall be considered as incidental to payment for NRCS Item #326.
- Details to be referenced on p. 2 of 6:
 - Typical Surface Drain Cross Section
 - Typical Subsurface Drain Installation
 - Typical Subsurface Drain Lateral Connection
 - Outlet Pipe Installation w/ Animal Guard
 - Inspection Well Installation
- All spoil is to be exported from the site per General Construction Note #5. Payment for spoil export shall be considered as incidental to payment for NRCS Items #582 and #608.
- Written notice must be provided to any property owner affected by installation of the drive culverts a minimum of seven calendar days prior to commencing the installation. Copies of written notice must be provided to the Construction Supervisor upon delivery to the property owners. Drive culvert installations should be planned such as to be completed within one working day. Drives must be made accessible at the completion of a working day either by completion of the installation or by temporary plating.
- Per General Construction Note 15, utilities are to be potholed at the following location:
 - STA 400+00

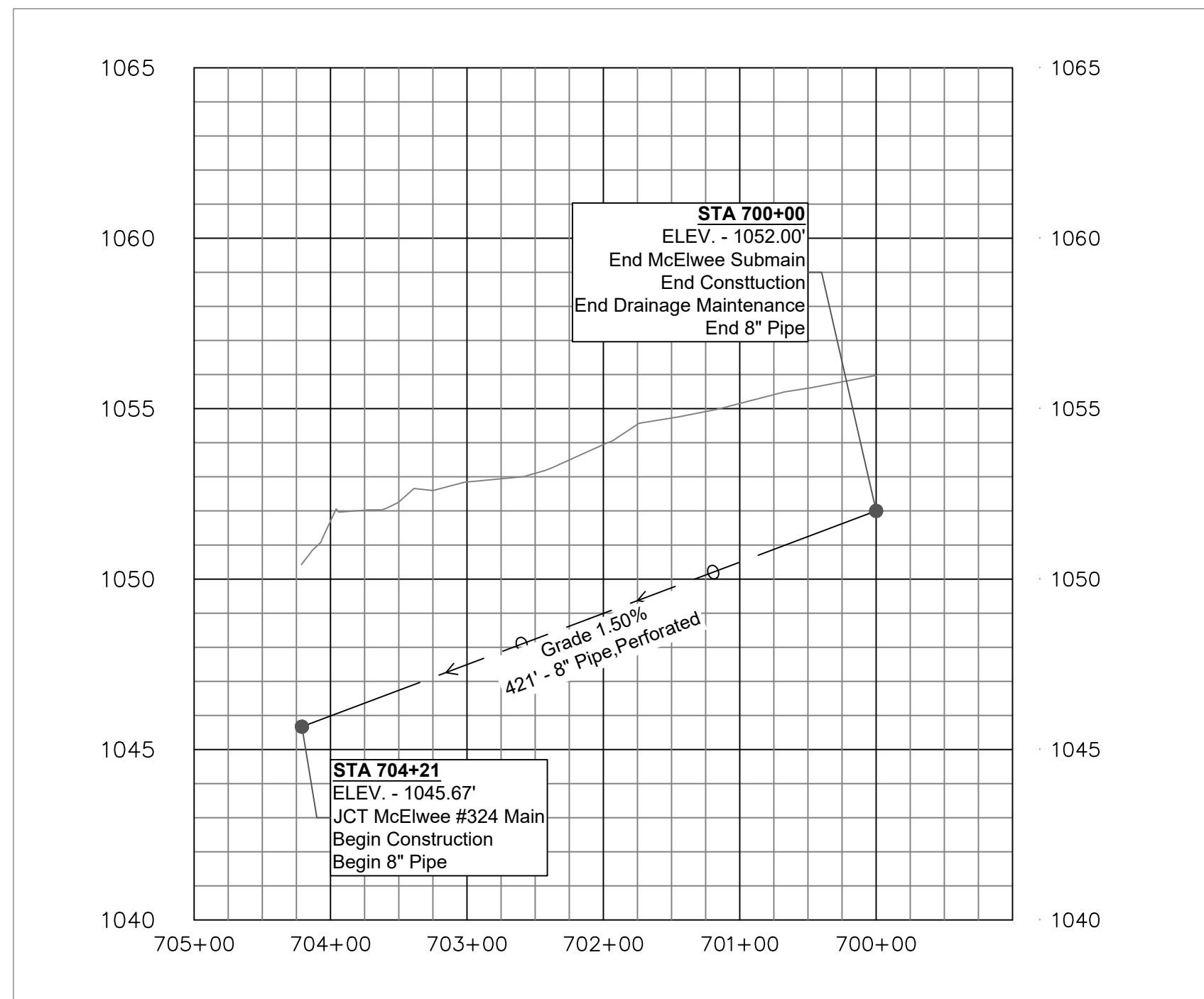
PROFILE



MCELWEE #324 SUBMAIN



PROFILE



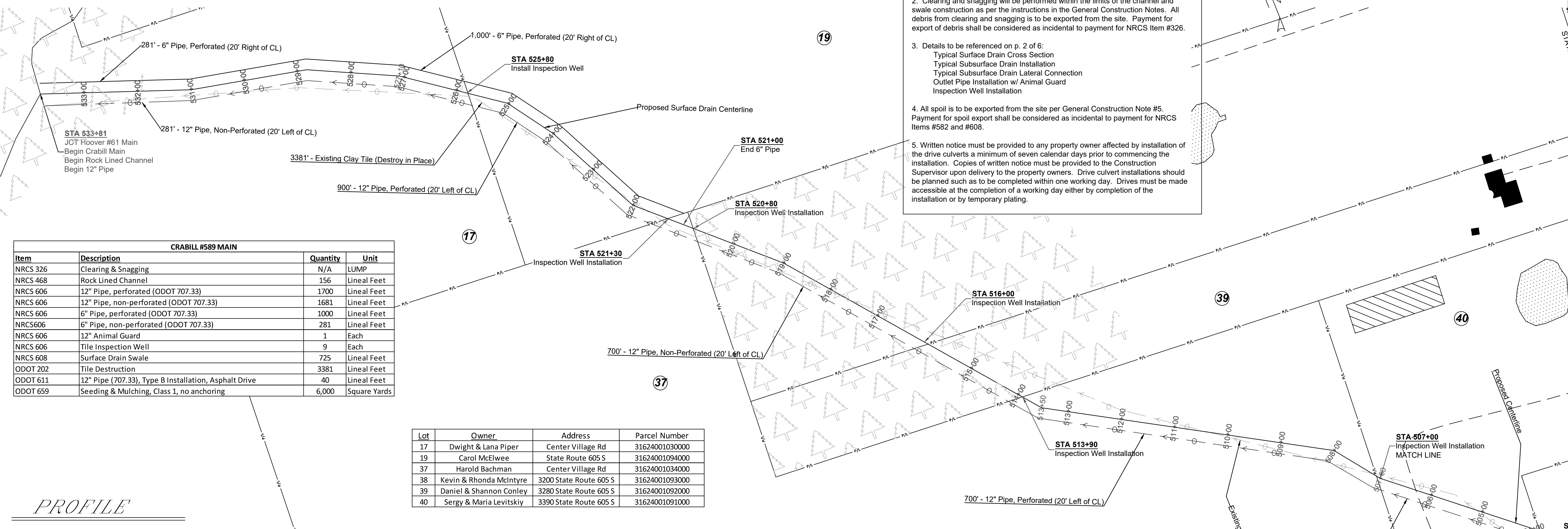
HOOVER #61
DRAINAGE IMPROVEMENT PROJECT
ENGINEERING DRAWINGS

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LEGEND	
Existing SSD	
Proposed Mains	
Building	
Septic System	
Pond	
Woodlands	
Road	
Driveway	
Benchmark	

Lot	Owner	Address	Parcel Number
16	Carol McElwee	State Route 605 S	31624001095000
18	Andrew & Melissa Feicht	2952 State Route 605 S	31624001095001
19	Carol McElwee	State Route 605 S	31624001094000
20	Kathleen Swift	State Route 605 S	31624001094002
21	Joyce McFadden	State Route 605 S	31613001020003
22	Joyce McFadden	State Route 605 S	31613001021000
23	Joyce McFadden	State Route 605 S	31613001020002
24	Joyce McFadden	3299 State Route 605 S	31613001020001
25	Jayson & Carole Harper	3341 State Route 605 S	31613001022000
26	John Duddy	3363 State Route 605 S	31613001023000
27	Erik Capwell	3441 State Route 605 S	31613001024000
28	Lynn Borden	3455 State Route 605 S	31613001026000
29	Christine Nash	3475 State Route 605 S	31613001027000
30	Myrtle Thompson	3501 State Route 605 S	31613001028000
31	Marie Gayheart	3519 State Route 605 S	31613001029000
32	Todd McFarland	3543 State Route 605 S	31613001030000
33	Todd McFarland	State Route 605 S	31613001031000
34	Adam & Michelle Bloom	13487 Center Village Rd	31613001046000
35	Christine Armbrust	13545 Center Village Rd	31613001047000
36	Fay & Corrine Bower	13581 Center Village Rd	31613001048000

MCELWEE #324			
NRCS 326	Clearing & Snagging	LUMP	N/A
NRCS 468	Rock Lined Channel	250	Lineal Feet
NRCS 582	Open Channel Restoration	43	Lineal Feet
NRCS 606	6" Pipe, perforated (ODOT 707.33)	2,069	Lineal Feet
NRCS 606	8" Pipe, non-perforated (ODOT 707.33)	3,000	Lineal Feet
NRCS 606	8" Pipe, perforated (ODOT 707.33) - SUBMAIN	421	Lineal Feet
NRCS 606	10" Pipe, perforated (ODOT 707.33)	750	Lineal Feet
NRCS 606	18" Pipe, non-perforated (ODOT 707.33)	2,069	Lineal Feet
NRCS 606	18" Animal Guard	1	Each
NRCS 606	Tile Inspection Well	19	Each
NRCS 608	Surface Drain - Grassed Waterway	1,826	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	20	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Concrete Drive	40	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Gravel Drive	100	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	16,000	Square Yards



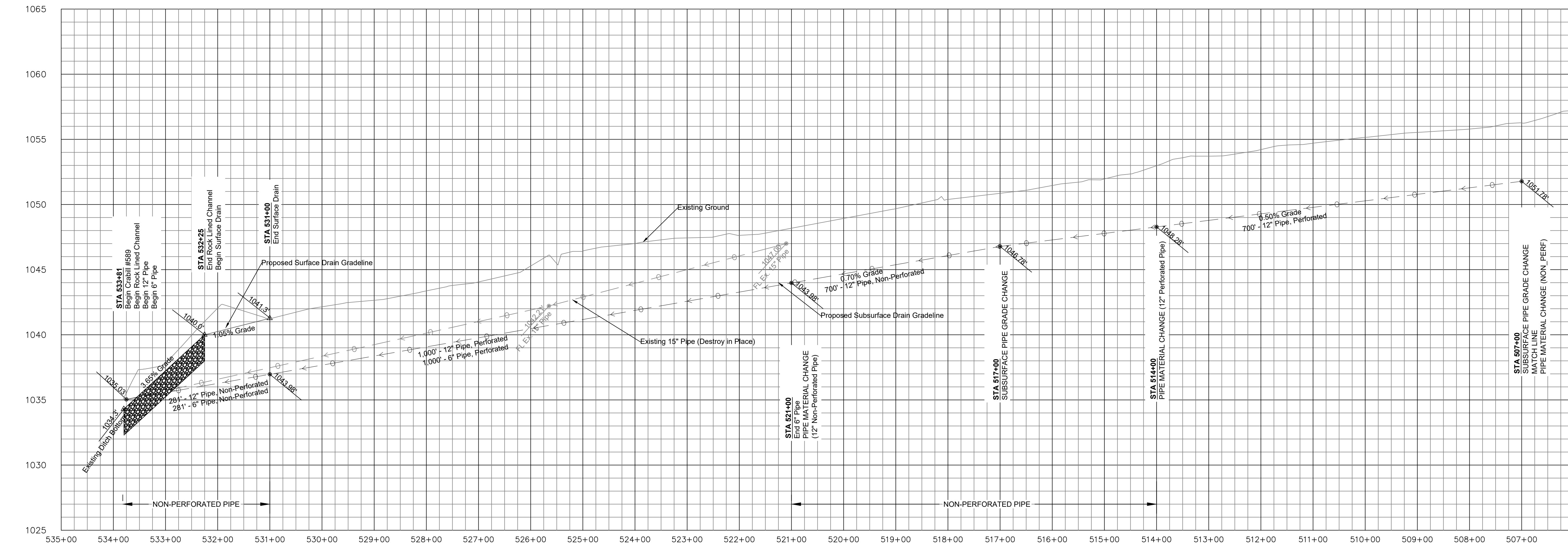
CONSTRUCTION NOTES

1. All General Construction Notes on P. 2 of 6 shall apply.
2. Clearing and snagging will be performed within the limits of the channel and swale construction as per the instructions in the General Construction Notes. All debris from clearing and snagging is to be exported from the site. Payment for export of debris shall be considered as incidental to payment for NRCS Item #326.
3. Details to be referenced on p. 2 of 6:
 - Typical Surface Drain Cross Section
 - Typical Subsurface Drain Installation
 - Typical Subsurface Drain Lateral Connection
 - Outlet Pipe Installation w/ Animal Guard
 - Inspection Well Installation
4. All spoil is to be exported from the site per General Construction Note #5. Payment for spoil export shall be considered as incidental to payment for NRCS Items #582 and #608.
5. Written notice must be provided to any property owner affected by installation of the drive culverts a minimum of seven calendar days prior to commencing the installation. Copies of written notice must be provided to the Construction Supervisor upon delivery to the property owners. Drive culvert installations should be planned such as to be completed within one working day. Drives must be made accessible at the completion of a working day either by completion of the installation or by temporary plating.

CRABILL #589 MAIN			
Item	Description	Quantity	Unit
NRCS 326	Clearing & Snagging	N/A	LUMP
NRCS 468	Rock Lined Channel	156	Lineal Feet
NRCS 606	12" Pipe, perforated (ODOT 707.33)	1700	Lineal Feet
NRCS 606	12" Pipe, non-perforated (ODOT 707.33)	1681	Lineal Feet
NRCS 606	6" Pipe, perforated (ODOT 707.33)	1000	Lineal Feet
NRCS606	6" Pipe, non-perforated (ODOT 707.33)	281	Lineal Feet
NRCS 606	12" Animal Guard	1	Each
NRCS 606	Tile Inspection Well	9	Each
NRCS 608	Surface Drain Swale	725	Lineal Feet
ODOT 202	Tile Destruction	3381	Lineal Feet
ODOT 611	12" Pipe (707.33), Type B Installation, Asphalt Drive	40	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	6,000	Square Yards

Lot	Owner	Address	Parcel Number
17	Dwight & Lana Piper	Center Village Rd	31624001030000
19	Carol McElwee	State Route 605 S	31624001094000
37	Harold Bachman	Center Village Rd	31624001034000
38	Kevin & Rhonda McIntyre	3200 State Route 605 S	31624001093000
39	Daniel & Shannon Conley	3280 State Route 605 S	31624001092000
40	Sergy & Maria Levitskiy	3390 State Route 605 S	31624001091000

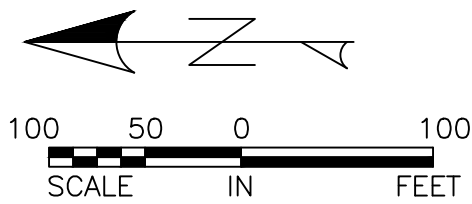
PROFILE



CRABILL #589

HOOVER #61
DRAINAGE IMPROVEMENT PROJECT
ENGINEERING DRAWINGS

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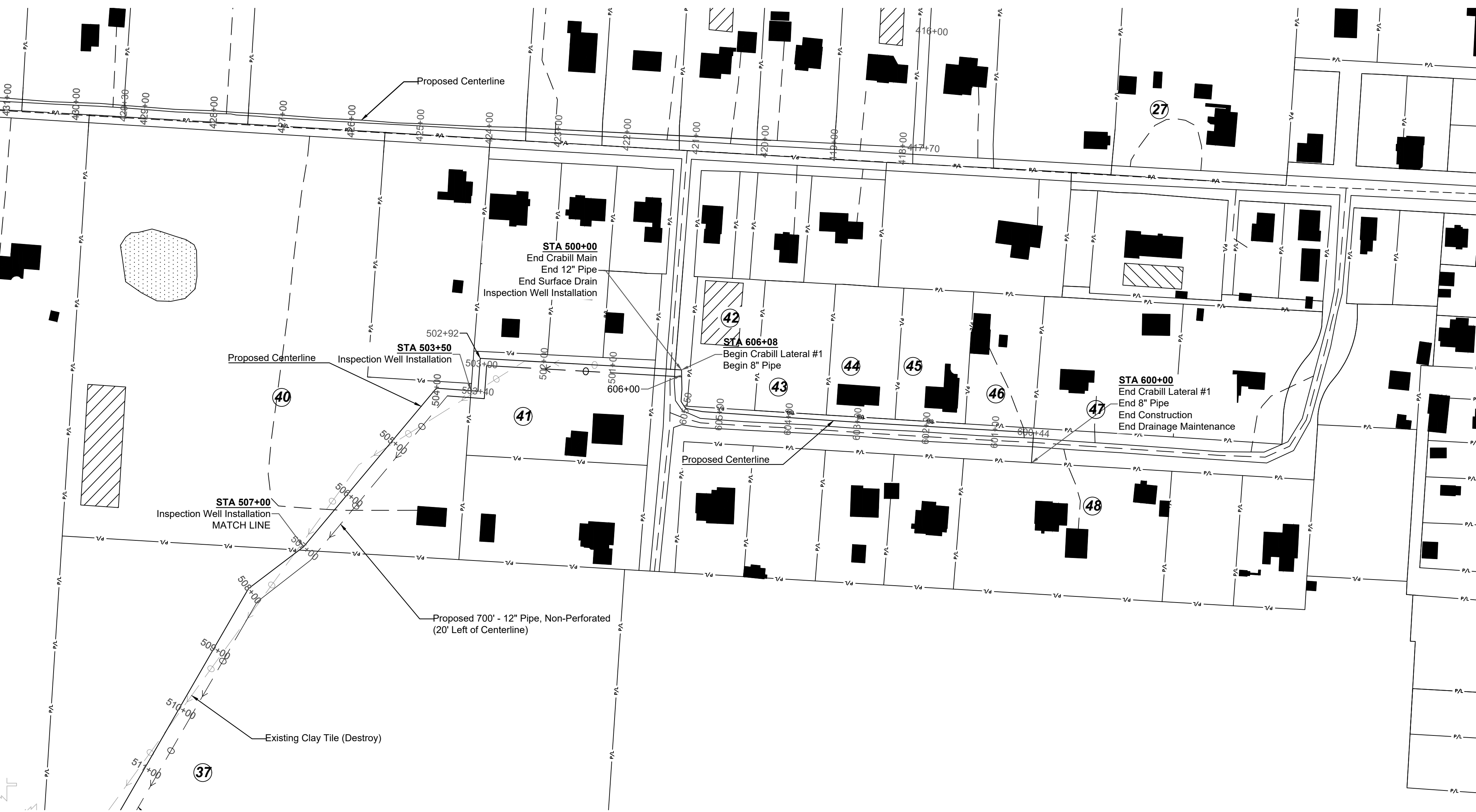
Inspection Well Installation Stations	
STA 600+00	
STA 600+44	
STA 601+45	
STA 602+45	
STA 603+45	
STA 604+45	
STA 605+50	

LEGEND	
Existing SSD	
Proposed Mains	
Building	
Septic System	
Pond	
Woodlands	
Road	
Driveway	
Benchmark	

Lot	Owner	Address	Parcel Number
40	Sergy & Maria Levitskiy	3390 State Route 605 S	31624001091000
41	Gary & Cindy Schlaegel	13335 North Dr	31624001064000
42	Anthony & Kelly Borer		31624001067000
43	Marie Pallone	Rich Dr	31624001068000
44	Marie Pallone	3521 Rich Dr	31624001069000
45	Donald Hutchinson & Kathleen Evers	3543 Rich Dr	31624001070000
46	Donald Hutchinson & Kathleen Evers	Rich Dr	31624001071000
47	John & Dorothy Gooch	3581 Rich Dr	31624001072000
48	Dale Fling	3580 Rich Dr	31624001057000

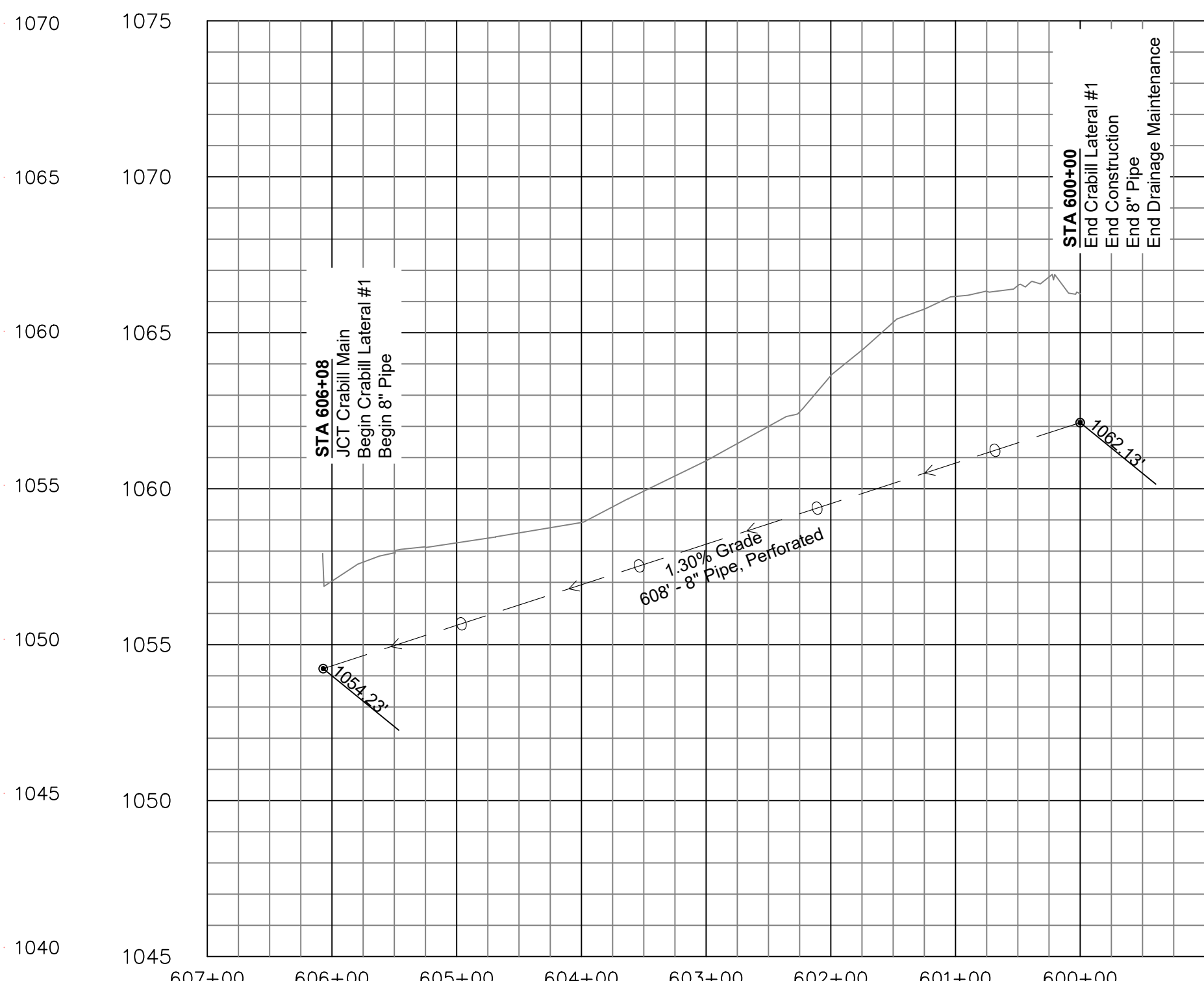
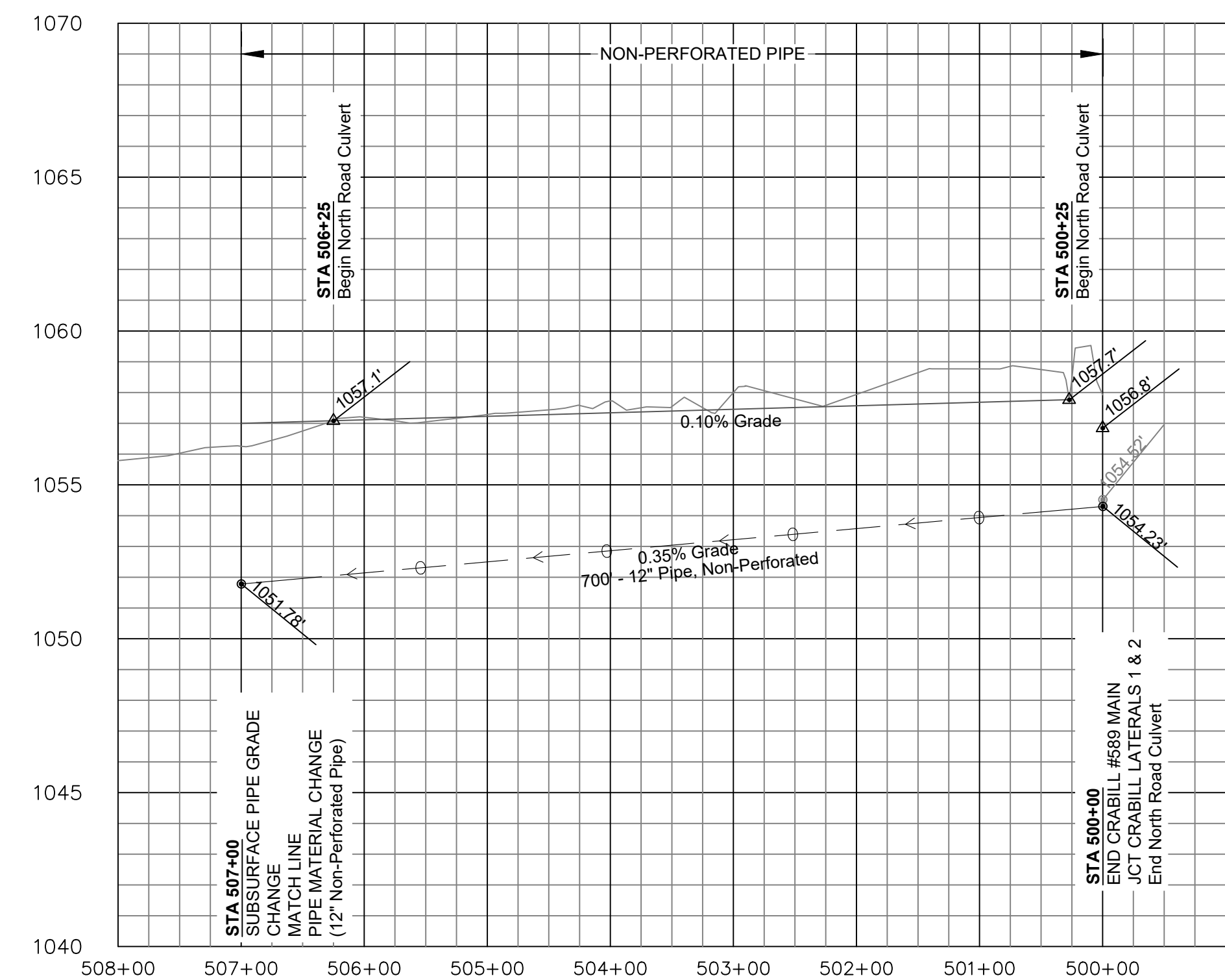
CONSTRUCTION NOTES

- All General Construction Notes on P. 2 of 6 shall apply.
- Clearing and snagging will be performed within the limits of the channel and swale construction as per the instructions in the General Construction Notes. All debris from clearing and snagging is to be exported from the site. Payment for export of debris shall be considered as incidental to payment for NRCS Item #326.
- Details to be referenced on p. 2 of 6:
 - Typical Surface Drain Cross Section
 - Typical Subsurface Drain Installation
 - Typical Subsurface Drain Lateral Connection
 - Outlet Pipe Installation w/ Animal Guard
 - Inspection Well Installation
- All spoil is to be exported from the site per General Construction Note #5. Payment for spoil export shall be considered as incidental to payment for NRCS Items #582 and #608.
- Written notice must be provided to any property owner affected by installation of the drive culverts a minimum of seven calendar days prior to commencing the installation. Copies of written notice must be provided to the Construction Supervisor upon delivery to the property owners. Drive culvert installations should be planned such as to be completed within one working day. Drives must be made accessible at the completion of a working day either by completion of the installation or by temporary plating.
- Per General Construction Note 15, utilities are to be potholed at the following location:
 - STA 500+00
 - STA 500+35
 - STA 600+44



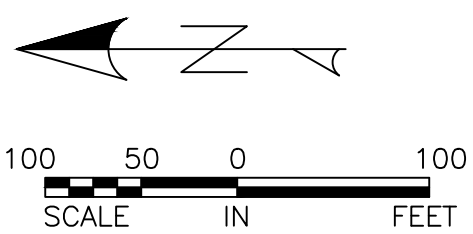
CRABILL MAIN PROFILE

CRABILL LAT #1 PROFILE



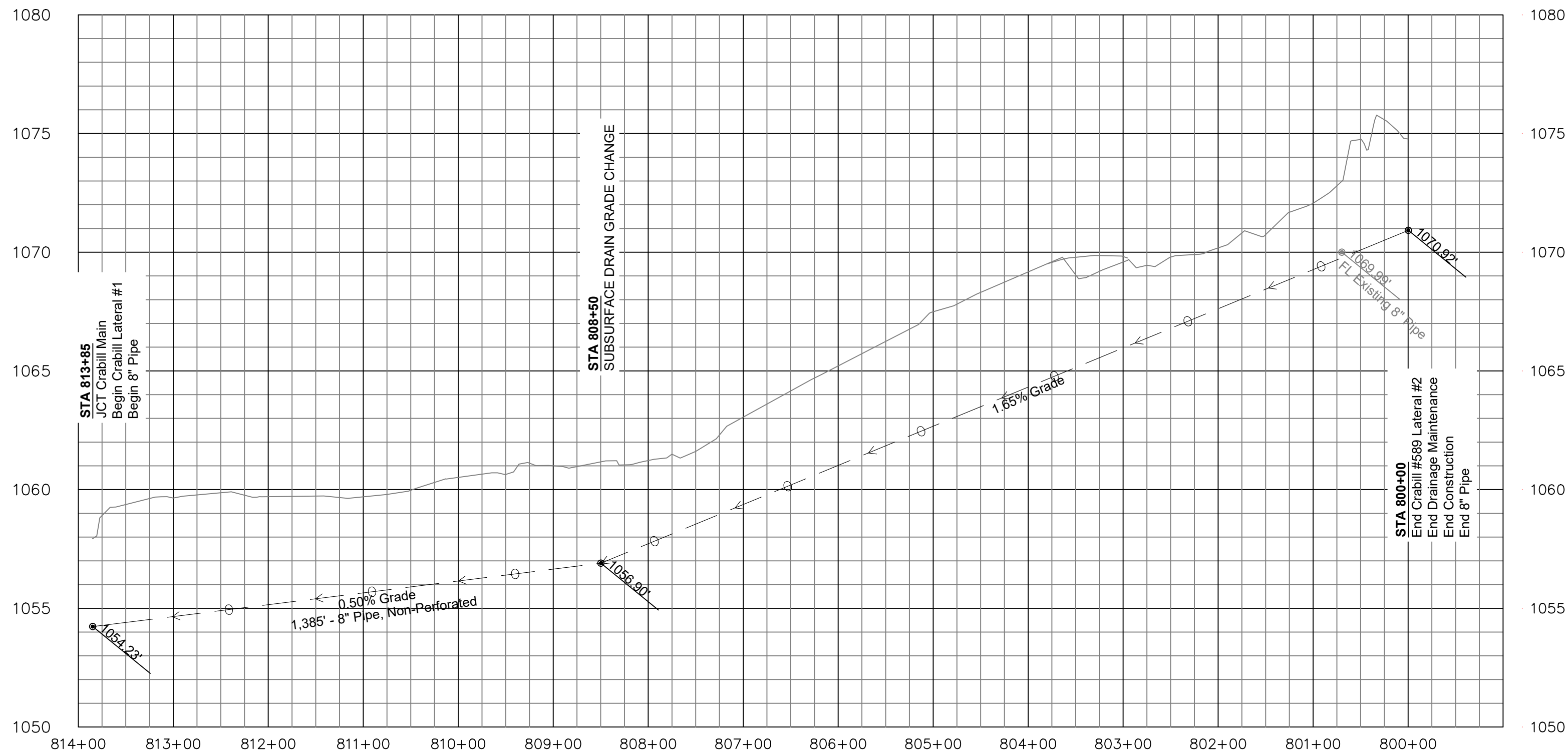
CRABILL #589 Lateral #1			
NRCS 326	Clearing & Snagging	LUMP	N/A
NRCS 606	8" Pipe, non-perforated (ODOT 707.33)	588	Lineal Feet
NRCS 606	Tile Inspection Well	7	Each
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	20	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	1,500	Square Yards
CRABILL #589 Lateral #2			
NRCS 326	Clearing & Snagging	LUMP	N/A
NRCS 606	8" Pipe, non-perforated (ODOT 707.33)	1,325	Lineal Feet
NRCS 606	Tile Inspection Well	11	Each
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	40	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Concrete Drive	20	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	3,200	Square Yards

CRABILL #589



Inspection Well Installation Stations	
STA 800+00	
STA 800+33	
STA 800+70	
STA 802+51	
STA 803+22	
STA 805+12	
STA 808+20	
STA 809+65	
STA 810+70	
STA 811+50	
STA 812+30	

CRABILL LAT #2 PROFILE



CRABILL #589 Lateral #1			
NRCS 326	Clearing & Snagging	LUMP	N/A
NRCS 606	8" Pipe, non-perforated (ODOT 707.33)	588	Lineal Feet
NRCS 606	Tile Inspection Well	7	Each
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	20	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	1,500	Square Yards
CRABILL #589 Lateral #2			
NRCS 326	Clearing & Snagging	LUMP	N/A
NRCS 606	8" Pipe, non-perforated (ODOT 707.33)	1,325	Lineal Feet
NRCS 606	Tile Inspection Well	11	Each
ODOT 611	8" Pipe (707.33), Type B Installation, Asphalt Drive	40	Lineal Feet
ODOT 611	8" Pipe (707.33), Type B Installation, Concrete Drive	20	Lineal Feet
ODOT 659	Seeding & Mulching, Class 1, no anchoring	3,200	Square Yards

HOOVER #61
DRAINAGE IMPROVEMENT PROJECT
ENGINEERING DRAWINGS

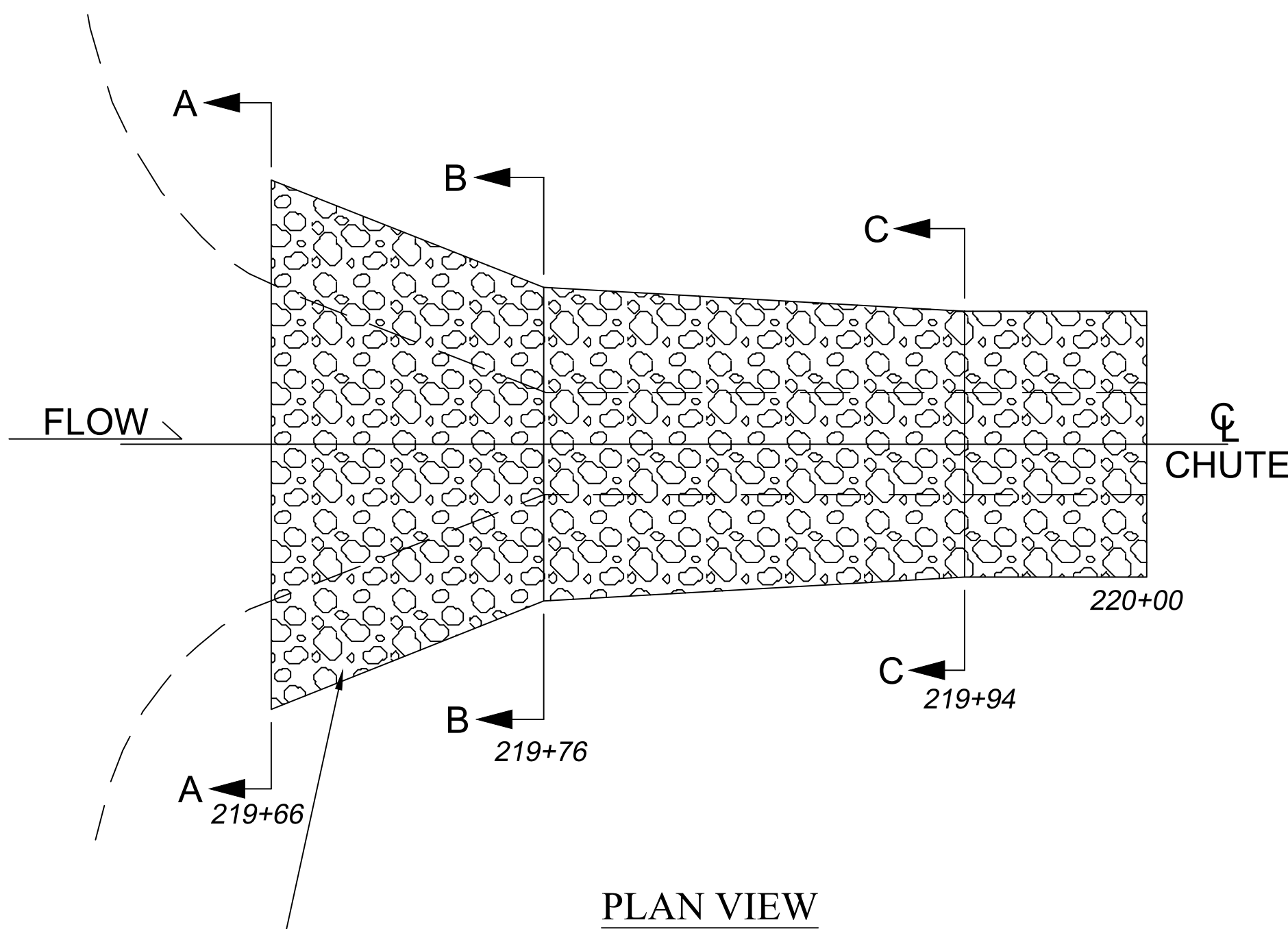
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LEGEND	
Existing SSD	
Proposed Mains	
Building	
Septic System	
Pond	
Woodlands	
Road	
Driveway	
Benchmark	

Lot	Owner	Address	Parcel Number
49	Anthony & Kelly Borer	3476 State Route 605 S	31624001085000
50	Anthony & Kelly Borer	State Route 605 S	31624001084000
51	William McGlothlin	3498 State Route 605 S	31624001083000
52	Allen Cantley	3510 State Route 605 S	31624001082000
53	Terry & Pamela Johnson	3560 State Route 605 S	31624001081000
54	Terry & Pamela Johnson	State Route 605 S	31624001080000
55	Laraine Weaver	3616 State Route 605 S	31624001078000
56	Paul & Bethanie Franey	3630 State Route 605 S	31624001076000
57	Michael & Lindsey Castle	3623 Rich Dr	31624001074000
58	Edward Valeska	3658 State Route 605 S	31624001051000

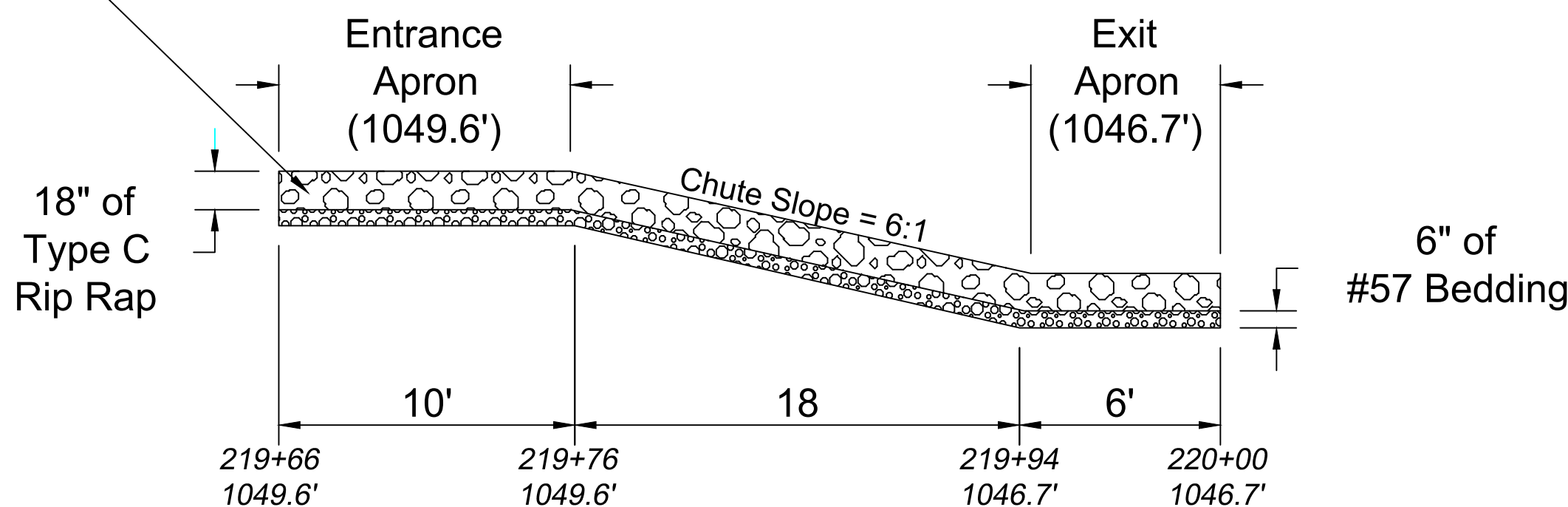
CONSTRUCTION NOTES

- All General Construction Notes on P. 2 of 6 shall apply.
- Clearing and snagging will be performed within the limits of the channel and swale construction as per the instructions in the General Construction Notes. All debris from clearing and snagging is to be exported from the site. Payment for export of debris shall be considered as incidental to payment for NRCS Item #326.
- Details to be referenced on p. 2 of 6:
 - Typical Surface Drain Cross Section
 - Typical Subsurface Drain Installation
 - Typical Subsurface Drain Lateral Connection
 - Outlet Pipe Installation w/ Animal Guard
 - Inspection Well Installation
- All spoil is to be exported from the site per General Construction Note #5. Payment for spoil export shall be considered as incidental to payment for NRCS Items #582 and #608.
- Written notice must be provided to any property owner affected by installation of the drive culverts a minimum of seven calendar days prior to commencing the installation. Copies of written notice must be provided to the Construction Supervisor upon delivery to the property owners. Drive culvert installations should be planned such as to be completed within one working day. Drives must be made accessible at the completion of a working day either by completion of the installation or by temporary plating.
- Per General Construction Note 15, utilities are to be potholed at the following location:
 - STA 800+60

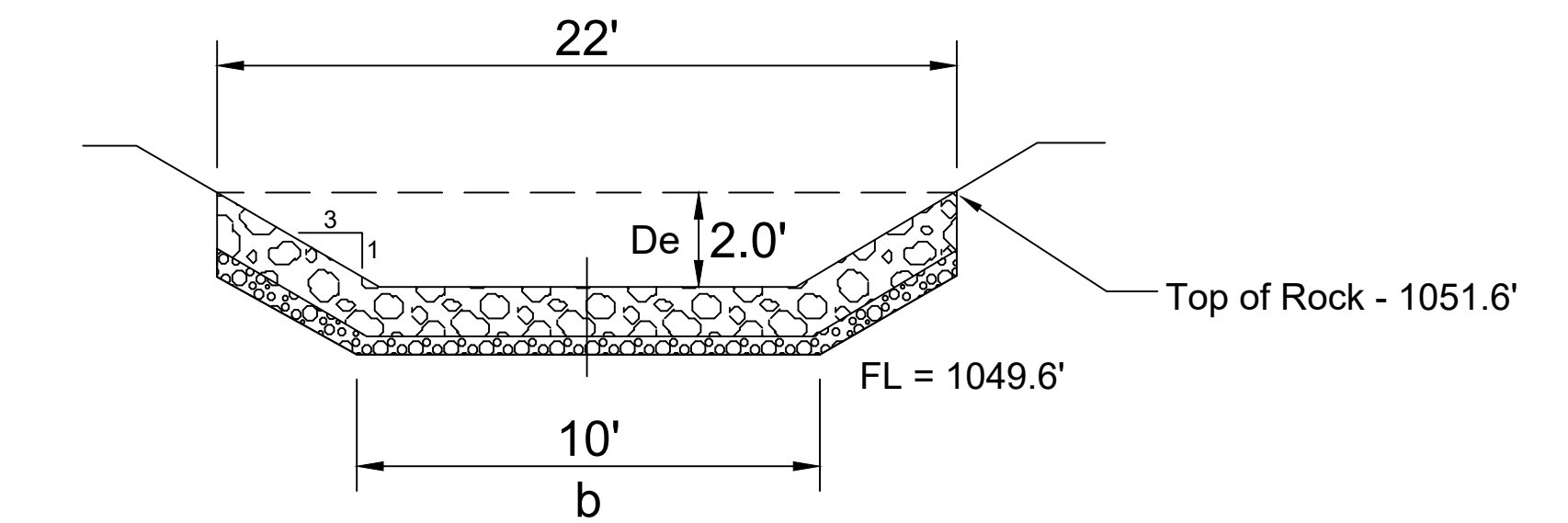


PLAN VIEW

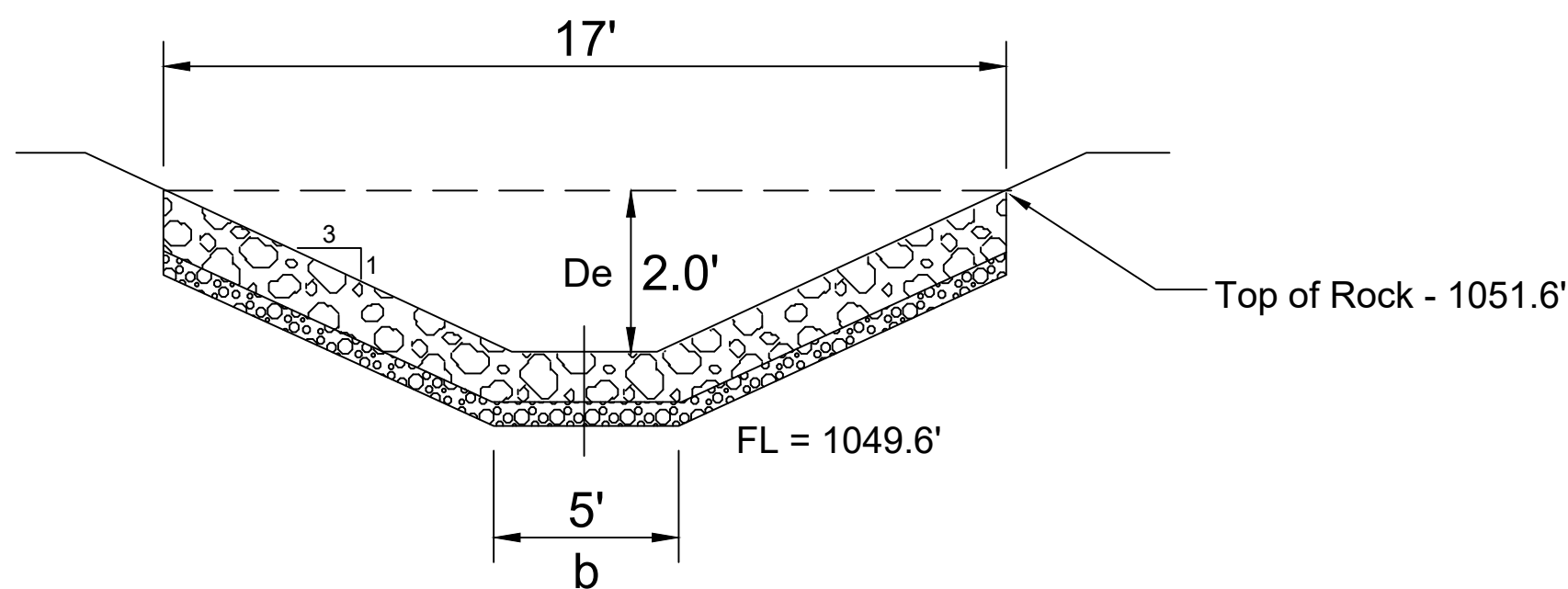
Type C shall consist of sizes such that at least 85 percent of the total material by weight shall be larger than an 6 inch (150 mm) but less than a 18 inch (0.5 m) square opening. At least 50 percent of the total material by weight shall be larger than a 12 inch (0.3 m) square opening. The material smaller than a 6 inch (150 mm) square opening shall consist predominantly of rock spalls and rock fines and shall be free of soil.



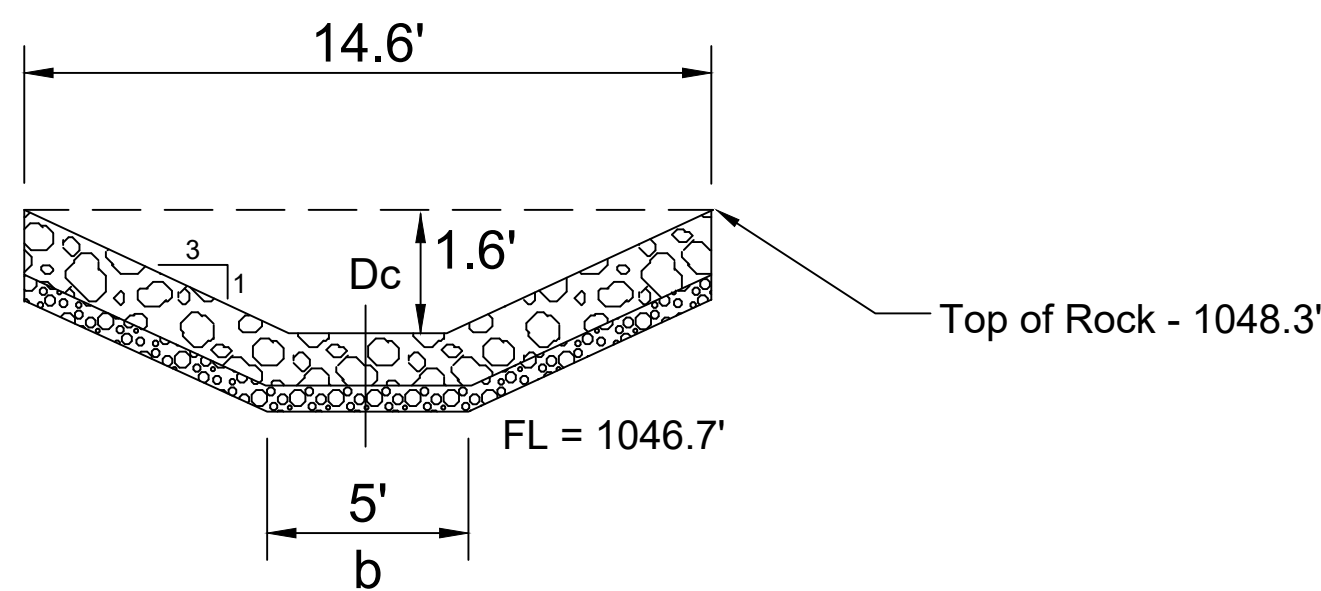
PROFILE ALONG CL OF ROCK CHUTE



SECTION A-A



SECTION B-B



SECTION C-C

MATERIAL GRADATIONS	
RIPRAP	
WEIGHT OF INDIVIDUAL PIECES (LBS)	PERCENT OF NUMBER OF PIECES
150-200	4
100-150	6
50-100	20
10-50	30
0-10	40
GRAVEL BEDDING(EQUIVALENT TO NO.57)	
SIZE-(INCHES)	PERCENT PASSING
1 1/2	100
1	95-100
1/2	25-60
NO. 4	0-10
NO. 8	0-5

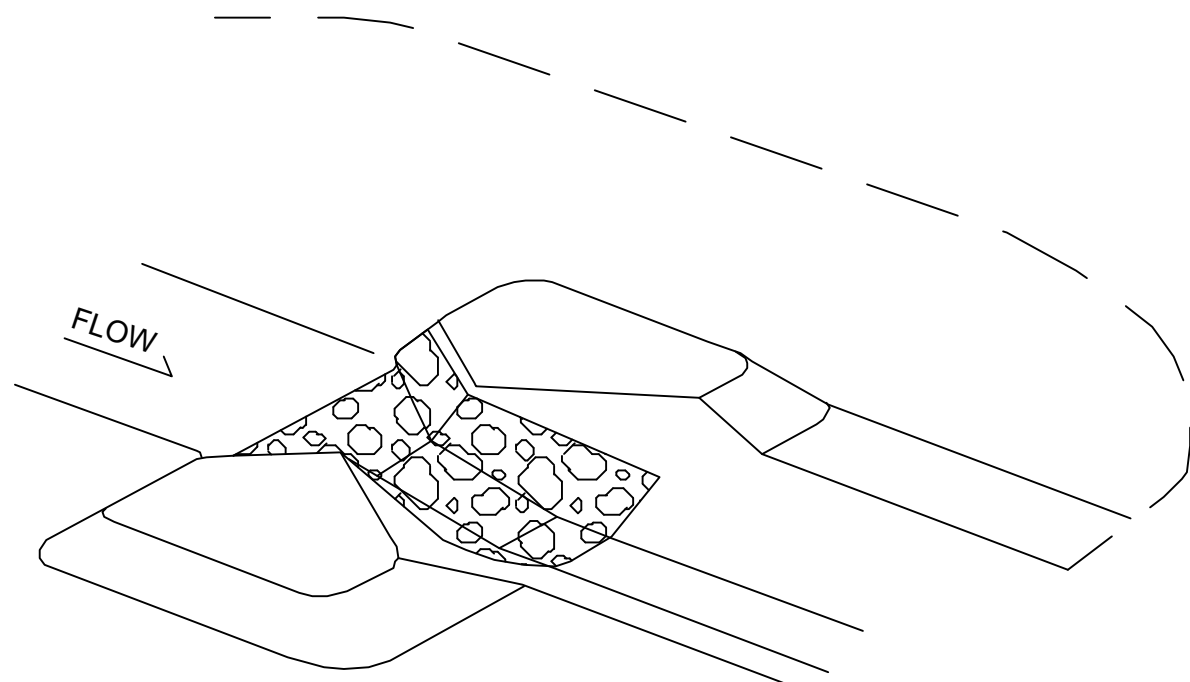
NOTES:

- ALL FILL SHALL BE COMPACTED IN 12" LAYERS WITH TWO PASSES OF WHEELED HEAVY EQUIPMENT OVER ALL THE SURFACE OF THE LAYER.
- BEDDING AND RIPRAP SHALL BE DENSE, DURABLE, ANGULAR ROCK. BEDDING SHALL BE PLACED AND INSPECTED BEFORE PLACING RIPRAP. RIPRAP SHALL BE PLACED TO A UNIFORM DEPTH.

EQUIVALENT ROCK SIZES (165 pcf)		
WEIGHT (LBS)	TYPICAL DIMENSIONS (INCHES)	COMMON SIZE (INCHES)
200	8 X 15 X 18	15
150	8 X 12 X 16	12
100	7 X 10 X 14	10
50	6 X 8 X 11	8
10	3 X 6 X 6	6

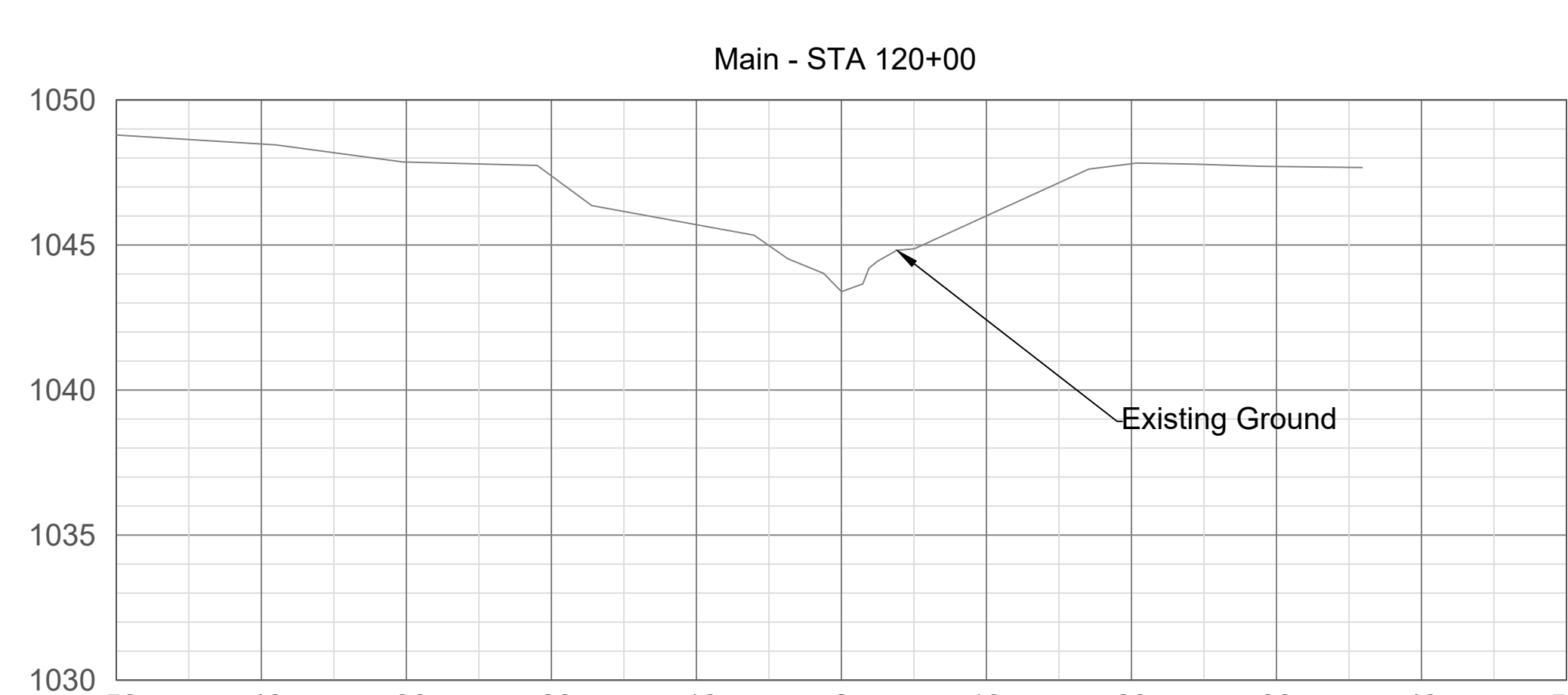
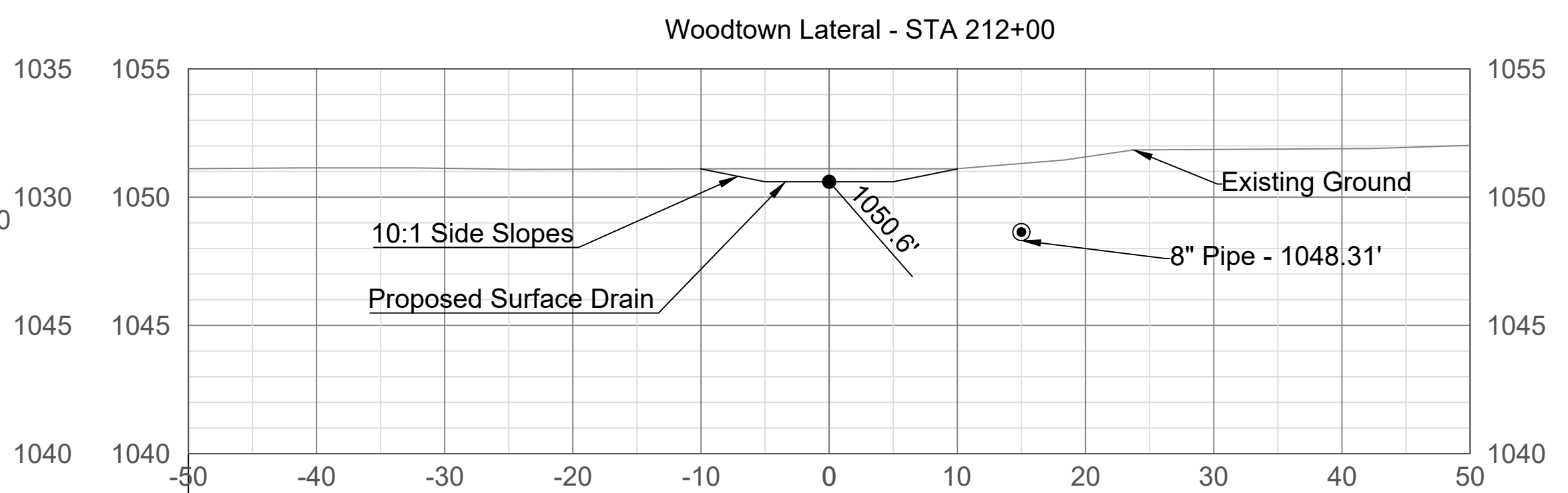
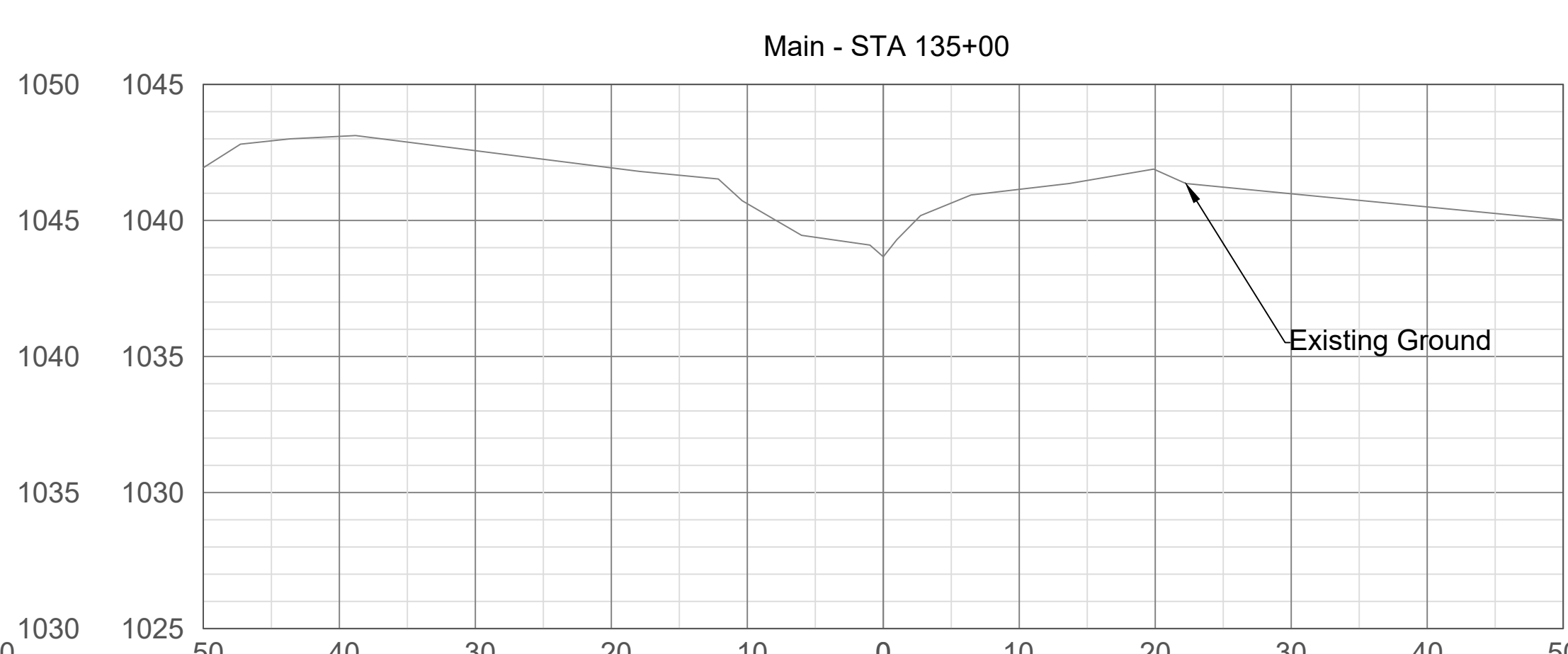
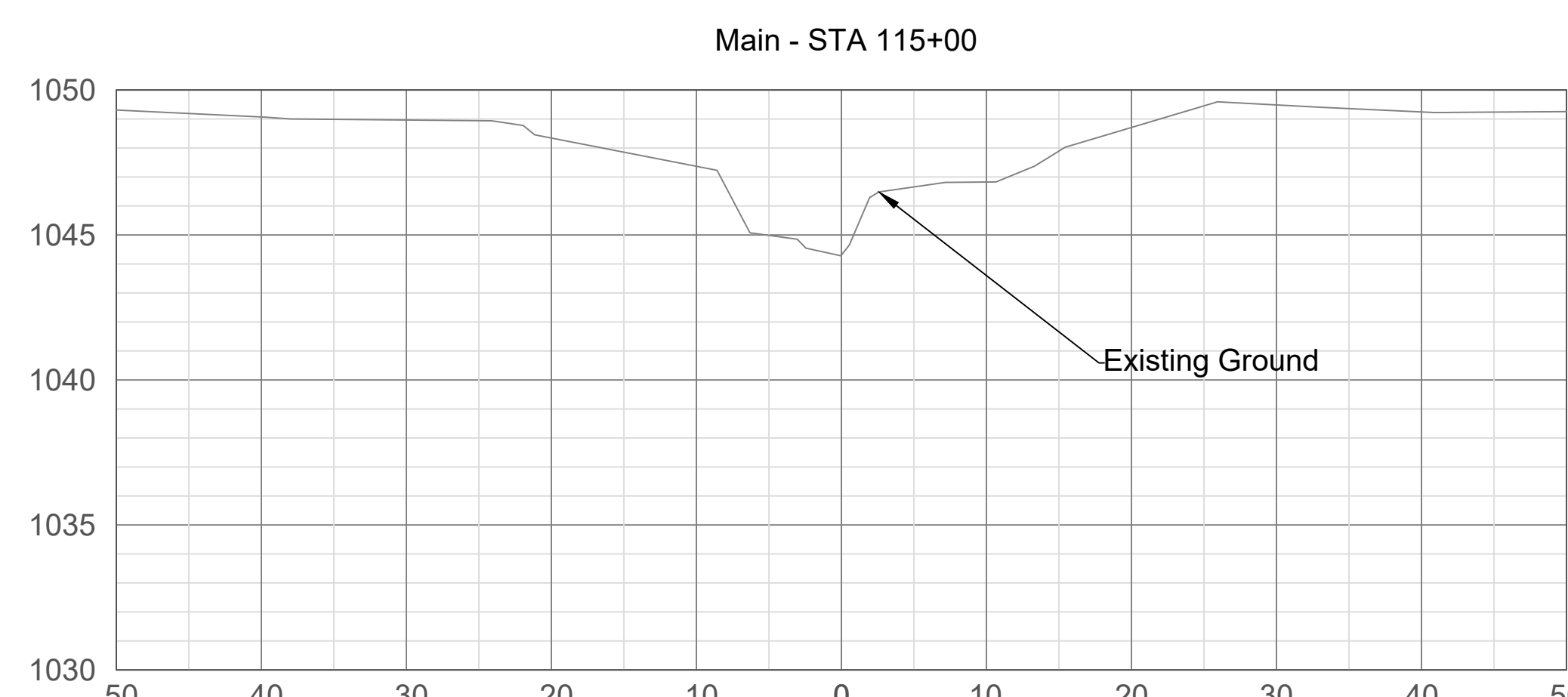
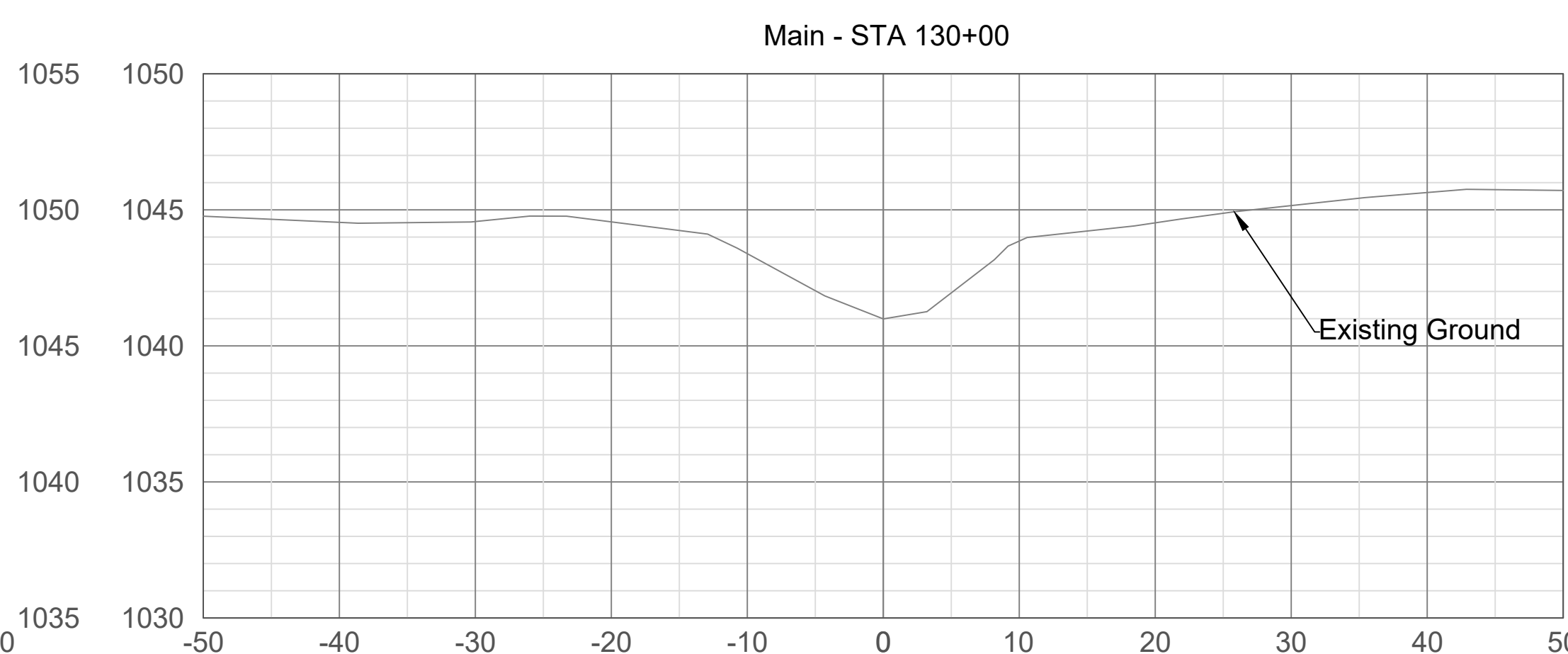
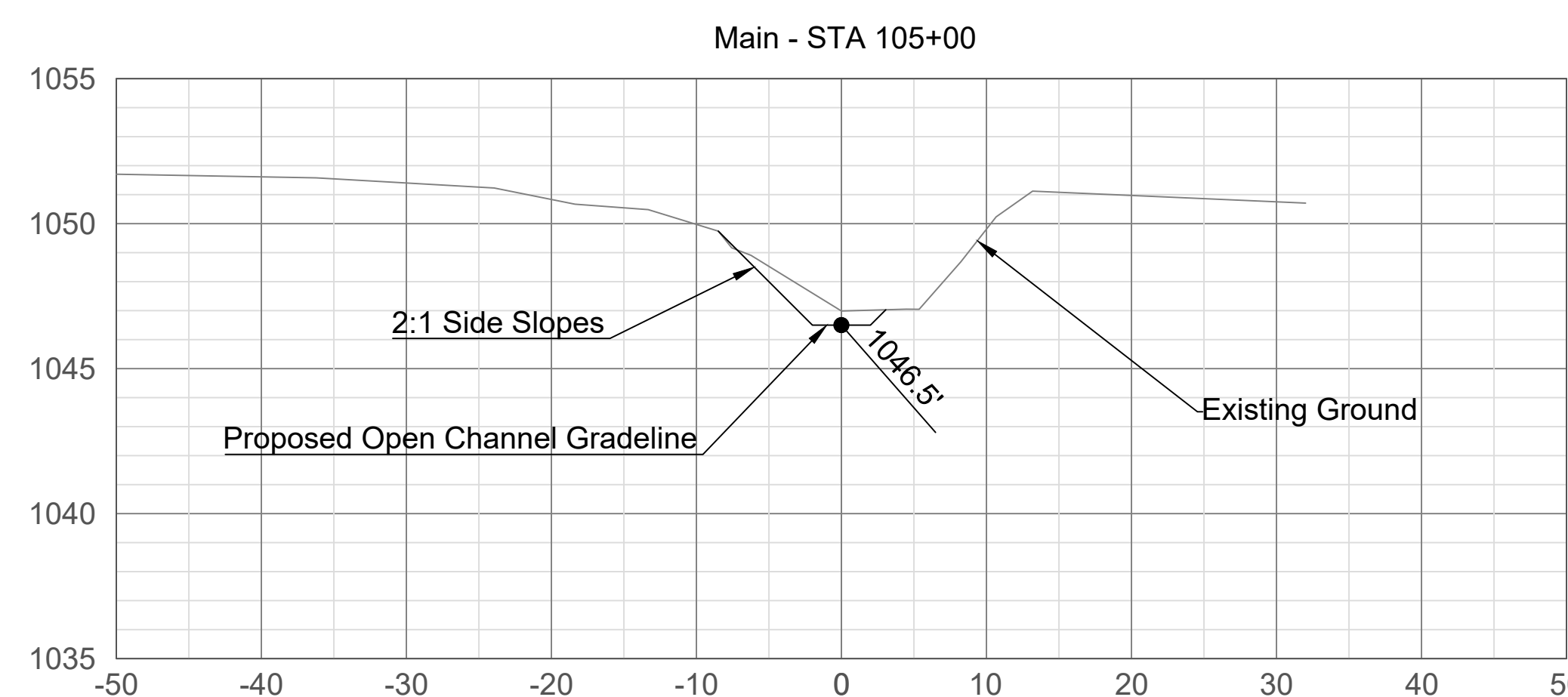
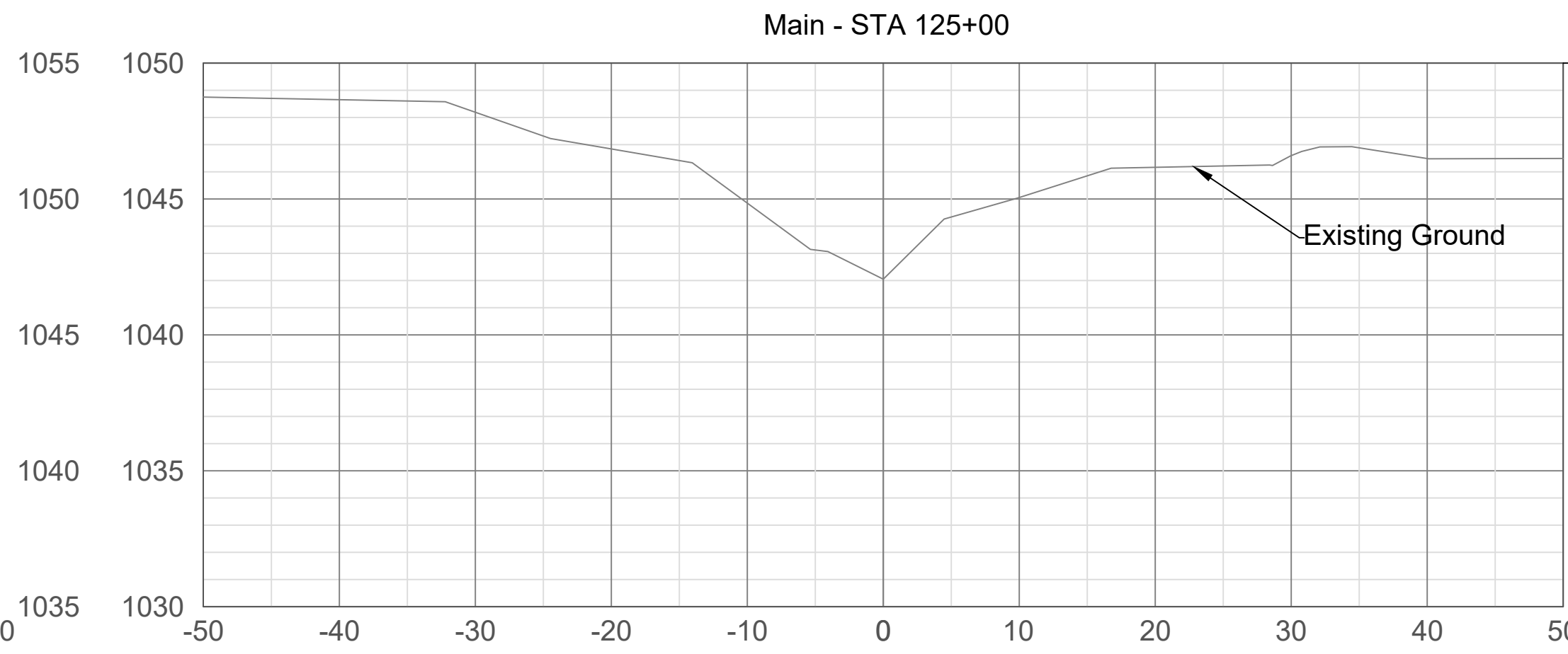
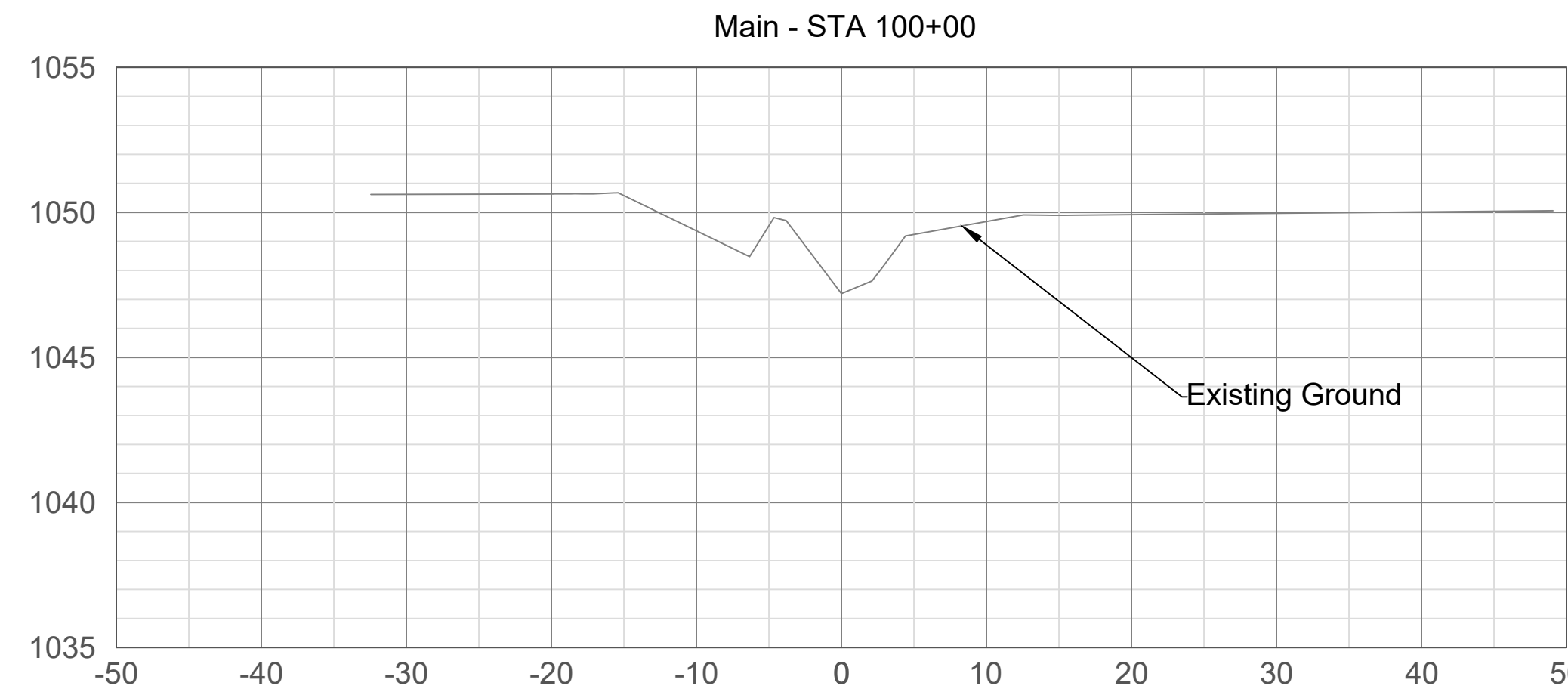
Design Data

Acres Drained	32
Chute Slope	6:1
Bottom Width (b) Varies	5'-10'
Side Slopes	3:1
De	2.0'
Dc	1.6'
V	9.4 FPS
Entrance Elevation	1049.6'
Exit Apron Elevation	1046.7'
Overfall	2.9'
Entrance Apron Length	10'
Exit Apron Length	6'
Type "C" Stone (Tons)	48.8
#57 Gravel Bedding (Tons)	16.2

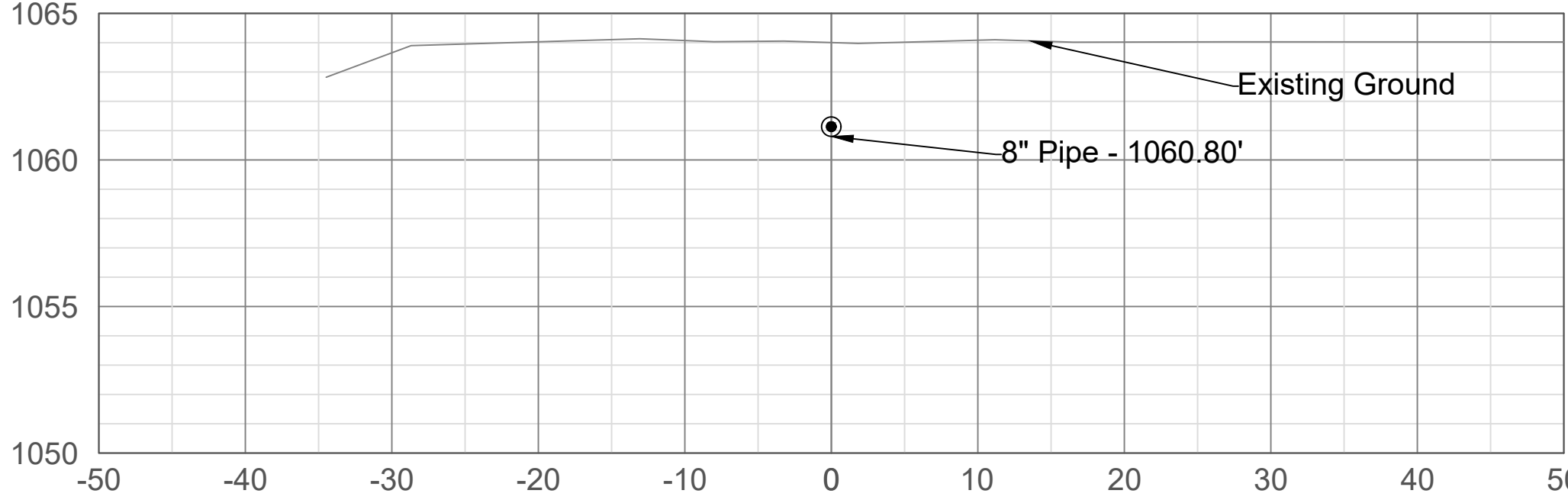


ISOMETRIC VIEW

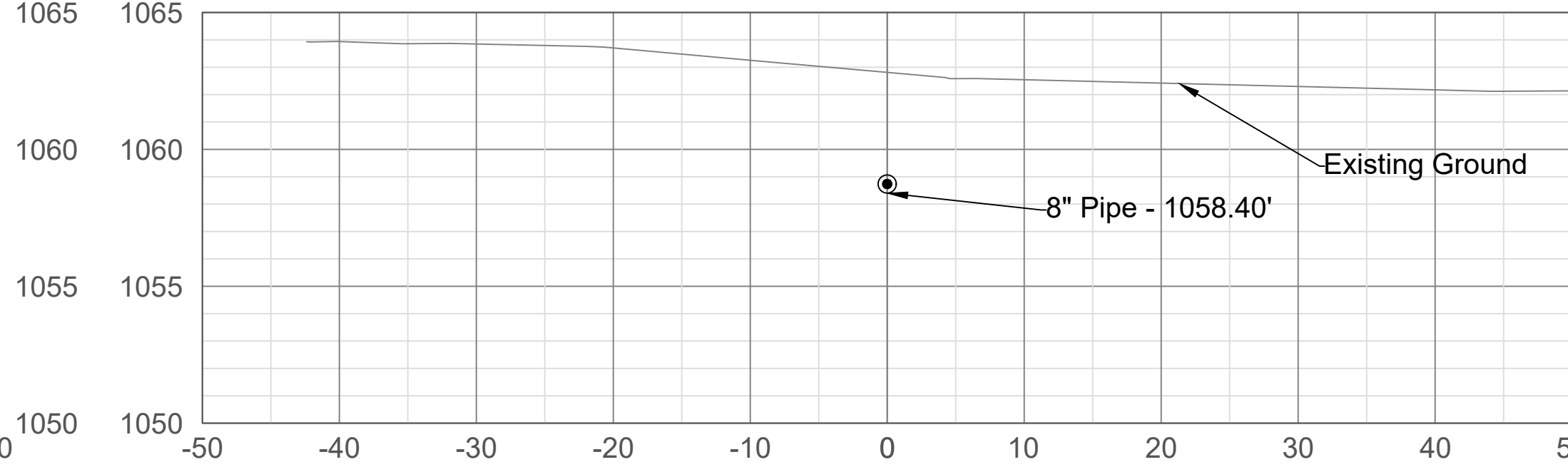
CROSS-SECTIONS



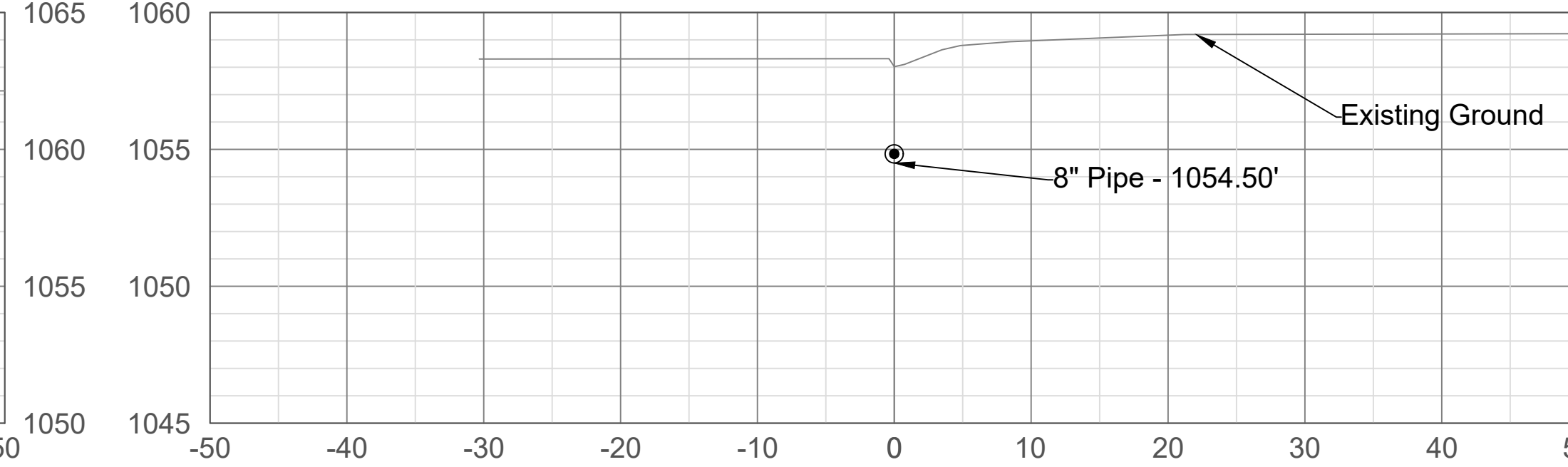
McElwee #329 - STA 402+00



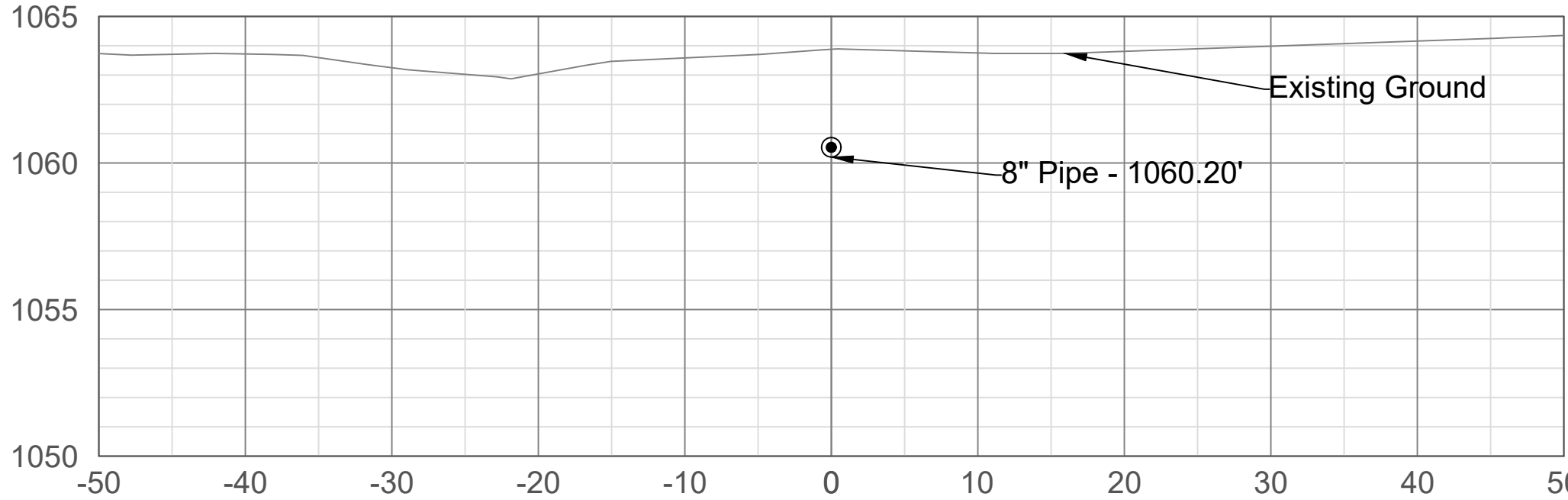
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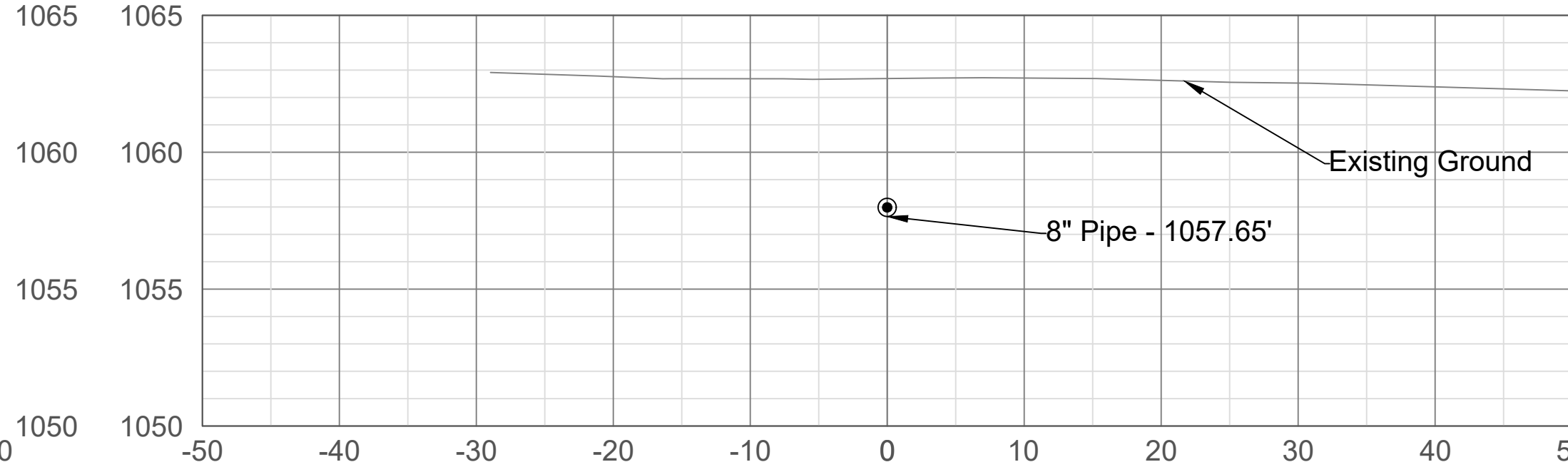
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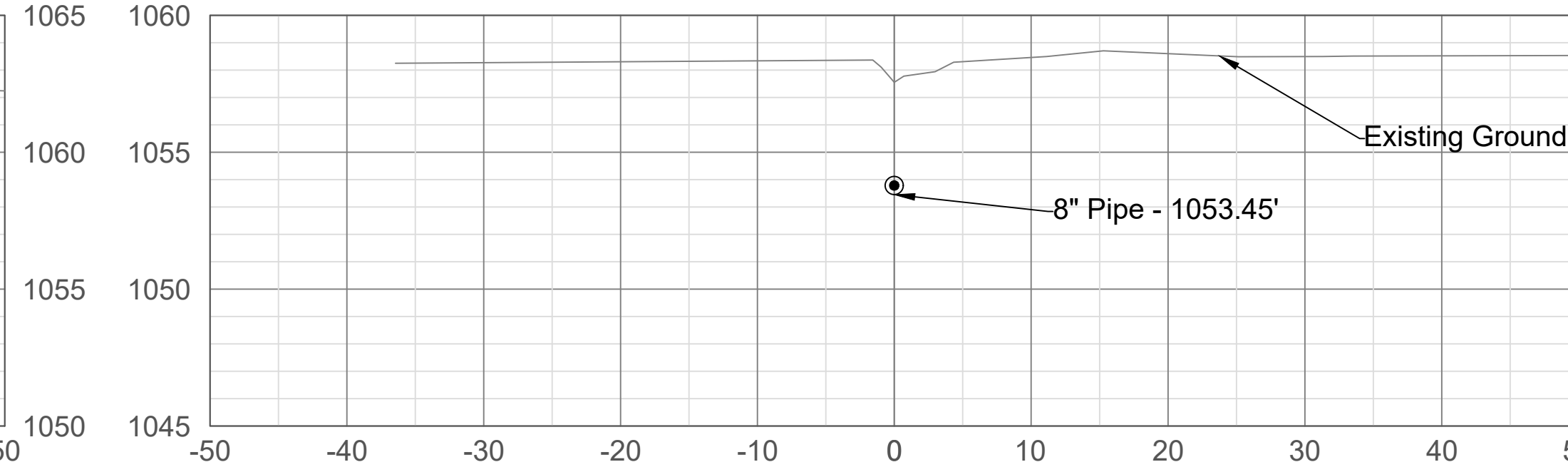
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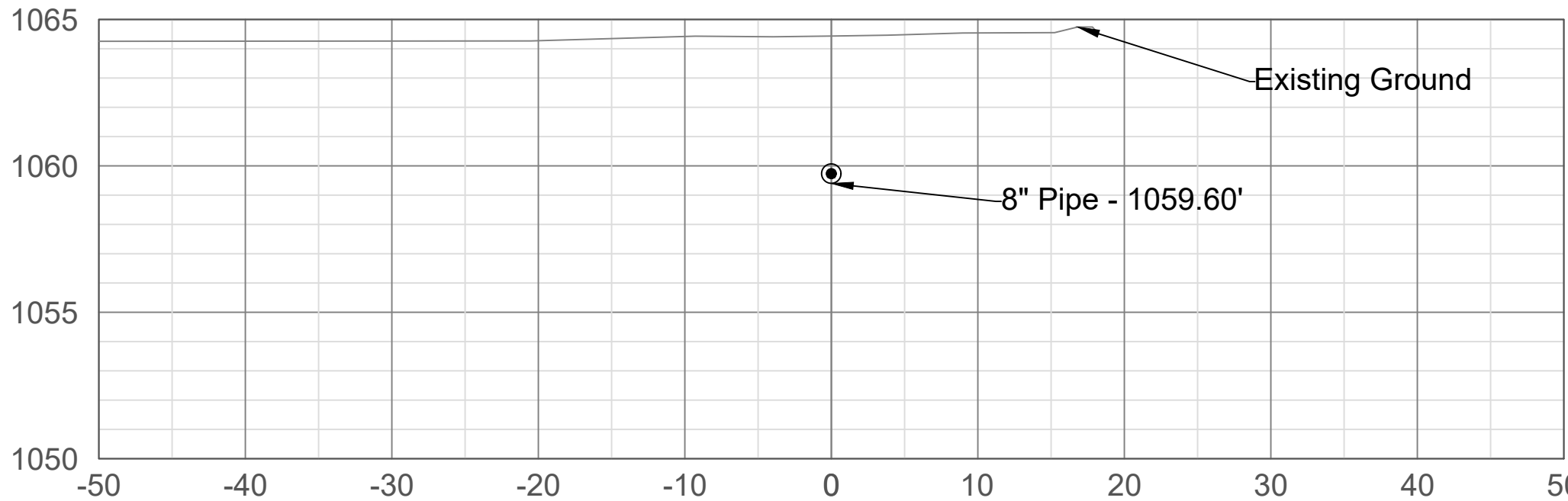
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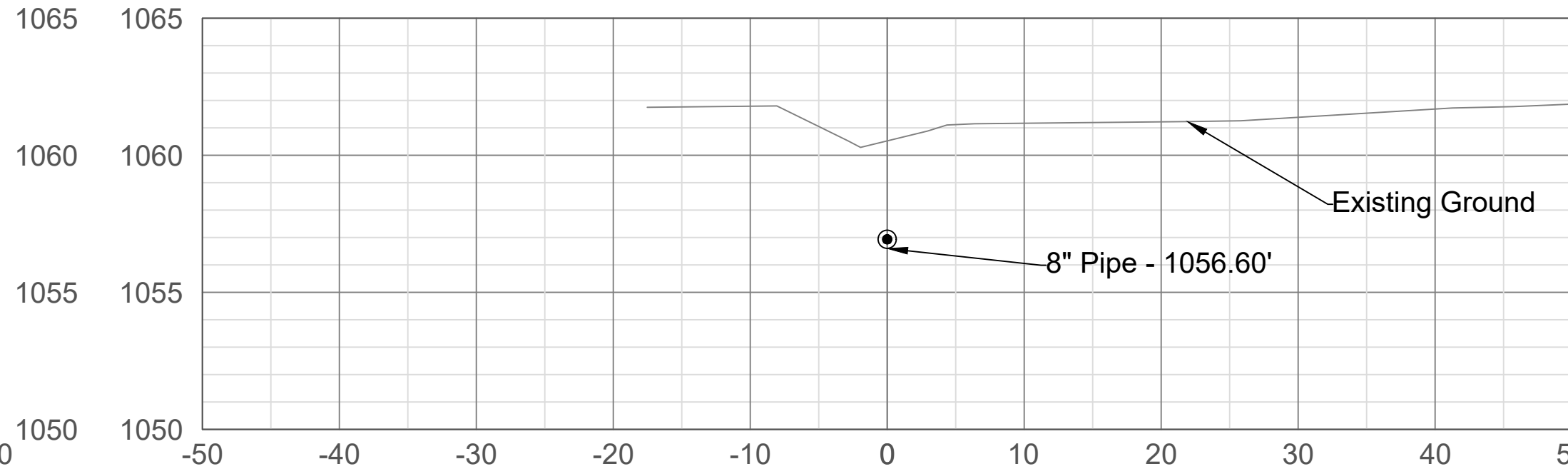
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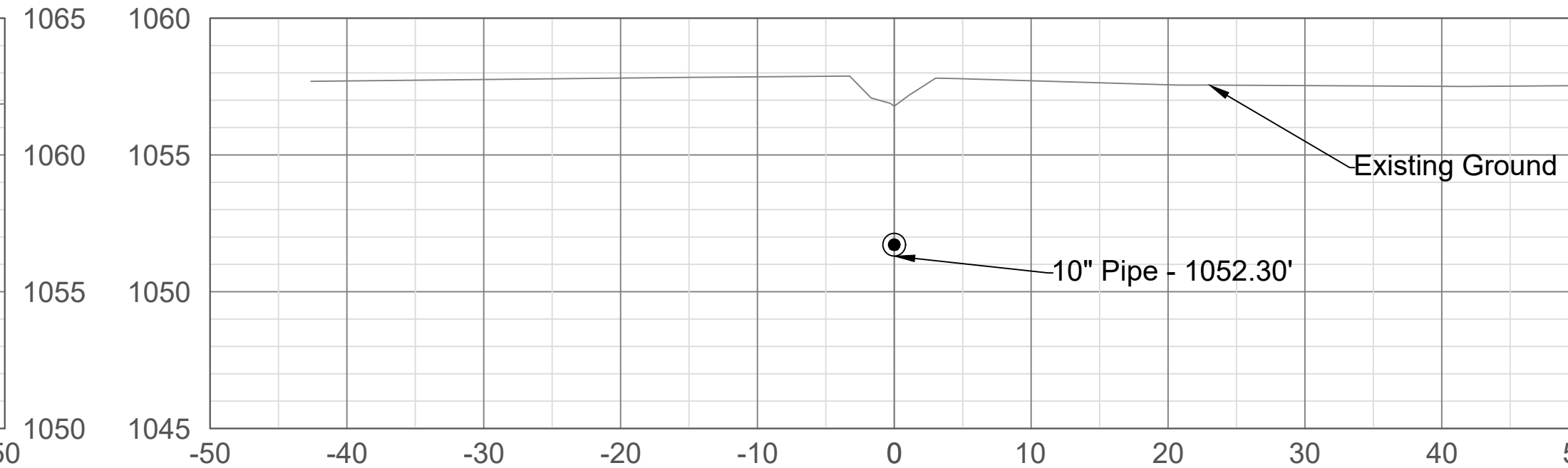
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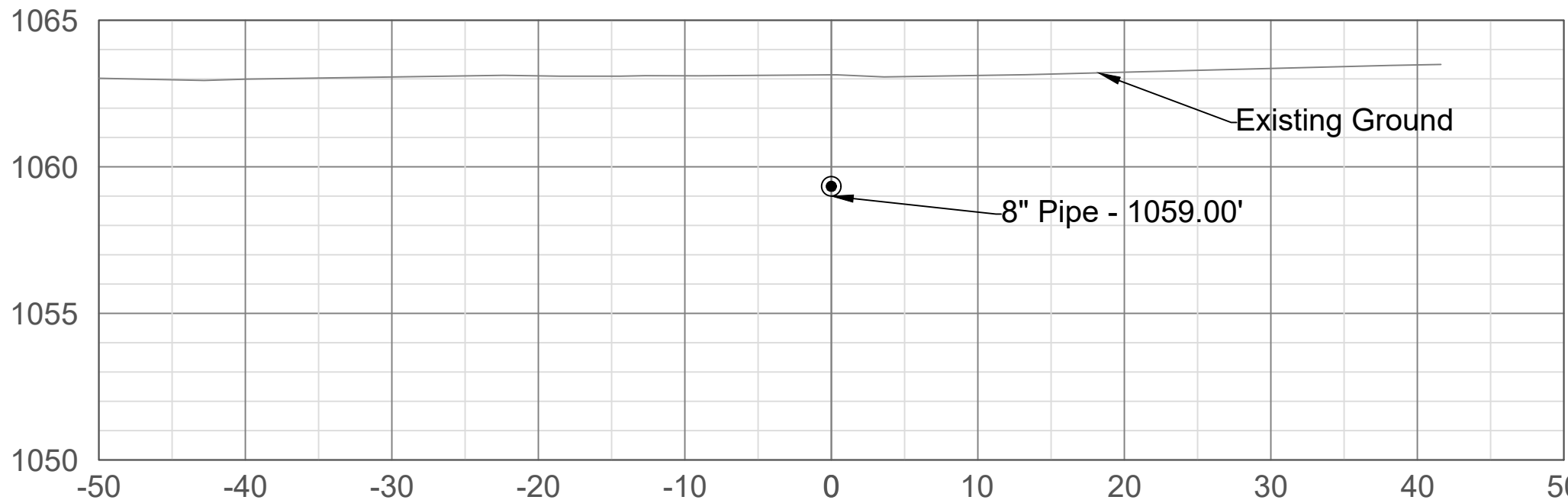
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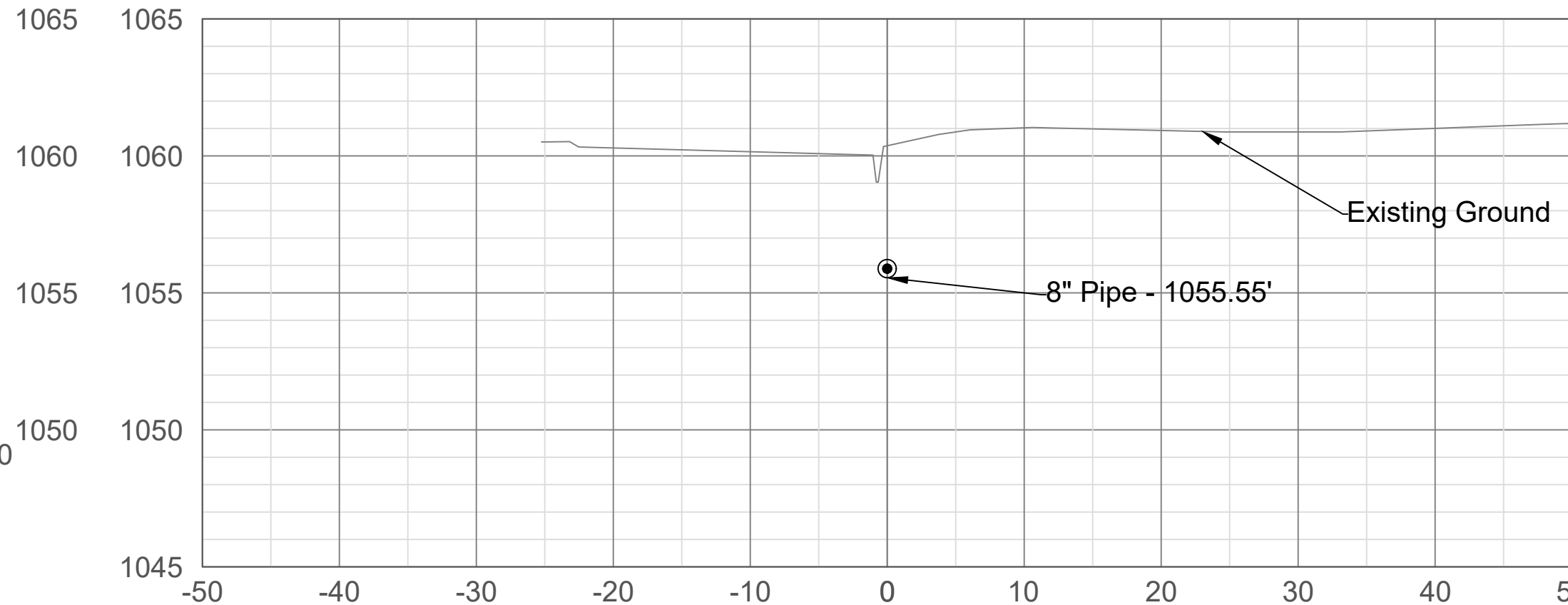
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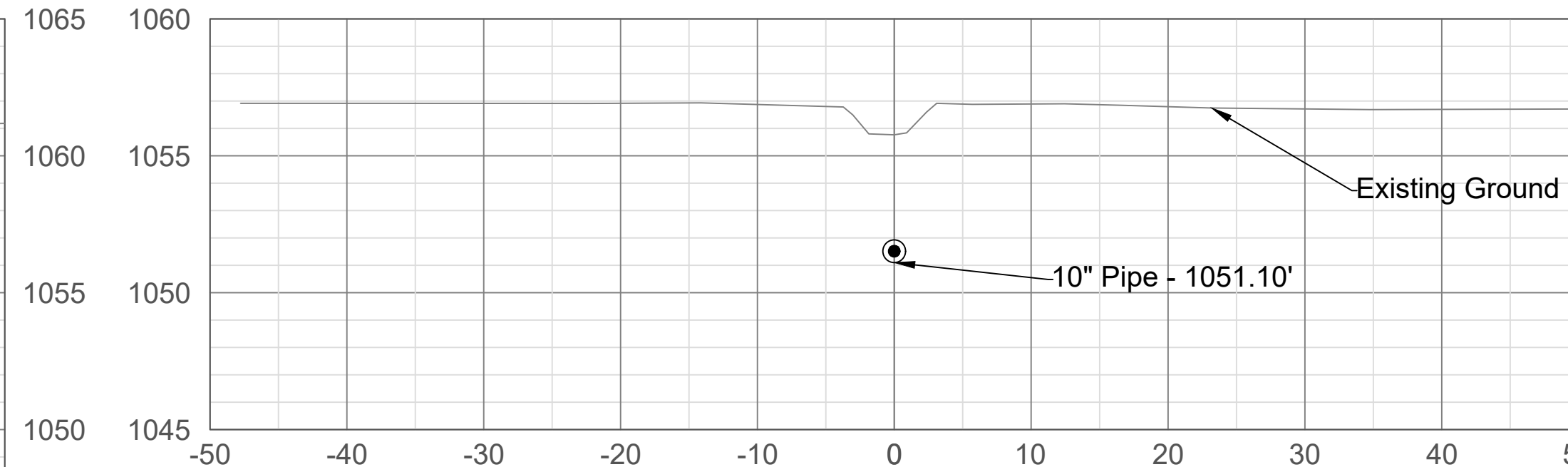
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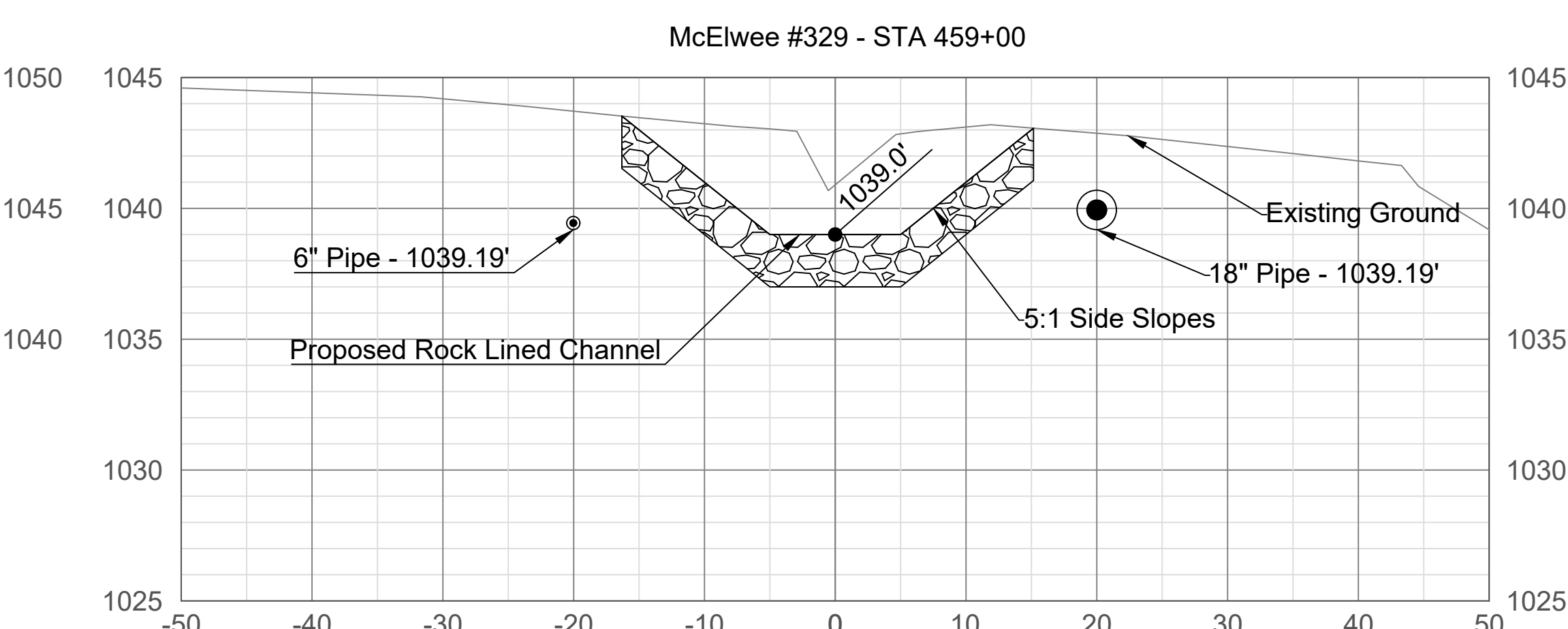
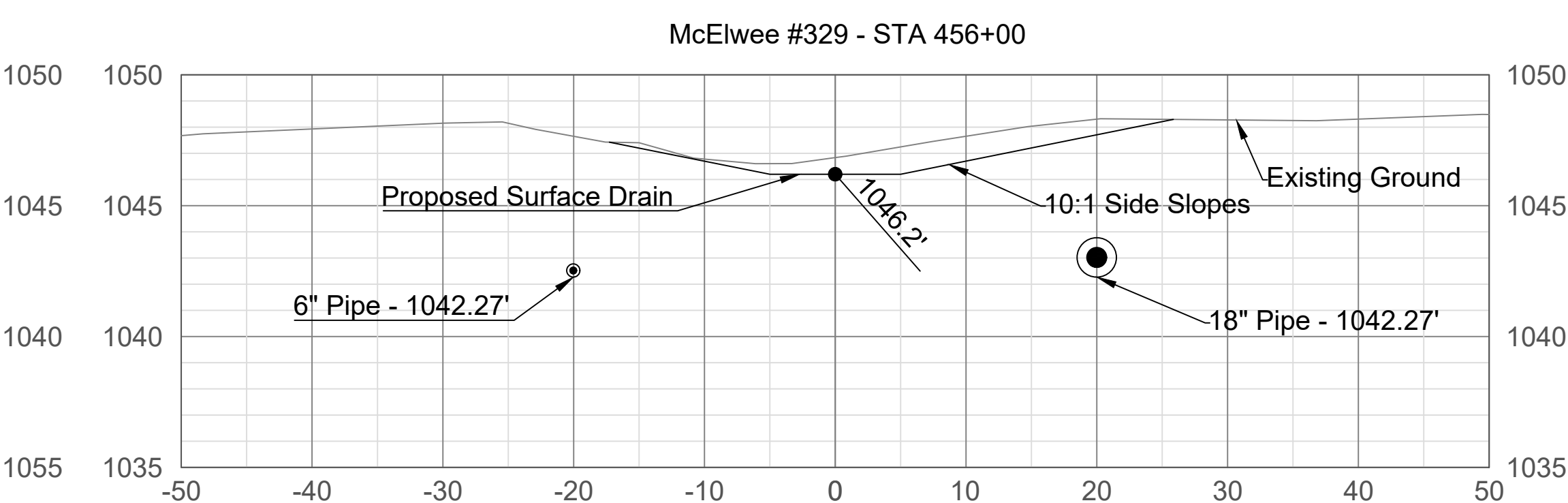
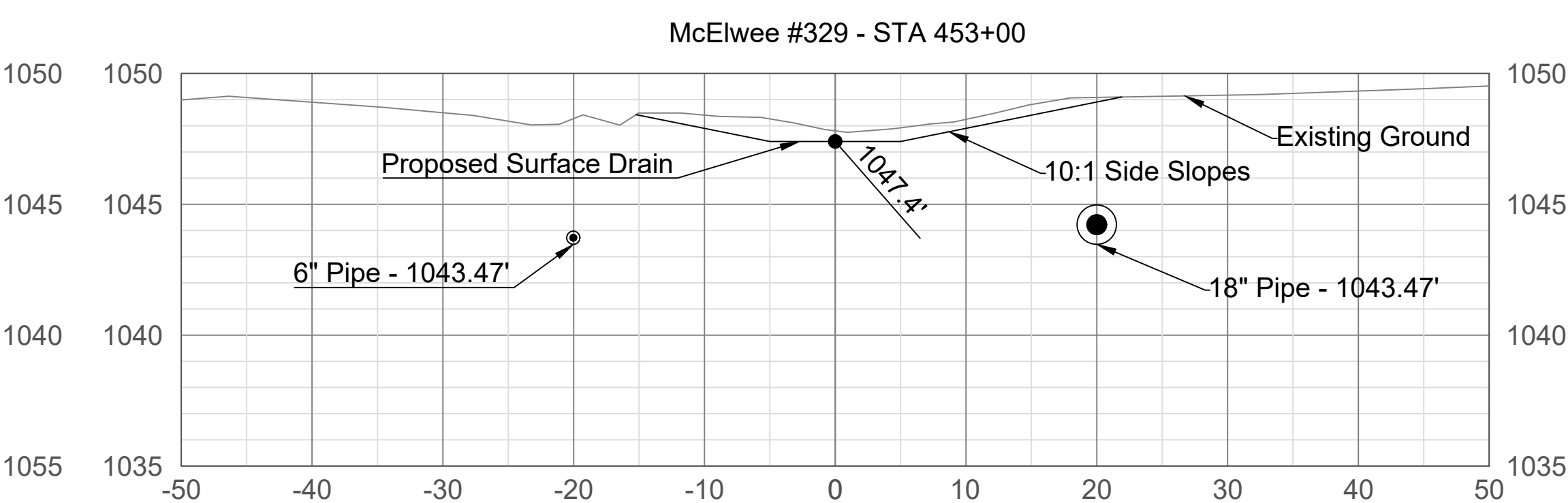
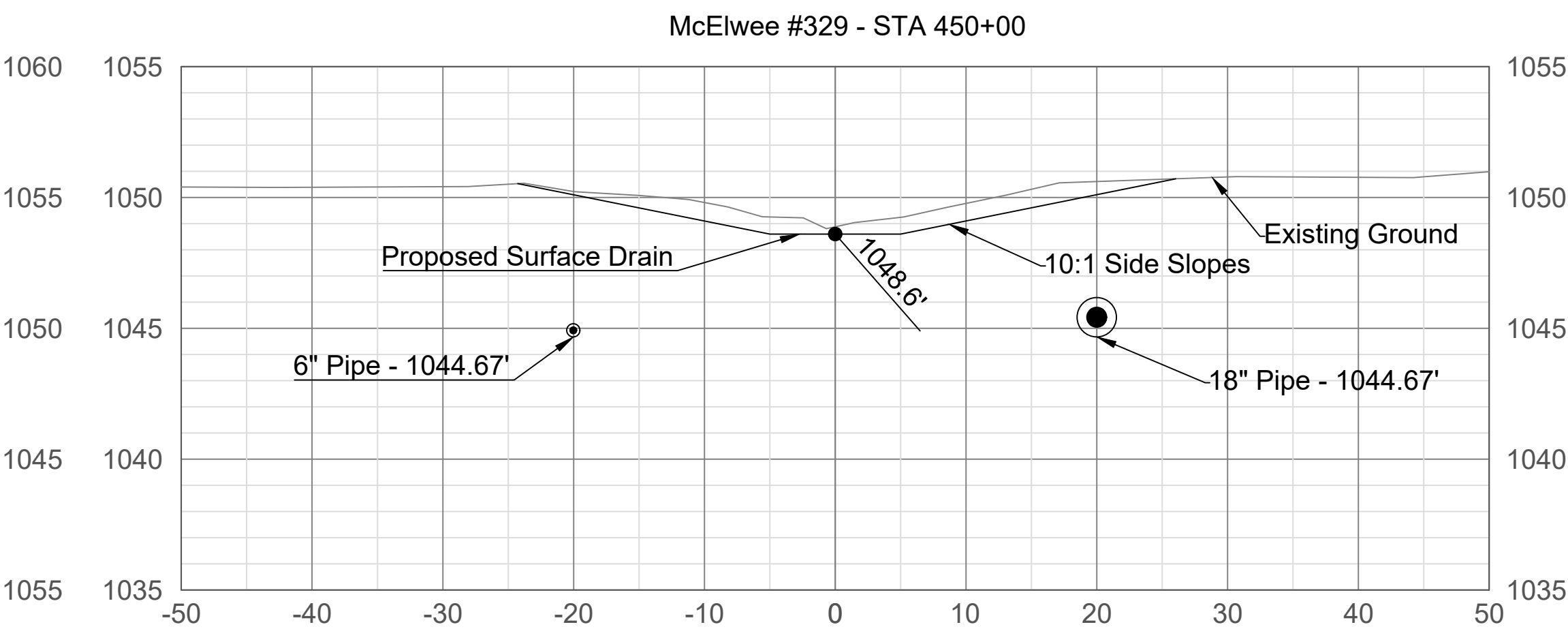
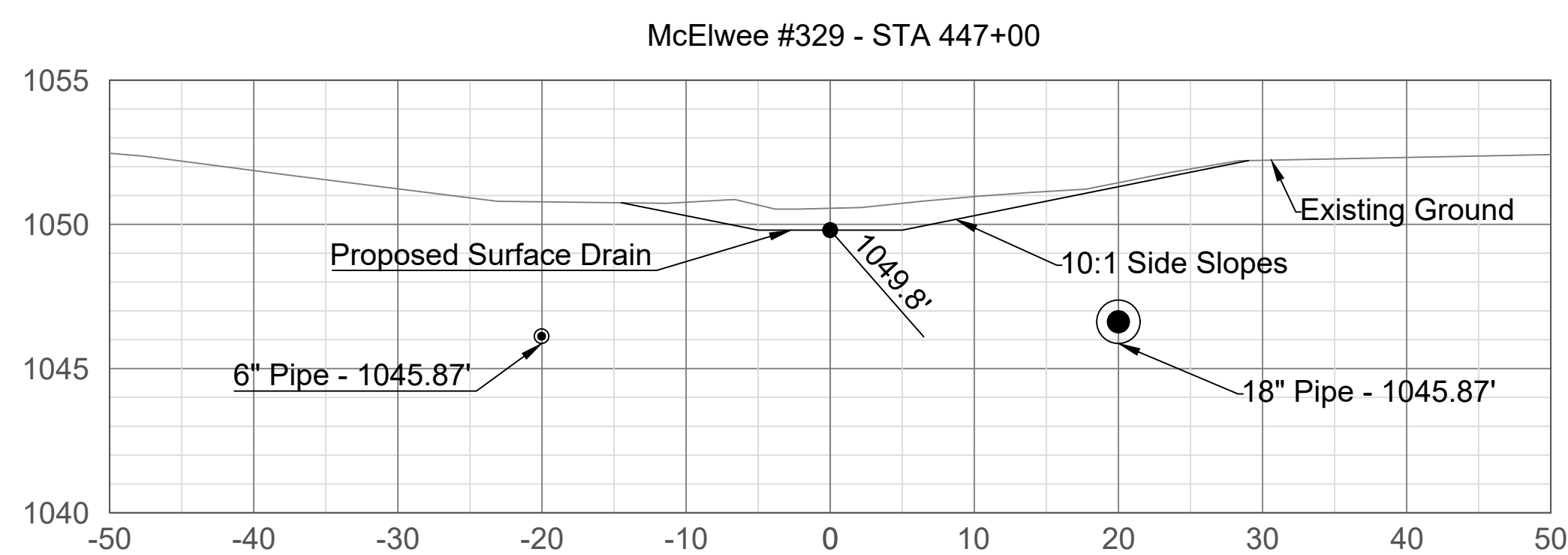
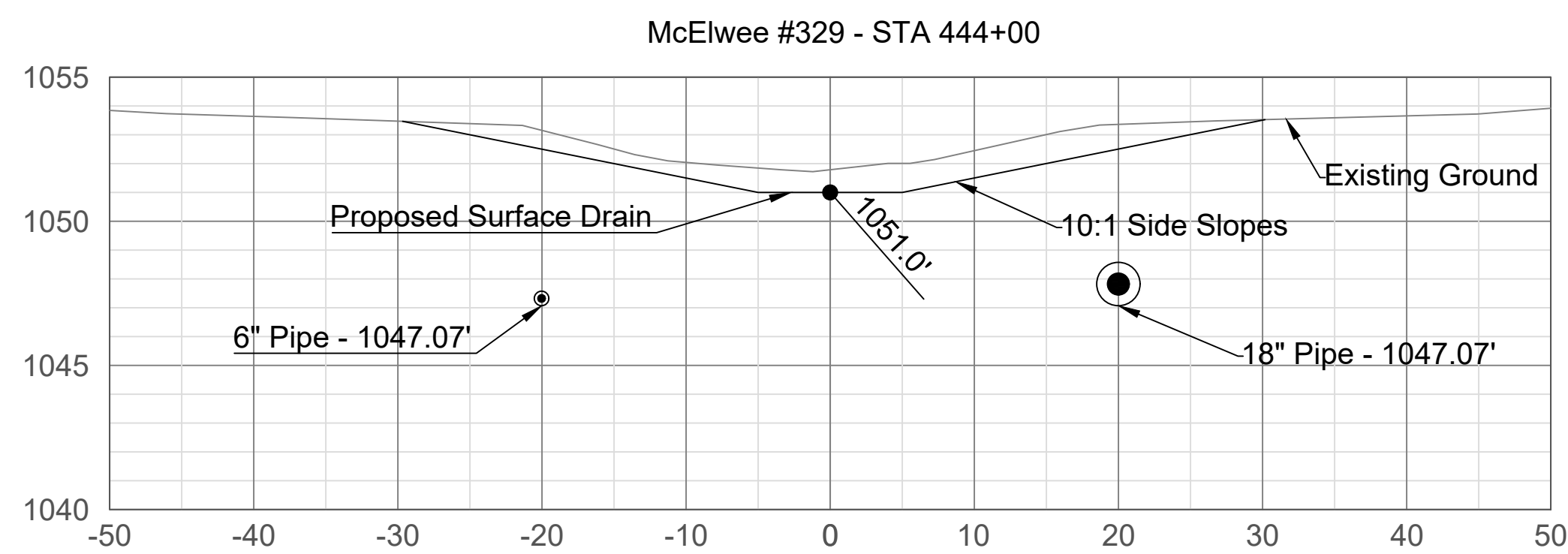
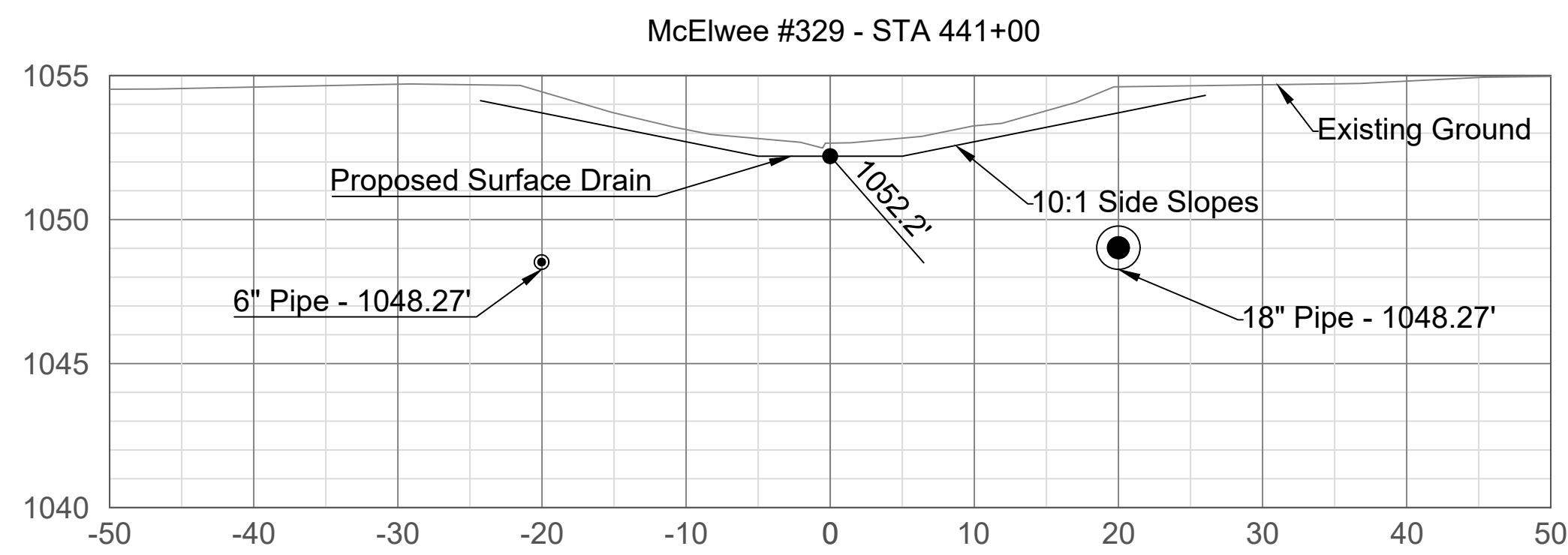
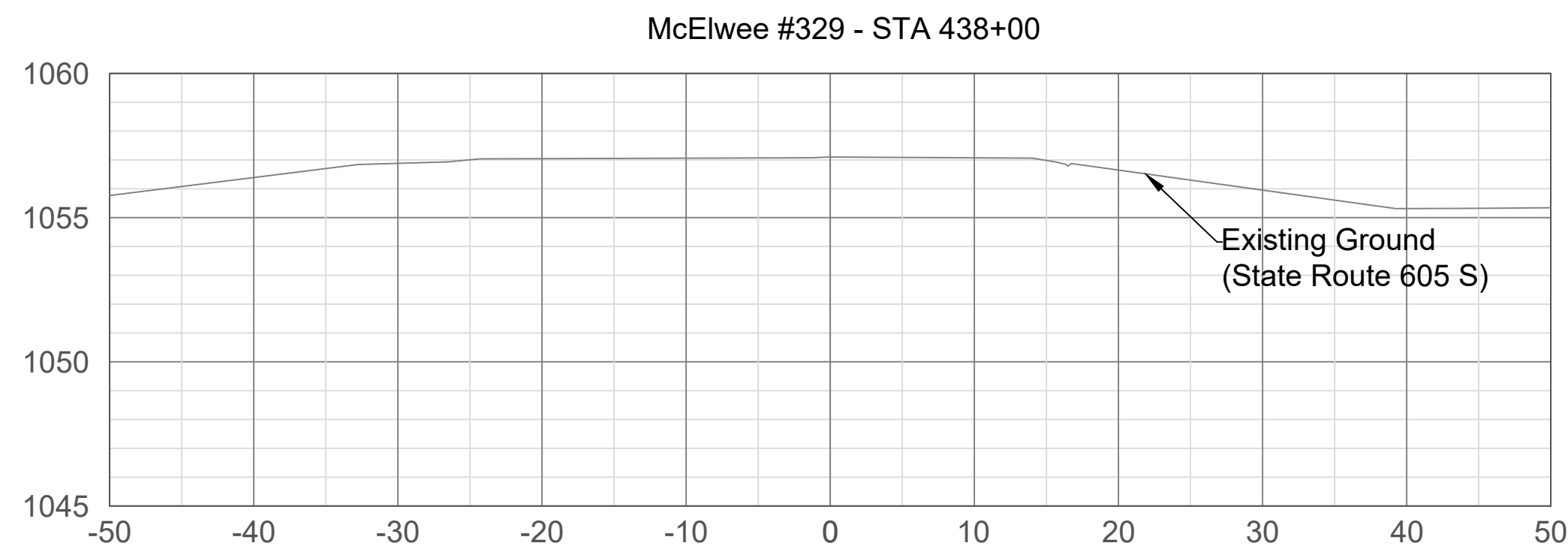
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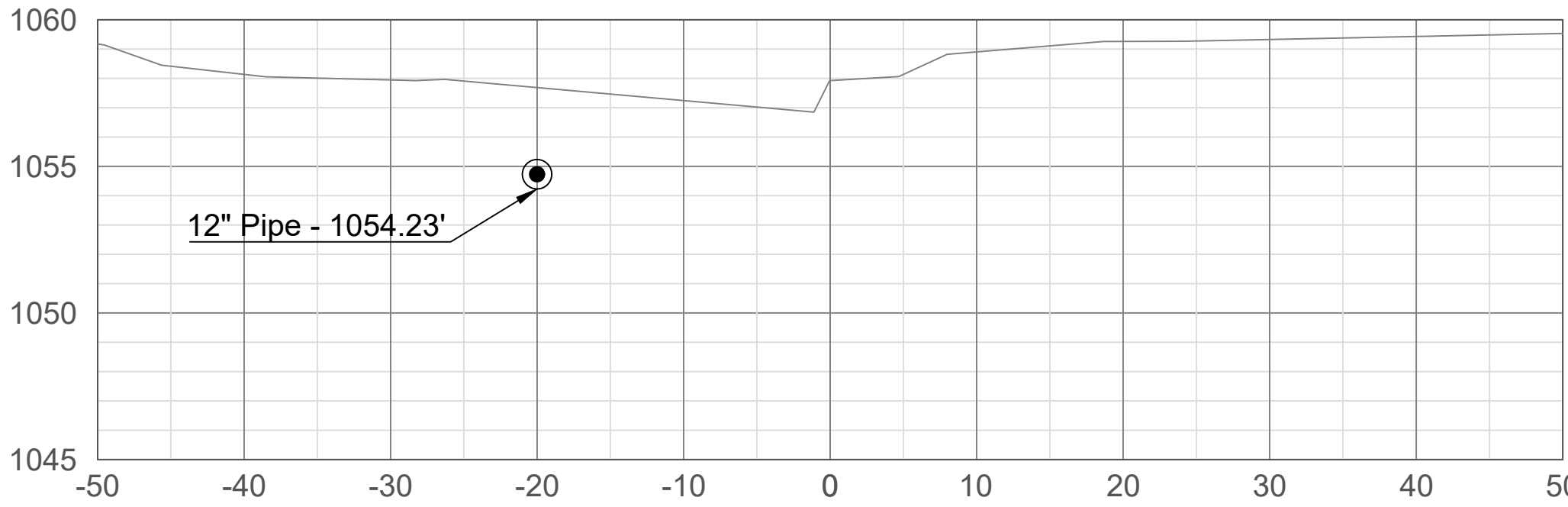
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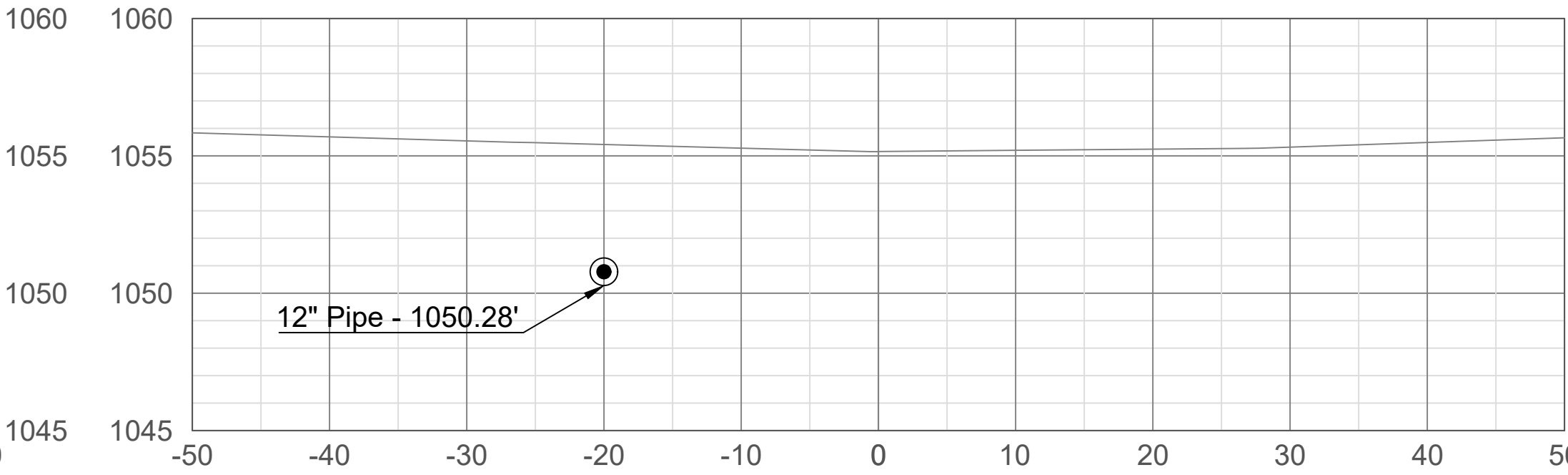
CROSS-SECTIONS



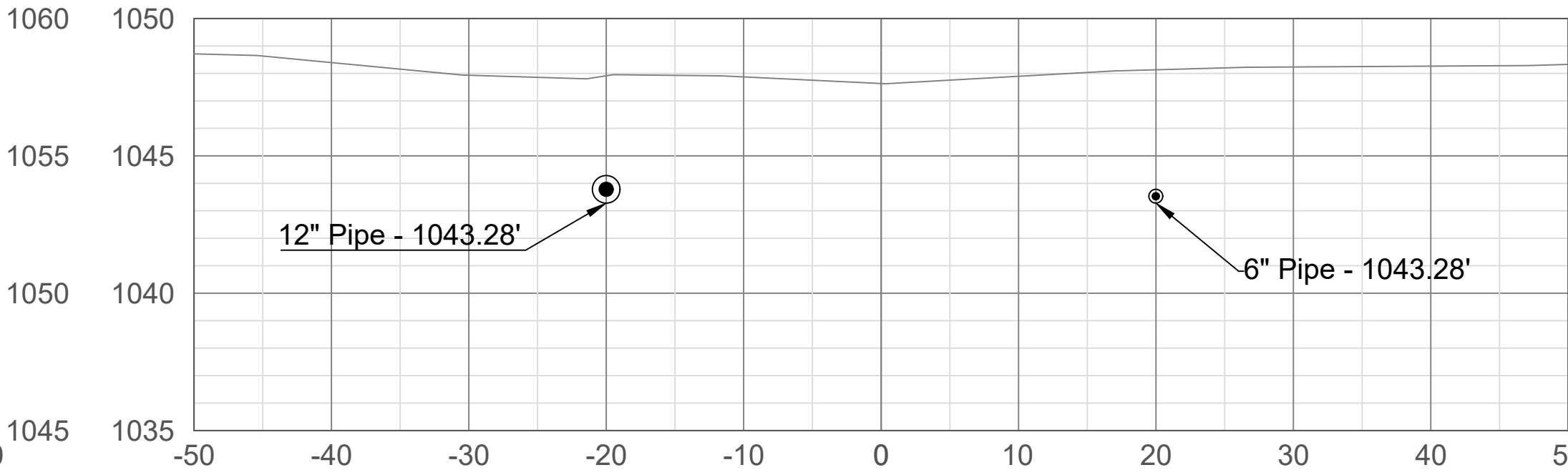
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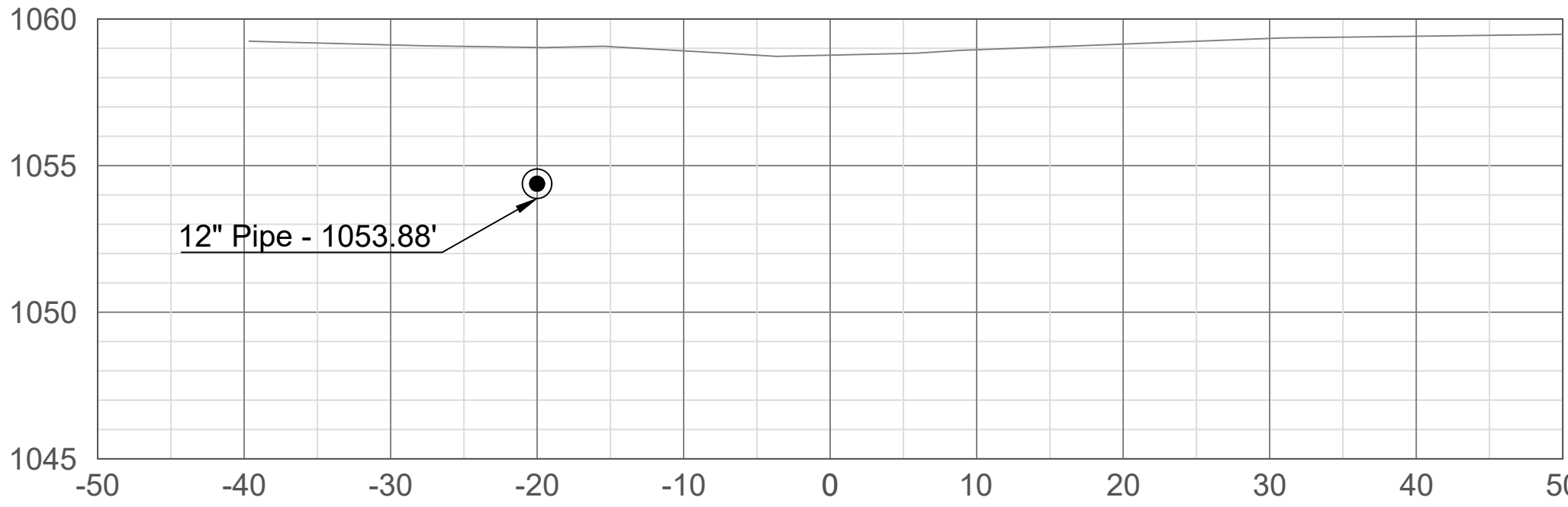
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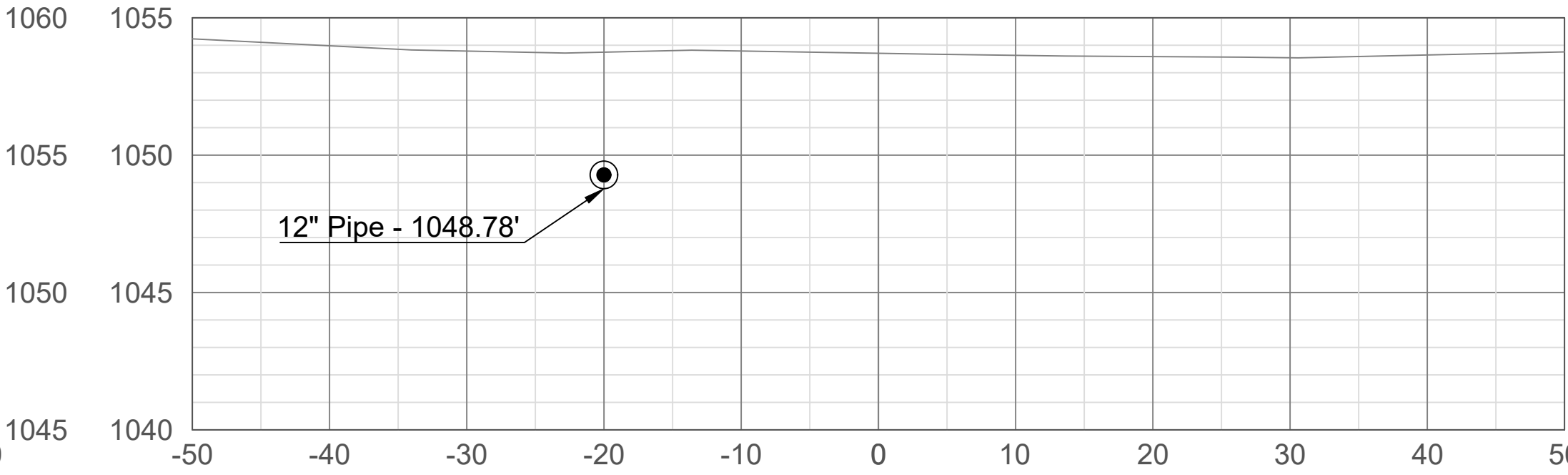
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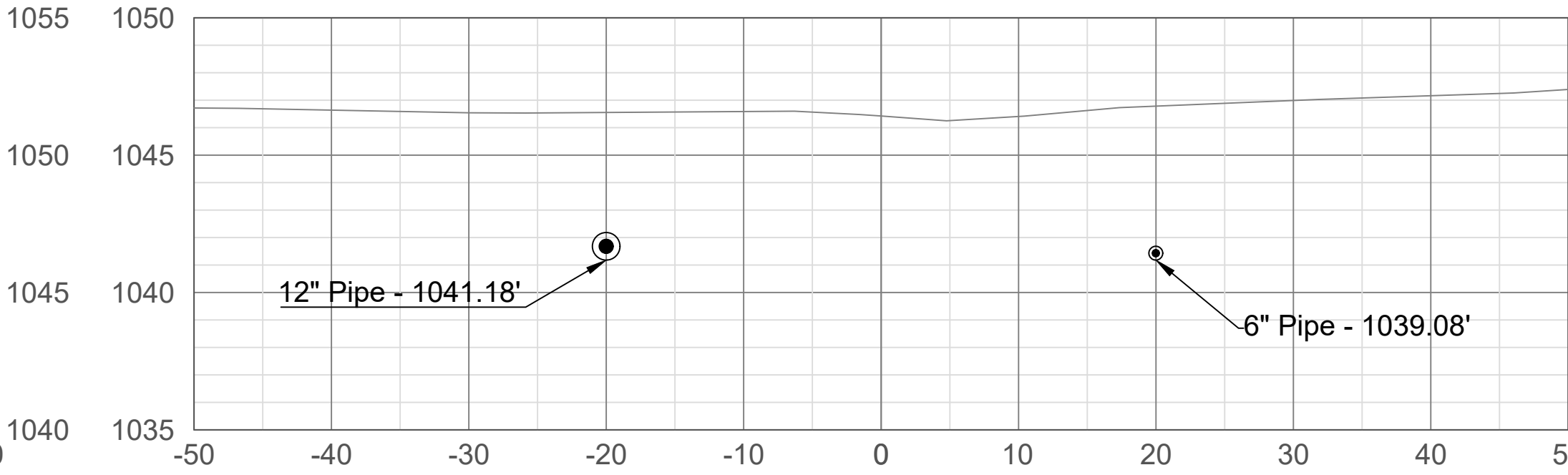
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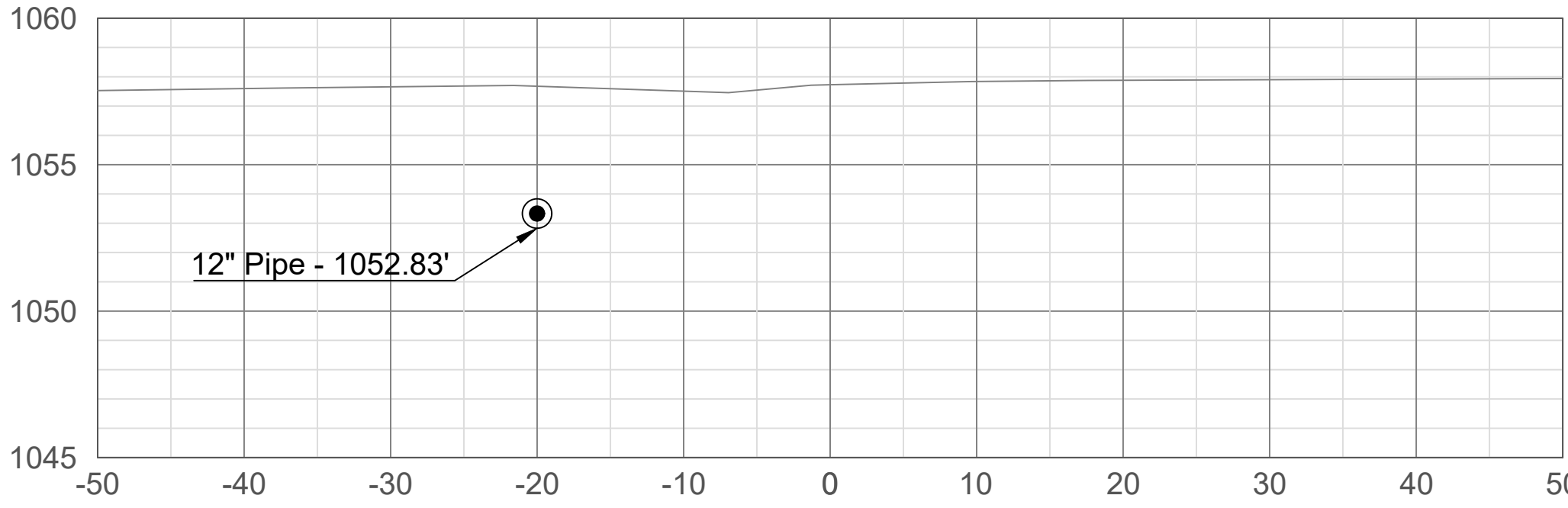
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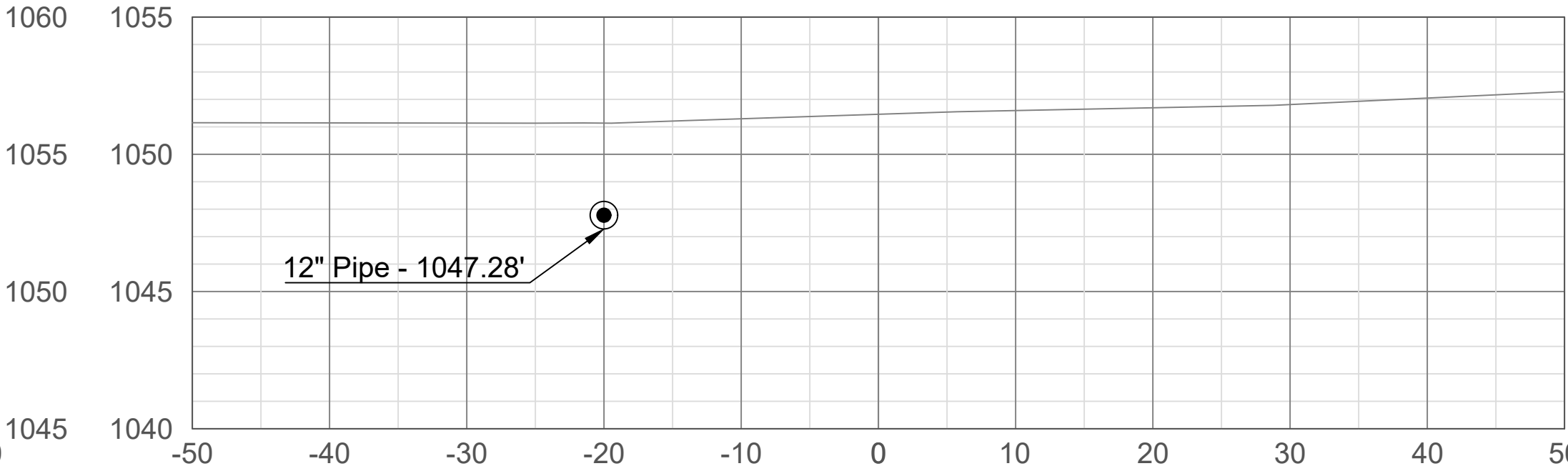
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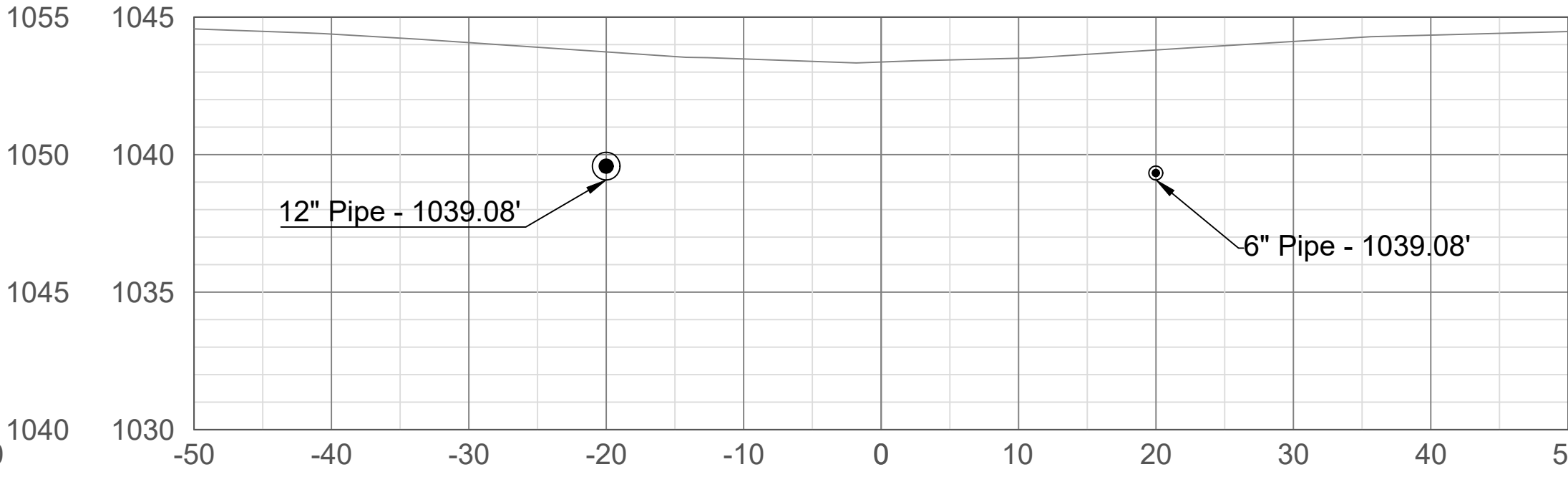
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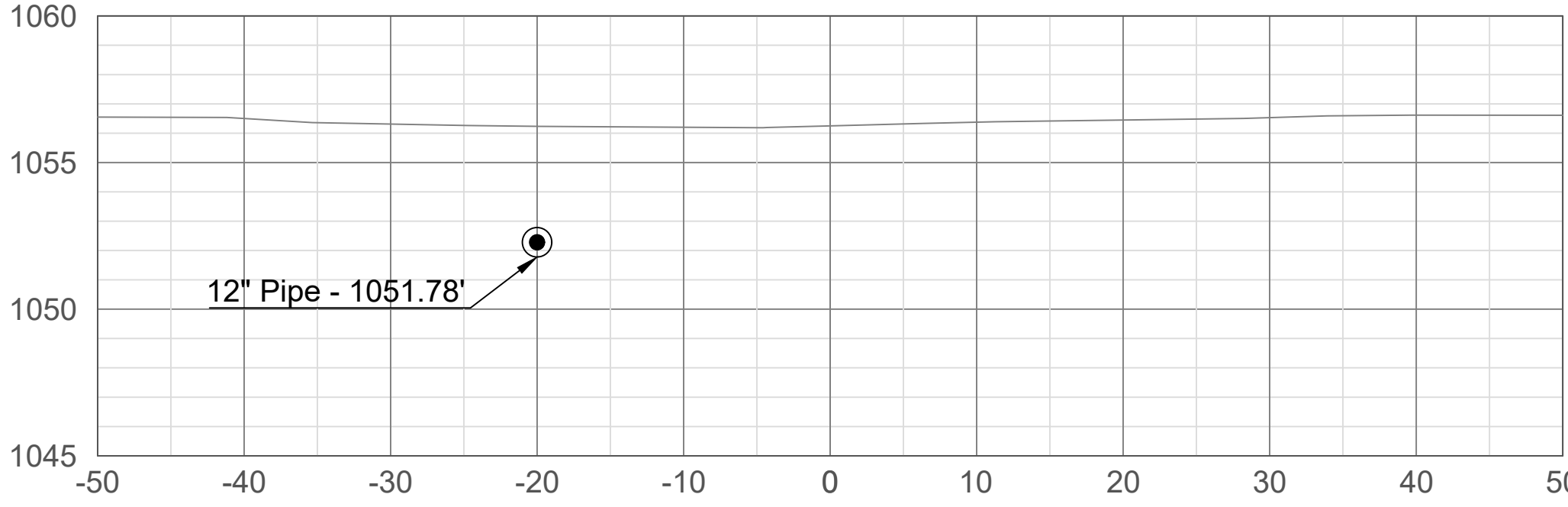
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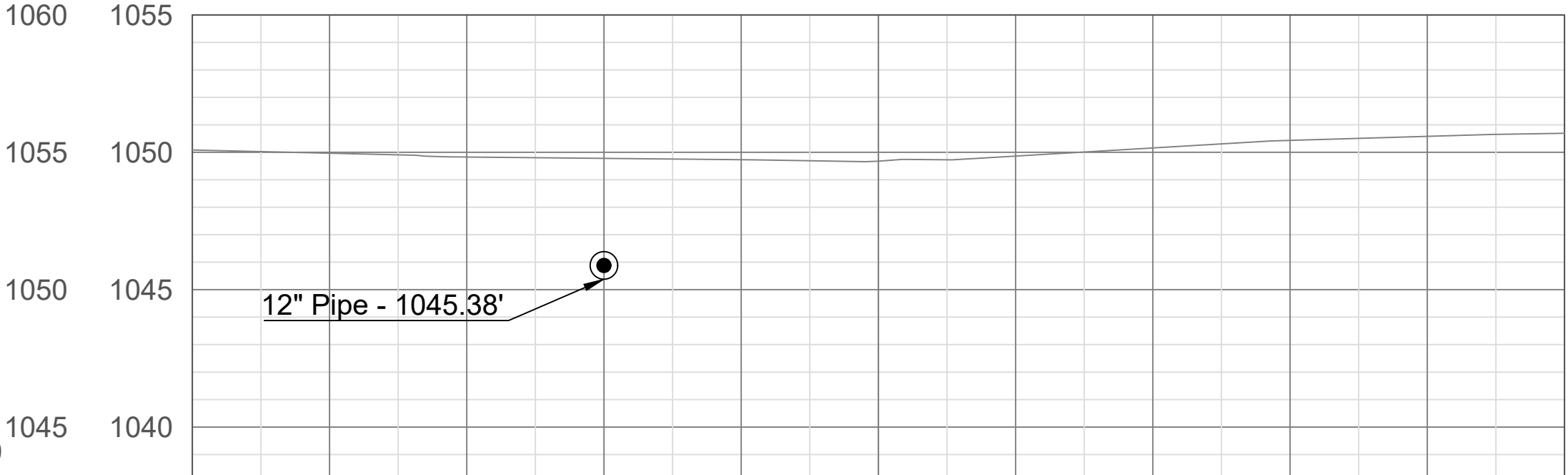
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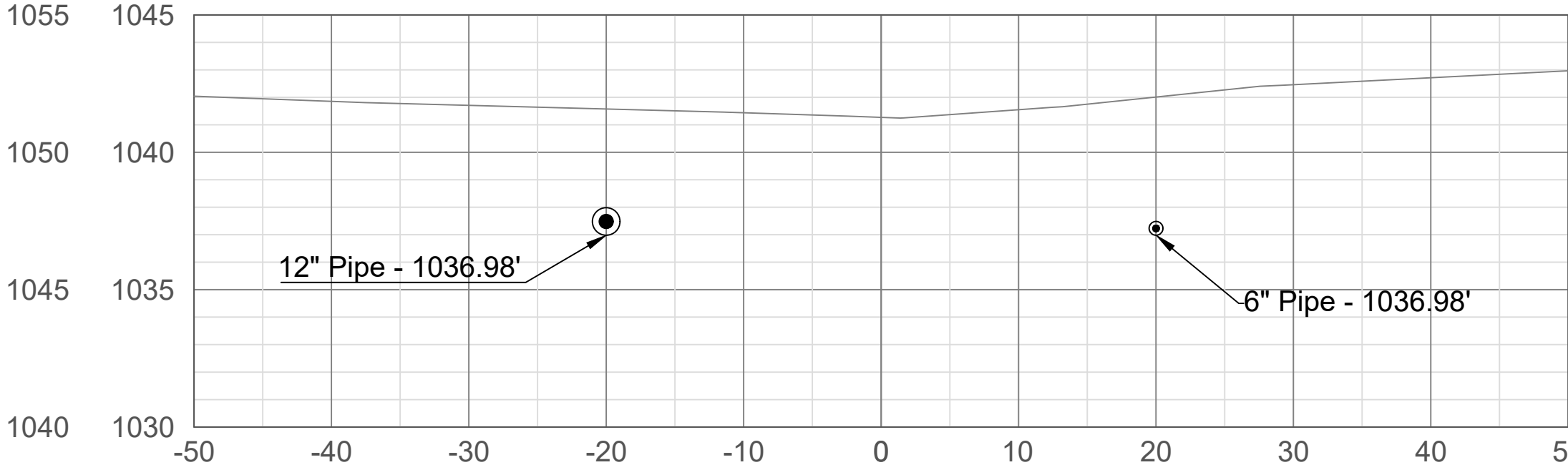
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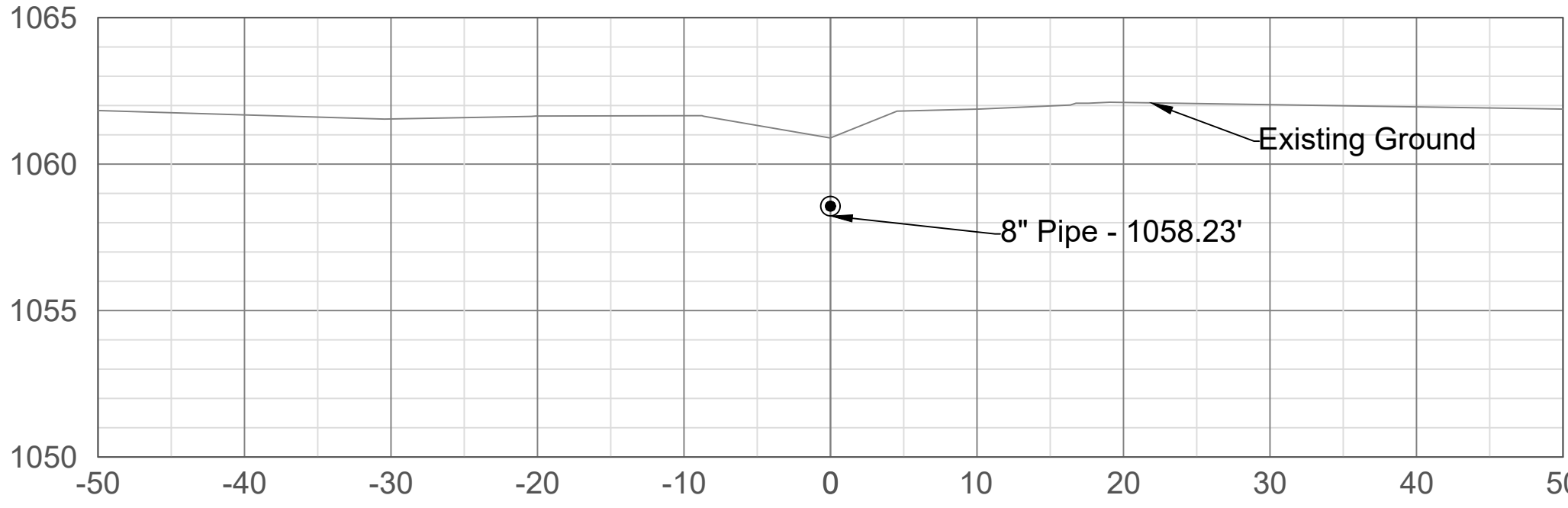
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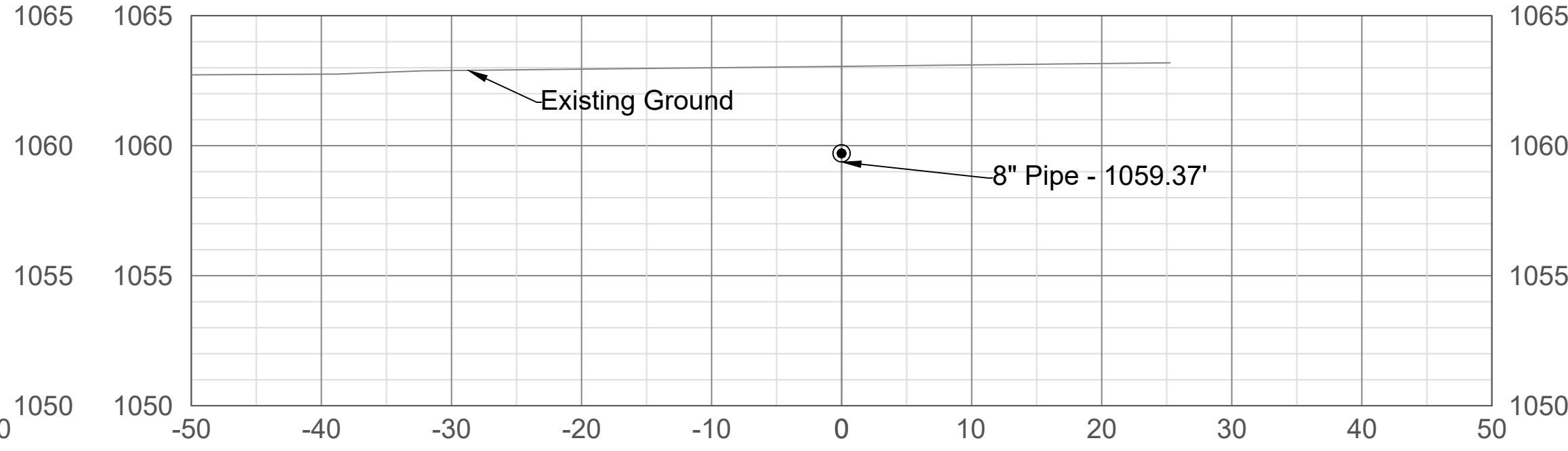
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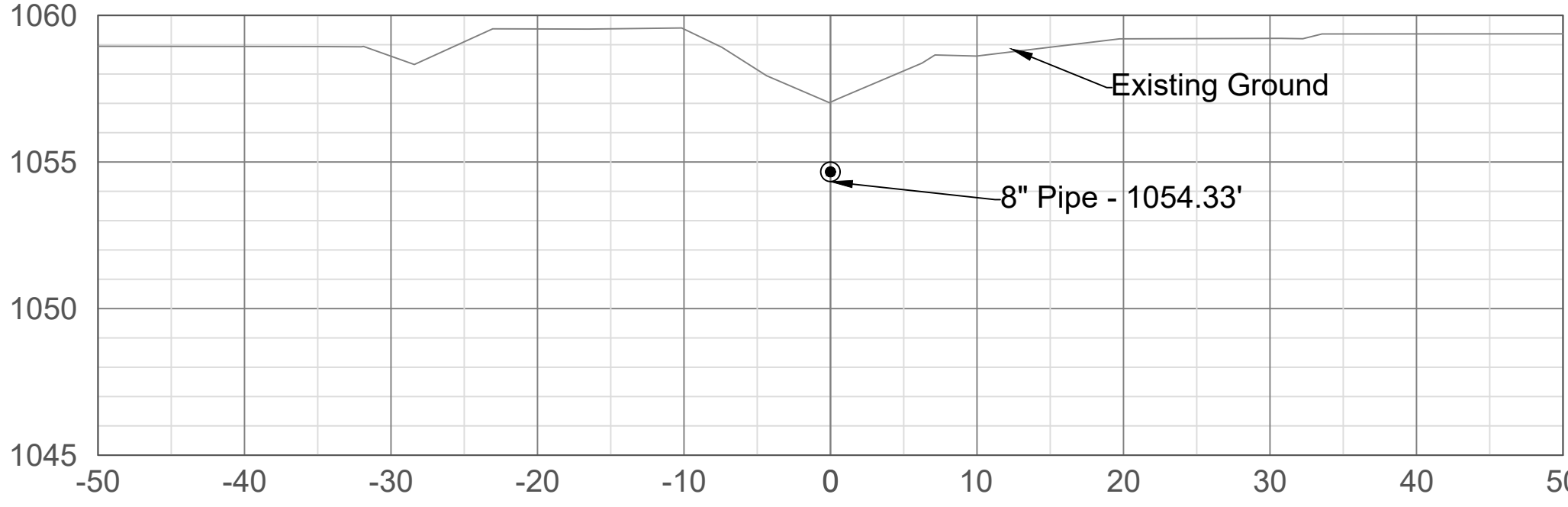
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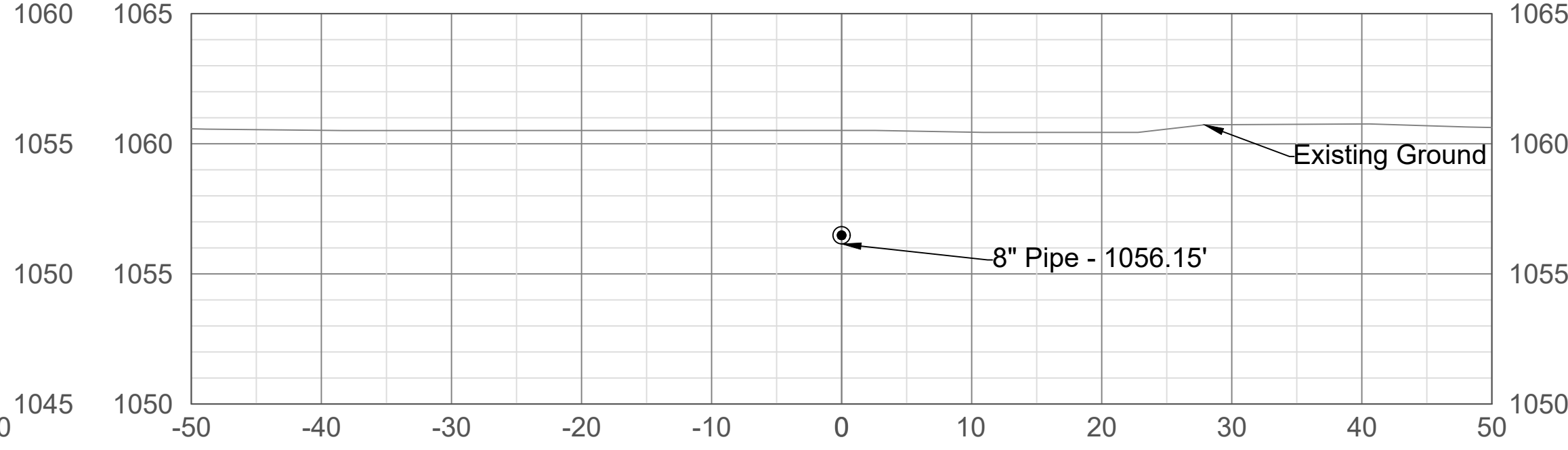
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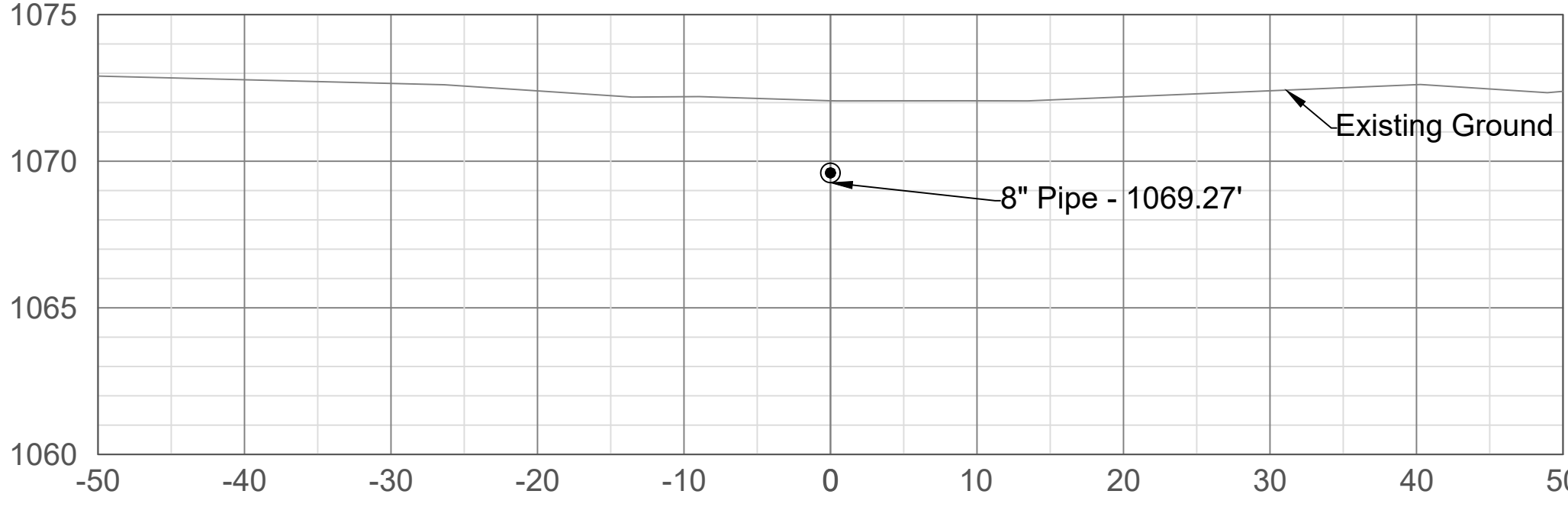
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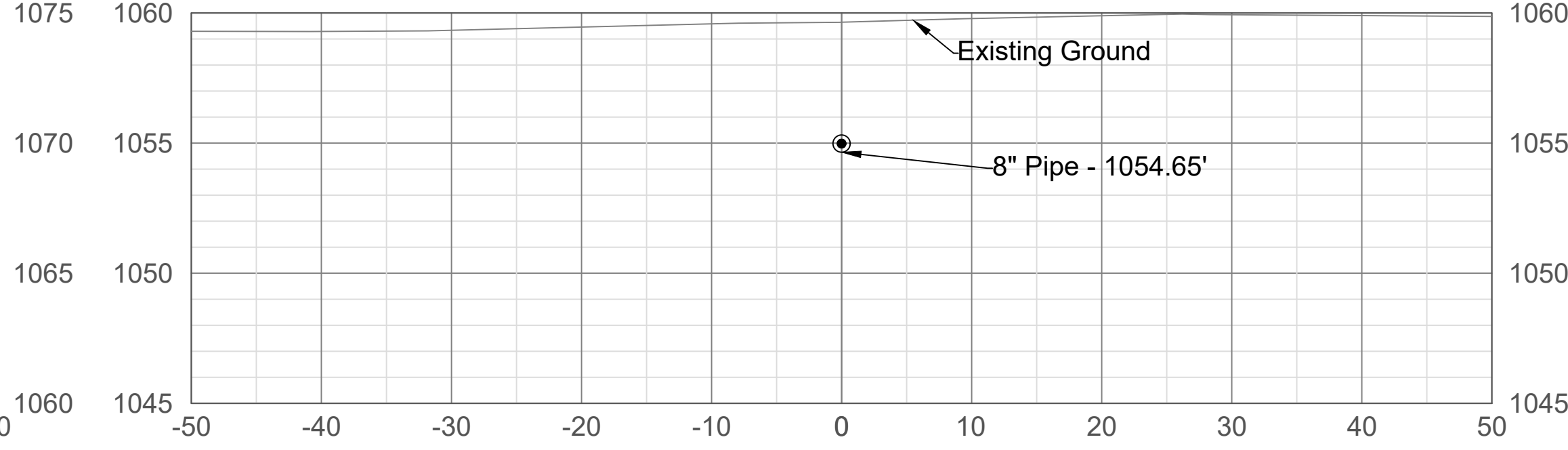
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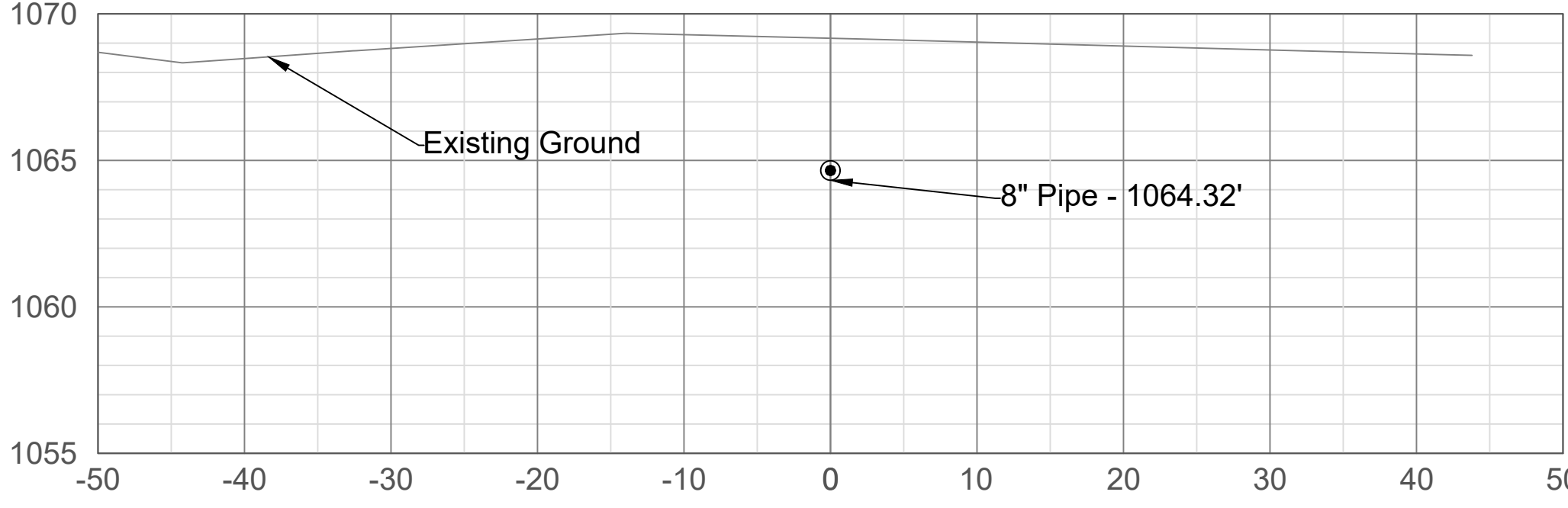
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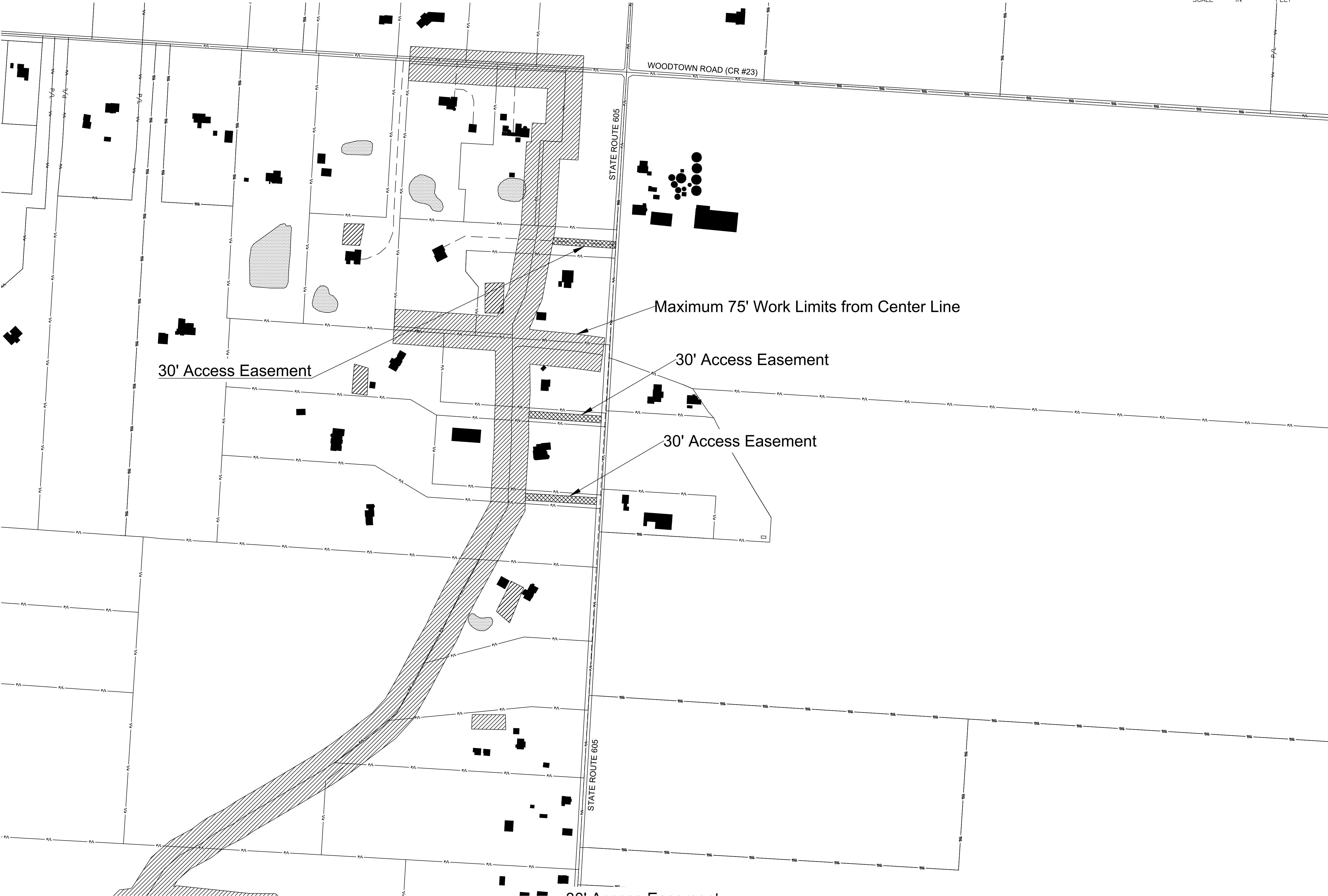
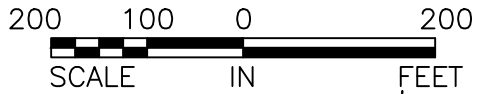


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Crabill #589 Lateral #2 - STA 804+00





200 100 0 200
SCALE IN FEET

