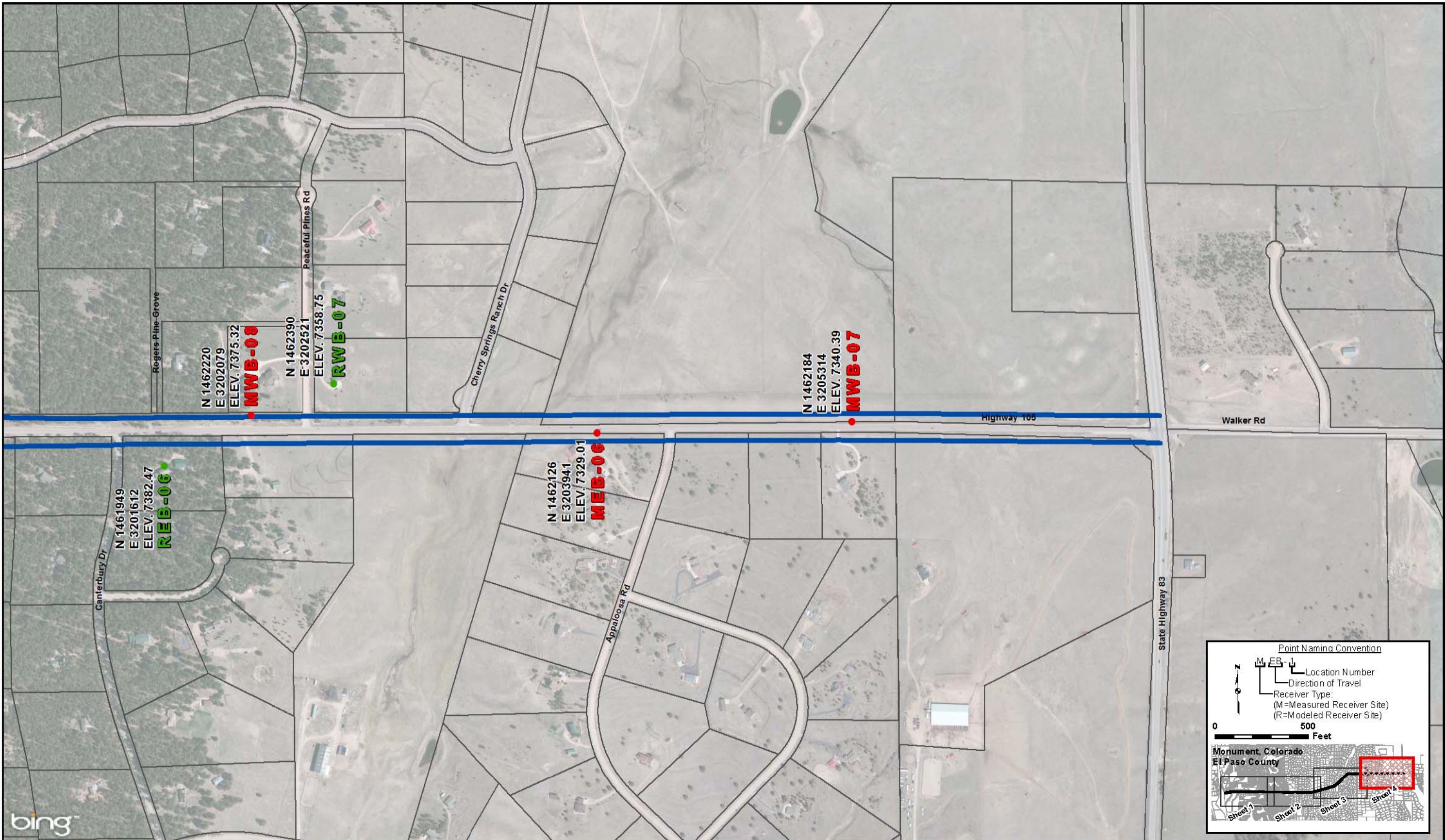


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Point Naming Convention

M EB 1
 ↓ Location Number
 ← Direction of Travel
 Receiver Type:
 (M=Measured Receiver Site)
 (R=Modeled Receiver Site)

0 500
 Feet

Monument, Colorado
 El Paso County

Print Date:	11/19/2012
FileName:	11x17_NOISE_build.mxd
Horiz. Scale:	1: 500
Vert. Scale:	None
Unit Information:	Unit Leader Initials
HDR	2060 BRIAR GATE PKY, SUITE 120 COLORADO SPRINGS, CO 80920 PHONE: 719-272-8800 FAX: 719-272-8801

●	Measured Receiver Site
●	Modeled Receiver Site
—	66dB Noise Level Contour
	Property Line/ROW

EL PASO COUNTY

COLORADO RW

As Constructed
No Revisions:
Revised:
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HIGHWAY 105 CORRIDOR FUTURE BUILD NOISE LEVELS (CANTERBURY DRIVE TO SH 83)	
Designer:	M. Paz de Araujo
Detailer:	T. Haugh
Sheet Subset:	NOISE
Structure Numbers:	
Subset Sheets:	4 of 4

Project No./Code
163862
Task 005
Sheet Number N16

7 Conceptual Roadway Plan and Profile

7.1 Corridor Preservation Basis

As part of the corridor study, conceptual plan and profile design was completed as the basis for identification of right-of-way requirements and for the development of conceptual cost estimates. The plan and profile design is based on an ultimate 4-lane configuration of Highway 105. As part of the process of the plan and profile development process, conceptual earthwork cross sections were also developed and used as the basis for determining the need for retaining walls and/or additional right-of-way or slope easements.

7.2 Project Segments

To help facilitate funding as it comes available, the corridor was broken into four project segments in which distinct improvement packages are proposed. It is anticipated that needed improvements for the balance of the corridor, which include shoulder and intersection improvements, will be completed in association with improvements to the identified segments, as funding permits.

The following describes each segment and the proposed improvements. The bases for the estimated costs for each segment are detailed in *Chapter 8, Cost Estimates and Phasing Options*. Project A is the first priority for final design and construction when funding becomes available. The remaining projects have not been prioritized.

Project Segment A – I-25 to Lake Woodmoor Drive

Improvements recommended for “Project/Segment A” include intersection upgrades, sidewalk extensions, and an “ultimate,” four-lane cross section within a minimal cross section that minimizes right-of-way impacts.

- Four lanes, two in each direction, using retaining walls to minimize ROW
- Continuous sidewalk on at least one side
- Curb and gutter on full segment
- Signal or possible roundabout conversion (Gold Canyon Road or Lake Woodmoor Drive)
- Standard lane widths/shoulders
- Turn, acceleration and deceleration lanes

Project Segment B – Lake Woodmoor Drive to Martingale

Improvements recommended for “Project/Segment B” reduce steep grades within the segment. The upgraded interim two-lane cross section for this segment includes shoulders and intersection upgrades. Grading and retaining walls are located to not preclude future four-lane widening should future traffic operational analysis determine that widening is needed.

- Standard lane widths/shoulders
- Turn, acceleration and deceleration lanes

- Drainage improvements
- Improved roadway alignment to flatten grades and maximize available sight distance with retaining walls used to minimize ROW
- Signal or roundabout conversion at Furrow Road
- Fairplay Drive signal, roundabout conversion or stop control with left-turn acceleration/merge

Project Segment C – Centered on Forest Drive Loop

Improvements recommended for “Project/Segment C” reduce steep grades and flatten the curve within the segment. The upgraded interim two-lane cross section for this segment includes shoulders and intersection upgrades. Grading and retaining walls are located to not preclude future widening.

- Improved roadway alignment to flatten grades and maximize available sight distance with retaining walls used to minimize ROW impacts
- Standard lane widths/shoulders
- Turn, acceleration/deceleration lanes
- Drainage improvements

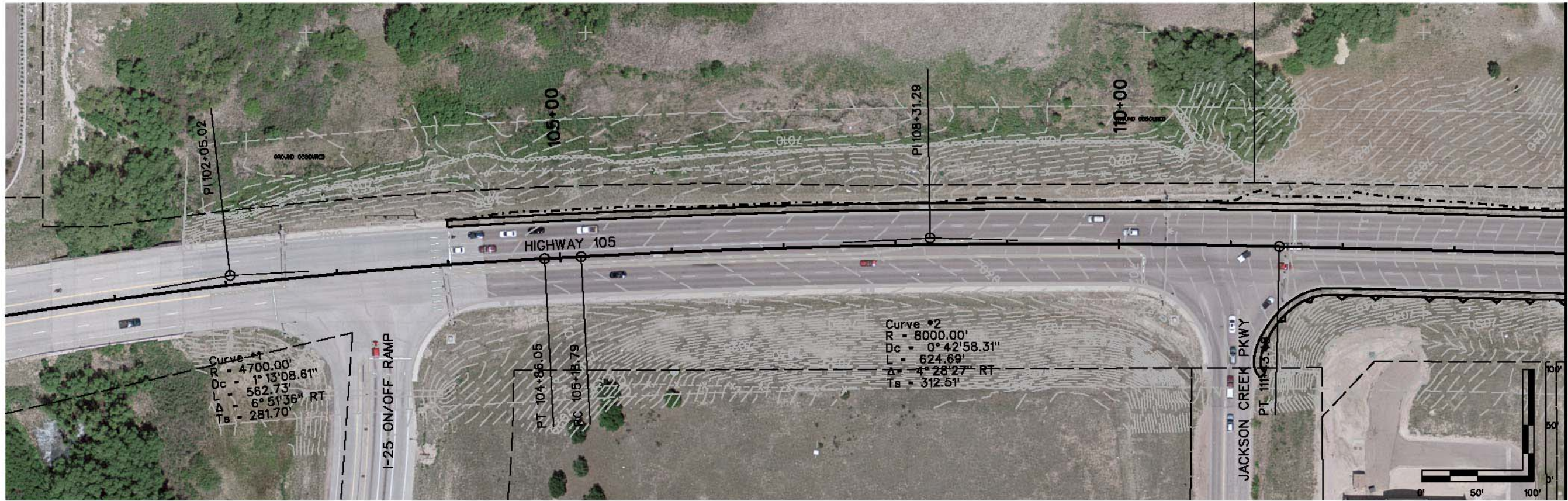
Project Segment D – Centered on Roller Coaster Road

Improvements recommended for “Project/Segment D” reduce steep Roller Coaster Road intersection approach grades as required for signalization or possible conversion of the intersection to a roundabout. The upgraded interim two-lane cross section for this segment includes shoulders and intersection upgrades. Grading and retaining walls are located to not preclude future widening.

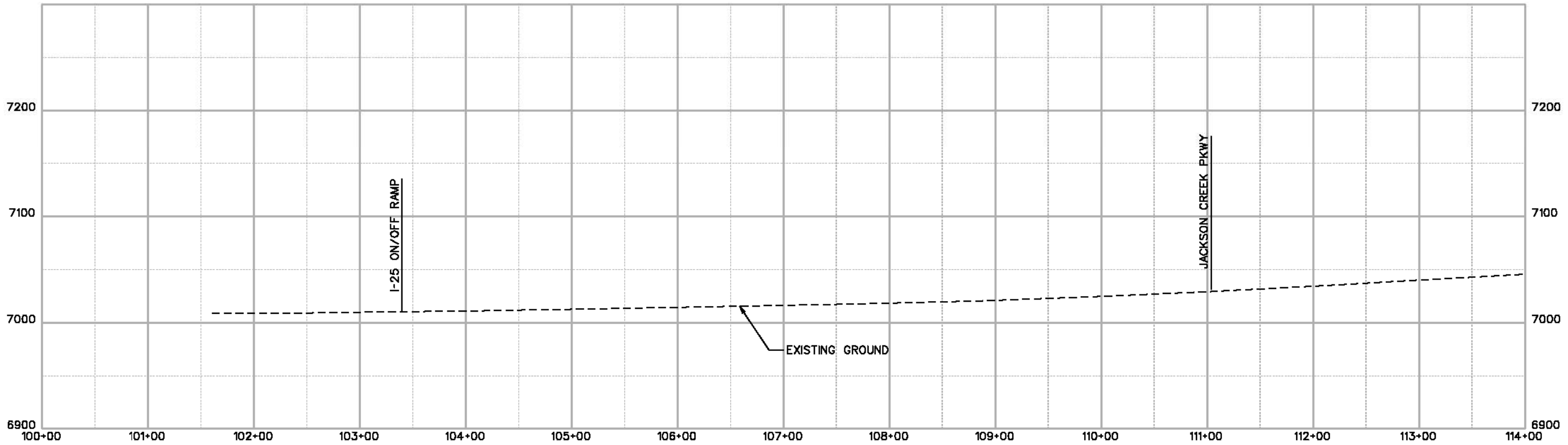
- Improved roadway alignment to flatten grades and improve sight distances with retaining walls used to minimize ROW
- Standard lane widths/shoulders
- Turn, acceleration and deceleration lanes
- Signal or roundabout conversion at Roller Coaster Road
- Drainage improvements

7.3 Conceptual Roadway Plan and Profile

Conceptual plan and profile design of the interim 4-lane rural and the ultimate 4-lane urban sections are shown in *Figure 7.1* through *Figure 7.19*. Although the existing right-of-way limits have not been confirmed, parcel limits are shown to provide a preliminary understanding of existing right-of-way. Required future right-of-way limits are indicated in the plan views by virtue of toe of slope limits and retaining wall locations for the ultimate rural and urban 4-lane cross sections. Grading and retaining walls for the interim rural sections will be located and constructed as would be required for the ultimate 4-lane rural section. Were roundabout options to be constructed, additional right-of-way would be required for the intersection, with less right-of-way required for approaches.



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 Phone: 719-272-8800 Fax: 719-272-8801

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Date:	Comments	Init.



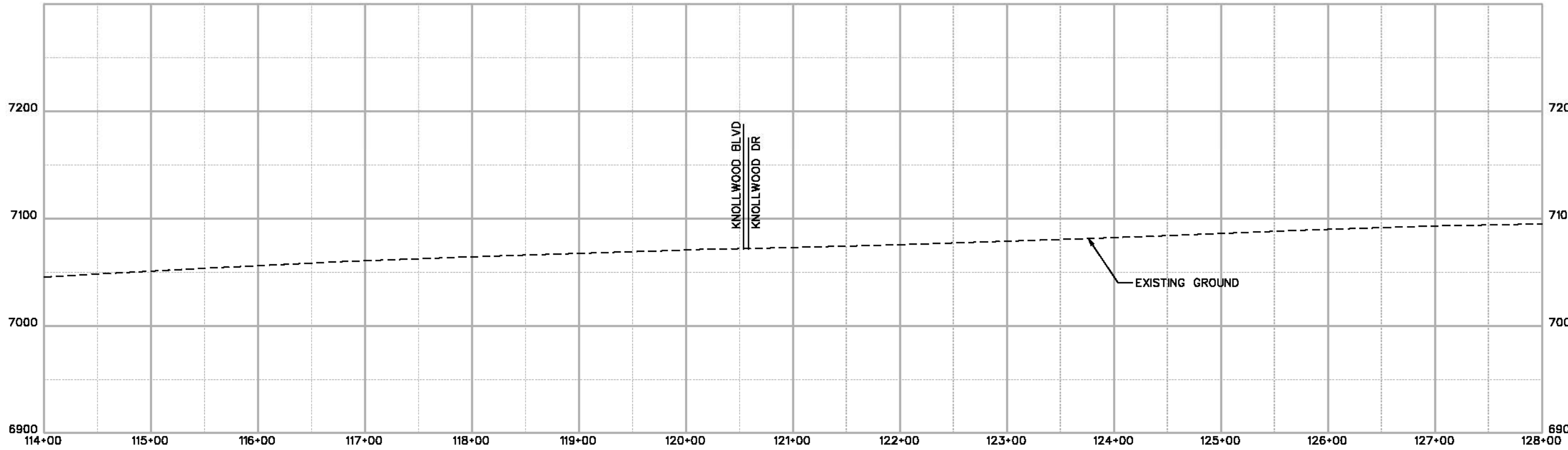
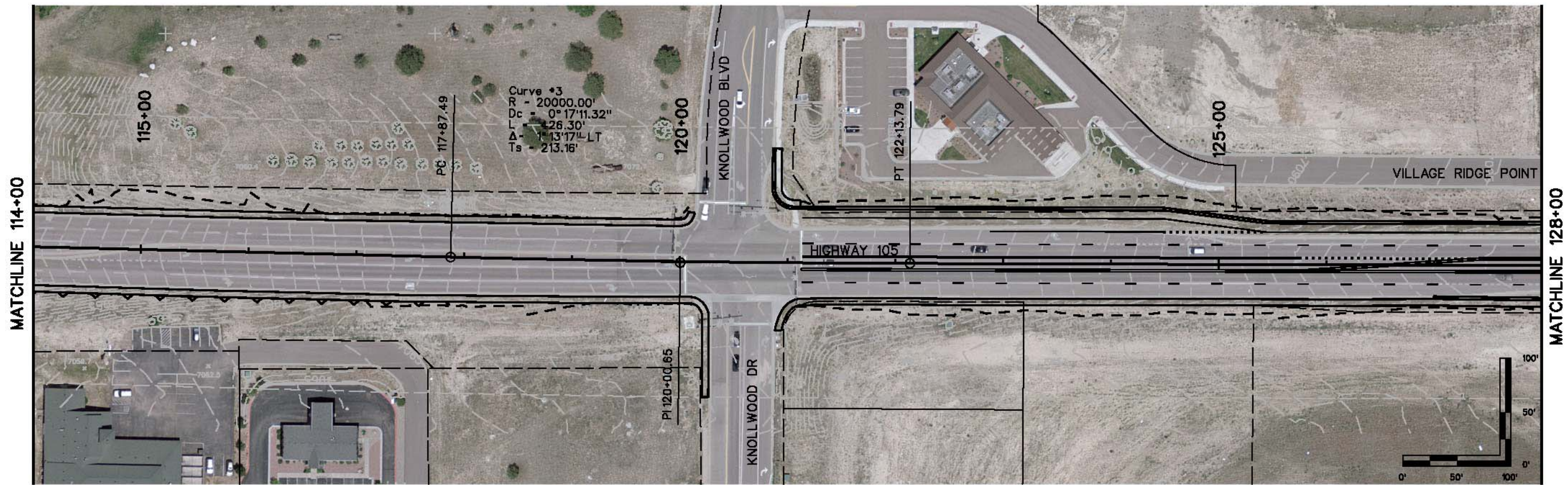
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**HIGHWAY 105 CORRIDOR
 PLAN AND PROFILE
 STA 100+00 TO 114+00**

Designer: M. GRANT
 Detailer: T. HAUGH
 Sheet Subset: Structure Numbers Subset Sheets: of

Project No./Code
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 Task 008
 Sheet Number **C-01**

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 Phone: 719-272-8800 Fax: 719-272-8801

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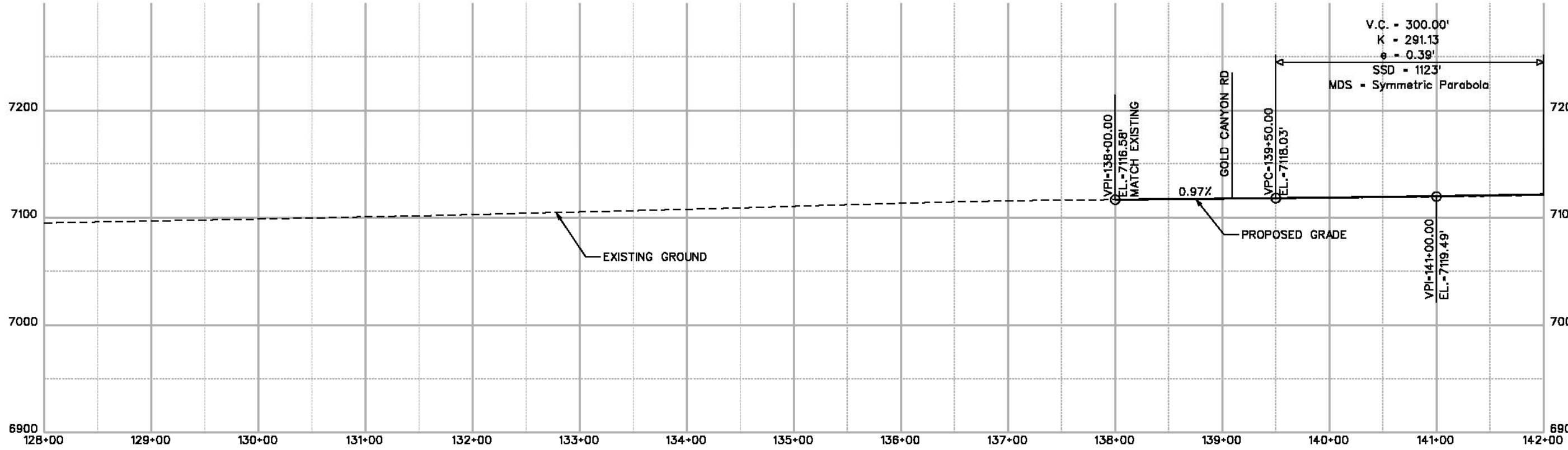
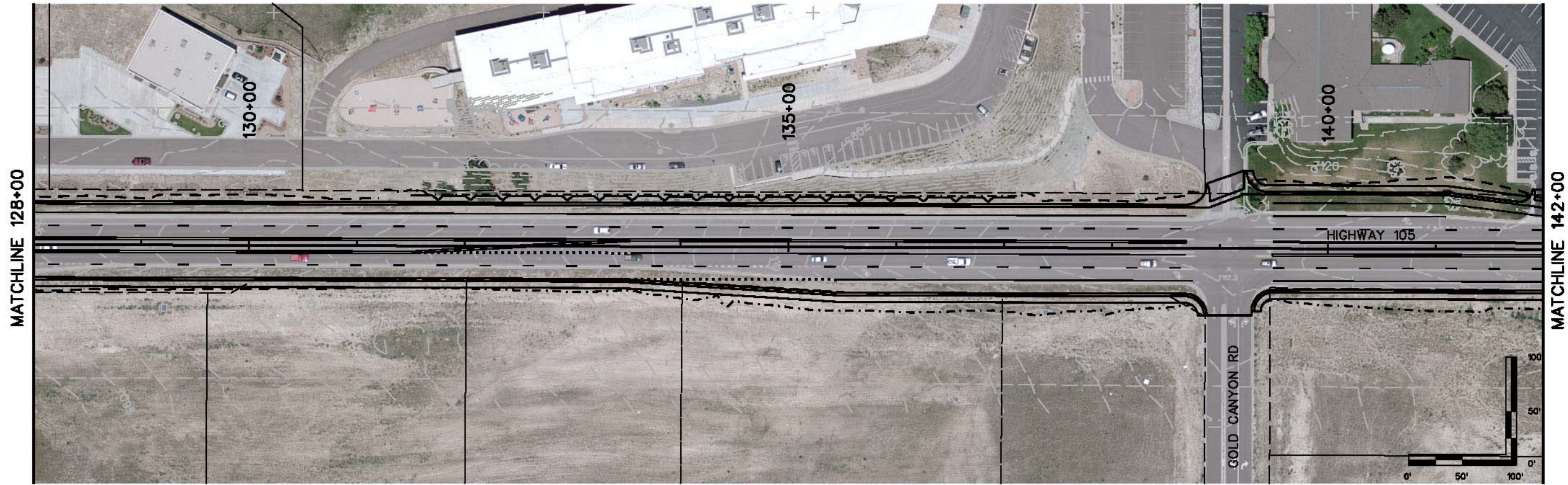


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**HIGHWAY 105 CORRIDOR
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 Designer: M. GRANT
 Detailer: T. HAUGH
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 Sheet Number **C-02**

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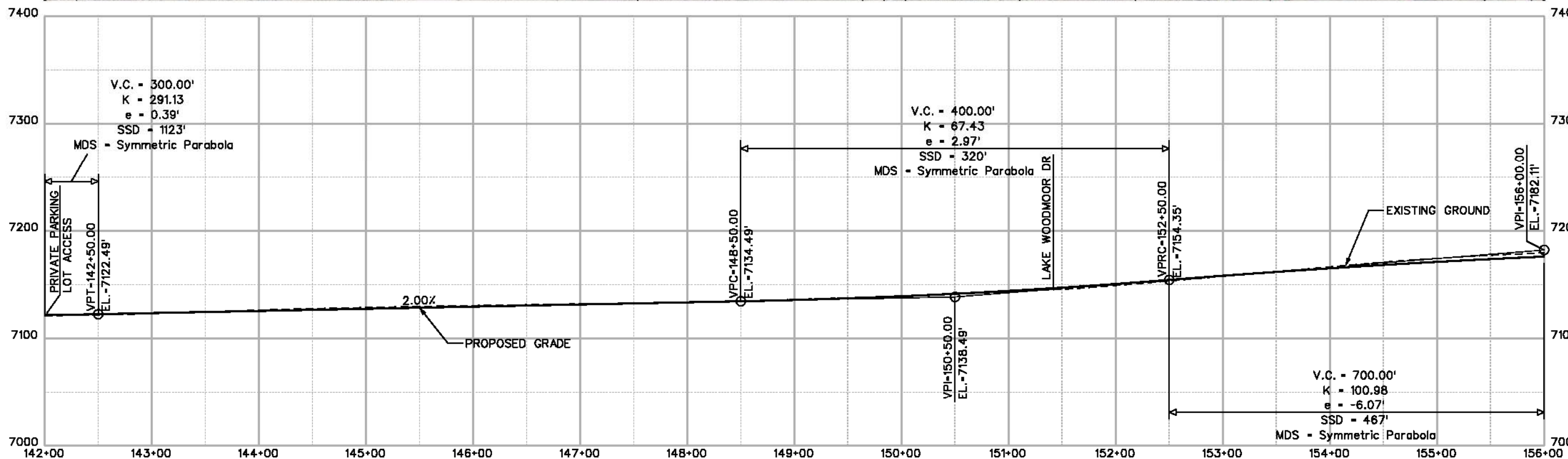
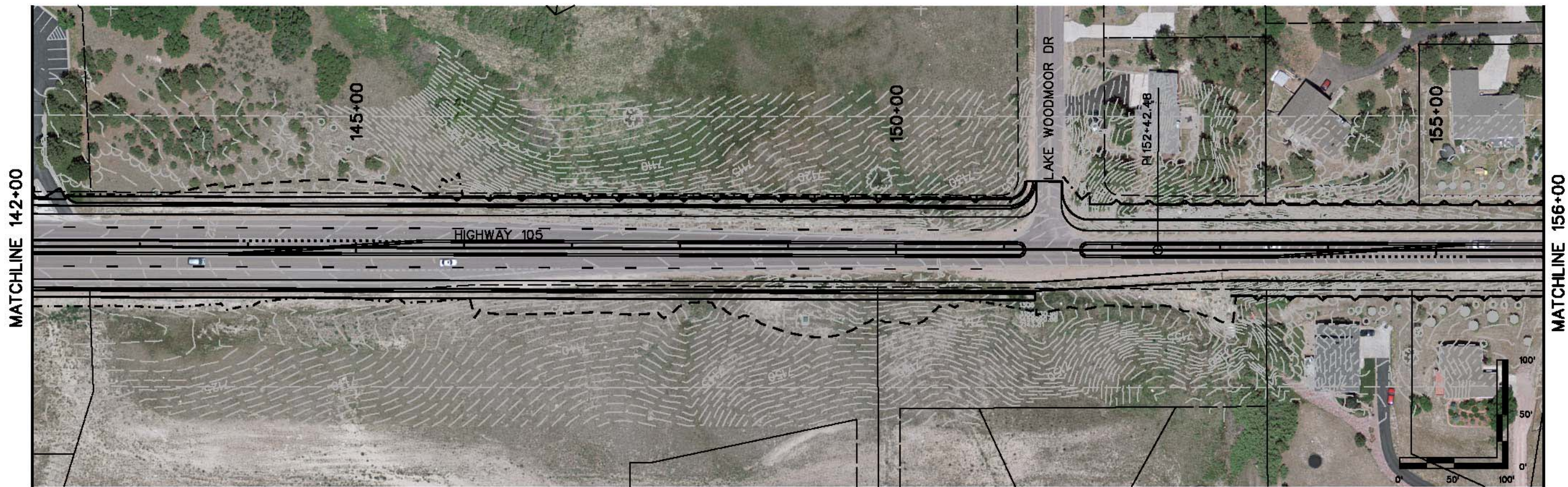


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Detailer: T. HAUGH	
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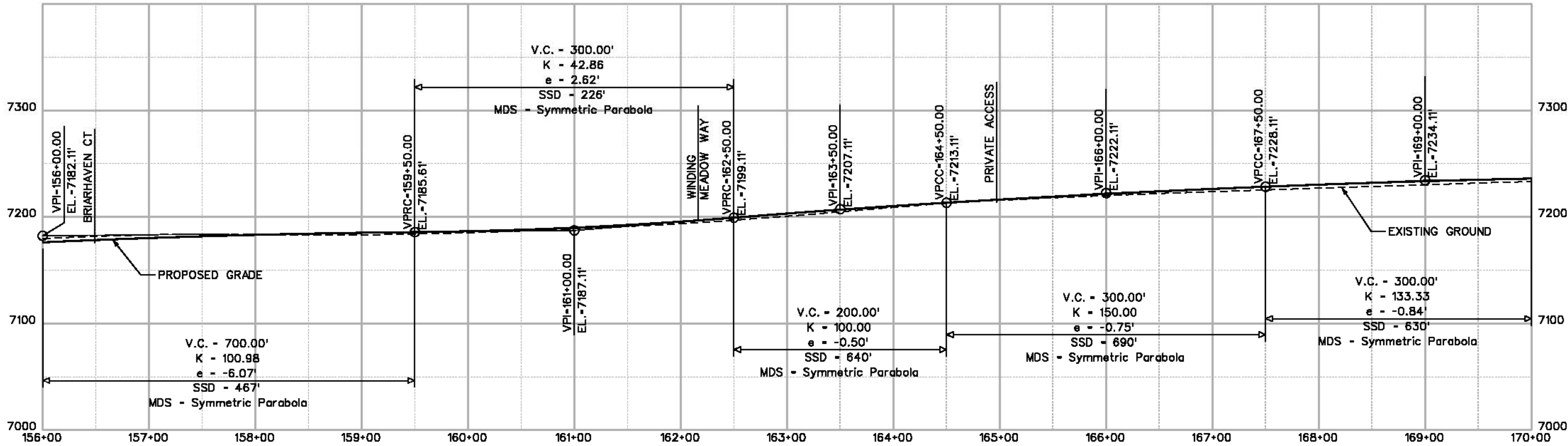
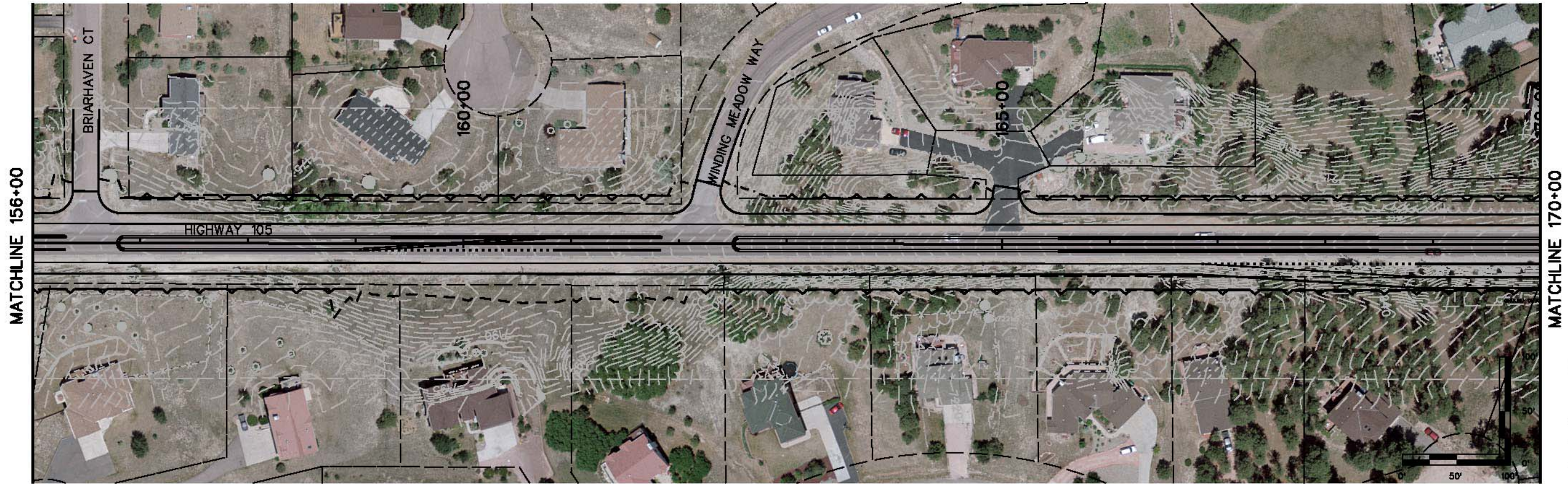


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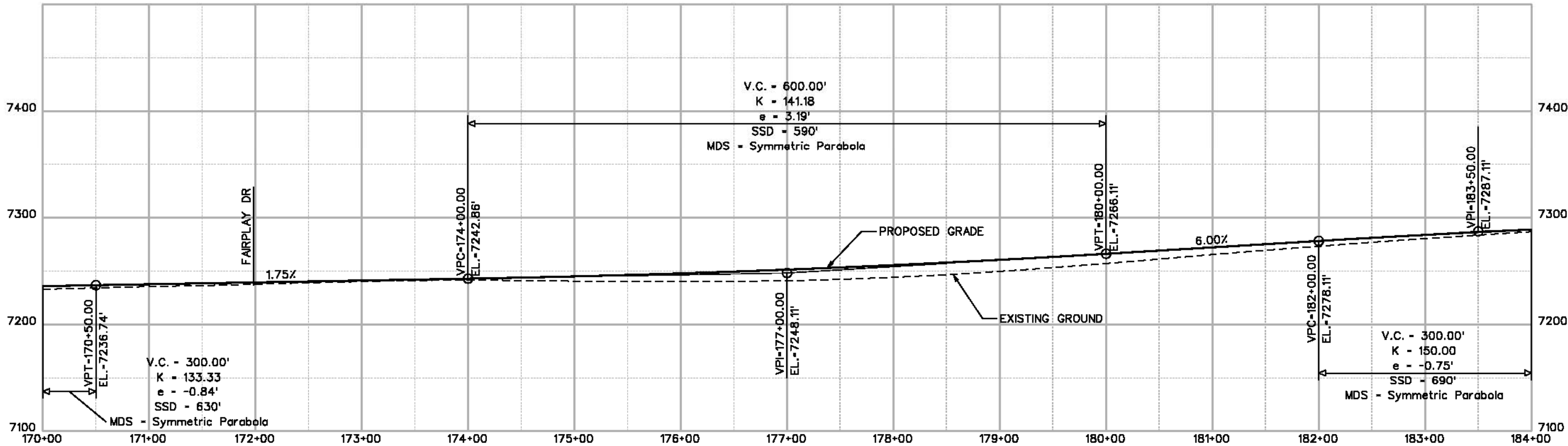
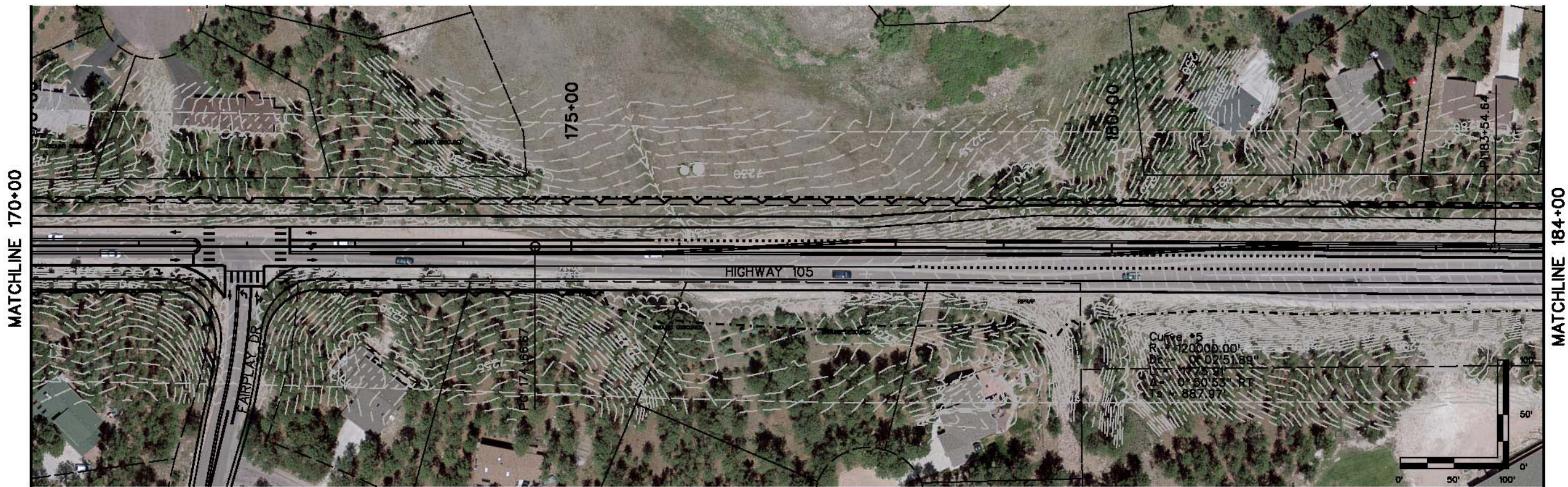
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 HDR Engineering, Inc. Phone: 719-272-8800 FAX: 719-272-8801

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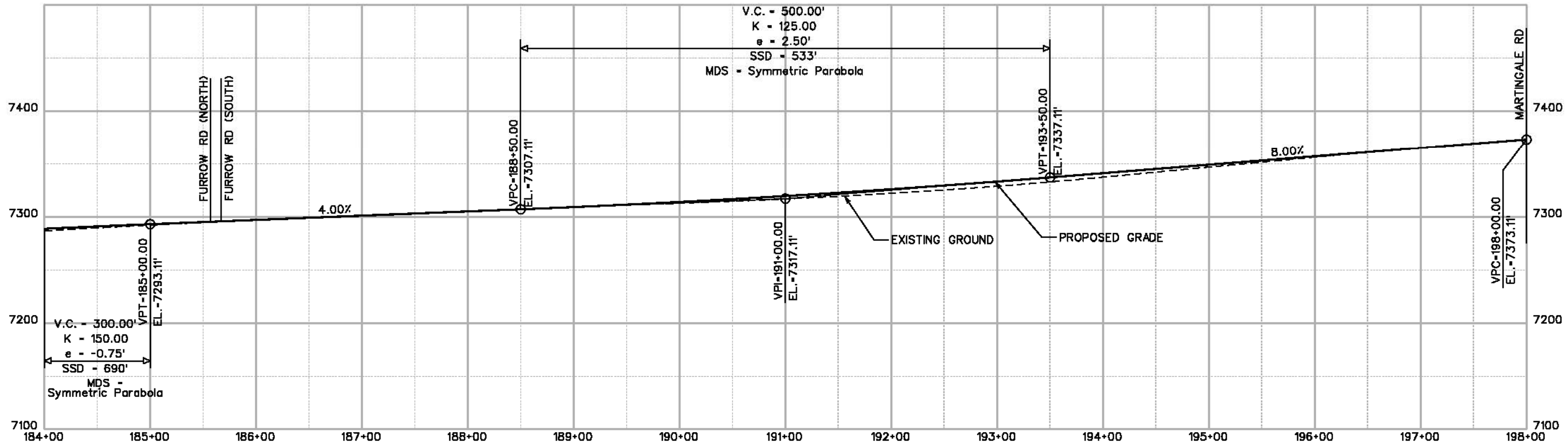
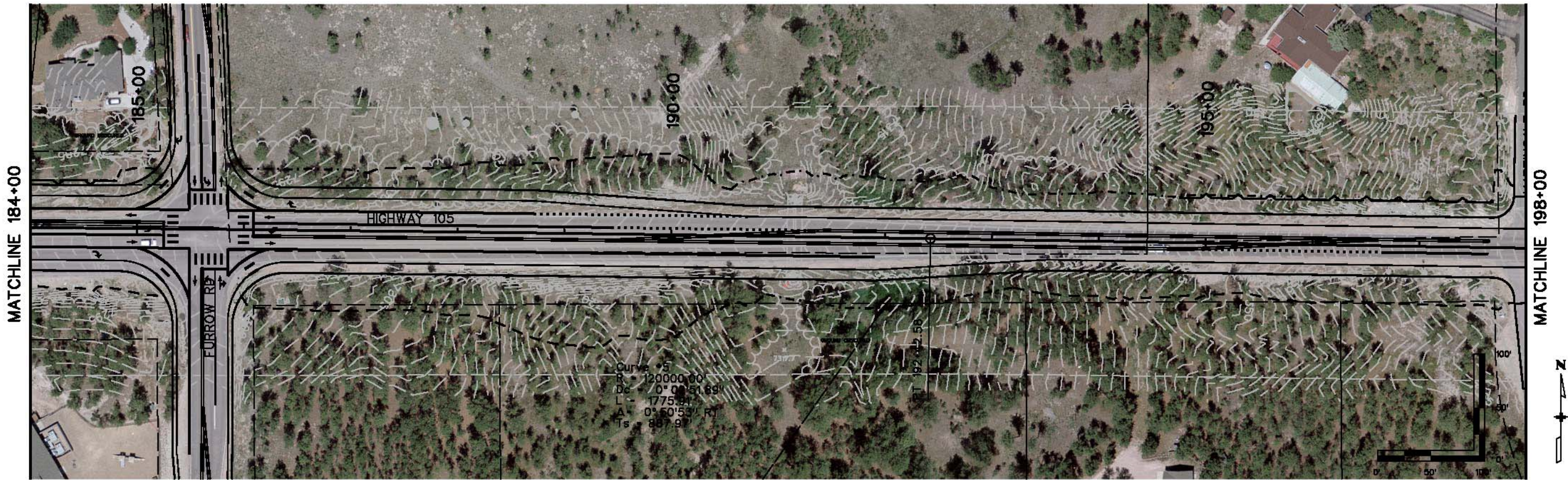


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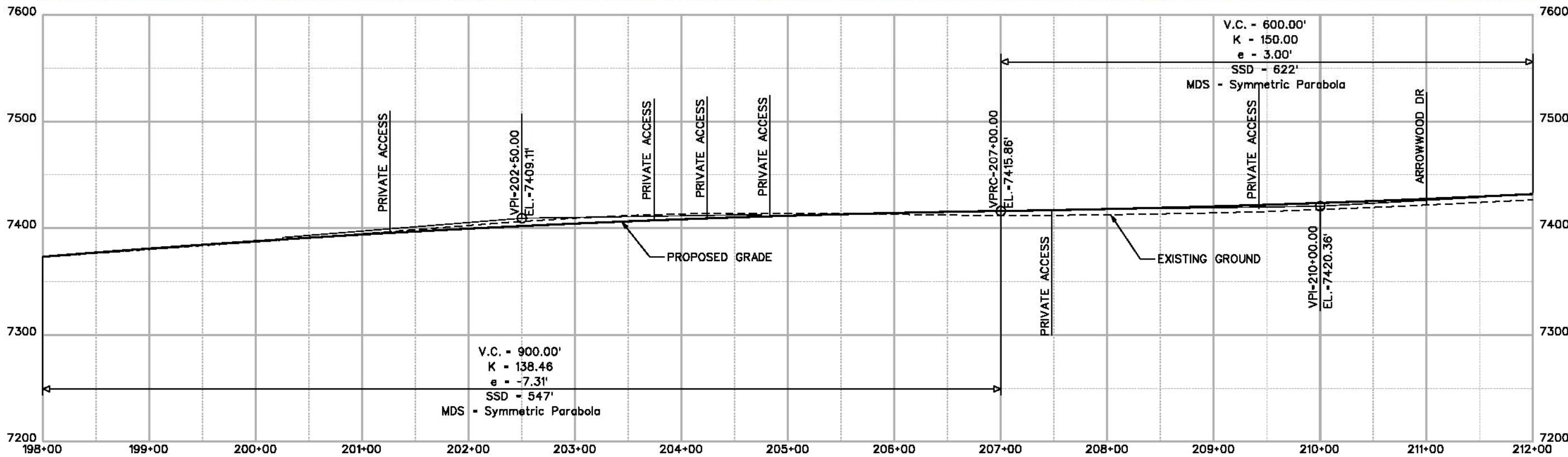


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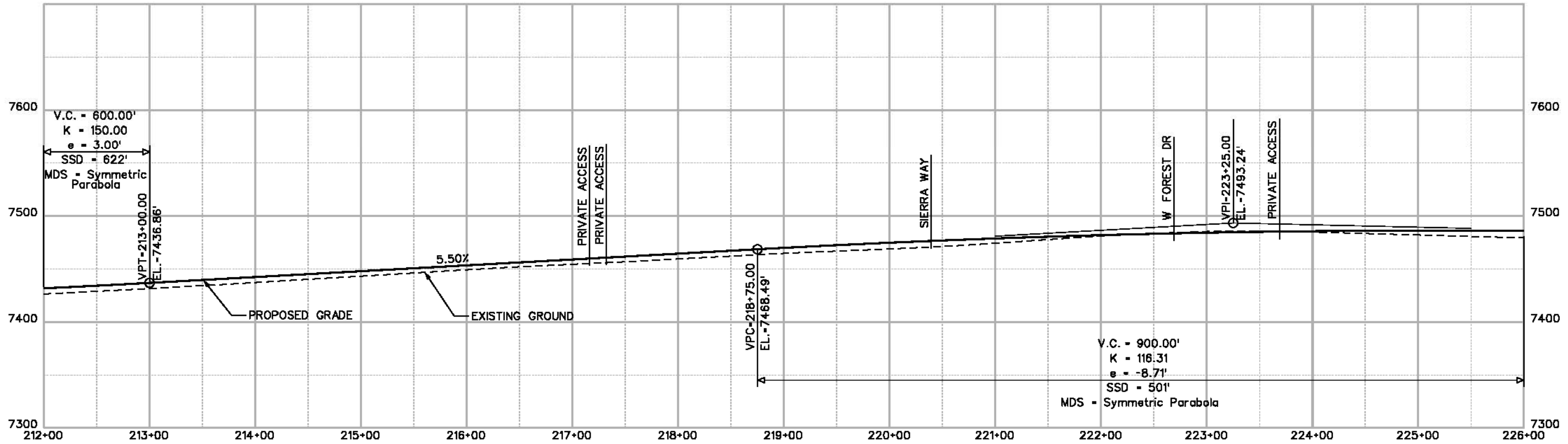


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 Detailer: T. HAUGH
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 Phone: 719-272-8800 Fax: 719-272-8801

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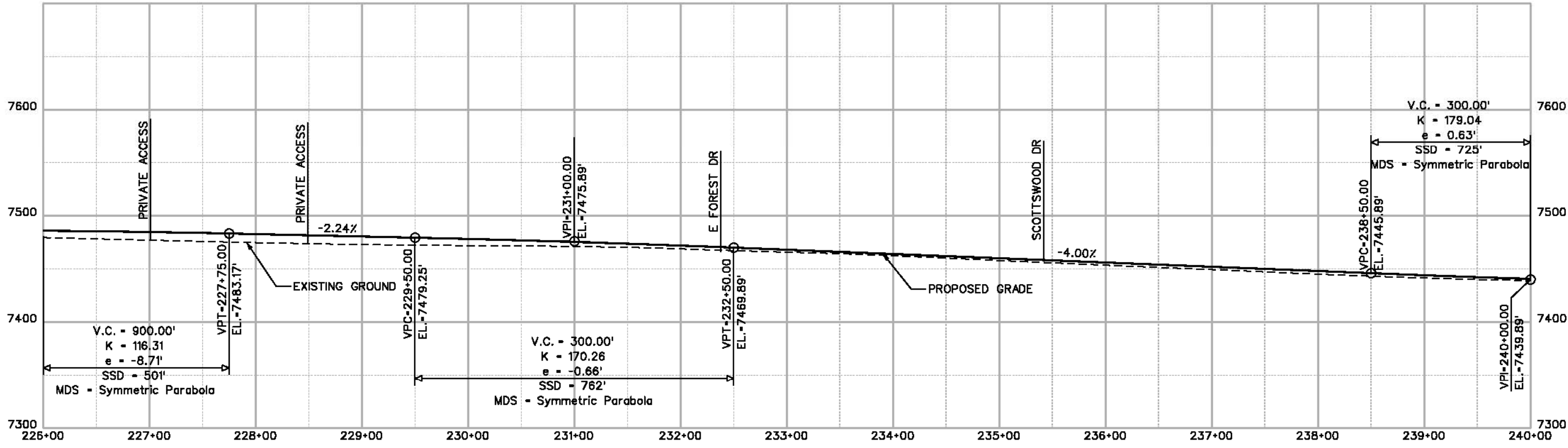
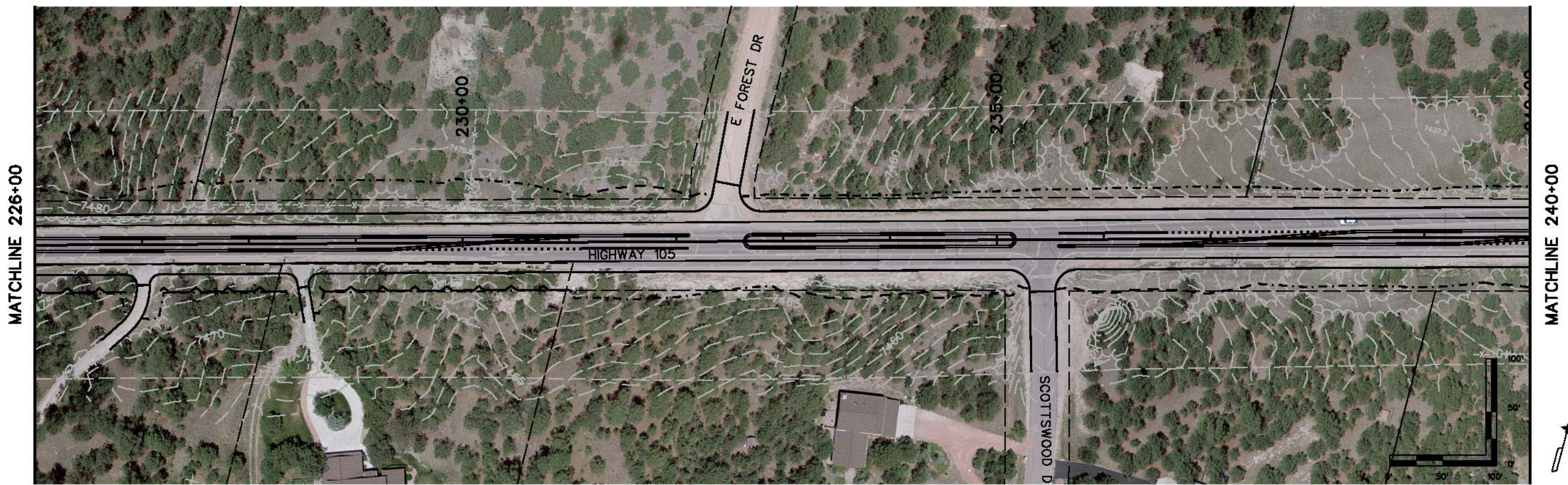
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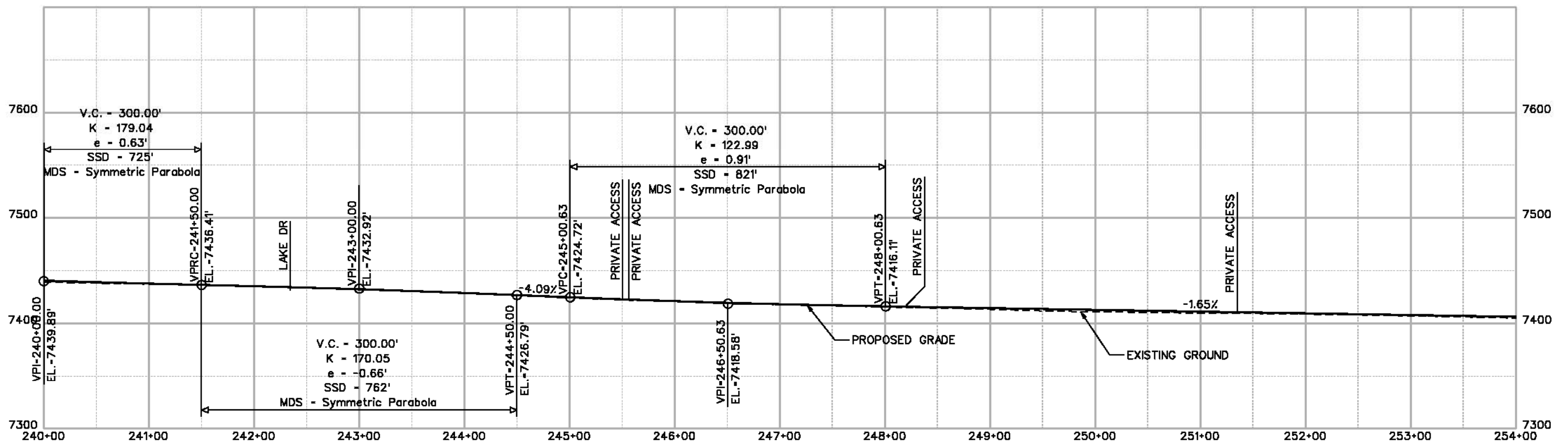


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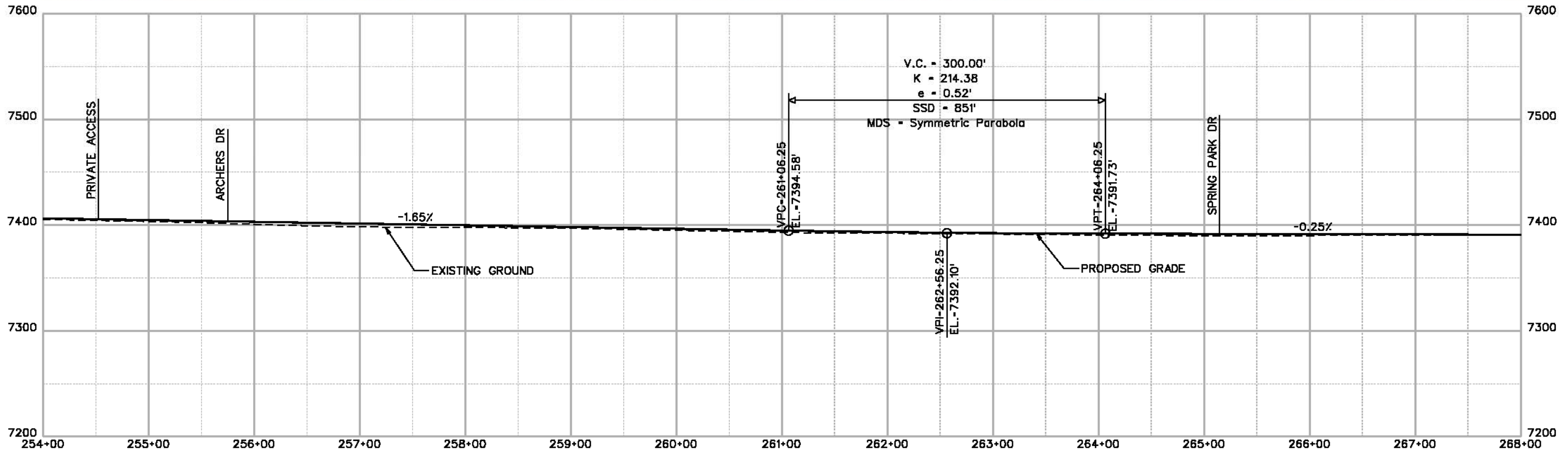


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Detailer: T. HAUGH	
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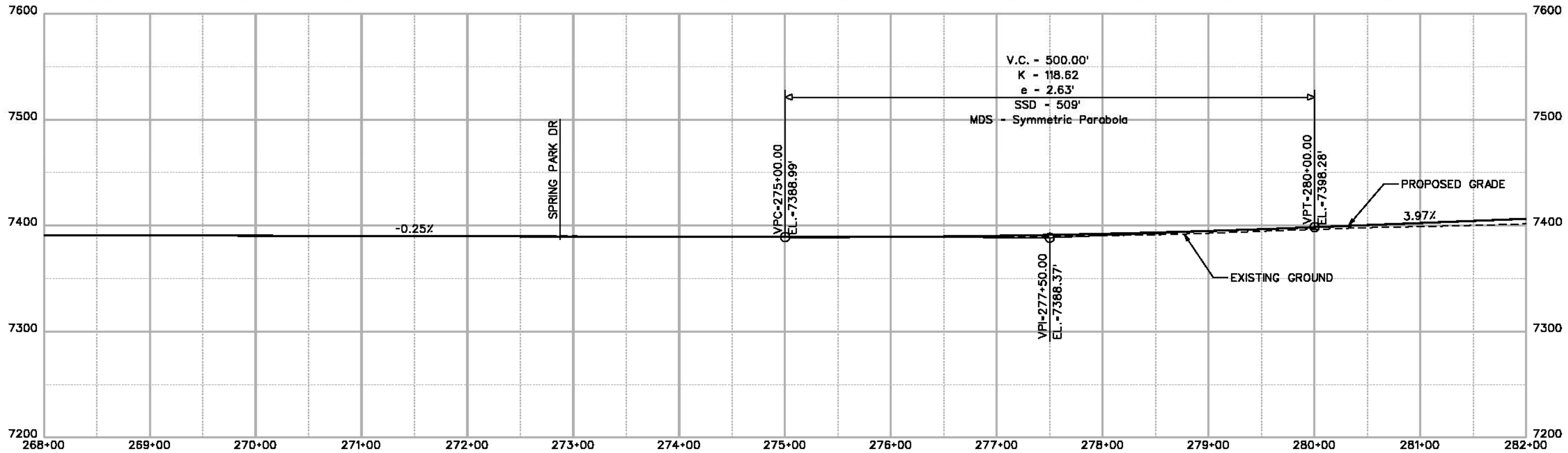
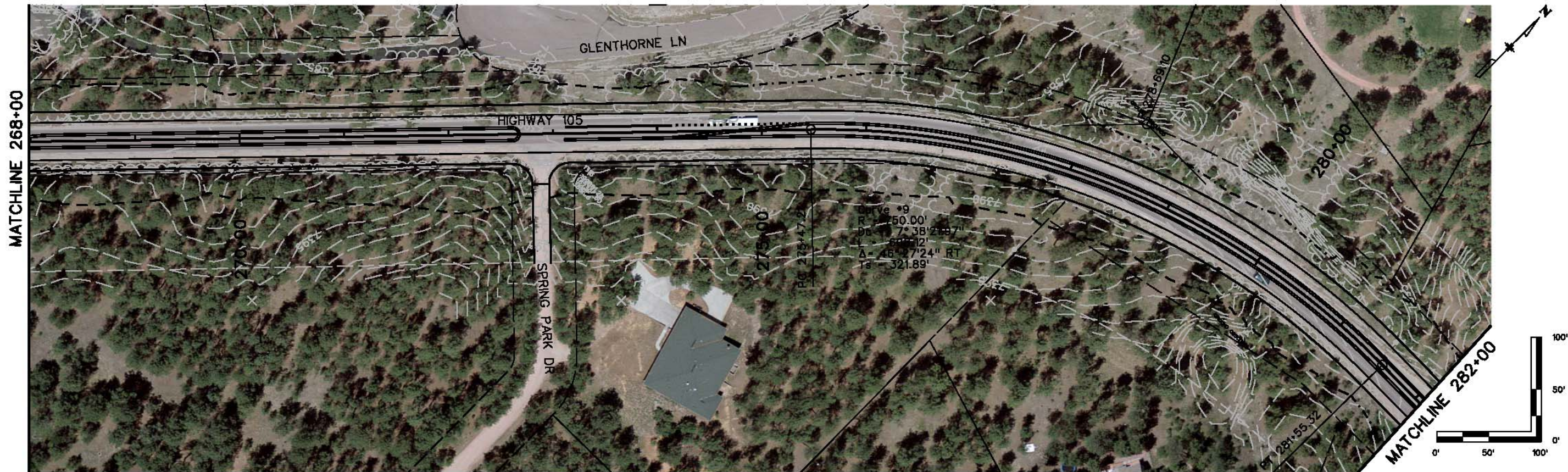


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 STA 254+00 TO 268+00**
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 Detailer: T. HAUGH
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 Phone: 719-272-8800 FAX: 719-272-8801

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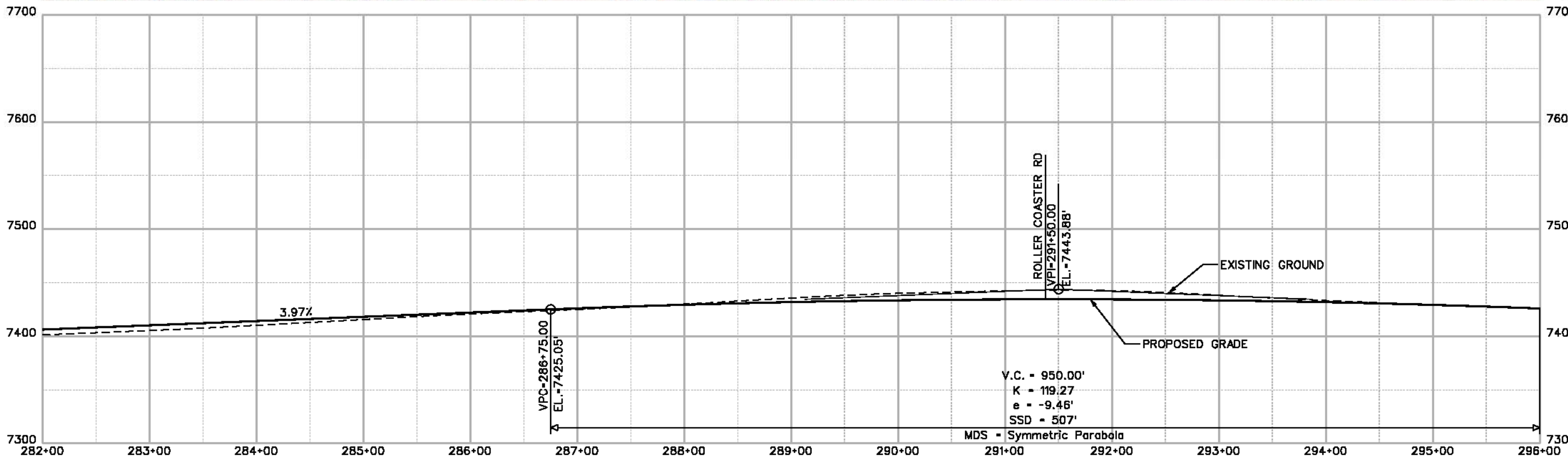
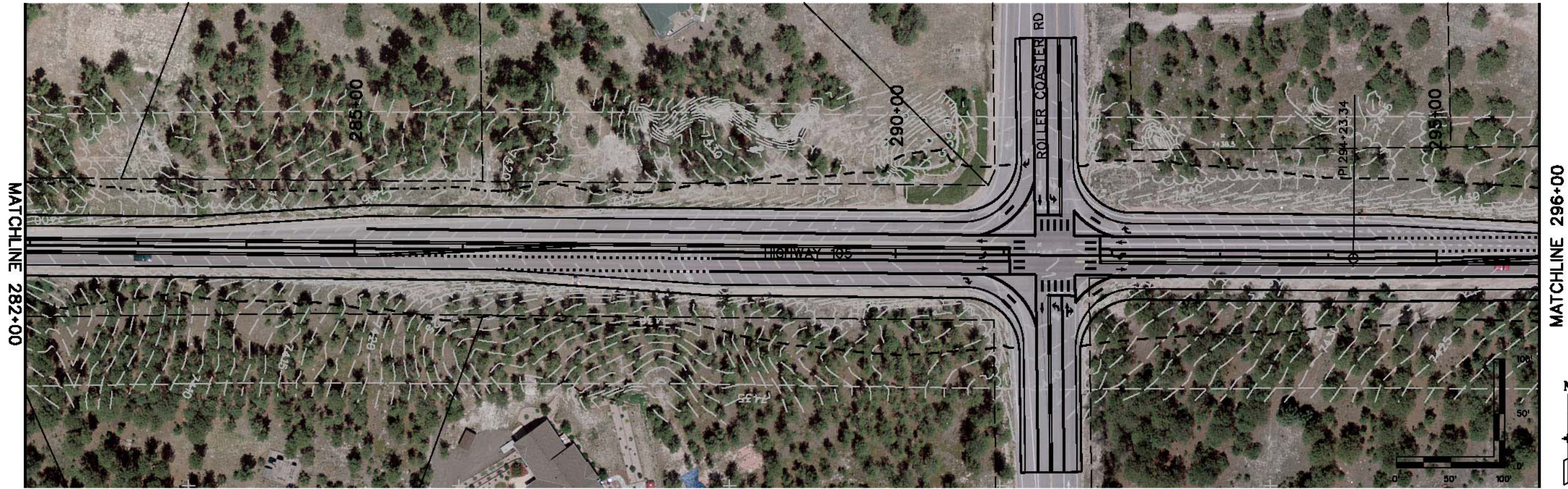


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Designer: M. GRANT	Structure Numbers
Detailer: T. HAUGH	
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Task 008
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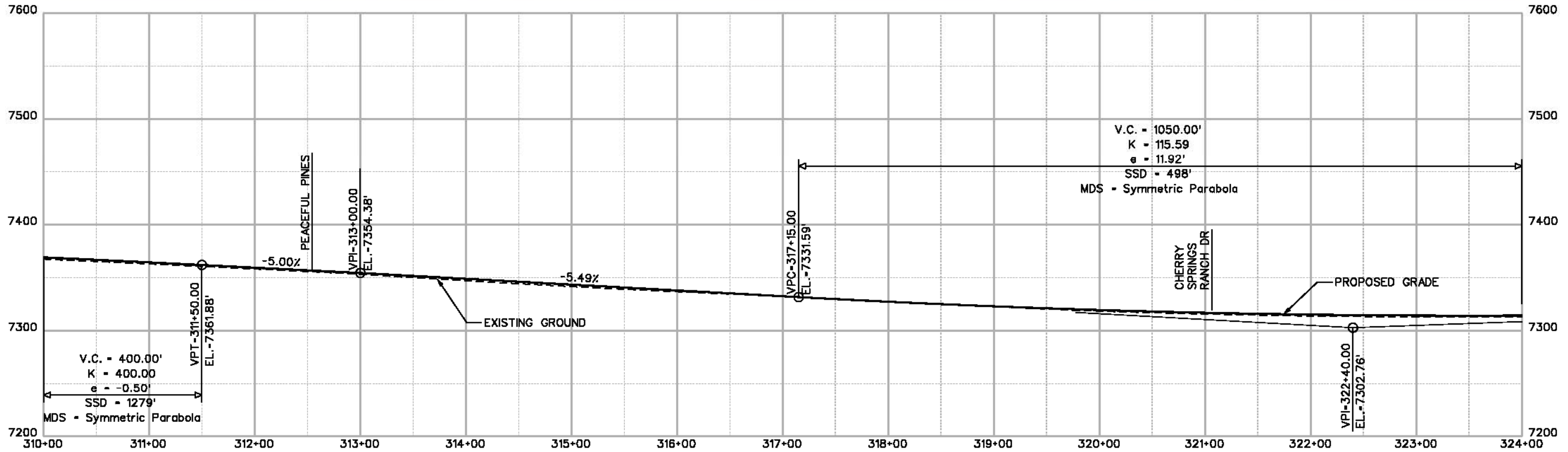


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HIGHWAY 105 CORRIDOR PLAN AND PROFILE STA 282+00 TO 296+00	
Designer: M. GRANT	Structure Numbers
Detailer: T. HAUGH	
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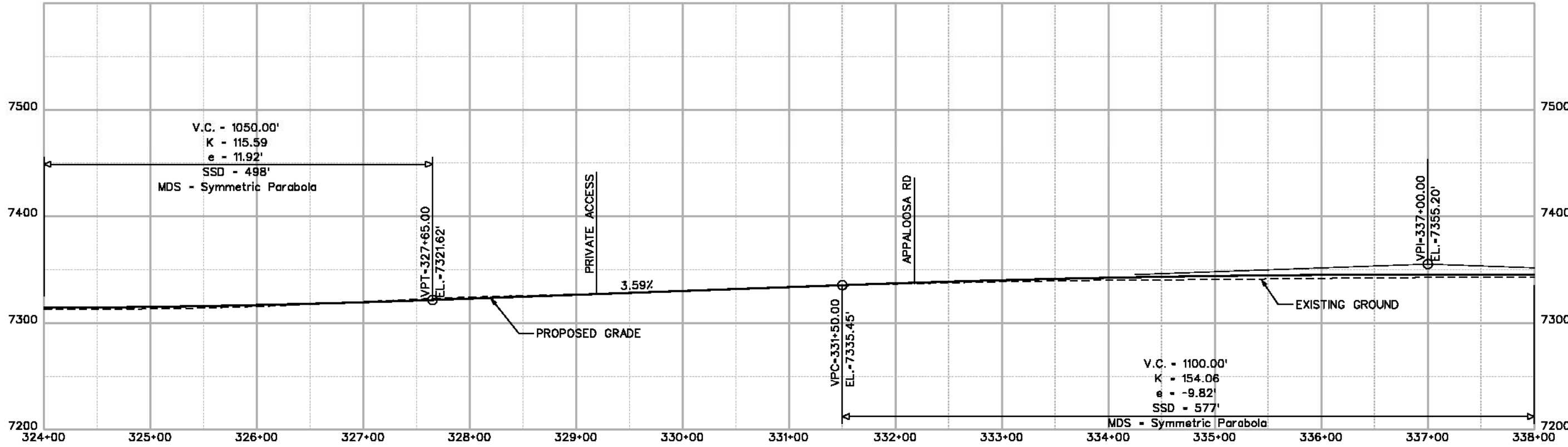
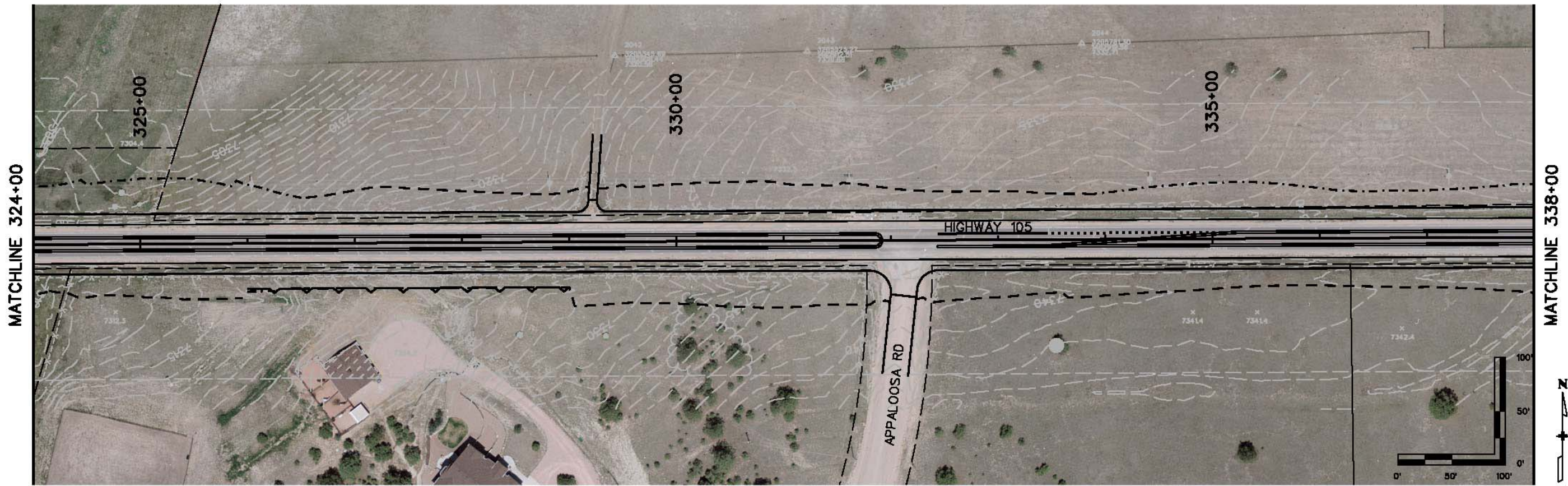


As Constructed
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**HIGHWAY 105 CORRIDOR
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 STA 310+00 TO 324+00**
 Designer: M. GRANT
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Project No./Code
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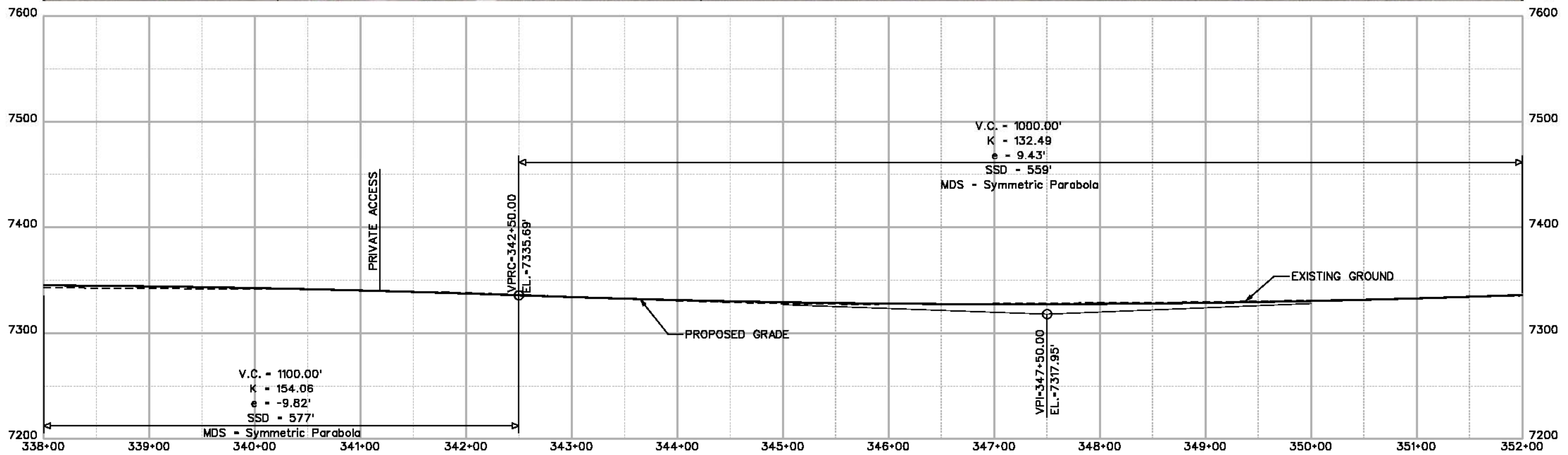


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**HIGHWAY 105 CORRIDOR
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 Designer: M. GRANT
 Detailer: T. HAUGH
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Project No./Code
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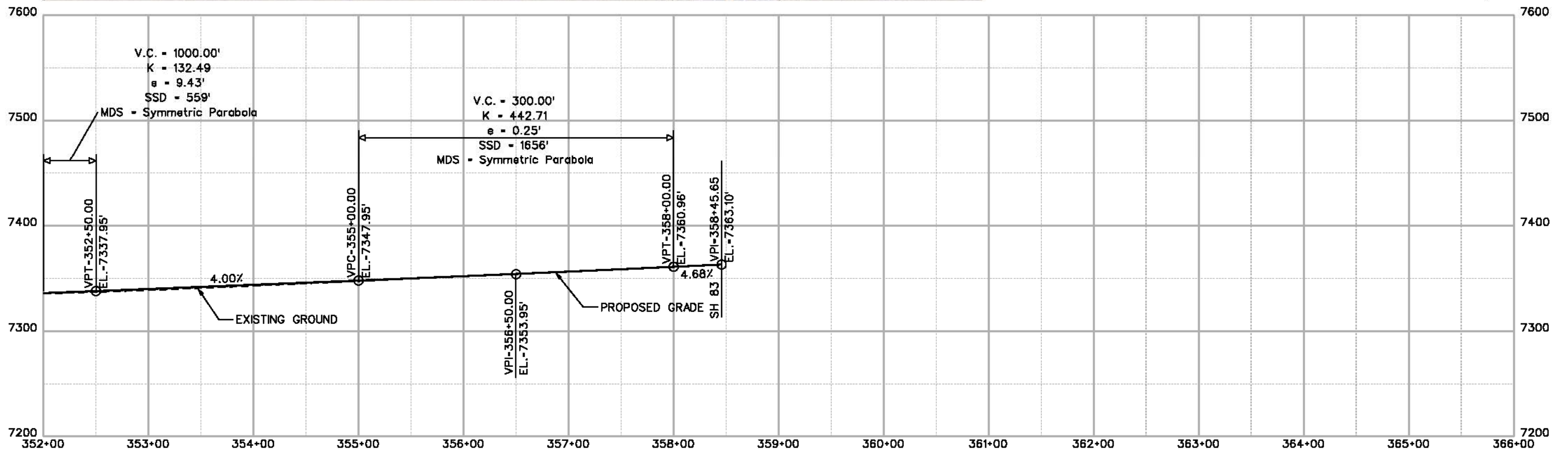
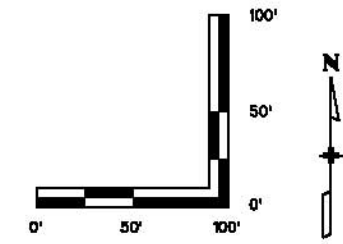


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**HIGHWAY 105 CORRIDOR
 PLAN AND PROFILE
 STA 338+00 TO 352+00**
 Designer: M. GRANT Structure Numbers
 Detailer: T. HAUGH
 Sheet Subaet: Subset Sheets: of

Project No./Code
 163862
 Task 008
 Sheet Number **C-18**

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 Unit Information Unit Leader Initials
HDR 2060 EMBURGATE PKY, SUITE 120 COLORADO SPRINGS, CO 80920
 Phone: 719-272-8800 Fax: 719-272-8801

Sheet Revisions		
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As Constructed
 No Revisions:
 Revised:
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**HIGHWAY 105 CORRIDOR
 PLAN AND PROFILE
 STA 352+00 TO END**

Designer: M. GRANT
 Detailer: T. HAUGH
 Sheet Subset:

Project No./Code
 163862
 Task 008
 Sheet Number **C-19**

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8 Cost Estimates and Phasing Options

The Highway 105 Corridor Study identified overall project involves safety, geometric and capacity (widening to 4 lanes) improvements to Highway 105, between Woodmoor Drive and State Highway (SH) 83. Four project segment areas, selected based on continuity of type and location of primary improvements, comprise the primary focus of the recommended Highway 105 Corridor improvements. The first of these focus areas is Project Segment A, the urban roadway segment between Woodmoor Drive and Lake Woodmoor Drive. The second area, Project Segment B, extends from the Lake Woodmoor Drive terminus of Project Segment A to just east of the Furrow Road intersection. The third area, Project Segment C, extends from 1990' west of West Forrest Drive to approximately 915' east of East Forrest Drive. The final area, Project Segment D, extends from 1980' west of the Roller Coaster Road intersection to 660' east of that intersection. Although no priorities have been set for implementation of improvements in these four focus areas, the County has secured FY 2014 Federal funding to support implementation of Project Segment A improvements, within the most congested segment of the corridor. It is anticipated that improvements to the balance of the corridor (Project E), which includes three corridor segments, would be completed together with adjacent focus area improvements rather than as a separate package or packages. Widening of the rural portion of the corridor to four thru travel lanes, two in each direction, would occur in the long term, only as need is dictated by future growth in corridor travel demand.

The planning level cost estimate for the overall improvements, including five project packages, is approximately \$27,000,000.00. Although the improvements will be built to accommodate future widening of the full corridor to four thru lanes, two in each direction, project segment cost estimates do not include the cost of widening the rural portion of the corridor to four thru lanes (for Project Segments B,C and D). Intersection improvements are priced for signalized alternatives. However, roundabout alternatives will be considered and may be selected during preliminary and final design development. Roundabouts would have a larger footprint and, in some locations would require additional right-of-way acquisition and earth work that is not included in the conceptual cost estimates. Descriptions of recommended improvements for the four focus areas and the balance of the corridor are provided below, together with detailed concept-level cost estimates.

Project Segment A – Woodmoor Drive to Lake Woodmoor Drive

Recommended "Project/Segment A" improvements include various upgrades needed to address operational, capacity and safety deficiencies within the project segment **between Woodmoor Drive and Lake Woodmoor Drive**. Specific project elements include: final design, right-of-way acquisition, and construction of improvements to include: widening of the project segment roadway to four (4) thru travel lanes, two (2) in each direction; addition of sidewalk to provide continuous sidewalk on at least one side of the roadway; extension of curb and gutter along the full project segment; provision of

standard lane widths; intersection channelization improvements to provide left-turn, right-turn and acceleration/deceleration lanes with adequate storage lengths to handle design year traffic volumes; construction of retaining walls as needed to accommodate proposed cross section with minimal impacts to adjacent properties; roadway drainage and water quality improvements needed to accommodate additional paved area; and signalization of, or construction of a roundabout at an additional intersection (Gold Canyon Road or Lake Woodmoor Drive), with construction of left-turn acceleration lane (onto Highway 105) for the retained stop-controlled intersection. Although a Gold Canyon/Lake Woodmoor Drive signal is priced/roundabout may be constructed in lieu of a signal. The concept level cost estimate for Project/Segment A recommended improvements is: **\$4,507,831.29**.

Project Segment B – Fairplay Drive/Furrow Road Segment

Recommended "Project/Segment B" improvements include various upgrades needed to address operational, capacity and safety deficiencies within the project segment extending from approximately 1990' west of Fairplay Drive to 1685' east of Furrow Road. Project elements include: final design and constructions of improvements to include provision of standard shoulders; intersection channelization improvements to provide left-turn, right-turn and acceleration/deceleration lanes with adequate storage lengths to handle design year traffic volumes; construction of retaining walls as needed to accommodate proposed rural/hybrid cross section with minimal impacts to adjacent properties; roadway drainage and water quality improvements needed to accommodate additional paved area; modification of substandard vertical curves as needed to meet standards and maximize sight distance between approximately 1100' west of Fairplay Drive and approximately 1685' east of Furrow Road; signalization of the Furrow Road intersection or conversion of that intersection to a roundabout configuration, and reconfiguration of the Fairplay Drive intersection to include a left-turn (out of Fairplay Drive) acceleration lane or conversion of that interchange to a roundabout configuration. Costs for right-of-way acquisition are not included; however concept level cost estimate contingencies should be adequate to cover limited right-of-way acquisition. Although a Fairplay Drive upgraded T-intersection and a Furrow Road signal are priced, roundabouts will be considered and may be constructed in lieu of the priced improvements. The concept level cost estimate for Project/Segment B recommended improvements is: **\$10,735,869.06**.

Project Segment C – Centered on Forest Drive Loop

Recommended "Project/Segment C" improvements include various upgrades needed to address operational, capacity and safety deficiencies within the project segment from approximately 1990' west of West Forest Drive to 915' east of East Forest Drive. Project elements include: final design and constructions of improvements to include provision of standard shoulders; intersection channelization improvements to provide left-turn, right-turn and acceleration/deceleration lanes with adequate storage lengths to handle design year traffic volumes; construction of retaining walls as needed to

accommodate proposed rural/hybrid cross section with minimal impacts to adjacent properties; roadway drainage and water quality improvements needed to accommodate additional paved area; and modification of substandard vertical curves as needed to meet standards and maximize sight distance conditions within the Forest Drive project segment. Costs for right-of-way acquisition are not included; however contingencies should be adequate to cover limited right-of-way acquisition. The concept level cost estimate for Project/Segment C recommended improvements is: **\$5,776,672.53**.

Project Segment D – Centered on Roller Coaster Road

Recommended “Project/Segment D” improvements include various upgrades needed to address operational, capacity and safety deficiencies within the project segment extending from approximately 1980’ west to 660’ east of Roller Coaster Road. Project elements include: final design and construction of improvements to include provision of standard shoulders; Roller Coaster Road intersection channelization improvements to provide left-turn, right-turn and acceleration/deceleration lanes with adequate storage lengths to handle design year traffic volumes; construction of retaining walls as needed to accommodate proposed rural/hybrid cross section with minimal impacts to adjacent properties; roadway drainage and water quality improvements needed to accommodate additional paved area; modification of substandard vertical and horizontal curves as needed to meet standards and maximize sight distance conditions within the Roller Coaster Road intersection project segment; and signalization of the Roller Coaster Road intersection or conversion of that intersection to a roundabout configuration. Costs for right-of-way acquisition are not included; however concept level cost estimate contingencies should be adequate to cover limited right-of-way acquisition. Although a Roller Coaster Road signal is priced, a roundabout will be considered and may be constructed in lieu of the priced signal upgrade. The concept level cost estimate for Project/Segment D recommended improvements is: **\$2,088,092.33**.

Project Segment E – Balance of the Corridor

Recommended “Project E” improvements include various upgrades needed to address operational, capacity and safety deficiencies within the rural project corridor, east of Lake Woodmoor Drive, that are not included in Projects B, C, or D. Improvements for these three noncontiguous project segments do not include modification of vertical or horizontal curves to address inadequate sight distance. Project elements include: final design, and constructions of improvements to include provision of standard shoulders; intersection channelization improvements to provide left-turn, right-turn and acceleration/deceleration lanes with adequate storage lengths to handle design year traffic volumes; and roadway drainage and water quality improvements needed to accommodate additional paved area. Costs for right-of-way acquisition are not included; however concept level cost estimate contingencies should be adequate to cover limited right-of-way acquisition. The concept level cost estimate for Project/Segment E recommended improvements is: **\$4,073,822.98**.

Basis of Costs

Unit costs and contingencies used to estimate Highway 105 improvement costs were derived from cost data for recent local highway projects, CDOT cost data. This local data and was supplemented by current RS Means unit cost data as needed. Cost estimate development also used a review iterative process in which unit costs were updated based on current CDOT and El Paso County bids results. Quantities were calculated from concept level design drawings (plans and profiles) for the interim and ultimate preferred alternatives as applicable.

Highway 105 Improvement Study
Project A - I-25 Off-Ramp to Lake Woodmoor Drive (103+00.00 to 151+50.00)

Description of Work:
Conceptual Opinion of Probable Cost
14-May-12

ITEM NO.	DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	COST
1	Removal of Asphalt Mat	SY	\$4.50	8749	\$39,370.50
2	Removal of Curb and Gutter	LF	\$3.00	3772	\$11,316.00
3	Unclassified Excavation	CY	\$8.00	8740	\$69,920.00
4	Embankment	CY	\$10.00	0	\$0.00
5	Hot Mix Asphalt (1)	TON	\$65.00	5551	\$360,815.00
6	Aggregate Base Course (1)	TON	\$25.00	5034	\$125,850.00
7	Concrete Sidewalk (2)	SY	\$33.00	4596	\$151,668.00
8	Sidewalk Base (2)	SY	\$25.00	908	\$22,700.00
9	Curb and Gutter	LF	\$15.00	5474	\$82,110.00
10	Retaining Walls	SF	\$50.00	12303	\$615,150.00
11	Right-of-way	EA	\$100,000.00	1	\$100,000.00
12	Traffic Signal	EA	\$280,000.00	1	\$280,000.00
SUBTOTAL					\$1,858,899.50
13	Removal of Structures and Obstructions	%	2%		\$37,177.99
14	Drainage/Water Quality	%	20%		\$371,779.90
15	Lighting	%	5%		\$92,944.98
16	Signing and Striping	%	4%		\$74,355.98
17	Mobilization	%	8%		\$148,711.96
18	Temporary and Permanent Erosion Control	%	10%		\$185,889.95
19	Traffic Control	%	10%		\$185,889.95
20	Construction Surveying	%	4%		\$74,355.98
21	Engineering Design	%	12%		\$223,067.94
22	Construction Management	%	12%		\$223,067.94
24	Utility Relocation/Updates	%	7%		\$130,122.97
SUBTOTAL					\$1,747,365.53
Misc Items					
25	Contingency	%	25%		\$901,566.26
SUBTOTAL					\$901,566.26
GRAND TOTAL					\$4,507,831.29

Note:

- Assumes a minimum thickness of 6" HMA (includes asphalt cement) on 6" ABC
- Assumes a minimum thickness of 6" sidewalk on 4" ABC
- A \$100,000.00 contingency only for Right of Way costs is included in this estimate.
- Costs for PPRTA Construction Management are not included in the Engineering Design.

Highway 105 Improvement Study
Project B - Lake Woodmoor to Martingale (151+50 to 198+00.00)

Description of Work:
Conceptual Opinion of Probable Cost
14-May-12

ITEM NO.	DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	COST
1	Removal of Asphalt Mat	SY	\$4.50	18515	\$83,317.50
2	Removal of Curb and Gutter	LF	\$3.00	0	\$0.00
3	Unclassified Excavation	CY	\$8.00	0	\$0.00
4	Embankment	CY	\$10.00	41005	\$410,050.00
5	Hot Mix Asphalt (1)	TON	\$65.00	13363	\$868,595.00
6	Aggregate Base Course (1)	TON	\$25.00	12118	\$302,950.00
7	Concrete Sidewalk (2)	SY	\$33.00	0	\$0.00
8	Sidewalk Base (2)	SY	\$25.00	0	\$0.00
9	Curb and Gutter	LF	\$15.00	0	\$0.00
10	Retaining Walls	SF	\$50.00	49645	\$2,482,250.00
11	Traffic Signal	EA	\$280,000.00	1	\$280,000.00
SUBTOTAL					\$4,427,162.50
12	Removal of Structures and Obstructions	%	2%	88,543.25	\$88,543.25
13	Drainage/Water Quality	%	20%	885,432.50	\$885,432.50
14	Lighting	%	5%	221,358.13	\$221,358.13
15	Signing and Striping	%	4%	177,086.50	\$177,086.50
16	Mobilization	%	8%	354,173.00	\$354,173.00
17	Temporary and Permanent Erosion Control	%	10%	442,716.25	\$442,716.25
18	Traffic Control	%	10%	442,716.25	\$442,716.25
19	Construction Surveying	%	4%	177,086.50	\$177,086.50
20	Engineering Design	%	12%	531,259.50	\$531,259.50
21	Construction Management	%	12%	531,259.50	\$531,259.50
22	ROW (Undetermined at this time)	LS	0%	0.00	\$0.00
23	Utility Relocation/Updates	%	7%	309,901.38	\$309,901.38
SUBTOTAL					\$4,161,532.75
Misc Items					
24	Contingency	%	25%		\$2,147,173.81
SUBTOTAL					\$2,147,173.81
GRAND TOTAL					\$10,735,869.06

Note:

- Assumes a minimum thickness of 6" HMA (includes asphalt cement) on 6" ABC
- Assumes a minimum thickness of 6" sidewalk on 4" ABC
- No Right of Way costs are included in this estimate.
- Costs for PPRTA Construction Management are not included in the Engineering Design.

Highway 105 Improvement Study
Project C - Forest Drive Loop (206+00.00 to 241+50.00)
Description of Work:
Conceptual Opinion of Probable Cost
14-May-12

ITEM NO.	DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	COST
1	Removal of Asphalt Mat	SY	\$4.50	12754	\$57,393.00
2	Removal of Curb and Gutter	LF	\$3.00	0	\$0.00
3	Unclassified Excavation	CY	\$8.00	0	\$0.00
4	Embankment	CY	\$10.00	42397	\$423,970.00
5	Hot Mix Asphalt (1)	TON	\$65.00	7498	\$487,370.00
6	Aggregate Base Course (1)	TON	\$25.00	6800	\$170,000.00
7	Concrete Sidewalk (2)	SY	\$33.00	0	\$0.00
8	Sidewalk Base (2)	SY	\$25.00	0	\$0.00
9	Curb and Gutter	LF	\$15.00	0	\$0.00
10	Retaining Walls	SF	\$50.00	19268	\$963,400.00
11	Traffic Signal	EA	\$280,000.00	1	\$280,000.00
SUBTOTAL					\$2,382,133.00
12	Removal of Structures and Obstructions	%	2%	47,642.66	\$47,642.66
13	Drainage/Water Quality	%	20%	476,426.60	\$476,426.60
14	Lighting	%	5%	119,106.65	\$119,106.65
15	Signing and Striping	%	4%	95,285.32	\$95,285.32
16	Mobilization	%	8%	190,570.64	\$190,570.64
17	Temporary and Permanent Erosion Control	%	10%	238,213.30	\$238,213.30
18	Traffic Control	%	10%	238,213.30	\$238,213.30
19	Construction Surveying	%	4%	95,285.32	\$95,285.32
20	Engineering Design	%	12%	285,855.96	\$285,855.96
21	Construction Management	%	12%	285,855.96	\$285,855.96
22	ROW (Undetermined at this time)	LS	0%	0.00	\$0.00
23	Utility Relocation/Updates	%	7%	166,749.31	\$166,749.31
SUBTOTAL					\$2,239,205.02
Misc Items					
24	Contingency	%	25%		\$1,155,334.51
SUBTOTAL					\$1,155,334.51
GRAND TOTAL					\$5,776,672.53

Note:

1. Assumes a minimum thickness of 6" HMA (includes asphalt cement) on 6" ABC
2. Assumes a minimum thickness of 6" sidewalk on 4" ABC
3. No Right of Way costs are included in this estimate.
4. Costs for PPRTA Construction Management are not included in the Engineering Design.

Highway 105 Improvement Study
Project D - Rollercoaster Road (273+00.00 to 297+50.00)
Description of Work:
Conceptual Opinion of Probable Cost
14-May-12

ITEM NO.	DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	COST
1	Removal of Asphalt Mat	SY	\$4.50	13700	\$61,650.00
2	Removal of Curb and Gutter	LF	\$3.00	0	\$0.00
3	Unclassified Excavation	CY	\$8.00	26393	\$211,144.00
4	Embankment	CY	\$10.00	0	\$0.00
5	Hot Mix Asphalt (1)	TON	\$65.00	6710	\$436,150.00
6	Aggregate Base Course (1)	TON	\$25.00	6085	\$152,125.00
7	Concrete Sidewalk (2)	SY	\$33.00	0	\$0.00
8	Sidewalk Base (2)	SY	\$25.00	0	\$0.00
9	Curb and Gutter	LF	\$15.00	0	\$0.00
10	Retaining Walls	SF	\$50.00	0	\$0.00
11	Traffic Signal	EA	\$280,000.00	0	\$0.00
SUBTOTAL					\$861,069.00
12	Removal of Structures and Obstructions	%	2%	17,221.38	\$17,221.38
13	Drainage/Water Quality	%	20%	172,213.80	\$172,213.80
14	Lighting	%	5%	43,053.45	\$43,053.45
15	Signing and Striping	%	4%	34,442.76	\$34,442.76
16	Mobilization	%	8%	68,885.52	\$68,885.52
17	Temporary and Permanent Erosion Control	%	10%	86,106.90	\$86,106.90
18	Traffic Control	%	10%	86,106.90	\$86,106.90
19	Construction Surveying	%	4%	34,442.76	\$34,442.76
20	Engineering Design	%	12%	103,328.28	\$103,328.28
21	Construction Management	%	12%	103,328.28	\$103,328.28
22	ROW (Undetermined at this time)	LS	0%	0.00	\$0.00
23	Utility Relocation/Updates	%	7%	60,274.83	\$60,274.83
SUBTOTAL					\$809,404.86
Misc Items					
24	Contingency	%	25%		\$417,618.47
SUBTOTAL					\$417,618.47
GRAND TOTAL					\$2,088,092.33

Note:

1. Assumes a minimum thickness of 6" HMA (includes asphalt cement) on 6" ABC
2. Assumes a minimum thickness of 6" sidewalk on 4" ABC
3. No Right of Way costs are included in this estimate.
4. Costs for PPRTA Construction Management are not included in the Engineering Design.

Highway 105 Improvement Study
Project E - All remaining segments not included in Project A, B, C, & D
(198+00.00 to 206+00.00)
(241+50.00 to 273+00.00)
(297+50.00 to 358+45.51)
Description of Work:
Conceptual Opinion of Probable Cost
14-May-12

ITEM NO.	DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	COST
1	Removal of Asphalt Mat	SY	\$4.50	0	\$0.00
2	Removal of Curb and Gutter	LF	\$3.00	0	\$0.00
3	Unclassified Excavation	CY	\$8.00	33904	\$271,232.00
4	Embankment	CY	\$10.00	0	\$0.00
5	Hot Mix Asphalt (1)	TON	\$65.00	9258	\$601,770.00
6	Aggregate Base Course (1)	TON	\$25.00	8397	\$209,925.00
7	Concrete Sidewalk (2)	SY	\$33.00	0	\$0.00
8	Sidewalk Base (2)	SY	\$25.00	0	\$0.00
9	Curb and Gutter	LF	\$15.00	0	\$0.00
10	Retaining Walls	SF	\$50.00	11940	\$597,000.00
11	Traffic Signal	EA	\$280,000.00	0	\$0.00
SUBTOTAL					\$1,679,927.00
12	Removal of Structures and Obstructions	%	2%	33,598.54	\$33,598.54
13	Drainage/Water Quality	%	20%	335,985.40	\$335,985.40
14	Lighting	%	5%	83,996.35	\$83,996.35
15	Signing and Striping	%	4%	67,197.08	\$67,197.08
16	Mobilization	%	8%	134,394.16	\$134,394.16
17	Temporary and Permanent Erosion Control	%	10%	167,992.70	\$167,992.70
18	Traffic Control	%	10%	167,992.70	\$167,992.70
19	Construction Surveying	%	4%	67,197.08	\$67,197.08
20	Engineering Design	%	12%	201,591.24	\$201,591.24
21	Construction Management	%	12%	201,591.24	\$201,591.24
22	ROW (Undetermined at this time)	LS	0%	0.00	\$0.00
23	Utility Relocation/Updates	%	7%	117,594.89	\$117,594.89
SUBTOTAL					\$1,579,131.38
Misc Items					
24	Contingency	%	25%		\$814,764.60
SUBTOTAL					\$814,764.60
GRAND TOTAL					\$4,073,822.98

Note:

1. Assumes a minimum thickness of 6" HMA (includes asphalt cement) on 6" ABC
2. Assumes a minimum thickness of 6" sidewalk on 4" ABC
3. No Right of Way costs are included in this estimate.
4. Costs for PPRTA Construction Management are not included in the Engineering Design.

9 Public Process

A multi-tiered public/stakeholder coordination process was used to engage El Paso County staff and elected officials, businesses and residents along the corridor, CDOT, the Town of Monument, and the general public. Each of these groups were engaged through a variety of formats including project meetings, individual meetings, small group meetings, formal presentations, telephone conversations, direct mailings, a project website with comment function, and three open house public meetings.

Figure 9.1: Distribution of Public Comments by Topic provides a summary of the relative importance of key corridor issues from a public perspective.

9.1 Project Coordination Meetings

Throughout the project development phase, the project team conducted bi-weekly coordination meetings. Special purpose meeting were held to support open house preparation and to provide interactive input from County staff for alternatives development. Two briefing meetings were also held with the Town of Monument staff to gather development plan input and to brief Monument staff regarding study progress and planned public meeting content and format. Monument was also briefed on meeting outcomes.

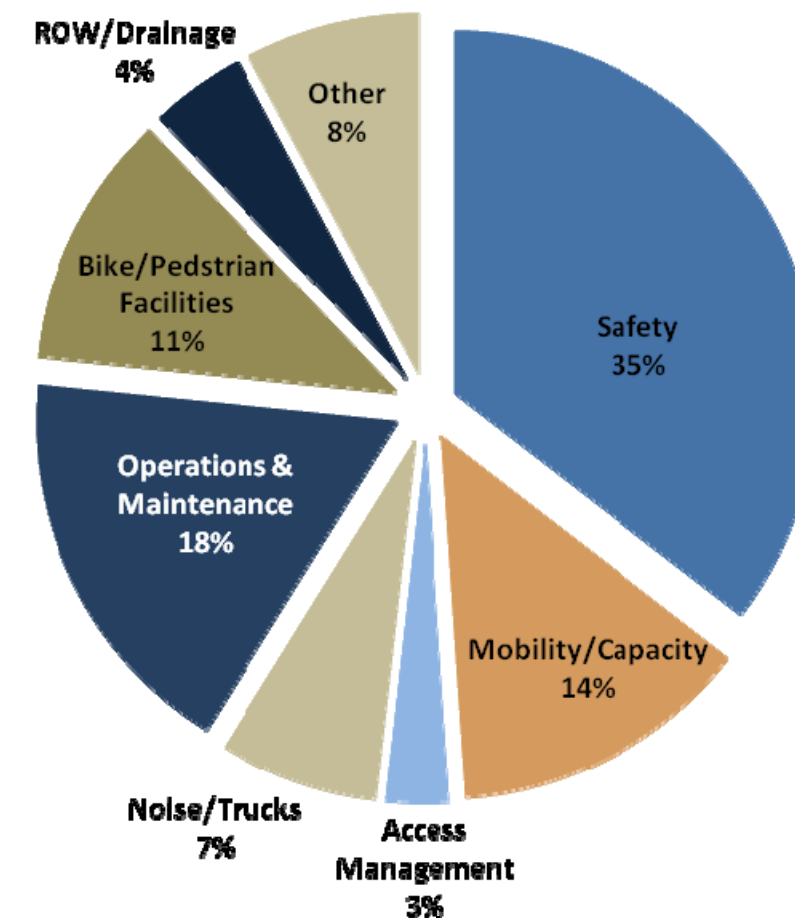
9.2 Stakeholder Coordination

In addition to the project coordination meetings, the project team held one-on-one and small group briefings with potentially impacted individual homeowners and neighborhood organizations.

9.3 Elected Officials

County Commissioners were included in direct mail invitations to the three public open houses. The Commissioner for the district in which the project corridor is located attended all three public meetings. He was also provided a briefing package, including a PowerPoint presentation that was used as part of a separate Town Hall Meeting briefing with a focus on on-going County infrastructure improvement projects.

Figure 9.1: Distribution of Public Comments by Topic



9.4 Public Open House Meetings

Three public open house-format meetings were held to introduce the Highway 105 Corridor Study to the general public, to present initial study findings and to present updated study findings. The meetings were held on August 2, 2011, February 28, 2012 and July 10, 2012. The final meeting was held jointly with CDOT Region 2, providing a venue in which updated findings and recommendations for the separate SH 83/Highway 105 intersection upgrade project could be presented. All meetings were well attended with close to 100 participants in attendance at each.

9.5 Project Website

A project website (www.105corridor.com) was developed and maintained throughout the development phase of the project. It is anticipated that the website will be continued through design and construction project phases. The website houses downloadable presentation materials from the public open houses as well as more detailed technical reports. Throughout the project development phase, the website also incorporated online public comment functionality.

