



New Mexico DEPARTMENT OF
TRANSPORTATION
MOBILITY FOR EVERYONE



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US-550 MP 64.93 TO MP 80.64 WILDLIFE VEHICLE COLLISION (WVC) MITIGATION **SCOPING REPORT**

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Sandoval County, New Mexico

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Date: July 2023

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Acronyms and Abbreviations

AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
AMSL	Above Mean Sea Level
BCR	Benefit-Cost Ratio
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CBC	Concrete Box Culvert
CL	Center Line
CMP	Corrugated Metal Pipe
CMSPP	Corrugated Metal Steel Plate Pipe
CWA	Clean Water Act
EA	Environmental Assessment
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GIS	Geographical Information System
GPS	Geographical Positioning System
IPaC	Information for Planning and Conservation
ITS	Intelligent Transportation System
JANDGF	Jicarilla Apache Nation Department of Game and Fish
LiDAR	Light Detection and Ranging
LRFR	Load and Resistance Factor Rating
LUST	Leaking Underground Storage Tank
MP	Milepost
MOT	Maintenance of Traffic
MPH	Miles Per Hour
NEPA	National Environmental Policy Act

NMDGF	New Mexico Department of Game and Fish
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environment Department
NMGMR	New Mexico Bureau of Geology and Mineral Resources
NRCS	Natural Resources Conservation Service
NWCAP	New Mexico Wildlife Corridors Action Plan
NWI	National Wetland Inventory
PMBP	Plant Mix Bituminous Pavement
PRV	Pressurized Release Valve
RCP	Reinforced Concrete Pipe
ROW	Right-of-Way
USACE	United States Army Corps of Engineers
USFS	United States Forest Service
USGS	United States Geological Survey
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
WC	Wildlife Crossing
WOTUS	Waters of the U.S.
WVC	Wildlife Vehicle Collision

1 Introduction

In June 2022, the New Mexico Wildlife Corridors Action Plan (NMWCAP) identified US-550 north of Cuba, New Mexico, from Milepost (MP) 64.0 to MP 80.3 as the state's top priority for wildlife vehicle collision (WVC) mitigation in a wildlife corridor. New Mexico Department of Transportation (NMDOT) data identified 208 crashes due to wildlife collisions from 2009 to 2022. Elk (*Cervus canadensis*) made up 58 percent of the reported collisions along this corridor. Mule deer (*Odocoileus hemionus*) were the second highest with 39 percent.

The purpose of this scoping report is to refine the structure configurations, locations, budget estimates, project implementation needs, and construction phasing sequencing to meet goals identified for the US-550 corridor in the NMWCAP. This report is needed to identify how best to implement WVC mitigation measures to meet budget and timing constraints, while achieving the highest reduction in WVCs to increase motorist safety and improve wildlife movement and habitat connectivity along the US-550 corridor.

This report identifies the existing infrastructure, natural resources, and geospatial/crash data along the US-550 corridor. Next, the report evaluates the engineering requirements to implement wildlife vehicle mitigation along the roadway based on the existing conditions. This report also identifies possible National Environmental Policy Act (NEPA) requirements to implement mitigation measures and provides a preliminary assessment of protected resources that could be present along the corridor. Last, the report refines the 18 structures originally considered in the NMWCAP to a total of eight structures that are spaced approximately every 1.5 to 3 miles along the US-550 corridor. The limits for the proposed mitigation measures have been refined from MP 64.0 to MP 80.3, as stated in the NMWCAP, to MP 64.93 to MP 80.64 (see Figure 1).



Figure 1. US-550 WVC Hotspot and Proposed Mitigation Area

1.1 Report Objectives

The objectives for this scoping report include the following:

- Identify and provide an inventory of existing infrastructure along the corridor.
- Identify existing conditions of environmental resources along the corridor.
- Review geospatial and crash data and identify crash hotspots and likely points of wildlife crossing activity.
- Evaluate project engineering requirements and provide preliminary engineering information to streamline successful implementation of WVC mitigation.
- Identifies possible NEPA requirements to implement mitigation measures and provide a preliminary assessment of protected resources that could be present along the corridor.
- Recommend a construction phasing plan, provide budget estimates, and evaluate benefit-cost for implementation of WVC mitigation measures.

1.2 Location

The US-550 WVC hotspot is located northwest of Cuba, New Mexico, from MP 64.93 to MP 80.64. It also includes a one-half mile segment of NM-96 from MP 0 to approximately MP 0.5. US-550 is a key highway linking the Albuquerque-Rio Rancho metropolitan center to Farmington, New Mexico, and Durango, Colorado. Average annual daily traffic (AADT) for the US-550 corridor is estimated to be approximately 4,900 vehicles per day. The corridor is bordered on the north by Jicarilla Apache Nation Tribal lands, and to the east by the San Pedro Parks Wilderness of Santa Fe National Forest. To the south of the corridor, much of the land along US-550 is managed by the Bureau of Land Management (BLM) with some land of Santa Fe National Forest on the southeast side of US-550. Parcels of private land are also scattered along the corridor. Figure 2 provides a visual overview of landownership along the US-550 corridor between MP 64.93 to MP 80.64. For more detailed land ownership information, refer to the Environmental Resources Mapbook in Appendix A.

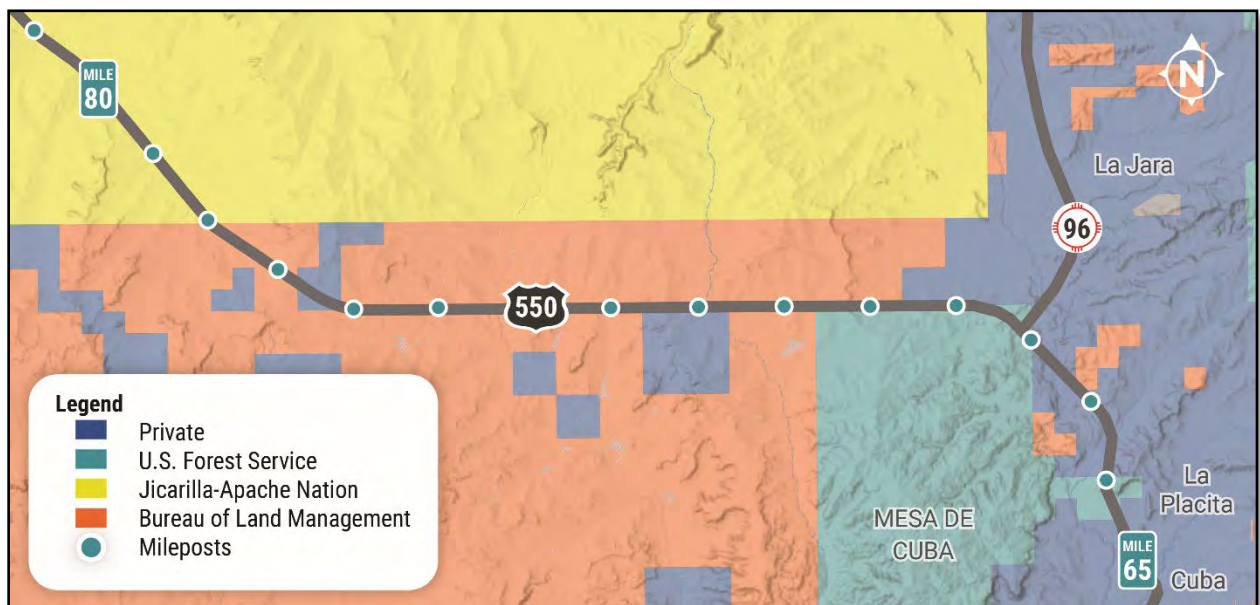


Figure 2. Land Ownership within the US-550 WVC Hotspot and Proposed Mitigation Area

1.1 Background and Project Identification

In 2022, a collaboration between prominent wildlife biologists, road ecologists, and multiple state and federal agencies culminated in the NMWCAP. The purpose of the NMWCAP was to evaluate WVC hotspots across New Mexico and identify the top priorities for WVC mitigation efforts. Top hotspots were identified based on metrics such as number of WVCs and the relative importance of the corridor for wildlife movement and connectivity. As part of the prioritization, the NMWCAP presented WVC mitigation recommendations for every hotspot.

The US-550 corridor was identified as the top priority to mitigate elk and mule deer vehicle collisions and a top priority for elk and mule deer movement and habitat connectivity. The NMWCAP presented WVC mitigation recommendations for the US-550 corridor from MP 64.0 to MP 80.3, which include wildlife overpasses, underpasses, potential retrofits of existing structures, and wildlife fencing. Recommendations built into the NMWCAP for the US-550 corridor were based on the best-available science and data for structure types and costs.

1.2 Methodology

1.2.1 Roadway Engineering Considerations

Conceptual design configurations were developed to reduce WVCs and to provide safe wildlife passage. These conceptual configurations are not intended to substitute for design-level project development, but instead serve as a basis for planning-level consideration to develop an implementation strategy to address all the needs identified in the NMWCAP. Some engineering was performed prior to commencing this effort, and engineering goals for the project were discussed and agreed upon with the entire project team. It was determined that all wildlife crossings should be constructed in a way that would not affect the existing road grade and avoid the need for additional right-of-way (ROW), if possible.

1.2.1.1 Overpasses

To avoid disturbing the horizontal roadway geometry, overpass structures should be a single span across the existing roadway typical section. All overhead structures would need to be large enough to fit four lanes of traffic as well as a flush median shoulder and would need to maintain a vertical clearance of 17 feet. The team decided to explore options that would have minimal impacts to roadway traffic and expedite construction time, while being cost effective. It was determined that a precast structure would help achieve these goals. For a visual representation of the typical clearance for an overpass, see Figure 3.

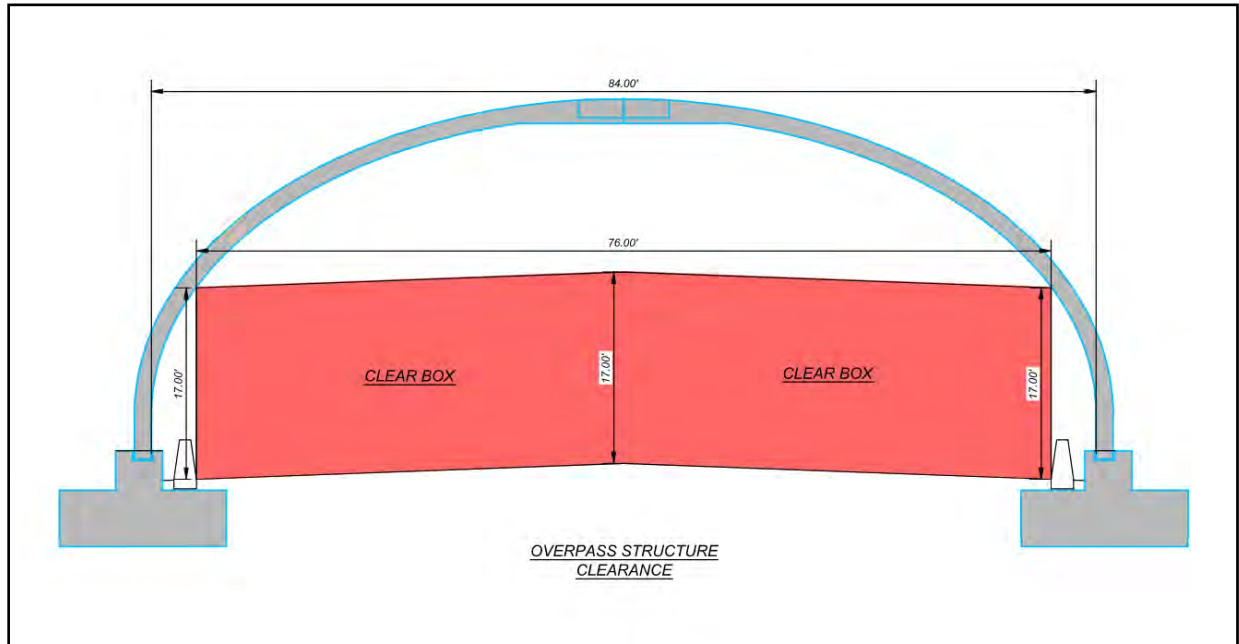


Figure 3. Overpass Typical Clearance

1.2.1.2 Underpasses

Wherever possible and to take advantage of the terrain, underpass structures would be constructed at or near existing drainage structures. Underpasses would be designed to meet best practices for elk and other large wildlife to cross. To appeal to the safety instincts of elk, underpasses would maintain a minimum height of 13 feet and a minimum width of 50 feet. These dimensions allow natural light to permeate the underpass and create a wide view, thereby maximizing the feel of openness within the undercrossing. Vertical clearance was maximized within the terrain and road constraints in order to make the structure appealing to wildlife. For a visual representation of the typical clearance for an underpass, see Figure 4.

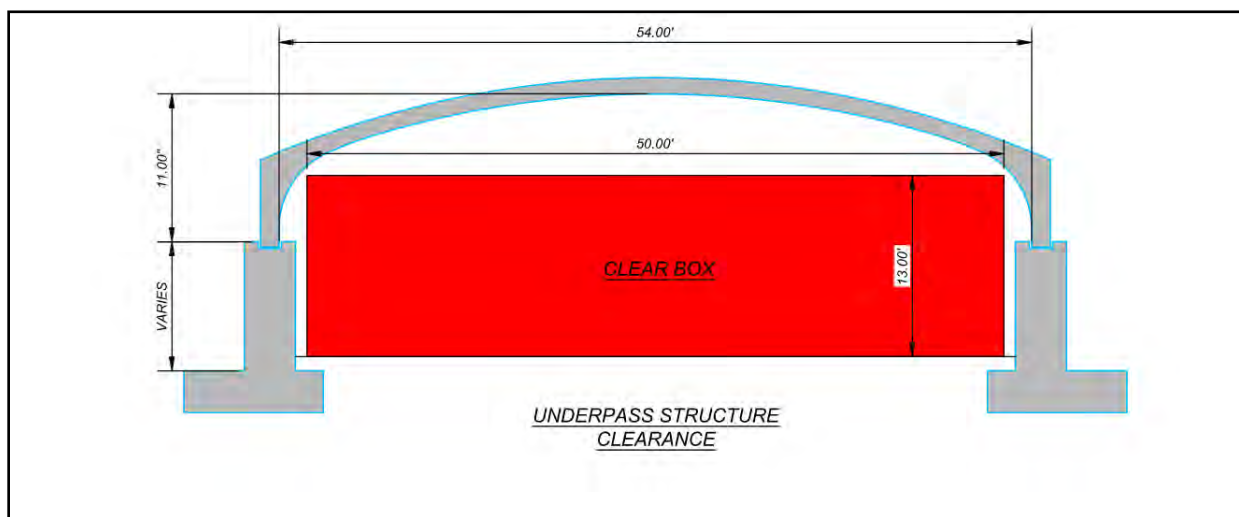


Figure 4. Underpass Typical Clearance

1.2.2 Structure Assumptions

To reduce cost, facilitate ease of construction, and minimize construction impact to US-550 traffic, precast span units were identified for use. Contech products were used to develop conceptual layouts and construction cost estimates. During the development of design concepts, the team coordinated with Contech to identify appropriate precast units for various configurations for both underpasses and overpasses. These precast units were considered for the purposes of assessing feasibility and developing estimates of construction cost. During design, actual structural configurations should be evaluated and considered as part of a Bridge Type Selection Report. Contech was selected as a manufacturer to provide a precast structure alternative that would satisfy the needs for both underpasses and overpasses.

1.2.2.1 Overpasses

For this scoping report, the structure for the overpasses assumed is a twin leaf precast concrete arch which spans 84 feet and has a midspan rise of 29 feet 10 inches. The structure is classified by Contech as a BEBO, 84'-0" Span x 29'-10" Rise and is the largest structure that Contech manufactures that maintains the required dimensions described in Section 1.3.1.1. For a visual representation of the roadway typical section at an overpass, see Figure 5. For more overpass details, refer to Appendix B Overpass Detail E84' x 29-10".

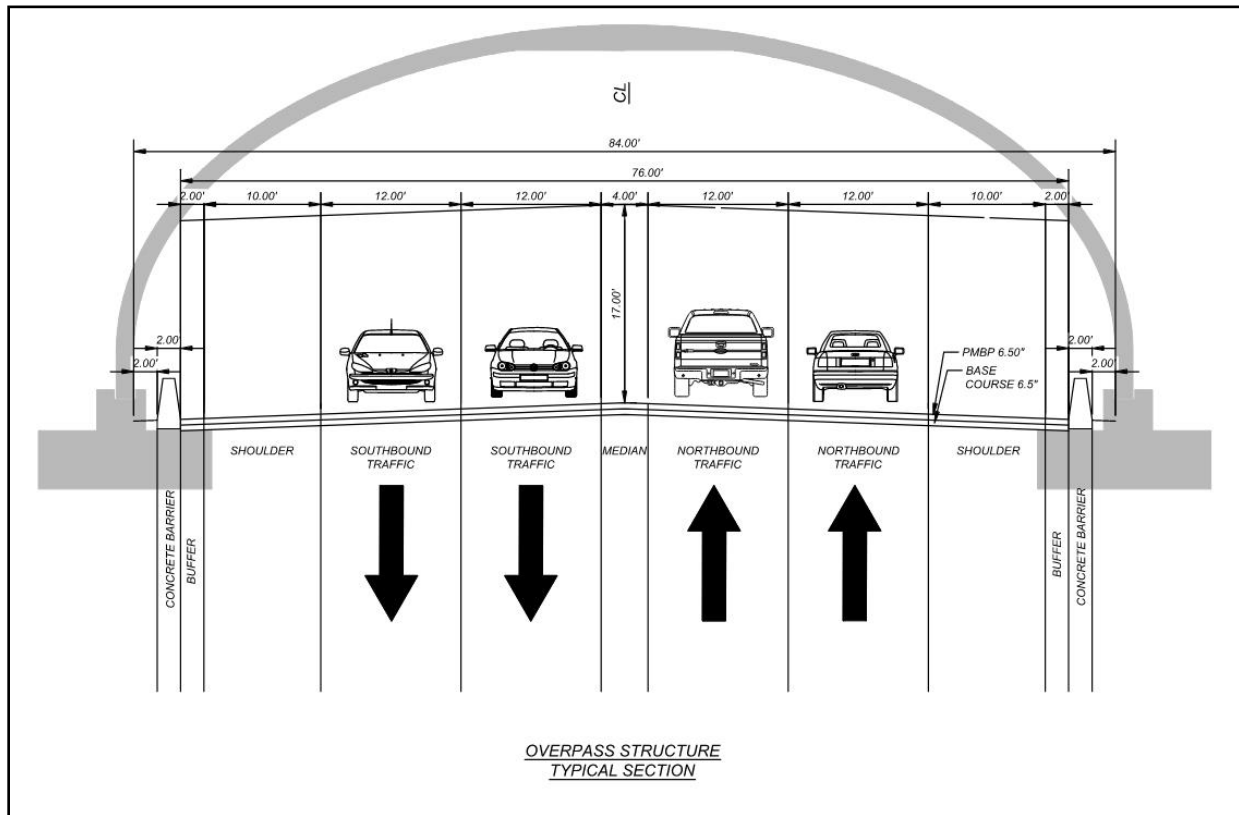


Figure 5. Overpass Typical Section

The height of the overpass structure requires extensive fill slopes. Therefore, overpasses should be placed between cut slopes to reduce the amount of fill material that would need to be hauled to the site. The BEBO E87T structure requires a minimum cover of one foot and a maximum of two feet. Increasing the span of the structure would inevitably translate into a tall structure, and as the structure gets taller, the fill slopes extend out significantly. Ideally, the fill slopes on the structures should have a 4:1 slope. The purpose of these slopes is to provide a sustainable grade above the structure to ensure the wildlife feel secure when using the crossing.

Wildlife, especially elk, are more likely to use large overpasses that feel open and unconfined and have abundant horizontal views. It was determined that overpass structures would be 150 feet in width to best appeal to the natural instincts of wildlife and encourage them to cross and as recommended in various wildlife crossing guide literature.

1.2.2.2 Underpasses

The structure used for the underpasses is a standard Contech CON/SPAN B Series, 54' Span x 11' Rise precast arch. This structure would require the use of stem walls on top of the foundation to provide enough vertical clearance to accommodate elk passage for wildlife as described in Section 1.3.1.2. Contech recommended to have a midspan cover of a minimum of two feet and a maximum of six feet. The existing vertical clearance of the road would determine the height of stem walls for the span sections to sit in to meet specific terrain situations.

The structure should have a length equal to or larger than the existing pavement cross-section. Neither the horizontal nor the vertical geometry of the existing road would need to be changed. Contech recommends a minimum midspan cover of two feet and a maximum of six feet. Wingwalls and head walls would be used to hold back the fill slopes. For a visual representation of the roadway typical section at an underpass, see Figure 6. For more underpass details, refer to Appendix C Underpass Detail 54' x 11' B-Series.

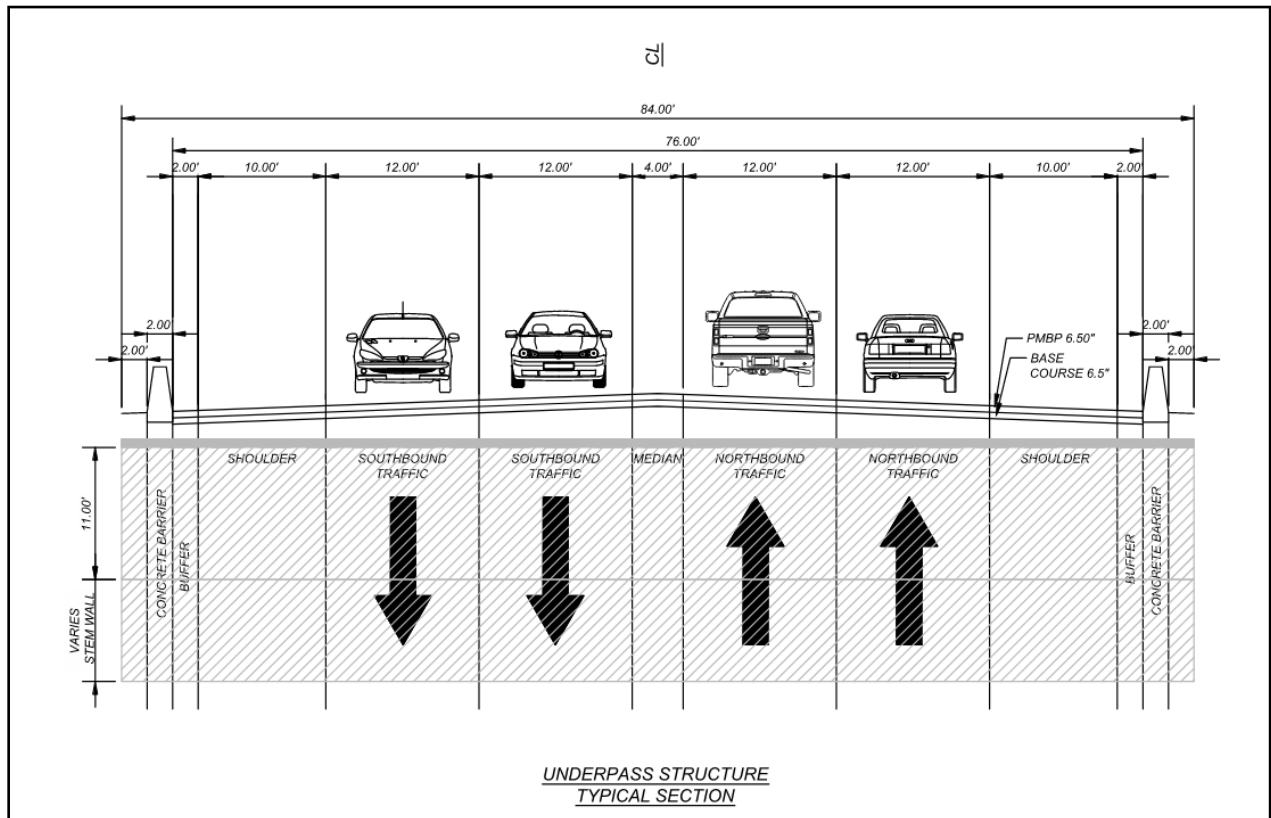


Figure 6. Underpass Typical Section

1.2.3 Benefit-Cost Analysis

A benefit-cost analysis was performed using existing crash data and present-day costs associated with human injuries, fatalities, damages to personal and public property, and the value of animals killed in WVCs (Huijser et al, 2022). Engineering cost estimates were developed for each wildlife crossing structure based on 2023 values. The benefits were estimated by evaluating the anticipated reduction in crash costs. Based on a review of recent literature evaluating the rate of successful wildlife crossings for different structure types and sizes, assumptions were developed about the potential reduction in WVCs with implementation of the proposed crossing structures. Given that all proposed structures met the design criteria currently recommended for crossings, a 90 percent reduction in WVCs is anticipated.

Literature on the effectiveness of wildlife crossings has begun recognizing the passive value of animals saved as part of the benefit calculation for wildlife crossing projects. Therefore, the reduction in animals lost was also extrapolated to reflect an annual avoided loss of animals as part of the monetary cost of WVCs. The projected life expectancy of the structures is assumed to be 75 years; therefore, the

reduction in crash costs and the value of elk and mule deer saved over 75 years was calculated as a benefit.

These assumptions and methods are similar to those used in the NMWCAP benefit-cost analyses. Given that each phase of the US-550 WVC mitigation is designed to have independent utility, these methods were employed to estimate the potential benefit-cost ratio for individual phases, as well as a total benefit-cost ratio for implementation of the full WVC mitigation phasing plan for the entire US-550 corridor from MP 64.93 to MP 80.64. The US-550 WVC hotspot recommendations would be implemented in phases.

It should be noted that many roadway ecologists, state wildlife departments, state departments of transportation, and the Federal Highway Administration (FHWA) agree that the annual number of WVCs is far higher than the number reported to highway patrol or local police departments. The 2008 Wildlife-Vehicle Collision Reduction Study (Huijser, et al, 2008) reported to Congress that only 15 to 30 percent of total WVCs that occur each year get reported. WVCs along the US-550 corridor are likely as much as 85 percent higher than what is shown in the data used to calculate the benefit-cost ratios. The increased WVC rate was corroborated by the Cuba Patrol Yard supervisor, who said they typically pick up one or more carcasses per day during the peak crash season (October – December). The increased rate of WVCs represents a potentially substantial cost to society from crash damages, human injuries, and loss of wildlife that go unaccounted for and should be kept in mind when considering the benefit-cost ratio of proposed WVC mitigation measures.

1.2.4 Wildlife Mitigation Phase Determination

Proposed structure types, locations, and construction phasing options for the MP 64.93 to MP 80.64 corridor was developed based on the following:

- Site and structure recommendations established in the NMWCAP.
- Field evaluations of site characteristics constraints.
- Geospatial analysis of existing WVC data combined with a topographic ruggedness evaluation for the terrain surrounding the US-550 corridor.
- Consideration of the different migratory and residential wildlife populations along the US-550 corridor.

Additionally, the Jicarilla-Apache Nation provided critical insight into elk movement from Geographical Positioning System (GPS) collared animal data, which helped to refine structure locations and construction phasing.

2 Existing Conditions - Infrastructure

The following sections detail the type and condition of existing infrastructure along the US-550 corridor from MP 64.93 to MP 80.64. Based on recommendations made in the NMWCAP, specific consideration was given to existing infrastructure that could be retrofitted or built into a fencing program to provide wildlife with additional options for safe passage across or under US-550.

2.1 Typical Section

US-550 is a crowned four-lane roadway with two 12-foot-wide travel lanes in each direction. The typical section also includes the four driving lanes separated by a 4-foot-wide median and 8-foot-wide shoulders on each side of the road (see Figure 7). The total width of the paved section is 68.9 feet. The pavement consists of 6.5 inches of plant mix bituminous pavement (PMBP) and 6.5 inches of base course.

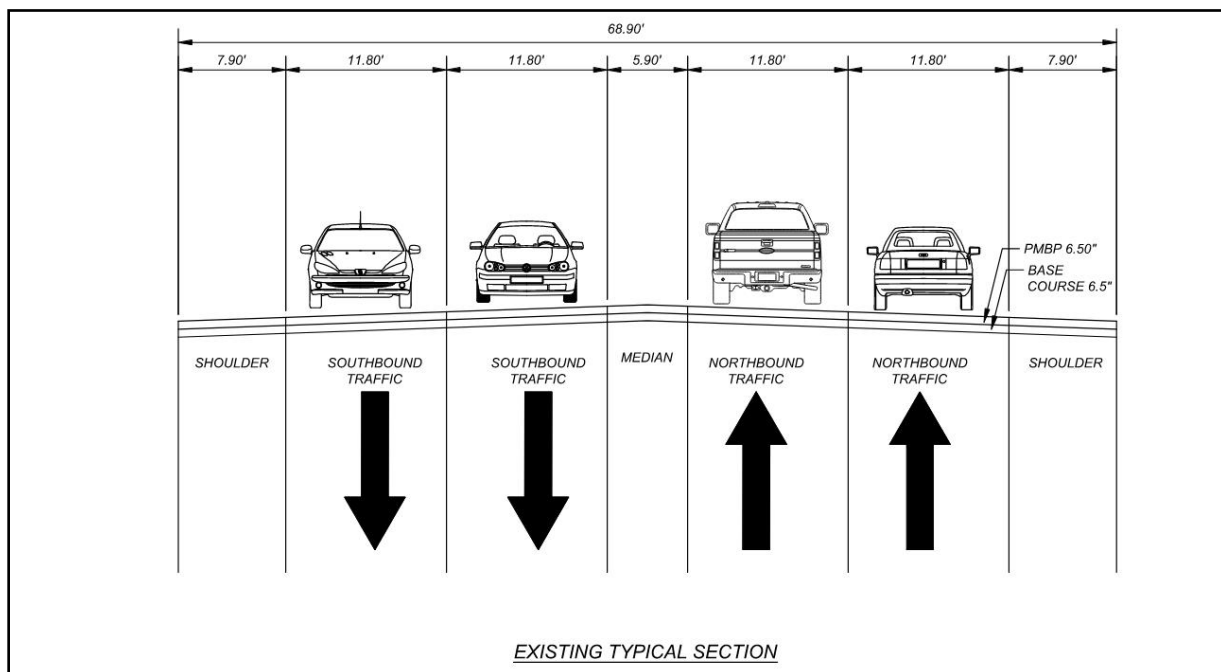


Figure 7. Existing US-550 Typical Section

2.2 As-Builts

As-built plans created by Wilson Company for the NM-44 Project No AC-NH-044-2(39)64 Sandoval County Control No. 3766 completed on November 1999 were collected and used to help locate and identify the types and sizes of the existing structures along the corridor. As-built plans are included in Appendix D.

2.3 Design and Posted Speed

Based on these as-built plans created by Wilson Company, the design speed was 65 miles per hour (mph). The current posted speed is 70 mph. Further design speed analysis would need to be completed to determine today's design speed.

2.4 Existing and Future Traffic Volume

Based on the NMDOT Transportation Data Management System from 2021, the AADT near the beginning of the project was 4,925 with 14% annual growth. NMDOT traffic information is included in Appendix E.

2.5 Vertical and Horizontal Alignment

The as-built plans indicate that there are two vertical curve design exceptions: The first being a crest curve near MP 66 and a second at MP 66.9. These two areas are substandard for what would be the appropriate design speed today (see Table 1). These two curves are in the vicinity of Wildlife Crossing (WC)-01 and WC-03, respectively.

Table 1. Vertical Curve Design Exceptions

Curve ID.	MP	Exist. Design Speed (mph)	$K_{existing}$	K_{80}
CV-1	66.0	55	169	384
CV-2	66.9	60	192.00	384

2.6 Major and Minor Intersections and Turnouts

There is one major intersection along US-550 between MP 64.93 to MP 80.64. This intersection is located at the junction of US-550 and NM-96.

There are 18 minor intersections along US-550 between MP 64.93 to MP 80.64. These minor intersections are located at Los Pinos County Road, Blue Road, Garcia Road, W. Ranger Lane, Morning Star Drive, Encino Vega Road, Shroyer Estates Road, Lapis Lane, Rito De Los Pinos Road, Cliff Dwellers Road, Bert's Trailer Park, Cub Mesa, US Forest Service Road 88, Indian Service Route 22, Chiulla Road 1101, Martinez, Indian Service Route 24, and BIA 37. There are also a number of unnamed dirt roads and accesses along the US-550 corridor between MP 64.93 and MP 80.64.

2.7 Fences and Cattleguards

Throughout the project limits there are a total of 41 access points. Of these access points, 25 have existing cattle guards and 16 have gates. All existing fencing is made of barbed wire and delineates existing ROW and/or land ownership.

2.8 Inventory of Major Structures

There are five major structures that are recognized by NMDOT as bridges that are present within the project area limits. The major structures and the wildlife crossing structures are summarized in Table 2. All the identified major structures fall under the maintenance of NMDOT District 6. Bridge Inspection reports are included in Appendix F.

Table 2. Existing Major Structures

Structure ID	Milepost	Bridge No.	Structure Type
WC-02	66.51	9141	2-132" x 181' CMSPP
WC-04	67.55	8730	3-15'4"x 9'3"x 196' CMSPP
WC-08	71.81	7060	2-10'x10'x140' CBC
WC-11	74.31	7061	2-10'x10'x133' CBC
WC-17	79.02	7972	2-10'x8'x133' CBC

2.9 Inventory of Minor Structures

There are six minor structures (i.e., walls and drainage structures) that are recognized by NMDOT as bridges that are present within the project area limits. The minor structures and the wildlife crossing structures are summarized in Table 3.

Table 3. Existing Minor Structures

Structure ID	Milepost	Existing Structure
WC-01	65.97	6'H x 2'T x 375'L Wall
WC-03	67.00	6'H x 2'T x 760'L Wall
WC-06	70.00	2-30" CMP
WC-10	72.99	8'x8'x116' CBC
WC-12	74.85	72"x199' RCP
WC-13	75.17	72"x132' RCP

2.10 Drainage at Major Structures

Bridge inspection reports from 2020 rated water and structural adequacy of existing drainage structures on a scale of 1 to 10, with 1 being the worst grade and 10 being excellent. All structures were cataloged as "8. Equal Desirable" or "9. Above Desirable" for the waterway adequacy. Structural evaluations were rated as "6. Equal to Minimum Criteria" and "7. Above Minimum Criteria." The Corrugated Metal Steel Plate Pipe (CMSPP) structures tend to have lower ratings. This is common given that with time, these structures tend to corrode and deform at the joints of the steel plates. Bridge Inspection reports are included in Appendix F.

2.11 Right-of-Way (ROW) Information

2.11.1 ROW Size/Limits

From MP 64 to MP 65.08, the width of the US-550 ROW is approximately 50 feet on either side of the highway edge of pavement. From MP 65.08 to MP 65.13, the width of the US-550 ROW is approximately 83 feet on the west/south and 117 feet on the east/north from edge of pavement. After MP 65.13, the width of the US-550 ROW transitions to between 100 feet and 160 feet on the west/south and 100 feet on the east/north until MP 80.5. Table 4 contains a summary of the ROW widths and transitions areas along US-550 from MP 64.78 to MP 84.93.

Table 4. Summary of ROW Widths at Wildlife Crossings

Structure ID	Mile Post	Left ROW (ft)	Right ROW (ft)
WC-01	65.97	100	100
WC-03	67.00	100	100
WC-04	67.55	100	100
WC-05	68.46	100	100
WC-07	70.28	160	100
WC-08	71.81	160	100
WC-10	72.99	160	100
WC-12	74.85	160	100
WC-16	76.98	160	100

2.11.2 ROW Ownership – Challenges

The priority for this project is to stay within the limits of the existing ROW and avoid any acquisitions or easements from adjacent landowners. Table 5 summarizes the adjacent landowners in the event that ROW acquisitions or easements become necessary.

Table 5. Adjacent Landowners

Structure ID	Mile Post	ROW Ownership
WC-01	65.97	Forest Service
WC-02	66.51	Herrera, Bruno & Hazel Revo Trust (West), Moose Enterprises Trust (East)
WC-03	67.00	Cortez, Robert O and Theresa B Revocable Trust
WC-04	67.55	Robinson Revocable Trust (West), Herrera Amadeo Antonio and Robin Louise (East)
WC-05	68.46	United States Forest Service (USFS)
WC-06	70.00	USFS (South), BLM (North)
WC-07	70.28	USFS (South), BLM (North)
WC-08	71.81	Silver Sage LLC and Smelser, Worthington S and Katherine M and Jonathan J (South), BLM (North)
WC-09	72.36	Silver Sage LLC and Smelser, Worthington S and Katherine M and Jonathan J (South), BLM (North)
WC-10	72.99	BLM
WC-11	74.31	BLM
WC-12	74.85	BLM
WC-13	75.17	BLM
WC-14	75.32	BLM
WC-15	75.63	BLM
WC-16	76.98	BLM
WC-17	79.02	Jicarilla Apache Nation
WC-18	80.32	Jicarilla Apache Nation

2.12 Utilities

Overhead electric lines and poles are located along both sides of US-550. The proposed structures would have no impact on any of the overhead electric transmission lines. There is an underground communications line on the northbound side of US-550 near the shoulder, 90 feet from centerline (CL). A gas line runs the entire section of the project on the southbound side of the road, 100 feet from highway CL. A water line is present on the northbound side of the road in small sections of the project, 90 feet from the highway CL and mostly near the portions of the project close to Cuba. See Section 7 for more information about potential utility impacts at proposed structures.

2.13 Intelligent Transportation Systems (ITS)

There are two ITS systems along the US-550 corridor from MP 64.93 to MP 80.64. There is a traffic camera at the continental divide at approximately MP 76.75 on the southbound side of the highway and a weigh-in-motion device at approximately MP 71.25.

3 Existing Conditions – Natural Resources

3.1 Geology and Physiography

The geology of US-550 corridor from MP 64.93 to MP 80.64 is characterized by the sedimentary San Juan Formation and the Nacimiento Formation, with small areas of the Ojo Alamo Formation, the Kirtland and Fruitland sedimentary and shale formations, and the Mancos Shale Formation (see geological formation maps in Appendix G). The area is within the larger Colorado Plateau, which is characterized by relatively horizontal layers of sedimentary rocks that have been formed into buttes, mesas, and badlands (New Mexico Bureau of Geology and Mineral Resources [NMBGMR], 2023).

3.2 Climate, Soils and Vegetation

The US-550 WVC hotspot is situated at elevations ranging from 6,900 to 7,400 feet above mean sea level (amsl). The area is located within the Sedimentary Subalpine Forest and San Juan/Chaco Tablelands and Mesas ecoregions, which are characterized by a mix of desert scrub, semi-desert shrub-steppe, and semi-desert grasslands. These ecoregions also contain smaller areas of low elevation Douglas fir forests and high elevation Englemann spruce and subalpine fir dominant forests on sandstone, siltstone, shale, and limestone substrates. Shadscale, four-wing saltbush, Mormon tea, Indian ricegrass, and blue and black grammas are also common. Soils are generally fine textured. Stream-quality water availability and aquatic habitats have increased nutrient loads in places due to the soluble carbonate substrates (Griffith, 2006). The region can experience severe erosion to the sedimentary bedrock and erosive soils from water, wind, and human influences. Dominant soils and formations in the US-550 corridor include rock outcroppings and predominantly sodic soils with lesser components of clay, clay loam, and loams (Natural Resources Conservation Service [NRCS], 2023).

3.3 Flora and Fauna

The landscape in the corridor passes through low elevation Douglas fir forest and transitions into a mix of desert scrub and semi-desert shrub-steppe. Dominant vegetation includes shadscale, four-wing saltbush, Mormon tea, Indian ricegrass, blue and black grammas, pinyon pine, juniper, black sagebrush, and Douglas fir. Seasonal arroyos in this area also support willows and other riparian species.

Habitat surrounding the US-550 corridor provides structure that likely supports an array of migratory songbird, raptors, and resident avian species. Large mammals supported by the surrounding landscape include black bear, mountain lion, mule deer, elk, and small mammals such as badger and red fox. Elk and mule deer populations in the area have both resident and migratory herds. From 2009 to 2018, reported WVC data for the corridor included 82 mule deer, 102 elk, five black bear, and one mountain lion.

4 Construction Phasing Analysis

To develop the WVC mitigation construction phasing plan, mapping techniques and geospatial data were used in conjunction with WVC crash data and field mapping data. These data helped to identify structure locations, type, and sizing as well as extents for wildlife fencing. Cost estimates for structures and fencing were developed based on the most current industry data. Mitigation measures were then prioritized for construction phasing based on estimated WVC reduction potential, budget estimates, and construction requirements.

4.1 Crash Data and Geospatial Analyses

Geospatial analysis of existing crash data as well as a topographic ruggedness evaluation of the terrain surrounding the US-550 corridor was used to help refine proposed locations and types for wildlife structures. These analyses were conducted using ArcGIS Pro and provided context for where and how wildlife might be moving through the landscape and attempting to cross US-550.

Heatmaps were developed using carcass and crash data provided to the study team by NMDOT to visualize concentrated areas of WVCs along the US-550 corridor. Figure 8 shows a heatmap of reported WVCs across all species, including elk, deer, black bear, and cougar. Separate heatmaps were also prepared showing concentrated areas of reported elk collisions (see Figure 9) and mule deer collisions (see Figure 10).

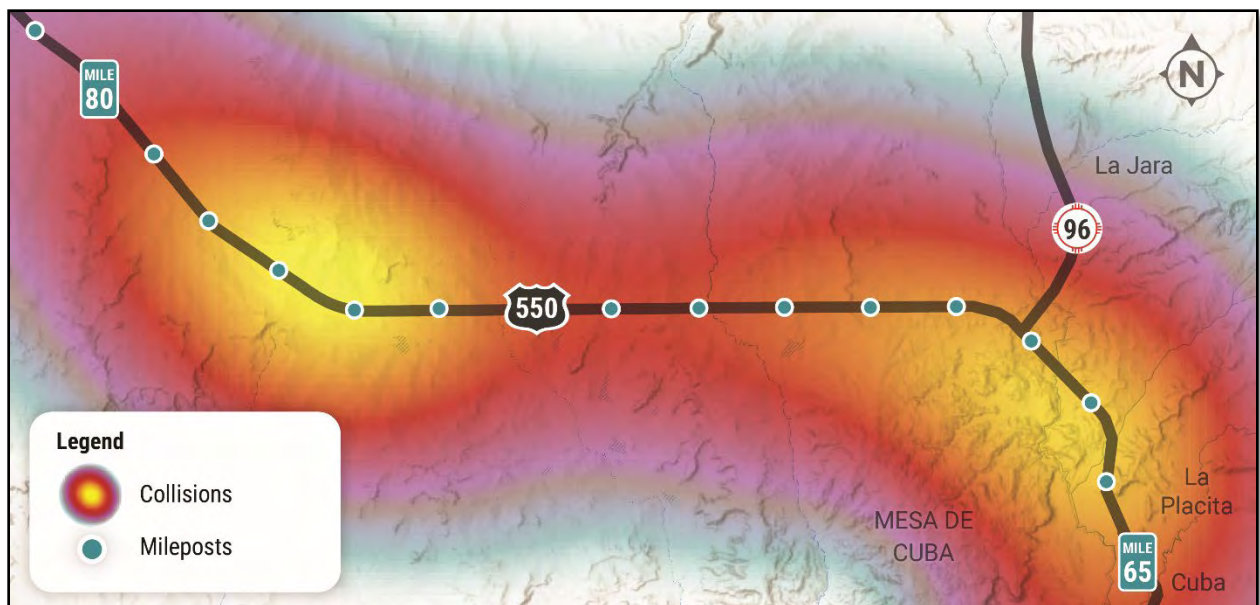


Figure 8. Heatmap of WVCs Across All Species

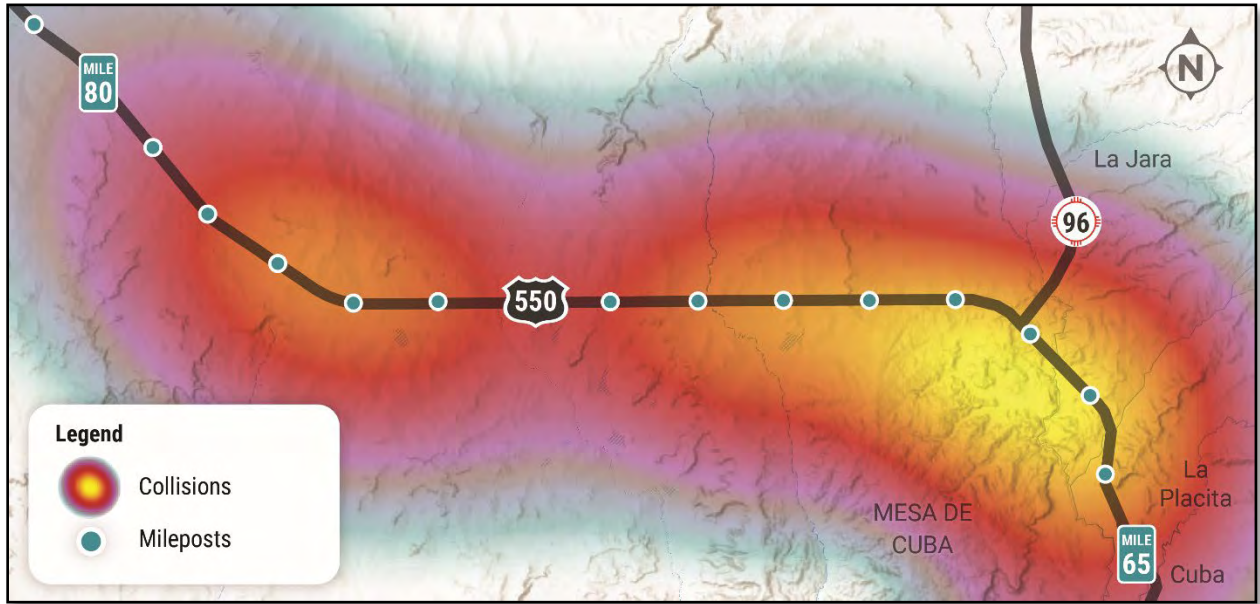


Figure 9. Heatmap of WVCs Involving Elk

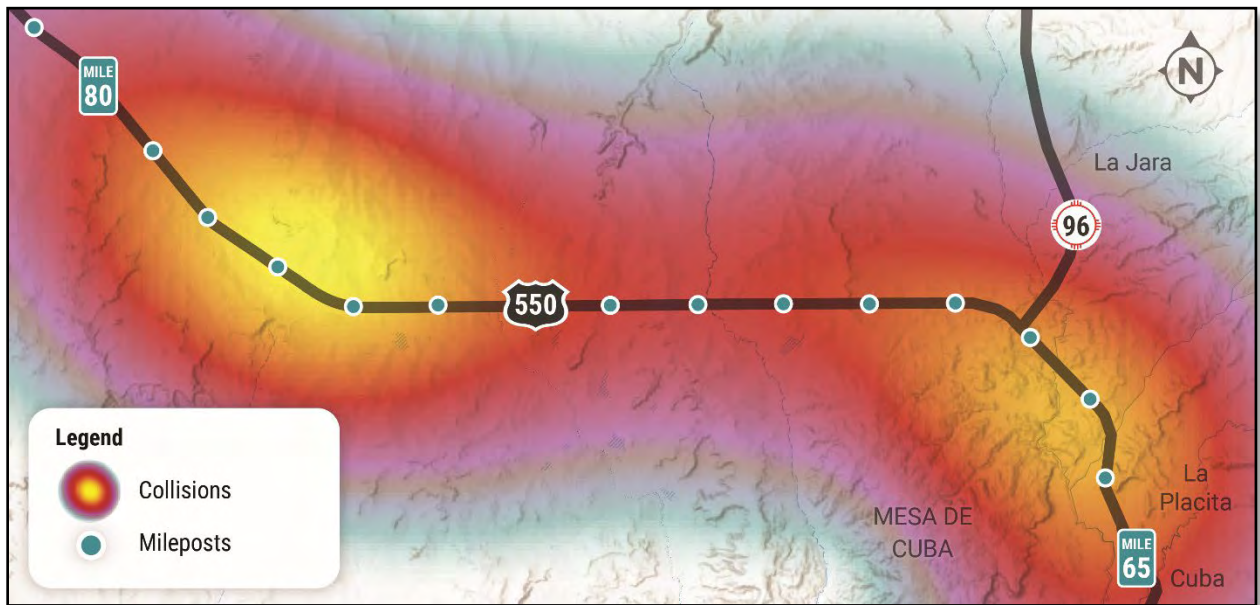


Figure 10. Heatmap of WVCs Involving Mule Deer

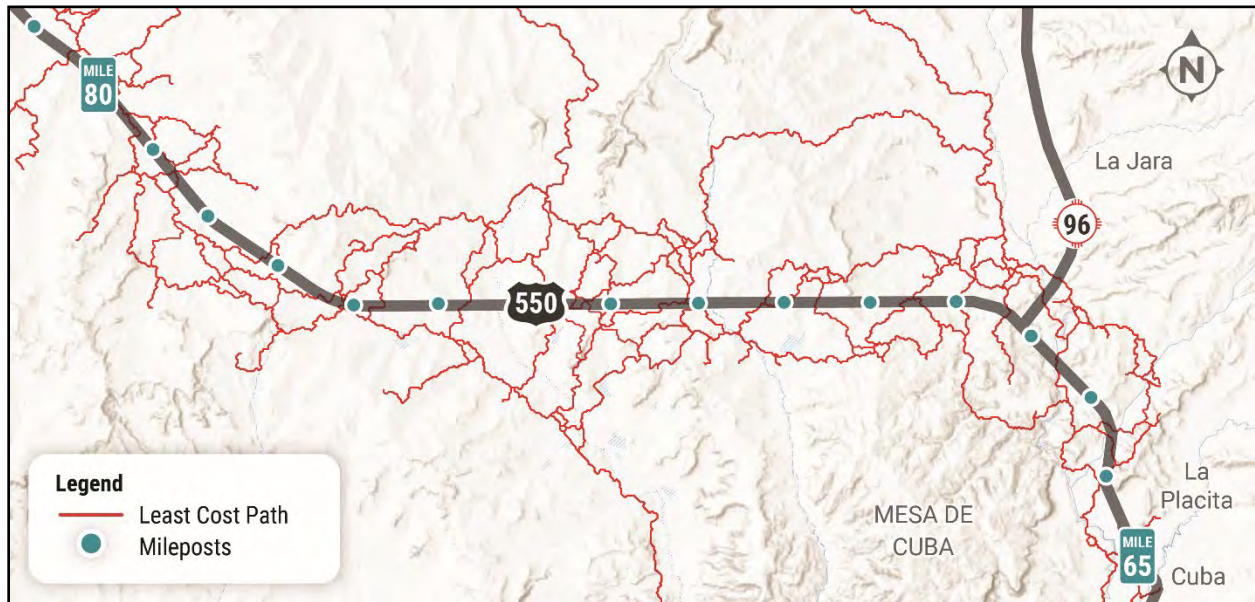


Figure 11. Topographical Ruggedness Evaluation (Least-Cost Path) Results

The topographical ruggedness evaluation, also known as a “least-cost path” analysis, used existing elevation data of the terrain near the US-550 corridor to identify paths which wildlife were most likely to use based on ease of traversal. Paths that may have concentrated occurrences of wildlife crossings are shown in Figure 11. A more granular visualization of crash data across all species is shown in Figure 12. Figure 12 was included in the scoping report to help visualize the locations of reported crashes in relation to possible wildlife paths.

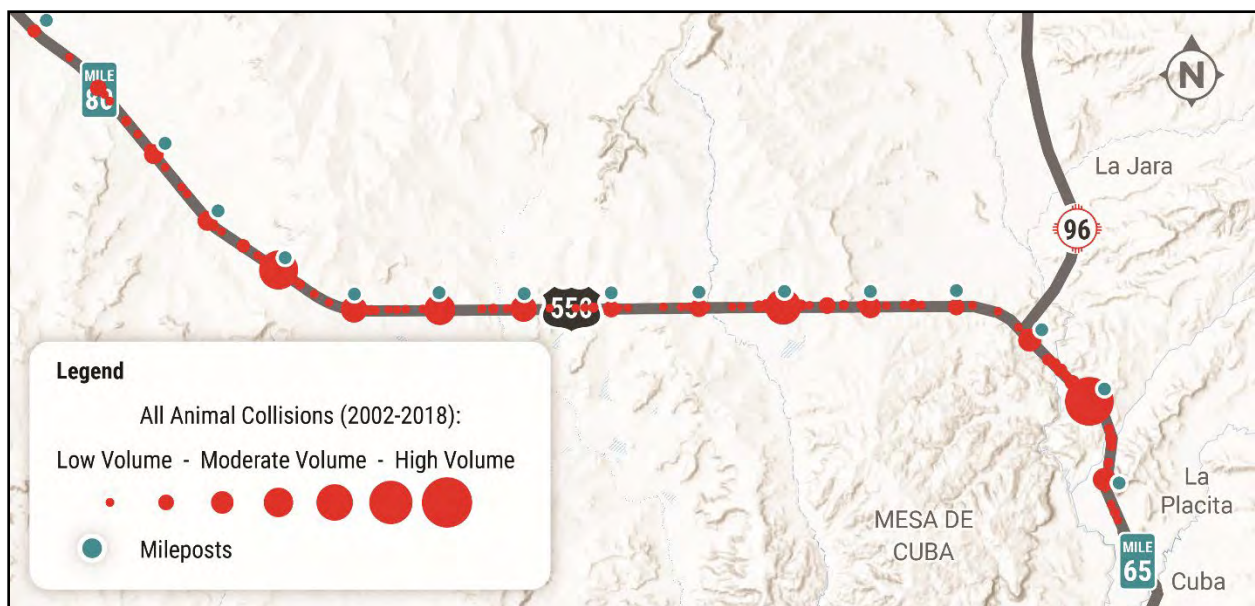


Figure 12. Approximate Locations of WVC Across All Species

The Jicarilla Apache Nation also provided critical insight into elk movement from their GPS collared animal data, which helped to refine structure locations and construction phasing by understanding more about potential movement patterns for migratory and residential populations.

4.2 Cost Estimates

Conceptual layouts were developed for all 18 structures identified in the NMWCAP. Existing topo information was acquired through United States Geological Survey (USGS) light detection and ranging (LiDAR) data, which was determined to be accurate enough for the purposes of this study. After determining a typical underpass and overpass layouts, each conceptual design per structure was developed. Conceptual layouts are included in Appendix H. From these conceptual layouts, quantity take-offs were completed. NMDOT bid tab history was then used to develop cost estimate. Cost estimates by structure are included in Appendix I. Additionally, Contech provided manufacturing costs for the selected structures which are included in Appendix J.

Fence costs for the entire corridor were calculated. This included game fence, game-guards (i.e., double cattle guards), and escape ramps. Estimates for all these fence elements were used to generate a game fence cost per mile, and this in turn was used as phasing was developed and for determining the lengths of fencing per phase. Cost estimate for the fencing breakdown is including in Appendix K.

5 Project Requirements

5.1 Traffic Control

The construction of the wildlife crossings would require an appropriate traffic management plan. Construction of overpass and underpass structures would require extensive Maintenance of Traffic (MOT) and temporary closures with appropriate monitoring. Given that US-550 is a high-traffic corridor, it is expected that much of the construction activities would need to be performed at night to reduce delays and impacts to the traveling public.

Road closures for both overpass and underpass bridges typically involve obtaining permits, notifying the public in advance through various media, installing signage, coordinating with emergency services, implementing traffic management measures, monitoring, and adjusting the closure.

5.1.1 Crossovers

The underpass structures would likely require a temporary road and drainage crossover to shift the traffic around the construction area. This would allow phasing of the construction while also providing maintenance of traffic.

5.1.2 Temporary Highway Closures

Due to the large size of the overpass structures, full closure would likely be necessary to crane single span sections over the highway. Since the recommended structure is a twin leaf structure and each side of the structure must be constructed simultaneously, there is not enough space for the traffic flow. Ideally, this work would be performed at night to minimize disruption to traffic.

5.2 ROW Requirements

It is desired that the wildlife crossings be built within the ROW if possible. Most of the crossings can be constructed within the existing ROW with one exception: It was determined that WC-16 would require work outside the ROW. At WC-16, the south/west side of the road is at a lower elevation than the north/east side of the road, so large fill slopes would be required based on the design criteria for the fill slopes of 4:1. The current ROW limit on the south/east side of the road is 160 feet from CL.

5.3 Drainage

The goal for wildlife underpasses is to replace the existing structures with larger structures than exist currently to promote safe wildlife passage while exceeding the existing drainage structure dimensions. The results of the 2020 bridge inspection report seem to support that the recommended structures would perform well in terms of allowing waterflow (see Appendix F for bridge inspection reports). Erosion at the outlets seems to be an issue, and some type of erosion control for the water channel would likely be required. Further drainage evaluations would be needed to determine the true efficiency of the recommended 54-ft span arch.

5.4 Game Fence

Game fence is a specialized fencing structure that is typically 8 feet tall and is designed to prevent animals from accessing certain areas from the highway. Implementing an effective game fence is as important as building a crossing structure, as both features work together and rely on each other. If game fences are not designed in conjunction with wildlife crossings, they create barriers that prevent animals from traveling freely between habitat patches. By providing wildlife with safe and effective crossings, game fences can help reduce the incidence of WVCs and prevent fragmentation of wildlife populations and habitat. For a visual example of a game fence, see Figure 13. NMDOT has standard drawings for game fencing (see Appendix H).

This scoping report provides phasing recommendations for both wildlife crossing structures and for game fence start and end points in Section 7.



Figure 13. Game Fence Example

5.5 Game-guards

Game-guards are installed at driveways or minor intersection openings in game fence runs to facilitate the free movement of vehicles while also restricting animal access to the highway. The specific requirements for the game guards on animal crossings may vary depending on factors such as the locations, type of animal crossing, and the wildlife species that are present in the area. However, some common requirements for game-guard are width, durability, visibility, accessibility, and maintenance. The game-guards must be wide enough to prevent animals from jumping over them and crossing the road or highway. The material for the guards must be sturdy and durable enough to withstand the weight and impact of large animals, which may attempt to jump over them. They must also be visible to animals so they avoid trying to cross. This may be accomplished by implementing bright colored markers or reflective materials. The accessibility to the game-guards must be easily reached for regular maintenance. This may include repairing a broken section or installing new game-guards as needed. For a visual example of a game-guard, see Figure 14. NMDOT has standard drawings for game guards (double cattle guards) (see Appendix H).



Figure 14. Game-guard Example

5.6 Escape Ramps

Escape ramps, or “jump outs,” along the project corridor are recommended for animals that are inadvertently caught within the highway ROW at a minimum half mile spacing. These ramps are important because they allow animals that are trapped on the roadway to safely exit without having to backtrack, thereby reducing the likelihood of WVCs. For a visual example of an escape ramp, see Figure 15. NMDOT has standard drawings for escape ramps (see Appendix H).



Figure 15. Escape Ramp Example

5.7 Survey Requirements

Survey of the recommended wildlife crossing locations is required to help the design of the crossings, including the size and location of the structures, the type of materials used, and other factors that can affect their effectiveness and safety. Proper surveying can help ensure that the construction of the crossings complies with relevant laws and regulations, which can help avoid legal challenges and costly delays in the project timeline.

5.8 Utilities

Utilities are present on both sides of US-550. Field verification would be needed for the underground utilities as the use of larger structures may require vertical adjustments for the utilities. Identifying the location of underground utility lines and other buried infrastructure is an important part of the planning process for wildlife crossings because it avoids conflicts with existing utilities. See Section 7 for more information related to utilities at the proposed structures.

5.9 Intelligent Transportation System (ITS)

No changes are anticipated or proposed to existing ITS.

5.10 Railroad

No impacts are anticipated with this proposed project. No railroad infrastructure exists within the US-550 MP 64.93 to MP 80.64 corridor.

5.11 Design Criteria

The design of effective wildlife structures requires a careful consideration of many direct factors, including the size and type of wildlife present, the environmental conditions of the area, and the connectivity of the larger habitat network. By taking these factors into account, designers can design structures that are safe, functional, and compatible with the surrounding environment, supporting the long-term and viability of wildlife populations.

Additionally, the AASHTO Manual for Bridge Evaluation indicates minimum load and resistance factor ratings (LRFR) for HL-93 vehicle and EV2 and EV3 emergency vehicles are as follows for underpass structures:

- HL-93 – 1.10 (inventory) and 1.43 (operating)
- EV2 – 1.0 (operating only)
- EV3 - 1.0 (operating only)

5.11.1 Wildlife Structure Design Criteria

Designing effective wildlife structures involves considering several criteria to ensure that the structures are safe, functional, and compatible with the surrounding environment. Structure dimensions are of particular importance so animals would use the crossings as identified in current literature. For more

information, refer to Sections 1.3.1 and 1.3.2. For the purposes of this study, deep foundations were assumed for all structures. It is recommended that a complete geotechnical investigation is completed to confirm the properties of the existing soils.

5.11.2 Roadway Design Criteria

The location of each structure must be carefully chosen such that it is in a place where wildlife is likely to use it, where it would not create a safety hazard for motorists or other users of the area, and in locations that are unlikely to be developed. The materials used in the construction of the structure must be durable, long-lasting, and able to withstand the environmental conditions of the area, such as temperature changes, weather, and water flow. The construction and the use of the structure must not have a negative impact on the surrounding environment, such as by altering the natural hydrology of the area, disturbing soil, or disrupting sensitive habitats. Crossings should be located so they work as part of a large network of wildlife corridors and habitat to provide connections to important habitats and movement corridors. The design must minimize potential hazards to wildlife, such as sharp edges or corners, or dangerous obstacles that may cause injury or death. The structure must also be cost-effective to ensure it can be constructed and maintained within the budgetary constraints of the project.

6 Environmental

Environmental resources with the potential to be present along the US-550 corridor were evaluated to identify those which could be affected by the projects detailed in this scoping report. The information presented in this scoping report was gathered through desktop analysis and is, therefore, preliminary in nature.

6.1 National Environmental Policy Act (NEPA) Level of Effort

Based on the anticipated scope of work for US-550 corridor WVC mitigation from MP 64.93 to MP 80.64, as well as the need for coordination with multiple federal agency partners (e.g., BLM, United States Forest Service [USFS], Bureau of Indian Affairs [BIA], etc.), the projects detailed in this scoping report may require the preparation of an Environmental Assessment (EA). The BLM, USFS and Jicarilla Apache Nation may be able to work with the NMDOT as cooperating agencies under a unified National NEPA clearance. Further coordination with these agencies and the FHWA is necessary to determine the best approach to completing the required NEPA clearances.

6.2 Public Involvement

Public awareness would be a necessary component of the US-550 WVC mitigation project. Public involvement has already been initiated with the development of the NMWCAP. Public involvement would need to continue into the NEPA process and throughout construction under the direction of NMDOT.

6.2.1 Preliminary Stakeholder List

Federal, Tribal, state, and local government stakeholders include:

- BLM Albuquerque District
- Santa Fe National Forest
- Jicarilla Apache Nation
- Sandoval County
- Village of Cuba
- Landowners

6.3 Hazardous Materials

The New Mexico Environment Department's (NMED) OpenEnviroMap shows three hazardous materials sites within proximity to US-550. Two sites are underground storage tanks (USTs) associated with the Circle K and Phillips 66 gas stations in Cuba. The third site is a leaking underground storage tank (LUST) with a current status of 3 – Contaminants in Ground Water. The latest documentation for the LUST is dated August 26, 2018, and states that ongoing monitoring at the site indicates that all contaminants are either non-detectable or below New Mexico Water Quality Control Commission's allowable concentration levels. For locations of hazardous materials sites, see the Environmental Resources

Mapbook in Appendix A. A public records request for hazardous materials sites was not completed as part of this scoping report.

6.4 Cultural Resources

Cultural resource survey needs would be determined by NMDOT's archaeologist.

6.5 Aquatic Resources

Permitting under section 404 of the Clean Water Act (CWA) may be necessary for any structures that may permanently impact waters of the U.S. (WOTUS), including ephemeral arroyos or perennial streams that meet the U.S. Army Corps of Engineers' (USACE) definition of WOTUS. Named features along the US-550 corridor include the Arroyo San Jose, Rito de los Pinos, and Arroyo Chijuillita. Potential WOTUS and riparian areas from the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) are included in the Environmental Resources Mapbook in Appendix A. A formal delineation of water resources was not completed as part of this scoping report.

Federal Emergency Management Agency (FEMA)-mapped 100-year floodplains were identified within proximity to the US-550 corridor. Identified floodplains can be seen in the Environmental Resources Mapbook in Appendix A.

6.6 Revegetation

Areas of ground disturbance outside the roadway prism would be reseeded post-construction with a seed mix approved by NMDOT Environmental Bureau. Overpasses would also include reseeded, planting, and landscaping to provide cover for animals. For more information about existing habitat conditions and dominant vegetative communities along the US-550 corridor, refer to Section 2 of this report.

6.7 Threatened, Endangered, and Sensitive Species

Endangered Species Act (ESA) listed, proposed, and candidate species; New Mexico endangered species; and USFS sensitive species were evaluated for their potential to occur within proximity to the US-550 corridor. Aerial imagery, Google Street View, and other online information was used to evaluate each species' potential to occur along or near US-550. Presence/absence surveys and other fieldwork to determine habitat suitability and/or occupancy was not completed as part of this scoping report.

A total of 19 species (three ESA listed, one ESA candidate, two New Mexico endangered, and thirteen USFS sensitive) were identified as having the potentially suitable habitat within proximity to the US-550 corridor. These 19 species are listed in the list below. For more detail of all the species evaluated as part of this scoping report, see Appendix L.

- Southwestern Willow Flycatcher (ESA Endangered)
- Knowlton's Cactus (ESA Endangered)
- Mexican Spotted Owl (ESA Threatened)
- Monarch Butterfly (ESA Candidate)

- Parish's Alkali Grass (New Mexico Endangered)
- Clover's Cactus (New Mexico Endangered)
- American Marten (USFS Sensitive)
- Pale Townsend's Big-eared Bat (USFS Sensitive)
- Cinereus Shrew (USFS Sensitive)
- Western Water Shrew (USFS Sensitive)
- Preble's Shrew (USFS Sensitive)
- Gunnison's Prairie Dog (USFS Sensitive)
- Northern Goshawk (USFS Sensitive)
- Burrowing Owl (USFS Sensitive)
- Gray Vireo (USFS Sensitive)
- Yellow Lady's-slipper (USFS Sensitive)
- Springer's Blazing Star (USFS Sensitive)
- Greene Milkweed (USFS Sensitive)
- Chaco Milkvetch (USFS Sensitive)

The USFWS Information for Planning and Conservation (IPaC) report is included in Appendix M. The New Mexico Environmental Review Species List is included in Appendix N. A list of protected species was requested from the Jicarilla Apache Nation Department of Game and Fish (JANDGF) and the BLM. Biologists from these agencies indicated that they do not have concerns for any protected species along or near US-550 (see agency correspondence in Appendix O). Therefore, Tribal and BLM protected species are not evaluated as part of this scoping report.

No designated or proposed critical habitats were identified within proximity to the US-550 corridor.

7 Proposed Construction Phasing

7.1 Summary of Phasing Workshop and Site Visit

On April 4, 2023, a Phasing Workshop was held via Microsoft Teams to discuss alternative approaches to construction phasing. Attendance at that meeting included personnel from NMDOT, New Mexico Department of Game and Fish (NMDGF), the Jicarilla-Apache Nation, and Horrocks. During that meeting, a construction phasing approach was selected and agreed upon by all participants. The construction phasing selected included a plan for which structures would be built during which phase, as well as approximate locations for fence ends during each phase. It was understood that the details of the construction phasing approach would be refined during a site visit to the US-550 corridor after considering on-the-ground conditions.

On May 3, 2023, a site visit to the US-550 corridor was made by personnel from NMDOT, NMDGF, and Horrocks to evaluate the construction phasing approach selected during the Phasing Workshop and to make refinements as needed. A visual summary of the proposed construction phasing and fence ends is shown in Figure 16. A larger and more detailed phasing summary map is available in Appendix P.

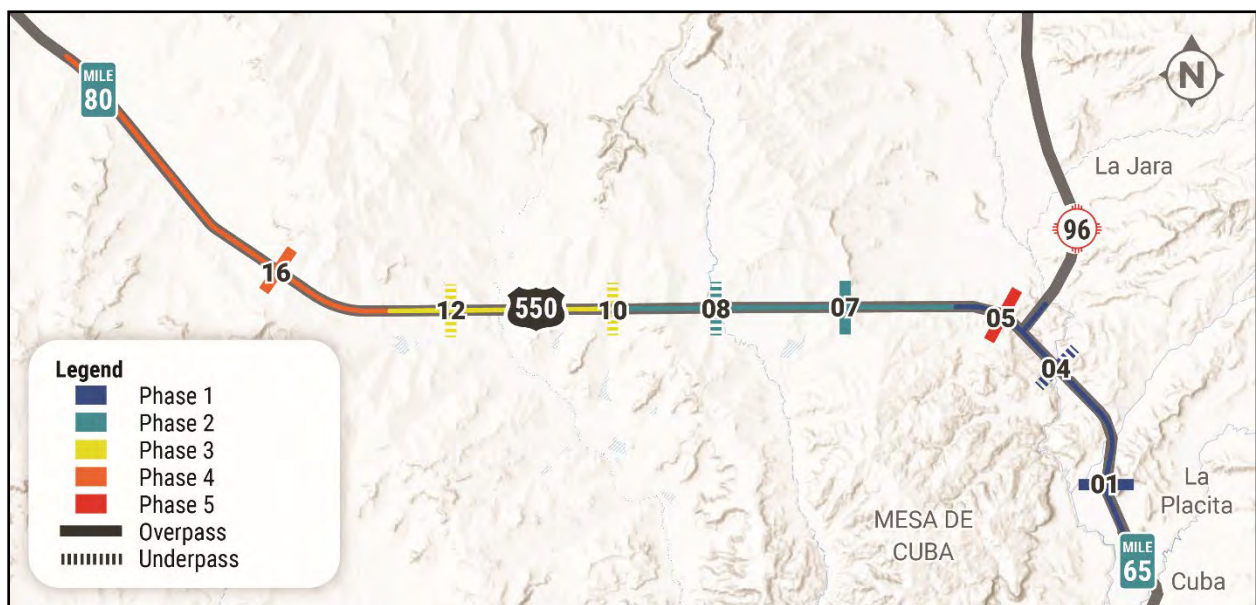


Figure 16. Visual Summary of Construction Phasing

The following general considerations apply to the construction phasing:

- Wherever possible, include two structures in each phase, especially an overpass and an underpass, to maximize wildlife crossing utilization and success as demonstrated in the literature.
- Install escape ramps every 0.5 miles on both sides of the road.
- Extend fence ends one to two miles beyond the last structure to provide adequate protection to motorists while also limiting habitat fragmentation.
- Install advanced wildlife crossing warning signs with flashing lights near fence ends.

7.2 Post-Construction Monitoring and Data Collection

It is recommended that post-construction monitoring of wildlife movement activity be implemented after each phase of the US-550 WVC mitigation project. Where possible, pre-construction monitoring of wildlife movement activity is also encouraged. Possible monitoring methods could include installation of wildlife trail cameras, tracking wildlife along the US-550 corridor using GPS collars, and other similar practices. Data collected from monitoring could be used to further inform future phases of the US-550 WVC mitigation project, as well as to inform other WVC mitigation projects contained in the NMWCAP.

7.3 Construction Phasing

The following sections details the wildlife crossing structures, infrastructure, and length of roadway mitigation by proposed construction phase. They also contain budget estimates, benefit-cost ratios, and the identification of risks for each phase. Each phase has independent utility from the other phases to facilitate flexibility of implementation. Figure 17 provides a summary of each phase and its associated cost estimate. A breakdown of these costs can be found in Appendix I.

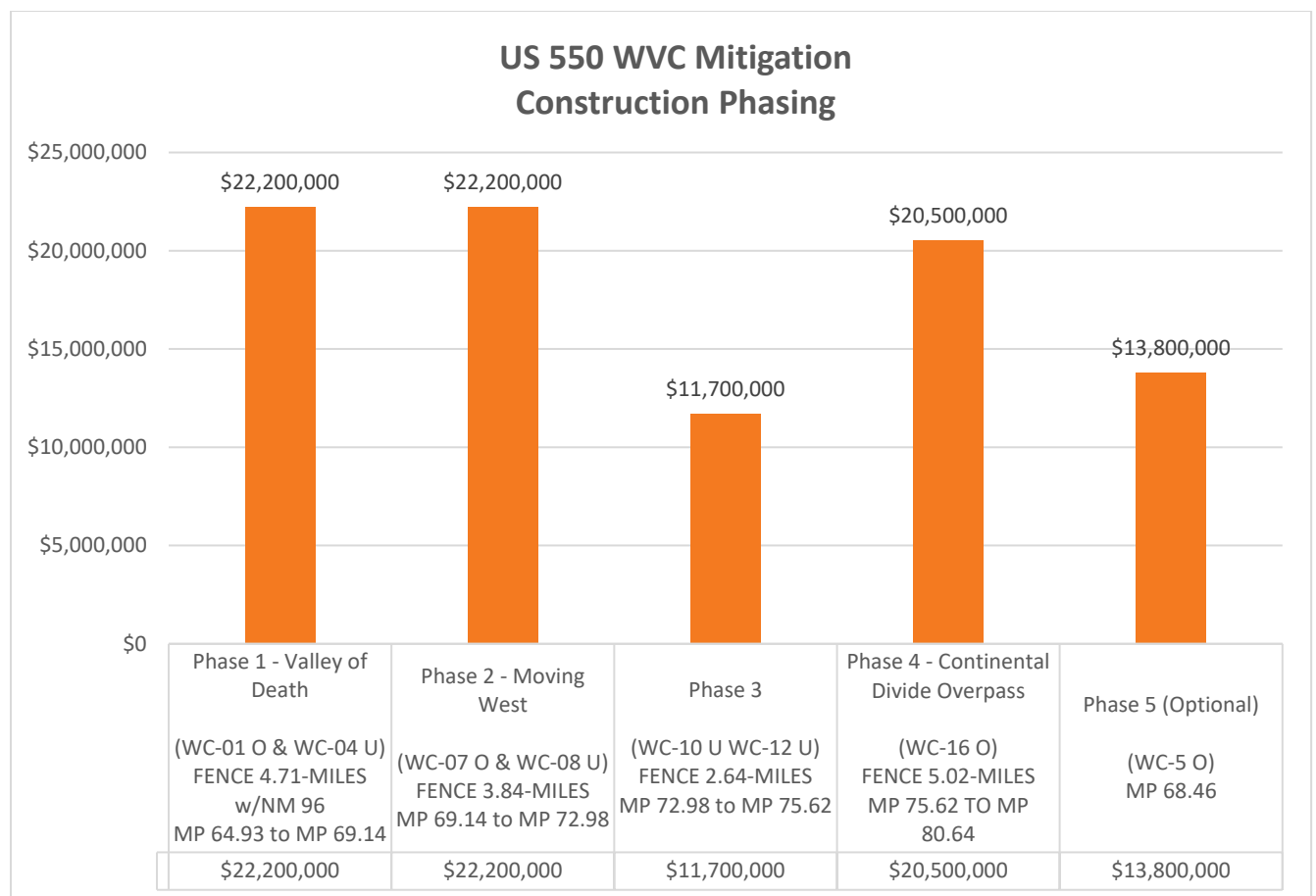


Figure 17. Summary of Construction Phasing Cost

7.3.1 Phase 1

7.3.1.1 Project Area and Description

Phase 1 extends from MP 64.93 to MP 69.14, crossing two natural drainages: Rito de los Pinos and the San Jose Arroyo. This section of the US-550 hotspot had a high occurrence of WVCs in a timeframe of 13 years with 135 reported crashes with wildlife including mule deer, elk, bear, livestock, and unidentified small mammals. Incidental observations from NMDOT staff who remove animal carcasses from the roadway indicate the actual number of WVCs is much higher than the number reported to highway patrol. In fact, Cuba Patrol Yard staff have nicknamed this area The Valley of Death because of the number of WVCs.

Phase 1: Summary

- Starting fencing at Los Pinos County Road near Cuba, on the north end of the cut slope and the back side of the gravel pull-out. This location allows for the greatest reasonable fencing distance beyond WC-01 without going into the urbanized portion of Cuba. This location is on a straightaway with good driver visibility and is in an area where cars are transitioning to a slower speed (35 mph), which would help reduce crashes/crash severity from potential fence end effects.
- Construct an overpass (WC-01) at MP 65.97.
- Construct an underpass (WC-04) at MP 67.55 (i.e., the San Jose Arroyo).
- Extend game fence for approximately 0.5 miles on both sides of Highway 96 to end at a large culvert at San Jose Creek. Elk scat and tracks observed near the culvert indicate that wildlife are already crossing in this location. Ending the fence here may encourage wildlife to utilize the culvert instead of crossing over Highway 96. Additionally, this location is in a straightaway with good driver visibility. Last, the installation of a double cattle guard across Highway 96 in this location would reduce problems from icing over during the winter since the road is in a flat grade. Conversely, a double cattle guard close to the intersection of Highway 96 and US-550 would be on a hill where cars must accelerate and merge into traffic after coming to a complete stop on an icy game guard grate.
- End the fence at approximately MP 69.14 on US-550. This location is in a straightaway with good driver visibility. Additionally, collar data from the Jicarilla Apache National indicates that this area has low levels of animal crossing activity. The topographical ruggedness/least cost path analysis supports the assumption that ending the fence in this location is unlikely to create a significant fence-end effect.

7.3.1.2 Wildlife Crossing Structures

WC-01 is recommended to be designed as an overpass. The determined location is at a road cut, and the adjacent banks would reduce the amount of fill that would be required. This location is also on a crest curve which does not meet current American Association of State Highway and Transportation Officials (AASHTO standards). The current K-value of the crest curve is 169. To meet today's design speed of 80 mph, the recommended K-value is 384. The overpass structure is recommending being a BEBO E87T. The structure would span the existing typical section and no roadway geometry is expected to be

affected. There appears to be bedrock exposed and further geotechnical investigations are recommended. For a conceptual rendering of the WC-01 overpass, see Figure 18.



Figure 18. Conceptual Rendering of WC-01 Overpass

WC-04 would require the replacement of the existing 3-15'4"x 9'3"x 196' CMSPP with a CON/SPAN B Series, 54' Span x 11' Rise precast arch. WC-04 also serves as a drainage crossing for San Jose Creek. The underpass should be constructed to provide enough drainage capacity as well as clearance for the target wildlife. The crest curve just east of WC-04 is deficient and doesn't meet today's AASHTO standards. The current K-value for the crest curve is 192, the recommended K-value for today's design speed of 80 mph is 384. For a conceptual rendering of the WC-04 underpass, see Figure 19.



Figure 19. Conceptual Rendering of WC-04 Underpass

7.3.1.3 Cost Estimate

The estimated construction cost for Phase 1 is \$22,200,000 in 2023 dollars. This estimate includes both wildlife crossing structures and 4.71 miles (0.5-miles along NM 96) of game fence on both sides of the road. The cost of wildlife fencing, including escape ramps (i.e., jump outs), double cattle guards, wildlife gates, and other such structures was averaged per mile for the entire length of the US-550 hotspot. The exact number of escape ramps, double cattle guards, wildlife gates, and other such structures needed for Phase 1 would need to be determined during final design.

7.3.1.4 Benefit-Cost Evaluation

A summary of reported crashes by animal type and value for Phase 1 (MP 64.93 to MP 69.14) from 2008 - 2021 is provided in Table 6. Values are based on an analysis completed by Huijser, *et al* (2022) for the Nevada Department of Transportation; the purpose of which was to adjust wildlife-vehicle crash values and wildlife values to 2020 U.S. Dollar equivalents.

Table 6. Summary of Phase 1 (MP 64.93 to MP 69.14) Crash Types and Costs

Crash Injury Class by Animal* & Animal Passive Value	Cost per Crash (Property Damage and Injury Only) & Animal Passive Value (2020 US\$) (Huijser, et al, 2022)	Property Damage Crashes (Number)	Injury Crashes (Number)	Total Cost (2020 US\$)
Deer-Vehicle Crash*	\$14,014	41	1	\$588,588
Elk-Vehicle Crash*	\$45,445	69	4	\$3,317,485
Crash Subtotal				\$3,906,073
Deer Passive Value	\$5,075	41	1	\$213,150
Elk Passive Value	\$27,751	69	4	\$2,025,823
Passive Value Subtotal				\$2,238,973
Total Cost				\$6,145,046
*Animals other than elk and deer, as well as unidentified animals, were excluded from the total animal-vehicle crash counts because cost evaluation data is not available for those species, or the crash could not be tied to a species.				

The benefit-cost is estimated by evaluating the expected 90 percent reduction in crash costs over 75 years (i.e., the estimated lifespan of the mitigation infrastructure). The benefit-cost is then divided by the total cost for the mitigation infrastructure. For Phase 1, the total cost for the mitigation infrastructure is estimated to be \$22,200,000. Table 7 summarizes the benefit calculations and values for Phase 1 (MP 64.93 to MP 69.14).

Table 7. Summary of Phase 1 (MP 64.93 to MP 69.14) Benefit Calculations and Values

	Values (2020 US\$)
Crash Costs	
Total value of crash costs (13 years)	\$3,906,073
Crash cost per mile per year	\$71,370
Avoided crash cost for Phase 1 section over 75 years of infrastructure (cost/mile/year x 4.21 x 75)	\$22,535,037
Benefit value of mitigation based on a 90% reduction in crashes over 75 years	\$20,281,533
Passive Value Costs	
Passive value – Deer*	\$5,075
Passive value – Elk	\$27,751
Estimated passive value of elk and mule deer saved over 75 years of mitigation	\$11,625,437
*Mule deer is the focal species for the NMWCAP; however, the Passive Value utilized in this analysis is based on white-tailed deer valuations presented by Huijser, et al (2022).	

For Phase 1, 63% of crashes were with elk and 37% were with mule deer. Averaging crashes over 13 years, there have been 8.8 reported crashes per year. Assuming a 90% reduction in crashes, a conservative estimate of avoided crashes would be 8.0 crashes prevented annually after mitigation is implemented. Therefore, approximately 5.1 elk and 2.9 deer would be saved annually in Phase 1. Over 75 years, the monetary value of the animals saved by the mitigation would be: Elk (\$27,751 x 5.1 x 75 years) + Mule deer (\$5,075 x 2.9 x 75 years) = \$10,518,697 + \$1,106,740 = \$11,625,437.

Using this information, a benefit-cost ratio can be calculated for the proposed Phase 1 WVC mitigation along US-550. Table 8 provides the benefit-cost ratio calculation that uses an estimated cost of \$22,200,000 for Phase 1 mitigation.

Table 8. Phase 1 Benefit-Cost Ratio

Valuation	Cost-Benefit Equation	Benefit-Cost Ratio
2020 US \$	(\$20,281,533 + \$11,625,437)/\$22,200,000	1.4

Phase 1 is expected to pay for itself within 75 years with a benefit-cost ratio (BCR) of 1.4. Keeping in mind that WVCs are under-reported, the potential benefits of implementing WVC mitigation measures in the area is likely an underestimation (refer to the last paragraph of Section 1.3.3).

7.3.1.5 Risk Identification

The team has assessed potential construction risks associated with implementing Phase 1. There is an existing retaining wall that is present on the west side of the road which may be impacted by the construction of the overpass. There are also utilities present on the west side of the road, including gas

line, waterline, pressure release valve (PRV) and water tank, and overhead electric. During the site visit, bedrock was seen exposed on both sides of the cut slope. The crest curve at this location is deficient and does not meet today's AASHTO guidelines, and construction of the overpass structure will not improve the sight distance.

WC-04 is located at the San Jose Creek drainage structure. The reconstructed structure will need to accommodate wildlife and drainage needs. Additionally, there are utilities present on the west side of the road, including gas line, waterline, PRV and water tank, and overhead electric.

7.3.2 Phase 2

7.3.2.1 Project Area and Description

Phase 2 extends from MP 69.14 to MP 72.98 for a total of 3.84 miles. In the 13 years of data collected, a total of 98 crashes have been reported with elk, deer, and a single unidentified animal. Incidental observations from Cuba Patrol Yard staff indicate that the actual number of WVCs is much higher than the number reported to highway patrol.

Phase 2: Summary

- Start fencing at MP 69.14, where Phase 1 ended.
- Construct an overpass (WC-07) at MP 70.28.
- Construct an underpass (WC-08) at MP 71.81.
- End fencing at MP 72.98. This location is on a straightaway with good driver visibility. The fence can tie into a large box culvert which may encourage wildlife to utilize the culvert instead of crossing over US-550.

7.3.2.2 Wildlife Crossing Structure

WC-07 is recommended to be designed as an overpass. WC-07 was the top-ranked overpass in the NMWCAP. The determined location is at a road cut, and the adjacent banks would reduce the amount of fill that would be required. The overpass structure is recommending being a BEBO E87T. The structure would span the existing typical section and no roadway geometry is expected to be affected. For a conceptual rendering of the WC-07 overpass, see Figure 20.



Figure 20. Conceptual Rendering of WC-07 Overpass

WC-08 would require the replacement of the existing 2-10' x 10' x 140' CBC with a CON/SPAN B Series, 54' Span x 11' Rise precast arch. WC-08 also serves as a drainage crossing. The underpass should be constructed to provide enough drainage capacity as well as clearance for the target wildlife. For a conceptual rendering of the WC-08 underpass, see Figure 21.



Figure 21. Conceptual Rendering of WC-08 Underpass

7.3.2.3 Cost Estimate

The total estimated cost for Phase 2 is \$22,200,000. This estimate includes both wildlife crossing structures and 3.84 miles of game fence on both sides of the road.

The cost of wildlife fencing, including escape ramps (i.e., jump outs), double cattle guards, wildlife gates, and other such structures was averaged per mile for the entire length of the US-550 hotspot. The exact

number of escape ramps, double cattle guards, wildlife gates, and other such structures need for Phase 2 would need to be determined during final design.

7.3.2.4 Benefit-Cost Evaluation

A summary of reported crashes by animal type and value for Phase 2 (MP 69.14 to MP 72.98) from 2008 - 2021 is provided in Table 9

Table 9. Values are based on an analysis completed by Huijser, *et al* (2022) for the Nevada Department of Transportation; the purpose of which was to adjust wildlife-vehicle crash values and wildlife values to 2020 U.S. Dollar equivalents.

Table 9. Summary of Phase 2 (MP 69.14 to MP 72.98) Crash Types and Costs

Crash Injury Class by Animal* & Animal Passive Value	Cost per Crash (Property Damage and Injury Only) & Animal Passive Value (2020 US\$) (Huijser, et al, 2022)	Property Damage Crashes (Number)	Injury Crashes (Number)	Total Cost (2020 US\$)
Deer-Vehicle Crash	\$14,014	33	5	\$532,532
Elk-Vehicle Crash	\$45,445	58	2	\$2,726,700
Crash Subtotal				\$3,259,232
Deer Passive Value	\$5,075	33	5	\$192,850
Elk Passive Value	\$27,751	58	2	\$1,665,060
Passive Value Subtotal				\$1,857,910
Total Cost				\$5,117,142
*Animals other than elk and deer, as well as unidentified animals, were excluded from the total animal-vehicle crash counts because cost evaluation data is not available for those species, or the crash could not be tied to a species.				

The benefit-cost is estimated by evaluating the expected 90 percent reduction in crash costs over 75 years (i.e., the estimated lifespan of the mitigation infrastructure). The benefit-cost is then divided by the total cost for the mitigation infrastructure. For Phase 2, the total cost for the mitigation infrastructure is estimated to be \$22,200,000. Table 10 summarizes the benefit calculations and values for Phase 2 (MP 69.14 to MP 72.98).

Table 10. Summary of Phase 2 (MP 69.14 to MP 72.98) Benefit Calculations and Values

	Values (2020 US\$)
Crash Costs	
Total value of crash costs (13 years)	\$3,259,232
Crash cost per mile per year	\$65,289
Avoided crash cost for Phase 2 section over 75 years of infrastructure (cost/mile/year x 3.84 x 75)	\$18,803,262
Benefit value of mitigation based on a 90% reduction in crashes over 75 years	\$16,922,935
Passive Value Costs	
Passive value – Deer*	\$5,075
Passive value – Elk	\$27,751
Estimated value of elk and mule deer Saved over 75 years of mitigation	\$9,646,840
*Mule deer is the focal species for the NMWCAP; however, the Passive Value utilized in this analysis is based on white-tailed deer valuations presented by Huijser, et al (2022).	

For Phase 2, 61% of crashes were with elk and 39% were with mule deer. Averaging crashes over 13 years, there have been 7.5 reported crashes per year. Assuming a 90% reduction in crashes, a conservative estimate of avoided crashes would be 6.8 crashes prevented annually after mitigation is implemented. Therefore, approximately 4.2 elk and 2.6 deer would be saved annually in this section of US-550. Over 75 years, the monetary value of the animals saved by the mitigation would be: Elk (\$27,751 x 4.2 x 75 years) + Mule deer (\$5,075 x 2.6 x 75 years) = \$8,645,504 + \$1,001,336 = \$9,646,840.

Utilizing this information, a benefit-cost ratio can be calculated for the proposed Phase 2 WVC mitigation along US-550. Table 11 provides the benefit-cost ratio calculation that uses an estimated cost of \$22,200,000 for Phase 2 mitigation.

Table 11. Phase 2 Benefit-Cost Ratio

Valuation	Benefit-Cost Equation	Benefit-Cost Ratio
2020 US \$	(\$16,922,935 + \$9,646,840)/\$22,200,000	1.2

Phase 2 is expected to pay for itself within 75 years with a BCR of 1.2. Keeping in mind that WVCs are under-reported, the potential benefits of implementing WVC mitigation measures in the area is likely an underestimation (refer to the last paragraph of Section 1.3.3).

7.3.2.5 Risk Identification

The team has assessed potential construction risks associated with implementing Phase 2. There are utilities present on the north and south sides of road, including, gas line, waterline, and overhead electric at WC-07. The utilities may be impacted in order to construct the new wildlife structure. WC-08

is located at an existing drainage structure. The reconstructed structure will need to accommodate wildlife and drainage needs. Utilities are present on the west side of road, including, gas line, waterline, and overhead electric.

7.3.3 Phase 3

7.3.3.1 Project Area and Description

Phase 3 extends from MP 72.98 to MP 75.62 for a total of 2.64 miles. In the 13 years of data collected, a total of 64 crashes have been reported with elk, deer, and a single black bear. Incidental observations from the Cuba Patrol Yard staff indicate that the actual number of WVCs is much higher than the number reported to highway patrol. It should be noted that the black bear crash was removed from the benefit-cost evaluation due to unreliable valuation data for that species.

Phase 3: Summary

- Start fencing at MP 72.98, where Phase 2 ended.
- Construct an underpass (WC-10) at MP 72.99.
- Construct an underpass (WC-12) at MP 74.85.
- End the fence at approximately MP 75.62. This location is on a straightaway with good driver visibility.

7.3.3.2 Wildlife Crossing Structure

WC-10 would require the replacement of the existing 1-8'x 8'x 116' CBC with a CON/SPAN B Series, 54' Span x 11' Rise precast arch. WC-10 also serves as a drainage crossing. The underpass should be constructed to provide enough drainage capacity as well as clearance for the target wildlife. For a conceptual rendering of the WC-10 underpass, see Figure 22.



Figure 22. Conceptual Rendering of WC-10 Underpass

WC-12 would be located proximately 500 feet west of the existing 1-72"x 199' RCP. WC-12 would be constructed with a CON/SPAN B Series, 54' Span x 11' Rise precast arch. Offsetting WC-12 to the nearby drainage structure was necessary in order to limit the amount of fill over the pre-cast structure. Additionally, WC-12 would not need to be accommodate drainage needs. For a conceptual rendering of the WC-12 underpass, see Figure 23.



Figure 23. Conceptual Rendering of WC-12 Underpass

7.3.3.3 Cost Estimate

The total estimated cost for Phase 3 is \$11,700,000. This estimate includes both wildlife crossing structures and 2.64 miles of game fence on both sides of the road.

The cost of wildlife fencing, including escape ramps (i.e., jump outs), double cattle guards, wildlife gates, and other such structures was averaged per mile for the entire length of the US-550 hotspot. The exact number of escape ramps, double cattle guards, wildlife gates, and other such structures needed for Phase 3 would need to be determined during final design.

7.3.3.4 Benefit-Cost Evaluation

A summary of reported crashes by animal type and value for Phase 3 (MP 72.98 to MP 75.62) from 2008 - 2021 is provided in Table 12. Values are based on an analysis completed by Huijser, *et al* (2022) for the Nevada Department of Transportation; the purpose of which was to adjust wildlife-vehicle crash values and wildlife values to 2020 U.S. Dollar equivalents.

Table 12. Summary of Phase 3 (MP 72.98 to MP 75.62) Crash Types and Costs

Crash Injury Class by Animal* & Animal Passive Value	Cost per Crash (Property Damage and Injury Only) & Animal Passive Value (2020 US\$) (Huijser, et al, 2022)	Property Damage Crashes (Number)	Injury Crashes (Number)	Total Cost (2020 US\$)
Deer-Vehicle Crash	\$14,014	32	1	\$462,462
Elk-Vehicle Crash	\$45,445	29	2	\$1,408,795
Crash Subtotal				\$1,871,257
Deer Passive Value	\$5,075	32	1	\$167,475
Elk Passive Value	\$27,751	29	2	\$860,281
Passive Value Subtotal				\$1,027,756
Total Cost				\$2,899,013
*Animals other than elk and deer, as well as unidentified animals, were excluded from the total animal-vehicle crash counts because cost evaluation data is not available for those species, or the crash could not be tied to a species.				

The benefit-cost is estimated by evaluating the expected 90 percent reduction in crash costs over 75 years (i.e., the estimated lifespan of the mitigation infrastructure). The benefit-cost is then divided by the total cost for the mitigation infrastructure. For Phase 3, the total cost for the mitigation infrastructure is estimated to be \$11,700,000.

Table 13 summarizes the benefit calculations and values for Phase 3 (MP 72.98 to MP 75.62).

Table 13. Summary of Phase 3 (MP 72.98 to MP 75.62) Benefit Calculations and Values

	Values (2020 US\$)
Crash Costs	
Total value of crash costs (13 years)	\$1,871,257
Crash cost per mile per year	\$54,524
Avoided crash cost for Phase 3 section over 75 years of infrastructure (cost/mile/year x 2.64 x 75)	\$10,795,713
Benefit value of mitigation based on a 90% reduction in crashes over 75 years	\$9,716,142
Passive Value Costs	
Passive value – Deer*	\$5,075
Passive value – Elk	\$27,751
Estimated value of elk and mule deer saved over 75 years of Mitigation	\$5,336,425
*Mule deer is the focal species for the NMWCAP; however, the Passive Value utilized in this analysis is based on white-tailed deer valuations presented by Huijser, et al (2022).	

For Phase 3, 48% of crashes were with elk and 52% were with mule deer. Averaging crashes over 13 years, there have been 4.9 reported crashes per year. Assuming a 90% reduction in crashes, a conservative estimate of avoided crashes would be 4.4 crashes prevented annually after mitigation is

implemented. Therefore, approximately 2.1 elk and 2.3 deer would be saved annually in this section of US-550. Over 75 years, the monetary value of the animals saved by the mitigation would be: Elk (\$27,751 x 2.1 x 75 years) + Mule deer (\$5,075 x 2.3 x 75 years) = \$4,466,843 + \$869,582 = \$5,336,425.

Utilizing this information, a benefit-cost ratio can be calculated for the proposed Phase 2 WVC mitigation along US-550. Table 14 provides the benefit-cost ratio calculation that uses an estimated cost of \$11,700,000 for Phase 3 mitigation.

Table 14. Phase 3 Benefit-Cost Ratio

Valuation	Benefit-Cost Equation	Benefit-Cost Ratio
2020 US \$	$(\$9,716,142 + \$5,336,425) / \$11,700,000$	1.3

Phase 3 is expected to pay for itself within 75 years with a BCR of 1.3. Keeping in mind that WVCs are under-reported, the potential benefits of implementing WVC mitigation measures in the area is likely an underestimation (refer to the last paragraph of Section 1.3.3).

7.3.3.5 Risk Identification

The team has assessed potential construction risks associated with implementing Phase 3. WC-10 currently acts as a drainage structure and the new structure would need to accommodate wildlife and drainage. WC-12 would be built offset from a nearby drainage structure. Utilities are present at both structures, including, gas, waterline, and overhead electric.

7.3.4 Phase 4

7.3.4.1 Project Area and Description

Phase 4 extends from MP 75.62 to MP 80.64 for a total of 5.02 miles. In the 13 years of data collected, a total of 122 crashes have been reported with elk, deer, two livestock collisions, two unidentified animal collisions, and one collision with an undetermined avian species. Incidental observations from Cuba Patrol Yard staff indicate that the actual number of WVCs is much higher than the number reported to highway patrol.

Phase 4: Summary

- Start fencing at MP 75.62, where Phase 3 ended.
- Construct an overpass (WC-16) at MP 76.98. There would be work that extends outside the ROW on the west/south side of US-550 to accommodate fill slopes for the structure (see Section 5.2). The land outside the ROW on both sides of US-550 is managed by the BLM in this location.
- End the fence within Jicarilla Apache tribal lands on the south side of BIA Road 37. This stretch of fence is the longest continuous stretch (approximately 5.02 miles) without a crossing. This decision was made under the direction of the Jicarilla Apache National Department of Game and Fish.

7.3.4.2 Wildlife Crossing Structure

WC-16 is recommended to be designed as an overpass. The ROW widens significant to the south side of the road, but it is not enough to stay within the ROW. This location is just west of the continental divide. The overpass structure is recommending being a BEBO E87T. The structure would span the existing typical section and no roadway geometry is expected to be affected. For a conceptual rendering of the WC-16 overpass, see Figure 24.

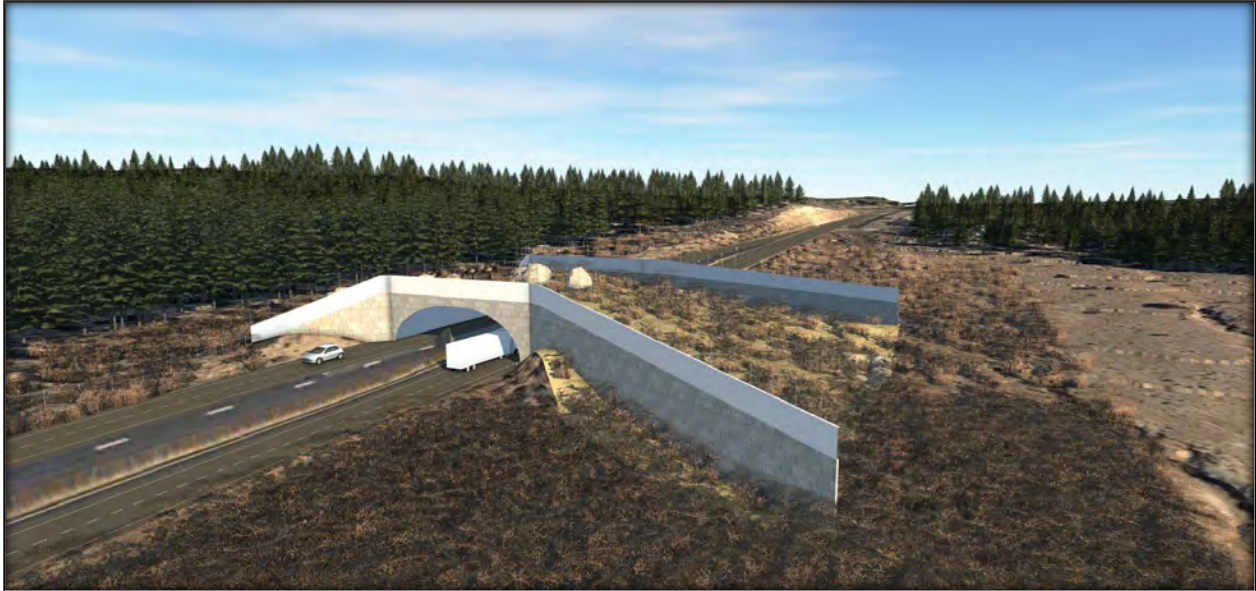


Figure 24. Conceptual Rendering of WC-16 Overpass

7.3.4.3 Cost Estimate

The total estimated cost for Phase 4 is \$20,500,000. This estimate includes one wildlife crossing structure and five miles of game fence on both sides of the road.

The cost of wildlife fencing, including escape ramps (i.e., jump outs), double cattle guards, wildlife gates, and other such structures was averaged per mile for the entire length of the US-550 hotspot. The exact number of escape ramps, double cattle guards, wildlife gates, and other such structures needed for Phase 4 would be determined during final design.

7.3.4.4 Benefit-Cost Evaluation

A summary of reported crashes by animal type and value for Phase 4 (MP 75.62 to MP 80.64) from 2008 - 2021 is provided in Table 15. Values are based on an analysis completed by Huijser, *et al* (2022) for the Nevada Department of Transportation; the purpose of which was to adjust wildlife-vehicle crash values and wildlife values to 2020 U.S. Dollar equivalents.

Table 15. Summary of Phase 4 (MP 75.62 to MP 80.64) Crash Types and Costs

Crash Injury Class by Animal* & Animal Passive Value	Cost per Crash (Property Damage and Injury Only) & Animal Passive Value (2020 US\$) (Huijser, et al, 2022)	Property Damage Crashes (Number)	Injury Crashes (Number)	Total Cost (2020 US\$)
Deer-Vehicle Crash	\$14,014	50	2	\$728,728
Elk-Vehicle Crash	\$45,445	69	1	\$3,181,150
Crash Subtotal				\$3,909,878
Deer Passive Value	\$5,075	50	2	\$263,900
Elk Passive Value	\$27,751	69	1	\$1,942,570
Passive Value Subtotal				\$2,206,470
Total Cost				\$6,116,348
*Animals other than elk and deer, as well as unidentified animals, were excluded from the total animal-vehicle crash counts because cost evaluation data is not available for those species or the crash could not be tied to a species.				

The benefit-cost is estimated by evaluating the expected 90 percent reduction in crash costs over 75 years (i.e., the estimated lifespan of the mitigation infrastructure). The benefit-cost is then divided by the total cost for the mitigation infrastructure. For Phase 4, the total cost for the mitigation infrastructure is estimated to be \$20,500,000. Table 16 summarizes the benefit calculations and values for Phase 4 (MP 75.62 to MP 80.64).

Table 16. Summary of Phase 4 (MP 75.62 to MP 80.64) Benefit Calculations and Values

	Values (2020 US\$)
Crash Costs	
Total value of crash costs (13 years)	\$3,909,878
Crash cost per mile per year	\$59,912
Avoided crash cost for Phase 4 section over 75 years of infrastructure (cost/mile/year x 5.02 x 75)	\$22,556,988
Benefit value of mitigation based on a 90% reduction in crashes over 75 years	\$20,301,290
Passive Value Costs	
Passive value – Deer*	\$5,075
Passive value – Elk	\$27,751
Estimated value of elk and mule deer saved over 75 years of mitigation	\$11,456,671
*Mule deer is the focal species for the NMWCAP; however, the Passive Value utilized in this analysis is based on white-tailed deer valuations presented by Huijser, et al (2022).	

For Phase 4, 57% of crashes were with elk, and 43% were with mule deer. Averaging crashes over 13 years, there have been 9.4 reported crashes per year. Assuming a 90% reduction in crashes, a conservative estimate of avoided crashes would be 8.4 crashes prevented annually after mitigation is

implemented. Therefore, approximately 4.8 elk and 3.6 deer would be saved annually in this section of US-550. Over 75 years, the monetary value of the animals saved by the mitigation would be: Elk (\$27,751 x 4.8 x 75 years) + Mule deer (\$5,075 x 3.6 x 75 years) = \$10,086,421 + \$1,370,250 = \$11,456,671. Utilizing this information, a benefit-cost ratio can be calculated for the proposed Phase 4 WVC mitigation along US-550.

Table 17 provides the benefit-cost ratio calculation, using the estimated cost of \$20,500,000 for Phase 4 mitigation.

Table 17. Phase 4 Benefit-Cost Ratio

Valuation	Benefit-Cost Equation	Benefit-Cost Ratio
2020 US \$	$(\$20,301,290 + \$11,456,671) / \$20,500,000$	1.5

Phase 4 is expected to pay for itself within 75 years with a BCR of 1.5. Keeping in mind that WVCs are under-reported, the potential benefits of implementing WVC mitigation measures in the area is likely an underestimation (refer to the last paragraph of Section 1.3.3).

7.3.4.5 Risk Identification

The team has assessed potential construction risks associated with implementing Phase 4. WC-16 would have ROW impacts, and environmental and ROW acquisition would be necessary. Utilities are present on the west side of road, including a gasoline, waterline, and overhead electric.

7.3.4.6 Other Considerations

Collar data from the Jicarilla Apache Nation indicates that few animals are crossing the road in the Phase 4 area, and that most crossings involve mule deer. In general, the topography in the Phase 4 area does not facilitate wildlife crossing structures without the risk of changing the existing grade of US-550. However, there are two locations that could possibly accommodate wildlife crossings. One of the locations is at approximately MP 80 between two cut-slopes and could accommodate an overpass. The second location is at a deep arroyo associated with WC 17 as identified in the NMWCAP. The existing facilities at WC 17 include two 10x8-ft concrete box culverts. To achieve minimum recommended dimensions for mule deer utilization (approximately 20 to 25-ft wide by 12 to 15-ft tall) would likely require a complete replacement of the existing structure as opposed to a retrofit. If the NMDOT and/or the Jicarilla Apache Nation wanted to construct crossings on tribal land in the future, these two locations represent the best options and could be considered for inclusion in Phase 4, or as separate projects.

7.3.5 Phase 5 (Optional)

7.3.5.1 Project Area and Description

Phase 5 includes one overpass structure (WC-5) near the intersection with NM-96 at MP 68.46.

Collar data from the Jicarilla Apache Nation indicates that this area has low levels of animal crossing activity. The topographical ruggedness/least cost path analysis also indicates this area would have relatively low big game crossing activity. Therefore, this phase was considered optional because constructing an overpass at this location may not be particularly effective but could be done if deemed necessary and if funding becomes available.

7.3.5.2 Wildlife Crossing Structure

WC-05 is recommended to be designed as an overpass. The determined location is at a road cut and the adjacent banks would reduce the amount of fill that would be required. The overpass structure is recommended to be a BEBO E87T. The structure would span the existing typical section, and no roadway geometry is expected to be affected. There appears to be bedrock exposed and further geotechnical investigations are recommended. For a conceptual rendering of the WC-05 overpass, see Figure 25.

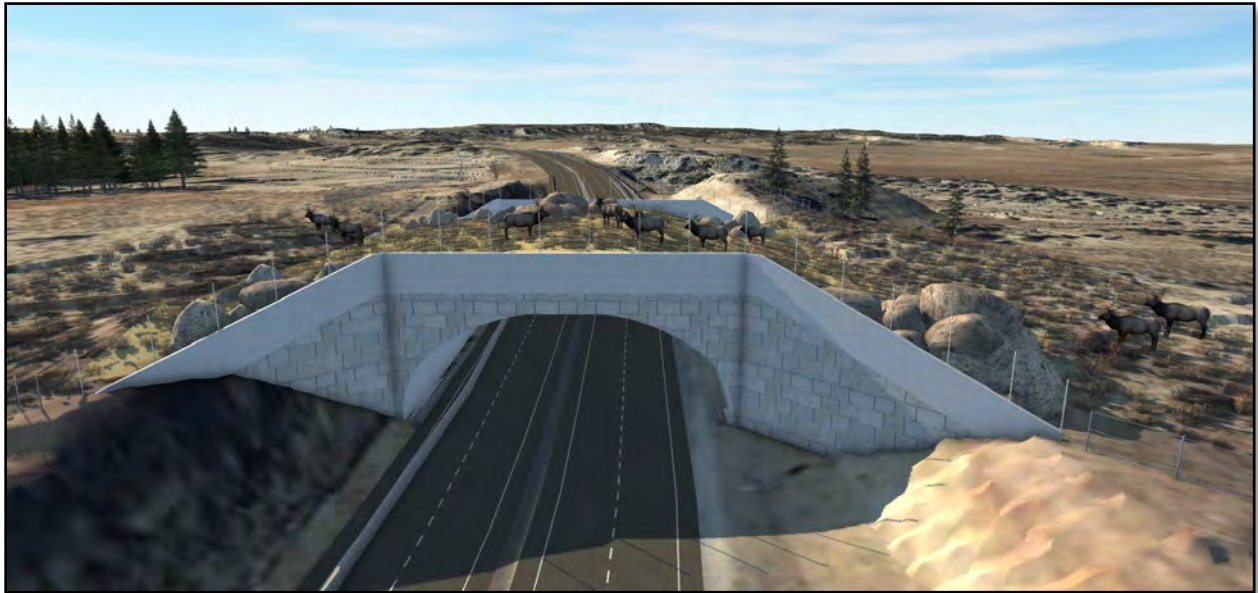


Figure 25. Conceptual Rendering of WC-05 Overpass

7.3.5.3 Cost Estimate

The total estimated cost for Phase 5 is \$13,800,000. This estimate includes one wildlife crossing structure. No game fence is included in Phase 5.

7.3.5.4 Cost Estimate

Given Phase 5 is an optional structure that could be added into the mitigation for this corridor of US-550 if identified as appropriate, an individual benefit-cost analysis is not presented because potential benefits associated with crash reductions and wildlife saved have been calculated as part of the analysis for Phase 1.

7.3.5.5 Risk Identification

The team has assessed potential construction risks associated with implementing Phase 5. At WC-05, there are utilities present on the west side of the road, including a gas line, waterline, and overhead electric. There is a 36-inch concrete wall barrier present along the eastbound lane that may be impacted by construction. This would be the final phase, and fencing would need to be removed and reinstalled in order to accommodate this phase.

7.4 Benefit-Cost Analysis for US-550 Hotspot Mitigation

Mitigation of the full US-550 hotspot corridor would run from MP 64.93 to MP 80.64 and would include the optional Phase 5. It would include four overpasses and four underpasses as well as 16 miles of

wildlife exclusion fencing on both sides of the highway. The estimated cost for WVC mitigation along the entire hotspot is \$90,200,000.

A summary of the reported crashes by animal type and value for the entire corridor (MP 64.93 – MP 80.64) from 2008 - 2021 is provided in Table 18. A total of 399 crashes with elk and mule deer were reported from 2008-2021.

Table 18. Summary of US-550 Hotspot (MP 64.93 to MP 80.64) Crash Types and Costs

Crash Injury Class by Animal* & Animal Passive Value	Cost per Crash (Property Damage and Injury Only) & Animal Passive Value (2020 US\$) (Huijser, et al, 2022)	Property Damage and Injury Crashes (Number)	Total Cost (2020 US\$)
Deer-Vehicle Crash	\$14,014	165	\$2,312,310
Elk-Vehicle Crash	\$45,445	234	\$10,634,130
Crash Subtotal			\$12,946,440
Deer Passive Value	\$5,075	165	\$837,375
Elk Passive Value	\$27,751	234	\$6,493,734
Passive Value Subtotal			\$7,331,109
Total Cost			\$20,277,549
*Animals other than elk and deer, as well as unidentified animals, were excluded from the total animal-vehicle crash counts because cost evaluation data is not available for those species or the crash could not be tied to a specific species.			

The benefit-cost is estimated by evaluating the expected 90 percent reduction in crash costs over 75 years (i.e., the estimated lifespan of the mitigation infrastructure). The benefit-cost is then divided by the total cost for the mitigation infrastructure. For the entire US-550 hotspot, the total cost for the mitigation infrastructure is estimated to be \$90,400,000 including Phase 5 (optional), and \$76,600,000 not including Phase 5. Table 19 summarizes the benefit calculations and values for the entire hotspot (MP 64.93 to MP 80.64).

Table 19. Summary of US-550 Hotspot (MP 64.93 to MP 80.64) Benefit Calculations and Values

	Values (2020 US\$)
Crash Costs	
Total value of crash costs (13 years)	\$12,946,440
Crash cost per mile per year	\$63,391
Avoided crash cost for US-550 hotspot corridor over 75 years of infrastructure (Cost/mile/year x 15.71 x 75)	\$74,691,600
Benefit value of mitigation based on a 90% reduction in crashes over 75 years	\$67,221,900
Passive Value Costs	
Passive value – Deer*	\$5,075
Passive value – Elk	\$27,751
Estimated value of elk and mule deer saved over 75 years of mitigation	\$38,065,374
*Mule deer is the focal species for the NMWCAP; however, the Passive Value utilized in this analysis is based on white-tailed deer valuations presented by Huijser, <i>et al</i> (2022).	

For the entire US-550 hotspot, 59% of crashes were with elk, and 41% were with mule deer. Averaging crashes over 13 years, there have been 30.7 reported crashes per year. Assuming a 90% reduction in crashes, a conservative estimate of avoided crashes would be 27.6 crashes prevented annually after mitigation is implemented. Therefore, approximately 16.2 elk and 11.4 deer would be saved annually in this section of US-550. Over 75 years, the monetary value of the animals saved by the mitigation would be: Elk (\$27,751 x 16.2 x 75 years) + Mule deer (\$5,075 x 11.4 x 75 years) = \$33,717,465 + \$4,347,909 = \$38,065,374.

Utilizing this information, a benefit-cost ratio can be calculated for the proposed US-550 WVC hotspot corridor mitigation from MP 64.93 to MP 80.64. Table 20 provides the benefit-cost ratio calculation, recalling that the estimated cost for the entire mitigation corridor would be \$90,200,000.

Table 20. US-550 Hotspot Benefit Calculations and Values

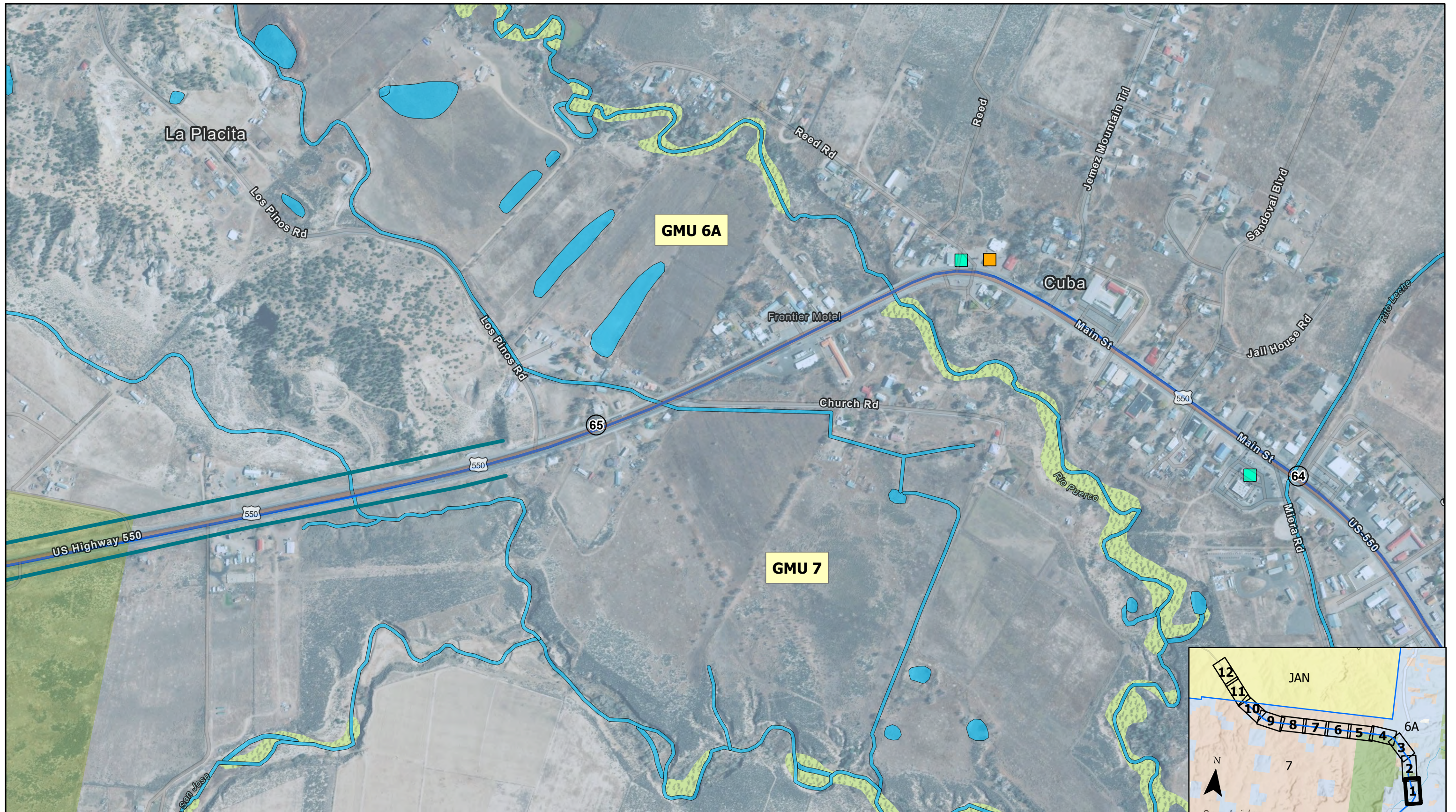
Valuation	Benefit-Cost Equation	Benefit-Cost Ratio
2020 US \$	$(\$67,221,900 + \$38,065,374) / \$90,200,000$	1.2

The proposed mitigation for the entire length of the US-550 hotspot is expected to pay for itself in 75 years or less with a benefit-cost ratio of 1.2. Keeping in mind that WVCs are under-reported, the potential benefits of implementing WVC mitigation measures in the area is likely an underestimation (refer to the last paragraph of Section 1.3.3).

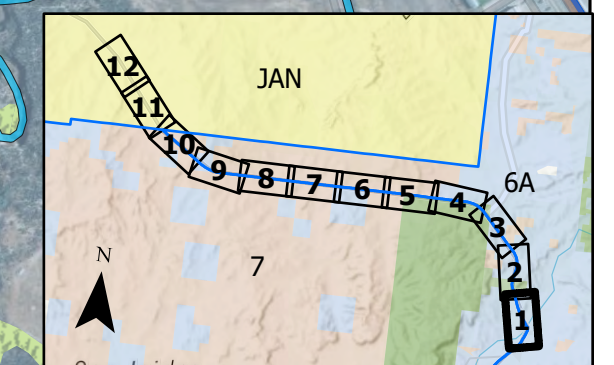
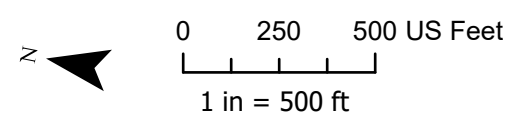
8 References

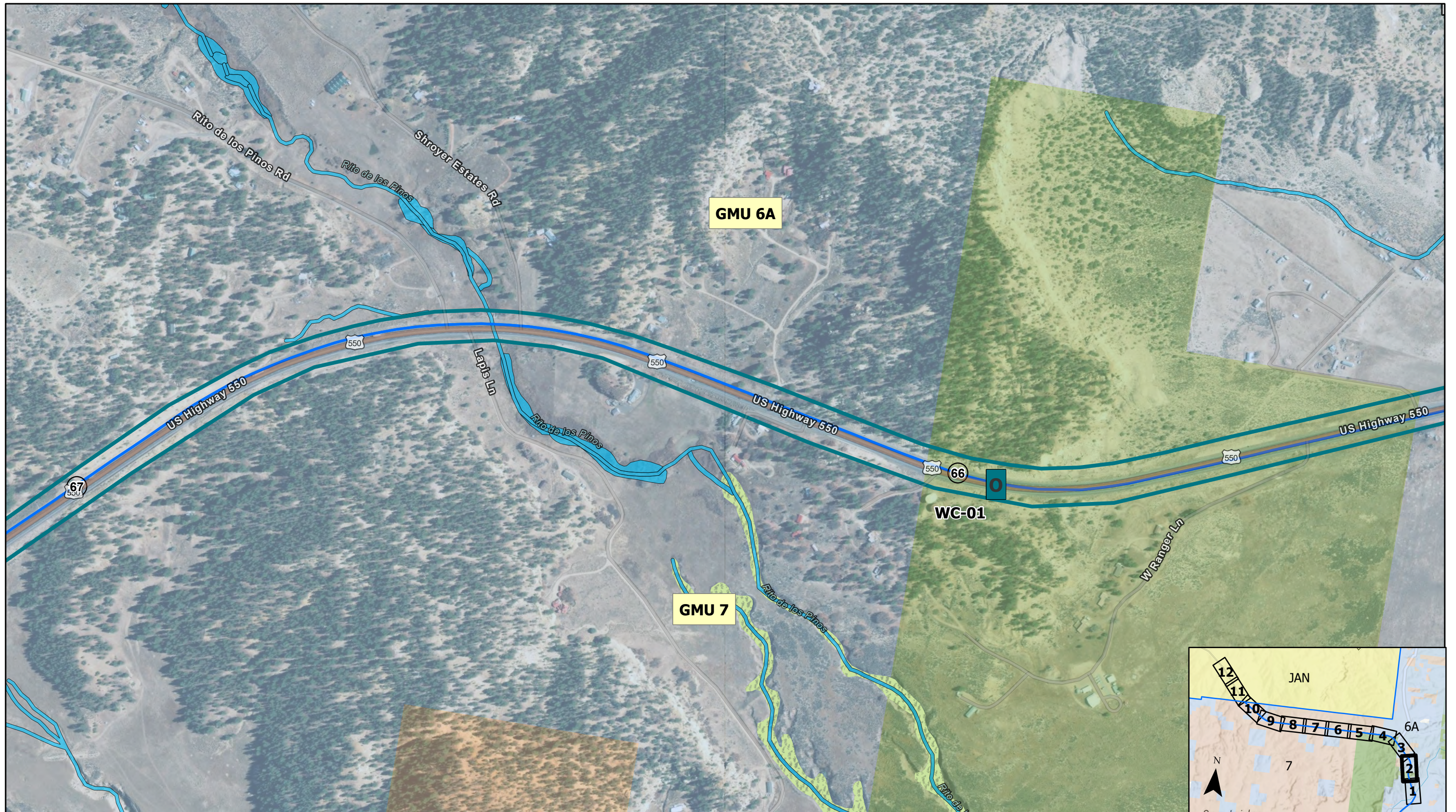
- Griffith, G.E., Omernik, J.M., McGraw, M.M., Jacobi, G.Z., Canavan, C.M., Schrader, T.S., Mercer, D., Hill, R., and Moran, B.C., 2006. Ecoregions of New Mexico (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,400,000).
- Huijser, M.P., Duffield, J.W., Neher, C., Clevenger, Anthony P., and McGuire, T. 2022. Cost-Benefit Analyses of Mitigation Measures Along Highways for Large Animal Species: An Update and Expansion of the 2009 Model. Report No. 701-18-803 TO 1 Part 3. Nevada Department of Transportation. Carson City, Nevada.
- Huijser, M.P., McGowan, P., Fuller, J., Hardy, A., Kociolek, A., Clevenger, A.P., Smith, D. and Ament, R. 2008. Wildlife-Vehicle Collision Reduction Study: Report to Congress. Report No. FHWA-HRT-08-034.
- Natural Resources Conservation Service (NRCS), 2023. Web Soil Survey. <https://www.nrcs.usda.gov/resources/data-and-reports/web-soil-survey>. Accessed on April 5, 2023.
- New Mexico Bureau of Geology and Mineral Resources (NMBGMR), 2023. NMBGMR Interactive Resources Map. <https://maps.nmt.edu/>. Accessed April 16, 2023.

Appendix A: Environmental Resources Mapbook

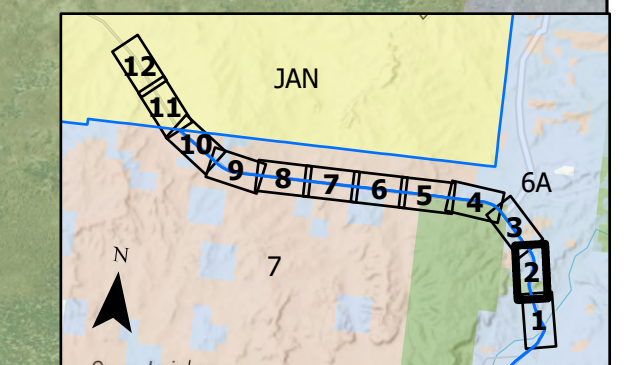
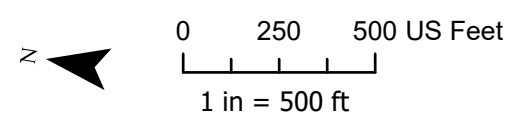


- Fence
- Structure
- Phase 1
- Phase 2
- Phase 3
- Phase 4
- Phase 5
- Milepost
- HazMat Site - LUST
- HazMat Site - UST
- Jicarilla Apache Nation
- Private
- NWI - Potential WOTUS
- NWI - Potential Riparain Area
- BLM
- Santa Fe National Forest
- Game Management Unit Boundary



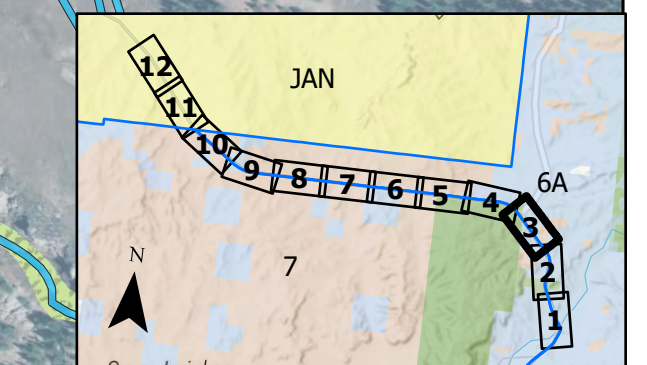
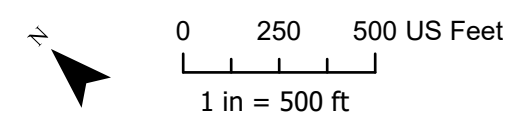


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|-----------|---------|--------------------------|-------------------------------|
| Fence | Phase 1 | Milepost | Jicarilla Apache Nation |
| Structure | Phase 2 | HazMat Site - LUST | Private |
| | Phase 3 | HazMat Site - UST | NWI - Potential WOTUS |
| | Phase 4 | BLM | NWI - Potential Riparain Area |
| | Phase 5 | Santa Fe National Forest | Game Management Unit Boundary |





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|-----------|---------|--------------------------|-------------------------------|
| Fence | Phase 1 | Milepost | Jicarilla Apache Nation |
| Structure | Phase 2 | HazMat Site - LUST | Private |
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| | Phase 5 | Santa Fe National Forest | Game Management Unit Boundary |



0 250 500 US Feet
1 in = 500 ft

US-550 Scoping Report Environmental Resources Mapbook



- | | | | |
|-----------|--------------------------|-------------------------------|-------------------------------|
| Fence | Phase 2 | Milepost | Jicarilla Apache Nation |
| Structure | Phase 3 | HazMat Site - LUST | Private |
| Phase 4 | Phase 5 | HazMat Site - UST | NWI - Potential WOTUS |
| Phase 5 | BLM | NWI - Potential Riparain Area | Game Management Unit Boundary |
| | Santa Fe National Forest | | |



0 250 500 US Feet
1 in = 500 ft

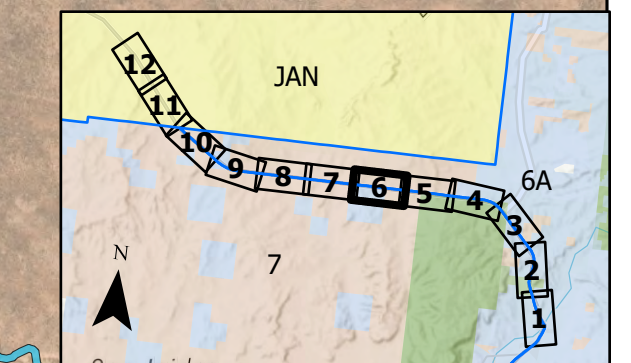
US-550 Scoping Report Environmental Resources Mapbook



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- Phase 4
- Phase 5
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0 250 500 US Feet
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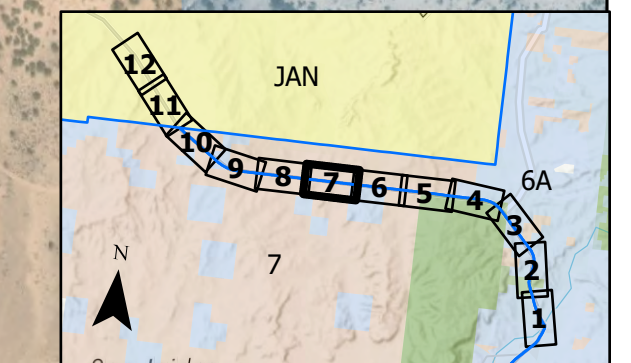
US-550 Scoping Report Environmental Resources Mapbook



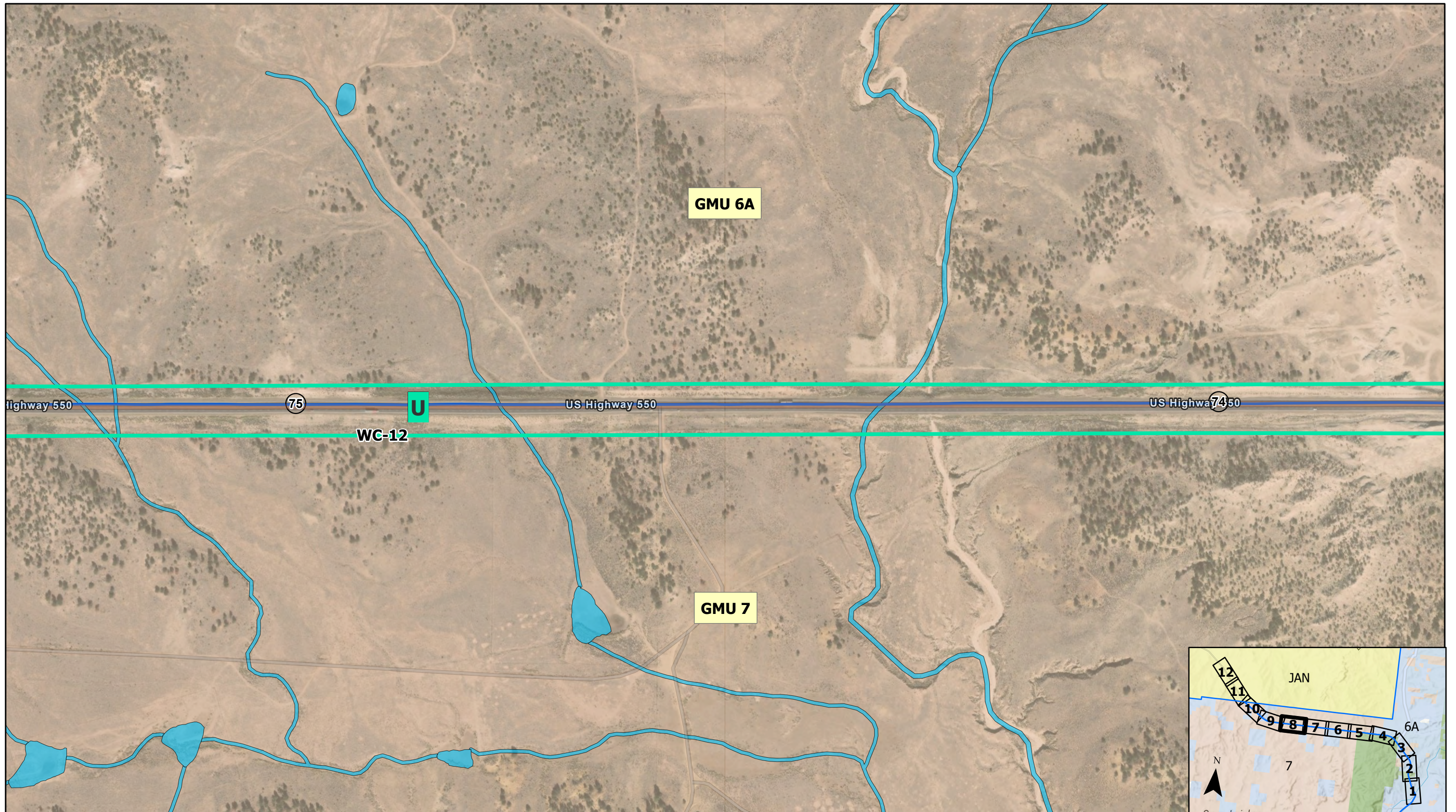
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US-550 Scoping Report Environmental Resources Mapbook

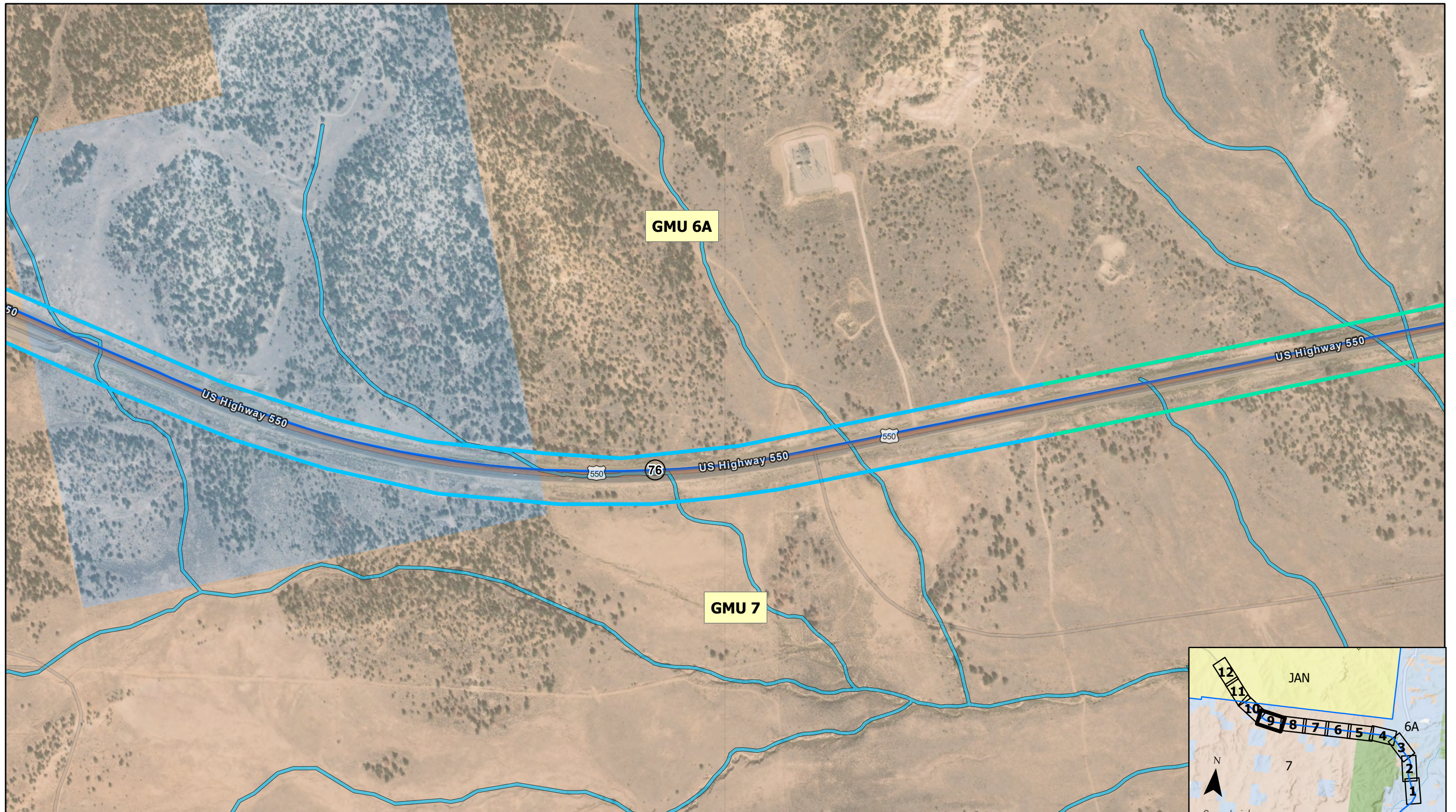


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1 in = 500 ft

US-550 Scoping Report Environmental Resources Mapbook

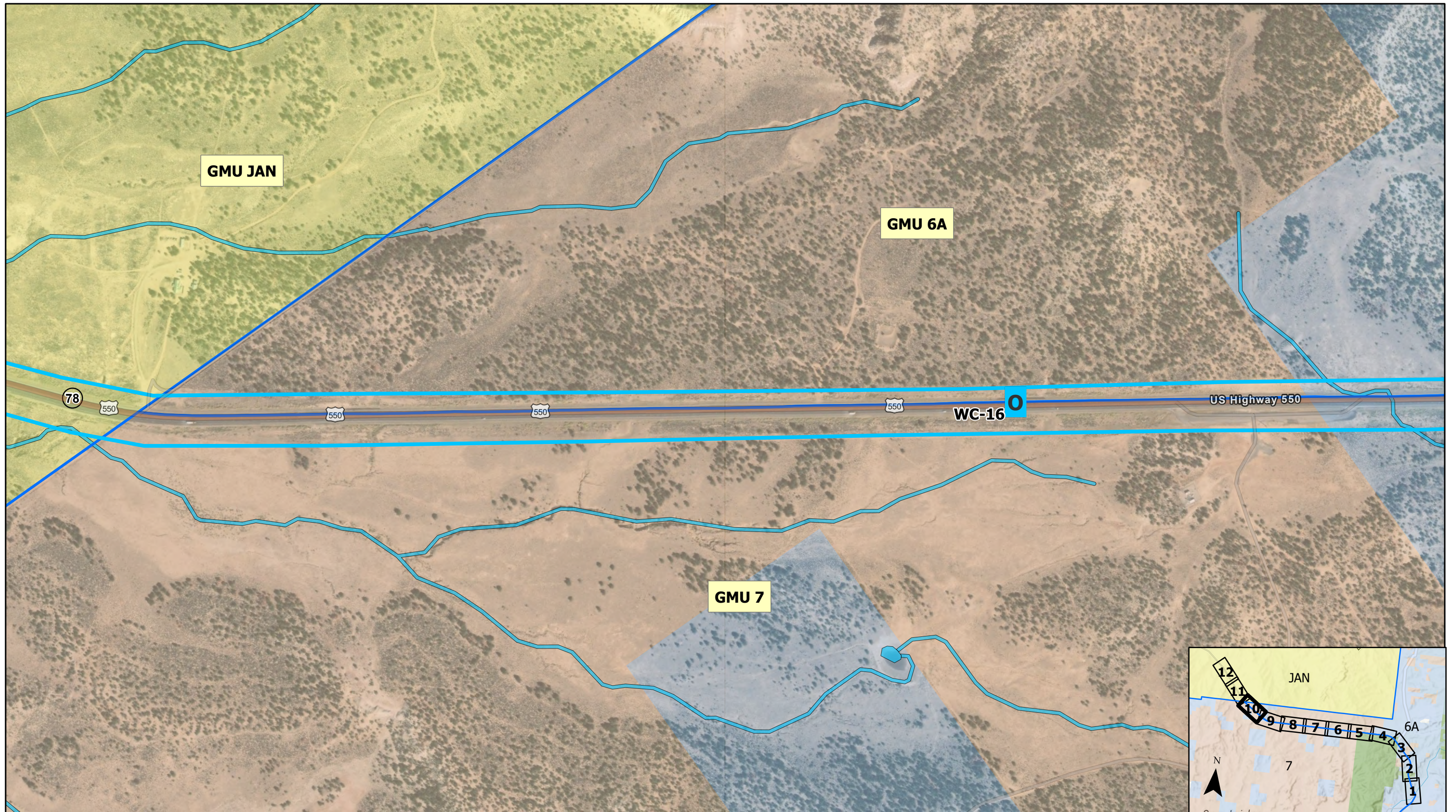


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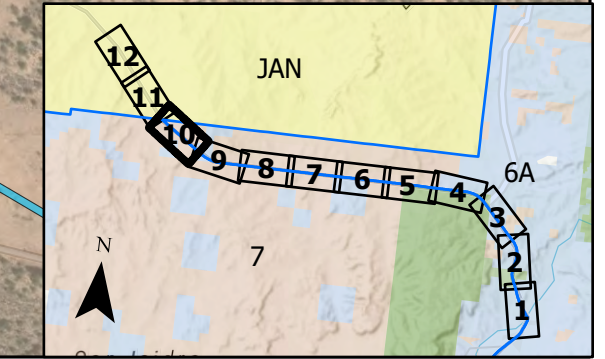
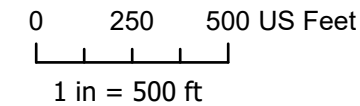


0 250 500 US Feet
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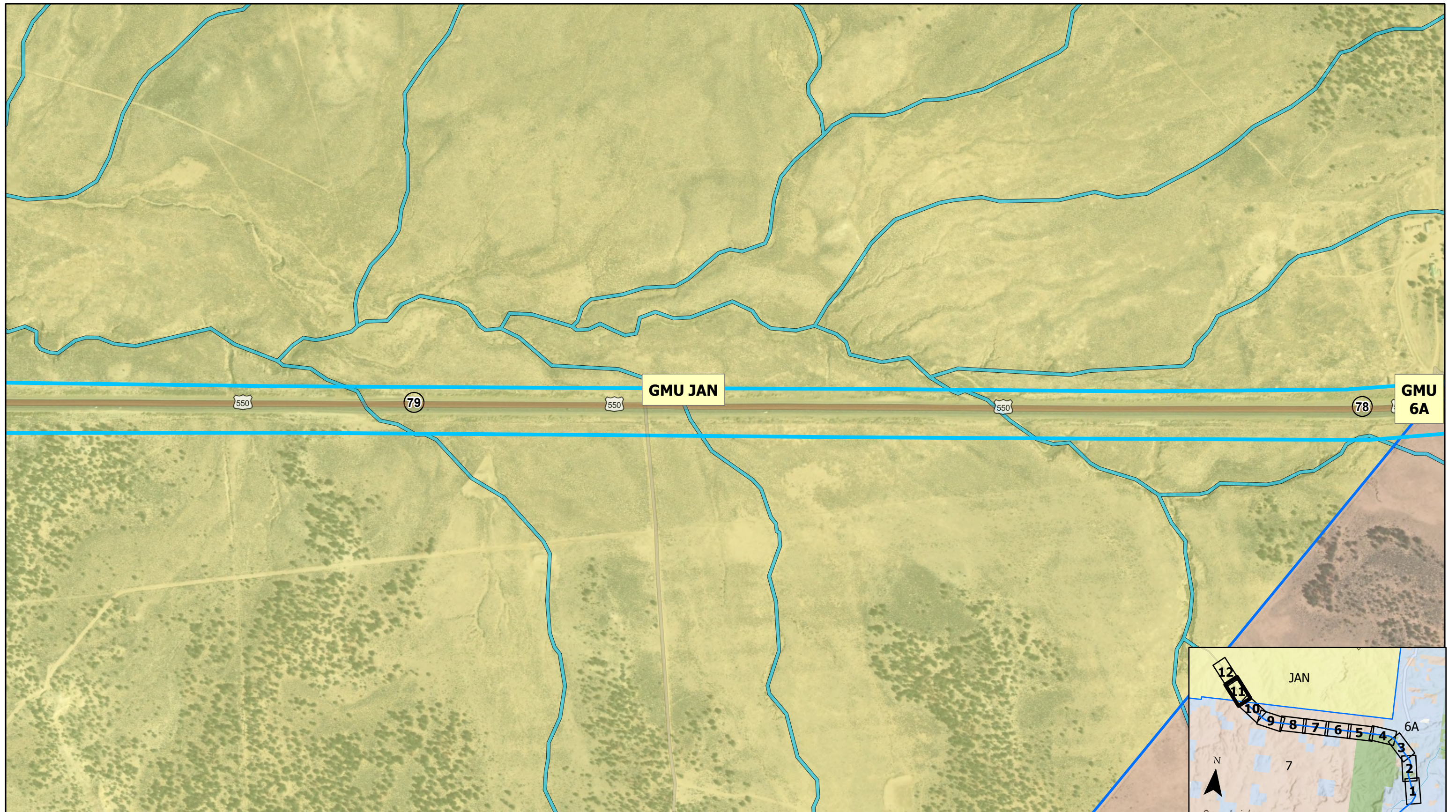
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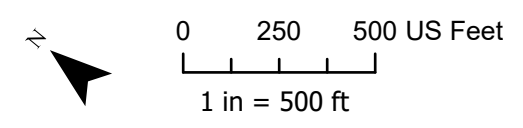
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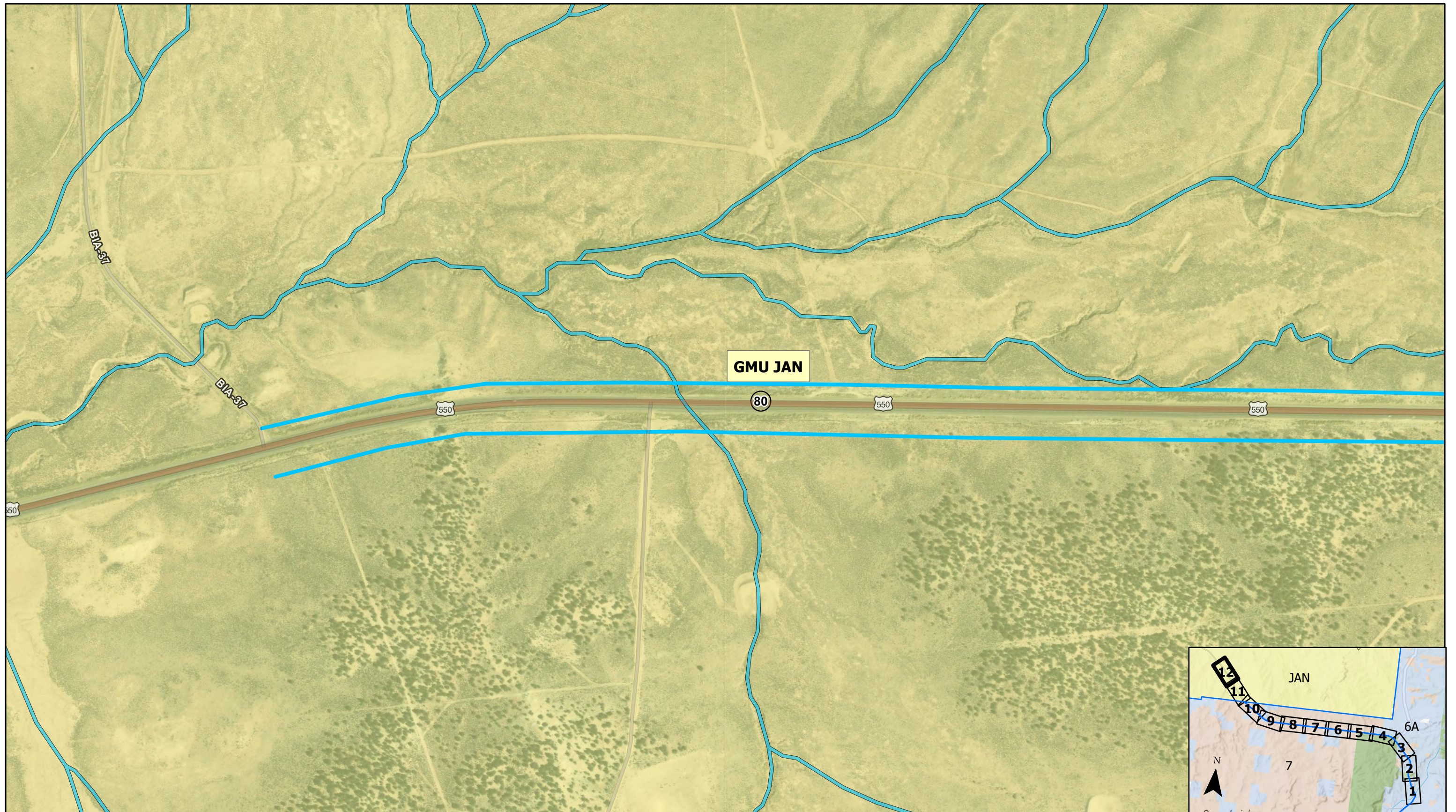
US-550 Scoping Report
Environmental Resources Mapbook



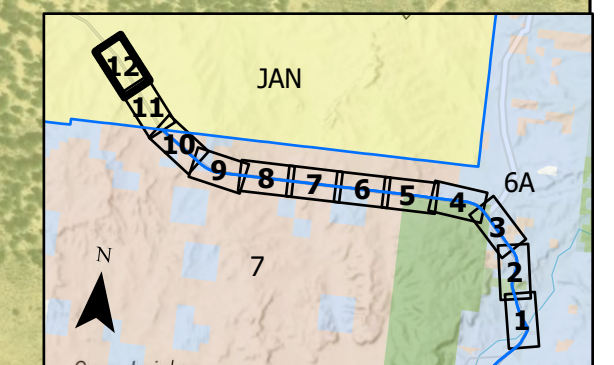
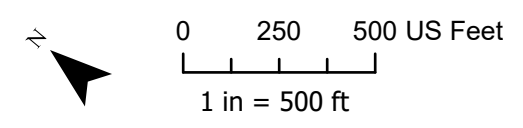
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US-550 Scoping Report
Environmental Resources Mapbook



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US-550 Scoping Report
Environmental Resources Mapbook

Appendix B: Overpass Detail E84' x 29-10"

PROJECT SUMMARY

LOCAL BRIDGE CONSULTANT

- NAME = Gavin Macwilliam
- EMAIL = Gavin.Macwilliam@ContechES.com
- PHONE NUMBER = 303-715-8534

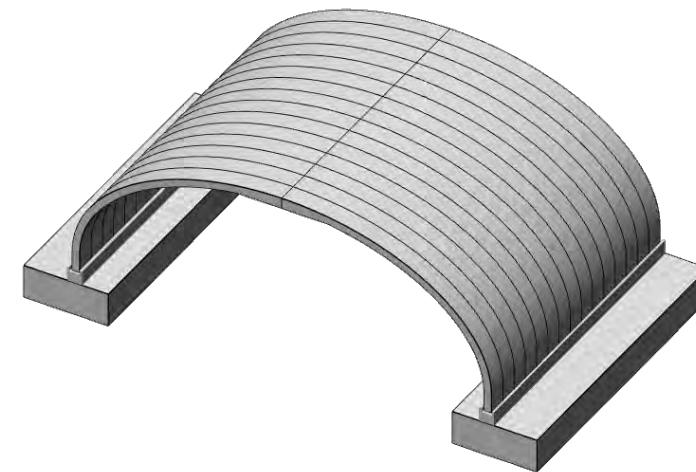
STRUCTURE DETAILS

- SPAN = 84' - 0"
- PRECAST RISE = 29' - 10"
- LENGTH = 60 FT.

FOUNDATIONS

- FOUNDATION TYPE = PEDESTAL

BEBO E-Series DYO E84 x 29'-10"



NOTES

1. THIS BRIDGE HAS BEEN DESIGNED FOR GENERAL SITE CONDITIONS. THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR THE STRUCTURE'S SUITABILITY TO THE EXISTING SITE CONDITIONS AND FOR THE HYDRAULIC EVALUATION -- INCLUDING SCOUR AND CONFIRMATION OF SOIL CONDITIONS.
2. PRIOR TO CONSTRUCTION, CONTRACTOR MUST VERIFY ALL ELEVATIONS SHOWN THROUGH THE ENGINEER.
3. ONLY CONTECH ENGINEERED SOLUTIONS LLC, THE BEBO APPROVED MANUFACTURER IN THE PROJECT STATE MAY PROVIDE THE STRUCTURE DESIGNED IN ACCORDANCE WITH THESE PLANS.
4. THIS DYOB DRAWING IS A CONCEPTUAL DESIGN. PLEASE WORK WITH YOUR LOCAL BRIDGE CONSULTANT FOR FURTHER SOLUTION DEVELOPMENT AND PRICING.
5. THE USE OF ANOTHER PRECAST STRUCTURE WITH THE DESIGN ASSUMPTIONS USED FOR THE BEBO STRUCTURE MAY LEAD TO SERIOUS DESIGN ERRORS. USE OF ANY OTHER PRECAST STRUCTURE WITH THIS DESIGN AND DRAWINGS VOIDS ANY CERTIFICATION OF THIS DESIGN AND WARRANTY. CONTECH ENGINEERED SOLUTIONS ASSUMES NO LIABILITY FOR DESIGN OF ANY ALTERNATE OR SIMILAR TYPE STRUCTURES.

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ENGINEERED SOLUTIONS LLC
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800-338-1122 513-645-7000 513-645-7993 FAX

BEBO
Arch Systems

DYOB
DRAWING

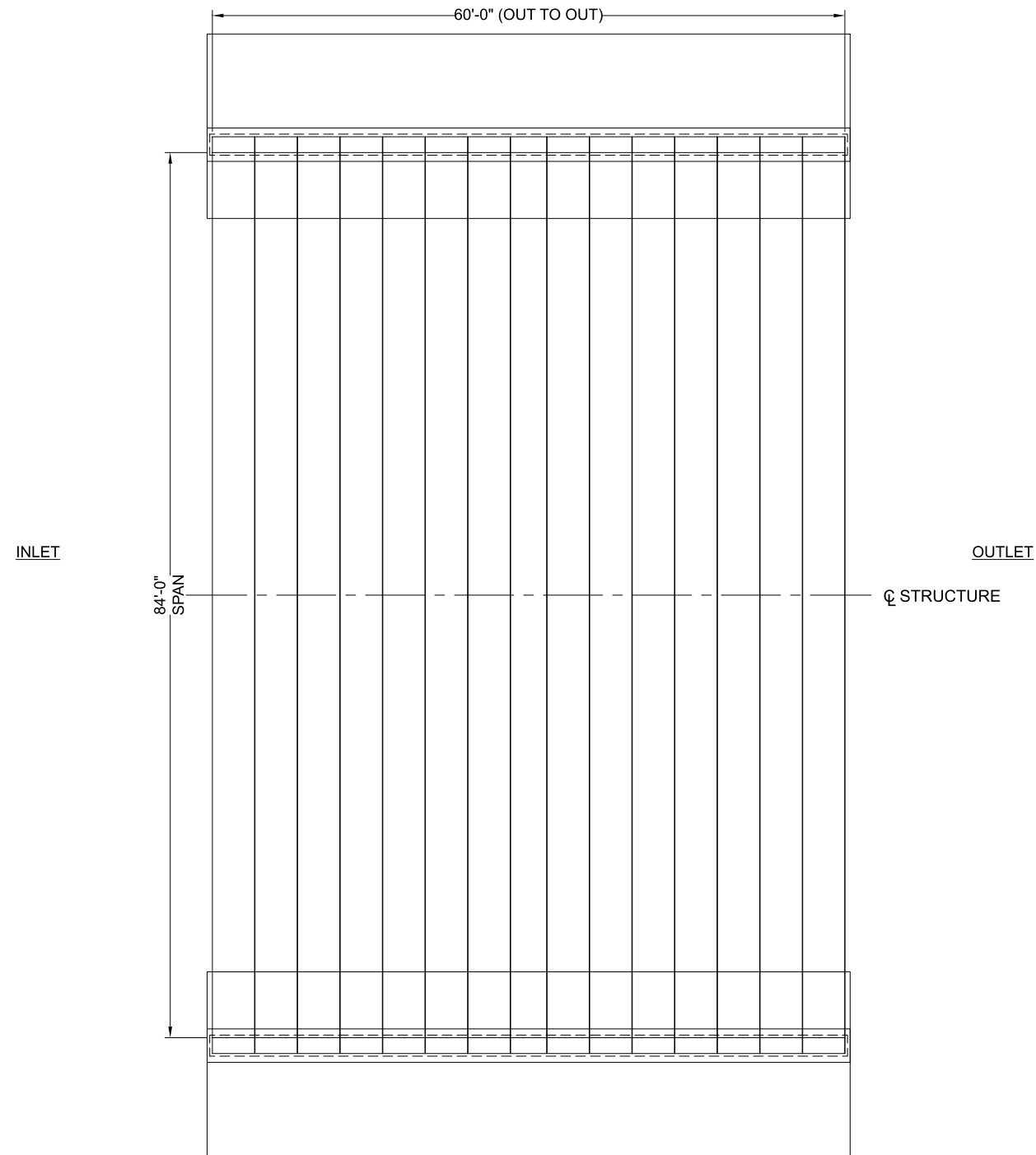
DYO29746, US 550 MP64.0-80.3 WVC Mitigation: Wildlife Structure

E84 x 29'-10"

Nageezi, NM

BEBO, 84'-0" Span x 29'-10" Rise

PROJECT No.: 20000	DYO No.: 29746	DATE: 04/04/2023
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D1 OF D10		



BRIDGE PLAN

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DRAWING

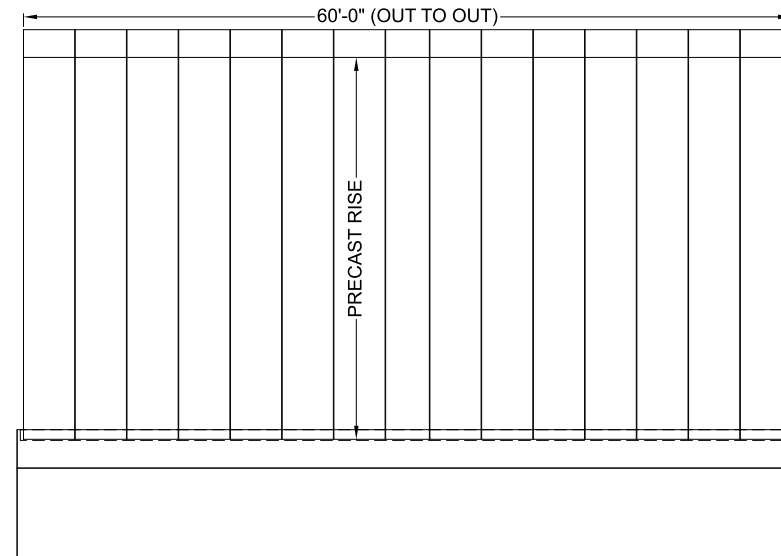
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E84 x 29'-10"

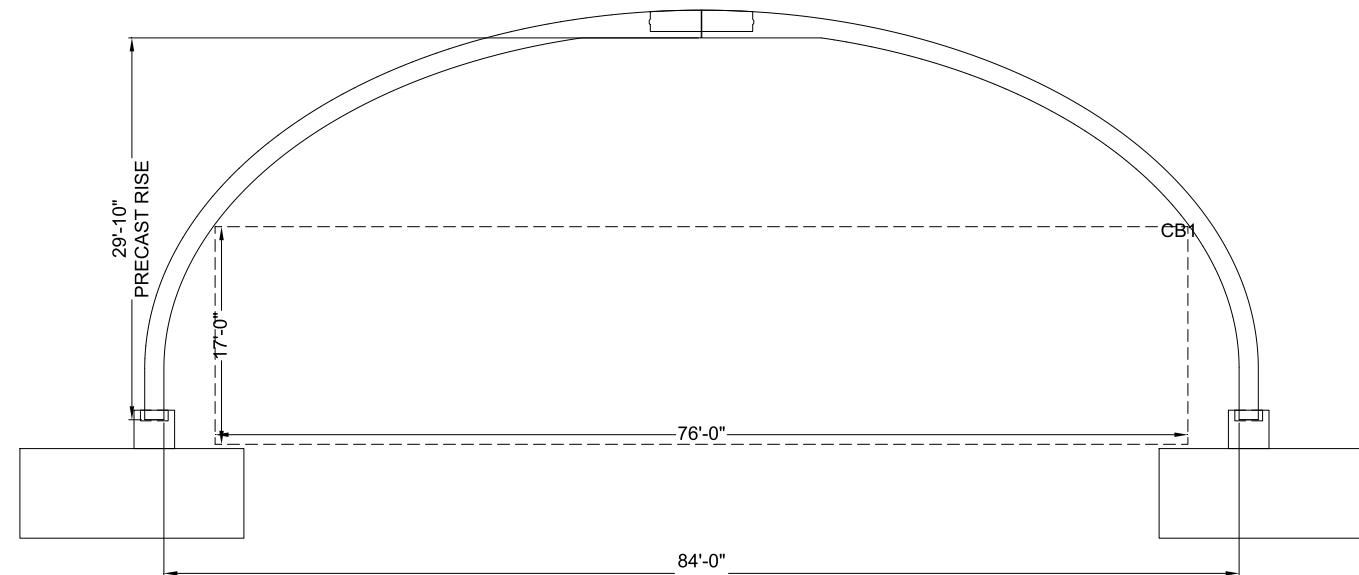
Nageezi, NM

BEBO, 84'-0" Span x 29'-10" Rise

PROJECT No.: 20000	DYO No.: 29746	DATE: 04/04/2023
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D2 OF D10		



LONGITUDINAL SECTION



CROSS SECTION

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BEBO
Arch Systems

DYOB
DRAWING

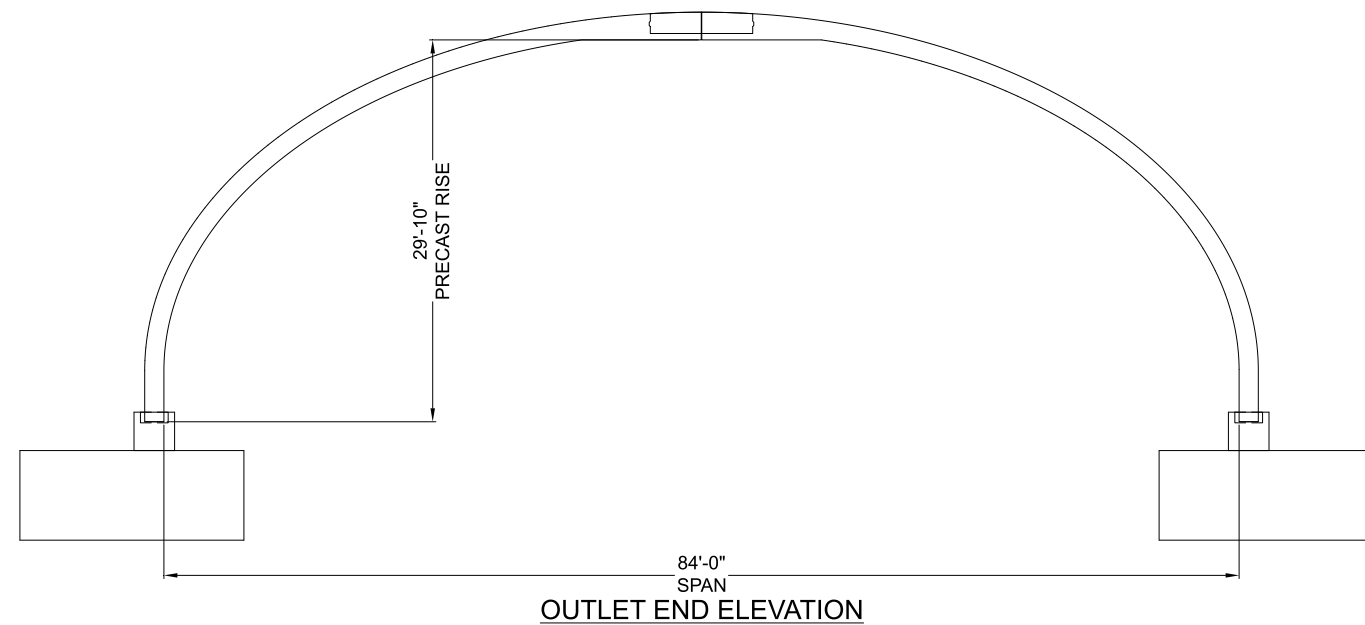
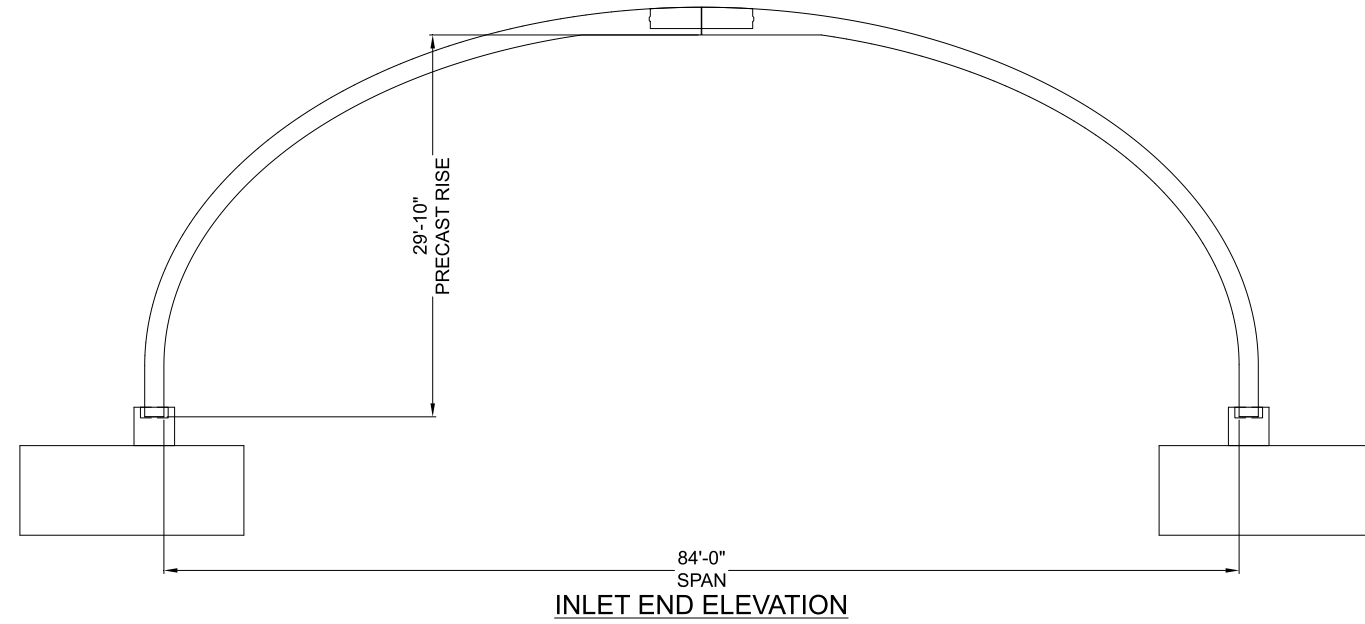
DYO29746, US 550 MP64.0-80.3 WVC Mitigation: Wildlife Structure

E84 x 29'-10"

Nageezi, NM

BEBO, 84'-0" Span x 29'-10" Rise

PROJECT No.: 20000	DYO No.: 29746	DATE: 04/04/2023
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.:		D3 OF D10



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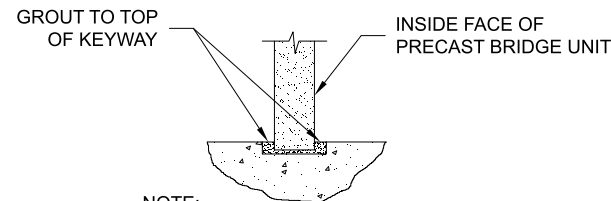
DYOB
DRAWING

DYO29746, US 550 MP64.0-80.3 WVC Mitigation: Wildlife Structure

E84 x 29'-10"
Nageezi, NM

BEBO, 84'-0" Span x 29'-10" Rise

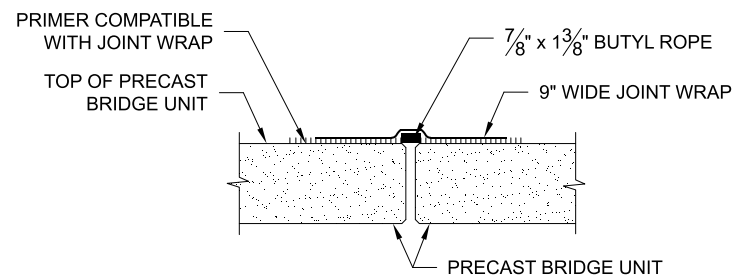
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DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D4 OF D10		



NOTE:
FILL ENTIRE KEYWAY INCLUDING
NOMINAL 1" VOID BETWEEN BOTTOM OF
KEYWAY AND BOTTOM OF PRECAST
BRIDGE UNIT LEG WITH GROUT.

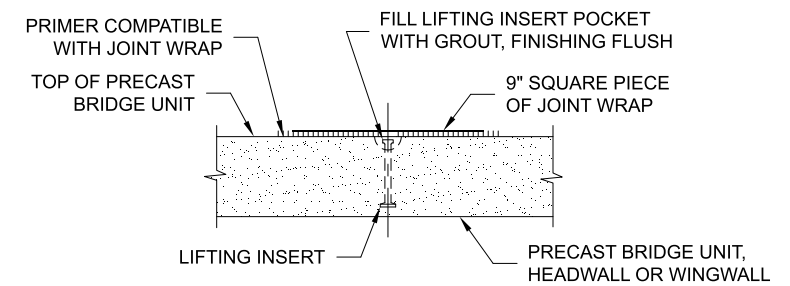
TYPICAL BRIDGE UNIT GROUT DETAIL

NOT TO SCALE



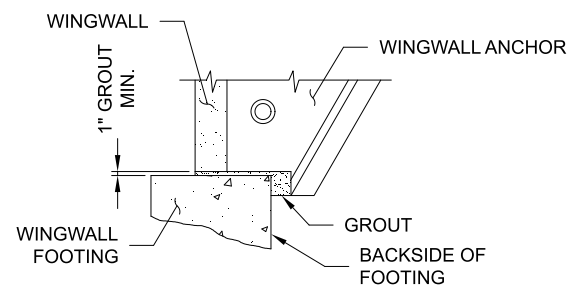
TYPICAL JOINT SEAL DETAIL

NOT TO SCALE



TYPICAL LIFT INSERT SEALING DETAIL

NOT TO SCALE

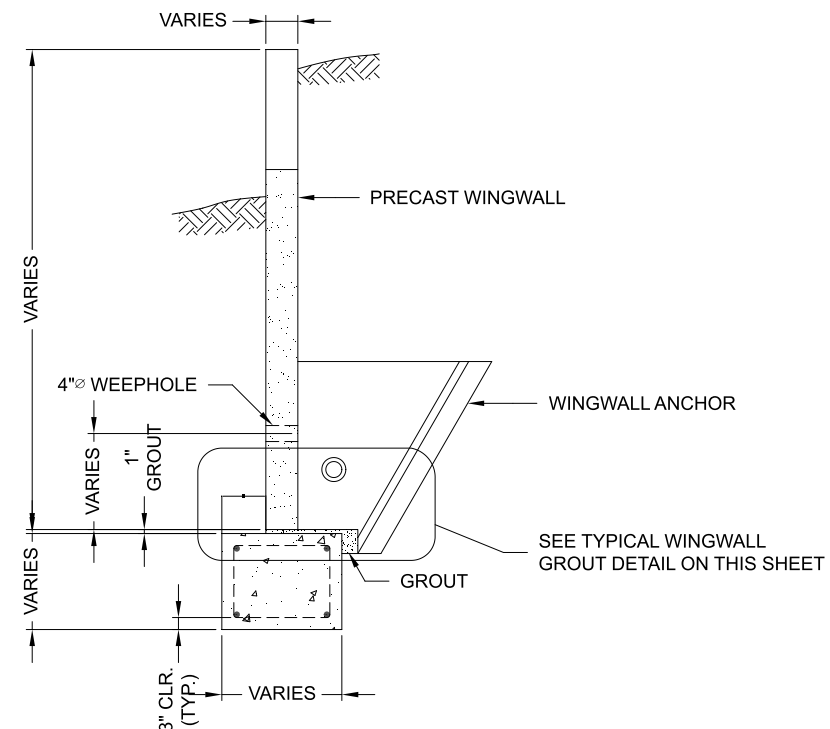


NOTES:

- MINIMUM 1" GROUT UNDER WINGWALL LEG & ANCHOR STEM.
- AREA BETWEEN WINGWALL FOOTING AND WINGWALL ANCHOR SHALL BE GROUTED SOLID BEFORE BACKFILL.
- FORM BACKSIDE OF FOOTING TO DIMENSIONS SHOWN ON FOUNDATION PLAN.

TYPICAL WINGWALL GROUT DETAIL

NOT TO SCALE



TYPICAL WINGWALL SECTION

NOT TO SCALE

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Nageezi, NM

BEBO, 84'-0" Span x 29'-10" Rise

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DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.:		D5 OF D10

SPECIFICATIONS FOR MANUFACTURE AND INSTALLATION OF BEBO® ARCH SYSTEMS

- 1. DESCRIPTION**
- 1.1. TYPE - THIS WORK SHALL CONSIST OF FURNISHING AND CONSTRUCTING A BEBO® BRIDGE SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON THE PLANS OR AS ESTABLISHED BY THE ENGINEER. IN SITUATIONS WHERE TWO OR MORE SPECIFICATIONS APPLY TO THIS WORK, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
- 1.2. DESIGNATION - PRECAST REINFORCED CONCRETE BEBO® BRIDGE UNITS MANUFACTURED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE DESIGNATED BY SPAN AND RISE. PRECAST REINFORCED CONCRETE WINGWALLS AND HEADWALLS MANUFACTURED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE DESIGNATED BY LENGTH, HEIGHT, AND DEFLECTION ANGLE.
- 2. DESIGN**
- 2.1. SPECIFICATIONS - THE PRECAST ELEMENTS ARE DESIGNED IN ACCORDANCE WITH THE "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS" 8TH EDITION, ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017. A MINIMUM OF ONE AND ONE-HALF FEET OF COVER ABOVE THE CROWN OF THE BRIDGE UNITS IS REQUIRED IN THE INSTALLED CONDITION. (UNLESS NOTED OTHERWISE ON THE SHOP DRAWINGS AND DESIGNED ACCORDINGLY.)
- 3. MATERIALS**
- 3.1. CONCRETE - THE CONCRETE FOR THE PRECAST ELEMENTS SHALL BE AIR-ENTRAINED WHEN INSTALLED IN AREAS SUBJECT TO FREEZE-THAW CONDITIONS, COMPOSED OF PORTLAND CEMENT, FINE AND COARSE AGGREGATES, ADMIXTURES AND WATER. AIR-ENTRAINED CONCRETE SHALL CONTAIN 6 ± 2 PERCENT AIR. THE AIR-ENTRAINING ADMIXTURE SHALL CONFORM TO AASHTO M154. THE MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE AS SHOWN ON THE SHOP DRAWINGS.
- 3.1.1. PORTLAND CEMENT - SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATIONS C150-TYPE I, TYPE II, OR TYPE III CEMENT.
- 3.1.2. COARSE AGGREGATE - SHALL CONSIST OF STONE HAVING A MAXIMUM SIZE OF 1". AGGREGATE SHALL MEET REQUIREMENTS FOR ASTM C33.
- 3.1.3. WATER REDUCING ADMIXTURE - THE MANUFACTURER MAY SUBMIT, FOR APPROVAL BY THE ENGINEER, A WATER-REDUCING ADMIXTURE FOR THE PURPOSE OF INCREASING WORKABILITY AND REDUCING THE WATER REQUIREMENT FOR THE CONCRETE.
- 3.1.4. CALCIUM CHLORIDE - THE ADDITION TO THE MIX OF CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE WILL NOT BE PERMITTED.
- 3.1.5. MIXTURE - THE AGGREGATES, CEMENT AND WATER SHALL BE PROPORTIONED AND MIXED IN A BATCH MIXER TO PRODUCE A HOMOGENEOUS CONCRETE MEETING THE STRENGTH REQUIREMENTS OF THIS SPECIFICATION. THE PROPORTION OF PORTLAND CEMENT IN THE MIXTURE SHALL NOT BE LESS THAN 564 POUNDS (6 SACKS) PER CUBIC YARD OF CONCRETE.
- 3.2. STEEL REINFORCEMENT
- 3.2.1. THE MINIMUM STEEL YIELD STRENGTH SHALL BE 60,000 PSI, UNLESS OTHERWISE NOTED ON THE SHOP DRAWINGS.
- 3.2.2. ALL REINFORCING STEEL FOR THE PRECAST ELEMENTS SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH THE DETAILED SHOP DRAWINGS SUBMITTED BY THE MANUFACTURER.
- 3.2.3. REINFORCEMENT SHALL CONSIST OF WELDED WIRE REINFORCING CONFORMING TO ASTM SPECIFICATION A 1064, OR DEFORMED STEEL BARS CONFORMING TO ASTM SPECIFICATION A 615, GRADE 60. LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY CONSIST OF WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS.
- 3.3. STEEL HARDWARE
- 3.3.1. BOLTS AND THREADED RODS FOR WINGWALL CONNECTIONS SHALL CONFORM TO ASTM A 307. NUTS SHALL CONFORM TO AASHTO M292 (ASTM A194) GRADE 2H. ALL BOLTS, THREADED RODS AND NUTS USED IN WINGWALL CONNECTIONS SHALL BE MECHANICALLY ZINC COATED IN ACCORDANCE WITH ASTM B695 CLASS 50.
- 3.3.2. STRUCTURAL STEEL FOR WINGWALL CONNECTION PLATES AND PLATE WASHERS SHALL CONFORM TO AASHTO M270 (ASTM A709) GRADE 36 AND SHALL BE HOT DIP GALVANIZED AS PER AASHTO M111 (ASTM A123).
- 3.3.3. INSERTS FOR WINGWALLS SHALL BE 1" DIAMETER TWO-BOLT PRESET WINGWALL ANCHORS AS MANUFACTURED BY DAYTON SUPERIOR CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700 AND SHALL BE ELECTRO GALVANIZED IN ACCORDANCE WITH ASTM B633 SC-1.
- 3.3.4. FERRULE LOOP INSERTS SHALL BE F-64 FERRULE LOOP INSERTS AS MANUFACTURED BY DAYTON SUPERIOR CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700 AND SHALL BE ELECTRO GALVANIZED.
- 3.3.5. HOOK BOLTS USED IN ATTACHED HEADWALL CONNECTIONS SHALL BE ASTM A307.
- 3.3.6. INSERTS FOR DETACHED HEADWALL CONNECTIONS SHALL BE AISI TYPE 304 STAINLESS STEEL, F-58 EXPANDED COIL INSERTS AS MANUFACTURED BY DAYTON/RICHMOND CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700. COIL RODS AND NUTS USED IN HEADWALL CONNECTIONS SHALL BE AISI TYPE 304 STAINLESS STEEL. WASHERS USED IN HEADWALL CONNECTIONS SHALL BE EITHER AISI TYPE 304 STAINLESS STEEL PLATE WASHERS OR AASHTO M270 (ASTM A709) GRADE 36 PLATE WASHERS HOT DIP GALVANIZED AS PER AASHTO M111 (ASTM A123).
- 3.3.7. RECHANICAL SPLICES OF REINFORCING BARS SHALL BE MADE
- USING THE DOWEL BAR SPLICER SYSTEM AS MANUFACTURED BY DAYTON SUPERIOR CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700, AND SHALL CONSIST OF THE DBDI SPLICE SYSTEM (DOWEL BAR SPLICER AND DOWEL-IN), OR AS MANUFACTURED BY BARSPLICE PRODUCTS INC, DAYTON, OHIO, (937)-275-8700, AND SHALL CONSIST OF BARSPLICER XP TYPE 2 SYSTEM.
- 4. MANUFACTURE OF PRECAST ELEMENTS**
- SUBJECT TO THE PROVISIONS OF SECTION 5, BELOW, THE PRECAST ELEMENT DIMENSION AND REINFORCEMENT DETAILS SHALL BE AS PRESCRIBED IN THE PLAN AND SHOP DRAWINGS PROVIDED BY THE MANUFACTURER.
- 4.1. FORMS - THE FORMS USED IN MANUFACTURE SHALL BE SUFFICIENTLY RIGID AND ACCURATE TO MAINTAIN THE REQUIRED PRECAST ELEMENT DIMENSIONS WITHIN THE PERMISSIBLE VARIATIONS GIVEN IN SECTION 5 OF THESE SPECIFICATIONS ALL CASTING SURFACES SHALL BE OF A SMOOTH MATERIAL.
- 4.2. PLACEMENT OF REINFORCEMENT
- 4.2.1. PLACEMENT OF REINFORCEMENT IN PRECAST BRIDGE UNITS - THE COVER OF CONCRETE OVER THE OUTSIDE CIRCUMFERENTIAL REINFORCEMENT SHALL BE 2" MINIMUM. THE COVER OF CONCRETE OVER THE INSIDE CIRCUMFERENTIAL REINFORCEMENT SHALL BE 1½" MINIMUM, UNLESS OTHERWISE NOTED ON THE SHOP DRAWINGS. THE CLEAR DISTANCE OF THE END CIRCUMFERENTIAL WIRES SHALL NOT BE LESS THAN 1" NOR MORE THAN 2" FROM THE ENDS OF EACH SECTION. REINFORCEMENT SHALL BE ASSEMBLED UTILIZING SINGLE OR MULTIPLE LAYERS OF WELDED WIRE FABRIC (NOT TO EXCEED 3 LAYERS), SUPPLEMENTED WITH A SINGLE LAYER OF DEFORMED BILLET-STEEL BARS, WHEN NECESSARY. WELDED WIRE FABRIC SHALL BE COMPOSED OF CIRCUMFERENTIAL AND LONGITUDINAL WIRES MEETING THE SPACING REQUIREMENTS OF 4.3, BELOW, AND SHALL CONTAIN SUFFICIENT LONGITUDINAL WIRES EXTENDING THROUGH THE BRIDGE UNIT TO MAINTAIN THE SHAPE AND POSITION OF THE REINFORCEMENT. LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY BE WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS AND SHALL MEET THE SPACING REQUIREMENTS OF 4.3, BELOW. THE ENDS OF THE LONGITUDINAL DISTRIBUTION REINFORCEMENT SHALL BE NOT MORE THAN 3" AND NOT LESS THAN 1½" FROM THE ENDS OF THE BRIDGE UNIT.
- 4.2.2. PLACEMENT OF REINFORCEMENT FOR PRECAST WINGWALLS AND HEADWALLS - THE COVER OF CONCRETE OVER THE LONGITUDINAL AND TRANSVERSE REINFORCEMENT SHALL BE 2" MINIMUM. THE CLEAR DISTANCE FROM THE END OF EACH PRECAST ELEMENT TO THE END OF REINFORCING STEEL SHALL NOT BE LESS THAN ½" NOR MORE THAN 3". REINFORCEMENT SHALL BE ASSEMBLED UTILIZING A SINGLE LAYER OF WELDED WIRE FABRIC, OR A SINGLE LAYER OF DEFORMED BILLET-STEEL BARS. WELDED WIRE FABRIC SHALL BE COMPOSED OF TRANSVERSE AND LONGITUDINAL WIRES MEETING THE SPACING REQUIREMENTS OF 4.3, BELOW, AND SHALL CONTAIN SUFFICIENT LONGITUDINAL WIRES EXTENDING THROUGH THE ELEMENT TO MAINTAIN THE SHAPE AND POSITION OF THE REINFORCEMENT. LONGITUDINAL REINFORCEMENT MAY BE WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS AND SHALL MEET THE SPACING REQUIREMENTS OF 4.3, BELOW.
- 4.3. LAPS, WELDS, SPACING
- 4.3.1. LAPS, WELDS, AND SPACING FOR PRECAST BRIDGE UNITS - TENSION SPLICES IN THE CIRCUMFERENTIAL REINFORCEMENT SHALL BE MADE BY LAPPING. LAPS MAY BE TACK WELDED TOGETHER FOR ASSEMBLY PURPOSES. FOR SMOOTH WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.11.6.1. FOR DEFORMED WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.11.6.2. THE OVERLAP OF WELDED WIRE FABRIC SHALL BE MEASURED BETWEEN THE OUTER-MOST LONGITUDINAL WIRES OF EACH FABRIC SHEET. FOR DEFORMED BILLET-STEEL BARS, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.11.5.3. FOR SPLICES OTHER THAN TENSION SPLICES, THE OVERLAP SHALL BE A MINIMUM OF 1'-0" FOR WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS. THE SPACING CENTER TO CENTER OF THE CIRCUMFERENTIAL WIRES IN A WIRE FABRIC SHEET SHALL BE NOT LESS THAN 2" NOR MORE THAN 4". THE SPACING CENTER TO CENTER OF THE LONGITUDINAL WIRES SHALL NOT BE MORE THAN 8". THE SPACING CENTER TO CENTER OF THE LONGITUDINAL DISTRIBUTION STEEL FOR EITHER LINE OF REINFORCING IN THE TOP SLAB SHALL BE NOT MORE THAN 1'-4".
- 4.3.2. LAPS, WELDS, AND SPACING FOR PRECAST WINGWALLS AND HEADWALLS - SPLICES IN THE REINFORCEMENT SHALL BE MADE BY LAPPING. LAPS MAY BE TACK WELDED TOGETHER FOR ASSEMBLY PURPOSES. FOR SMOOTH WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.11.6.1. FOR DEFORMED WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.11.6.2. FOR DEFORMED BILLET-STEEL BARS, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.11.5.3. THE SPACING CENTER-TO-CENTER OF THE WIRES IN A WIRE FABRIC SHEET SHALL BE NOT LESS THAN 2" NOR MORE THAN 8".
- 4.4. CURING - THE PRECAST CONCRETE ELEMENTS SHALL BE CURED FOR A SUFFICIENT LENGTH OF TIME SUCH THAT THE CONCRETE WILL DEVELOP ONE OF THE FOLLOWING COMPRESSIVE STRENGTH IN 28 DAYS OR LESS, ANY ONE OF THE FOLLOWING METHODS OF CURING OR COMBINATIONS THEREOF SHALL BE USED.
- 4.4.1. STEAM CURING - THE PRECAST ELEMENTS MAY BE LOW-PRESSURE STEAM CURED BY A SYSTEM THAT WILL MAINTAIN A MOIST ATMOSPHERE.
- 4.4.2. WATER CURING - THE PRECAST ELEMENTS MAY BE WATER CURED BY ANY METHOD THAT WILL KEEP THE SECTIONS MOIST.
- 4.4.3. MEMBRANE CURING - A SEALING MEMBRANE CONFORMING TO THE REQUIREMENTS OF ASTM SPECIFICATION C 309 MAY BE APPLIED AND SHALL BE LEFT INTACT UNTIL THE REQUIRED CONCRETE COMPRESSIVE STRENGTH IS ATTAINED. THE CONCRETE TEMPERATURE AT THE TIME OF APPLICATION SHALL BE WITHIN +/- 10 DEGREES F OF THE ATMOSPHERIC TEMPERATURE. ALL SURFACES SHALL BE KEPT MOIST PRIOR TO THE APPLICATION OF THE COMPOUNDS AND SHALL BE DAMP WHEN THE COMPOUND IS APPLIED.
- 4.5. STORAGE, HANDLING & DELIVERY
- 4.5.1. STORAGE - PRECAST CONCRETE BRIDGE ELEMENTS SHALL BE LIFTED AND STORED IN "AS-CAST" POSITION.
- PRECAST CONCRETE HEADWALL AND WINGWALL UNITS ARE CAST, STORED AND SHIPPED IN A FLAT POSITION.
- THE PRECAST ELEMENTS SHALL BE STORED IN SUCH A MANNER TO PREVENT CRACKING OR DAMAGE. STORE ELEMENTS USING TIMBER SUPPORTS AS APPROPRIATE. THE UNITS SHALL NOT BE MOVED UNTIL THE CONCRETE COMPRESSIVE STRENGTH HAS REACHED A MINIMUM OF 2500 PSI, AND THEY SHALL NOT BE STORED IN AN UPRIGHT POSITION.
- 4.5.2. HANDLING - HANDLING DEVICES SHALL BE PERMITTED IN EACH PRECAST ELEMENT FOR THE PURPOSE OF HANDLING AND SETTING.
- SPREADER BEAMS MAY BE REQUIRED FOR THE LIFTING OF PRECAST CONCRETE BRIDGE ELEMENTS TO PRECLUDE DAMAGE FROM BENDING OR TORSION FORCES.
- THE CONTRACTOR MUST PROVIDE A DOUBLE-DRUM CRANE WITH EQUAL CAPACITY ON EACH DRUM FOR THE INSTALLATION OF THE PRECAST ELEMENTS.
- 4.5.3. DELIVERY - PRECAST CONCRETE ELEMENTS MUST NOT BE SHIPPED UNTIL THE CONCRETE HAS ATTAINED THE SPECIFIED DESIGN COMPRESSIVE STRENGTH, OR AS DIRECTED BY THE DESIGN ENGINEER.
- PRECAST CONCRETE ELEMENTS MAY BE UNLOADED AND PLACED ON THE GROUND AT THE SITE UNTIL INSTALLED. STORE ELEMENTS USING TIMBER SUPPORTS AS APPROPRIATE.
- 4.6. QUALITY ASSURANCE - THE PRECASTER SHALL DEMONSTRATE ADHERENCE TO THE STANDARDS SET FORTH IN THE NPCA QUALITY CONTROL MANUAL. THE PRECASTER SHALL MEET EITHER SECTION 4.6.1 OR 4.6.2
- 4.6.1. CERTIFICATION - THE PRECASTER SHALL BE CERTIFIED BY THE PRECAST/PRESTRESSED CONCRETE INSTITUTE PLANT CERTIFICATION PROGRAM OR THE NATIONAL PRECAST CONCRETE ASSOCIATION'S PLANT CERTIFICATION PROGRAM PRIOR TO AND DURING PRODUCTION OF THE PRODUCTS COVERED BY THIS SPECIFICATION.
- 4.6.2. QUALIFICATIONS, TESTING AND INSPECTION
- 4.6.2.1. THE PRECASTER SHALL HAVE BEEN IN THE BUSINESS OF PRODUCING PRECAST CONCRETE PRODUCTS SIMILAR TO THOSE SPECIFIED FOR A MINIMUM OF THREE YEARS. HE SHALL MAINTAIN A PERMANENT QUALITY CONTROL DEPARTMENT OR RETAIN AN INDEPENDENT TESTING AGENCY ON A CONTINUING BASIS. THE AGENCY SHALL ISSUE A REPORT, CERTIFIED BY A LICENSED ENGINEER, DETAILING THE ABILITY OF THE PRECASTER TO PRODUCE QUALITY PRODUCTS CONSISTENT WITH INDUSTRY STANDARDS.
- 4.6.2.2. THE PRECASTER SHALL SHOW THAT THE FOLLOWING TESTS ARE PERFORMED IN ACCORDANCE WITH THE ASTM STANDARDS INDICATED. TESTS SHALL BE PERFORMED AS INDICATED IN SECTION 6 OF THESE SPECIFICATIONS.
- 4.6.2.2.1. AIR CONTENT: C231 OR C173
- 4.6.2.2.2. COMPRESSIVE STRENGTH: C31, C39, C497
- 4.6.2.3. THE PRECASTER SHALL PROVIDE DOCUMENTATION DEMONSTRATING COMPLIANCE WITH THIS SECTION TO CONTECH® BRIDGE SOLUTIONS AT REGULAR INTERVALS OR UPON REQUEST.
- 4.6.2.4. THE OWNER MAY PLACE AN INSPECTOR IN THE PLANT WHEN THE PRODUCTS COVERED BY THIS SPECIFICATION ARE BEING MANUFACTURED.
- 4.6.3. DOCUMENTATION - THE PRECASTER SHALL SUBMIT PRECAST PRODUCTION REPORTS TO CONTECH® BRIDGE SOLUTIONS AS REQUIRED.
- 5. PERMISSIBLE VARIATIONS**
- 5.1. BRIDGE UNITS
- 5.1.1. INTERNAL DIMENSIONS - THE INTERNAL DIMENSION SHALL VARY NOT MORE THAN 1% FROM THE DESIGN DIMENSIONS NOR MORE THAN 1½" WHICHEVER IS LESS.
- 5.1.2. SLAB AND WALL THICKNESS - THE SLAB AND WALL THICKNESS SHALL NOT BE LESS THAN THAT SHOWN IN THE DESIGN BY MORE THAN ½". A THICKNESS MORE THAN THAT REQUIRED IN THE DESIGN SHALL NOT BE CAUSE FOR REJECTION.
- 5.1.3. LENGTH OF OPPOSITE SURFACES - VARIATIONS IN LAYING LENGTHS OF TWO OPPOSITE SURFACES OF THE BRIDGE UNIT SHALL NOT BE MORE THAN ½" IN ANY SECTION, EXCEPT WHERE BEVELED ENDS FOR LAYING OF CURVES ARE SPECIFIED BY THE PURCHASER.
- 5.1.4. LENGTH OF SECTION - THE UNDERRUN IN LENGTH OF A SECTION SHALL NOT BE MORE THAN ½" IN ANY BRIDGE UNIT.
- 5.1.5. POSITION OF REINFORCEMENT - THE MAXIMUM VARIATION IN POSITION OF THE REINFORCEMENT SHALL BE ± ½". IN NO CASE
- SHALL THE COVER OVER THE REINFORCEMENT BE LESS THAN 1½" FOR THE OUTSIDE CIRCUMFERENTIAL STEEL OR BE LESS THAN 1" FOR THE INSIDE CIRCUMFERENTIAL STEEL AS MEASURED TO THE EXTERNAL OR INTERNAL SURFACE OF THE BRIDGE. THESE TOLERANCES OR COVER REQUIREMENTS DO NOT APPLY TO MATING SURFACES OF THE JOINTS.
- 5.1.6. AREA OF REINFORCEMENT - THE AREAS OF STEEL REINFORCEMENT SHALL BE THE DESIGN STEEL AREAS AS SHOWN IN THE MANUFACTURER'S SHOP DRAWINGS. STEEL AREAS GREATER THAN THOSE REQUIRED SHALL NOT BE CAUSE FOR REJECTION. THE PERMISSIBLE VARIATION IN DIAMETER OF ANY REINFORCEMENT SHALL CONFORM TO THE TOLERANCES PRESCRIBED IN THE ASTM SPECIFICATION FOR THAT TYPE OF REINFORCEMENT.
- 5.2. WINGWALLS & HEADWALLS
- 5.2.1. WALL THICKNESS - THE WALL THICKNESS SHALL NOT VARY FROM THAT SHOWN IN THE DESIGN BY MORE THAN ½".
- 5.2.2. LENGTH/ HEIGHT OF WALL SECTIONS - THE LENGTH AND HEIGHT OF THE WALL SHALL NOT VARY FROM THAT SHOWN IN THE DESIGN BY MORE THAN ½".
- 5.2.3. POSITION OF REINFORCEMENT - THE MAXIMUM VARIATION IN THE POSITION OF THE REINFORCEMENT SHALL BE ± ½". IN NO CASE SHALL THE COVER OVER THE REINFORCEMENT BE LESS THAN 1½".
- 5.2.4. SIZE OF REINFORCEMENT - THE PERMISSIBLE VARIATION IN DIAMETER OF ANY REINFORCING SHALL CONFORM TO THE TOLERANCES PRESCRIBED IN THE ASTM SPECIFICATION FOR THAT TYPE OF REINFORCING. STEEL AREA GREATER THAN THAT REQUIRED SHALL NOT BE CAUSE FOR REJECTION.
- 6. TESTING/ INSPECTION**
- 6.1. TESTING
- 6.1.1. TYPE OF TEST SPECIMEN - CONCRETE COMPRESSIVE STRENGTH SHALL BE DETERMINED FROM COMPRESSION TESTS MADE ON CYLINDERS OR CORES. FOR CYLINDER TESTING, A MINIMUM OF 4 CYLINDERS SHALL BE TAKEN FOR EACH BRIDGE ELEMENT. FOR CORE TESTING, A MINIMUM OF 2 CORES SHALL BE TAKEN FOR EACH BRIDGE ELEMENT. EACH ELEMENT SHALL BE CONSIDERED SEPARATELY FOR THE PURPOSE OF TESTING AND ACCEPTANCE.
- 6.1.2. COMPRESSION TESTING - CYLINDERS SHALL BE MADE AND TESTED AS PRESCRIBED BY THE ASTM C39 SPECIFICATION. CYLINDERS SHALL BE CURED IN THE SAME ENVIRONMENT AS THE BRIDGE ELEMENTS. CORES SHALL BE OBTAINED AND TESTED FOR COMPRESSIVE STRENGTH FROM EACH ELEMENT IN ACCORDANCE WITH THE PROVISIONS OF THE ASTM C42 SPECIFICATION.
- 6.1.3. ACCEPTABILITY OF CYLINDER TESTS - WHEN THE AVERAGE COMPRESSIVE STRENGTH OF ALL CYLINDERS TESTED IS EQUAL TO OR GREATER THAN THE DESIGN COMPRESSIVE STRENGTH, AND NOT MORE THAN 10% OF THE CYLINDERS TESTED HAVE A COMPRESSIVE STRENGTH LESS THAN THE DESIGN CONCRETE STRENGTH, AND NO CYLINDER TESTED HAS A COMPRESSIVE STRENGTH LESS THAN 90% OF THE REQUIRED CONCRETE STRENGTH, THEN THE ELEMENT SHALL BE ACCEPTED. WHEN THE COMPRESSIVE STRENGTH OF THE CYLINDERS TESTED DOES NOT CONFORM TO THESE ACCEPTANCE CRITERIA, THE ACCEPTABILITY OF THE ELEMENT MAY BE DETERMINED AS DESCRIBED IN SECTION 6.1.4, BELOW.
- 6.1.4. ACCEPTABILITY OF CORE TESTS - THE COMPRESSIVE STRENGTH OF THE CONCRETE IN A BRIDGE ELEMENT IS ACCEPTABLE WHEN EACH CORE TEST STRENGTH IS EQUAL TO OR GREATER THAN THE DESIGN CONCRETE STRENGTH. WHEN THE COMPRESSIVE STRENGTH OF A CORE TESTED IS LESS THAN THE DESIGN CONCRETE STRENGTH, THE PRECAST ELEMENT FROM WHICH THAT CORE WAS TAKEN MAY BE RE-CORED. WHEN THE COMPRESSIVE STRENGTH OF THE RE-CORE IS EQUAL TO OR GREATER THAN THE DESIGN CONCRETE STRENGTH, THE COMPRESSIVE STRENGTH OF THE CONCRETE IN THAT BRIDGE ELEMENT IS ACCEPTABLE.
- 6.1.4.1. WHEN THE COMPRESSIVE STRENGTH OF ANY RECORE IS LESS THAN THE DESIGN CONCRETE STRENGTH, THE PRECAST ELEMENT FROM WHICH THAT CORE WAS TAKEN SHALL BE REJECTED.
- 6.1.4.2. PLUGGING CORE HOLES - THE CORE HOLES SHALL BE PLUGGED AND SEALED BY THE MANUFACTURER IN A MANNER SUCH THAT THE ELEMENTS WILL MEET ALL OF THE TEST REQUIREMENTS OF THIS SPECIFICATION. PRECAST ELEMENTS SO SEALED SHALL BE CONSIDERED SATISFACTORY FOR USE.
- 6.1.4.3. TEST EQUIPMENT - EVERY MANUFACTURER FURNISHING PRECAST ELEMENTS UNDER THIS SPECIFICATION SHALL FURNISH ALL FACILITIES AND PERSONNEL NECESSARY TO CARRYOUT THE TEST REQUIRED.
- 6.2. INSPECTION - THE QUALITY OF MATERIALS, THE PROCESS OF MANUFACTURE, AND THE FINISHED PRECAST ELEMENTS SHALL BE SUBJECT TO INSPECTION BY THE PURCHASER.
- 7. JOINTS**
- THE BRIDGE UNITS SHALL BE PRODUCED WITH FLAT BUTT ENDS. THE ENDS OF THE BRIDGE UNITS SHALL BE SUCH THAT WHEN THE SECTIONS ARE LAID TOGETHER THEY WILL MAKE A CONTINUOUS LINE WITH A SMOOTH INTERIOR FREE OF APPRECIABLE IRREGULARITIES. ALL COMPATIBLE WITH THE PERMISSIBLE VARIATIONS IN SECTION 5, ABOVE. THE JOINT WIDTH BETWEEN ADJACENT PRECAST UNITS SHALL NOT EXCEED ¾".
- 8. WORKMANSHIP/ FINISH**
- THE BRIDGE UNITS, WINGWALLS, AND HEADWALLS SHALL BE SUBSTANTIALLY FREE OF FRACTURES. THE ENDS OF THE BRIDGE UNITS SHALL BE NORMAL TO THE WALLS AND CENTERLINE OF THE BRIDGE SECTION. WITHIN THE LIMITS OF THE VARIATIONS GIVEN IN SECTION 5, ABOVE, EXCEPT WHERE BEVELED ENDS ARE SPECIFIED. THE FACES OF THE WINGWALLS AND HEADWALLS SHALL BE PARALLEL TO EACH OTHER, WITHIN THE LIMITS OF VARIATIONS GIVEN IN SECTION 5, ABOVE. THE SURFACE OF THE PRECAST ELEMENTS SHALL BE A SMOOTH STEEL FORM OR TROWELED SURFACE. TRAPPED AIR POCKETS CAUSING SURFACE DEFECTS SHALL BE CONSIDERED AS PART OF A SMOOTH, STEEL FORM FINISH.
- 9. REPAIRS**
- PRECAST ELEMENTS MAY BE REPAIRED, IF NECESSARY, BECAUSE OF IMPERFECTIONS IN MANUFACTURE OR HANDLING DAMAGE AND WILL BE ACCEPTABLE IF, IN THE OPINION OF THE PURCHASER, THE REPAIRS ARE SOUND, PROPERLY FINISHED AND CURED, AND THE REPAIRED SECTION CONFORMS TO THE REQUIREMENTS OF THIS SPECIFICATION.
- 10. REJECTION**
- THE PRECAST ELEMENTS SHALL BE SUBJECT TO REJECTION ON ACCOUNT OF ANY OF THE SPECIFICATION REQUIREMENTS. INDIVIDUAL PRECAST ELEMENTS MAY BE REJECTED BECAUSE OF ANY OF THE FOLLOWING:
- 10.1. FRACTURES OR CRACKS PASSING THROUGH THE WALL, EXCEPT FOR A SINGLE END CRACK THAT DOES NOT EXCEED ONE HALF THE THICKNESS OF THE WALL.
- 10.2. DEFECTS THAT INDICATE PROPORTIONING, MIXING, AND MOLDING NOT IN COMPLIANCE WITH SECTION 4 OF THESE SPECIFICATIONS.
- 10.3. HONEYCOMBED OR OPEN TEXTURE.
- 10.4. DAMAGED ENDS, WHERE SUCH DAMAGE WOULD PREVENT MAKING A SATISFACTORY JOINT.
- 11. MARKING**
- EACH BRIDGE UNIT SHALL BE CLEARLY MARKED BY WATERPROOF PAINT. THE FOLLOWING SHALL BE SHOWN ON THE INSIDE OF THE VERTICAL LEG OF THE BRIDGE SECTION:
- BRIDGE SPAN x BRIDGE RISE
DATE OF MANUFACTURE
NAME OR TRADEMARK OF THE MANUFACTURER

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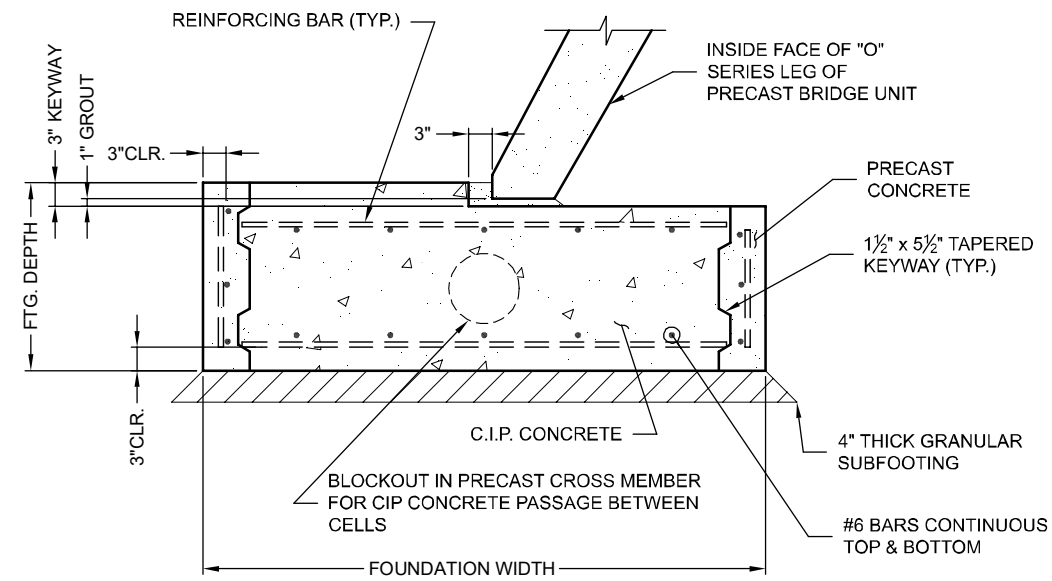
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SPECIFICATIONS

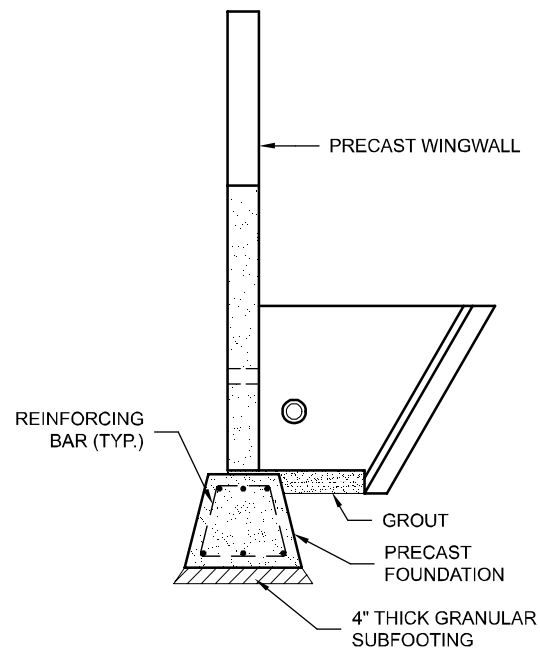
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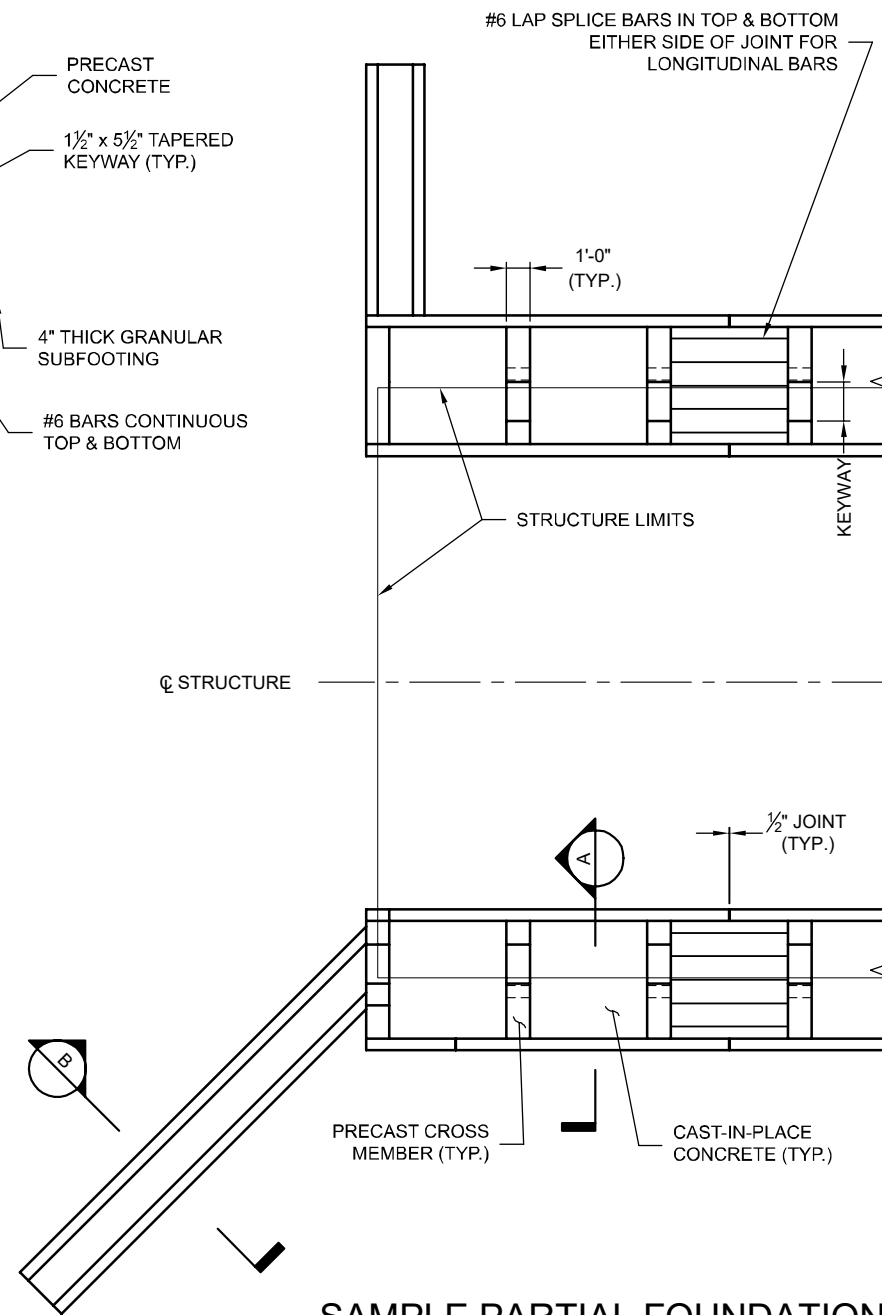
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SECTION A
(NOT PROJECT SPECIFIC)



SECTION B
(NOT PROJECT SPECIFIC)



SAMPLE PARTIAL FOUNDATION PLAN
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SHEET NO.:	D8 OF D9

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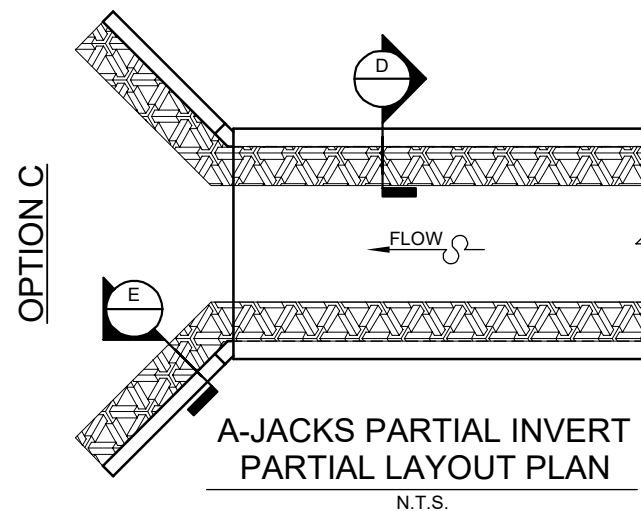
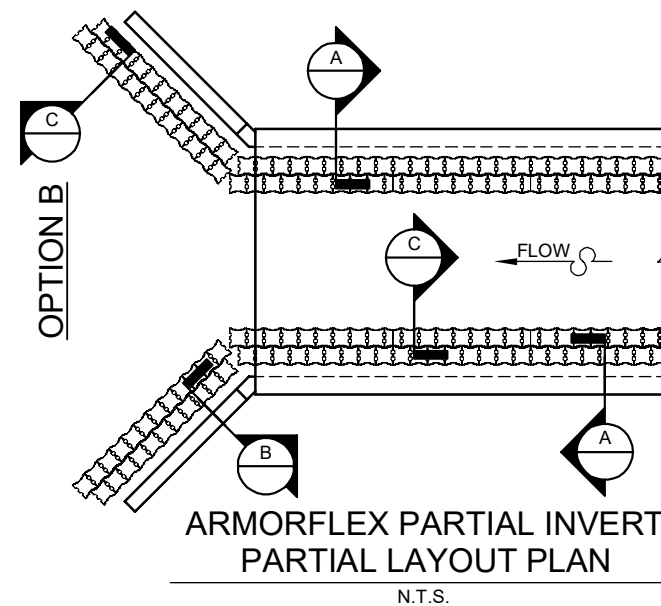
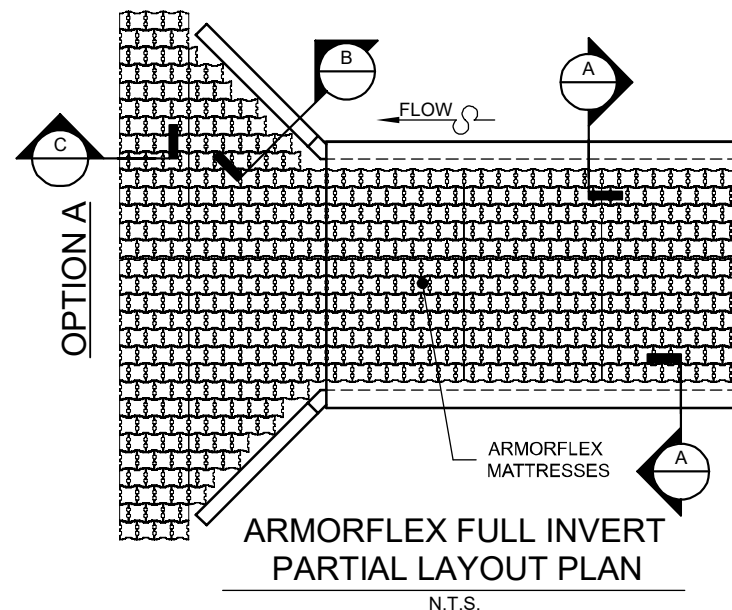
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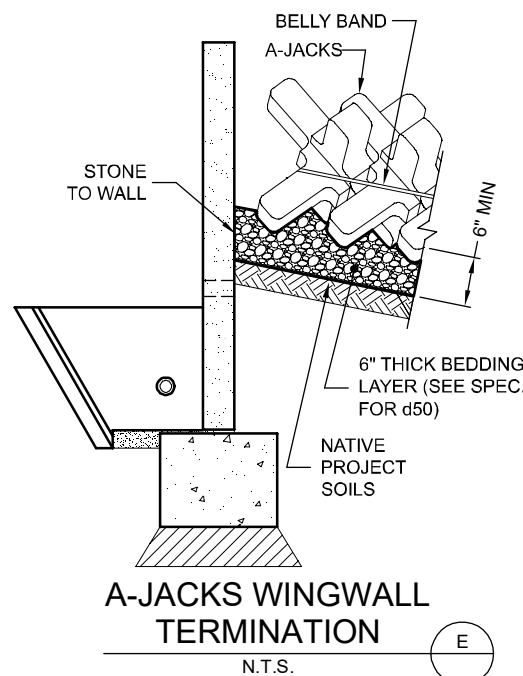
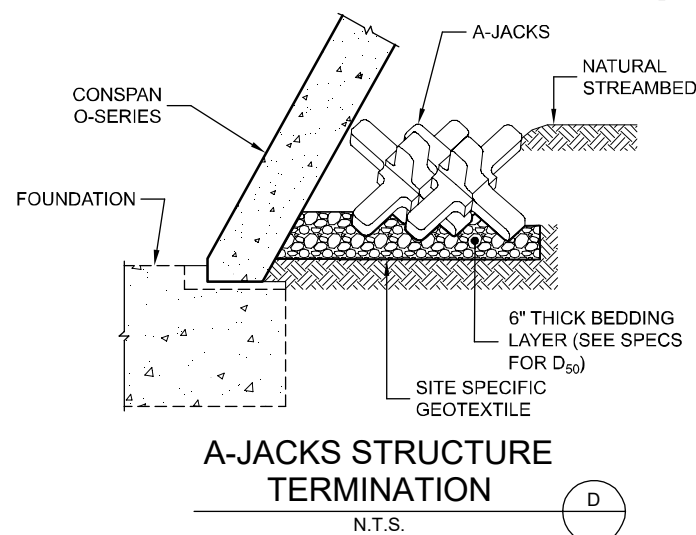
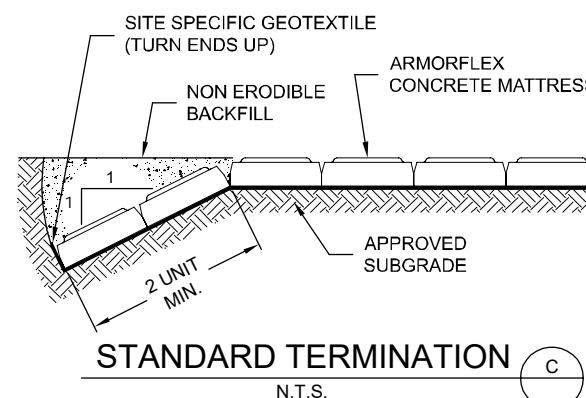
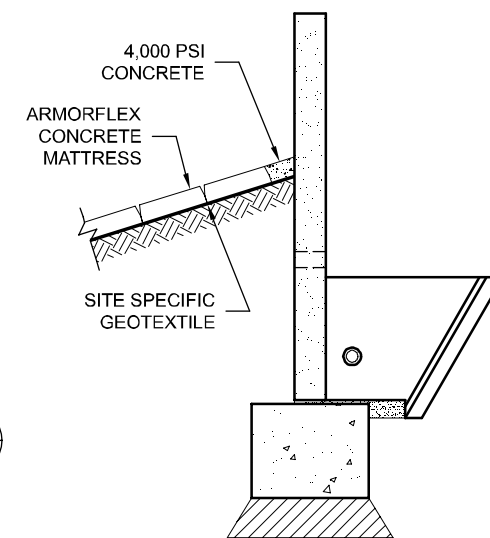
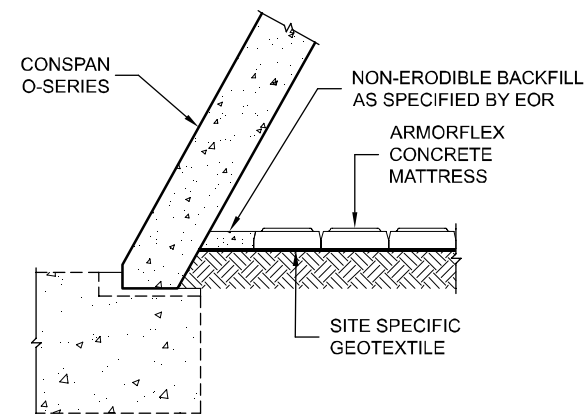


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CONSIDER A COMPLETE SYSTEM WITH ARMORTEC REVETMENT



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800-338-1122 513-645-7000 513-645-7993 FAX

BEBO
Arch Systems
DYOB DRAWING

BEBO
ARMORTEC SAMPLES

PROJECT No.:	DATE:
DESIGNED: DYO	DRAWN: DYO
CHECKED: DYO	APPROVED: DYO
SHEET No.:	D9 OF D9

Appendix C: Underpass Detail 54' x 11' B-Series

PROJECT SUMMARY

LOCAL BRIDGE CONSULTANT

- NAME = Gavin Macwilliam
- EMAIL = Gavin.Macwilliam@ContechES.com
- PHONE NUMBER = 303-715-8534

STRUCTURE DETAILS

- SPAN = 54' - 0"
- PRECAST RISE = 11' - 0"
- LENGTH = 60 FT.

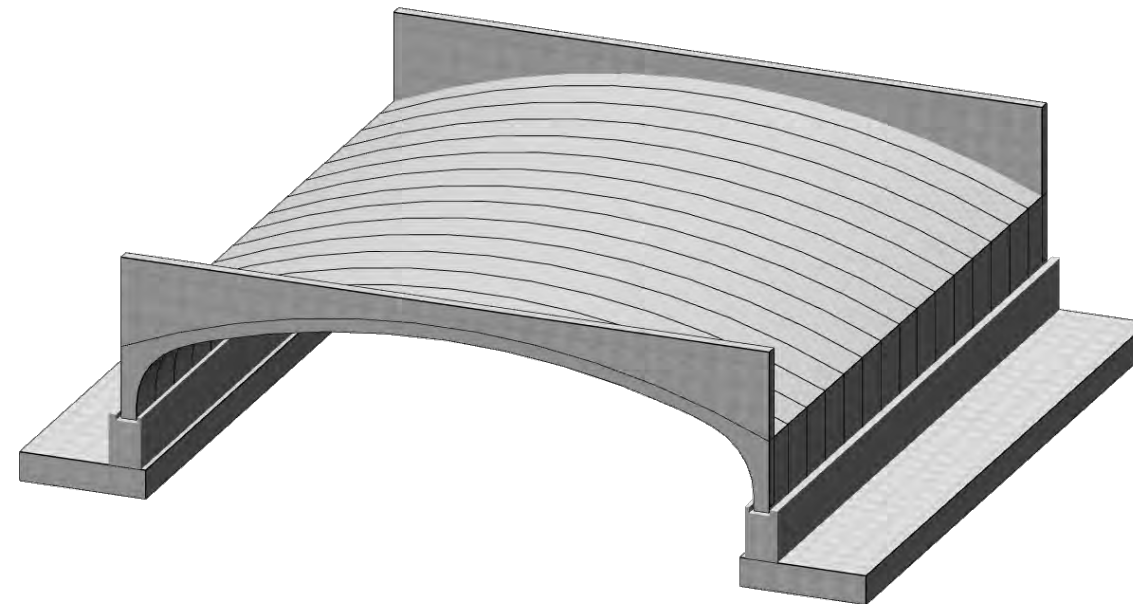
HEADWALLS

- INLET HEADWALL HEIGHT = 2 FT.
- OUTLET HEADWALL HEIGHT = 2 FT.

FOUNDATIONS

- FOUNDATION TYPE = PEDESTAL

CON/SPAN B-Series DYO 54' x 11' B-Series



NOTES

1. THIS BRIDGE HAS BEEN DESIGNED FOR GENERAL SITE CONDITIONS. THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR THE STRUCTURE'S SUITABILITY TO THE EXISTING SITE CONDITIONS AND FOR THE HYDRAULIC EVALUATION -- INCLUDING SCOUR AND CONFIRMATION OF SOIL CONDITIONS.
2. PRIOR TO CONSTRUCTION, CONTRACTOR MUST VERIFY ALL ELEVATIONS SHOWN THROUGH THE ENGINEER.
3. ONLY CONTECH ENGINEERED SOLUTIONS LLC, THE CONSPAN APPROVED MANUFACTURER IN THE PROJECT STATE MAY PROVIDE THE STRUCTURE DESIGNED IN ACCORDANCE WITH THESE PLANS.
4. THIS DYOB DRAWING IS A CONCEPTUAL DESIGN. PLEASE WORK WITH YOUR LOCAL BRIDGE CONSULTANT FOR FURTHER SOLUTION DEVELOPMENT AND PRICING.
5. THE USE OF ANOTHER PRECAST STRUCTURE WITH THE DESIGN ASSUMPTIONS USED FOR THE CON/SPAN® STRUCTURE MAY LEAD TO SERIOUS DESIGN ERRORS. USE OF ANY OTHER PRECAST STRUCTURE WITH THIS DESIGN AND DRAWINGS VOIDS ANY CERTIFICATION OF THIS DESIGN AND WARRANTY. CONTECH ENGINEERED SOLUTIONS ASSUMES NO LIABILITY FOR DESIGN OF ANY ALTERNATE OR SIMILAR TYPE STRUCTURES.

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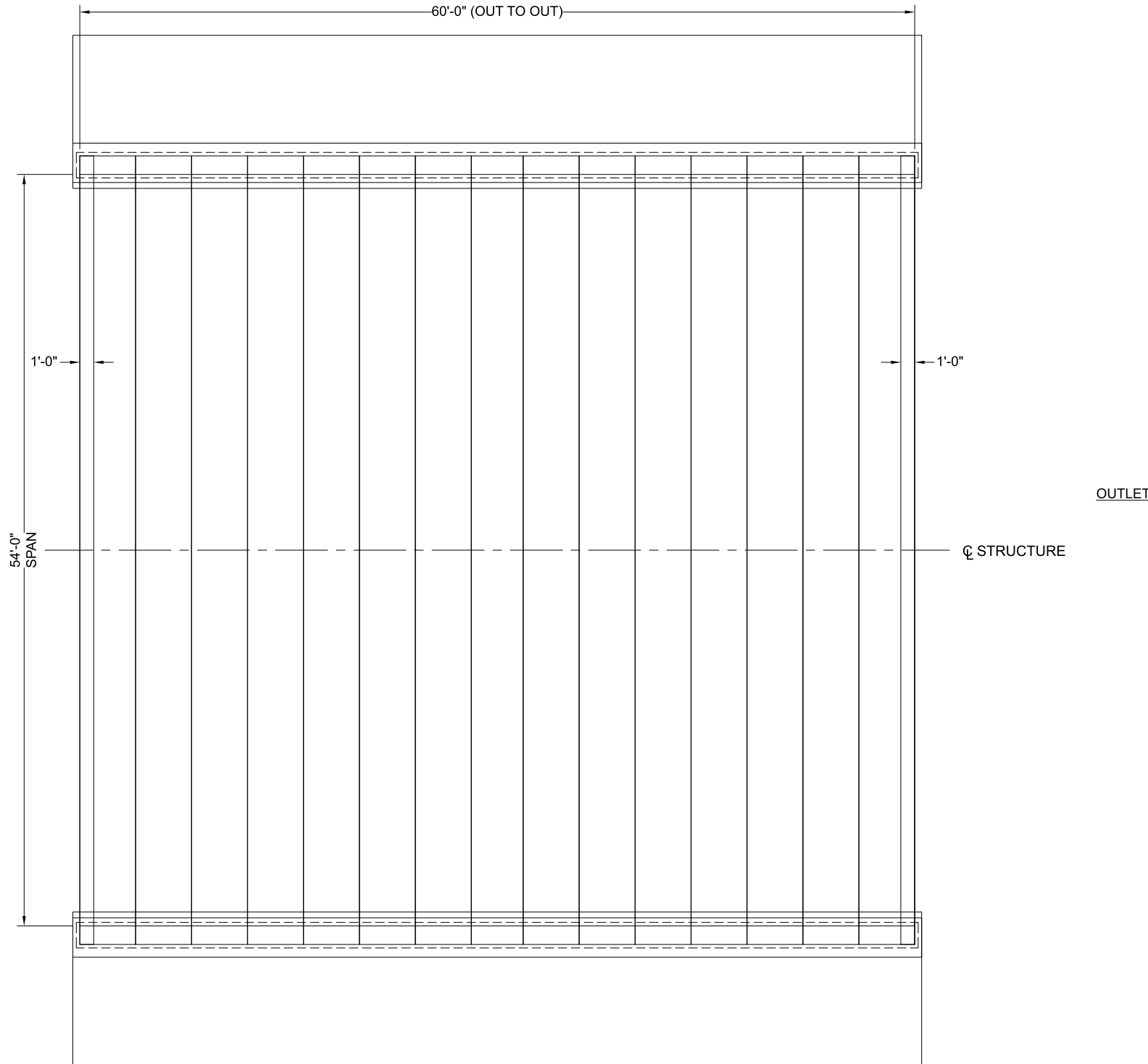
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CONSPAN
BRIDGE SYSTEMS

DYOB
DRAWING

DYO29747, US 550 MP64.0-80.3 WVC Mitigation: Wildlife Structure
54' x 11' B-Series
Nageezi, NM
B Series, 54' Span x 11' Rise

PROJECT No.: 20001	DYO No.: 29747	DATE: 04/04/2023
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D1 OF D9		



BRIDGE PLAN

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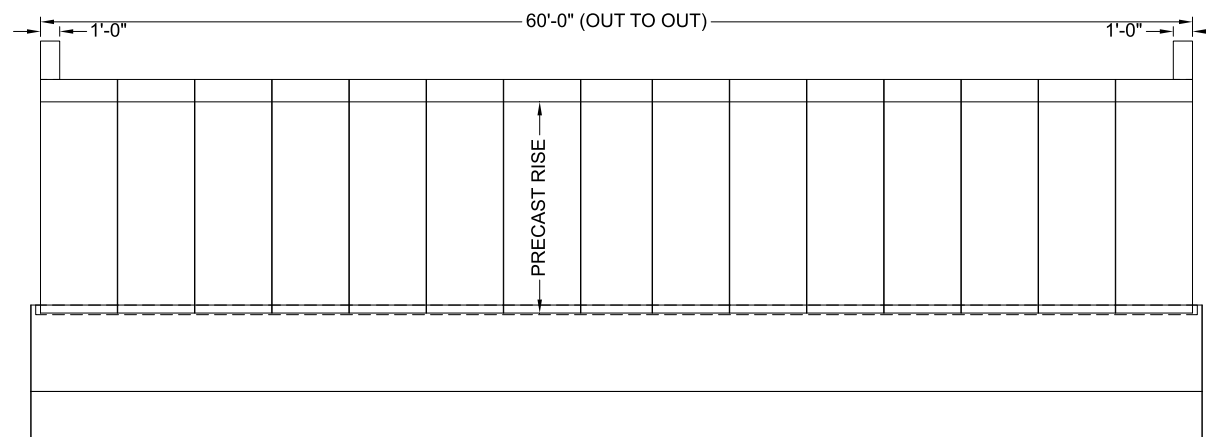
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BRIDGE SYSTEMS

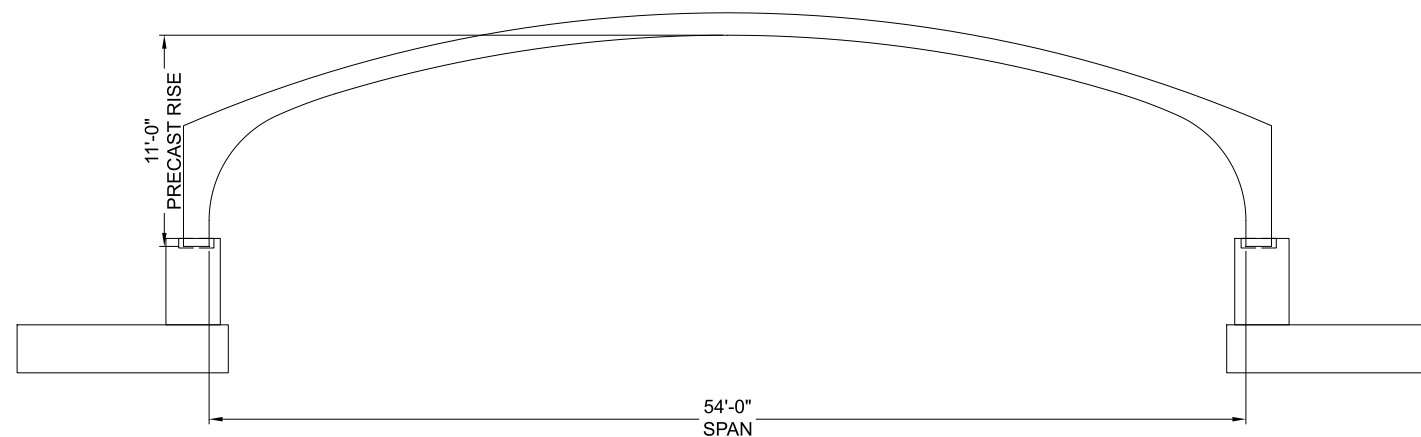
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SHEET NO.: D2 OF D9		



LONGITUDINAL SECTION



CROSS SECTION

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CONSPAN
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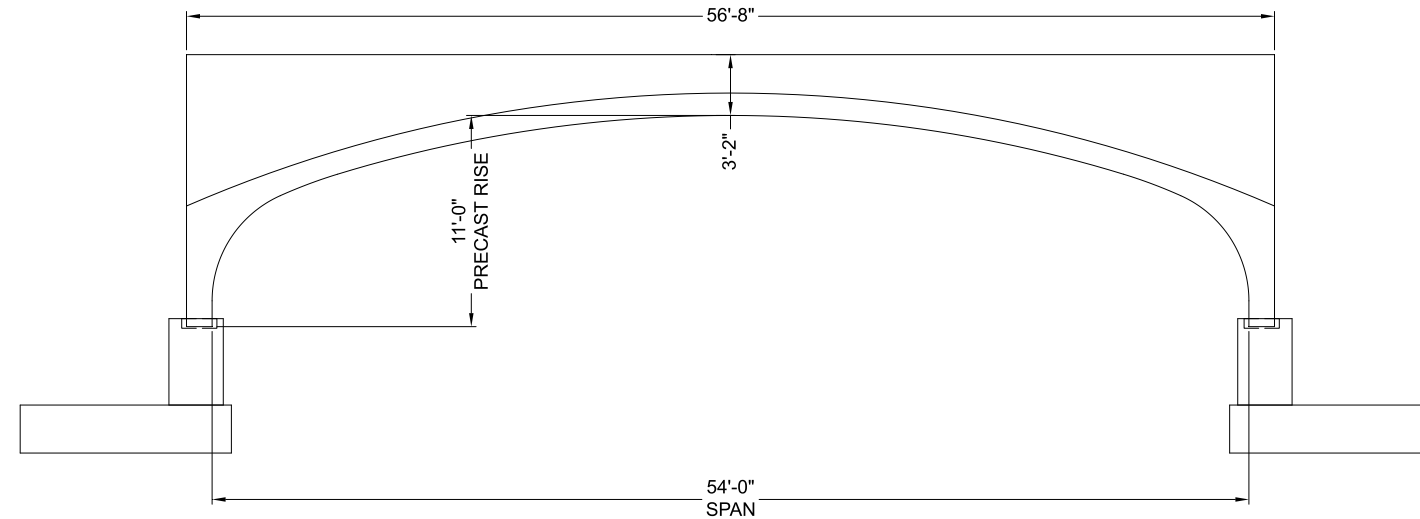
DYO29747, US 550 MP64.0-80.3 WVC Mitigation: Wildlife Structure

54' x 11' B-Series

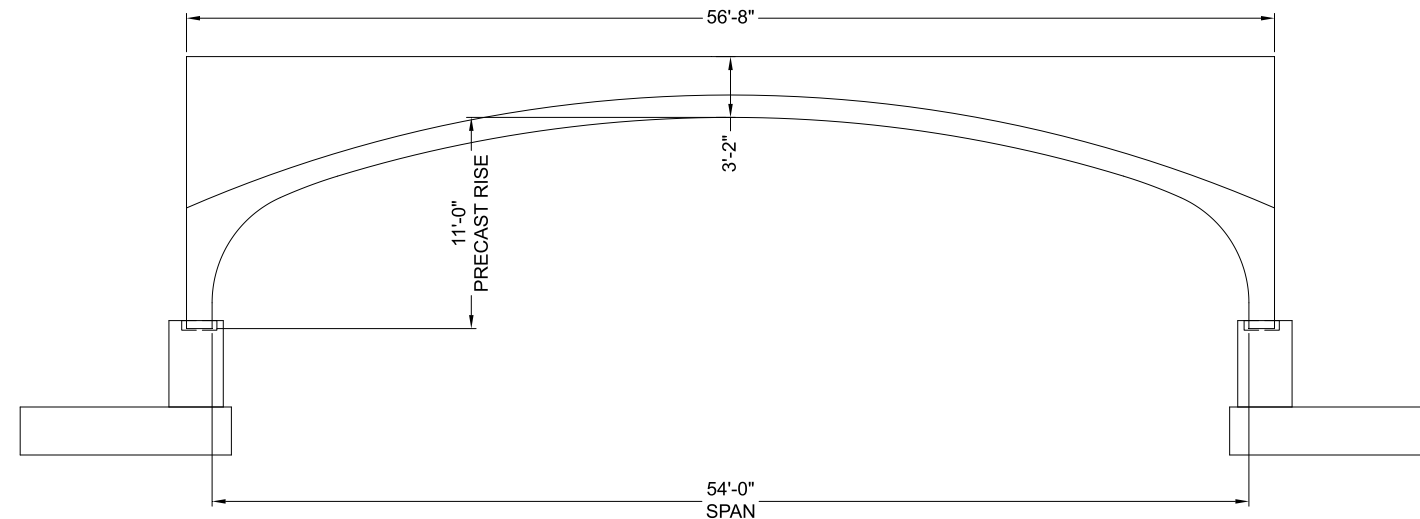
Nageezi, NM

B Series, 54' Span x 11' Rise

PROJECT No.: 20001	DYO No.: 29747	DATE: 04/04/2023
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D3 OF D9		



INLET END ELEVATION



OUTLET END ELEVATION

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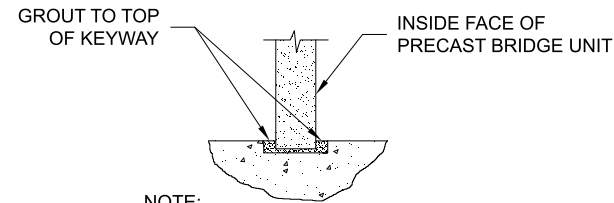
DYO29747, US 550 MP64.0-80.3 WVC Mitigation: Wildlife Structure

54' x 11' B-Series

Nageezi, NM

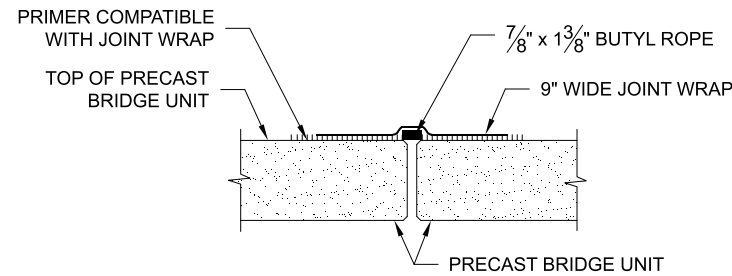
B Series, 54' Span x 11' Rise

PROJECT No.: 20001	DYO No.: 29747	DATE: 04/04/2023
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D4 OF D9		

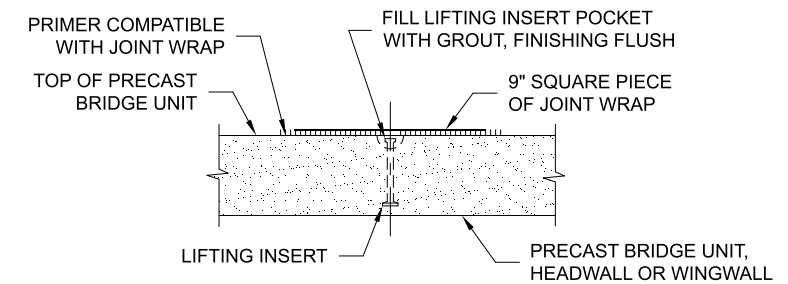


NOTE:
FILL ENTIRE KEYWAY INCLUDING
NOMINAL 1" VOID BETWEEN BOTTOM OF
KEYWAY AND BOTTOM OF PRECAST
BRIDGE UNIT LEG WITH GROUT.

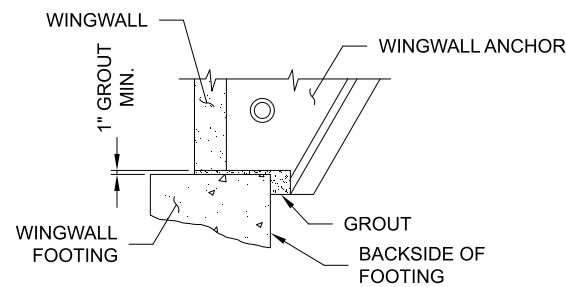
TYPICAL BRIDGE UNIT GROUT DETAIL
NOT TO SCALE



TYPICAL JOINT SEAL DETAIL
NOT TO SCALE

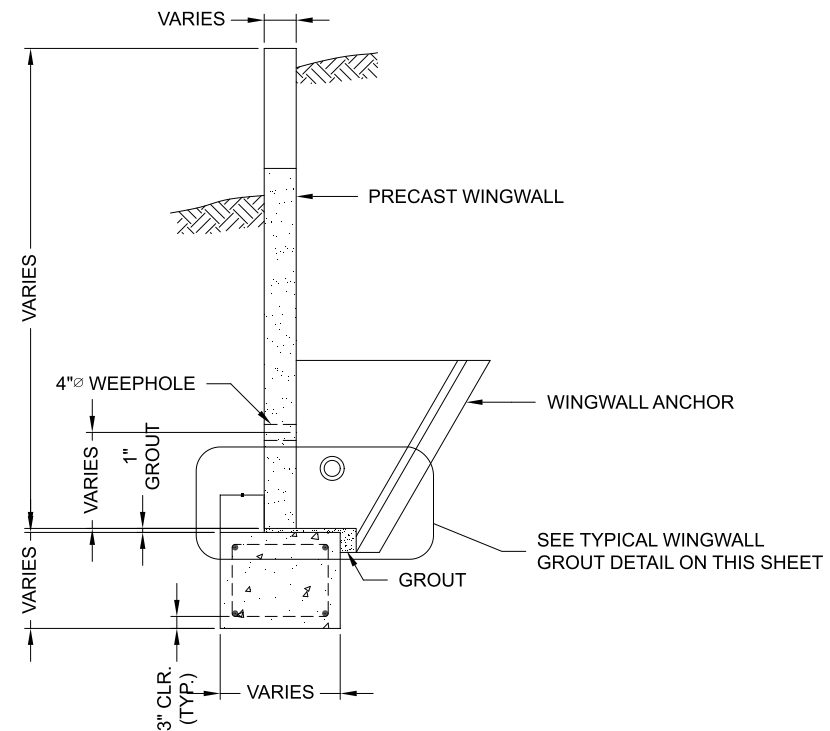


TYPICAL LIFT INSERT SEALING DETAIL
NOT TO SCALE



- NOTES:
- MINIMUM 1" GROUT UNDER WINGWALL LEG & ANCHOR STEM.
 - AREA BETWEEN WINGWALL FOOTING AND WINGWALL ANCHOR SHALL BE GROUTED SOLID BEFORE BACKFILL.
 - FORM BACKSIDE OF FOOTING TO DIMENSIONS SHOWN ON FOUNDATION PLAN.

TYPICAL WINGWALL GROUT DETAIL
NOT TO SCALE



TYPICAL WINGWALL SECTION
NOT TO SCALE

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SHEET NO.: D5 OF D9		

SPECIFICATIONS FOR MANUFACTURE AND INSTALLATION OF CON/SPAN® BRIDGE SYSTEMS

- 1. DESCRIPTION**
- 1.1. TYPE - THIS WORK SHALL CONSIST OF FURNISHING AND CONSTRUCTING A CON/SPAN® BRIDGE SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON THE PLANS OR AS ESTABLISHED BY THE ENGINEER. IN SITUATIONS WHERE TWO OR MORE SPECIFICATIONS APPLY TO THIS WORK, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
- 1.2. DESIGNATION - PRECAST REINFORCED CONCRETE CON/SPAN® BRIDGE UNITS MANUFACTURED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE DESIGNATED BY SPAN AND RISE. PRECAST REINFORCED CONCRETE WINGWALLS AND HEADWALLS MANUFACTURED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE DESIGNATED BY LENGTH, HEIGHT, AND DEFLECTION ANGLE. PRECAST REINFORCED CONCRETE EXPRESS™ FOUNDATION UNITS MANUFACTURED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE DESIGNATED BY LENGTH, HEIGHT AND WIDTH.
- 2. DESIGN**
- 2.1. SPECIFICATIONS - THE PRECAST ELEMENTS ARE DESIGNED IN ACCORDANCE WITH THE "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS" 8TH EDITION, ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017. A MINIMUM OF ONE FOOT OF COVER ABOVE THE CROWN OF THE BRIDGE UNITS IS REQUIRED IN THE INSTALLED CONDITION. (UNLESS NOTED OTHERWISE ON THE SHOP DRAWINGS AND DESIGN ACCORDINGLY.)
- 3. MATERIALS**
- 3.1. CONCRETE - THE CONCRETE FOR THE PRECAST ELEMENTS SHALL BE AIR-ENTRAINED WHEN INSTALLED IN AREAS SUBJECT TO FREEZE-THAW CONDITIONS, COMPOSED OF PORTLAND CEMENT, FINE AND COARSE AGGREGATES, ADMIXTURES AND WATER. AIR-ENTRAINED CONCRETE SHALL CONTAIN 6 ± 2 PERCENT AIR. THE AIR-ENTRAINED ADMIXTURE SHALL CONFORM TO AASHTO M154. THE MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE AS SHOWN ON THE SHOP DRAWINGS.
- 3.1.1. PORTLAND CEMENT - SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATIONS C150-TYPE I, TYPE II, OR TYPE III CEMENT.
- 3.1.2. COARSE AGGREGATE - SHALL CONSIST OF STONE HAVING A MAXIMUM SIZE OF 1 INCH. AGGREGATE SHALL MEET REQUIREMENTS FOR ASTM C33.
- 3.1.3. WATER REDUCING ADMIXTURE - THE MANUFACTURER MAY SUBMIT, FOR APPROVAL BY THE ENGINEER, A WATER-REDUCING ADMIXTURE FOR THE PURPOSE OF INCREASING WORKABILITY AND REDUCING THE WATER REQUIREMENT FOR THE CONCRETE.
- 3.1.4. CALCIUM CHLORIDE - THE ADDITION TO THE MIX OF CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE WILL NOT BE PERMITTED.
- 3.1.5. MIXTURE - THE AGGREGATES, CEMENT AND WATER SHALL BE PROPORTIONED AND MIXED IN A BATCH MIXER TO PRODUCE A HOMOGENEOUS CONCRETE MEETING THE STRENGTH REQUIREMENTS OF THIS SPECIFICATION. THE PROPORTION OF PORTLAND CEMENT IN THE MIXTURE SHALL NOT BE LESS THAN 564 POUNDS (6 SACKS) PER CUBIC YARD OF CONCRETE.
- 3.2. STEEL REINFORCEMENT
- 3.2.1. THE MINIMUM STEEL YIELD STRENGTH SHALL BE 60,000 PSI, UNLESS OTHERWISE NOTED ON THE SHOP DRAWINGS.
- 3.2.2. ALL REINFORCING STEEL FOR THE PRECAST ELEMENTS SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH THE DETAILED SHOP DRAWINGS SUBMITTED BY THE MANUFACTURER.
- 3.2.3. REINFORCEMENT SHALL CONSIST OF WELDED WIRE REINFORCING CONFORMING TO ASTM SPECIFICATION A 1064, OR DEFORMED STEEL BARS CONFORMING TO ASTM SPECIFICATION A 615, GRADE 60. LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY CONSIST OF WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS.
- 3.3. STEEL HARDWARE
- 3.3.1. BOLTS AND THREADED RODS FOR WINGWALL CONNECTIONS SHALL CONFORM TO ASTM A 307. NUTS SHALL CONFORM TO AASHTO M292 (ASTM A194) GRADE 2H. ALL BOLTS, THREADED RODS AND NUTS USED IN WINGWALL CONNECTIONS SHALL BE MECHANICALLY ZINC COATED IN ACCORDANCE WITH ASTM B695 CLASS 50.
- 3.3.2. STRUCTURAL STEEL FOR WINGWALL CONNECTION PLATES AND PLATE WASHERS SHALL CONFORM TO AASHTO M 270 (ASTM A 709) GRADE 36 AND SHALL BE HOT DIP GALVANIZED AS PER AASHTO M111 (ASTM A123).
- 3.3.3. INSERTS FOR WINGWALLS SHALL BE 1" DIAMETER TWO-BOLT PRESET WINGWALL ANCHORS AS MANUFACTURED BY DAYTON SUPERIOR CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700 AND SHALL BE ELECTRO GALVANIZED IN ACCORDANCE WITH ASTM B633 SC-1.
- 3.3.4. FERRULE LOOP INSERTS SHALL BE F-64 FERRULE LOOP INSERTS AS MANUFACTURED BY DAYTON SUPERIOR CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700 AND SHALL BE ELECTRO GALVANIZED.
- 3.3.5. HOOK BOLTS USED IN ATTACHED HEADWALL CONNECTIONS SHALL BE ASTM A307.
- 3.3.6. INSERTS FOR DETACHED HEADWALL CONNECTIONS SHALL BE AISI TYPE 304 STAINLESS STEEL, EXPANDED COIL INSERTS AS MANUFACTURED BY DAYTON SUPERIOR

CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700. COIL RODS AND NUTS USED IN HEADWALL CONNECTIONS SHALL BE AISI TYPE 304 STAINLESS STEEL. WASHERS USED IN HEADWALL CONNECTIONS SHALL BE EITHER AISI TYPE 304 STAINLESS STEEL PLATE WASHERS OR AASHTO M270 (ASTM A709) GRADE 36 PLATE WASHERS HOT DIP GALVANIZED AS PER AASHTO M111 (ASTM A123).

3.3.7. MECHANICAL SPLICES OF REINFORCING BARS SHALL BE MADE USING THE DOWEL BAR SPLICER SYSTEM AS MANUFACTURED BY DAYTON SUPERIOR CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700, AND SHALL CONSIST OF THE DBDI SPLICE SYSTEM (DOWEL BAR SPLICER AND DOWEL-IN), OR AS MANUFACTURED BY BARSPICE PRODUCTS INC, DAYTON, OHIO, (937)-275-8700, AND SHALL CONSIST OF BARSPLICER XP TYPE 2 SYSTEM.

4. MANUFACTURE OF PRECAST ELEMENTS - SUBJECT TO THE PROVISIONS OF SECTION 5, BELOW, THE PRECAST ELEMENT DIMENSION AND REINFORCEMENT DETAILS SHALL BE AS PRESCRIBED IN THE PLAN AND SHOP DRAWINGS PROVIDED BY THE MANUFACTURER.

4.1. FORMS - THE FORMS USED IN MANUFACTURE SHALL BE SUFFICIENTLY RIGID AND ACCURATE TO MAINTAIN THE REQUIRED PRECAST ELEMENT DIMENSIONS WITHIN THE PERMISSIBLE VARIATIONS GIVEN IN SECTION 5 OF THESE SPECIFICATIONS. ALL CASTING SURFACES SHALL BE OF A SMOOTH MATERIAL.

4.2. PLACEMENT OF REINFORCEMENT

4.2.1. PLACEMENT OF REINFORCEMENT IN PRECAST BRIDGE UNITS - THE COVER OF CONCRETE OVER THE OUTSIDE CIRCUMFERENTIAL REINFORCEMENT SHALL BE 2" MINIMUM. THE COVER OF CONCRETE OVER THE INSIDE CIRCUMFERENTIAL REINFORCEMENT SHALL BE 1½" MINIMUM, UNLESS OTHERWISE NOTED ON THE SHOP DRAWINGS. THE CLEAR DISTANCE OF THE END CIRCUMFERENTIAL WIRES SHALL NOT BE LESS THAN 1" NOR MORE THAN 2" FROM THE ENDS OF EACH SECTION.

REINFORCEMENT SHALL BE ASSEMBLED UTILIZING SINGLE OR MULTIPLE LAYERS OF WELDED WIRE FABRIC (NOT TO EXCEED 3 LAYERS), SUPPLEMENTED WITH A SINGLE LAYER OF DEFORMED BILLET-STEEL BARS, WHEN NECESSARY. WELDED WIRE FABRIC SHALL BE COMPOSED OF CIRCUMFERENTIAL AND LONGITUDINAL WIRES MEETING THE SPACING REQUIREMENTS OF 4.3, BELOW, AND SHALL CONTAIN SUFFICIENT LONGITUDINAL WIRES EXTENDING THROUGH THE BRIDGE UNIT TO MAINTAIN THE SHAPE AND POSITION OF THE REINFORCEMENT. LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY BE WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS AND SHALL MEET THE SPACING REQUIREMENTS OF 4.3, BELOW. THE ENDS OF THE LONGITUDINAL DISTRIBUTION REINFORCEMENT SHALL BE NOT MORE THAN 3" AND NOT LESS THAN 1½" FROM THE ENDS OF THE BRIDGE UNIT.

4.2.2. BENDING OF REINFORCEMENT FOR PRECAST BRIDGE UNITS - THE OUTSIDE AND INSIDE CIRCUMFERENTIAL REINFORCING STEEL FOR THE CORNERS OF THE BRIDGE SHALL BE BENT TO SUCH AN ANGLE THAT IS APPROXIMATELY EQUAL TO THE CONFIGURATION OF THE BRIDGE'S OUTSIDE CORNER.

4.2.3. PLACEMENT OF REINFORCEMENT FOR PRECAST WINGWALLS AND HEADWALLS - THE COVER OF CONCRETE OVER THE LONGITUDINAL AND TRANSVERSE REINFORCEMENT SHALL BE 2" MINIMUM. THE CLEAR DISTANCE FROM THE END OF EACH PRECAST ELEMENT TO THE END OF REINFORCING STEEL SHALL NOT BE LESS THAN 1½" NOR MORE THAN 3". REINFORCEMENT SHALL BE ASSEMBLED UTILIZING A SINGLE LAYER OF WELDED WIRE FABRIC, OR A SINGLE LAYER OF DEFORMED BILLET-STEEL BARS. WELDED WIRE FABRIC SHALL BE COMPOSED OF TRANSVERSE AND LONGITUDINAL WIRES MEETING THE SPACING REQUIREMENTS OF 4.3, BELOW, AND SHALL CONTAIN SUFFICIENT LONGITUDINAL WIRES EXTENDING THROUGH THE ELEMENT TO MAINTAIN THE SHAPE AND POSITION OF THE REINFORCEMENT. LONGITUDINAL REINFORCEMENT MAY BE WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS AND SHALL MEET THE SPACING REQUIREMENTS OF 4.3, BELOW.

4.2.4. PLACEMENT OF REINFORCEMENT FOR PRECAST FOUNDATION UNITS - THE COVER OF CONCRETE OVER THE BOTTOM REINFORCEMENT SHALL BE 3 INCHES MINIMUM. THE COVER OF CONCRETE FOR ALL OTHER REINFORCEMENT SHALL BE 2 INCHES MINIMUM. THE CLEAR DISTANCE FROM THE END OF EACH PRECAST ELEMENT TO THE END OF REINFORCING STEEL SHALL NOT BE LESS THAN 2 INCHES NOR MORE THAN 3 INCHES. REINFORCEMENT SHALL BE ASSEMBLED UTILIZING A SINGLE LAYER OF WELDED WIRE FABRIC OR A SINGLE LAYER OF DEFORMED BILLET-STEEL BARS. WELDED WIRE FABRIC SHALL BE COMPOSED OF TRANSVERSE AND LONGITUDINAL WIRES MEETING THE SPACING REQUIREMENTS OF 4.3, BELOW, AND SHALL CONTAIN SUFFICIENT LONGITUDINAL WIRES EXTENDING THROUGH THE ELEMENT TO MAINTAIN THE SHAPE AND POSITION OF THE REINFORCEMENT.

LONGITUDINAL REINFORCEMENT MAY BE WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS AND SHALL MEET THE SPACING REQUIREMENTS OF 4.3, BELOW.

4.3. LAPS, WELDS, SPACING

4.3.1. LAPS, WELDS, AND SPACING FOR PRECAST BRIDGE UNITS - TENSION SPLICES IN THE CIRCUMFERENTIAL REINFORCEMENT SHALL BE MADE BY LAPPING. LAPS MAY BE TACK WELDED TOGETHER FOR ASSEMBLY PURPOSES. FOR SMOOTH WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.10.8.2.5B AND 5.10.8.5.2. FOR DEFORMED WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.10.8.2.5A AND 5.10.8.5.1. THE OVERLAP OF WELDED WIRE FABRIC SHALL BE MEASURED BETWEEN THE OUTER-MOST LONGITUDINAL WIRES OF EACH FABRIC SHEET. FOR DEFORMED BILLET-STEEL BARS, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.10.8.2.1 FOR SPLICES OTHER THAN TENSION SPLICES. THE OVERLAP SHALL BE A MINIMUM OF 1'-0" FOR WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS. THE SPACING CENTER TO CENTER OF THE CIRCUMFERENTIAL WIRES IN A WIRE FABRIC SHEET SHALL BE NOT LESS THAN 2" NOR MORE THAN 4". THE SPACING CENTER TO CENTER OF THE LONGITUDINAL WIRES SHALL NOT BE MORE THAN 8". THE SPACING CENTER TO CENTER OF THE LONGITUDINAL DISTRIBUTION STEEL FOR EITHER LINE OF REINFORCING IN THE TOP SLAB SHALL BE NOT MORE THAN 1'-4".

4.3.2. LAPS, WELDS, AND SPACING FOR PRECAST WINGWALLS, HEADWALLS AND FOUNDATIONS - SPLICES IN THE REINFORCEMENT SHALL BE MADE BY LAPPING. LAPS MAY BE TACK WELDED TOGETHER FOR ASSEMBLY PURPOSES. FOR SMOOTH WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.10.8.2.5B AND 5.10.8.5.2. FOR DEFORMED WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.10.8.2.5A AND 5.10.8.5.1. FOR DEFORMED BILLET-STEEL BARS, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 5.10.8.2.1. THE SPACING CENTER-TO-CENTER OF THE WIRES IN A WIRE FABRIC SHEET SHALL BE NOT LESS THAN 2" NOR MORE THAN 8".

4.4. CURING - THE PRECAST CONCRETE ELEMENTS SHALL BE CURED FOR A SUFFICIENT LENGTH OF TIME SO THAT THE CONCRETE WILL DEVELOP THE SPECIFIED COMPRESSIVE STRENGTH IN 28 DAYS OR LESS. ANY ONE OF THE FOLLOWING METHODS OF CURING OR COMBINATIONS THEREOF SHALL BE USED:

4.4.1. STEAM CURING - THE PRECAST ELEMENTS MAY BE LOW-PRESSURE STEAM CURED BY A SYSTEM THAT WILL MAINTAIN A MOIST ATMOSPHERE.

4.4.2. WATER CURING - THE PRECAST ELEMENTS MAY BE WATER CURED BY ANY METHOD THAT WILL KEEP THE SECTIONS MOIST.

4.4.3. MEMBRANE CURING - A SEALING MEMBRANE CONFORMING TO THE REQUIREMENTS OF ASTM SPECIFICATION C309 MAY BE APPLIED AND SHALL BE LEFT INTACT UNTIL THE REQUIRED CONCRETE COMPRESSIVE STRENGTH IS ATTAINED. THE CONCRETE TEMPERATURE AT THE TIME OF APPLICATION SHALL BE WITHIN +/- 10 DEGREES F OF THE ATMOSPHERIC TEMPERATURE. ALL SURFACES SHALL BE KEPT MOIST PRIOR TO THE APPLICATION OF THE COMPOUNDS AND SHALL BE DAMP WHEN THE COMPOUND IS APPLIED.

4.5. STORAGE, HANDLING & DELIVERY

4.5.1. STORAGE - PRECAST CONCRETE BRIDGE ELEMENTS SHALL BE LIFTED AND STORED IN "AS-CAST" POSITION. PRECAST CONCRETE HEADWALL AND WINGWALL UNITS ARE CAST, STORED AND SHIPPED IN A FLAT POSITION. THE PRECAST ELEMENTS SHALL BE STORED IN SUCH A MANNER TO PREVENT CRACKING OR DAMAGE. STORE ELEMENTS USING TIMBER SUPPORTS AS APPROPRIATE. THE UNITS SHALL NOT BE MOVED UNTIL THE CONCRETE COMPRESSIVE STRENGTH HAS REACHED A MINIMUM OF 2500 PSI (3000 PSI FOR SPANS >48 FEET), AND THEY SHALL NOT BE STORED IN AN UPRIGHT POSITION.

4.5.2. HANDLING - HANDLING DEVICES SHALL BE PERMITTED IN EACH PRECAST ELEMENT FOR THE PURPOSE OF HANDLING AND SETTING. SPREADER BEAMS MAY BE REQUIRED FOR THE LIFTING OF PRECAST CONCRETE BRIDGE ELEMENTS TO PRECLUDE DAMAGE FROM BENDING OR TORSION FORCES.

4.5.3. DELIVERY - PRECAST CONCRETE ELEMENTS MUST NOT BE SHIPPED UNTIL THE CONCRETE HAS ATTAINED THE SPECIFIED DESIGN COMPRESSIVE STRENGTH, OR AS DIRECTED BY THE DESIGN ENGINEER. PRECAST CONCRETE ELEMENTS MAY BE UNLOADED AND PLACED ON THE GROUND AT THE SITE UNTIL INSTALLED. STORE ELEMENTS USING TIMBER SUPPORTS AS APPROPRIATE.

4.6. QUALITY ASSURANCE - THE PRECASTER SHALL DEMONSTRATE ADHERENCE TO THE STANDARDS SET FORTH IN THE NPCA QUALITY CONTROL MANUAL. THE PRECASTER SHALL MEET EITHER SECTION 4.6.1 OR 4.6.2

4.6.1. CERTIFICATION - THE PRECASTER SHALL BE CERTIFIED BY THE PRECAST/PRESTRESSED CONCRETE INSTITUTE PLANT CERTIFICATION PROGRAM OR THE NATIONAL PRECAST CONCRETE ASSOCIATION'S PLANT CERTIFICATION PROGRAM PRIOR TO AND DURING PRODUCTION OF THE PRODUCTS COVERED BY THIS SPECIFICATION.

4.6.2. QUALIFICATIONS, TESTING AND INSPECTION

4.6.2.1. THE PRECASTER SHALL HAVE BEEN IN THE BUSINESS OF PRODUCING PRECAST CONCRETE PRODUCTS SIMILAR TO THOSE SPECIFIED FOR A MINIMUM OF THREE YEARS. HE SHALL MAINTAIN A PERMANENT QUALITY CONTROL DEPARTMENT OR RETAIN AN INDEPENDENT TESTING AGENCY ON A CONTINUING BASIS. THE AGENCY SHALL ISSUE A REPORT, CERTIFIED BY A LICENSED ENGINEER, DETAILING THE ABILITY OF THE PRECASTER TO PRODUCE QUALITY PRODUCTS CONSISTENT WITH INDUSTRY STANDARDS.

4.6.2.2. THE PRECASTER SHALL SHOW THAT THE

FOLLOWING TESTS ARE PERFORMED IN ACCORDANCE WITH THE ASTM STANDARDS INDICATED. TESTS SHALL BE PERFORMED AS INDICATED IN SECTION 6 OF THESE SPECIFICATIONS.

4.6.2.2.1. AIR CONTENT: C231 OR C173

4.6.2.2.2. COMPRESSIVE STRENGTH: C31, C39, C497

4.6.2.3. THE PRECASTER SHALL PROVIDE DOCUMENTATION DEMONSTRATING COMPLIANCE WITH THIS SECTION TO CONTECH® ENGINEERED SOLUTIONS AT REGULAR INTERVALS OR UPON REQUEST.

4.6.2.4. THE OWNER MAY PLACE AN INSPECTOR IN THE PLANT WHEN THE PRODUCTS COVERED BY THIS SPECIFICATION ARE BEING MANUFACTURED.

4.6.3. DOCUMENTATION - THE PRECASTER SHALL SUBMIT PRECAST PRODUCTION REPORTS TO CONTECH® ENGINEERED SOLUTIONS AS REQUIRED.

5. PERMISSIBLE VARIATIONS

5.1. BRIDGE UNITS

5.1.1. INTERNAL DIMENSIONS - THE INTERNAL DIMENSION SHALL VARY NOT MORE THAN 1% FROM THE DESIGN DIMENSIONS NOR MORE THAN 1½" WHICHEVER IS LESS.

5.1.2. SLAB AND WALL THICKNESS - THE SLAB AND WALL THICKNESS SHALL NOT BE LESS THAN THAT SHOWN IN THE DESIGN BY MORE THAN ½". A THICKNESS MORE THAN THAT REQUIRED IN THE DESIGN SHALL NOT BE CAUSE FOR REJECTION.

5.1.3. LENGTH OF OPPOSITE SURFACES - VARIATIONS IN LAYING LENGTHS OF TWO OPPOSITE SURFACES OF THE BRIDGE UNIT SHALL NOT BE MORE THAN ½" IN ANY SECTION, EXCEPT WHERE BEVELED ENDS FOR LAYING OF CURVES ARE SPECIFIED BY THE PURCHASER.

5.1.4. LENGTH OF SECTION - THE UNDERRUN IN LENGTH OF A SECTION SHALL NOT BE MORE THAN ½" IN ANY BRIDGE UNIT.

5.1.5. POSITION OF REINFORCEMENT - THE MAXIMUM VARIATION IN POSITION OF THE REINFORCEMENT SHALL BE ± ½". IN NO CASE SHALL THE COVER OVER THE REINFORCEMENT BE LESS THAN 1½" FOR THE OUTSIDE CIRCUMFERENTIAL STEEL OR BE LESS THAN 1" FOR THE INSIDE CIRCUMFERENTIAL STEEL AS MEASURED TO THE EXTERNAL OR INTERNAL SURFACE OF THE BRIDGE. THESE TOLERANCES OR COVER REQUIREMENTS DO NOT APPLY TO MATING SURFACES OF THE JOINTS.

5.1.6. AREA OF REINFORCEMENT - THE AREAS OF STEEL REINFORCEMENT SHALL BE THE DESIGN STEEL AREAS AS SHOWN IN THE MANUFACTURER'S SHOP DRAWINGS. STEEL AREAS GREATER THAN THOSE REQUIRED SHALL NOT BE CAUSE FOR REJECTION. THE PERMISSIBLE VARIATION IN DIAMETER OF ANY REINFORCEMENT SHALL CONFORM TO THE TOLERANCES PRESCRIBED IN THE ASTM SPECIFICATION FOR THAT TYPE OF REINFORCEMENT.

5.2. WINGWALLS & HEADWALLS

5.2.1. WALL THICKNESS - THE WALL THICKNESS SHALL NOT VARY FROM THAT SHOWN IN THE DESIGN BY MORE THAN ½".

5.2.2. LENGTH/HEIGHT OF WALL SECTIONS - THE LENGTH AND HEIGHT OF THE WALL SHALL NOT VARY FROM THAT SHOWN IN THE DESIGN BY MORE THAN ½".

5.2.3. POSITION OF REINFORCEMENT - THE MAXIMUM VARIATION IN THE POSITION OF THE REINFORCEMENT SHALL BE ± ½". IN NO CASE SHALL THE COVER OVER THE REINFORCEMENT BE LESS THAN 1½".

5.2.4. SIZE OF REINFORCEMENT - THE PERMISSIBLE VARIATION IN DIAMETER OF ANY REINFORCING SHALL CONFORM TO THE TOLERANCES PRESCRIBED IN THE ASTM SPECIFICATION FOR THAT TYPE OF REINFORCING. STEEL AREA GREATER THAN THAT REQUIRED SHALL NOT BE CAUSE FOR REJECTION.

5.3. FOUNDATION UNITS

5.3.1. WALL THICKNESS - THE WALL THICKNESS SHALL NOT VARY FROM THAT SHOWN IN THE DESIGN BY MORE THAN ½".

5.3.2. LENGTH/HEIGHT/WIDTH OF FOUNDATION SECTIONS - THE LENGTH, HEIGHT AND WIDTH OF THE FOUNDATION UNITS SHALL NOT VARY FROM THAT SHOWN IN THE DESIGN BY MORE THAN ½".

5.3.3. POSITION OF REINFORCEMENT - THE MAXIMUM VARIATION IN THE POSITION OF THE REINFORCEMENT SHALL BE ± ½". IN NO CASE SHALL THE COVER OVER THE REINFORCEMENT BE LESS THAN 1½".

5.3.4. SIZE OF REINFORCEMENT - THE PERMISSIBLE VARIATION IN DIAMETER OF ANY REINFORCING SHALL CONFORM TO THE TOLERANCES PRESCRIBED IN THE ASTM SPECIFICATION FOR THAT TYPE OF REINFORCING. STEEL AREA GREATER THAN THAT REQUIRED SHALL NOT BE CAUSE FOR REJECTION.

6. TESTING/INSPECTION

6.1. TESTING

6.1.1. TYPE OF TEST SPECIMEN - CONCRETE COMPRESSIVE STRENGTH SHALL BE DETERMINED FROM COMPRESSION TESTS MADE ON CYLINDERS OR CORES. FOR CYLINDER TESTING, A MINIMUM OF 4 CYLINDERS SHALL BE TAKEN FOR EACH BRIDGE ELEMENT. FOR CORE TESTING, A MINIMUM OF 2 CORES SHALL BE TAKEN FOR EACH BRIDGE ELEMENT. EACH ELEMENT SHALL BE CONSIDERED SEPARATELY FOR THE PURPOSE OF TESTING AND ACCEPTANCE.

6.1.2. COMPRESSION TESTING - CYLINDERS SHALL BE MADE AND TESTED AS PRESCRIBED BY THE ASTM C39 SPECIFICATION. CYLINDERS SHALL BE CURED IN THE SAME ENVIRONMENT AS THE BRIDGE ELEMENTS. CORES SHALL BE OBTAINED AND TESTED FOR COMPRESSIVE STRENGTH FROM EACH ELEMENT IN ACCORDANCE WITH THE PROVISIONS OF THE

ASTM C42 SPECIFICATION.

6.1.3. ACCEPTABILITY OF CYLINDER TESTS - WHEN THE AVERAGE COMPRESSIVE STRENGTH OF ALL CYLINDERS TESTED IS EQUAL TO OR GREATER THAN THE DESIGN COMPRESSIVE STRENGTH, AND NOT MORE THAN 10% OF THE CYLINDERS TESTED HAVE A COMPRESSIVE STRENGTH LESS THAN THE DESIGN CONCRETE STRENGTH, AND NO CYLINDER TESTED HAS A COMPRESSIVE STRENGTH LESS THAN 90% OF THE REQUIRED CONCRETE STRENGTH, THEN THE ELEMENT SHALL BE ACCEPTED. WHEN THE COMPRESSIVE STRENGTH OF THE CYLINDERS TESTED DOES NOT CONFORM TO THESE ACCEPTANCE CRITERIA, THE ACCEPTABILITY OF THE ELEMENT MAY BE DETERMINED AS DESCRIBED IN SECTION 6.1.4, BELOW.

6.1.4. ACCEPTABILITY OF CORE TESTS - THE COMPRESSIVE STRENGTH OF THE CONCRETE IN A BRIDGE ELEMENT IS ACCEPTABLE WHEN EACH CORE TEST STRENGTH IS EQUAL TO OR GREATER THAN THE DESIGN CONCRETE STRENGTH. WHEN THE COMPRESSIVE STRENGTH OF A CORE TESTED IS LESS THAN THE DESIGN CONCRETE STRENGTH, THE PRECAST ELEMENT FROM WHICH THAT CORE WAS TAKEN MAY BE RE-CORED. WHEN THE COMPRESSIVE STRENGTH OF THE RE-CORE IS EQUAL TO OR GREATER THAN THE DESIGN CONCRETE STRENGTH, THE COMPRESSIVE STRENGTH OF THE CONCRETE IN THAT BRIDGE ELEMENT IS ACCEPTABLE.

6.1.4.1. WHEN THE COMPRESSIVE STRENGTH OF ANY RECORE IS LESS THAN THE DESIGN CONCRETE STRENGTH, THE PRECAST ELEMENT FROM WHICH THAT CORE WAS TAKEN SHALL BE REJECTED.

6.1.4.2. PLUGGING CORE HOLES - THE CORE HOLES SHALL BE PLUGGED AND SEALED BY THE MANUFACTURER IN A MANNER SUCH THAT THE ELEMENTS WILL MEET ALL OF THE TEST REQUIREMENTS OF THIS SPECIFICATION. PRECAST ELEMENTS SO SEALED SHALL BE CONSIDERED SATISFACTORY FOR USE.

6.1.4.3. TEST EQUIPMENT - EVERY MANUFACTURER FURNISHING PRECAST ELEMENTS UNDER THIS SPECIFICATION SHALL FURNISH ALL FACILITIES AND PERSONNEL NECESSARY TO CARRY OUT THE TEST REQUIRED.

6.2. INSPECTION - THE QUALITY OF MATERIALS, THE PROCESS OF MANUFACTURE, AND THE FINISHED PRECAST ELEMENTS SHALL BE SUBJECT TO INSPECTION BY THE PURCHASER.

7. JOINTS

THE BRIDGE UNITS SHALL BE PRODUCED WITH FLAT BUTT ENDS. THE ENDS OF THE BRIDGE UNITS SHALL BE SUCH THAT WHEN THE SECTIONS ARE LAID TOGETHER THEY WILL MAKE A CONTINUOUS LINE WITH A SMOOTH INTERIOR FREE OF APPRECIABLE IRREGULARITIES, ALL COMPATIBLE WITH THE PERMISSIBLE VARIATIONS IN SECTION 5, ABOVE. THE JOINT WIDTH BETWEEN ADJACENT PRECAST UNITS SHALL NOT EXCEED ½".

8. WORKMANSHIP/FINISH

THE BRIDGE UNITS, WINGWALLS, HEADWALLS AND FOUNDATION UNITS SHALL BE SUBSTANTIALLY FREE OF FRACTURES. THE ENDS OF THE BRIDGE UNITS SHALL BE NORMAL TO THE WALLS AND CENTERLINE OF THE BRIDGE SECTION, WITHIN THE LIMITS OF THE VARIATIONS GIVEN IN SECTION 5, ABOVE, EXCEPT WHERE BEVELED ENDS ARE SPECIFIED. THE FACES OF THE WINGWALLS AND HEADWALLS SHALL BE PARALLEL TO EACH OTHER, WITHIN THE LIMITS OF VARIATIONS GIVEN IN SECTION 5, ABOVE. THE SURFACE OF THE PRECAST ELEMENTS SHALL BE A SMOOTH STEEL FORM OR TROWELED SURFACE. TRAPPED AIR POCKETS CAUSING SURFACE DEFECTS SHALL BE CONSIDERED AS PART OF A SMOOTH, STEEL FORM FINISH.

9. REPAIRS

PRECAST ELEMENTS MAY BE REPAIRED, IF NECESSARY, BECAUSE OF IMPERFECTIONS IN MANUFACTURE OR HANDLING DAMAGE AND WILL BE ACCEPTABLE IF, IN THE OPINION OF THE PURCHASER, THE REPAIRS ARE SOUND, PROPERLY FINISHED AND CURED, AND THE REPAIRED SECTION CONFORMS TO THE REQUIREMENTS OF THIS SPECIFICATION.

10. REJECTION

THE PRECAST ELEMENTS SHALL BE SUBJECT TO REJECTION ON ACCOUNT OF ANY OF THE SPECIFICATION REQUIREMENTS. INDIVIDUAL PRECAST ELEMENTS MAY BE REJECTED BECAUSE OF ANY OF THE FOLLOWING:

10.1. FRACTURES OR CRACKS PASSING THROUGH THE WALL, EXCEPT FOR A SINGLE END CRACK THAT DOES NOT EXCEED ONE HALF THE THICKNESS OF THE WALL.

10.2. DEFECTS THAT INDICATE PROPORTIONING, MIXING, AND MOLDING NOT IN COMPLIANCE WITH SECTION 4 OF THESE SPECIFICATIONS.

10.3. HONEYCOMBED OR OPEN TEXTURE.

10.4. DAMAGED ENDS WHERE SUCH DAMAGE WOULD PREVENT MAKING A SATISFACTORY JOINT.

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CONSPAN
BRIDGE SYSTEMS

DYOB
DRAWING

CON/SPAN B-SERIES SPECIFICATIONS

PROJECT No.:	SEQ. No.:	DATE:
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.:	D6 OF D9	

SPECIFICATIONS FOR MANUFACTURE AND INSTALLATION OF CON/SPAN® BRIDGE SYSTEMS (CONT'D)

11. MARKING
EACH BRIDGE UNIT SHALL BE CLEARLY MARKED BY WATERPROOF PENT. THE FOLLOWING SHALL BE SHOWN ON THE INSIDE OF THE VERTICAL LEG OF THE BRIDGE SECTION:
BRIDGE SPAN x BRIDGE RISE
DATE OF MANUFACTURE
NAME OR TRADEMARK OF THE MANUFACTURER

12. INSTALLATION PREPARATION
TO ENSURE CORRECT INSTALLATION OF THE PRECAST CONCRETE BRIDGE SYSTEM, CARE AND CAUTION MUST BE EXERCISED IN FORMING THE SUPPORT AREAS FOR BRIDGE UNITS, HEADWALL, AND WINGWALL ELEMENTS. EXERCISING SPECIAL CARE WILL FACILITATE THE RAPID INSTALLATION OF THE PRECAST COMPONENTS.

12.1. FOOTINGS
DO NOT OVER EXCAVATE FOUNDATIONS UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.

THE SITE SOILS ENGINEER SHALL CERTIFY THAT THE BEARING CAPACITY MEETS OR EXCEEDS THE FOOTING DESIGN REQUIREMENTS, PRIOR TO THE CONTRACTOR POURING OF THE FOOTINGS.

THE BRIDGE UNITS AND WINGWALLS SHALL BE INSTALLED ON EITHER PRECAST OR CAST-IN-PLACE CONCRETE FOOTINGS. THE SIZE AND ELEVATION OF THE FOOTINGS SHALL BE AS DESIGNED BY THE ENGINEER. A KEYWAY SHALL BE FORMED IN THE TOP SURFACE OF THE BRIDGE FOOTING AS SPECIFIED ON THE PLANS. NO KEYWAY IS REQUIRED IN THE WINGWALL FOOTINGS, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

THE FOOTINGS SHALL BE GIVEN A SMOOTH FLOAT FINISH AND SHALL REACH A COMPRESSIVE STRENGTH OF 2,000 PSI BEFORE PLACEMENT OF THE BRIDGE AND WINGWALL ELEMENTS. BACKFILLING SHALL NOT BEGIN UNTIL THE FOOTING HAS REACHED THE FULL DESIGN COMPRESSIVE STRENGTH.

THE FOOTING SURFACE SHALL BE CONSTRUCTED IN ACCORDANCE WITH GRADES SHOWN ON THE PLANS. WHEN TESTED WITH A 10'-0" STRAIGHT EDGE, THE SURFACE SHALL NOT VARY MORE THAN 1/4" IN 10'-0".

IF A PRECAST CONCRETE FOOTING IS USED, THE CONTRACTOR SHALL PREPARE A 4" THICK BASE LAYER OF COMPACTED GRANULAR MATERIAL THE FULL WIDTH OF THE FOOTING PRIOR TO PLACING THE PRECAST FOOTING.

THE FOUNDATIONS FOR PRECAST CONCRETE BRIDGE ELEMENTS AND WINGWALLS MUST BE CONNECTED BY REINFORCEMENT TO FORM ONE MONOLITHIC BODY. EXPANSION JOINTS SHALL NOT BE USED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF THE FOUNDATIONS PER THE PLANS AND SPECIFICATIONS.

13. INSTALLATION
13.1. GENERAL - THE INSTALLATION OF THE PRECAST CONCRETE ELEMENTS SHALL BE AS EXPLAINED IN THE PUBLICATION CON/SPAN BRIDGE SYSTEMS INSTALLATION HANDBOOK.

13.1.1. LIFTING - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT A CRANE OF THE CORRECT LIFTING CAPACITY IS AVAILABLE TO HANDLE THE PRECAST CONCRETE UNITS. THIS CAN BE ACCOMPLISHED BY USING THE WEIGHTS GIVEN FOR THE PRECAST CONCRETE COMPONENTS AND BY DETERMINING THE LIFTING REACH FOR EACH CRANE UNIT. SITE CONDITIONS MUST BE CHECKED WELL IN ADVANCE OF SHIPPING TO ENSURE PROPER CRANE LOCATION AND TO AVOID ANY LIFTING RESTRICTIONS. THE LIFT ANCHORS OR HOLES PROVIDED IN EACH UNIT ARE THE ONLY MEANS TO BE USED TO LIFT THE ELEMENTS. THE PRECAST CONCRETE ELEMENTS MUST NOT BE SUPPORTED OR RAISED BY OTHER MEANS THAN THOSE GIVEN IN THE MANUALS AND DRAWINGS WITHOUT WRITTEN APPROVAL FROM CONTECH® ENGINEERED SOLUTIONS.

13.1.2. CONSTRUCTION EQUIPMENT WEIGHT RESTRICTIONS - IN NO CASE SHALL EQUIPMENT OPERATING IN EXCESS OF THE DESIGN LOAD (HL-93) BE PERMITTED OVER THE BRIDGE UNITS UNLESS APPROVED BY CONTECH® ENGINEERED SOLUTIONS.

13.1.2.1. IN THE IMMEDIATE AREA OF THE BRIDGE UNITS, THE FOLLOWING RESTRICTIONS FOR THE USE OF HEAVY CONSTRUCTION MACHINERY DURING BACKFILLING OPERATIONS APPLY:

- NO CONSTRUCTION EQUIPMENT SHALL CROSS THE BARE PRECAST CONCRETE BRIDGE UNIT.
- AFTER THE COMPACTED FILL LEVEL HAS REACHED A MINIMUM OF 4" OVER THE CROWN OF THE BRIDGE, CONSTRUCTION EQUIPMENT WITH A WEIGHT OF LESS THAN 10 TONS MAY CROSS THE BRIDGE.
- AFTER THE COMPACTED FILL LEVEL HAS REACHED A MINIMUM OF 1'-0" OVER THE CROWN OF THE BRIDGE, CONSTRUCTION EQUIPMENT WITH A WEIGHT OF LESS THAN 30 TONS MAY CROSS THE BRIDGE.
- AFTER THE COMPACTED FILL LEVEL HAS REACHED THE DESIGN COVER, OR 2'-0" MINIMUM, OVER THE CROWN OF THE PRECAST CONCRETE BRIDGE, CONSTRUCTION EQUIPMENT WITHIN THE DESIGN LOAD LIMITS FOR THE ROAD MAY CROSS THE PRECAST CONCRETE BRIDGE.

13.2. LEVELING PADS/SHIMS - THE BRIDGE UNITS AND WINGWALLS SHALL BE SET ON HARDBOARD SHIMS CONFORMING TO ASTM D1037 OR PLASTIC SHIMS (DAYTON SUPERIOR P-80, P-81 OR APPROVED EQUAL) MEASURING 5" x 5", MINIMUM, UNLESS SHOWN OTHERWISE ON THE PLANS. A MINIMUM GAP OF 1/2" SHALL BE PROVIDED BETWEEN THE FOOTING AND THE BOTTOM OF THE BRIDGE'S

VERTICAL LEGS OR THE BOTTOM OF THE WINGWALL. ALSO, A SUPPLY OF 1/4", 1/2" AND 3/8" THICK HARDBOARD OR PLASTIC SHIMS FOR VARIOUS SHIMMING PURPOSES SHALL BE ON SITE.

13.3. PLACEMENT OF BRIDGE UNITS - THE BRIDGE UNITS SHALL BE PLACED AS SHOWN ON THE ENGINEER'S PLAN DRAWINGS. SPECIAL CARE SHALL BE TAKEN IN SETTING THE ELEMENTS TO THE TRUE LINE AND GRADE. THE JOINT WIDTH BETWEEN ADJACENT PRECAST UNITS SHALL NOT EXCEED 1/4".

13.4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE STRUCTURE SPAN DURING ALL PHASES OF INSTALLATION. DUE TO THE ARCH SHAPE, BRIDGE ELEMENTS WILL TEND TO SPREAD UNDER SELF-WEIGHT. IT IS IMPERATIVE THAT ANY LATERAL SPREADING OF THE BRIDGE ELEMENTS BE AVOIDED DURING AND AFTER THEIR PLACEMENT. GENERALLY, HORIZONTAL CABLE TIES OR TIE RODS ARE SHIPPED IN THE LARGER BRIDGE ELEMENTS TO ASSIST IN PREVENTING THIS SPREADING. CABLE TIES/TIE RODS SHALL NOT BE REMOVED UNTIL BRIDGE UNITS ARE GROUTED AND GROUT HAS CURED. IT IS RECOMMENDED THAT TEMPORARY HARDWOOD BLOCKS BE USED IN CONJUNCTION WITH THE CABLE TIES/TIE RODS TO MAINTAIN SPAN. IF, HOWEVER, DUE TO SITE RESTRICTIONS, THESE CABLE TIES/TIE RODS MUST BE REMOVED PRIOR TO PLACEMENT OF THE BRIDGE ELEMENTS, THE CONTRACTOR MUST NOTIFY CONTECH (MANUFACTURER) AND REQUEST A SUGGESTED INSTALLATION PROCEDURE.

IN ADDITION, IF THE CABLE TIES/TIE RODS MUST BE REMOVED PRIOR TO SETTING ARCH UNITS, THE FOLLOWING QUALITY CONTROL PROCEDURE MUST BE FOLLOWED:

- 1) FIND "MEASURED SPAN" UPON ARCH UNIT'S DELIVERY TO SITE, PRIOR TO LIFTING FROM TRUCK AND REMOVING CABLE TIES/TIE RODS. "MEASURED SPAN" SHALL BE THE AVERAGE OF (3) SPAN MEASUREMENTS ALONG THE LAY LENGTH OF THE ARCH UNIT.
- 2) AFTER SETTING OF BRIDGE UNIT ON THE FOUNDATION, VERIFY THE SPAN. THIS "INSTALLED SPAN MEASUREMENT" SHALL NOT EXCEED THE MAXIMUM OF:
 - A) THE NOMINAL SPAN + 1/2" OR
 - B) THE "MEASURED SPAN"

IF THE "INSTALLED SPAN MEASUREMENT" EXCEEDS THIS AMOUNT, THE ARCH UNIT SHALL BE LIFTED AND RE-SET UNTIL THE "INSTALLED SPAN MEASUREMENT" MEETS THE LIMITS.

13.5. PLACEMENT OF WINGWALLS, HEADWALLS AND FOUNDATION UNITS - THE WINGWALLS, HEADWALLS AND FOUNDATIONS SHALL BE PLACED AS SHOWN ON THE PLAN DRAWINGS. SPECIAL CARE SHALL BE TAKEN IN SETTING THE ELEMENTS TO THE TRUE LINE AND GRADE.

13.6. JOINT PROTECTION AND SUBSURFACE DRAINAGE

13.6.1. EXTERNAL PROTECTION OF JOINTS - THE BUTT JOINT MADE BY TWO ADJOINING BRIDGE UNITS SHALL BE COVERED WITH A 1/2" x 1 1/2" PREFORMED BITUMINOUS JOINT SEALANT AND A MINIMUM OF A 9" WIDE JOINT WRAP. THE SURFACE SHALL BE FREE OF DIRT BEFORE APPLYING THE JOINT MATERIAL. A PRIMER COMPATIBLE WITH THE JOINT WRAP TO BE USED SHALL BE APPLIED FOR A MINIMUM WIDTH OF 9" ON EACH SIDE OF THE JOINT. THE EXTERNAL WRAP SHALL BE CS212 BY CONCRETE SEALANTS INC., EZ-WRAP RUBBER BY PRESS-SEAL GASKET CORPORATION, SEAL WRAP BY MAR MAC MANUFACTURING CO. INC. OR APPROVED EQUAL. THE JOINT SHALL BE COVERED CONTINUOUSLY FROM THE BOTTOM OF ONE BRIDGE SECTION LEG, ACROSS THE TOP OF THE BRIDGE AND TO THE OPPOSITE BRIDGE SECTION LEG. ANY LAPS THAT RESULT IN THE JOINT WRAP SHALL BE A MINIMUM OF 6" LONG WITH THE OVERLAP RUNNING DOWNHILL.

13.6.2. IN ADDITION TO THE JOINTS BETWEEN BRIDGE UNITS, THE JOINT BETWEEN THE END BRIDGE UNIT AND THE HEADWALL SHALL ALSO BE SEALED AS DESCRIBED ABOVE. IF PRECAST WINGWALLS ARE USED, THE JOINT BETWEEN THE END BRIDGE UNIT AND THE WINGWALL SHALL BE SEALED WITH A 2'-0" STRIP OF FILTER FABRIC. ALSO, IF LIFT HOLES ARE FORMED IN THE BRIDGE UNITS, THEY SHALL BE PRIMED AND COVERED WITH A 9" x 9" SQUARE OF JOINT WRAP.

13.6.3. DURING THE BACKFILLING OPERATION, CARE SHALL BE TAKEN TO KEEP THE JOINT WRAP IN ITS PROPER LOCATION OVER THE JOINT.

13.6.4. SUBSOIL DRAINAGE SHALL BE AS DIRECTED BY THE ENGINEER.

13.7. GROUTING

13.7.1. GROUTING SHALL NOT BE PERFORMED WHEN TEMPERATURES ARE EXPECTED TO GO BELOW 35° FOR A PERIOD OF 72 HOURS. GROUTING SHOULD BE COMPLETED AS SOON AS PRACTICAL AFTER PRECAST ARCHES HAVE BEEN INSTALLED. FILL THE BRIDGE-FOUNDATION KEYWAY WITH CEMENT GROUT (PORTLAND CEMENT AND WATER OR CEMENT MORTAR COMPOSED OF PORTLAND CEMENT, SAND AND WATER) WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI. VIBRATE AS REQUIRED TO ENSURE THAT THE ENTIRE KEY AROUND THE BRIDGE ELEMENT IS COMPLETELY FILLED. IF BRIDGE ELEMENTS HAVE BEEN SET WITH TEMPORARY TIES (CABLES, BARS, ETC.) GROUT MUST ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI BEFORE TIES MAY BE REMOVED.

13.7.2. ALL GROUT SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 1/4".

13.7.3. LIFTING AND ERECTION ANCHOR RECESSES SHALL BE FILLED WITH GROUT.

13.7.4. AFTER GROUT HAS REACHED ITS DESIGN STRENGTH THE TEMPORARY HARDWOOD WEDGES SHALL BE REMOVED AND THEIR HOLES FILLED WITH GROUT.

13.8. BACKFILL

13.8.1. DO NOT PERFORM BACKFILLING DURING WET OR FREEZING

WEATHER.
13.8.2. NO BACKFILL SHALL BE PLACED AGAINST ANY STRUCTURAL ELEMENTS UNTIL THEY HAVE BEEN APPROVED BY THE ENGINEER.

13.8.3. BACKFILL SHALL BE CONSIDERED AS ALL REPLACED EXCAVATION AND NEW EMBANKMENT ADJACENT TO THE PRECAST CONCRETE ELEMENTS. THE PROJECT CONSTRUCTION AND MATERIAL SPECIFICATIONS, WHICH INCLUDE THE SPECIFICATIONS FOR EXCAVATION FOR STRUCTURES AND ROADWAY EXCAVATION AND EMBANKMENT CONSTRUCTION, SHALL APPLY EXCEPT AS MODIFIED IN THIS SECTION.

13.8.4. BACKFILL ZONES:
• IN-SITU SOIL
• ZONE A: CONSTRUCTED EMBANKMENT OR OVERFILL.
• ZONE B: FILL THAT IS DIRECTLY ASSOCIATED WITH PRECAST CONCRETE BRIDGE INSTALLATION.
• ZONE C: ROAD STRUCTURE.

13.8.5. REQUIRED BACKFILL PROPERTIES

13.8.5.1. IN-SITU SOIL - NATURAL GROUND IS TO BE SUFFICIENTLY STABLE TO ALLOW EFFECTIVE SUPPORT TO THE PRECAST CONCRETE BRIDGE UNITS. AS A GUIDE, THE EXISTING NATURAL GROUND SHOULD BE OF SIMILAR QUALITY AND DENSITY TO ZONE B MATERIAL FOR MINIMUM LATERAL DIMENSION OF ONE BRIDGE SPAN OUTSIDE OF THE BRIDGE FOOTING.

13.8.5.2. ZONE A - ZONE A REQUIRES FILL MATERIAL WITH SPECIFICATIONS AND COMPACTING PROCEDURES EQUAL TO THAT FOR NORMAL ROAD EMBANKMENTS.

13.8.5.3. ZONE B - GENERALLY, SOILS SHALL BE REASONABLY FREE OF ORGANIC MATTER, AND, NEAR CONCRETE SURFACES, FREE OF STONES LARGER THAN 3" IN DIAMETER. SEE CHARTS FOR DETAILED DESCRIPTIONS OF ACCEPTABLE SOILS.

13.8.5.4. ZONE C - ZONE C IS THE ROAD SECTION OF GRAVEL, ASPHALT OR CONCRETE BUILT IN COMPLIANCE WITH LOCAL ENGINEERING PRACTICES.

13.8.5.5. GEOTECHNICAL ENGINEER SHALL REVIEW GRADATIONS OF ALL INTERFACING MATERIALS AND, IF NECESSARY, RECOMMEND GEOTEXTILE FILTER FABRIC (PROVIDED BY CONTRACTOR)

13.8.6. PLACING AND COMPACTING BACKFILL
DUMPING FOR BACKFILLING IS NOT ALLOWED ANY NEARER THAN 3'-0" FROM THE BRIDGE LEG.

THE FILL MUST BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE MAXIMUM DIFFERENCE IN THE SURFACE LEVELS OF THE FILL ON OPPOSITE SIDES OF THE BRIDGE MUST NOT EXCEED 2'-0".

THE FILL BEHIND WINGWALLS MUST BE PLACED AT THE SAME TIME AS THAT OF THE BRIDGE FILL. IT MUST BE PLACED IN PROGRESSIVELY PLACED HORIZONTAL LAYERS NOT EXCEEDING 8" PER LAYER.

THE BACKFILL OF ZONE B SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% OF THE STANDARD PROCTOR, AS REQUIRED BY AASHTO T-99.

SOIL WITHIN 1'-0" OF CONCRETE SURFACES SHALL BE HAND-COMPACTED. ELSEWHERE, USE OF ROLLERS IS ACCEPTABLE. IF VIBRATING ROLLER-COMPACTORS ARE USED, THEY SHALL NOT BE STARTED OR STOPPED WITHIN ZONE B AND THE VIBRATION FREQUENCY SHOULD BE AT LEAST 30 REVOLUTIONS PER SECOND.

THE BACKFILL MATERIAL AND COMPACTING BEHIND WINGWALLS SHALL SATISFY THE CRITERIA FOR THE BRIDGE BACKFILL, ZONE B.

BACKFILL AGAINST A WATERPROOFED SURFACE SHALL BE PLACED CAREFULLY TO AVOID DAMAGE TO THE WATERPROOFING MATERIAL.

13.8.7. BRIDGE UNITS
FOR FILL HEIGHTS OVER 12 FEET (AS MEASURED FROM TOP CROWN OF BRIDGE TO FINISHED GRADE), NO BACKFILLING MAY BEGIN UNTIL A BACKFILL COMPACTION TESTING PLAN HAS BEEN COORDINATED WITH AND APPROVED BY CONTECH® ENGINEERED SOLUTIONS.

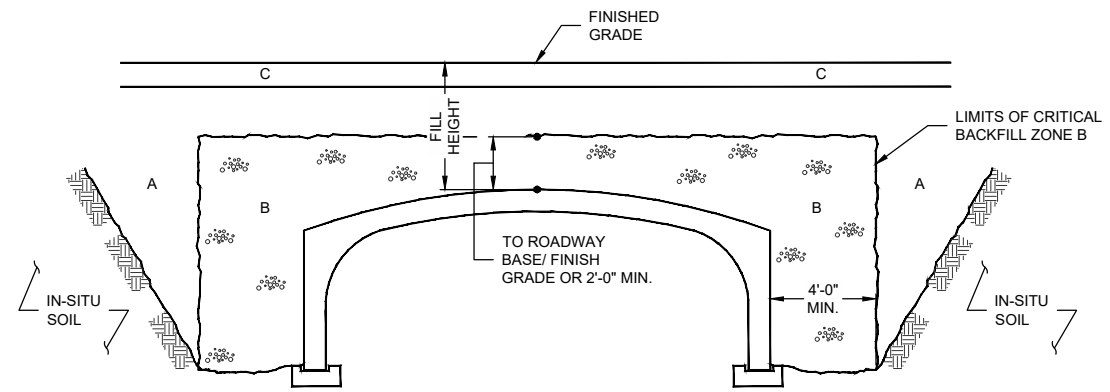
13.8.8. WINGWALLS
BACKFILL IN FRONT OF WINGWALLS SHALL BE CARRIED TO GROUND LINES SHOWN IN THE PLANS.

13.8.9. MONITORING
THE CONTRACTOR SHALL CHECK SETTLEMENTS AND HORIZONTAL DISPLACEMENT OF FOUNDATION TO ENSURE THAT THEY ARE WITHIN THE ALLOWABLE LIMIT PROVIDED BY THE ENGINEER. THESE MEASUREMENTS SHOULD GIVE AN INDICATION OF THE SETTLEMENTS AND DEFORMATIONS ALONG THE LENGTH OF THE FOUNDATIONS.

THE FIRST MEASUREMENT SHOULD TAKE PLACE AFTER THE ERECTION OF ALL PRECAST BRIDGE SYSTEM ELEMENTS, A SECOND AFTER COMPLETION OF BACKFILLING, AND A THIRD BEFORE OPENING OF THE BRIDGE TO TRAFFIC. FURTHER MEASUREMENTS MAY BE MADE ACCORDING TO LOCAL CONDITIONS.

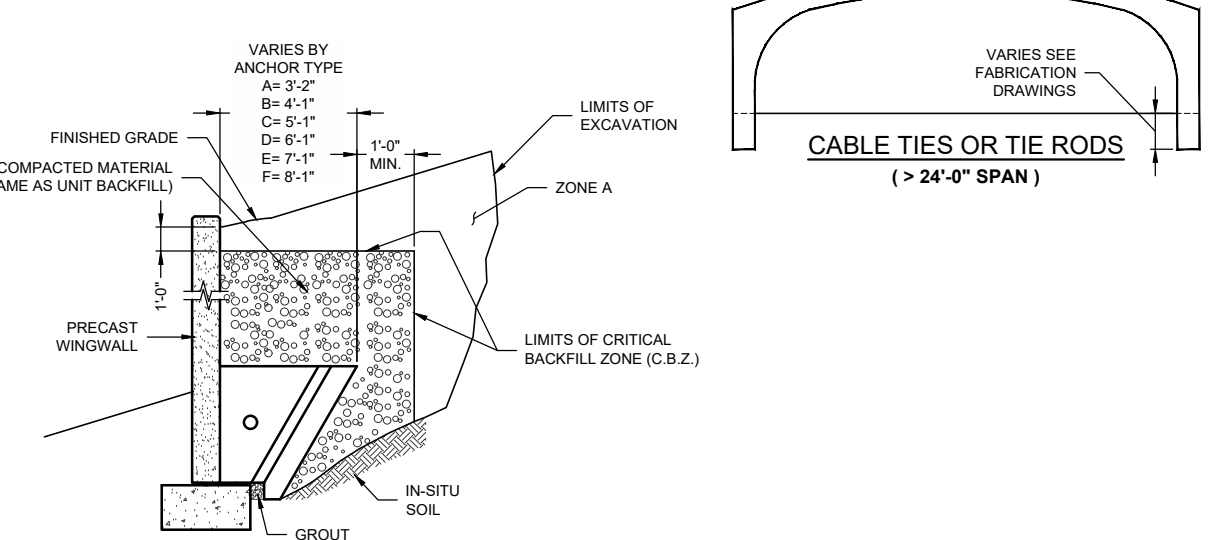
ACCEPTABLE SOILS FOR USE IN ZONE B BACKFILL

TYPICAL USCS MATERIALS	AASHTO GROUP	AASHTO SUBGROUP	PERCENT PASSING US SIEVE NO.			CHARACTER OF FRACTION PASSING NO. 40 SIEVE		SOIL DESCRIPTION
			#10	#40	#200	LIQUID LIMIT	PLASTICITY INDEX	
GW, GP, SP	A1	A-1a	50 MAX	30 MAX	15 MAX	6 MAX		LARGELY GRAVEL BUT CAN INCLUDE SAND AND FINES
GM, SW, SP, SM		A-1b		50 MAX	25 MAX	6 MAX		GRAVELLY SAND OR GRADED SAND, MAY INCLUDE FINES
GM, SM, ML, SP, GP	A2	A-2-4			35 MAX	40 MAX	10 MAX	SANDS, GRAVELS WITH LOW-PLASTICITY SILT FINES
SC, GC, GM		A-2-5			35 MAX	41 MIN	10 MAX	SANDS, GRAVELS WITH PLASTIC SILT FINES
SP, SM, SW	A3			51 MIN	10 MAX		NON-PLASTIC	FINE SANDS
ML, SM, SC	A4				36 MIN	40 MAX	10 MAX	LOW-COMPRESSIBILITY SILTS



SPAN	FILL HEIGHT	ACCEPTABLE MATERIAL INSIDE ZONE B
≤ 24'-0"	≥ 12'-0"	A1, A3
≤ 24'-0"	< 12'-0"	A1, A2, A3, A4
> 24'-0"	ALL	A1, A3

BACKFILL REQUIREMENTS



WALL BACKFILL REQUIREMENTS

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800-338-1122 513-645-7000 513-645-7993 FAX



CON/SPAN
BRIDGE SYSTEMS

DYOB
DRAWING

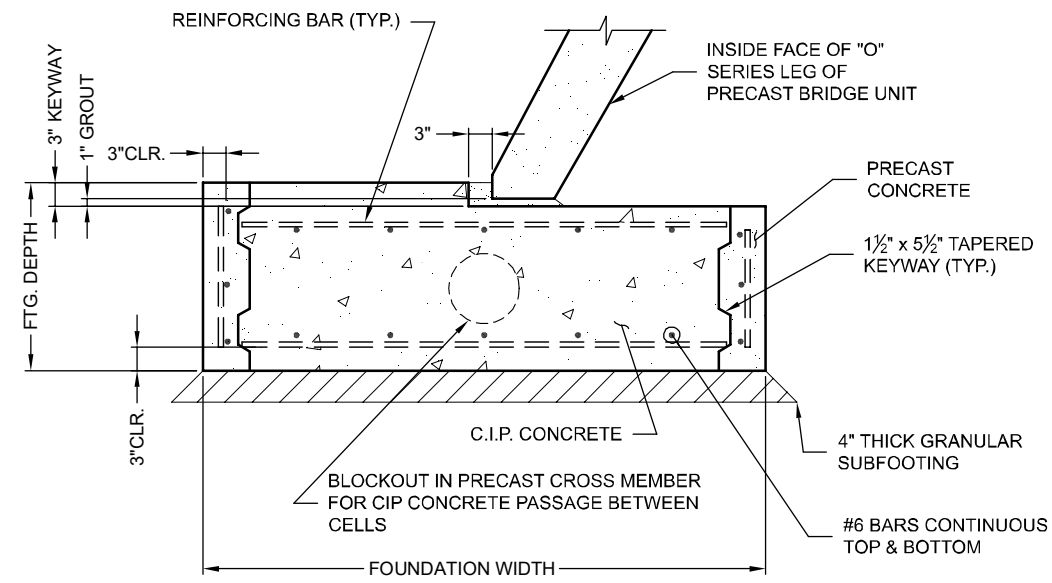
CON/SPAN B-SERIES SPECIFICATIONS

PROJECT No.:	SEQ. No.:	DATE:
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET No.:	D7 OF D9	

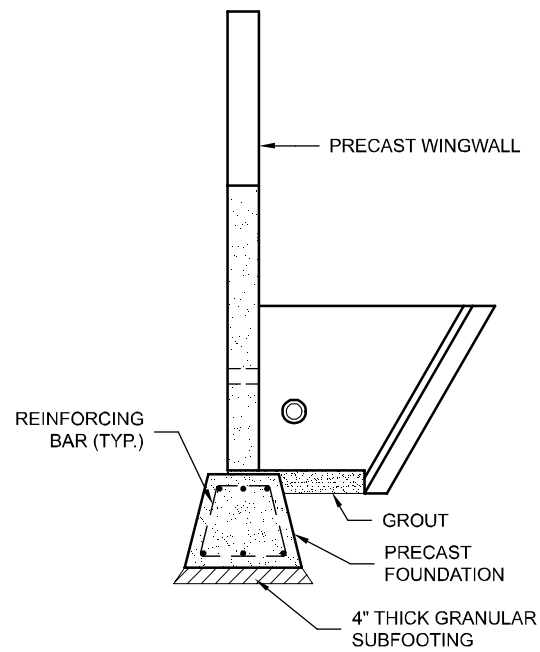
C:\USERS\JEREMY.JOHNSON\DRIVE - THE QUIKRETE COMPANIES\DOCUMENTS\DRAWINGS\DWG - 11/22/2022 10:37 AM



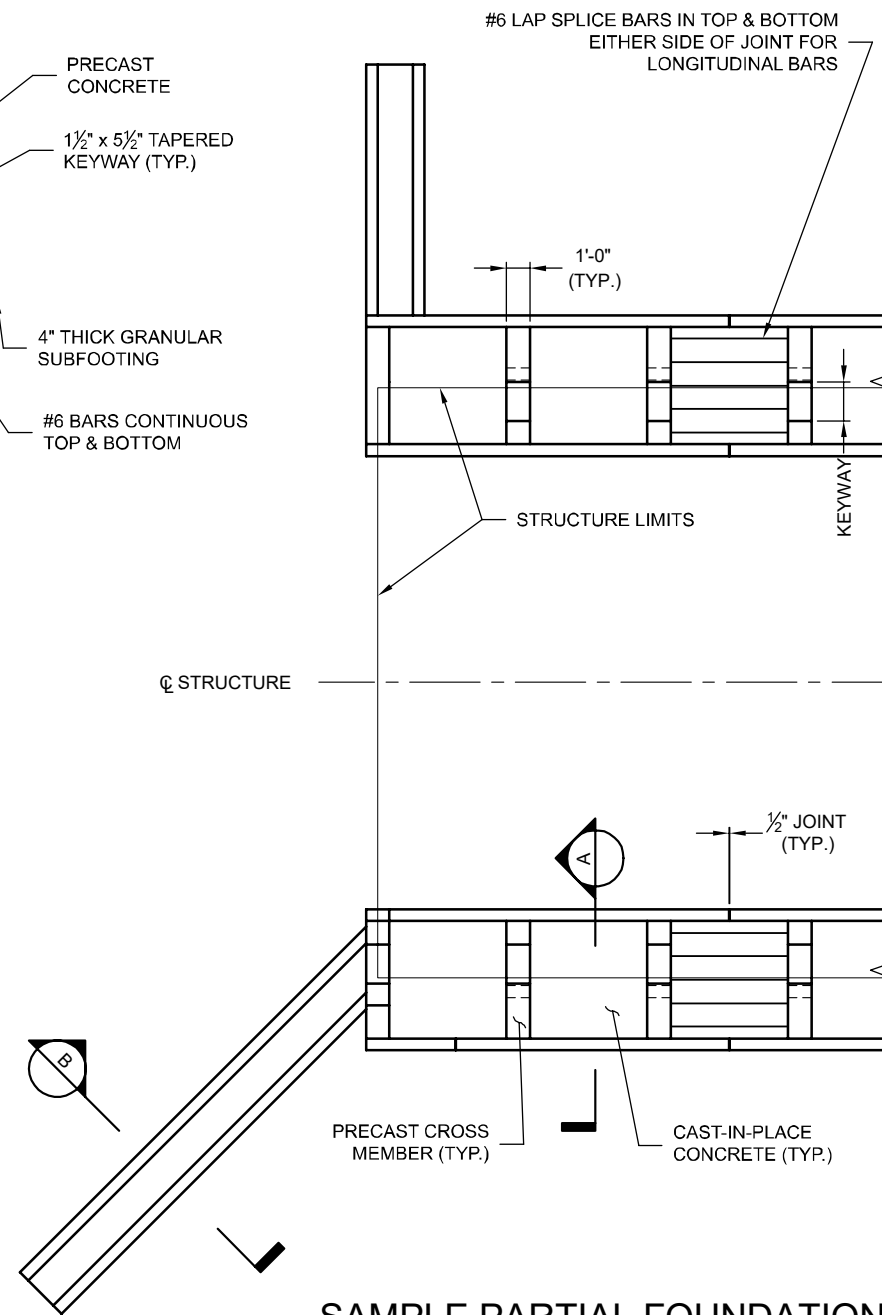
SAMPLE DRAWING ONLY



SECTION A
(NOT PROJECT SPECIFIC)



SECTION B
(NOT PROJECT SPECIFIC)



SAMPLE PARTIAL FOUNDATION PLAN
(NOT PROJECT SPECIFIC)

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CONISPAN
BRIDGE SYSTEMS
DYOB
DRAWING

CON/SPAN B-SERIES
EXPRESS FOUNDATION SAMPLES

PROJECT No.:	DATE:
DESIGNED: DYO	DRAWN: DYO
CHECKED: DYO	APPROVED: DYO
SHEET NO.:	D8 OF D9

SAMPLE DRAWING ONLY



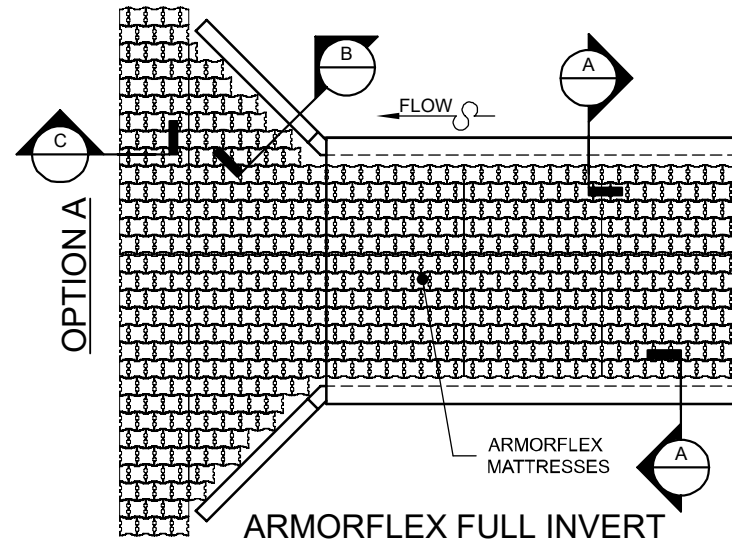
ARMORFLEX FULL INVERT - CLOSED CELL
N.T.S.



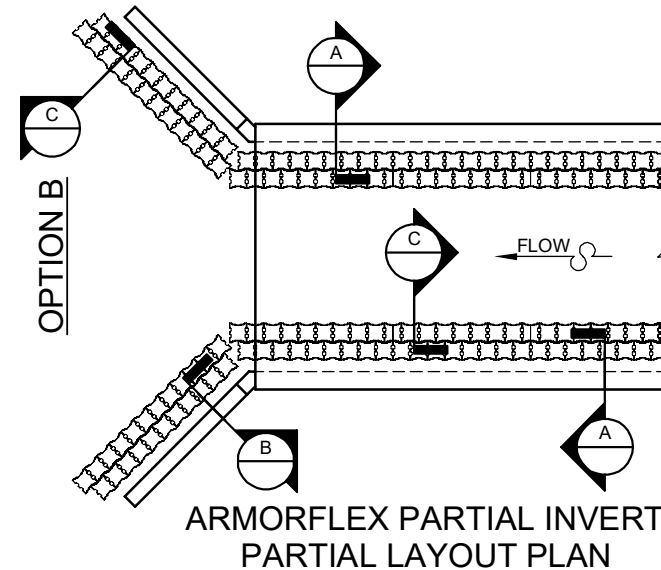
ARMORFLEX PARTIAL INVERT
N.T.S.



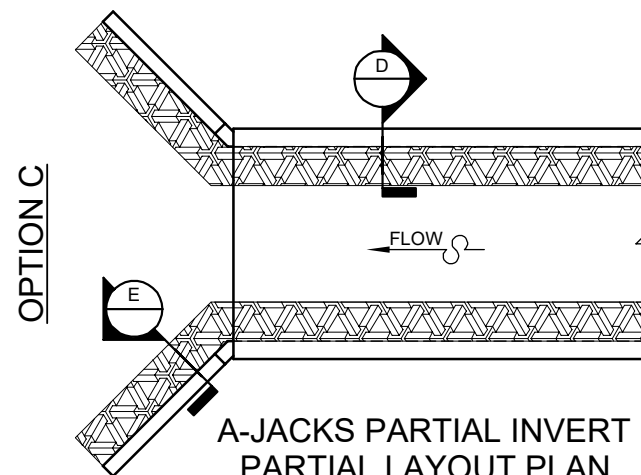
A-JACKS PARTIAL INVERT
N.T.S.



ARMORFLEX FULL INVERT
PARTIAL LAYOUT PLAN
N.T.S.

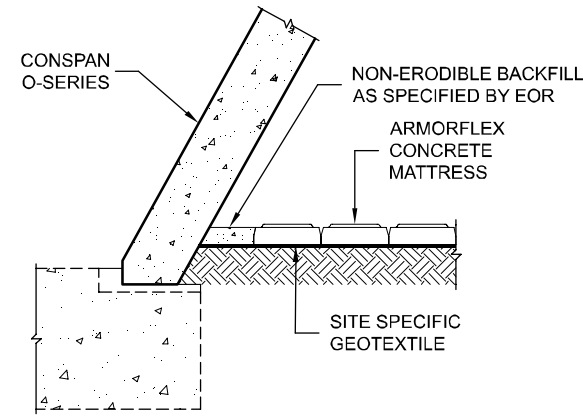


ARMORFLEX PARTIAL INVERT
PARTIAL LAYOUT PLAN
N.T.S.

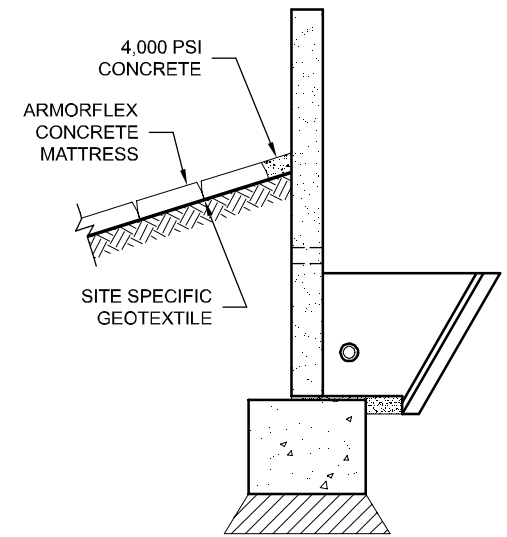


A-JACKS PARTIAL INVERT
PARTIAL LAYOUT PLAN
N.T.S.

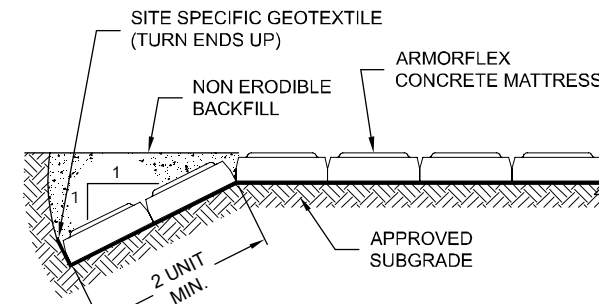
CONSIDER A COMPLETE SYSTEM WITH ARMORTEC REVETMENT



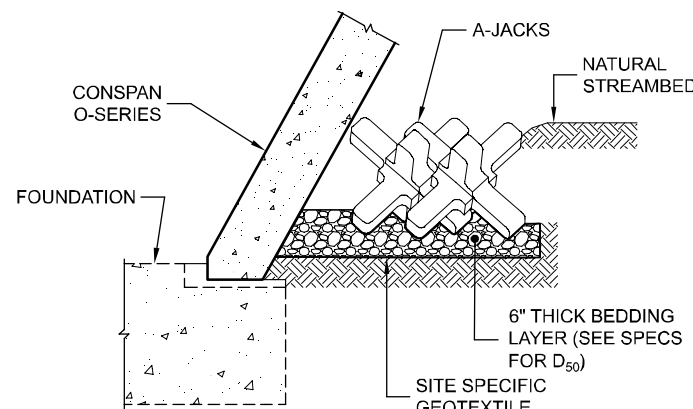
ARMORFLEX STRUCTURE TERMINATION
N.T.S.



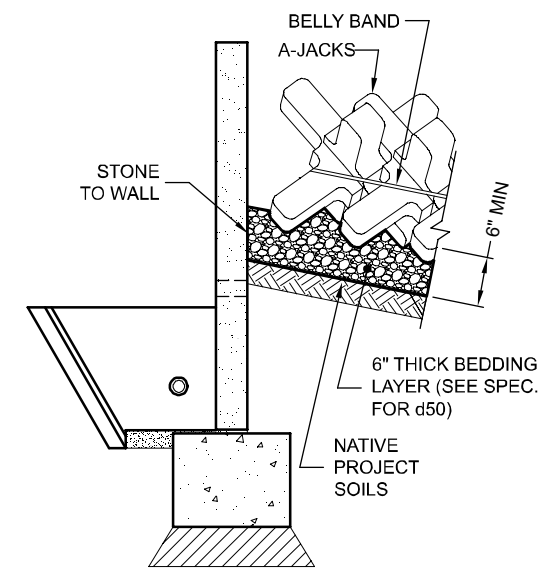
ARMORFLEX WINGWALL
TERMINATION
N.T.S.



STANDARD TERMINATION
N.T.S.



A-JACKS STRUCTURE
TERMINATION
N.T.S.



A-JACKS WINGWALL
TERMINATION
N.T.S.

CON/SPAN B-SERIES
ARMORTEC SAMPLES

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CONSPAN
BRIDGE SYSTEMS
DYOB
DRAWING

PROJECT No.:	DATE:
DESIGNED: DYO	DRAWN: DYO
CHECKED: DYO	APPROVED: DYO
SHEET No.:	D9 OF D9

Appendix D: As-built Plans

REVISED
DRAWINGS

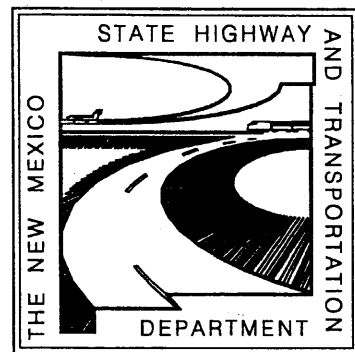
NM 44

SECTION 4

FNF
CONSTRUCTION

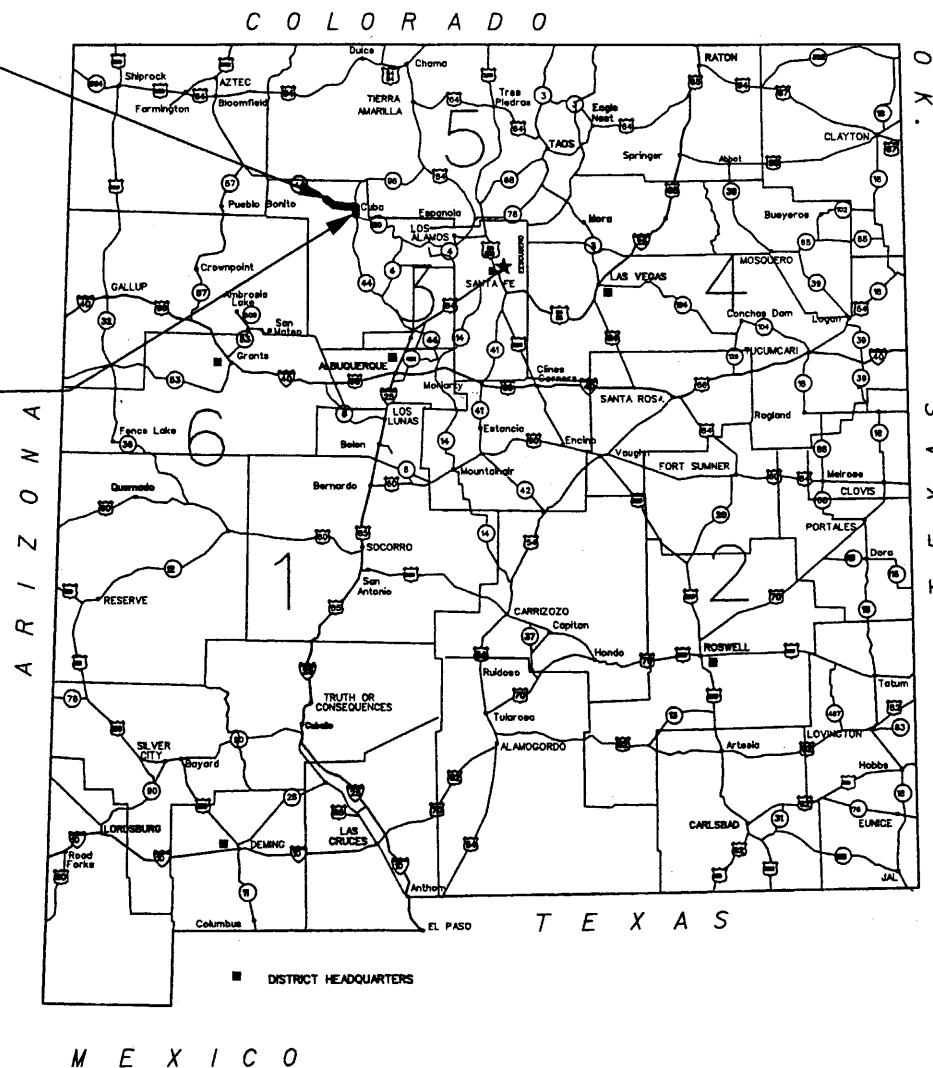
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

THE NM 44 PROJECT PROJECT NO AC-NH-044-2(39)64 SANDOVAL COUNTY CONTROL NO 3766



END PROJECT
STA. 5063+91.89
MP 85.00

BEGIN PROJECT
STA. 4000+00
MP 64.78



MESA PDC, LLC

JUNE 1999
NOVEMBER 1999
(REVISED)

Index Of Sheets

SHEET NO	DESCRIPTION	SECTION SHEET SUBTOTAL
1-1	COVER SHEET	
1-2	VICINITY MAP	
1-3	INDEX OF SHEETS	
1-4	LEGEND	
1-5	ABBREVIATIONS	
1-6	GENERAL NOTES	
1-7	UTILITY OWNERS/OPERATORS	
1-8 TO 1-15	GEOMETRIC AND MONUMENTATION LAYOUT	15
2-1 TO 2-4	TYPICAL SECTIONS	
2-5 TO 2-10	MISCELLANEOUS DETAILS	
2-11 TO 2-21	MISCELLANEOUS SCHEDULES	
2-22 TO 2-24	HIGH SPEED WEIGH-IN-MOTION SYSTEM (PLANS, DETAILS, ELECTRICAL)	
2-25	STANDARD CHAIN LINK FENCES AND GATES	
2-26 TO 2-46	EROSION CONTROL PLANS	
2-47	STD. TRANSITION AND ELBOW FOR 12", 18", 24", 30", 36", AND 42" DIA. PIPE SIPHON	48
3-1 TO 3-41	PLAN & PROFILES	41
4-1 TO 4-22	DRIVEPAD/TURNOUT PROFILES	26
5-1 TO 5-4	RSS BUTTRESS	
5-5 TO 5-8	STRUCTURE D4-272 DETAILS	8
6 PLANS	DELETED 10/1999 (CONSTRUCTION SIGNING)	
7-1 TO 7-25	PERMANENT SIGNING	25
8-1 TO 8-61	STRUCTURE PLACEMENT SECTIONS	68
9-1 TO 9-11	UTILITY PLANS	11
	SHEET SUBTOTAL = 241	

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Plot Date: 04 NOV 1999

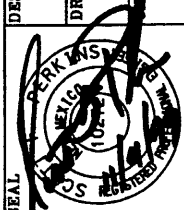
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)84
CN 3766

WILSON
& COMPANY

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



1-3

MILEPOST	STATION
64.78	4000+00 (BOP)
65	4011+46
66	4064+12
67	4116+50
68	4169+24
69	4221.72
70	4274+34
71	4326+94
72	4379+53
73	4432+23
74	4484+88
75	4537+49
76	4590+14
77	4642+89
78	4695+72
79	4748+37
80	4801+06
81	4853+69
82	4906+29
83	4958+89
84	5011+53
85	5063+91.89 (EOP)

STA. 4091+07.64
STRUCT D4-240
BRIDGE • 9141
MP 66.5

STA. 4145+09.66
STRUCT D4-246
BRIDGE • 9142
MP 67.5

STA. 4370+03.66
STRUCT D4-267
BRIDGE • 7060
MP 71.8

STA. 4502+30.81
STRUCT D4-272
BRIDGE • 9141
MP 74.3 *7060*

STA. 4715+85.84
STRUCT D4-291
BRIDGE • 7972
MP 78.3

PROJECT UNIT BREAKS			
UNIT	STATION TO	STATION	DESCRIPTION
UNIT 1	4000+00.00	4014+93	CUBA CITY LIMITS
UNIT 2	4014+93	4691+69	SANDOVAL COUNTY
UNIT 3	4691+69	5063+91.89	JICARILLA APACHE INDIAN RESERVATION

DESIGN CRITERIA	
DESIGN SPEED = 65 MPH	eMAX = 6%
POSTED SPEED LIMIT: URBAN - 35 MPH ; RURAL - 55 TO 65 MPH	
65 MPH STA. 4000+00 (MP 64.78) TO STA. 5063+91.89 (MP 85.0)	

VERTICAL CURVE DESIGN EXCEPTIONS				
PVI STA.	Lc (FT)	K	TYPE	Ds (MPH)
4066+00.00	1600	169	CREST	55
4110+00.00	2000	192	CREST	60

* 55 MPH - EXTENDS TO STA. 4074+00.00
* 60 MPH - EXTENDS TO STA. 4120+00.00

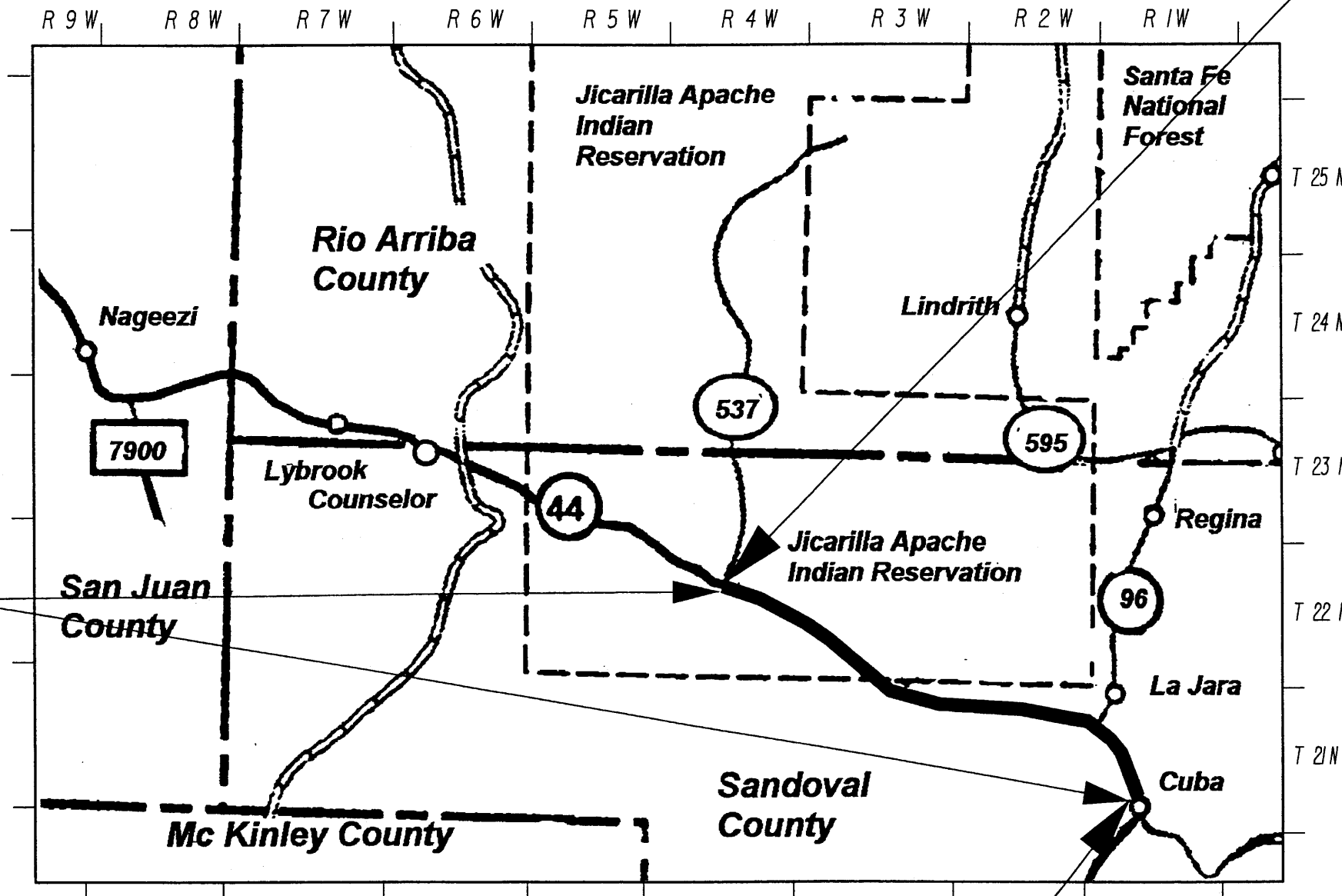
TRAFFIC DATA (MP 64.78 TO 67.915)	
ACTUAL (1998) AADT = 6,054	AADT (1999) = 6,280
DHV = 565	
% HEAVY COMMERCIAL = 14.8%	
DESIGN (2019) AADT = 10,966	DHV = 987
% HEAVY COMMERCIAL = 13.0%	
% HEAVY COMMERCIAL DURING DHV = 12.0%	
(2022) AADT = 11,669	
CUM.ESALS-2022 (FLEX) = 4,000,000	

TRAFFIC DATA (MP 67.915 TO 85.00)	
ACTUAL (1998) AADT = 4,000	AADT (1999) = 4,150
DHV = 332	
% HEAVY COMMERCIAL = 33.5%	
DESIGN (2019) AADT = 7,247	DHV = 580
% HEAVY COMMERCIAL = 29.3%	
% HEAVY COMMERCIAL DURING DHV = 27.3%	
(2022) AADT = 7,712	
CUM.ESALS-2022 (FLEX) = 4,000,000	

TYPE OF CONSTRUCTION: FULL CONSTRUCTION

LENGTH OF PROJECT 20.15 IN MILES

E.O.P. STA: 5063+91.89
MP 85
T22N R4W SECTION 9



VICINITY MAP

1 INCH = 5 MILES

0 5 10

B.O.P. STA. 4000+00
MP 64.78
T21N R1W SECTION 29

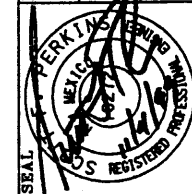
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



Design File: x:\public\projects\98082-01\sect1&2\44front&ovr\44441gnd.dgn
 Plot Date: 27 MAY 99

LEGEND

GENERAL		
EXISTING	PROPOSED	DESCRIPTION
---	---	CENTERLINE - ROADWAY
⊕	⊕	CENTERLINE SYMBOL
N/A	Ⓞ	CHECK DAM
N/A	---	CONCRETE WALL BARRIER
N/A	CWB4-XX	CONCRETE WALL BARRIER DESIGNATION
N/A	CME4-X	CONSTR MAINT EASEMENT
N/A	6620	CONTOUR LINE - TEN-FT
N/A	---	CONTOUR LINE - TWO-FT
DATUM LINE GROUND ELEVATION 6860.9	DATUM LINE GRADE ELEVATION 6860.9	(ON PROFILE)
⊙	N/A	CONTROL POINT
⌋	⌋	DRAINAGE PIPE
⌋	⌋	DRAINAGE PIPE (ON PROFILE)
N/A	D4-XXX	DRAINAGE STRUCTURE DESIGNATION
---	N/A	EASEMENT LINE
---	---	EDGE OF PAVEMENT
---	N/A	EXISTING CURB/GUTTER
X	X	FENCE
---	---	FENCE ALONG R/W LINE
N/A	○ ○ ○ ○	GUARDRAIL W/CURB

GENERAL		
EXISTING	PROPOSED	DESCRIPTION
N/A	G4-XX	GUARDRAIL DESIGNATION
N/A	▽	HIGH WATER ELEVATION (ON PROFILE)
Ⓜ	N/A	MAILBOX
⬆	N/A	NORTH ARROW
N/A	▨	RETAINING WALL
N/A	R4-XX	RETAINING WALL DESIGNATION
---	N/A	RIGHT-OF-WAY LINE
⊙	N/A	RIGHT-OF-WAY MONUMENT
d	d	SIGN
▨	N/A	ROADWAY PAVEMENT
N/A	→	DRAINAGE DITCH FLOWLINE
N/A	---	SLOPE LIMIT - CUT
N/A	---	SLOPE LIMIT - FILL
N/A	T4-XX	TURNOUT DESIGNATION
N/A	TD4-XX	TURNOUT DRAINAGE STRUCT. DESIGNATION
N/A	⊙ ⊙ ⊙ ⊙	VEHICULAR IMPACT ATTENUATOR UNIT
N/A	VIA4-XX	VEHICULAR IMPACT ATTENUATOR DESIGNATION
N/A	⊗ ⊗ ⊗ ⊗	RIP RAP CLASS "A"
N/A	▨	REINFORCED SOIL SLOPE
N/A	⊗ ⊗ ⊗ ⊗	GEOCELL LINED DITCH

NOTE: ALL ITEMS ABOVE REPRESENT PLAN VIEW UNLESS OTHERWISE NOTED.

UTILITIES		
EXISTING	PROPOSED	DESCRIPTION
○ _{UP}	N/A	UTILITY POLE
○ _{PP}	N/A	POWER POLE
○ _{GLM}	N/A	GAS LINE MARKER
○ _{UTM}	N/A	UNDER GROUND TELEPHONE MARKER
E	N/A	ELECTRIC BOX
T	N/A	TELEPHONE PEDESTAL
⊗	N/A	WATER VALVE
⊗ _{WM}	N/A	WATER METER
⊗ _{GM}	N/A	GAS METER
⊗ _{GV}	N/A	GAS VALVE
— OH ELEC —	N/A	OVERHEAD ELECTRIC LINE
— OH TELE —	N/A	OVERHEAD TELEPHONE LINE
— UG/T —	N/A	UNDER GROUND TELEPHONE LINE
— GAS —	N/A	GAS LINE
— W —	N/A	WATER LINE
— SAS —	N/A	SANITARY SEWER LINE
— OH CATV —	N/A	OVERHEAD CABLE TV LINE
○ _{FH}	N/A	FIRE HYDRANT

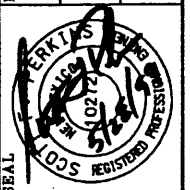
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



ABBREVIATIONS

TERM	DESCRIPTION
AADT	AVERAGE ANNUAL DAILY TRAFFIC
AC	ACRE
AHD	AHEAD
BK	BACK
BOP	BEGINNING OF PROJECT
CBC	CONCRETE BOX CULVERT
CC	POINT OF COMPOUND CURVATURE
CFS	CUBIC FEET PER SECOND
CL	CENTER LINE
CME	CONSTRUCTION MAINTENANCE EASEMENT
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CONC	CONCRETE
CONST	CONSTRUCTION
CONTR	CONTRACTOR
CORR	CORRUGATED
CU FT	CUBIC FEET
CWB	CONCRETE WALL BARRIER
CY	CUBIC YARD
CZ	CLEAR ZONE
DES	DESIGN
DIST	DISTANCE
DIV	DIVISION
DOE	US DEPARTMENT OF ENERGY
E	EAST
e MAX	MAXIMUM SUPER ELEVATION
EA	EACH
EL	ELEVATION
EOP	END OF PROJECT
EPA	US ENVIRONMENTAL PROTECTION AGENCY
EQN	EQUATION
EXIST	EXISTING
FT	FEET
FWD	FORWARD
HW	HIGH WATER ELEVATION
IN	INCH
INV	INVERT
K	CURVATURE
L	LENGTH
LB	POUND
LF	LINEAR FEET
LOC	LOCATION
LS	LUMP SUM
LT	LEFT
MDI	MEDIAN DROP INLET
MED	MEDIAN
MIN	MINIMUM
MISC	MISCELLANEOUS

TERM	DESCRIPTION
MO	MIDDLE ORDINATE
MP	MILE POST
MSG	MESSAGE
N	NORTH
NO	NUMBER
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NTS	NOT TO SCALE
OFF	OFFSET
OGFC	OPEN GRADED-FRICTION COURSE
PC	POINT OF CURVATURE
PGL	PROFILE GRADE LINE
PI	POINT OF INFLECTION
PM	PROJECT MANAGER
PMBP	PLANT MIX BITUMINOUS PAVEMENT
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
Q	FLOW RATE
R	RADIUS
r	RISE
RCP	REINFORCED CONCRETE PIPE
RF	RIGHT FORWARD
R-O-W	RIGHT OF WAY
RT	RIGHT
S	SOUTH
s	SPAN
SF	SQUARE FOOT
SHLDR	SHOULDER
SMA	STONE MATRIX ASPHALT
SPP	STRUCTURAL PLATE PIPE
SPPA	STRUCTURAL PLATE PIPE ARCH
SSD	STOPPING SIGHT DISTANCE
STA	STATION
STD. DWG.	STANDARD DRAWING
STRUCT	STRUCTURAL
SY	SQUARE YARD
T	TANGENT LENGTH
TCP	TEMPORARY CONSTRUCTION PERMIT
TESCM	TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES
VIA	VEHICULAR IMPACT ATTENUATOR
W	WEST
WD	WIDTH
WIMS	WEIGH-IN-MOTION SYSTEM
WP	WORK PERMIT

Design File: x:\public\projects\98082-01\sect1&2\44front&cvr\4444abr.v.dgn
Plot Date: 24 MAY 99

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766
NM 44

ABBREVIATIONS



DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



GENERAL NOTES

WARPING OF SLOPES

1. THE CONTRACTOR SHALL WARP SLOPES WHERE NECESSARY TO STAY WITHIN THE RIGHT-OF-WAY, CONSTRUCTION EASEMENT LIMITS, OR OUTSIDE OF ENVIRONMENTALLY SENSITIVE AREAS.

STATION MARKERS

2. THE CONTRACTOR SHALL PLACE A SHOP MADE STATION MARKER AT EVERY FIFTH STATION AND AT EVERY EQUATION. THE MARKER SHALL BE 1"x5"x14" BLACK ON WHITE WITH 3" HIGH STENCILED NUMBERS. THE MARKER SHALL HAVE TWO HOLES DRILLED FOR MOUNTING AND SHALL BE TIED WITH WIRE ON THE FENCE OR MOUNTED ON AN APPROPRIATE SHOP MADE POST APPROXIMATELY FOUR FEET ABOVE THE GROUND. STATION MARKERS SHALL BE RESET ON NEW FENCE AS NECESSARY.

UTILITIES

3. THE LOCATION OF THE UTILITIES THAT ARE SHOWN ON THE PLANS ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATIONS PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR IS HEREBY ADVISED THAT UTILITY RELOCATION BY THE UTILITY OWNERS MAY BE PERFORMED CONCURRENT WITH CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE FOR UTILITY WORK IN CONJUNCTION WITH CONSTRUCTION OPERATIONS AND SHALL BE REQUIRED TO COORDINATE SCHEDULING OF WORK WITH THE RESPECTIVE UTILITY OWNERS. THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS 72 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN FLOWS AT STRUCTURE D4-226 THROUGHOUT THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE GARCIA/LUCERO (ACEQUIA) DITCH ASSOCIATION ONE WEEK PRIOR TO PERFORMING WORK ON THIS STRUCTURE.

FOR A COMPLETE LISTING OF UTILITY OWNERS/OPERATORS RELATED TO THIS PROJECT, REFER TO SHEET 1-7.

TRAFFIC CONTROL

7. TRAFFIC CONTROL PLANS AND TRAFFIC CONTROL EXECUTION SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD, LATEST EDITION), NM-44 PROJECT SPECIFICATIONS, AND NM-44 PROJECT STANDARD DRAWINGS.

8. FOR SIGNING AND STRIPING NOTES SEE SECTION 7.

DRAINAGE

9. NOTE: THE ROADWAY WIDTH AS SHOWN IN THE TYPICAL SECTIONS HAS BEEN REDUCED AND IS NOT REFLECTED IN THESE STRUCTURE SECTIONS. THE WIDTH OF SUBGRADE (HINGE POINT TO HINGE POINT) HAS BEEN MODIFIED IN THE CONTRACT PLANS BY REDUCING THE PAVEMENT WIDTH TO CONFORM TO METRIC DIMENSIONS, AND BY REDUCING THE PAVEMENT TAPER TO 6 FEET. FOR THE TYPICAL ROADWAY SECTION HAVING A 5.9 -FOOT MEDIAN WIDTH, THE WIDTH OF SUBGRADE IS REDUCED BY 5.1 FEET. CONTRACTOR IS REQUIRED STAKE THE DRAINAGE STRUCTURES TO THE SLOPES SHOWN, AND EXTEND OR CONSTRUCT NEW STRUCTURES TO MATCH ACTUAL FIELD CONDITIONS.

10. THE MAPPING SHOWN ON THE DRAWINGS AND USED IN THE DESIGN WAS PRODUCED BY EarthData INTERNATIONAL OF NM, LLC, IT'S AGENTS, CONTRACTORS, AND SUBCONTRACTORS, USING AIRBORNE AND TERRESTRIAL DATA COLLECTION TECHNIQUES IN COMPLIANCE WITH "AMERICAN SOCIETY OF PHOTOGRAMMETRY AND REMOTE SENSING" MAP ACCURACY STANDARDS FOR 1"=200' MAPPING ("STANDARDS") WITH THE FOLLOWING SPECIFICATION ADDITIONS:

- A.) THE AREA WITHIN THE PAVED ROADWAY SECTION HAS CONTOURS ACCURATE TO PLUS OR MINUS 0.5 FEET IN ACCORDANCE WITH THE STANDARDS.
- B.) THE AREAS WITHIN THE ROADWAY RIGHT-OF-WAY THAT ARE NOT OBTSCURED BY TREES, SCRUB, OR SHADOWS OR DO NOT HAVE SLOPE CUTS OF HIGH REFLECTIVE MATERIAL HAVE CONTOURS ACCURATE TO PLUS OR MINUS 1 FOOT IN ACCORDANCE WITH THE STANDARDS.
- C.) THE AREAS WITHIN THE ROADWAY RIGHT-OF-WAY THAT ARE OBTSCURED BY TREES, SCRUB OR SHADOWS OR HAVE SLOPE CUTS OF HIGH REFLECTIVE MATERIAL HAVE CONTOURS OF APPROXIMATE ACCURACY ONLY IN ACCORDANCE WITH THE STANDARDS.

DATA COLLECTION AND MAPPING COMPILATION WAS CONDUCTED BETWEEN JULY 1997 AND DECEMBER 1998 INCLUDING:

SURVEYING AND CONTROL	07/02/97
AERIAL PHOTOGRAPHY	07/04/97, 07/05/97 AND 08/06/97
LIDAR DATA	09/05/97
MAPPING, INITIAL DELIVERY	09/24/97
SUPPLEMENTAL FIELD SURVEYS	09/97 THROUGH 12/98
MAPPING, FINAL SUBMITTAL	12/98

STANDARD DRAWINGS

4. THE NM 44 PROJECT STANDARD DRAWINGS HAVE BEEN COMPILED SPECIFICALLY FOR THE NM 44 CORRIDOR PROJECT - SAN YSIDRO TO BLOOMFIELD. ALL REFERENCES TO "STANDARD DRAWINGS" MADE HEREIN SHALL MEAN THE "NM 44 PROJECT STANDARD DRAWINGS."

FENCE & GATES

5. FENCE IS LOCATED ALONG ROW LINE UNLESS OTHERWISE SHOWN.
6. ALL GATES AND FENCE EXISTING ON THE PROJECT WILL REMAIN AND BE PROTECTED BY THE CONTRACTOR FOR THE DURATION OF THIS PROJECT. NO ADDITIONAL MEASUREMENT OR PAYMENT WILL BE MADE FOR THIS WORK.

10. HDPE PIPE NOTE: DELETE ALL REFERENCES TO HDPE PIPE FOR CULVERTS. CONTRACTOR SHALL USE RCP PIPE WHERE HDPE IS SPECIFIED OR SHOWN.

11. Portions of wingwalls and parapets do not need to be removed more than four-feet below subgrade.

12. Small Diameter Pipes (24" and 30") - In lieu of the concrete blankets specified for 24" and 30" culverts, premanufactured end sections will be allowed. The 24" end section will not require safety grates, and the 30" end section will require safety grates.

NO.	REVISIONS DESCRIPTION	DATE
1	NOTE ADDED	01-2000

Design File: 44441gn1.dgn
Plot Date: 27-JAN-2000

SHEET REVISED DECEMBER 22, 1999, SINCE ADVERTISING NOTES 4-6 ADDED TO SHEET

SHEET TITLE

GENERAL NOTES

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

WILSON & COMPANY

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



UTILITY OWNERS/ OPERATORS

WATER/WASTE WATER:

VILLAGE OF CUBA
 P.O. BOX 426
 16B E. CORDOVA ST.
 CUBA, NEW MEXICO 87013
 CONTACTS: VANDORA MARTINEZ, WATER BILLING/ADMIN
 (505)289-3864
 JOE DURAN, WATER/WASTE WATER SYS. OPS & MAINT.
 (505)289-3864
 LUPE ARAGON, CIRCUIT RIDER, NMRWA
 (505) 884-1031, CELL PHONE (505) 280-3185
 KATHY ROMERO, VILLAGE CLERK (505) 289-3758
 FAX - (505) 289-3769

TELECOMMUNICATIONS:

GTE (800) 483-4345
 2000 STATE ROAD #68
 NORTH RIVERSIDE DRIVE
 ESPANOLA, NEW MEXICO 87533
 CONTACTS: MIKE BENAVIDES, CONST. OPERATIONS FOREMAN
 (505)753-8202
 FAX- (505)753-6539
 GUILLERMO (WILLIE) HERNANDEZ, PLANNER & DESIGN MGR.
 (1-800-483-4345), (505)753-5070
 PAGER -(888)674-4842
 GIL MARTINEZ/OPS. & MAINT. MGR.
 (505)753-5300, (505)753-4800
 FAX- (505)753-6539
 JRC TELECOMMUNICATIONS (CABLE TV)
 SUN VALLEY CABLE AND PRIMESTAR DIGITAL
 SATELLITE SYSTEM
 137 MTN. PARK PL. NW
 ALBUQUERQUE, NEW MEXICO 87114
 CONTACTS: JIM CLOUD, OWNER
 (505)792-8045; (800)523-0758
 MOBILE PH: (505) 269-7209
 PAGER: (505)229-5809
 FAX: (505)792-8046
 CUBA OFFICE- (505)289-3036
 ROLAND LACKEY, MAINT. -CUBA
 PAGER- (505) 949-2397

ELECTRIC/POWER:

JEMEZ MOUNTAINS ELECTRIC COOPERATIVE, INC.
 P.O. BOX 10
 CUBA, NEW MEXICO 87013
 CONTACTS: ELMER MORALES, GEN. MNGR.
 (505)289-3241, CELLULAR (505) 269-5837
 FAX-(505)289-0103
 PLAINS ELECTRIC GENERATION AND
 TRANSMISSION COOPERATIVE
 2401 AZTEC RD. NE
 ALBUQUERQUE, NEW MEXICO 87107
 CONTACTS: MARK MURRAY, OPS. & ENG. MNGR
 (505)889-7200, FAX- (505)889-7636
 MICHELLE GALLEGOS, CONTRACTS & ROW SUPR.
 (505) 889-7658

IRRIGATION (ACEQUIA) DITCH WATER ASSOC.:

AREA NORTH OF CUBA, NEW MEXICO
 GARCIA/LUCERO (ACEQUIA) DITCH ASSOCIATION
 CONTACTS: ELESIO VALDEZ, SUPERVISOR
 (505)289-3486, P.O. BOX 184
 CUBA, NEW MEXICO 87013

LIVESTOCK WATER ASSOCIATIONS:

US BUREAU OF LAND MANAGEMENT
 CHIUILLA & CONTINENTAL DVIDE PIPELINE SYSTEMS
 SUITE C, COUNTY ROAD # 11
 P.O. BOX 670, CUBA, NEW MEXICO 87013
 CONTACT: BRETT O'HAVER, FIELD MANAGER
 (505)289-3748
 HARRY CASAUS, ALLOTEE
 (505)289-3472
 P.O. BOX 374, CUBA, NEW MEXICO 87013
 APARCIO GURULE, ALLOTEE
 (505)289-3418
 P.O. BOX 416, CUBA, NEW MEXICO 87013

NATURAL GAS SERVICES:

HIGH PRESSURE 12" DIA. NATURAL GAS PIPELINE:
 U.S. DEPT. OF ENERGY (DOE-OWNER/SELLER)
 LOS ALAMOS NATIONAL LABS
 P.O. BOX 1663, MAIL STOP K718
 LOS ALAMOS, NEW MEXICO 87545
 CONTACT: JERRY GONZALES, GAS & STEAM ENGINEER
 (505)665-2612
 PNM (PUBLIC SERVICE CO. OF NEW MEXICO)
 (BUYER/OPERATOR/MAINT.)
 P.O. BOX 4750
 FARMINGTON, NEW MEXICO 87499
 CONTACTS: ART HUNTINGTON, OPS. SUPERVISOR
 (505)324-3753, CELLULAR- 320-1690
 PAGER- (505)324-7841, FAX-(505)325-7365
 TONY CANDELARIA, FORMAN III - CONST. SUPV
 (505) 324-3783, CELLULAR 320-1691
 PAGER (505)327-8384
 GAS SERVICE (FOR CUBA & NORTHWEST) FROM
 12" DOE/LOS ALAMOS GASLINE
 PNM (PUBLIC SERVICE CO. OF NEW MEXICO)
 P.O. BOX 4750
 FARMINGTON, NEW MEXICO 87499 OR

603 WEST ELM STREET
 FARMINGTON, NEW MEXICO 87401
 CONTACTS: ART HUNTINGTON, OPS. SUPERVISOR
 (505)324-3753, CELL. PH.- (505)320-1690
 PAGER- (505)324-7841, FAX- (505)325-7365
 BENNY SERRANO, AREA REP., OPS. & MAINT.
 (505)756-2243, PAGER- (505)564-1036
 CELLULAR - (505)320-0204, FAX - (505)327-9207

OTHER GAS AND PETROLEUM PRODUCTS AND PIPELINE OWNERS

BENSON-MONTIN-GREER DRILLING CORPORATION
 4900 COLLEGE BLVD.
 FARMINGTON, NEW MEXICO 87402
 CONTACT: ALBERT R. GREER, PRES.
 (505)325-8874, FAX- (505)327-9207

SHEET TITLE

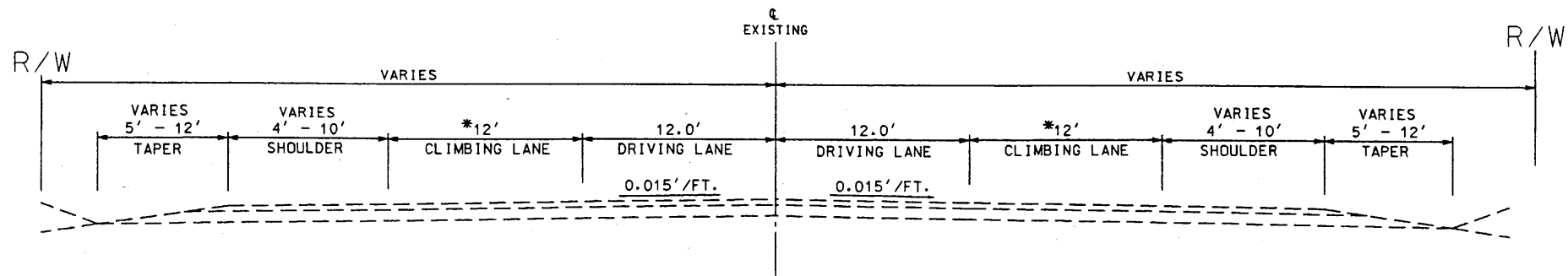
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

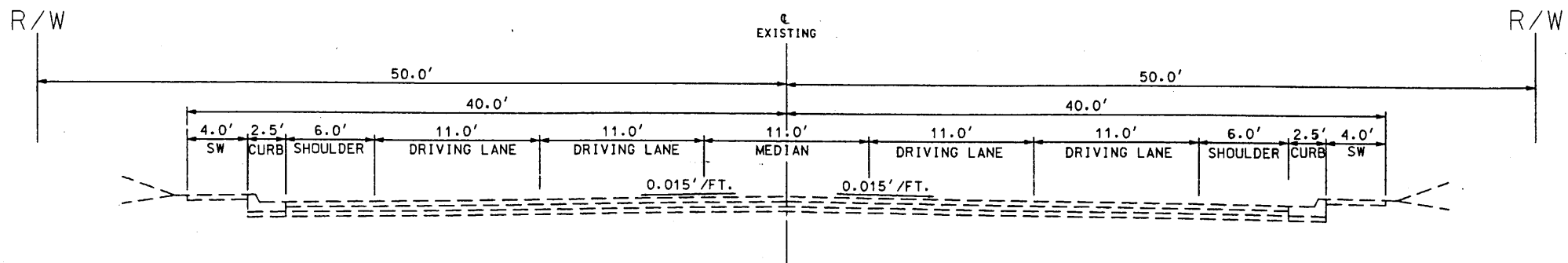
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP





EXISTING TYPICAL SECTION (RURAL)
 STA. 4000+30 TO STA. 5063+91.89

* NOTE: CLIMBING LANE STATIONS
 STA. 4168+00 TO STA. 4211+00 RT.
 STA. 4172+00 TO STA. 4185+00 LT.
 STA. 4394+00 TO STA. 4450+00 LT.
 STA. 4590+00 TO STA. 4634+00 RT.
 STA. 4624+00 TO STA. 4687+00 LT.



EXISTING TYPICAL SECTION (CUBA)
 STA. 4000+00 TO STA. 4000+30

SHEET TITLE

EXISTING TYPICAL SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

DESIGN BY:
DDM

DRAWN BY:
STAFF

CHECKED BY:
SFP



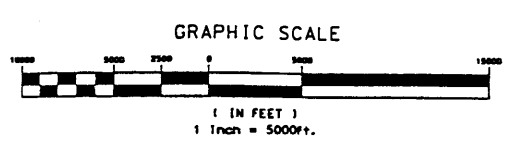
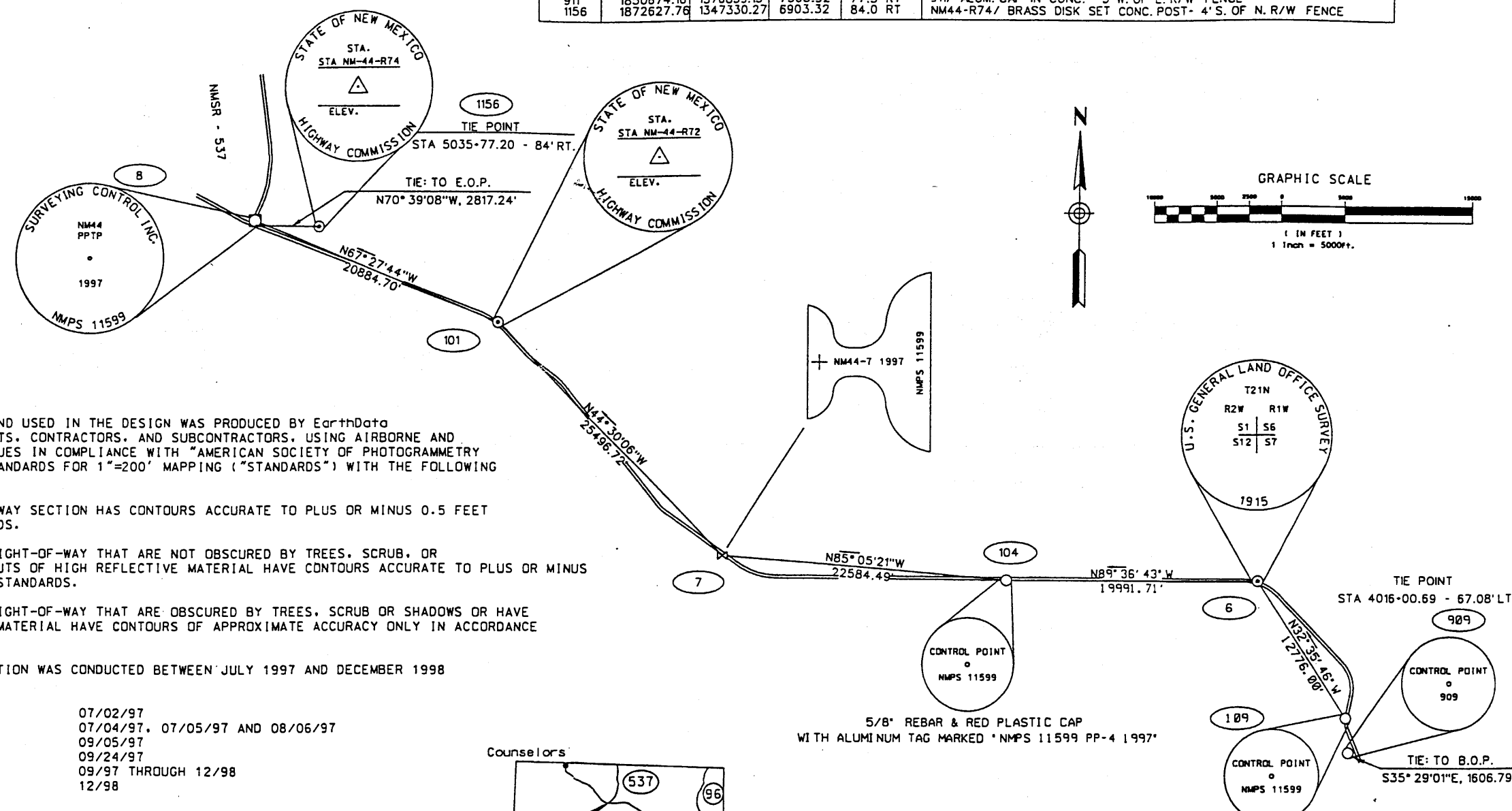
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GEODETIC INFORMATION
GEOGRAPHIC/STATE PLANE (NAD83) COORDINATES

POINT	LATITUDE	LONGITUDE	NORTHING [METERS]	EASTING [METERS]	ZONE	GEOID[M] SEPARATION	ELLIPSOID HEIGHT[M]
6	36° 04' 17.173710" 106°	59° 32' 99.8050"	562693.90	433120.05	NM C	-19.2970	2178.4710
7	36° 04' 34.107890" 107°	08' 10.631080"	563324.22	420173.03	NM C	-19.7992	2230.1910
8	36° 08' 49.402840" 107°	15' 46.447310"	571303.96	408850.53	NM C	-19.9986	2069.2760
101	36° 07' 32.200190" 107°	11' 50.403100"	568864.96	414727.85	NM C	-19.8803	2119.0500
104	36° 04' 16.935550" 107°	03' 36.433400"	562735.16	427028.98	NM C	-19.5804	2214.4030
109	36° 02' 31.280660" 106°	58' 08.223540"	559414.36	435217.09	NM C	-19.2213	2131.2950

LOCAL PROJECT GROUND COORDINATES

POINT	NORTHING [US FEET]	EASTING [US FEET]	ELEVATION [US FEET]	LOCATION (MP)	DESCRIPTION/ TYPE/OFF-SET TO R/W FENCE NM ROAD 44 / CUBA TO NM ROAD 537
6	1846761.57	1421499.89	7210.51	68.7 RT	NM44-6/ BRASS CAP W/IRON PIPE - 50' N. OF N. R/W FENCE
7	1848830.31	1379007.05	7381.84	76.8 RT	NM44-7/ T-RAIL AT R/W FENCE
8	1875020.26	1341845.96	6854.56	85.6 RT	NM44 PPTP/ BRASS DISK SET CONC. POST- 6' S. OF F.O.C(S. REST AREA)
101	1867015.34	1361135.64	7017.47	81.6 RT	NM44-R72/ BRASS DISK SET CONC. POST- 4' S. OF N. R/W FENCE
104	1846896.97	1401508.64	7329.33	72.4 RT	PP-4/ 5/8 " REBAR W/PLASTIC CAP-30' N. OF S. R/W FENCE
109	1835997.92	1428382.48	7055.48	66.0 LT	PP-9/ 5/8 " REBAR W/PLASTIC CAP-18' E. OF W. R/W FENCE
909	1831475.54	1429993.20	6935.25	65.1 LT	909/ ALUM. CAP IN CONC. - 7' E. OF W. R/W FENCE
910	1833713.90	1429042.01	6919.77	65.5 LT	910/ ALUM. CAP IN CONC. - 5' E. OF W. R/W FENCE
911	1850674.16	1376839.13	7305.52	77.3 RT	911/ ALUM. CAP IN CONC. - 5' W. OF E. R/W FENCE
1156	1872627.78	1347330.27	6903.32	84.0 RT	NM44-R74/ BRASS DISK SET CONC. POST- 4' S. OF N. R/W FENCE



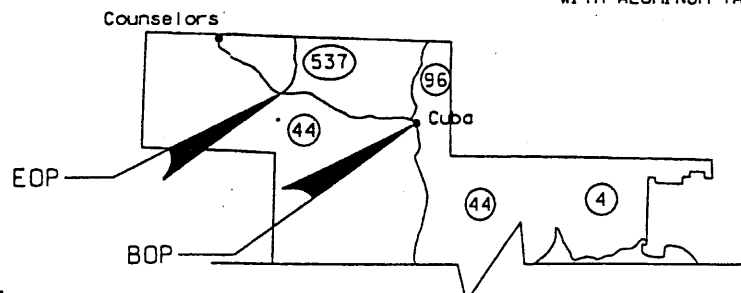
SURVEY NOTES

- THE MAPPING SHOWN ON THE DRAWINGS AND USED IN THE DESIGN WAS PRODUCED BY EarthData INTERNATIONAL OF NM, LLC. IT'S AGENTS, CONTRACTORS, AND SUBCONTRACTORS, USING AIRBORNE AND TERRESTRIAL DATA COLLECTION TECHNIQUES IN COMPLIANCE WITH "AMERICAN SOCIETY OF PHOTOGRAMMETRY AND REMOTE SENSING" MAP ACCURACY STANDARDS FOR 1"=200' MAPPING ("STANDARDS") WITH THE FOLLOWING SPECIFICATION ADDITIONS:
 - THE AREA WITHIN THE PAVED ROADWAY SECTION HAS CONTOURS ACCURATE TO PLUS OR MINUS 0.5 FEET IN ACCORDANCE WITH THE STANDARDS.
 - THE AREAS WITHIN THE ROADWAY RIGHT-OF-WAY THAT ARE NOT OBSCURED BY TREES, SCRUB, OR SHADOWS OR DO NOT HAVE SLOPE CUTS OF HIGH REFLECTIVE MATERIAL HAVE CONTOURS ACCURATE TO PLUS OR MINUS 1 FOOT IN ACCORDANCE WITH THE STANDARDS.
 - THE AREAS WITHIN THE ROADWAY RIGHT-OF-WAY THAT ARE OBSCURED BY TREES, SCRUB OR SHADOWS OR HAVE SLOPE CUTS OF HIGH REFLECTIVE MATERIAL HAVE CONTOURS OF APPROXIMATE ACCURACY ONLY IN ACCORDANCE WITH THE STANDARDS.

DATA COLLECTION AND MAPPING COMPILATION WAS CONDUCTED BETWEEN JULY 1997 AND DECEMBER 1998 INCLUDING:

SURVEYING AND CONTROL	07/02/97
AERIAL PHOTOGRAPHY	07/04/97, 07/05/97 AND 08/06/97
LIDAR DATA	09/05/97
MAPPING, INITIAL DELIVERY	09/24/97
SUPPLEMENTAL FIELD SURVEYS	09/97 THROUGH 12/98
MAPPING, FINAL SUBMITTAL	12/98

- THE SURVEY MONUMENTS FOR THE CONTROL OF THIS PROJECT ARE LOCATED WITHIN THE HIGHWAY RIGHT-OF-WAY EXCEPT AS NOTED.
- A \$1000 COST PENALTY WILL BE ASSESSED TO THE CONTRACTOR DURING CONSTRUCTION FOR ANY SURVEY CONTROL POINTS THAT ARE DISTURBED OR DESTROYED. IF ANY MONUMENT MUST BE DISTURBED DURING CONSTRUCTION, NOTIFICATION MUST BE MADE PRIOR TO SUCH ACTION. THE CONTRACTOR SHALL INSTALL PROPER REFERENCE MARKS AND REINSTALL SAID MONUMENTS IN ACCORDANCE WITH NMSHTD SURVEY PROCEDURES.
- THE PROJECT SURVEY CONTROL SYSTEM WAS CREATED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, NAD83, CENTRAL AND WEST ZONES, REFERENCED TO THE NEW MEXICO HIGH ACCURACY REFERENCE SYSTEM (HARN) USING GPS STATIC OBSERVATION TECHNIQUES. IT WAS SUBSEQUENTLY CONVERTED TO A LOCAL PROJECT CONTROL SYSTEM USING COORDINATES AND DISTANCES SCALED TO GROUND ELEVATION ABOVE MEAN SEA LEVEL. ALL COORDINATES AND CALCULATED DISTANCES SHOWN ARE RELATIVE TO GROUND DISTANCES IN U.S. SURVEY FEET.
- FOR Q TRANSITIONS AND OFFSETS OF THE EXISTING CONSTRUCTION SEE SHEET 1-15 AND THE PLAN AND PROFILE SHEETS.
- FOR CURVE DATA INFORMATION SEE SHEETS 1-14 AND 1-15.



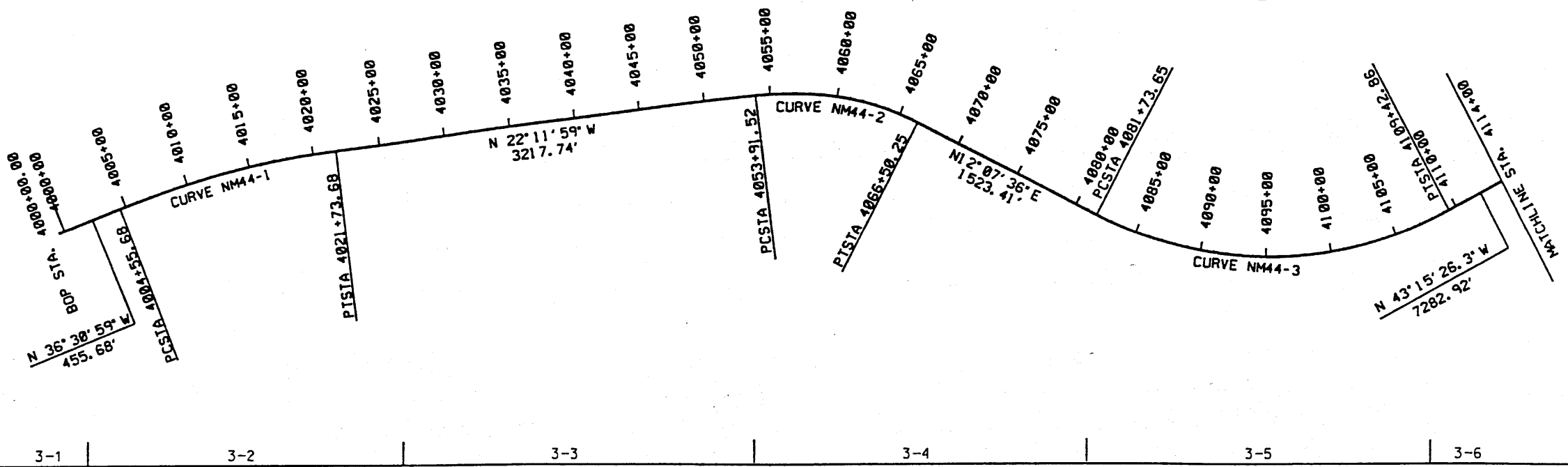
- LEGEND
- CAPPED IRON PIN SET
 - BRASS CAP ON IRON PIPE SET
 - ⊙ BRASS CAP FOUND
 - ⊠ R/W T-RAIL FOUND

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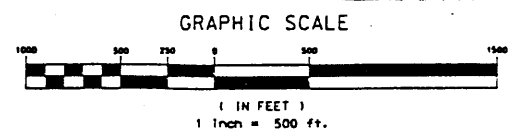
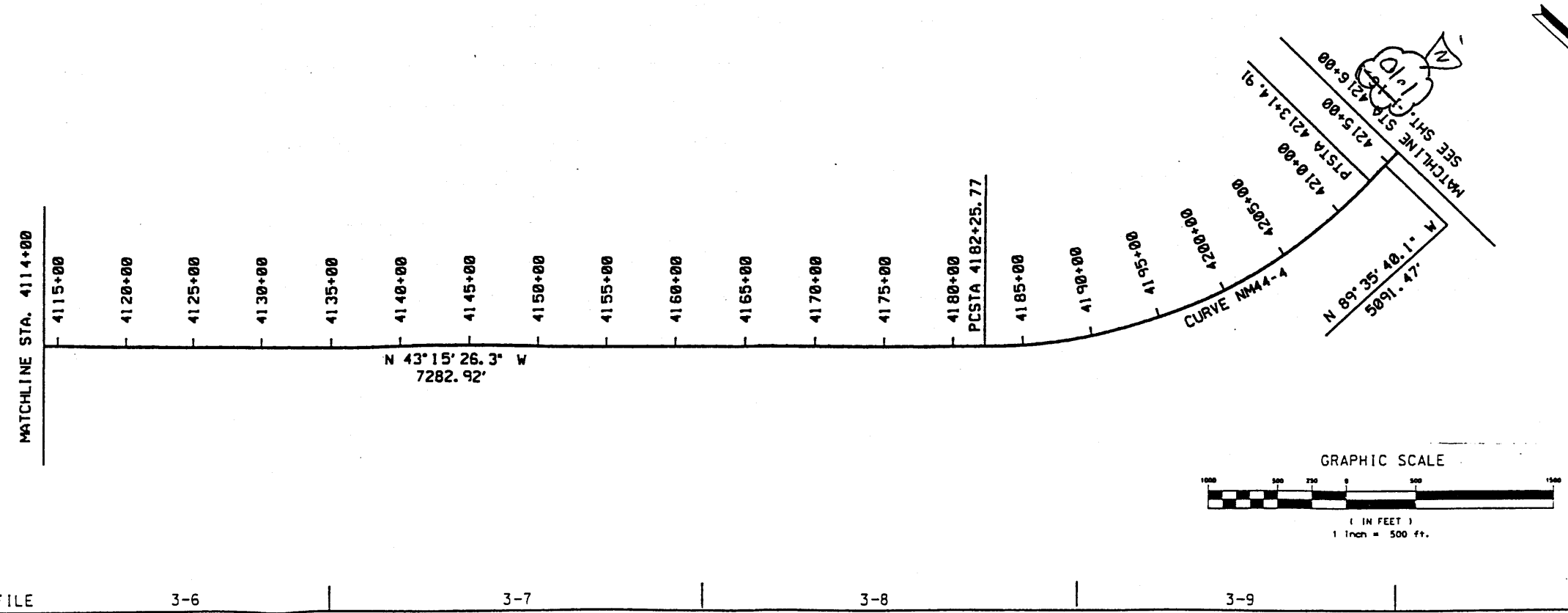
SHEET TITLE
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3786
NM 44
GEOMETRIC AND MONUMENTATION LAYOUT
DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP
WILSON & COMPANY
SCOTT F. PERKINS REGISTERED PROFESSIONAL ENGINEER
STATE OF NEW MEXICO
NO. 10272

Design File: Y:\98082-01\SECT1&2\sect1\44geometry\4442gsal.dgn
 Plot Date: 02/15/2000

PLAN & PROFILE
 SHEET REF.



PLAN & PROFILE
 SHEET REF.



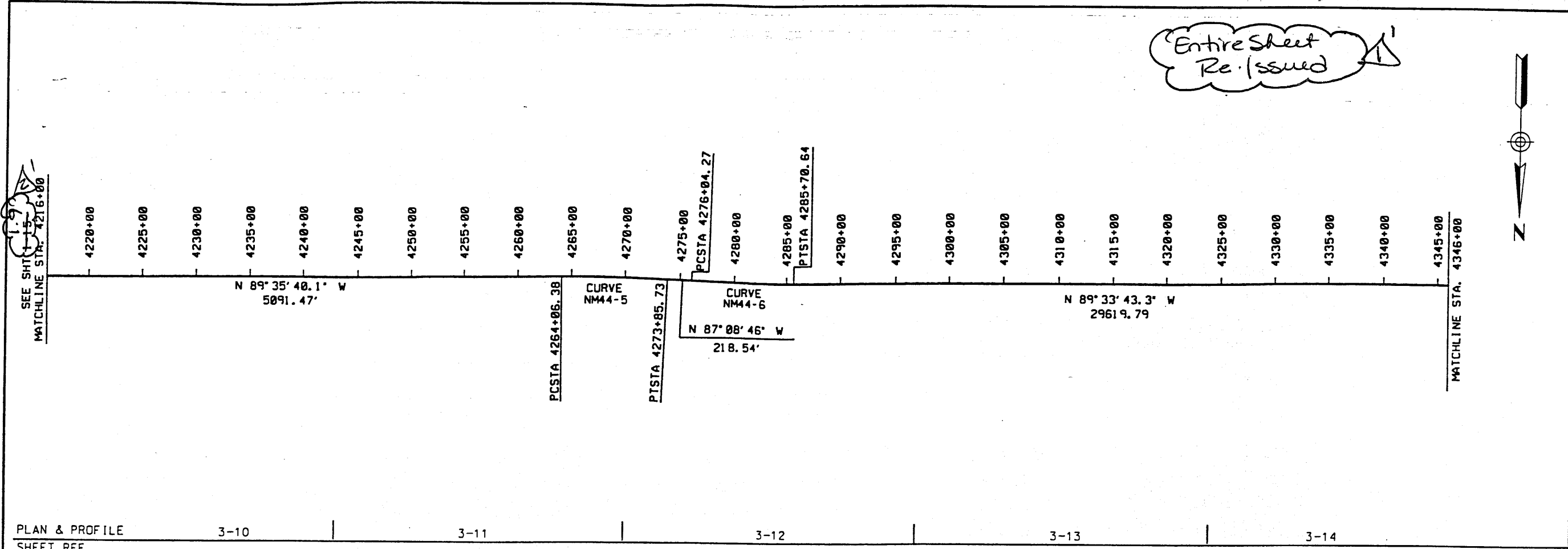
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 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
 CN 3766

WILSON & COMPANY

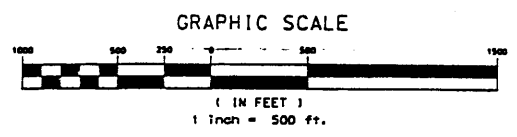
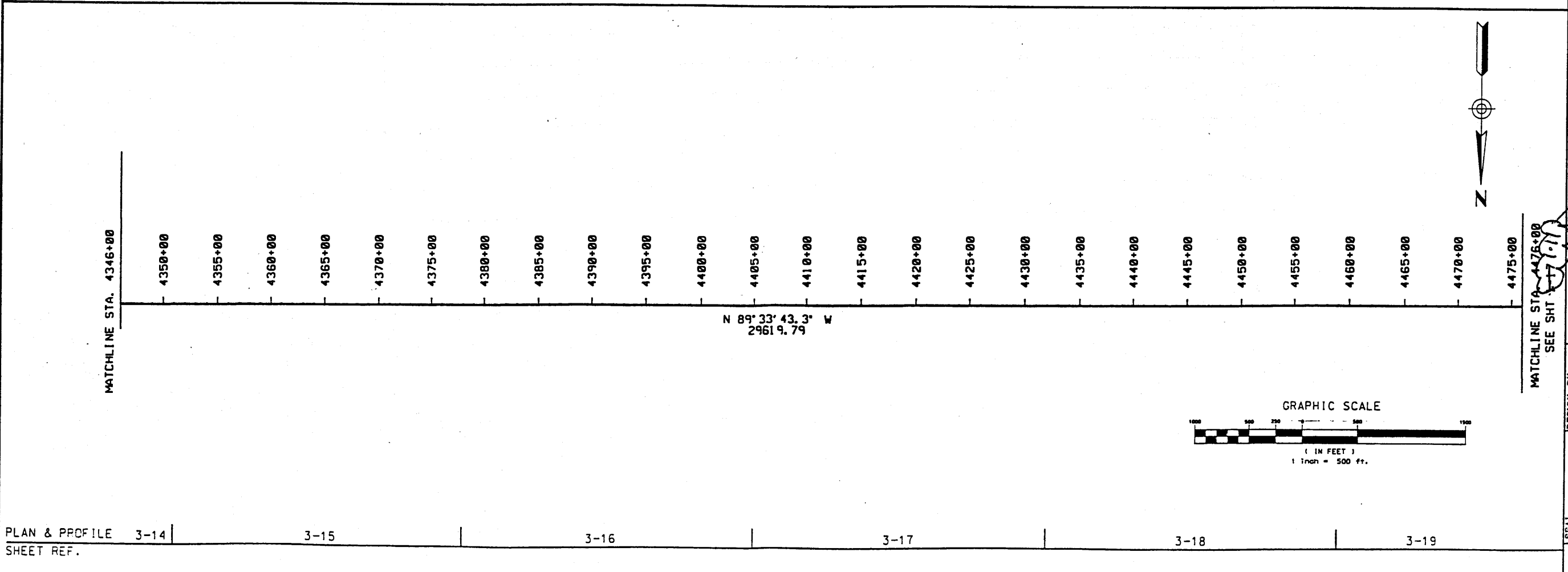
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



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 Plot Date: 02/15/2008



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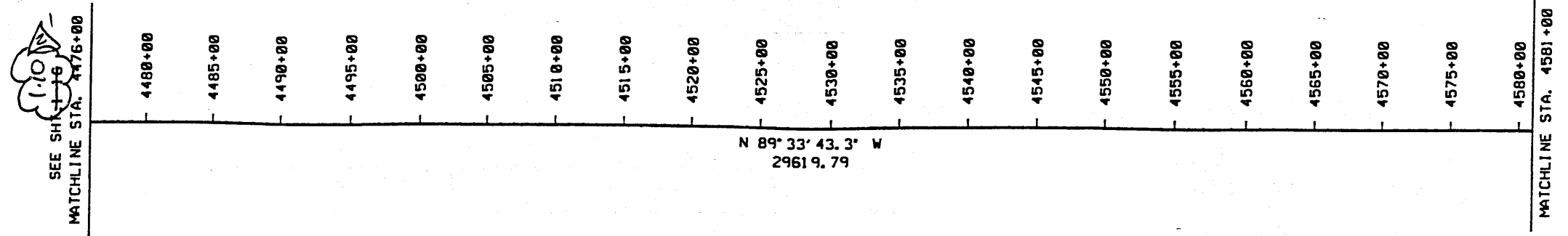
DESIGN BY: DDM DRAWN BY: STAFF CHECKED BY: SFP		SHEET TITLE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6 NM 44 NEW MEXICO PROJECT NO AC-NH-044-2(39)64 CN 3766	GEOMETRIC LAYOUT

PROJECT NO. AC.NH.044.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 1:10 Geometric Layout

NO.	REVISION	DATE	BY
1	Re-issue sheet	2.15.00	FSC DCW 002428
2 ³	Add sheet Number; Correct		
	Matchline Reference	10.28.01	FSC/FNF-0572

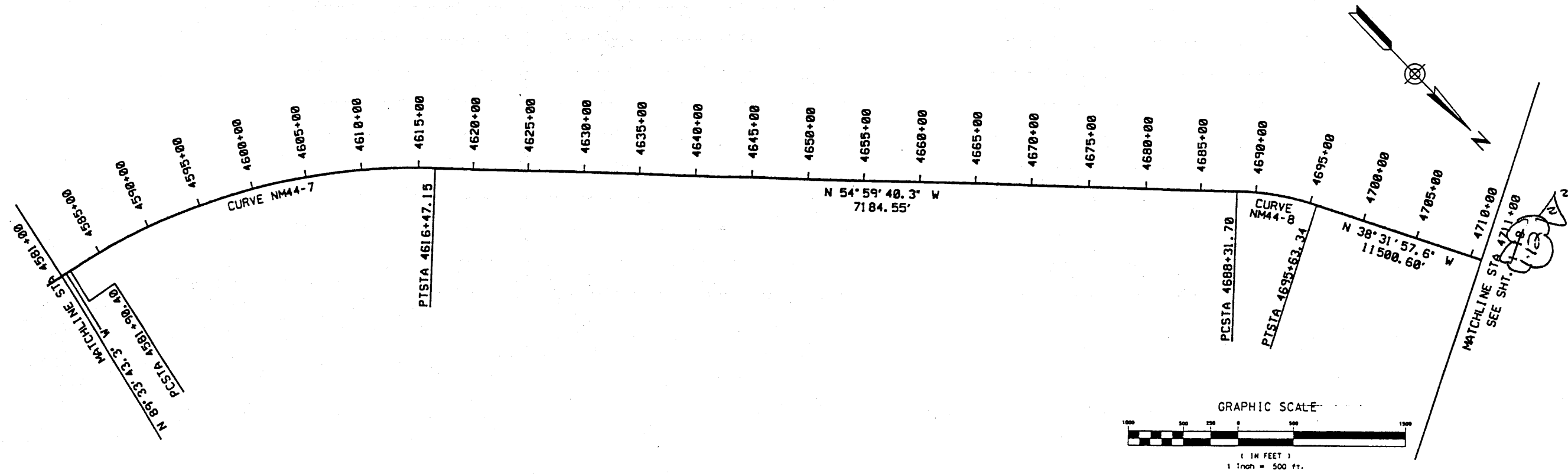
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 Plot Date: 02/15/2000

PLAN & PROFILE SHEET REF. 3-19 3-20 3-21 3-22 3-23



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PLAN & PROFILE SHEET REF. 3-23 3-24 3-25 3-26 3-27 3-28

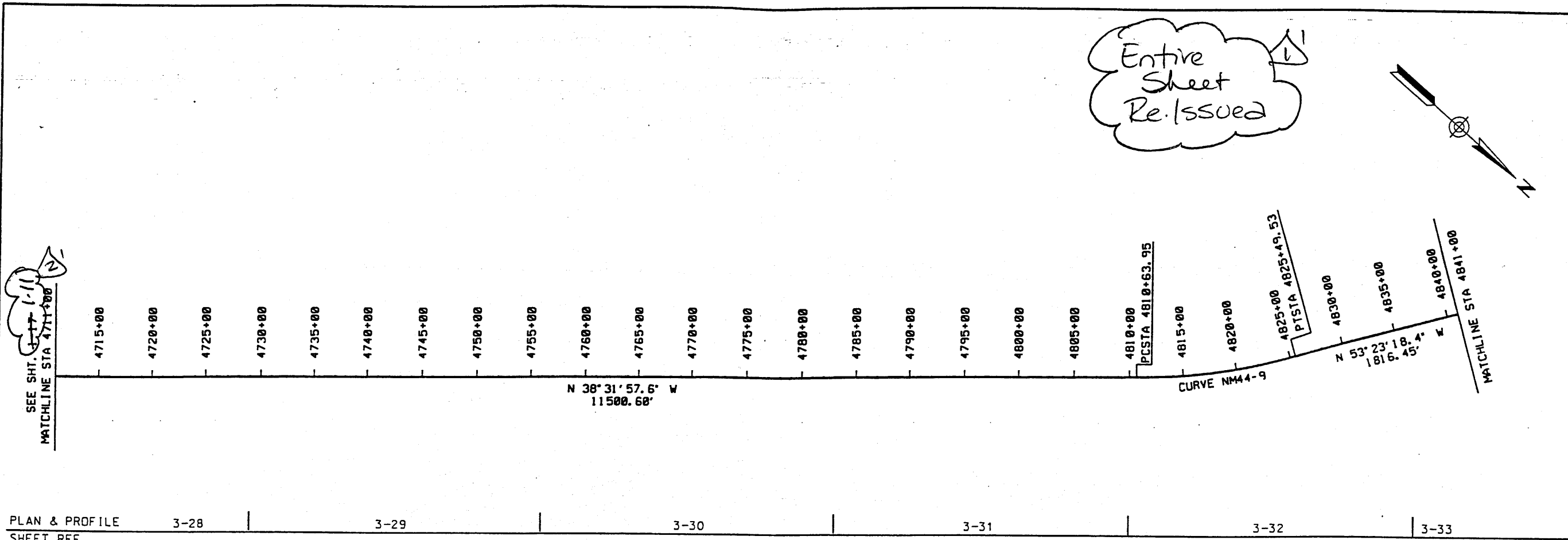


	DESIGN BY: DDM		SHEET TITLE
	DRAWN BY: STAFF		NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6
	CHECKED BY: SFP		NEW MEXICO PROJECT NO AC-NH-044-2(39)64 NM 44 CN 3788

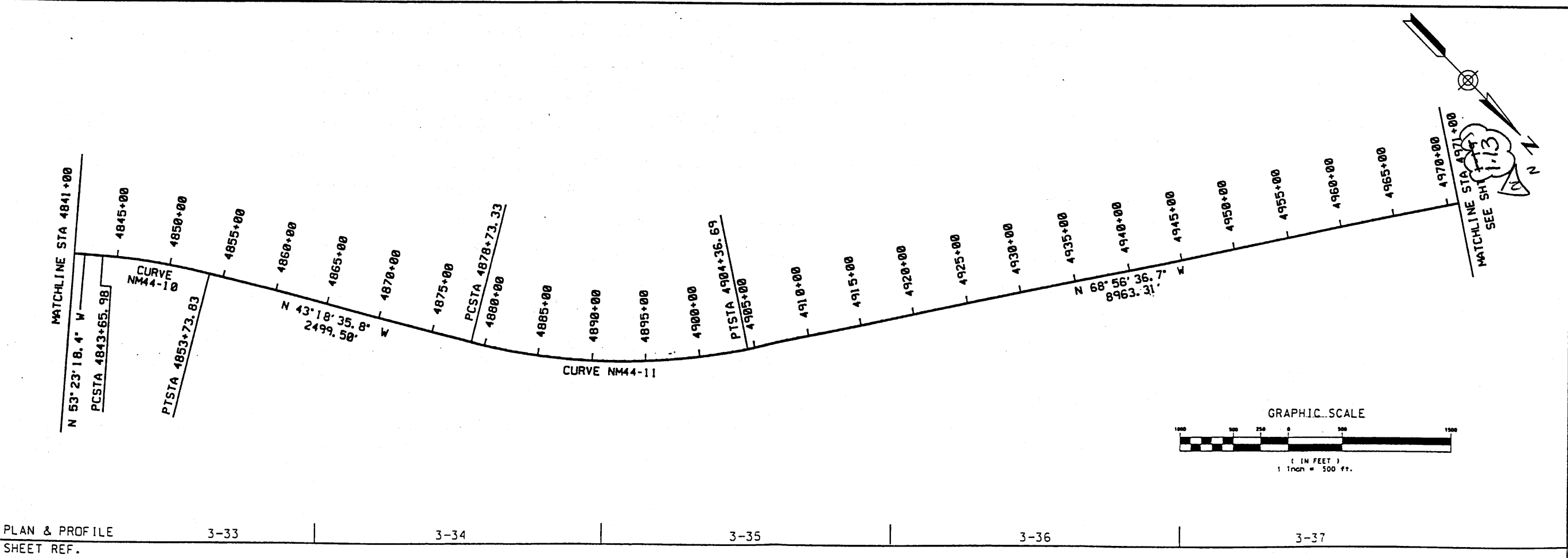
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CN NO. 3766
PACKAGE NO. 4
SHEET NO. 1.11, Geometric Layout

NO.	REVISION	DATE	BY
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2 ³	Add Sheet Number's Correct		
	MatchLine Reference	10.28.01	FSC/FUF- 0572

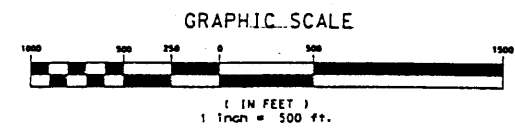
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 Plot Date: 02/15/2000



PLAN & PROFILE	3-28	3-29	3-30	3-31	3-32	3-33
SHEET REF.						



PLAN & PROFILE	3-33	3-34	3-35	3-36	3-37
SHEET REF.					



SEAL

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 F.H.W.A. REGION NO 6
 NM 44
 CN 3766

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT

WILSON & COMPANY

SCOTT F. PERKINS
 REGISTERED PROFESSIONAL ENGINEER
 NO. 10272
 STATE OF NEW MEXICO

SHEET TITLE
 GEOMETRIC LAYOUT

PLAN & PROFILE SHEET REF.

3-37

3-38

3-39

3-40

3-41

SEE SHT. 1-12
 MATCHLINE STA. 4971+00

4975+00

4980+00

4985+00

4990+00

4995+00

5000+00

5005+00

5010+00

5015+00

5020+00

PI STA 5022+00.04

5025+00

5030+00

5035+00

5040+00

5045+00

5050+00

5055+00

5060+00

EOP STA. 5063+91.89

5065+00

5070+00

5075+00

5080+00

5085+00

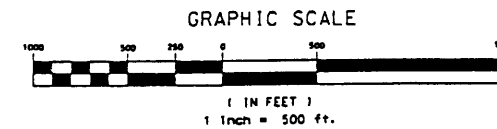
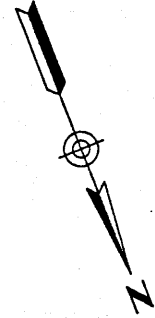
N 68° 56' 36.7" W
 8963.31'

PI STA 4994+00.00

N 68° 22' 14" W
 2800.04'

N 68° 56' 36.8" W
 4191.85'

Entire Sheet Re-issued



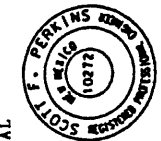
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



SEAL

Course from BOP Station 4000+00 NM44 to PC NM44-1 N 36°30'59.0" W Dist 455.68'

CURVE NM44-1			
PI STATION	4013+19.18	1831227.38 N	1430140.90 E
PC STATION	4004+55.68	1830533.38 N	1430654.73 E
CC STATION		1834624.66 N	1436180.48 E
PT STATION	4021+73.68	1832026.85 N	1429814.65 E
DELTA	= 14°19'00.0" (RT)		
TANGENT	= 863.50		
LENGTH	= 1718.00		
RADIUS	= 6875.49		
EXTERNAL	= 54.01		
CHORD	= 1713.53		
MIDDLE ORDINATE	= 53.59		
BACK TANGENT	= N 36°30'59.0" W		
AHEAD TANGENT	= N 22°11'59.0" W		
CHORD BEARING	= N 29°21'29.0" W		

Course from PT NM44-1 to PC NM44-2 N 22°11'59.0" W Dist 3.217.84

CURVE NM44-2			
PI STATION	4060+40.41	1835606.95 N	1428353.66 E
PC STATION	4053+91.52	1835006.16 N	1428598.83 E
CC STATION		1835799.99 N	1430544.09 E
PT STATION	4066+50.25	1836241.36 N	1428489.97 E
DELTA	= 34°19'35.1" (RT)		
TANGENT	= 648.89		
LENGTH	= 1258.73		
RADIUS	= 2101.00		
EXTERNAL	= 97.92		
CHORD	= 1239.99		
MIDDLE ORDINATE	= 93.56		
BACK TANGENT	= N 22°11'59.0" W		
AHEAD TANGENT	= N 12°07'36.1" E		
CHORD BEARING	= N 05°02'11.4" W		

Course from PT NM44-2 to PC NM44-3 N 12°07'36.1" E Dist 1.523.41

CURVE NM44-3			
PI STATION	4096+77.19	1839200.76 N	1429125.86 E
PC STATION	4081+73.65	1837730.77 N	1428810.00 E
CC STATION		1838332.59 N	1426009.14 E
PT STATION	4109+42.86	1840295.76 N	1428095.52 E
DELTA	= 55°23'02.5" (LT)		
TANGENT	= 1503.54		
LENGTH	= 2769.20		
RADIUS	= 2864.79		
EXTERNAL	= 370.58		
CHORD	= 2662.64		
MIDDLE ORDINATE	= 328.14		
BACK TANGENT	= N 12°07'36.1" E		
AHEAD TANGENT	= N 43°15'26.3" W		
CHORD BEARING	= N 15°33'55.1" W		

Course from PT NM44-3 to PC NM44-4 N 43°15'26.3" W Dist 7.282.91

CURVE NM44-4

PI STATION	4198+60.42	1846790.28 N	1421984.52 E
PC STATION	4182+25.77	1845599.79 N	1423104.71 E
CC STATION		1842982.23 N	1420322.87 E
PT STATION	4213+14.91	1846801.85 N	1420349.91 E
DELTA	= 46°20'13.8" (LT)		
TANGENT	= 1634.65		
LENGTH	= 3089.14		
RADIUS	= 3819.72		
EXTERNAL	= 335.08		
CHORD	= 3005.64		
MIDDLE ORDINATE	= 308.06		
BACK TANGENT	= N 43°15'26.3" W		
AHEAD TANGENT	= N 89°35'40.1" W		
CHORD BEARING	= N 66°25'33.2" W		

Course from PT NM44-4 to PC NM44-5 N 89°35'40.1" W Dist 5.091.47

CURVE NM44-5			
PI STATION	4268+96.13	1846841.35 N	1414768.82 E
PC STATION	4264+06.38	1846837.89 N	1415258.57 E
CC STATION		1869755.62 N	1415420.78 E
PT STATION	4273+85.73	1846865.74 N	1414279.69 E
DELTA	= 02°26'54.1" (RT)		
TANGENT	= 489.75		
LENGTH	= 979.35		
RADIUS	= 22,918.31		
EXTERNAL	= 5.23		
CHORD	= 979.27		
MIDDLE ORDINATE	= 5.23		
BACK TANGENT	= N 89°35'40.1" W		
AHEAD TANGENT	= N 87°08'46.0" W		
CHORD BEARING	= N 88°22'13.0" W		

Course from PT NM44-5 to PC NM44-6 N 87°08'46.0" W Dist 218.54

CURVE NM44-6			
PI STATION	4280+87.53	1846900.68 N	1413578.77 E
PC STATION	4276+04.27	1846876.62 N	1414061.42 E
CC STATION		1823986.73 N	1412920.33 E
PT STATION	4285+70.64	1846904.37 N	1413095.52 E
DELTA	= 02°24'57.4" (LT)		
TANGENT	= 483.26		
LENGTH	= 966.37		
RADIUS	= 22,918.31		
EXTERNAL	= 5.09		
CHORD	= 966.30		
MIDDLE ORDINATE	= 5.09		
BACK TANGENT	= N 87°08'46.0" W		
AHEAD TANGENT	= N 89°33'43.3" W		
CHORD BEARING	= N 88°21'14.6" W		

Course from PT NM44-6 to PC NM44-7 N 89°33'43.3" W Dist 29.619.79

GEOMETRIC LAYOUT

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



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Design File: Y:\98082-01\SECT1&2\444602.dgn
Plot Date: 02/15/2000

Course from PT NM44-6 to PC NM44-7 N 89°33'43.3" W Dist 29,619.76'

CURVE NM44-7			
PI STATION	4599+73.18	1847144.41 N	1381693.90 E
PC STATION	4581+90.40	1847130.79 N	1383476.63 E
CC STATION		1852860.20 N	1383520.42 E
PT STATION	4616+47.15	1848167.12 N	1380233.62 E
DELTA	= 34°34'03.0" (RT)		
TANGENT	= 1782.78		
LENGTH	= 3456.75		
RADIUS	= 5729.58		
EXTERNAL	= 270.95		
CHORD	= 3404.56		
MIDDLE ORDINATE	= 258.72		
BACK TANGENT	= N 89°33'43.3" W		
AHEAD TANGENT	= N 54°59'40.3" W		
CHORD BEARING	= N 72°16'41.8" W		

Course from PT NM44-7 to PC NM44-8 N 54°59'40.3" W Dist 7,184.55'

CURVE NM44-8			
PI STATION	4692+00.06	1852499.88 N	1374047.06 E
PC STATION	4688+31.70	1852288.57 N	1374348.78 E
CC STATION		1854374.38 N	1375809.58 E
PT STATION	4695+63.34	1852788.03 N	1373817.58 E
DELTA	= 16°27'42.7" (RT)		
TANGENT	= 368.36		
LENGTH	= 731.64		
RADIUS	= 2546.48		
EXTERNAL	= 26.50		
CHORD	= 729.12		
MIDDLE ORDINATE	= 26.23		
BACK TANGENT	= N 54°59'40.3" W		
AHEAD TANGENT	= N 38°31'57.6" W		
CHORD BEARING	= N 46°45'48.9" W		

Course from PT NM44-8 to PC NM44-9 N 38°31'57.6" W Dist 11,500.61'

CURVE NM44-9			
PI STATION	4818+10.93	1862368.74 N	1366187.82 E
PC STATION	4810+63.95	1861784.41 N	1366653.16 E
CC STATION		1858215.11 N	1362171.18 E
PT STATION	4825+49.53	1862814.22 N	1365588.22 E
DELTA	= 14°51'20.9" (LT)		
TANGENT	= 746.98		
LENGTH	= 1485.58		
RADIUS	= 5729.58		
EXTERNAL	= 48.49		
CHORD	= 1481.42		
MIDDLE ORDINATE	= 48.08		
BACK TANGENT	= N 38°31'57.6" W		
AHEAD TANGENT	= N 53°23'18.4" W		
CHORD BEARING	= N 45°57'38.0" W		

Course from PT NM44-9 to PC NM44-10 N 53°23'18.4" W Dist 1,816.45'

CURVE NM44-10

PI STATION	4848+71.21	1864198.85 N	1363724.61 E
PC STATION	4843+65.98	1863897.54 N	1364130.16 E
CC STATION		1868496.65 N	1367547.20 E
PT STATION	4853+73.83	1864566.48 N	1363378.05 E
DELTA	= 10°04'42.6" (RT)		
TANGENT	= 505.23		
LENGTH	= 1007.85		
RADIUS	= 5729.58		
EXTERNAL	= 22.23		
CHORD	= 1006.55		
MIDDLE ORDINATE	= 22.15		
BACK TANGENT	= N 53°23'18.4" W		
AHEAD TANGENT	= N 43°18'35.8" W		
CHORD BEARING	= N 48°20'57.1" W		

Course from PT NM44-10 to PC NM44-11 N 43°18'35.8" W Dist 2,499.50'

CURVE NM44-11			
PI STATION	4891+76.83	1867333.74 N	1360769.41 E
PC STATION	4878+73.33	1866385.25 N	1361663.54 E
CC STATION		1862455.07 N	1357494.39 E
PT STATION	4904+36.69	1867802.07 N	1359552.96 E
DELTA	= 25°38'01.0" (LT)		
TANGENT	= 1303.5		
LENGTH	= 2563.36		
RADIUS	= 5729.58		
EXTERNAL	= 146.40		
CHORD	= 2542.04		
MIDDLE ORDINATE	= 142.76		
BACK TANGENT	= N 43°18'35.8" W		
AHEAD TANGENT	= N 68°56'36.8" W		
CHORD BEARING	= N 56°07'36.3" W		

Course from PT Station 4904+36.69 NM44-11 to PI Station 4994+00.00

N 68°56'36.8" W DIST. 8963.31'

Course from PI Station 4994+00.00 to PI Station 5022+00.04

N 68°22'14.0" W DIST. 2800.04'

Course from PI Station 5022+00.04 to E.O.P. Station 5063+91.89

N 68°56'36.8" W DIST. 4191.85'

⊕ OFFSETS & TRANSITIONS	
STATION TO STATION	REMARKS
STA. 4000+00.00 TO STA. 4004+55.68	⊕ CONST. = ⊕ EXIST
STA. 4004+55.68 TO STA. 4023+40.16	⊕ CONST. TRANSITION TO 18' RT. FROM ⊕ EXIST.
STA. 4023+40.16 TO STA. 4053+91.52	⊕ CONST. 18' RT. ⊕ EXIST
STA. 4053+91.52 TO STA. 4066+50.25	⊕ CONST. TRANSITION FROM 18' RT. ⊕ EXIST. TO 15' LT. ⊕ EXIST
STA. 4066+50.25 TO STA. 4994+00.00	⊕ CONST. 15' LT. ⊕ EXIST
STA. 4994+00.00 TO STA. 5022+00.04	⊕ CONST. TRANSITION FROM 15' LT. ⊕ EXIST. TO 13' RT. ⊕ OF EXIST.
STA. 5022+00.04 TO EOP STA. 5063+91.89	⊕ CONST. 13' RT. ⊕ EXIST.

Entire Sheet Re-issued

GEOMETRIC LAYOUT

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)164
CN 3766

WILSON & COMPANY

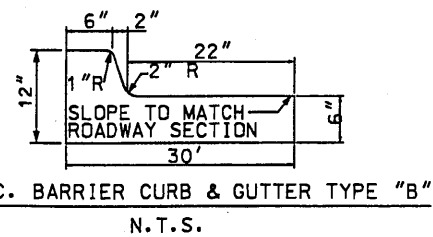
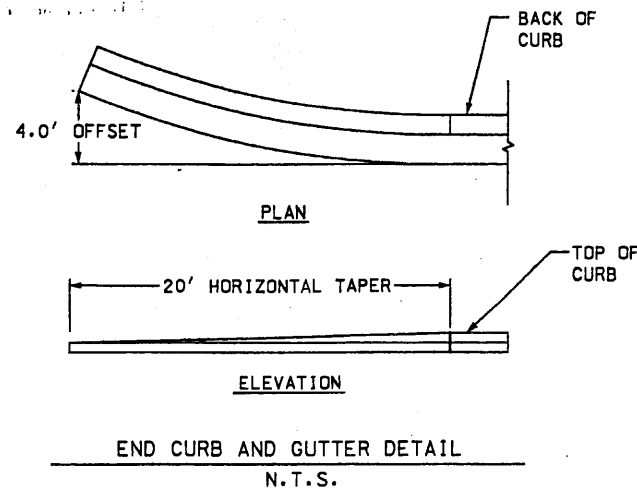
DESIGN BY: DDM

DRAWN BY: STAFF

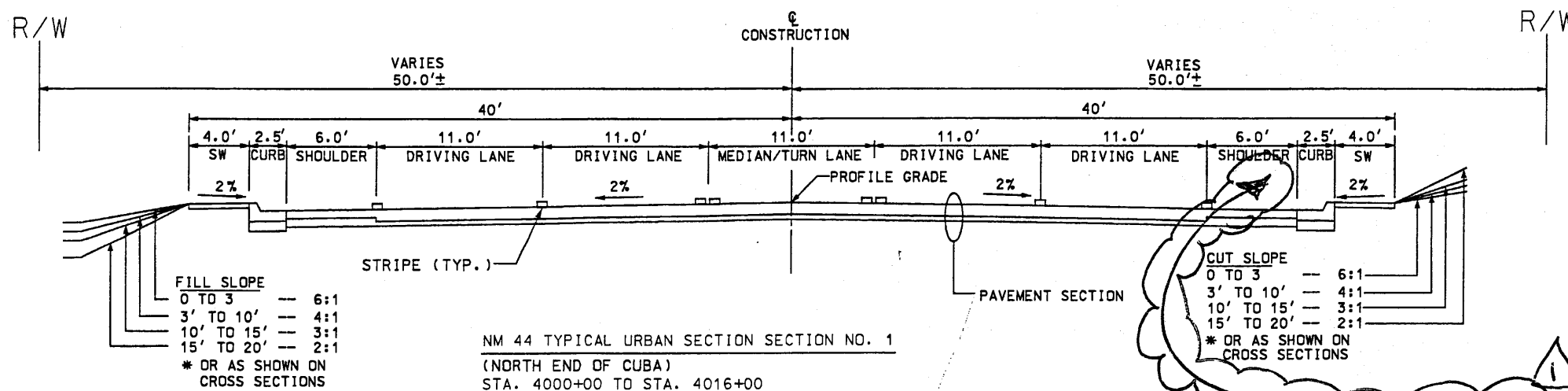
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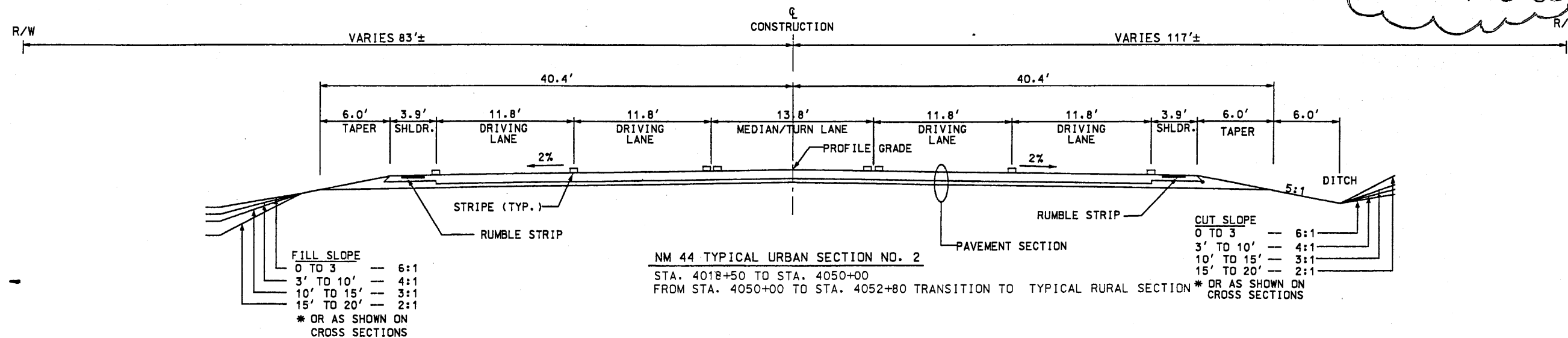


SEE STD. DWG. BSCG-001
FOR CONSTRUCTION DETAILS

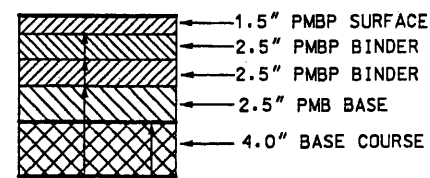


NOTE: 1) SEE STD. DWG. BSCG-001 FOR SIDEWALK JOINT DETAILS
2) STATION 4000+00 TO 4000+75
TRANSITION PAVEMENT CROSS SLOPE
FROM 1.5% TO 2.0%

Transition 6.0' to 8.0',
STA 4006+05 to
STA 4007+0525
8.0', STA 4007+0525 to
STA 4007+65
Transition 8.0' to 6.0',
STA 4007+65 to
STA 4008+85

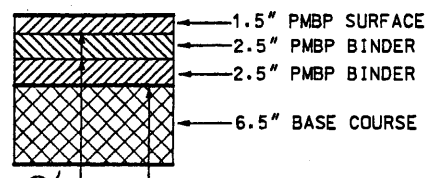


NOTE: 1) SEE STD. DWG. 44-R03
FOR RUMBLE STRIP DETAILS



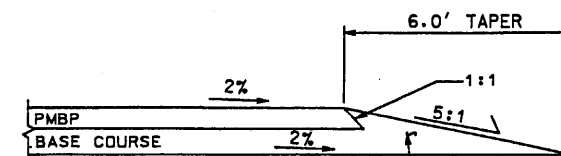
SUBGRADE PREPARATION
AS REQUIRED BY PROJECT
SPECIFICATIONS

PRIME COAT
TACK COAT



SUBGRADE PREPARATION
AS REQUIRED BY PROJECT
SPECIFICATIONS

PRIME COAT
TACK COAT



PAVEMENT TAPER FOR RECLAIMED ASPHALT
PAVEMENT R.A.P. SEAL FINAL SURFACE
WITH TACK COAT.

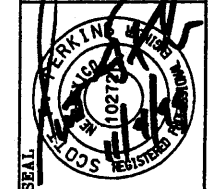
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

**WILSON
& COMPANY**

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DRAWN BY: STAFF
CHECKED BY: SFP

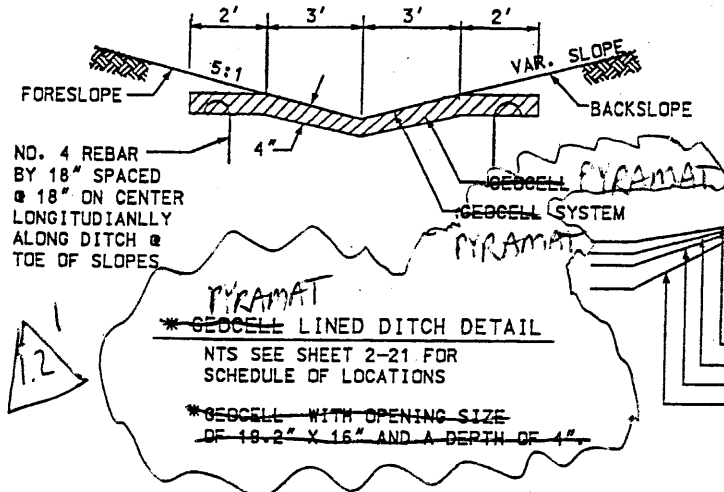
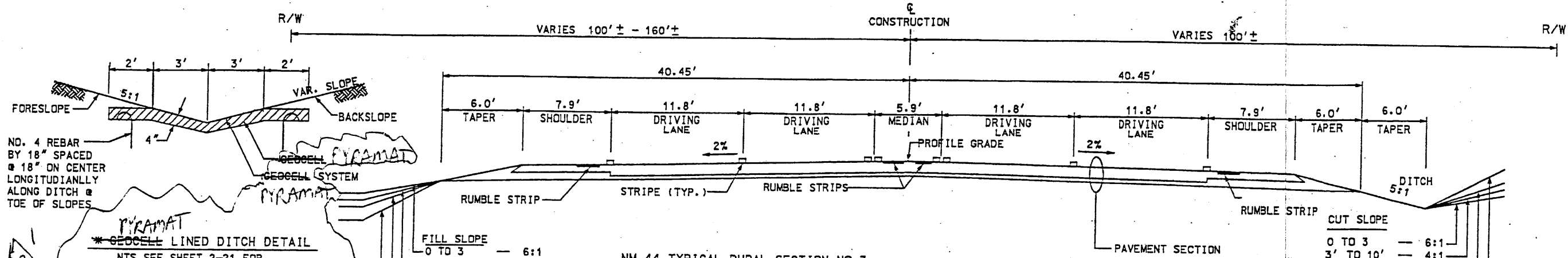


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PROJECT NO. AC NH 04. 2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 2.2, Typical Sections

NO.	REVISION	DATE	BY
Δ	Modify Urban Section 1	10.6.01	FSC/FNF-0537

64



FILL SLOPE

0 TO 3	6:1
3' TO 10'	4:1
10' TO 15'	3:1
15' TO 20'	2:1

* OR AS SHOWN ON CROSS SECTIONS

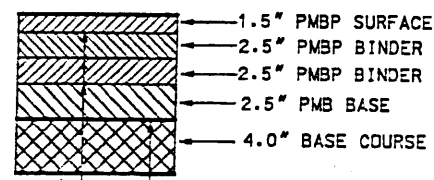
NM 44 TYPICAL RURAL SECTION NO.3
 STA. 4052+80 TO STA. 4172+07.01
 FROM STA. TO 4172+07.01 TO STA 4175+57.01
 TRANSITION TO TYPICAL SECTION NO. 4 (NM 96)
 STA. 4189+28.56 TO E.O.P STA. 5063+91.89
 FROM STA. 4337+00 TO STA. 4340+00
 SEE SHEETS 2-22 TO 2-24 FOR
 WEIGH-IN-MOTION DETAILS

See Sheet 2.4A
 for section
 STA 4054+50 to
 STA 4062+50

CUT SLOPE

0 TO 3	6:1
3' TO 10'	4:1
10' TO 15'	3:1
15' TO 20'	2:1

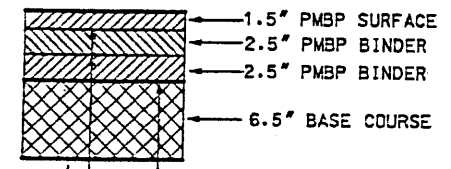
* OR AS SHOWN ON CROSS SECTIONS



SUBGRADE PREPARATION AS REQUIRED BY PROJECT SPECIFICATIONS

PRIME COAT TACK COAT

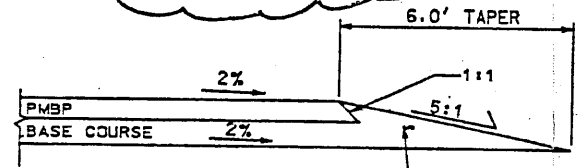
ROADWAY PAVEMENT SECTION
 NTS



SUBGRADE PREPARATION AS REQUIRED BY PROJECT SPECIFICATIONS

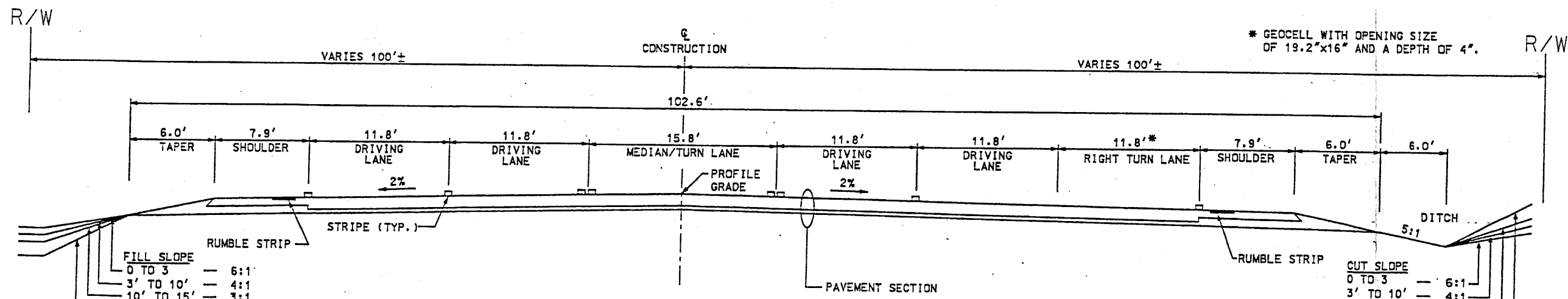
PRIME COAT TACK COAT

SHOULDER PAVEMENT SECTION
 NTS



PAVEMENT TAPER FOR RECLAIMED ASPHALT PAVEMENT (R.A.P.) SEAL FINAL SURFACE WITH TACK COAT.

TAPER DETAIL
 NTS



FILL SLOPE

0 TO 3	6:1
3' TO 10'	4:1
10' TO 15'	3:1
15' TO 20'	2:1

* OR AS SHOWN ON CROSS SECTIONS

CUT SLOPE

0 TO 3	6:1
3' TO 10'	4:1
10' TO 15'	3:1
15' TO 20'	2:1

* OR AS SHOWN ON CROSS SECTIONS

NM 44 TYPICAL RURAL SECTION AT MAJOR INTERSECTION NO.4 (NM 96)
 STA. 4175+57.01 TO STA. 4185+78.56
 FROM STA 4185+78.56 TO STA. 4189+28.56 TRANSITION TO TYPICAL SECTION NO. 3
 * STA. 4175+57.01 TO STA 4176+57.01 RIGHT TURN LANE

NOTE: 1) SEE STD. DWG. 44-R03 FOR RUMBLE STRIP DETAILS

TYPICAL SECTIONS

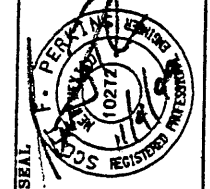
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)064
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \\sect1\sect2\44typsec\44442ts3.dgn Plot Date: 01/01/00

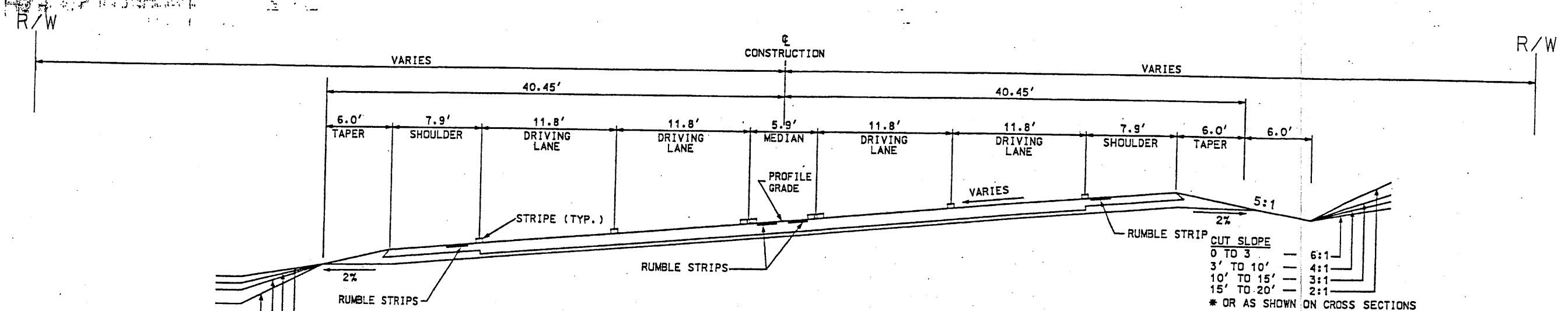
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(3)904
CN 3766

**WILSON
& COMPANY**

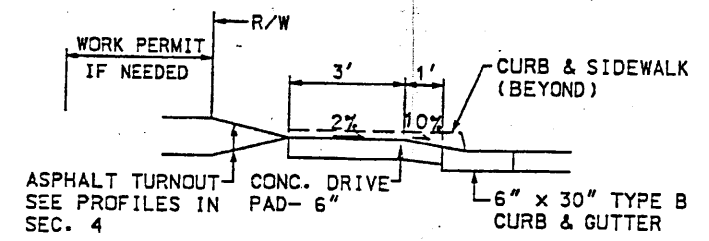
DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



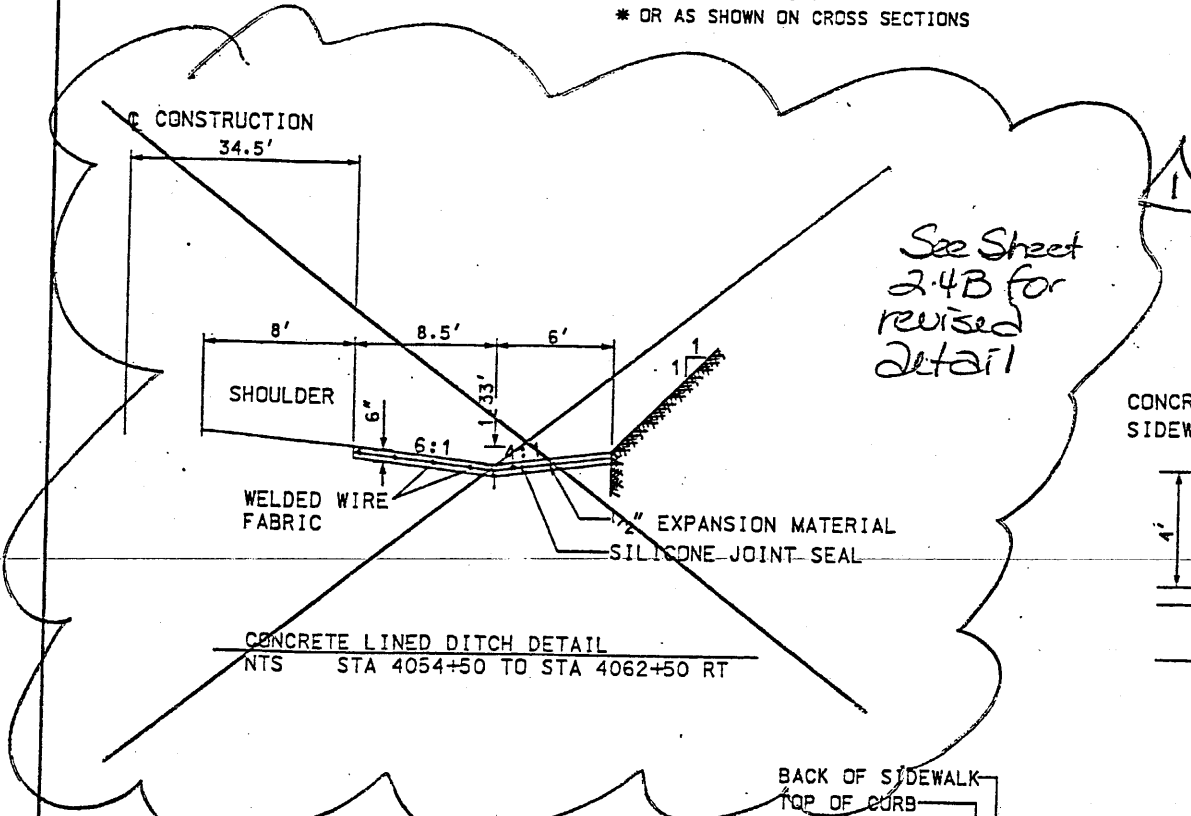
NM 44 TYPICAL SUPERELEVATION SECTION

SEE PLAN AND PROFILE SHEETS FOR SUPERELEVATION STATIONS

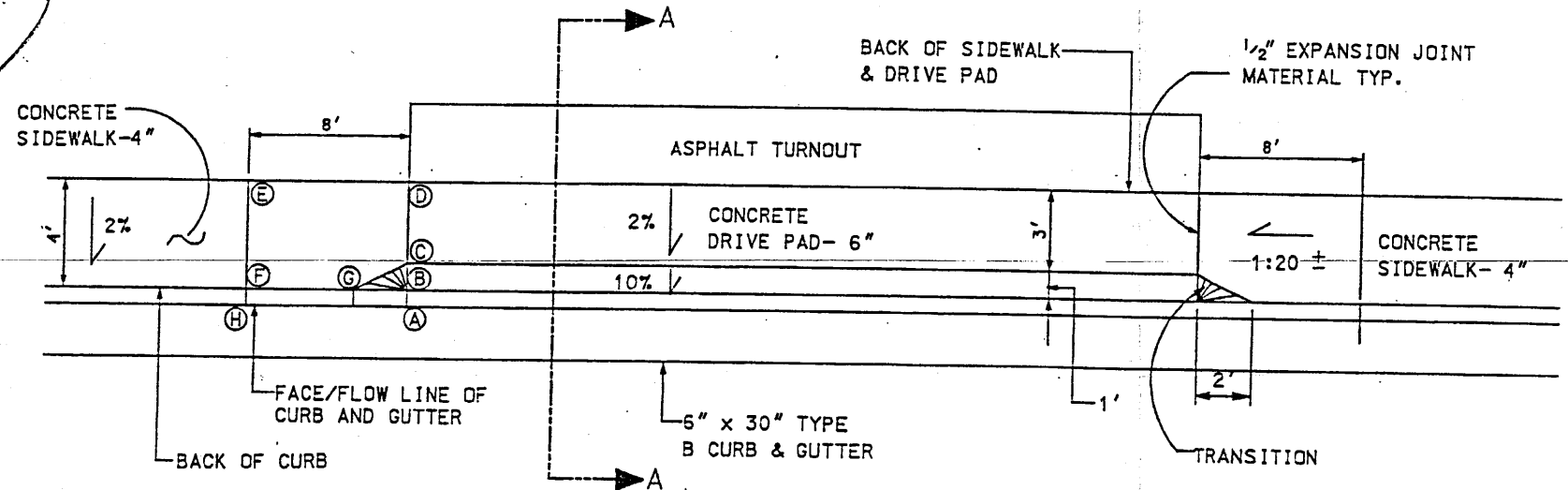
NOTE: 1) SEE STD. DWG. 44-R03 FOR RUMBLE STRIP DETAILS



SECTION A - A
SCALE N.T.S.



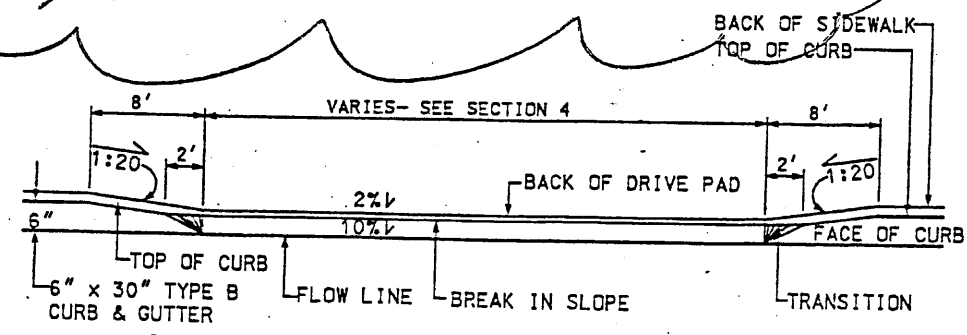
CONCRETE LINED DITCH DETAIL
NTS STA 4054+50 TO STA 4062+50 RT



SIDEWALK/CONCRETE DRIVE PAD TRANSITION
SCALE: N.T.S.

POINT	ELEVATION (IN.)
A	0.00
B	0.80
C	2.00
D	2.75
E	7.00
F	6.00
G	2.81
H	0.00

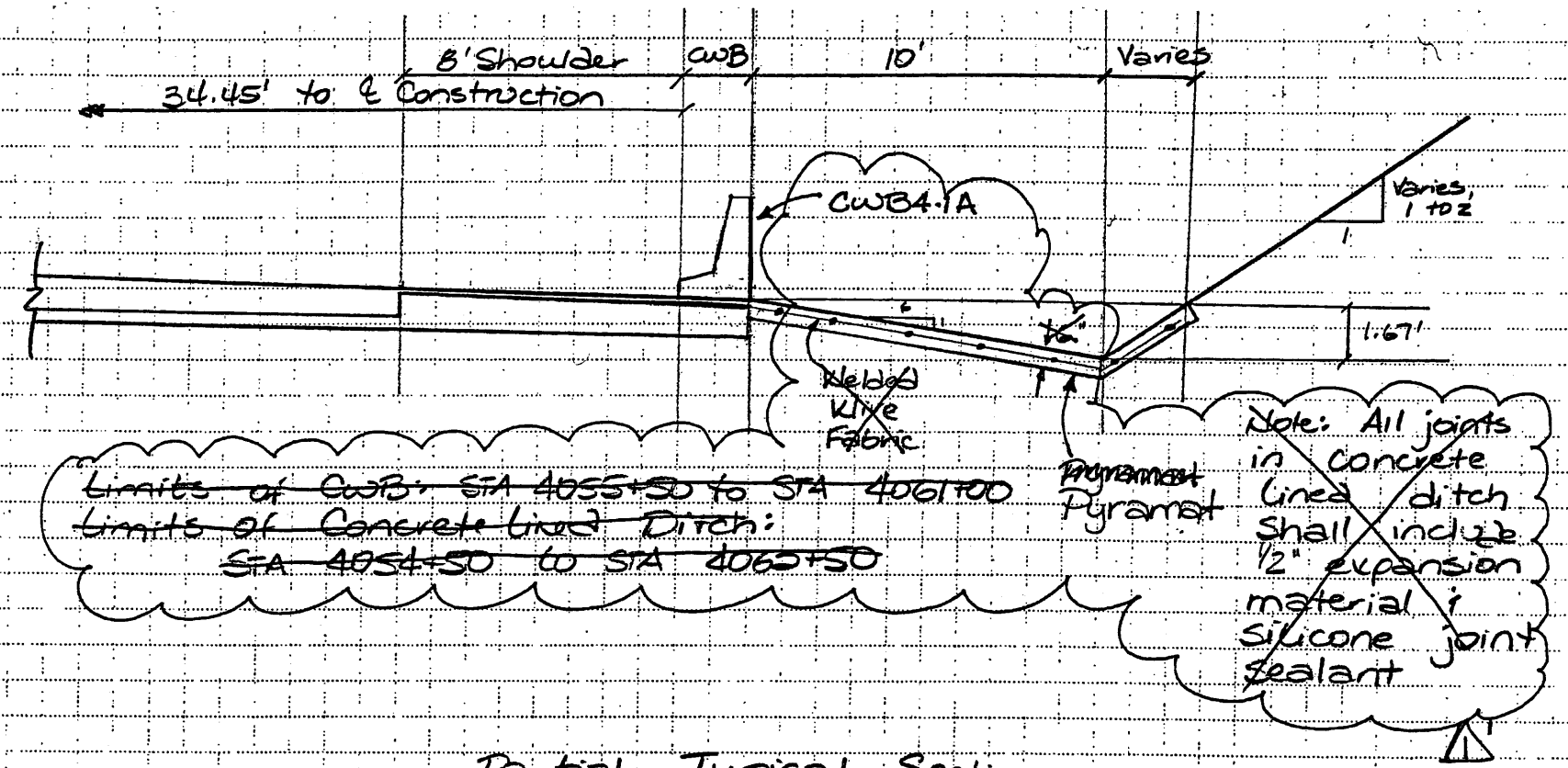
- NOTES:
- THE ABOVE POINTS ARE PROVIDED TO AID THE CONTRACTOR IN BUILDING THE DRIVE PAD TRANSITION TO SIDEWALK.
 - POINTS A & H ARE REFERENCE POINTS AT THE FLOWLINE OF THE CURB AND GUTTER. ELEVATIONS DO NOT REFLECT THE ROADWAY PROFILE.
 - THE CONTRACTOR SHALL VERIFY ALL POINTS WITH THE PROJECT MANAGER PRIOR TO BUILDING. SIDEWALK AND DRIVE PAD SLOPES SHALL MEET ADA GUIDELINES.



CURB LINE ELEVATION
VERTICAL SCALE EXAGGERATED

Design File: 32-01\sect1&2\sect2\44typsec\44442tet.dgn Plot Date: 03/99

NUM 44
AC-NH-044.2(39)44
CN 3766



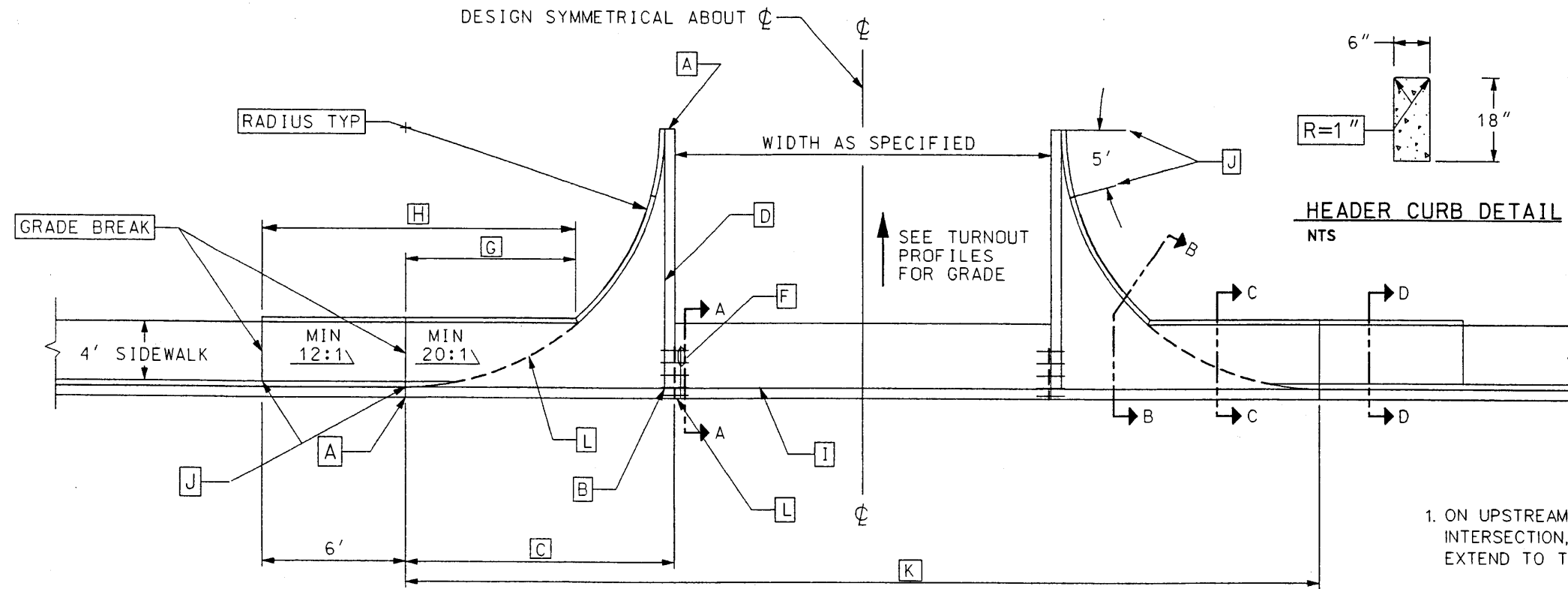
~~Limits of CWB: STA 4055+50 to STA 4061+00~~
~~Limits of Concrete lined Ditch:~~
~~STA 4054+50 to STA 4062+50~~

Note: All joints
 in Concrete
 lined ditch
 shall include
 1/2" expansion
 material &
 silicone joint
 sealant

Partial Typical Section
 STA 4054+50 to STA 4062+50

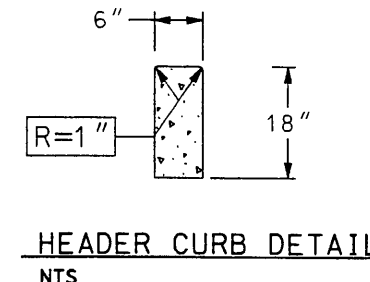
New Sheet
 12.6.00
 FSC/FNF-0240

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 Plot Date: 27 MAY 99



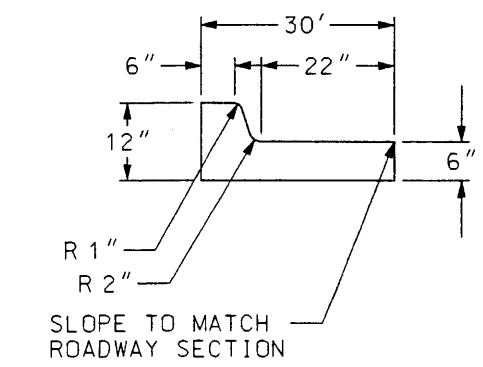
VALLEY GUTTER/WHEELCHAIR RAMP DETAIL

NTS



HEADER CURB DETAIL

NTS



CONCRETE BARRIER CURB AND GUTTER TYPE "B"

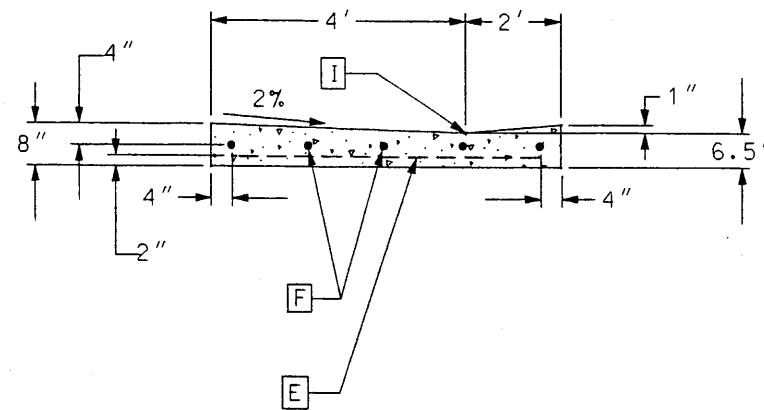
NTS

GENERAL NOTES

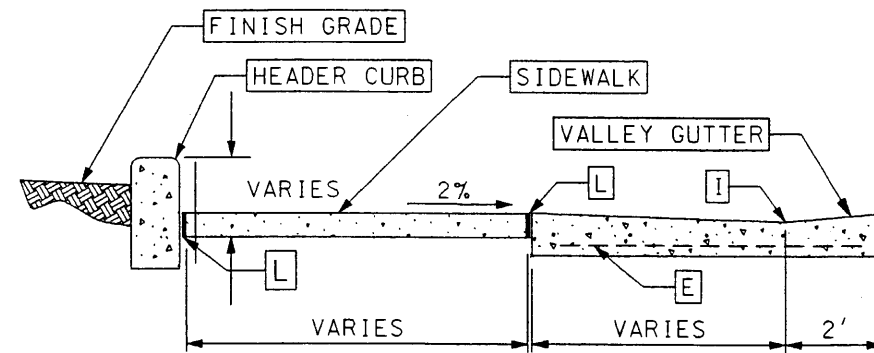
1. ON UPSTREAM AND DOWNSTREAM ENDS OF THE INTERSECTION, VALLEY GUTTER CONSTRUCTION SHALL EXTEND TO THE END OF RETURNS.
2. THE VALLEY GUTTER TO BE REINFORCED WITH 6" X 6" X 6 GA WIRE MESH.
3. INVERT OF VALLEY GUTTER TO EXTEND FROM FLOWLINE OF UPSTREAM CURB RETURN TO FLOWLINE OF DOWNSTREAM CURB RETURN.

CONSTRUCTION NOTES

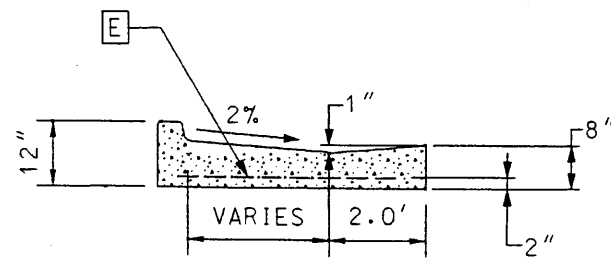
- A. END OF CURB RETURN.
- B. INTERSECTION OF FLOWLINES
- C. VALLEY GUTTER (CURB RETURN FILLET)
- D. PROJECTED FLOWLINE OF 1.5" INVERT, SEE NOTE 1
- E. 6" X 6" X 6 GA WIRE MESH.
- F. NO. 4 BARS 3.0' LONG AT 16" O.C.
- G. LENGTH VARIES PER RADIUS OF TURNOUT.
- H. CONSTRUCT HEADER CURB.
- I. THEORETICAL FACE OF CURB OR FLOWLINE.
- J. TRANSITION HEIGHT OF CURB FROM 6" TO 0".
- K. LIMITS OF VALLEY GUTTER.
- L. EXPANSION JOINT, 0.5" THICK.



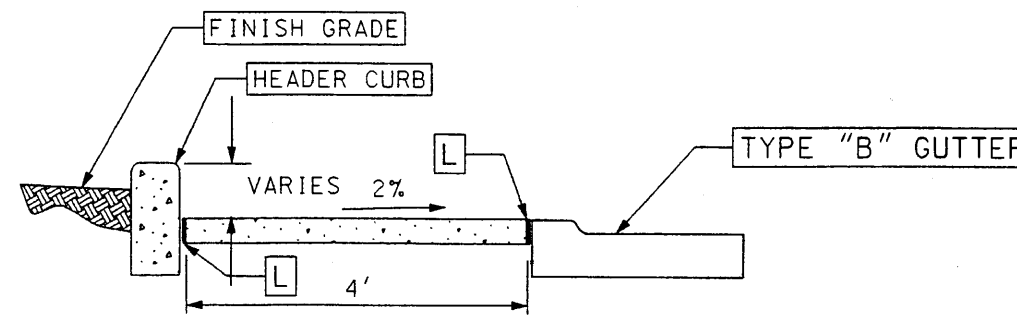
SECTION A-A
(VALLEY GUTTER)
NTS



SECTION C-C
NTS



SECTION B-B
NTS



SECTION D-D
NTS

SHEET TITLE

**CURB AND GUTTER
DETAILS**

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 PROJECT NO AC-NH-044-2(39)64
 CN 3766

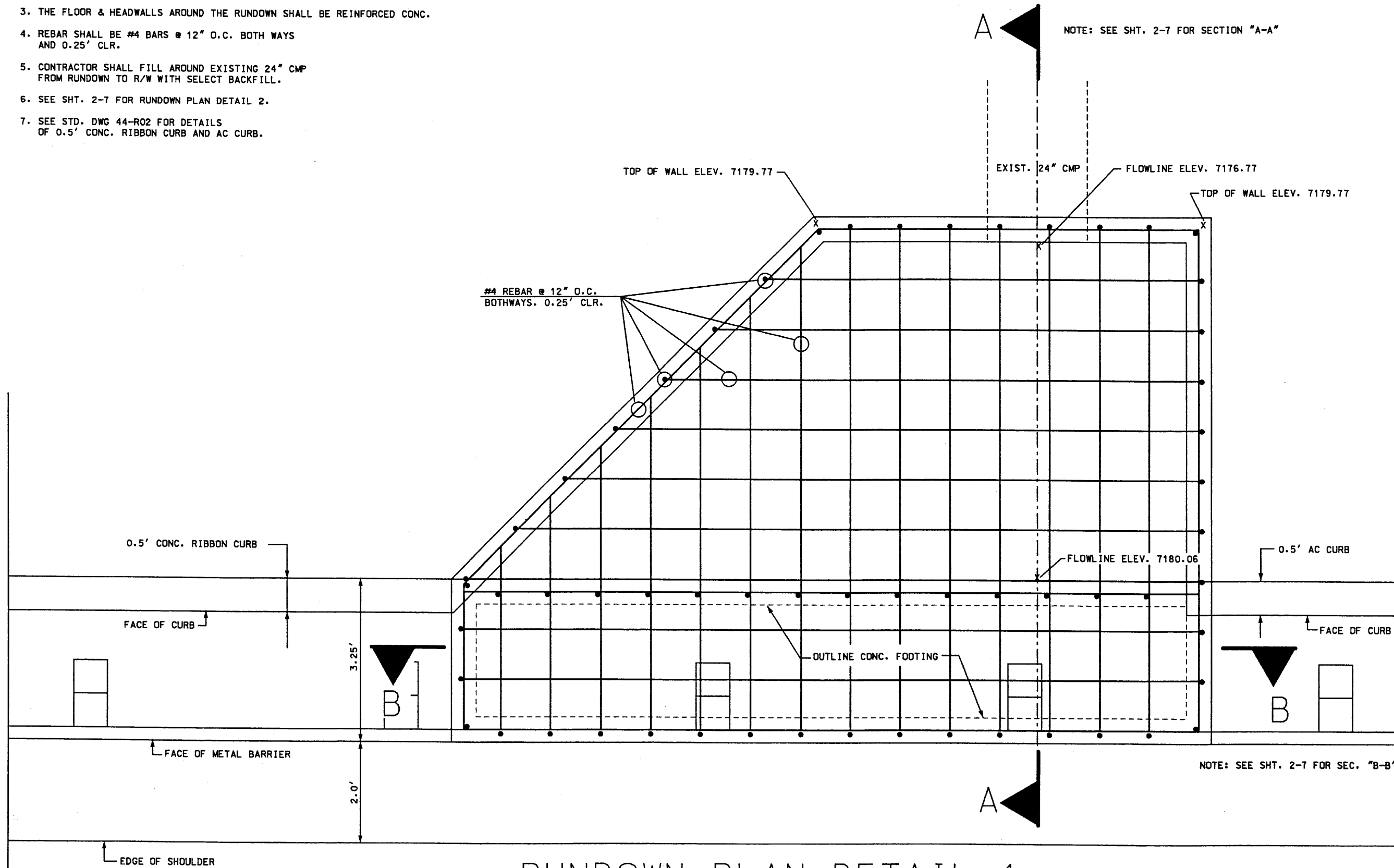
**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



GENERAL NOTES:

1. HEADWALL VARIES FROM 3' HIGH @ PIPE INLET TO 0.5' HIGH @ 3.25' BEHIND FACE OF METAL BARRIER.
2. THE 6" SLAB FROM THE FACE OF METAL BARRIER TO 3.25' BEHIND THE METAL BARRIER SHALL HAVE A 6" WIDE x1' DEEP REINFORCED FOOTING COMPLETE ALL AROUND.
3. THE FLOOR & HEADWALLS AROUND THE RUNDOWN SHALL BE REINFORCED CONC.
4. REBAR SHALL BE #4 BARS @ 12" O.C. BOTH WAYS AND 0.25' CLR.
5. CONTRACTOR SHALL FILL AROUND EXISTING 24" CMP FROM RUNDOWN TO R/W WITH SELECT BACKFILL.
6. SEE SHT. 2-7 FOR RUNDOWN PLAN DETAIL 2.
7. SEE STD. DWG 44-R02 FOR DETAILS OF 0.5' CONC. RIBBON CURB AND AC CURB.



RUNDOWN PLAN DETAIL-1

SCALE: 1"=1'

SHEET TITLE

RUNDOWN DETAILS FOR
STA. 4253+66.45 - RT.

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

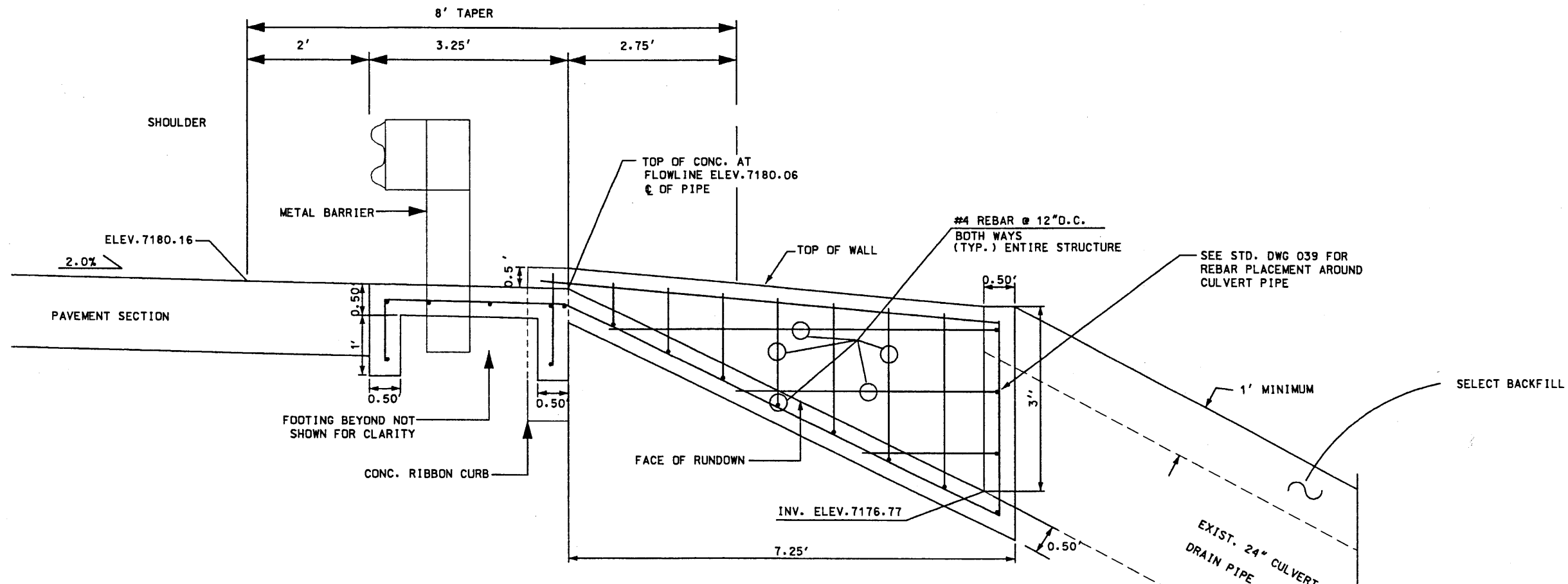
**WILSON
& COMPANY**

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



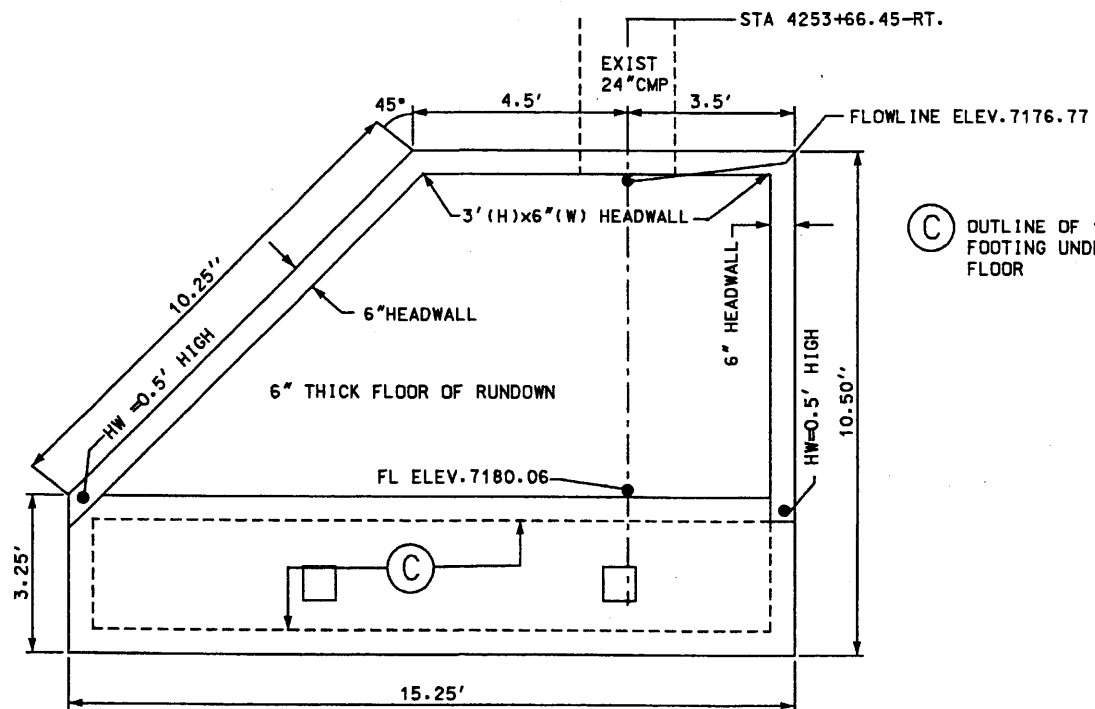
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Plot Date: 01 JUN 99

Design File: x:\public\projects\98082-01\sect1&2\44miscqty\37662mq01.dgn
 Plot Date: 01 JUN 99



SECTION "A-A"

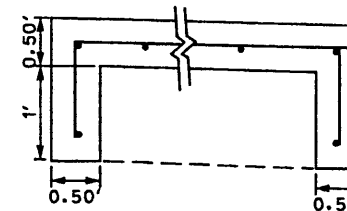
SCALE: 1"=1'
 NOTE: SEE SHT. 2-6 FOR DETAIL VIEW-1



RUNDOWN PLAN DETAIL - 2

SCALE: 1"=2'

(C) OUTLINE OF 1' DEEP x 6" WIDE FOOTING UNDER 6" RUNDOWN FLOOR



SECTION "B-B"

SCALE: 1"=1'

SHEET TITLE

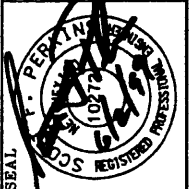
RUNDOWN DETAILS FOR
 STA. 4253+66.45 - RT.

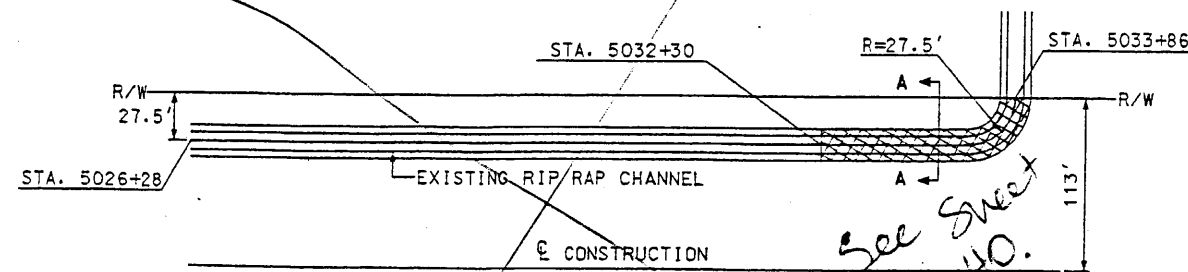
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)84
 CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP





DRAINAGE CHANNEL
STA. 5032+30 TO STA. 5033+86

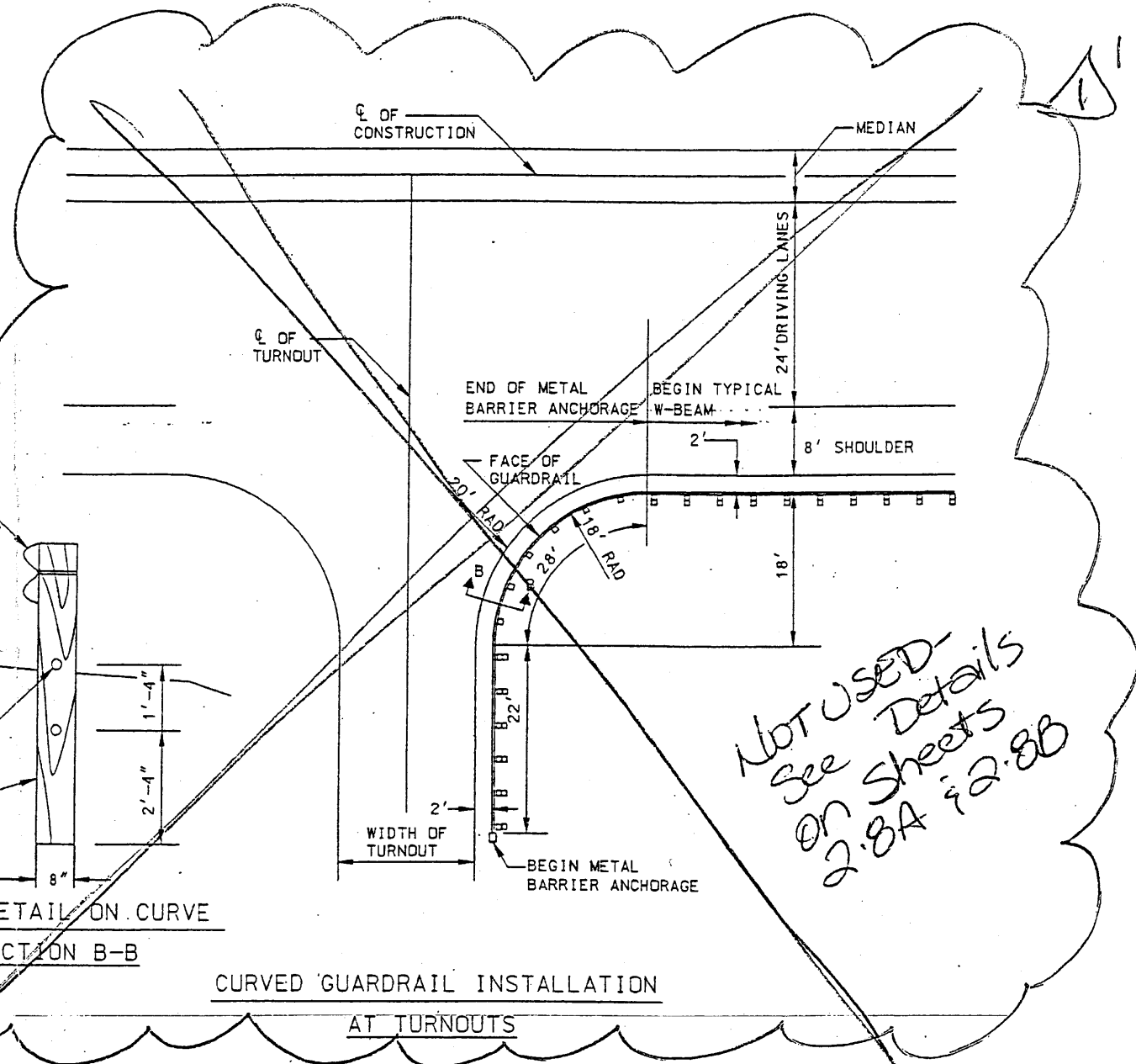
CONSTRUCTION NOTES:

1. REMOVE EXISTING RIP RAP CHANNEL FROM STA. 5032+30 LT TO STA. 5033+86/LT.
2. CONSTRUCT 5" THICK CONCRETE LINED CHANNEL PER SECTION A-A FROM STA. 5032+30 LT. TO STA. 5033+86 LT. TIE EXISTING RIP RAP INTO CHANNEL WITH HOOK BOLTS AT 1'-0" O.C. (SEE STD. DWG. EC-61).
3. CLEAN SILT OFF EXISTING RIP RAP CHANNEL.
4. REPAIR AND REBUILD EARTH BERM FROM STA. 5026+28 LT. TO STA. 5034+00 LT.

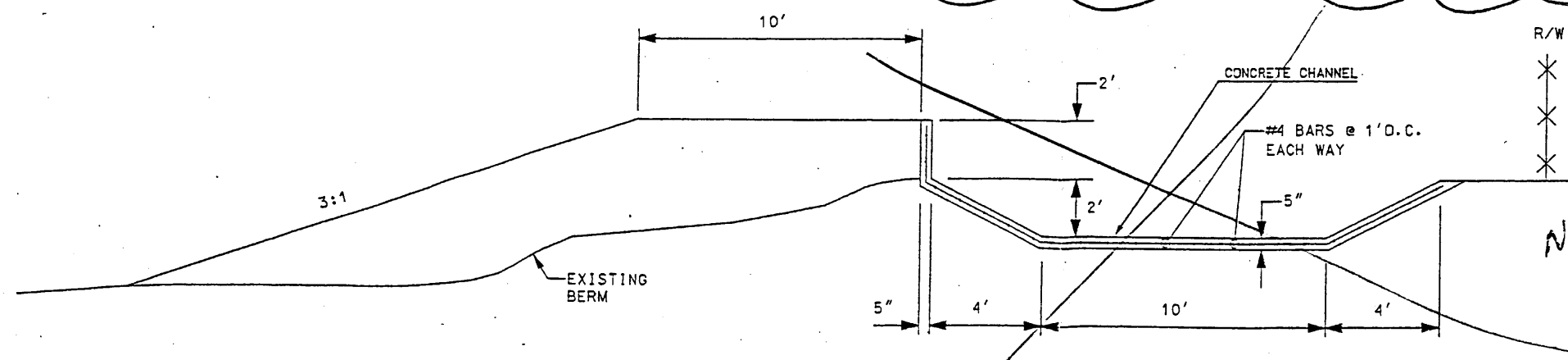
SEE 44-R02 FOR METAL BARRIER DETAILS

3-1/2" DIA. HOLE CENTERED IN POST
6"x8"x6' WOOD POST

POST DETAIL ON CURVE
SECTION B-B



CURVED GUARDRAIL INSTALLATION
AT TURNOUTS



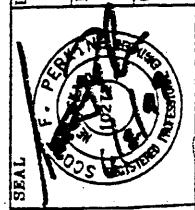
SECTION A-A

NOT DONE
SEE SHEET 3-40
FOR VE ASBUILTS

SHEET TITLE
MISCELLANEOUS DETAILS
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6
NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

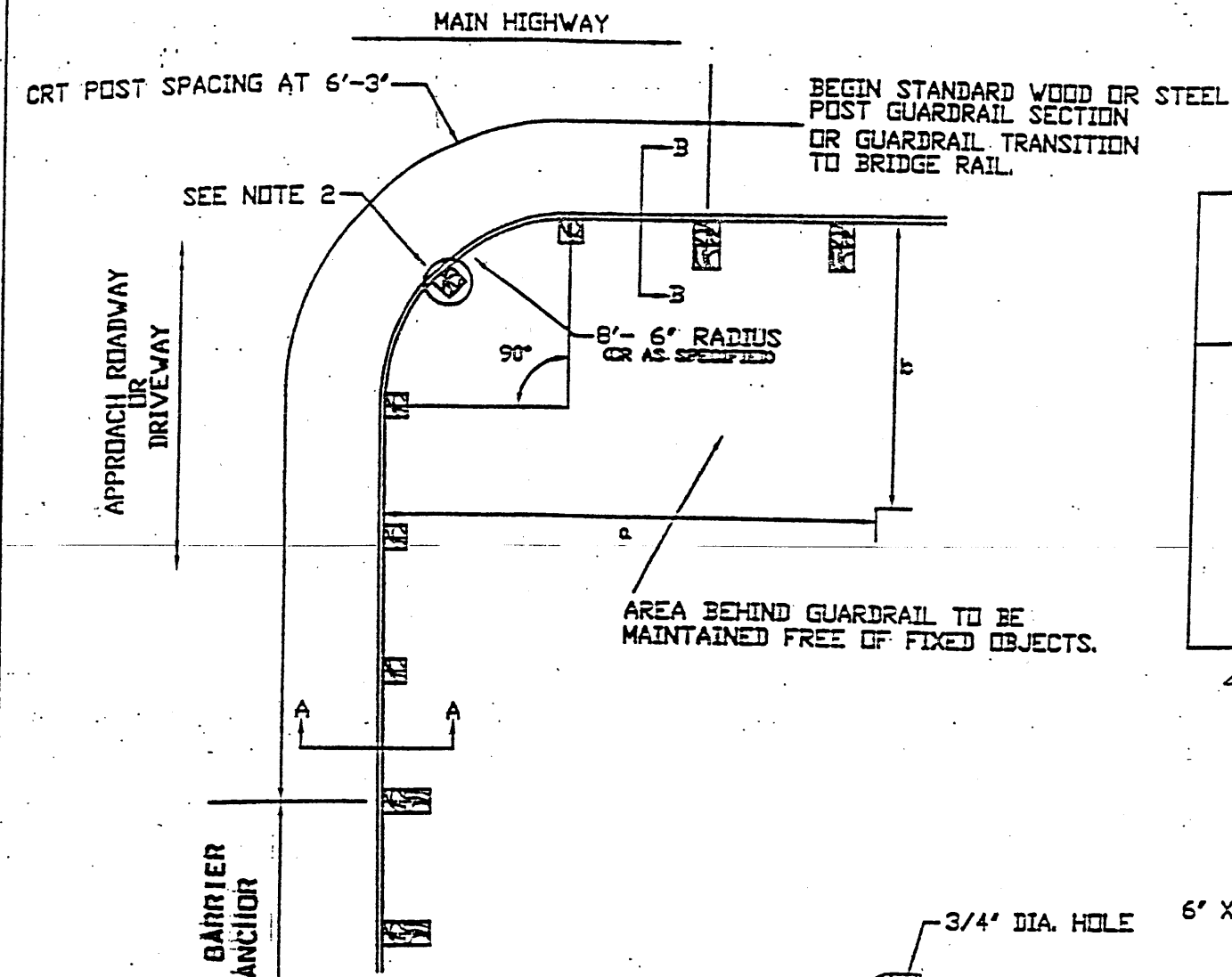
WILSON & COMPANY

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



Design File: x:\public\projects\98082-01\sect1&2\4\misc\trf\miscdet.dgn
Plot Date: 01 JUN 99

FAYAT RICHY NO. 6	SHEET NO.
NEW MEXICO PROJECT NO.	

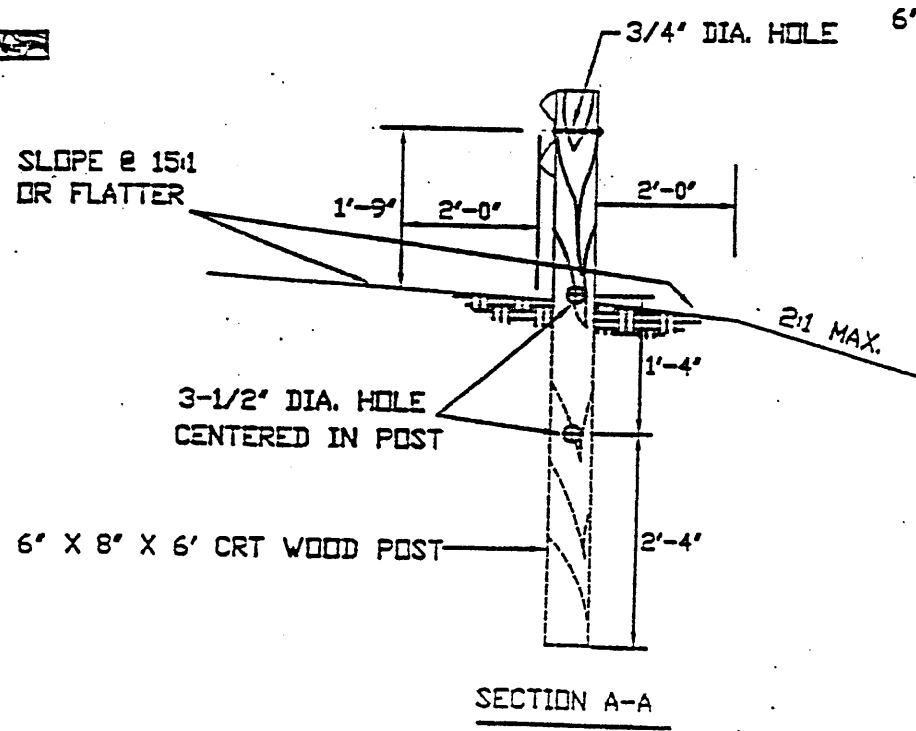


RADIUS	NO. OF CRT POSTS	REQUIRED AREA FREE OF FIXED OBJECTS
		a X b
8'-6"	5	25' X 15'
17'	6	30' X 15'
25'-6"	8	40' X 20'
35'	11	50' X 20'

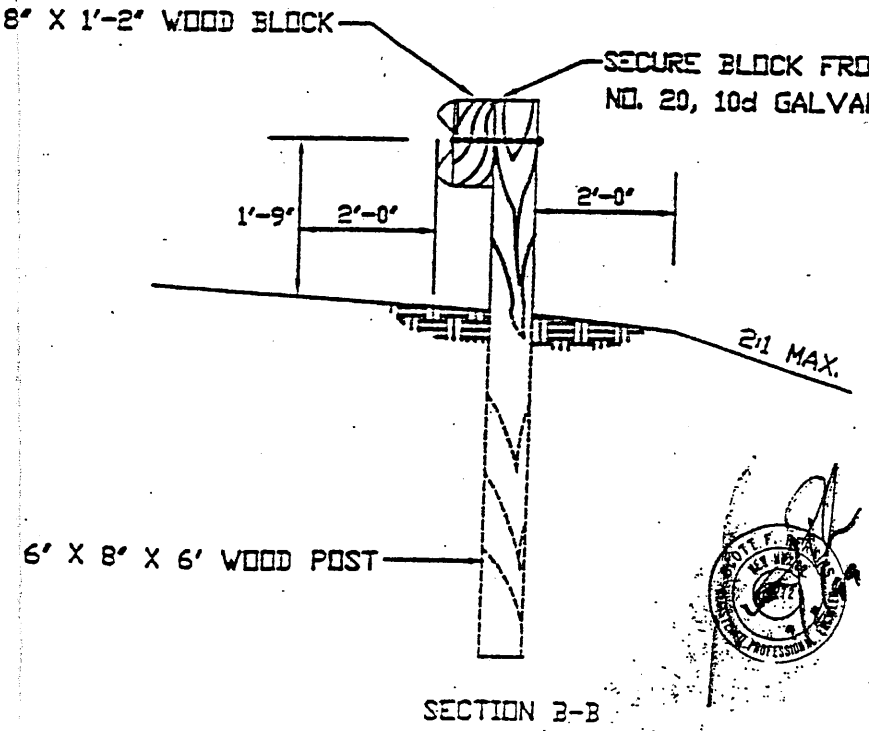
43'-6" 13

- NOTES**
1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE NEW MEXICO 44 CONTRACT
 2. THE RAIL IS NOT BOLTED TO THE CRT POST AT THE CENTER OF THE NOSE FOR THE 8'-6" RADIUS INSTALLATION.
 3. SEE SERIALS M-21-77C AND M-21-62 FOR V-BEAM GUARDRAIL.
 4. NO WASHERS ARE USED ON THE 5/8" BUTTON HEAD BOLTS CONNECTING THE RAIL TO THE CRT POSTS.
 5. THE CURVED GUARDRAIL SECTION SHALL BE SHOP BENT.
 6. THE SLOPE IN FRONT OF THE INSTALLATION SHOULD NOT EXCEED 15:1.

BEGIN STANDARD METAL BARRIER SECTION OR APPROVED ANCHOR



SECTION A-A



SECTION B-B

6			
5			
4			
3			
2			
1			
NO.	DESCRIPTION	DATE	BY
REVISIONS OR CHANGE NOTICES			
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT			
CURVED GUARDRAIL INSTALLATION			
SERIAL	SCALE 1/4"		
N.M.P.	SHEET 1 OF 2	SHEET	

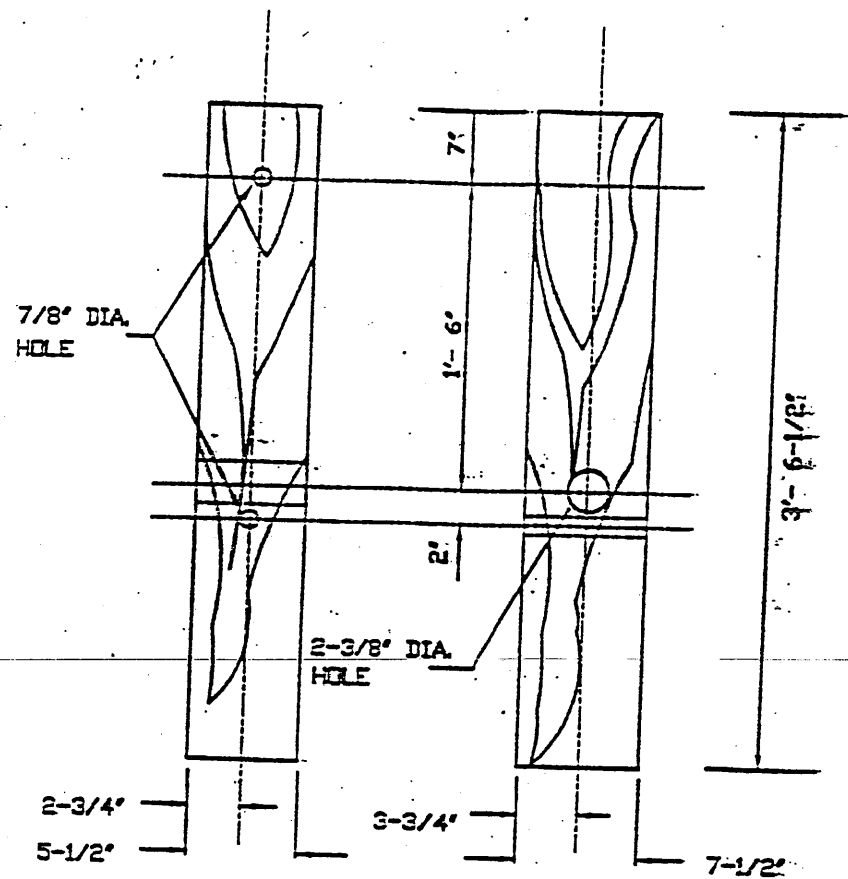


CHECKED BY
DRAWN BY
DESIGNED BY

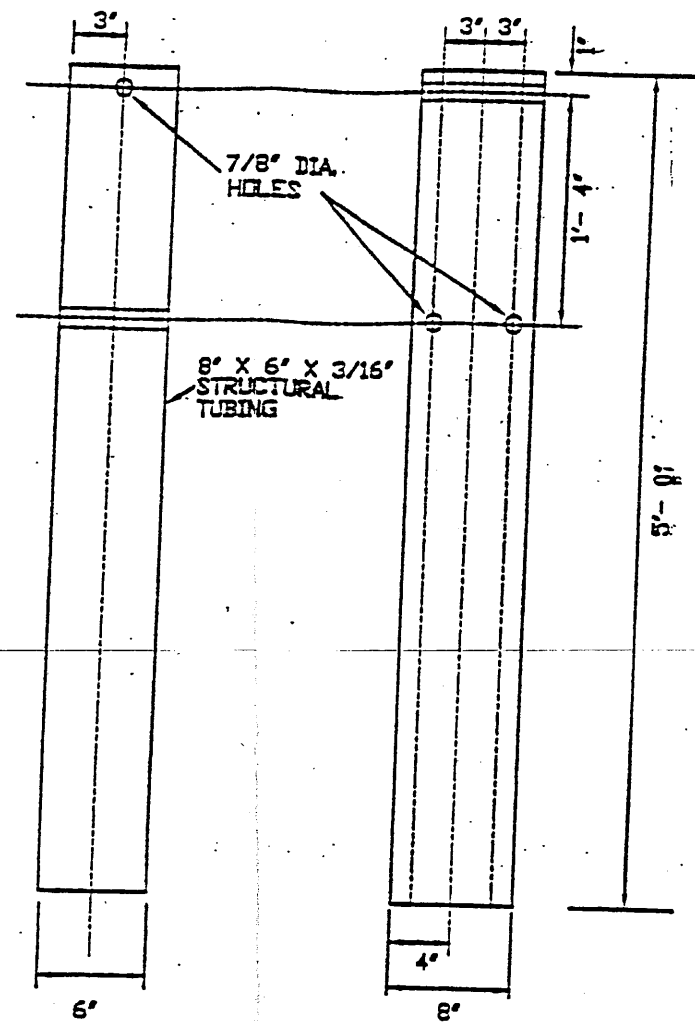
FAYATTA REGION NO. 6	SHEET
NEW MEXICO PROJECT NO.	NO.

NOTES

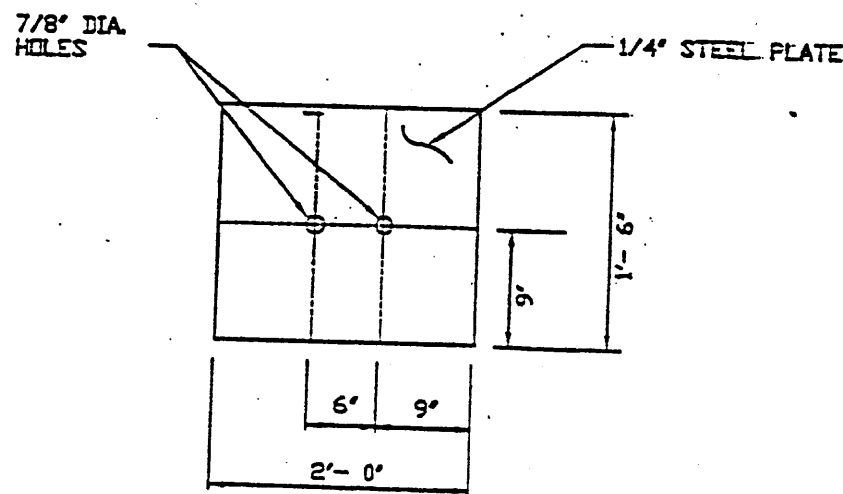
1. THE WOOD BREAKAWAY POST SHALL BE S4S TIMBER WITH A STRESS GRADE OF 1200 PSI AND SHALL BE GRADE MARKED OR CERTIFIED BY A RECOGNIZED ASSOCIATION OR AGENCY WHICH IS CERTIFIED BY THE BOARD OF REVIEW, AMERICAN LUMBER STANDARDS COMMITTEE TO GRADE THE SPECIES. IT SHALL RECEIVE A PRESERVATIVE TREATMENT IN ACCORDANCE WITH AASHTO DESIGNATION M-123.
2. ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 36 AND STRUCTURAL TUBING TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D11. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. NO PUNCHING, DRILLING, CUTTING OR WELDING WILL BE PERMITTED AFTER GALVANIZING.
3. POST B IS FABRICATED FROM POST A BY ADDING THE GALVANIZED STRUCTURAL TUBE (SEE SHEET 2, DETAIL B) BEFORE GALVANIZING.



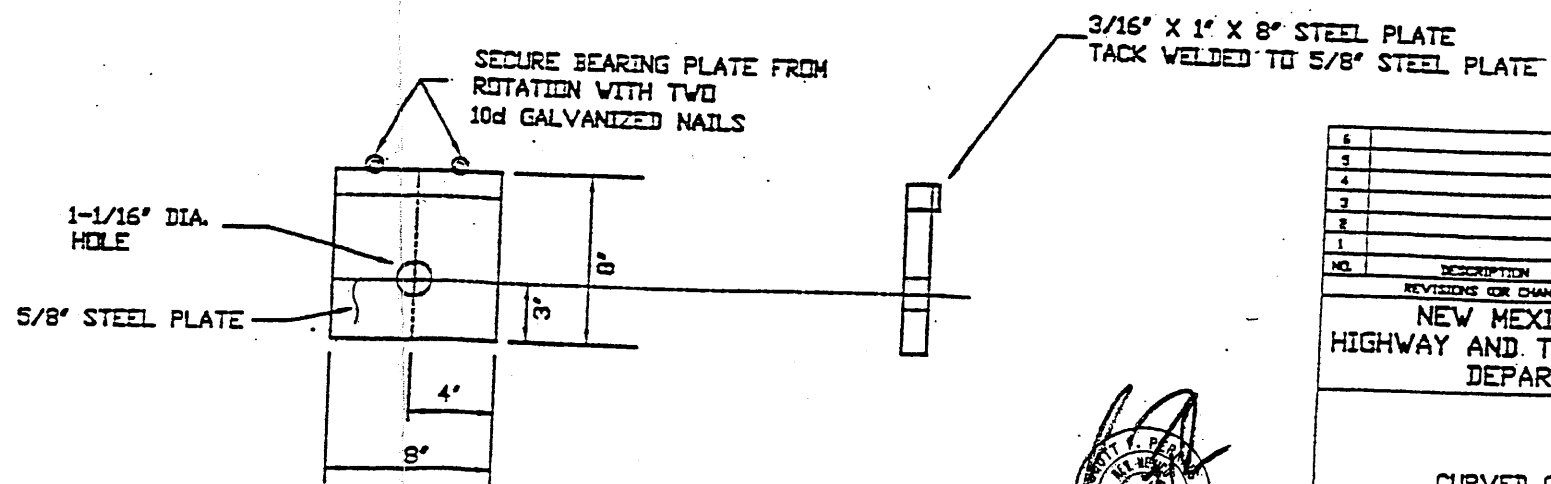
WOOD BREAKAWAY POST



STEEL TUBE (POST A)



SOIL PLATE



BEARING PLATE



NO.	DESCRIPTION	DATE	BY
6			
5			
4			
3			
2			
1			

REVISIONS OR CHANGE NOTICES

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

CURVED GUARDRAIL SPECIAL ANCHOR DETAILS

DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE

SERIAL _____ SCALE 1/4"

N.M.P. SHEET 2 OF 2 SHEET

DESIGNED BY
 DRAWN BY
 CHECKED BY

T4-30 ALIGN. DATA
 STA 4073+17.00

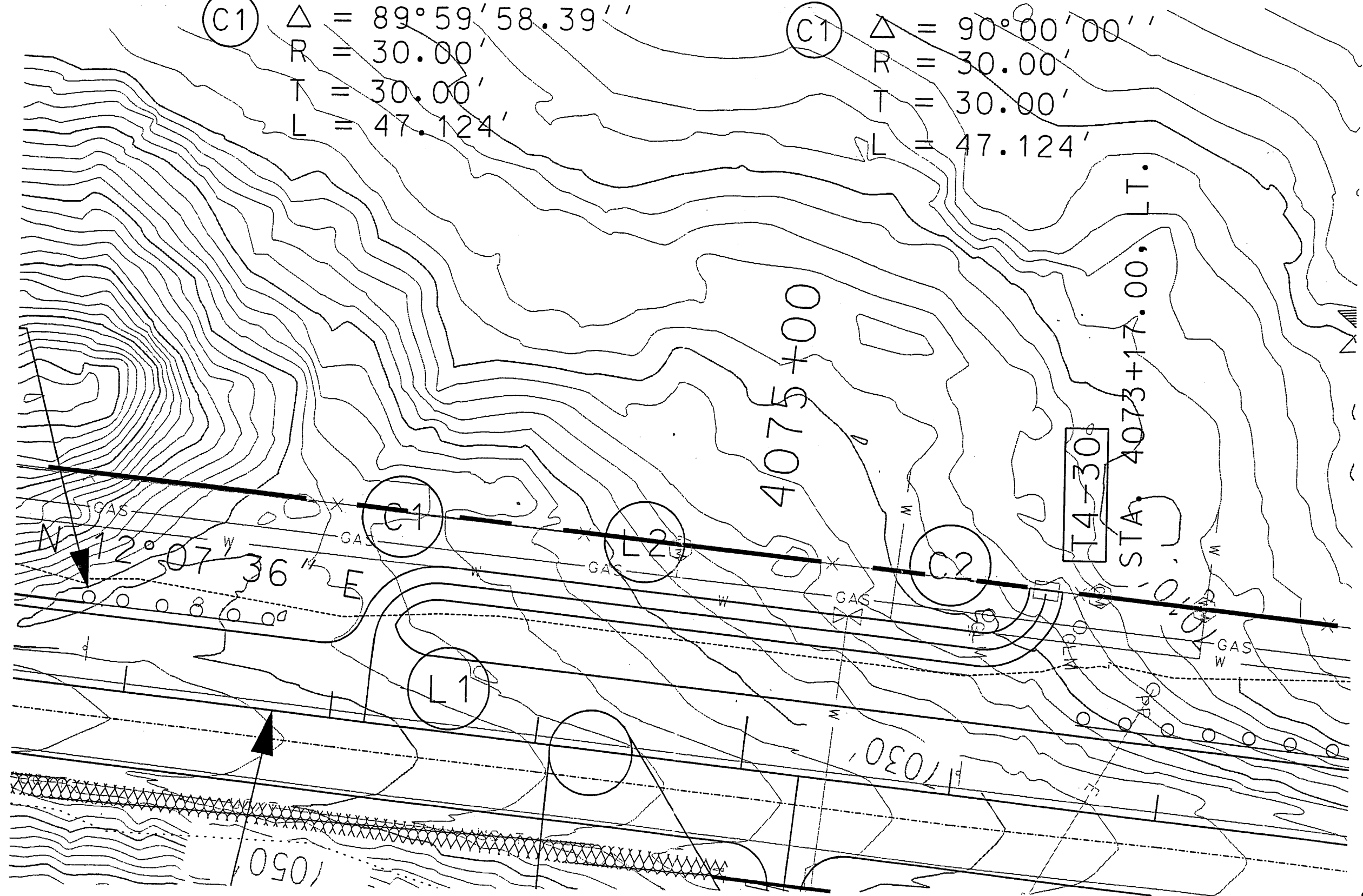
New Sheet,
 10.31.00,
 FSC/BUF-0212

(L1) S77°52'22.37"E, 40.00'

(L2) S12°07'36.02"W, 257.494'

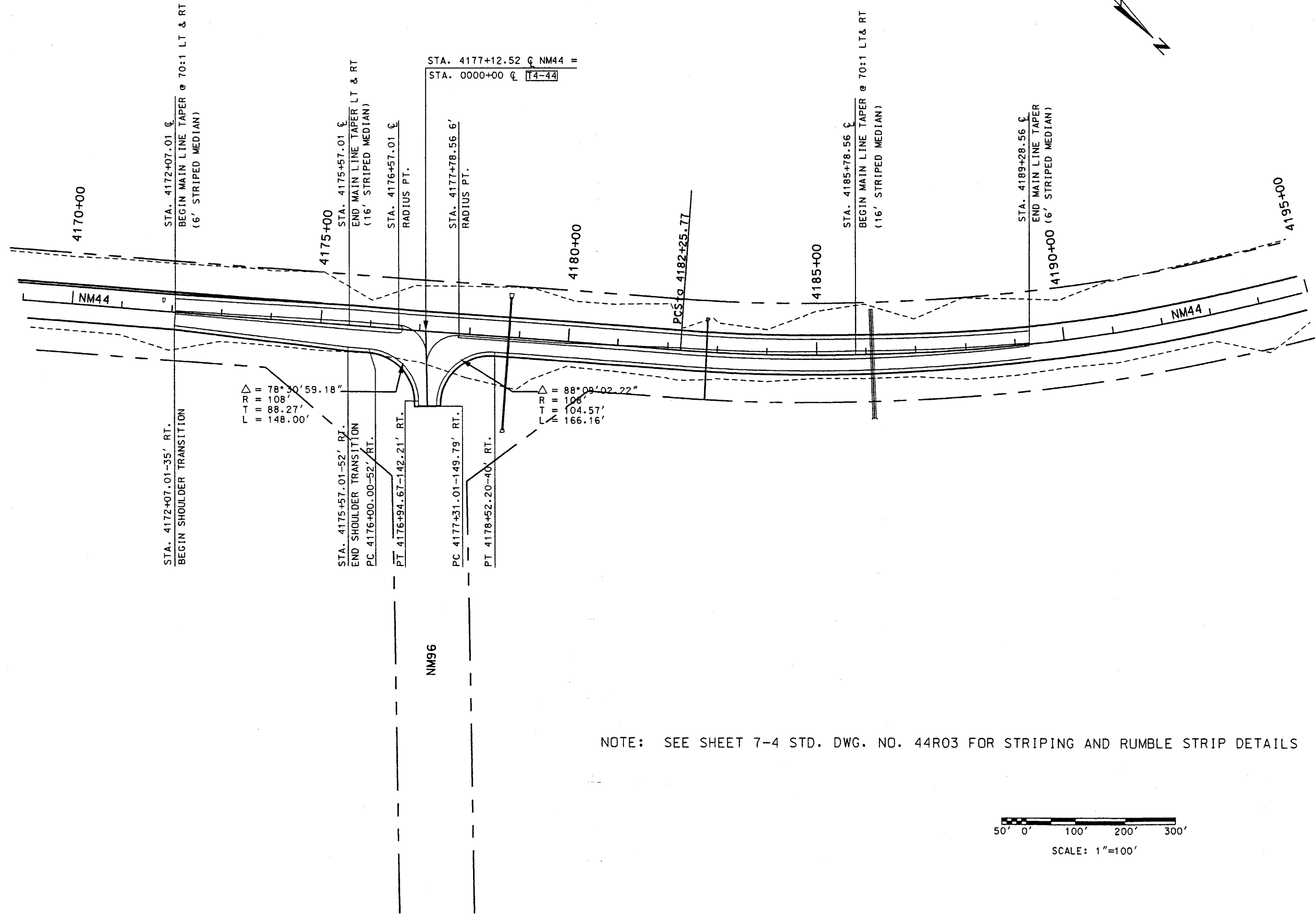
(C1) $\Delta = 89^{\circ}59'58.39''$
 R = 30.00'
 T = 30.00'
 L = 47.124'

(C1) $\Delta = 90^{\circ}00'00''$
 R = 30.00'
 T = 30.00'
 L = 47.124'

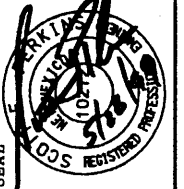
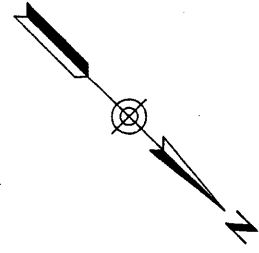
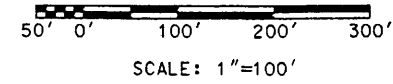


TURNOUT T4-30
LAYOUT

NH 44
 AC. NH. 044.2(39)64
 CN 3766



NOTE: SEE SHEET 7-4 STD. DWG. NO. 44R03 FOR STRIPING AND RUMBLE STRIP DETAILS



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

WILSON & COMPANY

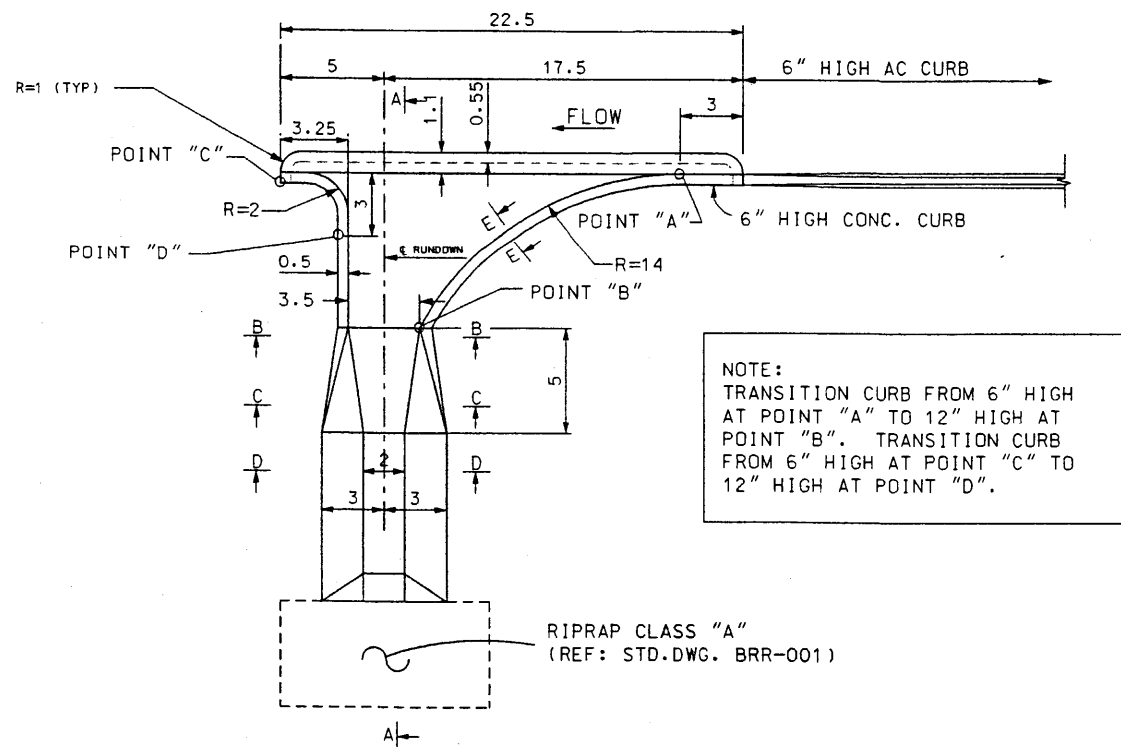
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

SHEET TITLE

NM44 - NM96
 INTERSECTION GEOMETRICS

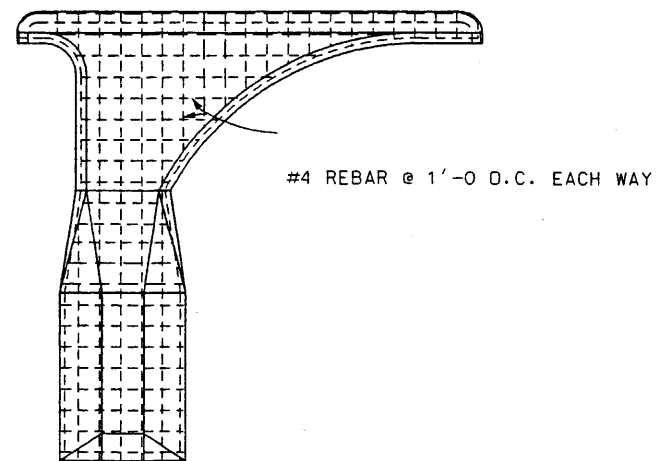
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

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 Plot Date: 29 MAY 99

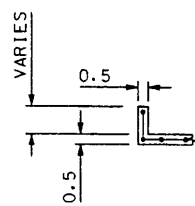


NOTE:
 TRANSITION CURB FROM 6" HIGH AT POINT "A" TO 12" HIGH AT POINT "B". TRANSITION CURB FROM 6" HIGH AT POINT "C" TO 12" HIGH AT POINT "D".

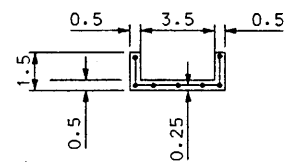
PLAN
 NTS



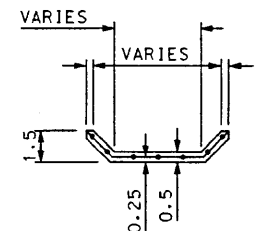
REBAR PLACING PLAN
 NTS



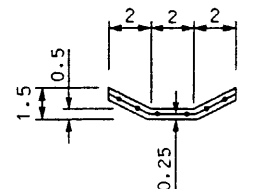
SECTION E-E
 NTS



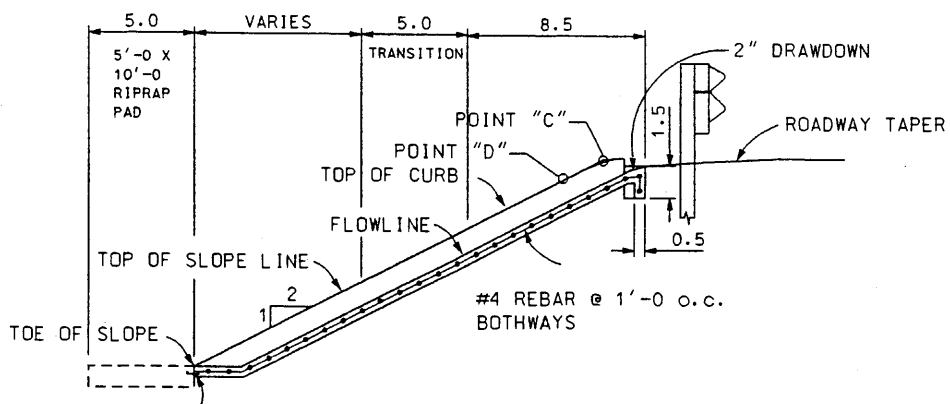
SECTION B-B
 NTS



SECTION C-C
 NTS



SECTION D-D
 NTS



HOOK BOLTS @ 1'-0"
 (REF: STD.DWG. EC-61)

SECTION A-A
 NTS

NOTE:
 FOR DETAILS OF METAL BARRIER AND POST SEE STD. DWG. 44-R02

GENERAL NOTES

1. STRUCTURAL CAST-IN PLACE CONCRETE SHALL BE CLASS "A". CHAMFER ALL EXPOSED EDGES OF CONCRETE ³/₄".
2. ALL REINFORCING BARS SHALL CONFORM TO AASHTO SPECIFICATION M-31, GRADE 60.
3. FIELD CUT AND BEND REINFORCING BARS AS REQUIRED FOR THE STRUCTURE.
4. INSTALLATION AS SHOWN IS TYPICAL AND DETAILS MAY BE VARIED TO FIT LOCATION. QUANTITIES WILL BE ADJUSTED IN THE FIELD.
5. CONCRETE PORTION OF THE RUNDOWNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT SPECIFICATION FOR REINFORCED CONCRETE FOR MINOR STRUCTURES - SECTION 515.
6. DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.

SHEET TITLE
RUNDOWN DETAILS
 NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



METAL BARRIER SCHEDULE

NUMBER	STATION	TO	STATION	LOCATION	METAL BARRIER			TYPE "A" END		TYPE "B" END		STATION FOR		CURBING		REMARKS
					W-BEAM	THREE BEAM	ANCHORAGE	ANCHORAGE	ANCHORAGE	LENGTH	CURB	6" BITUMINOUS	6" CONCRETE			
					LF	LF	EACH	EACH	EACH	OF NEED	TYPE	LF	LF			
UNIT 1- CUBA																
NO METAL BARRIERS IN UNIT 1																
UNIT 2- SANDOVAL COUNTY																
G4-1A	4053+18.75		4054+00	RT	6.25	50.00										Includes 12.5' of doubled length & trans. to CWB & W-beam
G4-1	4044+58.25		4060+25.00	LT	1508.25	50.00										Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-2	4064+00.00		4064+93.75	LT	6.25	50.00				4064+80.00						Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-3	4030+69		4033+19	LT	200'+curve					4030+21.5						Curved guardrail installation at T4-21. Metal Barrier Req'd Only if D4-234 Alternate Used
G4-4	4033+95		4036+25	LT	187.5					4036+71						Metal Barrier Req'd Only if D4-234 Alternate Used
G4-5	4071+75.00		4072+68.75	LT	6.25	50.00				4072+55.00						Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-6	4076+87.50		4082+55.00	RT	512.50					4076+80.00						
G4-7	4076+87.50		4085+52.50	LT	500.00					4085+20.00						Project Manager to confirm station limits prior to installation
G4-8	4099+06.27		4093+70.27	RT	380.00					4088+00.00						Curved guardrail installation
G4-9	4090+30.00		4092+50.00	LT	162.50					4090+47.00						Curved guardrail installation
G4-10	4098+87.00		4102+92.00	RT	350.00					4098+80.00						
G4-11	4108+90		4109+31	LT	4+curve	50.00										Includes 12.5' of doubled length & transition to CWB & W-beam. Curved guardrail installation
G4-12	4115+50.00		4127+25.00	RT	400.00					4114+30.00						Reduce length of W-beam due to hill at 4115+50. Curved guardrail installation at T4-37A
G4-13	4116+98 (PT)		4131+31.25	LT	1268.75	50.00				4131+18.00						Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-14	4144+05.00		4146+07.50	RT	187.50					4141+78.00						Curved guardrail installation
G4-15	4144+25.50		4148+63.00	LT	337.50					4148+50.00						
G4-16	4152+65.00		4160+90.00	RT	750.00					4152+78.00						
G4-17	4154+68.75		4159+25.00	LT	393.75	50.00				4155+00.00						
G4-18	4171+50.00		4172+43.75	LT	6.25	50.00				4172+30.00						Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-19	4176+43.75		4190+00.00	LT	1293.75	50.00				4176+75.00						Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-20	4177+55.00		4188+42.06	RT	1125.00					4188+15.00						Tie into existing guardrail, face of guardrail radius = 98' (No AC curb from STA. 4181+00 to 4188+40 RT)
G4-21	4197+75.00		4198+68.75	LT	6.25	50.00				4198+55.00						Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-22	4195+87.00		4201+37.00	RT	475.00					4196+00.00						
G4-23	4214+00		4214+93.25	LT	6.25	50					6" AC Curb					Includes 12.5' of doubled length & transitions to CWB & W-beam
G4-24	4214+67.00		4231+42.00	RT	1600.00					4214+80.00						
G4-25	NOT USED		4236+42													
G4-26	4246+38.33		4257+26.33	RT	1075.00					4244+80.00						Curved guardrail installation Install concrete ribbon curb from STA. 4253+54.70 to STA. 4254+05.00
G4-27	NOT USED															
G4-28	4255+00.00		4260+37.50	LT	462.50					4260+20.00						
G4-29	4271+00.00		4283+37.50	RT	1182.50					4271+50.00						
G4-30	4274+58.00		4280+33.00	LT	500.00					4280+20.00						

MISCELLANEOUS SCHEDULES
 NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design Plot Date: 18082-01\sect1&2\sect2\44mscqt\4442mq1.dgn, NOV 99

PROJECT NO. AC-NH-04-2(39) 64
 CN NO. 3766
 PACKAGE NO. 4
 SHEET NO. 211, Miscellaneous Schedules

NO.	REVISION	DATE	BY
△ ³	Revise G4.15	6.10.00	RFP 3766-05
△ ¹	Add G4-3 & G4-4	8.23.00	FSC RFI 78
△ ¹	Add Note to G4.6	10.31.00	FSC/FNF - 0212
△ ¹	Revise G4.12	2.14.01	FSC/ FNF - 0282
△ ²	Add G4.11 & G4.23 due to elimination of VIAS	6.21.01	FSC/FNF - 0383
△ ³	Revise G4.7	8.2.01	RFI 57
△ ²	Revise G4.7	8.24.01	FSC RFI 157
△ ²	Revise G4.24	9.4.01	FSC RFI 160
△ ¹	Revise G4.7 ends	9.13.01	FSC RFI 157R1
△ ¹	Add G4.1A	12.4.01	FSC/FNF-0627

Initiated by
(FNF/FSC-0059)

METAL BARRIER SCHEDULE

NUMBER	STATION	TO	STATION	LOCATION	METAL BARRIER	METAL BARRIER	METAL BARRIER	TYPE "A" END	TYPE "B" END	STATION FOR	CURB	CURBING		REMARKS
					W-BEAM	THRIE BEAM	ANCHORAGE	ANCHORAGE	ANCHORAGE	LENGTH		6" BITUMINOUS	6" CONCRETE	
					LF	LF	EACH	EACH	EACH	OF NEED	TYPE	LF	LF	
G4-31	4304+67.00		4308+54.50	RT	312.50		1	1		4304+80.00	6" AC Curb	338		
G4-32	4307+65.50		4311+53.00	LT	312.50		1	1		4311+40.00	6" AC Curb	338		
G4-33	4369+60.50		4373+48.00	LT	312.50		1	1		4373+35.00	6" AC Curb	338		
G4-34	4384+67.00		4392+42.00	RT	700.00		1	1		4384+80.00	6" AC Curb	725		
G4-35	4425+67.00		4433+42.00	RT	700.00		1	1		4425+80.00	6" AC Curb	725		
G4-36	4431+61.19		4435+36.19	LT	300.00		1	1		4435+23.50	6" AC Curb	325		
G4-37	4452+47.00		4458+34.50	RT	512.50		1	1		4452+60.00	6" AC Curb	538		
G4-38	4455+45.50		4464+33.00	LT	812.50		1	1		4464+20.00	6" AC Curb	838		
G4-39	4498+67.00		4502+87.00	RT	325.00		1	1		4499+00.00	6" AC Curb	350		
G4-40	4501+60.50		4505+73.00	LT	337.50		1	1		4505+60.00	6" AC Curb	363		
G4-41	4521+67.00		4532+29.50	RT	987.50		1	1		4521+80.00	6" AC Curb	1,013		
G4-42	4521+70.50		4534+33.00	LT	1187.50		1	1		4534+20.00	6" AC Curb	1,213		
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION														
G4-43	4714+58.00		4718+83.00	LT	350.00		1	1		4718+70.00	6" AC Curb	375		
G4-44	4748+17.00		4752+42.00	RT	350.00		1	1		4748+30.00	6" AC Curb	375		
G4-45	4750+08.00		4753+83.00	LT	300.00		1	1		4753+70.00	6" AC Curb	325		
G4-46	NOT USED													
G4-47	NOT USED													
G4-48	4773+76.00		4774+66.75	LT	6.25	50.00	1	1		4774+55.00	6" AC Curb	60		Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-49	NOT USED													
G4-50	4796+75.00		4796+66.75	LT	6.25	50.00	1	1		4796+55.00	6" AC Curb	60		Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-51	4802+17.00		4806+42.00	RT	350.00		1	1		4802+30.00	6" AC Curb	375		
G4-52	4804+31.50		4807+09.00	LT	262.50			1	1	4808+20.00	6" AC Curb	235		Curved guardrail installation
G4-53	NOT USED													
G4-54	4819+75.00		4820+68.75	LT	6.25	50.00	1	1		4820+55.00	6" AC Curb	60		Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-55	4847+37.00		4851+37.00	RT	325.00		1	1		4847+50.00	6" AC Curb	350		
G4-56	4849+50.50		4853+63.00	LT	337.50		1	1		4853+50.00				
G4-57	NOT USED													
G4-58	4878+75.00		4879+68.75	LT	6.25	50.00	1	1		4879+55.00	6" AC Curb	60		Includes 12.5' of doubled length and transitions to CWB and W-beam
G4-59	5008+77.00		5012+89.50	RT	300.00	37.50	1	1		5008+90.00	6" AC Curb	363		Thrie beam from Station 5012+00 to 5012+37.5
G4-60	5011+63.00		5015+63.00	LT	325.00		1	1		5015+50.00	6" AC Curb	350		

MISCELLANEOUS SCHEDULES

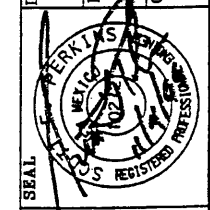
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
CN 3766



DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



Design File: \\01\sect1&2\sect2\44misocqy\4442mql.dgn
Plot Date: 03 N

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NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

SHEET TITLE

MISCELLANEOUS
SCHEDULES

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2-14

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**WILSON
& COMPANY**

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

SHEET TITLE

MISCELLANEOUS
SCHEDULES

Design File: j:\082-01\sect1&2\sect2\44mscqt\44442mq2.dgn
 Plot Date: 04 NOV 99

CONCRETE BARRIER CURB & GUTTER - TYPE "B" 6" X 30"					
STATION	TO	STATION	LOCATION	QUANTITY	REMARKS
				LF	
UNIT 1- CUBA					
4000+00.00		4014+22.40	RT	1422.40	
4000+00.00		4005+64.52	LT	564.52	
4014+86.90		4014+93.00	RT	6.10	
4006+65.71		4014+93.00	LT	827.29	
UNIT 2 - SANDOVAL COUNTY					
4014+93.00		4016+00.00	RT	107.00	
4014+93.00		4016+00.00	LT	107.00	
4016+00.00		4016+20.00	RT	20.00	END DETAIL
4016+00.00		4016+20.00	LT	20.00	END DETAIL
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION					
NO BARRIER CURB & GUTTER INSTALLATIONS IN UNIT 3					

CONCRETE VALLEY GUTTER - 8" X 72"					
STATION	TO	STATION	LOCATION	QUANTITY	REMARKS
				LF	
UNIT 1- CUBA					
4005+64.52		4006+65.71	LT	101.19	INCLUDES FILLETS
4014+22.40		4014+86.90	RT	64.50	INCLUDES FILLETS
UNIT 2 - SANDOVAL COUNTY					
NO VALLEY GUTTER INSTALLATIONS IN UNIT 2					
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION					
NO VALLEY GUTTER INSTALLATIONS IN UNIT 3					

CONCRETE SIDEWALK, 4"					
STATION	TO	STATION	LOCATION	QUANTITY	REMARKS
				SQ. YD.	
UNIT 1- CUBA					
4000+00.00		4000+36.83	RT	16.37	4' WIDE
4000+00.00		4000+21.54	LT	9.57	4' WIDE
4000+71.54		4001+23.62	LT	23.15	4' WIDE
4000+86.83		4001+26.89	RT	17.80	4' WIDE
4001+50.89		4001+96.71	RT	20.36	4' WIDE
4001+98.62		4005+75.17	LT	167.36	4' WIDE
4002+12.71		4003+25.00	RT	49.91	4' WIDE
4003+41.00		4003+82.44	RT	18.42	4' WIDE
4003+98.44		4006+95.75	RT	132.14	4' WIDE
4006+51.46		4008+21.69	LT	75.66	4' WIDE
4007+19.75		4009+28.75	RT	92.89	4' WIDE
4008+37.69		4010+41.13	LT	90.42	4' WIDE
4009+52.75		4010+55.20	RT	45.53	4' WIDE
4010+57.13		4012+07.95	LT	67.03	4' WIDE
4010+71.20		4011+88.00	RT	51.91	4' WIDE
4012+04.00		4014+35.13	RT	102.72	4' WIDE
4012+23.95		4012+72.41	LT	21.54	4' WIDE
4012+88.41		4014+67.24	LT	79.48	4' WIDE
4014+74.15		4014+93.00	RT	8.38	4' WIDE
4014+83.24		4014+85.24	LT	0.89	4' WIDE
UNIT 2 - SANDOVAL COUNTY					
4014+93.00		4016+00.00	RT	47.56	4' WIDE
4015+01.24		4016+00.00	LT	43.89	4' WIDE
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION					
NO CONCRETE SIDEWALK INSTALLATIONS IN UNIT 3					

SHEET TITLE

MISCELLANEOUS
SCHEDULES

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



Design File: \\p082-01\sect1&2\sect2\44msctj\44442mq2.dgn
 Plot Date: 04 NOV 99

CONCRETE WALL BARRIER

NUMBER	STATION	TO	STATION	LOCATION	CONCRETE WALL			Remarks
					BARRIER 32" LF	BARRIER 48" LF	BARRIER 80" LF	
UNIT 1 - CUBA								
NO CWB'S CONTAINED WITHIN UNIT 1								
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> 641A CWB 4-1A 4054+00 4059+30 RT 550 Temporary CWB - Furnished by NMSATD ② </div>								
UNIT 2 - SANDOVAL COUNTY								
CWB 4-1	4060+25		4064+00	LT	375			
CWB 4-2	4068+75		4068+85	LT	10			TRANSITION END TREATMENT
	4068+85		4069+25	LT		40		TRANSITION FROM 32" TO 80"
	4069+25		4071+35	LT		210		
	4071+35		4071+75	LT		40		TRANSITION FROM 80" TO 32"
CWB 4-3	4104+75		4104+85	LT	10			TRANSITION END TREATMENT
	4104+85		4105+25	LT		40		TRANSITION FROM 32" TO 80"
	4105+25		4108+50	LT		325		
	4108+50		4108+90	LT		40		TRANSITION FROM 80" TO 32"
CWB 4-4	NOT USED							
CWB 4-5	4110+12		4110+22	LT	10			TRANSITION END TREATMENT
	4110+22		4110+62	LT		40		TRANSITION FROM 32" TO 80"
	4110+62		4117+35	LT		673		
	4117+35		4117+75	LT		40		TRANSITION FROM 80" TO 32"
CWB 4-6	4159+25		4159+65	LT		40		TRANSITION FROM 32" TO 80"
	4159+65		4171+10	LT		1145		
	4171+10		4171+50	LT		40		TRANSITION FROM 80" TO 32"
CWB 4-7	4190+00		4197+75	LT	775			
CWB 4-8	4208+20		4208+30	LT	10			TRANSITION END TREATMENT
	4208+30		4208+70	LT		40		TRANSITION FROM 32" TO 80"
	4209+17		4213+60	LT		443		
	4213+60		4214+00	LT		40		TRANSITION FROM 80" TO 32"
CWB 4-9	NOT USED							
CWB 4-10	NOT USED							
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION								
CWB 4-11	NOT USED							
CWB 4-12	4763+00		4763+10	LT	10			TRANSITION END TREATMENT
	4763+10		4773+75	LT	1005			
CWB 4-13	4790+25		4790+35	LT	10			TRANSITION END TREATMENT
	4790+35		4795+75	LT	540			
CWB 4-14	4814+75		4814+85	LT	10			TRANSITION END TREATMENT
	4814+85		4815+25	LT		40		TRANSITION FROM 32" TO 80"
	4815+25		4819+35	LT		410		
	4819+35		4819+75	LT		40		TRANSITION FROM 80" TO 32"
CWB 4-15	4876+00		4876+10	LT	10			TRANSITION END TREATMENT
	4876+10		4876+24	LT		14		TRANSITION FROM 32" TO 48"
	4876+24		4878+61	LT		237		
	4878+61		4878+75	LT		14		TRANSITION FROM 48" TO 32"

BUILD WALL DRAINAGE SYSTEM, SEE SHEET 2-48

~~CWB 4-12~~
~~CWB 4-13~~

MISCELLANEOUS SCHEDULES

SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



CONCRETE WALL BARRIER

NUMBER	STATION	TO	STATION	LOCATION	CONCRETE WALL BARRIER 32" LF	CONCRETE WALL BARRIER 48" LF	CONCRETE WALL BARRIER 80" LF	Remarks
UNIT 1 - CUBA								
NO CWB's CONTAINED WITHIN UNIT 1								
UNIT 2 - SANDOVAL COUNTY								
CWB 4-1	4060+25		4064+00	LT	375			
CWB 4-2	4068+75		4068+85	LT	10			TRANSITION END TREATMENT
	4068+85		4069+25	LT			40	TRANSITION FROM 32" TO 80"
	4069+25		4071+35	LT			210	
	4071+35		4071+75	LT			40	TRANSITION FROM 80" TO 32"
CWB 4-3	4104+75		4104+85	LT	10			TRANSITION END TREATMENT
	4104+85		4105+25	LT			40	TRANSITION FROM 32" TO 80"
	4105+25		4108+50	LT			325	
	4108+50		4108+90	LT			40	TRANSITION FROM 80" TO 32"
CWB 4-4	NOT USED							
CWB 4-5	4110+12		4110+22	LT	10			TRANSITION END TREATMENT
	4110+22		4110+62	LT			40	TRANSITION FROM 32" TO 80"
	4110+62		4117+35	LT			673	
	4117+35		4117+75	LT			40	TRANSITION FROM 80" TO 32"
CWB 4-6	4159+25		4159+65	LT			40	TRANSITION FROM 32" TO 80"
	4159+65		4171+10	LT			1145	
	4171+10		4171+50	LT			40	TRANSITION FROM 80" TO 32"
CWB 4-7	4190+00		4197+75	LT	75			
CWB 4-8	4208+20		4208+30	LT	10			TRANSITION END TREATMENT
	4208+30		4208+70	LT			40	TRANSITION FROM 32" TO 80"
	4209+17		4213+60	LT			443	
	4213+60		4214+00	LT			40	TRANSITION FROM 80" TO 32"
CWB 4-9	NOT USED							
CWB 4-10	NOT USED							
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION								
CWB 4-11	NOT USED							
CWB 4-12	4763+00		4763+10	LT	10			TRANSITION END TREATMENT
	4763+10		4773+75	LT	1000			
CWB 4-13	4790+25		4790+35	LT	10			TRANSITION END TREATMENT
	4790+35		4795+75	LT	540			
CWB 4-14	4814+75		4814+85	LT	10			TRANSITION END TREATMENT
	4814+85		4815+25	LT			40	TRANSITION FROM 32" TO 80"
	4815+25		4819+35	LT			410	
	4819+35		4819+75	LT			40	TRANSITION FROM 80" TO 32"
CWB 4-15	4876+00		4876+10	LT	10			TRANSITION END TREATMENT
	4876+10		4876+24	LT		14		TRANSITION FROM 32" TO 48"
	4876+24		4878+61	LT		237		
	4878+61		4878+75	LT		14		TRANSITION FROM 48" TO 32"

SUPERCEDED

BUILD WALL DRAINAGE SYSTEM, SEE SHEET 2-48

~~CWB 4-12~~ and ~~CWB 4-13~~ entries are circled with a scalloped border.

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NI-044-2(3)904
CN 3766

MISCELLANEOUS SCHEDULES

WILSON & COMPANY

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP

SEAL: [Professional Engineer Seal]

2-16

Design File: 2-01\sect182\sect2\44m.scty\44442mq2.dgn
Plot Date: 04 99

PROJECT NO. AC.WH.044.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 2.16, Miscellaneous Schedules

NO.	REVISION	DATE	BY
①	Add wall drainage system, CWB4-8	9.28.00	FSC/FNF-0186
②	Delete CWB#12 & CWB#13	9.12.00	FSC/FNF-0169

01

TURNOUT SCHEDULE						
TURNOUT NUMBER	WIDTH FT	SKEW	DRIVEWAY TYPE	CONCRETE DRIVEPAD 6" SQ. YD.	TURNOUT DELINEATOR EA	4" BASE COURSE PAST R/W
UNIT 1 (CUBA)						
T4 - 01	50		C	22.2	2	
T4 - 02	50		C	22.2	2	
T4 - 03	24		B	10.7	2	16.27
T4 - 04	75		C	33.3	2	
T4 - 05	16		B	7.1	2	
T4 - 05 A	16		B	7.1	2	
T4 - 06	16		B	7.1	2	
T4 - 07	24	213* LTBK	D			
T4 - 07 A	16	10*27' RF	B			
T4 - 08	24		B	10.7	2	7.45
T4 - 09	16		B	7.1	2	
T4 - 10	24		B	10.7	2	25.90
T4 - 11	16		B	7.1	2	20.00
T4 - 12	16		B	7.1	2	9.68
T4 - 13 A	16		B	7.1	2	10.01
T4 - 13	16		B	7.1	2	
T4 - 14	16		B	7.1	2	15.00
T4 - 15	30		D			
T4 - 16	16		B	7.1	2	
UNIT 2 (SANDOVAL COUNTY)						
T4 - 16 A	16		B	7.1	2	
T4 - 17	24		B		2	
T4 - 18	16		B		2	
T4 - 19	16		B		2	
T4 - 20	16		B		2	
T4 - 21	16		B		2	
T4 - 22	16	5*27'27" LF	B		2	
T4 - 23	16	5*27'27" RTBK	B		2	
T4 - 24	16		B		2	
T4 - 25	24		B		2	
T4 - 26	24		B		2	182.91
T4 - 27A	16		A			
T4 - 27	24		D			
T4 - 28	32		B		2	
T4 - 29	16		B		2	
T4 - 30	16		B		2	29.00
T4 - 31	16		B		2	
T4 - 32	16		B		2	
T4 - 33	16	20*11'26" RF	B		2	
T4 - 34	24		D			

NOTE: This Sheet not revised to reflect modifications made during construction. See 4-Series Sheets.

MISCELLANEOUS SCHEDULES

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6
NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766



DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP

Design File: 12-01\sect1&2\sect2\44m\scqj\44442mq3.dgn
Plot Date: 04

TURNOUT SCHEDULE

TURNOUT NUMBER	WIDTH FT	SKEW	DRIVEWAY TYPE	CONCRETE DRIVEPAD 6"	TURNOUT DELINEATOR	4" BASE COURSE PAST R/W
				SQ. YD.	EA	
T4 - 35	16		B		2	
T4 - 36	16		B		2	
T4 - 36 A	16		B		2	
T4 - 37	16	13*10'08" LF	A			
T4 - 38	16		B		2	
T4 - 39	16		A			
T4 - 39A	16		A			
T4 - 40	24		B		2	
T4 - 41	16		A			
T4 - 42	16		A			
T4 - 43	16		A			
T4 - 44	40	5*12'07" RF				
T4 - 45	16		B		2	
T4 - 46	16		B		2	
T4 - 47	16	21*19'34" LF	B		2	
T4 - 48	16		A			
T4 - 49	16		A			
T4 - 50	16		A			
T4 - 51	16	15*01'03" LF	B		2	
T4 - 52	16		A			
T4 - 53	16		A			
T4 - 54	16		A			
T4 - 55	16		B		2	
T4 - 56	16		A			
T4 - 57	16		D		2	
T4 - 58	16		A			
T4 - 59	16		A			
T4 - 60	16		A			
T4 - 61	16		B		2	
T4 - 62	16		A			
T4 - 63	16		A			
T4 - 64	16		A			
T4 - 65	16		A			
T4 - 66	16		B		2	
T4 - 67	16		A			
T4 - 68	16		A			
T4 - 69	16		A			
T4 - 70	16		A			
T4 - 71	32		C		2	
T4 - 71 A	24		B		2	
T4 - 72	32		C		2	
T4 - 73	16		A			
T4 - 74	16		B		2	
UNIT 3 JICARILLA APACHE INDIAN RESERVATION						
T4 - 75	24		A			
T4 - 76 A	16		A			
T4 - 76	24		B		2	
T4 - 77	16		A			
T4 - 78	16		A			

Note: This sheet not revised to reflect modifications made during construction. See 4-Series Sheets.

MISCELLANEOUS SCHEDULES

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

WILSON & COMPANY

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



SLURRY FILLED GEOCELL

3:1

RIPRAP CLASS A

STATION	TO	STATION	LOCATION	QUANTITY		DIMENSIONS
				CU. YD.		
UNIT 1 - CUBA						
NO RIPRAP IN UNIT 1						
UNIT 2 - SANDOVAL COUNTY						
4056+00	TO	4057+70	LT	32.0		170' L X 5'W X 1'D
4102+30	TO	4104+00	LT	32.0		170' L X 5'W X 1'D
4104+00	TO	4105+00	LT	19.0		100' L X 5'W X 1'D
4117+00	TO	4118+00	RT	19.0		100' L X 5'W X 1'D
4118+00	TO	4119+00	LT	19.0		100' L X 5'W X 1'D
4144+15	TO	4144+60	RT	9.0		45' L X 5'W X 1'D
4158+00	TO	4159+00	LT	19.0		100' L X 5'W X 1'D
4172+15	TO	4172+60	RT	9.0		45' L X 5'W X 1'D
4176+00	TO	4176+80	LT	15.0		80' L X 5'W X 1'D
4187+20	TO	4188+60	RT	26.0		140' L X 5'W X 1'D
4203+25	TO	4205+00	LT	33.0		175' L X 5'W X 1'D
4237+60	TO	4238+50	LT	17.0		90' L X 5'W X 1'D
4258+30	TO	4259+50	RT	23.0		120' L X 5'W X 1'D
4262+00	TO	4263+00	RT	19.0		100' L X 5'W X 1'D
4283+00	TO	4284+00	LT & RT	38.0		100' L X 5'W X 1'D
4363+00	TO	4364+00	LT	19.0		100' L X 5'W X 1'D
4369+20	TO	4369+00	RT	12.0		60' L X 5'W X 1'D
4392+00	TO	4393+00	RT	19.0		100' L X 5'W X 1'D
4424+00	TO	4425+00	LT	19.0		100' L X 5'W X 1'D
4425+00	TO	4426+00	RT	19.0		100' L X 5'W X 1'D
4471+00	TO	4472+00	LT	19.0		100' L X 5'W X 1'D
4507+00	TO	4508+00	RT	19.0		100' L X 5'W X 1'D
4507+00	TO	4510+00	LT	56.0		300' L X 5'W X 1'D
4523+00	TO	4533+00	RT	19.0		100' L X 5'W X 1'D
4533+00	TO	4534+00	LT	19.0		100' L X 5'W X 1'D
4589+00	TO	4590+00	RT	13.0		70' L X 5'W X 1'D
4640+00	TO	4641+00	RT	19.0		100' L X 5'W X 1'D
4663+00	TO	4664+00	RT	19.0		100' L X 5'W X 1'D
4677+80	TO	4678+80	RT	19.0		100' L X 5'W X 1'D
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION						
4716+00	TO	4716+40	RT	8.0		40' L X 5'W X 1'D
4714+40	TO	4714+80	LT	8.0		40' L X 5'W X 1'D
4774+75	TO	4775+75	LT	19.0		100' L X 5'W X 1'D
4796+75	TO	4797+75	LT	19.0		100' L X 5'W X 1'D
4879+75	TO	4880+75	LT	19.0		100' L X 5'W X 1'D

NOTE: 1. THIS SCHEDULE DOES NOT INCLUDE RIPRAP TO BE PLACED AT STRUCTURES AND CONCRETE RUNDOWNS

2. THE STATIONS AND DIMENSIONS PROVIDED ARE APPROXIMATE. THE FINAL LOCATION AND DIMENSIONS OF EACH RIPRAP PAD SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AS APPROVED BY THE PROJECT MANAGER

4214+65 to 4214+90 LT 6.5CY 35' L X 5' W X 1'D

SLOPE EXCEPTIONS THAT ARE LESS THAN 2:1

STATION	TO	STATION	LOCATION	PROPOSED SLOPE	CUT/FILL	REMARKS
4056+50	TO	4057+00	RT	1.94:1	CUT	
4058+50	TO		RT	1.98:1	CUT	
4059+50	TO		RT	1.50:1	CUT	
4061+00	TO		RT	1.50:1	CUT	
4067+00	TO		RT	1.75:1	CUT	
4063+00	TO	4064+00	LT	1.75:1	CUT	
4069+00	TO	4070+00	LT	1.75:1	CUT	
4071+00	TO	4073+00	RT	1.75:1	CUT	
4085+00	TO	4086+00	RT	1.75:1	CUT	
4105+00	TO	4108+00	LT	1.75:1	CUT	
4108+00	TO		RT	1.50:1	CUT	
4109+00	TO	4116+00	RT	1.00:1	CUT	
4120+00	TO	4123+00	LT	1.75:1	FILL	REQUIRES REINFORCED SOIL SLOPE (USE 1.5:1 SLOPE DETAILS)
4140+00	TO		LT	1.75:1	CUT	
4144+00	TO	4146+00	LT & RT	1.27:1	FILL	REQUIRES REINFORCED SOIL SLOPE
4160+00	TO	4171+00	LT	1.75:1	CUT	
4182+00	TO		LT	1.75:1	CUT	
4191+00	TO	4197+00	LT	1.75:1	CUT	
4194+00	TO		RT	1.75:1	CUT	
4196+00	TO		RT	1.75:1	CUT	
4209+00	TO		LT	1.75:1	CUT	
4210+00	TO		LT	1.44:1	CUT	
4211+00	TO		LT	1.22:1	CUT	
4240+00	TO	4246+00	LT	1.75:1	CUT	
4288+00	TO		LT	1.75:1	CUT	
4370+04	TO		LT	1.89:1	FILL	
4753+00	TO	4755+00	LT	1.75:1	CUT	
4764+00	TO	4769+00	LT	1.75:1	CUT	
4773+00	TO		LT	1.75:1	CUT	
4816+00	TO	4819+00	LT	1.75:1	CUT	
4877+00	TO	4878+00	LT	1.75:1	CUT	

NOTE: FOR REINFORCED SOIL SLOPE DETAILS, SEE STANDARD DRAWING 44-R07

4059+00 to 4060+00 RT TRANSITION 2:1 to 1:1 CUT
4060+00 to 4062+00 RT TRANSITION 1:1 to 1.5:1 CUT

VEHICULAR IMPACT ATTENUATOR UNIT						QTY	REMARKS
NUMBER	STATION	TO	STATION	LOCATION	EA		
UNIT 2 - SANDOVAL COUNTY (ONLY)							
VIA4-1	4108+90.00	TO	4109+16.50	LT	1		END OF CWB 4-3
VIA4-2	4106+23.50	TO	4105+50.00	RT	1		END OF CWB 4-4 NOT USED
VIA4-3	4214+00.00	TO	4214+26.50	LT	1		END OF CWB 4-9

NOTE 1: NO VIA'S ARE CONTAINED IN UNITS 1 OR 3.

NOTE 2: FOR ESTIMATING PURPOSES A QUAD GUARD (QS2407Y) 7-BAY SYSTEM WITH A LENGTH OF 26.5' WAS USED.

MISCELLANEOUS SCHEDULES

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6

NM 44 NEW MEXICO PROJECT NO AC-NH-044-2(3)9(6) CN 3766

WILSON & COMPANY

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP

Design File: \\sect2\44msoq\14442mq4.dgn
Plot Date: 11 NOV

PROJECT NO. AC.NH.044.2(39)64
 CN NO. 3766
 PACKAGE NO. 4
 SHEET NO. 2-18, Miscellaneous Schedules

NO.	REVISION	DATE	BY
1	Delete RSS, 4144+00 to 4146+00	6.10.00	RFP 3766.05 (FNF/FSC-0059)
2	Delete RSS, 4120+00 to 4123+00	10.30.00	FSC/FNF-0210, RFP 3766-11
3	Revise slopes due to elimination of buttress	12.6.00	FSC/FNF-0240
3.1	CL. A RIPRAP CHANGED TO SURF FILLED GEOTEXT		
4	ADD RIPRAP, 4214+65 TO 4214+90 + ELIMINATE VIAS	6.21.01	FSC/FNF-0383

Initiated by

Design File: y:\082-01\sect1&2\sect2\44mscqtj\44442mq5.dgn
 Plot Date: 04 NOV 99

CATTLE GUARDS

DRIVEWAY NUMBER	STATION	LOCATION	Cattle Guard 16'	Cattle Guard 24'	Cattle Guard 30'	Remarks
			EA	EA	EA	
UNIT 1 - CUBA						
T4 - 15	4014+54.62	RT			1	
UNIT 2 - SANDOVAL COUNTY						
T4 - 28	4065+45.92	LT	1			
T4 - 29	4075+27.70	RT	1			
T4 - 30	4076+28.79	LT	1			
T4 - 46	4215+00.00	LT	1			
T4 - 48	4246+26.33	RT	1			
T4 - 49	4252+37.71	LT	1			
T4 - 51	4307+33.65	LT	1			
T4 - 53	4348+69.58	RT	1			
T4 - 55	4381+40.59	LT	1			
T4 - 60	4465+28.58	RT	1			
T4 - 62	4469+36.39	RT	1			
T4 - 63	4517+37.74	LT	1			
T4 - 71A	4629+86.56	LT		1		
T4 - 73	4654+03.32	RT	1			
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION						
T4 - 75	4735+57.49	LT		1		
T4 - 76A	4807+19.00	LT	1			

CONSTRUCTION FENCE

STATION	TO	STATION	LOCATION	TEMP CONST FENCING 4'	REMARKS
				2-STRAND BARBED WIRE	
				LF	
UNIT 2 - SANDOVAL COUNTY					
4015+00		4016+80	RT	245	
4015+40		4016+70	LT	220	
4020+80		4022+70	RT	275	
4163+25		4167+50	LT	485	
4354+00		4355+60	LT	360	
4364+50		4367+60	RT	360	
4364+50		4367+60	LT	470	
4415+50		4417+00	RT	240	
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION					
4817+00		4819+00	LT	230	
4817+00		4819+00	RT	343	

NOTE: 1. EXISTING FENCE SHALL REMAIN IN PLACE

CONSTRUCTION MAINTENANCE EASEMENTS

NUMBER	STATION	LOCATION	SIZE	REMARKS
CME4-1	4547+78.56	RT	50'X30'	10-CME-1 (BLM) FOR D4-275
CME4-2	4758+33.13	RT	100'X50'	10-CME-2 (JICARILLA APACHE) FOR D4-296

SHEET TITLE

MISCELLANEOUS
SCHEDULES

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



GATES					
EXISTING GATES SHALL BE PROTECTED AND MAINTAINED					
DRIVEWAY NUMBER	STATION	LOCATION	Standard Gate, 16'		Remarks
			EA	EA	
UNIT 1 - CUBA					
T4 - 15	4014+54.62	RT	1		
UNIT 2 - SANDOVAL COUNTY					
T4 - 17	4024+11.66	RT		1	
T4 - 20	4032+08.21	RT	1		
T4 - 23	4033+75.41	RT	1		
T4 - 24	4037+09.34	LT	1		
T4 - 25	4039+57.36	LT		1	
T4 - 26	4039+57.36	RT		1	
T4 - 27A	4054+50.00	RT		1	NMSHTD ACCESS
T4 - 30	4076+28.79	LT	1		
T4 - 31	4083+57.06	RT	1		
T4 - 35	4101+85.96	LT	1		
T4 - 36	4105+58.90	RT	1		
T4 - 37	4109+41.28	LT	1		
N/A	4117+10.00	RT	1		
T4 - 38	4131+35.27	RT	1		
T4 - 39	4137+86.29	LT	1		
T4 - 39A	4143+95.00	RT	1		
T4 - 41	4152+36.62	RT	1		
N/A	4163+25.00	RT	1		
T4 - 49	4252+37.71	LT	1		
T4 - 54	4368+40.73	LT	1		
T4 - 55	4381+40.59	LT	1		
N/A	4414+00.00	LT	1		
T4 - 60	4465+28.58	RT	1		
T4 - 61	4465+83.51	LT	1		
T4 - 64	4520+63.36	RT	1		
T4 - 65	4569+17.22	LT	1		
T4 - 66	4569+18.33	RT	1		
T4 - 67	4575+56.64	RT	1		
T4 - 68	4581+35.00	LT	1		
T4 - 70	4616+10.45	RT	1		
T4 - 71A	4629+86.56	LT	1		
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION					
T4 - 76A	4807+19.00	LT	1		
T4 - 75	4735+57.49	LT	1		

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 Plot Date: 04 NOV 99

SHEET TITLE

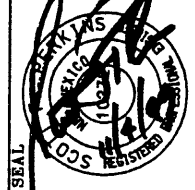
MISCELLANEOUS
 SCHEDULES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



GEOCELL LINED DITCH - PYRAMAT						
STATION	TO	STATION	LOCATION	LENGTH	WIDTH	QUANTITY
				LF	FT	SQ YD
UNIT 1 - CUBA						
NO GEOCELL LINED DITCHES IN UNIT 1						
4054+60	to	4059+50	RT	490	10	644 544
UNIT 2 - SANDOVAL COUNTY						
4063+00		4076+00	RT	1,300	10	1,444
4190+00		4195+00	RT	500	10	556
4201+00		4206+00	RT	500	10	556
4215+50		4218+00	LT	250	10	278
4233+00		4237+00	LT	400	10	444
4261+00		4269+00	RT	800	10	889
4263+00		4269+00	LT	600	10	667
4284+00		4290+00	RT	600	10	667
4284+00		4290+00	LT	600	10	667
4346+00		4356+00	RT	1,000	10	1,111
4393+00		4425+00	RT	3,200	10	3,556
4393+00		4408+00	LT	1,500	10	1,667
4415+00		4424+00	LT	900	10	1,000
4472+00		4492+00	LT	2,000	10	2,222
4475+00		4485+00	RT	1,000	10	1,111
4508+00		4520+00	RT	1,200	10	1,333
4510+00		4517+00	LT	700	10	778
4590+00		4691+00	RT	10,100	10	11,222
4625+00		4634+00	LT	900	10	1,000
4680+00		4687+00	LT	700	10	778
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION						
4702+00		4714+00	RT	1,200	10	1,333
4820+00		4824+00	LT	400	10	444
4828+00		4833+00	LT	500	10	556
4886+00		4891+00	LT	500	10	556
4947+00		4925+00	RT	600	10	667

NOTE: SEE SHEET 2-3 FOR DETAIL

CONCRETE LINED DITCH (6" THK)				
STATION	TO	STATION	LOCATION	REMARKS
Deleted				
UNIT 1 - CUBA				
NO CONCRETE LINED DITCHES IN UNIT 1				
UNIT 2 - SANDOVAL COUNTY				
4054+50		4062+50	RT	SEE DETAIL ON SHEET 2-4
UNIT 3 - JICARILLA APACHE INDIAN RESERVATION				
NO CONCRETE LINED DITCHES IN UNIT 3				

MISCELLANEOUS
SCHEDULES


SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

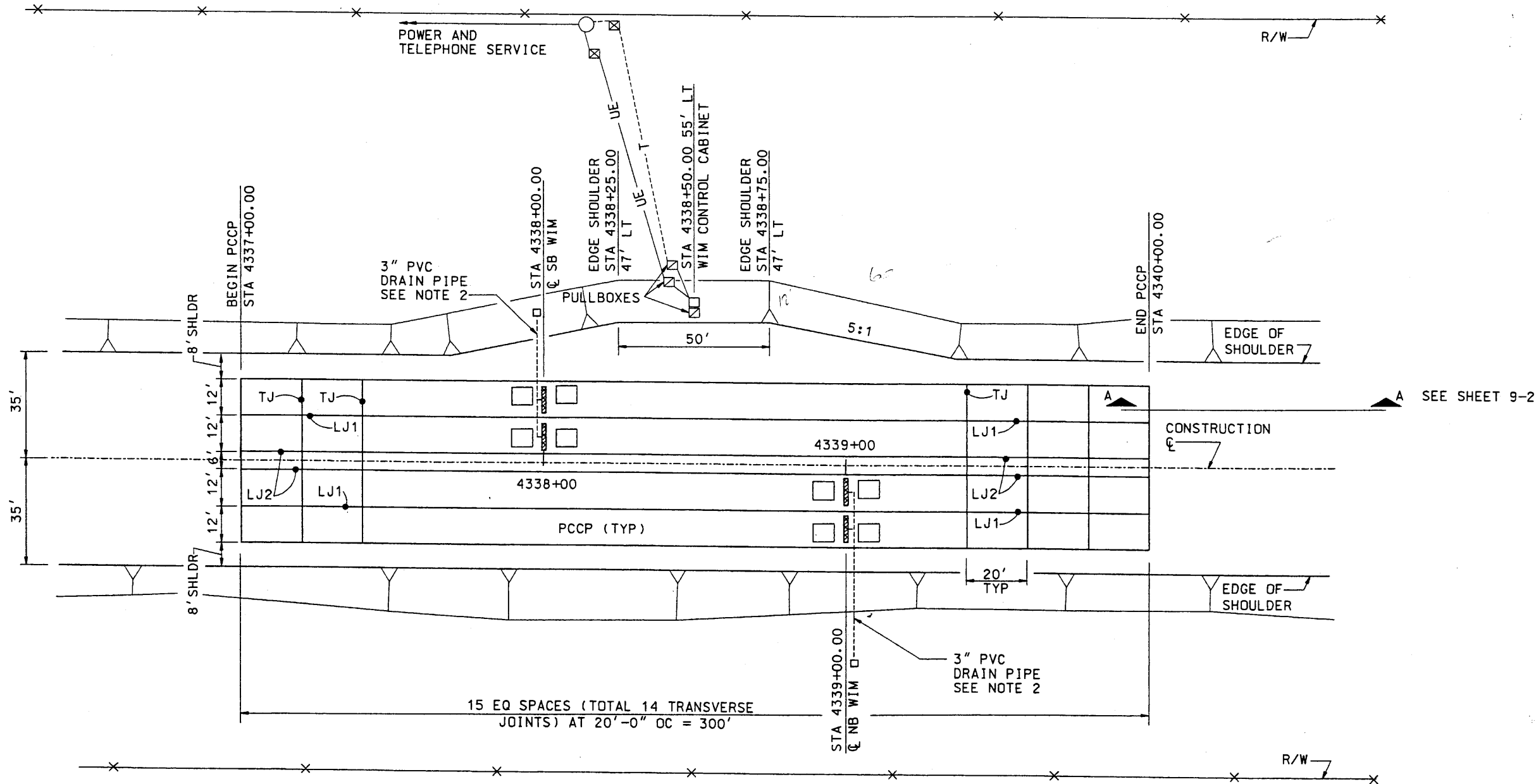
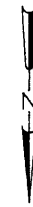
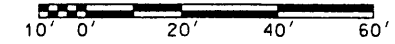
NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)184
CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



- NOTES:
1. INSTALL STRIPING AND RUMBLE STRIPS PER PLANS.
 2. INSTALL 3" PVC CONDUITS TO ENSURE POSITIVE DRAINAGE.
 3. SEE SHEET 9-3 FOR CONDUIT LAYOUT.
 4. INSTALL CONTROL CABINET SUCH THAT ACCESS DOOR FACES ROAD.



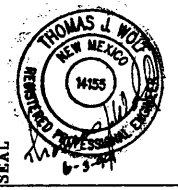
DATE
06/03/99

SHEET TITLE
HIGH SPEED
WEIGH-IN-MOTION
SYSTEMS
(PLAN)

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.-H.W.A. REGION NO 6
Project No. AC-NH-044-2(39)64
CN 3766

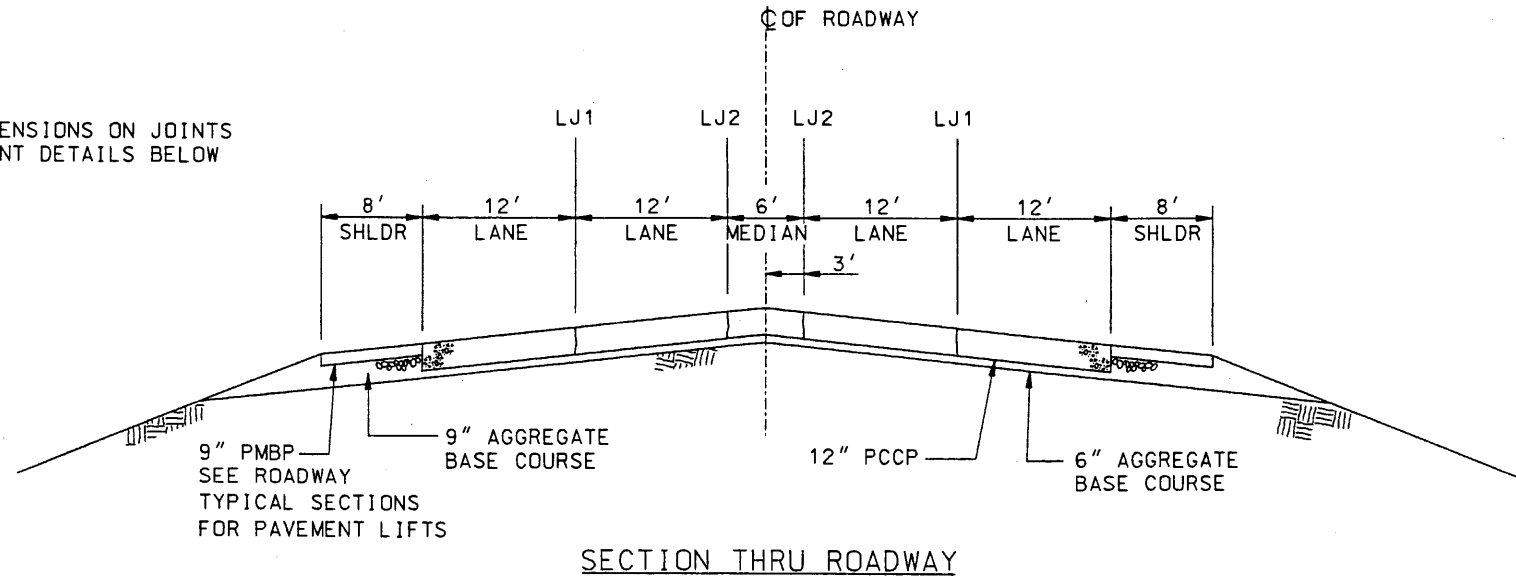
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DESIGN BY: JS
DRAWN BY: PE
CHECKED BY: TW

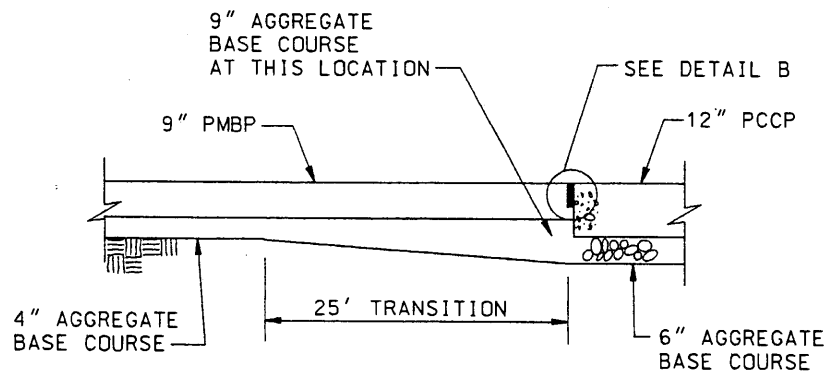


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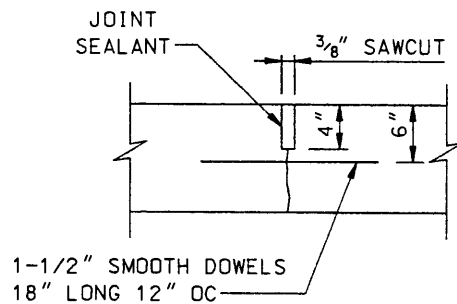
NOTE:
FOR DIMENSIONS ON JOINTS
SEE JOINT DETAILS BELOW



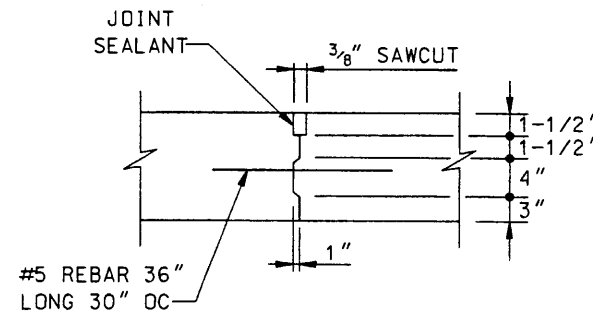
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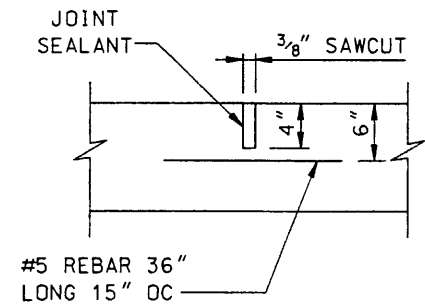
SECTION A-A



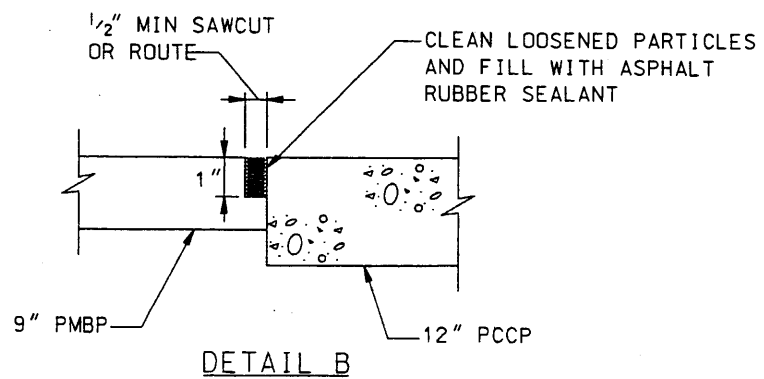
TJ TRANSVERSE JOINT



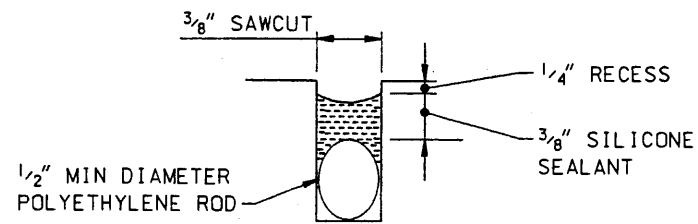
LJ1 LONGITUDINAL JOINT @ LANES



LJ2 LONGITUDINAL JOINT @ MEDIAN



DETAIL B

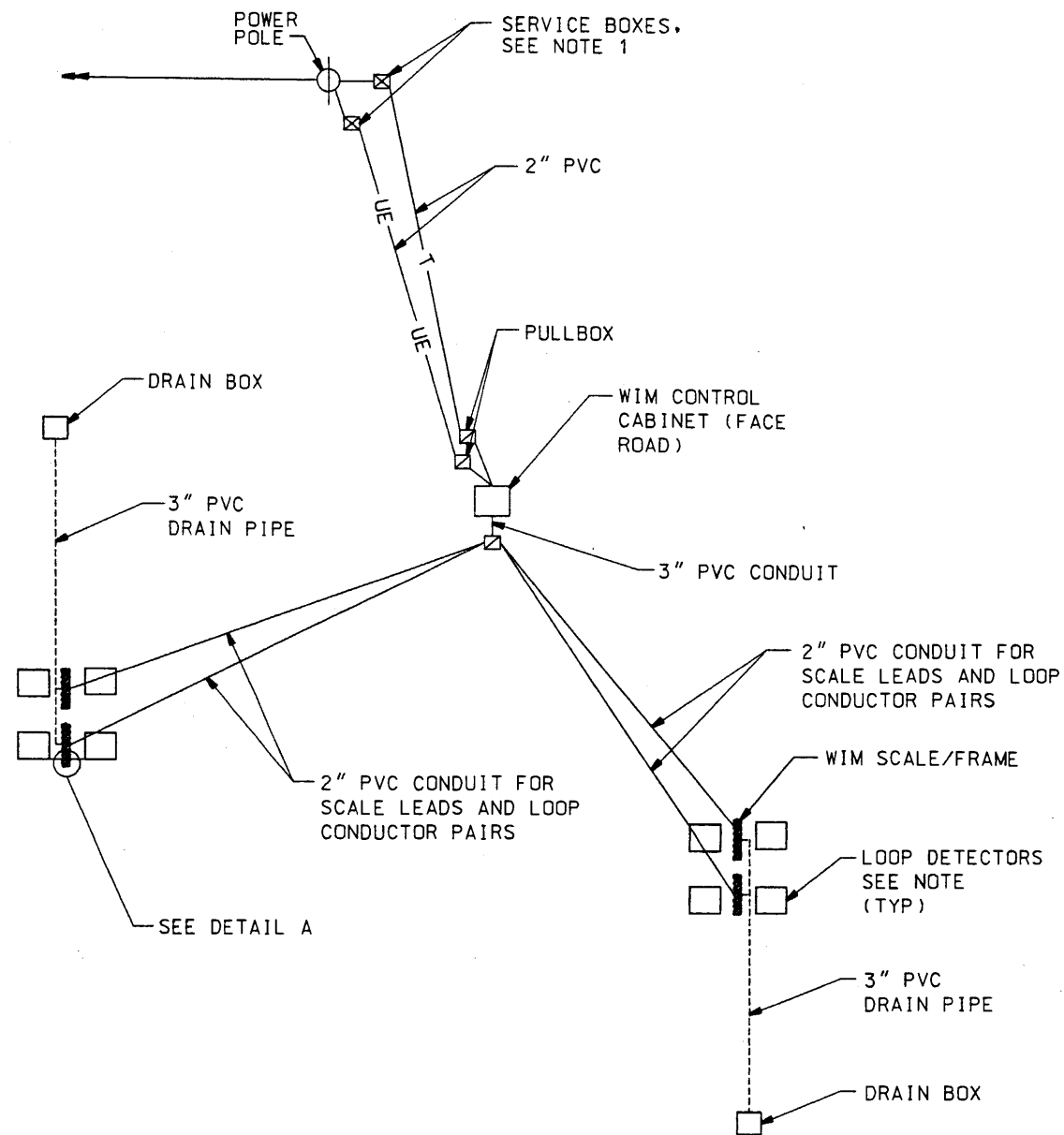


JOINT SEALANT DETAIL

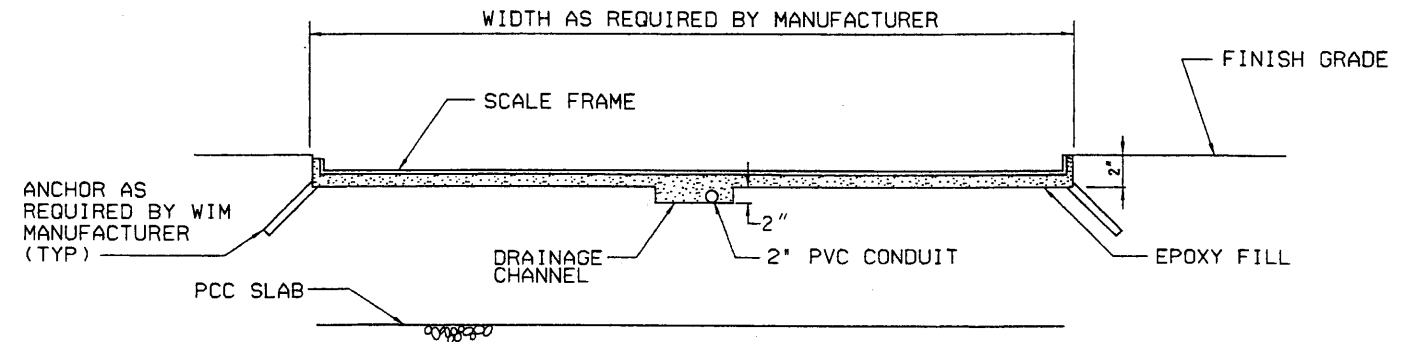
NOTE:
1. TRANSVERSE JOINT DOWELS TO BE PLACED 6" FROM EDGE OF CONCRETE PAVEMENT.
2. DOWELS AND REBAR TO BE EPOXY COATED AND PLACED +/- 1/4" IN ALL DIRECTIONS.

NOTES:

1. ELECTRICAL AND TELEPHONE SERVICE FROM POLE TO SERVICE BOXES TO BE PROVIDED BY OTHERS.
2. LOCATION OF LOOP DETECTORS WILL BE CRITICAL. LOCATION TO BE PER WIM MANUFACTURER'S REQUIREMENTS.
3. FINAL CONFIGURATION OF CONDUIT AND DRAIN PIPE SHALL BE PER WIM MANUFACTURER'S REQUIREMENTS.
4. PROVIDE 100A SERVICE AT CONTROL CABINET.
5. PULL BOXES SHALL BE NO. 5 WITH THE FOLLOWING MINIMUM DIMENSIONS:
 - WALL THICKNESS = 1.0"
 - DEPTH = 22.0"
 - LENGTH (OUTSIDE DIMENSION) = 28.0"
 - WIDTH (OUTSIDE DIMENSION) = 18.0"

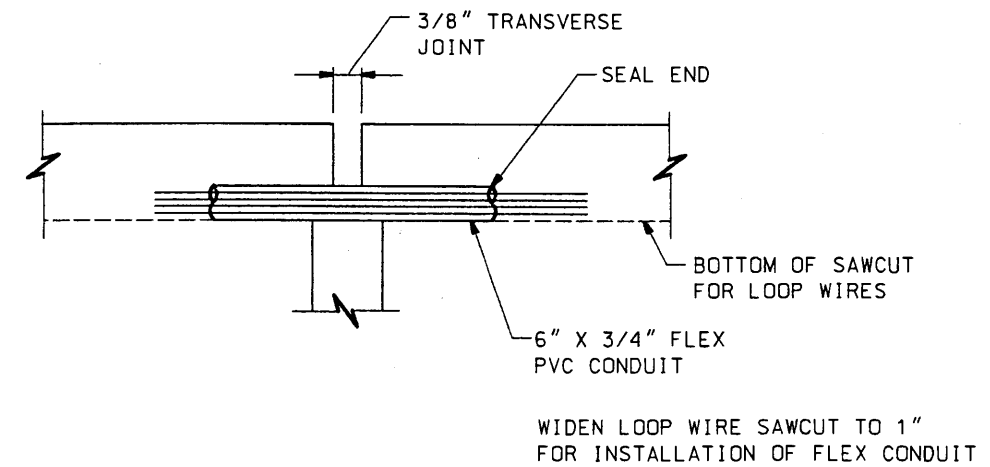


SERVICE WIRE DIAGRAM

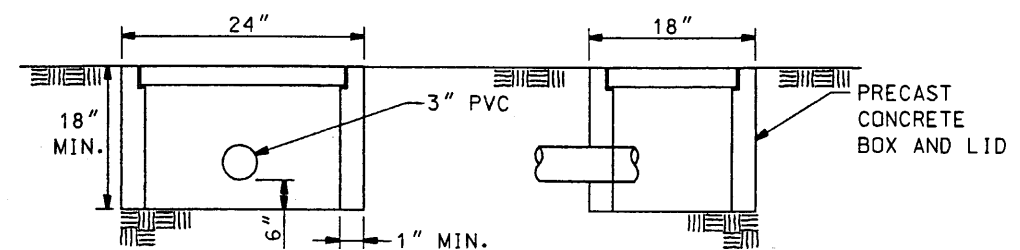


NOTE:
SCALE FRAME INSTALLATION TO BE VERIFIED BY WIM SUPPLIER.

**DETAIL A
WIM SCALE FRAME DETAIL**



INDUCTION LOOP ACROSS TRANSVERSE JOINTS



DRAIN BOX DETAIL

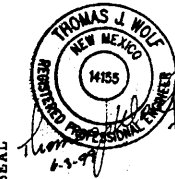
DATE
06/03/99

SHEET TITLE
HIGH SPEED
WEIGH-IN-MOTION
SYSTEM
ELECTRICAL DETAILS

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6
Project No. AC-NH-044-2(39)64
CN 3766

CH2MHILL

DESIGN BY: JS
DRAWN BY: PE
CHECKED BY: TW



THIS SHEET INTENTIONALLY LEFT BLANK

SEAL

2-25

DESIGN BY:

DDM

DRAWN BY:

STAFF

CHECKED BY:

SFP

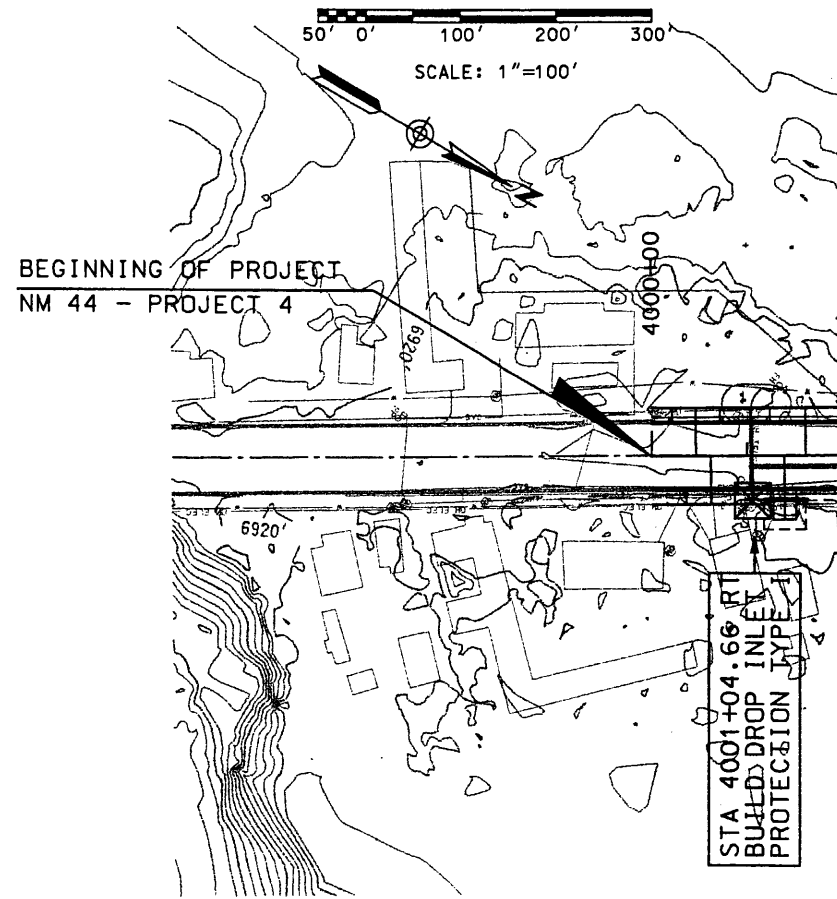
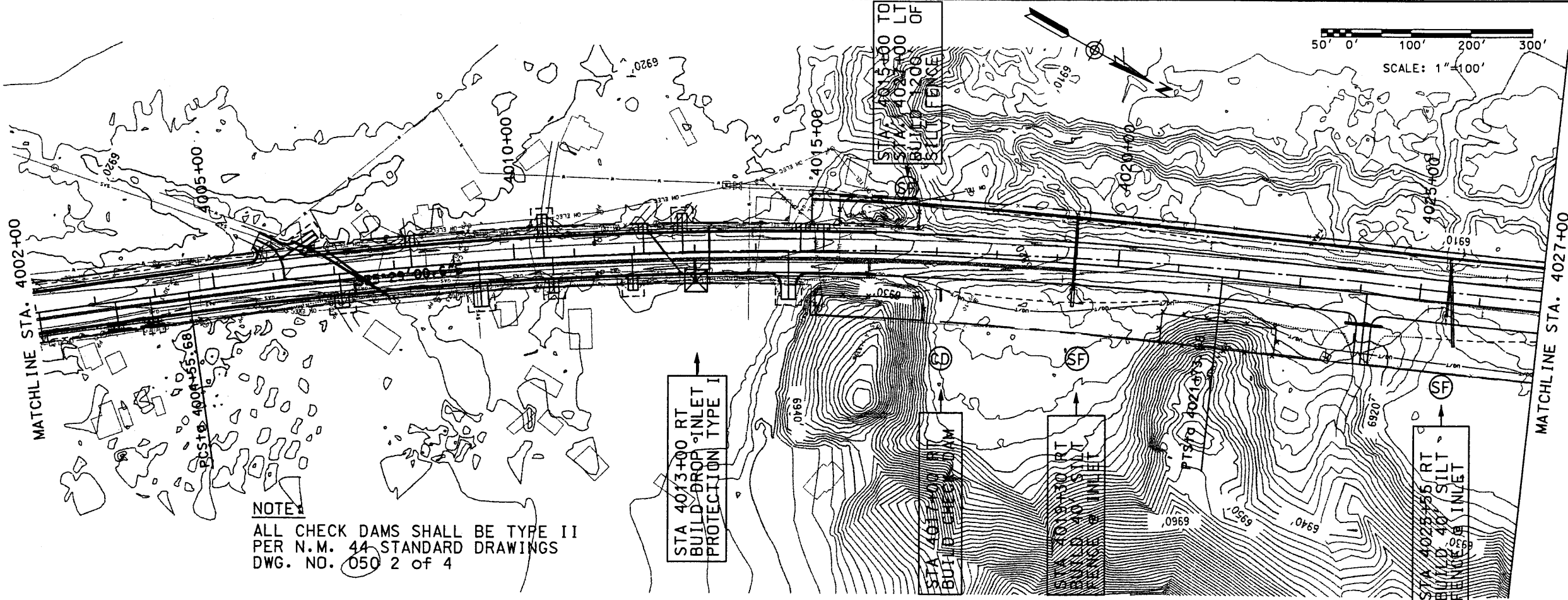
**WILSON
& COMPANY**

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
NM 44
CN 3766

SHEET TITLE

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 Plot Date: 03 NOV 99



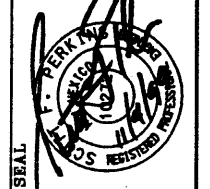
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 F.H.W.A. REGION NO 6

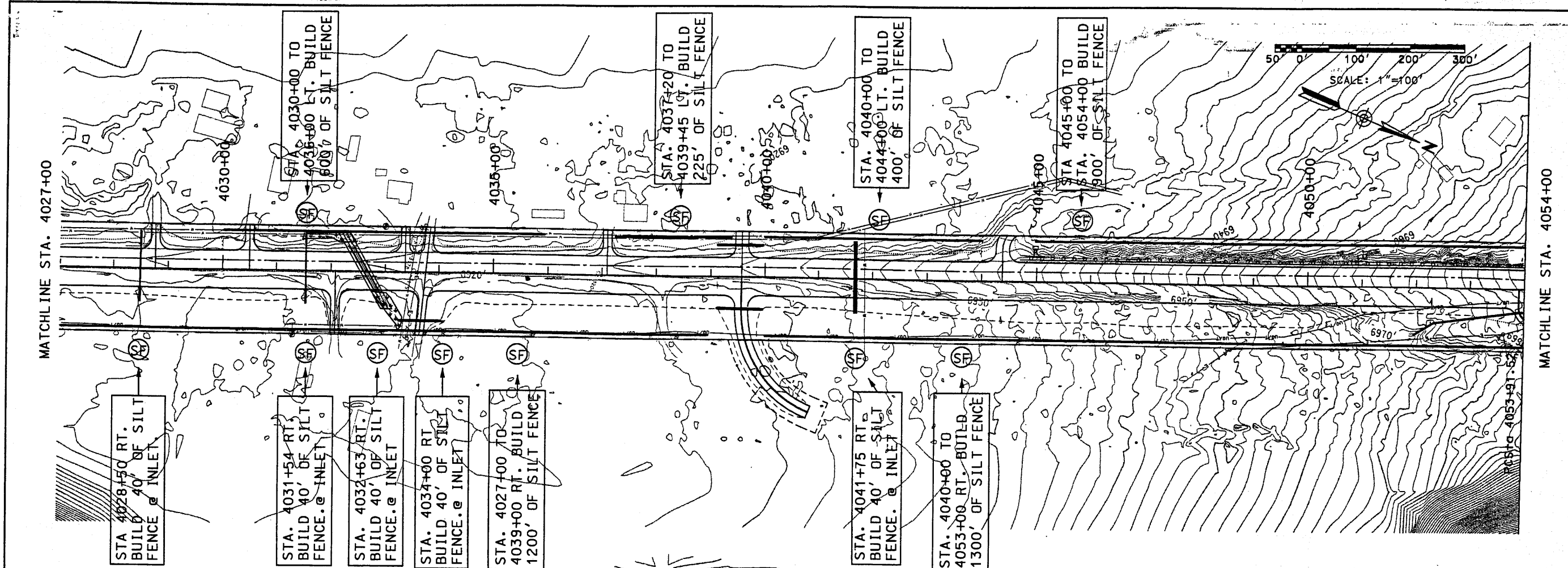
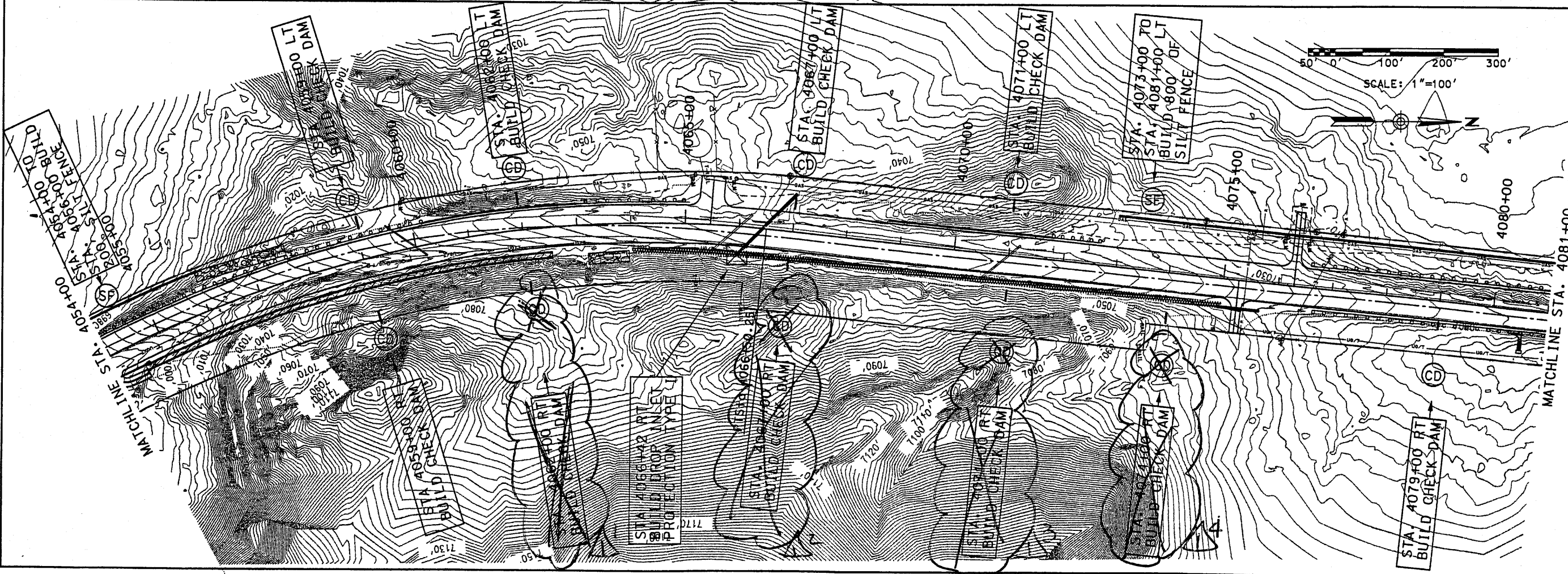
NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766

EROSION CONTROL PLANS
 STA. 4000+00
 TO
 STA. 4027+00



DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP





DESIGN BY: STAFF
DRAWN BY: STAFF
CHECKED BY: SFP

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NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

SHEET TITLE

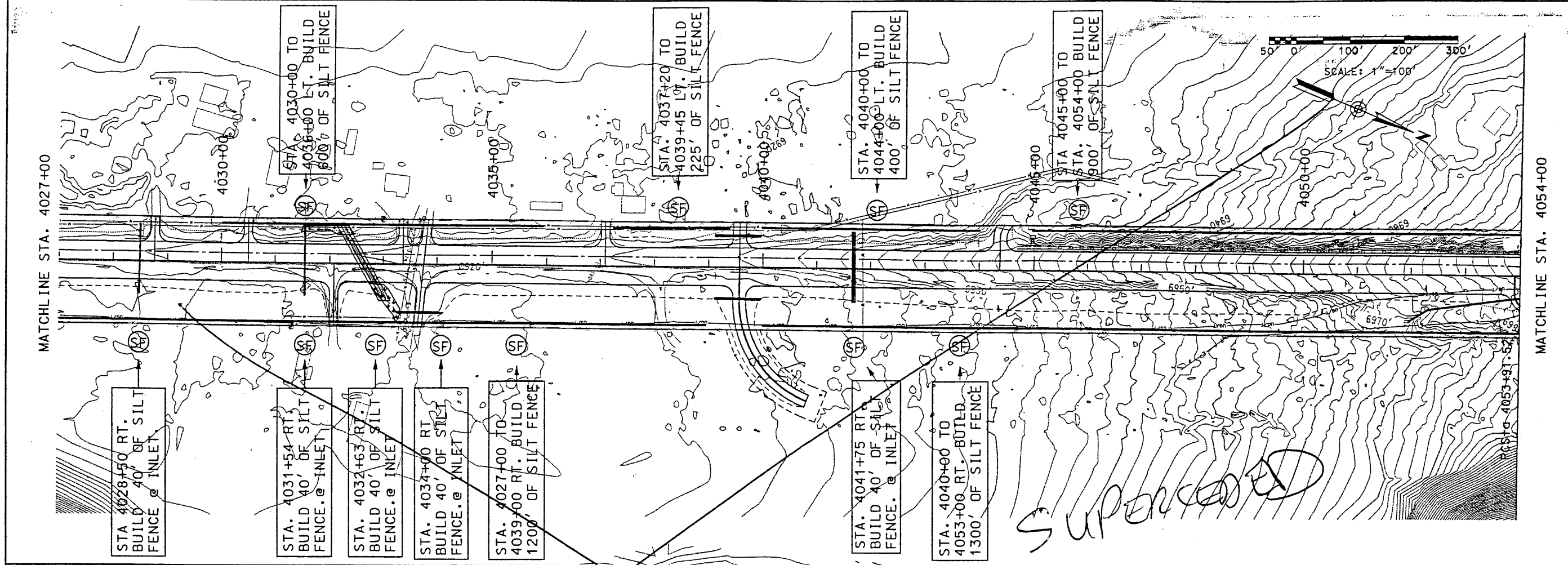
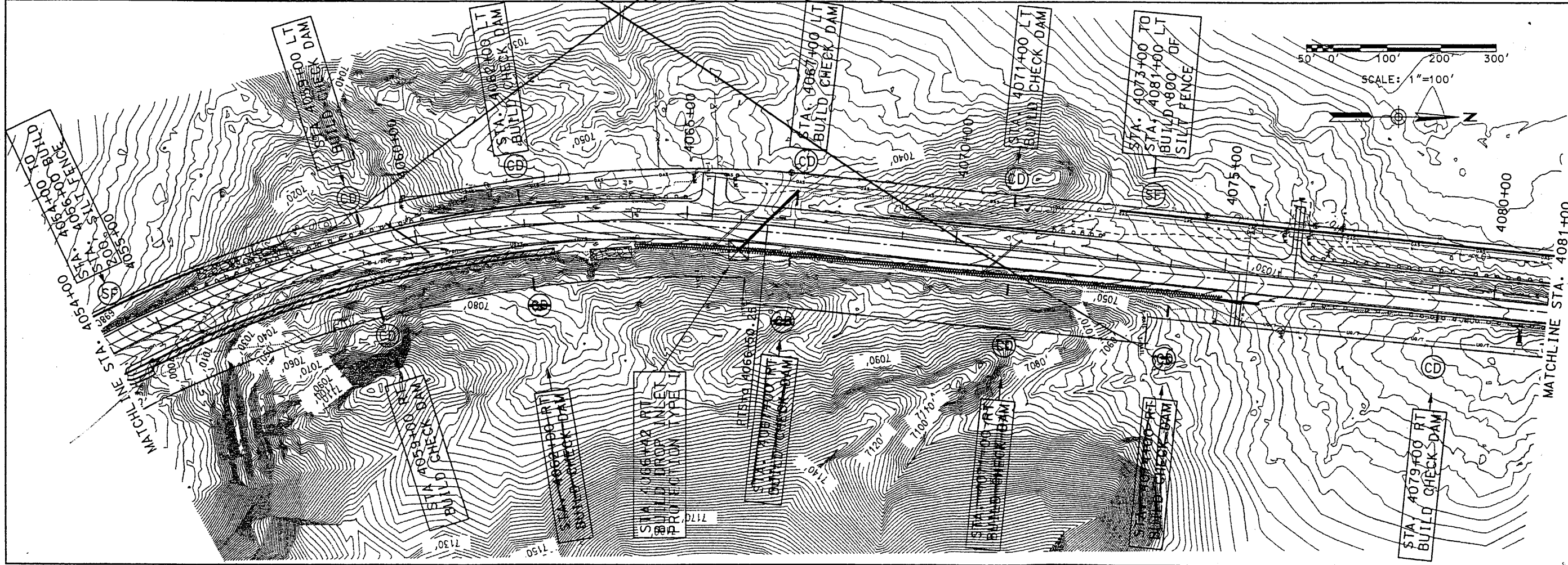
EROSION CONTROL PLANS
STA. 4027+00
TO
STA. 4081+00

NM 44
NEW MEXICO PROJECT NO AC-NH--044-2(3)9164
CN 3766

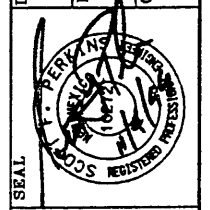
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MATCHLINE STA. 4081+00



2-27

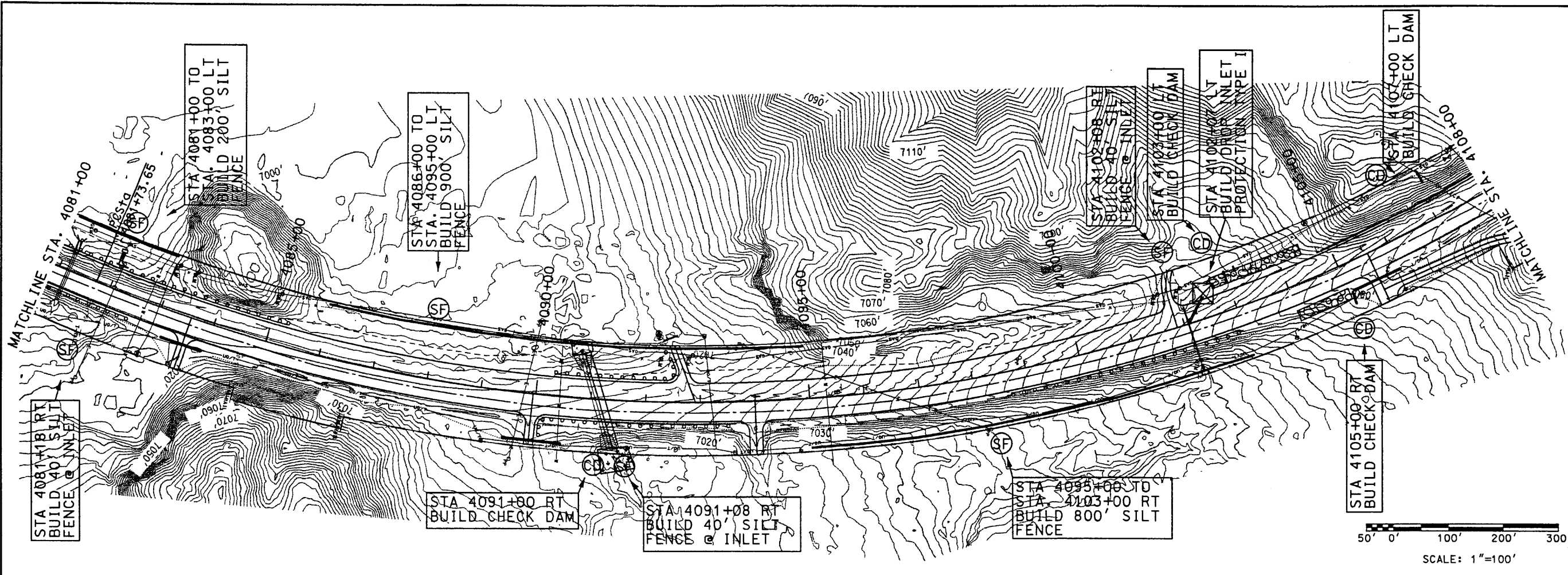
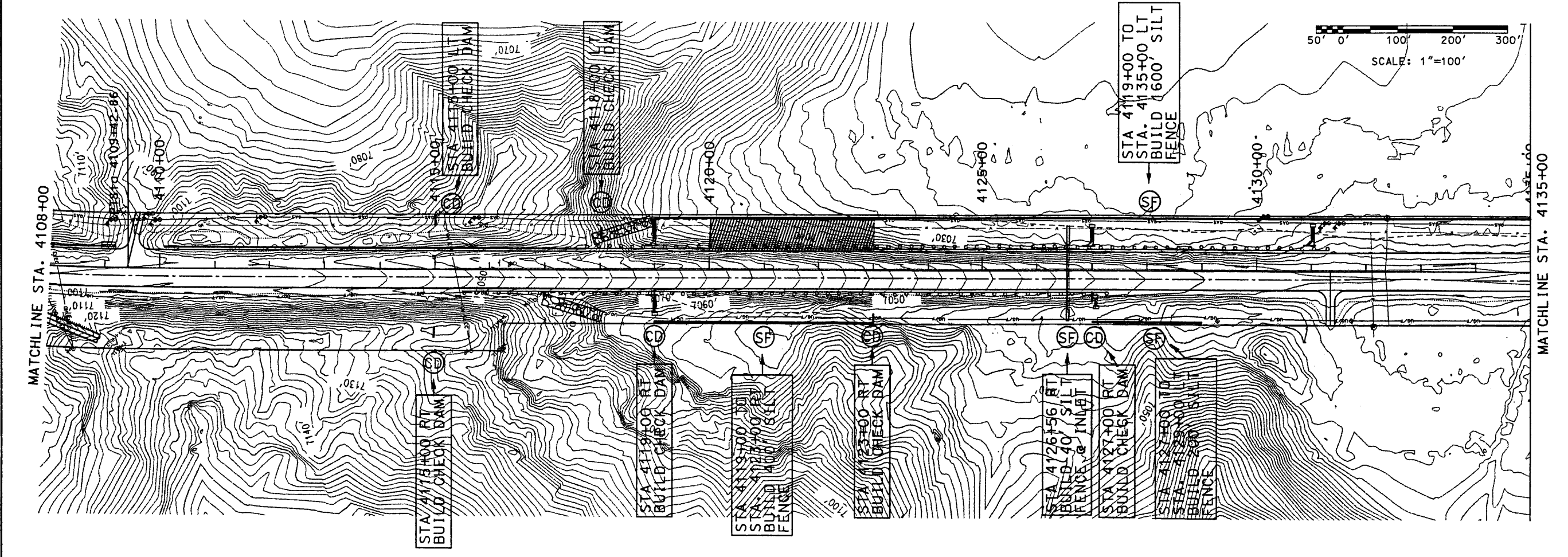


DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP



NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766

SHEET TITLE
 EROSION CONTROL PLANS
 STA. 4027+00
 TO
 STA. 4081+00



DESIGN BY:
STAFF

DRAWN BY:
STAFF

CHECKED BY:
SFP

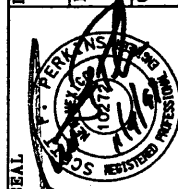
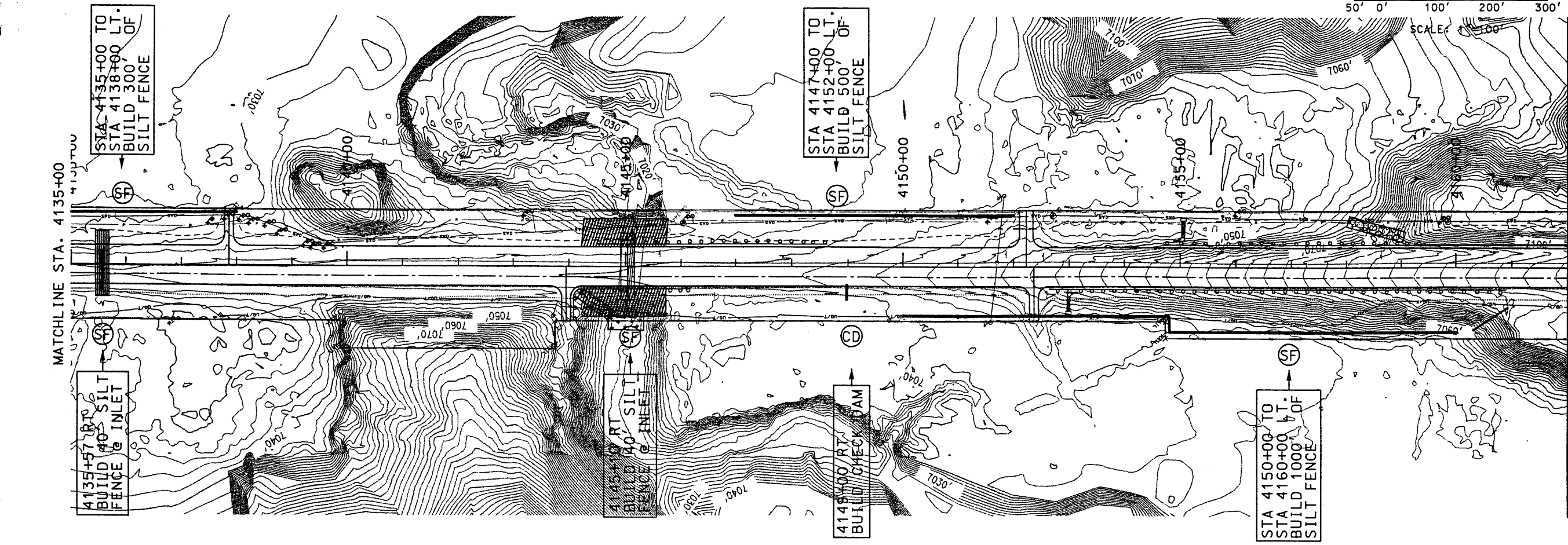
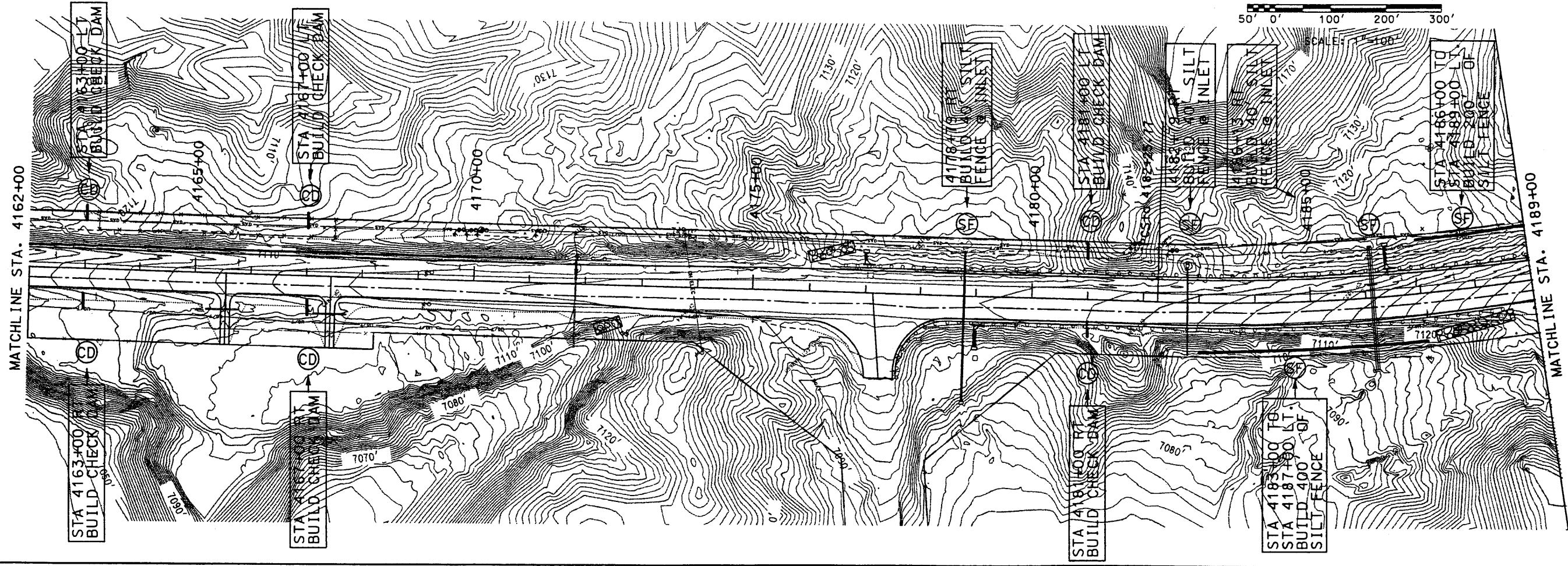


NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH--044-2(39)64
CN 3766

SHEET TITLE
EROSION CONTROL PLANS
STATION 4081+00
TO
STATION 4135+00

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 Plot Date: 03 NOV 99

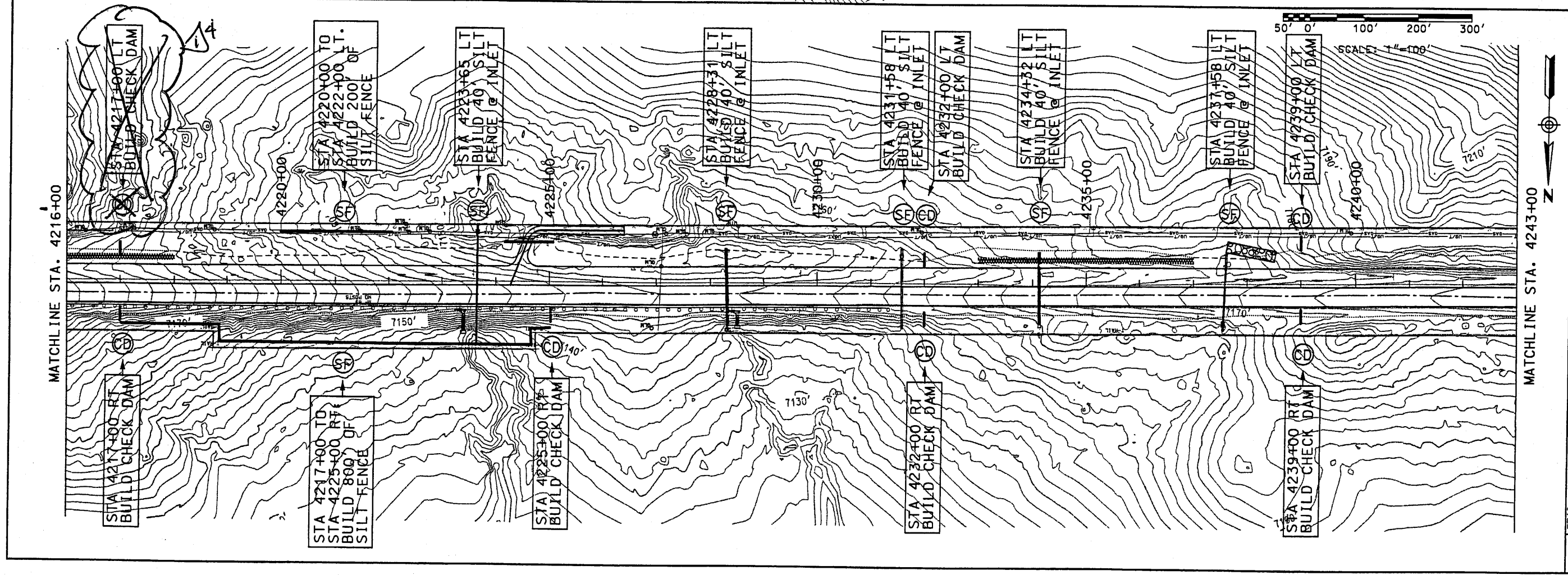
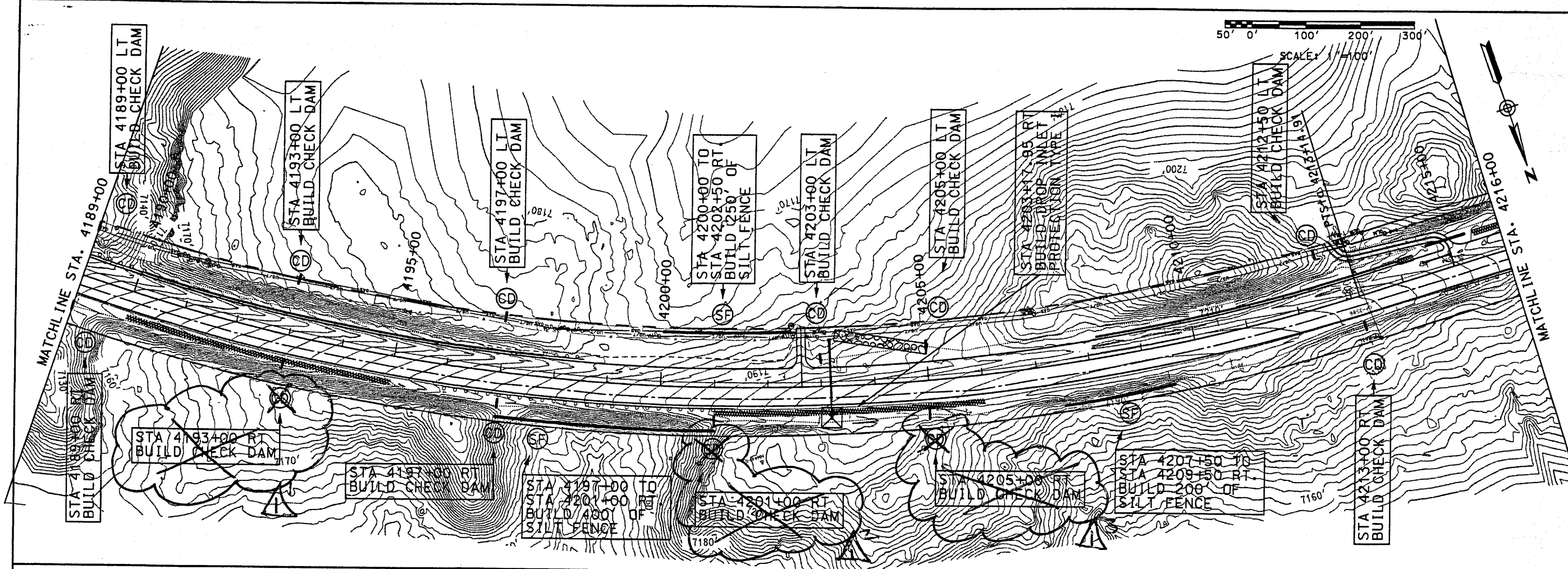


DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP

**WILSON
& COMPANY**

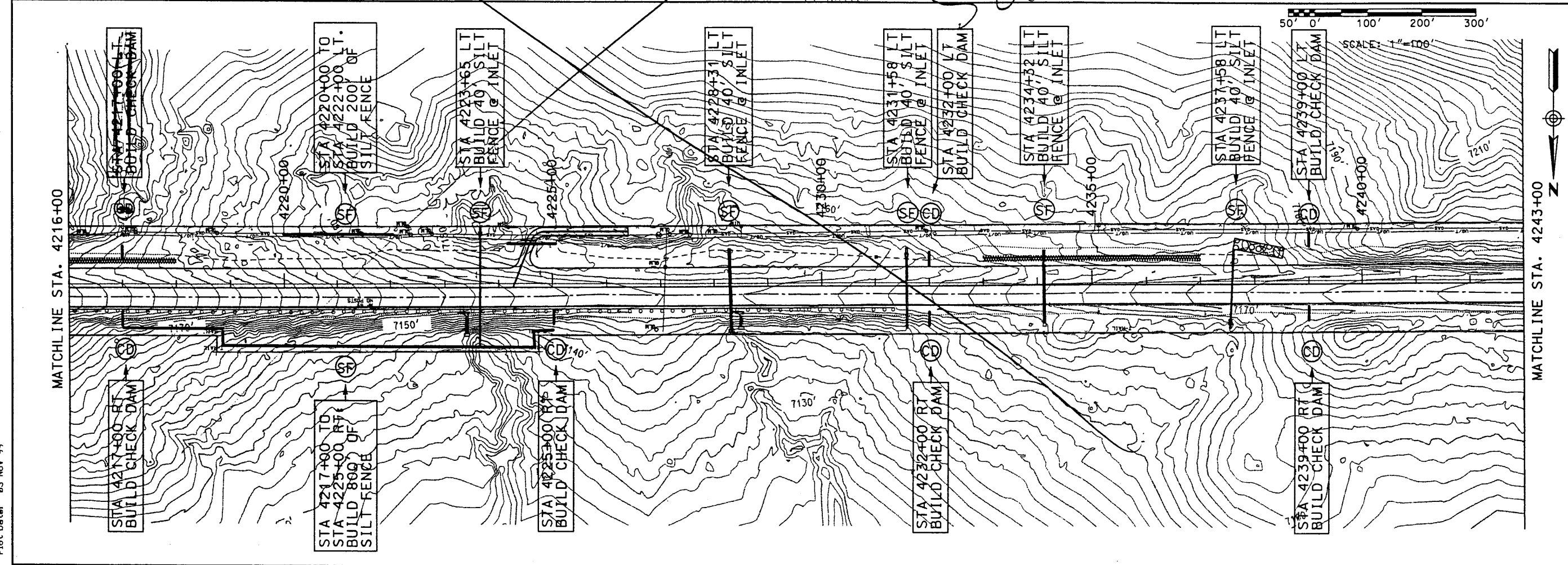
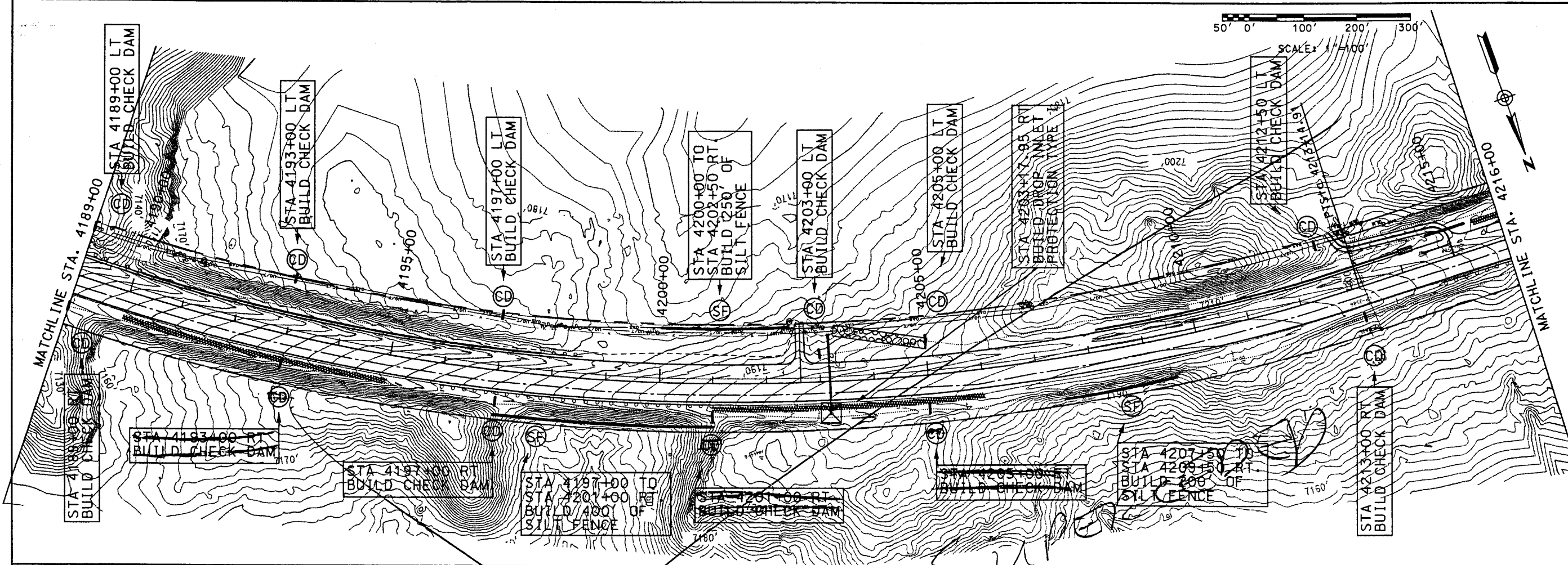
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 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(3)964
 CN 3766


SHEET TITLE
 EROSION CONTROL PLANS
 STA. 4135+00 TO
 STA. 4189+00



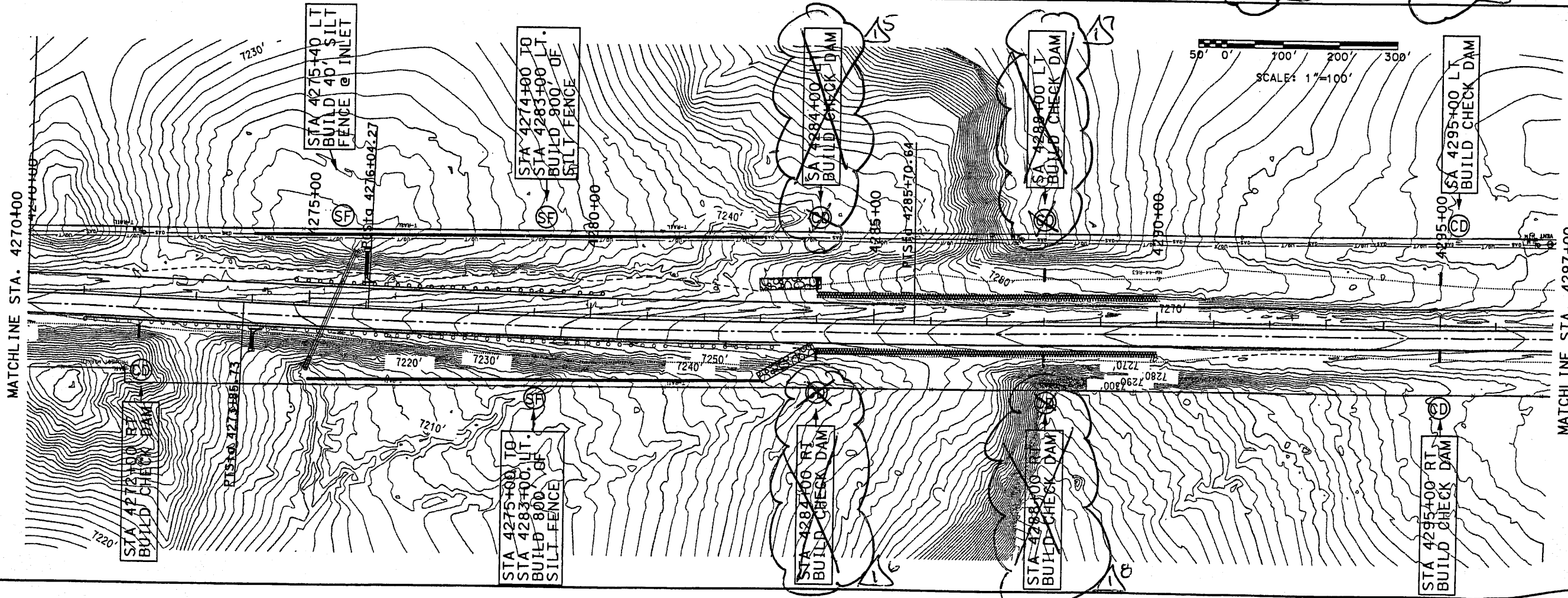
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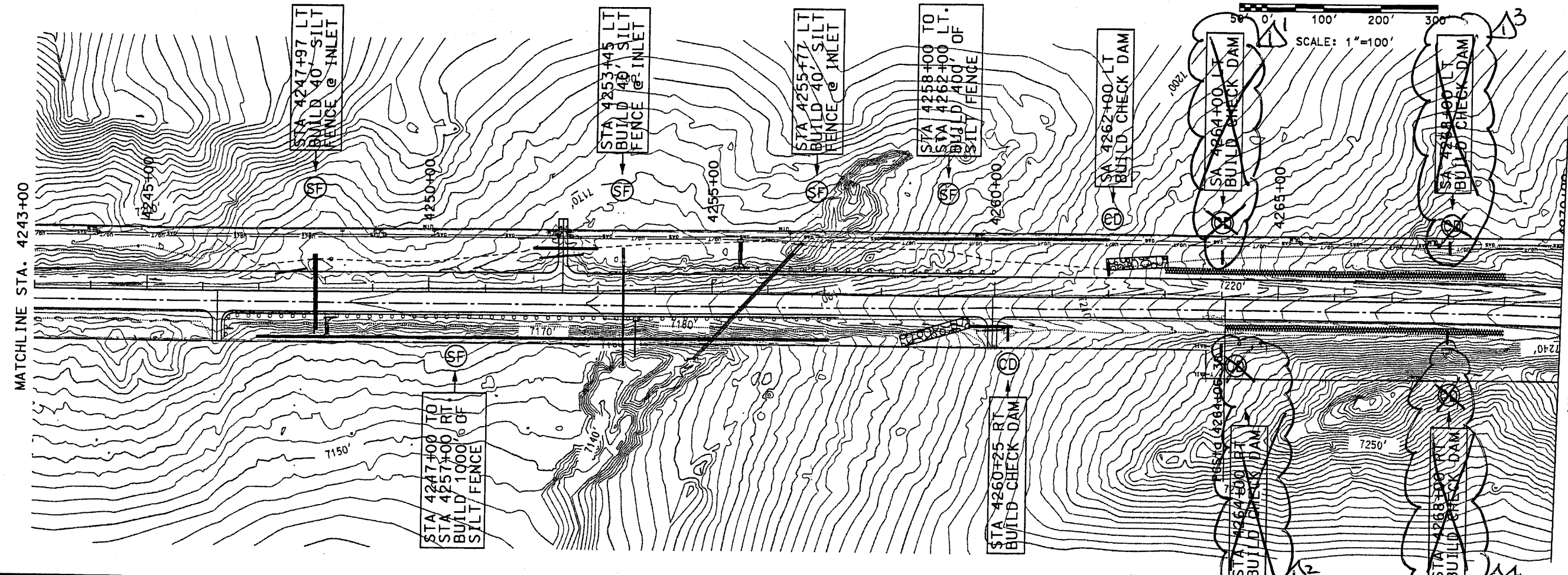
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MATCHLINE STA. 4270+00

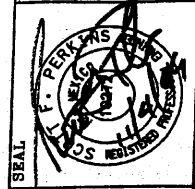


MATCHLINE STA. 4297+00

MATCHLINE STA. 4243+00



MATCHLINE STA. 4270+00



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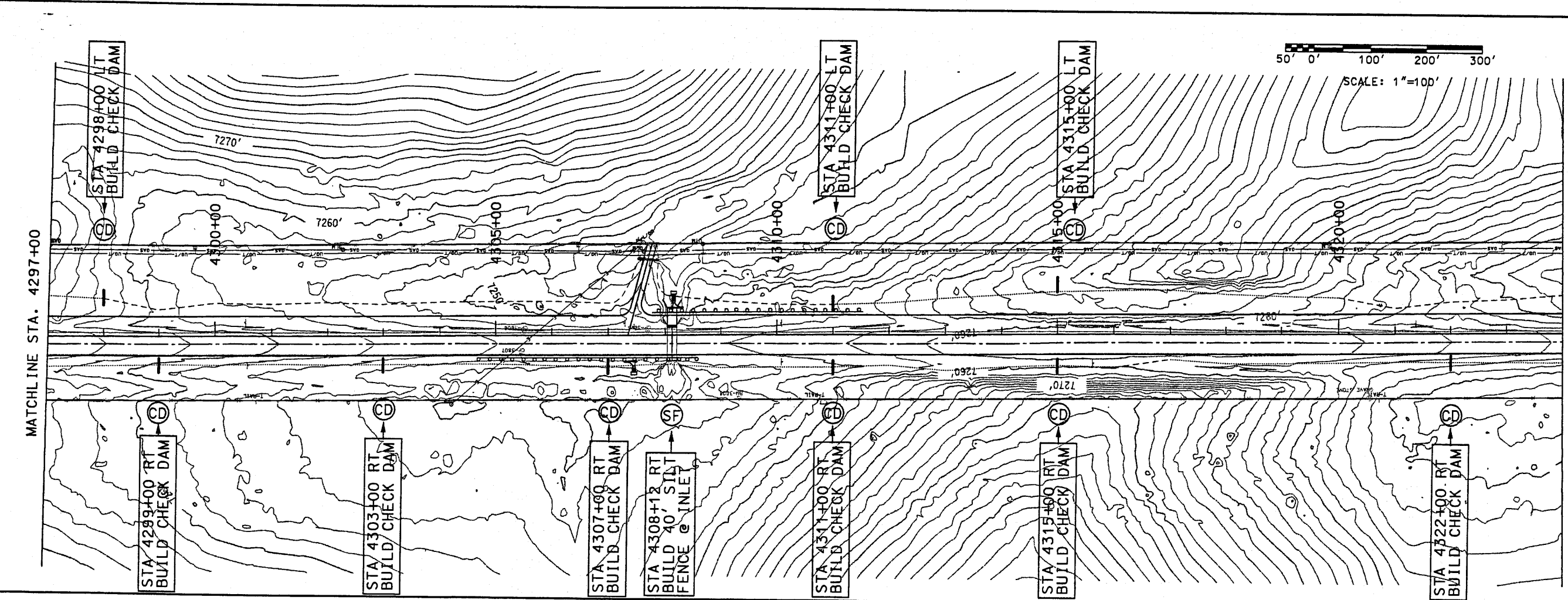
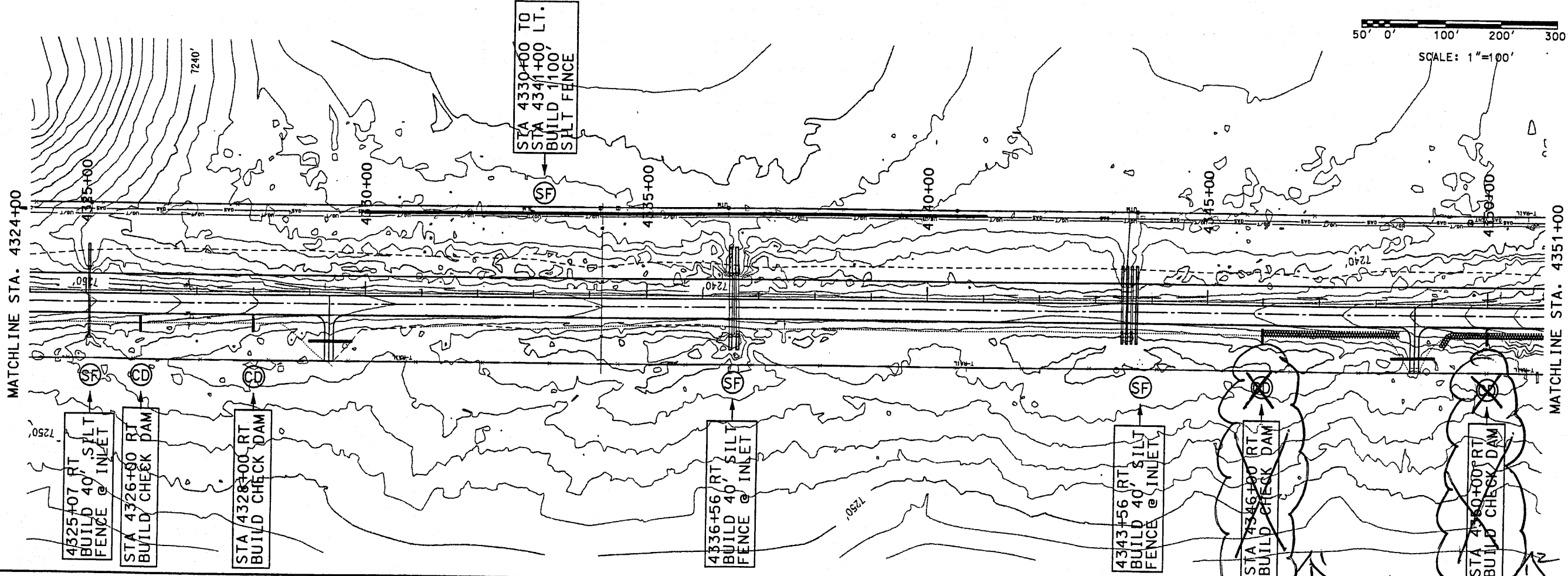
WILSON & COMPANY

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(3)164
 CN 3766

SHEET TITLE

EROSION CONTROL PLANS
 STA. 4243+00
 TO
 STA. 4297+00



DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP

WILSON & COMPANY

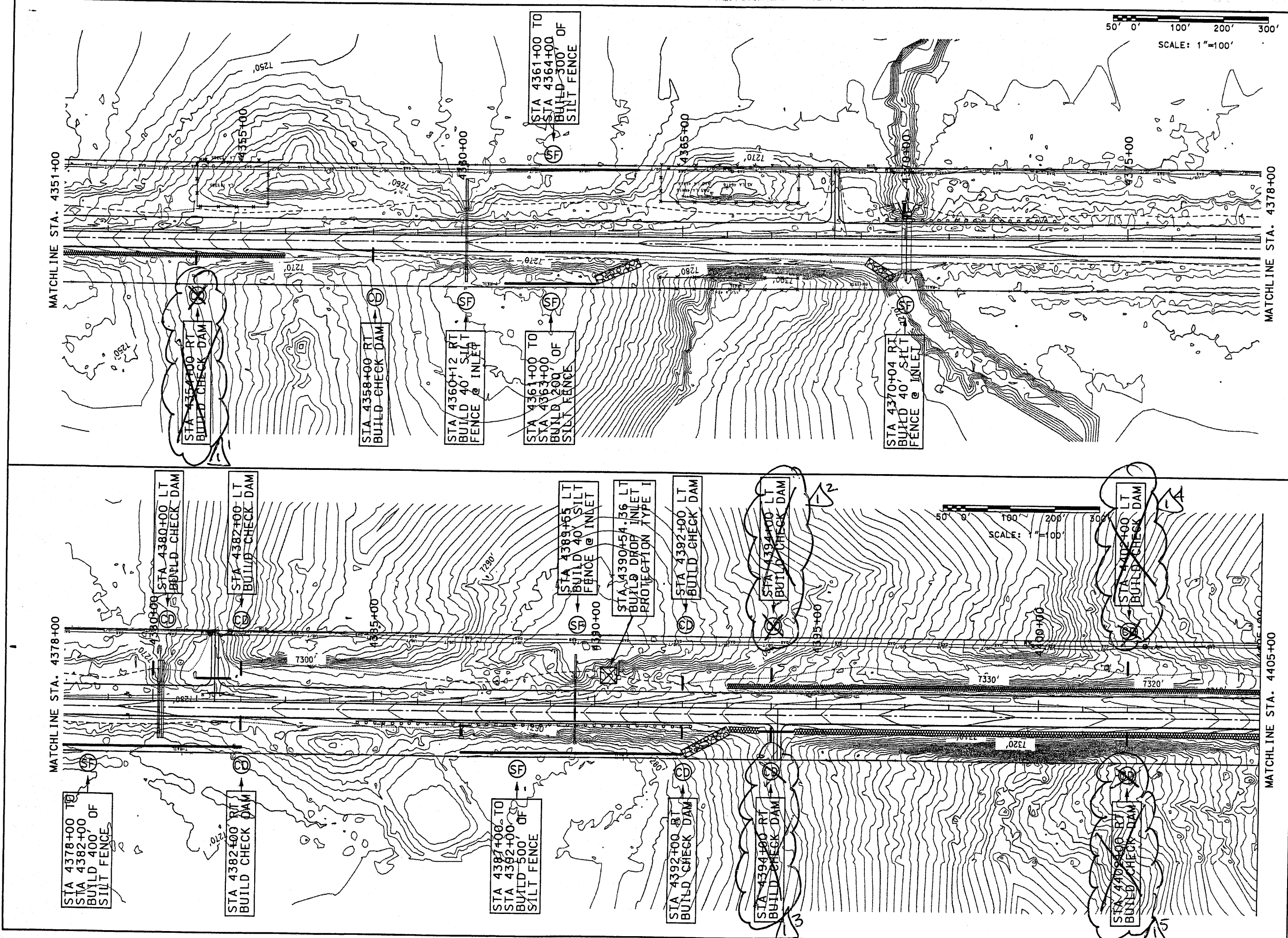
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 F.H.W.A. REGION NO 6

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 PROJECT NO AC-NH--044-2(3)9/64
 CN 3786

SHEET TITLE

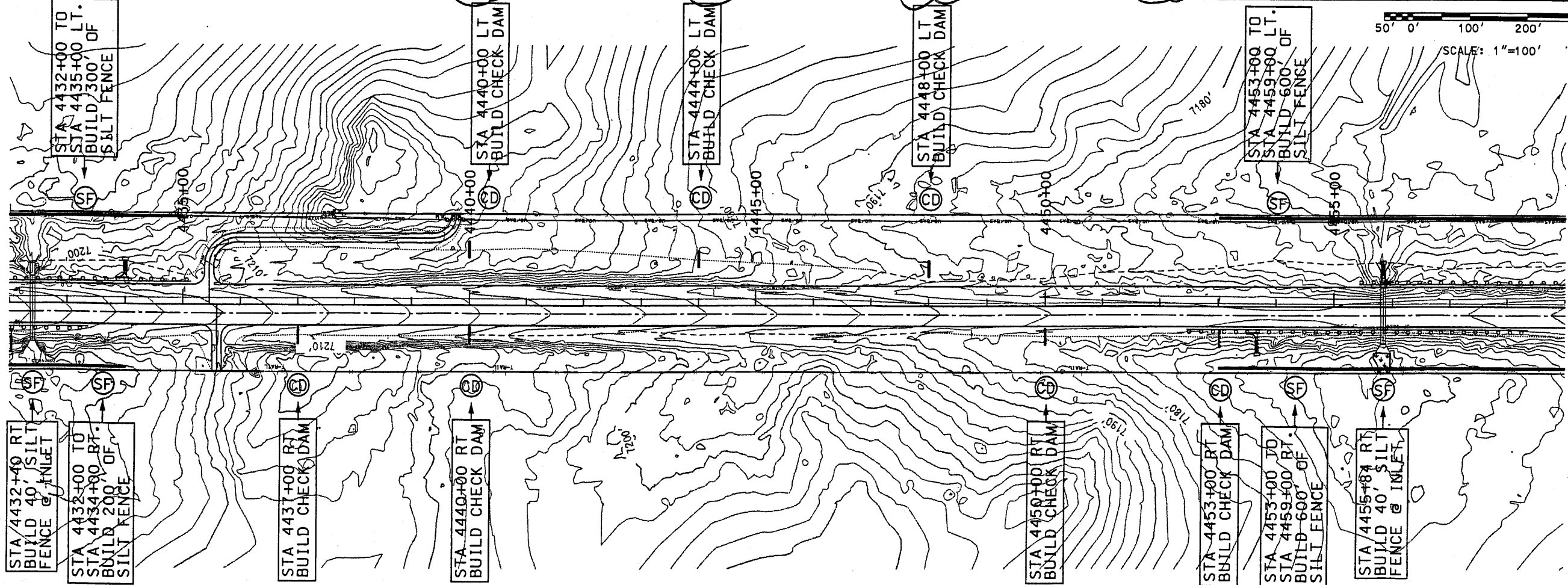
EROSION CONTROL PLAN
 STA. 4297+00 TO
 STA. 4351+00

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 Plot Date: 03 NOV 99



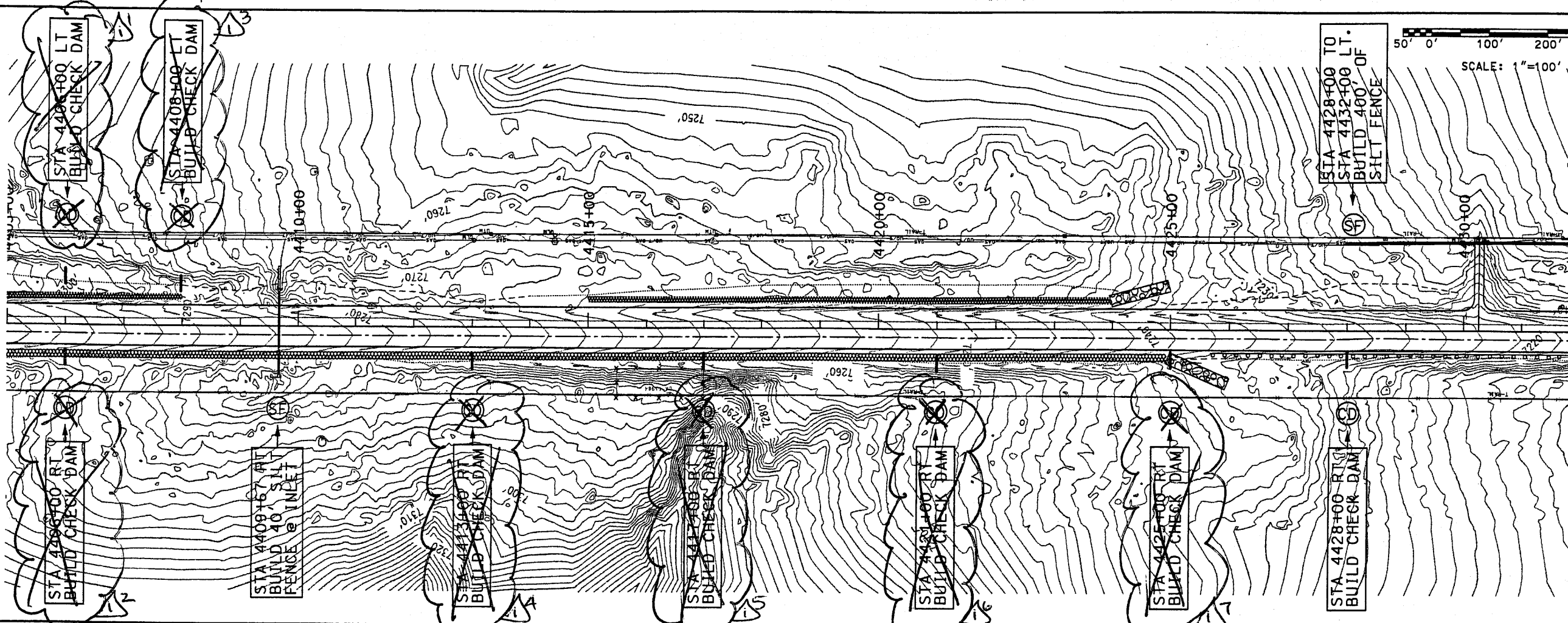
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SHEET TITLE EROSION CONTROL PLANS STA. 4351+00 TO STA. 4405+00		
NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)64 CN 3766		

MATCHLINE STA. 4432+00




MATCHLINE STA. 4459+00

MATCHLINE STA. 4405+00



MATCHLINE STA. 4432+00

SEAL: 

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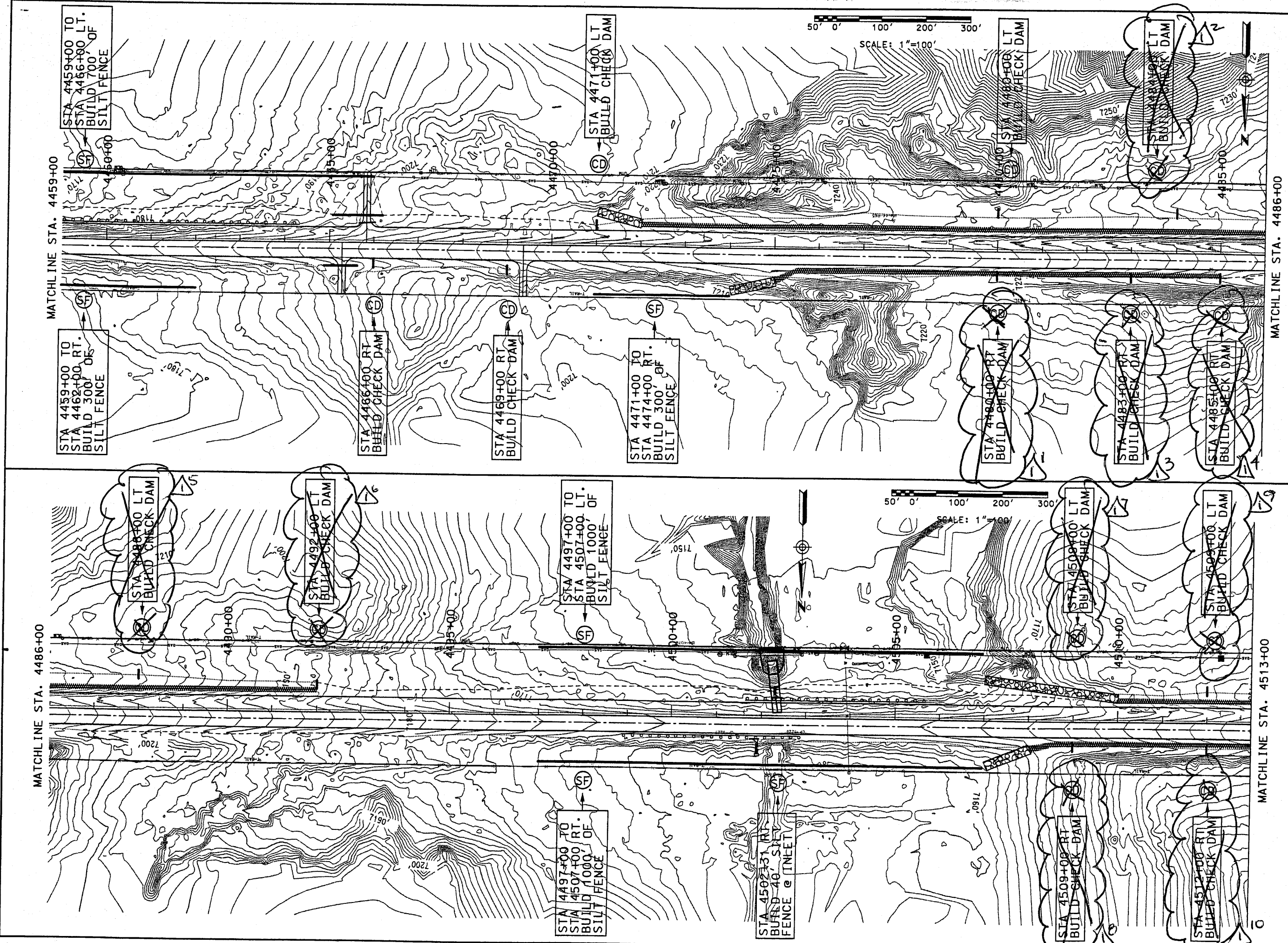
WILSON & COMPANY

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.-H.W.A. REGION NO 6

NM 44
 PROJECT NO AC-NH--044-2(39)64
 CN 3766

SHEET TITLE

EROSION CONTROL PLANS
 STA. 4405+00
 TO
 STA. 4459+00

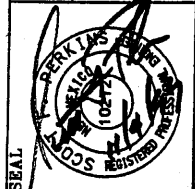


MATCHLINE STA. 4486+00

MATCHLINE STA. 4513+00

MATCHLINE STA. 4459+00

MATCHLINE STA. 4486+00



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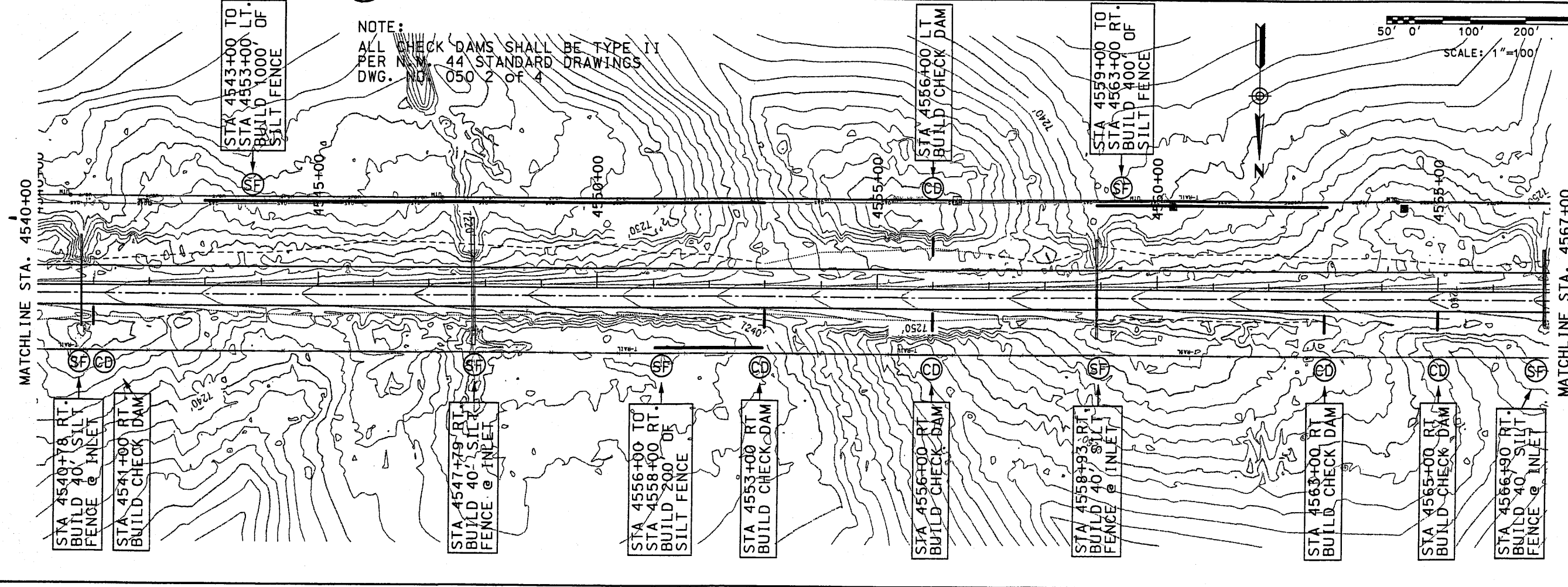
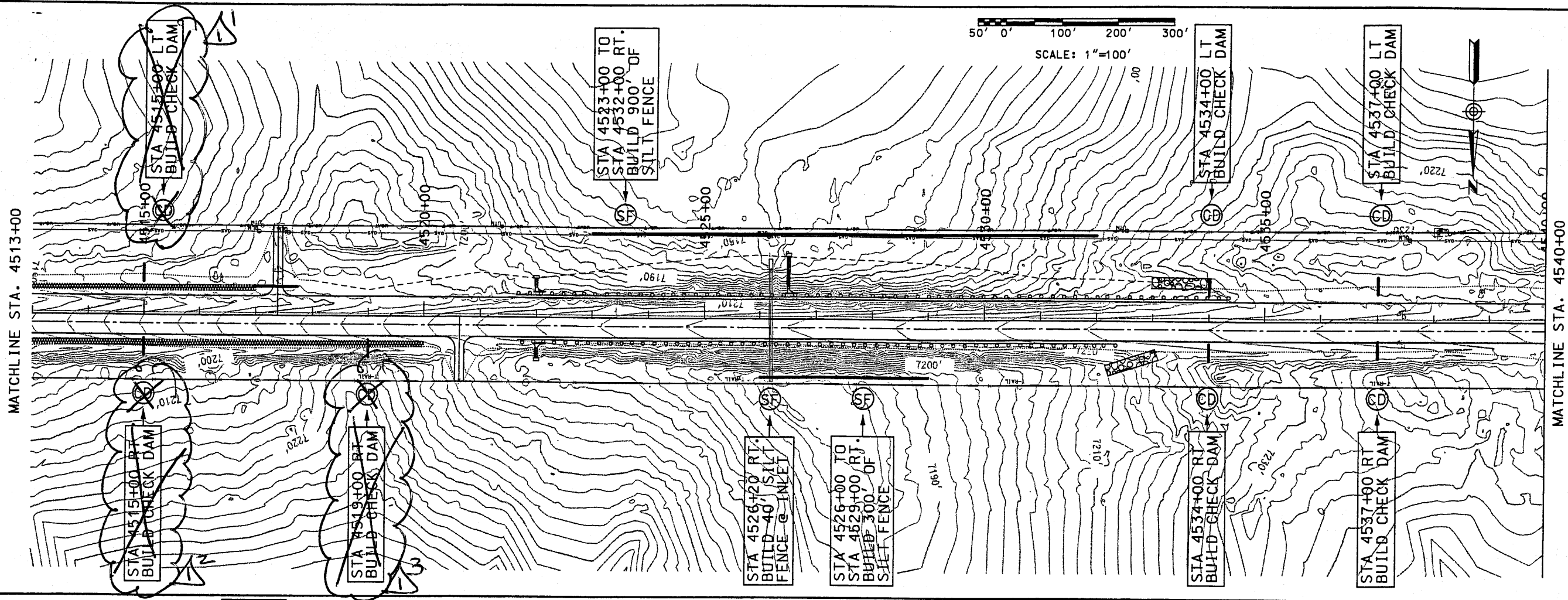
WILSON & COMPANY

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(3)9164
 CN 3766

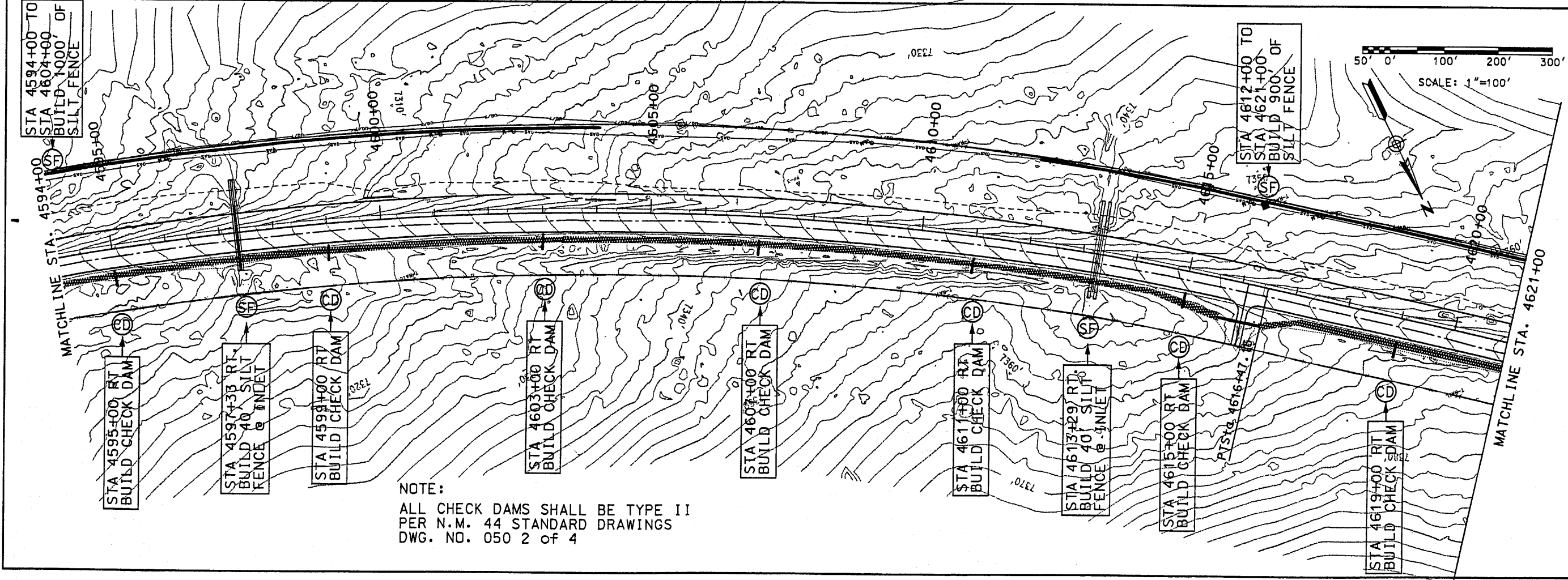
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 STA. 4459+00
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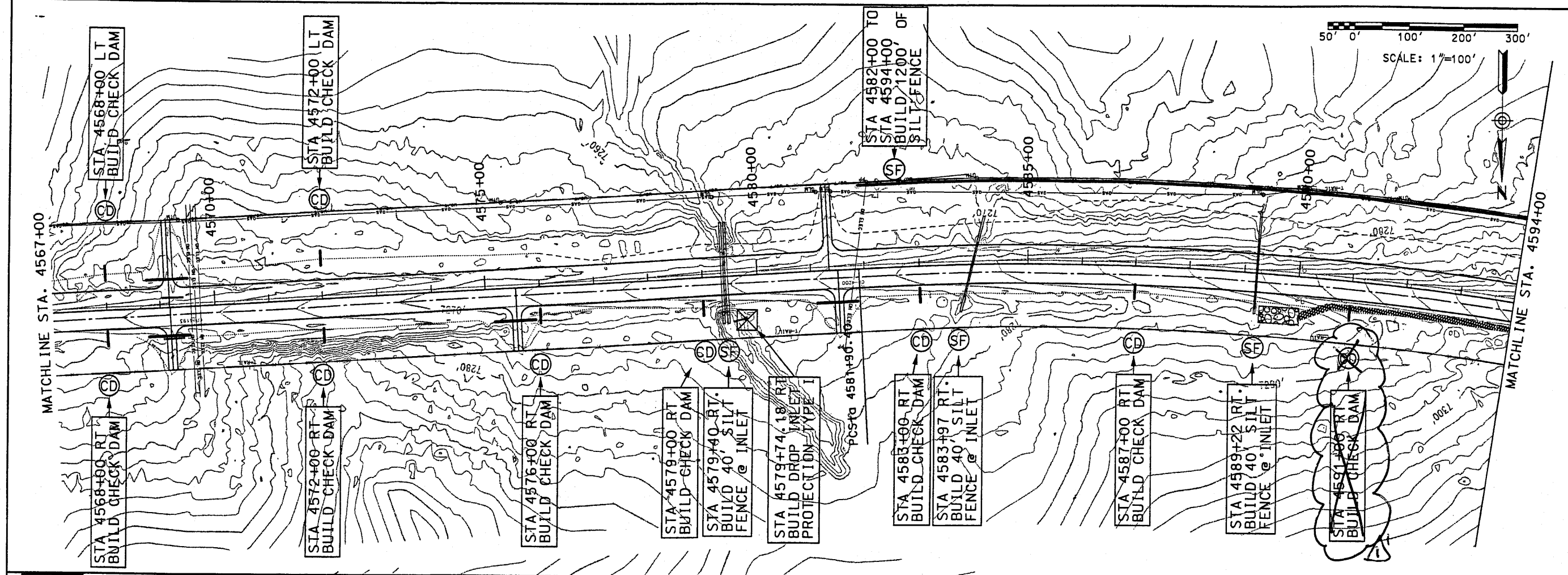


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SEAL	CHECKED BY: SFP	NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6 NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)64 CN 3766	

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 Plot Date: 04 NOV 99



NOTE:
 ALL CHECK DAMS SHALL BE TYPE II
 PER N.M. 44 STANDARD DRAWINGS
 DWG. NO. 050 2 of 4



DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP

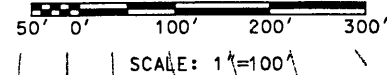


NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766

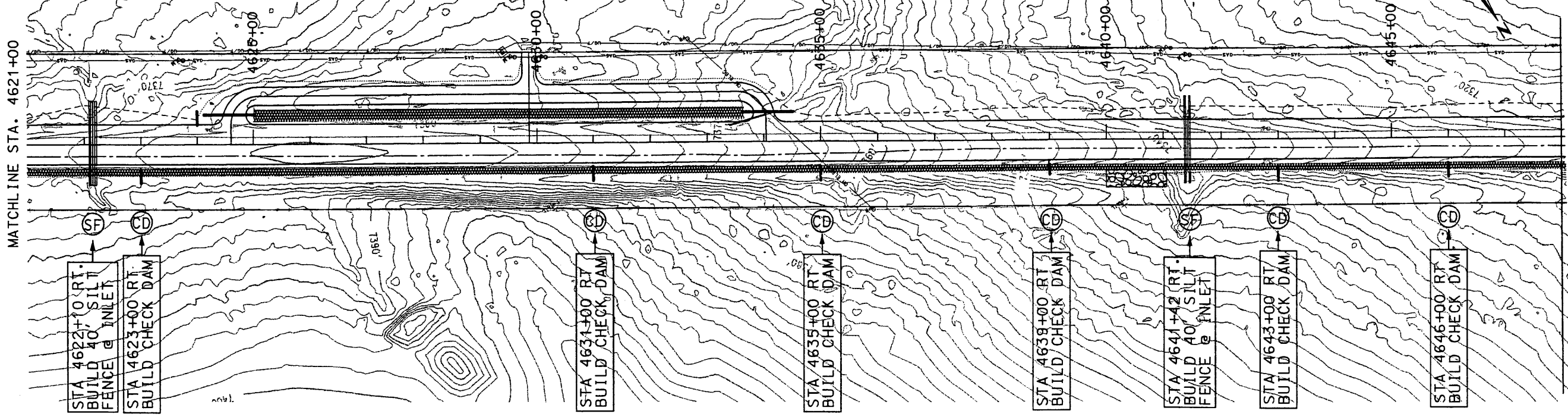
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 EROSION CONTROL PLANS
 STA. 4567+00
 TO
 STA. 4621+00

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 Plot Date: 04 NOV 99

NOTE:
 ALL CHECK DAMS SHALL BE TYPE II
 PER N.M. 44 STANDARD DRAWINGS
 DWG. NO. 050 2 OF 4

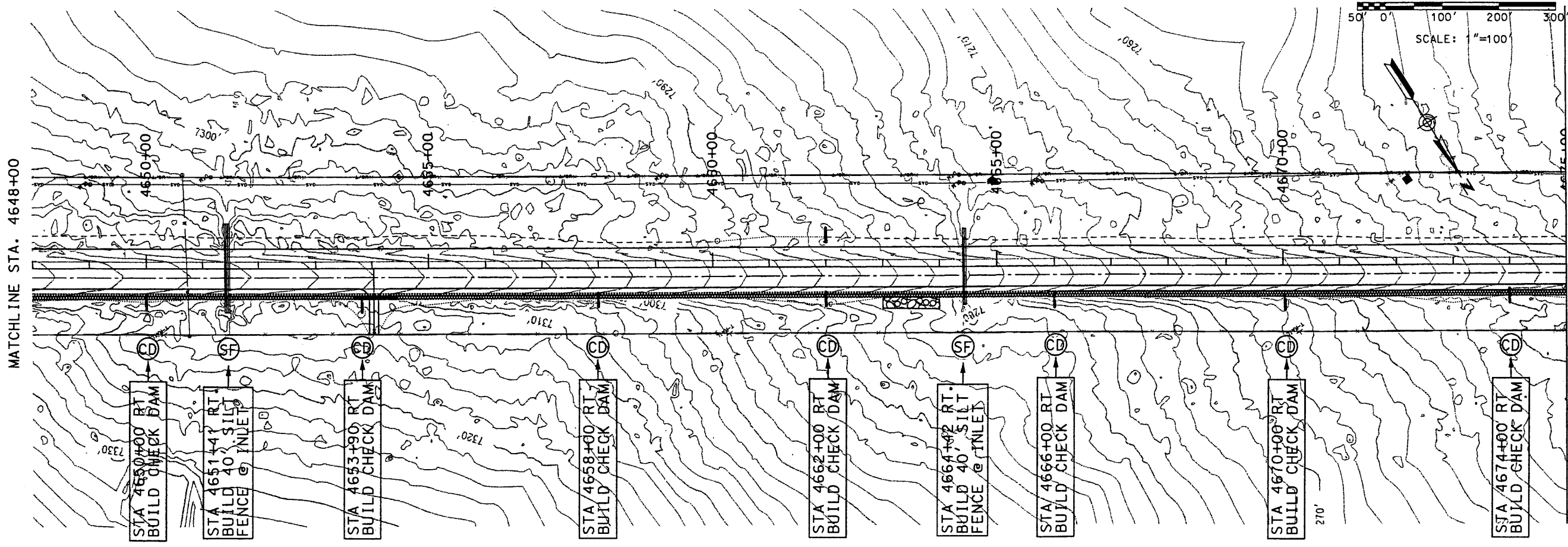
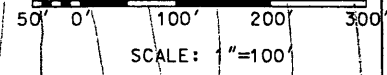


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MATCHLINE STA. 4648+00

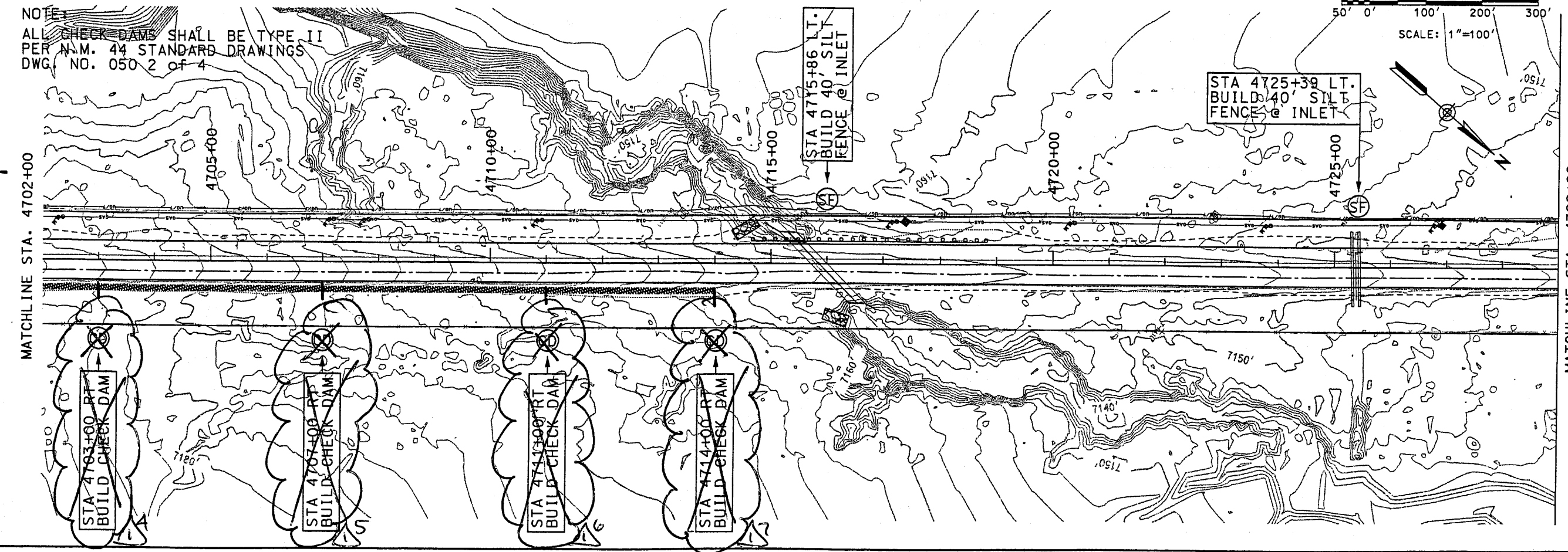
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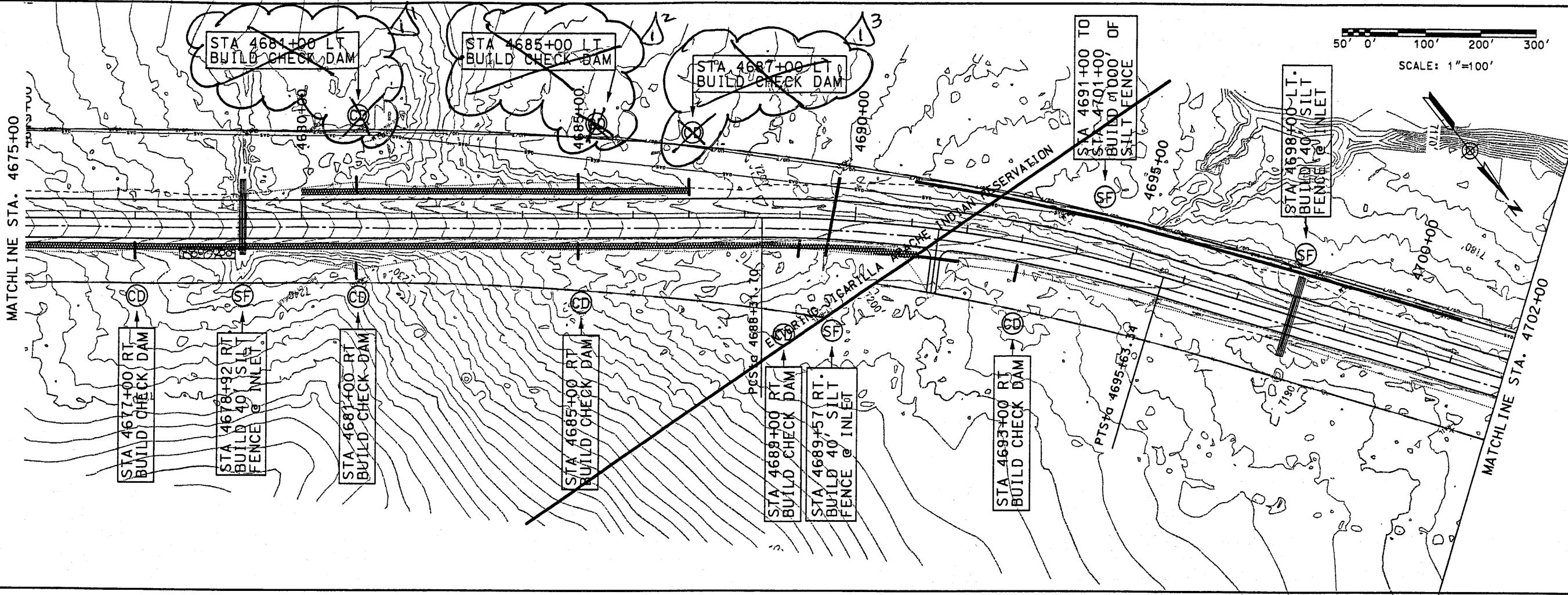
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	DRAWN BY: STAFF			
CHECKED BY: SFP		2-38		

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 Plot Date: 04 NOV 99



NOTE:
 ALL CHECK DAMS SHALL BE TYPE II
 PER N.M. 44 STANDARD DRAWINGS
 DWG. NO. 050 2 of 4



DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP



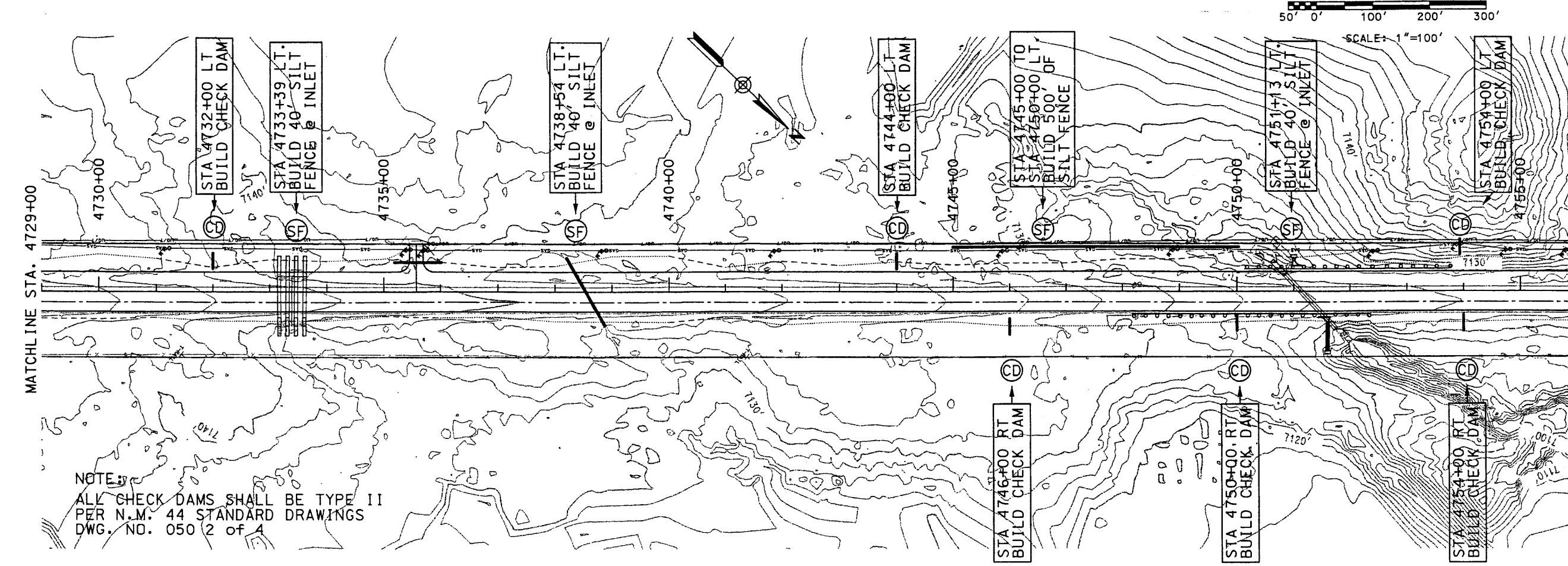
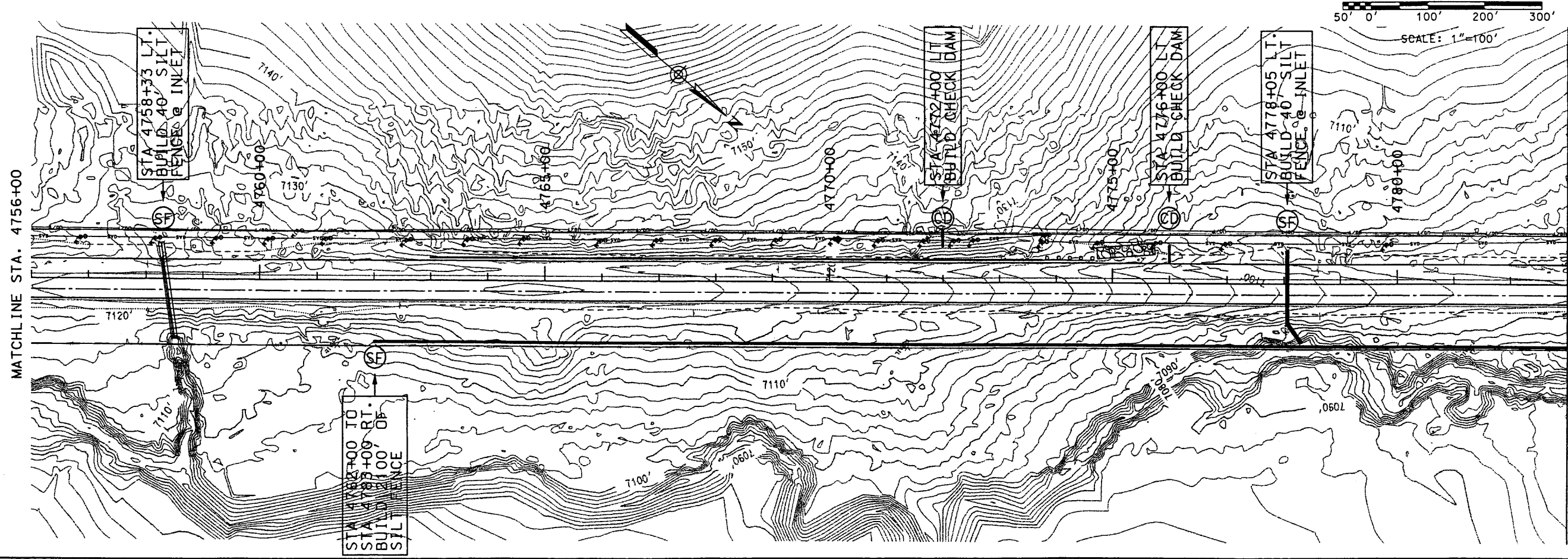
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 PROJECT NO AC-NH--044-2(3)964
 CN 3766

SHEET TITLE

EROSION CONTROL PLANS
 STA. 4675+00
 TO
 STA. 4729+00

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 Plot Date: 04 NOV 99



NOTE:
 ALL CHECK DAMS SHALL BE TYPE II
 PER N.M. 44 STANDARD DRAWINGS
 DWG. NO. 050 (2 of 4)

SEAL

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 DRAWN BY: STAFF
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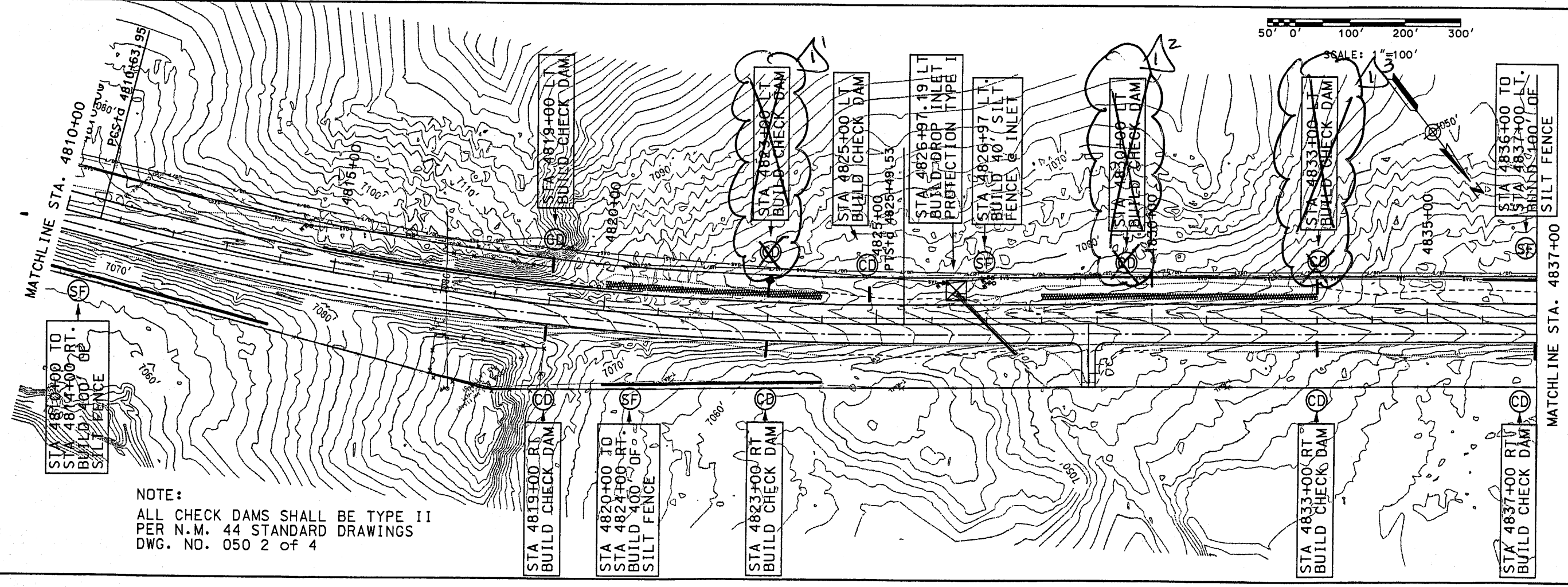
WILSON & COMPANY

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

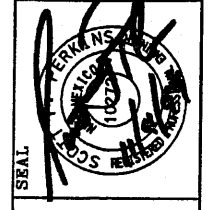
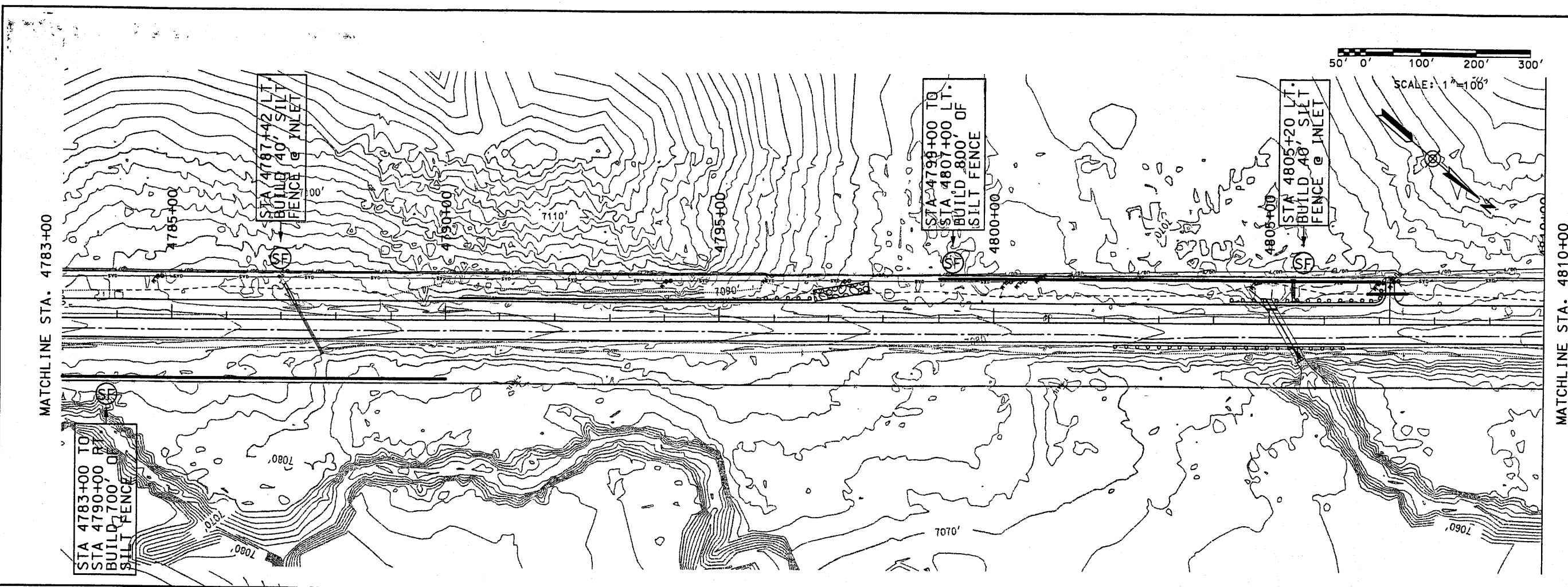
NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(3)164
 CN 3766

SHEET TITLE
 EROSION CONTROL PLANS
 STA. 4729+00 TO
 STA. 4783+00

Design File: \\s082-01\sect1&2\sect2\44eroston\44442ec16.100
 Plot Date: 04 NOV 99



NOTE:
 ALL CHECK DAMS SHALL BE TYPE II
 PER N.M. 44 STANDARD DRAWINGS
 DWG. NO. 050 2 of 4



DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP

WILSON & COMPANY

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

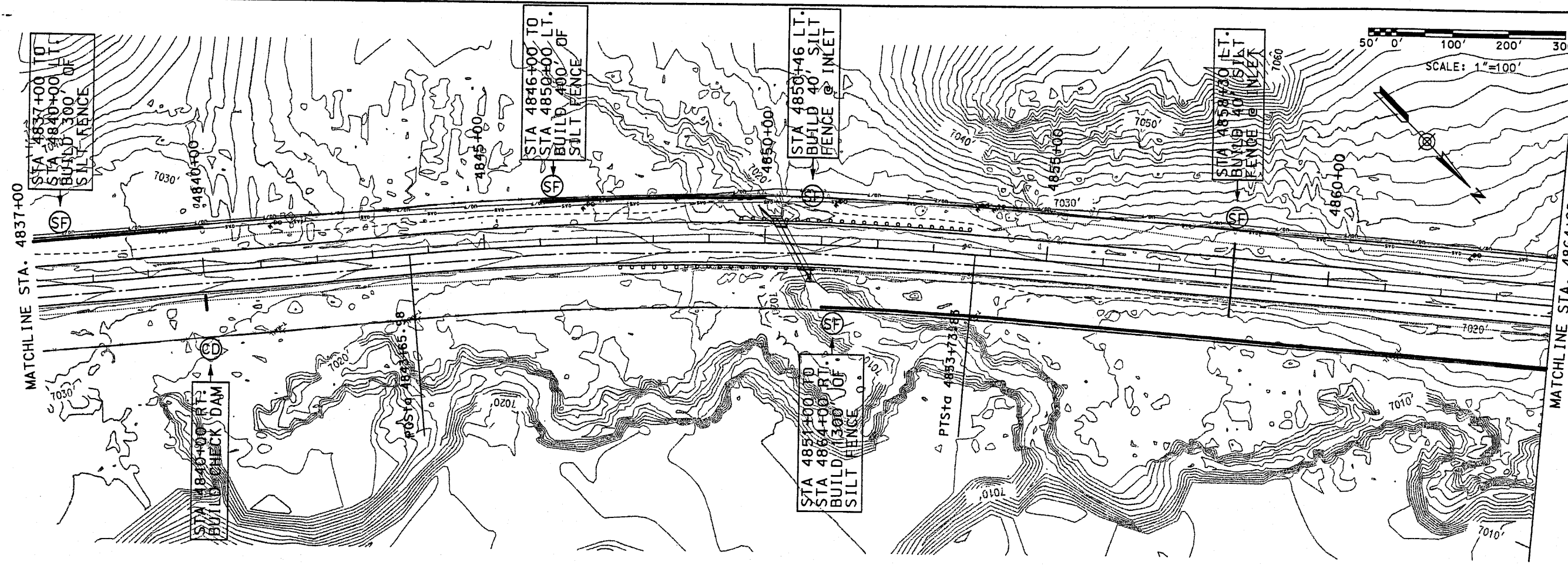
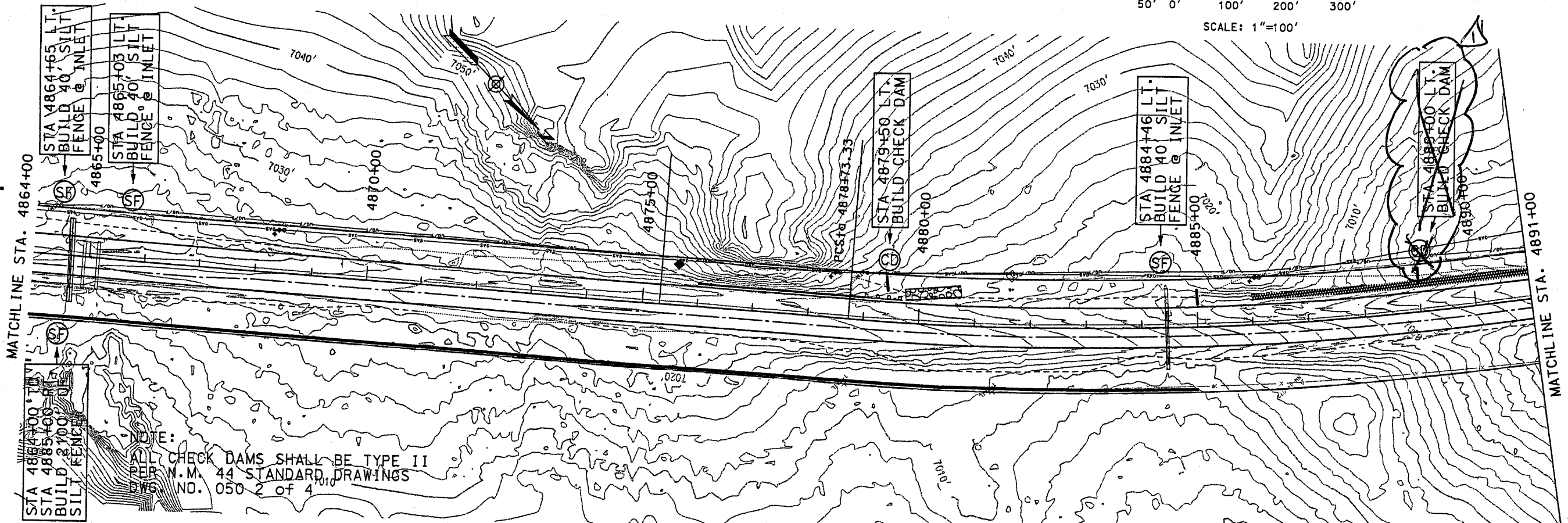
NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766

EROSION CONTROL PLANS
 STA. 4783+00
 TO
 STA. 4837+00

SHEET TITLE

MATCHLINE STA. 4810+00

MATCHLINE STA. 4783+00



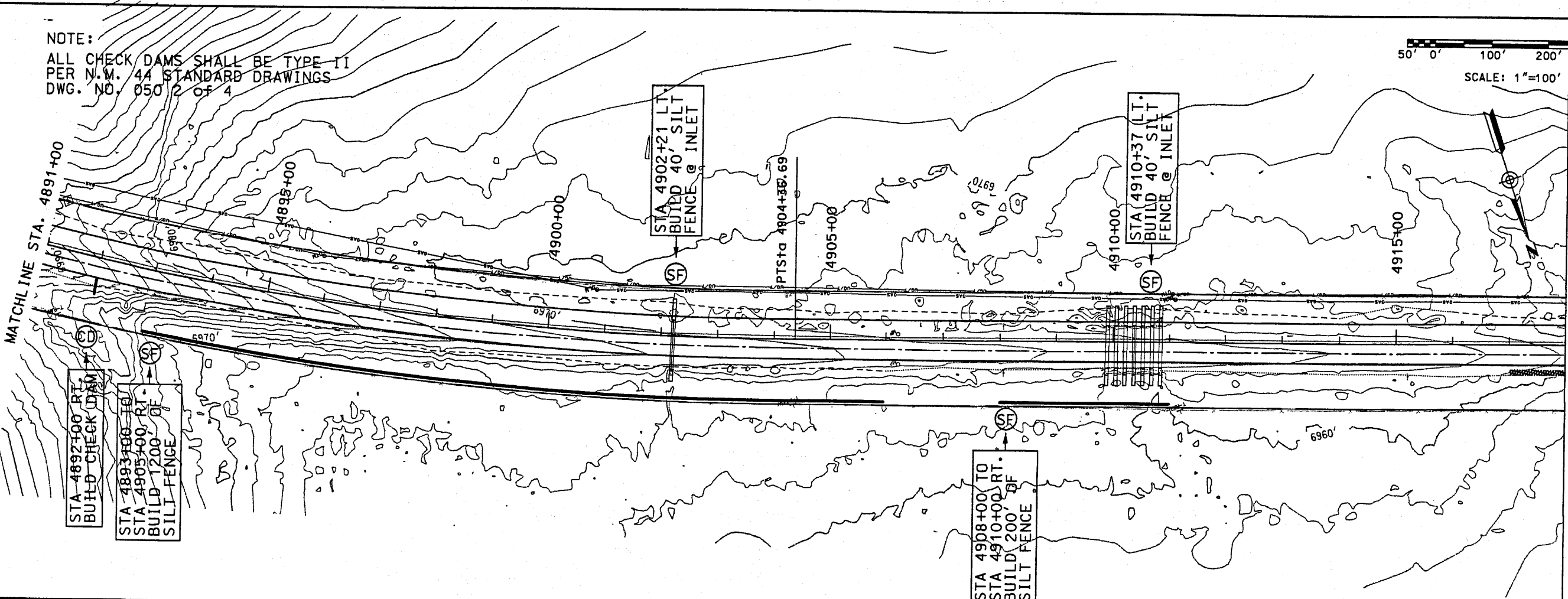
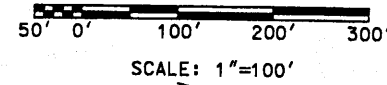
SEAL
 DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP

WILSON & COMPANY

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766

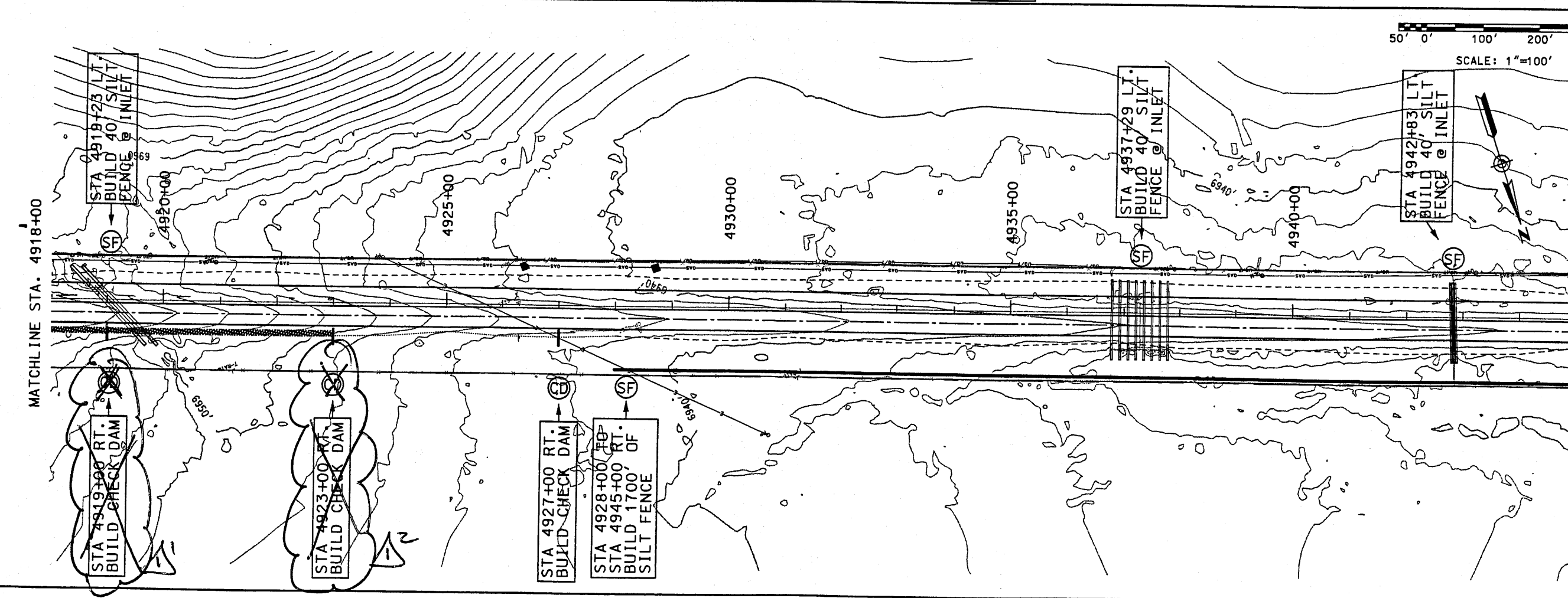
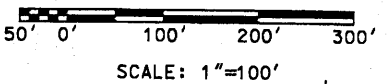
SHEET TITLE
 EROSION CONTROL PLANS
 STA. 4837+00 TO STA. 4891+00

NOTE:
 ALL CHECK DAMS SHALL BE TYPE II
 PER N.M. 44 STANDARD DRAWINGS
 DWG. NO. 050 2 OF 4



MATCHLINE STA. 4918+00

MATCHLINE STA. 4918+00



MATCHLINE STA. 4945+00

SHEET TITLE
 EROSION CONTROL PLANS
 STA. 4891+00
 TO
 STA. 4945+00

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 PROJECT NO AC-NH--044-2(39)64
 CN 3766

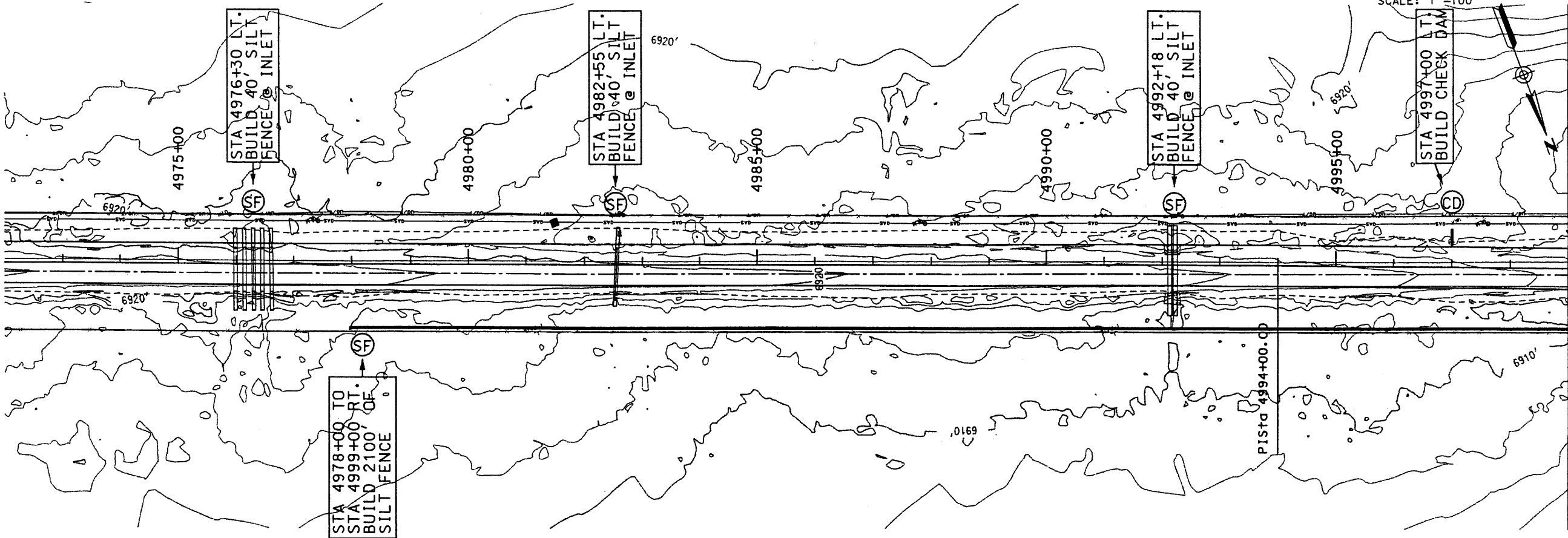


DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP



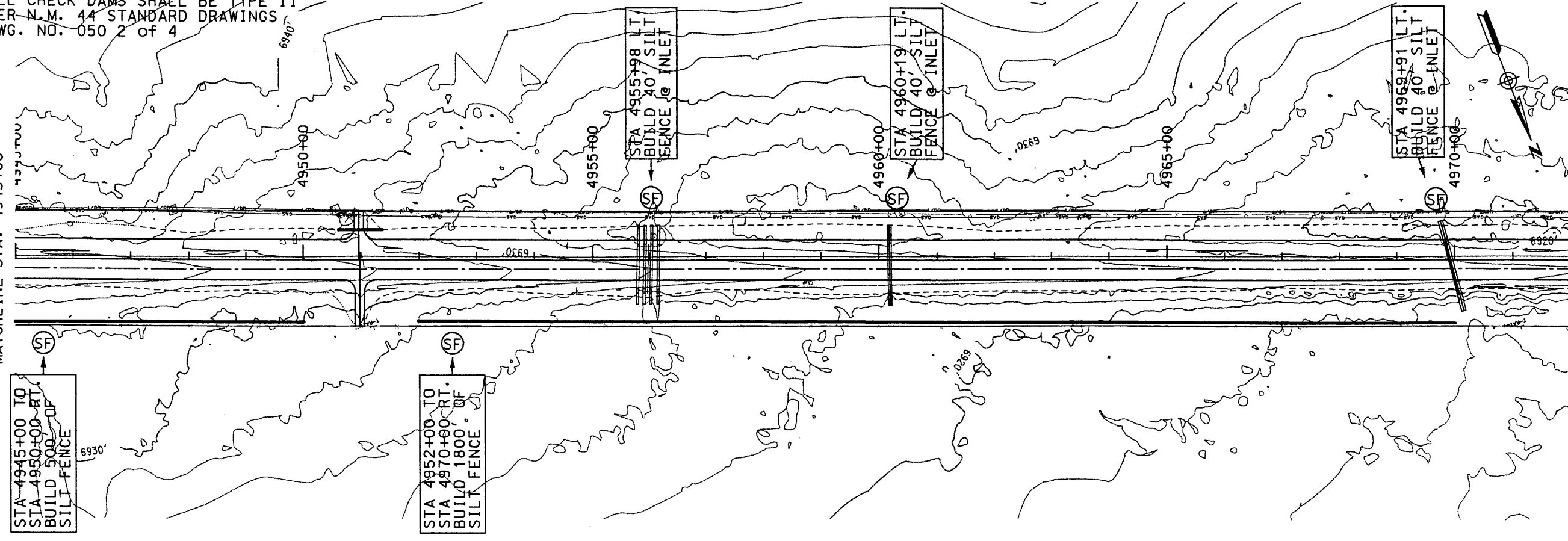
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 Plot Date: 03 NOV 99

MATCHLINE STA. 4972+00



MATCHLINE STA. 4999+00

MATCHLINE STA. 4945+00



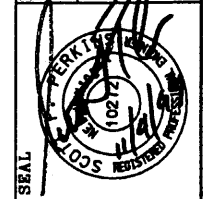
MATCHLINE STA. 4972+00

NOTE:
 ALL CHECK DAMS SHALL BE TYPE II
 PER N.M. 44 STANDARD DRAWINGS
 DWG. NO. 050 2 of 4

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766

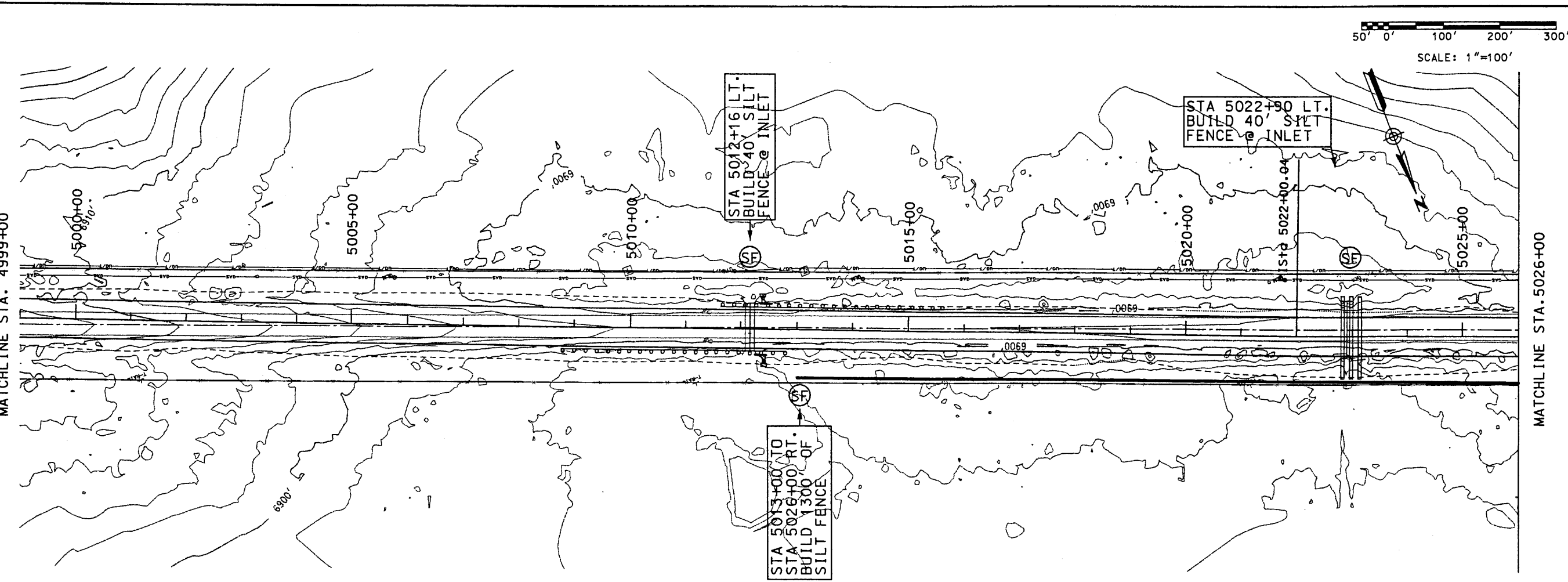
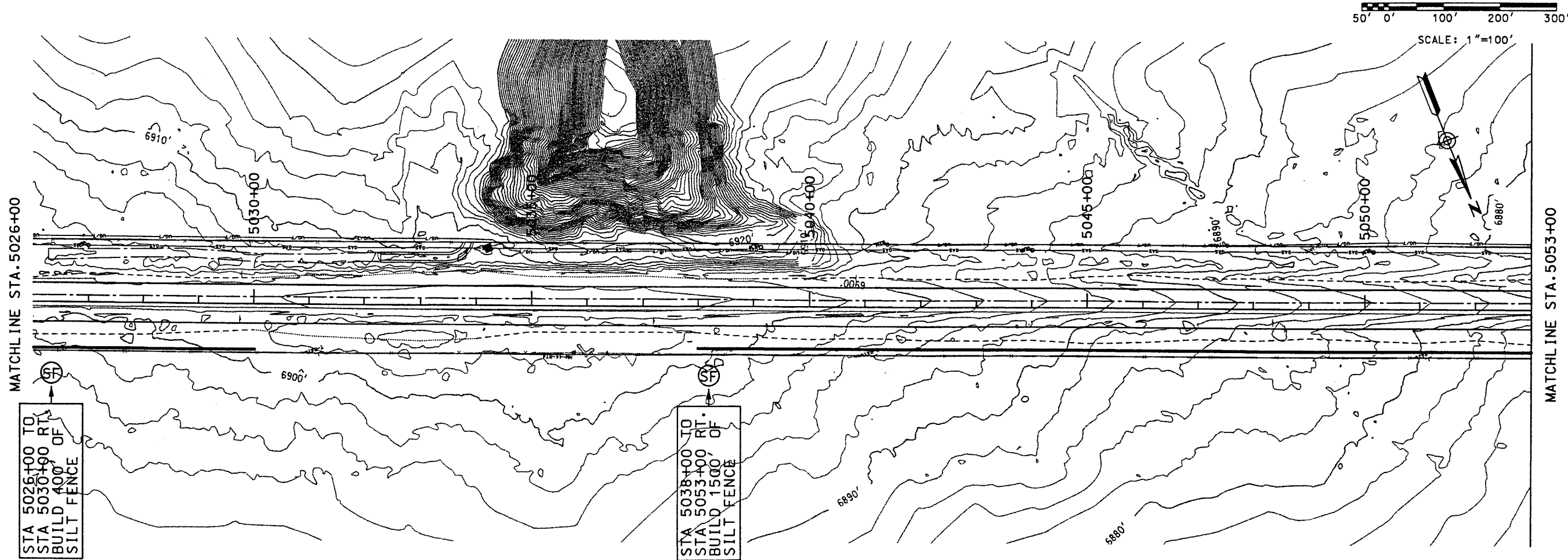
SHEET TITLE
 EROSION CONTROL PLANS
 STA. 4945+00
 TO
 STA. 4999+00

DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP



WILSON & COMPANY

Design File: g:\1998\2-61\sect1&2\sect2\44\erasion\44442ec2b.100
Plot Date: 03 NOV 99



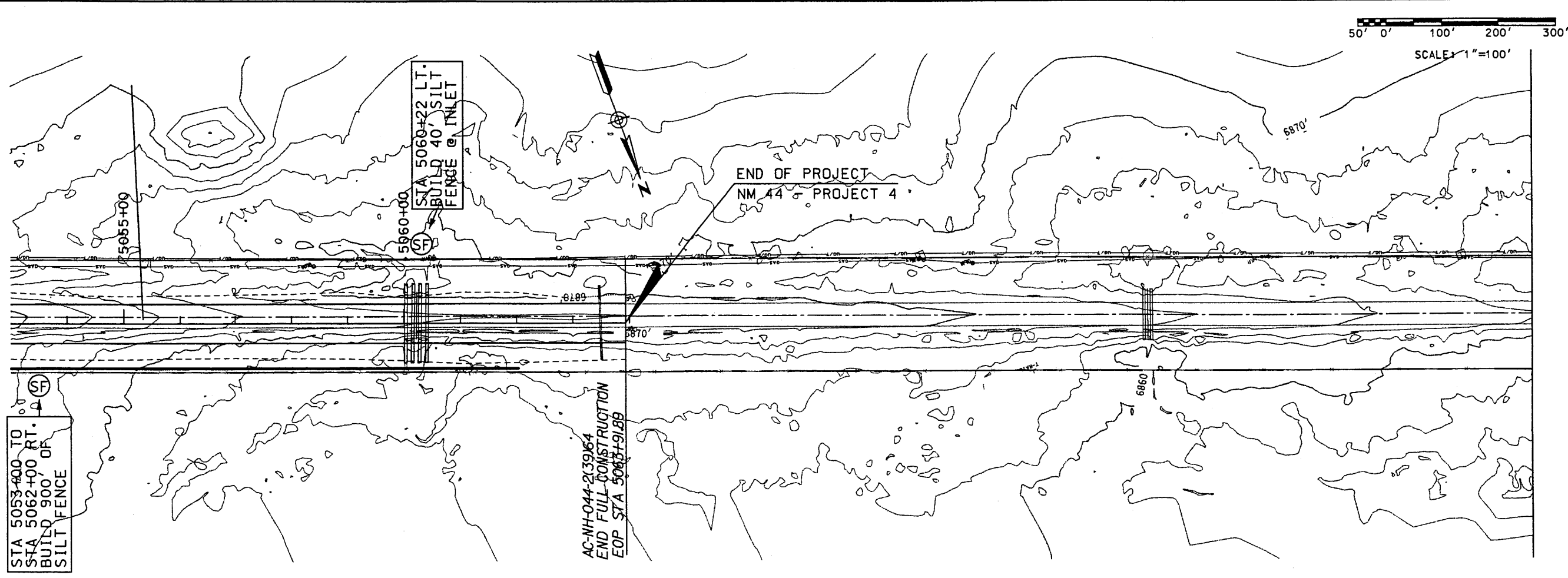
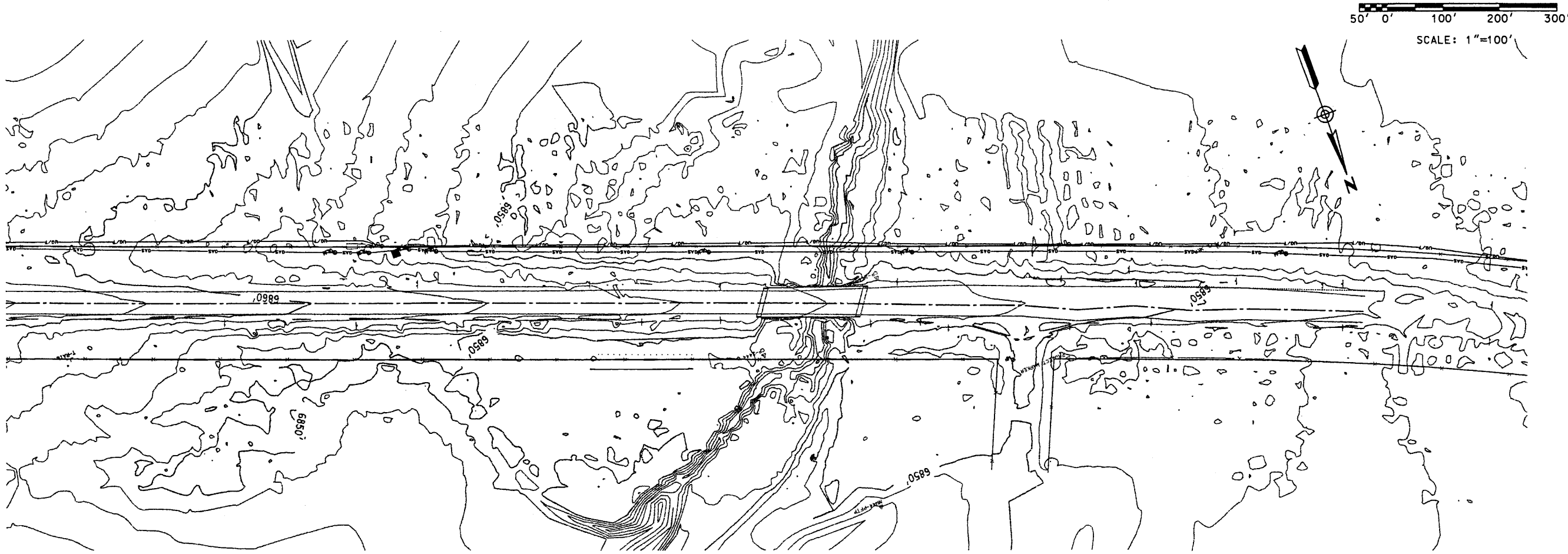
SEAL
DESIGN BY:
DRAWN BY:
CHECKED BY:



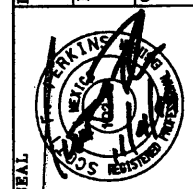
NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6
NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

SHEET TITLE
EROSION CONTROL PLANS
STA. 4999+00
TO
STA. 5053+00

Design File: g:\88862-01\sect1&2\sect2\44erosion\44442ec21.100
Plot Date: 0. NOV 99



SEAL



DESIGN BY:

DRAWN BY:

CHECKED BY:

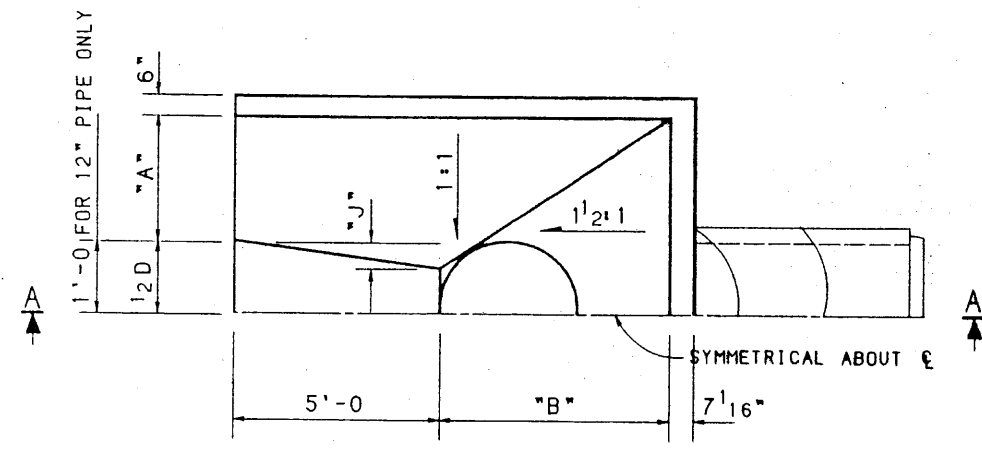
**WILSON
& COMPANY**

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

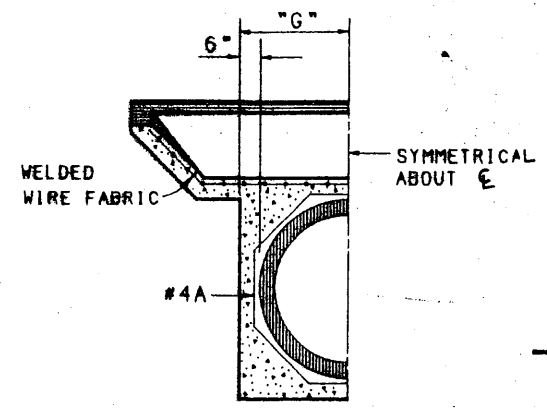
NM 44
NEW MEXICO PROJECT NO AC-NH--044-2(39)64
CN 3766

SHEET TITLE

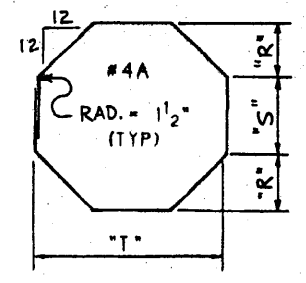
EROSION CONTROL PLANS
STA. 5053+00
TO
E.O.P. STA. 5063+91.89



HALF PLAN



SECTION C-C



REINFORCING STEEL

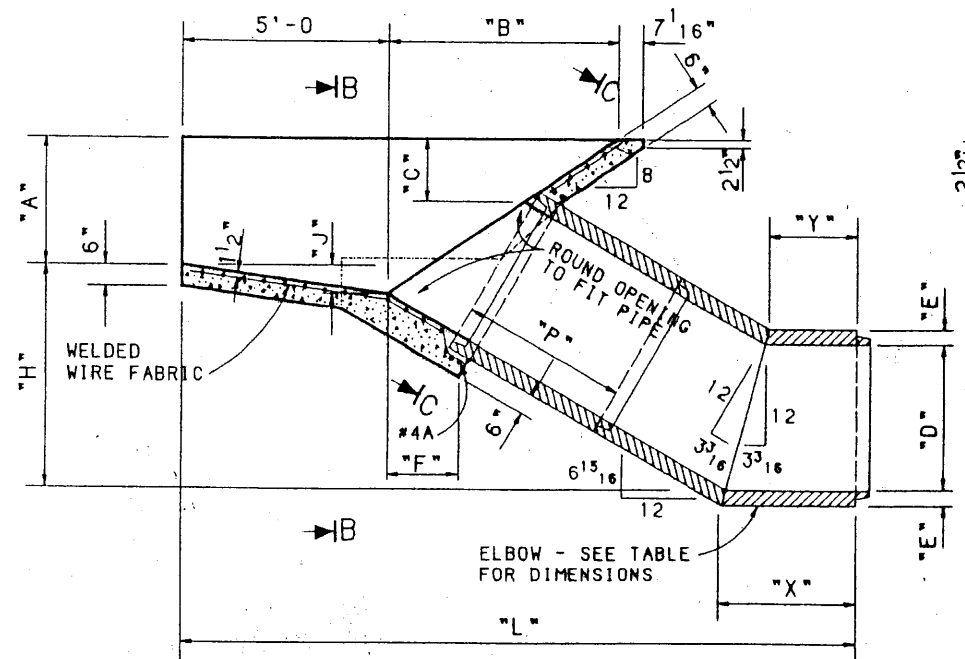
REINFORCING STEEL DIMENSIONS				
"D"	"T"	"R"	"S"	LENGTH
12"	1'-6"	5 ¹³ / ₁₆ "	6 ³ / ₈ "	4'-9"
18"	2'-1"	7 ⁵ / ₁₆ "	10 ³ / ₈ "	7'-9"
24"	2'-8"	9 ³ / ₈ "	1'-1 ¹ / ₄ "	9'-9"
30"	3'-3"	11 ³ / ₈ "	1'-4 ¹ / ₄ "	11'-9"
36"	3'-10"	1'-1 ¹ / ₁₆ "	1'-7 ¹ / ₈ "	13'-6"
42"	4'-6"	1'-4"	1'-10"	16'-0"

2 REQ'D. PER TRANSITION

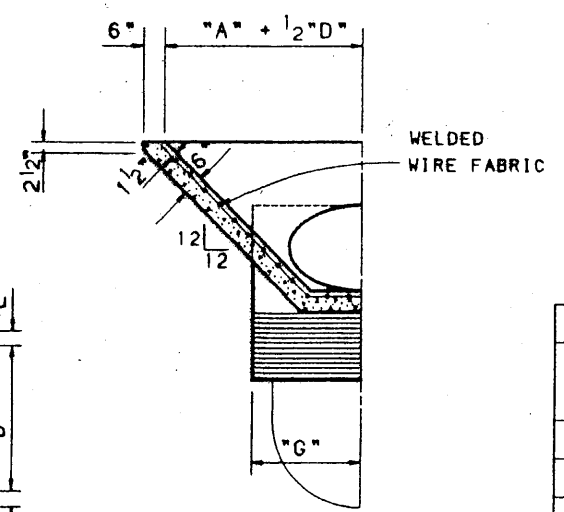
ELBOW DIMENSIONS		
"D"	"X"	"Y"
12"	3'-2 ¹ / ₈ "	2'-9 ⁷ / ₈ "
18"	3'-3"	2'-9"
24"	3'-4"	2'-6"
30"	3'-5"	2'-7"
36"	3'-6"	2'-6"
42"	3'-7"	2'-5"

NOTE

ELBOWS TO BE MADE FROM 6' LENGTH OF STANDARD PIPE CUT TO 15° BEVEL AND REASSEMBLED AS SHOWN. REINFORCING STEEL IN CONCRETE PIPE TO BE SPLICED BY WELDING AFTER REASSEMBLY AND CONCRETE TO BE REPLACED IN ORIGINAL CONDITION. ELBOWS ARE INCLUDED IN THE QUANTITY FOR SIPHON PIPE AT THE RATE OF 6 LIN. FT. PER ELBOW.



SECTION A-A



SECTION B-B

ITEM	UNIT	ESTIMATED QUANTITIES FOR ONE TRANSITION											
		CONCRETE SIPHON PIPE						METAL SIPHON PIPE					
		12"	18"	24"	30"	36"	42"	12"	18"	24"	30"	36"	42"
STRUCTURAL CONCRETE CLASS "A"	CU. YD.	0.84	1.45	1.61	2.21	2.43	3.86	0.85	1.47	1.63	2.26	2.50	3.95
REINFORCING BARS, GRADE 60	LB.	7	10	13	16	18	21	7	10	13	16	18	21
WELDED WIRE FABRIC	LB.	18	34	37	50	55	57	18	34	37	50	55	57

DESIGNED BY: S.J.M. 4/89 CHECKED BY: S.J.M. 5/89
 DETAILED BY: J.A.K. 4/89 CHECKED BY: E.R.D. 6/89

TRANSITION DIMENSIONS							
"D"	"A"	"B"	"C"	"E"	"F"	"G"	"J"
12"	1'-0"	2'-3"	10 ⁹ / ₁₆ "	2"	7 ³ / ₄ "	1'-2"	6"
18"	2'-0"	3'-6"	1'-4 ⁷ / ₈ "	2 ¹ / ₂ "	10 ⁵ / ₁₆ "	1'-5 ¹ / ₂ "	4"
24"	2'-0"	3'-6"	1'-1 ¹ / ₈ "	3"	1'-0 ⁷ / ₈ "	1'-9"	4"
30"	2'-6"	4'-6"	1'-5 ⁷ / ₁₆ "	3 ¹ / ₂ "	1'-3 ³ / ₈ "	2'-0 ¹ / ₂ "	6"
36"	2'-6"	4'-6"	1'-1 ³ / ₄ "	4"	1'-5 ¹⁵ / ₁₆ "	2'-4"	6"
42"	3'-0"	5'-6"	1'-6"	4 ¹ / ₂ "	1'-8 ¹ / ₂ "	2'-7 ¹ / ₂ "	8"

STRUCTURAL LAYOUT DIMENSIONS						
"D"	"P" = 0'		"P" = 4'		"P" = 6'	
	"H"	"L"	"H"	"L"	"H"	"L"
12"	2'-4 ¹ / ₄ "	11'-4 ¹ / ₈ "	4'-4 ¹ / ₄ "	14'-9 ³ / ₄ "	5'-4 ¹ / ₄ "	16'-6 ¹ / ₂ "
18"	2'-4 ¹ / ₄ "	11'-8 ⁷ / ₁₆ "	4'-4 ¹ / ₄ "	15'-2 ¹ / ₁₆ "	5'-4 ¹ / ₄ "	16'-10 ¹ / ₁₆ "
24"	2'-6 ¹ / ₄ "	12'-0 ³ / ₄ "	4'-6 ¹ / ₄ "	15'-6 ⁵ / ₁₆ "	5'-6 ¹ / ₄ "	17'-3 ¹ / ₈ "
30"	2'-10 ⁵ / ₁₆ "	12'-5"	4'-10 ⁵ / ₁₆ "	15'-10 ⁹ / ₁₆ "	5'-10 ⁵ / ₁₆ "	17'-7 ³ / ₈ "
36"	3'-0 ⁵ / ₁₆ "	12'-9 ⁵ / ₁₆ "	5'-0 ⁵ / ₁₆ "	16'-2 ⁷ / ₈ "	6'-0 ⁵ / ₁₆ "	17'-11 ⁵ / ₈ "
42"	3'-4 ³ / ₈ "	13'-1 ⁵ / ₈ "	5'-4 ³ / ₈ "	16'-7 ¹ / ₄ "	6'-4 ³ / ₈ "	18'-4"

NOTE: DUE TO LOCAL CONDITIONS, "H" MAY VARY FROM THE DIMENSIONS SHOWN IN THE TABLE ABOVE. "L" AND "P" SHALL BE ADJUSTED ACCORDINGLY.

GENERAL NOTES

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1994 EDITION, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
2. ALL CONCRETE SHALL BE CLASS "A". CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4".
3. REINFORCING STEEL SHALL CONFORM TO A.A.S.H.T.O. SPECIFICATION M 31, GRADE 60.
4. WELDED WIRE FABRIC TO BE 6x6-W2.9xW2.9 CONFORMING TO A.A.S.H.T.O. SPECIFICATION M 55. DIMENSION IS TO THE FACE OF THE FABRIC.
5. PIPE MAY BE EITHER REINFORCED CONCRETE OR CORRUGATED METAL PIPE CONFORMING TO THE APPLICABLE SPECIFICATION FOR PIPE SIPHONS.

NO.	DESCRIPTION	DATE	BY
1	REVISED NOTE #1	6-4-94	PR

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

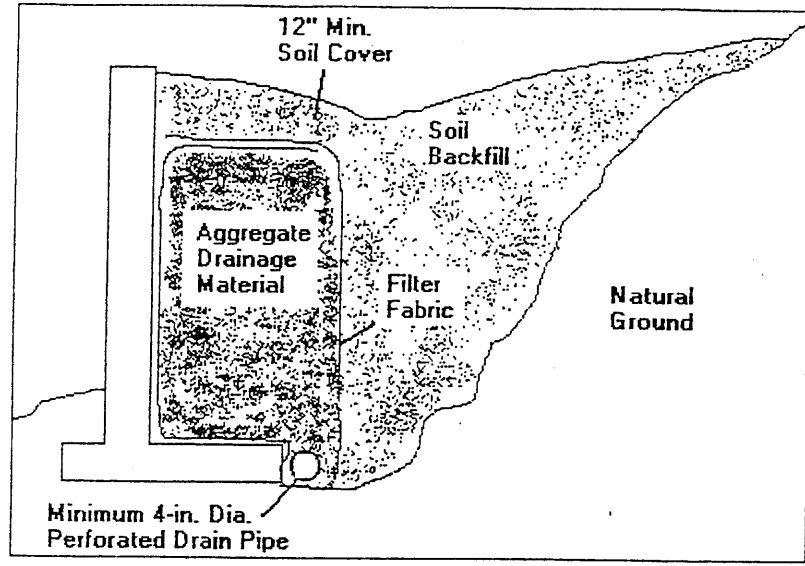
STANDARD TRANSITION AND ELBOW FOR 12", 18", 24", 30", 36", & 42" DIA. PIPE SIPHON

DESIGNED BY: S.J.M.	CHECKED BY: S.J.M.	DATE: 4/89
APPROVED BY: J.A.K.	CHECKED BY: E.R.D.	DATE: 6/89

SERIAL BST-001-01 SHT. 1 OF 1

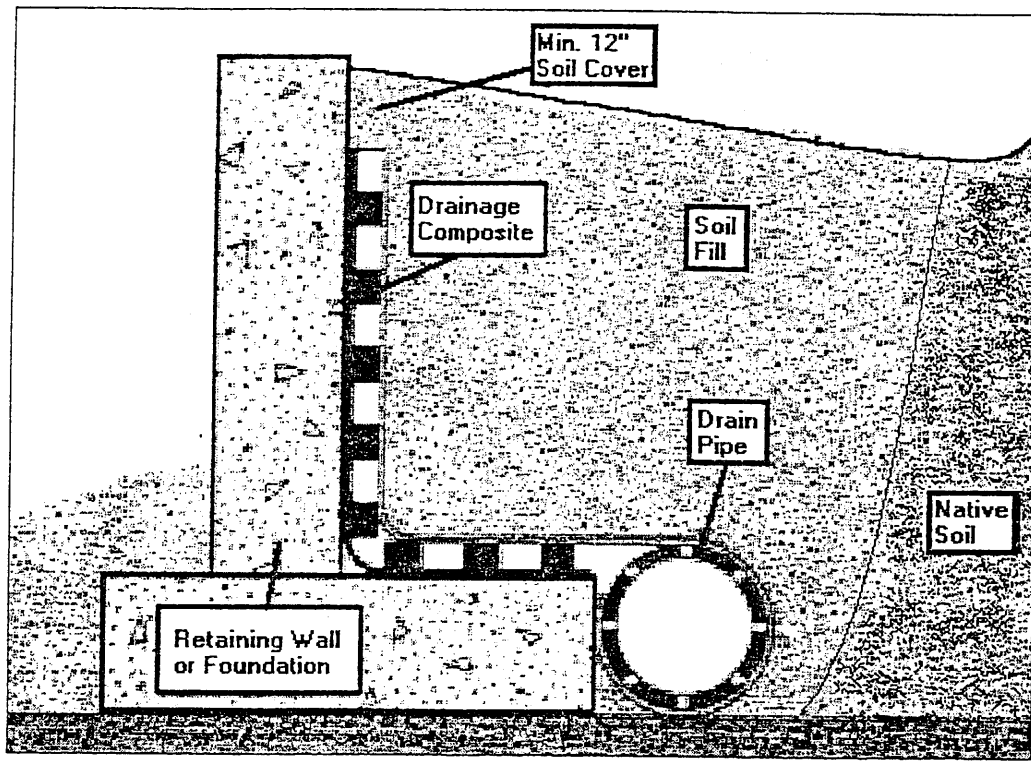
New Sheet,
9.28.00
FSC/FNF-0186

OPTION 'A'



Wall Drainage System Using Aggregate Fill Wrapped In Filter Fabric.

OPTION 'B'



Wall Drainage System Using Drainage Composite.

WALL DRAINAGE
SYSTEM
DETAILS

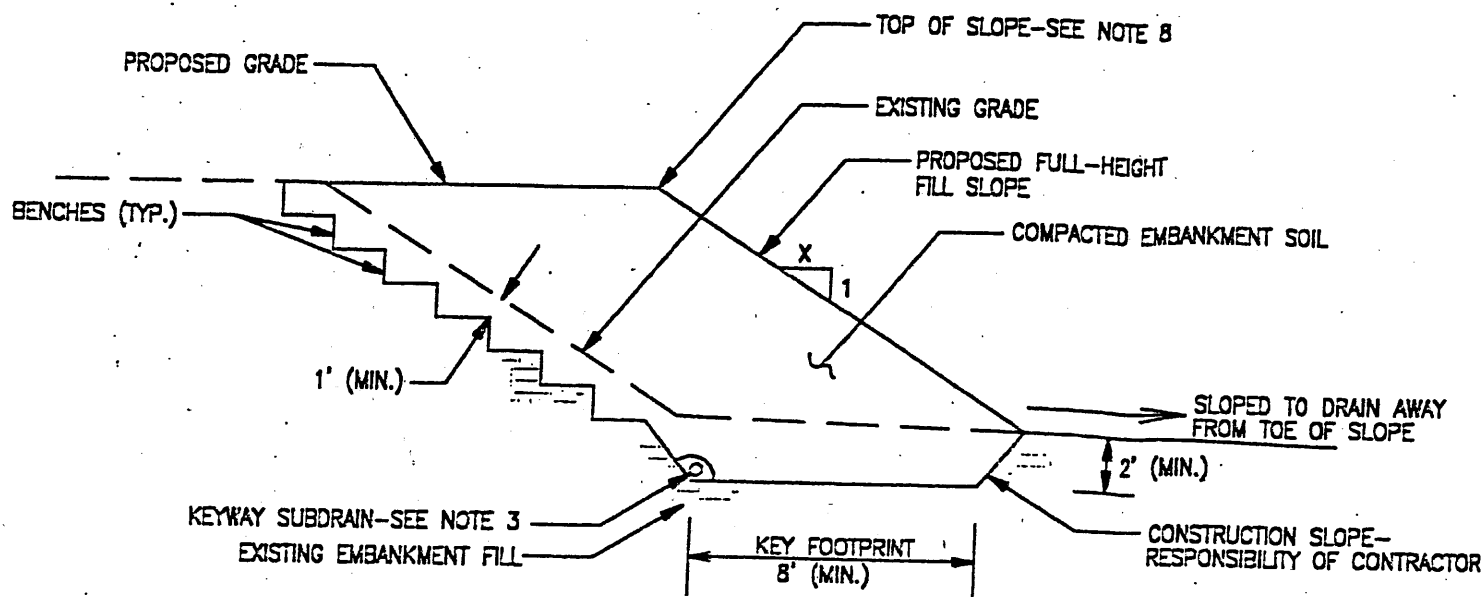
NUM 44
AC-NH-044.2(39)64
CN 3766

Note: Extend drain pipe to
daylight beyond ends
of CWB.

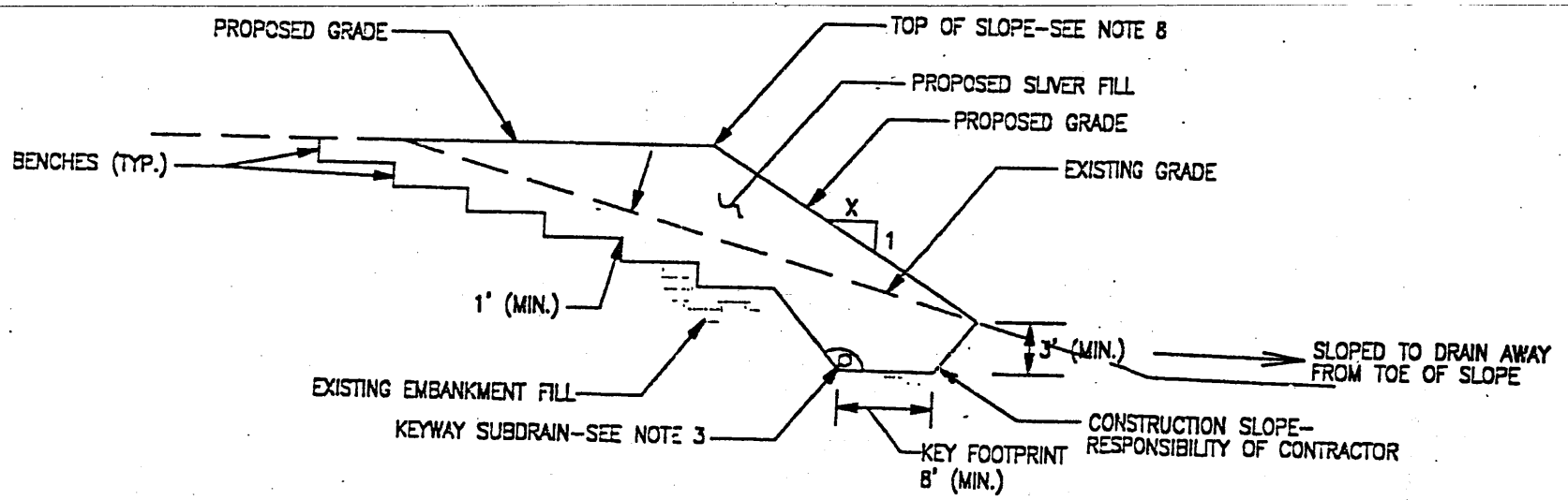
806
842-8282

KEYWAY &
BENCHING
DETAILS

KEY & BENCH DETAIL FOR FULL-HEIGHT FILL SLOPES



KEY & BENCH DETAIL FOR SLIVER FILL SLOPES

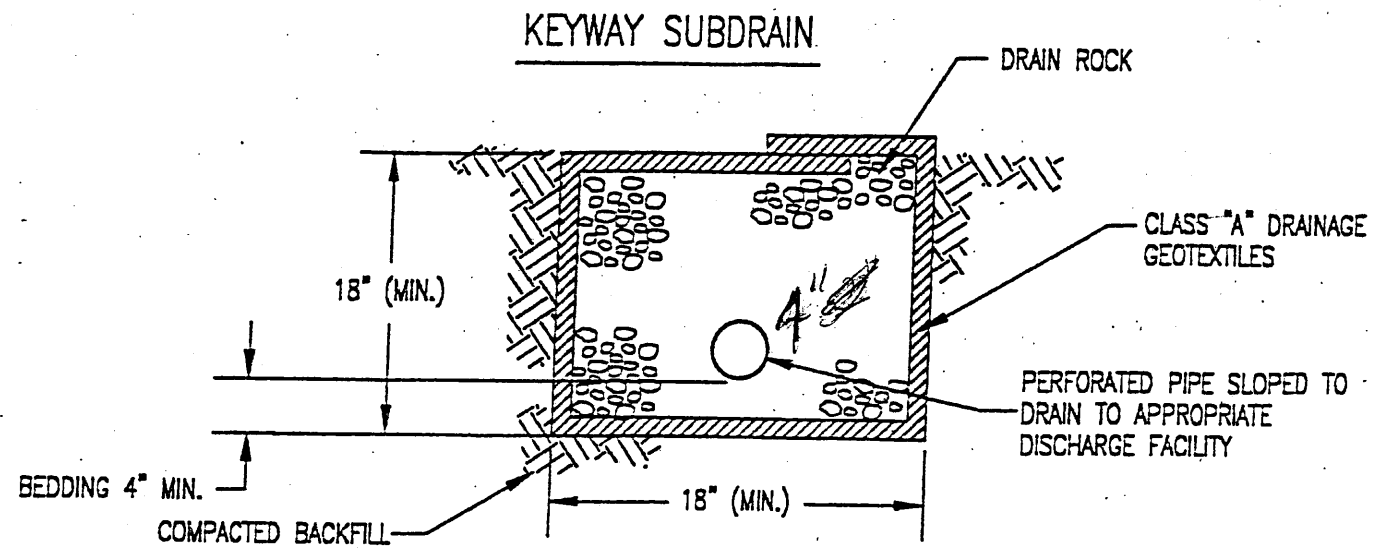


NOTES:

1. KEY TO BE A MINIMUM OF 8 FEET WIDE AT BASE OF KEY OR THE FOOTPRINT WIDTH OF COMPACTED FILL.
2. KEY TO BE EXCAVATED IN COMPETENT SOIL. SOFT/LOOSE OR OTHERWISE UNSUITABLE SUBGRADE SHOULD BE OVEREXCAVATED AND REPLACED WITH COMPACTED EMBANKMENT SOIL.
3. A KEYWAY SUBDRAIN SHOULD BE INSTALLED WHERE MOIST OR WET CONDITIONS ARE ENCOUNTERED DURING EXCAVATION OF KEYWAY. KEYWAY SUBDRAINS SHOULD BE CONSTRUCTED PER DETAILS SHOWN ON ~~FIGURE 8~~ SHEET 2-50. SUBDRAINS SHOULD BE SLOPED TO DRAIN TO AN APPROPRIATE DISCHARGE FACILITY.
4. COMPACTED EMBANKMENT SOIL SHOULD MEET THE REQUIREMENTS OF THE NMSHTD SPEC AND SHALL BE COMPACTED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE REPORT.
5. ALL TEMPORARY SLOPES SHOULD BE PROTECTED AGAINST EROSION AS DISCUSSED IN THE REPORT.
6. CONSTRUCTION SLOPES TO BE DETERMINED BY CONTRACTOR. CONSTRUCTION SLOPES TO BE CONSTRUCTED IN ACCORDANCE WITH OSHA REGULATIONS.
7. EXCAVATION OF LOOSE SOIL, BENCHING, KEYING, AND RECONSTRUCTION OF SLOPES TO BE OBSERVED BY A QUALIFIED ENGINEER.
8. CURBING OR A DRAINAGE SWALE SHOULD BE PROVIDED AT THE TOP OF SLOPE TO PREVENT ROADWAY RUNOFF FROM FLOWING OVER THE TOP OF SLOPE AND DOWN THE FACE. SLOPES SHOULD BE PROTECTED AGAINST EROSION.

NM44
AC-NH-044.2(39)64
CD 3766

New Sheet
12-18-00
FSC/FNF-0251



NOTES:

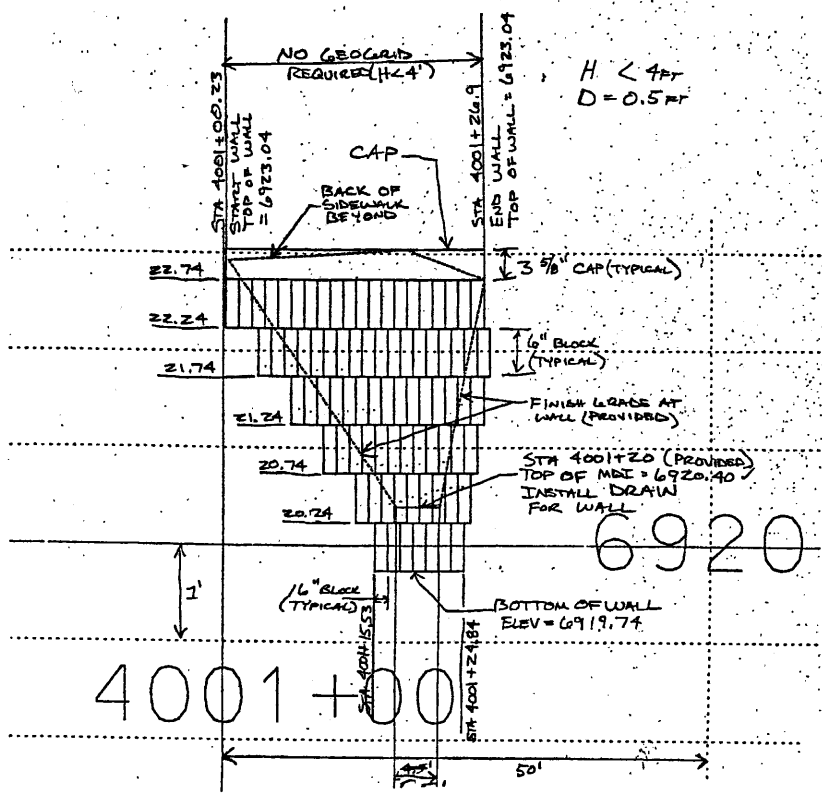
1. A KEYWAY SUBDRAIN SHOULD BE INSTALLED WHERE MOIST OR WET CONDITIONS ARE ENCOUNTERED DURING EXCAVATION OF THE KEYWAY.
2. CLASS "A" DRAINAGE GEOTEXTILE SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH NMSHTD SPEC, SECTION 604-SOIL & DRAINAGE GEOTEXTILE.
3. PERFORATED PIPE SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH NMSHTD SPEC, SECTION 605-DRAINS.
4. DRAIN ROCK SHALL CONSIST OF OPEN-GRADED GRAVEL MEETING THE REQUIREMENTS GIVEN IN NMSHTD SPEC, SECTION 605-DRAINS.

New Sheet
12-18-00
FSC/FNF-0251

KEYWAY
SUBDRAIN
DETAILS

NM44
AC.N# 044.2(39)61
CN 3766

RETAINING WALLS - ELEVATIONS

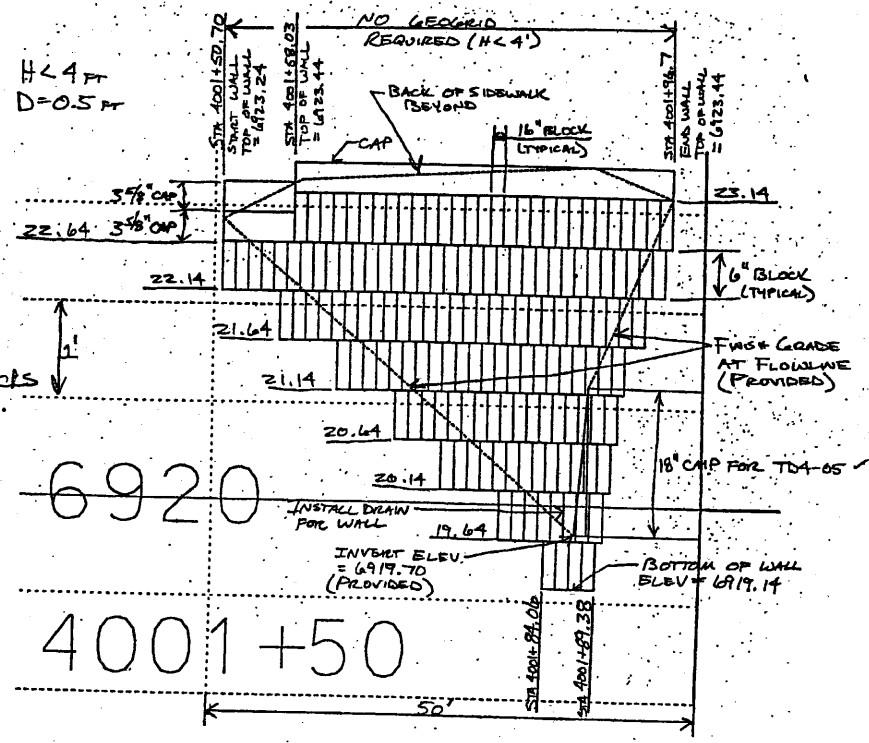


H < 4 FT
D = 0.5 FT

Note: Adjust steps as required to fit actual MDI location.

6920

4001+00

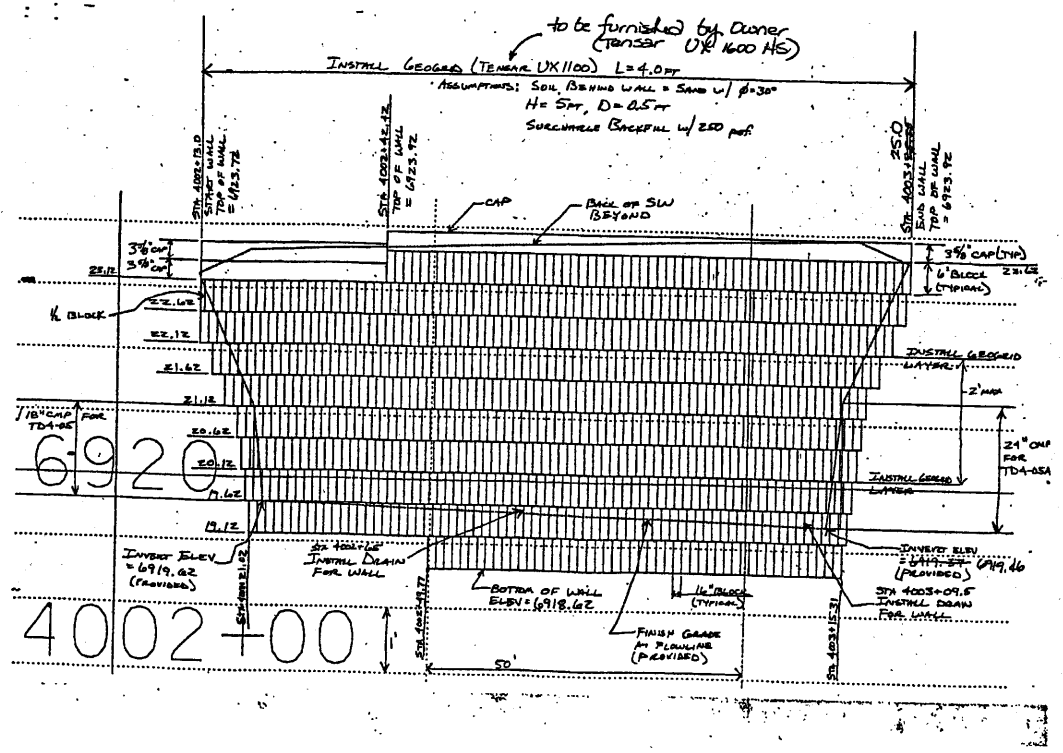


H < 4 FT
D = 0.5 FT

NOTE: 1/2 blocks req'd.

6920

4001+50

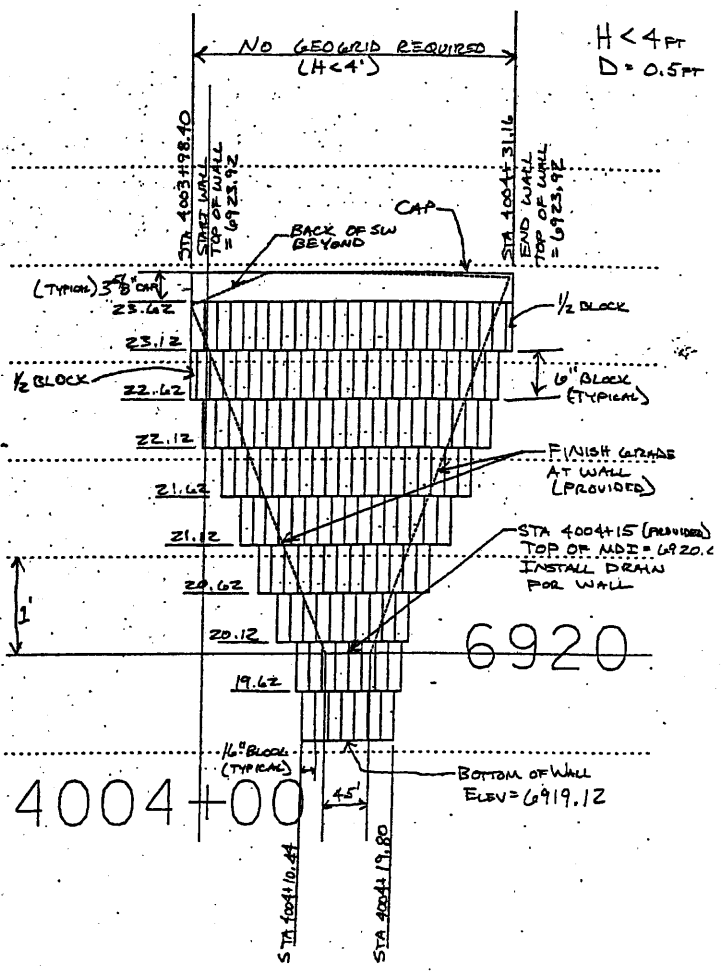


to be furnished by owner (Tensar UX1100) L=4.0 FT

ASSUMPTIONS: SOIL BEHIND WALL = SAND w/ $\beta=30^\circ$
H = 5 FT, D = 0.5 FT
SURCHARGE BACKFILL w/ 250 psf

6920

4002+00



H < 4 FT
D = 0.5 FT

6920

4004+00

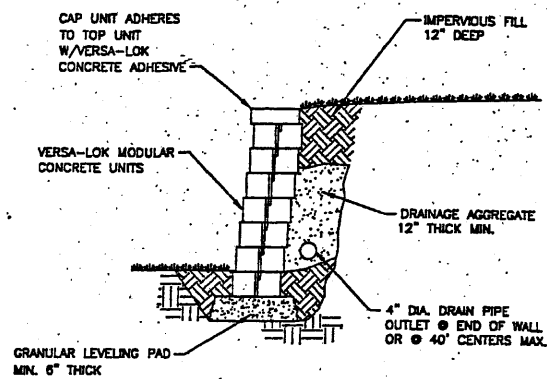
Segmental Retaining walls to be Versa-lock, Keystone, or approved equal installed in accordance with manufacturer's recommendations.

NEW SHEET
10.4.01
FSC/ENF-0533

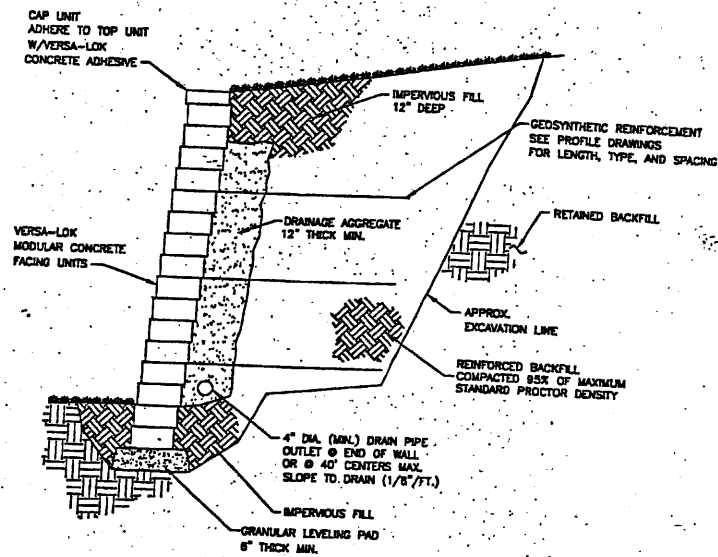
NM44
AC.NH.04.2(39)64
CN 3766

RETAINING WALLS - DETAILS

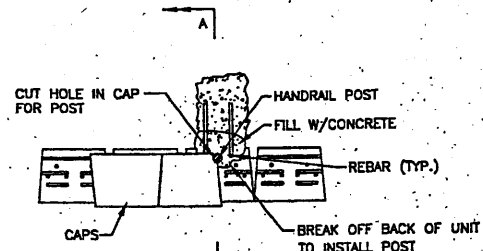
NM 44
AC. NH. 044.2(39)64
CU 3766



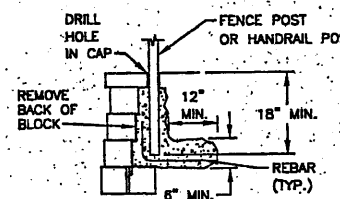
TYPICAL SECTION—UNREINFORCED RETAINING WALL
SCALE: NONE



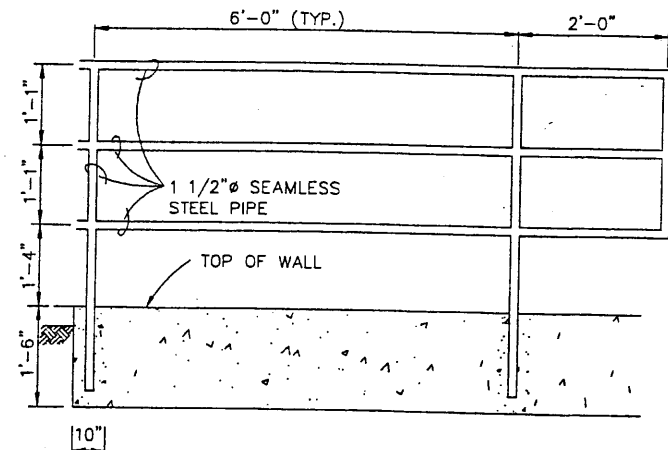
TYPICAL SECTION—REINFORCED RETAINING WALL
MODULAR CONCRETE UNIT
SCALE: NONE



POST DETAIL— PLAN VIEW
TYPICAL HANDRAIL AND/OR FENCE POST
SCALE: NONE



POST DETAIL— SECTION A-A
TYPICAL HANDRAIL AND/OR FENCE POST
SCALE: NONE



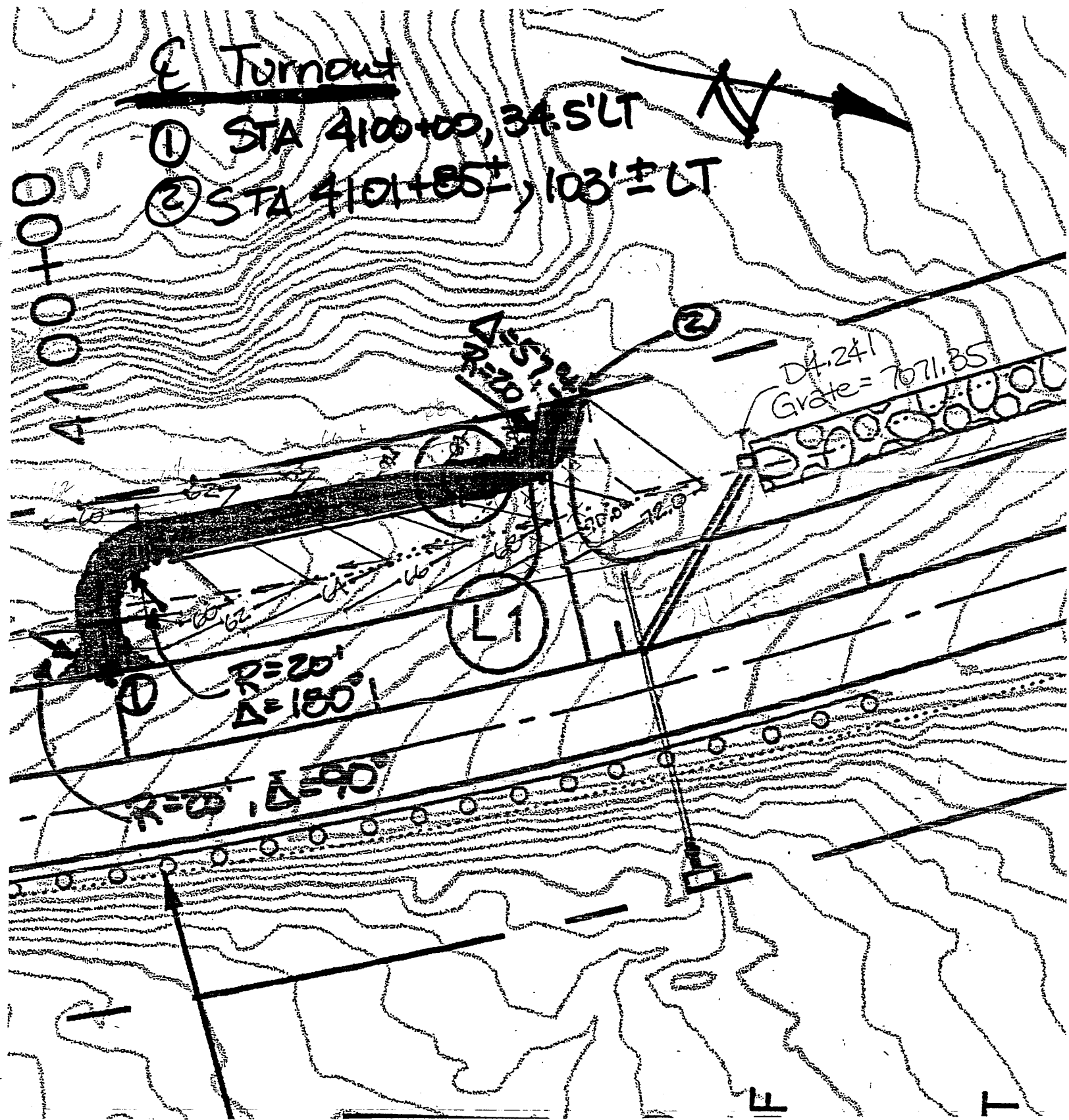
NOTE: WELD ALL JOINTS WITH A CONTINUOUS BEAD AND DRESS SMOOTH. ROUND ALL CORNERS.

ALL METAL PORTIONS OF THE PEDESTRIAN RAILING SHALL BE PAINTED USING "CLAYMONT" K-48 BY DUPONT. A 1'x1' COLOR SAMPLE PANEL SHALL BE PREPARED AND APPROVED BY THE ENGINEER. PRIOR TO THE CONTRACTOR ORDERING ANY MATERIALS, THE PANEL SHALL BE USED AS A CONTROL TO MATCH THE PEDESTRIAN RAILING. THE COST OF THE PAINT AND FOUNDATIONS IS TO BE INCLUDED WITH THE UNIT BID PRICE FOR METAL PEDESTRIAN RAILING.

METAL PEDESTRIAN RAILING DETAIL

End of pedestrian railing shall provide a minimum clearance of 2' from the edge of railing to the edge of driveway where applicable.

New Sheet
10.4.01
FSC/FNF-0533



ENLARGED PLAN
 TURNOUT T4-35

New Sheet
 11.30.01
 FSC/FNF-0619

11/14/4
 AC-041.044 2(39)64
 CNJ 3766

THIS PROJECT BEGINS IN T21N, R1W, SEC. 29

B.O.P. STA. 4000+00.00
 COORDINATES
 N=1830167.16
 E=1430925.89

NOTE: SEE SHT. 1-14 FOR TIE
 TO CONTROL POINT

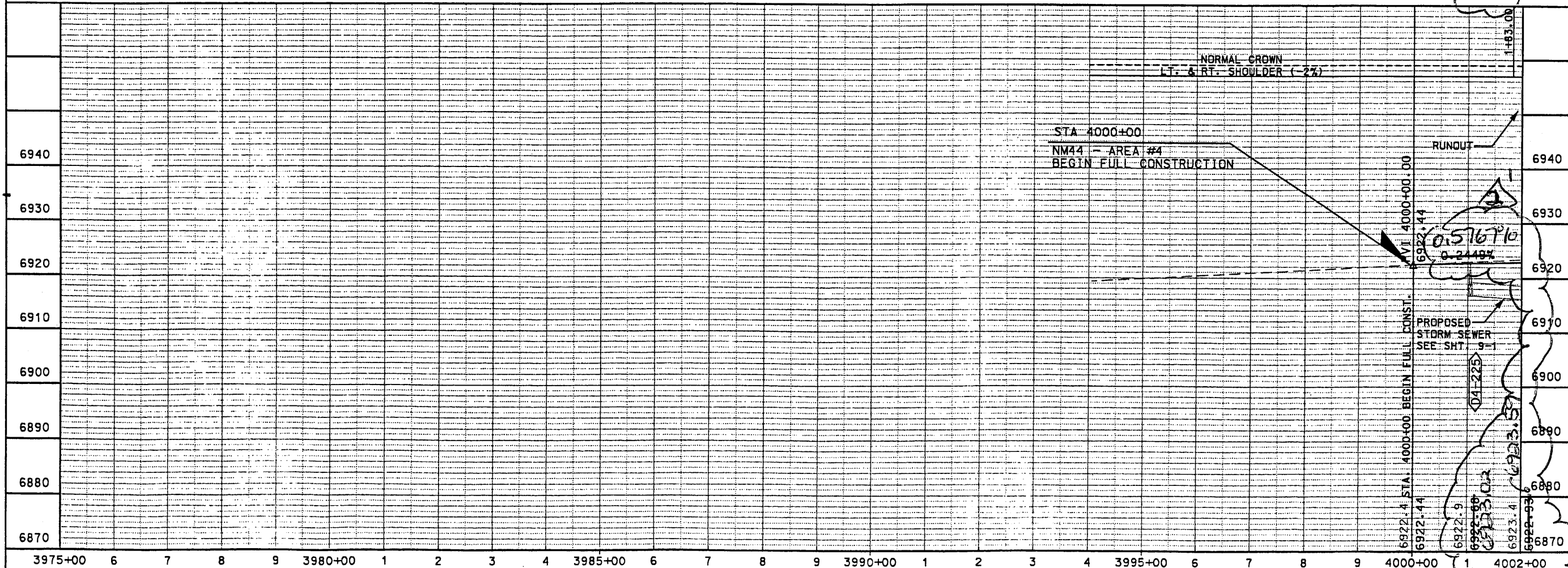
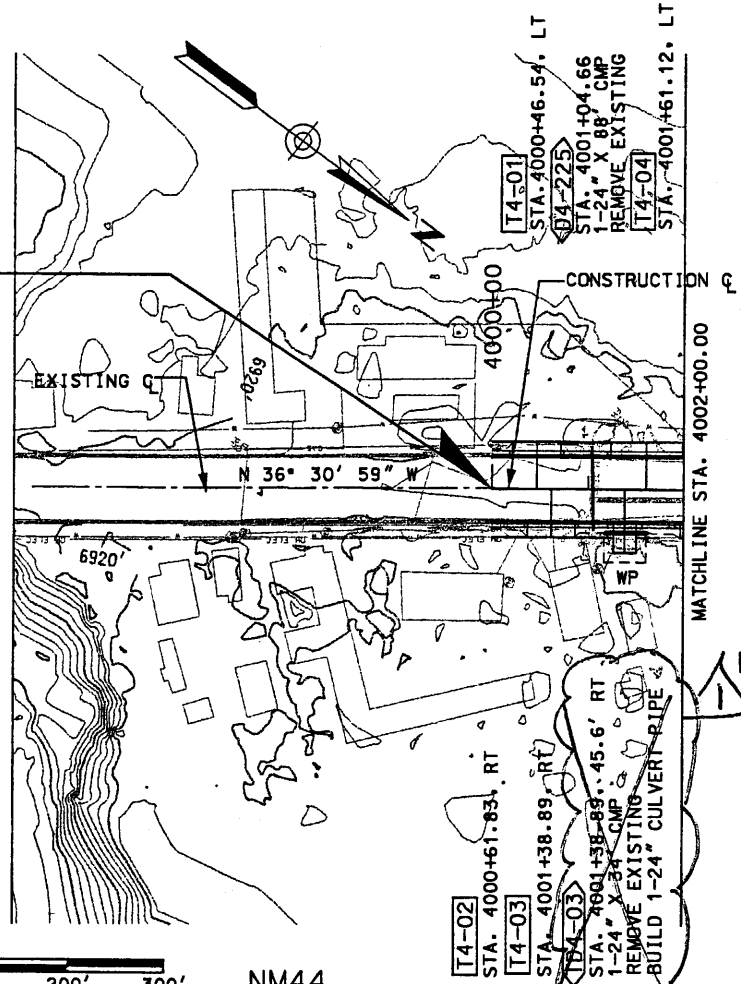
Note: Retaining walls not
 shown for clarity.
 See sheet 2.51

STA 4000+00
 NM44 - AREA #4
 BEGIN FULL CONSTRUCTION

STA. 3998+60 ±, 45' ± LT. &
 STA. 4001+35 ±, 40' ± LT.
 ADJUST WATER VALVE BOX
 TO GRADE.

STA. 4000+35, 38' RT.
 ADJUST MANHOLE TO GRADE

50' 0' 100' 200' 300'



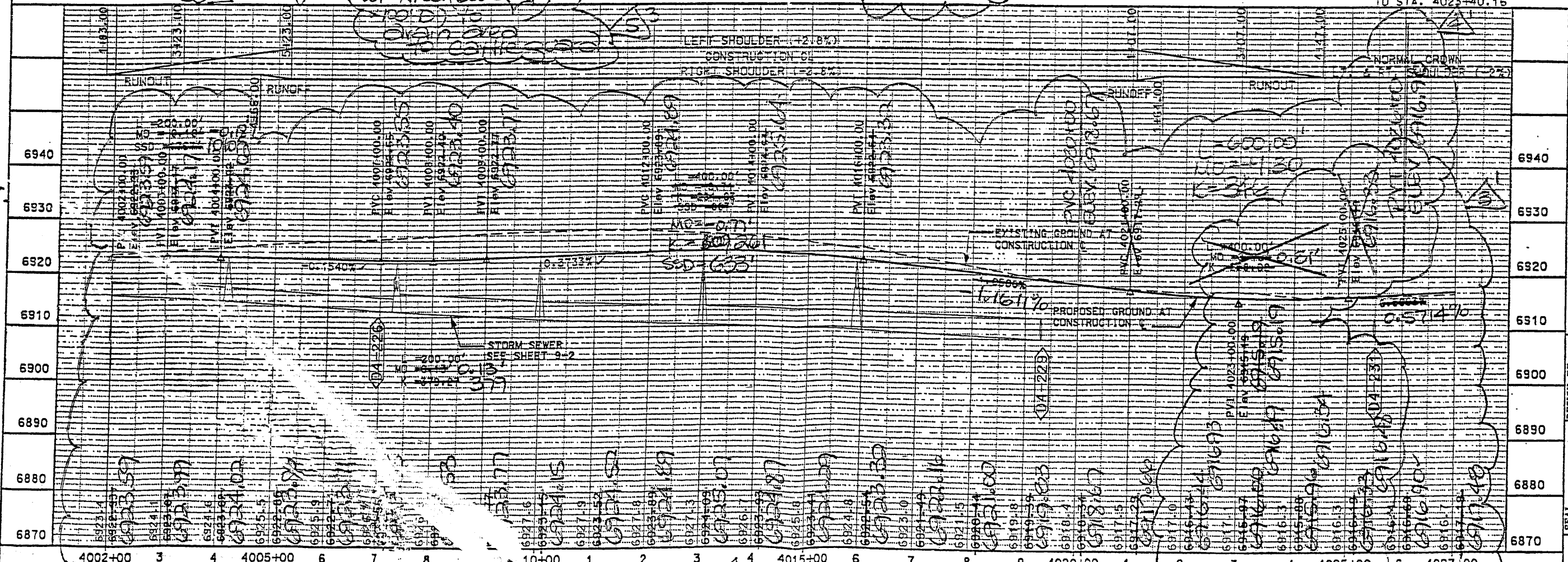
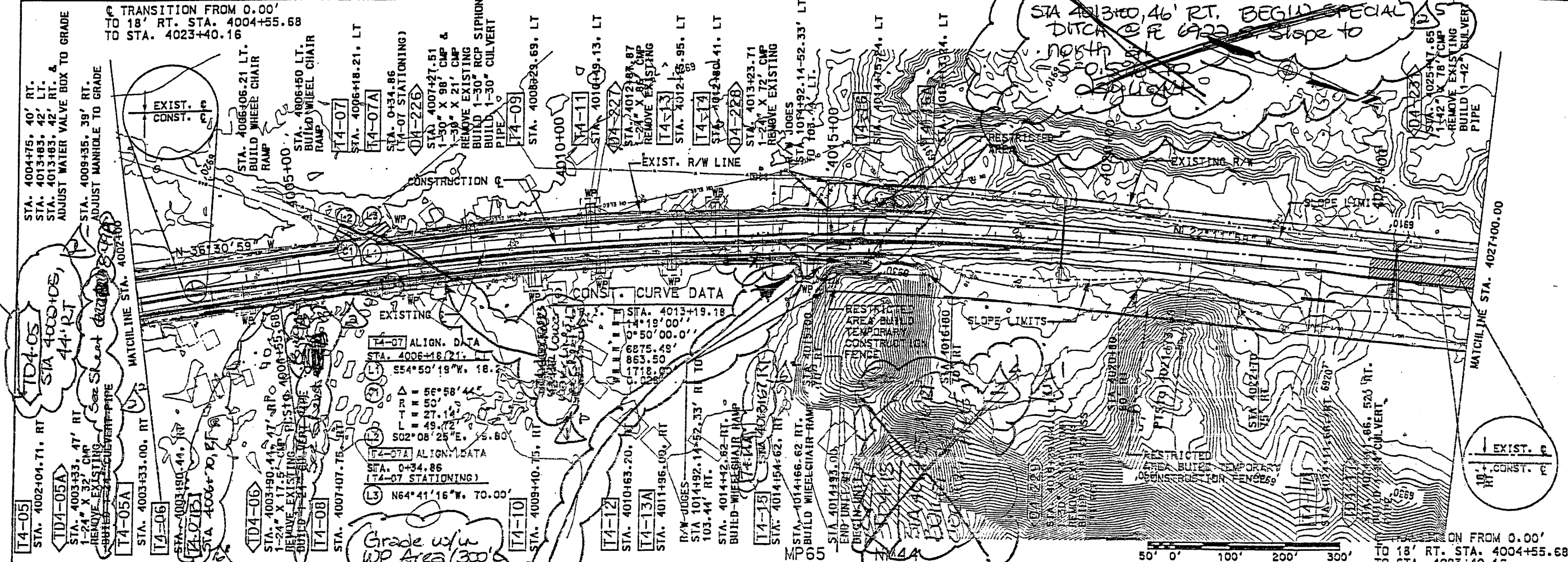
SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

3-1

Design File: x:\public\proj\secta\98082-01\sect3\4444pp01.dgn
 Plot Date: 03 NOV 1999



PLAN & PROFILE
 STATION 4002+00.00
 TO
 STATION 4027+00.00

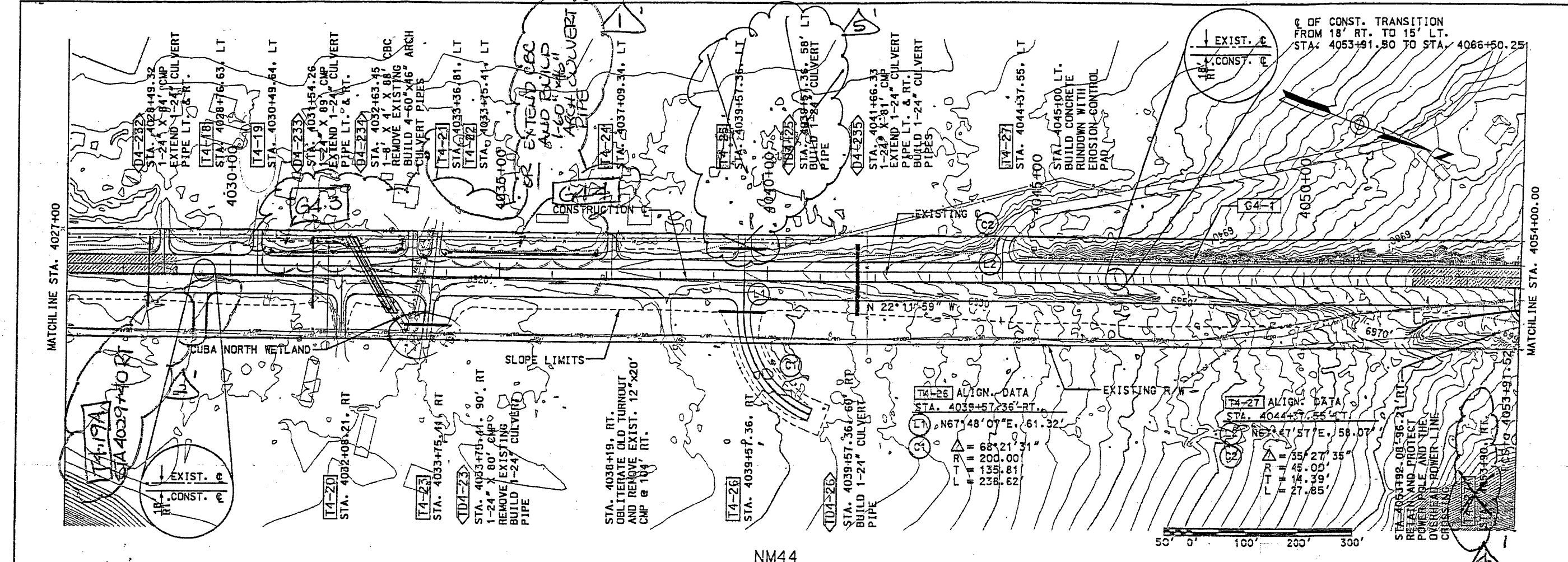
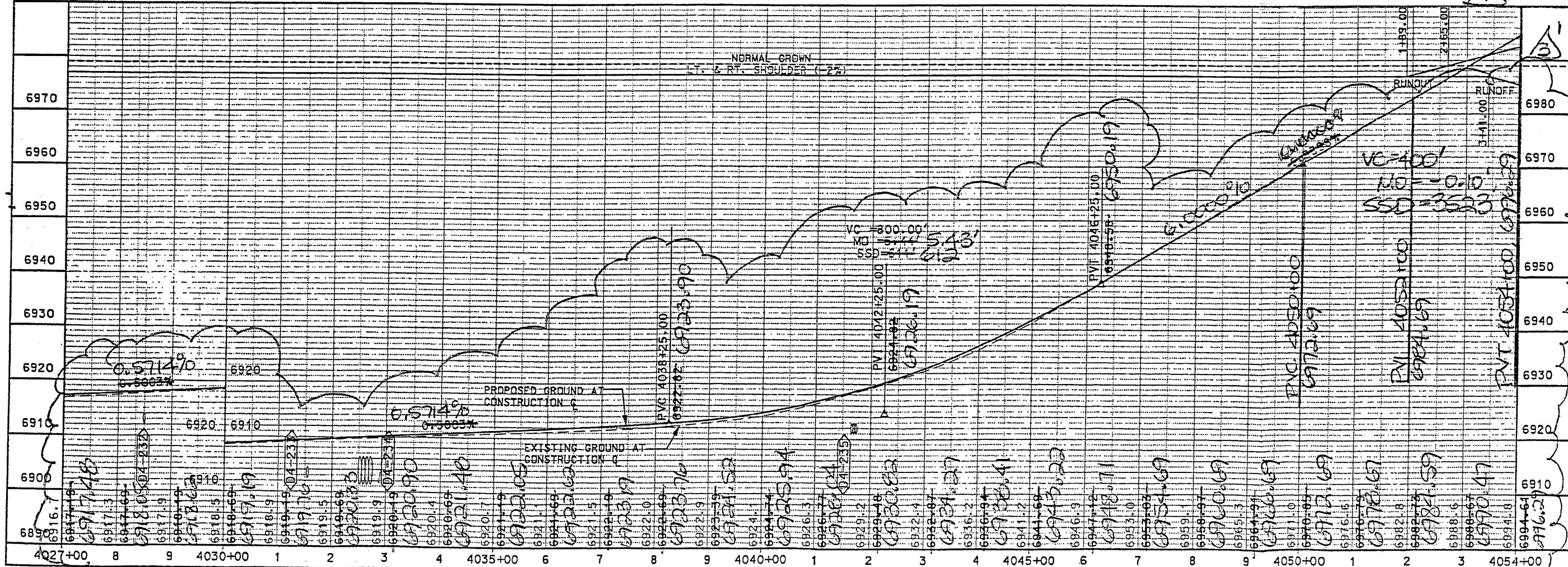
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(3)D64
 CN 3705

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

WILSON & COMPANY

3-2

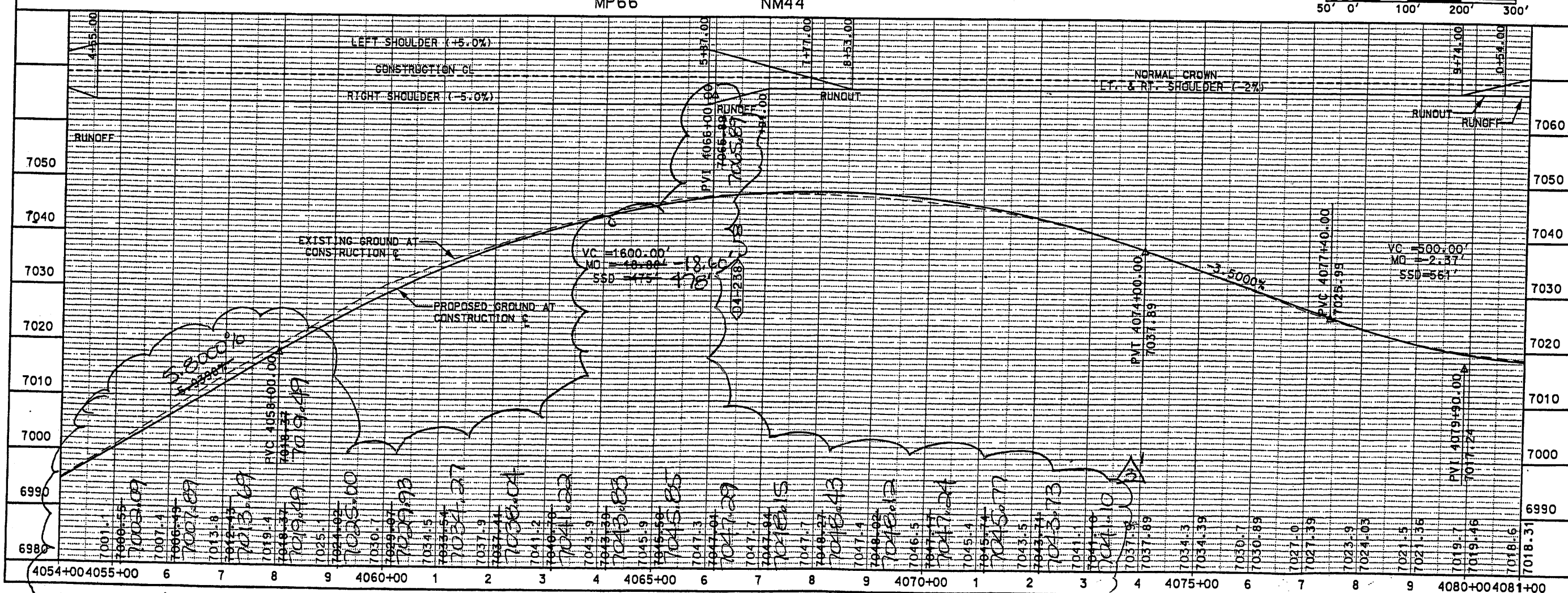
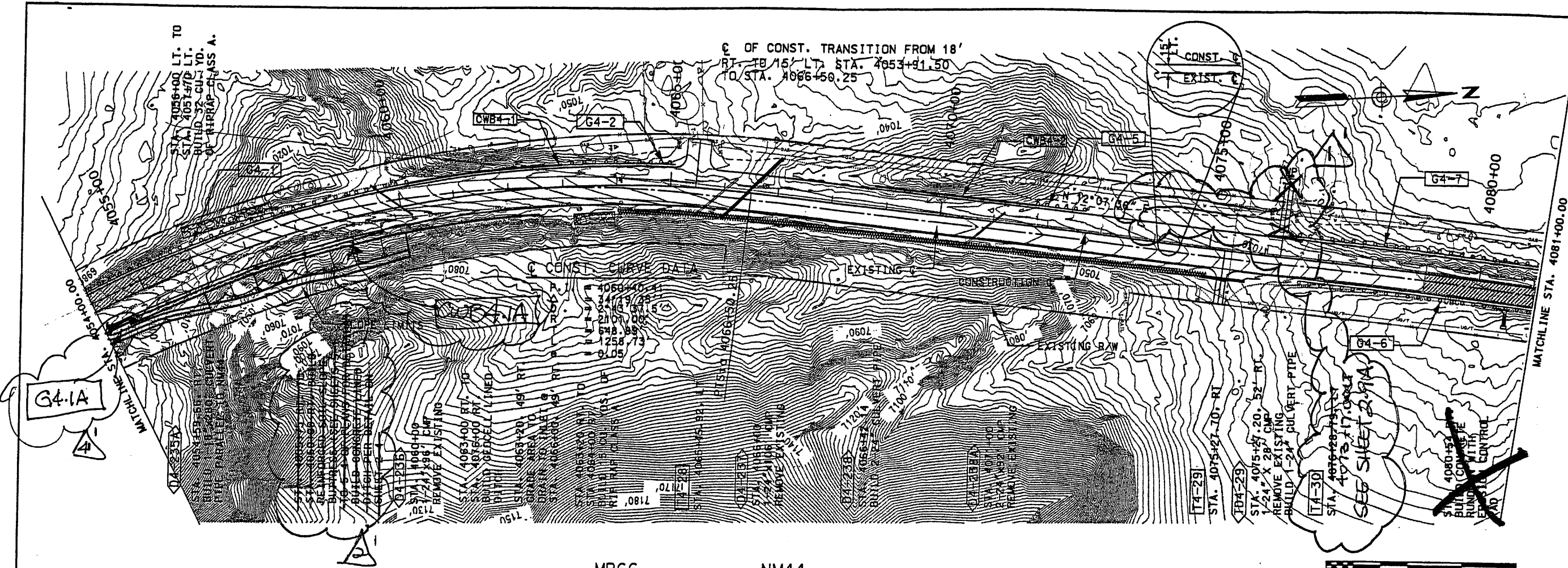




DESIGN BY: DDM DRAWN BY: STAFF CHECKED BY: SFP	SHEET TITLE PLAN & PROFILE STATION 4027+00.00 TO STATION 4054+00.00
NEW MEXICO PROJECT NO AC-NH-044-2(3)9164 CN 3766	

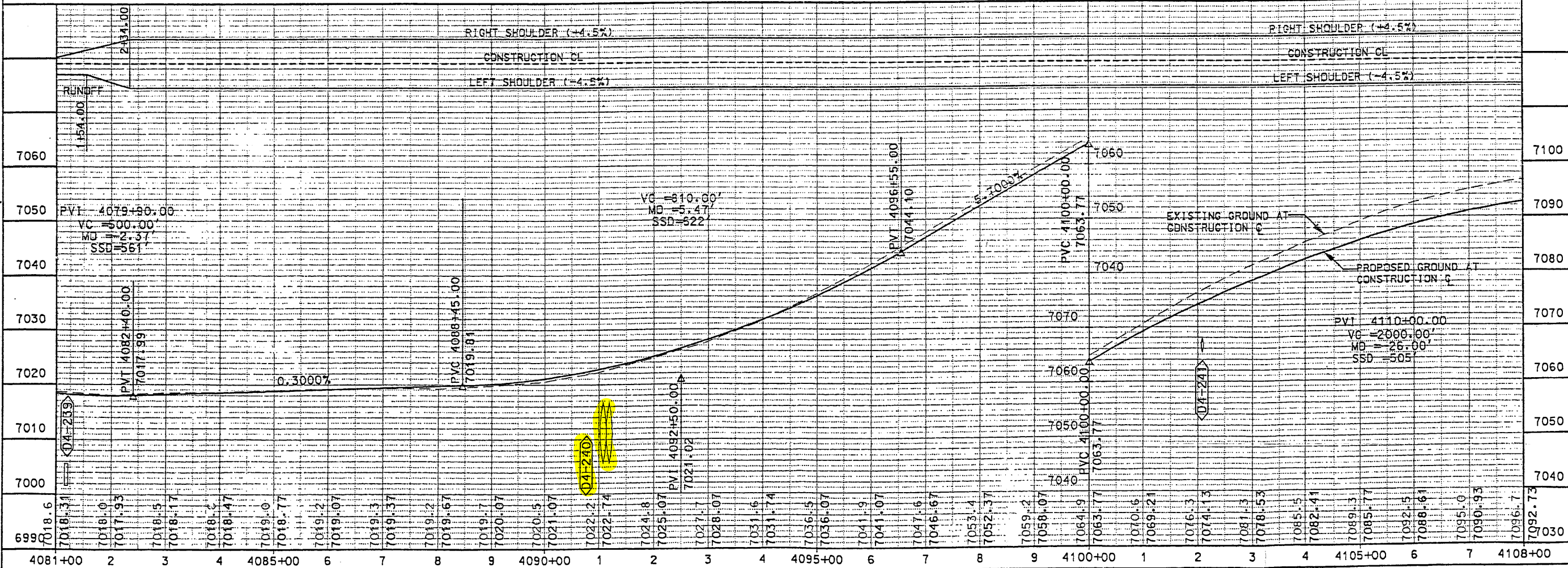
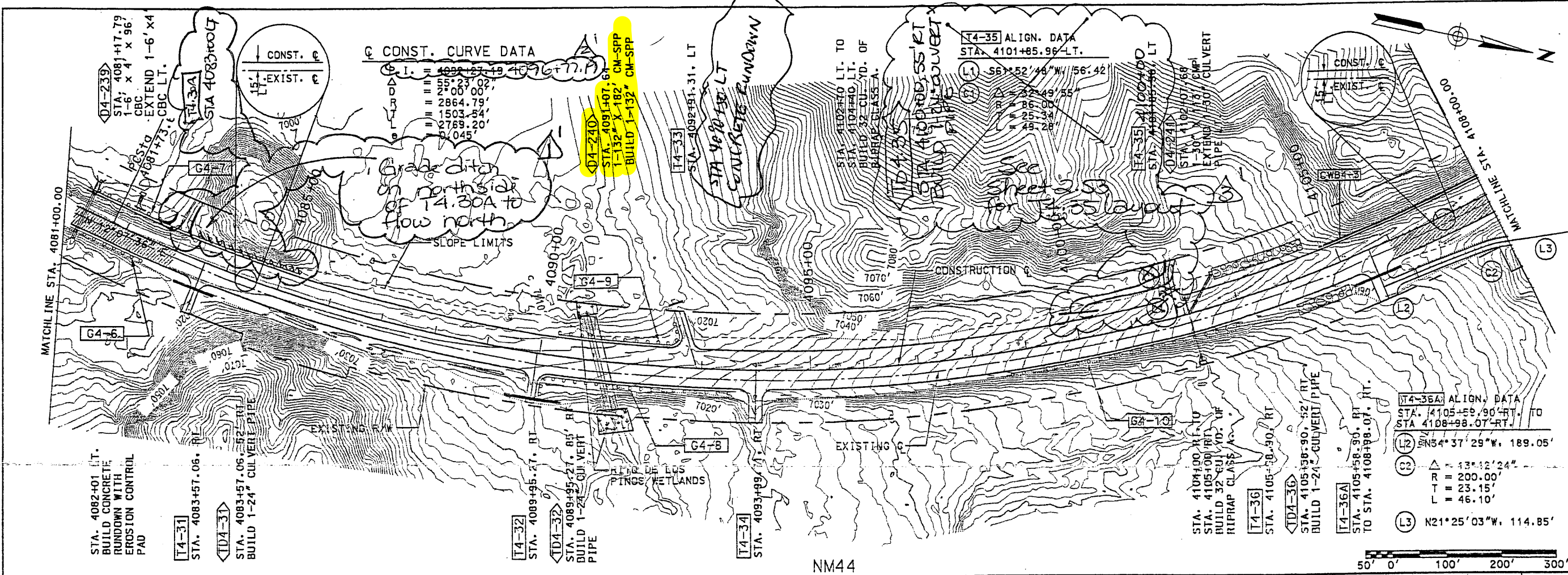
WILSON & COMPANY



Design Files: \projects\98882-B1\sect3\444pp81.dwg
 Plot Date: 04 nov 1999



	SHEET TITLE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6	
	PLAN & PROFILE STATION 4054+00.00 TO STATION 4081+00.00	
DESIGN BY: DDM	NEW MEXICO PROJECT NO AC-NH-044-2(39)64 NM 44 CN 3766	
DRAWN BY: STAFF		
CHECKED BY: SFP		
SEAL 		
3-4		



SHEET TITLE
 PLAN & PROFILE
 STATION 4081+00.00
 TO
 STATION 4108+00.00

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

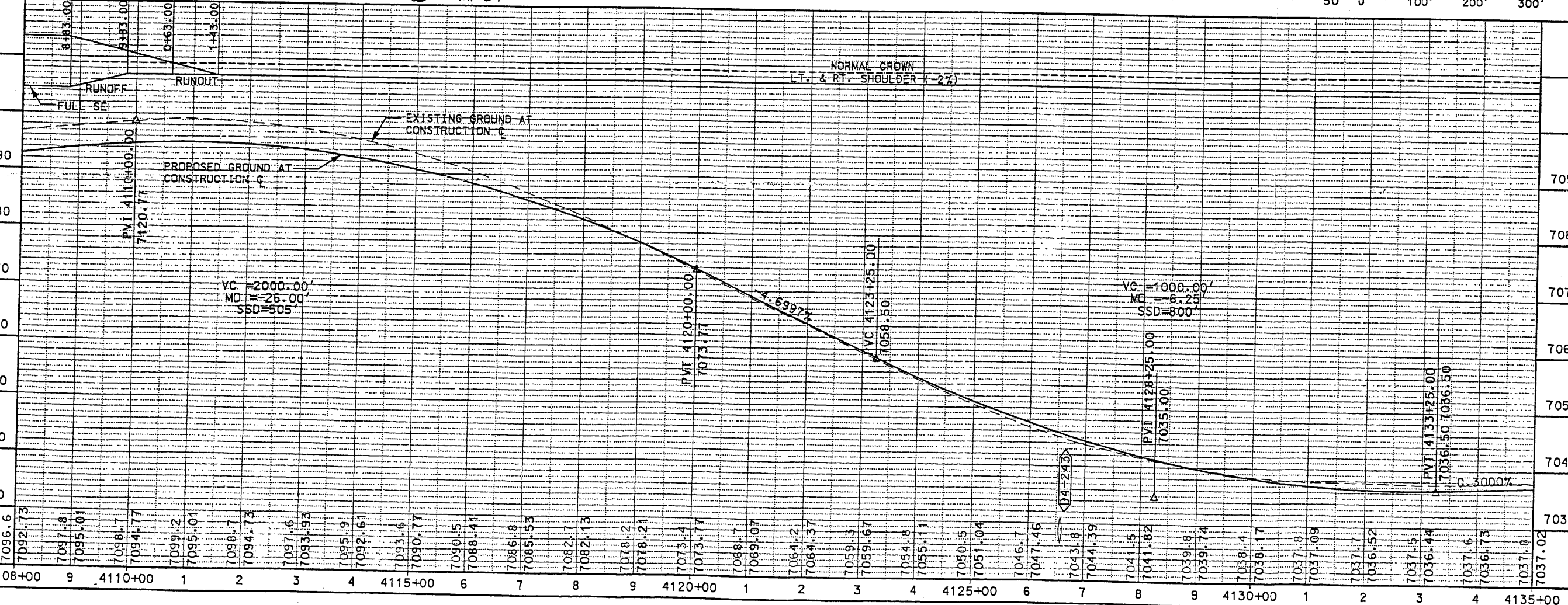
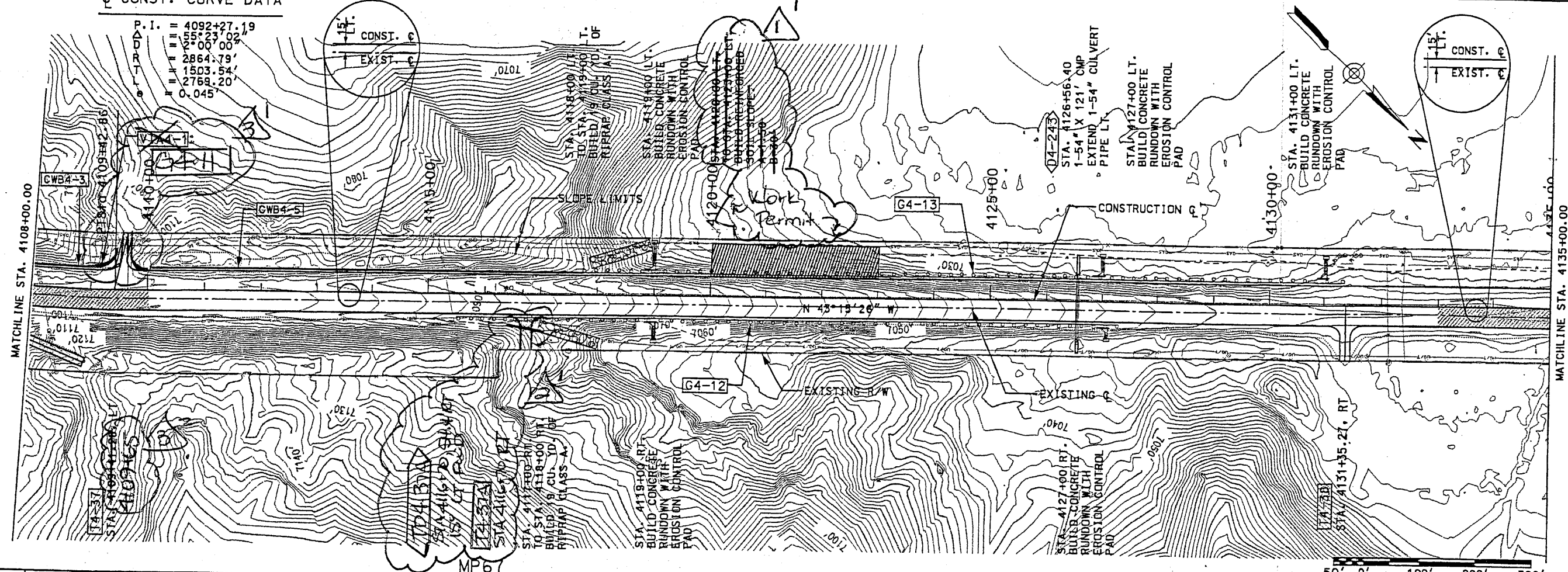
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DRAWN BY: STAFF
CHECKED BY: SFP

SEAL

3-5

CONST. CURVE DATA

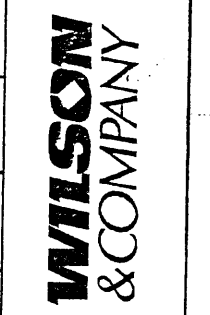
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 2864.79'
 1503.54'
 2769.20'
 0.045'



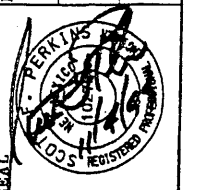
SHEET TITLE
 PLAN & PROFILE
 STATION 4108+00.00
 TO
 STATION 4135+00.00

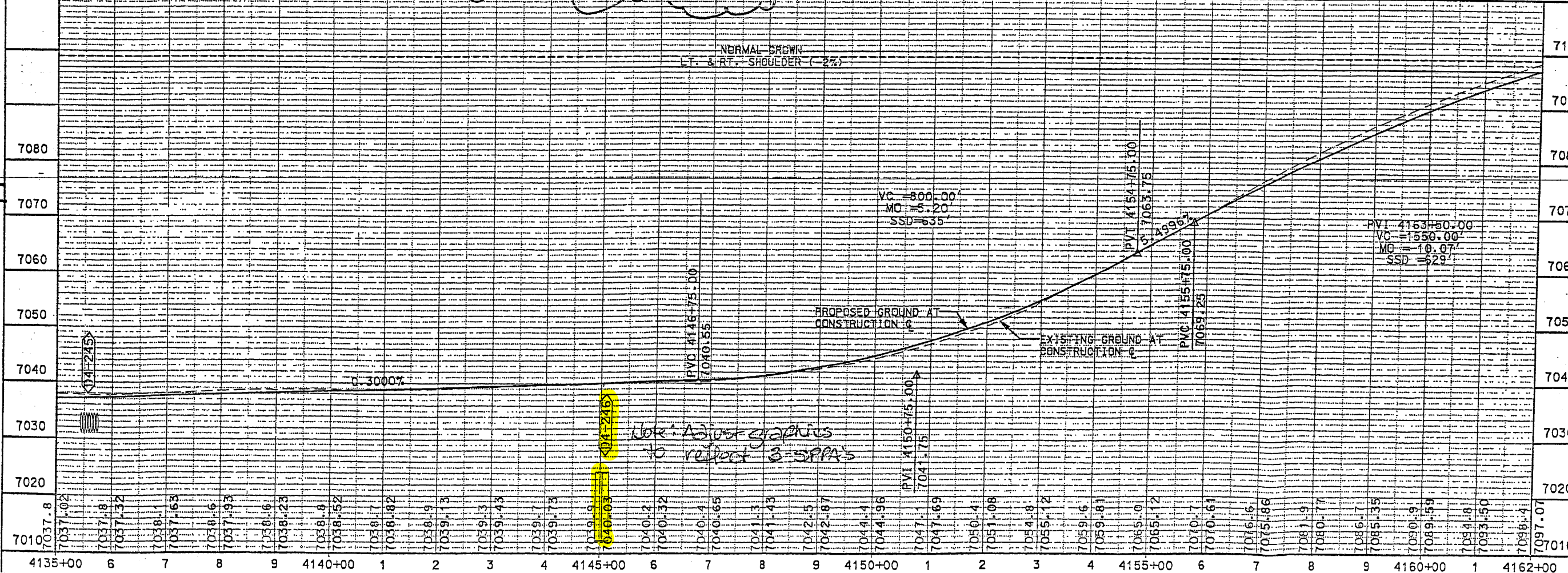
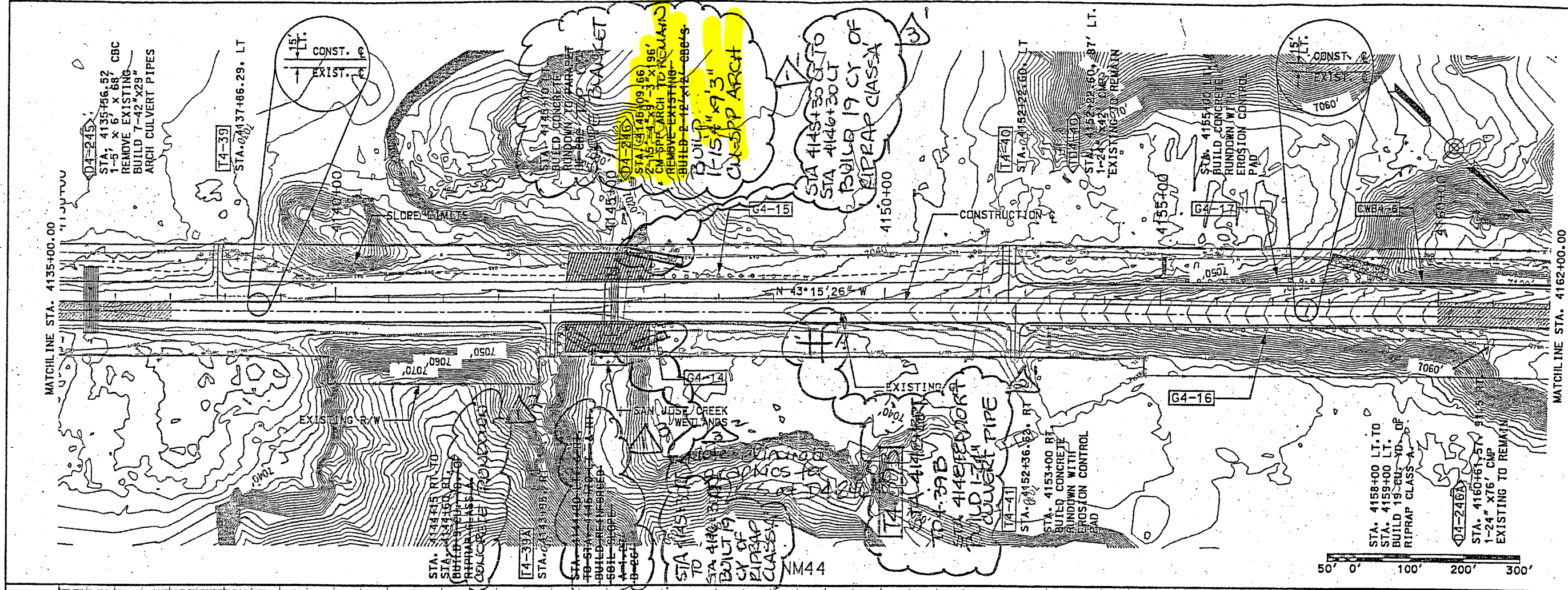
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP





DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

WILSON & COMPANY

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)164
 CN 3766

SHEET TITLE

PLAN & PROFILE
 STATION 4135+00.00 TO
 STATION 4162+00.00

PROJECT NO. AC.NH.044.2(39)64

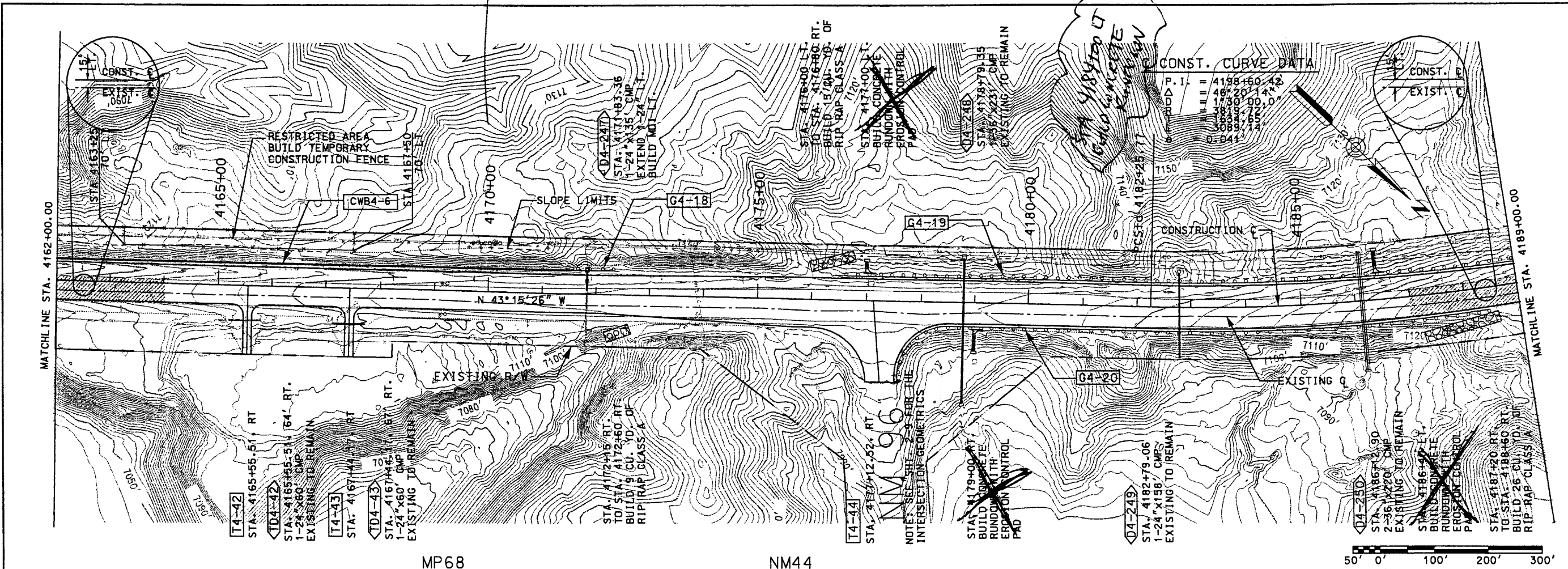
CN NO. 3766

PACKAGE NO. 4

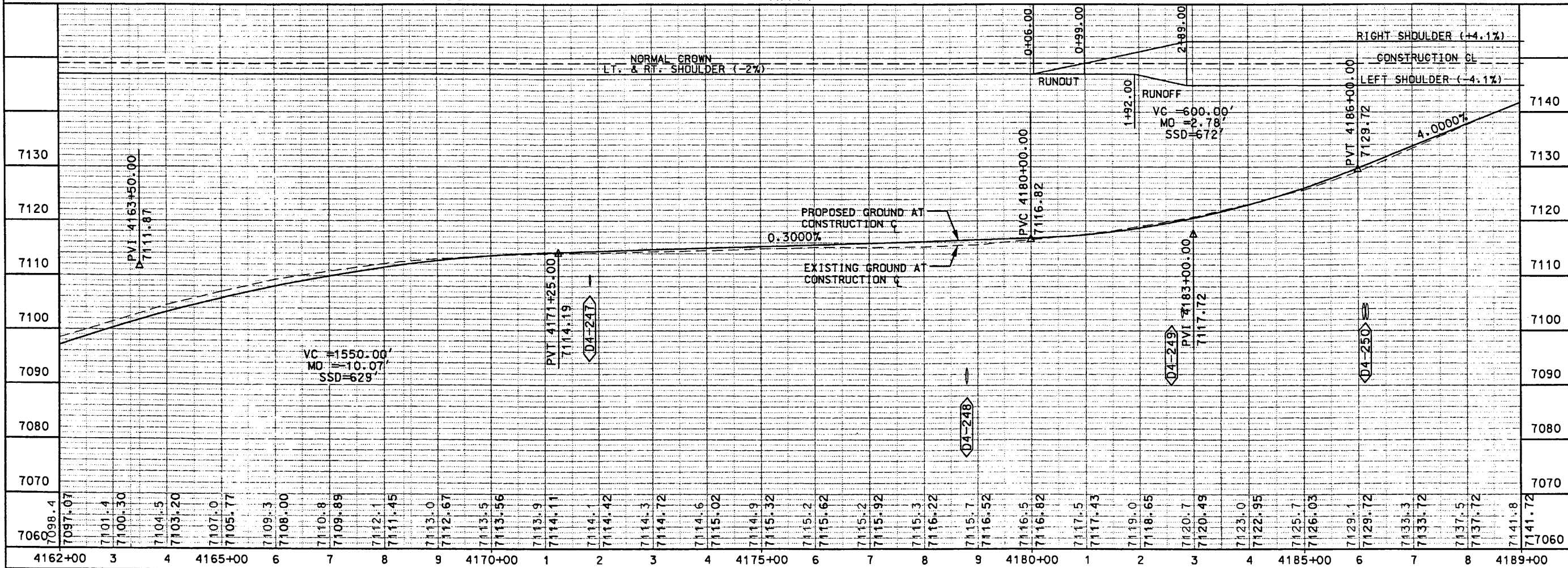
SHEET NO. 3.7, Plan & Profile, Station 4135+00 to Station 4162+00

NO.	REVISION	DATE	BY
Δ ³	Modify D4.246, Eliminate RR RSS in vicinity of D4.246	6.10.00	RFP 3766-05
Δ ¹	Add T4.39B & TD4.39B	3.8.01	FSC/FNF-0298
Δ ²	Add Riprap, 4145+30 to 4146+30 LT	10.18.01	FSC RFI 168

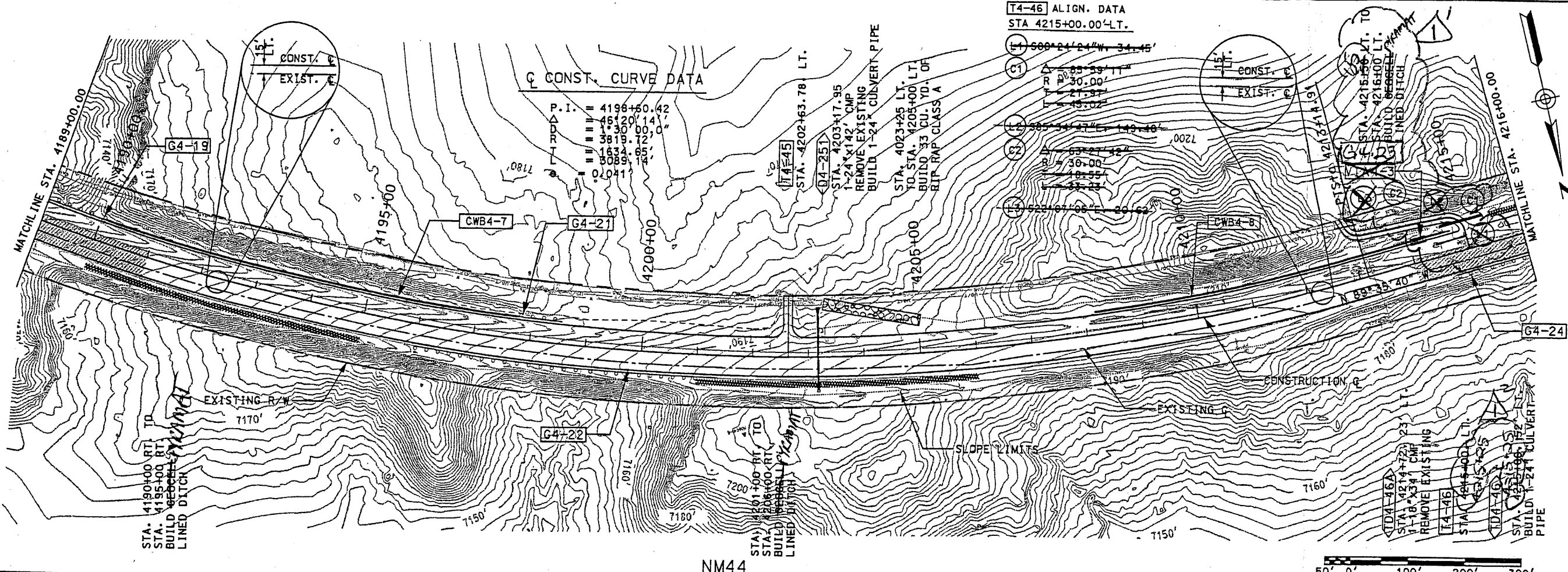
Initiated by
(FNF/FSC)
-0059



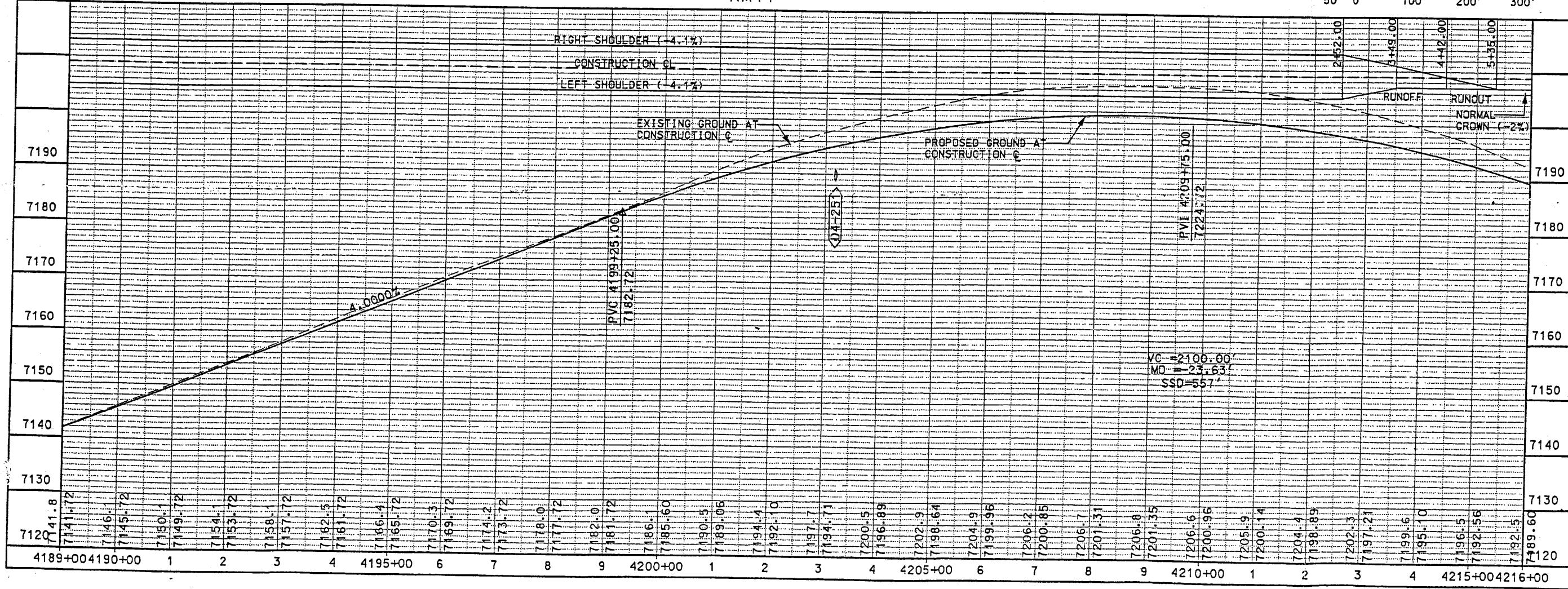
NM44



Design File: \projects\98082-01\sect3\444\pp09.100
 Plot Date: 1/99



NM44



SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

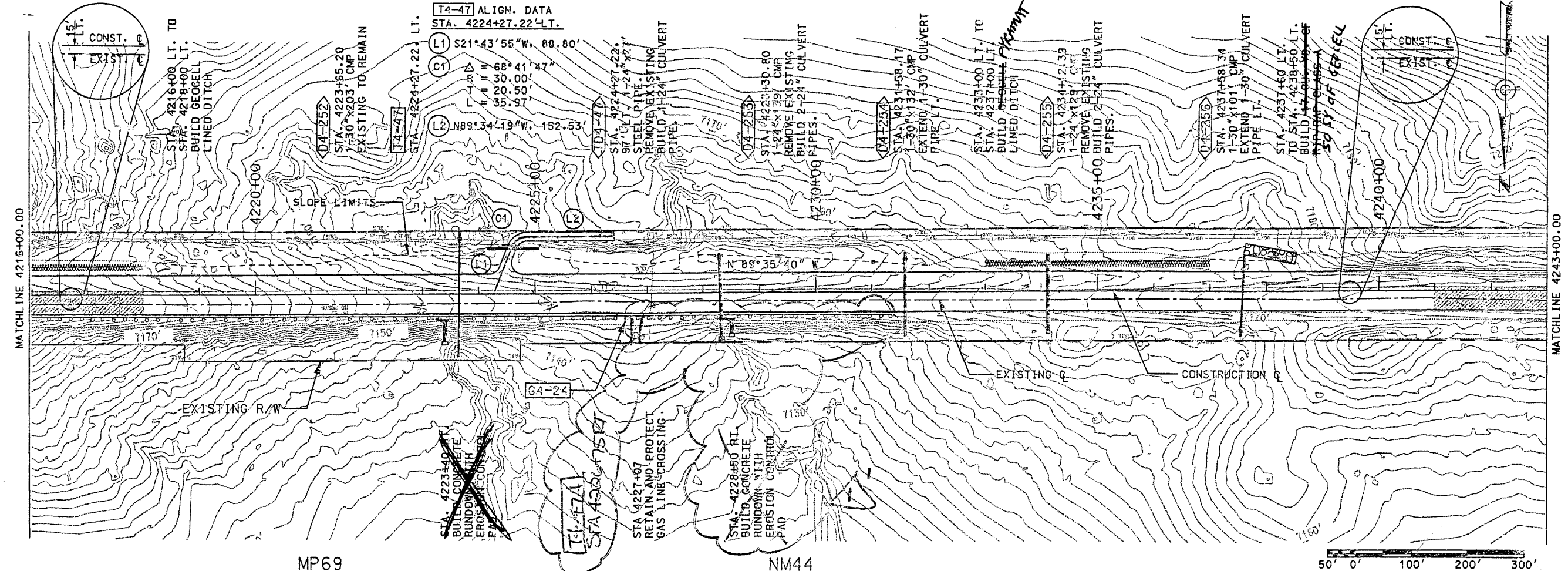
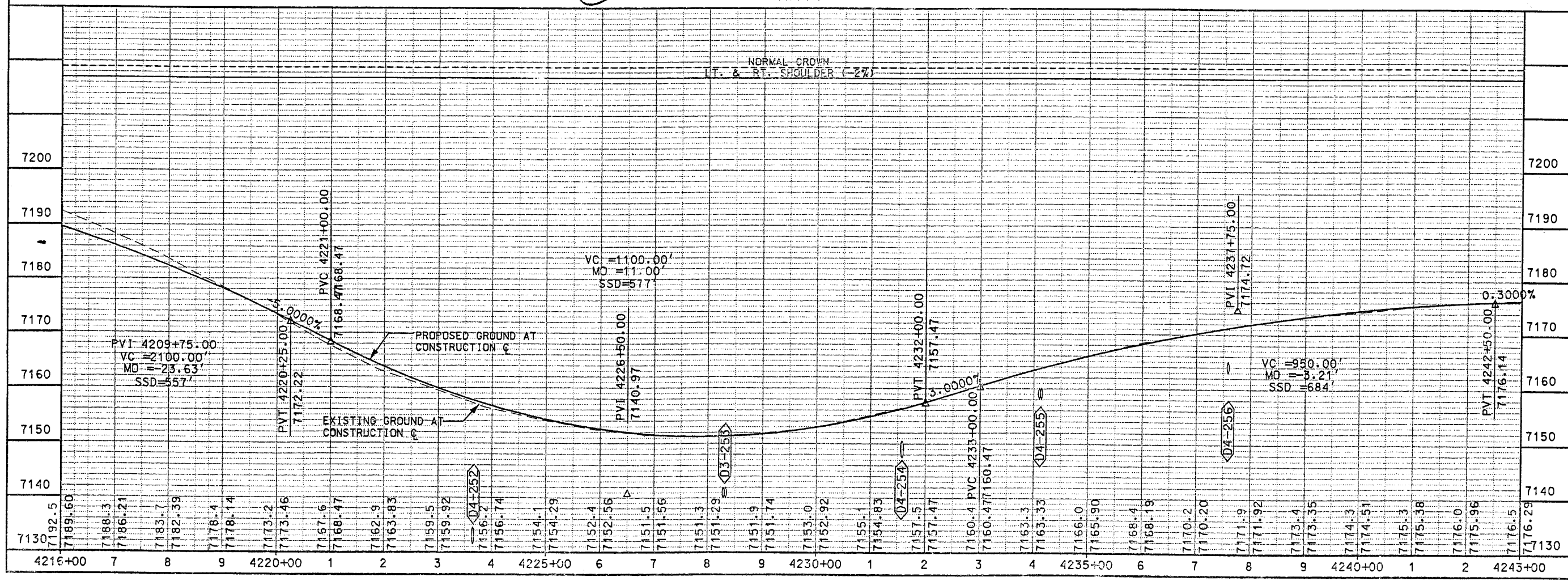


DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

PLAN & PROFILE
 STATION 4189+00.00
 TO
 STATION 4216+00.00

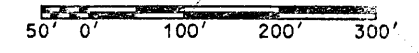
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
 CN 3766

Design 1
Plot Date: 1/19/95
c:\projects\98082-01\sec3\4444ppt10.100



MP69

NM44



WILSON & COMPANY

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP

SEAL: [Professional Engineer Seal]

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

PLAN & PROFILE
STATION 4216+00.00 TO STATION 4243+00.00

NEW MEXICO PROJECT NO AC-NH-044-2(39)34
CN 3766

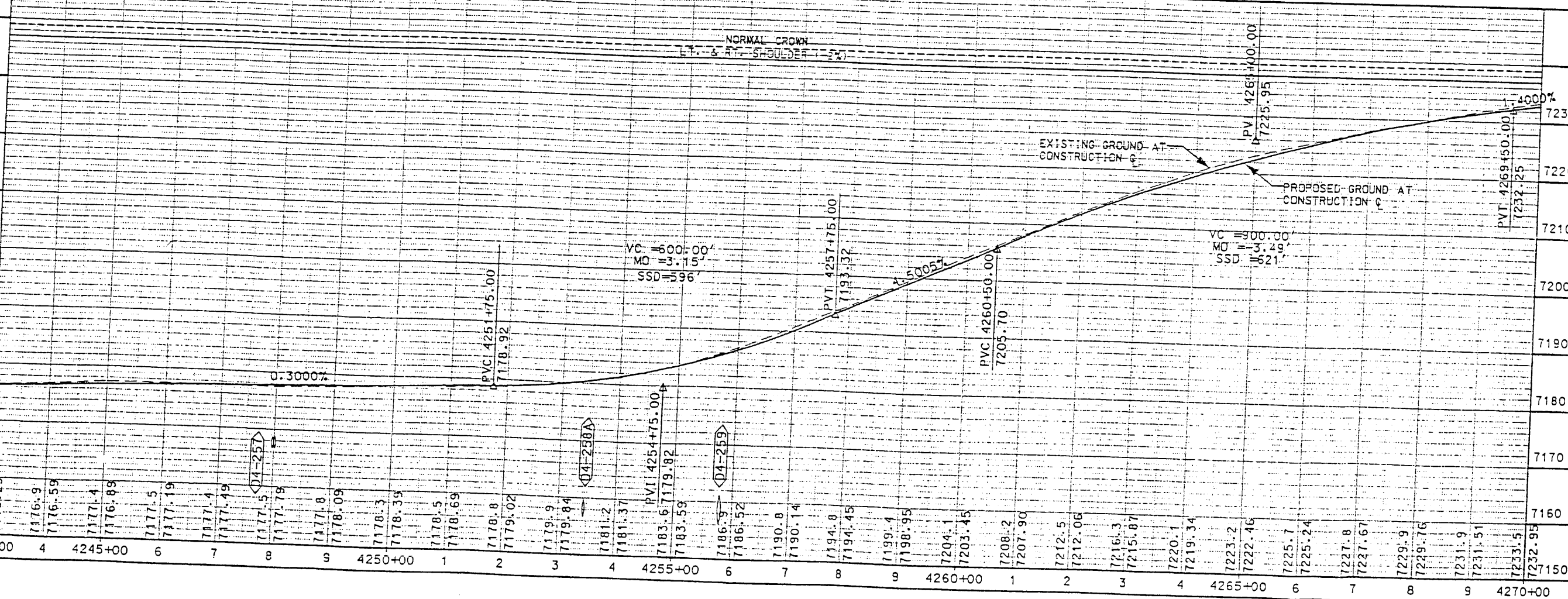
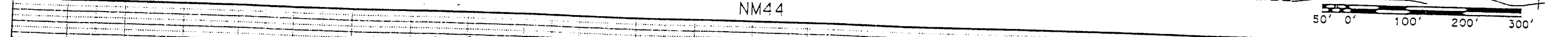
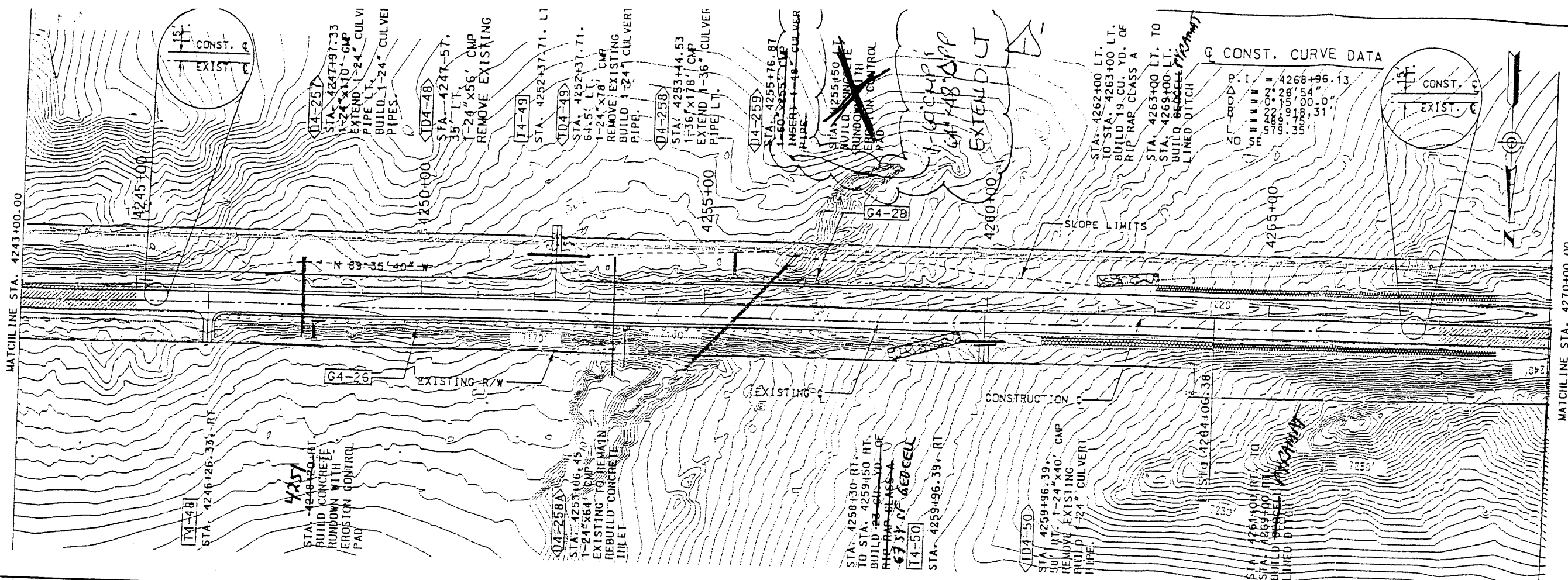
3-10

PROJECT NO. AC-NH-044-2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 3.10, Plan & Profile, STA 4216+00 to STA 4243+00

NO.	REVISION	DATE	BY
1	Add T4.47A, Revise G4.24 &		
	Delete Rundown at STA 4228+50	9.4.01	FSC RFI 160

MATCHLINE STA. 4243+00.00

MATCHLINE STA. 4270+00.00



NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

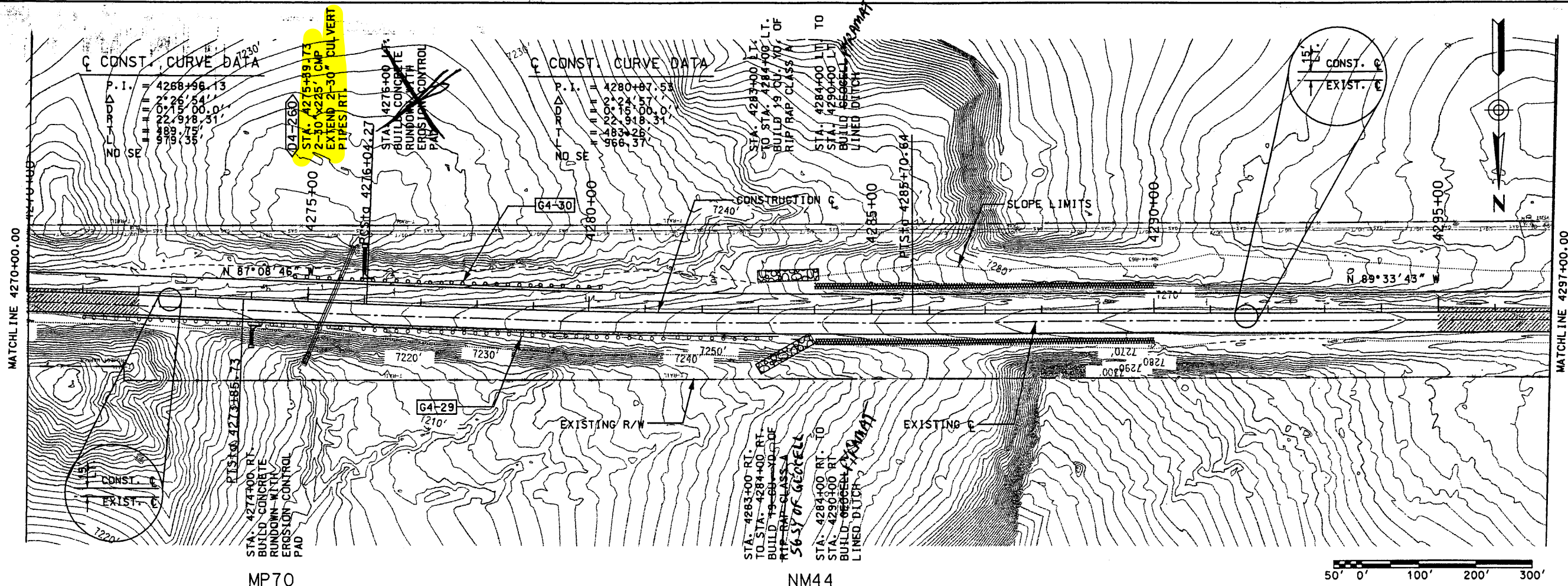
NEW MEXICO PROJECT NO AC-NII-044-2(39)64
NM 44
CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP

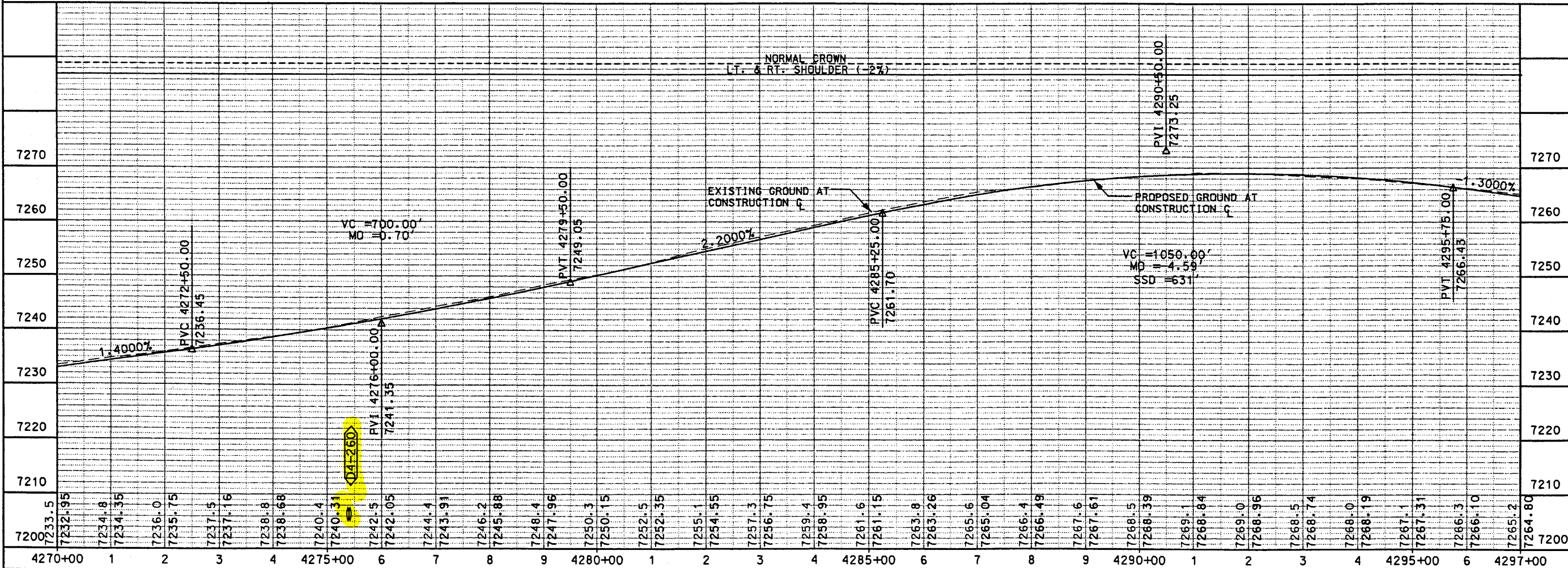


SUBJECT TITLE
PLAN & PROFILE
STATION 4243+00.00
TO
STATION 4270+00.00



MP70

NM44



SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.-H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

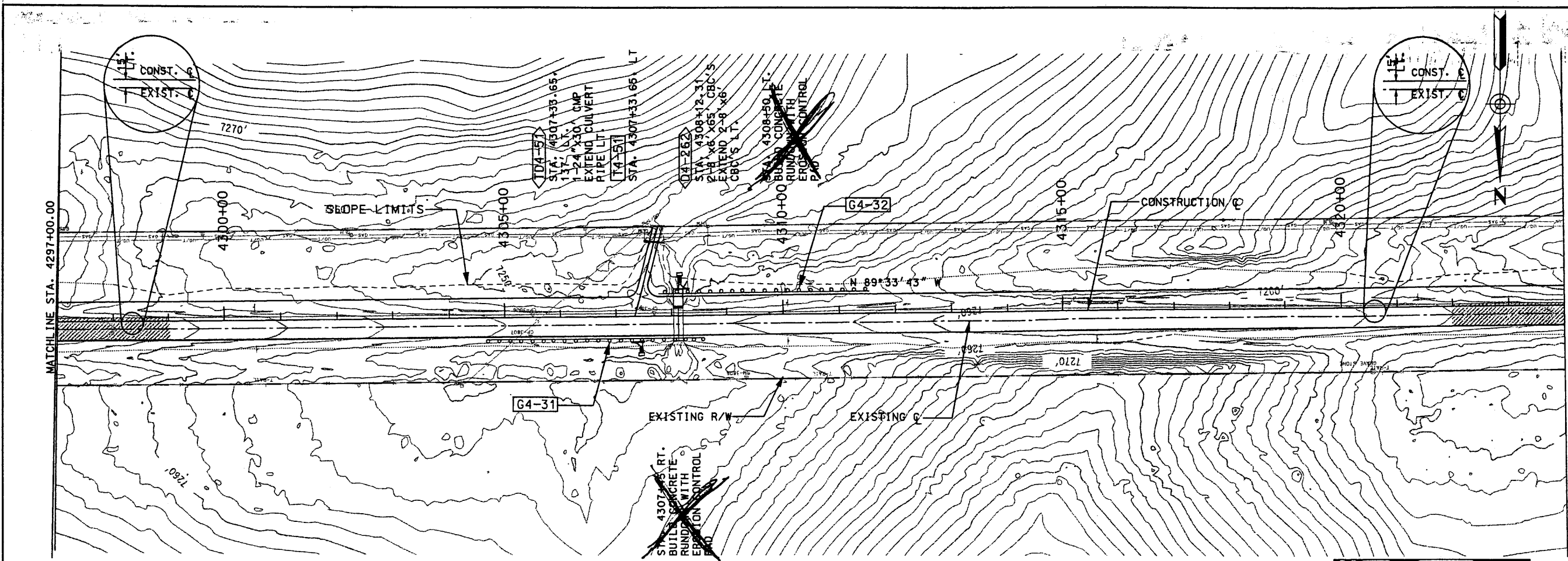
NM 44

PLAN & PROFILE
STATION 4270+00.00
TO
STATION 4297+00.00

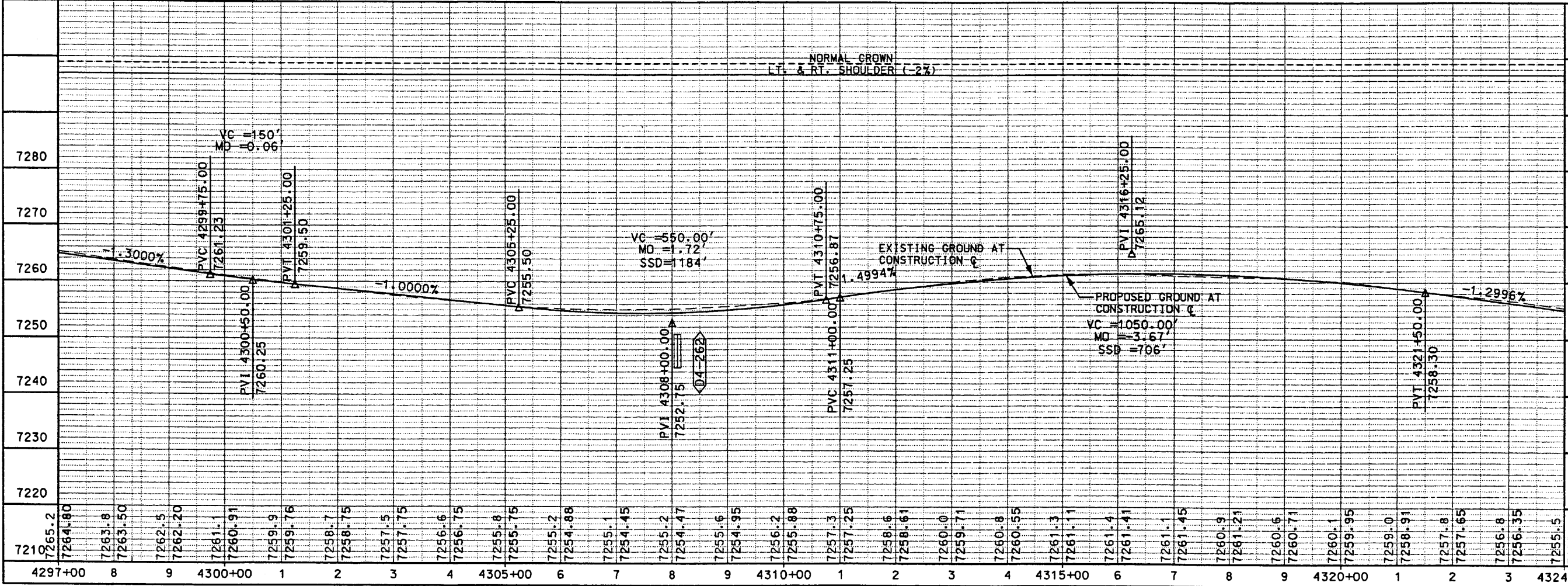
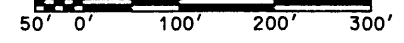
WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

3-12



NM44



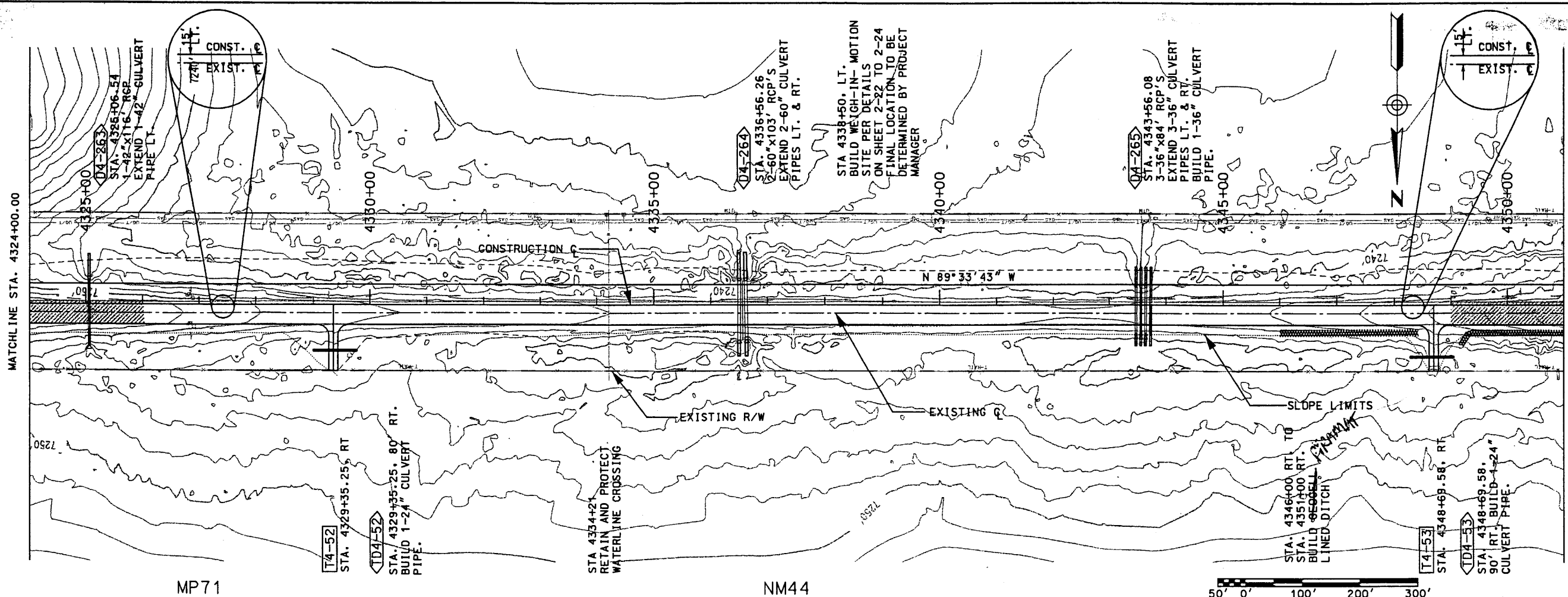
PLAN & PROFILE
 STATION 4297+00.00
 TO
 STATION 4324+00.00

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.-H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(89)64
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

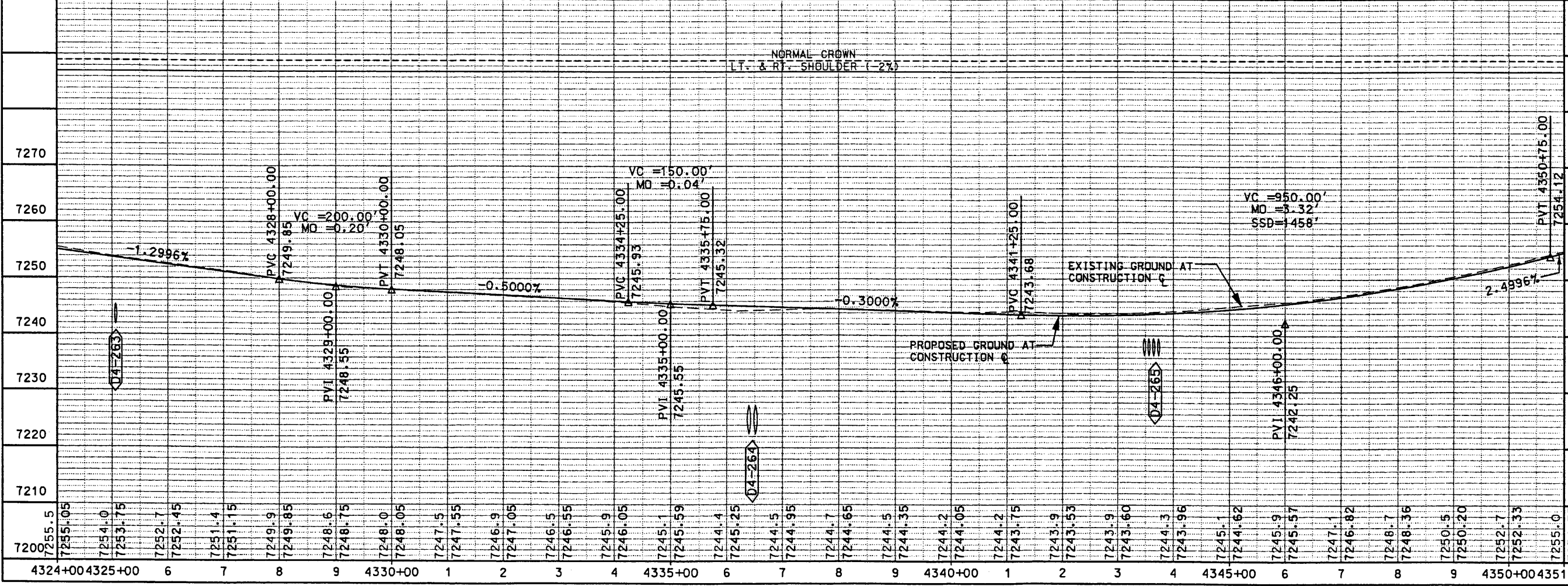




MATCHLINE STA. 4351+00.00

MP71

NM44



50' 0' 100' 200' 300'

SHEET TITLE
 PLAN & PROFILE
 STATION 4324+00.00
 TO
 STATION 4351+00.00

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

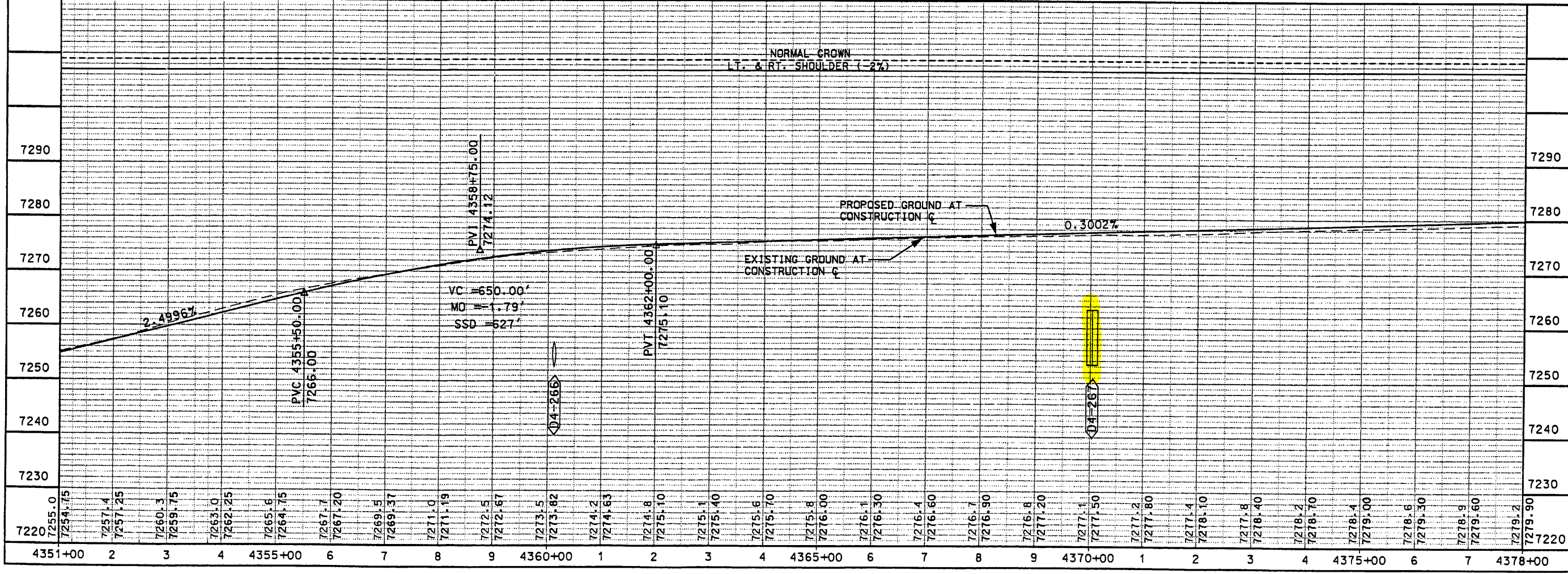
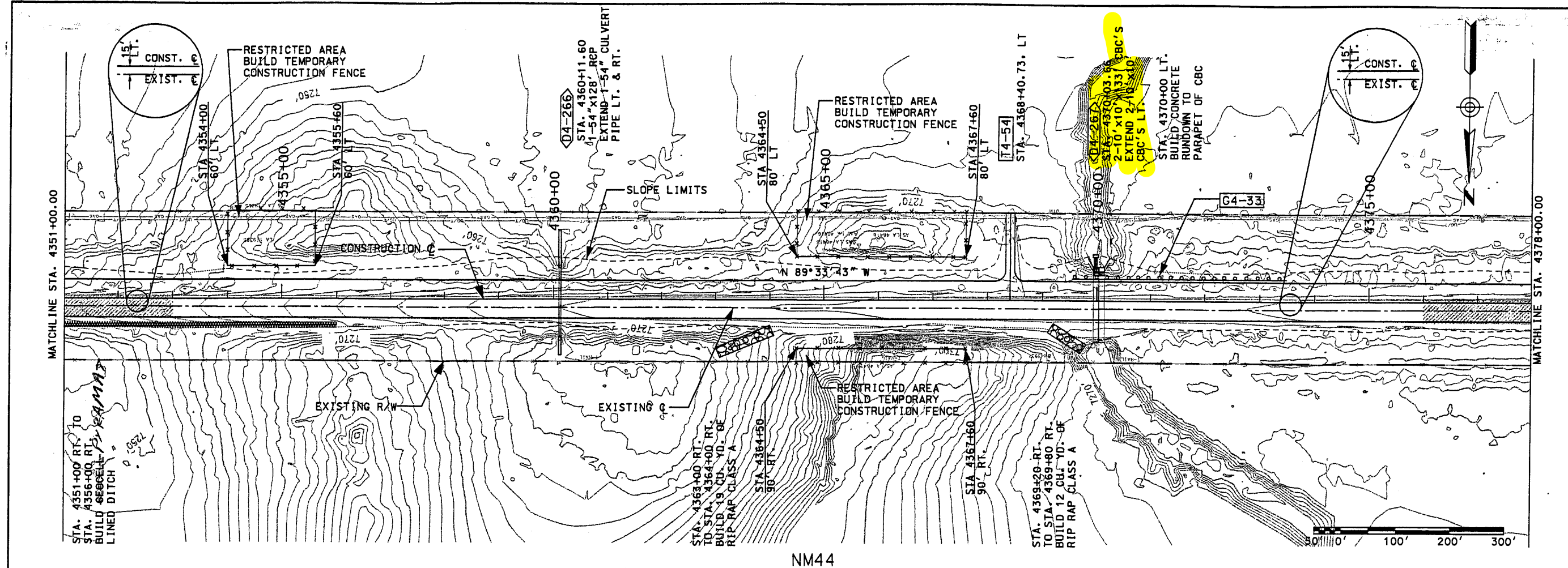
NM 44
 PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

3-14

Design File: \\projects\98082-01\sect3\4444pp15.100
 Plot Date: 1999



SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

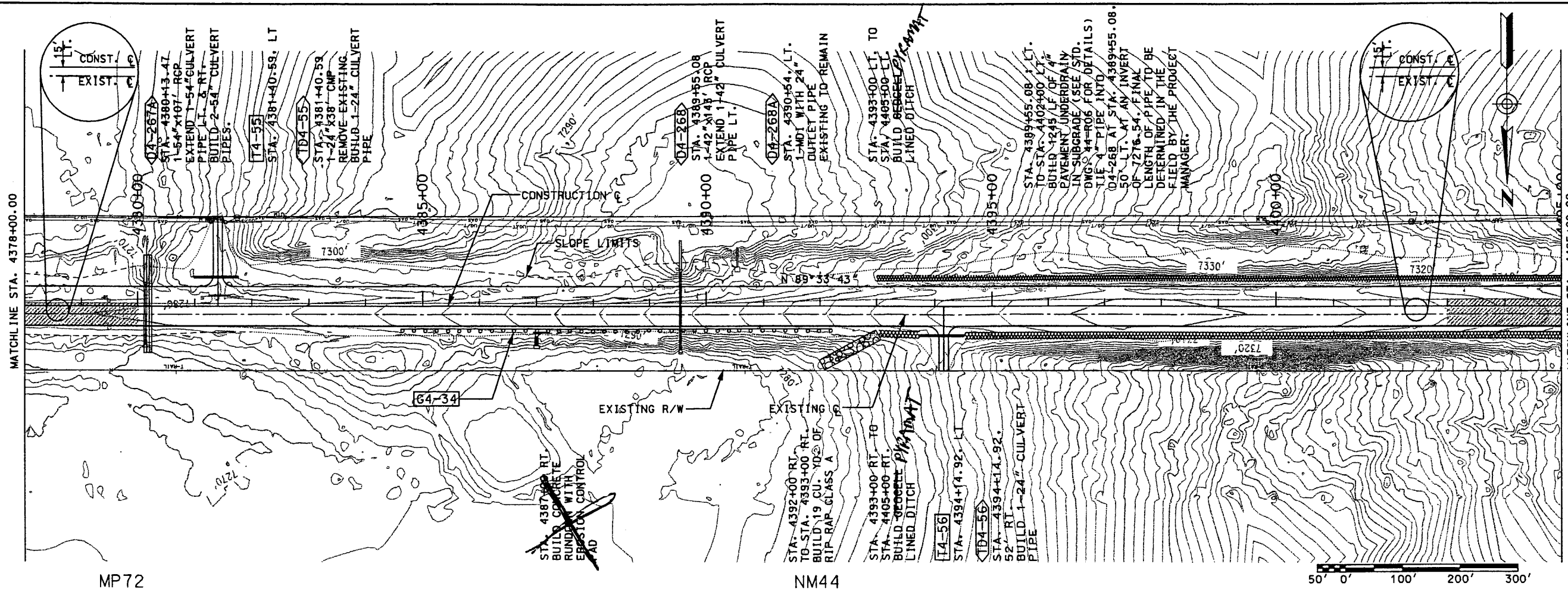
DESIGN BY: DDM
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 CHECKED BY: SFP

NEW MEXICO PROJECT NO AC-NH-044-2(39)84
 NM 44
 CN 3766

PLAN & PROFILE
 STATION 4351+00.00
 TO
 STATION 4378+00.00

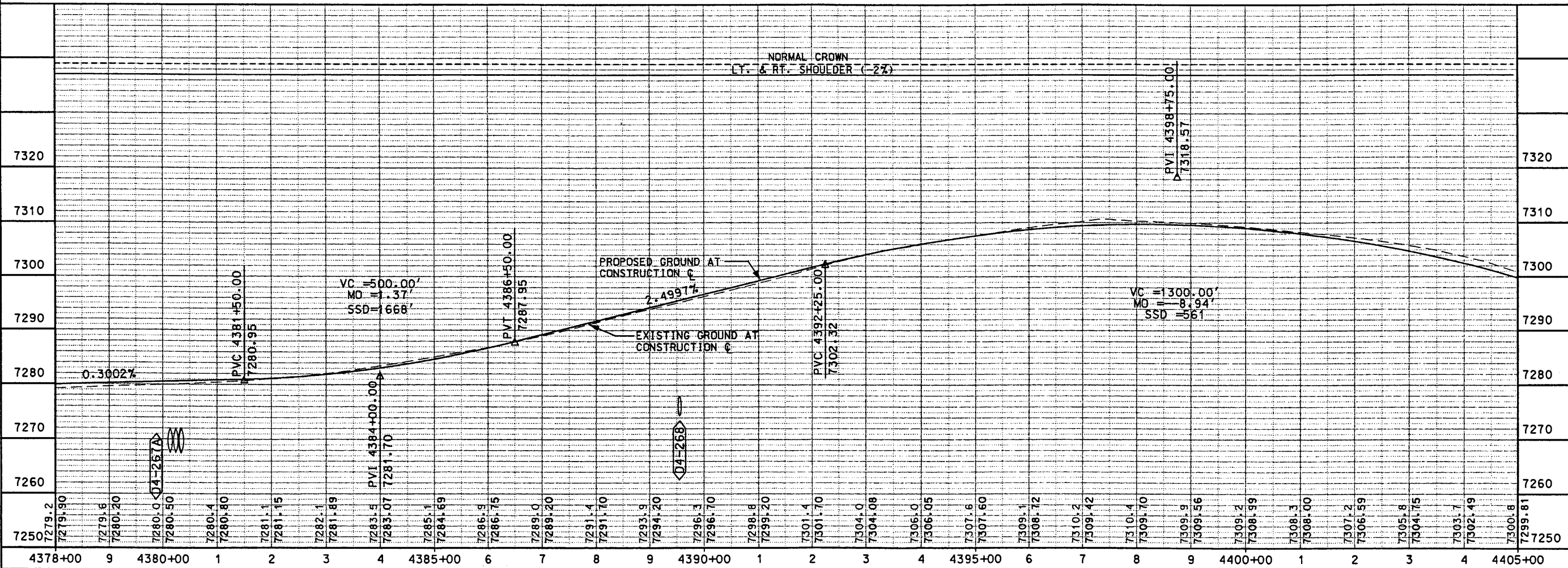
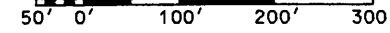
SEAL

3-15



MP72

NM44



MATCHLINE STA. 4378+00.00

MATCHLINE STA. 4405+00.00

SHEET TITLE

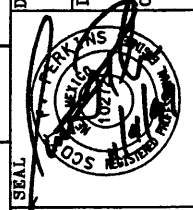
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

PLAN & PROFILE
 STATION 4378+00.00
 TO
 STATION 4405+00.00

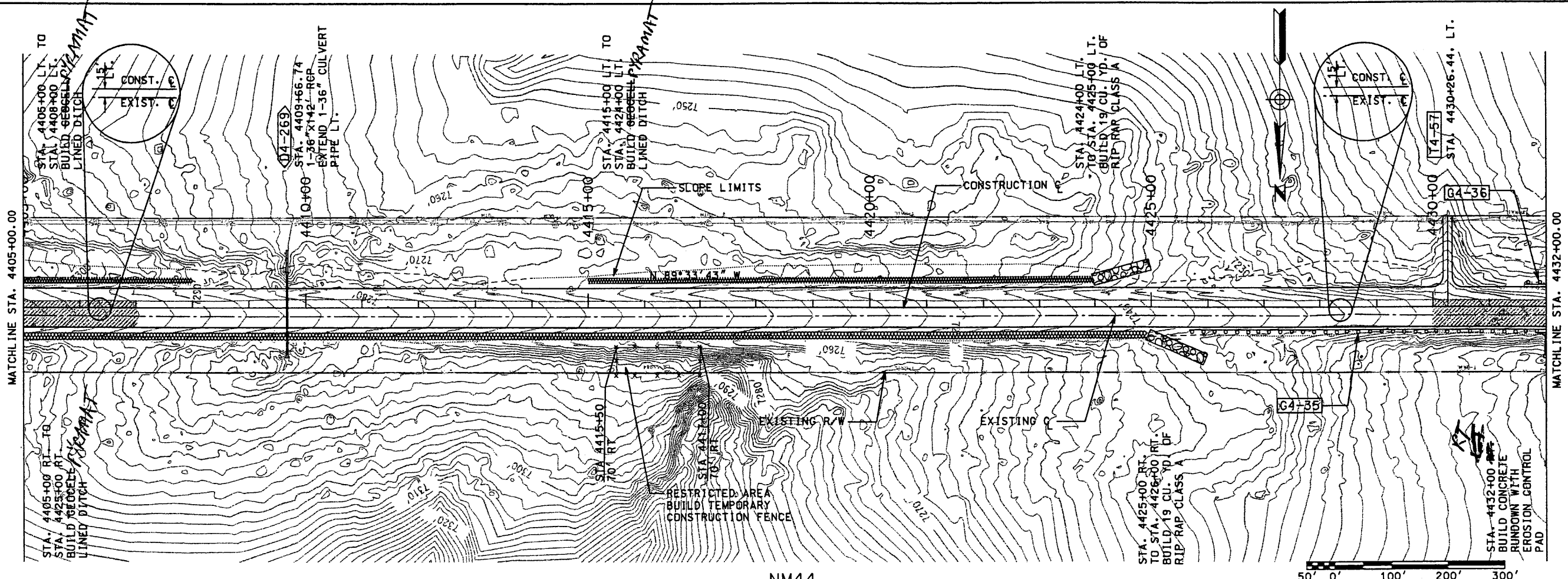
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



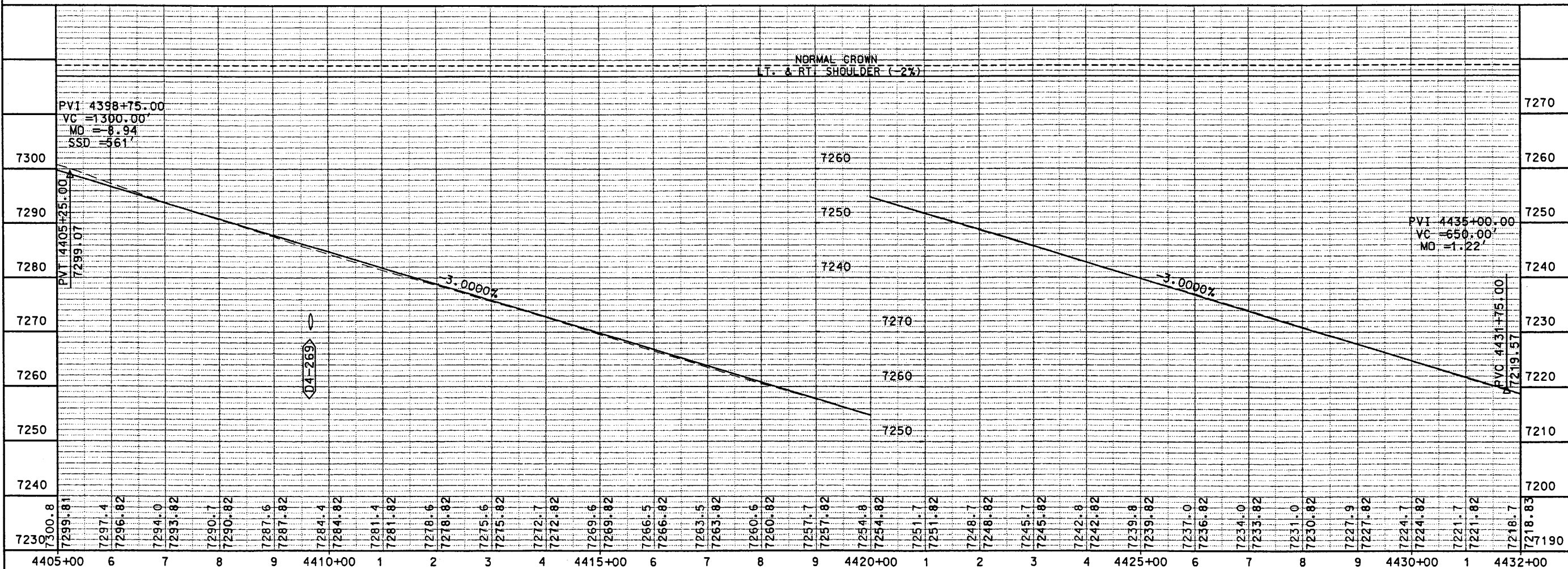
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 DRAWN BY: STAFF
 CHECKED BY: SFP



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 Plot Date: 04 NOV 1999

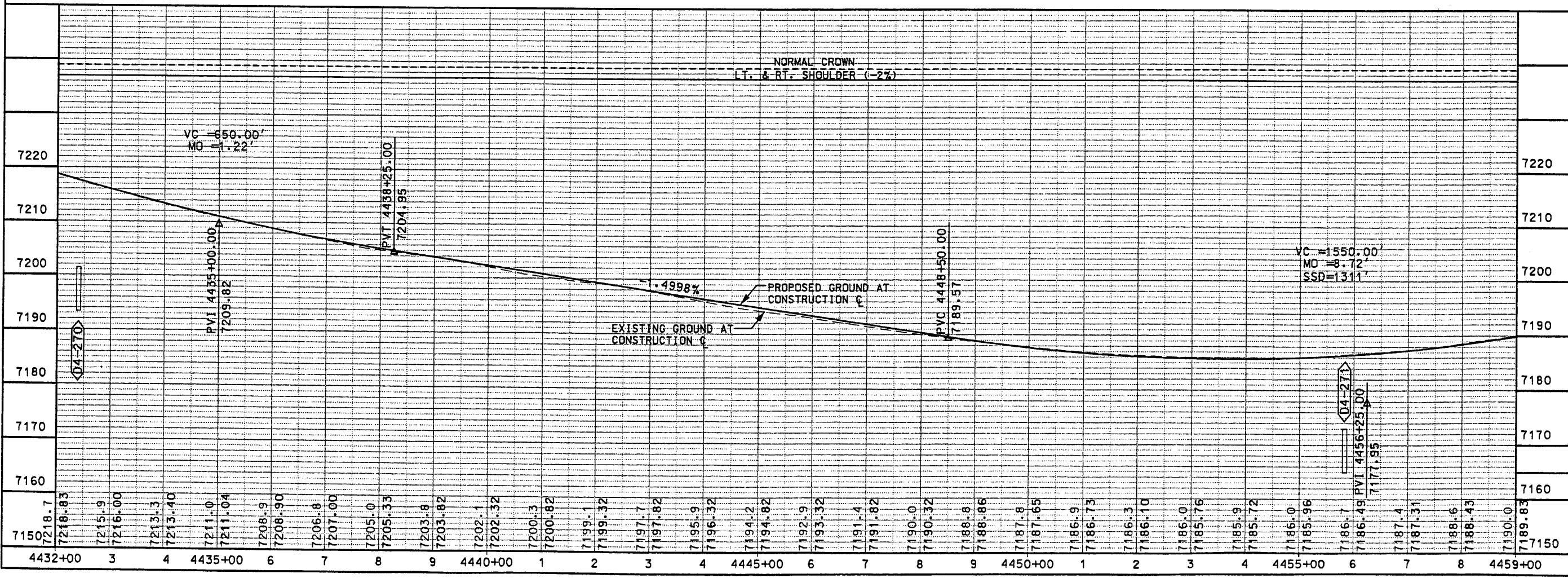
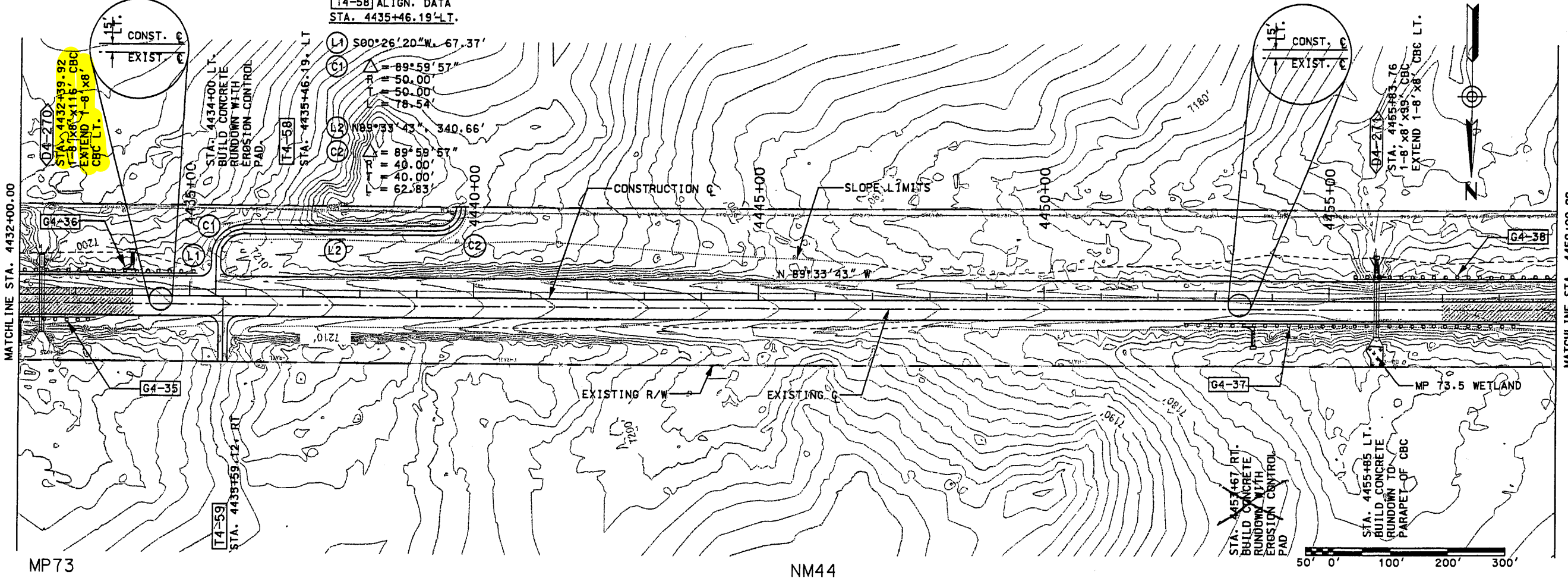


NM44



SHEET TITLE		PLAN & PROFILE
STATION 4405+00.00		TO
STATION 4432+00.00		
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6		
NM 44		
NEW MEXICO PROJECT NO AC-NH-044-2(39)64 CN 3766		
WILSON & COMPANY		
DESIGN BY:	DDM	
DRAWN BY:	STAFF	
CHECKED BY:	SFP	
3-17		

Design F
 Plot Date: 1/1999
 c:\projects\98082-01\sect3\444\p18.100



PLAN & PROFILE
 STATION 4432+00.00
 TO
 STATION 4459+00.00

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

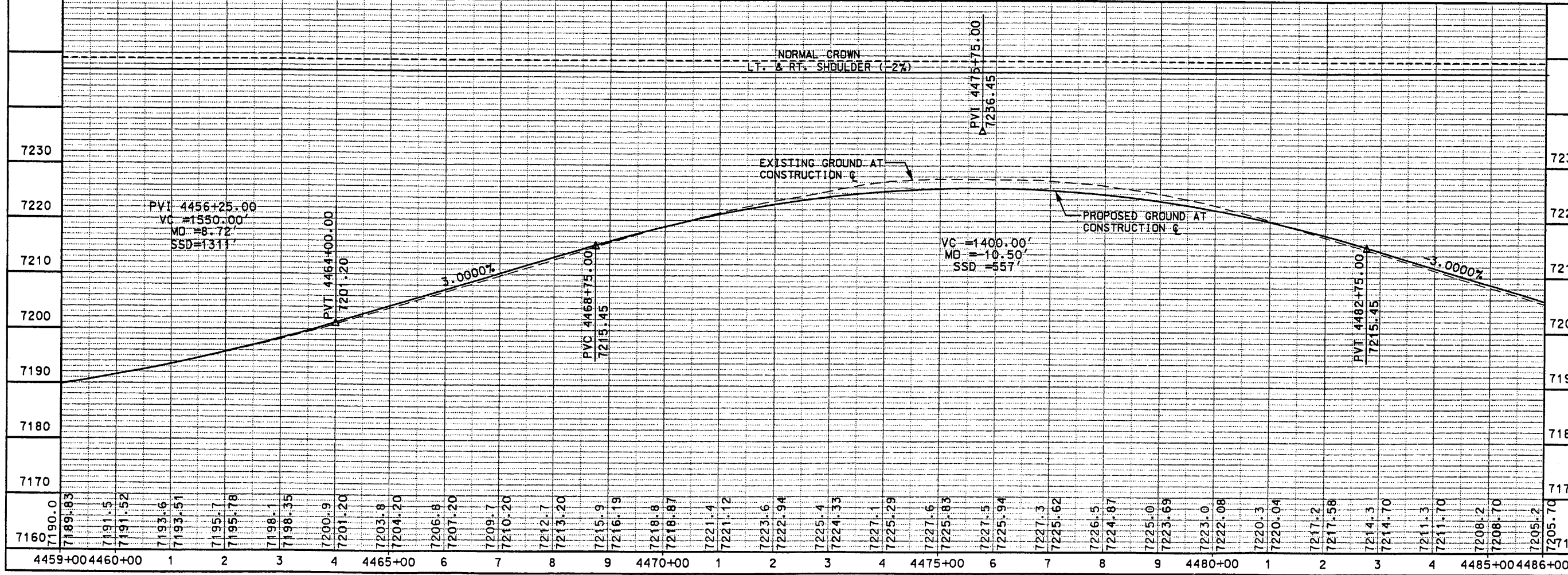
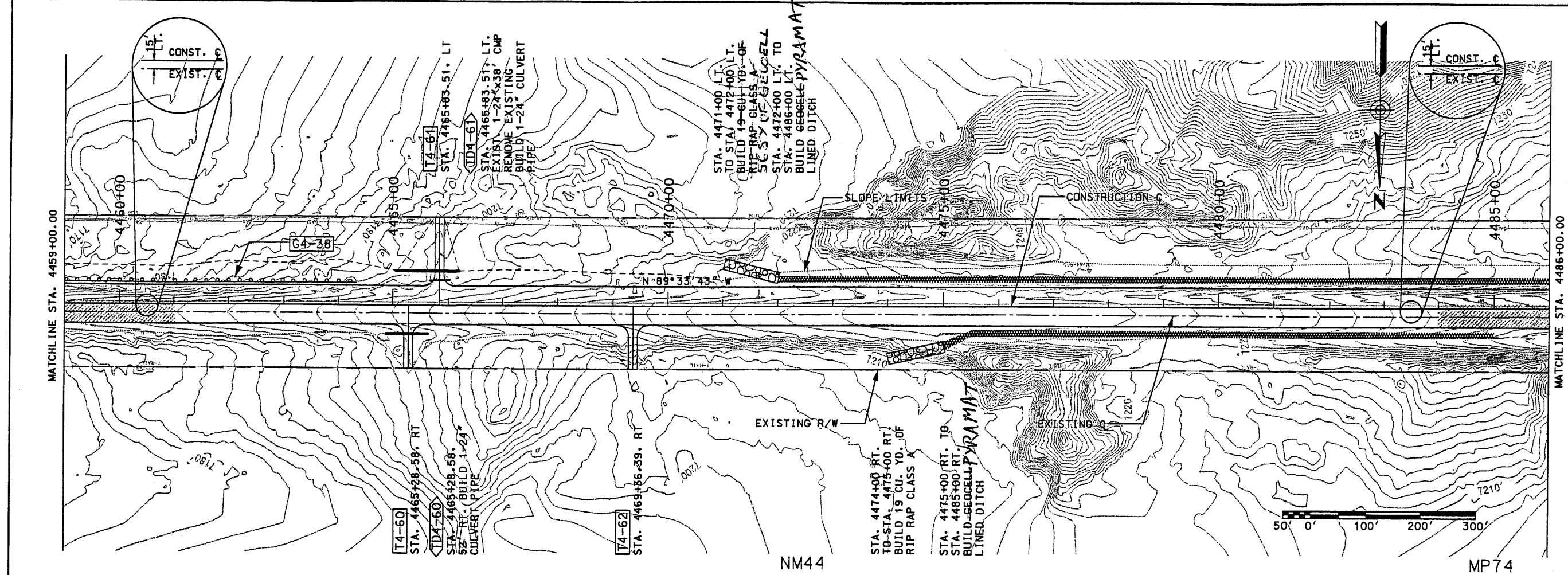
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

3-18

Design F1
Plot Date: 1999



NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.-H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

NM 44

PLAN & PROFILE
STATION 4459+00.00
TO
STATION 4486+00.00

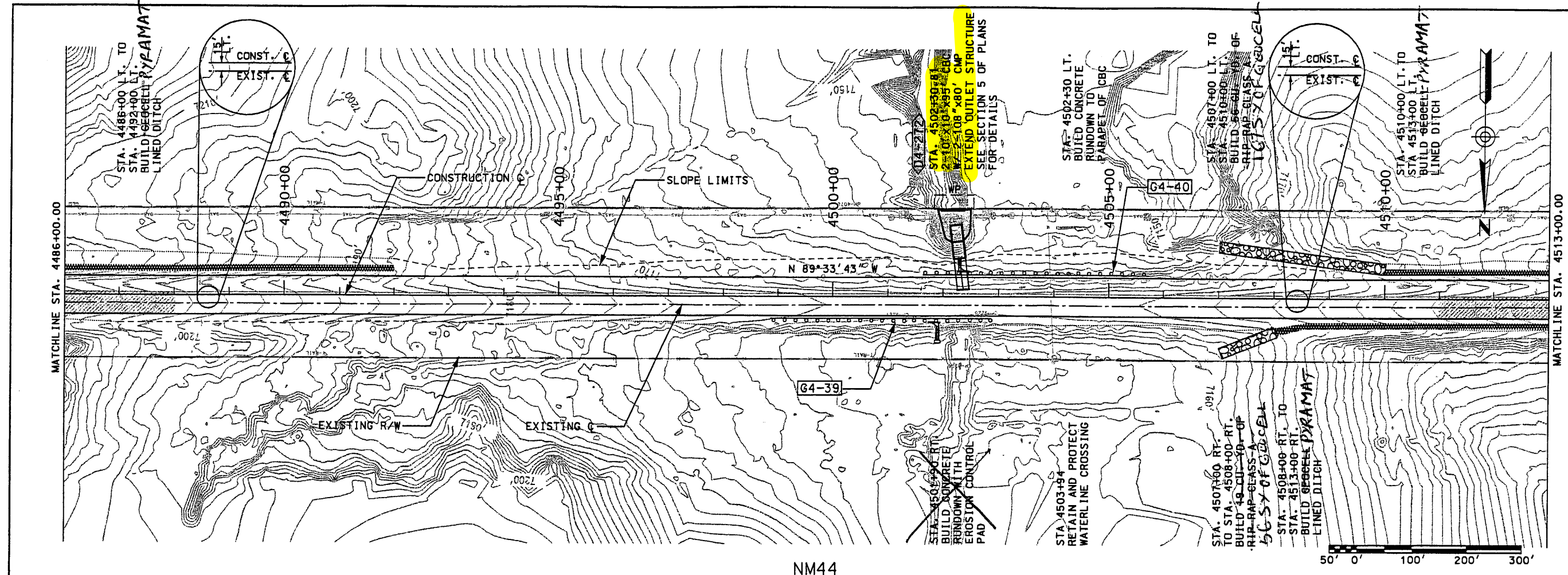
SHEET TITLE

WILSON & COMPANY

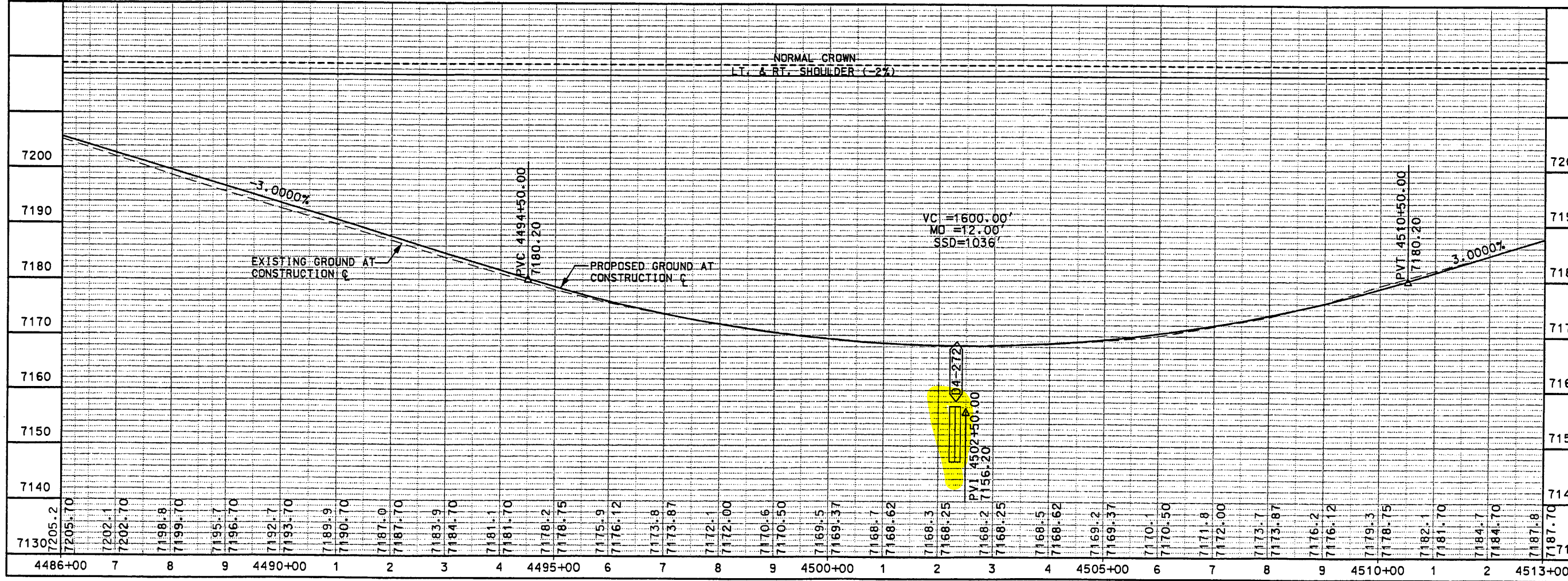
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DRAWN BY: STAFF
CHECKED BY: SFP

3-19

Design File: \\projects\98082-01\sec3\4444pp28.100
 Plot Date: 1995



NM44



SHEET TITLE
PLAN & PROFILE
 STATION 4486+00.00
 TO
 STATION 4513+00.00

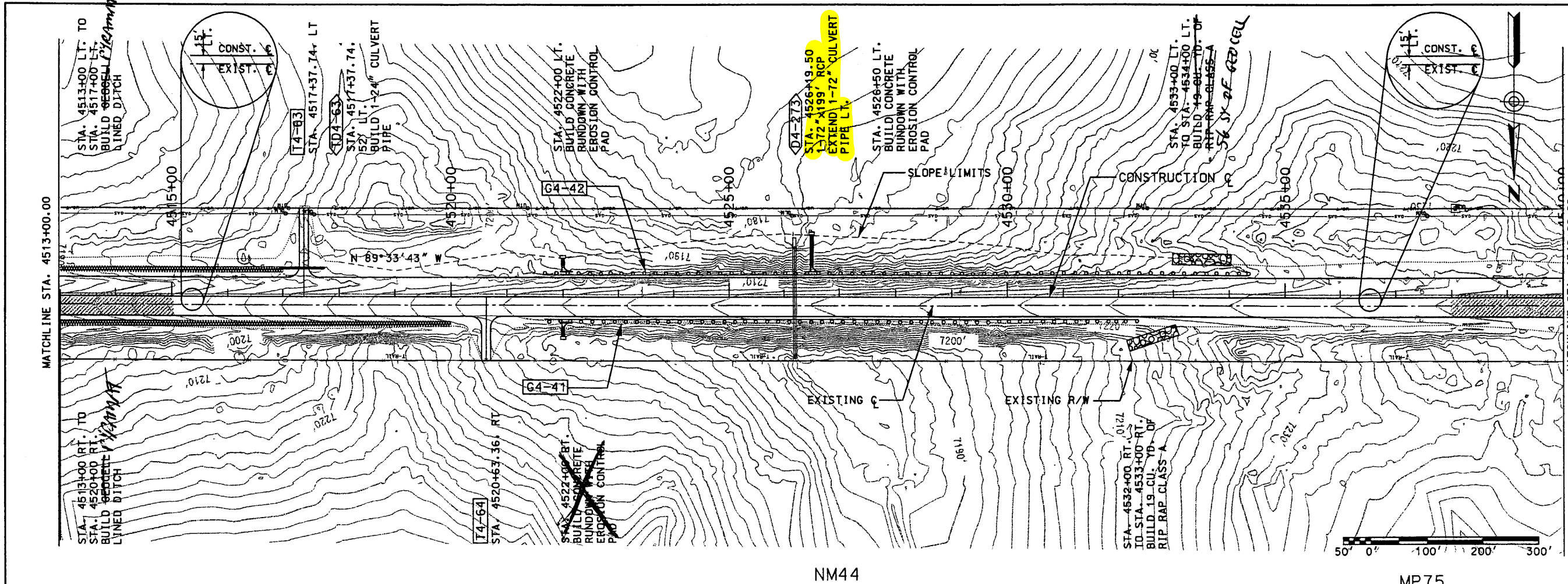
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)964
 CN 3766

**WILSON
& COMPANY**

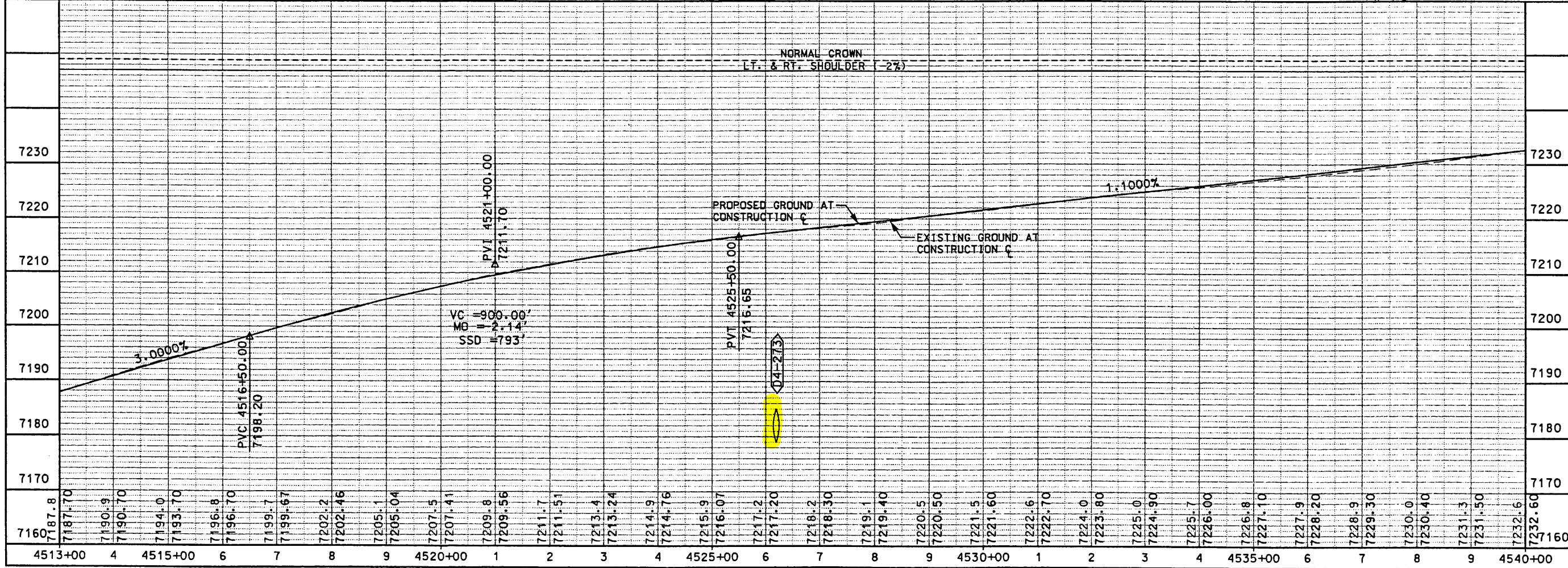
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

3-20



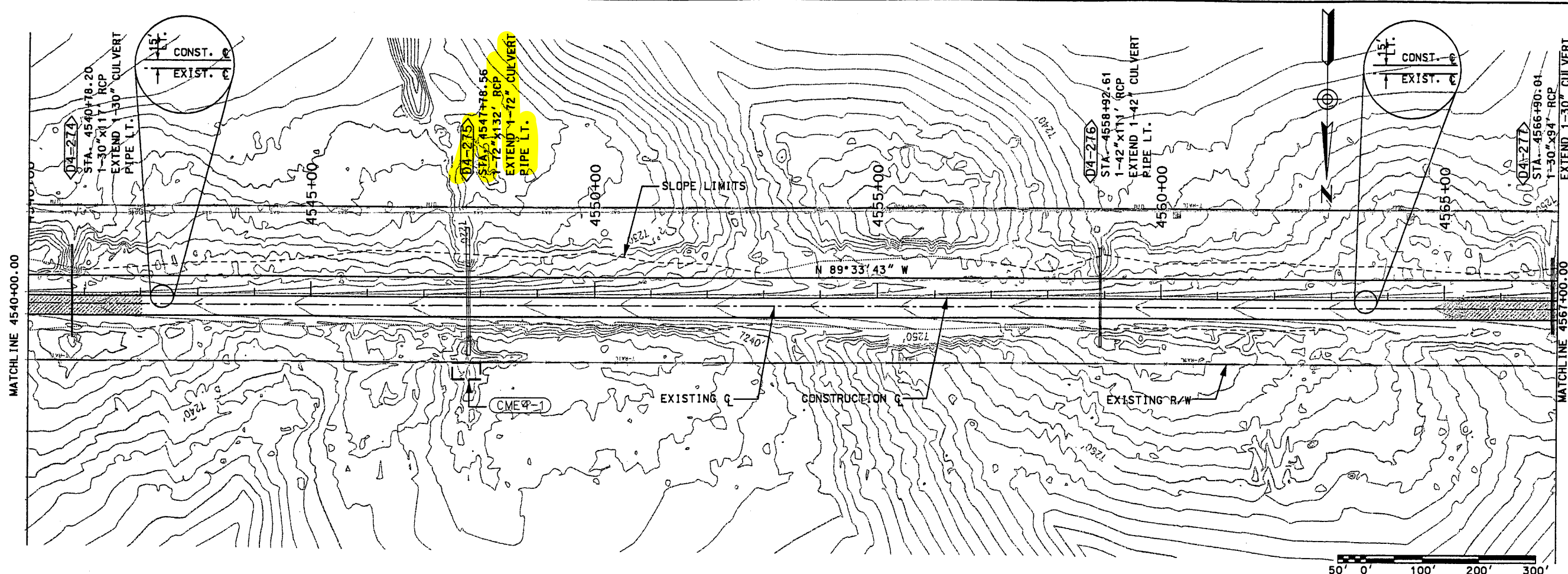
NM44

MP75

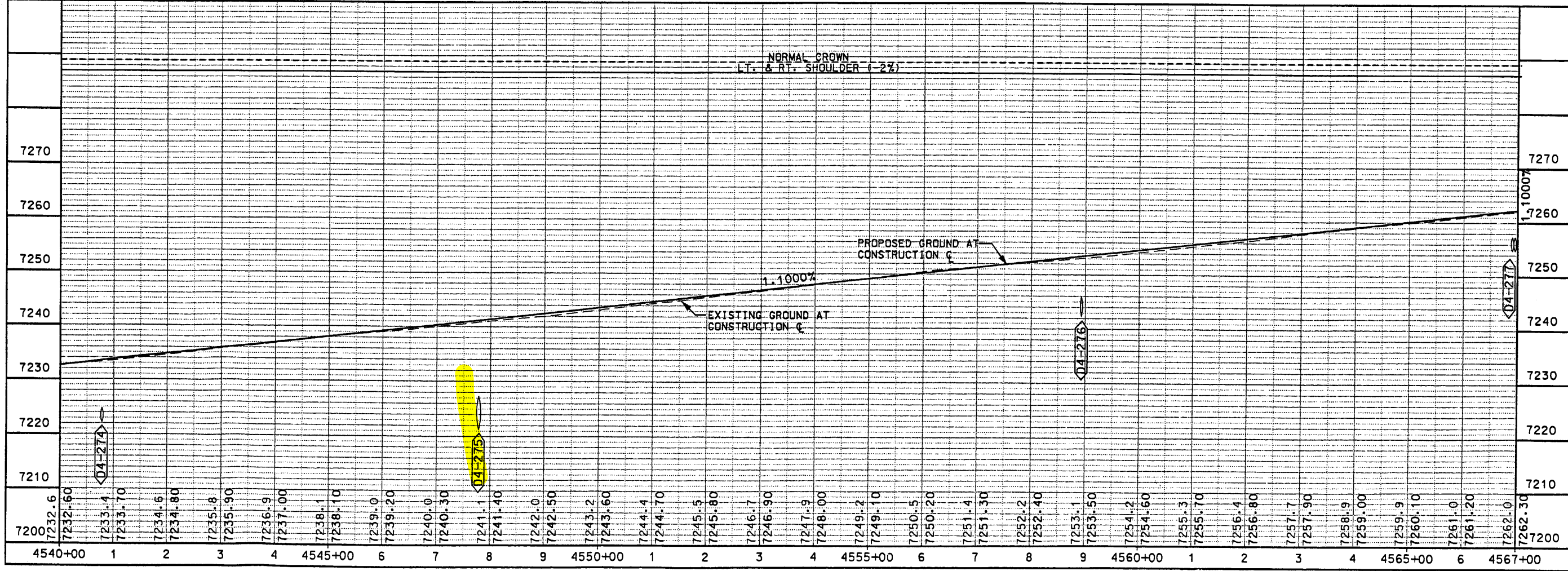
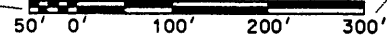


DESIGN BY: DDM DRAWN BY: STAFF CHECKED BY: SFP	SHEET TITLE PLAN & PROFILE STATION 4513+00.00 TO STATION 4540+00.00
	NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6 NM 44 PROJECT NO AC-NH-044-2(39)164 CN 3766
SEAL: 	3-21

Design File: \\projects\98082-01\sect3\444\pp22.100
 Plot Date: 04 NOV 1999



NM44



MATCHLINE 4540+00.00
 STA. 4540+78.20
 1-30" x 11' RCP
 EXTEND 1-30" CULVERT
 PIPE LT.
 STA. 4547+78.56
 1-72" x 132' RCP
 EXTEND 1-72" CULVERT
 PIPE LT.
 STA. 4558+92.61
 1-42" x 11' RCP
 EXTEND 1-42" CULVERT
 PIPE LT.
 STA. 4566+90.01
 1-30" x 94' RCP
 EXTEND 1-30" CULVERT
 PIPE LT.
 BUILD 1-30" CULVERT
 PIPE
 MATCHLINE 4567+00.00

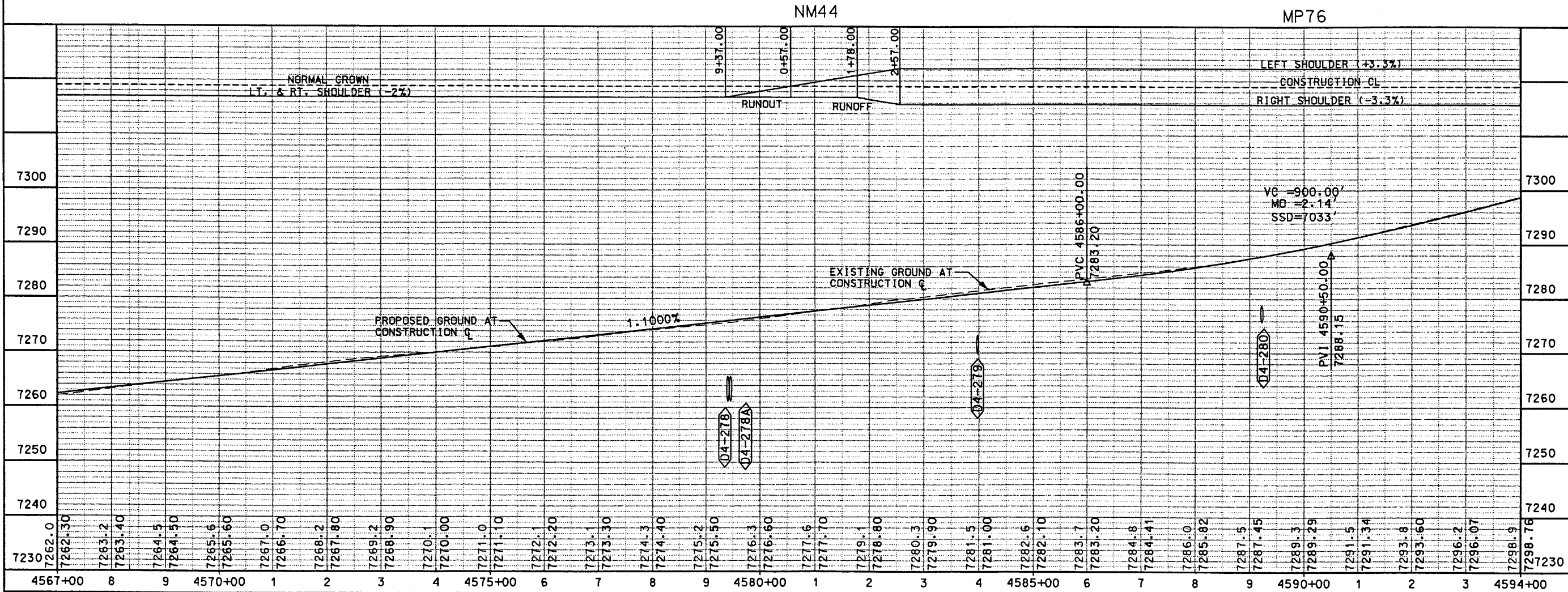
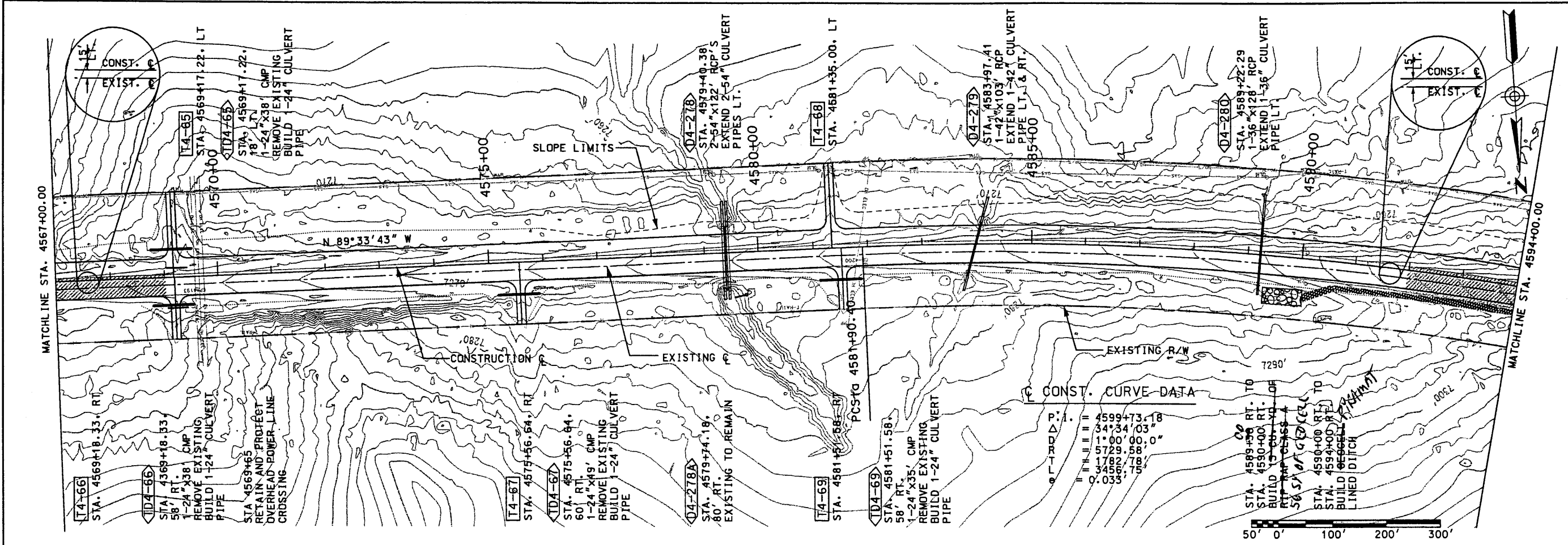
SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

PLAN & PROFILE
 STATION 4540+00.00
 TO
 STATION 4567+00.00

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

3-22



NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

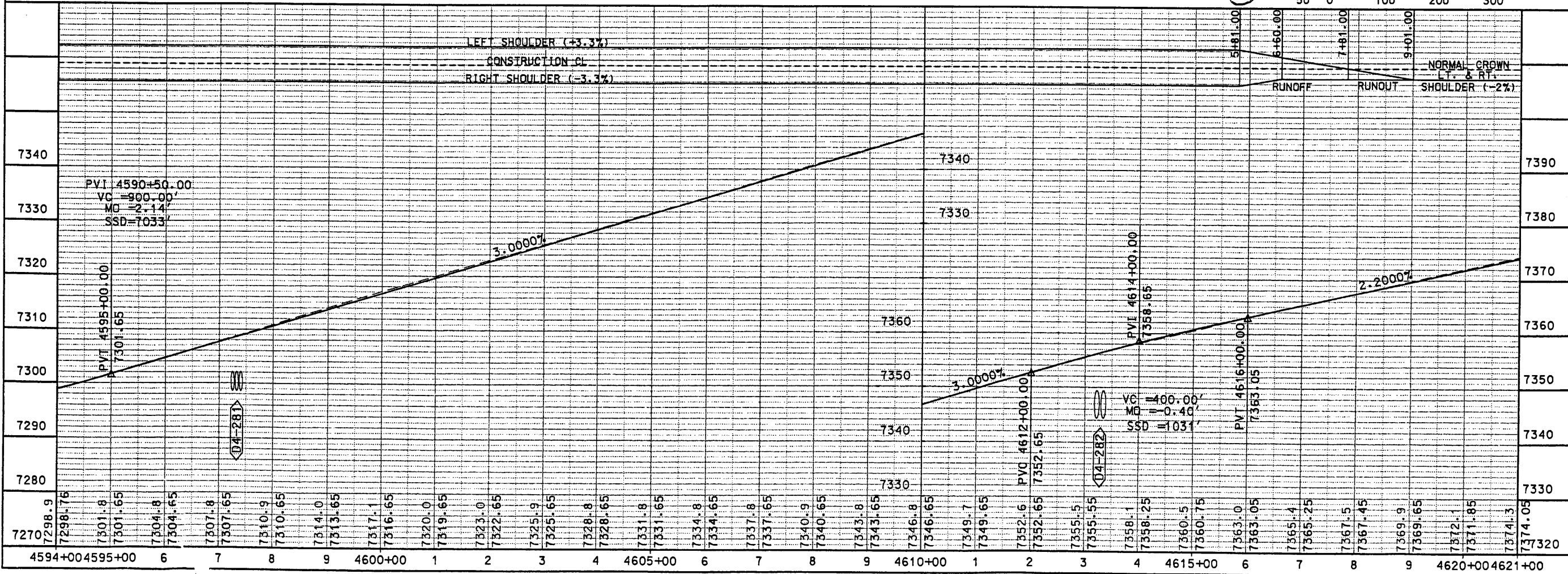
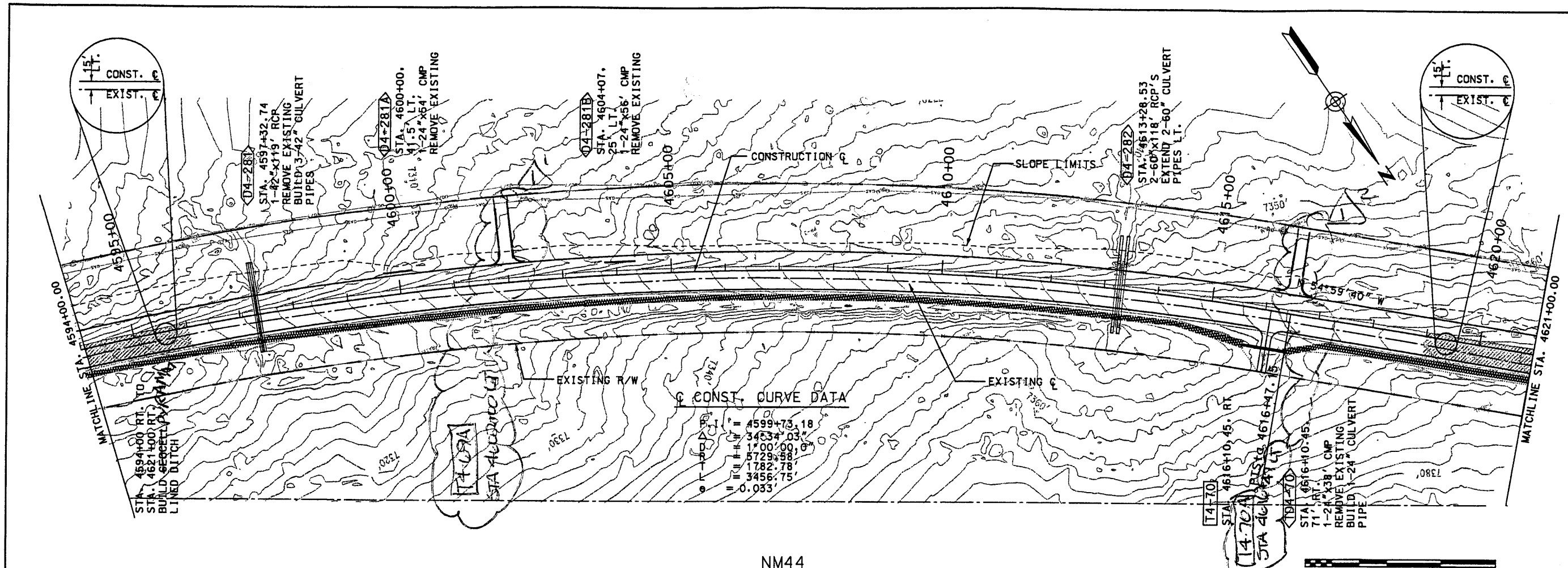
SEAL: [Professional Engineer Seal]

SHEET TITLE: PLAN & PROFILE
 STATION 4567+00.00 TO STATION 4594+00.00

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 NM 44
 CN 3766

3-23

Design File: X:\projects\98062-01\sect\4444pp24.100
 Plot Date: 04 NOV 1999



NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(3)164
 CN 3766

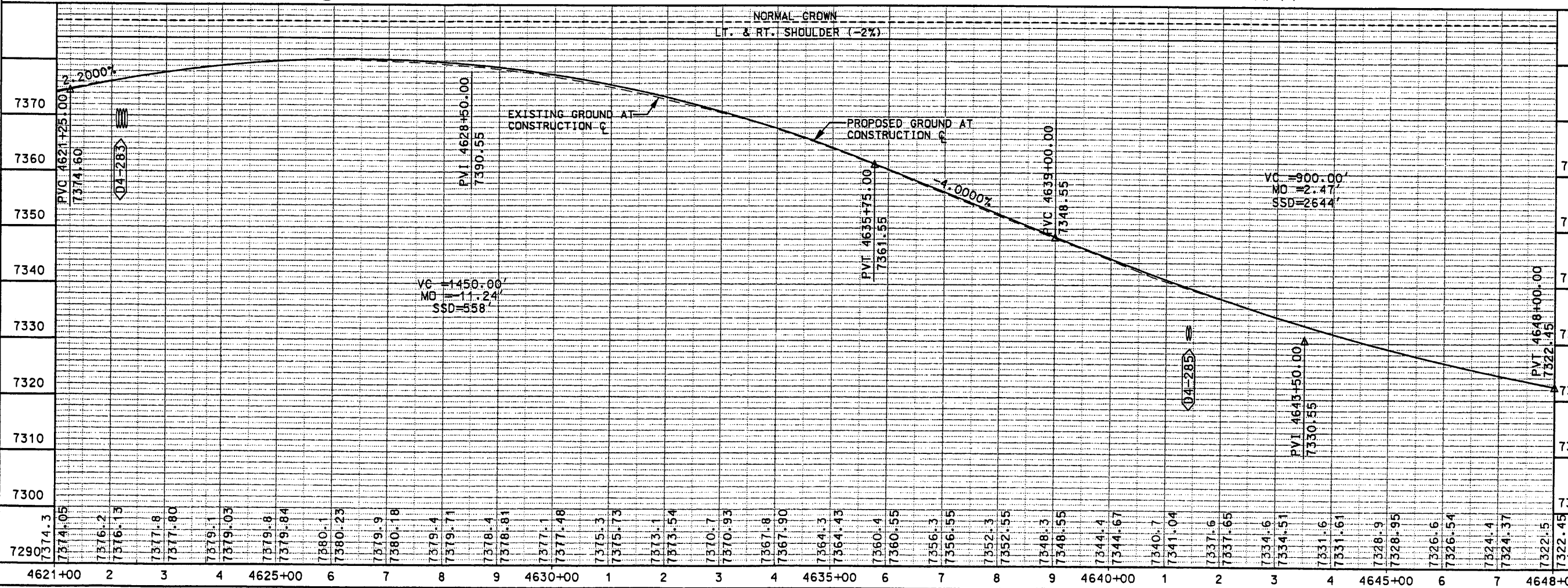
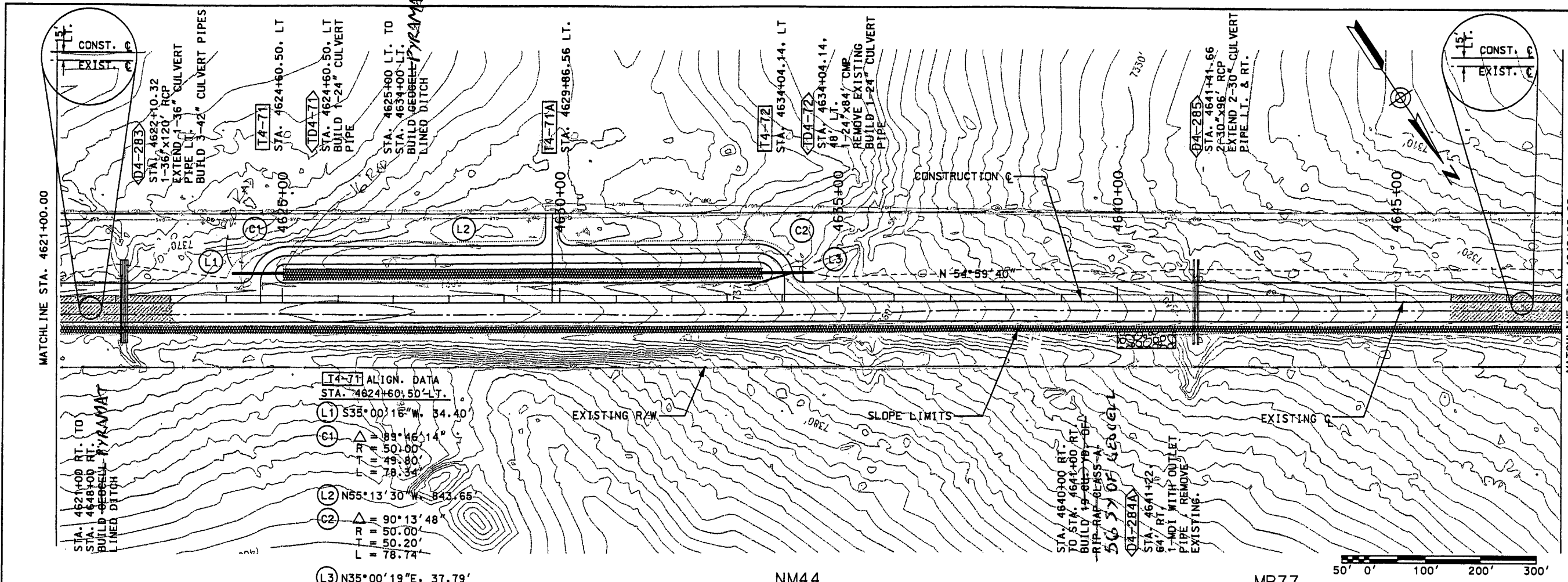
NM 44

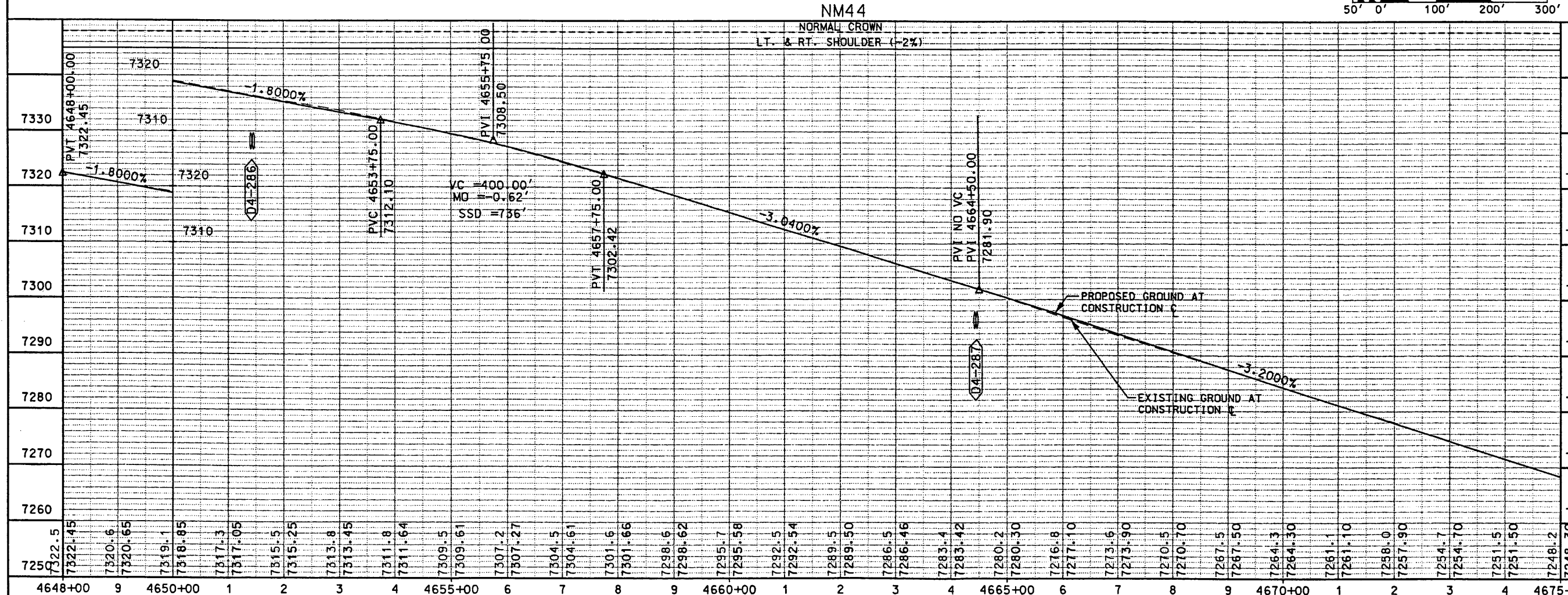
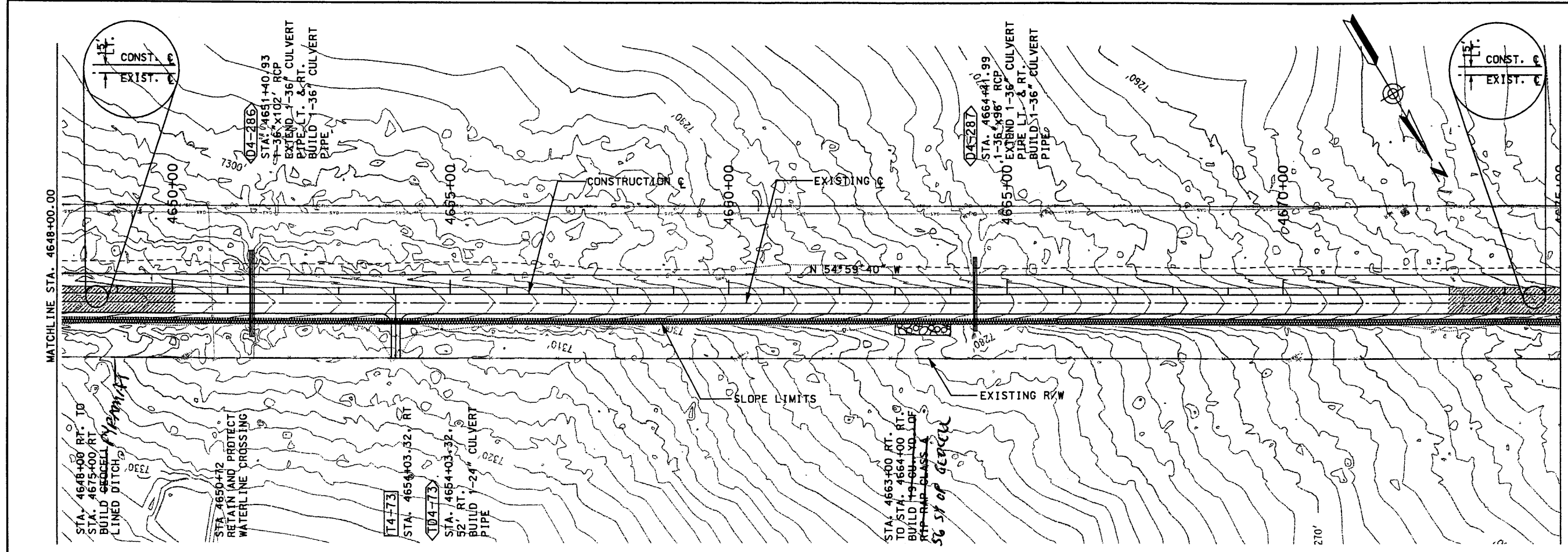
PLAN & PROFILE
 STATION 4594+00.00
 TO
 STATION 4621+00.00

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

3-24





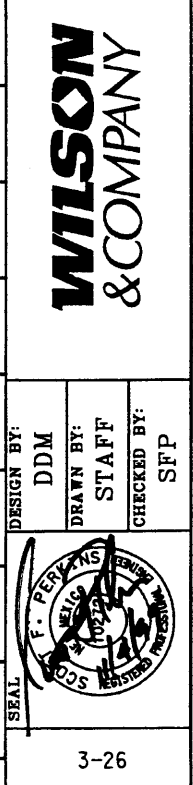
MATCHLINE STA. 4648+00.00
 MATCHLINE STA. 4675+00.00

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

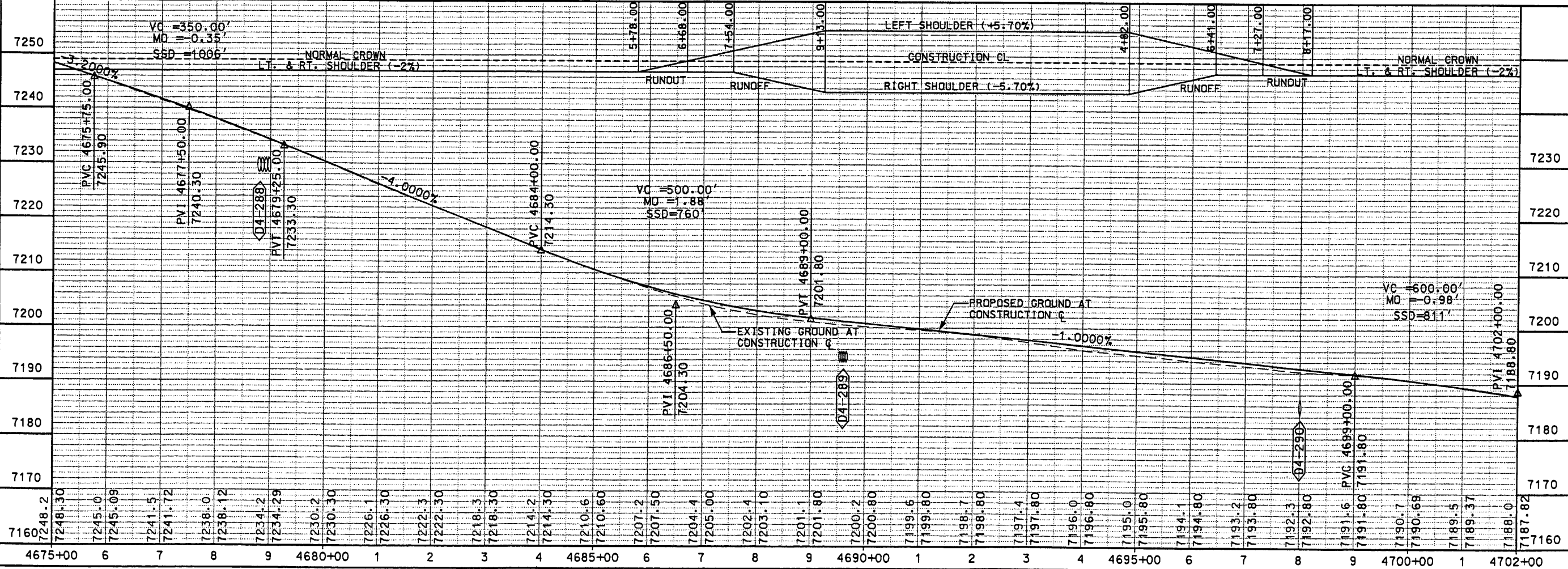
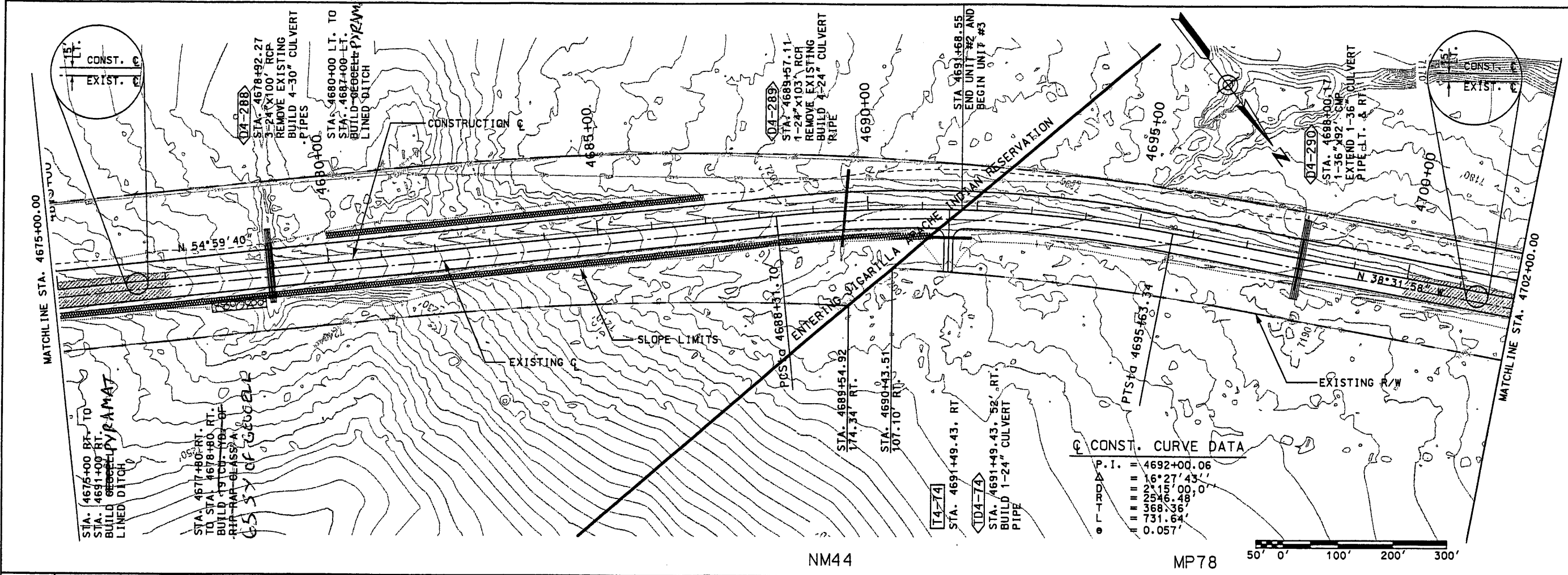
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

PLAN & PROFILE
 STATION 4648+00.00 TO
 STATION 4675+00.00

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



Design File: \\projects\98062-01\sect3\4444p27.100
 Plot Date: 31 NOV 1995



NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
 CN 3766

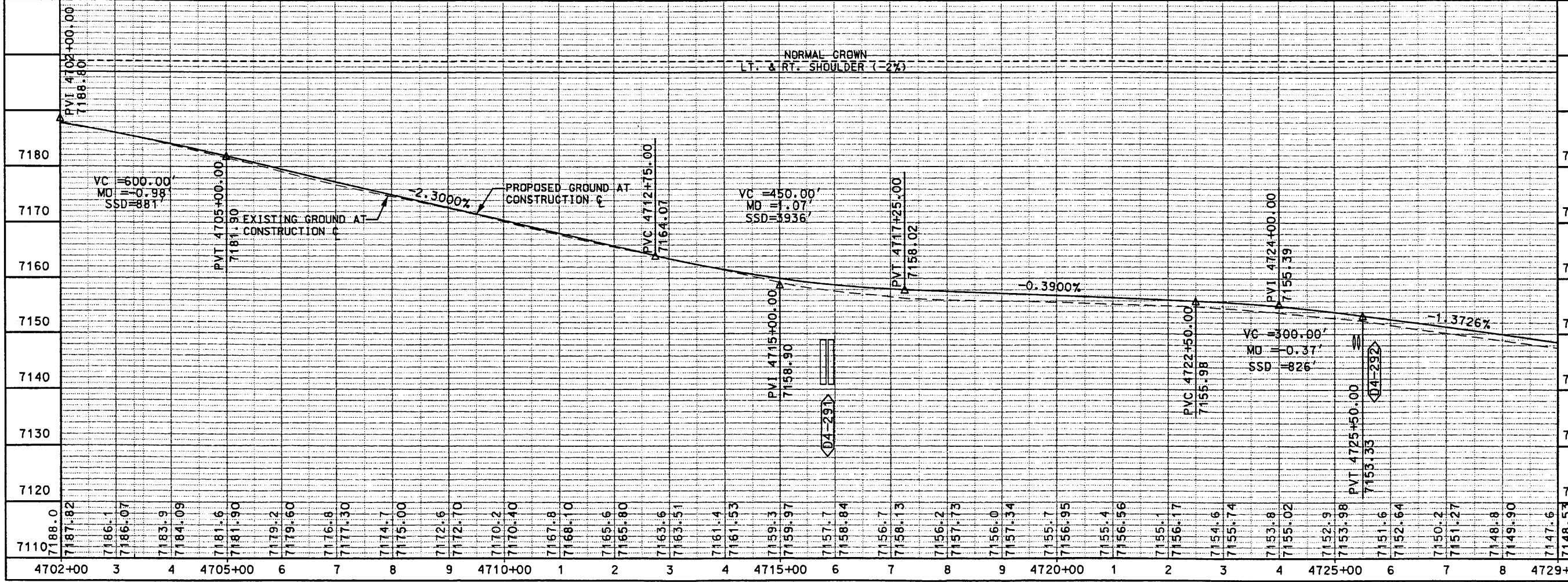
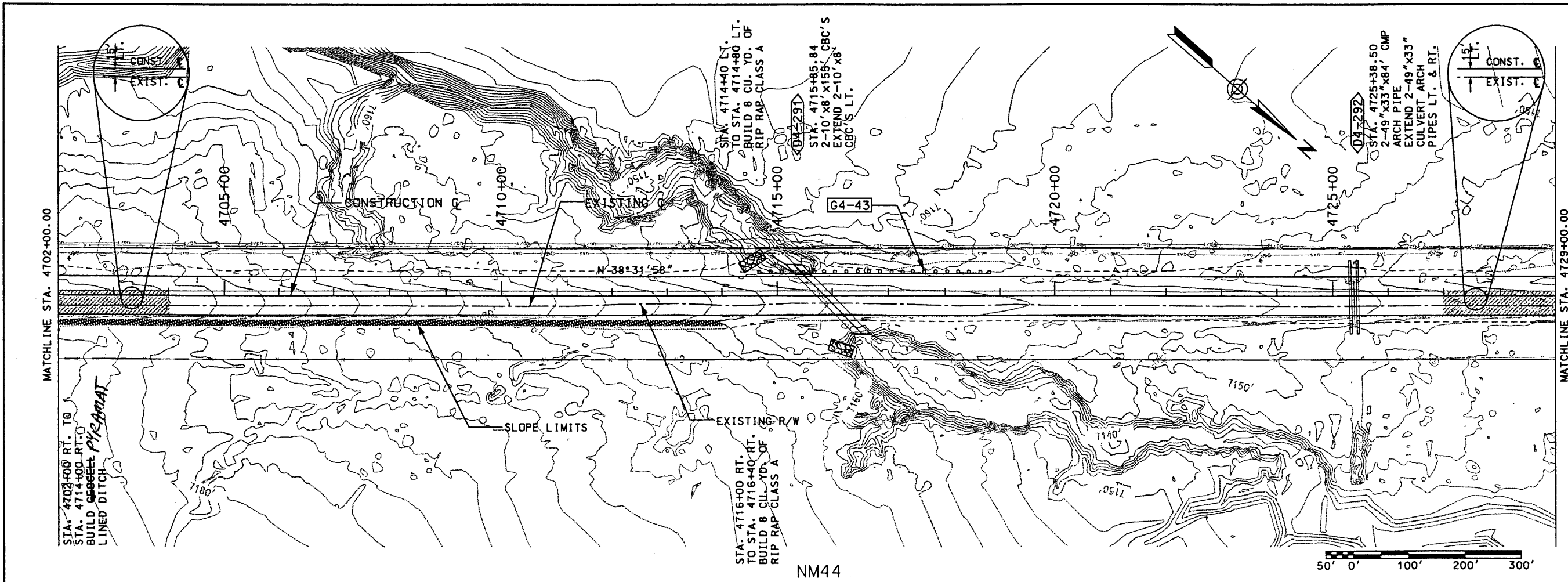
PLAN & PROFILE
 STATION 4675+00.00 TO STATION 4702+00.00

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

SEAL: F. PERKINS, REGISTERED PROFESSIONAL ENGINEER, NO. 10271, STATE OF NEW MEXICO, 1985

3-27

Design File: x:\p\...projects\98082-01\sect3\444pp28-100
 Plot Date: 04 NOV 1999



MATCHLINE STA. 4702+00.00

MATCHLINE STA. 4729+00.00

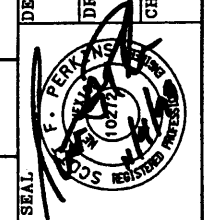
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

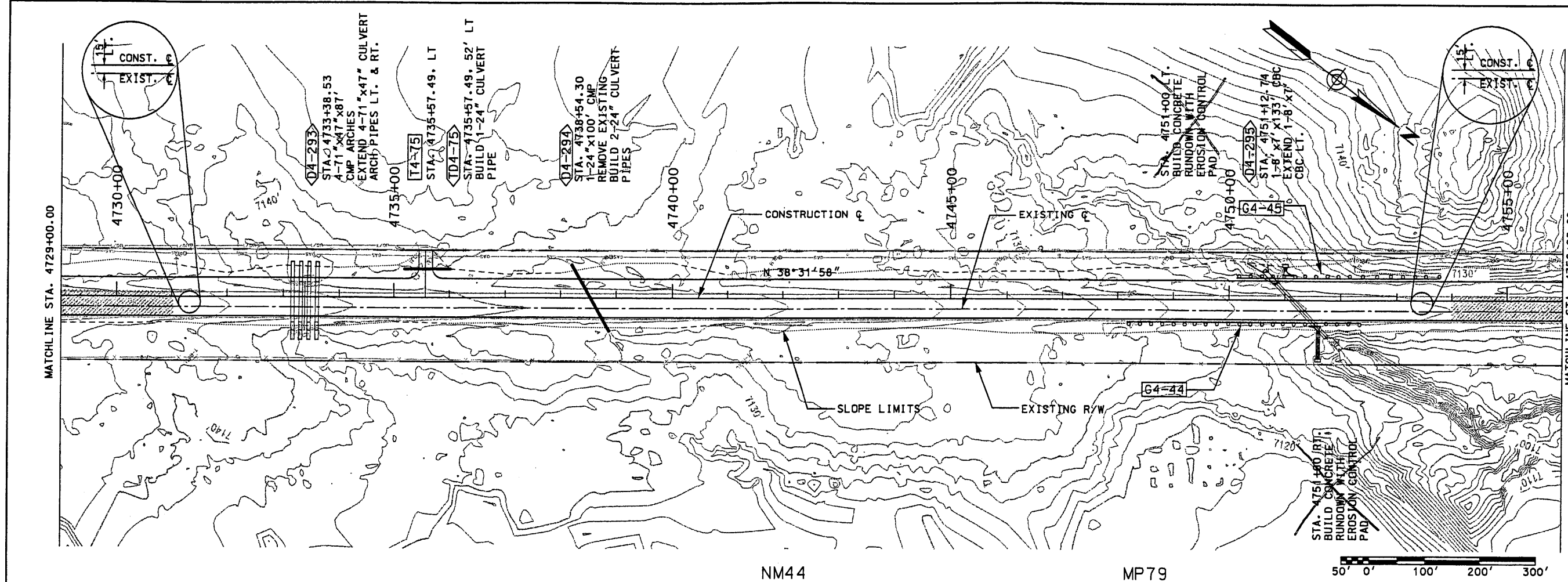


DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



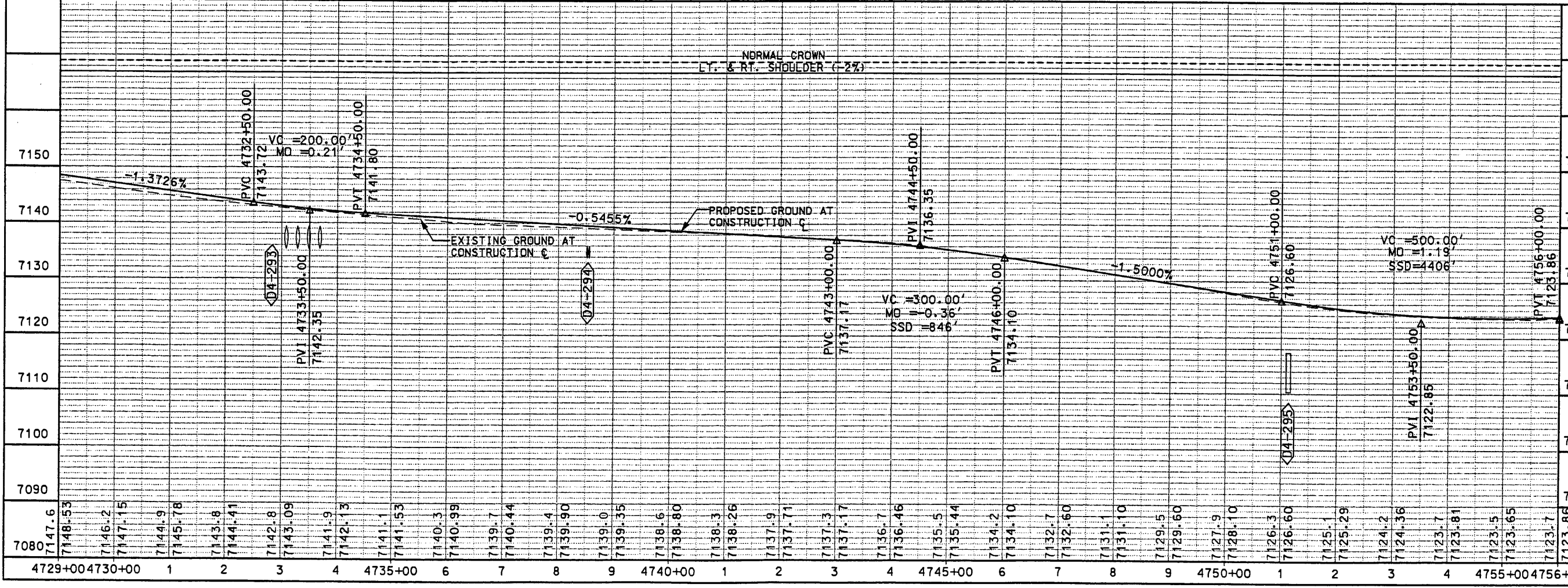
PLAN & PROFILE
 STATION 4702+00.00
 TO
 STATION 4729+00.00

Design File: \\projects\98082-01\sect3\444pp29.100
 Plot Date: 01 NOV 1999



NM44

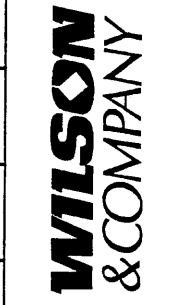
MP79



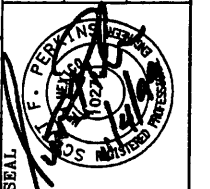
SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

PLAN & PROFILE
 STATION 4729+00.00
 TO
 STATION 4756+00.00

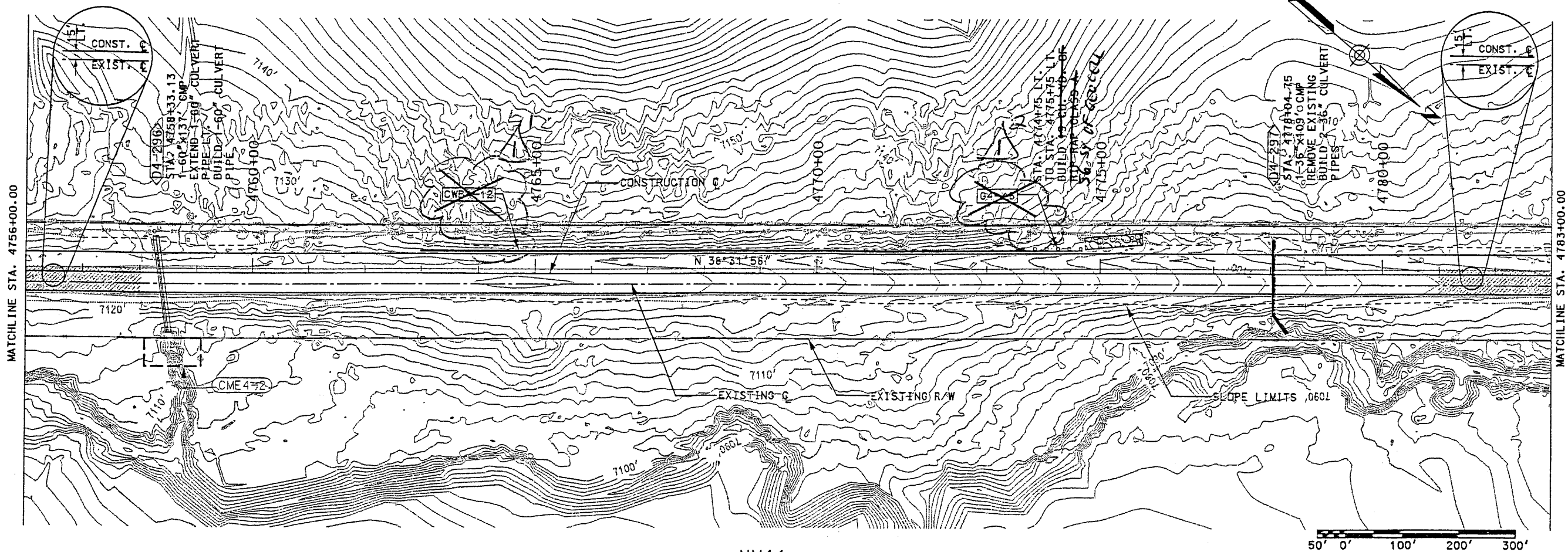
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 NM 44
 CN 3766



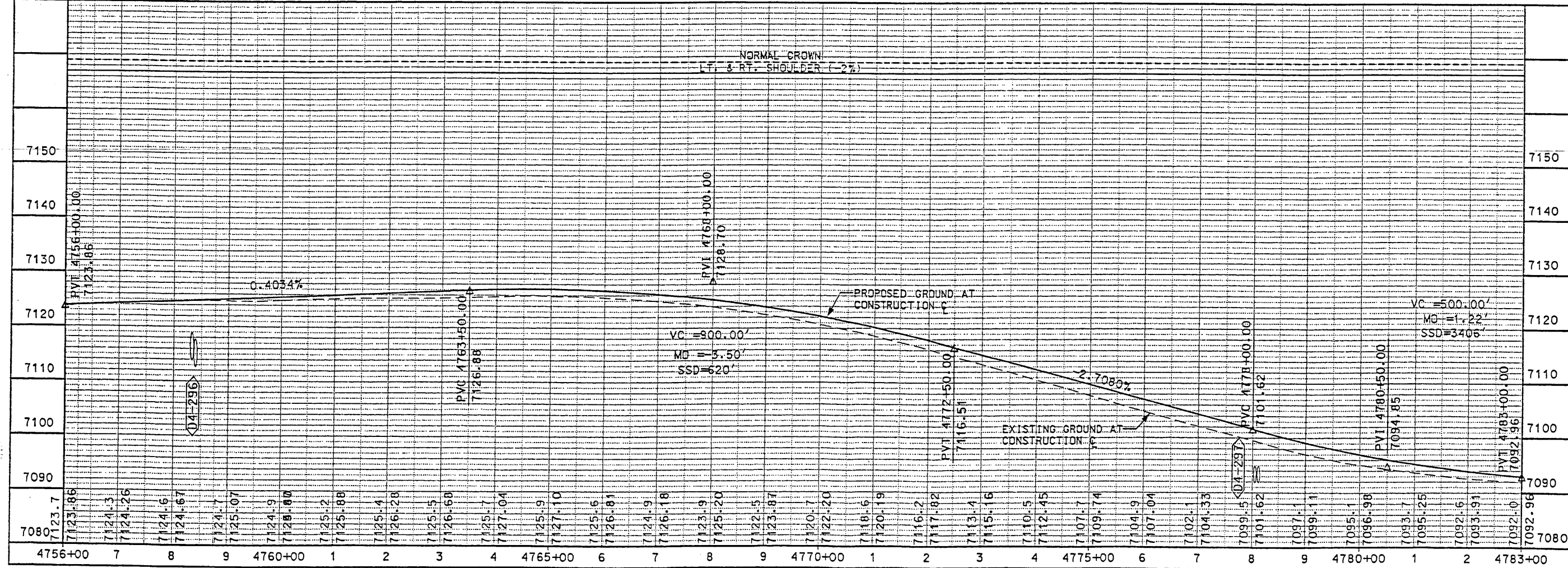
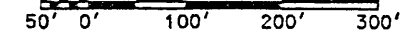
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \projects\98062-01\sect3\444pp30.100
 Plot Date: 04/11/04

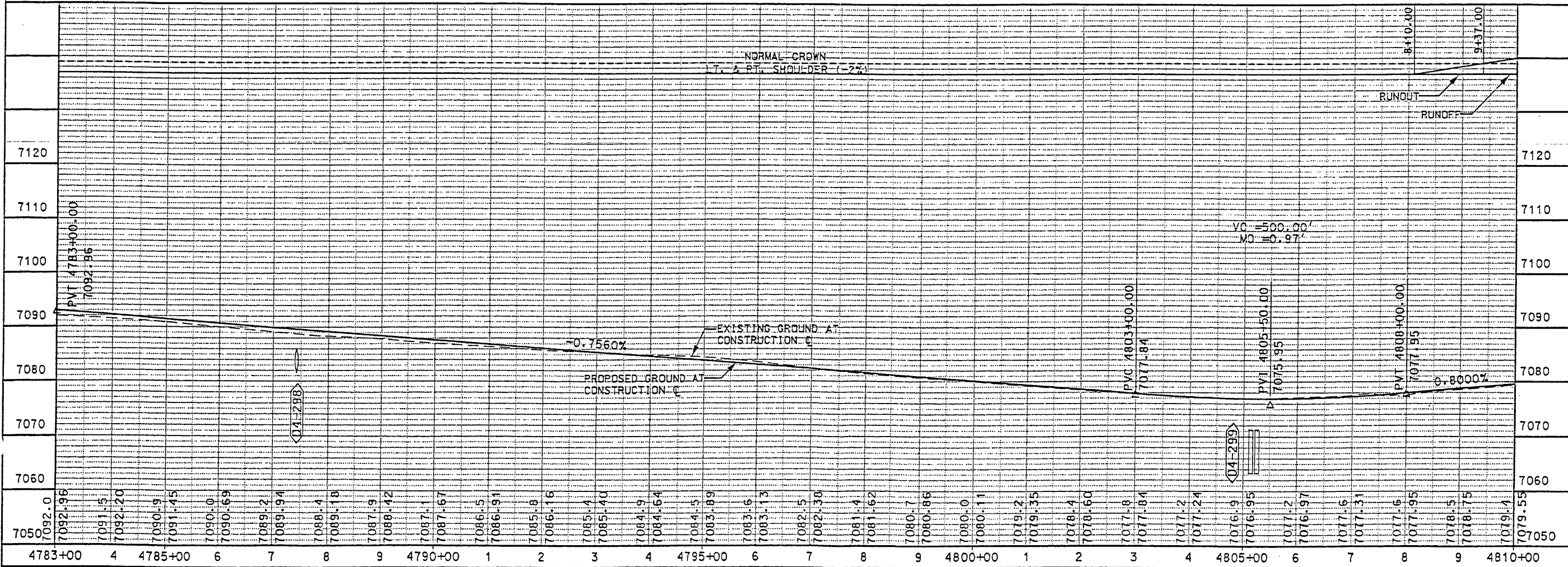
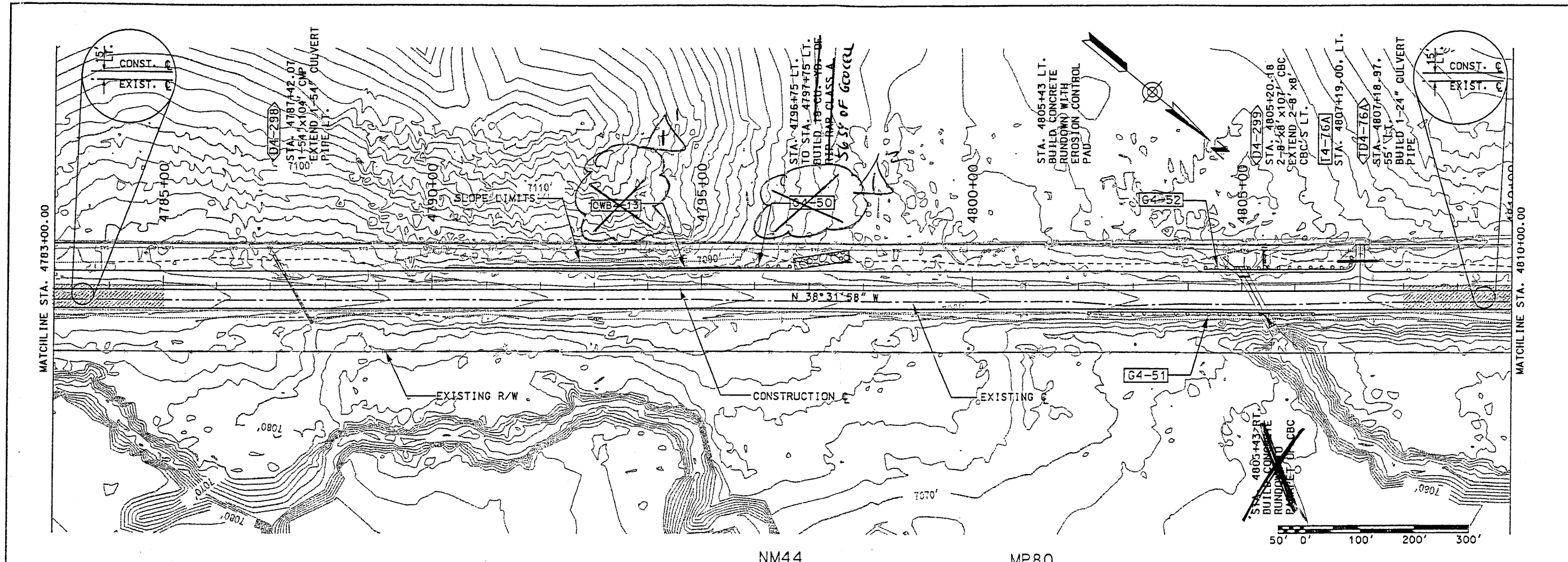


NM44



SHEET TITLE PLAN & PROFILE STATION 4756+00.00 TO STATION 4783+00.00	
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6	
NM 44 PROJECT NO AC-NH-044-2(39)64 CN 3766	
DESIGN BY: DDM	DRAWN BY: STAFF
CHECKED BY: SFP	
3-30	

Design File: \\s01r\projects\90082-01\sect3\444pp31.108
 Plot Date: 04 NOV



PLAN & PROFILE
 STATION 4783+00.00
 TO
 STATION 4810+00.00

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NII-044-2(39)64
 CN 3760

WILSON & COMPANY

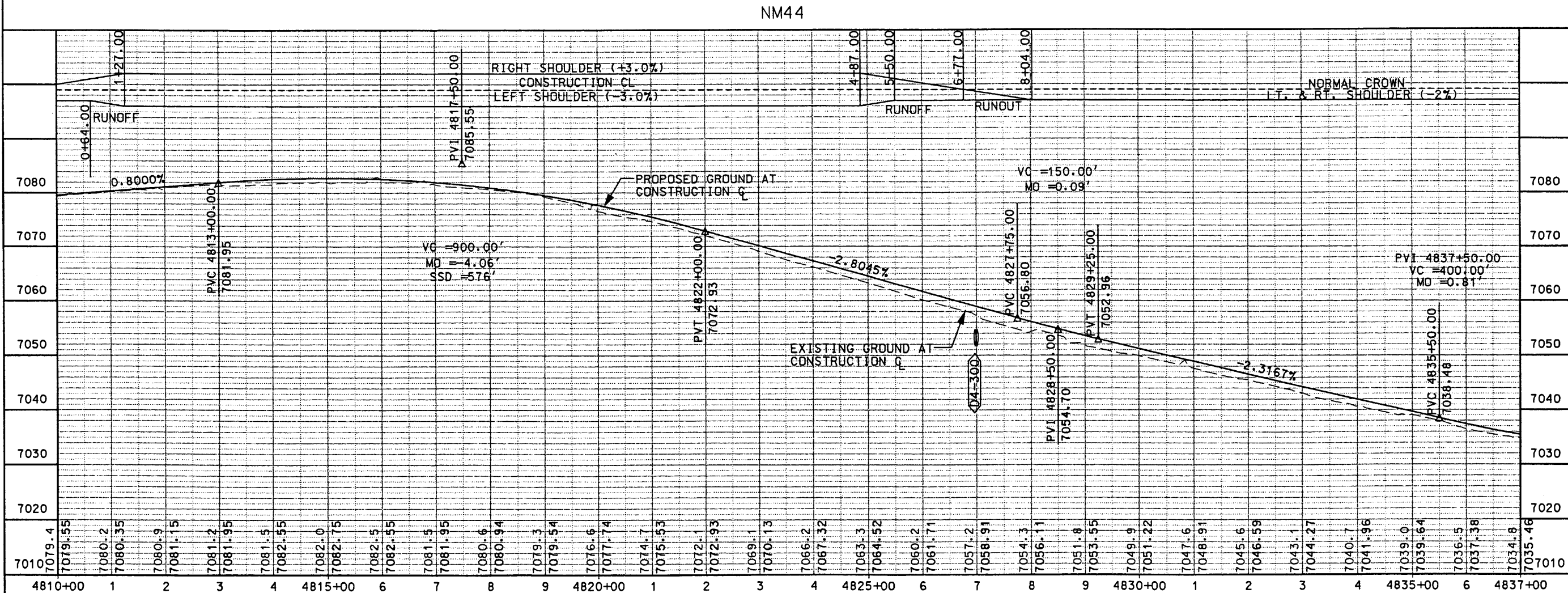
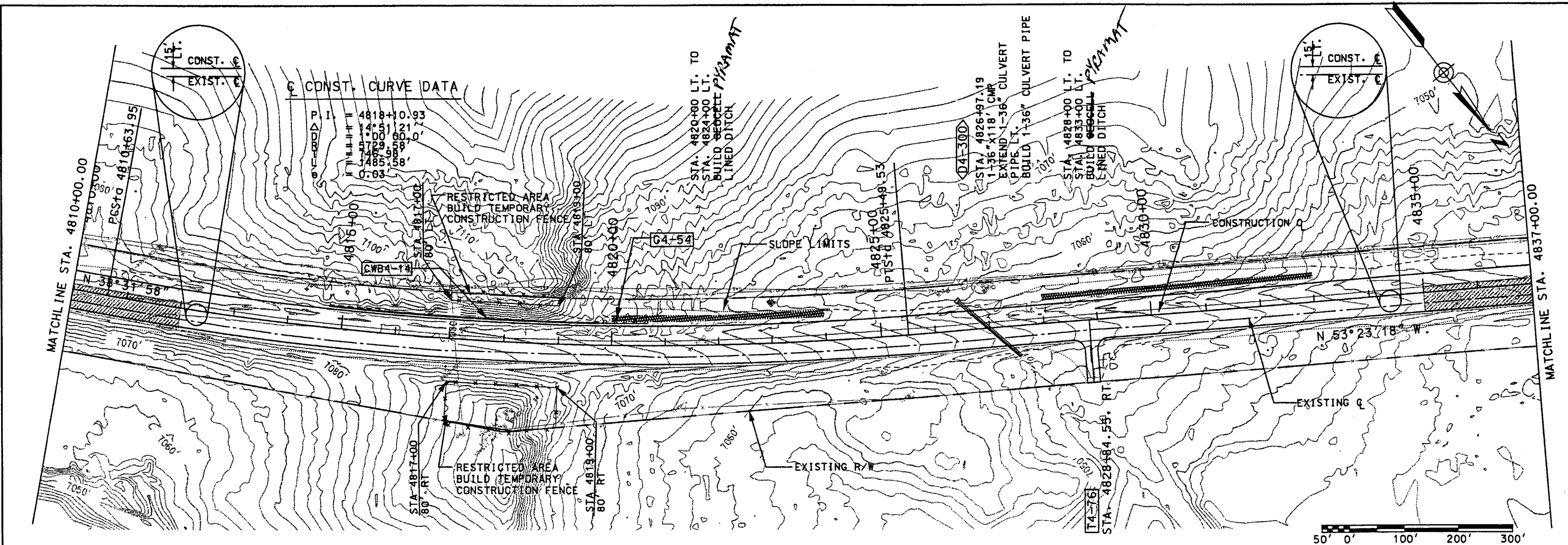
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

3-31

PROJECT NO. 40.NH.044.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 3.31, Plan & Profile, STA 4783+00 to STA 4810+00

NO.	REVISION	DATE	BY
12	Delete CWB4-13 & G4-50	9.12.00	FSC/FNF-0169
13			

Design File: g:\98062-01\sect3\4444pp32.100
 Plot Date: 04 NOV 99



NM44

SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

PLAN & PROFILE
 STATION 4810+00.00
 TO
 STATION 4837+00.00

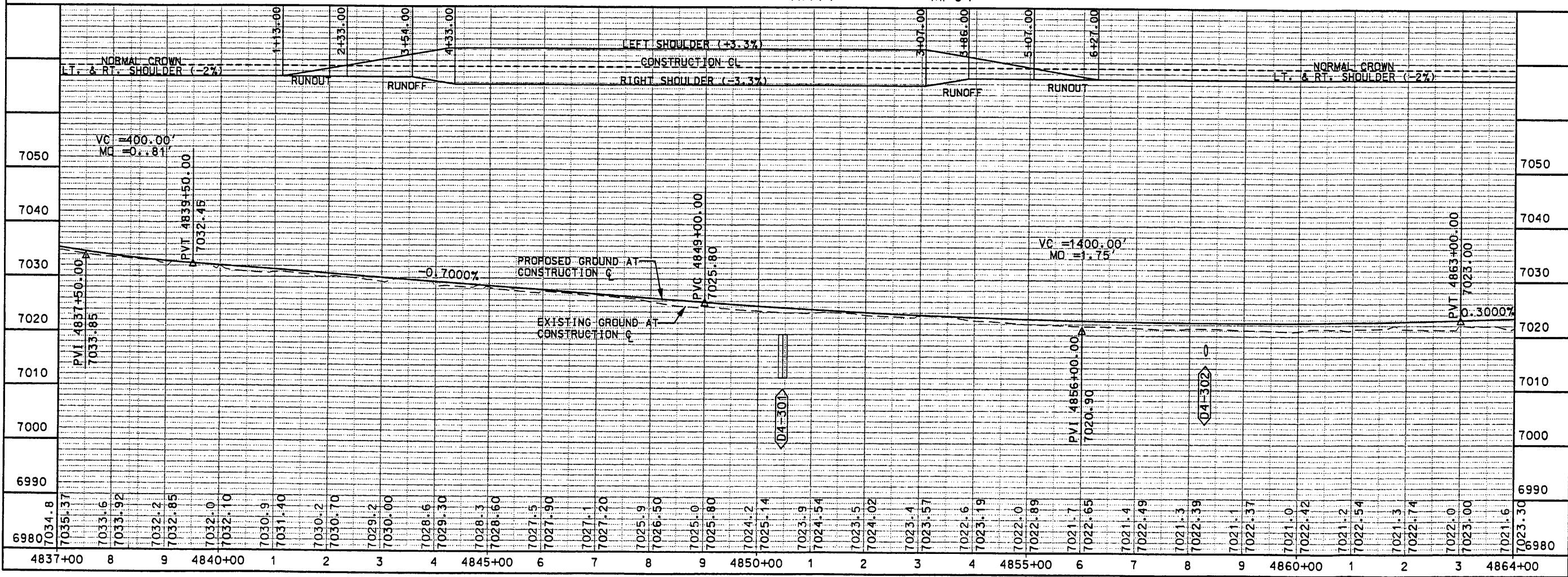
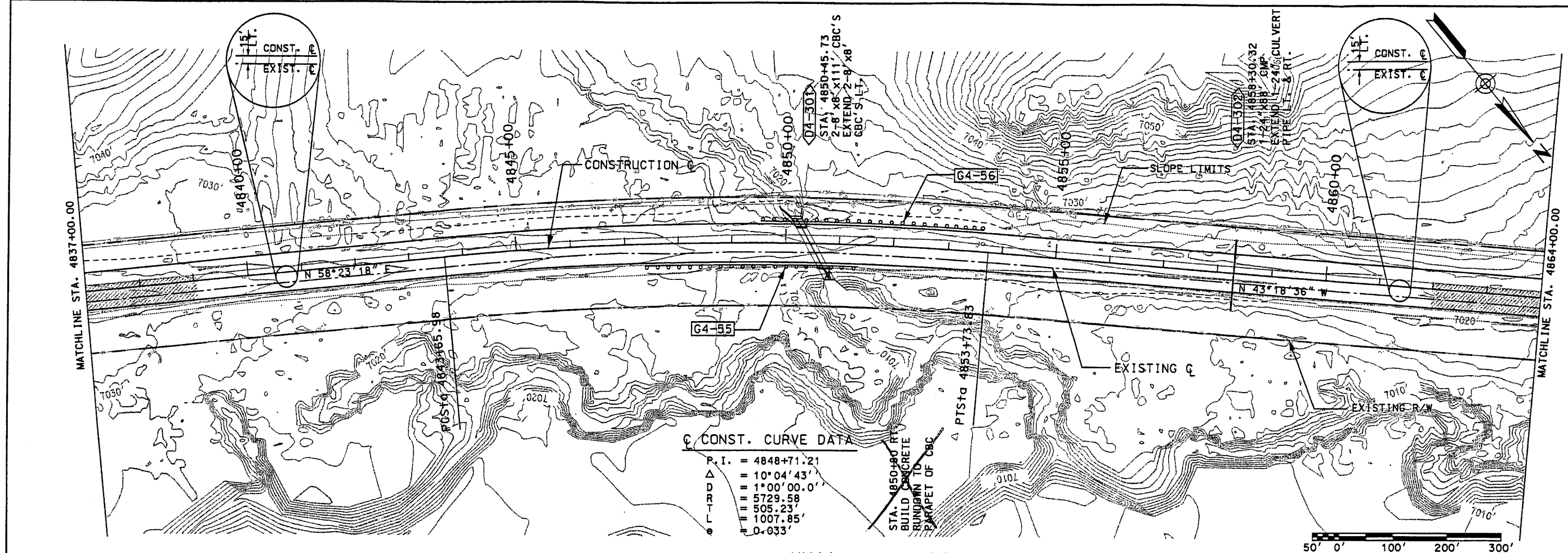
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

3-32

Design File: \\01\sect3\4444pp33.100
 Plot Date: 6/20/99



SHEET TITLE
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

PLAN & PROFILE
 STATION 4837+00.00
 TO
 STATION 4864+00.00

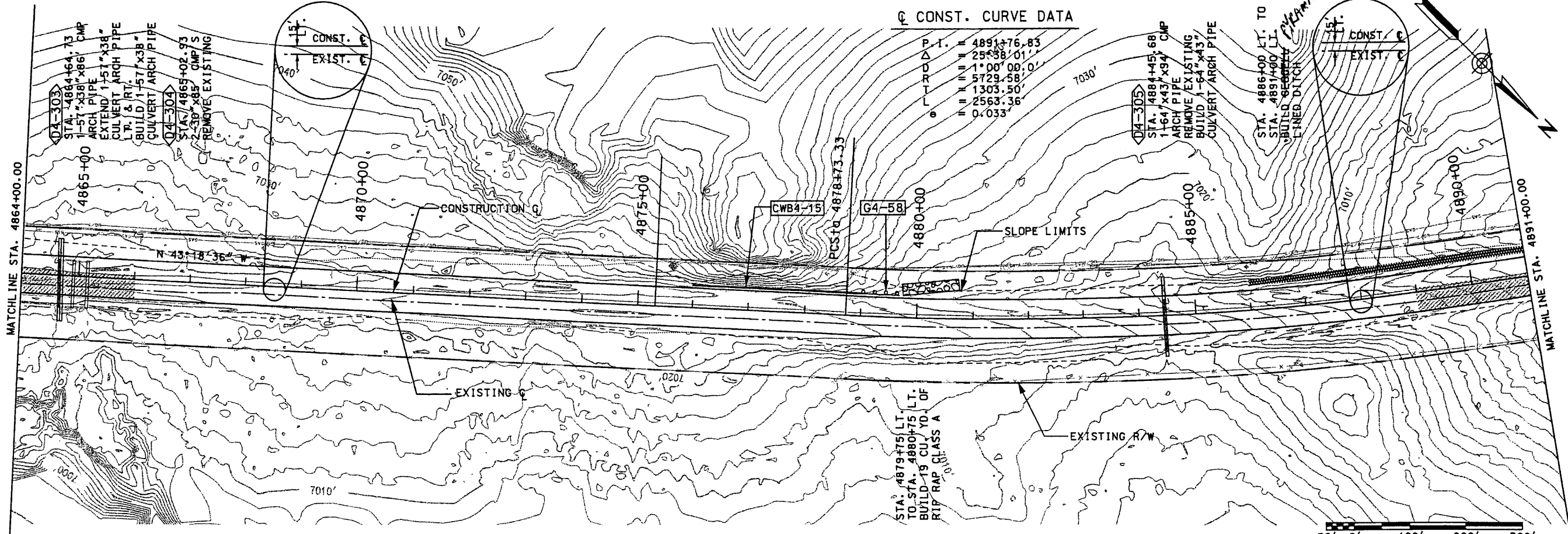
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 NM 44
 CN 3766

WILSON & COMPANY

DESIGN BY:	DDM
DRAWN BY:	STAFF
CHECKED BY:	SFP

3-33

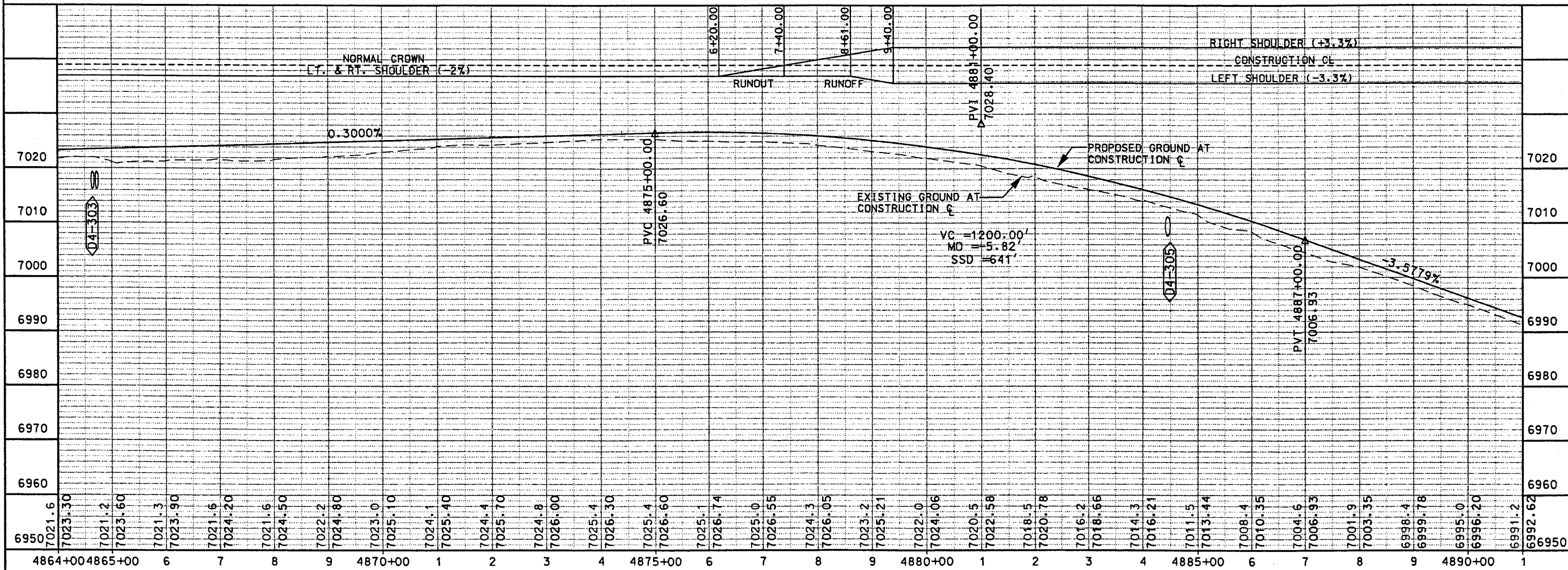
Design File: g:\p\shou\c\01\sect3\4444pp34.100
 Plot Date: 04 NOV 99



CONST. CURVE DATA

P. I.	4891+76.83
L. T. R. V. Δ	25°38'01"
L. T. R. V. Δ	1°00'00.0"
L. T. R. V. Δ	5729.58'
L. T. R. V. Δ	1303.50'
L. T. R. V. Δ	2563.36'
L. T. R. V. Δ	0.033'

NM44



PLAN & PROFILE
 STATION 4864+00.00
 TO
 STATION 4891+00.00

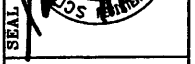
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

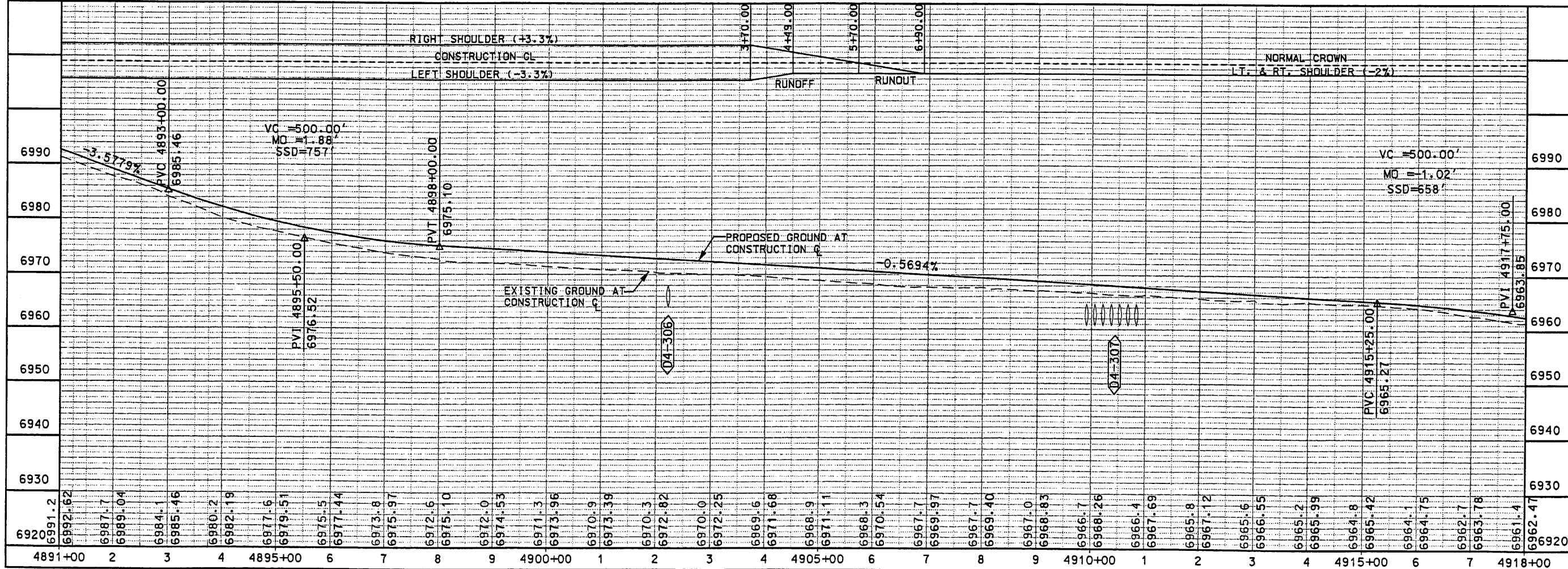
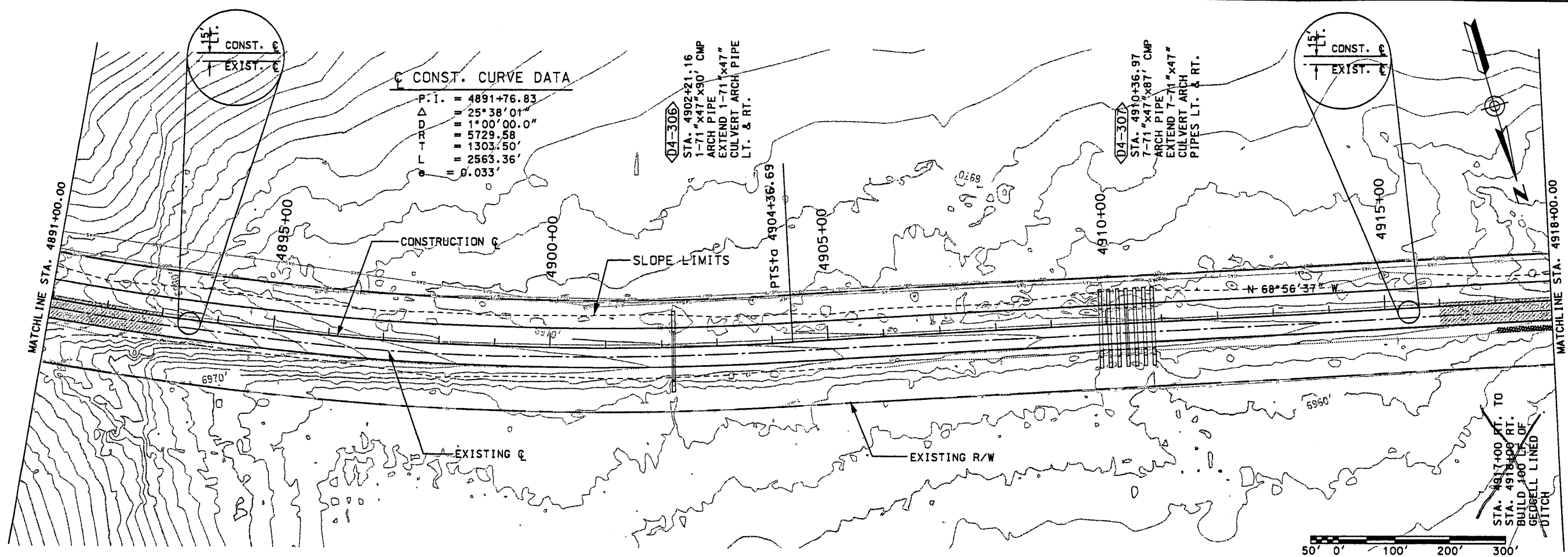
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \\082-01\sect3\444\pp35.100
 Plot Date: 04 NOV 99



SHEET TITLE

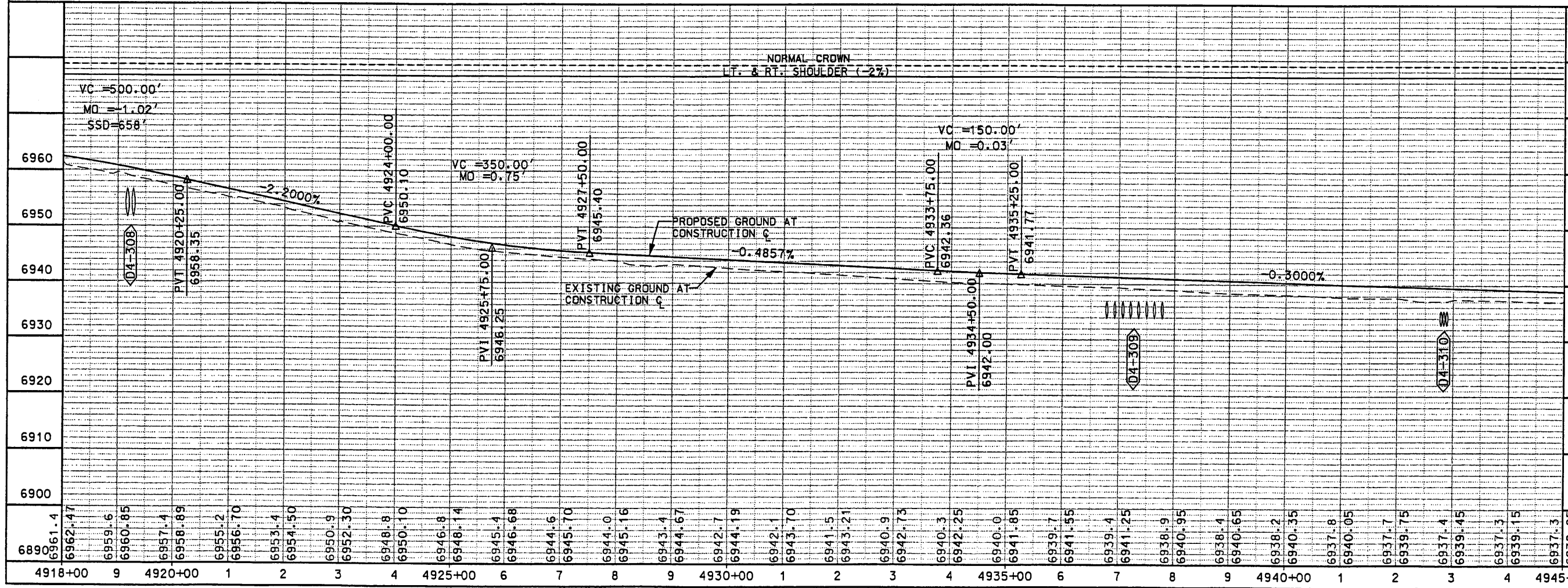
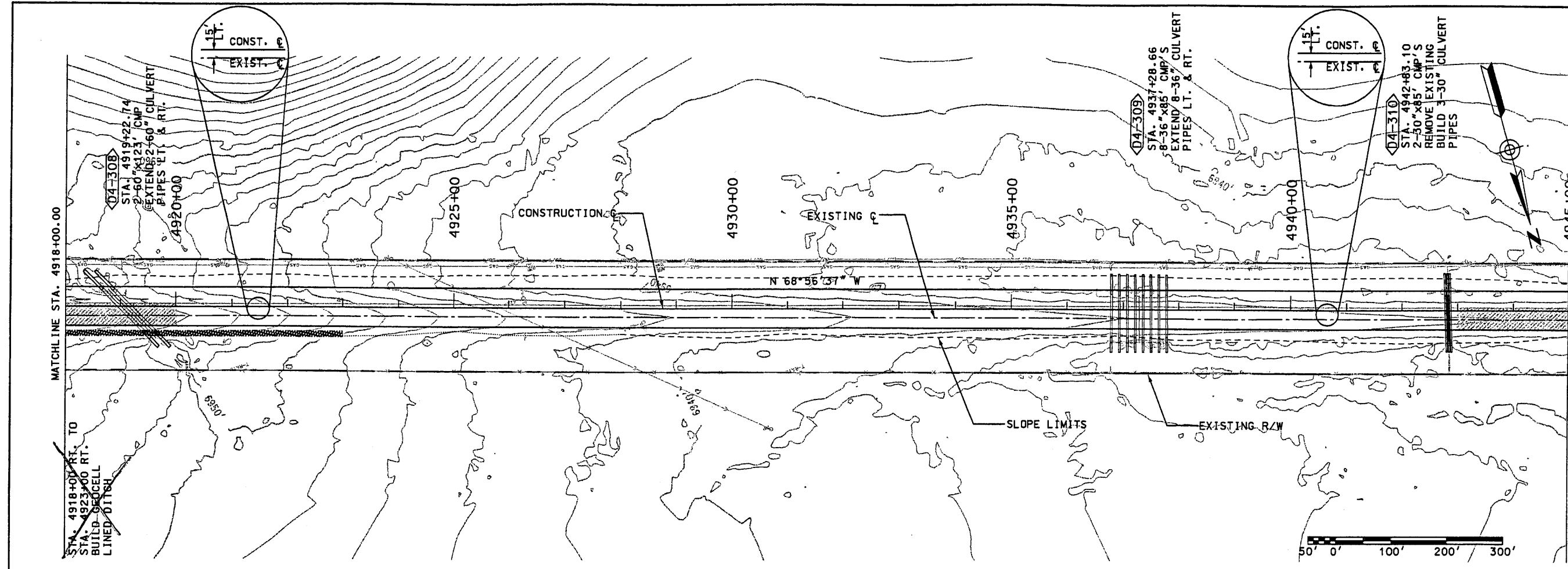
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

PLAN & PROFILE
 STATION 4891+00.00
 TO
 STATION 4918+00.00

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



MATCHLINE STA. 4918+00.00
 STA. 4918+00 RT. TO STA. 4923+00 RT. BUILD GEOCELL LINED DITCH
 STA. 4919+22.74 2'-50" X 123" CMP EXTENDS 2'-60" CULVERT PIPES LT. & RT.
 4920+00
 4925+00
 CONSTRUCTION CL
 4930+00
 EXISTING CL
 4935+00
 4940+00
 MATCHLINE STA. 4945+00.00
 STA. 4937+28.66 8'-36" X 85' CMP'S EXTEND 8'-36" CULVERT PIPES LT. & RT.
 D4-309
 STA. 4942+83.10 2'-50" X 85' CMP'S REMOVE EXISTING BUILD 3'-30" CULVERT PIPES
 D4-310
 SLOPE LIMITS
 EXISTING R/W
 50' 0' 100' 200' 300'

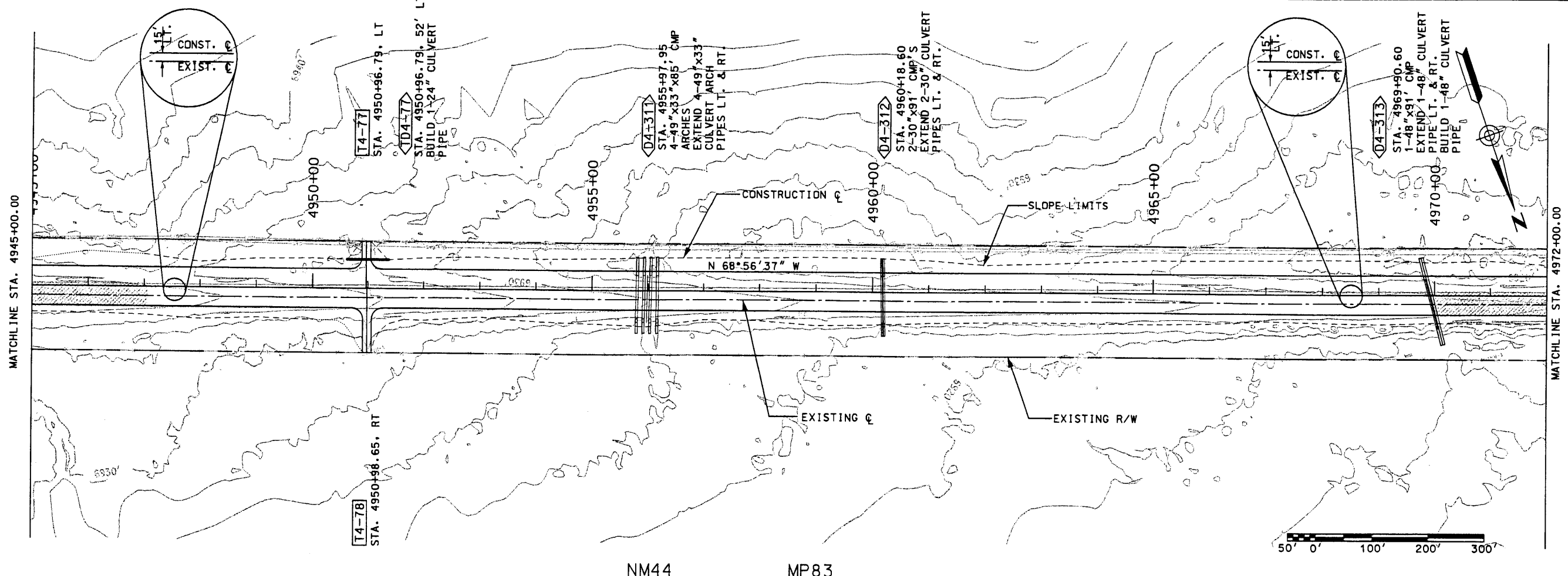
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

PLAN & PROFILE
 STATION 4918+00.00 TO STATION 4945+00.00

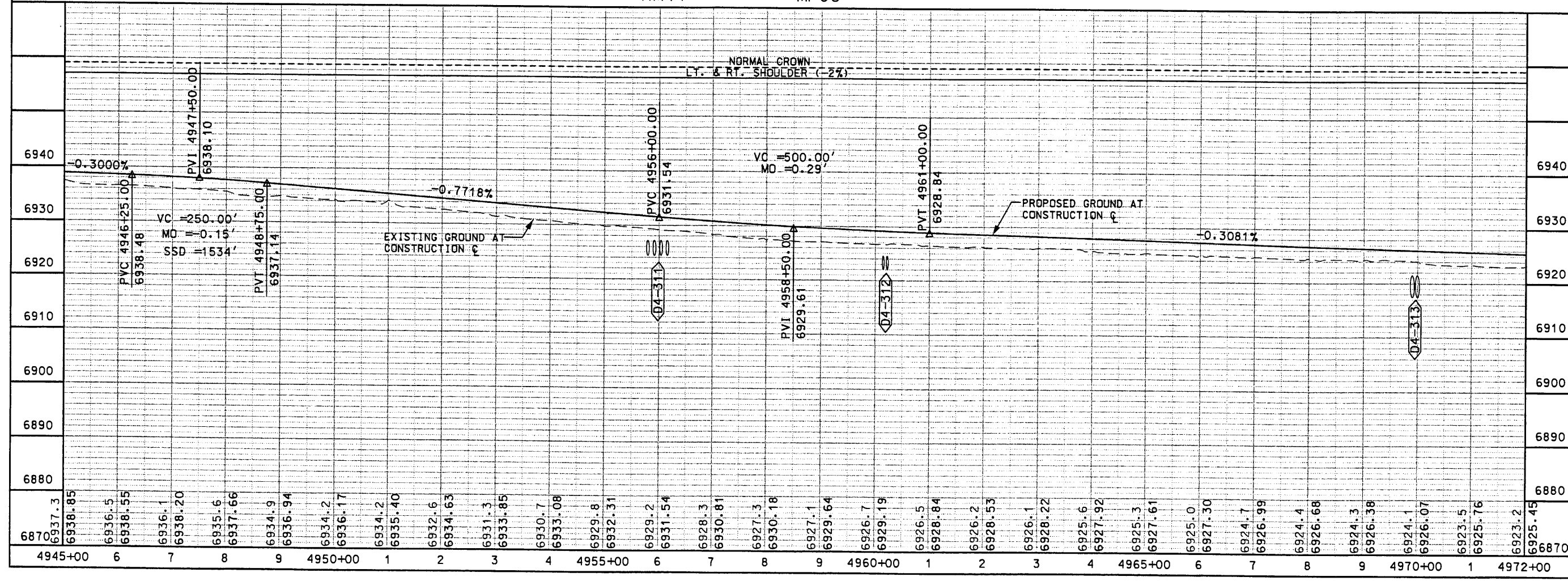
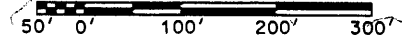
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

WILSON & COMPANY

3-36

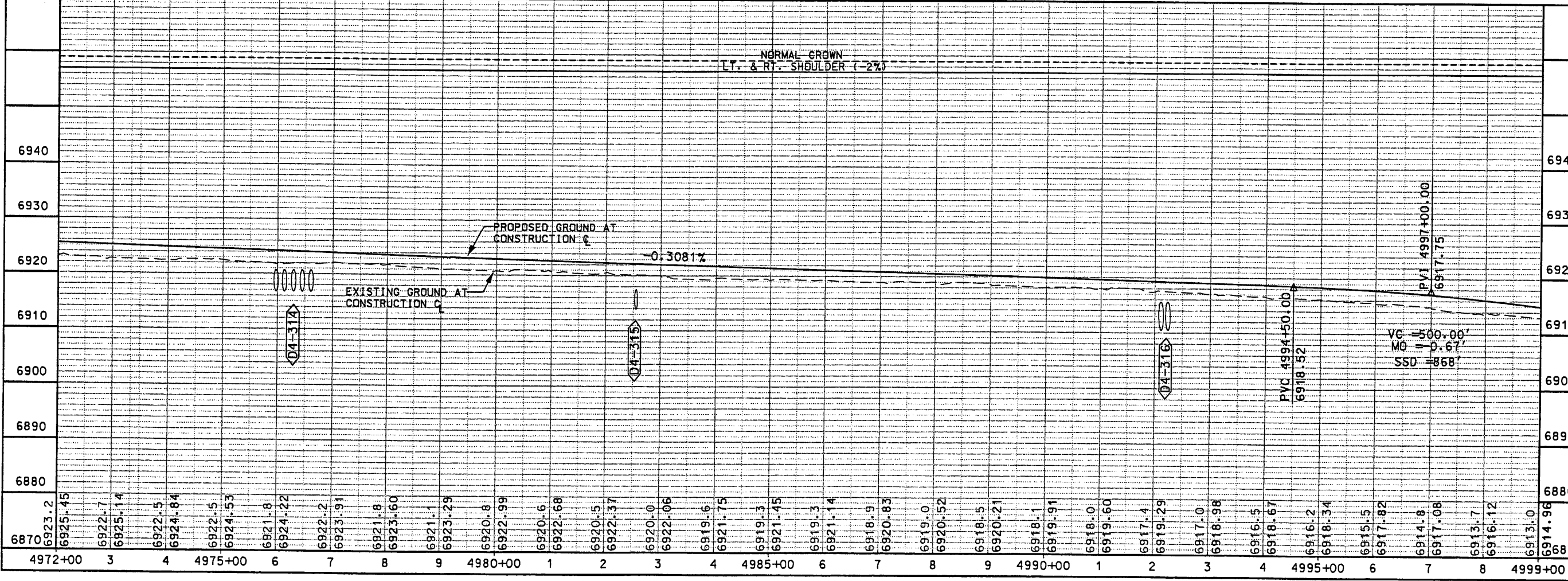
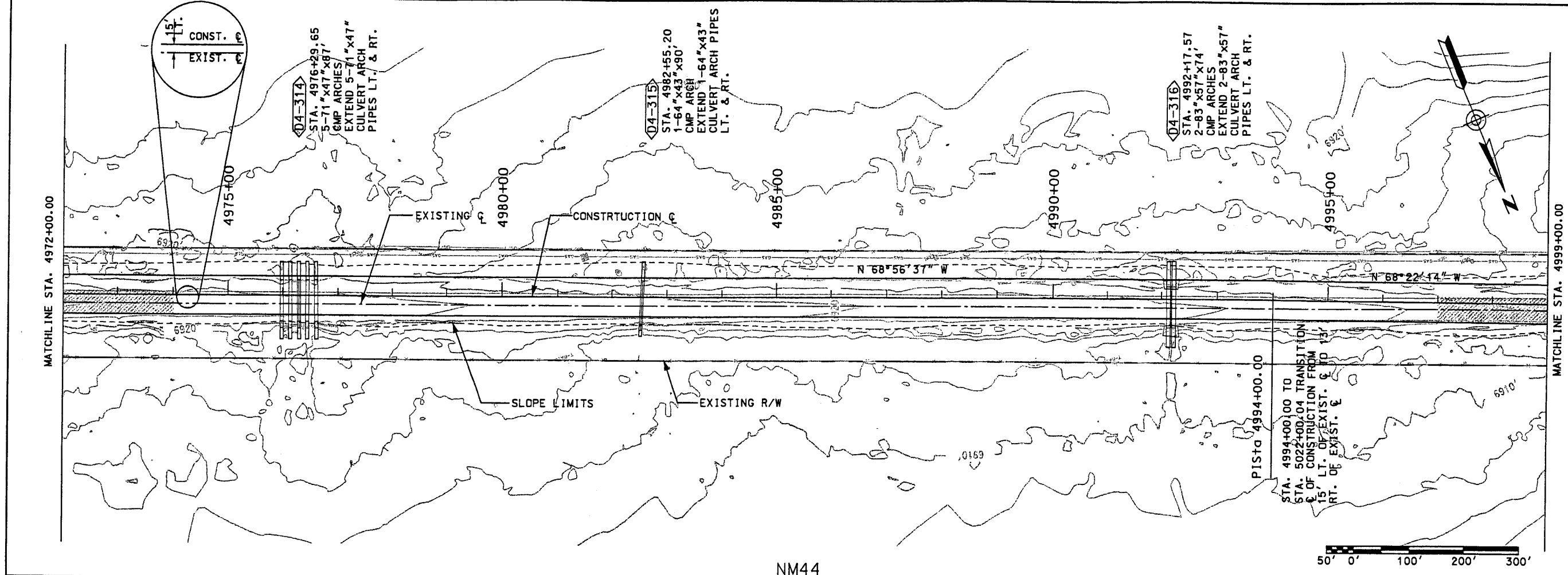


NM44 MP83




	DESIGN BY: DDM DRAWN BY: STAFF CHECKED BY: SFP	WILSON & COMPANY	SHEET TITLE PLAN & PROFILE STATION 4945+00.00 TO STATION 4972+00.00
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6		NM 44 NEW MEXICO PROJECT NO AC-NH-044-2(39)64 CN 3766	
3-37			

Design File: ...projects\98082-01\sect3\444pp38.100
 Plot Date: 04 NOV 1999



NM44

SEAL: 

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

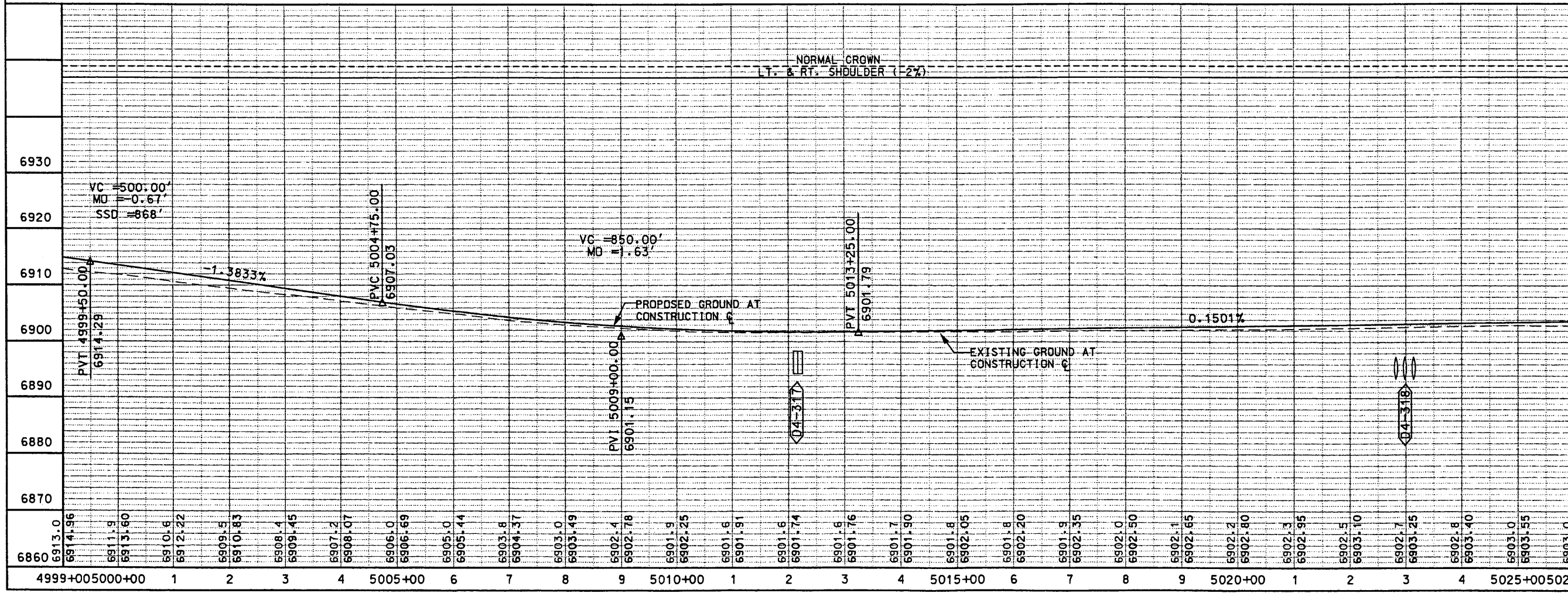
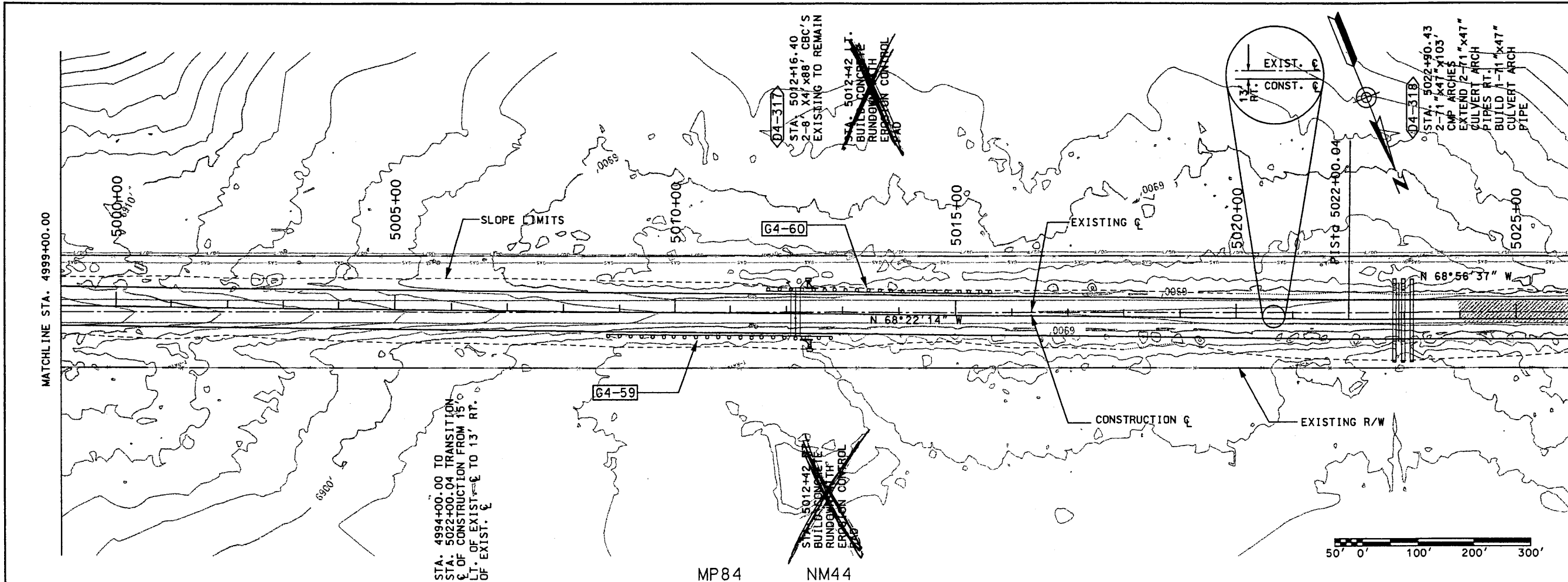
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

SHEET TITLE: PLAN & PROFILE
 STATION 4972+00.00 TO STATION 4999+00.00

NM 44
 PROJECT NO AC-NH-044-2(39)64
 CN 3766

3-38

Design File: g:\9800... \sect3\444\pp39_100
 Plot Date: 04 NOV 99

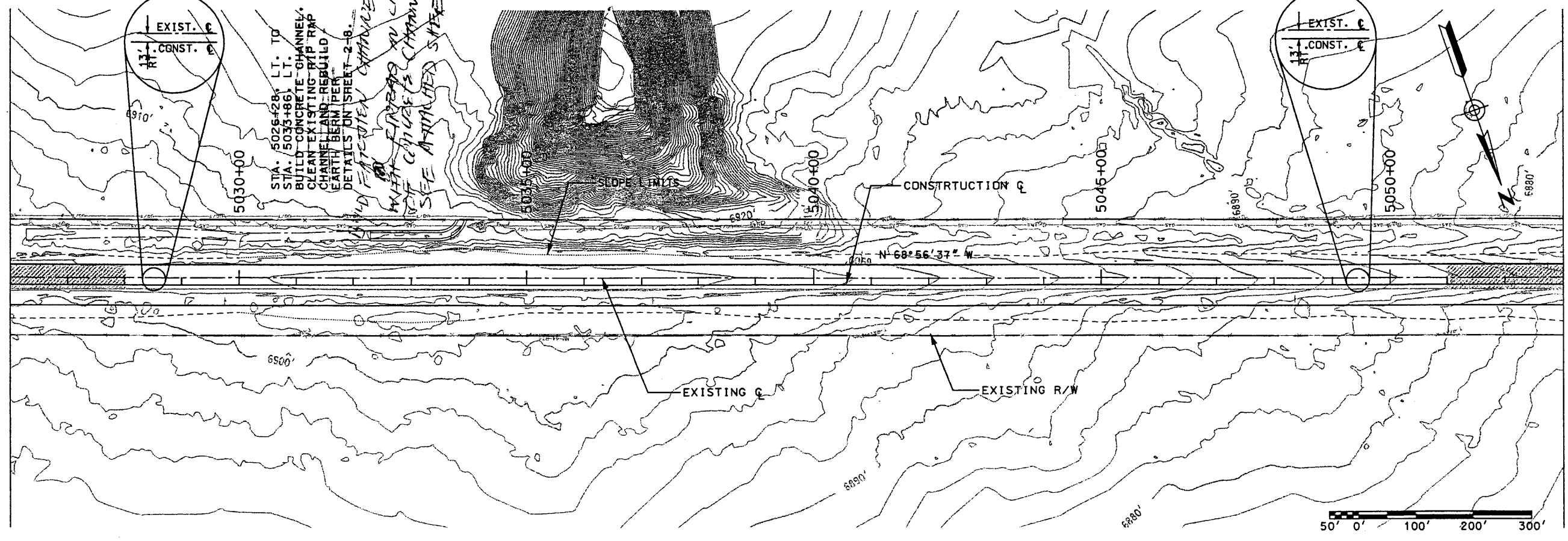


SEAL	DESIGN BY: DDM	DRAWN BY: STAFF	CHECKED BY: SFP	<p style="text-align: center;">WILSON & COMPANY</p> <p style="text-align: center;">NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.-H.W.A. REGION NO 6</p> <p style="text-align: center;">NEW MEXICO PROJECT NO AC-NH-044-2(39)64 NM 44 CN 3766</p>
SHEET TITLE				<p>PLAN & PROFILE STATION 4999+00.00 TO STATION 5026+00.00</p>
3-39				

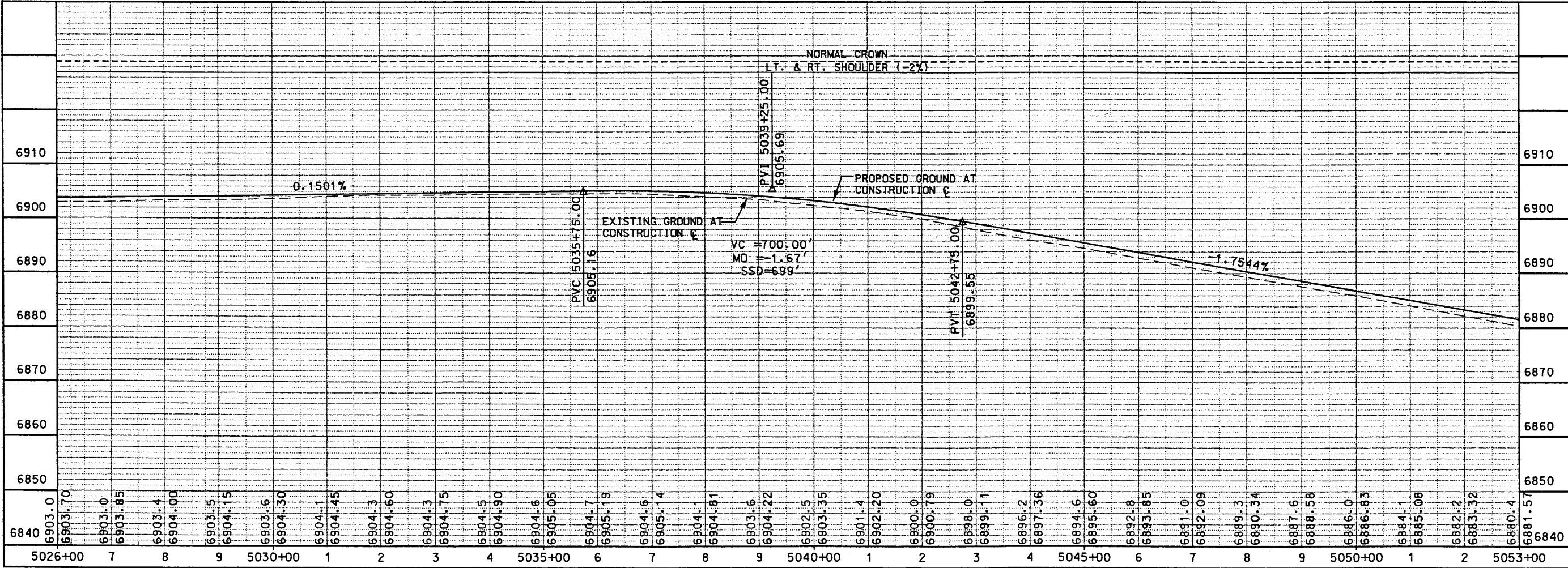
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 Plot Date: 04 NOV 1999

MATCHLINE STA. 5026+00.00

MATCHLINE STA. 5053+00.00

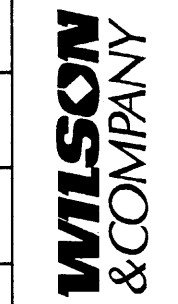


NM44



SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

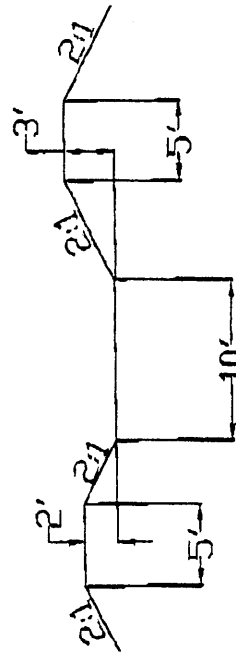
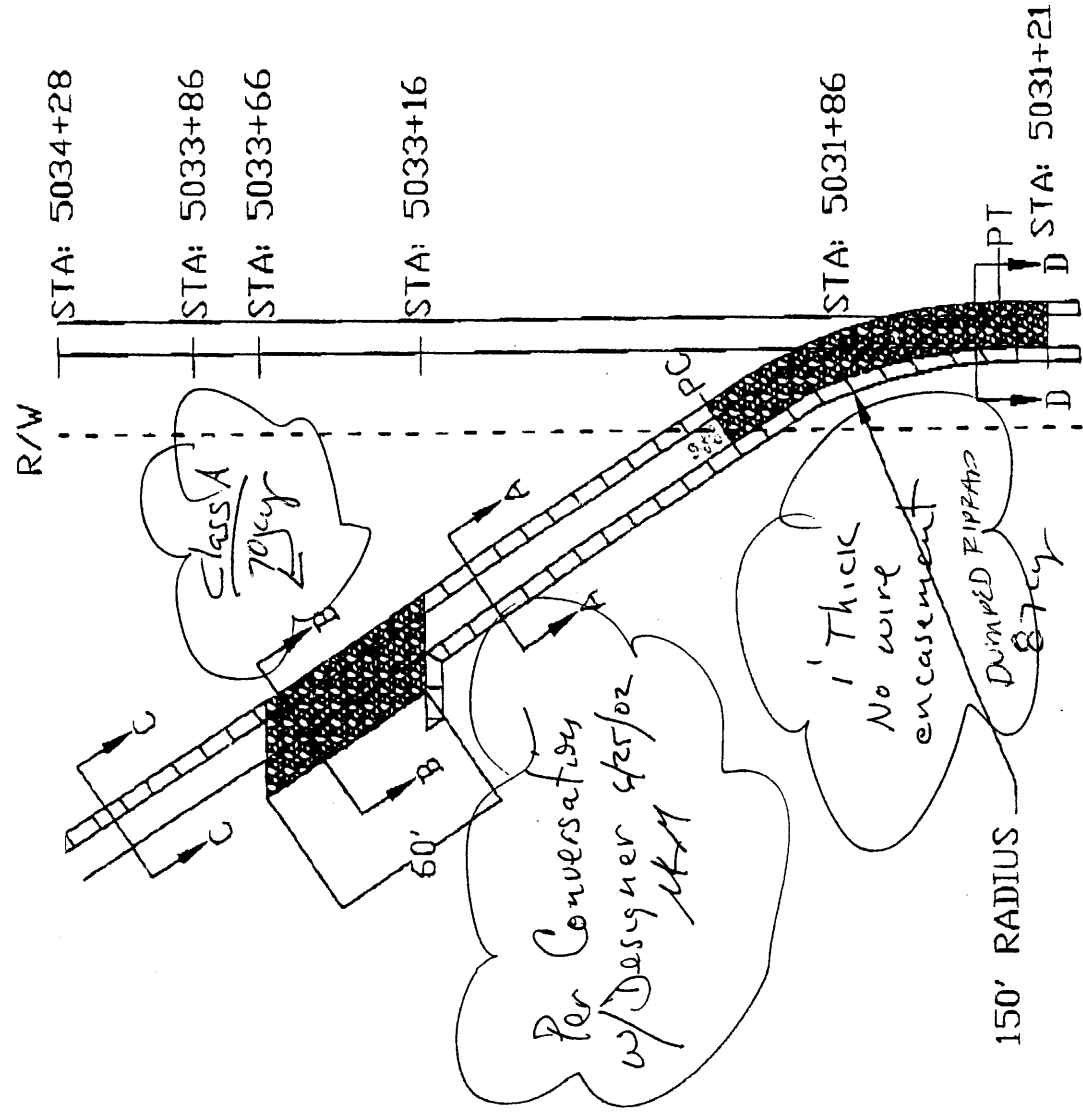


DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

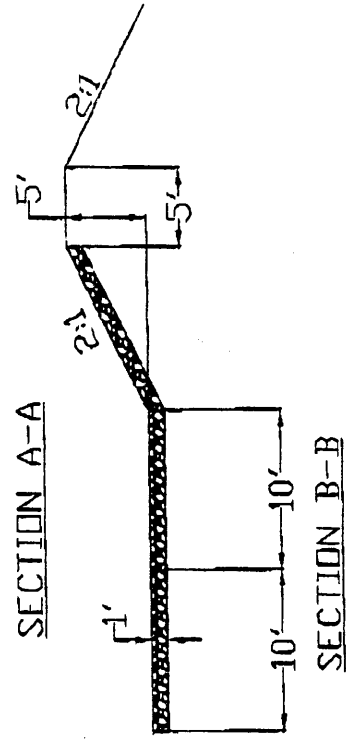


PLAN & PROFILE
 STATION 5026+00.00
 TO
 STATION 5053+00.00

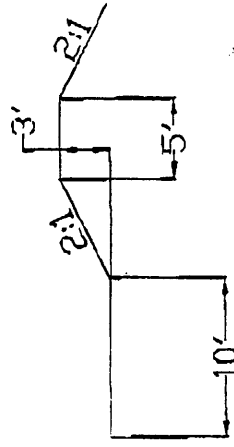
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



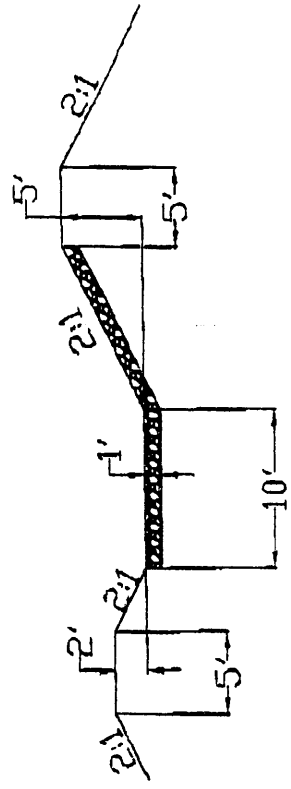
SECTION A-A



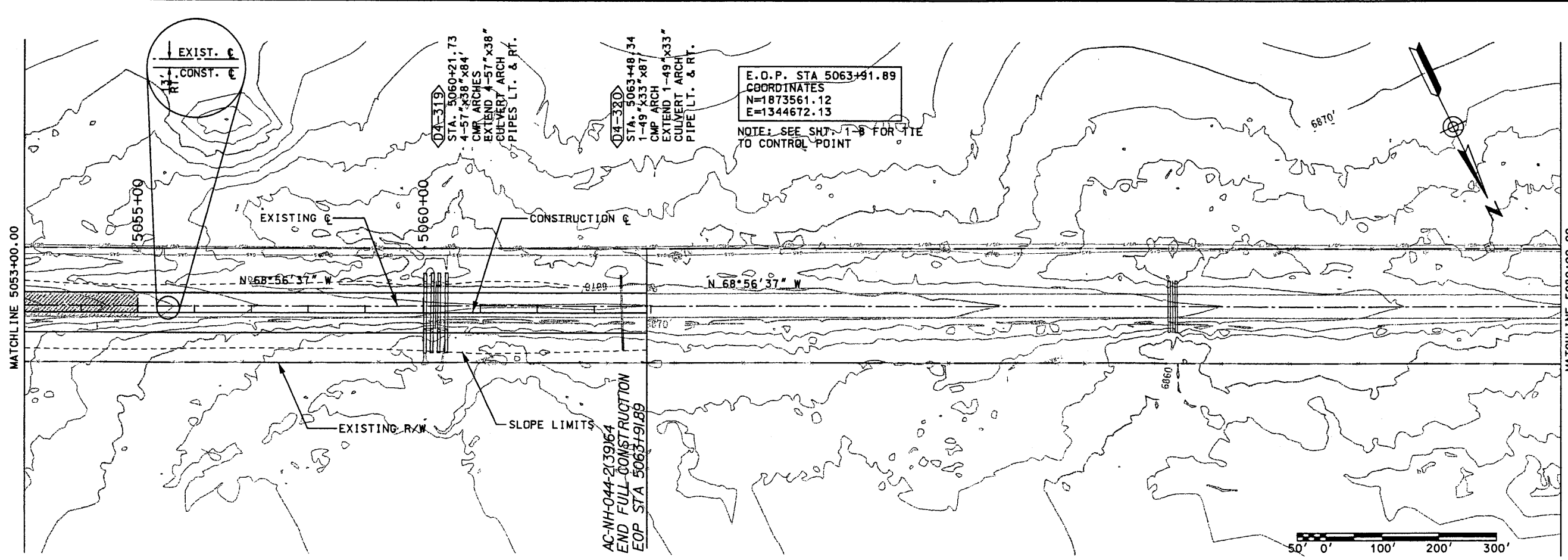
SECTION B-B



SECTION C-C



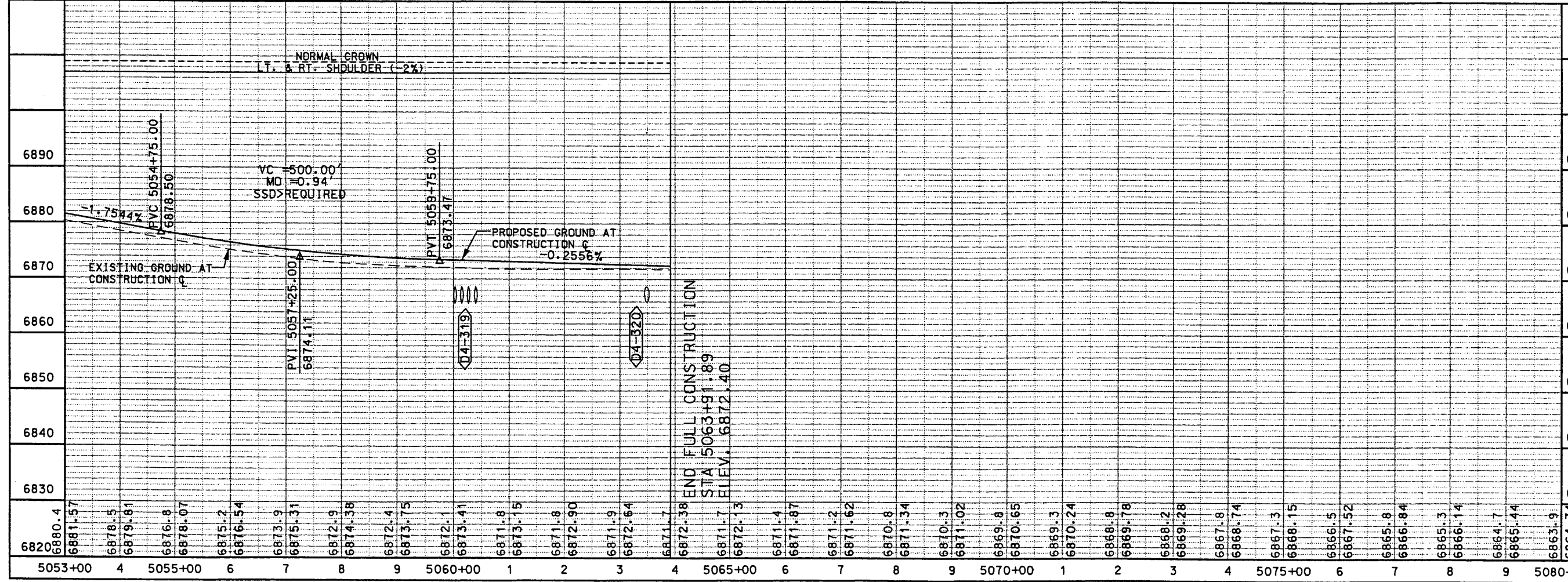
SECTION D-D



NM44

E.O.P. STA 5063+91.89
 COORDINATES
 N=1873561.12
 E=1344672.13
 NOTE: SEE SH. 1-B FOR TIE
 TO CONTROL POINT

AC-NH-04-2(39)64
 END FULL CONSTRUCTION
 EOP STA 5063+91.89



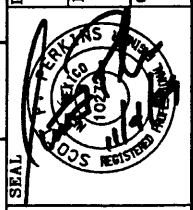
MATCHLINE 5053+00.00
 MATCHLINE 5080+00.00

SHEET TITLE
 PLAN & PROFILE
 STATION 5053+00.00
 TO
 STATION 5080+00.00

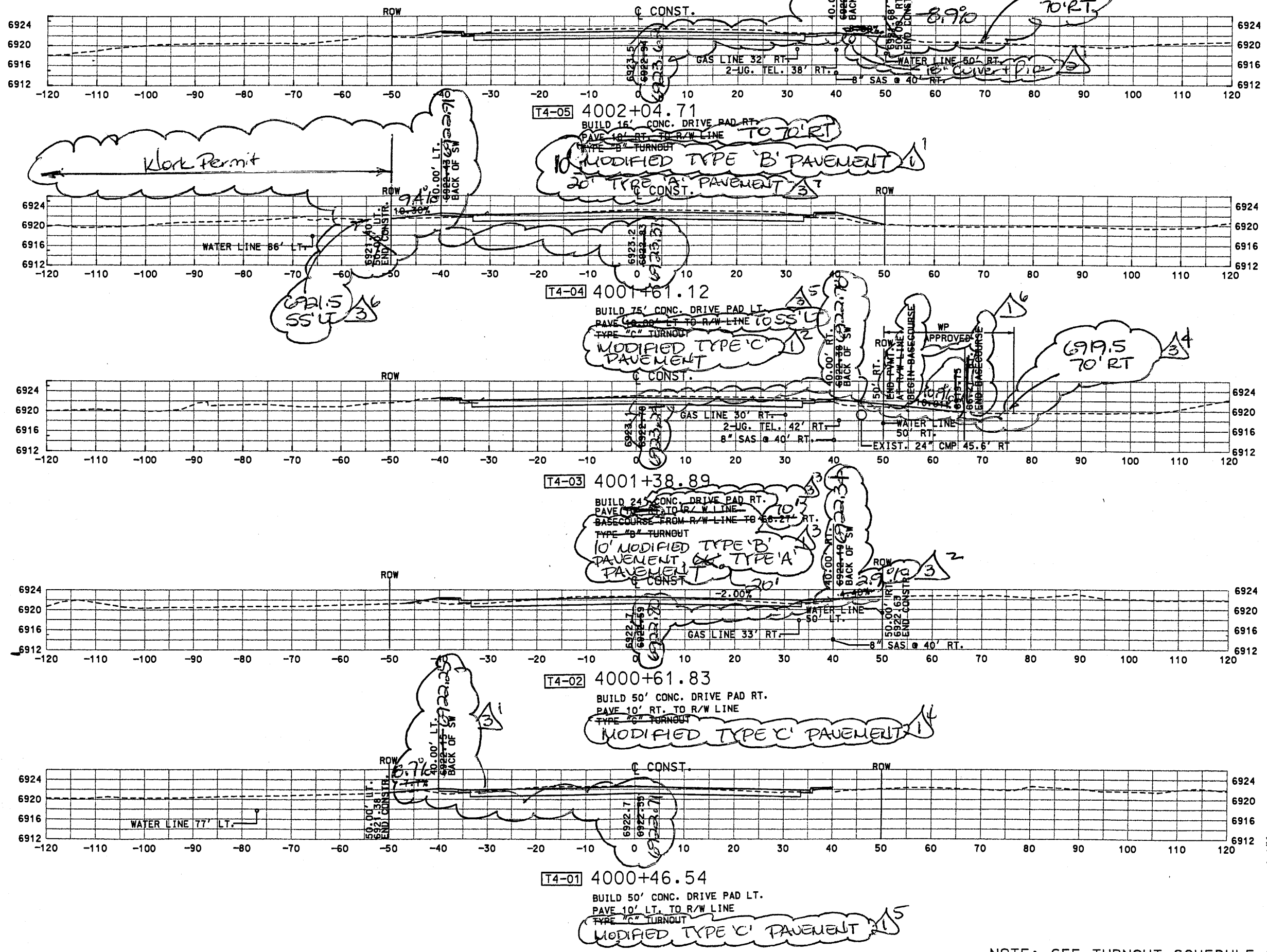
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-04-2(39)64
 CN 3766

**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design Plot Da
JY 99
\\02-01\sect4\44444.mtl.dgn



SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE
DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

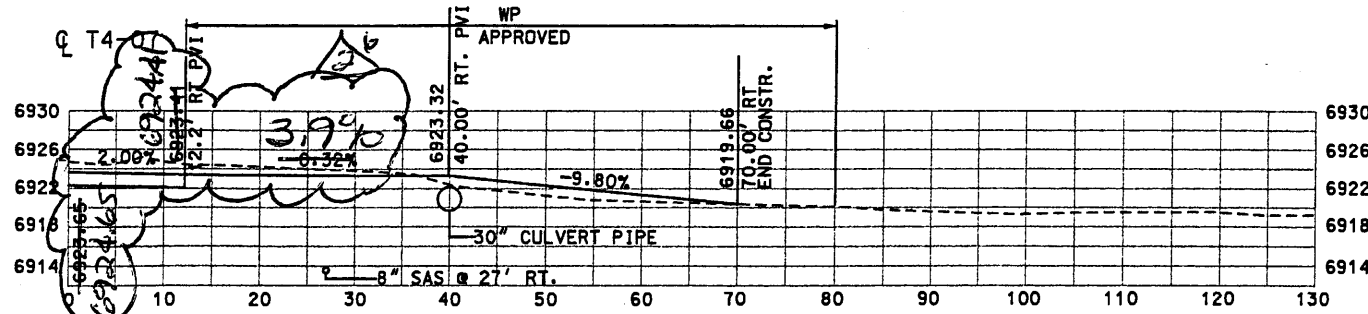
NEW MEXICO PROJECT NO AC-NH-044-2(3)164
CN 3766

NM 44

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP

WILSON & COMPANY

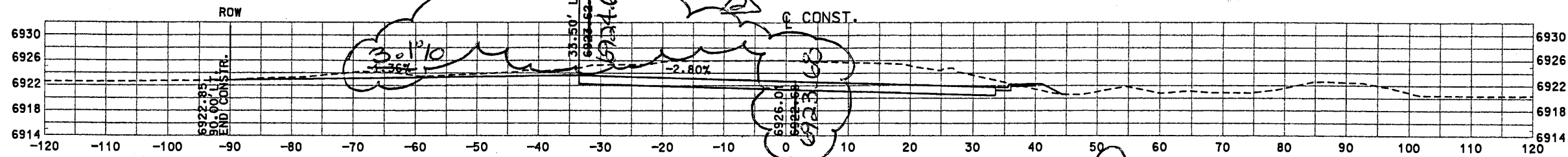
4-1



T4-07A 0+34.86 - (T4-07 STATIONING)
SKEW 10°27' RT. FWD

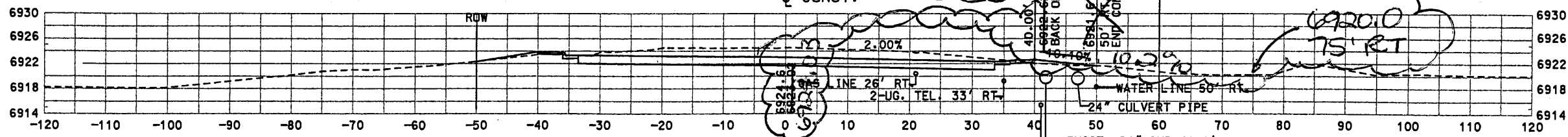
BUILD 16' TURNOUT RT.
PAVE 57.80' RT.
5' RADIUS RT., 25' RADIUS LT.
TYPE "B" TURNOUT

25' MODIFIED TYPE 'B' PAVEMENT
30' TYPE 'A' PAVEMENT



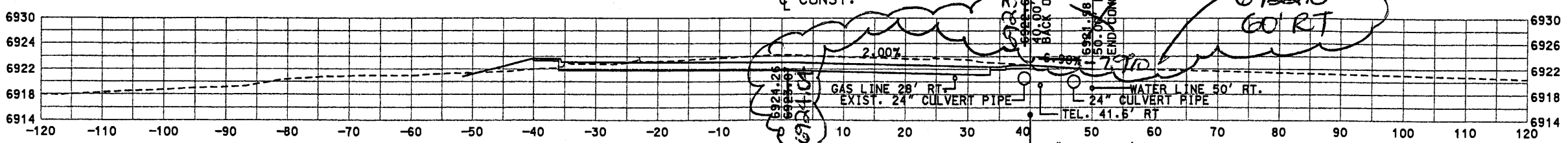
T4-07 4006+18.21
213° RT. FWD. COUNTY ROAD
BUILD 24' TURNOUT LT.
PAVE 56.50' LT. TO R/W LINE.
15' RADIUS LT., 25' RADIUS RT.
TYPE "B" TURNOUT

MODIFIED TYPE 'D' PAVEMENT
CONST.



T4-06 4003+90.44
BUILD 16' CONC. DRIVE PAD RT.
PAVE 10' RT. TO 75' RT.
TYPE "B" TURNOUT

10' MODIFIED TYPE 'B' PAVEMENT
25' TYPE 'A' PAVEMENT
CONST.



T4-05A 4003+33.00
BUILD 16' CONC. DRIVE PAD RT.
PAVE 10' RT. TO R/W LINE
TYPE "B" TURNOUT

10' MODIFIED TYPE 'B' PAVEMENT
10' TYPE 'A' PAVEMENT

SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE

DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-04-4-2(3)9164
CN 3766

NM 44

WILSON & COMPANY

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP

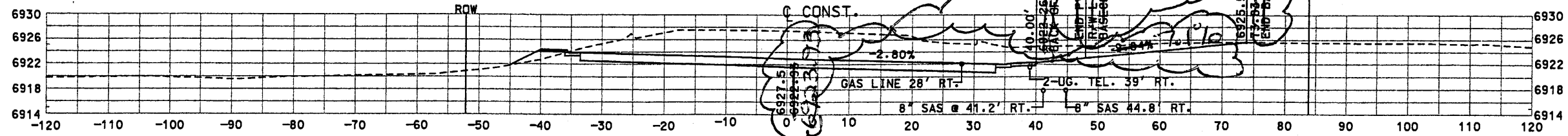
SEAL

4-2

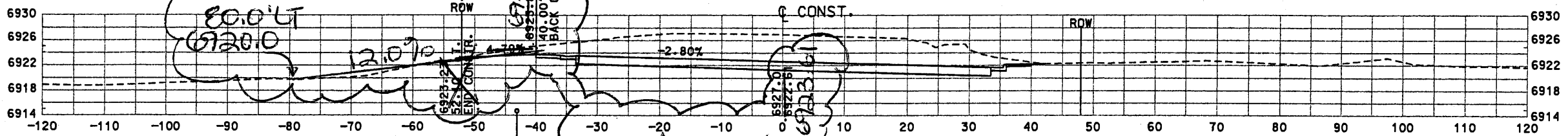
PROJECT NO. Ac. NH. 044.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 4.2, Drivepad/Jurnout Profiles

NO.	REVISION	DATE	BY
A ⁴	Revise Pavement	8.24.01	FSC/FNF-0466
A ⁶	Revise Turnouts for PGL		
	Revision, 4000'± to 4026'±	10.6.01	FSC/FNF-0537

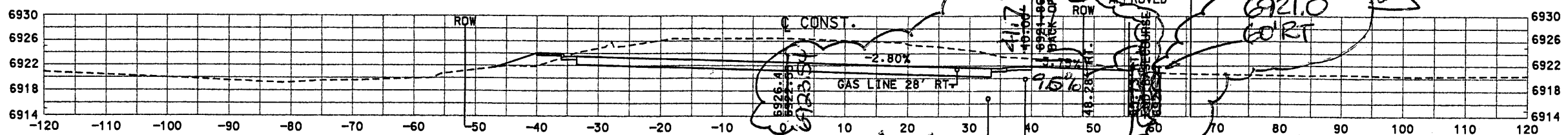
Design File: 82-01\sect4\44444.mtl.dgn
 Plot Date: 03 JUL 99



T4-10 4009+40.75
 BUILD 24' CONC. DRIVE PAD RT.
 PAVE 7.93' RT. TO R/W LINE.
 BASECOURSE FROM R/W LINE TO 73.83' RT. 34' RT.
 TYPE "B" TURNOUT
 MODIFIED TYPE 'B' PAVEMENT



T4-09 4008+29.69
 BUILD 16' CONC. DRIVE PAD LT.
 PAVE 12.49' LT. TO R/W LINE.
 TYPE "B" TURNOUT
 MODIFIED TYPE 'B' PAVEMENT
 30' TYPE 'A' PAVEMENT



T4-08 4007+07.75
 BUILD 24' CONC. DRIVE PAD RT.
 PAVE 6.28' RT. TO R/W LINE.
 BASECOURSE FROM R/W LINE TO 55.73' RT. 16' RT. TO 60' RT.
 TYPE "B" TURNOUT
 MODIFIED TYPE 'B' PAVEMENT,

SCALE:
 1" = 10' HORIZ.
 1" = 10' VERT.

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE


DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

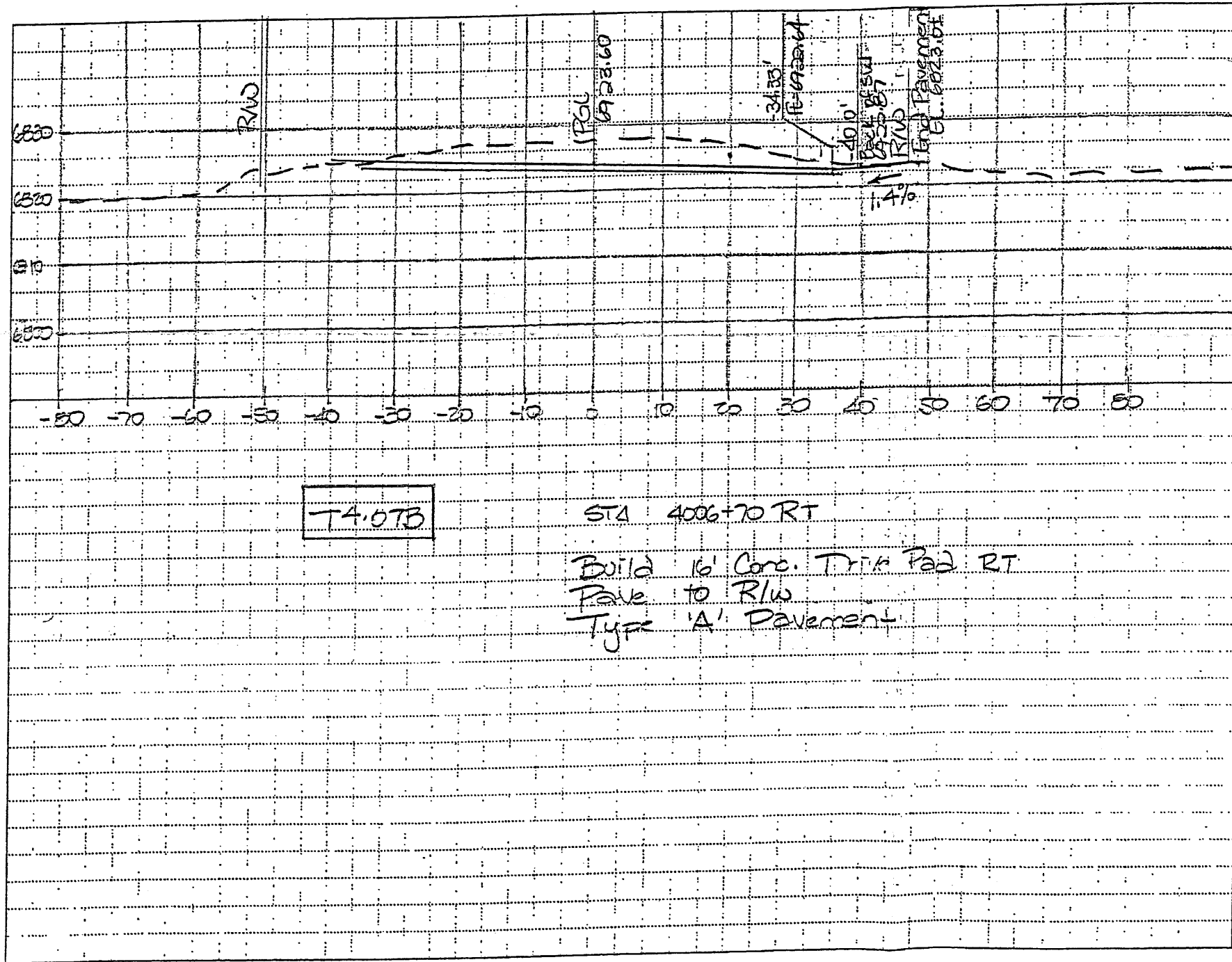
SEAL


4-2A

PROJECT NO. AC.NH.044.2(3A)4
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 4.2A, Drivepad / Turnout Profiles

NO.	REVISION	DATE	BY
1 st	Revise Pavement	8.24.01	FSC/FNF-0466
2 nd	Revise Turnouts for PGL		
	Revision, 4000+00 to 4026+00	10.6.01	FSC/FNF-0537

NM 44
AC-NH-044-2(39)64
CN 3766

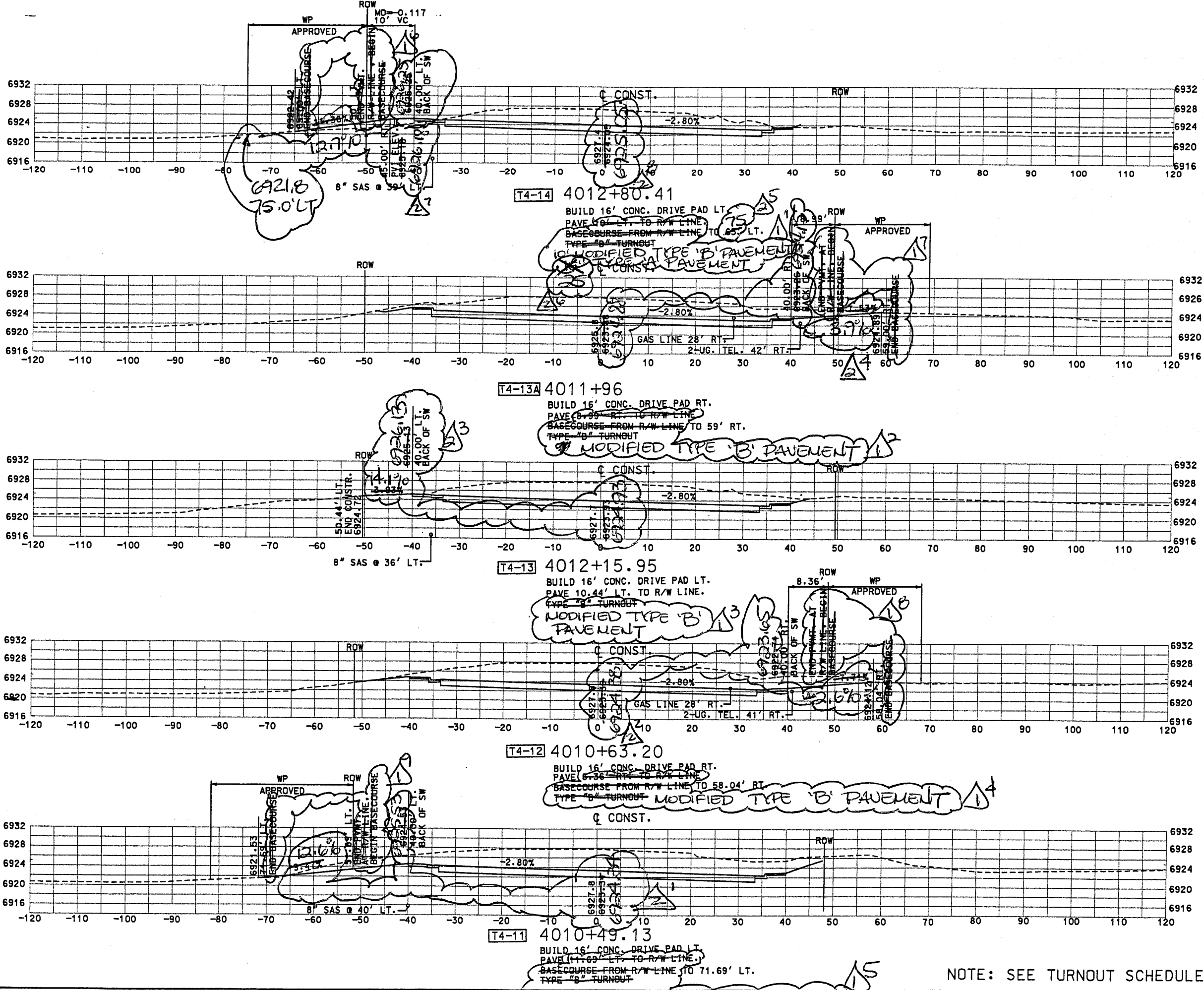


T4.07B

STA 4006+70 RT
Build 16' Conc. Turn Pad RT
Pave to R/W
Type 'A' Pavement

New Sheet
11.19.01
FSC/FNF-0604

Design F:\98062-01\sect4\44444.mtl.dgn
 Plot Date: 3 NOV 99



NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SCALE:
 1" = 10' HORIZ.
 1" = 10' VERT.

SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)164
 CN 3766

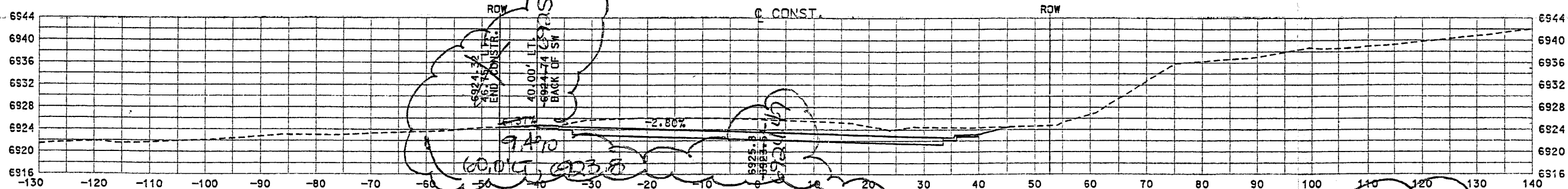
WILSON & COMPANY

DESIGN BY: DDM	DRAWN BY: STAFF	CHECKED BY: SFP
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4-3

PROJECT NO. Ac. NH. 044. 2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 4.3, Drivepad/ Turnout Profiles

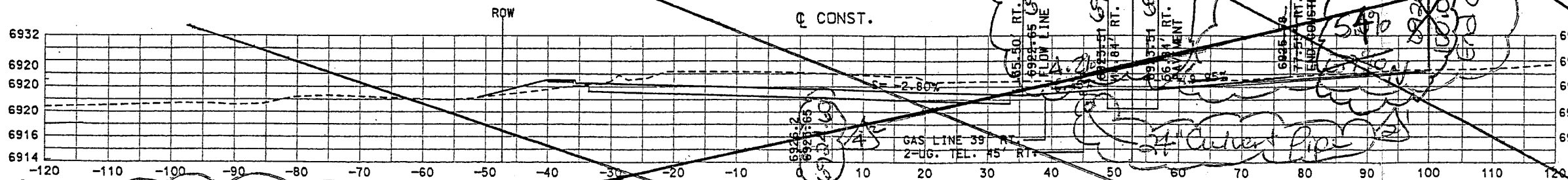
NO.	REVISION	DATE	BY
A ⁹	Revise Pavement	8.24.01	FSC/FNF-0466
A ⁸	Revise Turnouts for PGL		
	Revision, 4000+00 to 4026+00	10.6.01	FSC/FNF-0537



T4-16 4014+75.24

BUILD 16' CONC. DRIVE PAD LT.
 PAVE 6'-7.5' LT. TO R/W LINE.
 TYPE 'B' TURNOUT
 20' R.
 MODIFIED TYPE 'B' PAVEMENT

SUPERCEDED - SEE SHEET 4.3B



T4-15 4014+54.62

BUILD 30' TURNOUT RT.
 PAVE 15.34' RT. TO CATTLE GUARD
 PAVE FROM CATTLE GUARD TO 37.55' RT.
 REMOVE & REPLACE CATTLE GUARD
 TYPE 'D' TURNOUT
 20' R.
 MODIFIED TYPE 'D' PAVEMENT

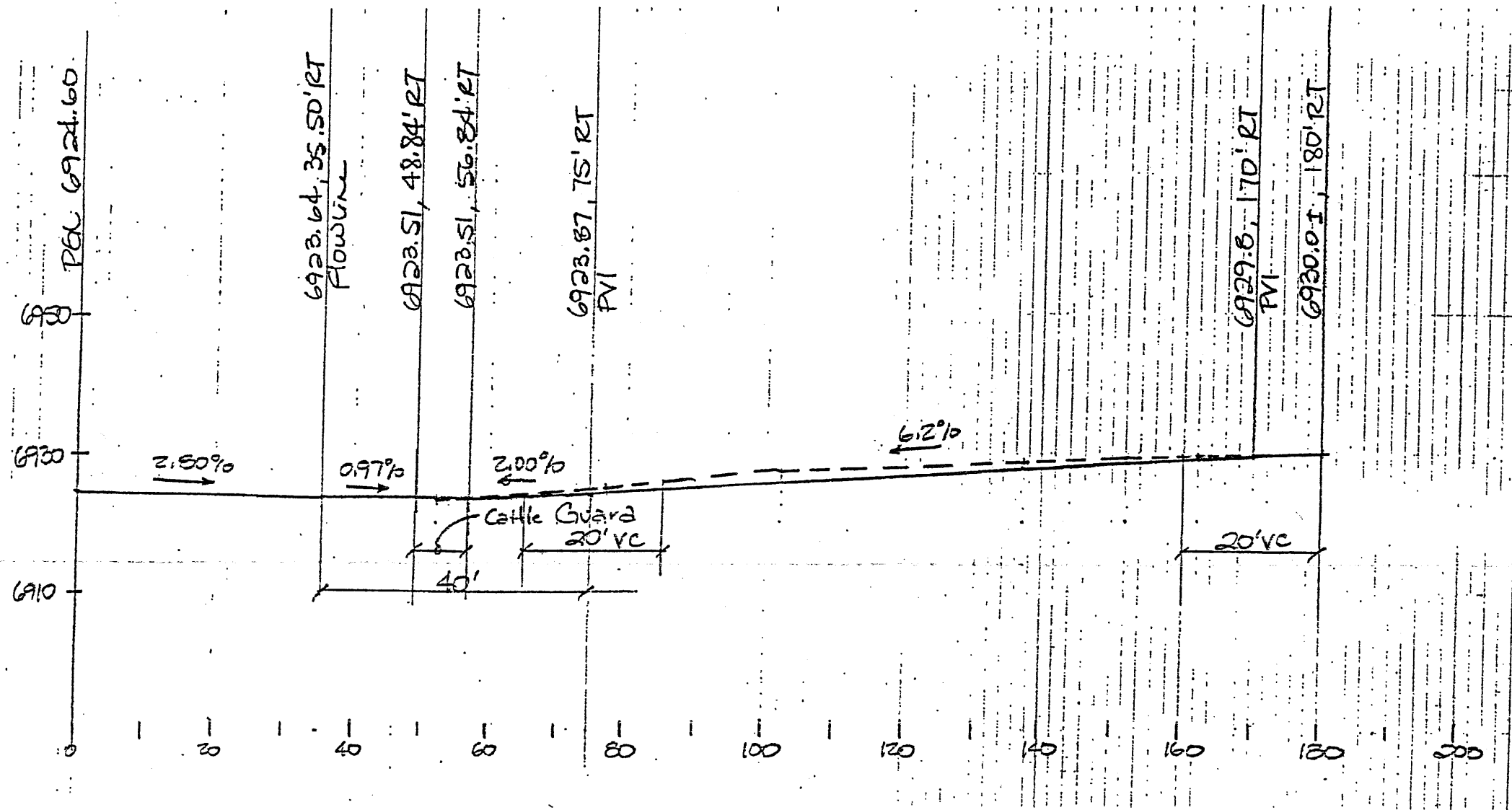
NEW 24' CATTLE GUARD

CATTLE GUARD TO BE
 EROSION CONTROL TYPE
 (SEE STD DWG 300-009-04).
 SOUTH E EL= 6922.0
 NORTH E EL= 6921.5
 INSTALL 12" CULVERT PIPE AT
 OUTLET, DAYLIGHT TO DITCH.

SCALE:
 1" = 10' HORIZ.
 1" = 10' VERT.

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE		DRIVEPAD / TURNOUT PROFILES	
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6		NEW MEXICO PROJECT NO AC-NH-044-2(39)64 NM 44 CN 3765	
		DESIGN BY:	DDM
		DRAWN BY:	STAFF
		CHECKED BY:	SFP
4-3A			



DRIVEPAD/
TURNOUT
PROFILES

KJM 4/4
AC.NH.044.2(39)64
CU 3766

NEW SHEET
10.31.01
FSC/FNF-0576

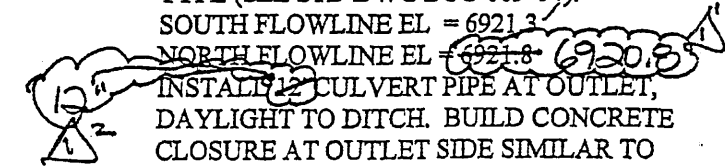
T4.15

4014+54.62

BUILD 24' TURNOUT RT
PAVE 15.24' TO CATTLE GUARD
PAVE 3 FROM CATTLE GUARD TO 180' RT
REMOVE AND REPLACE CATTLE GUARD,
NEW 24' CATTLE GUARD
MODIFIED TYPE 'D' PAVEMENT
20' R

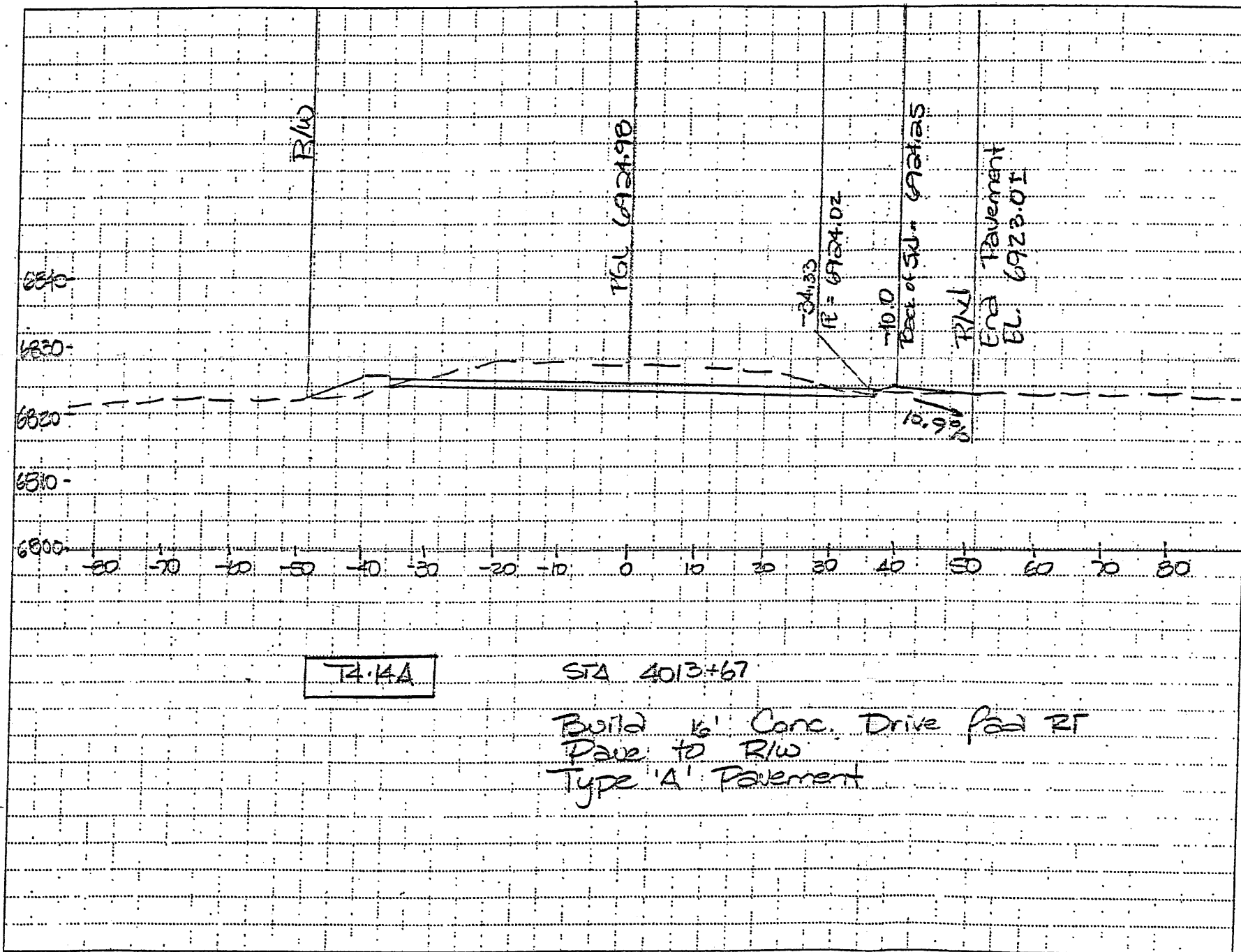


CATTLE GUARD TO BE EROSION CONTROL
TYPE (SEE STD DWG BCG-009-04).
SOUTH FLOWLINE EL = 6921.3
NORTH FLOWLINE EL = 6921.8
INSTALL 12" CULVERT PIPE AT OUTLET,
DAYLIGHT TO DITCH. BUILD CONCRETE
CLOSURE AT OUTLET SIDE SIMILAR TO
WALL FOR CAST IN PLACE CONCRETE
CATTLE GUARD (SEE STD DWG BCG-001-02).



CATTLE GUARD WAS FILLED
WITH CONCRETE TO ALLOW
DRAINAGE. CONCRETE IS
WITHIN 16" OF GRATE

Note: This sheets
contains
Rev. 1 through
Rev. 5 previously
shown on
Sheet 4.3A, as
applicable.



T4.14A

STA 4013+67

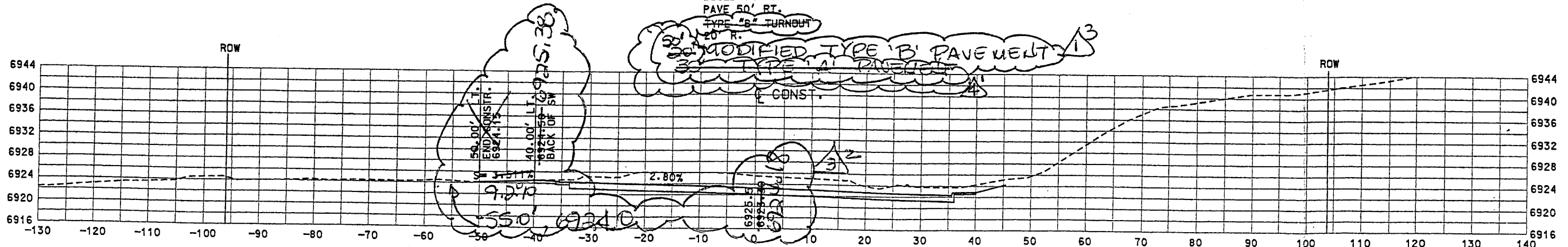
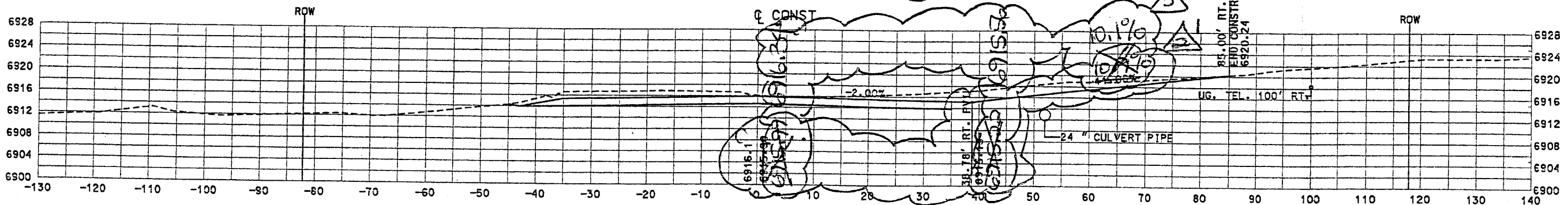
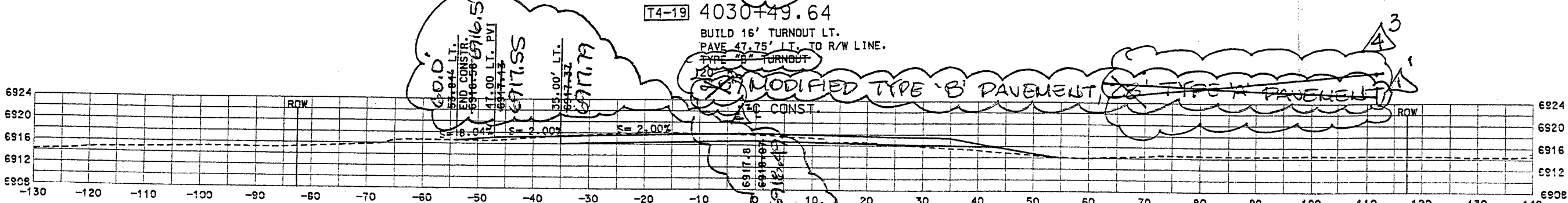
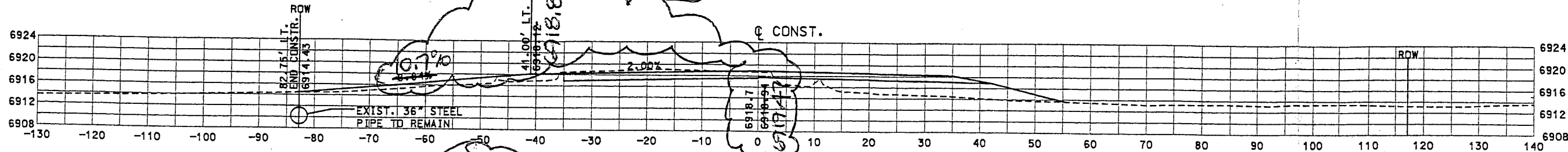
Build 6' Conc. Drive Pad RT
 Pave to R/W
 Type 'A' Pavement

New Sheet
 11-19-01
 FSC/FNF-0604

DRIVEPAD/
 TURNOUT
 PROFILES

NM44
 AC. NH. 044.2(39) of
 CW 3766

SCALE:
 1" = 10' HORIZ.
 1" = 10' VERT.



T4-16A 4015+13.24
 BUILD 16' CONC. DRIVE PAD LT.
 PAVE 15' LT.
 TYPE "B" TURNOUT
 MODIFIED TYPE 'B' PAVEMENT

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

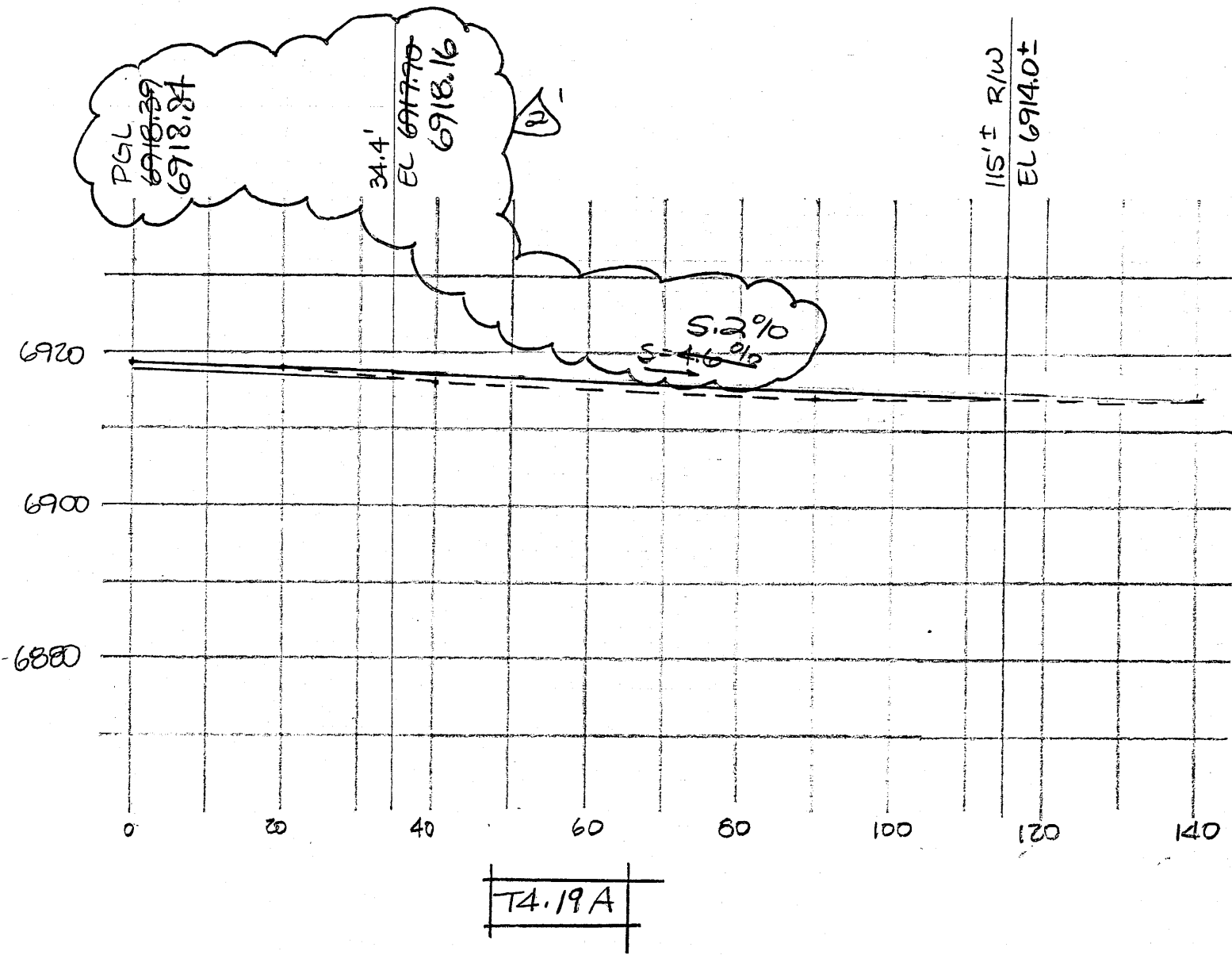
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)9/04
 CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: 98082-01\sect4\44444.mtl.dgn
 Plot Date: 10V 99



T4.19A

STA 4029+40

BUILD 16' TURNOUT RT.
PAVE TO R/W

~~TYPE 'B' TURNOUT~~
20' R
20' MODIFIED TYPE 'A' PAVEMENT,
±60' TYPE 'A' PAVEMENT

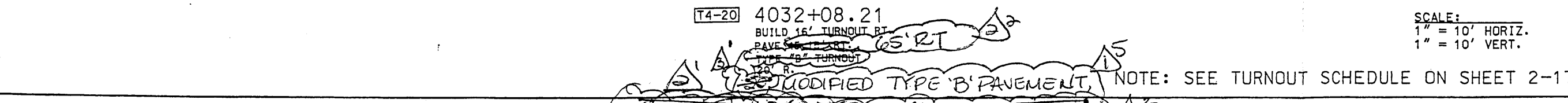
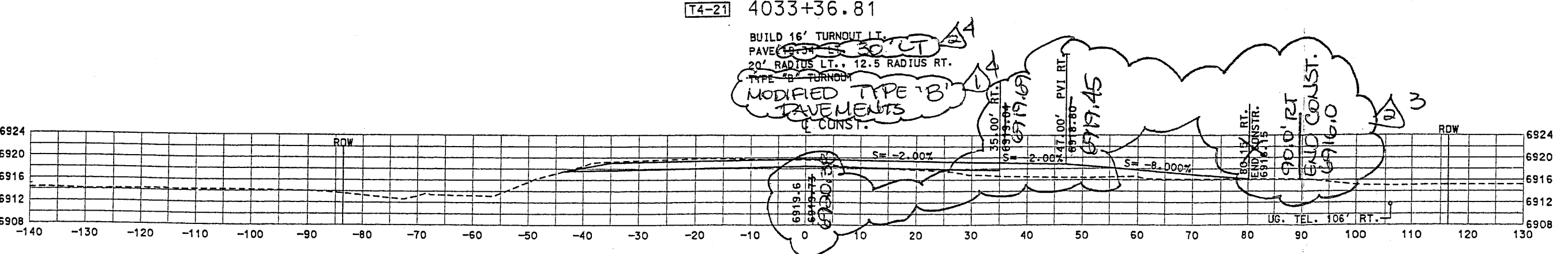
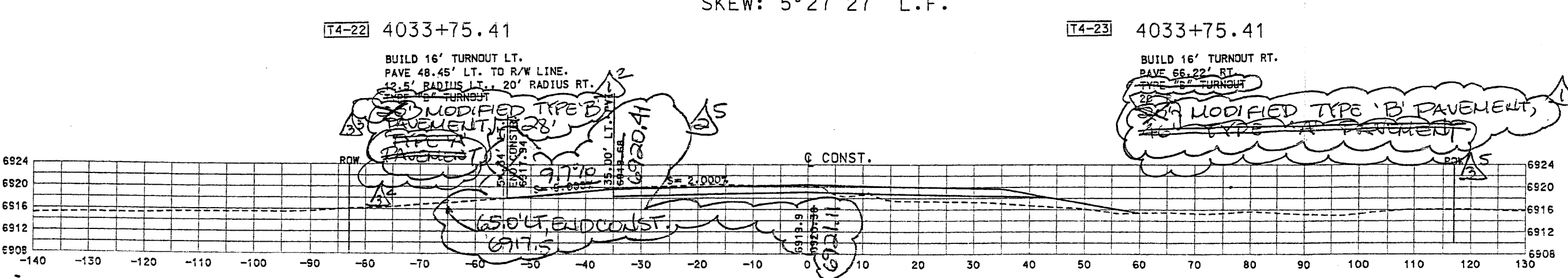
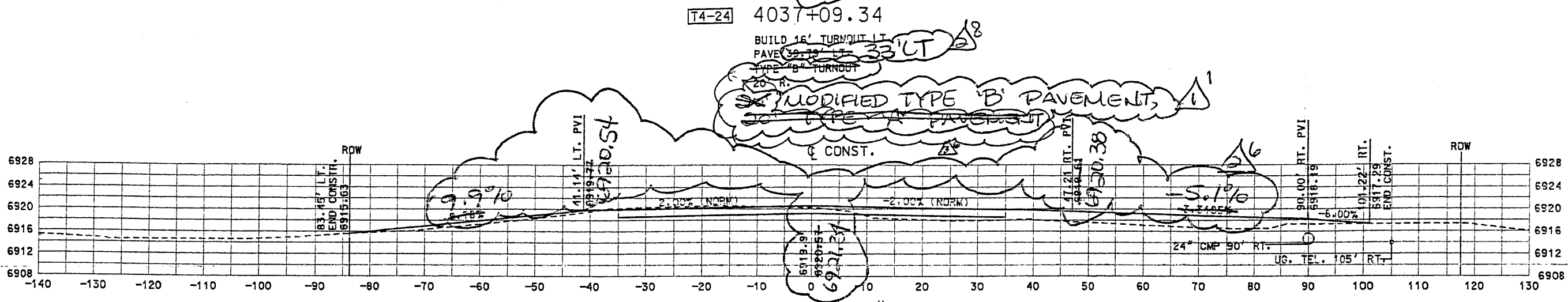
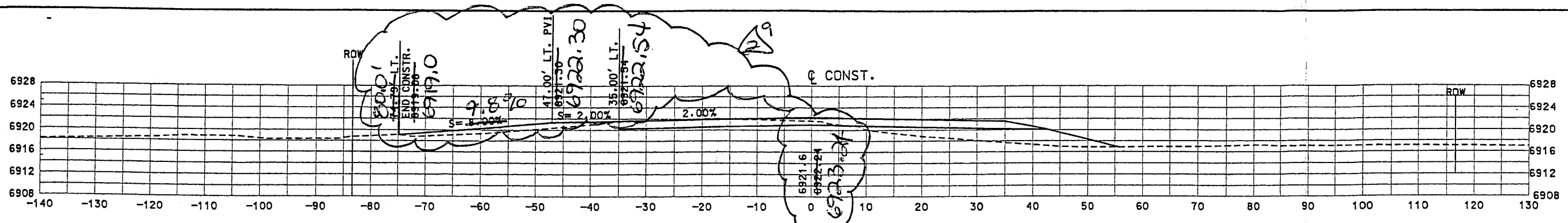
Note: Contact
Property Owner
(Frank & Leonor
Duran, 289.3865)
to confirm
location prior
to construction.

New Sheet
9.18.00
FSC/FNF-018

NUM 44
PROJECT NO AC.NH.044.2(39)64
CW 3766
DRIVEPAD/
TURNOUT
PROFILES

PROJECT NO. AC-NA-044.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 4.4A, Drivepad/Shoulder Profiles

NO.	REVISION	DATE	BY
1	Revise Pavement	8.24.01	FSC/FNF-0466
2	Revise Turnout for PGL		
	Revision, 4021+00 to 4074+00	10.6.01	FSC/FNF-0537



T4-24 4037+09.34

T4-22 4033+75.41

T4-23 4033+75.41

T4-21 4033+36.81

T4-20 4032+08.21

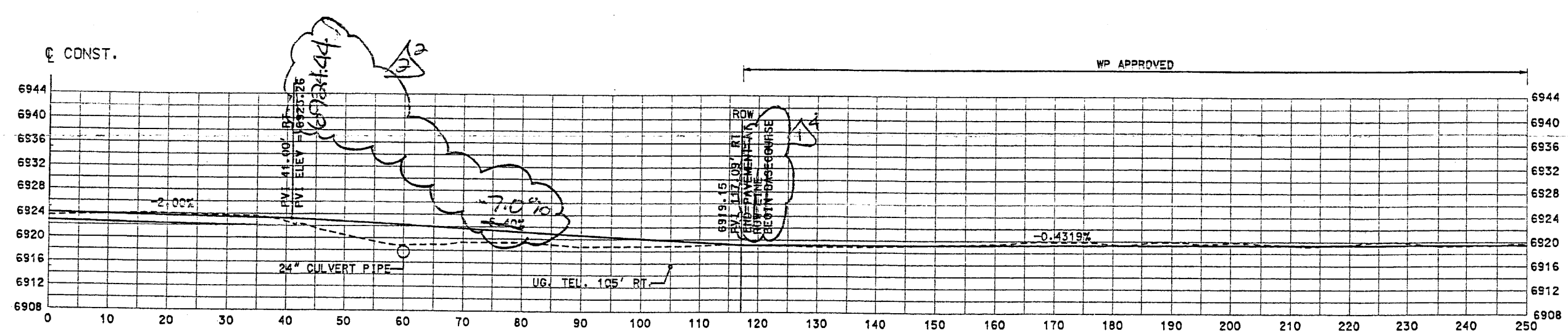
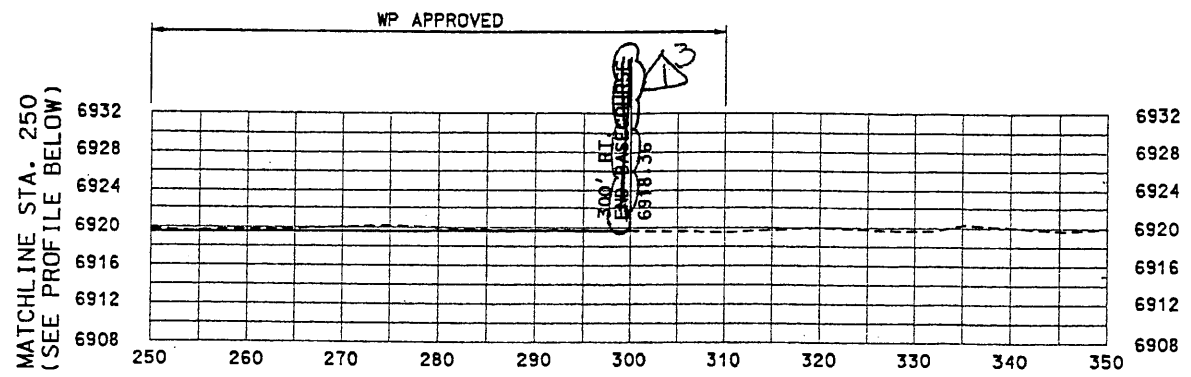
SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE
 DRIVEPAD / TURNOUT PROFILES
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(30)64
 CN 3766
WILSON & COMPANY
 DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP
 SEAL: [Professional Engineer Seal]
 4-5

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 Plot Date: 99

Design File: 98082-01\sect4\44444mtl.dgn
Plot Date: V 99

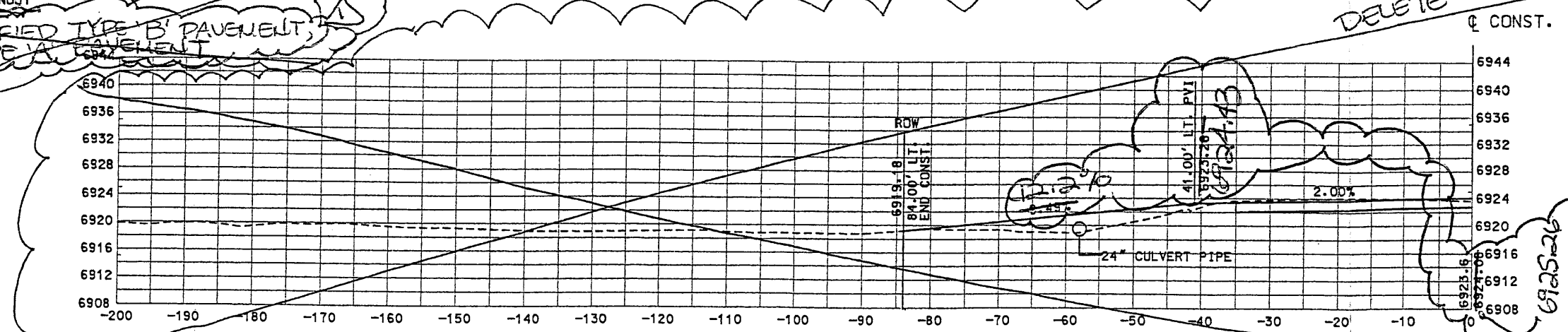


T4-26 4039+57.36 RT.

BUILD 24' TURNOUT RT.
PAVE 62.05' RT. TO R/W LINE
BASECOURSE FROM R/W LINE TO 300' RT.
BUILD 24' CULVERT PIPE 60' RT.
TYPE 'B' TURNOUT

62' RT TO R/W (MODIFIED TYPE 'B')
PLUS 245' beyond R/W (TYPE 'A')

30' MODIFIED TYPE 'B' PAVEMENT
245' TYPE 'A' PAVEMENT



T4-25 4039+57.36 LT.

BUILD 24' TURNOUT LT.
PAVE 45' LT. TO R/W LINE.
TYPE 'B' TURNOUT
20' R.

SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

MODIFIED TYPE 'B' PAVEMENT

* NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE

DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

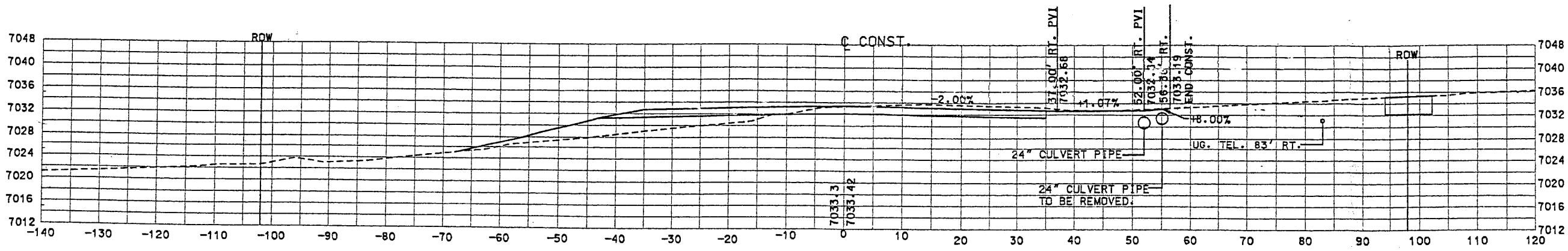
NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3768

**WILSON
& COMPANY**

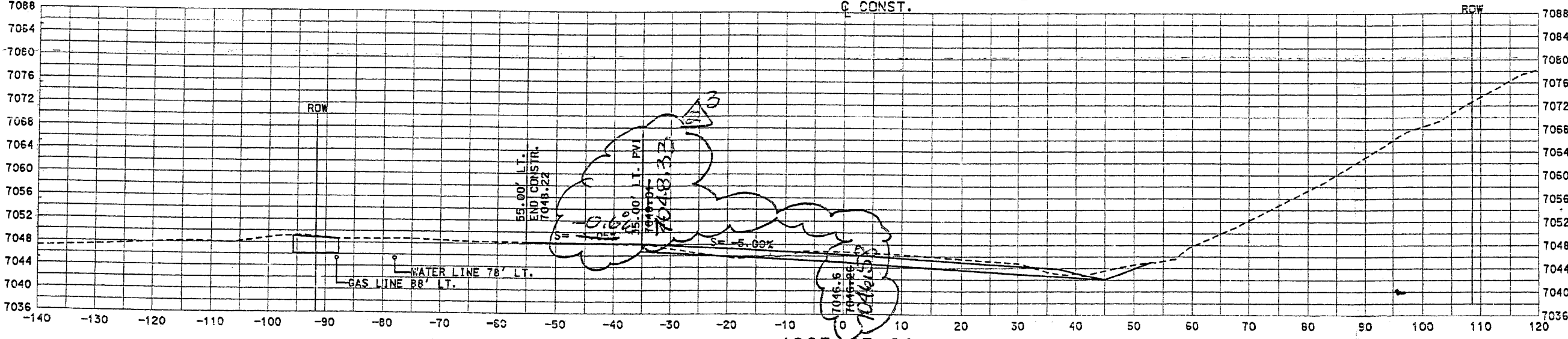
DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



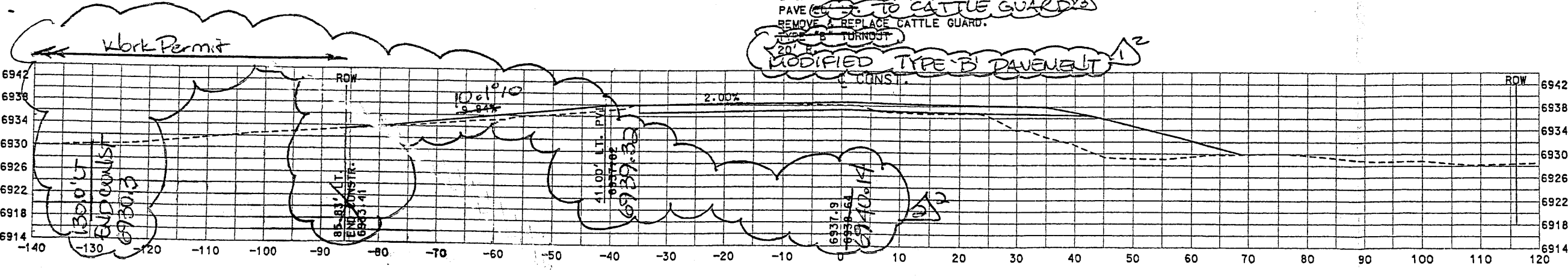
SCALE:
 1" = 10' HORIZ.
 1" = 10' VERT.



T4-29 4075+27.70
 BUILD 16' TURNOUT RT.
 PAVE 61.38' RT. TO CATTLE GUARD 3'
 INSTALL CATTLE GAUD AT R/W LINE.
 TYPE "B" TURNOUT
 120' R.
 MODIFIED TYPE 'B' PAVEMENT 1'



T4-28 4065+45.92
 BUILD 32' TURNOUT LT.
 PAVE 66.12' RT. TO CATTLE GUARD 3'
 REMOVE & REPLACE CATTLE GUARD.
 TYPE "B" TURNOUT
 20' R.
 MODIFIED TYPE 'B' PAVEMENT 1'
 2



T4-27 4044+37.55
 BUILD 24' TURNOUT LT.
 PAVE 50.83' RT. TO R/W LINE 95' LT 1'
 TYPE "D" TURNOUT
 20' R.
 MODIFIED TYPE 'D' PAVEMENT 1'
 3

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE

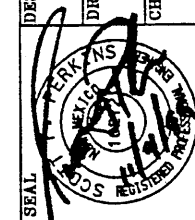
DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

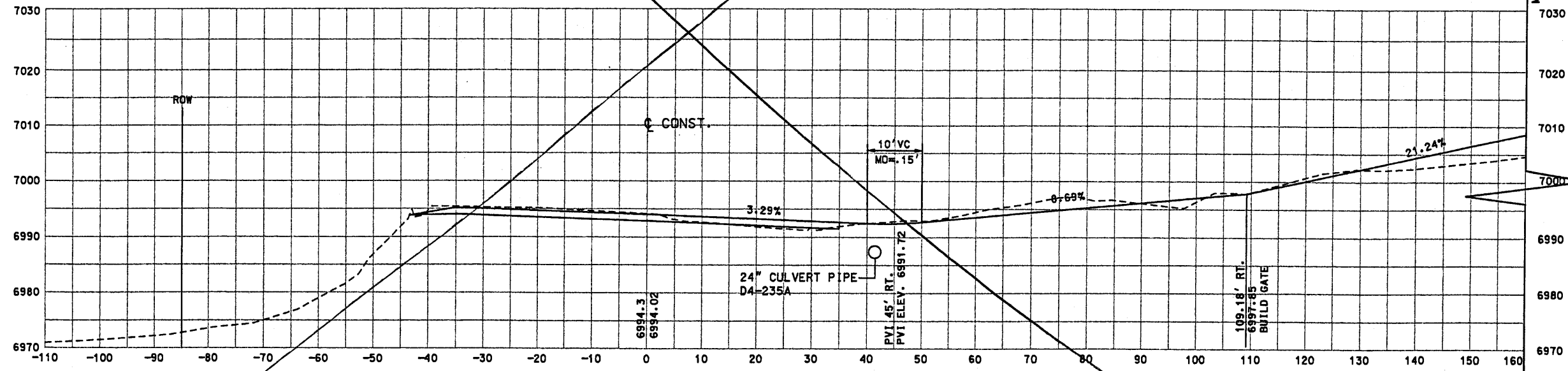
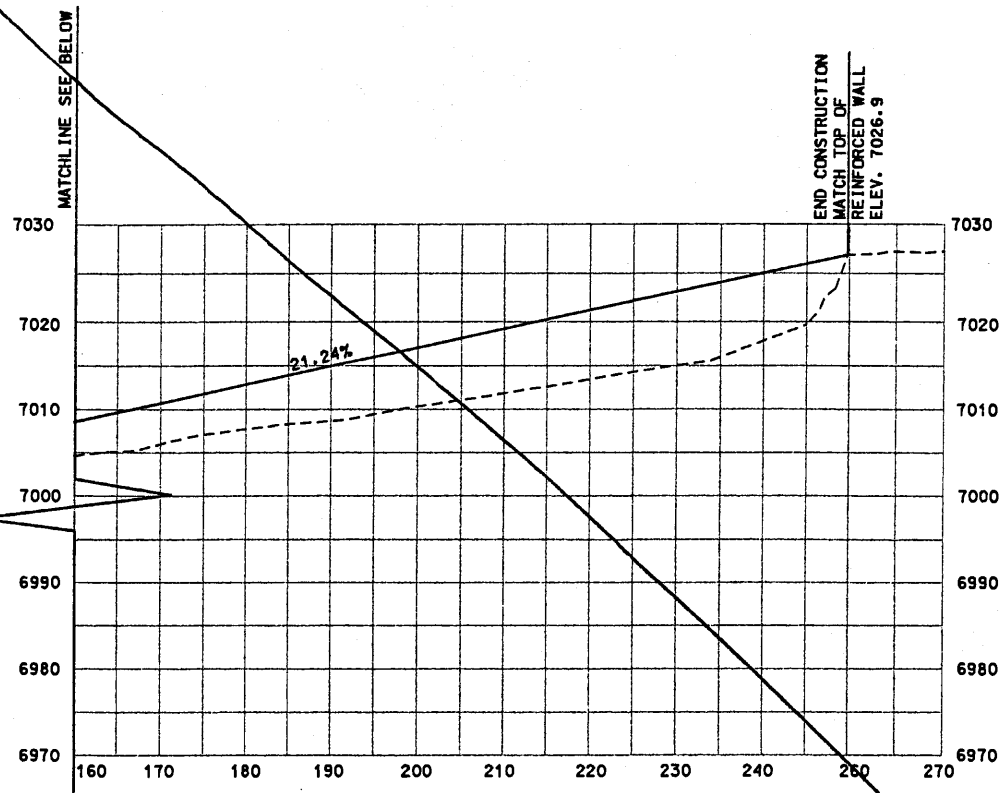
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \\s02-01\sect4\44444.mtd.dgn
 Plot Date: 10/99

Design File: \\IC\PROJECTS\98082-01\SECT4\44444.mtl.dgn
 Plot Date: 04 NOV 1999

SCALE:
 1" = 10' HORIZ.
 1" = 10' VERT.



T4-27A 4053+90.00
 BUILD 16' TURNOUT RT.
 BASECOURSE 220' RT.
 BUILD GATE @ 109.18' RT.
 20' R RT. & 8' R LT.
 TYPE "A" TURNOUT

DELETE

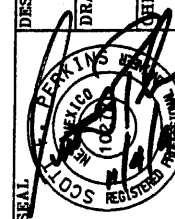
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



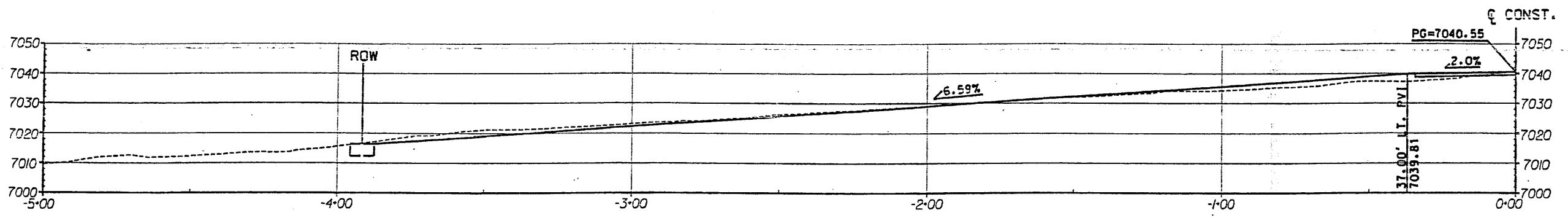
4-7A

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

New Sheet
10.31.00
PSC/PNF-0212

DRIVEPAD/
TURNOUT
PROFILES

0244
AC.NH.044.2(39)64
CW 3766

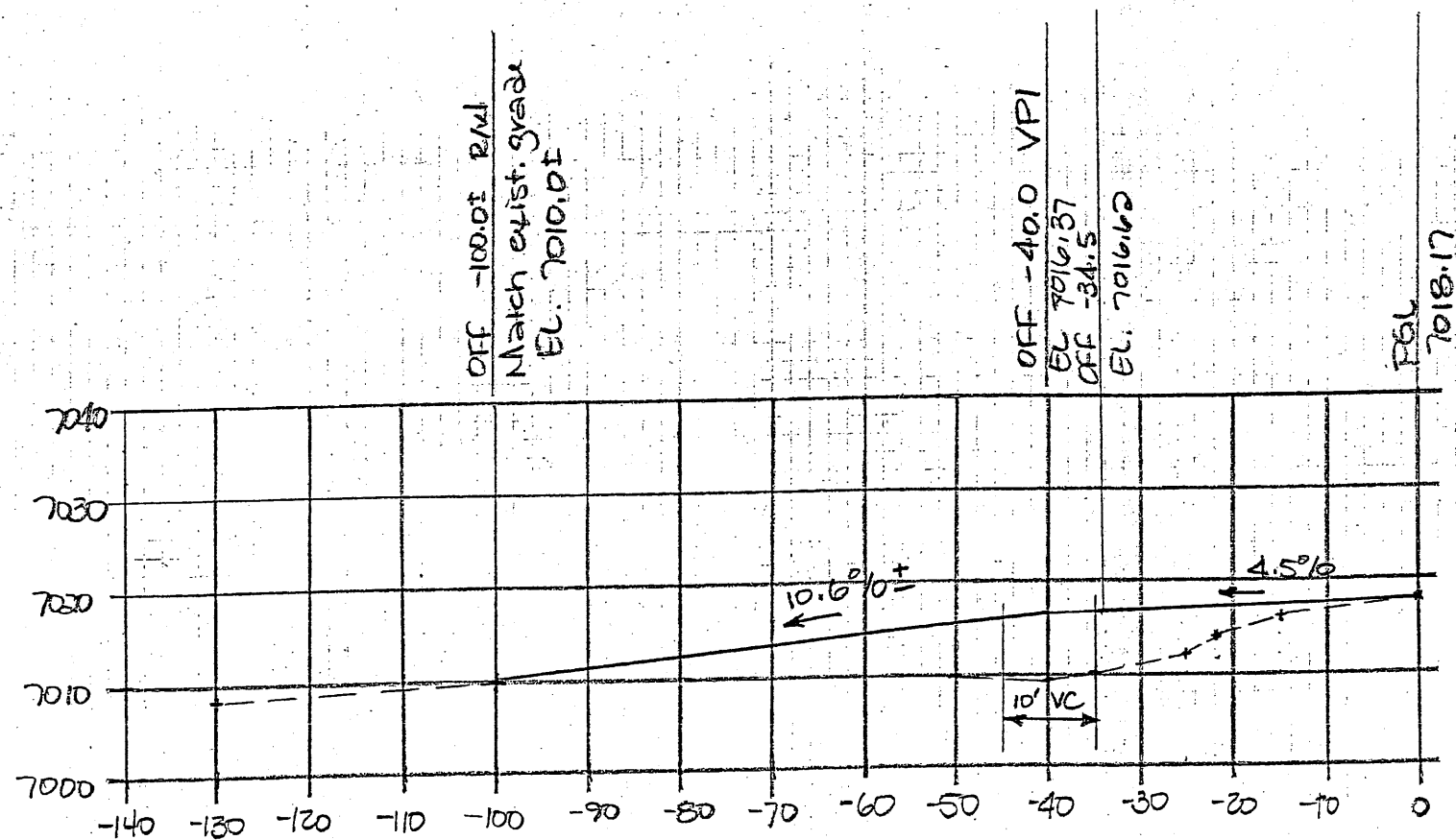


T4-30 4073+17.00

BUILD 16' TURNOUT LT.
PAVE 354.095' LT

EXISTING CATTLE GUARD TO BE REVIEWED BY FLATRION REMOVE & REPLACE CATTLE GUARD

20' R
TYPE "B" TURNOUT
~~EXISTING TYPE "A" PAVEMENT~~
MODIFIED TYPE "B" PAVEMENT



T4.30A

STA 4083+00 LT

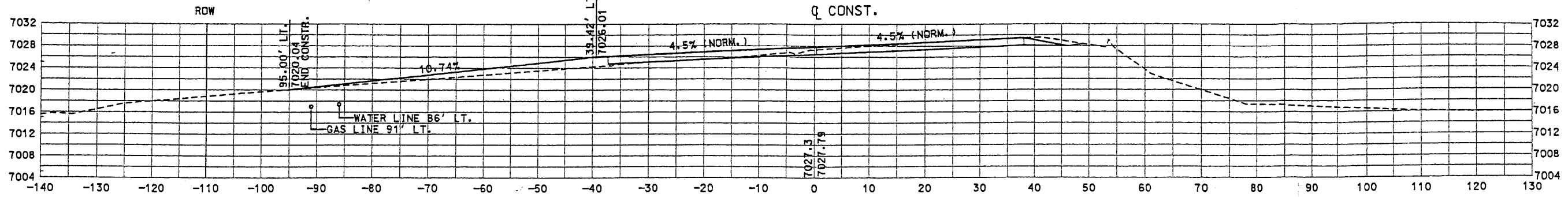
Build Turnout
Pave Type 'A' Pavement to 54.5' LT

16' wide, 20' Radii

New Sheet
8.24.01
FSC RFI 157

TURNOUT
PROFILES
NM 44
AC. NH. 014. 2(FI)A
AC. NH. 010. H. H. H.
77 MN
CW 3766

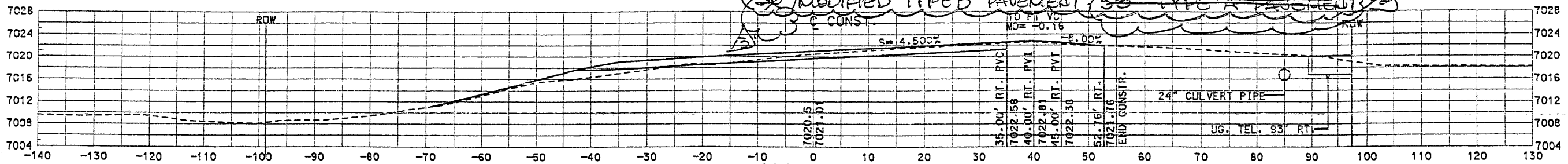
SCALE:
1" = 10' HORIZ.
1" = 10' VERT.



T4-33 4092+91.31
SKEW: 20° 11' 26" RF

BUILD 16' TURNOUT LT.
PAVE 57.71' LT.
EXIST. CATTLE GUARD & GATE
PAST R/W TO REMAIN IN PLACE

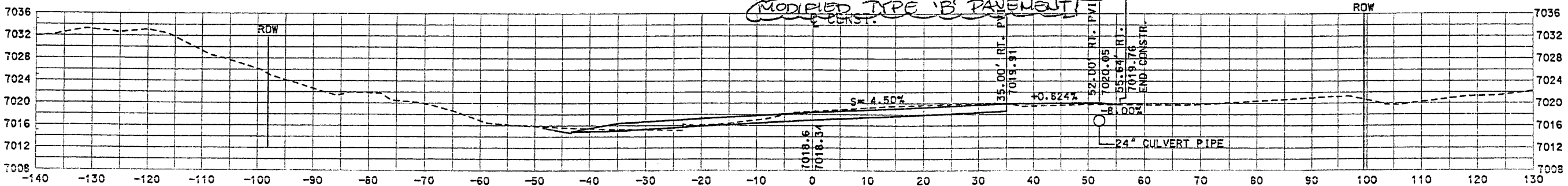
MODIFIED TYPE 'B' PAVEMENT *TYPE 'A' PAVEMENT*



T4-32 4089+95.27

BUILD 16' TURNOUT RT.
PAVE 17.76' RT.
EXISTING CATTLE GUARD & GATE TO
REMAIN IN PLACE

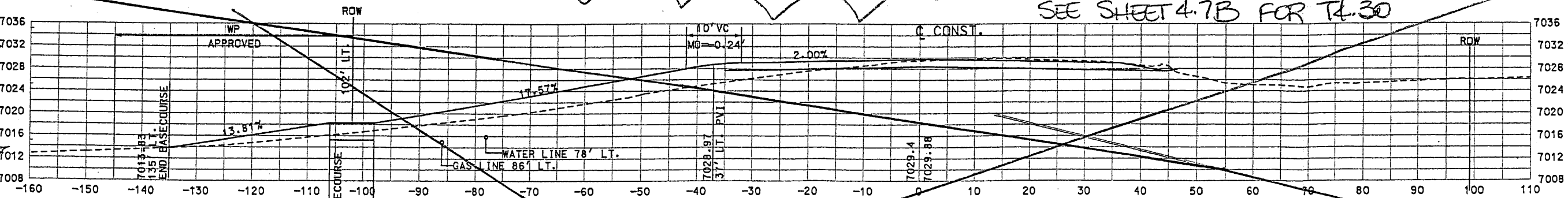
MODIFIED TYPE 'B' PAVEMENT



T4-31 4083+57.06

BUILD 16' TURNOUT RT.
PAVE 10 RWL
TYPE 'B' TURNOUT
20' RT
MODIFIED TYPE 'B' PAVEMENT

SEE SHEET 4.7B FOR T4.30



T4-30 4076+28.79

BUILD 16' TURNOUT LT.
PAVE 63' LT. & BASECOURSE FROM CATTLE GUARD TO 135' LT
REMOVE AND REPLACE CATTLE GUARD
20' R
RELOCATE 3 EXIST. STEEL BOLLARDS PER DIRECTION OF PROPERTY OWNERS
TYPE 'B' TURNOUT

SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE

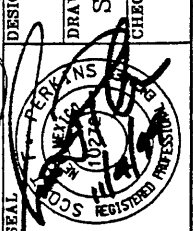
DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NII-044-2(39)64
CN 3766

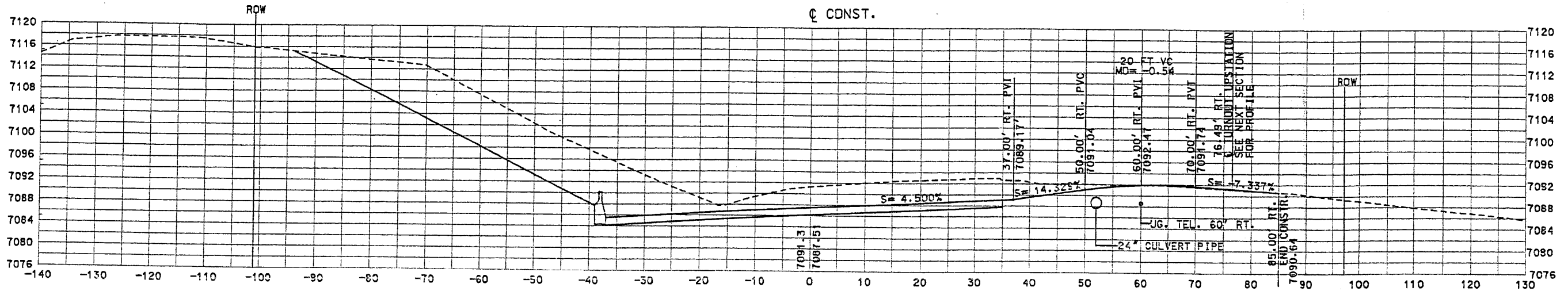
**WILSON
& COMPANY**

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



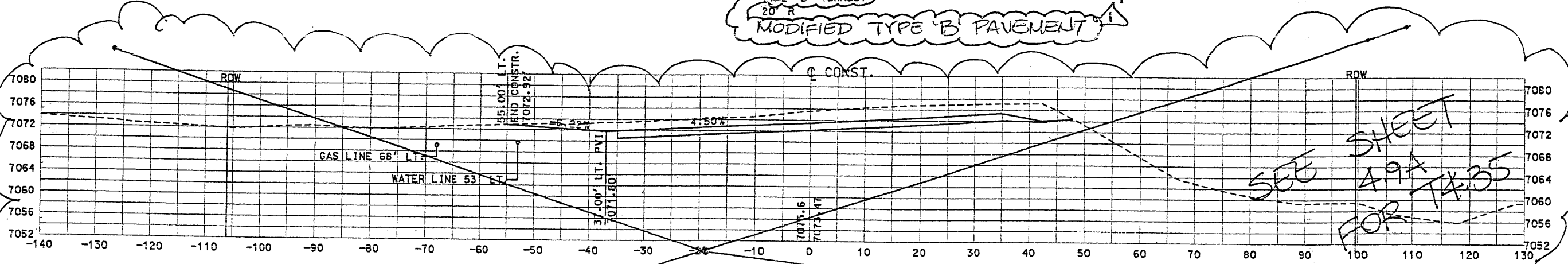
Design Plot Date: xong2-01\sect4\44444mt1.dgn 99

SCALE:
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 1" = 10' VERT.



T4-36 4105+58.90

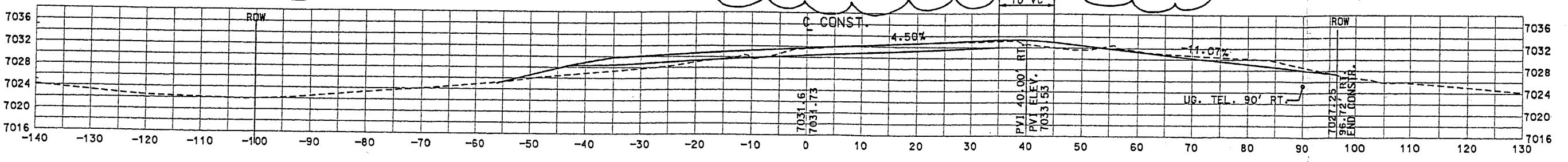
BUILD 16' TURNOUT RT.
 PAVE 20' RT. TO R/W
 TYPE "B" TURNOUT
 20' R
 MODIFIED TYPE 'B' PAVEMENT



T4-35 4101+85.96

BUILD 16' TURNOUT LT.
 PAVE 20' LT.
 TYPE "B" TURNOUT
 20' R
 MODIFIED TYPE 'B' PAVEMENT

SEE SHEET
 49A
 FOR TX-35



T4-34 4093+99.71

BUILD 24' TURNOUT RT.
 PAVE, 61.72' RT. TO R/W LINE.
 EXIST. CATTLE GUARD & GATE PAST
 R/W TO REMAIN IN PLACE.
 TYPE "D" TURNOUT
 20' R
 MODIFIED TYPE 'D' PAVEMENT

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE
 DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 NM 44
 CN 3763

WILSON & COMPANY

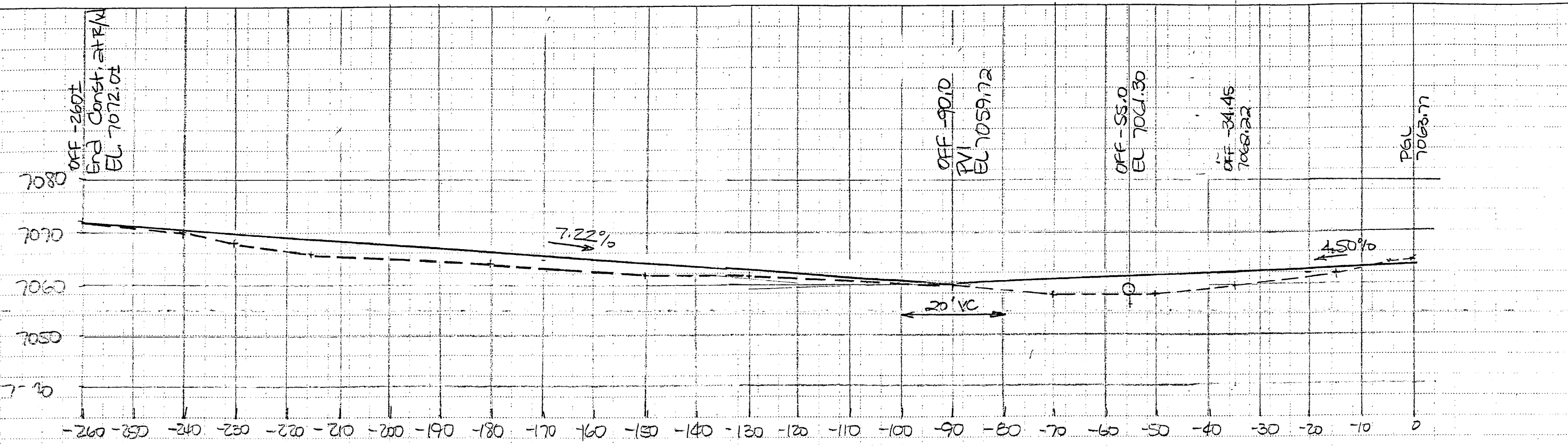
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

SEAL
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF NEW MEXICO
 NO. 1088

4-9

Design Plot Dat.
 8002-01\sect\44444.mtl.dgn
 11/99

MM44
AC-NH-044-2(39)64
CW3766



T4.35

SFA 4100+00 LT

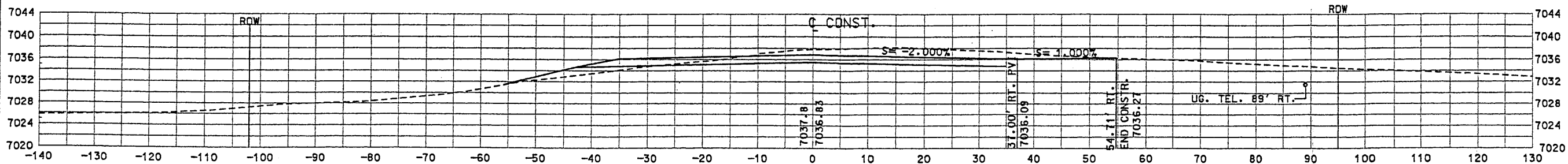
Build 16' Turnout, LT
Pave 20' Modified Type 'B' Pavement
& 205'± Type 'A' Pavement to R/W
20'R

Install 1-24" Culvert Pipe

Note: Provide 1% Cross Slope
on Turnout toward
highway

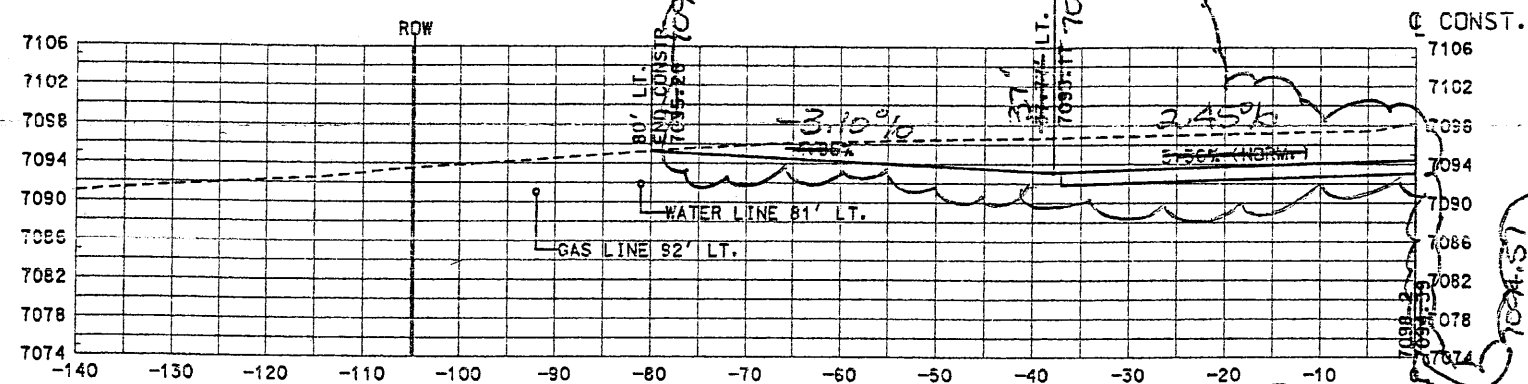
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11.30.01
FSC/PNF-0619

SCALE:
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 1" = 10' VERT.



T4-38 4131+35.27

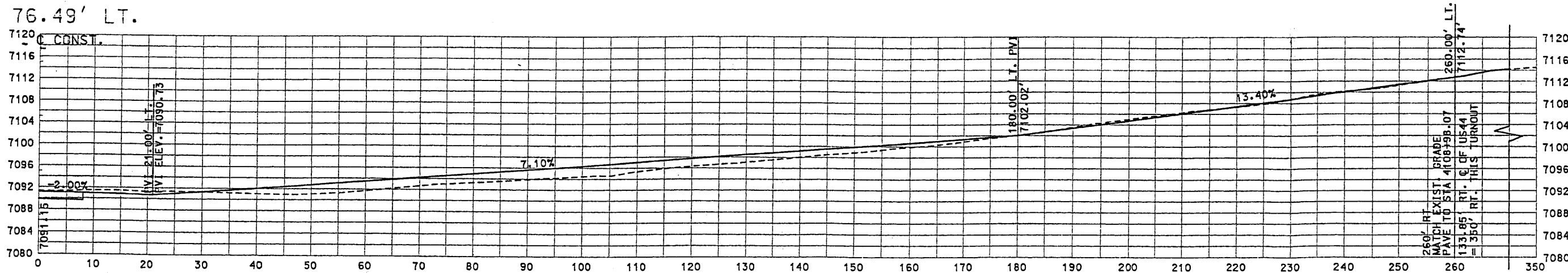
BUILD 16' TURNOUT RT.
 PAVE 334' RT. TO R/W
 TYPE 'B' TURNOUT
 20' R.
 MODIFIED TYPE 'B' PAVEMENT



SKREW: 13° 10' 8" LF

T4-37 4109+11.28 4109+65

BUILD 16' TURNOUT LT.
 BASECOURSE 44.05' LT.
 TYPE 'A' TURNOUT
 20' R.



T4-36A TURNOUT AT 4105+58.90 '-76.49' RT. TO
 STA 4108+98.07 '-133.85' RT.

BUILD 16' TURNOUT RT.
 PAVE 334' RT. TO R/W LINE.

TYPE 'B' TURNOUT
 20' RADIUS RT. TO R/W LINE
 30' MODIFIED TYPE 'B' PAVEMENT
 314' TYPE 'A' PAVEMENT

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE

DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3768

**WILSON
& COMPANY**

DESIGN BY:

DDM

DRAWN BY:

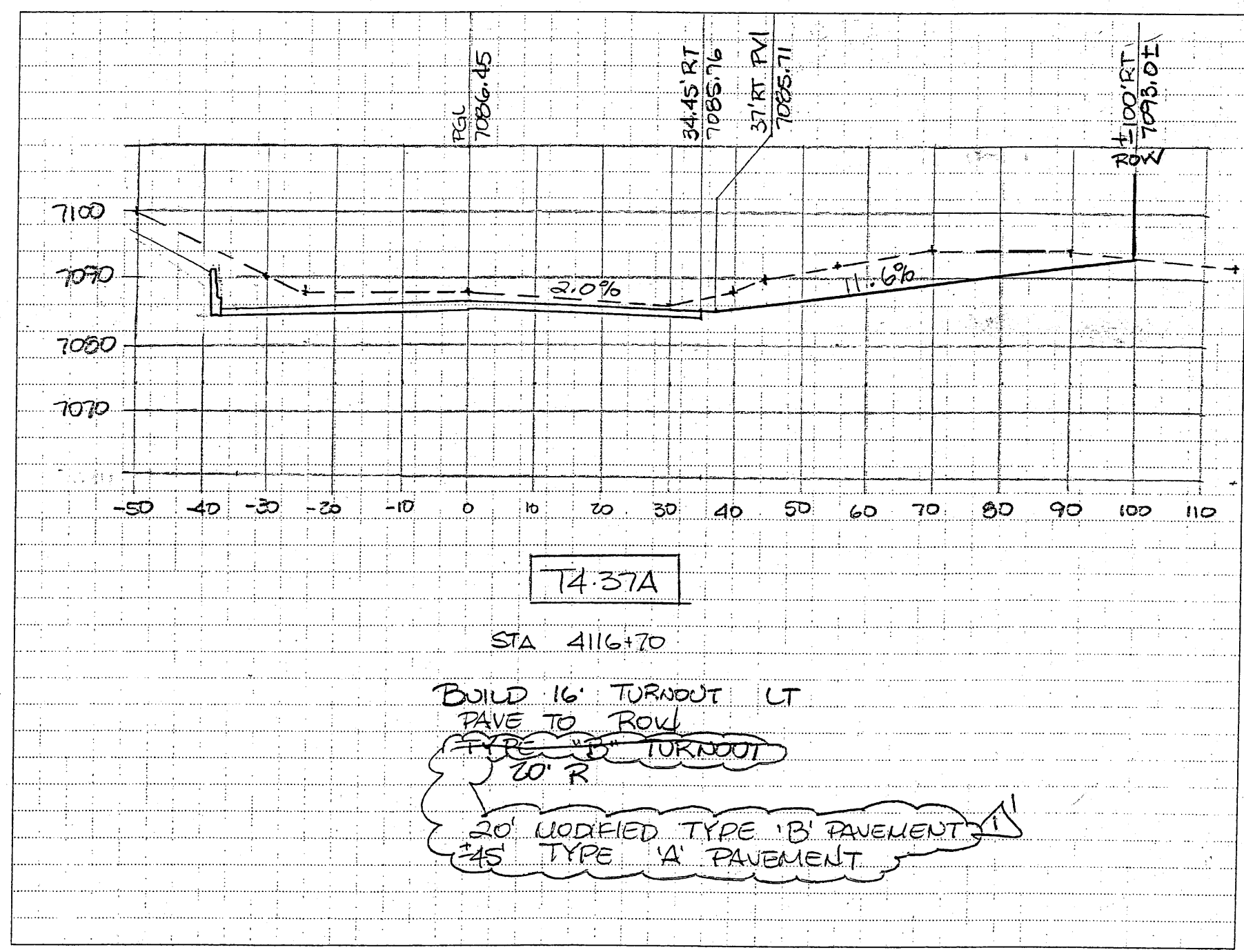
STAFF

CHECKED BY:

SFP

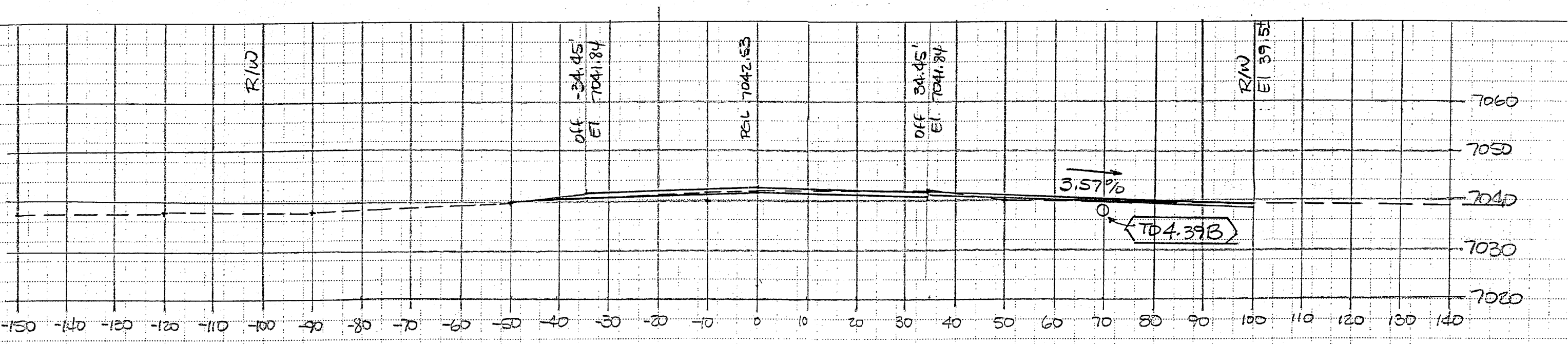


Turnout
Profiles



11/14
AC-NH-044.2(31)G
CW 3766

New Sheet
2.14.01
FSC/FNF-0282



TD 4.39B

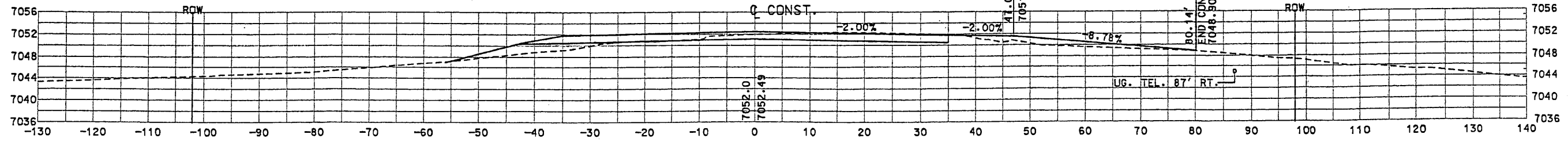
STA 448+80 RT

Build 16' Turnout
Type "A"
20' R

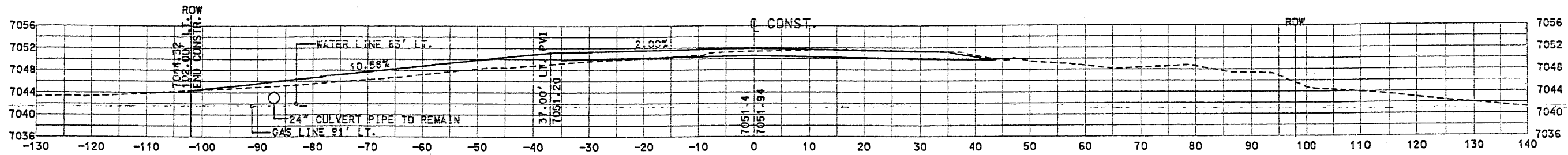
New Sheet
3.8.01
FSC/FNF-0298

MM 44
AC 24.041.84(39)6
11.31.12

SCALE:
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 1" = 10' VERT.

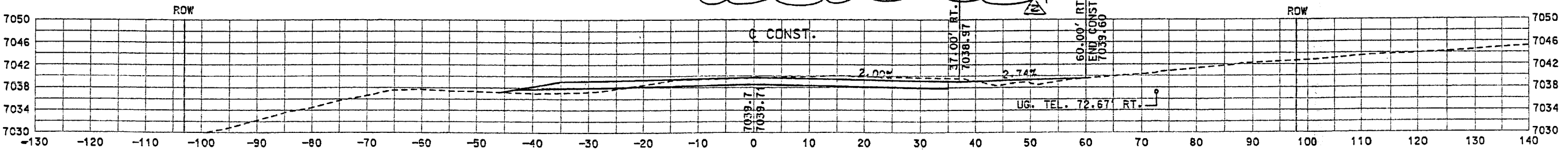


T4-41 4152+36.62
 BUILD 16' TURNOUT RT.
 BASECOURSE 45.14' RT.
 TYPE "A" TURNOUT
 20' R.

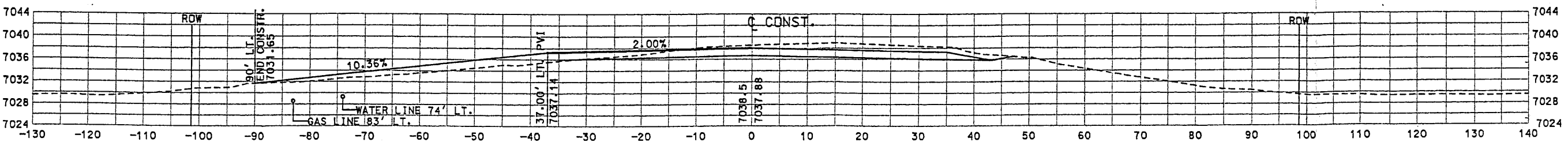


T4-40 4152+22.60
 BUILD 24' TURNOUT LT.
 PAVE 67' LT. TO R/W LINE
 TYPE "B" TURNOUT
 20' R.

*MODIFIED TYPE 'B' PAVEMENT,
 AT TYPE 'A' PAVEMENT*



T4-39A 4143+95
 BUILD 16' TURNOUT RT.
 BASECOURSE 25' RT.
 TYPE "A" TURNOUT
 20' R.



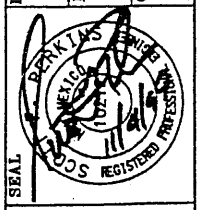
T4-39 4137+86.29
 BUILD 16' TURNOUT LT.
 BASECOURSE 55' LT.
 TYPE "A" TURNOUT
 20' R.

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE
DRIVEPAD / TURNOUT PROFILES
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

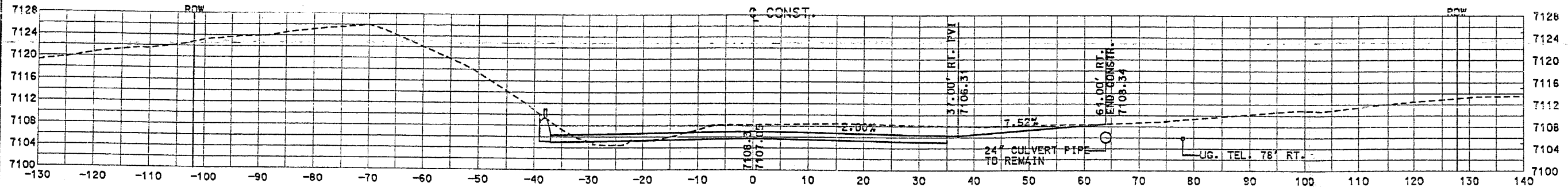


DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \\s02-01\sect4\44444mt1.dgn
 Plot Date: 03 99

SCALE:
 1" = 10' HORIZ.
 1" = 10' VERT.



T4-42 4165+55.51

BUILD 16' TURNOUT RT.
 BASE COURSE 2" RT.
 TYPE 'A' TURNOUT
 20' R.

PAVE TO R/W
 MODIFIED TYPE 'B' PAVEMENT

SHEET TITLE

DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NII-044-2(39)64
 CN 3766

**WILSON
 & COMPANY**

DESIGN BY:
DDM

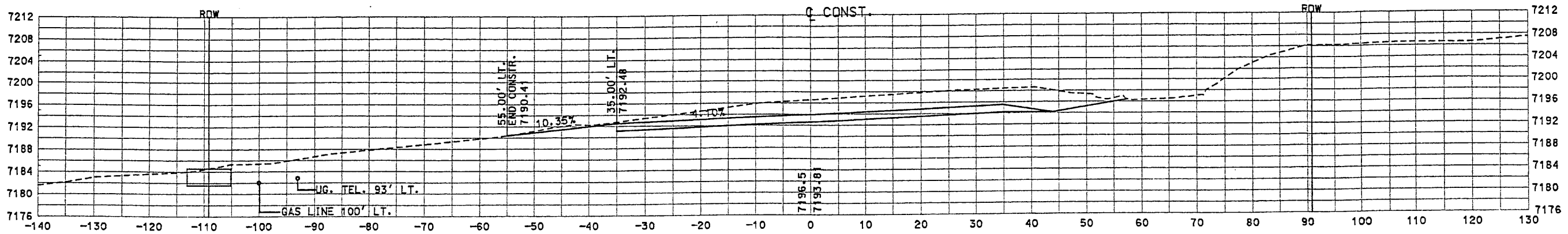
DRAWN BY:
STAFF

CHECKED BY:
SFP



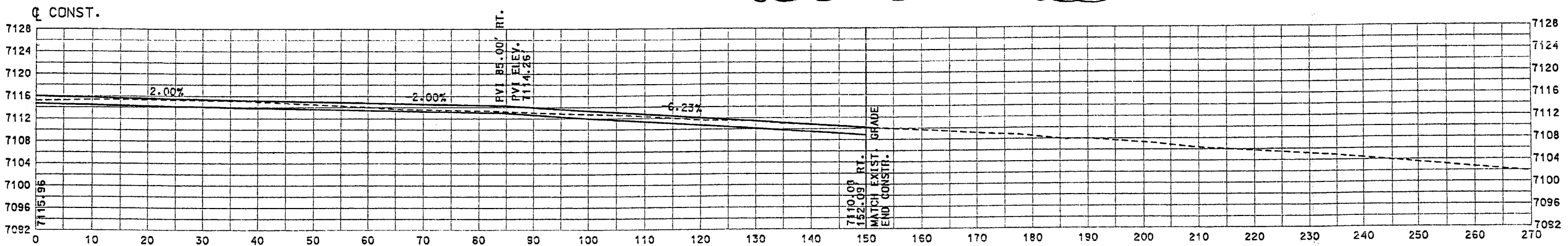
NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SCALE:
1" = 10' HORIZ.
1" = 10' VERT.



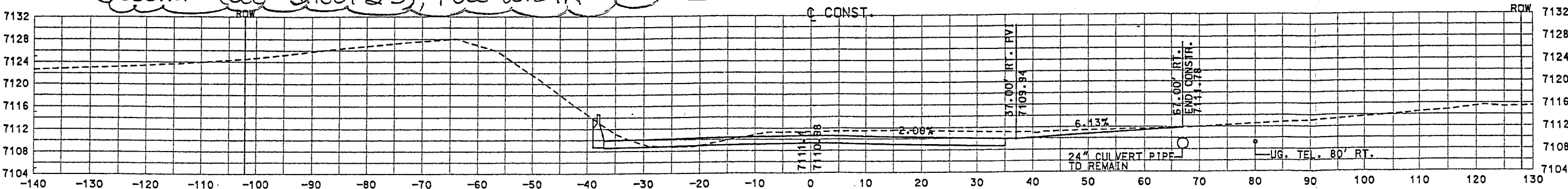
T4-45 4202+63.78

BUILD 16' TURNOUT LT
PAVE 20.00' LT. (15' CATTLE GUARD
EXISTING CATTLE GUARD & GATE TO
REMAIN IN PLACE
TYPE 'B' TURNOUT
90' R.
MODIFIED TYPE 'B' PAVEMENT



T4-44 MAJOR TURNOUT
SKEW: 5°12'7" R.F.
4177+12.52 (NM 96)

BUILD 40' TURNOUT RT
PAVE 110.00' RT.
100' R.
TURNOUT PAVEMENT TO MATCH ROADWAY PAVEMENT SECTION (SEE SHEET 2-3), FULL WIDTH



T4-43 4167+44.17

BUILD 16' TURNOUT RT
BASECOURSE 32' RT. PAVE TO ROW
TYPE 'A' TURNOUT
20' R.
MODIFIED TYPE 'B' PAVEMENT

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE
DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)164
CN 3766

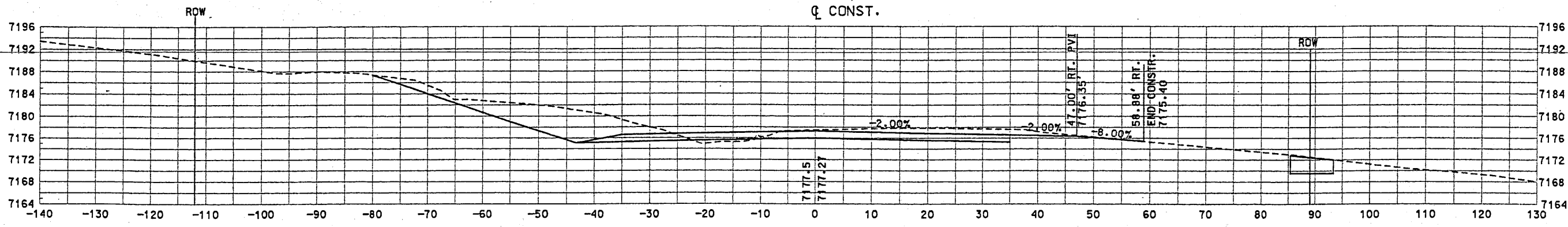


DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP

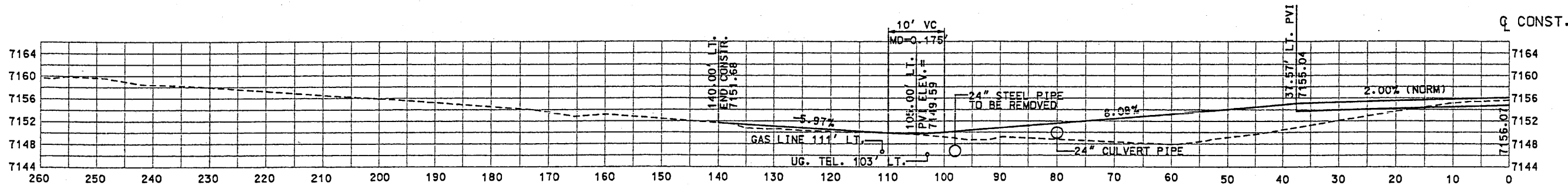


Design Plot Date: 12-01\sect4\44444mtl.dgn 99

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 1" = 10' VERT.

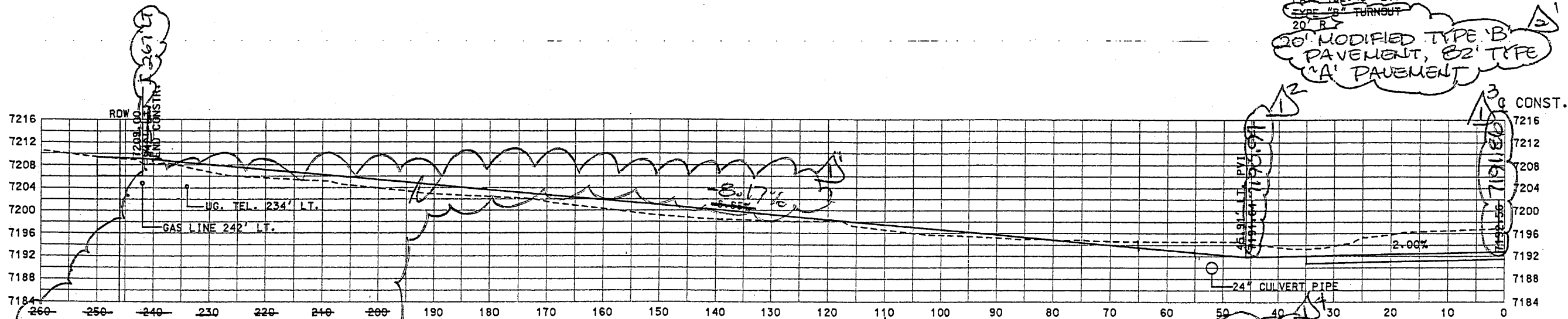


T4-48 4246+26.33
 BUILD 16' TURNOUT RT.
 BASECOURSE 23.88' RT.
 INSTALL CATTLE GAURD AT R/W LINE.
 TYPE "A" TURNOUT
 20' R



T4-47 SKEW: 21°19'34" LF
 4224+27.22
 BUILD 16' TURNOUT LT.
 PAVE 102.43' LT.
 TYPE "B" TURNOUT
 20' R

20' MODIFIED TYPE 'B' PAVEMENT, 82' TYPE 'A' PAVEMENT



30' MODIFIED TYPE 'B' PAVEMENT, 1203' TYPE 'A' PAVEMENT

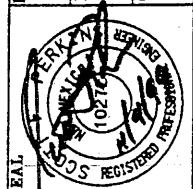
T4-46 4215+00 BUILD 16' TURNOUT LT.
 PAVE 263' LT. TO CATTLE GUARD
 REMOVE AND REPLACE CATTLE GUARD.
 TYPE "B" TURNOUT
 30' RADIUS RT. 15' RADIUS LT.

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

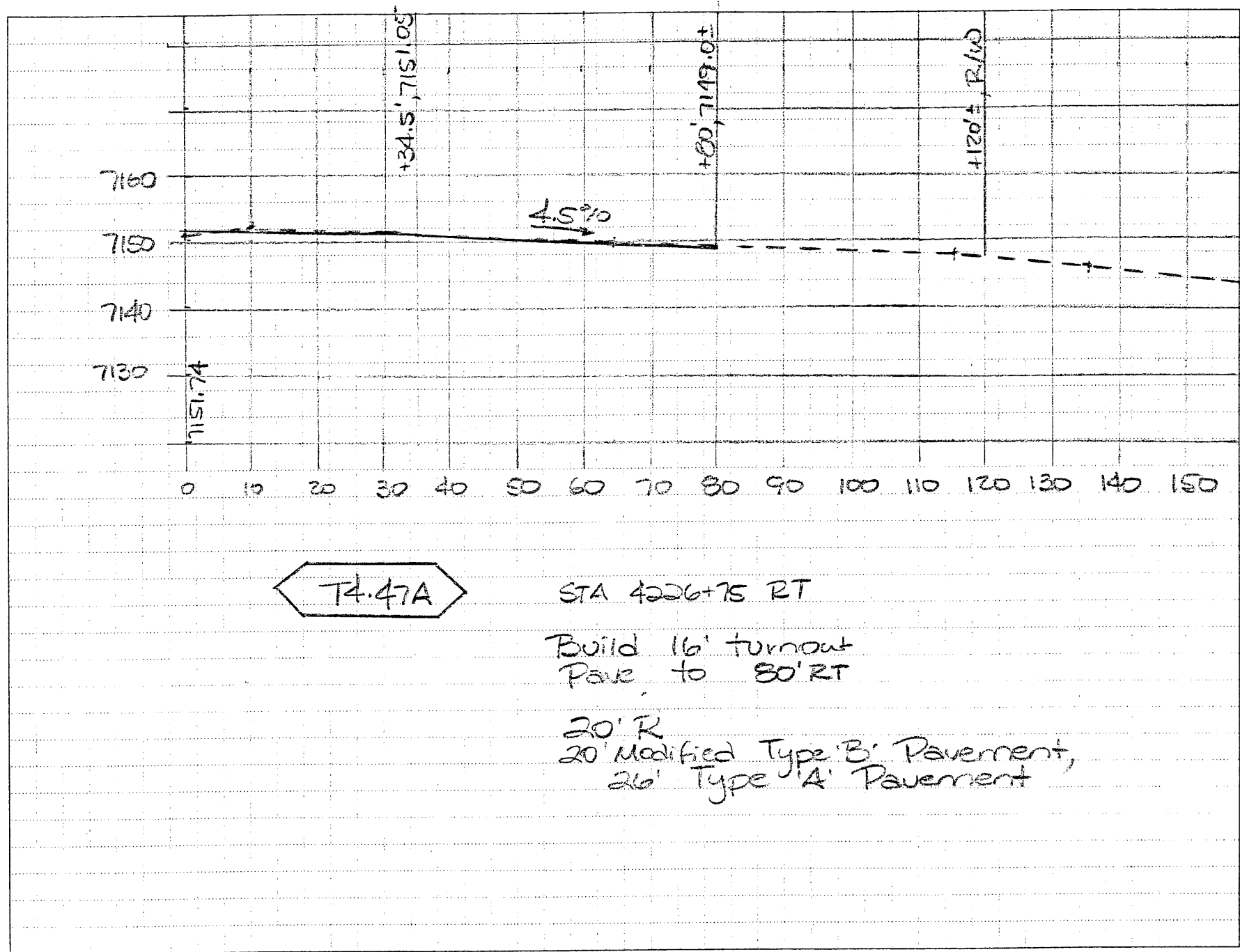
SHEET TITLE
 DRIVEPAD / TURNOUT PROFILES
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: 102-01\sect4\44444\mtl.dgn
 Plot Date: 11/99



T4.47A

STA 4226+75 RT

Build 16' turnout
Pave to 80' RT

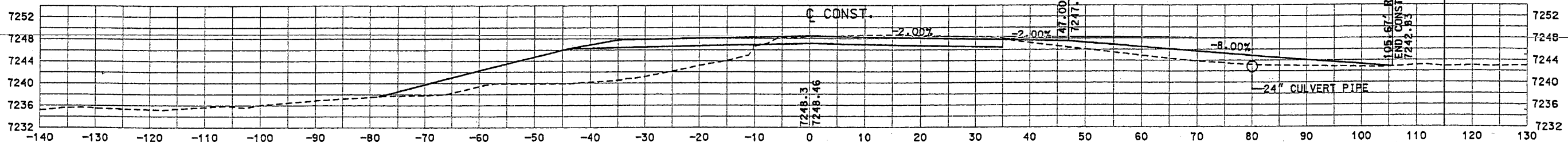
20' R
20' Modified Type 'B' Pavement,
26' Type 'A' Pavement

DRIVEPAD/
TURNOUT
PROFILES

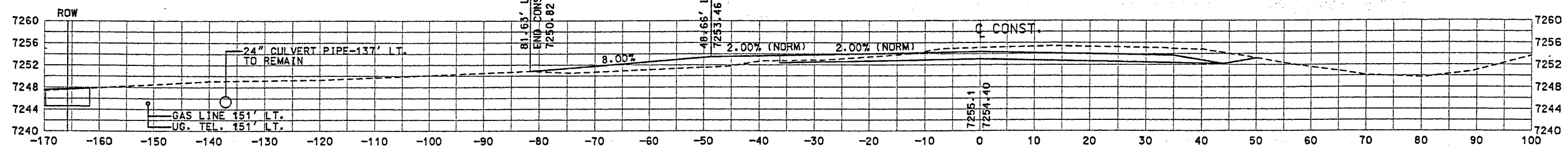
NM 44
AC.NH.044 2(39)64
CU 3766

New Sheet
9.4.01
FSC RFI 160

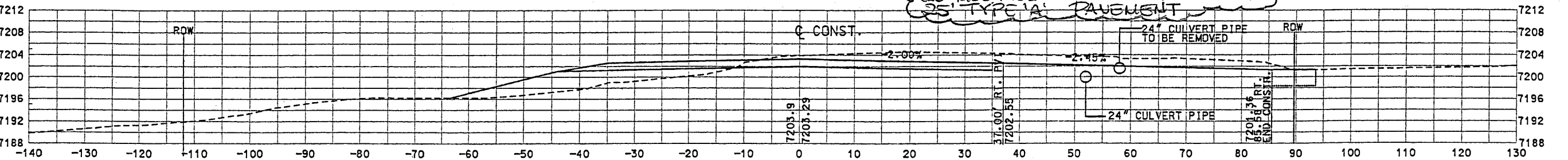
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 1" = 10' VERT.



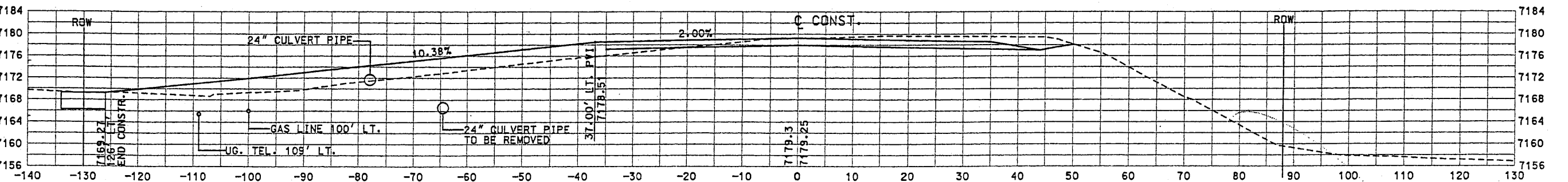
T4-52 4329+35.25
 BUILD 16' TURNOUT RT.
 BASECOURSE 70.67' RT.
 EXISTING GATE AT R/W LINE TO REMAIN
 IN PLACE.
 TYPE "A" TURNOUT
 20' R



T4-51 4307+33.65
 SKEW: 15° 1' 3" L.F.
 BUILD 16' TURNOUT LT.
 PAVE 45.39' LT.
 REMOVE AND REPLACE CATTLE GUARD.
 TYPE "B" TURNOUT
 20' MODIFIED TYPE "B" PAVEMENT
 35' TYPE "A" PAVEMENT



T4-50 4259+96.39
 BUILD 16' TURNOUT RT.
 BASECOURSE 50.58' RT. TO CATTLE GUARD
 EXISTING CATTLE GUARD & GATE TO
 REMAIN IN PLACE.
 TYPE "A" TURNOUT
 20' R



T4-49 4252+37.71
 BUILD 16' TURNOUT LT.
 BASECOURSE 91.00' LT. TO CATTLE GUARD
 REMOVE AND REPLACE CATTLE GUARD & GATE.
 TYPE "A" TURNOUT
 20' R

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE
 DRIVEPAD / TURNOUT PROFILES

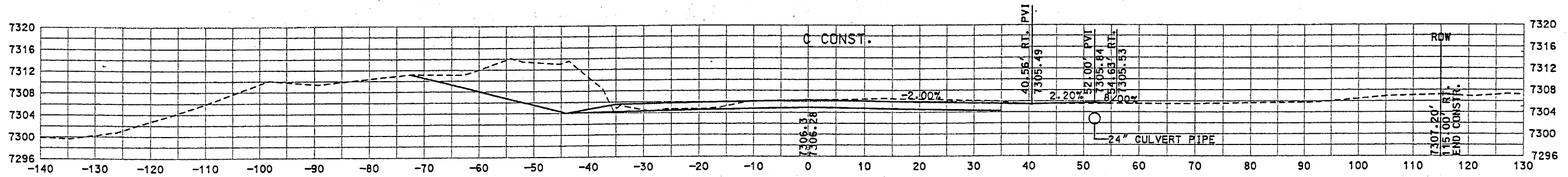
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



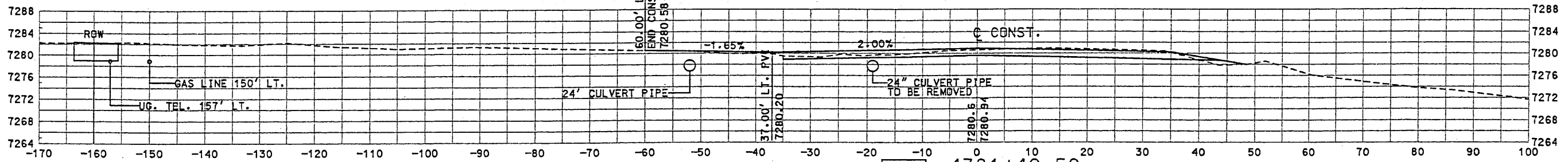
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

Design File: 982-01\sect4\44444mtl.dgn
 Plot Date: V 99

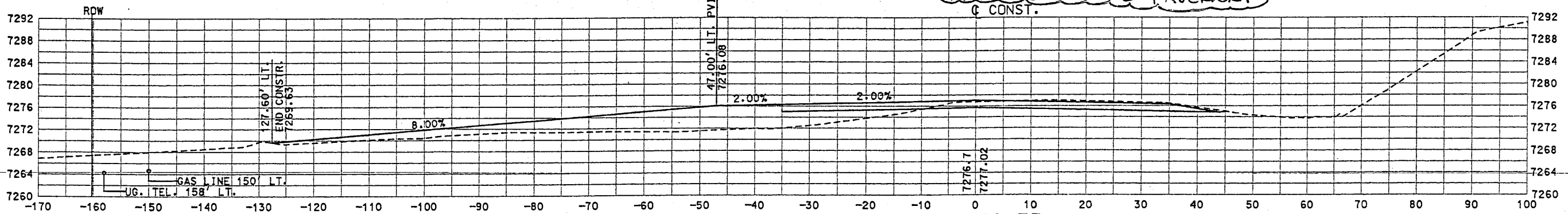
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 1" = 10' VERT.



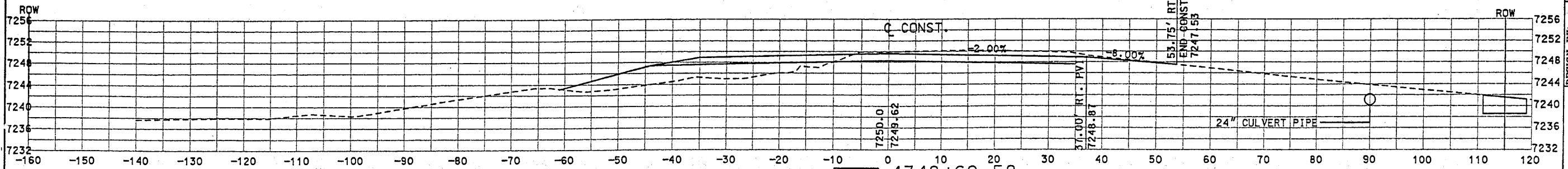
T4-56 4394+14.92
 BUILD 16' TURNOUT RT.
 BASECOURSE 19.63' RT.
 EXISTING GATE AT R/W LINE TO
 REMAIN IN PLACE.
 TYPE "A" TURNOUT
 20' R



T4-55 4381+40.59
 BUILD 16' TURNOUT LT.
 PAVE 25.00' LT.
 INSTALL CATTLE GAURD
 AT R/W LINE.
 TYPE "B" TURNOUT
 20' R
 MODIFIED TYPE 'B' PAVEMENT
 C CONST.



T4-54 4368+40.73
 BUILD 16' TURNOUT LT.
 BASECOURSE 92.60' LT.
 TYPE "A" TURNOUT
 20' R



T4-53 4348+69.58
 BUILD 16' TURNOUT RT.
 BASECOURSE 18.75' RT.
 REMOVE & REPLACE CATTLE GUARD.
 20' R, TYPE "A" TURNOUT

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE

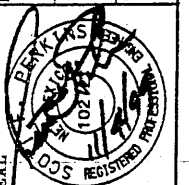
DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

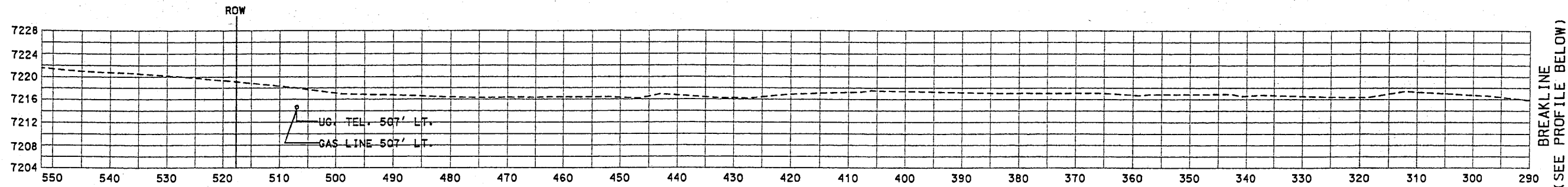
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)964
 CN 3766

**WILSON
 & COMPANY**

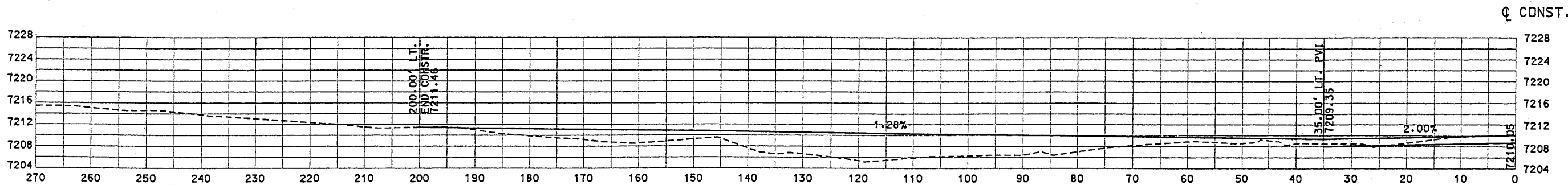
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



SCALE:
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 1" = 10' VERT.

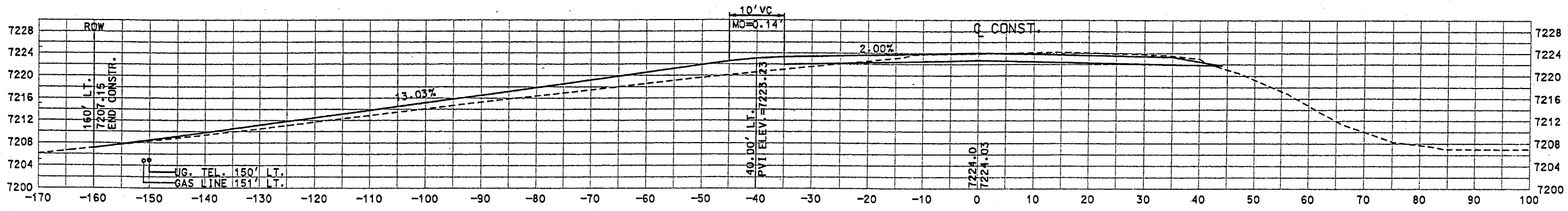


BREAKLINE
 (SEE PROFILE BELOW)



T4-58 4435+46.19 TO 4439+76.85'-160' LT.

BUILD 16' TURNOUT LT.
 BASECOURSE 165' LT.
 EXISTING GATE AT R/W LINE
 TO REMAIN IN PLACE.
 TYPE "A" TURNOUT
 20' RADIUS LT., 16' RADIUS RT.



T4-57 4430+26.44

BUILD 16' TURNOUT LT.
 PAVE 125' LT. TO R/W LINE.
 EXIST. CATTLE GUARD PAST R/W TO REMAIN
 TYPE "B" TURNOUT
 20' R.

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE

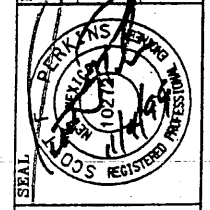
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)964
 CN 3766

DRIVEPAD / TURNOUT PROFILES

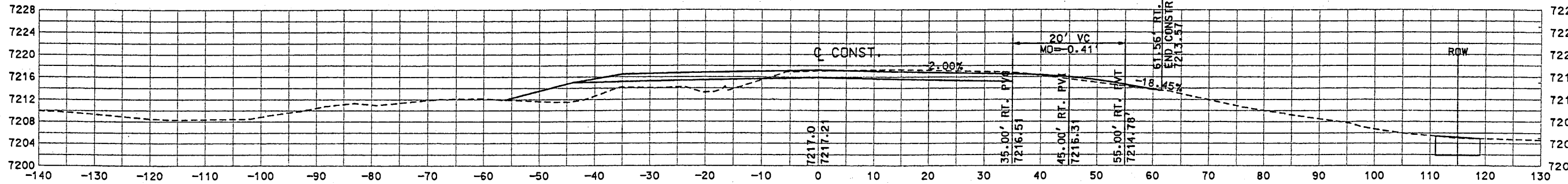
**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

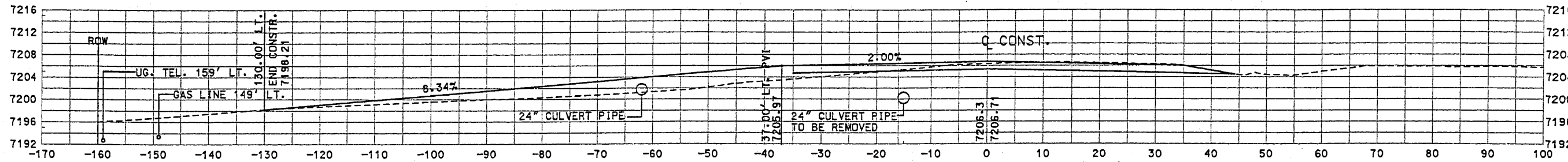


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 Plot Date: 7/99

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 1" = 10' VERT.

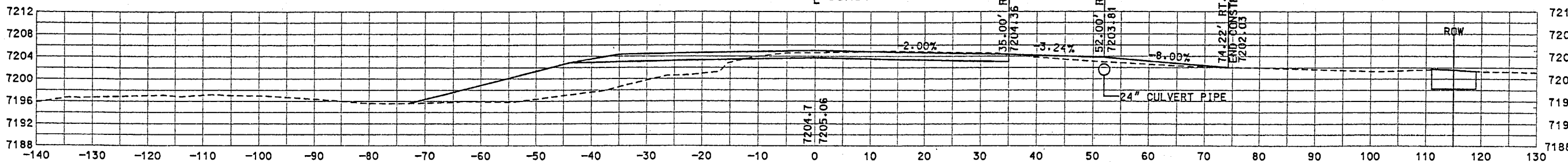


T4-62 4469+36.39
 BUILD 16' TURNOUT RT.
 BASECOURSE 26.56'
 REMOVE & REPLACE CATTLE GUARD
 TYPE "A" TURNOUT
 20' R

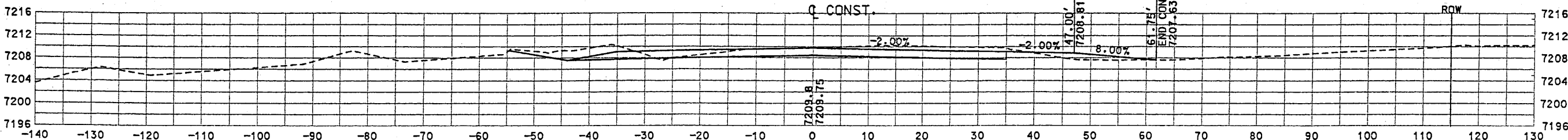


T4-61 4465+83.51
 BUILD 16' TURNOUT LT.
 PAVE 95' LT.
 TYPE "B" TURNOUT
 20' R.

20' MODIFIED TYPE 'B' PAVEMENT,
 15' TYPE 'A' PAVEMENT



T4-60 4465+28.58
 BUILD 16' TURNOUT RT.
 BASECOURSE 39.22' RT.
 INSTALL CATTLE GUARD AT
 R/W LINE.
 TYPE "A" TURNOUT
 20' R.



T4-59 4435+59.12
 BUILD 16' TURNOUT RT.
 BASECOURSE 27.65' RT.
 EXISTING GATE AT R/W LINE
 TO REMAIN IN PLACE.
 TYPE "A" TURNOUT
 20' R

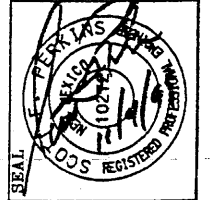
NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE
 DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

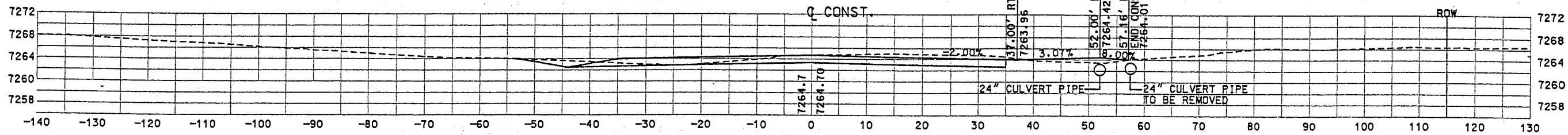
**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: 082-01\sect4\44444mt1.dgn
 Plot Date: JV 99

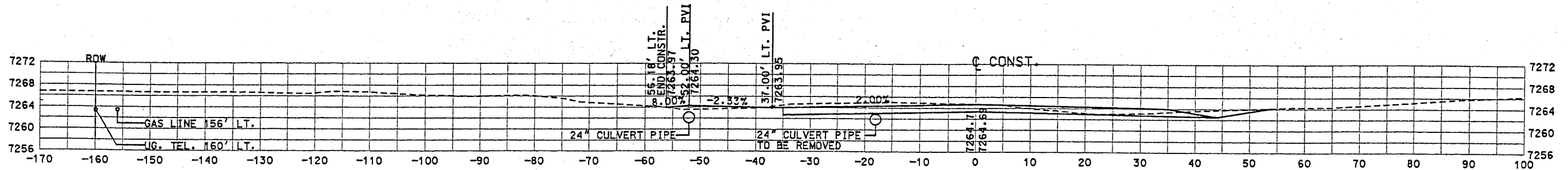
SCALE:
 1" = 10' HORIZ.
 1" = 10' VERT.



T4-66 4569+18.33

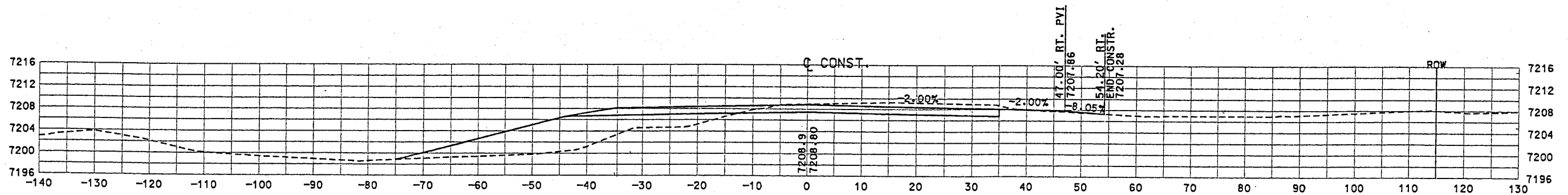
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 PAVE 22.16' RT.
 TYPE "B" TURNOUT
 20' R

MODIFIED TYPE "B" PAVEMENT



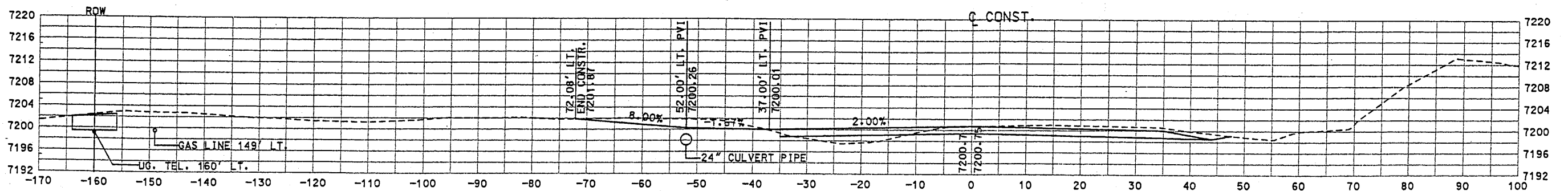
T4-65 4569+17.22

BUILD 16' TURNOUT LT.
 BASECOURSE 21.18' LT.
 TYPE "A" TURNOUT
 20' R



T4-64 4520+63.36

BUILD 16' TURNOUT RT.
 BASECOURSE 19.20' RT.
 TYPE "A" TURNOUT
 20' R



T4-63 4517+37.74

BUILD 16' TURNOUT LT.
 BASECOURSE 37.08' LT.
 REMOVE & REPLACE CATTLE GUARD
 TYPE "A" TURNOUT
 20' R

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE

DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
 & COMPANY**

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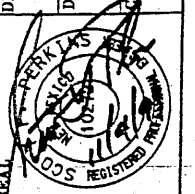
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STAFF

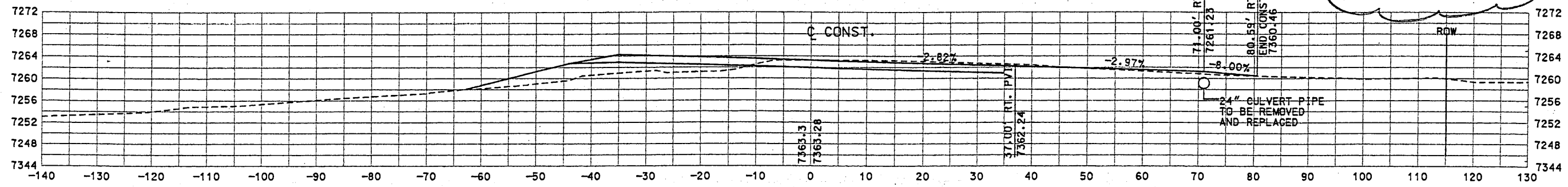
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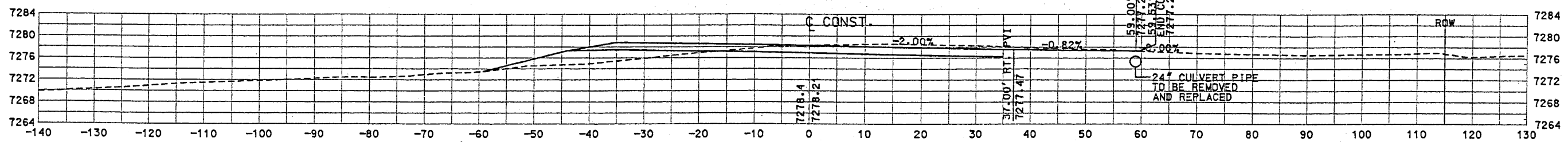


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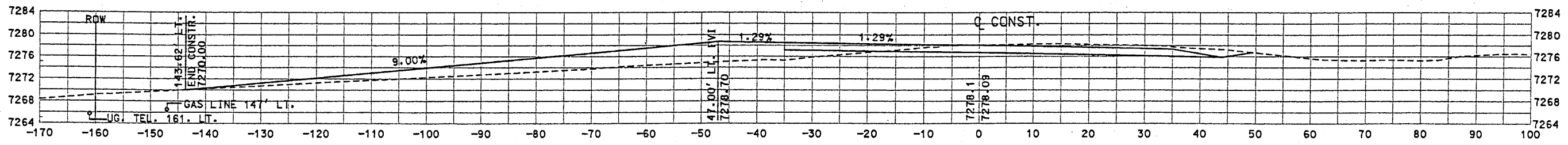
NOTE: See sheet 4.19A
 for T4.69A &
 T4.70A



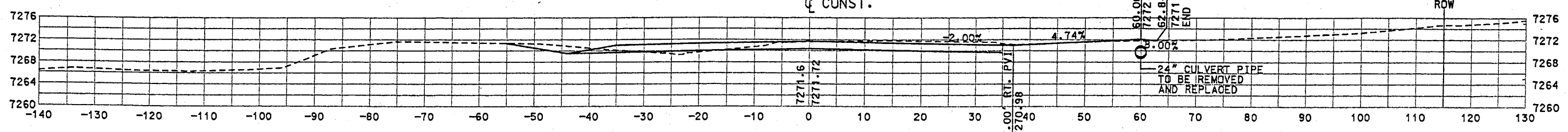
T4-70 4616+10.45
 BUILD 16' TURNOUT RT.
 BASECOURSE 45.59' RT.
 TYPE "A" TURNOUT
 20' R



T4-69 4581+51.58
 BUILD 16' TURNOUT RT.
 BASECOURSE 24.53'
 EXISTING GATE AT R/W LINE
 TO REMAIN IN PLACE.
 TYPE "A" TURNOUT
 20' R



T4-68 4581+35.00
 BUILD 16' TURNOUT LT.
 BASECOURSE 108.62' LT.
 TYPE "A" TURNOUT
 20' R



T4-67 4575+56.64
 BUILD 16' TURNOUT RT.
 BASECOURSE 27.84' RT.
 TYPE "A" TURNOUT
 20' R

SHEET TITLE

DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



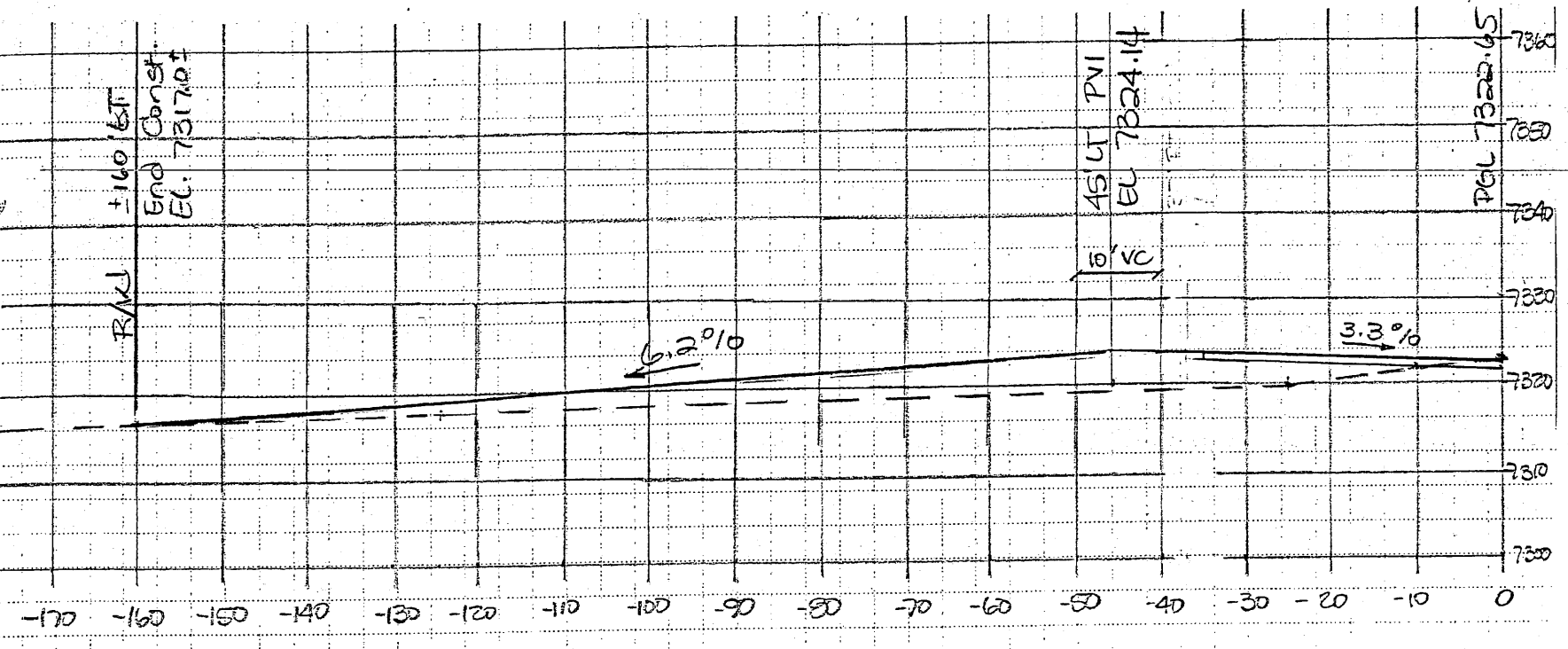
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NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

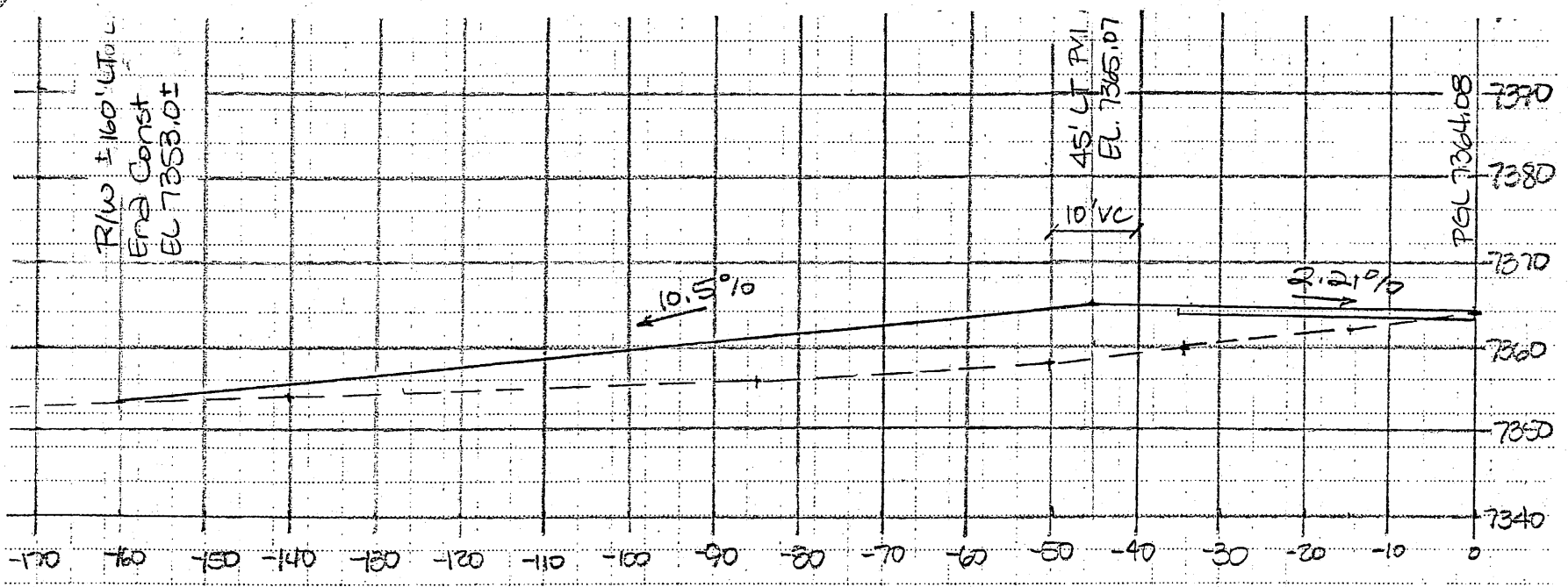
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Driveway
Turnout
Profiles



T4.69A

STA 4602+00 LT
Build 16' turnout
to R/W
Type 'A' Pavement
20' R



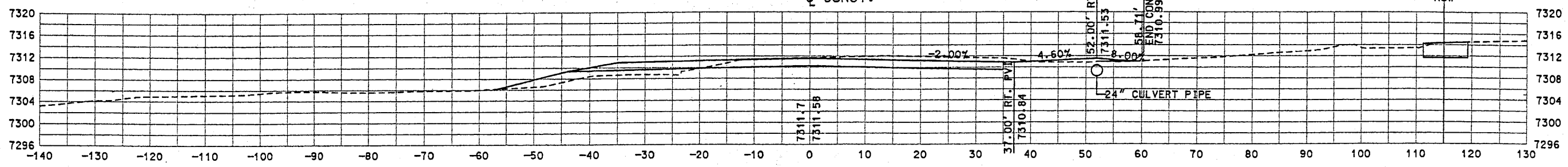
T4.70A

STA 4616+47 LT
Build 16' turnout
to R/W
Type 'A' Pavement
20' R

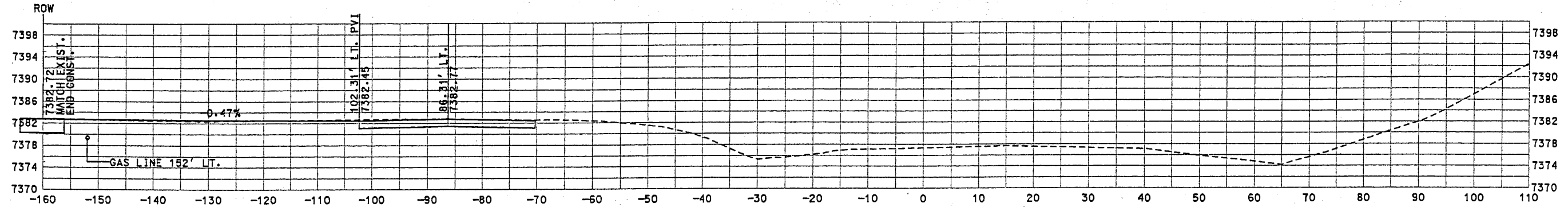
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N1144
AC.NH.044.2(39)64
CN 3766

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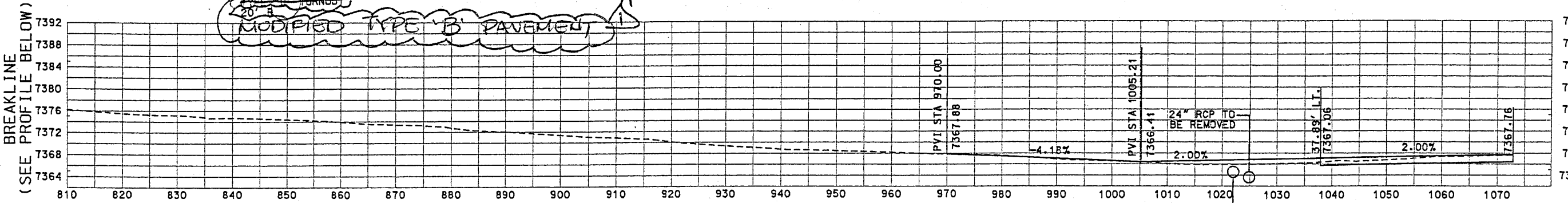


T4-73 4654+03.32
BUILD 16' TURNOUT RT.
BASECOURSE 23.71' RT.
TYPE "A" TURNOUT
20' R



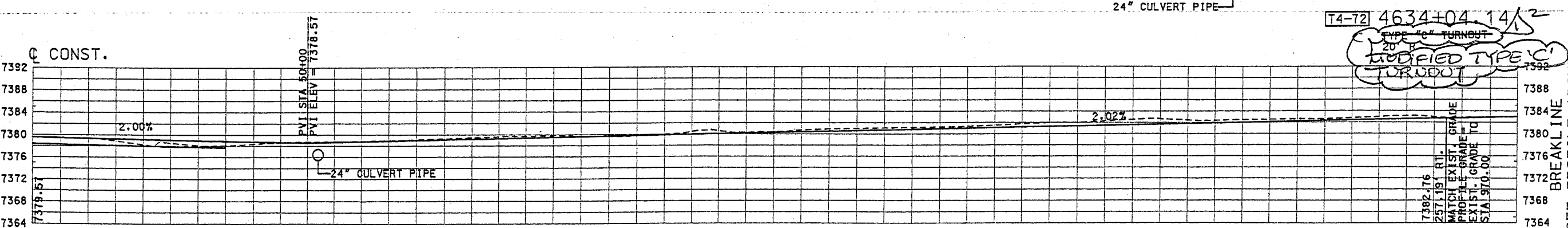
T4-71A NM44 STA 4629+86.56'-86.31' LT. =
STA 589.27 TURNOUT STA 4624+60.50
BUILD 24' TURNOUT LT., PAVE 57.69' LT TO ROW LINE
REMOVE AND REPLACE CATTLE GUARD

MODIFIED TYPE 'B' PAVEMENT



T4-72 4634+04.14

*TYPE 'C' TURNOUT
MODIFIED TYPE 'C' TURNOUT*



T4-71 4624+60.50 TO

T4-72 4634+04.14

BUILD 32' TURNOUT LT.
PAVE 1002' ALONG TURNOUT
AT STA 589.27
BUILD 24' WIDE TURNOUT LT.
TYPE "C" TURNOUT
20' RADIUS LT., 16' RADIUS RT.

MODIFIED TYPE 'C' PAVEMENT

SHEET TITLE

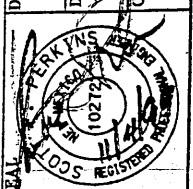
NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

DRIVEPAD / TURNOUT PROFILES

NM 44
PROJECT NO AC-NH-044-2(3)9(6)4
CN 3766

WILSON & COMPANY

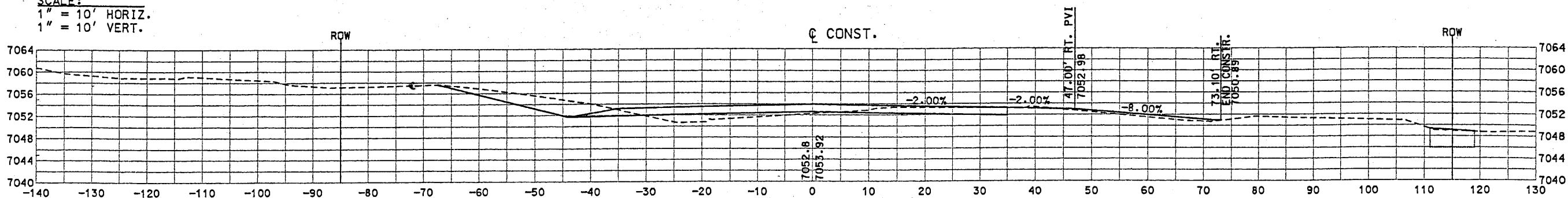
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DRAWN BY: STAFF
CHECKED BY: SFP



NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

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Plot Date: 7/99

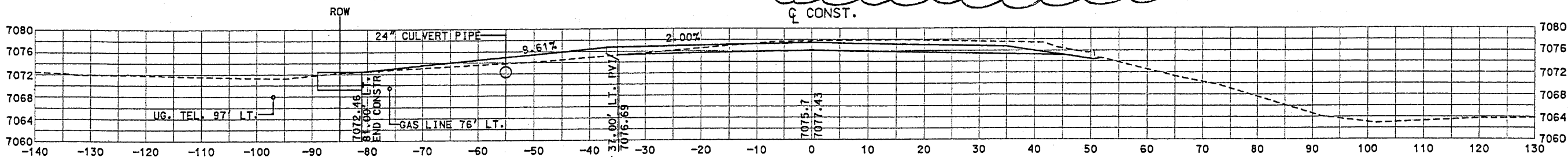
SCALE:
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T4-76 4828+84.55

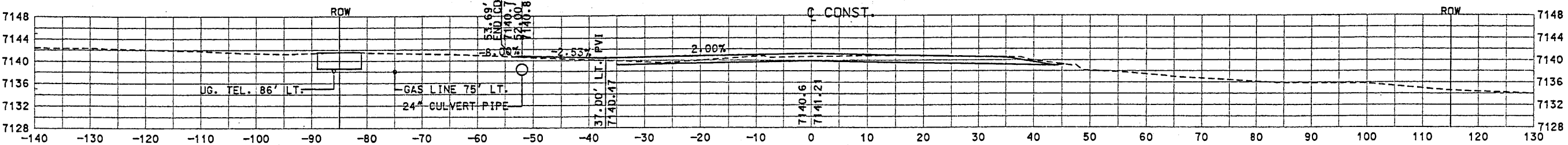
BUILD 24' TURNOUT RT.
 PAVE 38.10'
 EXISTING CATTLE GUARD & GATE
 TO REMAIN IN PLACE.

20' R
 20' MODIFIED TYPE 'A' PAVEMENT, 18' TYPE 'A' PAVEMENT



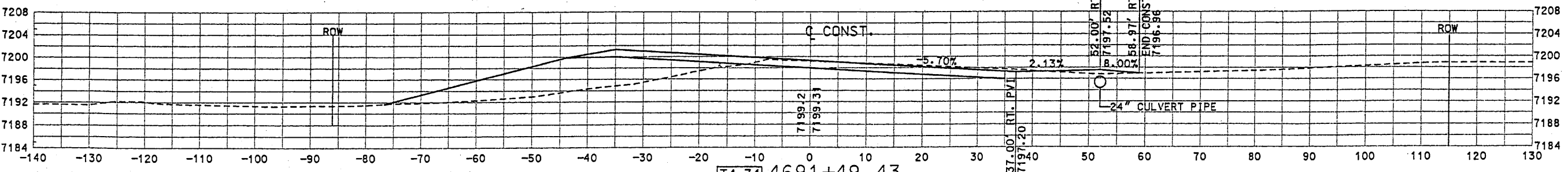
T4-76A 4807+19

BUILD 16' TURNOUT LT.
 BASECOURSE 50' LT. TO R/W LINE
 REMOVE & REPLACE CATTLE GUARD
 TYPE 'A' TURNOUT.
 20' R



T4-75 4735+57.49

BUILD 24' TURNOUT LT.
 BASECOURSE 18.69' LT.
 REMOVE & REPLACE CATTLE GUARD
 TYPE 'A' TURNOUT
 20' R



T4-74 4691+49.43

BUILD 16' TURNOUT RT.
 PAVE 23.97' RT.
 EXISTING GATE AT R/W LINE TO
 REMAIN IN PLACE

20' R
 MODIFIED TYPE 'B' PAVEMENT

NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

SHEET TITLE

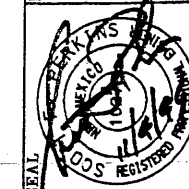
DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

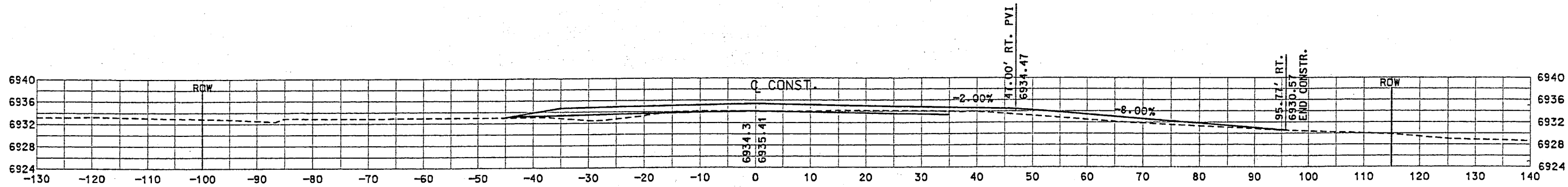
**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



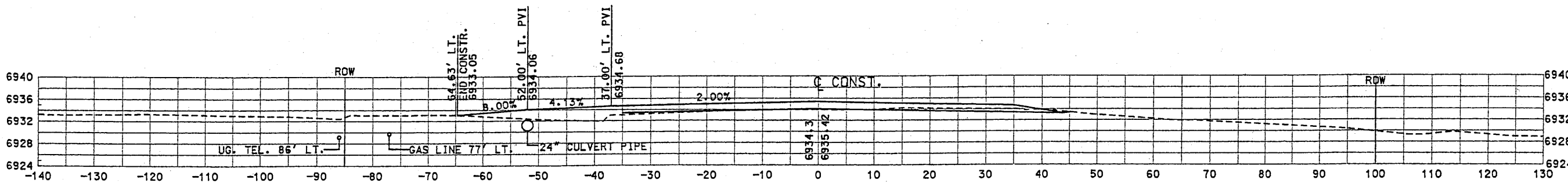
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 Plot Date: JV 99

SCALE:
 1" = 10' HORIZ.
 1" = 10' VERT.



T4-78 4950+98.65

BUILD 16' TURNOUT RT.
 BASECOURSE 60.77' RT.
 EXISTING GATE AT R/W LINE
 TO REMAIN IN PLACE
 TYPE "A" TURNOUT
 20' R



T4-77 4950+96.79

BUILD 16' TURNOUT LT.
 BASECOURSE 29.63' LT.
 EXISTING GATE AT R/W LINE
 TO REMAIN IN PLACE.
 TYPE "A" TURNOUT
 20' R

SHEET TITLE

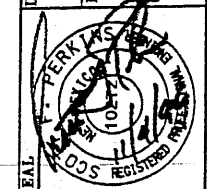
DRIVEPAD / TURNOUT PROFILES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

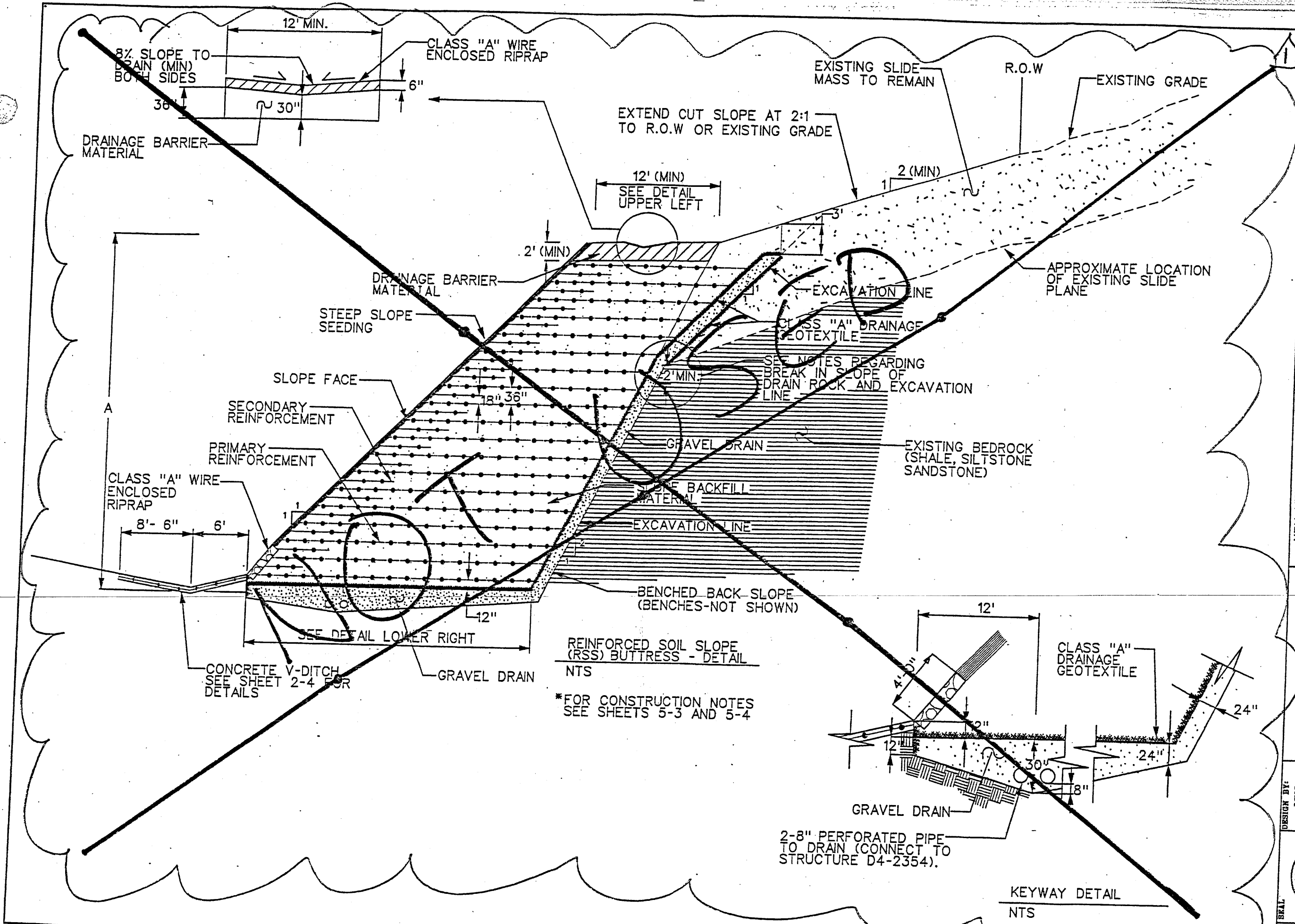
**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
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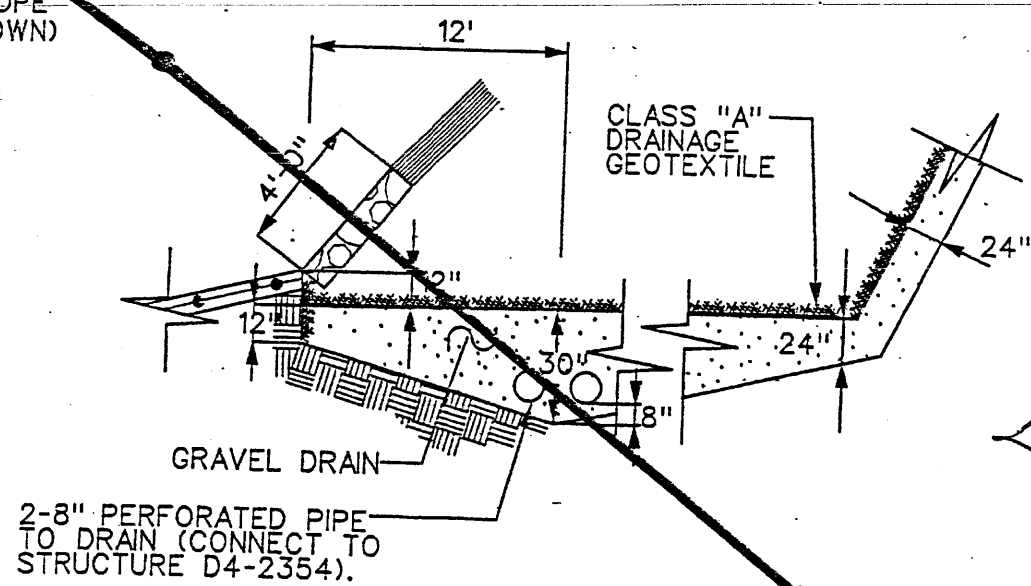


NOTE: SEE TURNOUT SCHEDULE ON SHEET 2-17.

Design File: \\PUBLIC\PROJECTS\99083\4444borsoil.dgn
 Plot Date: 04 NOV 1999



REINFORCED SOIL SLOPE (RSS) BUTTRESS - DETAIL
 NTS
 *FOR CONSTRUCTION NOTES SEE SHEETS 5-3 AND 5-4



KEYWAY DETAIL
 NTS

SHEET TITLE		CONSTRUCTION CRITERIA FOR REINFORCED SOIL SLOPE (RSS) BUTTRESS	
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6		NEW MEXICO PROJECT NO AC-NH-044-2(39)04 CN 3706	
KLEINFELDER		NM 44	
DESIGN BY: JSN	DRAWN BY: STAFF	CHECKED BY: JSN	
5-1			

TABLE 1 - REINFORCEMENT CRITERIA FOR REINFORCED SOIL SLOPE (RSS) BUTTRESS

A-Slope Height (ft.)	PRIMARY REINFORCEMENT				SECONDARY REINFORCEMENT Length. (ft.)
	Minimum Tensile Strength at 2% Strain (lb./ft.)	Minimum Tensile Strength at 5% Strain (lb./ft.)	Ult. Tensile Strength (lb./ft.)	Long Term (75)	
0 < A ≤ 8	700	1200	2000	800	3
8 < A ≤ 16	700	1200	2000	800	3
16 < A ≤ 24	1100	1700	3500	1300	3
24 < A ≤ 32	1800	2700	5300	2100	3.5
32 < A ≤ 40	2300	4300	8800	3500	4

NO



DESIGN BY: JSN
 DRAWN BY: STAFF
 CHECKED BY: JSN

KLEINFELDER

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NII-044-2(39)04
 CN 3760

SUBJECT TITLE
CONSTRUCTION CRITERIA FOR REINFORCED SOIL SLOPE (RSS) BUTTRESS

NOTES FOR REINFORCED SOIL SLOPE (RSS) BUTTRESS

GENERAL

1. THE DESIGNATED SLOPE SHALL BE REINFORCED WITH UNIAXIAL GEOGRID PRIMARY REINFORCEMENT AND BIAxIAL GEOGRID SECONDARY REINFORCEMENT TO THE DIMENSION, LINES AND GRADES INDICATED HEREIN AND ON THE DETAILS. THE GEOGRID REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH NM44 PROJECT SPECIFICATIONS SECTION 612 - "GEOGRID REINFORCEMENT" EXCEPT AS NOTED ON THESE SHEETS.
2. TABLE 1 IS PRESENTED ON SHEET 5-2. TABLE 1 SHALL BE UTILIZED TO DETERMINE APPLICABLE SLOPE HEIGHTS, SECONDARY REINFORCEMENT LENGTHS AND PRIMARY REINFORCEMENT STRENGTH PROPERTIES.
3. SEE SHEET 5-1 FOR DETAILS.
4. DIMENSIONS GIVEN ON TABLE 1 SHALL BE MEASURED IN ACCORDANCE WITH THE DETAILS.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY EXCAVATIONS AND SLOPES. ALL TEMPORARY EXCAVATIONS AND SLOPING SHALL CONFORM TO OSHA REQUIREMENTS. SLOUGHING AND SLIDING OF TEMPORARY EXCAVATIONS AND SLOPES AND ANY ASSOCIATED DAMAGE IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CORRECTED OR REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.

6. THE RSS BUTTRESS IS BEING CONSTRUCTED TO STABILIZE AN EXISTING LANDSLIDE. THE LANDSLIDE IS SUSCEPTIBLE TO MOVEMENT ESPECIALLY DURING TIMES WHEN SURFACE OR SUBSURFACE WATER IS PRESENT. CONTRACTOR SHALL SUBMIT AT LEAST 30 DAYS PRIOR TO THE WORK, ITS PLAN FOR CONSTRUCTING THE RSS BUTTRESS INCLUDING CONSTRUCTION SEQUENCE, APPROACH, Dewatering, AND SCHEDULE.

5. MINIMUM JUNCTION STRENGTH GIVEN IN TABLE I IS THE MD STRENGTH FOR GEOGRID REINFORCEMENT IN UNITS OF POUNDS PER RUNNING FOOT OF MATERIAL AS DETERMINED BY GRI-GG2 (GEOSYNTHETICS RESEARCH INSTITUTE) TEST NUMBER GG2.

KEYWAY

1. A FULL-WIDTH KEYWAY SHALL BE PROVIDED AS SHOWN ON THE DETAIL FOR THE FULL LENGTH OF THE RSS BUTTRESS. THE KEYWAY SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THIS SHEET.
2. CONSTRUCTION SLOPES FOR EXCAVATION OF KEYWAYS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL TEMPORARY EXCAVATIONS AND SLOPING SHALL CONFORM TO OSHA REQUIREMENTS.
3. THE KEYWAY SHALL BE EXCAVATED INTO COMPETENT SUBGRADE (STABLE AND WELL-COMPACTED) LOCATED BENEATH THE SURFACE OF THE PROPOSED RSS BUTTRESS. SUBGRADE NOT MEETING THIS CRITERIA SHALL BE OVEREXCAVATED TO COMPETENT SUBGRADE. BACKFILL OF OVEREXCAVATED AREAS SHALL BE MADE WITH SELECT AGGREGATE MATERIAL MEETING THE CRITERIA FOR TYPE 1-B BASE COURSE AND COMPACTED TO NOT LESS THAN 96 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.

BENCHES

1. BENCHES ARE REQUIRED FOR THE FULL HEIGHT OF THE BACKSLOPE. ALL BENCHES SHALL HAVE A MINIMUM WIDTH, OF 1'-6".
2. AS A MINIMUM, BENCHES SHALL BE PROVIDED AT THE ELEVATION OF EACH LAYER OF UNIAXIAL PRIMARY GEOGRID REINFORCEMENT. ADDITIONAL BENCHES MAY BE EXCAVATED AS NECESSITATED BY THE SITE CONDITIONS AND AT THE DISCRETION OF THE CONTRACTOR, BUT IN NO CASE SHALL BENCHES BE LESS THAN 1'-0" HIGH.

STEEP SLOPE SEEDING

1. STEEP SLOPE SEEDING SHALL BE PLACED IN ACCORDANCE WITH NM44 PROJECT SPECIFICATIONS, SECTION 632 "SEEDING".

FILL MATERIAL AND PLACEMENT

1. FILL MATERIAL SHALL BE PLACED AND COMPACTED TO THE LINES AND GRADES SHOWN ON THE STATION-SPECIFIC DRAWINGS AS WELL AS ON THE DETAIL.
2. "SLOPE BACKFILL MATERIAL" USED FOR THE RSS BUTTRESS SHALL CONFORM TO THE REQUIREMENTS PRESENTED IN NM44 PROJECT SPECIFICATION, SECTION 507-"REINFORCED SOIL SLOPES", SUBSECTION 507.22-"SLOPE BACKFILL MATERIAL".
3. "DRAINAGE BARRIER MATERIAL" SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

SLEEVE SIZE	PERCENT PASSING
2"	100
1 1/2"	75-100
NO. 4	60-95
40	40-80
200	30-60

PLASTICITY INDEX (PI), AS DETERMINED BY AASHTO T-200 SHALL BE BETWEEN TEN PERCENT AND 20 PERCENT (10% -20%).

4. FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 9" IN HEIGHT. THINNER LIFTS MAY BE REQUIRED TO ACHIEVE THE REQUIRED VERTICAL SPACING OF UNIAXIAL GEOGRID PRIMARY REINFORCEMENT AS INDICATED IN TABLE 1.

5. FILL MATERIAL SHALL BE COMPACTED BASED ON AASHTO T-180 AND IN ACCORDANCE WITH THE FOLLOWING CRITERIA:

MATERIAL	MINIMUM RELATIVE DENSITY
SLOPE BACKFILL	95%
DRAINAGE BARRIER	90%

GEOGRID REINFORCEMENT

1. GEOGRID REINFORCEMENT SHALL CONFORM TO THE CRITERIA PRESENTED IN THE NM 44 PROJECT SPECIFICATIONS, SECTION 612 - "GEOGRID REINFORCEMENT".
2. ALL GEOGRID REINFORCEMENT SHALL BE PLACED TO THE LINES AND GRADES INDICATED ON THE DETAIL. ALL GEOGRID REINFORCEMENT SHALL EXTEND BEYOND THE SLOPE FACE DURING PLACEMENT AND SHALL BE CUT FLUSH WITH THE SLOPE FACE UPON COMPLETION OF FINAL GRADING AND CONSTRUCTION. PRIMARY GEOGRID REINFORCEMENT SHALL EXTEND LATERALLY TO THE DRAIN ROCK LAYER AS SHOWN ON THE DETAIL.
3. MINIMUM TENSILE STRENGTH GIVEN IN TABLE 1 IS MACHINE DIRECTION (MD). LONG TERM ALLOWABLE MINIMUM TENSILE STRENGTH (T_a) FOR UNIAXIAL GEOGRID PRIMARY REINFORCEMENT IS GIVEN BY THE EQUATION:

$$T_a = \frac{FS_{CR} \times FS_{ID} \times FS_{DU} \times FS_{JNT}}{100}$$

AND SHALL BE DETERMINED AS DESCRIBED IN THE FHWA PUBLICATION FHWA/SA-93-025. THE MINIMUM TENSILE STRENGTH PROPERTIES FOR 2%, 5% AND ULTIMATE (T_u) FOR UNIAXIAL GEOGRID PRIMARY REINFORCEMENT SHALL BE DETERMINED IN ACCORDANCE WITH ASTM TEST DESIGNATION D4595. ALL UNIAXIAL GEOGRID PRIMARY REINFORCEMENT SHALL POSSESS AN OPEN AREA OF GREATER THAN 50% AND LESS THAN 80% AS DETERMINED BY COE CW02215.

4. ALL BIAxIAL GEOGRID SECONDARY REINFORCEMENT SHALL POSSESS THE FOLLOWING MINIMUM TENSILE STRENGTH VALUES:

TENSILE STRENGTH @ 2% STRAIN	300 LBS/FT
TENSILE STRENGTH @ 5% STRAIN	450 LBS/FT
TENSILE STRENGTH @ ULTIMATE	900 LBS/FT

THE TENSILE STRENGTH PROPERTIES FOR THE BIAxIAL GEOGRID SECONDARY REINFORCEMENT SHALL BE DETERMINED IN ACCORDANCE WITH ASTM TEST DESIGNATION D4595. ALL BIAxIAL GEOGRID SECONDARY REINFORCEMENT SHALL POSSESS AN OPEN AREA OF GREATER THAN 50% AND LESS THAN 80% AS DETERMINED COE CW02215.

REVISIONS	DATE
NO. 1	01-2000
DESCRIPTION	
1	NOTE CHANGED

Design File: 4445gn1.dgn
Plot Date: 27-JAN-2000

SHEET TITLE
CONSTRUCTION CRITERIA
FOR
REINFORCED SOIL SLOPE
(RSS) BUTTRESS

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(3)9064
CN 3766

KLEINFELDER

DESIGN BY: JSN
DRAWN BY: STAFF
CHECKED BY: JSN

SEAL

PROJECT NO. AC-NH-044-2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 5.3, Construction Criteria for Reinforced Slope
(RSS) Buttress

NO.	REVISION	DATE	BY
Δ	Revise General Note 6	11-23-99	Addendum No.1
Δ	Eliminate Buttress	12-6-00	FSC/FNF-0240

Handwritten mark resembling the number 24.

NOTES (CONT.) REINFORCED SOIL SLOPE (RSS) BUTTRESS

GRAVEL DRAIN

1. GRAVEL DRAIN SHALL BE CONSTRUCTED TO THE LINES AND GRADES SHOWN ON THE DETAIL. THE BREAK IN SLOPE OF THE BACK SLOPE GRAVEL DRAIN SHOWN ON THE DETAIL SHALL BE INITIATED AT THE INTERSECTION WITH THE EXISTING SLIDE PLANE. THE EXACT LOCATION OF THE SLIDE PLANE SHALL BE DETERMINED IN THE FIELD AT THE TIME OF EXCAVATION BY THE GEOTECHNICAL ENGINEER. THE EXCAVATION LINE AS SHOWN ON THE PROJECT CROSS SECTIONS DOES NOT REFLECT THE REQUIREMENT INDICATED HEREIN FOR A BREAK IN SLOPE (FLATTER SLOPE) ABOVE THE FIELD DETERMINED SLIDE PLANE.
2. THE GRAVEL DRAIN IN THE KEYWAY SHALL BE PLACED INTO THE PROPERLY PREPARED FULL-WIDTH KEYWAY AS INDICATED ON THE DETAIL.
3. GRAVEL DRAINS SHALL BE CONSTRUCTED WITH DRAIN ROCK CONFORMING TO SECTION 304-BASE COURSE EXCEPT THAT IT SHALL POSSESS THE FOLLOWING GRADATION:

SLIPE SIZE	PERCENT PASSING
1"	100%
3/4"	90%-100%
3/8"	20%-55%
No. 4	0%-10%
No. 200	0%-2%

AND 100% OF THE MATERIAL SHALL POSSESS AT LEAST TWO FRACTURED FACES AS DETERMINED IN ACCORDANCE WITH THE SPECIFICATIONS.

CLASS "A" DRAINAGE GRAVEL

1. SHALL CONFORM WITH THE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPT. STANDARD SPECIFICATIONS FOR HIGHWAY & BRIDGE CONSTRUCTION, SECTION-604 AND SHALL BE UTILIZED WHERE INDICATED.

CLASS "A" WERE ENCLOSED RIPRAP

1. SHALL CONFORM WITH THE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPT. SECTION 602 AND SHALL BE UTILIZED WHERE INDICATED.

USED

NOT

Design File: PUBLIC\PROJECTS\99083\4444.dgn
 Plot Date: 04 NOV 1999

SHEET TITLE
 CONSTRUCTION CRITERIA
 FOR
 REINFORCED SOIL SLOPE
 (RSS) BUTTRESS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)04
 CN 3706

KLEINFELDER

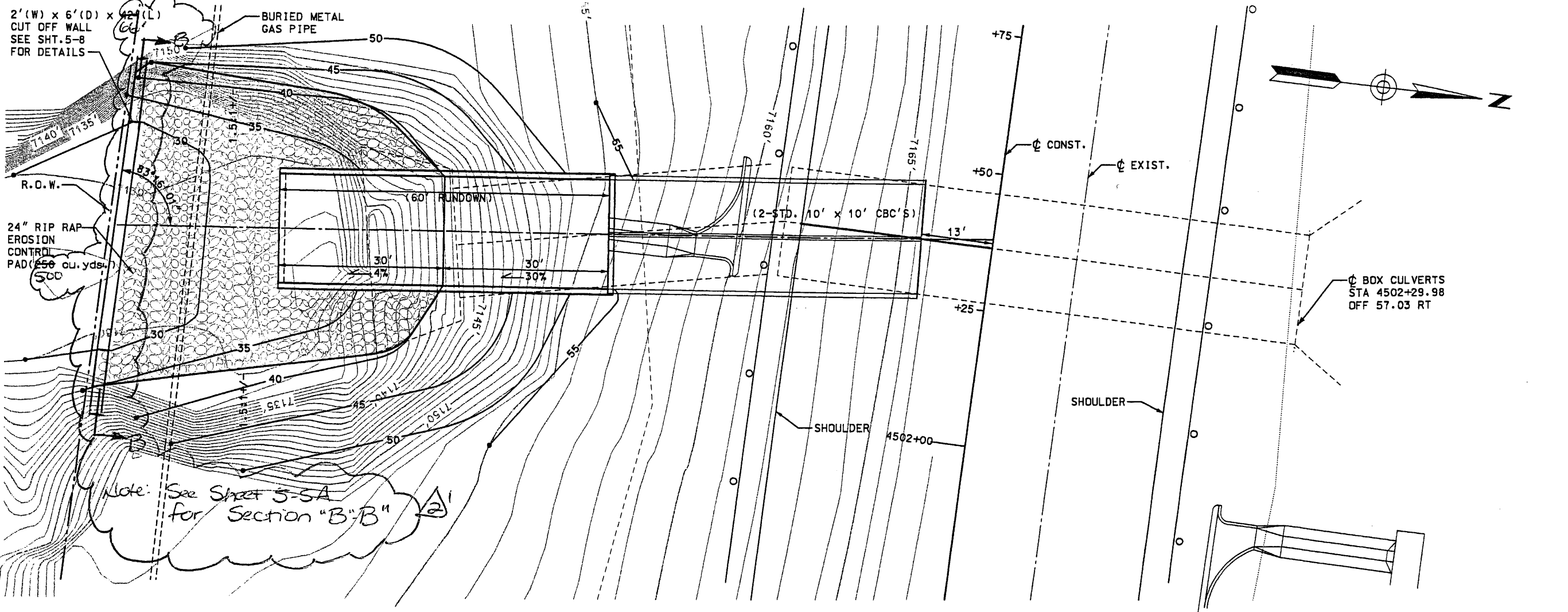
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 CHECKED BY: JSN



PROJECT NO. AC.NH.044.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. ~~5~~ 5.4 Construction Criteria for RSS Buttress

NO.	REVISION	DATE	BY
Δ	Eliminate Buttress	12.6.00	FSC/FNF-0240

1004



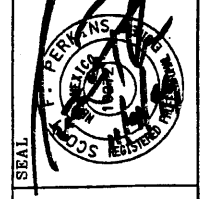
Note: See Sheet 5-SA for Section "B-B"

SHEET TITLE
BRIDGE #7061
STRUCTURE PLACEMENT
SECTIONS

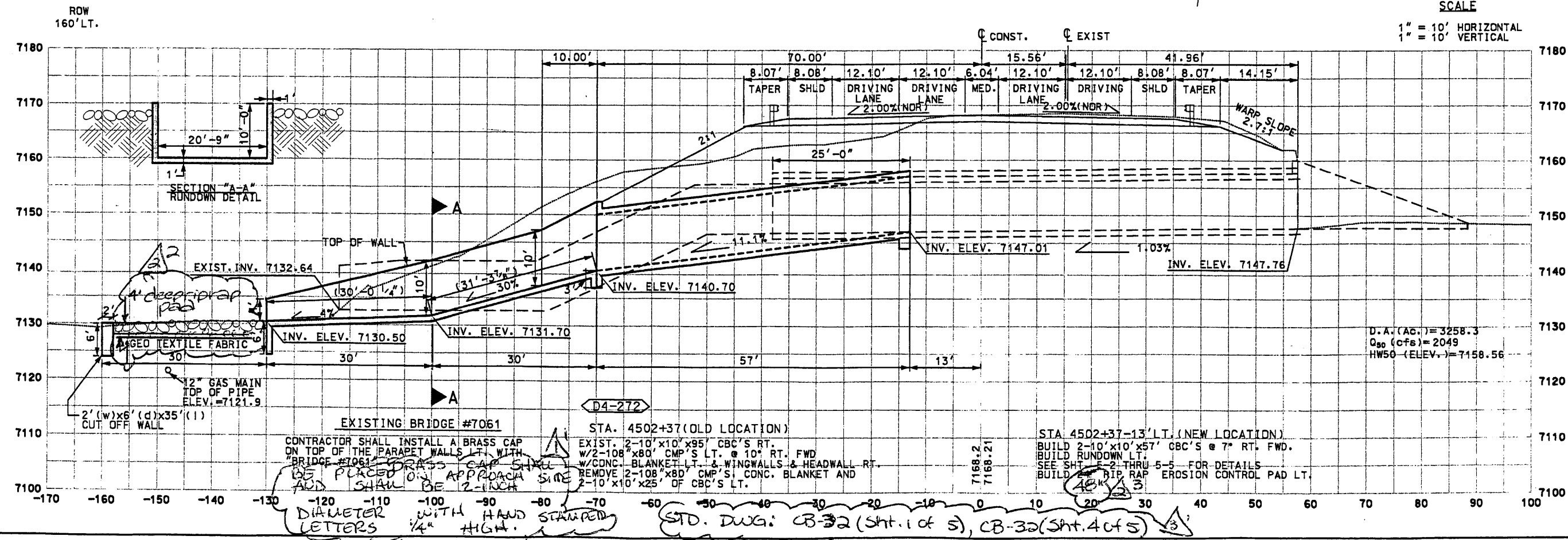
NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6
NM 44
NEW MEXICO PROJECT NO AC-NH--044-2(39)64
CN 3766

**WILSON
& COMPANY**

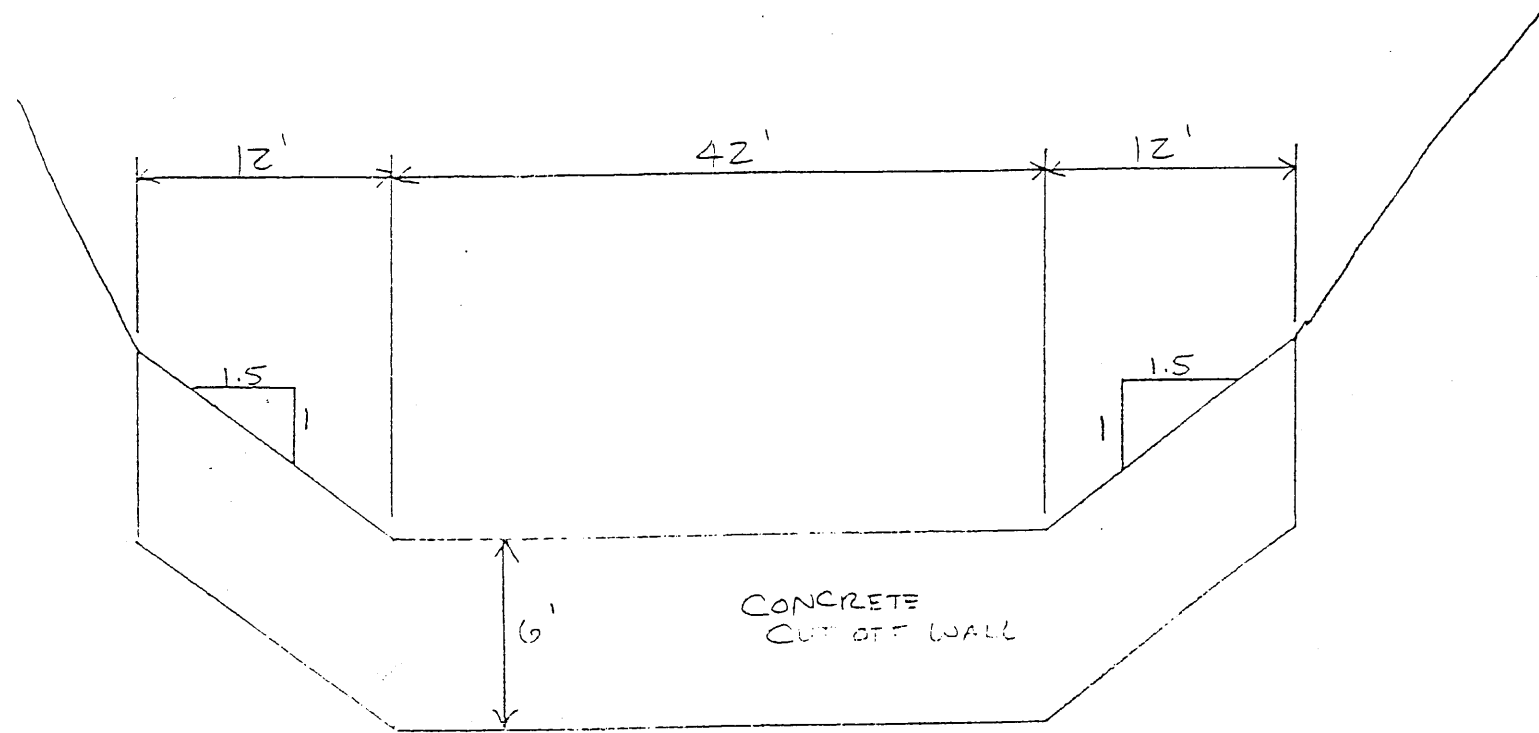
DESIGN BY: STAFF
DRAWN BY: STAFF
CHECKED BY: SFP



SCALE
1" = 10' HORIZONTAL
1" = 10' VERTICAL



Design File: 44ASSTR02.DGN
ELO CAD MASTER



SECTION B-B
~~A-A~~
 MTS

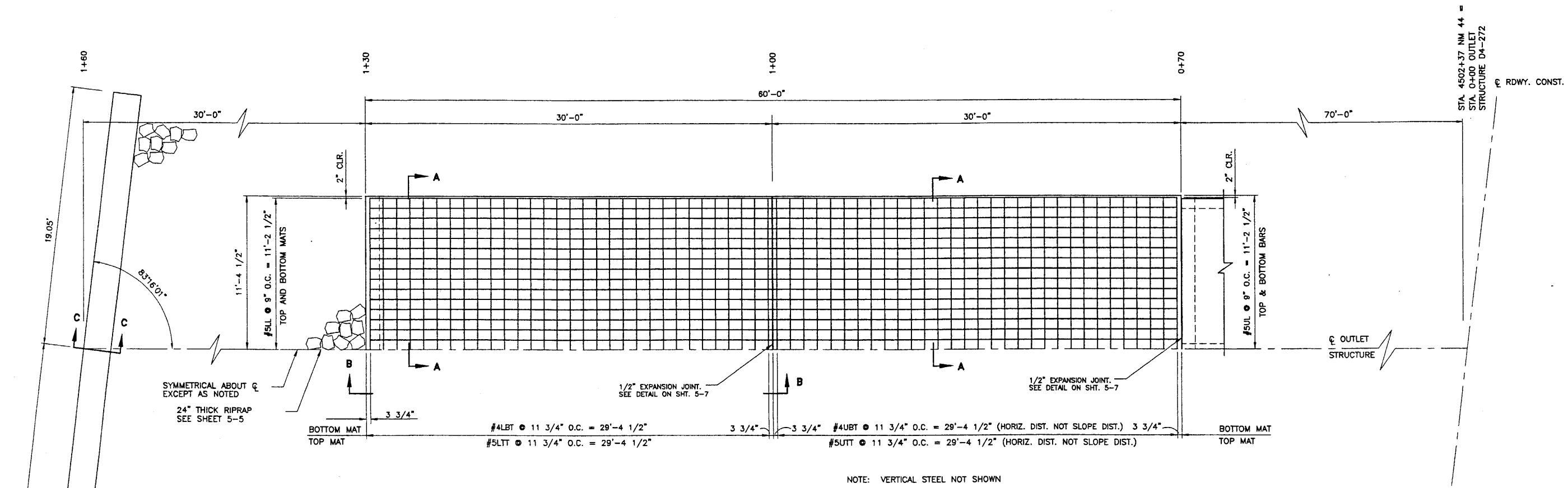
Note: See sheet 5-5
 for Section location

New Sheet
 5.24.00
 FSC RFI No. 77

Bridge #7061
 Cut-Off Wall Section

UN44
 PROJECT NO. AC-UN-044-(39)04
 CW 3766





OUTLET STRUCTURE PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

CONCRETE: ALL CONCRETE SHALL BE CLASS "A" CONCRETE. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.

REINFORCING BARS: ALL REINFORCING BARS SHALL BE GRADE 60. DIMENSIONS SHOWN REFER TO THE CENTERLINE OF BARS UNLESS OTHERWISE NOTED.

FOUNDATION EXCAVATION: FOUNDATION SOILS SHALL BE OVEREXCAVATED TO A DEPTH 2' BELOW BOTTOM OF FOOTINGS. OVEREXCAVATION SHALL EXTEND Laterally 2' BEYOND THE FOOTING PERIMETERS. EXCAVATED SOIL SHALL BE REPLACED AND RECOMPACTED TO NOT LESS THAN 95% MAXIMUM DENSITY IN ACCORDANCE WITH AASHTO T-99. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT BE LESS THAN 2 PERCENTAGE POINTS BELOW, NOR GREATER THAN 3 PERCENTAGE POINTS ABOVE THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY AASHTO T-99.

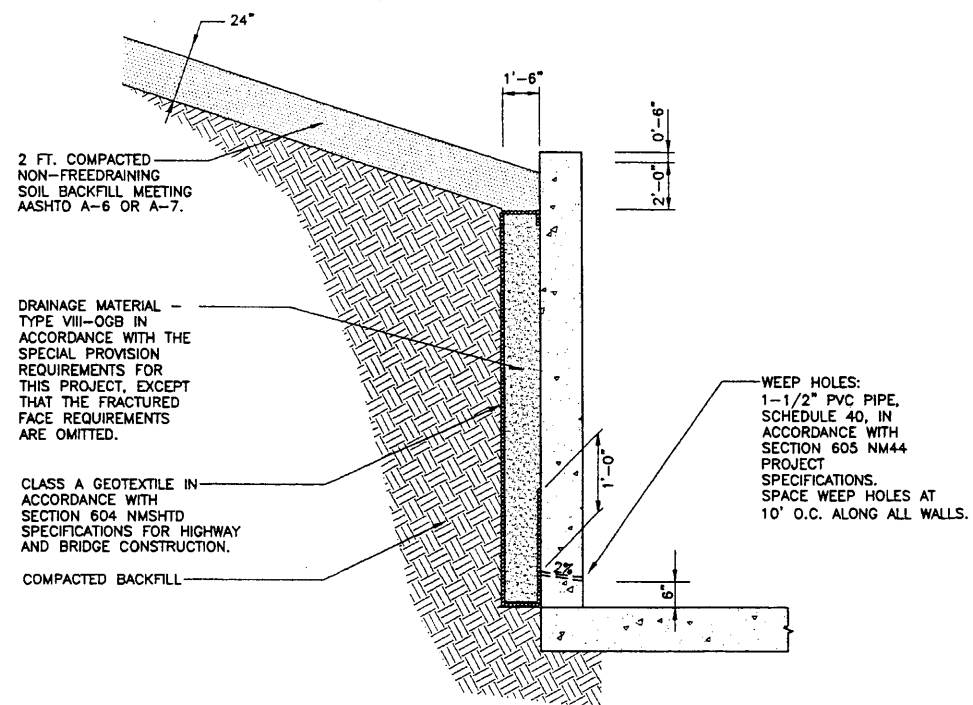
DESIGN DATA:

THE DESIGN IN ACCORDANCE WITH THE AASHTO SPECIFICATIONS 1996 EDITION AND CURRENT INTERIMS.

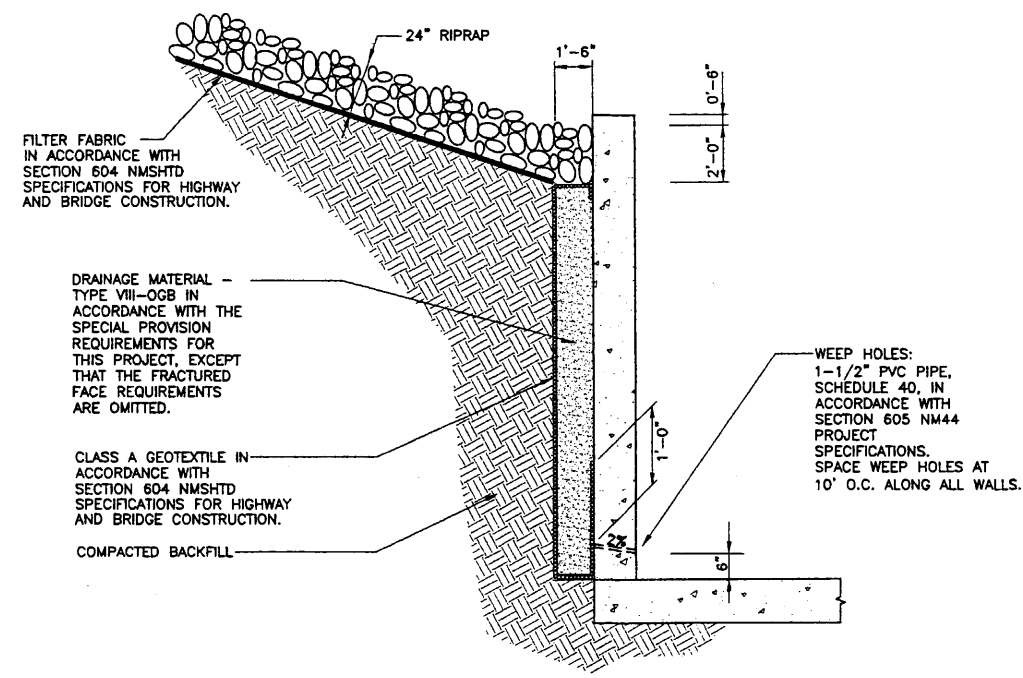
DESIGN STRESSES: REINFORCED CONCRETE: $F_c = 3000$ PSI AT 28 DAYS
 $F_y = 60,000$ PSI GRADE 60
 $n = 8$

EARTH PRESSURE: VERTICAL: 120 PCF
HORIZONTAL: 35 PCF

ALLOWABLE BEARING PRESSURE: 3000 PCF



TYPICAL DRAINAGE AND BACKFILL DETAILS (STA. 0+70 TO STA. 1+00)
N.T.S.



TYPICAL DRAINAGE AND BACKFILL DETAILS (STA. 1+00 TO STA. 1+30)
N.T.S.

SHEET TITLE: BRIDGE #7061
OUTLET STRUCTURE AT
STATION 4502+22.5

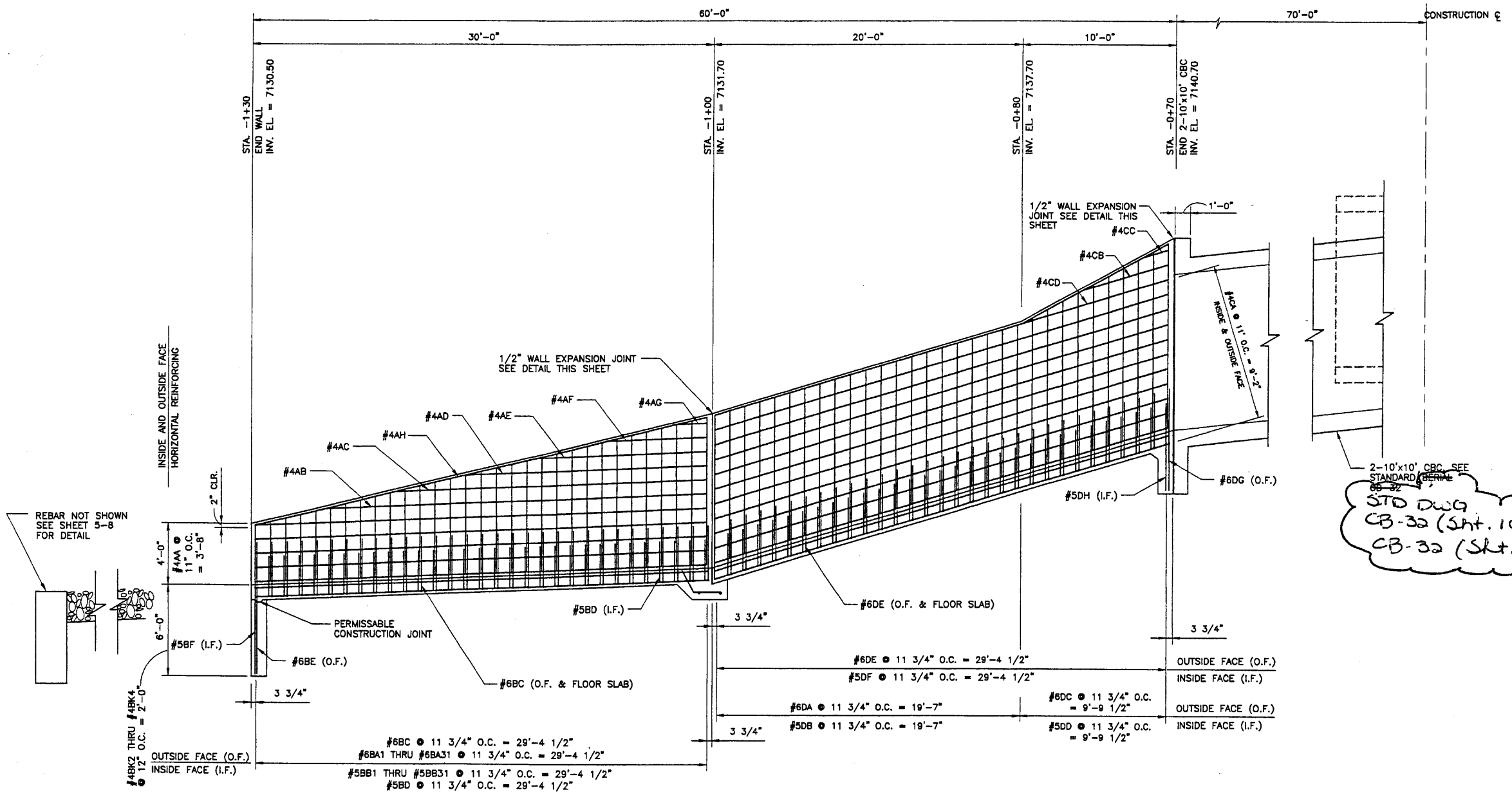
NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
NM 44
CN 3766



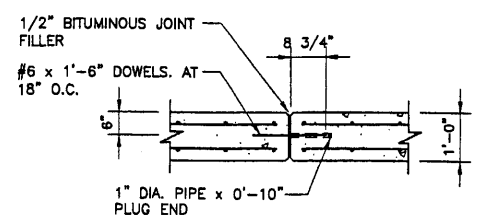
DESIGNED BY: GWK
DRAWN BY: TDS
CHECKED BY: GWK



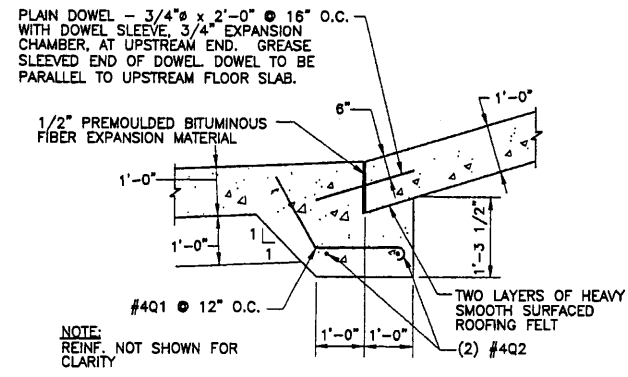


2-10'x10' CBC, SEE
STANDARD SPEC
SECTION 60-32
STD DWG
CB-32 (Sht. 1 of 5)
CB-32 (Sht. 4 of 5)

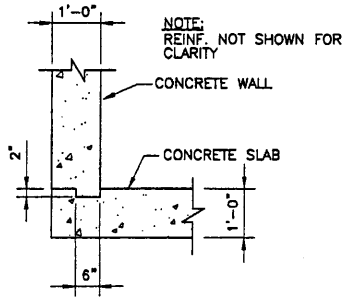
SIDEWALL ELEVATION VIEW
SCALE: 1/4" = 1'-0"



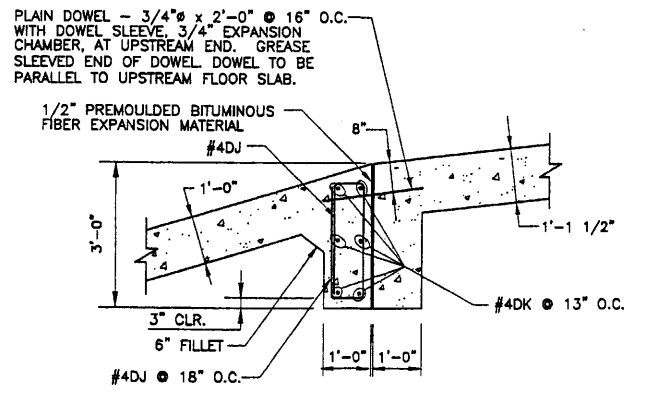
WALL EXPANSION JOINT
SCALE: 1/2" = 1'-0"



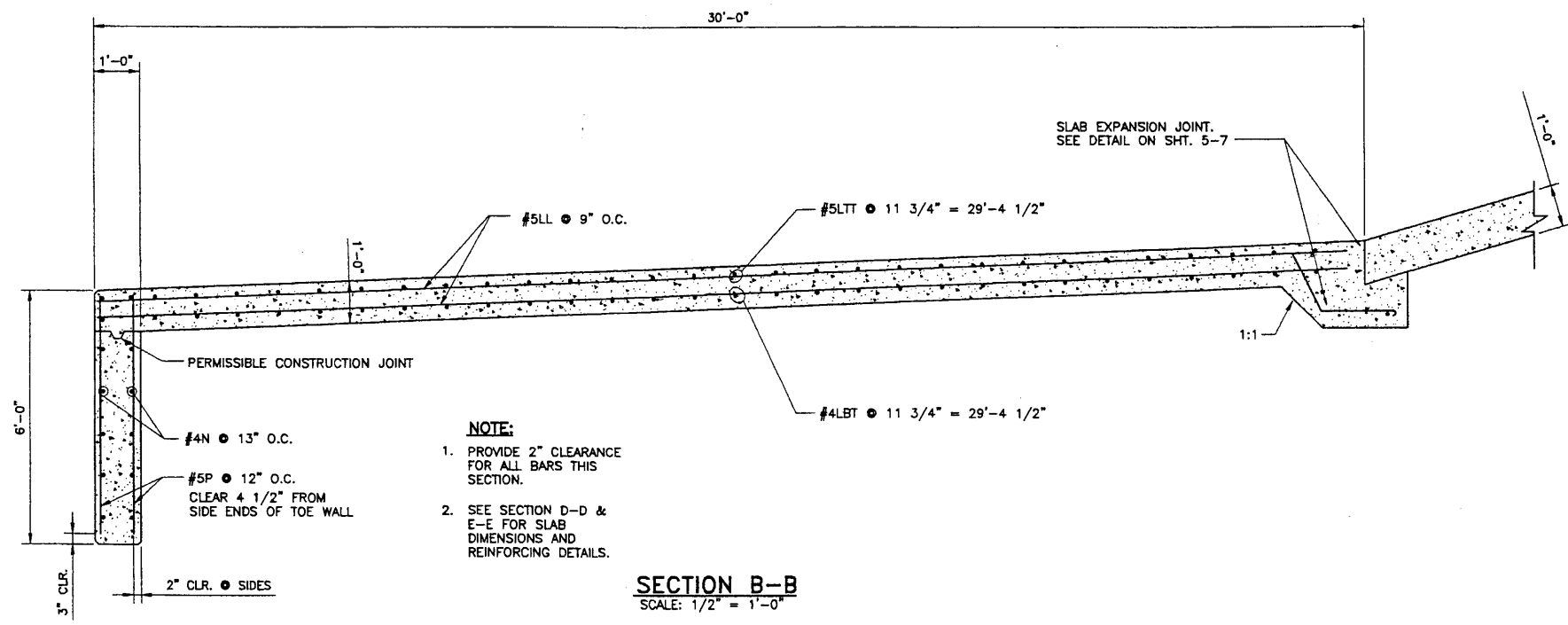
SLAB TO SLAB EXPANSION JOINT
SCALE: 1/2" = 1'-0"



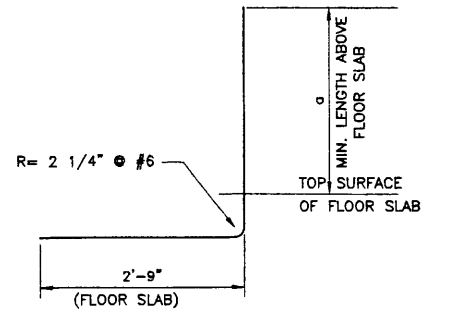
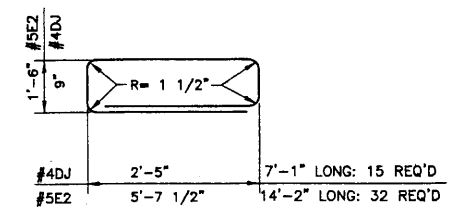
WALL CONSTRUCTION JOINT
SCALE: 1/2" = 1'-0"



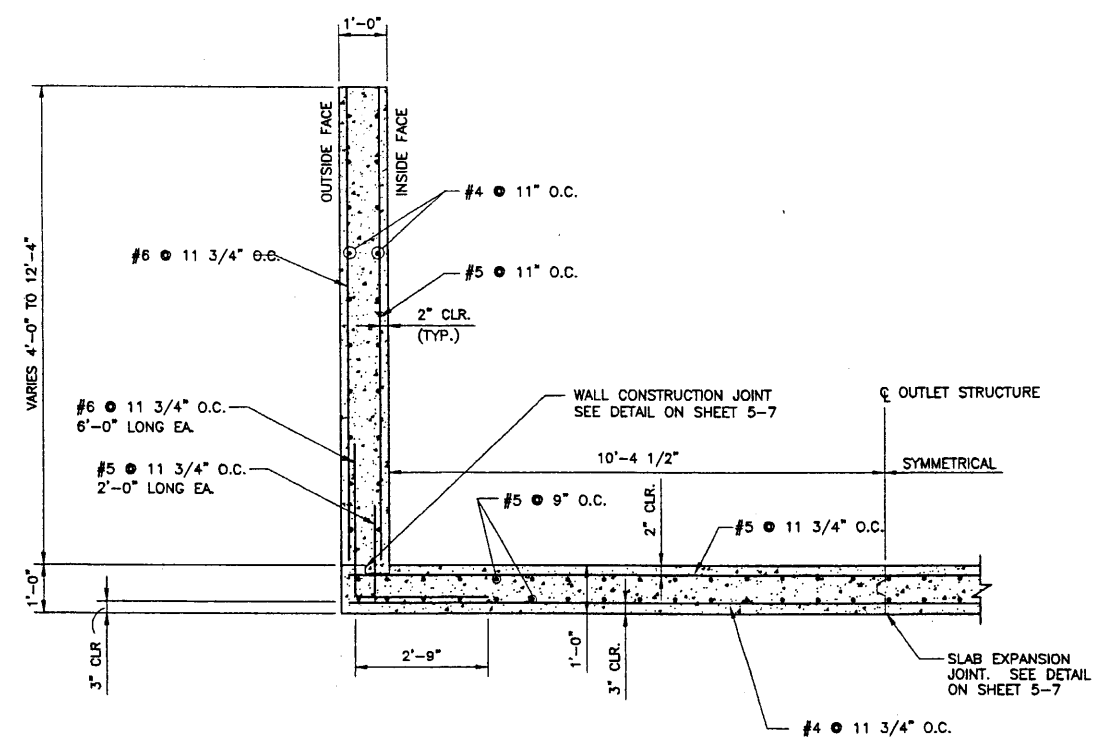
CONC. BOX CULV. TO SLAB EXPANSION JOINT
SCALE: 1/2" = 1'-0"



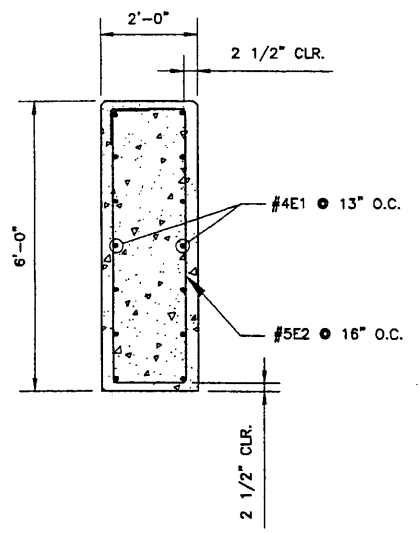
SECTION B-B
SCALE: 1/2" = 1'-0"



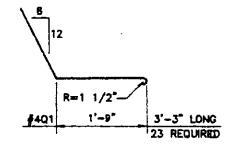
MARK	c	LENGTH	NO. REQ'D
#BBC	2' - 6"	8' - 0"	60
#BDE	2' - 6"	8' - 0"	60
#BE	2' - 6"	11' - 0"	2
#BDC	2' - 6"	8' - 0"	2



SECTION A-A
SCALE: 1/2" = 1'-0"



HEADWALL SECTION C-C
SCALE: 1/2" = 1'-0"

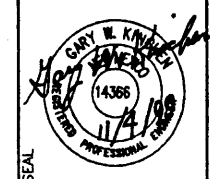


MARK	LENGTH	NO. REQ'D
#4AA	29' - 6"	20
#4AB	24' - 11"	4 EACH OF SIX
#4AG	2' - 0"	4
#4AH	30' - 1"	4
#5BA1	3' - 8 1/2"	2 EACH OF THIRTY-ONE
#5BA31	9' - 7 3/4"	2 EACH OF THIRTY-ONE
#5BB1	3' - 8 1/2"	2 EACH OF THIRTY-ONE
#5BB31	9' - 7 3/4"	2 EACH OF THIRTY-ONE
#5BD	2' - 0"	60
#5BF	7' - 0"	4
#4CA	31' - 0"	44
#4CB	6' - 1"	4
#4CC	2' - 0"	4
#4CD	11' - 2"	4
#5DA	9' - 7 3/4"	42
#5DB	9' - 7 3/4"	42
#5DC1	9' - 10 1/4"	2 EACH OF TEN
#5DC10	11' - 11"	2 EACH OF TEN
#5DD1	9' - 10 1/4"	2 EACH OF TEN
#5DD10	11' - 11"	2 EACH OF TEN
#5DF	2' - 0"	60
#5DH	4' - 0"	4
#5UL	31' - 0"	62
#5LL	29' - 6"	62
#5LTT	22' - 5"	31
#4LBT	22' - 5"	31
#4LBT	22' - 5"	31
#4LBT	22' - 5"	31
#4DK	22' - 3"	6
#4N	22' - 3"	12
#5P	5' - 7"	46
#4E1	41' - 6"	12
#4Q2	22' - 5"	2

SHEET TITLE:
BRIDGE #7061
OUTLET STRUCTURE AT
STATION 4502+22.5
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

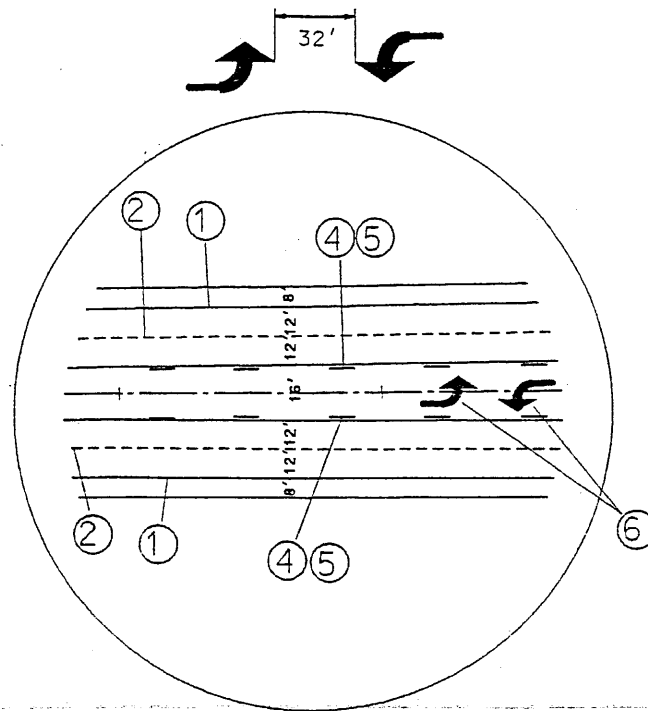


DESIGNED BY: GWK
 DRAWN BY: TDS
 CHECKED BY: GWK



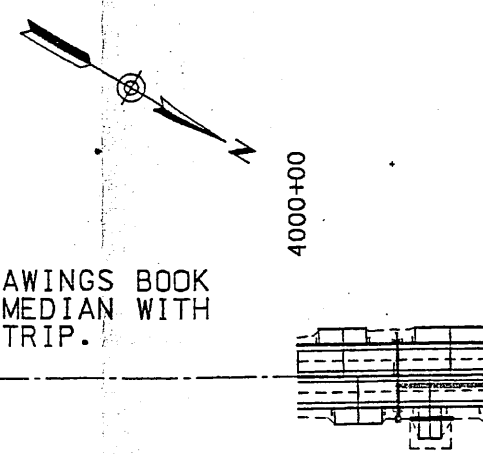
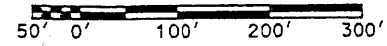
STRIPING KEY

- ① 4" SOLID WHITE PAINT
- ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP)
- ③ DOUBLE 4" SOLID YELLOW PAINT
- ④ 4" SOLID YELLOW PAINT
- ⑤ 4" BROKEN YELLOW PAINT
- ⑥ REFLECTORIZED PLASTIC LEFT ARROW



STRIPING DETAIL
CONTINUOUS LEFT TURN LANE

NOTE:
SEE STANDARD DRAWINGS BOOK
FOR DETAILS OF MEDIAN WITH
MILLED RUMBLE STRIP.

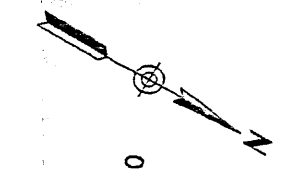
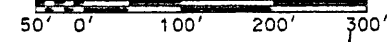
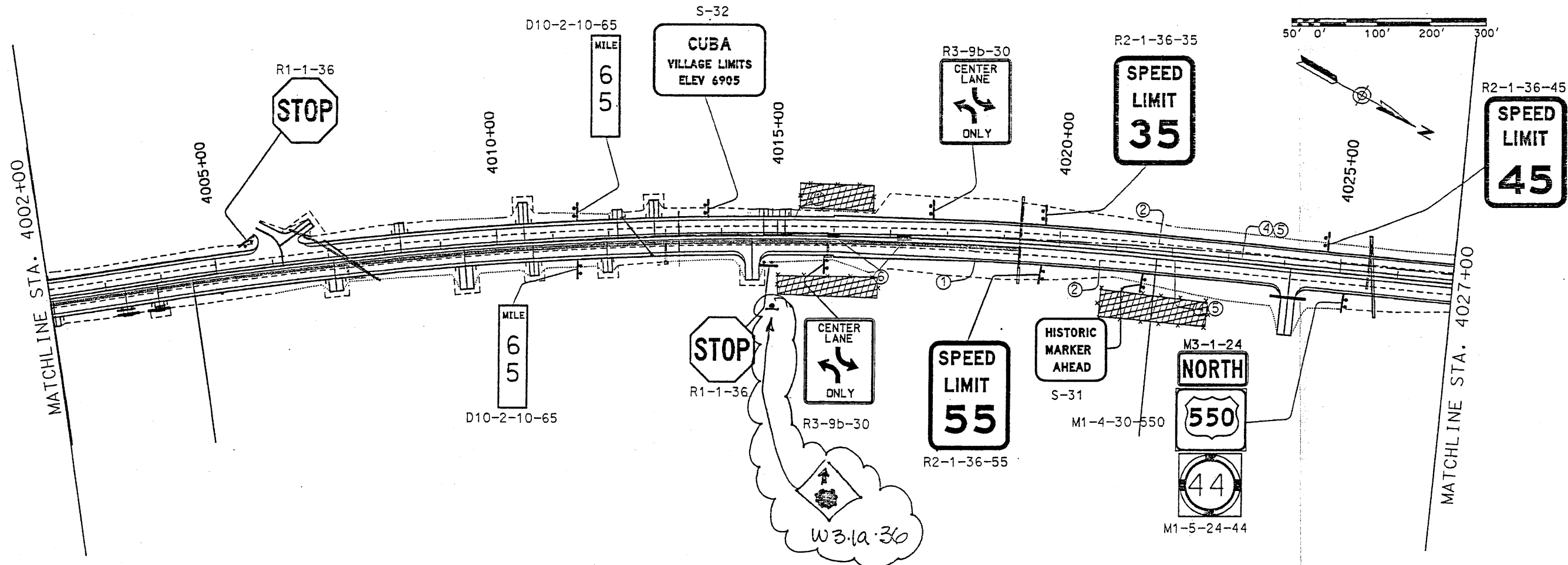


PERMANENT SIGNING
& STRIPING PLAN
STATION 4000+00
TO
STATION 4027+00

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(3)064
CN 3766



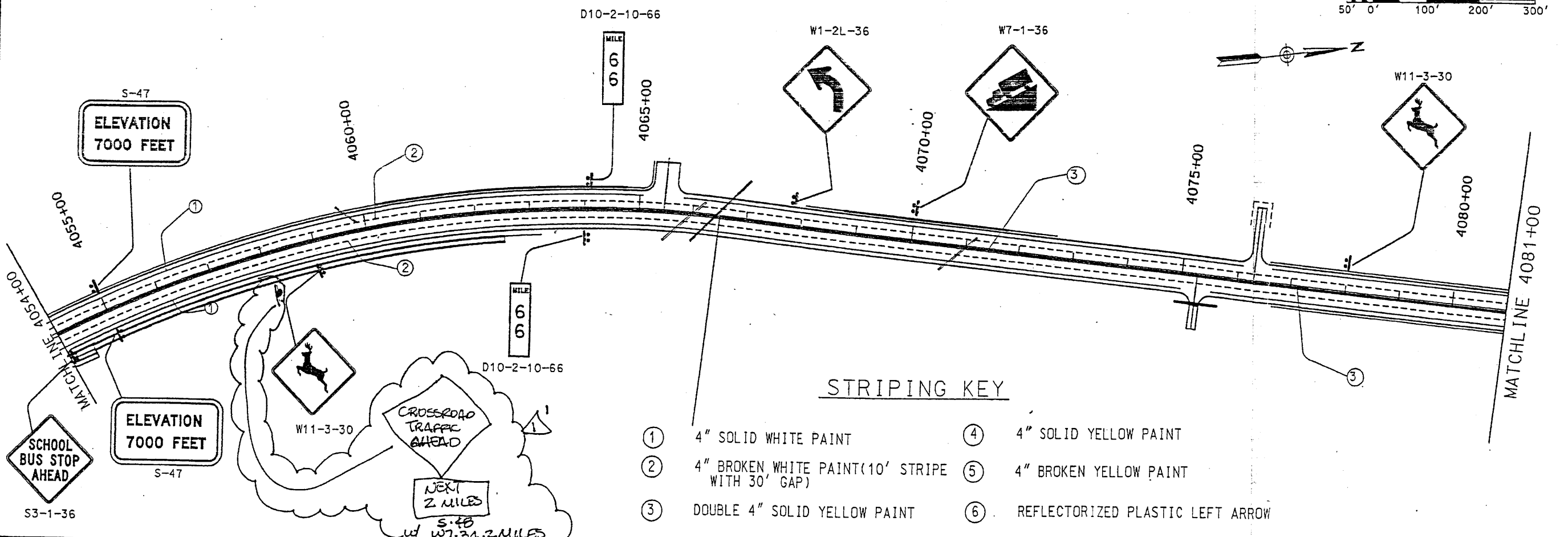
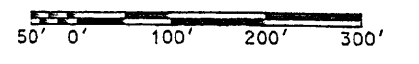
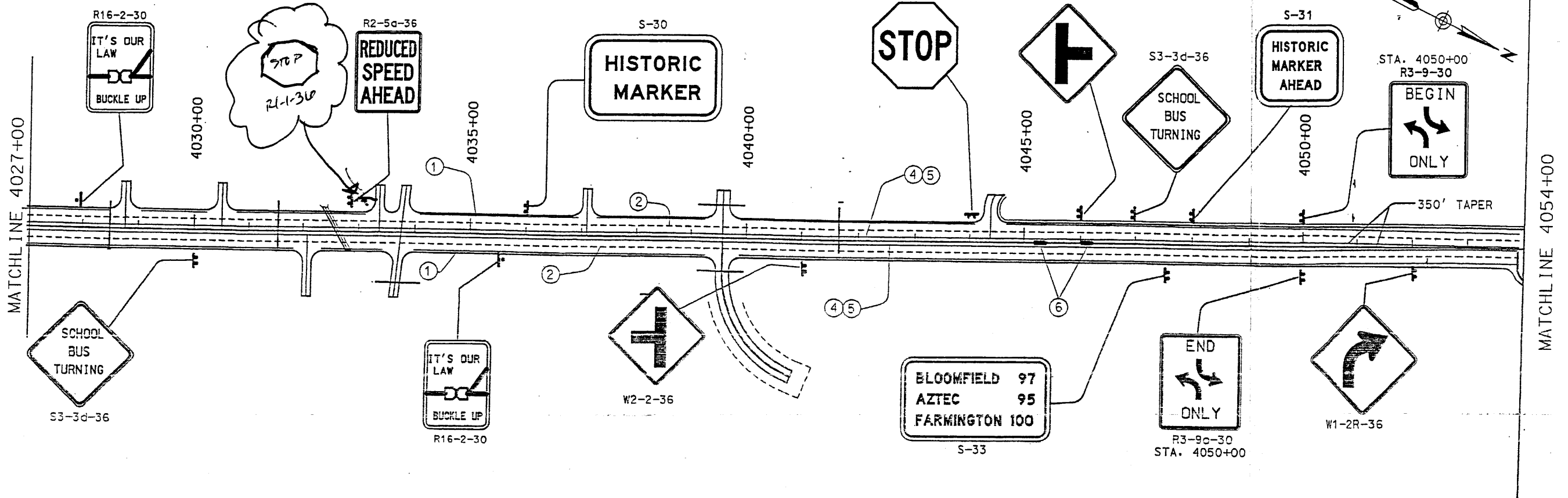
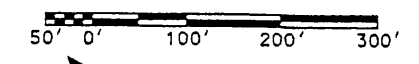
**WILSON
& COMPANY**

DESIGN BY: STAFF
DRAWN BY: STAFF
CHECKED BY: SFP



Design File: x:\public\projects\98082-01\sect7\444\pa01.dwg
Plot Date: 25 MAY 99

REMOVE AND RESET EXISTING HISTORIC MARKER TO 57' RT OF C.



STRIPING KEY

- ① 4" SOLID WHITE PAINT
- ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP)
- ③ DOUBLE 4" SOLID YELLOW PAINT
- ④ 4" SOLID YELLOW PAINT
- ⑤ 4" BROKEN YELLOW PAINT
- ⑥ REFLECTORIZED PLASTIC LEFT ARROW

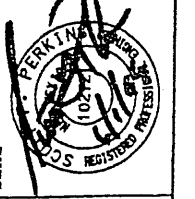
SHEET TITLE
 PERMANENT SIGNING & STRIPING PLAN
 STATION 4027+00 TO STATION 4081+00

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NII--044-2(39)64
 CN 3766

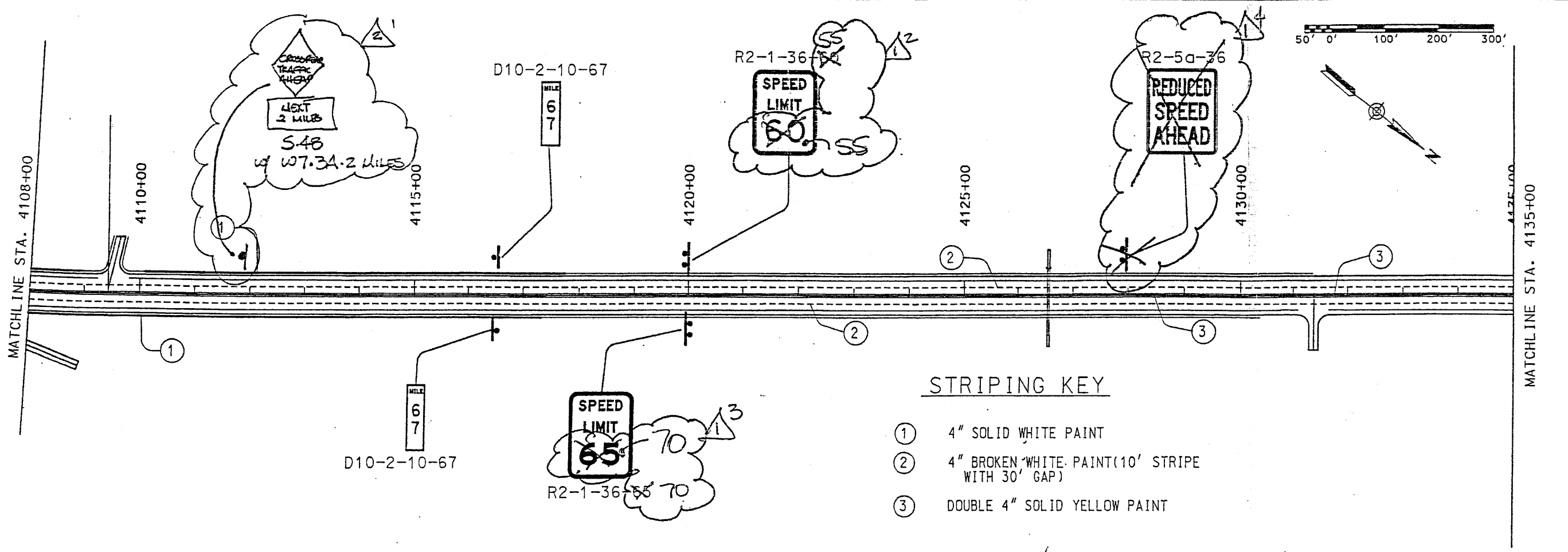
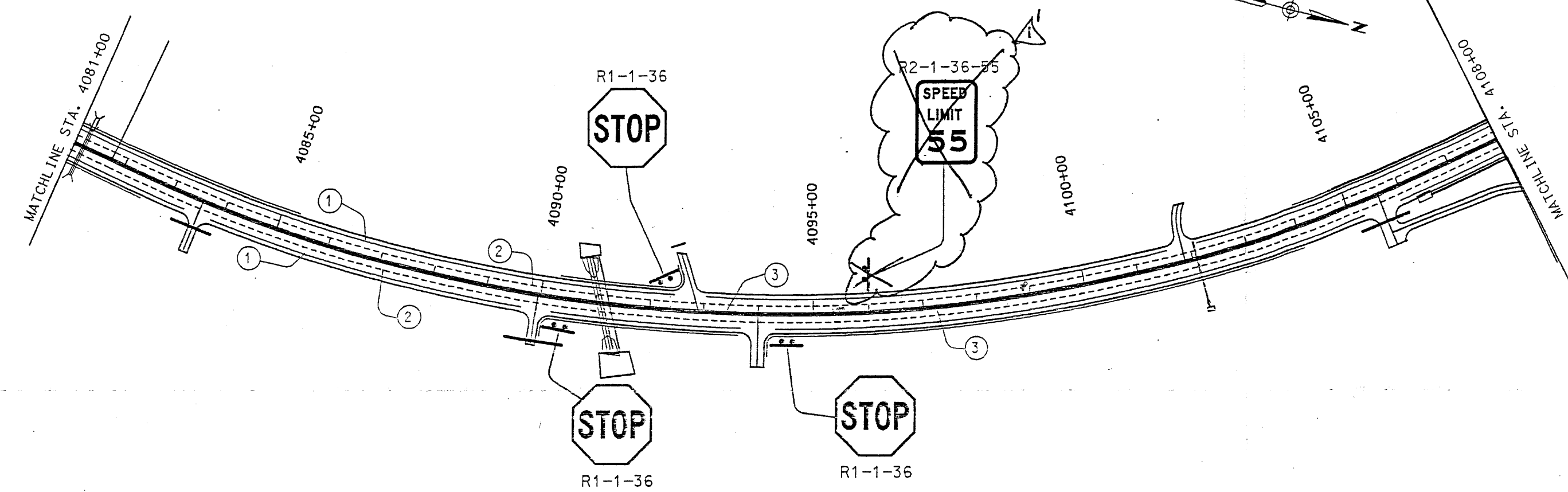
WILSON & COMPANY

DESIGN BY: GO
 DRAWN BY: SKI
 CHECKED BY: SFP



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 Plot Date: 01 JUN 99

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 Plot Date: 01 JUN 99

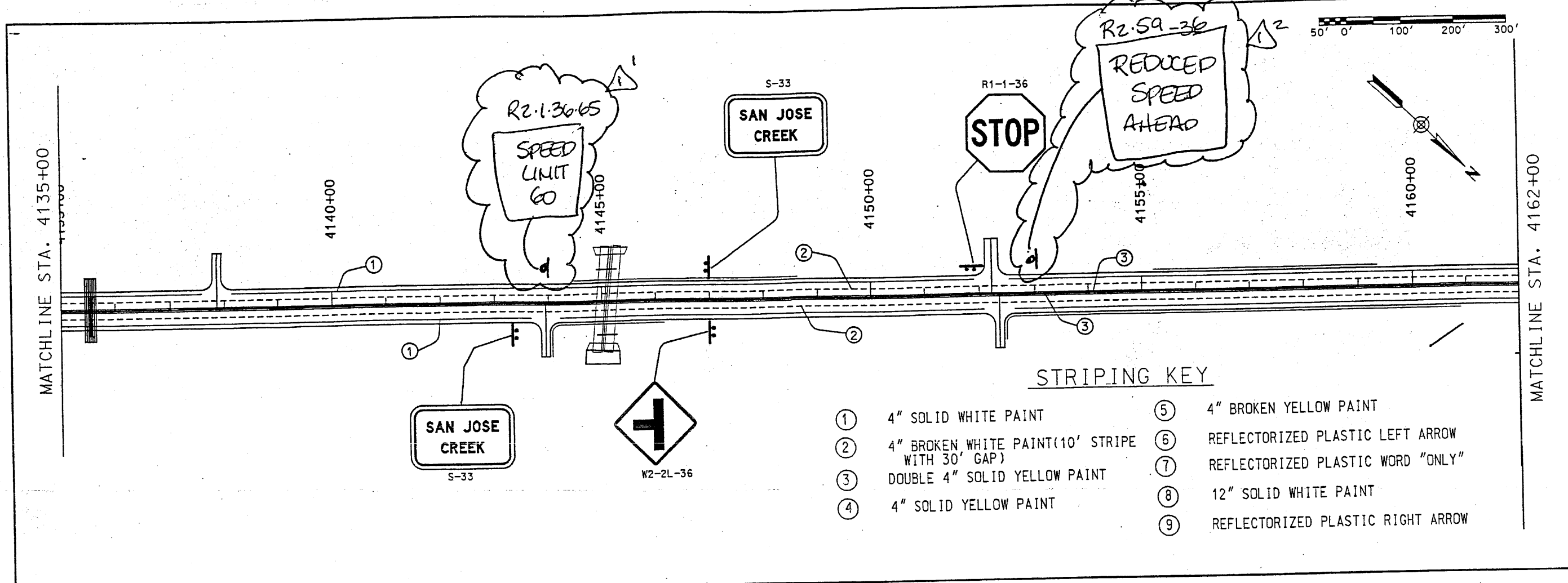


STRIPING KEY

①	4" SOLID WHITE PAINT
②	4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP)
③	DOUBLE 4" SOLID YELLOW PAINT

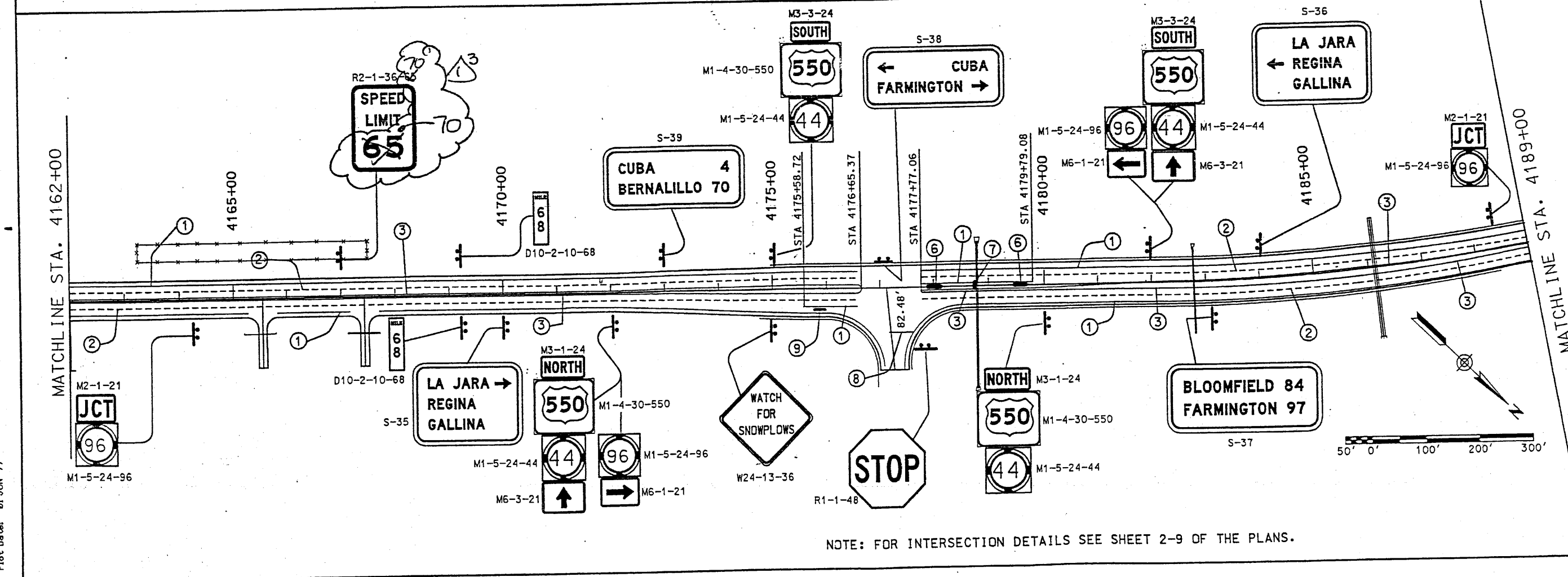
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DESIGN BY: GO	WILSON & COMPANY			
DRAWN BY: SKI	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"> SEAL </td> <td style="width: 33%; text-align: center;"> CHECKED BY: SFP </td> <td style="width: 33%;"></td> </tr> </table>	SEAL 	CHECKED BY: SFP	
SEAL 	CHECKED BY: SFP			
CHECKED BY: SFP	MATCHLINE STA. 4108+00 MATCHLINE STA. 4135+00			
7-3				

Design File: xt\public\projects\98082-01\sect\4447\psd\1.00
 Plot Date: 01 JUN 99



STRIPING KEY

- | | | | |
|---|---|---|-----------------------------------|
| ① | 4" SOLID WHITE PAINT | ⑤ | 4" BROKEN YELLOW PAINT |
| ② | 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP) | ⑥ | REFLECTORIZED PLASTIC LEFT ARROW |
| ③ | DOUBLE 4" SOLID YELLOW PAINT | ⑦ | REFLECTORIZED PLASTIC WORD "ONLY" |
| ④ | 4" SOLID YELLOW PAINT | ⑧ | 12" SOLID WHITE PAINT |
| | | ⑨ | REFLECTORIZED PLASTIC RIGHT ARROW |



NOTE: FOR INTERSECTION DETAILS SEE SHEET 2-9 OF THE PLANS.

SHEET TITLE
 PERMANENT SIGNING & STRIPING PLAN
 STATION 4135+00 TO STATION 4189+00
 NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 PROJECT NO AC-NH--044-2(3)964
 CN 3766

WILSON & COMPANY
 DESIGN BY: GO
 DRAWN BY: SKI
 CHECKED BY: SFP

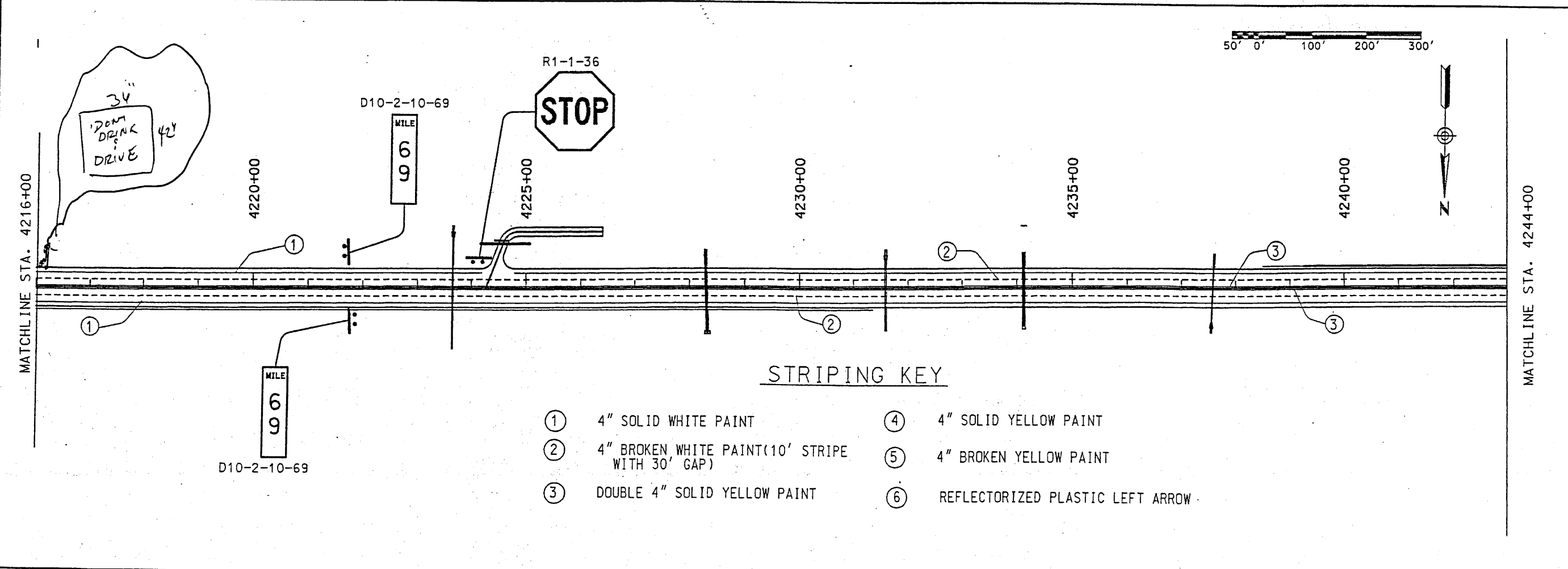
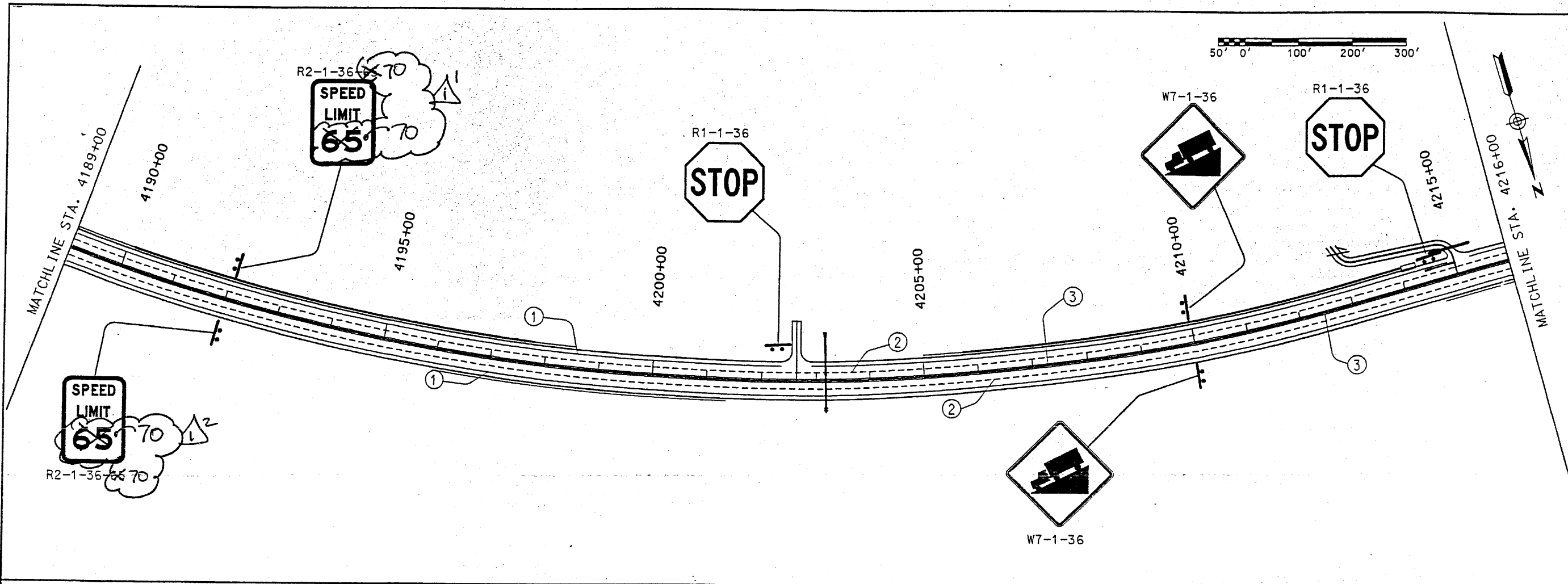
SEAL
 F. PENK...
 REGISTERED PROFESSIONAL ENGINEER

7-4

PROJECT NO. AC-NH-044-2(39)4
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 7.4, Permanent Signing, Striping Plan,
STA 4135+00 to STA 4189+00

NO.	REVISION	DATE	BY
1 ³	Revise Signs for 70mph		
	Revise Southbound Speed		
	Reduction Zone	3-27-01 & 10-28-01	FSC/FNF-0313 & FSC/FNF-0570

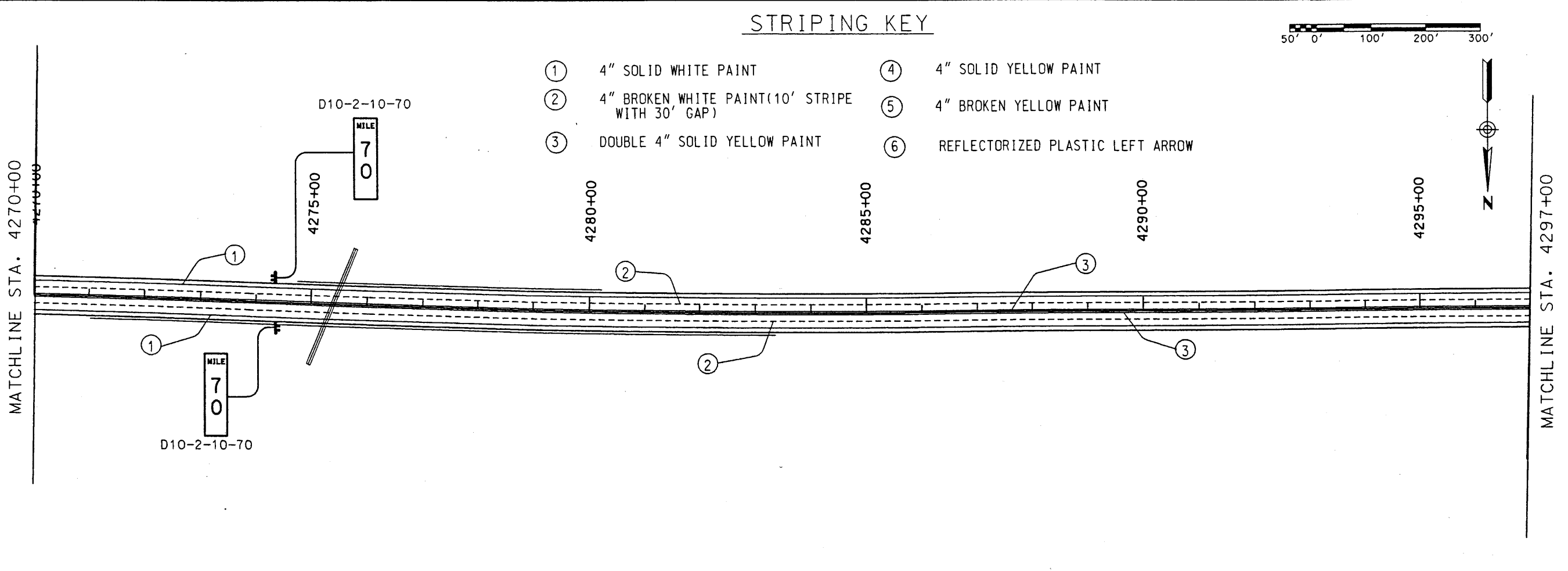
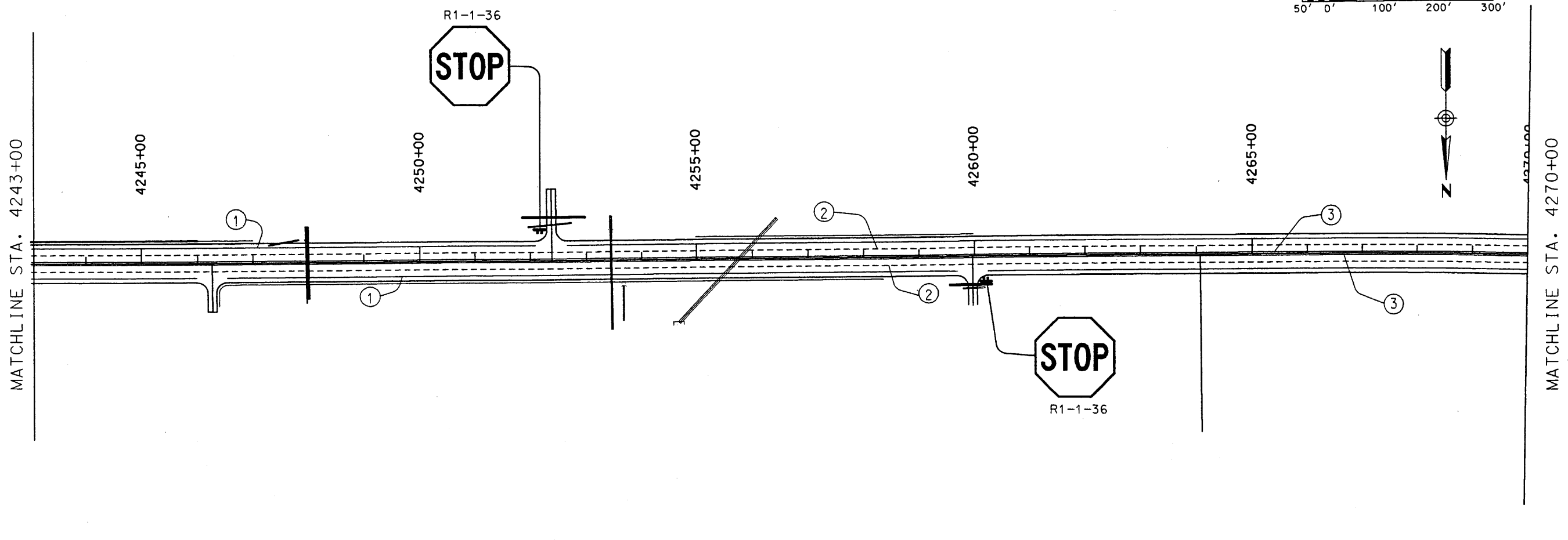
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 Plot Date: 01 JUN 99



STRIPING KEY

- ① 4" SOLID WHITE PAINT
- ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP)
- ③ DOUBLE 4" SOLID YELLOW PAINT
- ④ 4" SOLID YELLOW PAINT
- ⑤ 4" BROKEN YELLOW PAINT
- ⑥ REFLECTORIZED PLASTIC LEFT ARROW

	DESIGN BY: GO DRAWN BY: SKI CHECKED BY: SFP	WILSON & COMPANY
SHEET TITLE PERMANENT SIGNING & STRIPING PLAN STATION 4189+00 TO STATION 4243+00		
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6 NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)64 CN 3766		

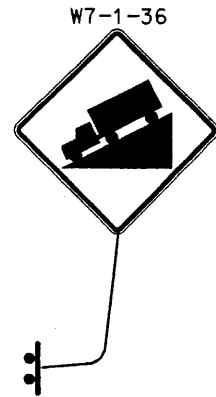


STRIPING KEY

- | | |
|---|------------------------------------|
| ① 4" SOLID WHITE PAINT | ④ 4" SOLID YELLOW PAINT |
| ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |

	DESIGN BY: GO DRAWN BY: SKI CHECKED BY: SFP	SHEET TITLE PERMANENT SIGNING & STRIPING PLAN STATION 4243+00 TO STATION 4297+00
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.-H.W.A. REGION NO 6		NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)64 CN 3766

MATCHLINE STA. 4297+00



4300+00

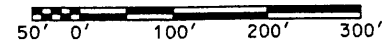


4305+00

4310+00

4315+00

4320+00



MATCHLINE STA. 4324+00

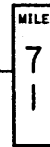
STRIPING KEY

- | | |
|---|------------------------------------|
| ① 4" SOLID WHITE PAINT | ④ 4" SOLID YELLOW PAINT |
| ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |

MATCHLINE STA. 4324+00

4325+00

D10-2-10-71



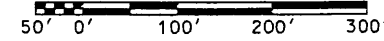
4330+00

4335+00

4340+00

4345+00

4350+00



MATCHLINE STA. 4351+00

SEAL

DESIGN BY: GO
 DRAWN BY: SKI
 CHECKED BY: SFP

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

PERMANENT SIGNING
 & STRIPING PLAN
 STATION 4297+00
 TO
 STATION 4351+00

NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766

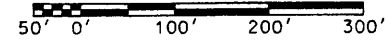
**WILSON
 & COMPANY**

Design File: xt\public\projects\98082-01\sect7\4447ps06.100
 Plot Date: 01 JUN 99

MATCHLINE STA. 4351+00

STRIPING KEY

- ① 4" SOLID WHITE PAINT
- ② 4" BROKEN WHITE PAINT(10' STRIPE WITH 30' GAP)
- ③ DOUBLE 4" SOLID YELLOW PAINT
- ④ 4" SOLID YELLOW PAINT
- ⑤ 4" BROKEN YELLOW PAINT
- ⑥ REFLECTORIZED PLASTIC LEFT ARROW



4355+00

4360+00

4365+00

4370+00

4375+00

MATCHLINE STA. 4378+00

D10-2-10-72

72

4380+00

D10-2-10-72

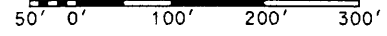
72

4385+00

4390+00

4395+00

4400+00



S-40

CUBA 7
BERNALILLO 72

MATCHLINE STA. 4405+00

MATCHLINE STA. 4378+00

SEAL

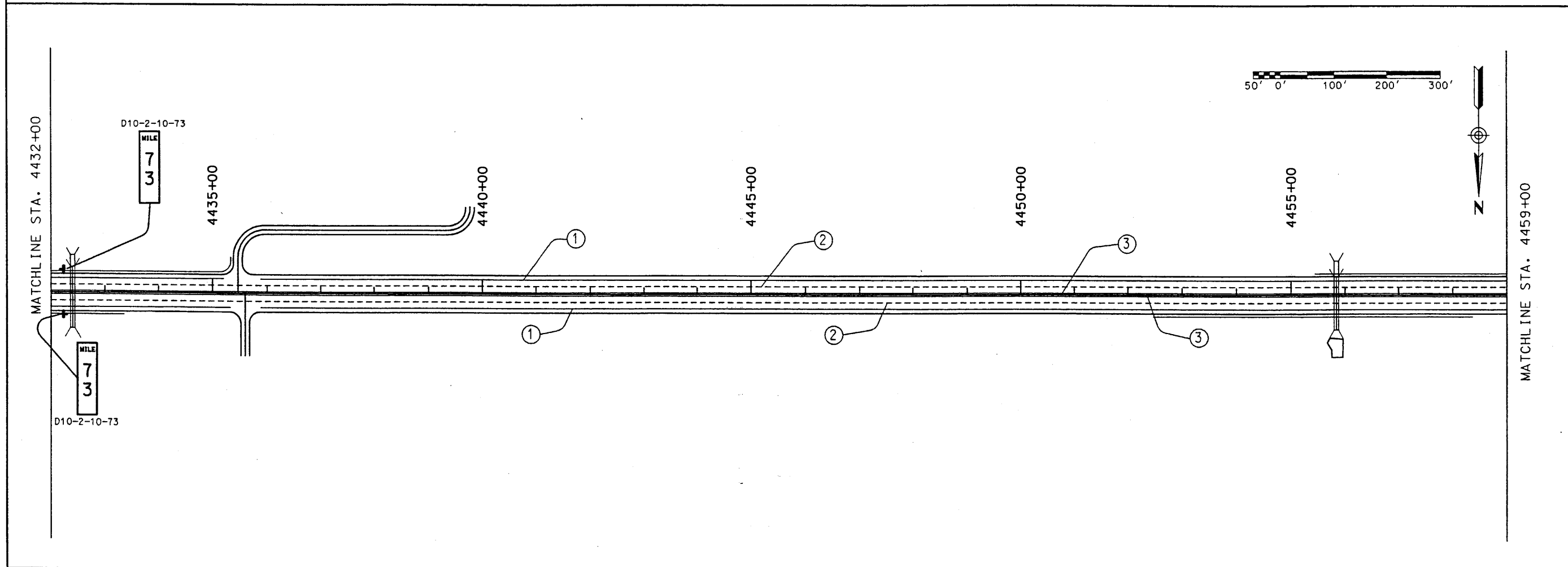
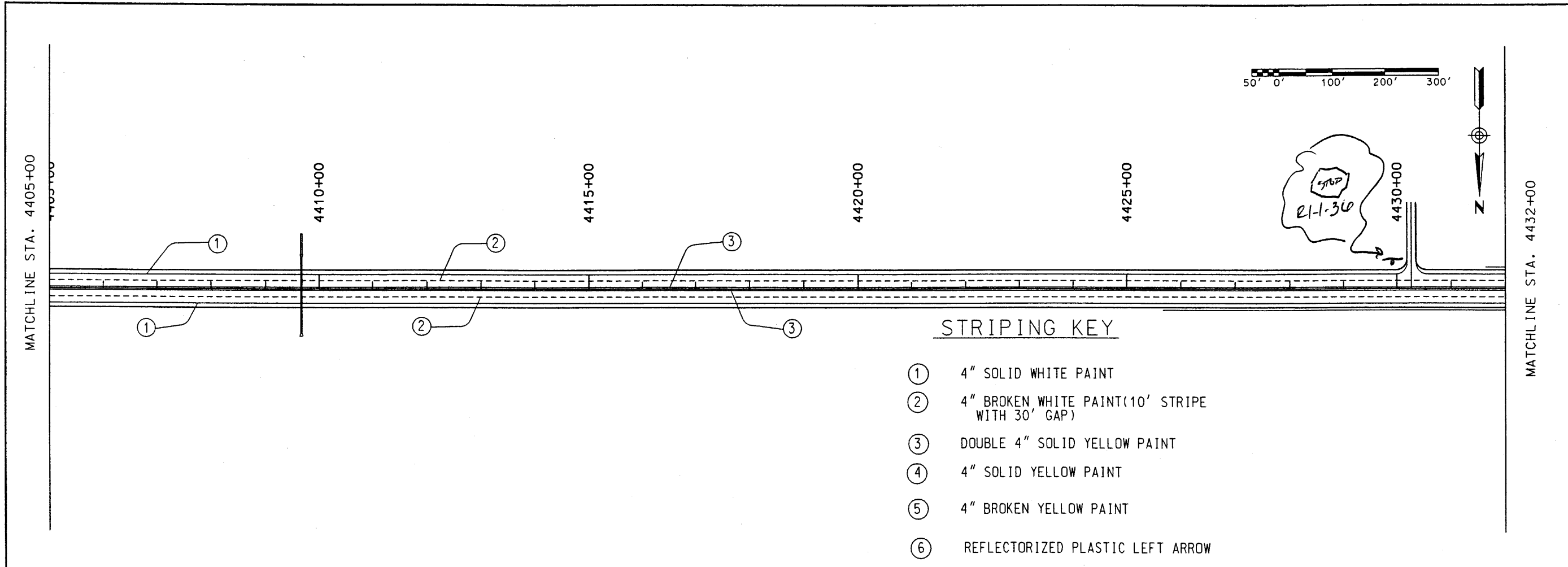
DESIGN BY: GO
 DRAWN BY: SKI
 CHECKED BY: SFP

WILSON & COMPANY

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

SHEET TITLE
 PERMANENT SIGNING
 & STRIPING PLAN
 STATION 4351+00
 TO
 STATION 4405+00

NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766



	DESIGN BY: GO	DRAWN BY: SKI	CHECKED BY: SFP	WILSON & COMPANY	SHEET TITLE PERMANENT SIGNING & STRIPING PLAN STATION 4405+00 TO STATION 4459+00
				NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6	NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)64 CN 3766
7-9					

Design File: s:\public\projects\98082-01\sect7\447ps10.100
 Plot Date: 01 JUN 99

MATCHLINE STA. 4459+00

4460+00

4465+00

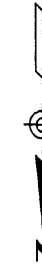
4470+00

4475+00

4480+00

4485+00

50' 0' 100' 200' 300'



D10-2-10-74

MILE
7
4

MATCHLINE STA. 4486+00

MATCHLINE STA. 4486+00

4490+00

4495+00

4500+00

4505+00

4510+00

50' 0' 100' 200' 300'



MATCHLINE STA. 4513+00

STRIPING KEY

- | | |
|--|------------------------------------|
| ① 4" SOLID WHITE PAINT | ④ 4" SOLID YELLOW PAINT |
| ② 4" BROKEN WHITE PAINT(10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

PERMANENT SIGNING
 & STRIPING PLAN
 STATION 4459+00
 TO
 STATION 4513+00

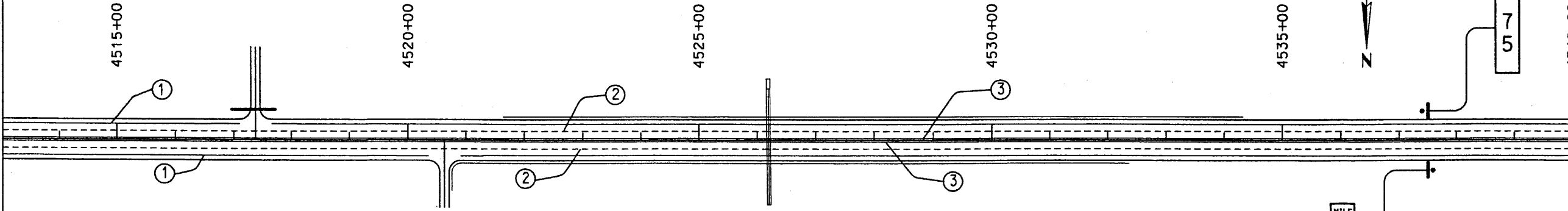
NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766
 NM 44

**WILSON
 & COMPANY**

DESIGN BY: GO
 DRAWN BY: SKI
 CHECKED BY: SFP



MATCHLINE STA. 4513+00

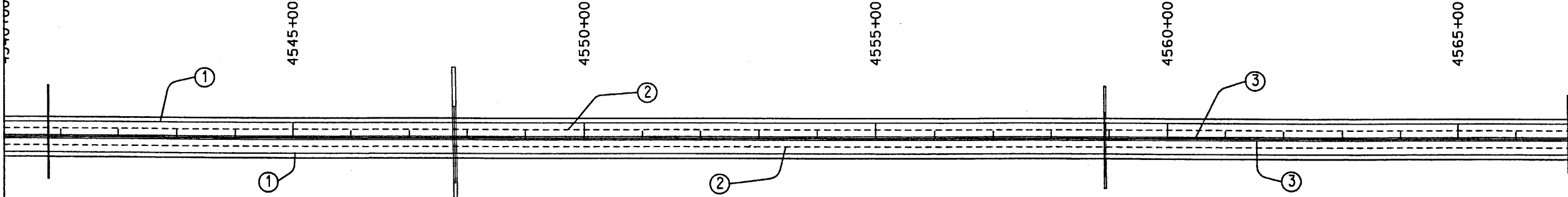


STRIPING KEY

- | | |
|---|------------------------------------|
| ① 4" SOLID WHITE PAINT | ④ 4" SOLID YELLOW PAINT |
| ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |

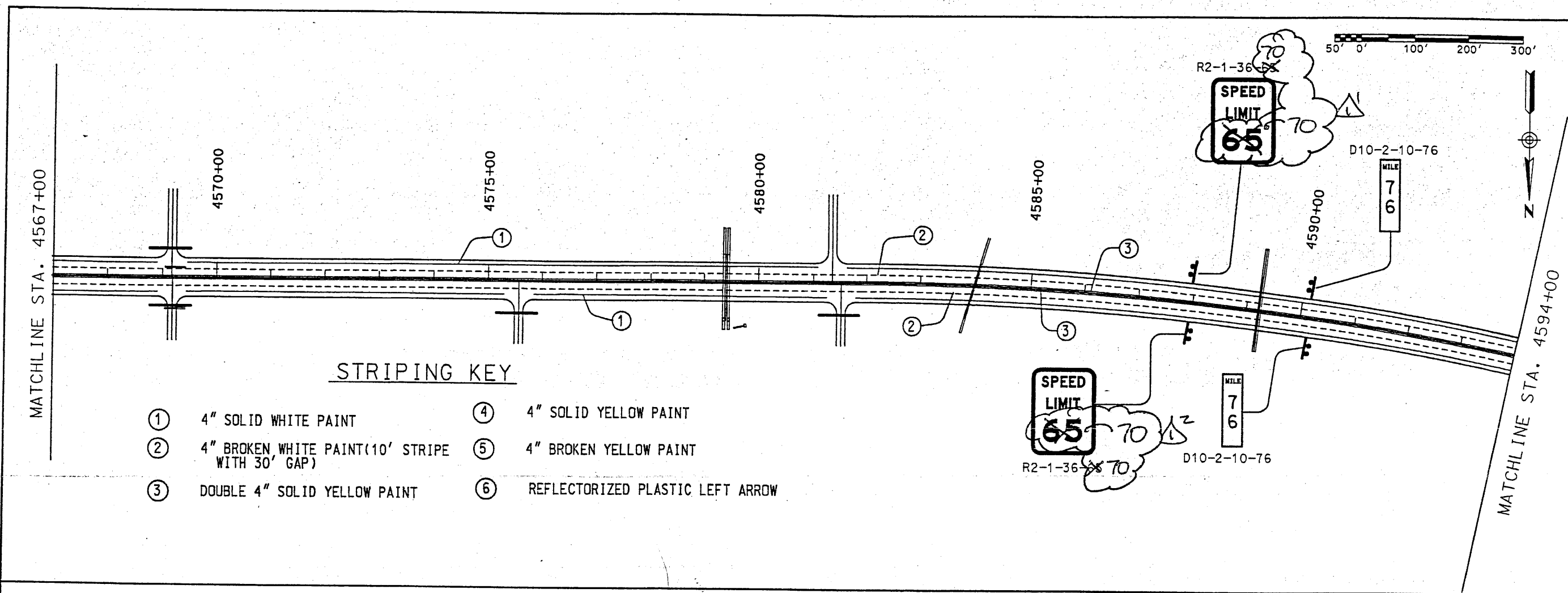
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MATCHLINE STA. 4540+00



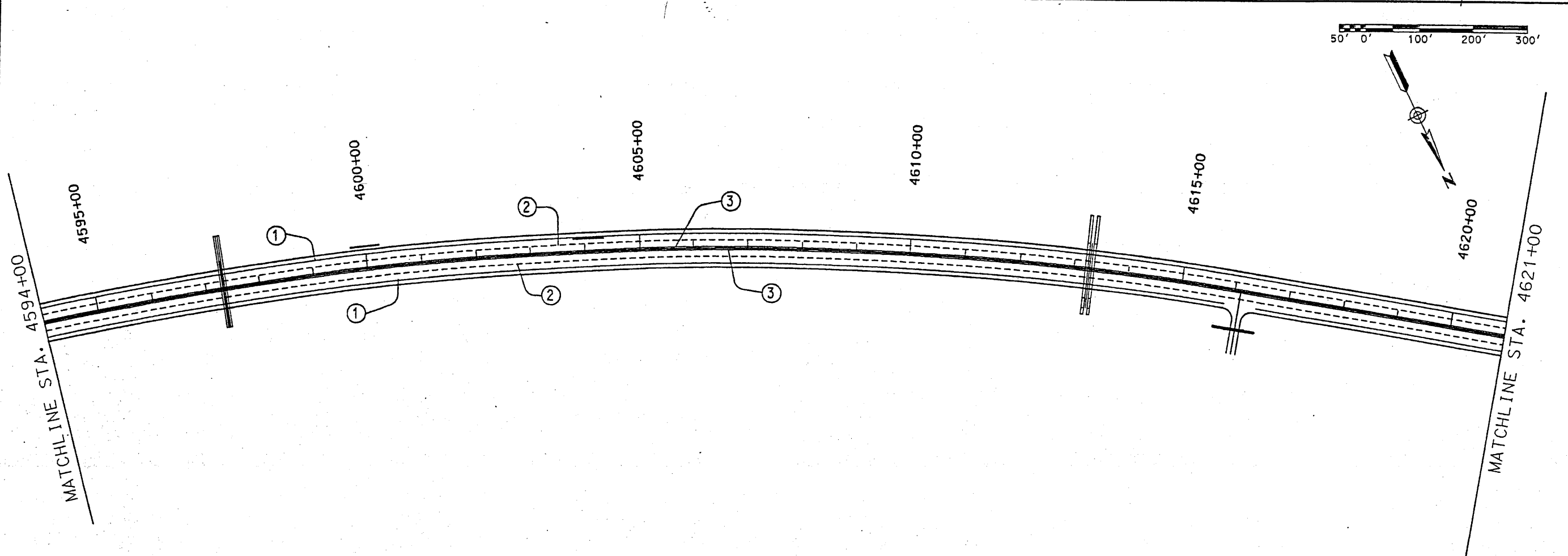
MATCHLINE STA. 4567+00

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	DRAWN BY: SKI CHECKED BY: SFP	
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6 NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)64 CN 3766		
7-11		



STRIPING KEY

- | | |
|---|------------------------------------|
| ① 4" SOLID WHITE PAINT | ④ 4" SOLID YELLOW PAINT |
| ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |



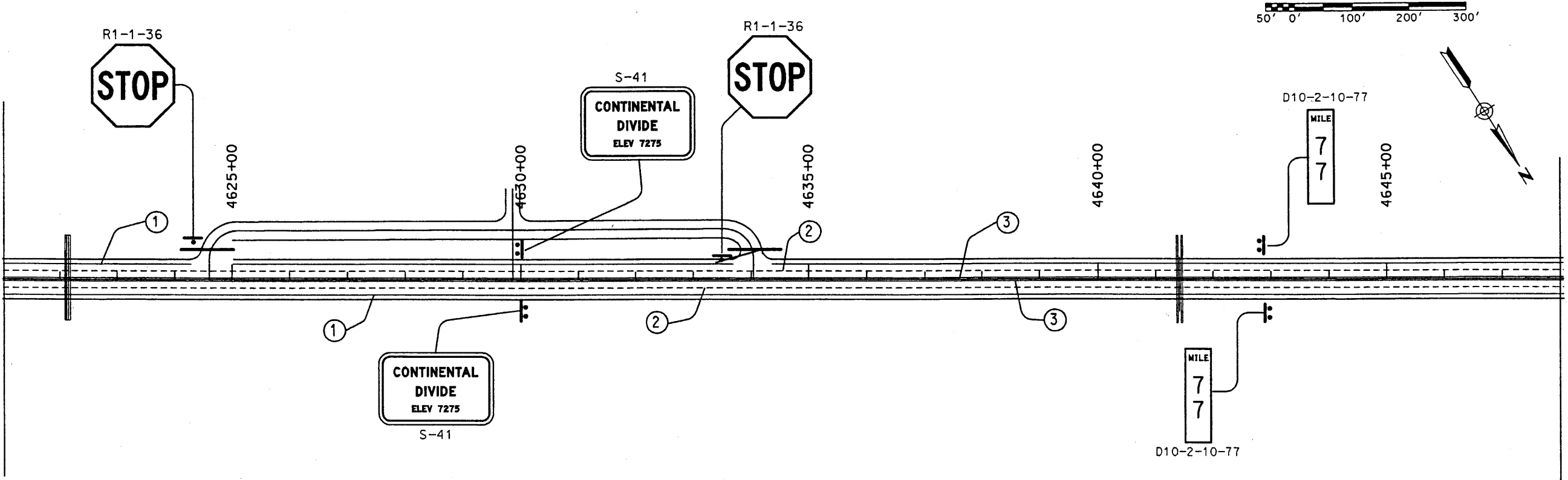
SHEET TITLE PERMANENT SIGNING & STRIPING PLAN STATION 4567+00 TO STATION 4621+00	DESIGN BY: GO
	DRAWN BY: SKI
CHECKED BY: SFP	SEAL
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6 NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)64 CN 3766	

**WILSON
& COMPANY**

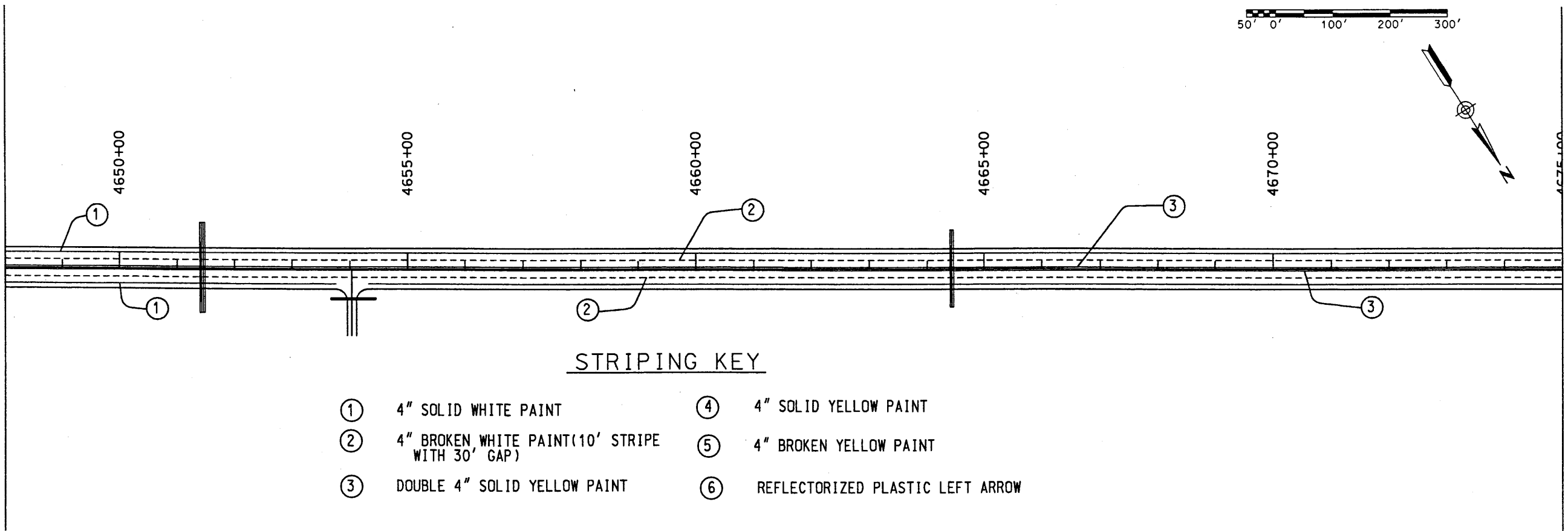
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 Plot Date: 01 JUN 99

MATCHLINE STA. 4621+00

MATCHLINE STA. 4645+00



MATCHLINE STA. 4645+00



MATCHLINE STA. 4675+00

STRIPING KEY

- | | |
|---|------------------------------------|
| ① 4" SOLID WHITE PAINT | ④ 4" SOLID YELLOW PAINT |
| ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |

SHEET TITLE

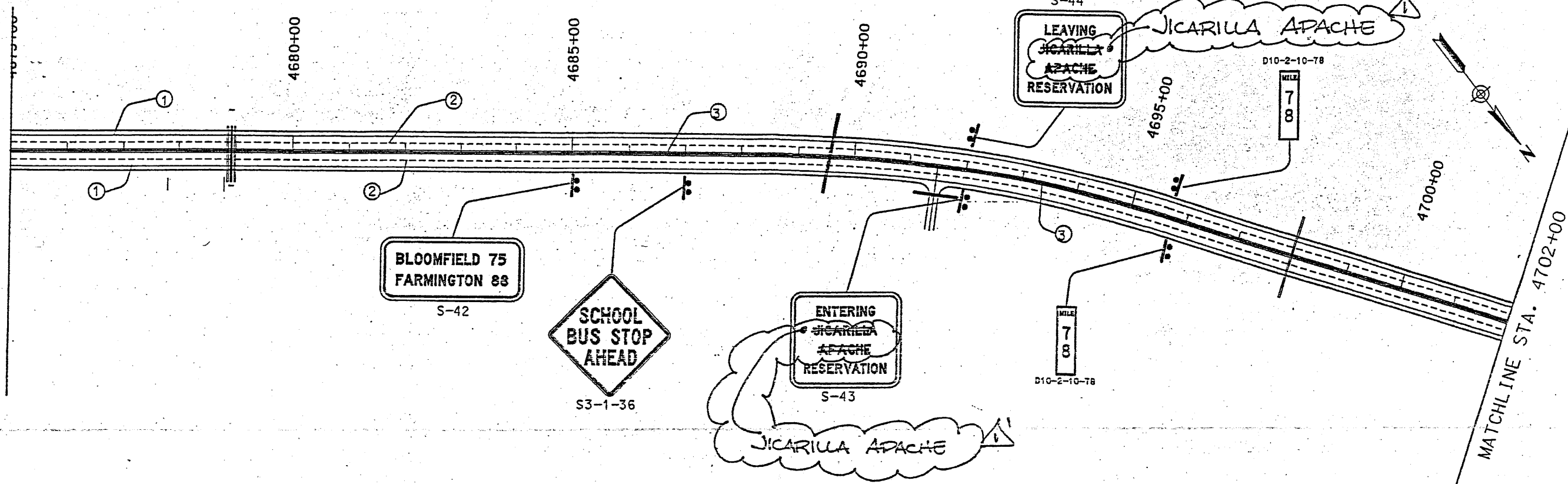
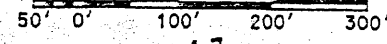
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

PERMANENT SIGNING
 & STRIPING PLAN
 STATION 4621+00
 TO
 STATION 4675+00



DESIGN BY: GO
 DRAWN BY: SKI
 CHECKED BY: SFP

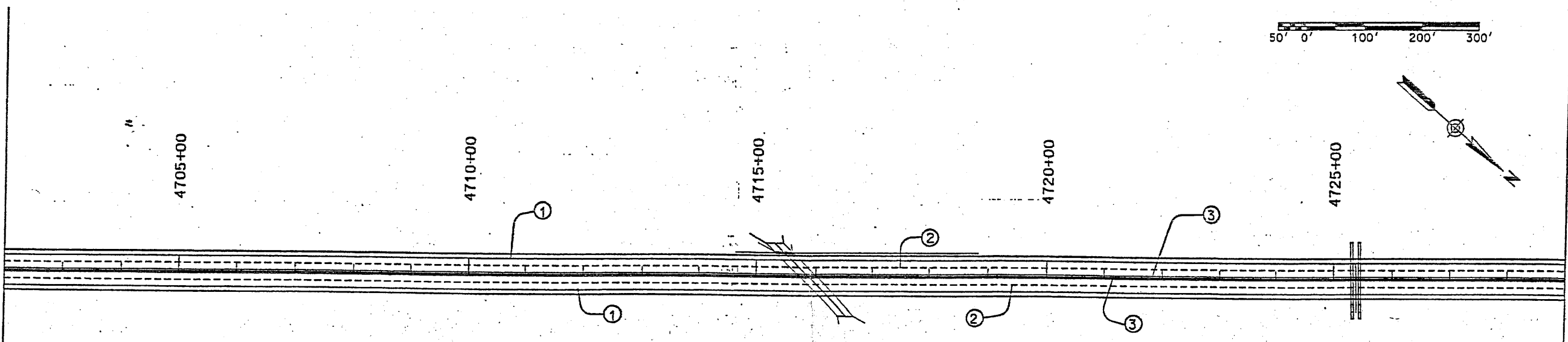
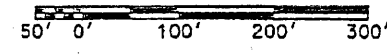
MATCHLINE STA. 4675+00



PERMANENT SIGNING
 & STRIPING PLAN
 TO
 STATION 4675+00
 FROM
 STATION 4729+00

SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766

MATCHLINE STA. 4702+00



MATCHLINE STA. 4729+00

DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP

WILSON & COMPANY

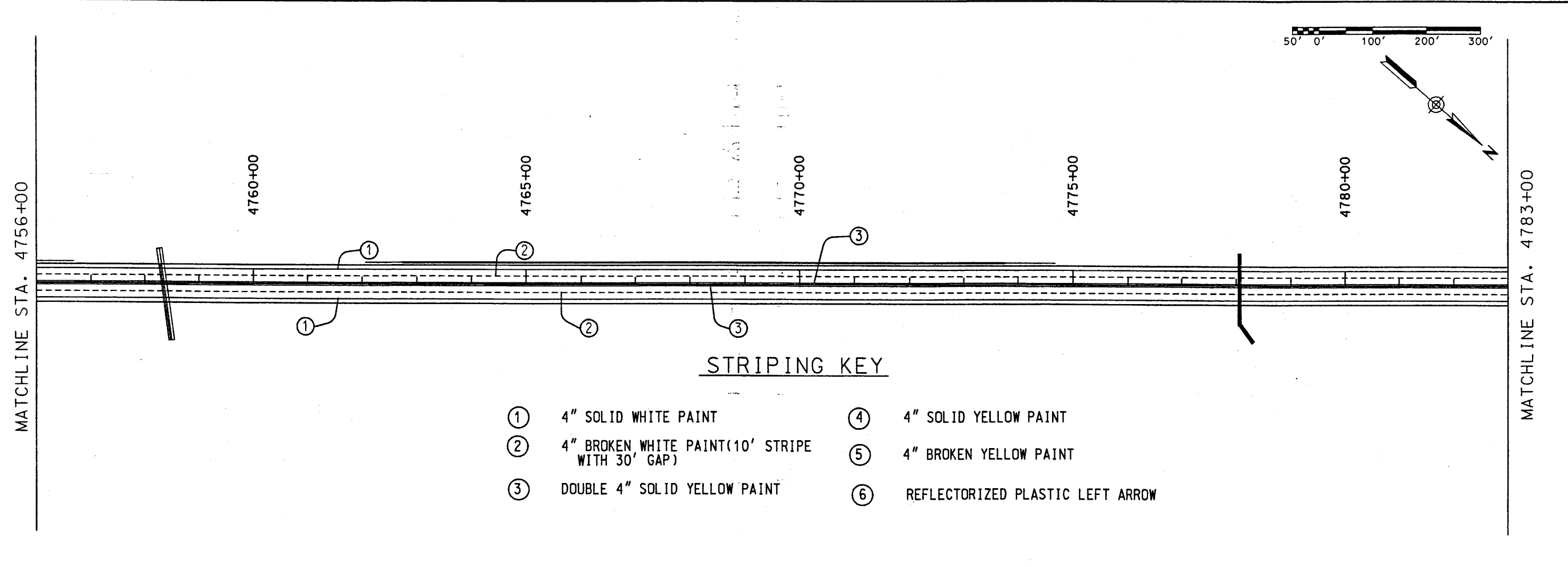
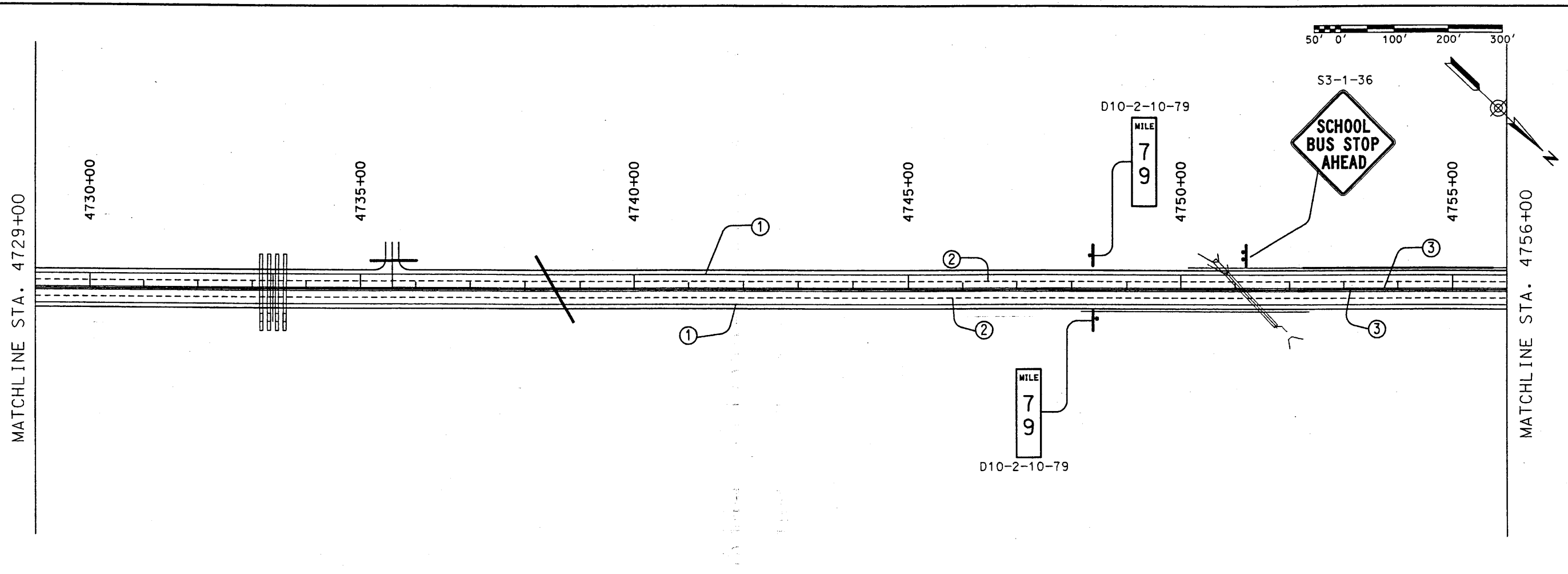
SEAL

 SCOTT L. PERKINS
 STATE OF NEW MEXICO
 LICENSE NO. 10222
 EXPIRES 12/31/93

STRIPING KEY

- | | |
|---|------------------------------------|
| ① 4" SOLID WHITE PAINT | ④ 4" SOLID YELLOW PAINT |
| ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |

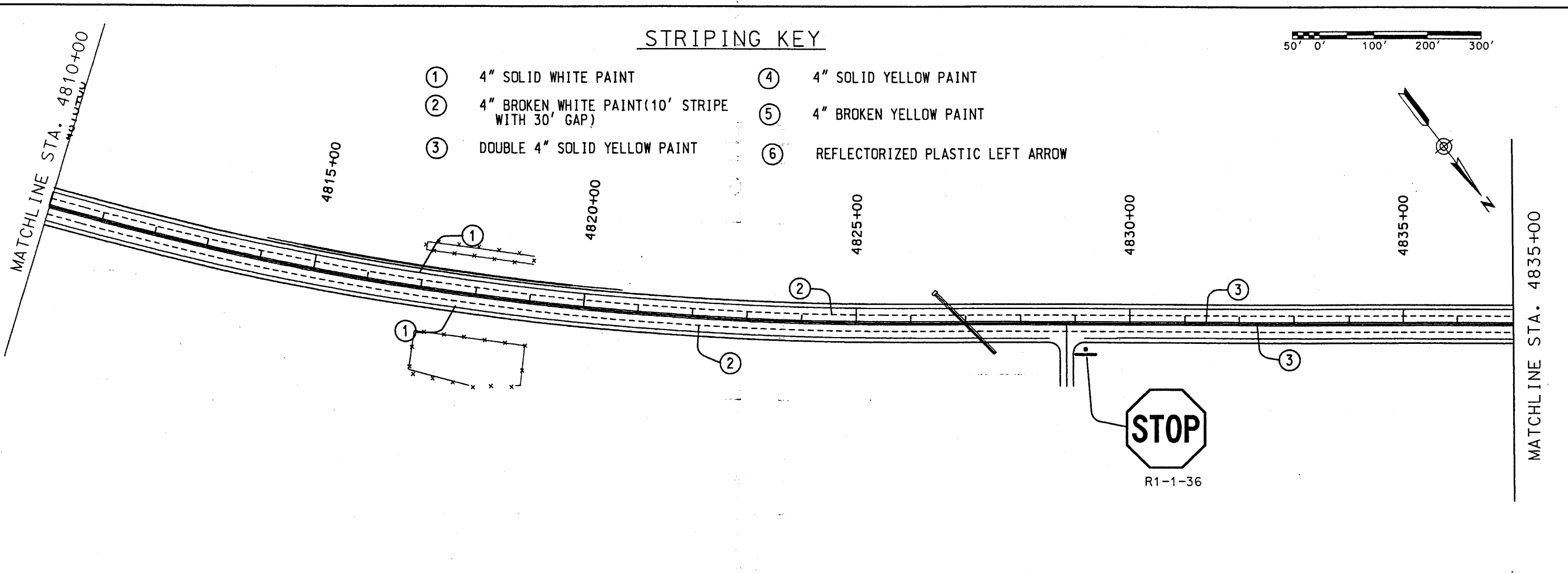
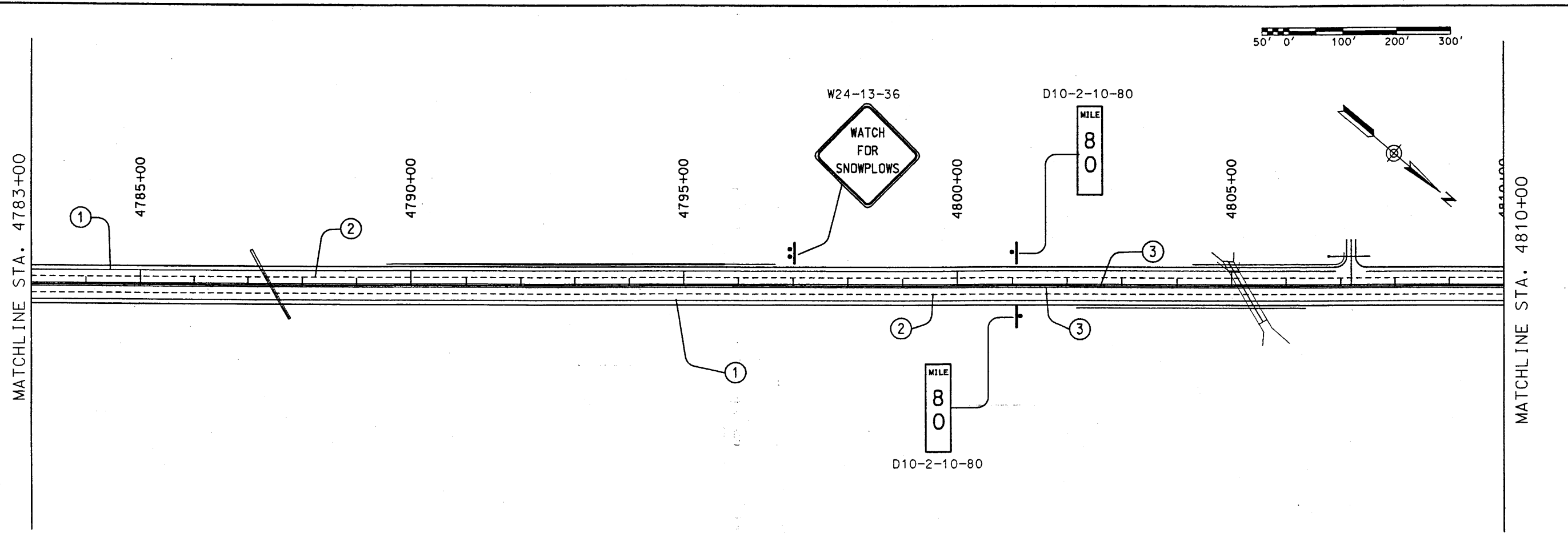
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 Plot Date: 24 MAY 99



STRIPING KEY


- | | |
|---|------------------------------------|
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| ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |

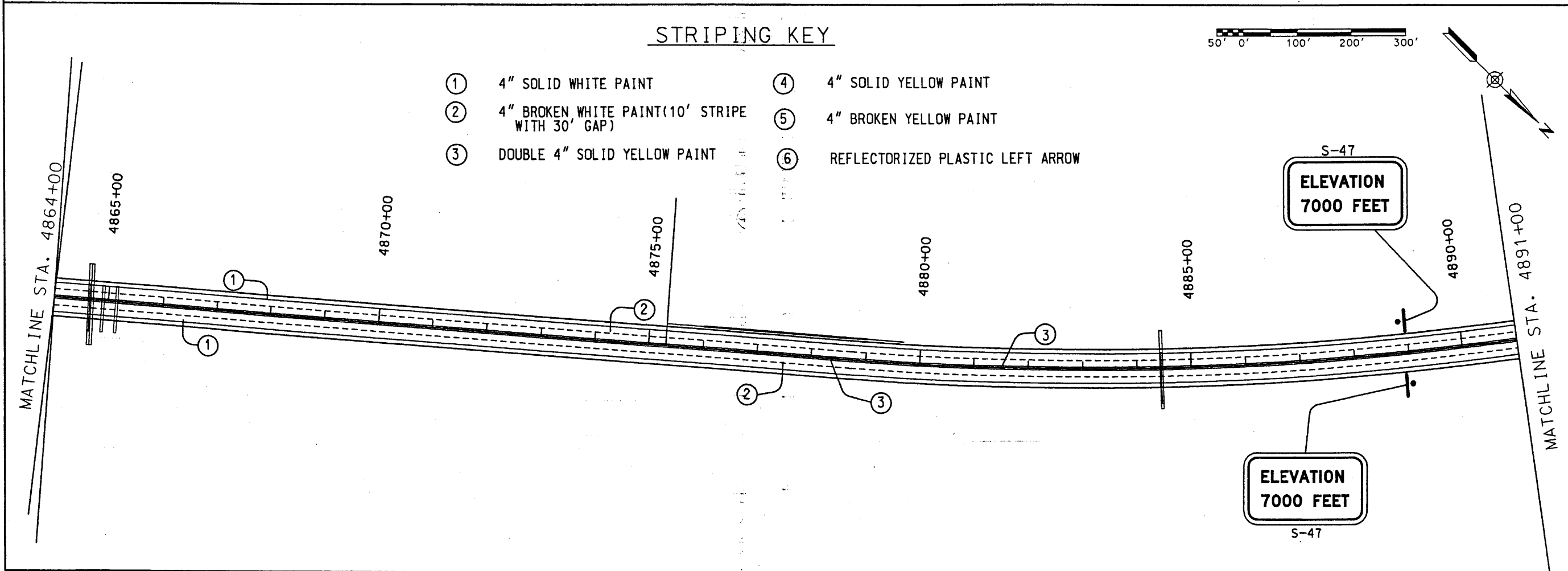
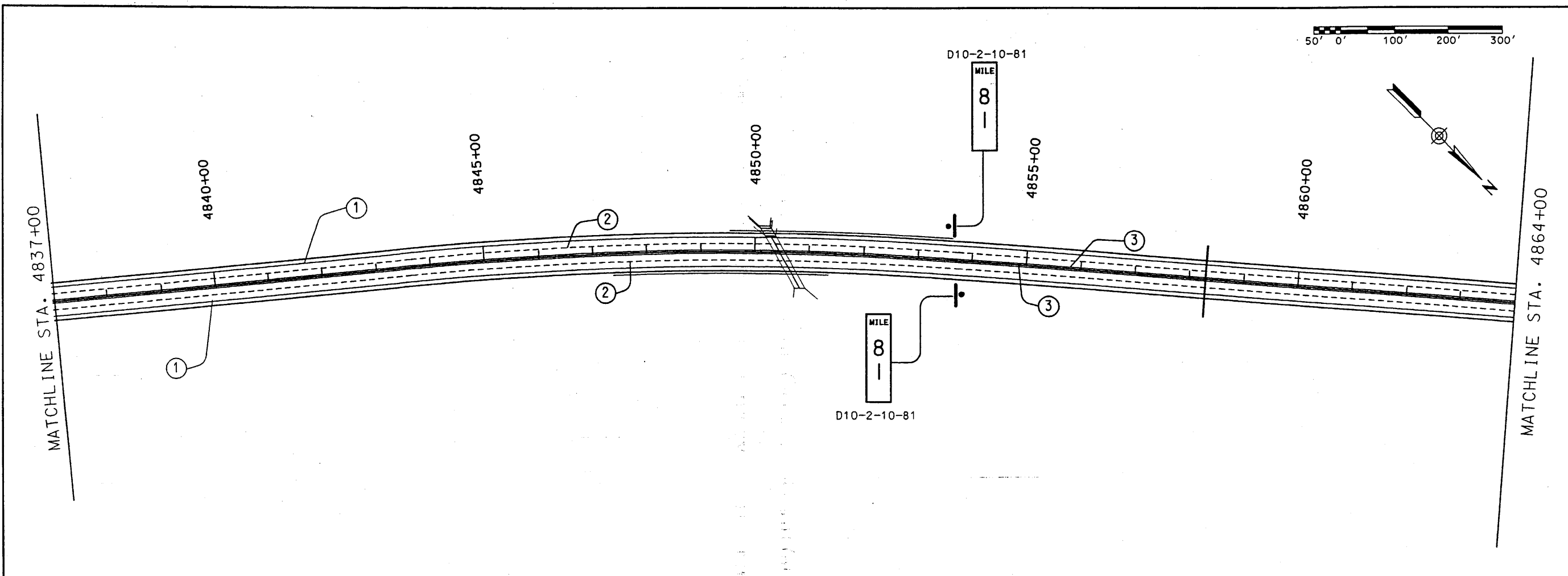
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SHEET TITLE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6		
PERMANENT SIGNING & STRIPING PLAN STATION 4729+00 TO STATION 4783+00		
NEW MEXICO PROJECT NO AC-NH--044-2(39)64 NM 44 CN 3766		
7-15		



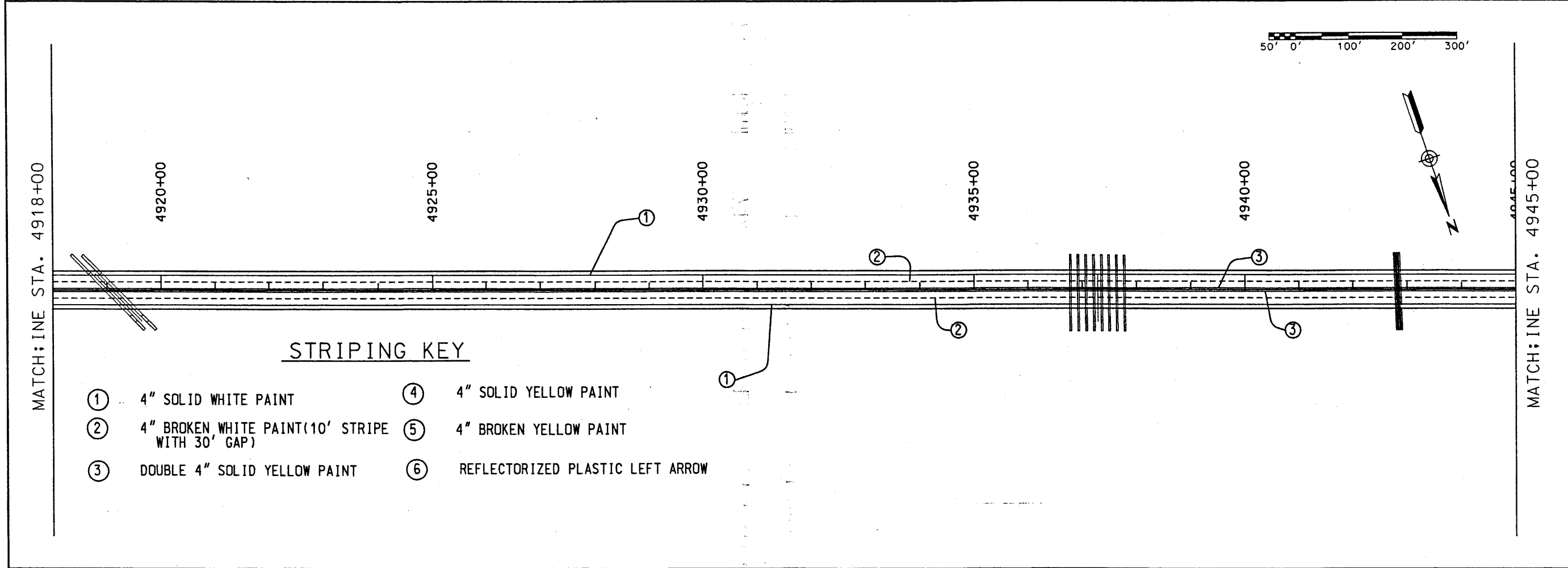
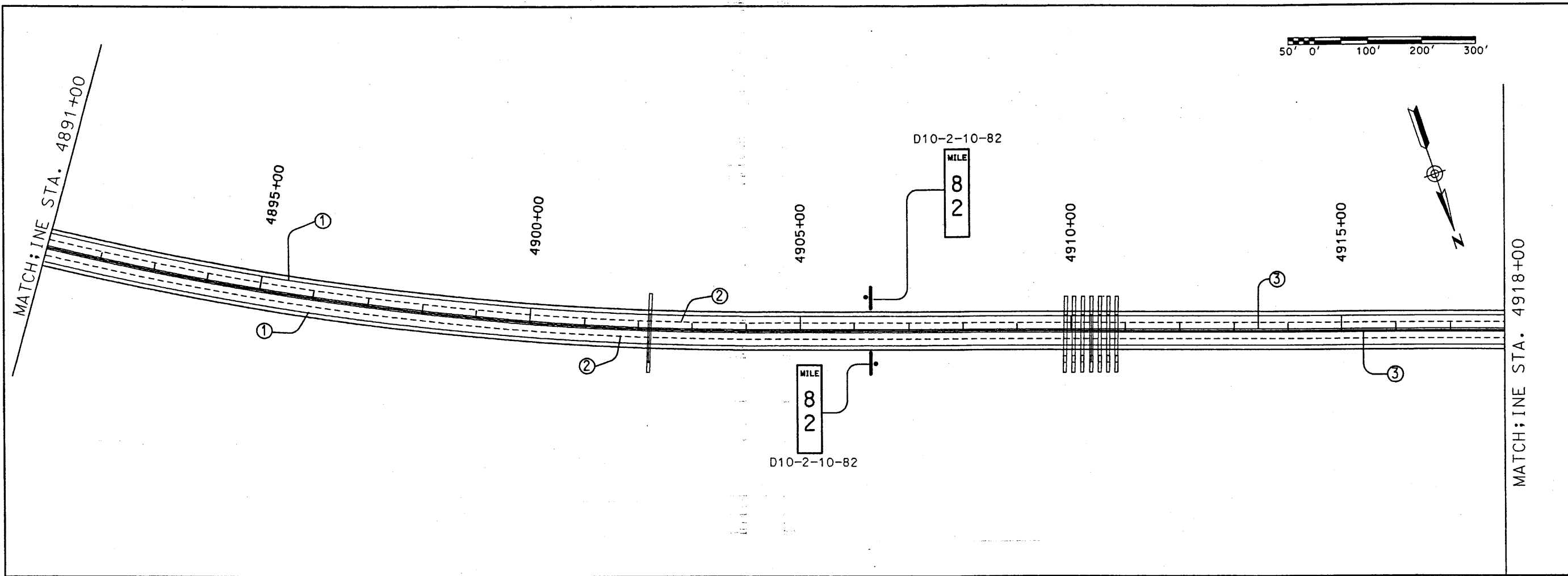
STRIPING KEY

- | | |
|---|------------------------------------|
| ① 4" SOLID WHITE PAINT | ④ 4" SOLID YELLOW PAINT |
| ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |

SEAL 	DESIGN BY: STAFF	DRAWN BY: STAFF	CHECKED BY: SFP	SHEET TITLE PERMANENT SIGNING & STRIPING PLAN STATION 4783+00 TO STATION 4837+00
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6				
NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)64 CN 3766				



	DESIGN BY: STAFF	DRAWN BY: STAFF	CHECKED BY: SFP	PERMANENT SIGNING & STRIPING PLAN STATION 4837+00 TO STATION 4891+00
<b style="font-size: 1.5em;">WILSON & COMPANY				
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6 NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)164 CN 3766				
SHEET TITLE				
7-17				



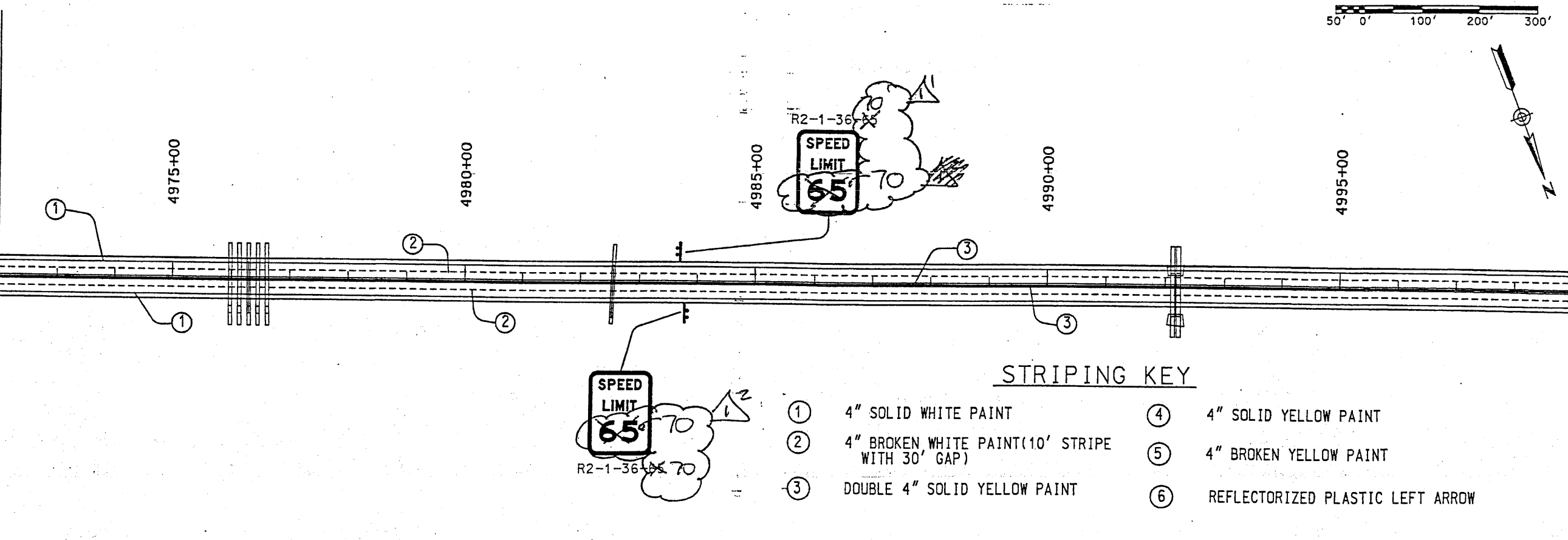
STRIPING KEY

- | | |
|---|------------------------------------|
| ① 4" SOLID WHITE PAINT | ④ 4" SOLID YELLOW PAINT |
| ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |

SHEET TITLE PERMANENT SIGNING & STRIPING PLAN STATION 4891+00 TO STATION 4945+00	NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6 NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)64 CN 3766
DESIGN BY: STAFF	
DRAWN BY: STAFF	CHECKED BY: SFP
7-18	

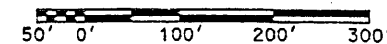
MATCHLINE STA. 4972+00

MATCHLINE STA. 4945+00



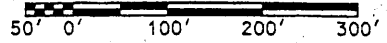
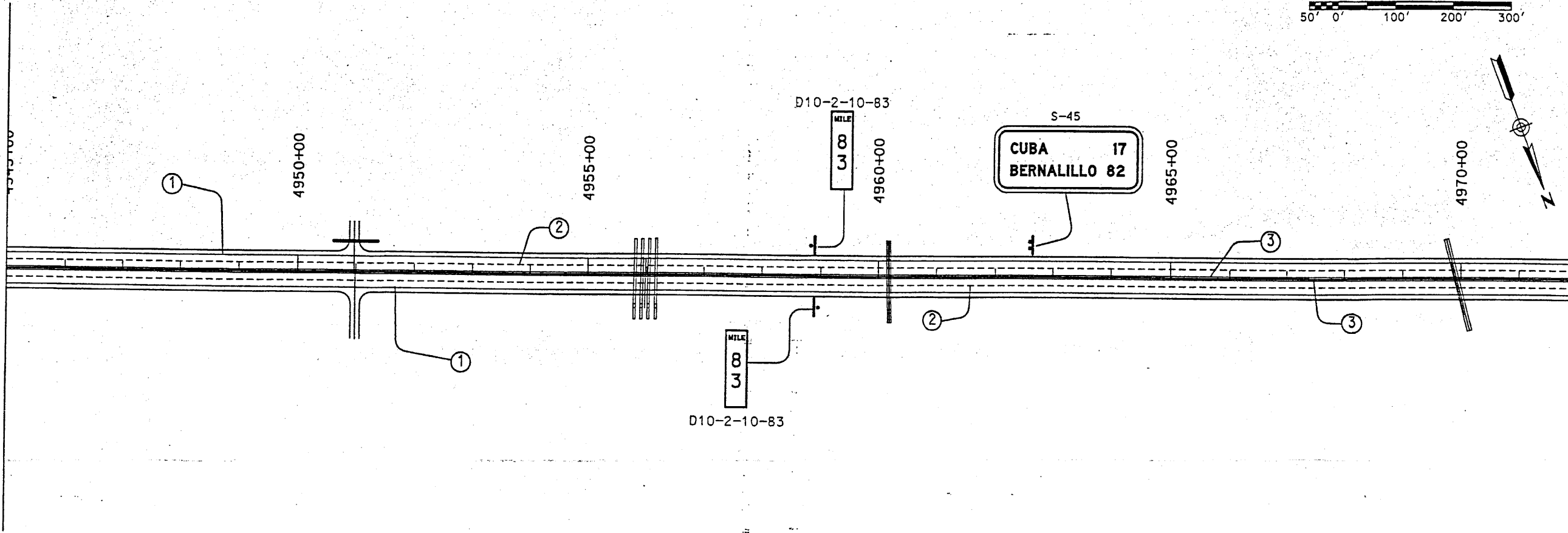
STRIPING KEY

- | | | | |
|---|--|---|----------------------------------|
| ① | 4" SOLID WHITE PAINT | ④ | 4" SOLID YELLOW PAINT |
| ② | 4" BROKEN WHITE PAINT(10' STRIPE WITH 30' GAP) | ⑤ | 4" BROKEN YELLOW PAINT |
| ③ | DOUBLE 4" SOLID YELLOW PAINT | ⑥ | REFLECTORIZED PLASTIC LEFT ARROW |



MATCHLINE STA. 4945+00

MATCHLINE STA. 4999+00

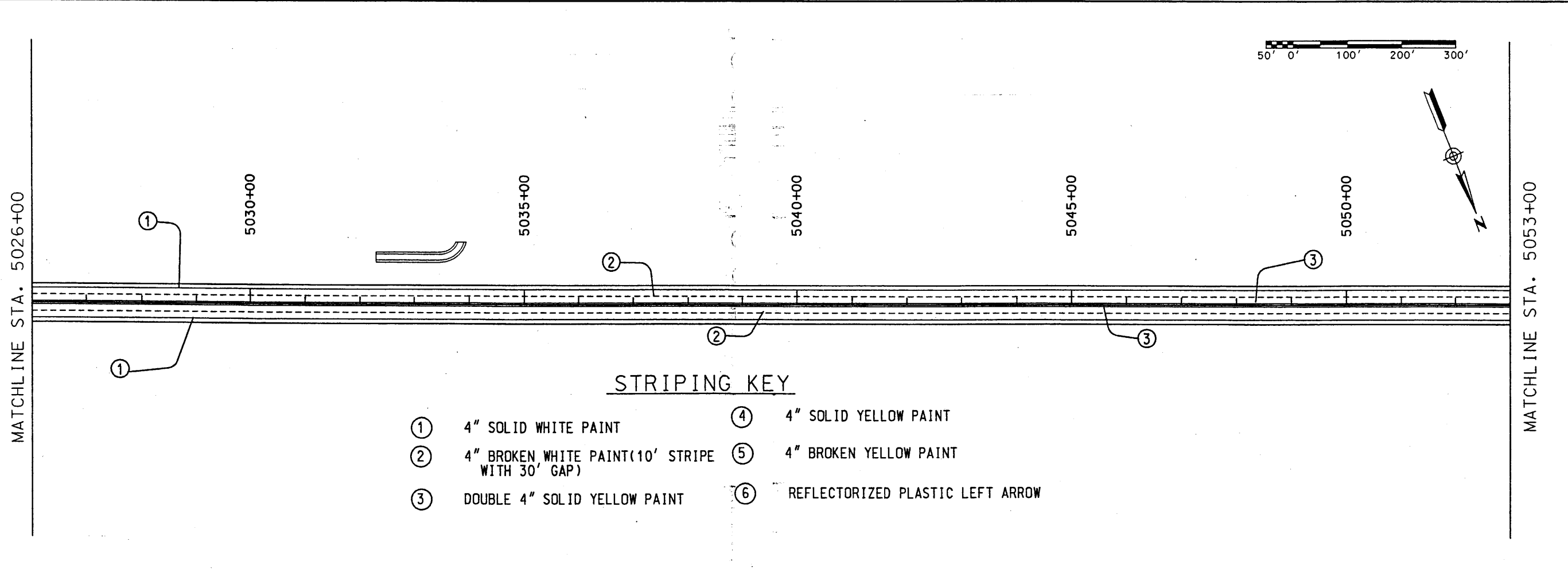
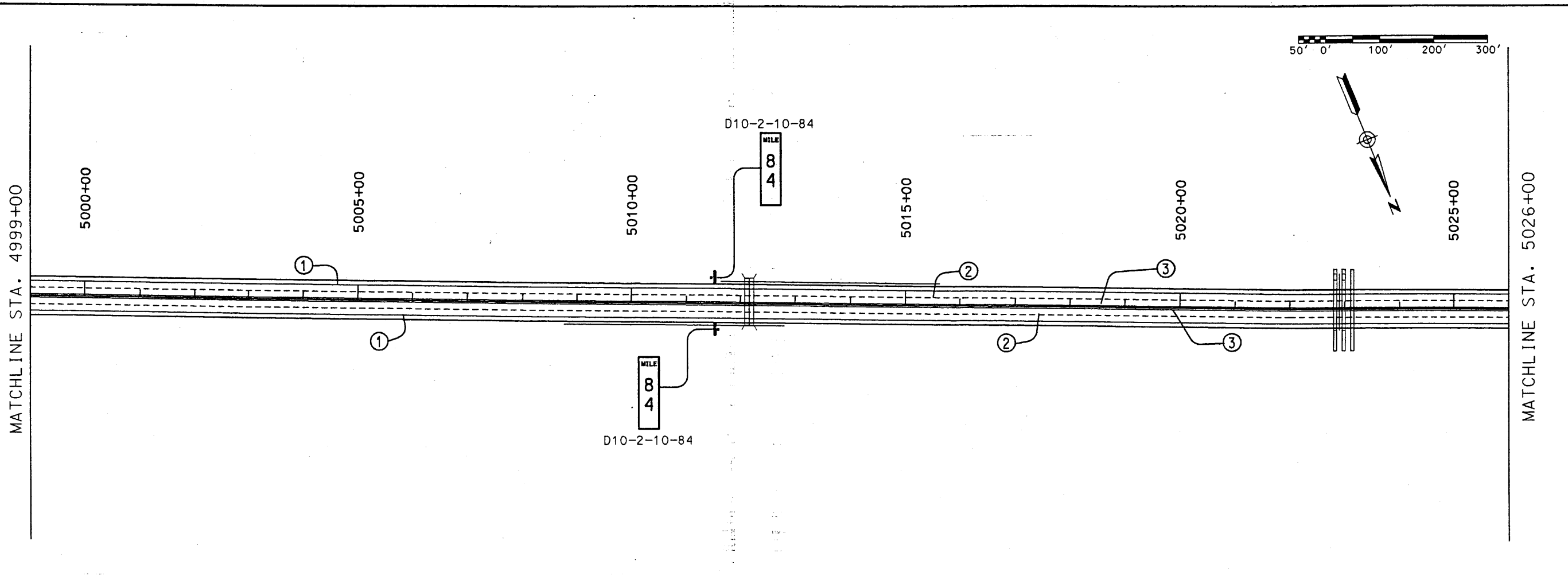


DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP

WILSON & COMPANY

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.-H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2(39)64
 CN 3766

PERMANENT SIGNING & STRIPING PLAN
 STATION 4945+00 TO STATION 4999+00



STRIPING KEY


- | | |
|--|------------------------------------|
| ① 4" SOLID WHITE PAINT | ④ 4" SOLID YELLOW PAINT |
| ② 4" BROKEN WHITE PAINT(10' STRIPE WITH 30' GAP) | ⑤ 4" BROKEN YELLOW PAINT |
| ③ DOUBLE 4" SOLID YELLOW PAINT | ⑥ REFLECTORIZED PLASTIC LEFT ARROW |

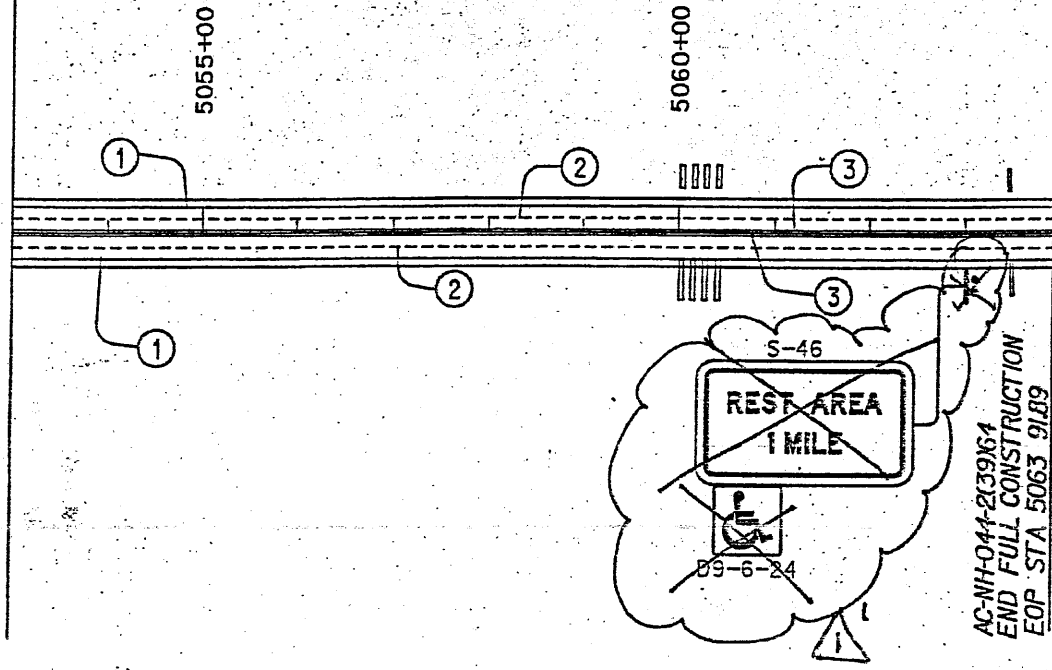
MATCHLINE STA. 4999+00

MATCHLINE STA. 5026+00

MATCHLINE STA. 5026+00

MATCHLINE STA. 5053+00

SEAL 	DESIGN BY: STAFF DRAWN BY: STAFF CHECKED BY: SFP	WILSON & COMPANY	SHEET TITLE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6 NM 44 NEW MEXICO PROJECT NO AC-NH--044-2(39)64 CN 3766
PERMANENT SIGNING & STRIPING PLAN STATION 4999+00 TO STATION 5053+00			7-20

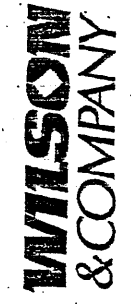


STRIPING KEY

- ① 4" SOLID WHITE PAINT
- ② 4" BROKEN WHITE PAINT (10' STRIPE WITH 30' GAP)
- ③ DOUBLE 4" SOLID YELLOW PAINT
- ④ 4" SOLID YELLOW PAINT
- ⑤ 4" BROKEN YELLOW PAINT
- ⑥ REFLECTORIZED PLASTIC LEFT ARROW



DESIGN BY: STAFF
 DRAWN BY: STAFF
 CHECKED BY: SFP

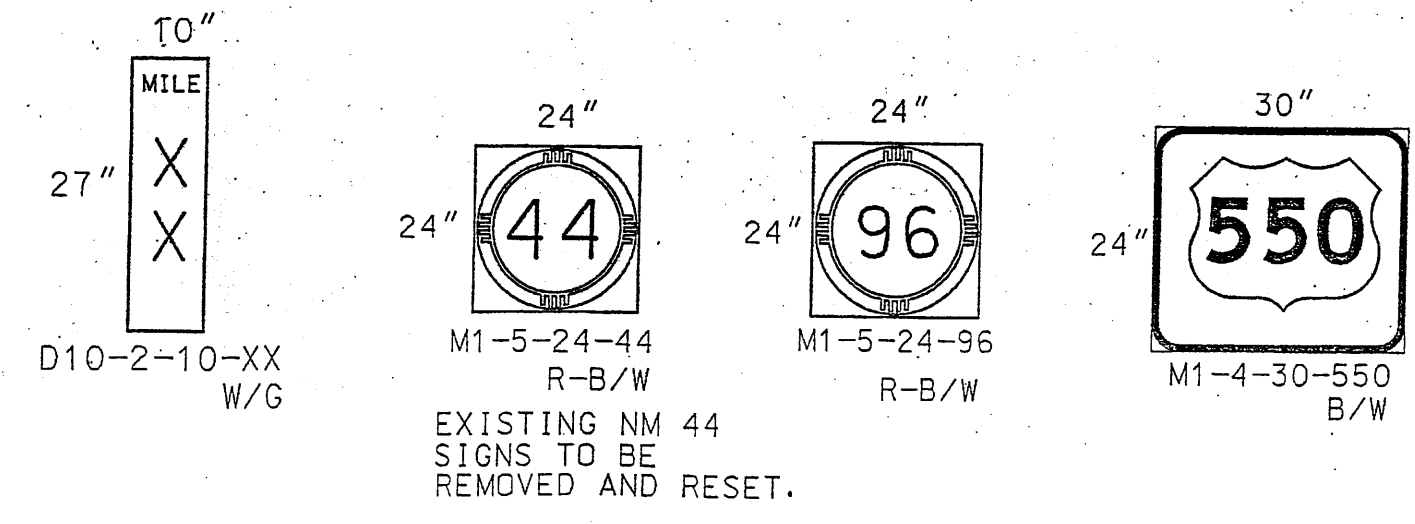
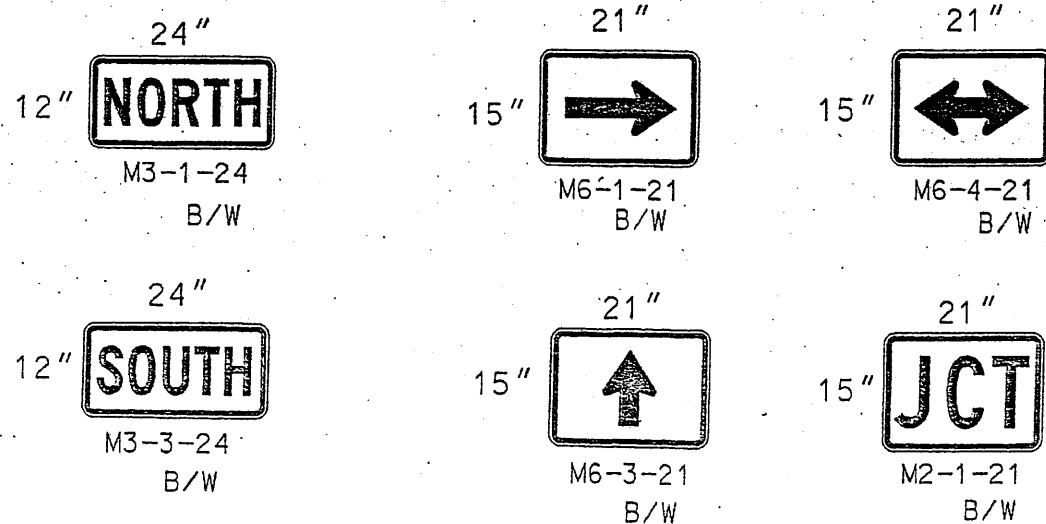
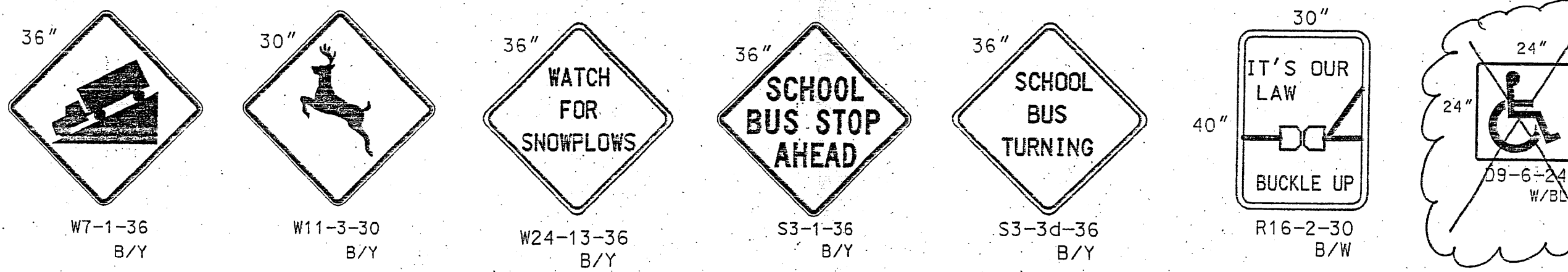
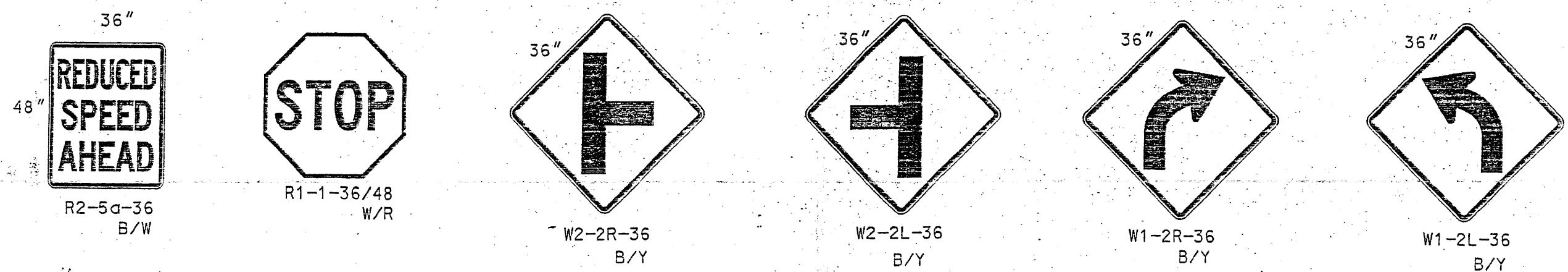
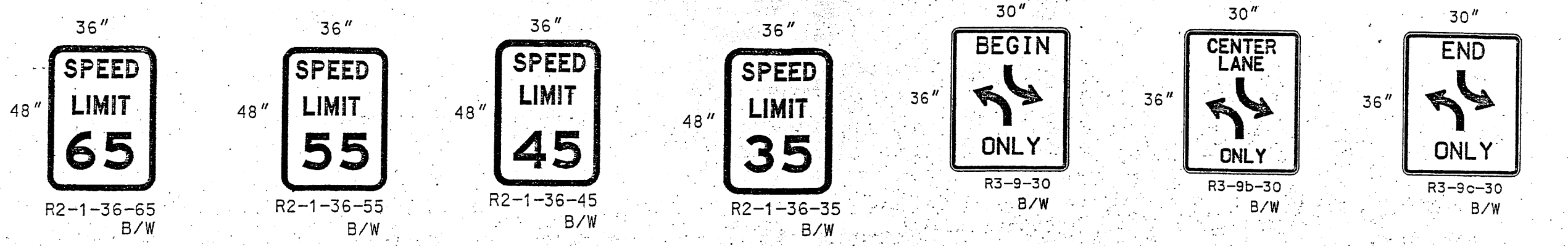


NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH--044-2139164
 CN 3766

SHEET TITLE

PERMANENT SIGNING
 & STRIPING PLAN
 STATION 5053+00
 TO
 STATION 5105+00



EXISTING NM 44
SIGNS TO BE
REMOVED AND RESET.

Design File: x:\public\projects\98082-01\sect7\447ps22.100
Plot Date: 01 JUN 99

SHEET TITLE
SIGNFACE DETAILS
PERMANENT SIGNING
& STRIPING PLAN

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6
NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(30)64
CN 3766

**WILSON
& COMPANY**

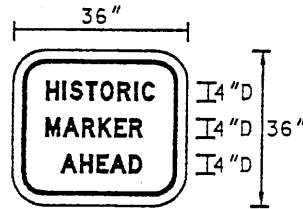
DESIGN BY: GO
DRAWN BY: SKI
CHECKED BY: SFP

SEAL
SCOTT R. PERKINS
REGISTERED PROFESSIONAL ENGINEER
STATE OF NEW MEXICO

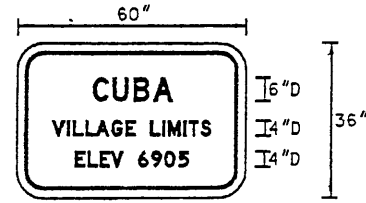
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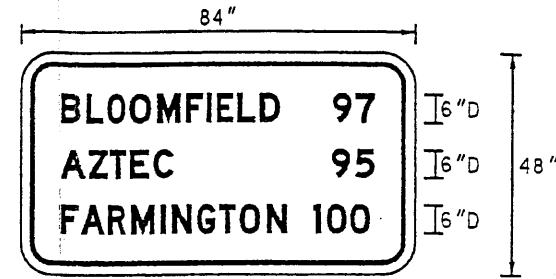
S-30



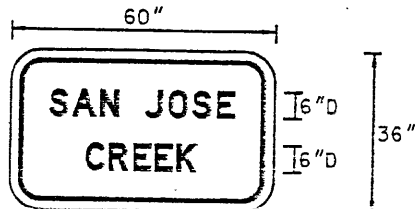
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BR/W



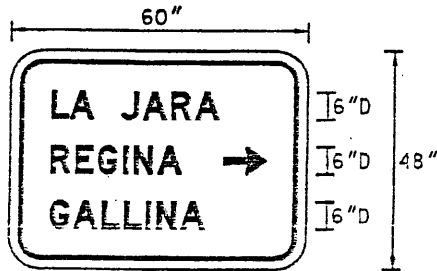
S-32, W/G



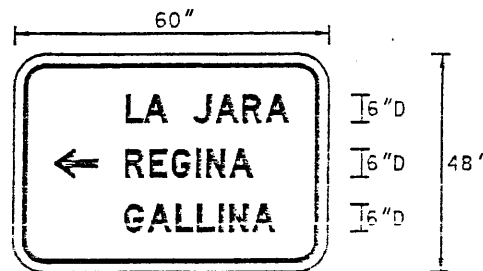
S-33, W/G



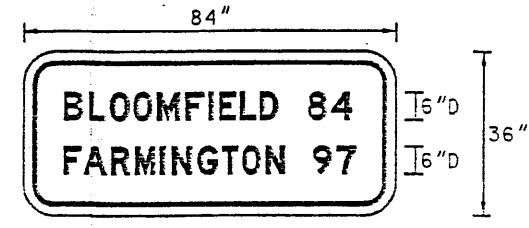
S-34, W/G



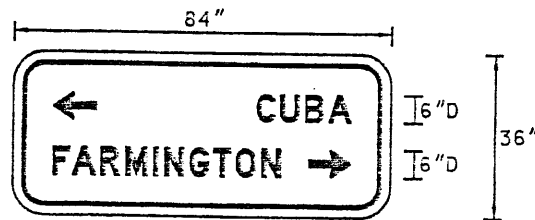
S-35, W/G
10" ARROW



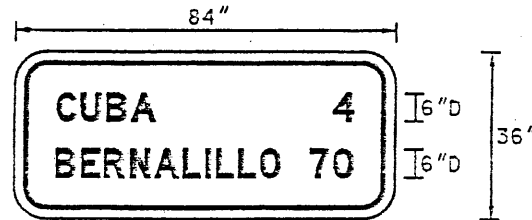
S-36, W/G
10" ARROW



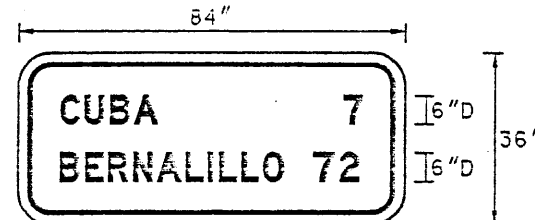
S-37, W/G



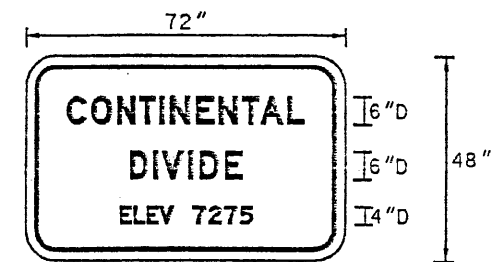
S-38, W/G
10" ARROW



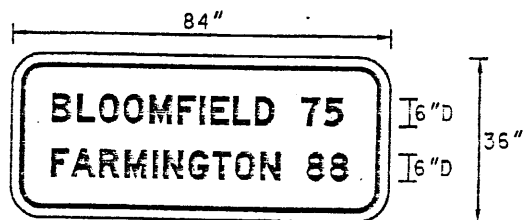
S-39, W/G



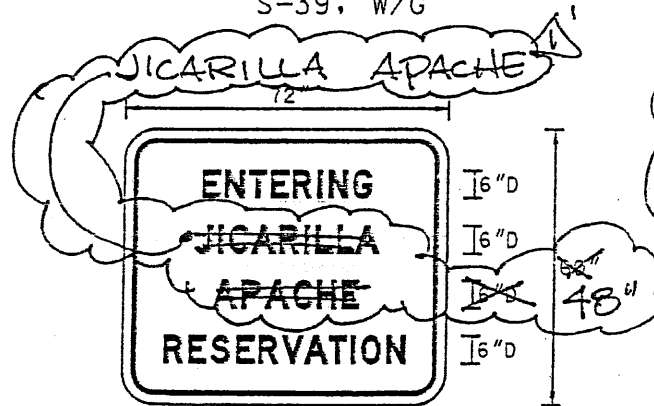
S-40, W/G



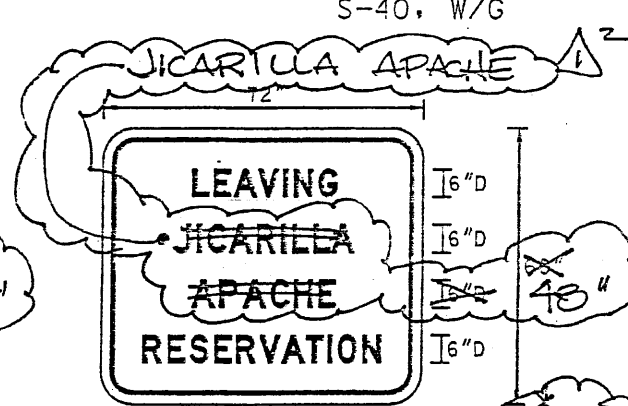
S-41, W/G



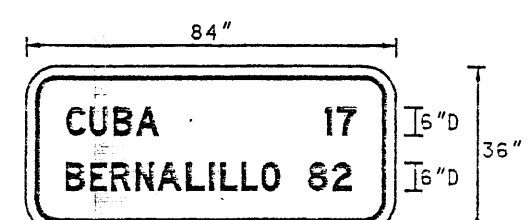
S-42, W/G



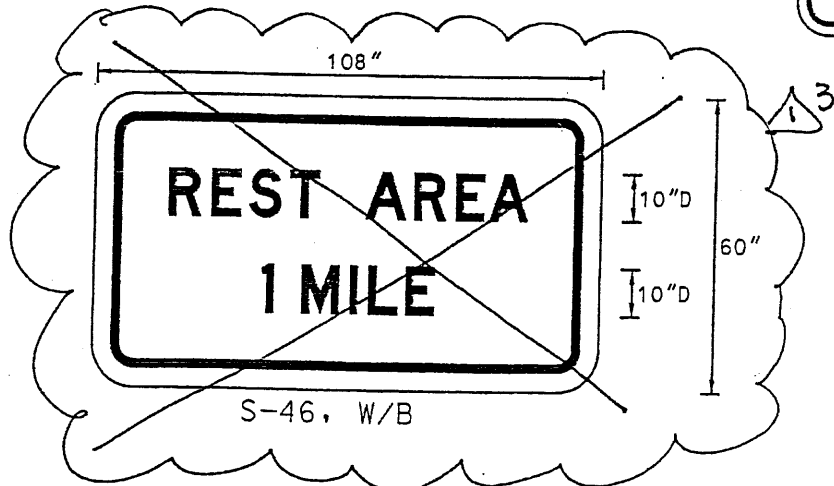
S-43, W/G



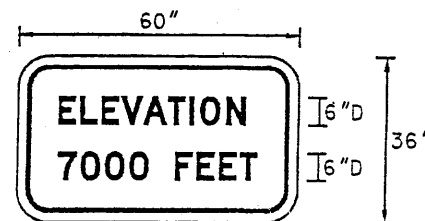
S-44, W/G



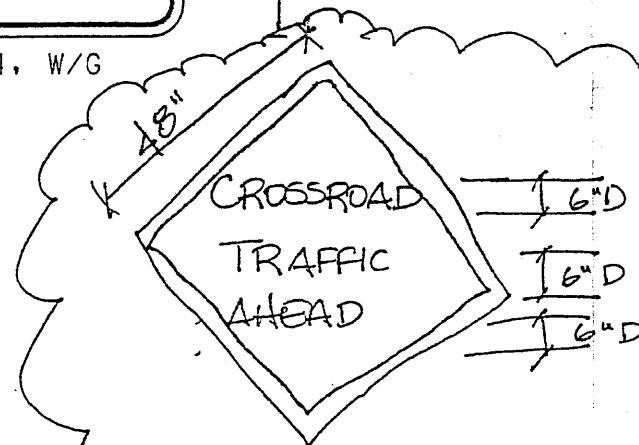
S-45, W/G



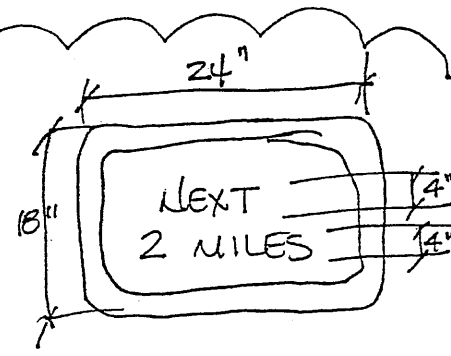
S-46, W/B



S-47, W/G



S-48, B/Y, RB



WLT-34. 2 MILES

SIGNFACE DETAILS
PERMANENT SIGNING
& STRIPING PLAN

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

WILSON
& COMPANY

DESIGN BY: GO

DRAWN BY: SKI

CHECKED BY: SFP



SIGN CODE	NO. OF SIGNS	TOTAL SIGN AREA SQ. FT.	POST LENGTHS				MOUNTING REQUIREMENTS			BASE POSTS		
			LEFT	CTR.	RIGHT	TOTAL	FLANGED CHANNEL	DRIVEDOWN POSTS	PORTABLE SIGN SUPPORT	NO.	TOTAL LENGTH	
CUBA UNIT I												
D10-2-10	2	3.75	-	7	-	14	X		X		2	7
R1-1-36	1	9	-	10	-	10		X	X		1	3.5
S-32	1	15	10	-	10	20		X	X		2	7
SANDOVAL COUNTY UNIT II												
D10-2-10	26	48.75	-	7	-	182	X		X		26	91
M1-4-30-550	5	25	13	-	13	130		X	X		10	35
** M1-5-24-44	5	20	-	-	-	-		-	-		-	-
* M1-5-24-96	4	16	11	-	11	88		X	X		8	28
* M2-1-21	2	4.4	-	-	-	-		-	-		-	-
* M3-1-24	3	6	-	-	-	-		-	-		-	-
* M3-3-24	2	4	-	-	-	-		-	-		-	-
* M6-1-21	2	4.4	-	-	-	-		-	-		-	-
* M6-3-21	1	2.2	-	-	-	-		-	-		-	-
R1-1-36	14	126	-	10	-	140	X		X		14	49
R1-1-48	1	16	11	-	11	22		X	X		2	7
R2-1-36-35	1	12	11	-	11	22		X	X		2	7
R2-1-36-45	1	12	11	-	11	22		X	X		2	7
R2-1-36-55	2	24	11	-	11	44		X	X		4	14
R2-1-36-65	7	84	11	-	11	154		X	X		14	49
R2-5a-36	1	12	11	-	11	22		X	X		2	7
R3-9-30	1	7.5	-	10	-	10		X	X		1	3.5
R3-9b-30	2	15	-	10	-	10		X	X		2	7
R3-9c-30	1	7.5	-	10	-	10		X	X		1	3.5
R16-2-30	2	16.7	-	10	-	20		X	X		2	7
S3-1-36	2	18	-	10	-	20		X	X		2	7
S3-3d-36	2	18	-	10	-	20		X	X		2	7
W1-2R-36	1	9	-	10	-	10		X	X		1	3.5
W1-2L-36	1	9	-	10	-	10		X	X		1	3.5
W2-2R-36	1	9	-	10	-	10		X	X		1	3.5
W2-2L-36	2	18	-	10	-	10		X	X		1	3.5
W7-1-36	4	36	-	10	-	40		X	X		4	14
W11-3-30	2	12.5	-	10	-	20		X	X		2	7
W24-13-36	1	9	-	10	-	10		X	X		1	3.5

NOTES

** EXISTING SIGNING TO BE REMOVED AND RESET.

* NO ADDITIONAL POST NEEDED. SIGN TO BE MOUNTED ON COMMON POST WITH ANOTHER SIGN.

ALL EXISTING SIGNING ON FENCE LINE SHALL BE REMOVED AND RESET ON NEW FENCE LINE.

EXISTING SIGNS TO BE REMOVED: 183 SINGLE POST
 42 DOUBLE POST
 225 TOTAL

NOTE: THIS SHEET NOT UPDATED TO INCLUDE REVISIONS MADE DURING CONSTRUCTION.

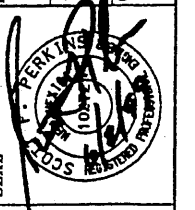
SIGN CODE	NO. OF SIGNS	TOTAL SIGN AREA SQ. FT.	POST LENGTHS				MOUNTING REQUIREMENTS			BASE POSTS		
			LEFT	CTR.	RIGHT	TOTAL	FLANGED CHANNEL	DRIVEDOWN POSTS	PORTABLE SIGN SUPPORT	NO.	TOTAL LENGTH	
SANDOVAL COUNTY UNIT II												
S-31	2	18	-	10	-	20		X	X		2	7
S-33	1	28	11	-	11	22		X	X		2	7
S-34	2	30	10	-	10	40		X	X		4	14
S-35	1	20	11	-	11	22		X	X		2	7
S-36	1	20	11	-	11	22		X	X		2	7
S-37	1	21	10	-	10	20		X	X		2	7
S-38	1	21	10	-	10	20		X	X		2	7
S-39	1	21	10	-	10	20		X	X		2	7
S-40	1	21	10	-	10	20		X	X		2	7
S-41	2	48	11	-	11	22		X	X		4	14
S-42	1	21	10	-	10	20		X	X		2	7
S-47	2	30	10	-	10	40		X	X		4	14
JICARILLA APACHE RESERVATION												
D9-6-24	1	4	-	-	-	-		-	-		-	-
D10-2-10	14	26.25	-	7	-	98	X		X		14	49
R1-1-36	1	9	-	10	-	10		X	X		1	3.5
R2-1-36-65	2	24	11	-	11	44		X	X		4	14
S3-1-36	1	9	-	10	-	10		X	X		1	3.5
W24-13-36	1	9	-	10	-	10		X	X		1	3.5
S-43	1	30	12	-	12	24		X	X		2	7
S-44	1	30	12	-	12	24		X	X		2	7
S-45	1	21	10	-	10	20		X	X		2	7
S-46	1	45	12	12	12	36		X	X		3	10.5
S-47	2	30	10	-	10	20		X	X		2	7

SHEET TITLE
 SUMMARY OF QUANTITIES
 PERMANENT SIGNING
 & STRIPING PLAN

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: GO
 DRAWN BY: SKI
 CHECKED BY: SFP

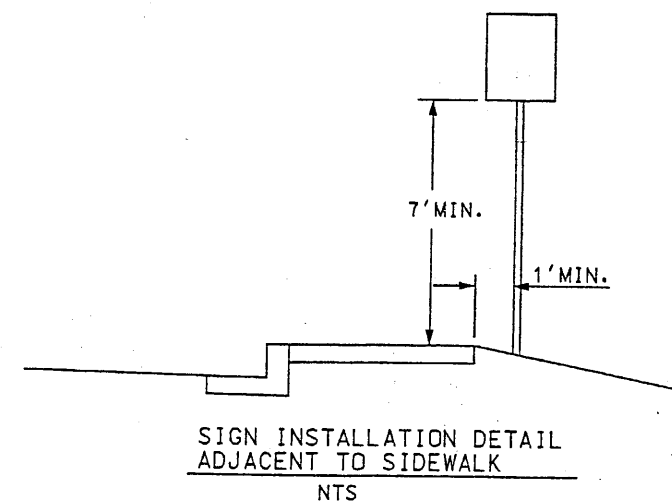


NOTES:

1. ALL SIGNS, UNLESS OTHERWISE SPECIFIED, SHALL HAVE REFLECTIVITY III SHEETING FOR THE LEGEND BORDER AND BACKGROUND. ONLY ALUMINUM PANEL SIGNS ARE PERMITTED.
2. QUANTITIES MAY VARY AS FIELD CONDITIONS DICTATE. THE CONTRACTOR WILL BE PAID FOR ACTUAL QUANTITIES USED.
3. ALL TRAFFIC CONTROL DEVICES (SIGNING, MARKERS, PAVEMENT MARKERS, ETC.) SHALL COMPLY WITH NEW MEXICO 44 PROJECT SPECIFICATIONS AND THE CURRENT EDITION, WITH REVISIONS, OF THE MUTCD.
4. EACH SIGN FACE SHOWN ON PLANS SHALL MEET THE SPECIFICATIONS IN THE STANDARD HIGHWAY SIGNS MANUAL (1979 EDITION) FOR PROPER ARRANGEMENT, SPACING OF LETTERS, LETTER HEIGHT, LETTER SERIES, SYMBOLS AND BORDERS FOR THE SPECIFIED SIZE AND MESSAGE AS SHOWN ON PLANS.
5. POST LENGTHS ARE BASED ON A MINIMUM OF 5 FT FOR RURAL SECTIONS TO A MINIMUM OF 7 FT FOR URBAN SECTIONS. THE LENGTHS ARE MEASURED FROM THE BOTTOM OF THE SIGN TO NEAR EDGE OF THE DRIVING LANE OF SHOULDER. (SEE SIGN INSTALLATION DETAIL BELOW)
6. THE LATERAL CLEARANCE OF SIGNS SHALL BE NO CLOSER THAN 6 FT FROM THE EDGE OF SHOULDER OR 12 FT FROM THE EDGE OF THE TRAVELED WAY FOR RURAL AREAS AND NO CLOSER THAN 2 FT FROM FACE OF CURB FOR URBAN AREAS. (SEE SIGN INSTALLATION DETAIL BELOW)
7. ALL SIGNING HARDWARE, INCLUDING BRACKETS ARE CONSIDERED INCIDENTAL TO SIGN INSTALLATION. THEREFORE NO PAYMENT WILL BE MADE.
8. THREE 4 LB/FT SIGN POST INSTALLATION APPROVED ONLY IF THE SPAN BETWEEN THE OUTER POSTS. EXCEEDS 84 INCHES (SIGN WIDTH OF 96 INCHS OR GREATER).

PERMANENT SIGNING ESTIMATED QUANTITIES

ITEM DESCRIPTION	QUANTITIES	UNIT-I	UNIT-II	UNIT-III
PANEL SIGN	SQUARE FEET	27.75	901.25	237.25
REFLECTORIZED PAVEMENT MARKING * 4" EQUIVLENT	FEET	28,310.00	1,286,082.00	707,750.00
REFLECTORIZED PLASTIC RIGHT ARROW	EACH	---	1	---
REFLECTORIZED PLASTIC LEFT ARROW	EACH	---	10	---
REFLECTORIZED PLASTIC WORD (ONLY)	EACH	---	1	---
STEEL POST AND BASE POST FOR PANEL SIGN	FEET	61.50	1786.50	408



NOTE: THIS SHEET NOT UPDATED TO INCLUDE REVISIONS MADE DURING CONSTRUCTION.

GENERAL NOTES AND
ESTIMATED QUANTITIES
PERMANENT SIGNING
& STRIPING PLAN

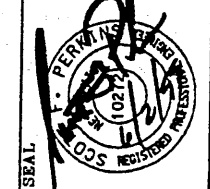
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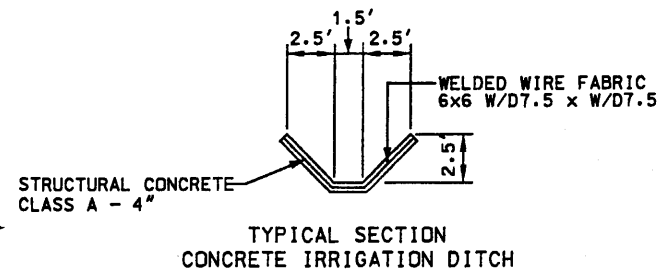
NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

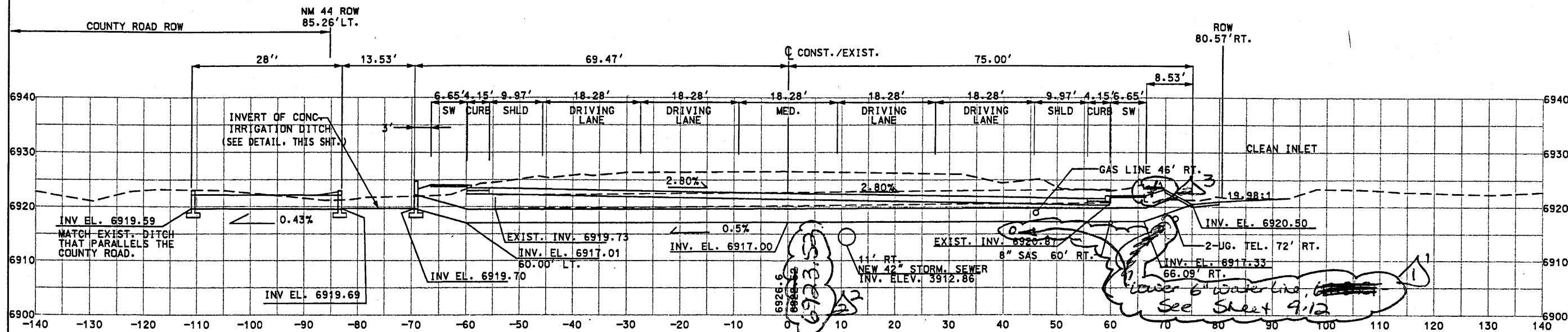
**WILSON
& COMPANY**

DESIGN BY: GO
DRAWN BY: SKI
CHECKED BY: SFP





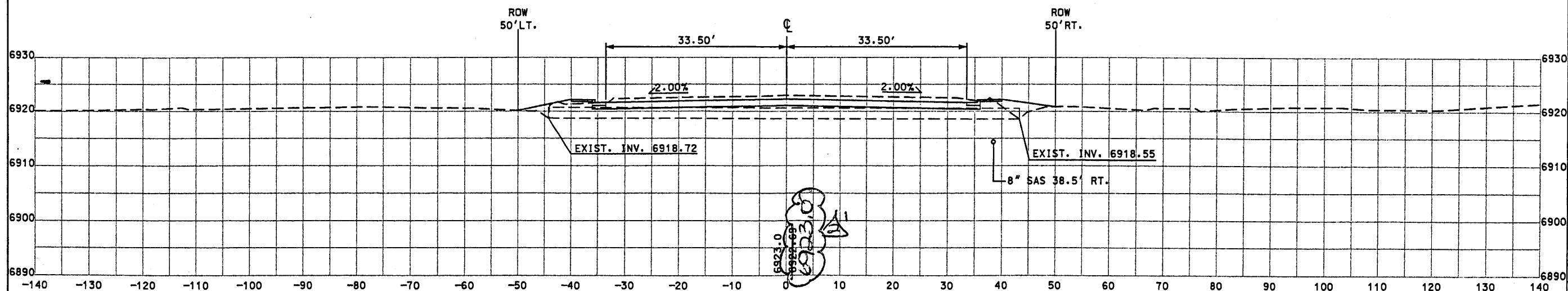
NOTE: THE ROADWAY WIDTH AS SHOWN IN THE TYPICAL SECTIONS HAS BEEN REDUCED AND IS NOT REFLECTED IN THESE STRUCTURE SECTIONS. THE WIDTH OF SUBGRADE (HINGE POINT TO HINGE POINT) HAS BEEN MODIFIED IN THE CONTRACT PLANS BY REDUCING THE PAVEMENT WIDTH TO CONFORM TO METRIC DIMENSIONS, AND BY REDUCING THE PAVEMENT TAPER TO 6 FEET. FOR THE TYPICAL ROADWAY SECTION HAVING A 5.9 FOOT MEDIAN WIDTH, THE WIDTH OF SUBGRADE IS REDUCED BY 5.1 FEET. THE CONTRACTOR IS REQUIRED TO STAKE THE DRAINAGE STRUCTURES TO THE SLOPES SHOWN, AND EXTEND OR CONSTRUCT NEW STRUCTURES TO MATCH ACTUAL FIELD CONDITIONS.



OLD STA 4007+35.72
 EXIST. 1-30"x98' CMP, 48" RF, W/HEADWALLS LT. & RT. (IN PLACE UNDER NM 44)
 EXIST. 1-30"x21' CMP, 48" RF, (IN PLACE UNDER TURNOUT)
 REMOVE EXISTING PIPES AND HEADWALLS

D4-226 NEW STA 4007+27.51
 BUILD 1-30"x145' RCP (CLASS IV) IRRIGATION SIPHON, 53' RT. FWD., 69.47' LT. TO 75' RT. W/CONC. HEADWALL AND ELBOW LT. & STD. CONC. TRANSITION AND ELBOW RT. (SEE DETAILS ON SHEET 2-47)
 BUILD 13.53' OF CONCRETE LINED IRRIGATION DITCH 62" RT. FWD.- 83' LT. TO 69.47' LT. (SEE DETAIL, THIS SHT.)
 BUILD 1-30"x28' CULVERT PIPE @ 62" RT. FWD., 111' LT. TO 83' LT. W/CONC. HEADWALL AND ELBOW LT. & RT.
 BUILD 5' Lx5' Wx6" D CONC. PAD OVER THE 42" STORM SEWER.

STD DWG. : BMC-005-01, H-1-61, M-16-71



D4-225
 STA. 4001+04.66
 EXIST. 1-24"x88' CMP, NORMAL IN PLACE
 W/WINGWALL LT. TO BE REMOVED
 SEE SHEETS 9-1 & 9-2
 FOR STORM SEWER LAYOUT

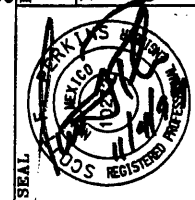
SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

STRUCTURE PLACEMENT SECTIONS

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

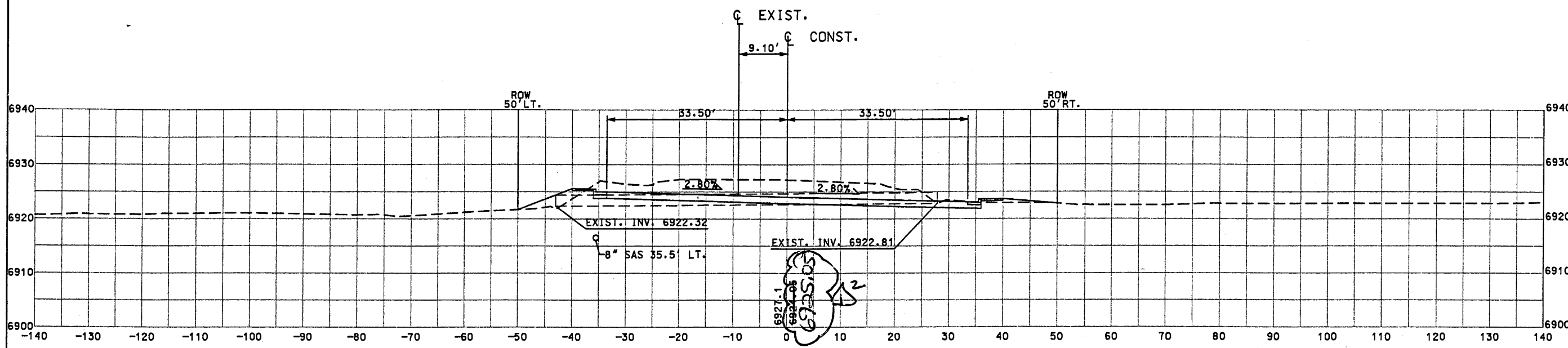
WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

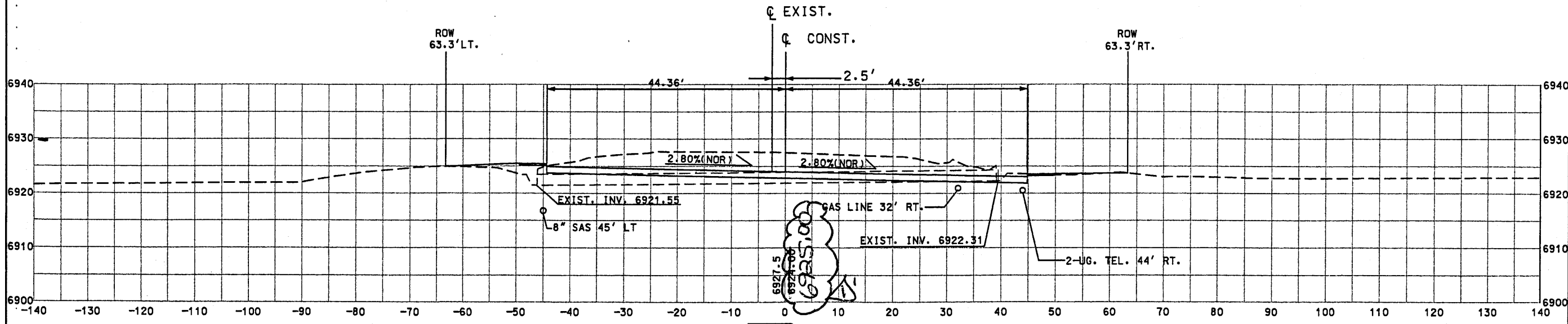


Design Plot Dat
 V 1999
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Design File: I:\projects\98082-01\sect8\44448sp1.dgn
 Plot Date: 7/1999



◊4-228◊
 STA 4013+23.71
 EXIST. 1-24"x72' CMP NORMAL IN PLACE
 TO BE REMOVED.
 SEE SHEETS 9-1 & 9-2
 FOR STORM SEWER LAYOUT



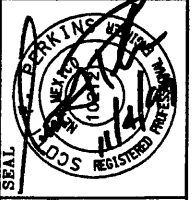
◊4-227◊
 STA. 4012+52.21
 EXIST. 1-24"x86' CMP @ 45° RT. FWD
 w/HEAD WALLS LT. & RT.
 TO BE REMOVED
 SEE SHEETS 9-1 & 9.2
 STORM SEWER LAYOUT

STRUCTURE PLACEMENT
 SECTIONS

SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



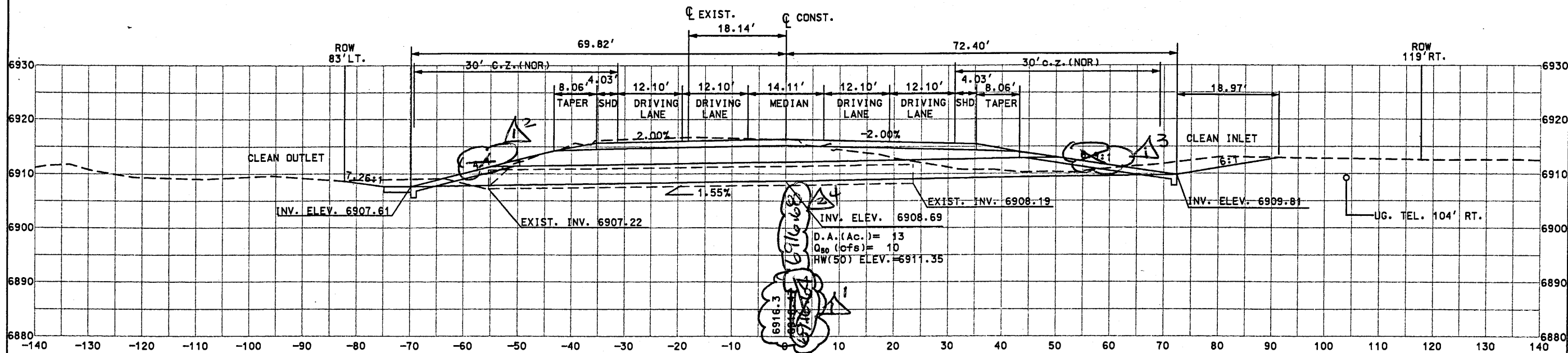
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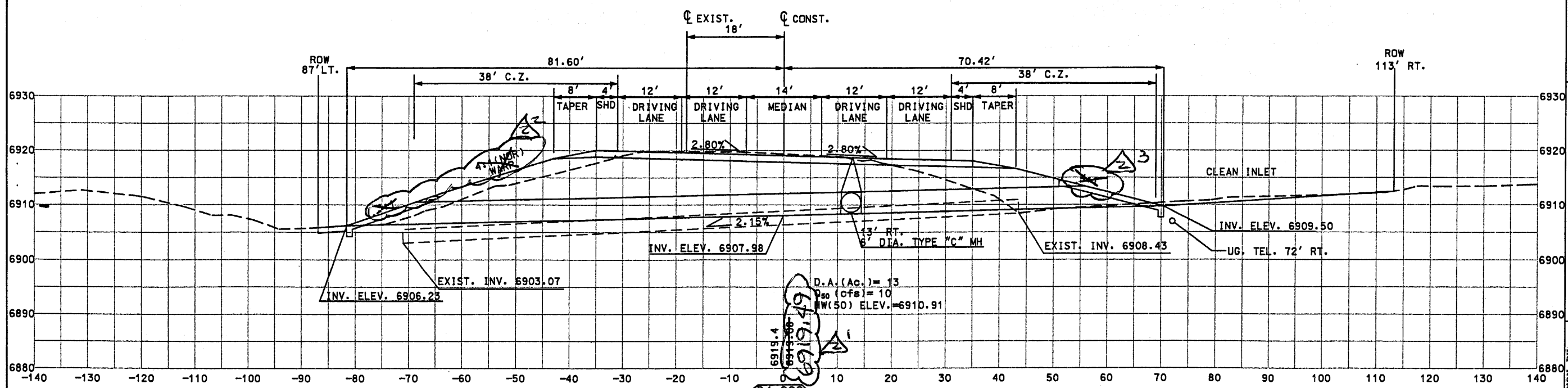
PROJECT NO. AC.NH.04.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 8.2, Structure Placement Sections

NO.	REVISION	DATE	BY
Δ ²	Revise Structures for PGL		
	Revision, 4000r00 to 4026r00	10.6.01	FSC/FNF-0537

Design Plot Dd
 7/1999
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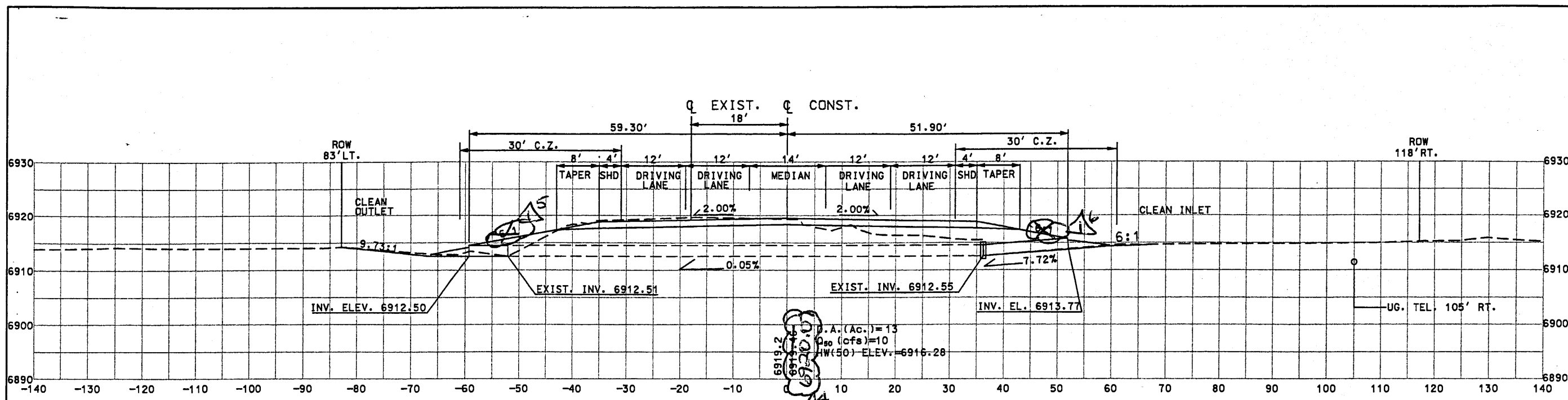
OLD STA 4025+47.65
 EXIST. 1-42"x78" CMP NORMAL IN PLACE
 TO BE REMOVED
 D4-231 NEW STA 4025+54.66
 BUILD 1-42"x78" CULVERT PIPE @ 7' RT. FWD.
 BUILD CONC. BLANKETS w/SAFETY GRATES LT. & RT.
 BUILD EROSION CONTROL PAD LT. 5'L x 10.5' W x 1'D
 STD DWG.: BBG-022, BBG-024, BMC-001-03, BMC-003-01,
 BMC-005-01, BRR-001-08, EC-61, M-16-71



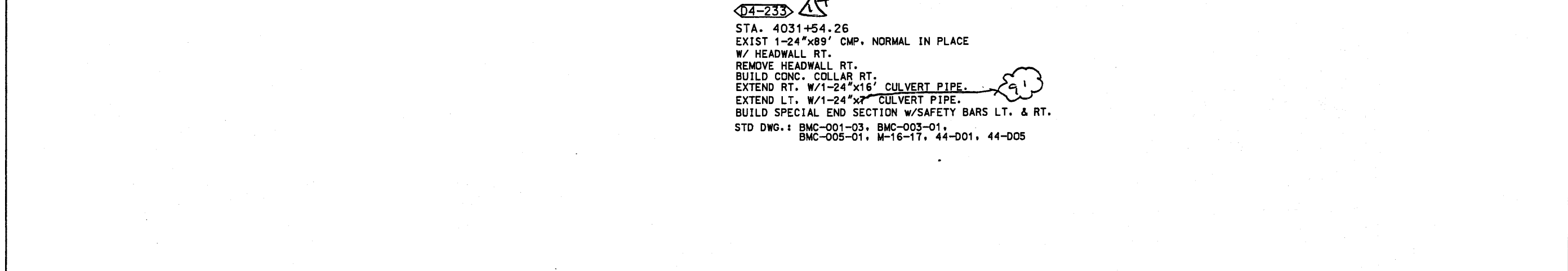
STA 4019+29.64
 EXIST. 1-30"x144" CMP NORMAL IN PLACE
 TO BE REMOVED
 BUILD 1-48"x152' CLASS III RCP
 BUILD CONCRETE BLANKETS w/SAFETY GRATES LT. & RT.
 BUILD 6' DIA. TYPE "C" MH @ 13' RT. (SEE SHT 9-2
 FOR BUILD NOTE)
 BUILD EROSION CONTROL PAD 5'L x 7.5' W x 1'D.
 STD DWG.: BBG-021, BBG-023, BMC-001-03, BMC-003-01, BMC-005-01, BRR-001-08,
 EC-61, M-16-71, MH-2

SHEET TITLE
 STRUCTURE PLACEMENT SECTIONS
 NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 PROJECT NO AC-NH-044-2(39)64
 CN 3786
WILSON & COMPANY
 DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP
 SEAL
 8-3

Design Plot Date
 11/19/99
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D4-233
 STA. 4031+54.26
 EXIST 1-24"x89' CMP. NORMAL IN PLACE
 W/ HEADWALL RT.
 REMOVE HEADWALL RT.
 BUILD CONC. COLLAR RT.
 EXTEND RT. W/1-24"x16' CULVERT PIPE.
 EXTEND LT. W/1-24"x7' CULVERT PIPE.
 BUILD SPECIAL END SECTION W/SAFETY BARS LT. & RT.
 STD DWG.: BMC-001-03, BMC-003-01,
 BMC-005-01, M-16-17, 44-D01, 44-D05



D4-232
 STA. 4028+49.32
 EXIST 1-24"x84' CMP. NORMAL IN PLACE
 EXTEND RT. W/1-24"x12' CULVERT PIPE
 EXTEND LT. W/1-24"x8' CULVERT PIPE.
 BUILD SPECIAL END SECTION W/SAFETY BARS LT. & RT.
 STD DWG.: BMC-001-03, BMC-003-01,
 BMC-005-01, M-16-17, 44-D01, 44-D05

SHEET TITLE
 STRUCTURE PLACEMENT SECTIONS
 NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

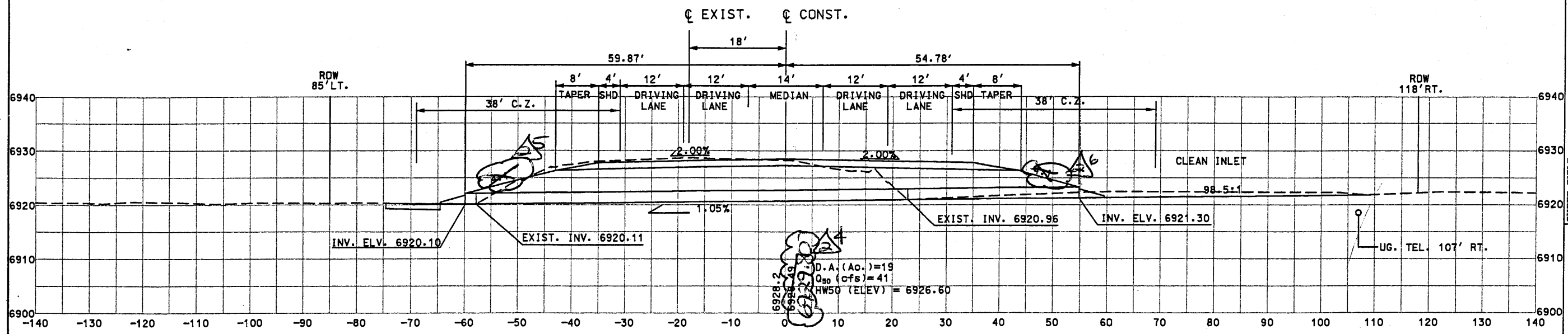
WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP
 SEAL
 8-4

PROJECT NO. AC. NH. 044.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 84, Structure Placement Sections

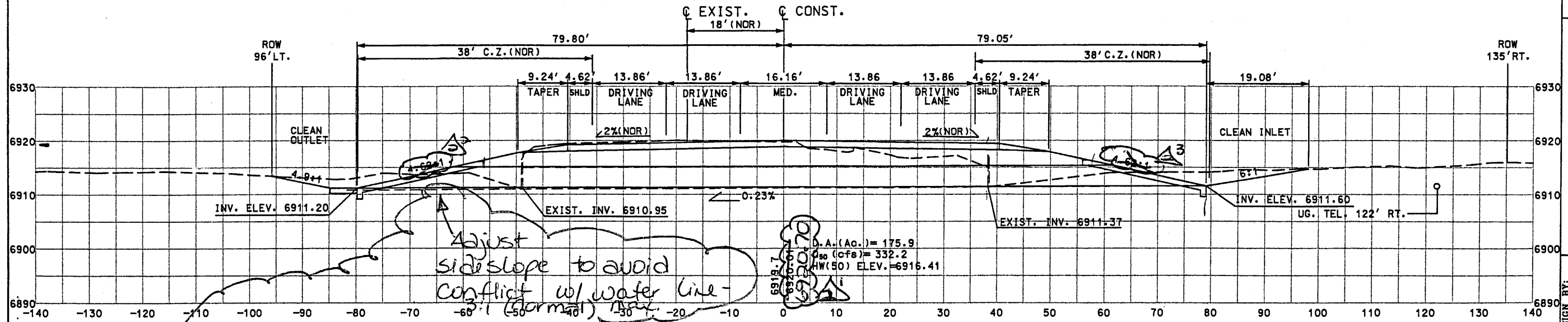
NO.	REVISION	DATE	BY
16	Revise Structures for PGL		
	Revision, 4021+00 to 4074+00	10.6.01	FSC/FNF-0537

Design Plot Dd
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 11/19/99



D4-235

STA. 4041+66.33
 EXIST. 1-24"x81' CMP NORMAL IN PLACE
 EXTEND RT. W/1-24"x 32' CULVERT PIPE
 EXTEND LT. W/1-24" x 2' CULVERT PIPE.
 BUILD 1-24"x 115' CULVERT PIPES
 UPSTATION FROM EXISTING.
 BUILD SPECIAL END SECTIONS w/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 10' L x 14' W x 1' D
 STD DWG: BBG-001-03, BMC-003-01, BMC-005-01,
 BRR-001-08, EC-61, M-16-71, 44-005



D4-234

STA 4032+63.45
 EXIST. 1-8'x4'x88' CBC, DES. 1 @ 30° RT. FWD.
 w/HEADWALLS & WINGWALLS LT. & RT.
 TO BE REMOVED
 BUILD 4-60"x46"x160' ARCH CULVERT PIPES @ 30° RT. FWD
 BUILD CONC. BLANKETS w/SAFETY GRATES LT. & RT.
 BUILD EROSION CONTROL PAD LT. 5' w x 32.2' L x 1' D
 STD DWG.: BBG-022, BBG-026, BMC-002-07, BMC-004-01,
 BMC-005-01, BRR-001-08, EC-61, M-16-71-A

CONSTRUCTION NOTE: AN EXISTING WETLAND HAS BEEN IDENTIFIED AT THE INLET AND OUTLET OF THE EXISTING STRUCTURE. THE CONTRACTOR SHALL RESTRICT ALL CONSTRUCTION ACTIVITY IN THE AREA TO WITHIN THE PROPOSED SLOPE LIMITS AND WILL MINIMIZE IMPACTS TO THE EXISTING WETLAND AREAS.

Adjust side slope to avoid conflict w/ water line - (normal) 1:50

NOTE: See Sheet 8-5A for alternate structure section, D4234

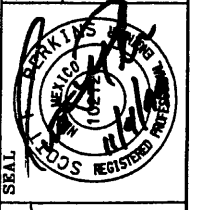
STRUCTURE PLACEMENT SECTIONS

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
 CN 3766

WILSON & COMPANY

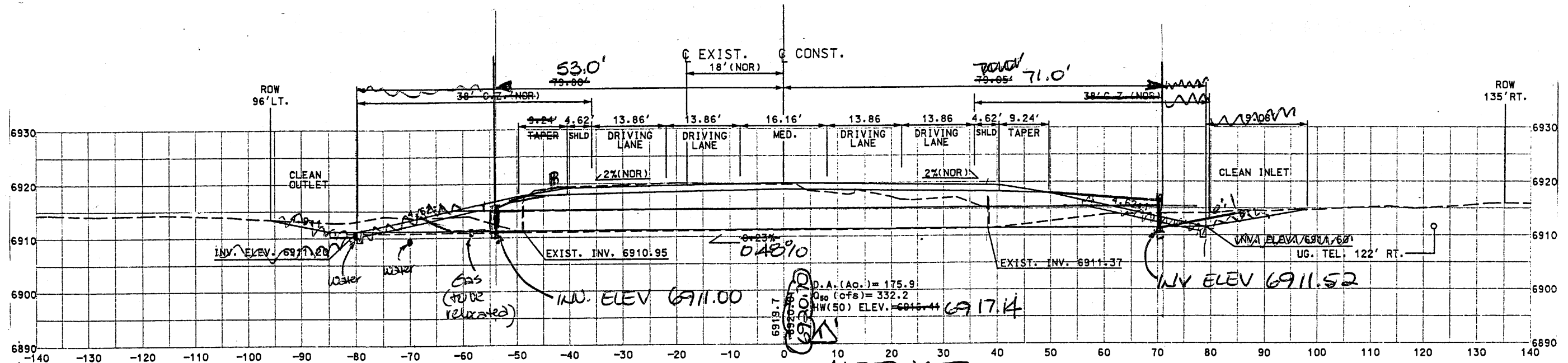
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



PROJECT NO. AC.NH.044.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 8.5, Structure Placement Sections

NO.	REVISION	DATE	BY
A	Add D4234 Alternate & note utilities	8.23.00	FSC RFI 78
A'	Revise Structures for PGL		
	Revision, 4021+00 to 4074+00	10.6.01	FSC/FNF-0537

STRUCTURE
PLACEMENT
SECTIONS



NOTE: SEE STD DWG
BPAB-001 &
BPAB-002 FOR
BARRIER POST
ANCHORAGE

04-234 - ALTERNATE

STA 4032+63.45
EXIST. 1-8'x4'x88' CBC, DES. 1, @ 30° RT. FWD.
W/HEADWALLS & WINGWALLS LT. & RT.
TO BE REMOVED

REMOVE
BUILD 1-60"x46"x160" ARCH CULVERT PIPES @ 30° RT. FWD
BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.
BUILD EROSION CONTROL PAD LT. 5' W X 32.2' L X 1' D
BUILD HEADWALL (EXTEND TO INCLUDE PIPE)
STD DWG.: BMC-022, BMC-026, BMC-002-07, BMC-004-01,
BMC-005-01, BRR-001-08, EC-51, M-16-71-A

EXTEND
LT w/1-8'x4'x4' CBC
RT w/1-8'x4'x32' CBC

CB-31, CB-31 S,
WCB-30 (Sheets 1 & 2)

CONSTRUCTION NOTE: AN EXISTING WETLAND
HAS BEEN IDENTIFIED AT THE INLET AND
OUTLET OF THE EXISTING STRUCTURE. THE
CONTRACTOR SHALL RESTRICT ALL CONSTRUCTION
ACTIVITY IN THE AREA TO WITHIN THE PROPOSED
SLOPE LIMITS AND WILL MINIMIZE IMPACTS TO
THE EXISTING WETLAND AREAS.

WING
WALLS, LT & RT.
ADJUST SKEW & LENGTH OF LT
WINGWALL TO AVOID WATER UNGE.

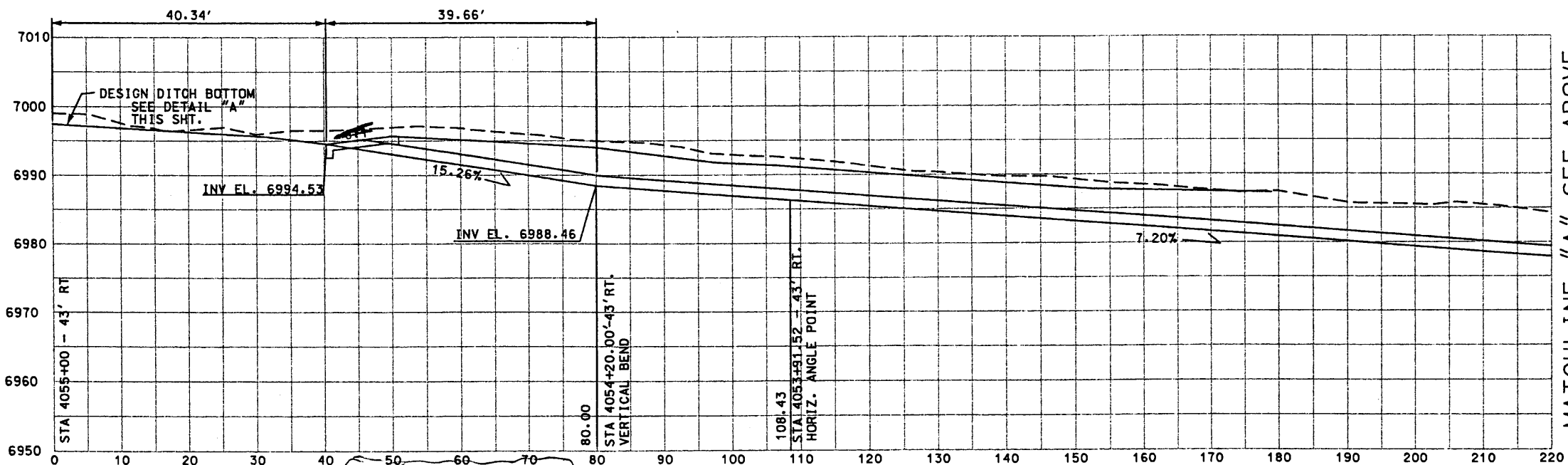
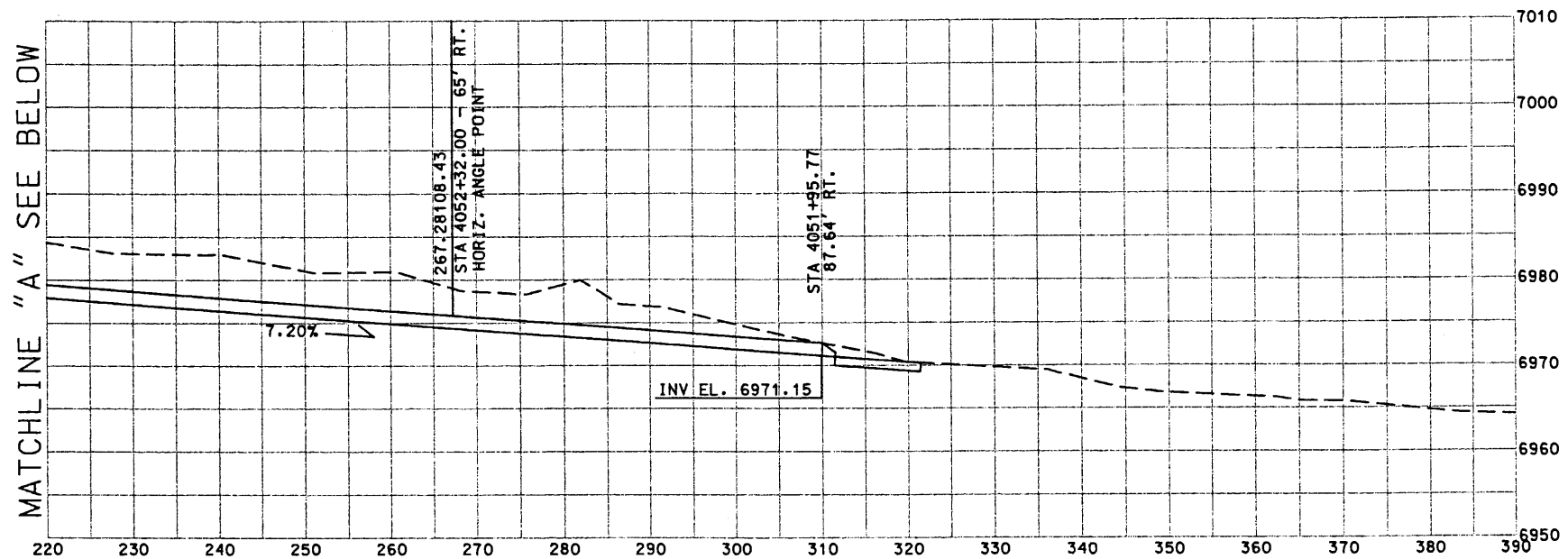
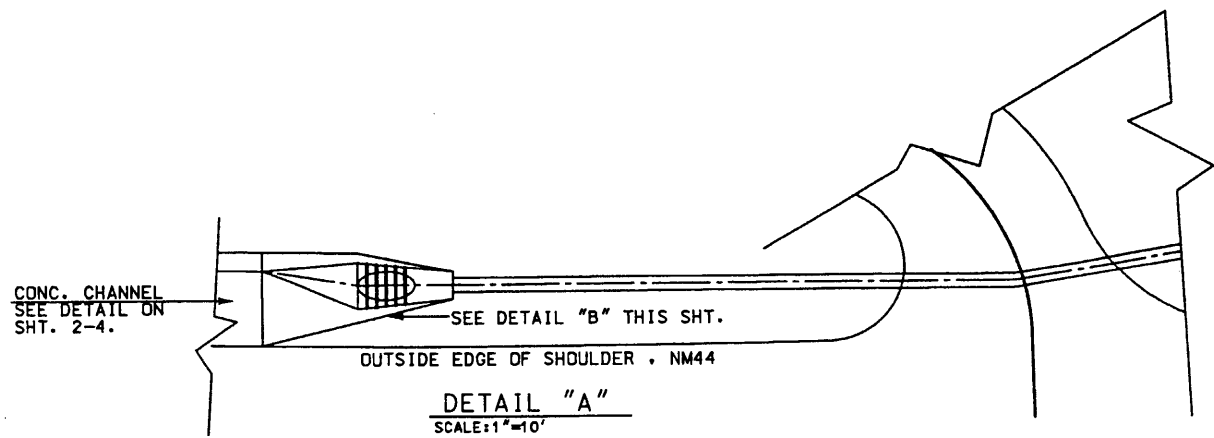
New Sheet
8.23.00
FSC RFI 78

NM44
AC.NH.044.2(39)64
CW 3766

PROJECT NO. AC.NH.044.2(39)at
CN NO. 3766
PACKAGE NO. 4
SHEET NO. B.SA1, Structure Placement Sections

NO.	REVISION	DATE	BY
1	Revise Structures for PGL		
	Revision, 4021+00 to 4074+00	10.6.01	FSC/FNF-0537

Design File: 082-01\sect8\4448spl.dgn
 Plot Date: 07/99



D4-235A

STA. 4054+59.66 - RT.
 BUILD 1'-18" x 280' CULVERT PIPE PARALLEL TO NM44
 BUILD CONC. BLANKET w/ SAFETY CRATES AT THE INLET
 BUILD END SECTIONS AT THE OUTLET
 BUILD EROSION CONTROL PAD RT. 10'L x 4.5'W x 1'D

FLARED END SECTION
SPECIAL END SECTION

STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, BRR-001-08, EC-61, ES-1, M-16-71

SHEET TITLE

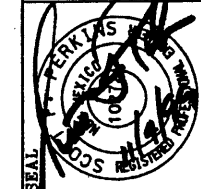
STRUCTURE PLACEMENT
 SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

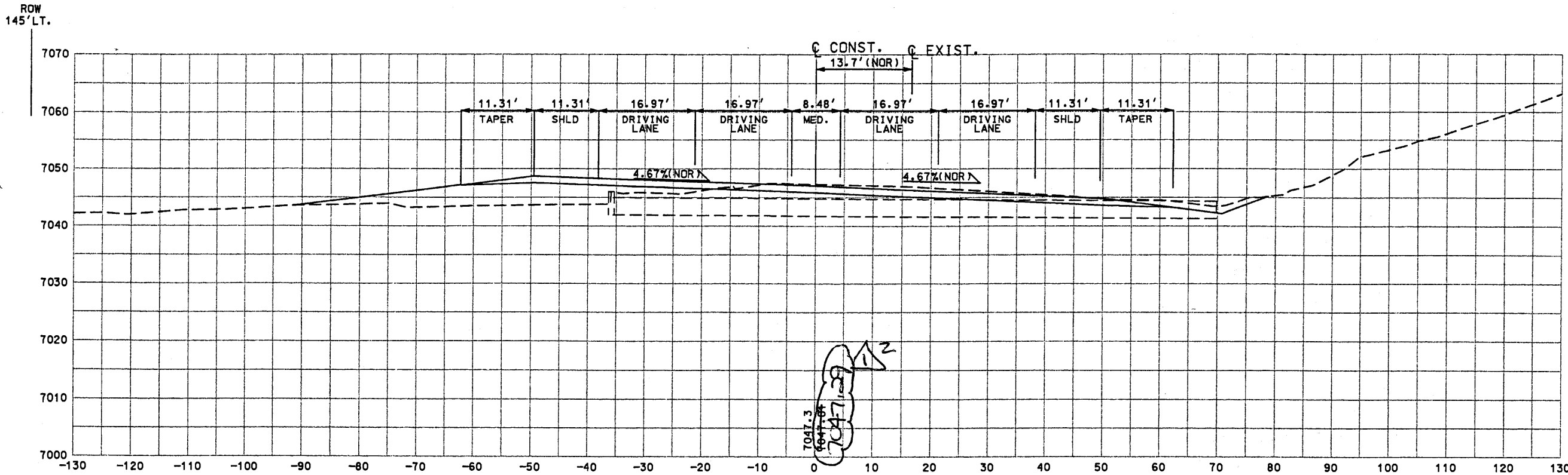
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
 & COMPANY**

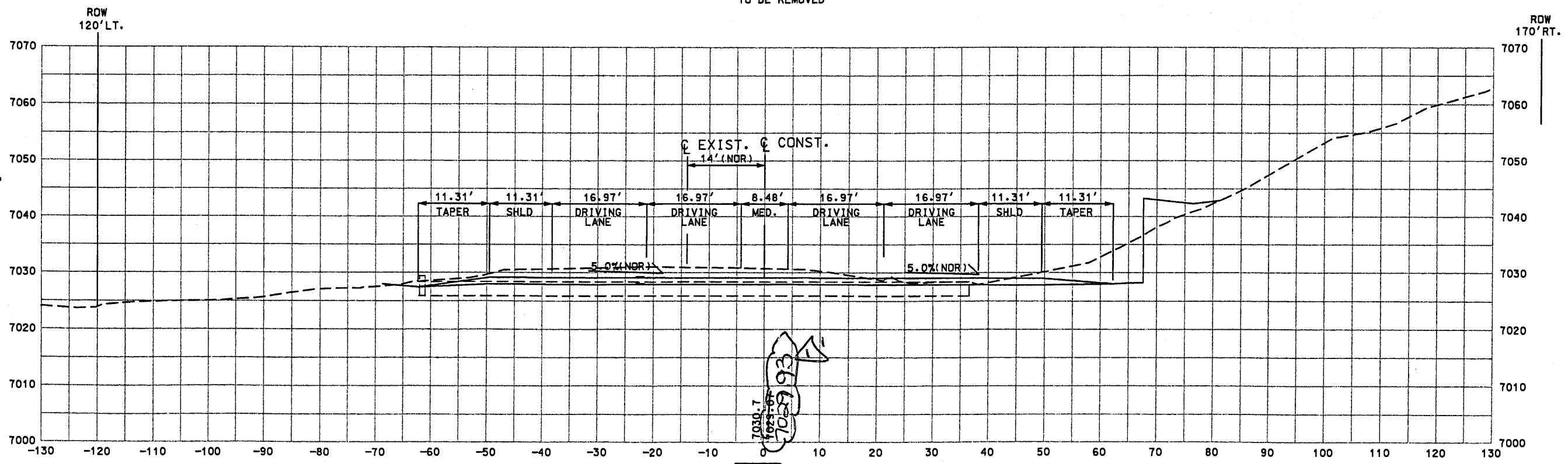
DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



8-5A



D4-237
 STA. 4066+00
 EXIST 1-24"x106' CMP @ 45° LT. FWD.
 W/END WALL LT.
 TO BE REMOVED



D4-236
 STA. 4060+00
 EXIST 1-24"x96' CMP @ 45° RT. FWD.
 W/END WALL LT.
 TO BE REMOVED

STRUCTURE PLACEMENT SECTIONS

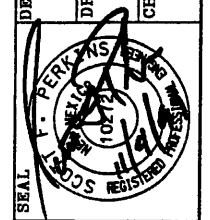
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

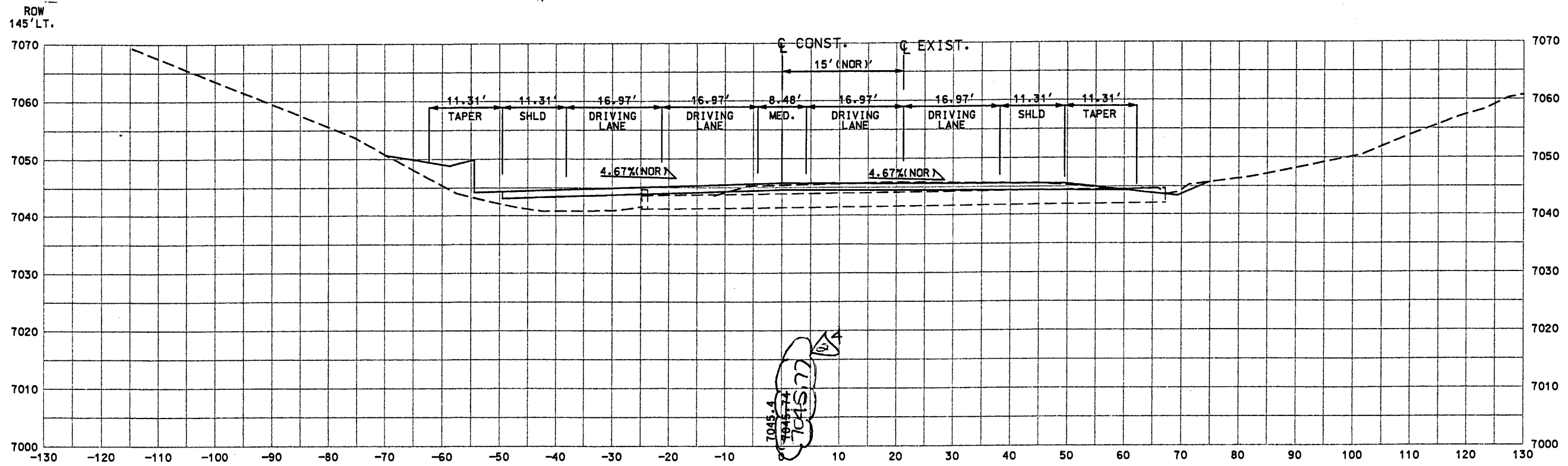


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 Plot Date: 6 JV 1999

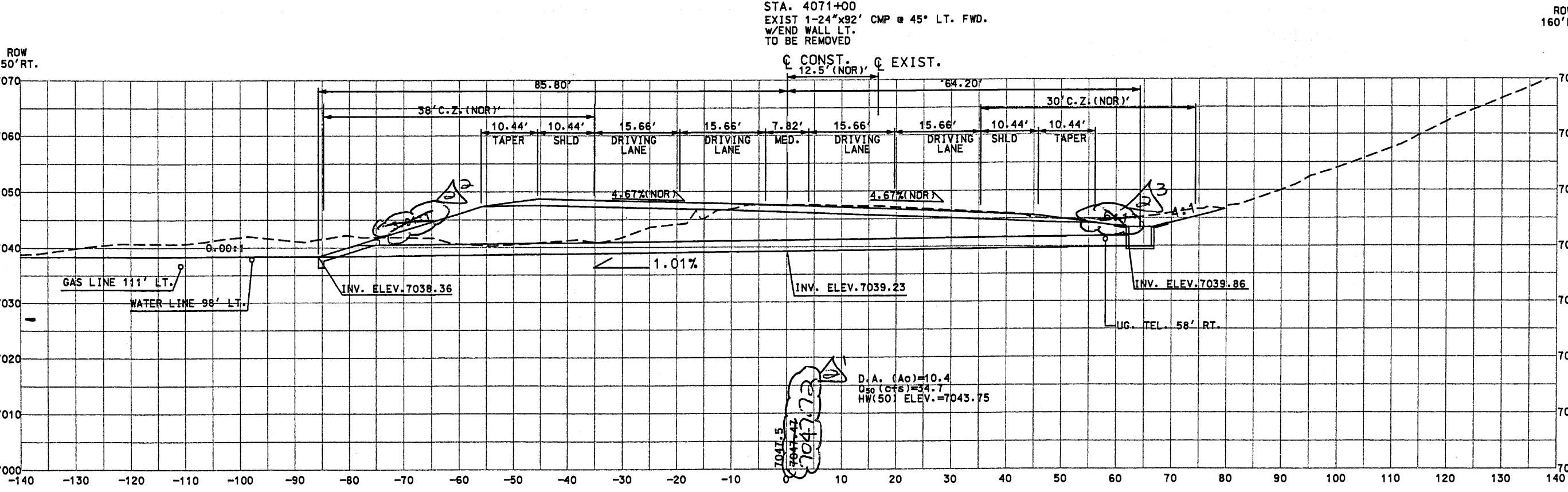
PROJECT NO. AC.NH.04.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 8.5B, Structure Placement Sections

NO.	REVISION	DATE	BY
Δ ²	Revise Structures for PGL		
	Revision, 4021+00 to 4074+00	10.6.01	FSC/FNF - 0537

Design File: 92-01\sect8\44448spl.dgn
 Plot Date: 4/99



D4-238A
 STA. 4071+00
 EXIST 1-24"x92' CMP @ 45° LT. FWD.
 w/END WALL LT.
 TO BE REMOVED



D4-238
 STA. 4066+42.14
 BUILD 2-24"x148' CULVERT PIPE @ 40° LT. FWD;
 BUILD 1-10'x5' RURAL MDI @ STA 4066+00 - 49' RT.
 H=3.5'
 BUILD 2' WIDE x 2" THICK ASPHALT PAD AROUND MDI
 BUILD OUTLET @ STA 4067+00 - 70' LT.
 BUILD CONC. BLANKET LT. w/ SAFETY GRATES

STD DWG: BDC-029, BMC-001-03, BMC-003-01, BMC-005-01, BMDI-001,
 BMDI-002, M-16-71

NOTE: THE AREA FROM STA 4063+20 - 49' RT. IS TO BE GRADED TO DRAIN INTO THIS INLET RT.

ROW 210' RT.

ROW 160' RT.

SHEET TITLE

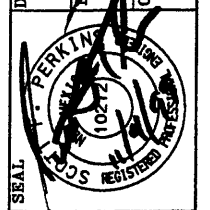
STRUCTURE PLACEMENT SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

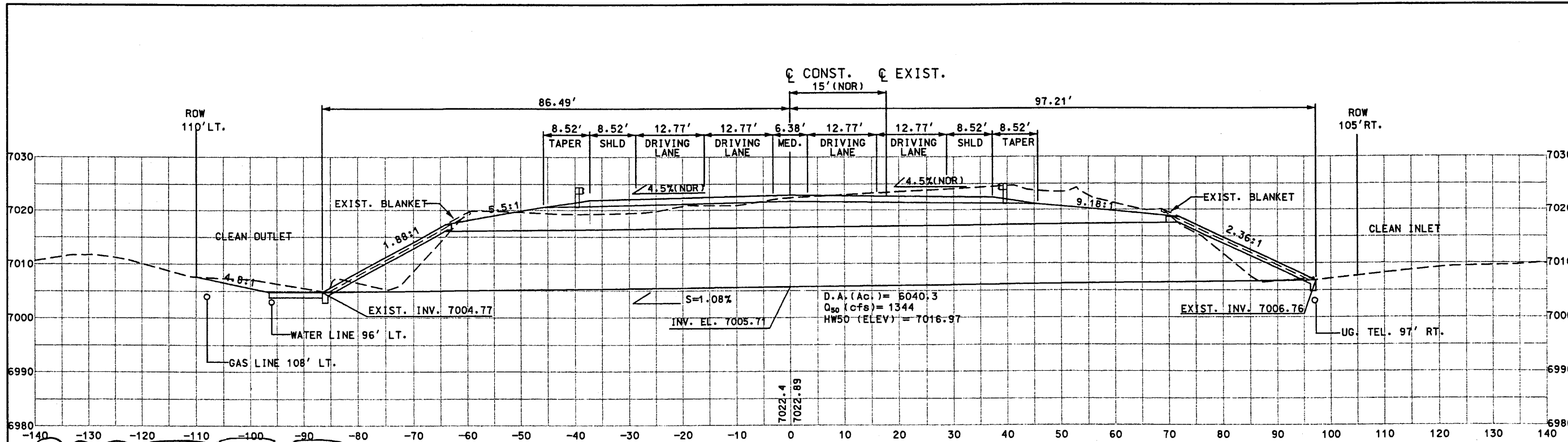


8-5C

PROJECT NO. AC.NH.044.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 8.SC, Structure Placement Section

NO.	REVISION	DATE	BY
①	Add safety grate, D4.238 LT	9.19.00	FSC RFI 110
②	Revise Structures for PGL		
	Revisions, 4021+00 to 4074+00	10.6.01	FSC/FNF-0537

Design File: \\public\projects\98082-01\sect8\44448spl.dgn
 Plot Date: 04 NOV 1999

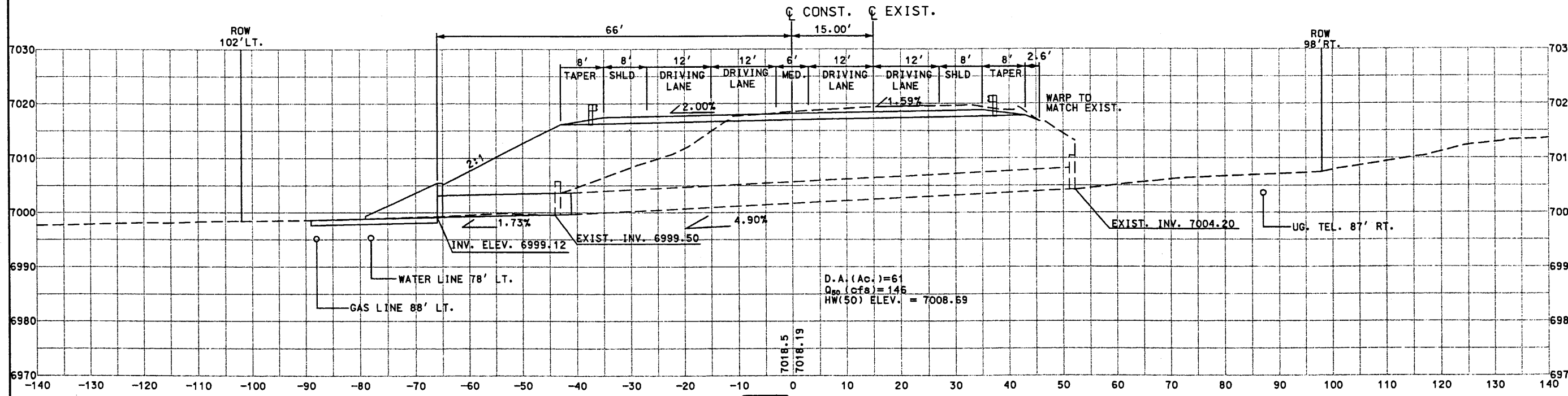


*** BRASS CAP SHALL BE 2-INCH DIAMETER WITH HAND STAMPED LETTERS 1/4" HIGH**

BRIDGE #9141
 CONTRACTOR SHALL INSTALL A BRASS CAP ON TOP OF THE APPROACH SIDE OF EACH CONC. BLANKET LT. & RT. THE BRASS CAP SHALL BE STAMPED "BRIDGE #9141".

D4-240
 STA. 4091+07.64
 EXIST. 1-132"x184" CM-SPP @ 20° RT. FWD. W/CONC. BLANKETS LT. & RT. TO REMAIN
 BUILD 1-132"x184" CM-SPP @ 20° RT. FWD. UP STATION FROM EXISTING.
 BUILD CONC. BLANKETS LT. & RT. (TIE INTO EXIST. BLANKETS)
 BUILD EROSION CONTROL PAD LT. 10' L x 35.3' W x 1' D
 STD DWG: BBG-020, BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71-A

CONSTRUCTION NOTE: AN EXISTING WETLAND HAS BEEN IDENTIFIED AT THE INLET AND OUTLET OF THE EXISTING STRUCTURE. THE CONTRACTOR SHALL RESTRICT ALL CONSTRUCTION ACTIVITY IN THE AREA TO WITHIN THE PROPOSED SLOPE LIMITS AND WILL MINIMIZE IMPACTS TO THE EXISTING WETLAND AREAS.



D4-239
 STA. 4081+17.79
 EXIST. 1-6'x4'x96' CBC. DES. 2. NORMAL IN PLACE W/WINGWALLS & HEADWALLS LT. & RT
 REMOVE WINGWALLS & HEADWALLS LT.
 REMOVE 3' LT. EXTEND LT. W/ 1-6'x4'x25' CBC DESIGN 2
 TYPE II EXTENSION. BUILD WINGWALLS & PARAPET LT.
 BUILD EROSION CONTROL PAD LT. 23' L x 17' W x 1' D
 STD DWG: BCE-001, BEB-001-04, BRR-001-08, CB-31 (SHT. 2 OF 4)
 EC-61, WCB-0 (SHT. 1 OF 2), WCB-0 (SHT. 2 OF 2)

STRUCTURE PLACEMENT SECTIONS

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

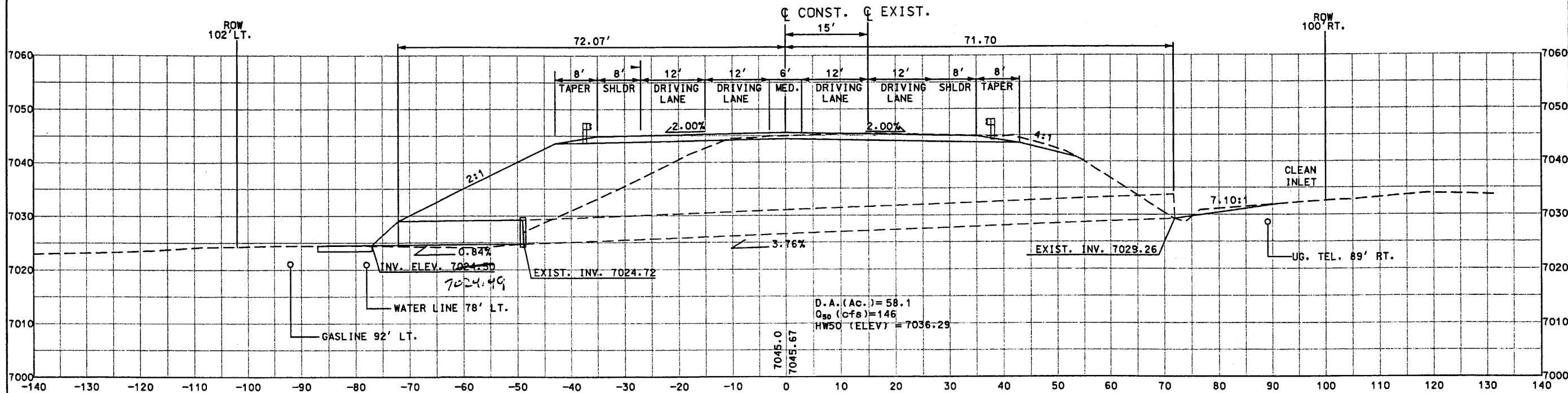
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)164
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

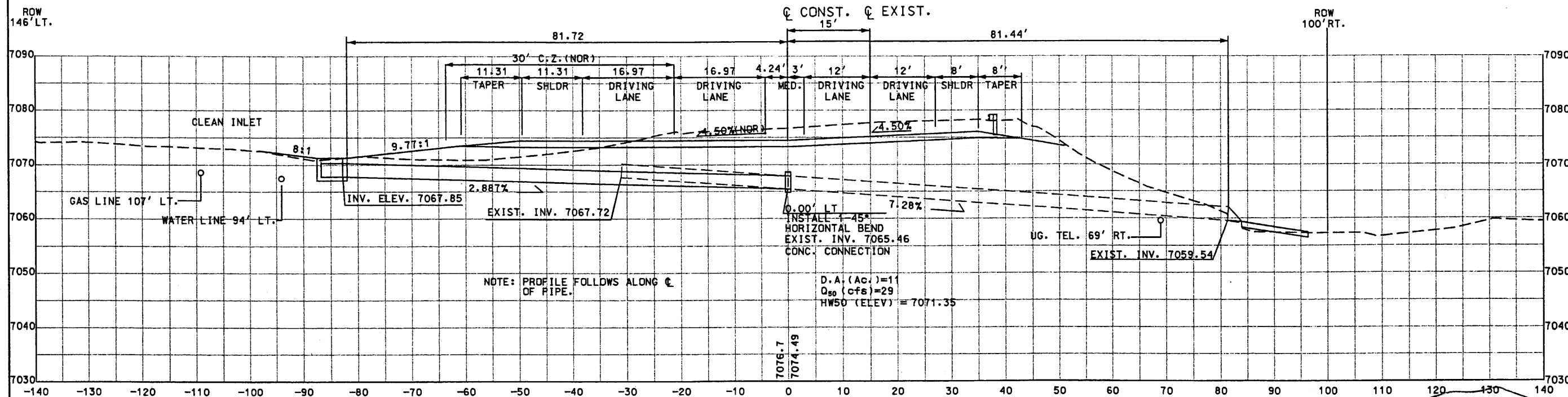
SEAL: [Professional Engineer Seal]

Design File: \\blc\projects\98082-01\sect8\44448sp1.dgn
 Plot Date: 01/07/1999



D4-243
 STA. 4126+56.40
 EXIST. 1-54"x121' CMP, NORMAL IN PLACE
 W/WINGWALL LT. & RT.
 REMOVE WINGWALLS LT.
 BUILD CONC. COLLAR LT.
 EXTEND LT. w/1-54"x23' CULVERT PIPE.
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT. 10'L x 13.5'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01,
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D01



D4-241
 STA. 4102+07.68
 EXIST 1-30"x113' CMP, NORMAL IN PLACE
 W/OUTLET STRUCTURE RT.
 REMOVE OUTLET STRUCTURE
 REMOVE 31' OF 30' CMP LT.
 BUILD CONC. COLLAR LT.
 EXTEND LT. w/1-30"x83' CULVERT PIPE.

BUILD 1-45° BEND LT.
 BUILD 1-RURAL MDI TYPE II, H=3.5'
 BUILD END SECTION RT.
 BUILD 12' W/17' (1) (D)
 RIP RAP CLASS "A" EROSION CONTROL PAD RT.

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, BMD1-001,
 BMD1-002, BRR-001-08, EC-61, ES-1, M-16-71, 44-D01

EXISTING STRUCTURE
 AND EROSION CONTROL
 ON RIGHT REMAINED
 IN PLACE PER FSC

STRUCTURE PLACEMENT SECTIONS

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

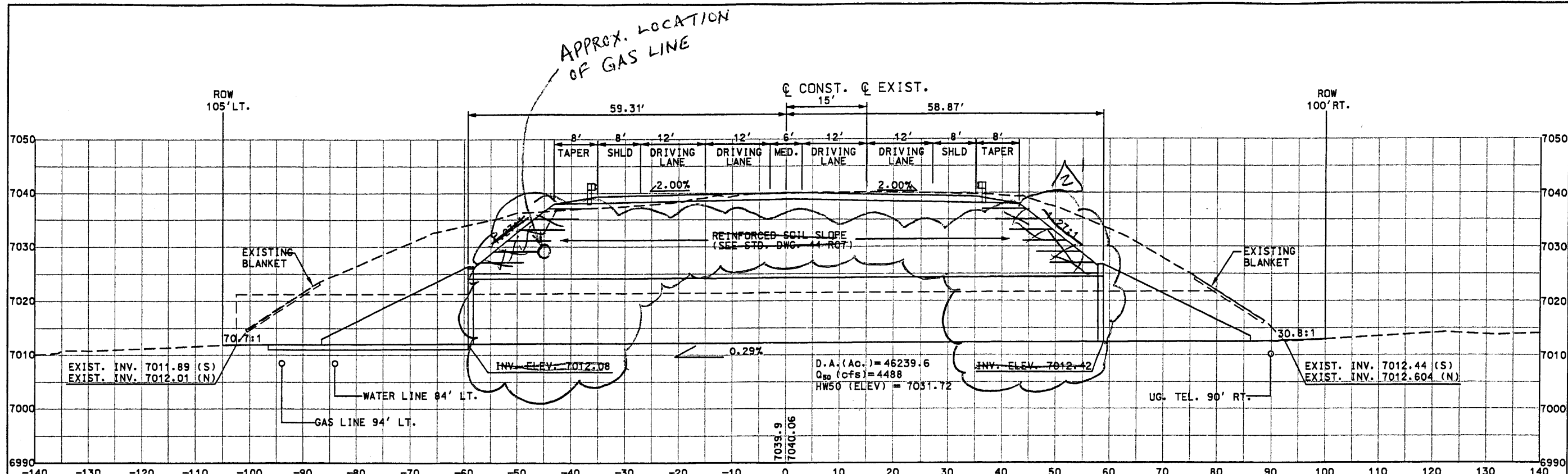
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

8-7

Design File: \\projects\98082-01\sect8\44448sp1.dgn
 Plot Date: 11/14/1999

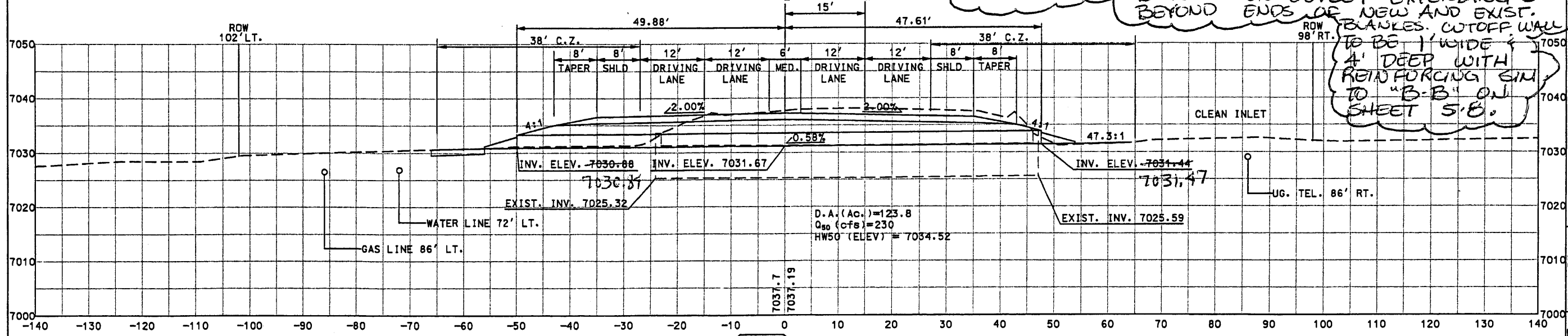


note: rev. made by RFI 12 superceded by rev. 2 shown.

EXISTING BRIDGE #8730 TO BE RETIRED
 CONTRACTOR SHALL INSTALL A BRASS CAP ON TOP OF THE NEW PARAPET WALL LT. & RT. WITH "BRIDGE #9142". THE CAPS SHALL BE PLACED ON THE APPROACH SIDE OF THE NEW PARAPET WALL FROM EACH DIRECTION. BRASS CAP SHALL BE 2-INCH DIAMETER WITH HAND STAMPED LETTERS 1/4" HIGH.

D4-246
 STA. 4145+09.66
 EXIST. 2-15'-4"x9'-3"x196' CM-SPP ARCH @ 5' LT. FWD. W/CONC. BLANKETS LT. & RT. TO BE REMOVED
 BUILD 2-15'-4"x9'-3"x196' CM-SPP ARCH @ 5' LT FWD (DOWNSTATION OF EXISTING)
 PLACE TWO SINGLE OPENING CBC'S NEXT TO EACH OTHER (SEE JOINT DETAIL FOR MULTIPLE UNIT BOXES)
 W/ WINDWALLS & PARAPETS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 37.25' L x 70.5' W x 1' D
 STD DWG: BEB-001-04, BRR-001-08, EC-31 (SHT. 1 OF 4); EC-32 (SHT. 1 OF 5) & (SHT. 2 OF 2); EC-61, WCB-01 (SHT. 1 OF 2) & (SHT. 2 OF 2)
 BMC-002-07, BMC-005-01,

CONSTRUCTION NOTE: AN EXISTING WETLAND HAS BEEN IDENTIFIED AT THE INLET OF THE EXISTING STRUCTURE. THE CONTRACTOR SHALL RESTRICT ALL CONSTRUCTION ACTIVITY IN THE AREA TO WITHIN THE PROPOSED SLOPE LIMITS AND WILL MINIMIZE IMPACTS TO THE EXISTING WETLAND AREAS.
 BUILD CONCRETE SLOPE BLANKETS, LT & RT
 BUILD CUTOFF WALL AT END OF SLOPE BLANKET ON OUTLET EXTENDING 5' BEYOND ENDS OF NEW AND EXIST. BLANKETS. CUTOFF WALL TO BE 1' WIDE & 4' DEEP WITH REINFORCING SIM TO "B-B" ON SHEET 5.8.



D4-245
 STA. 4135+56.52
 EXIST. 1-5'x6'x68' CBC, DES. 1. NORMAL IN PLACE W/HEADWALLS LT. & RT. TO BE REMOVED
 BUILD 7-42"(S)x29"(R)x98"(L) CULVERT PIPE ARCHES, NORMAL IN PLACE
 BUILD SPECIAL END SECTION W/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 10' L x 43' W x 1' D
 STD DWG: BMC-002-07, BMC-004-01, BMC-005-01, BRR-001-08, EC-61, M-16-71-A, 44-D05

STRUCTURE PLACEMENT SECTIONS

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

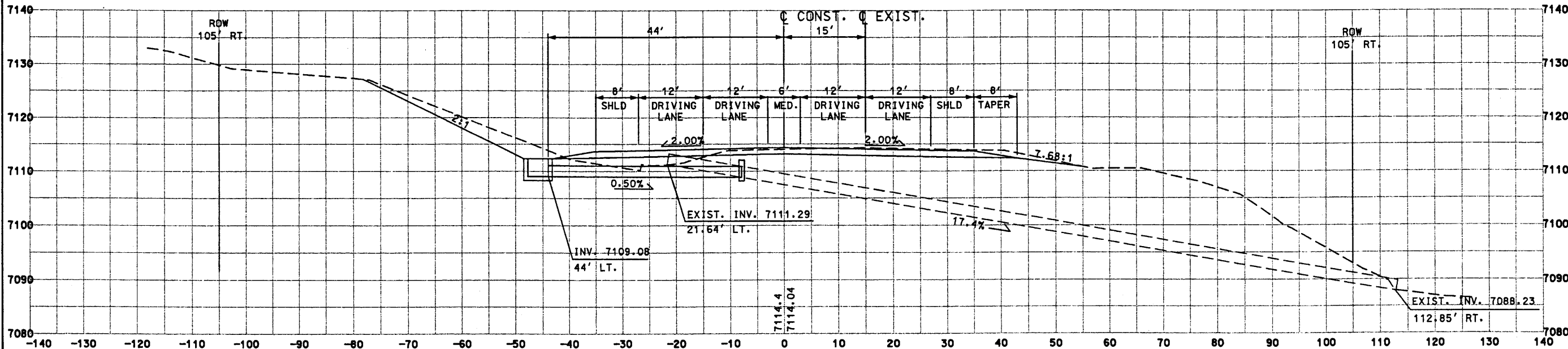
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

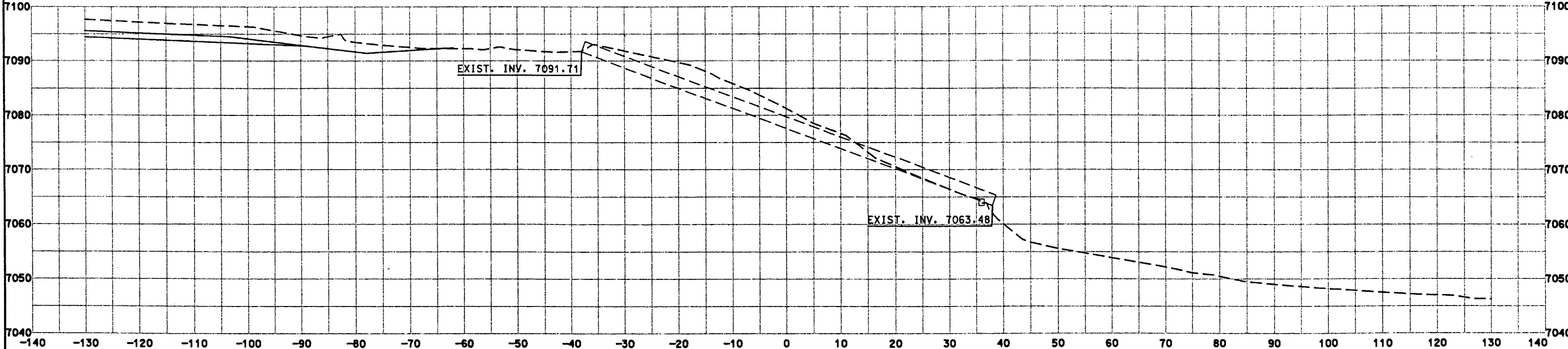
8-8

Design File: \\public\projects\98082-01\sect8\44448spl.dgn
 Plot Date: 01/01/1999



D4-247
 STA. 4171+83.36
 EXIST. 1-24" x 135' CMP NORMAL IN PLACE
 REMOVE CONC. BLANKET LT. & 17' OF CMP LT
 EXTEND LT. W/ 1-24" x 36' CULVERT PIPE
 BUILD CONC. COLLAR LT.
 BUILD 1-RURAL MDI TYPE II LT., H=3.25'
 BUILD 2' WIDE x 2" THICK ASPHALT PAD AROUND MDI

STD. DWG.: BMC-001-03, BMC-003-01, BMC-005-01, BMDI-001,
 BMDI-002, M-16-71, 44-001



D4-246A
 STA. 4160+61.57 - 91.5' RT.
 EXIST. 1-24" x 76' CMP
 W/HEADWALL RT.
 TO REMAIN IN PLACE

STRUCTURE PLACEMENT
 SECTIONS

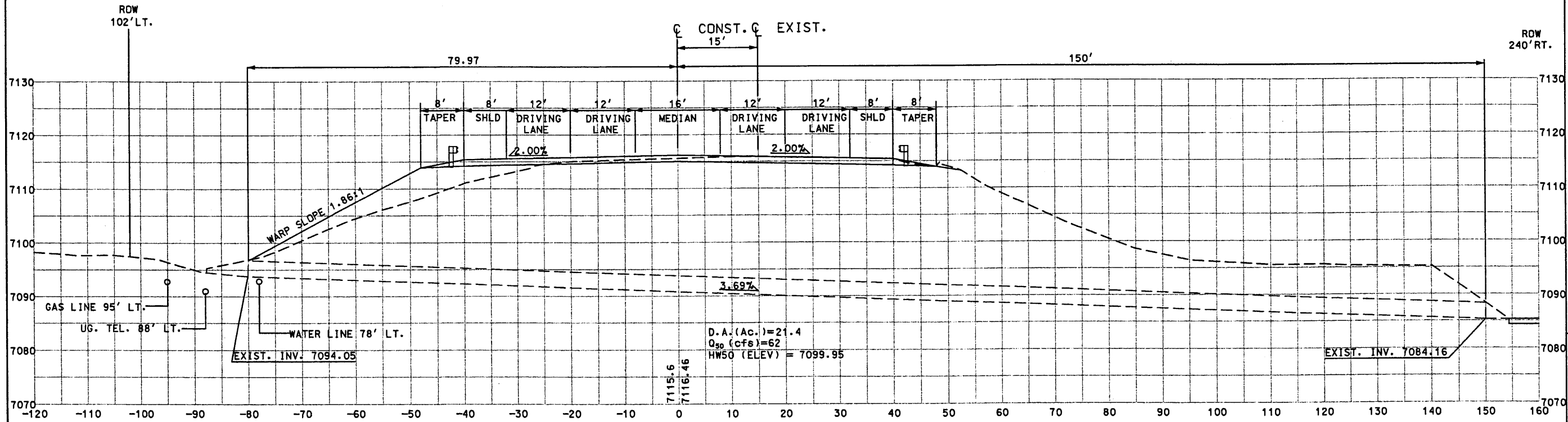
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \\public\projects\98082-01\sect8\44448spi.dgn
 Plot Date: 0V 1999



D4-248

STA. 4178+79.35
 EXIST. 1-36"x231' CMP. NORMAL IN PLACE
 W/CONC. BLANKETS LT. & RT.
 BUILD EROSION CONTROL PAD RT. 10'L x 9'W x 1'D

STD DWG: BRR-001-08, EC-61

SHEET TITLE

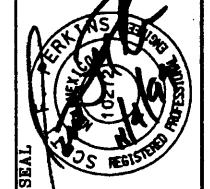
STRUCTURE PLACEMENT
 SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

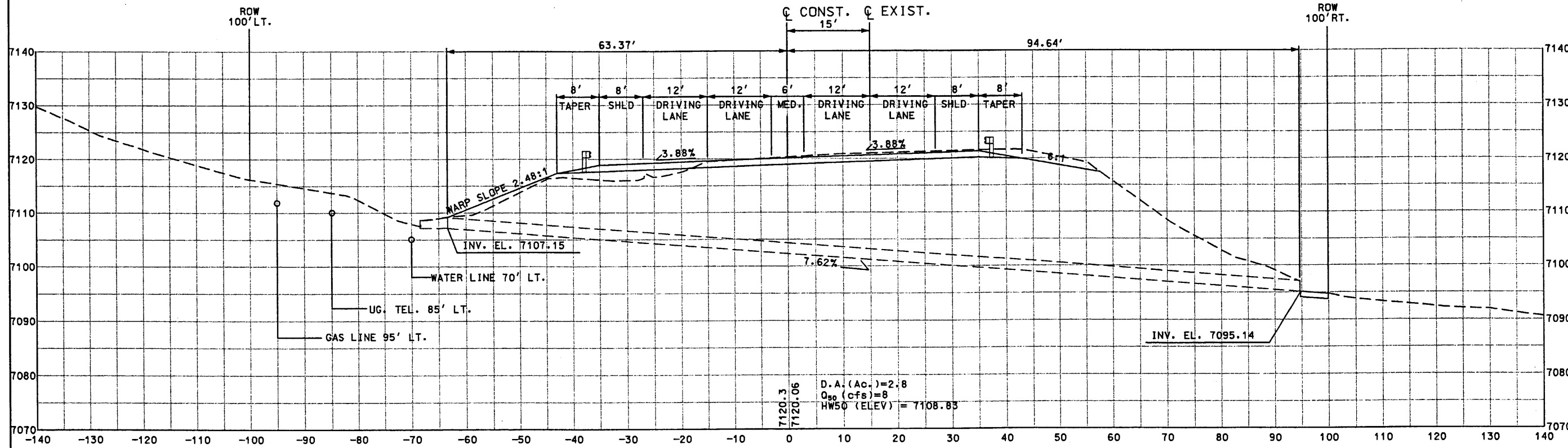
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \\blhc\projects\98082-01\sect8\44448sp1.dgn
 Plot Date: 10/10/1999



7120.3
 7120.06
 D.A. (Ac.)=2.8
 Q₅₀ (cfs)=8
 HW50 (ELEV) = 7108.85

D4-249
 STA. 4182+79.06
 EXIST. 1-24"x158' CMP NORMAL IN PLACE
 W/CONCRETE BLANKET LT.
 BUILD EROSION CONTROL PAD RT. 5'L x 6'W x 1'D
 STD DWG: BRR-001-08. EC-61

SHEET TITLE

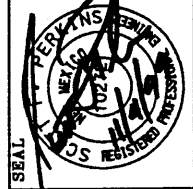
STRUCTURE PLACEMENT
 SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

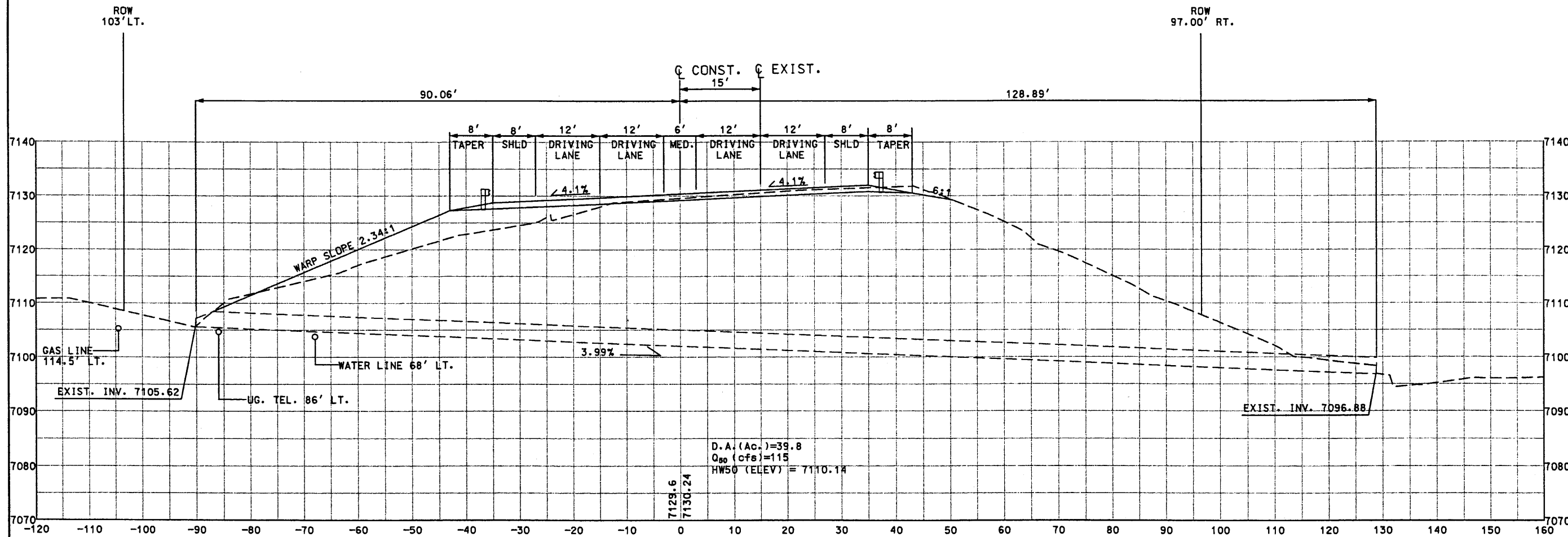
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \\bluc\projects\98082-01\sect8\44448spl.dgn
 Plot Date: 11/01/1999



D.A. (Ac.)=39.8
 Q₅₀ (cfs)=115
 HW50 (ELEV)=7110.14

7129.6
 7130.24

D4-250
 STA. 4186+12.90
 EXIST. 2-36"x220' CMP's. NORMAL IN PLACE
 w/WINGWALL LT.

SHEET TITLE

STRUCTURE PLACEMENT
 SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

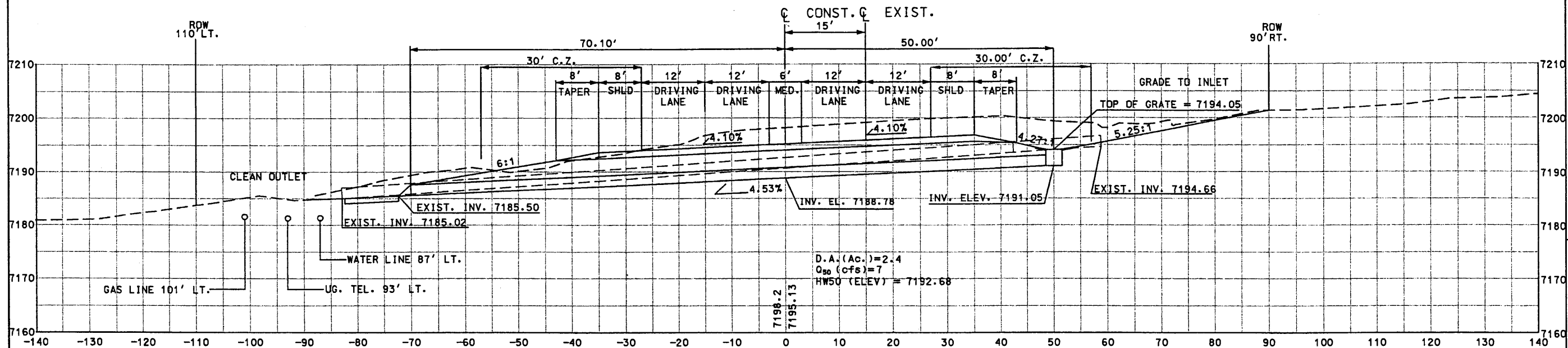
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: public\projects\98082-01\sect8\44448sp1.dgn
 Plot Date: NOV 1999



◊D4-251◊
 STA. 4203+17.95
 EXIST. 1-24"x142' CMP NORMAL IN PLACE
 w/CONC. BLANKET LT. & MDI RT.
 TO BE REMOVED
 BUILD 1 -24" X 119' CULVERT PIPE
 w/1-MDI TYPE II-(RURAL), H=3 RT
 BUILD 2' WIDE X 2" THICK ASPHALT PAD AROUND MDI
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT. 10'L x 6'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, BMDI-001
 BMDI-002, BRR-001-08, EC-61, ES-1, M-16-71

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

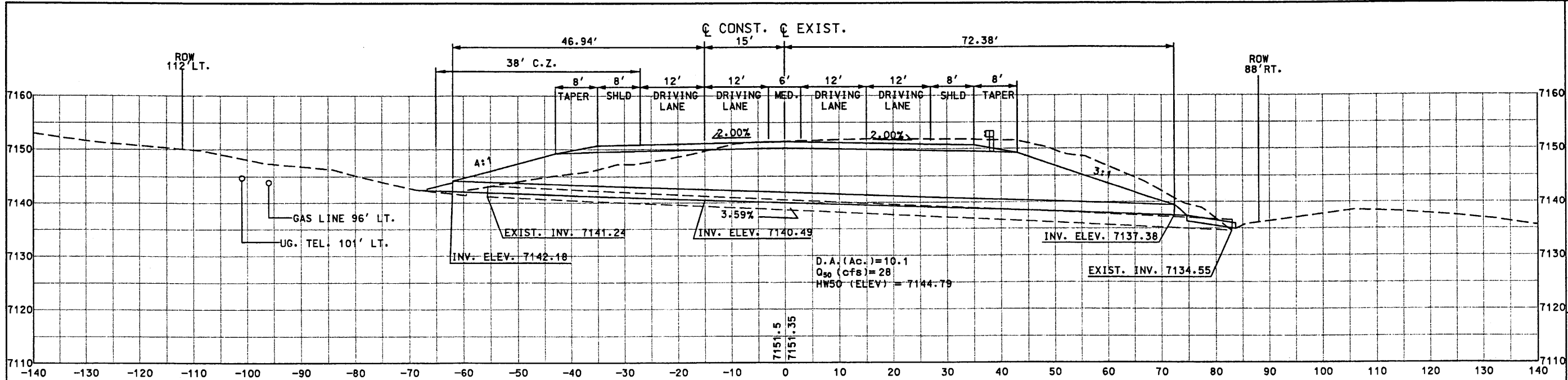
STRUCTURE PLACEMENT
 SECTIONS

**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: ESTUAR/REP
 CHECKED BY: SFP

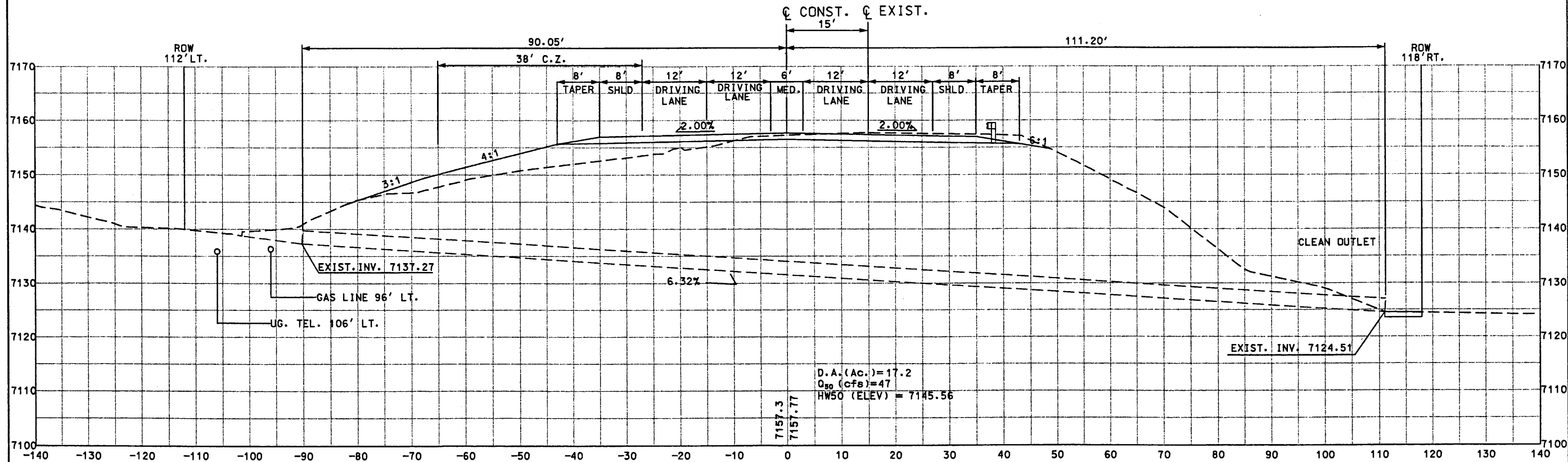


Design File: \\blc\projects\98082-01\sect8\4448sp1.dgn
 Plot Date: 10/19/99



D4-253

STA. 4228+30.80
 EXIST. 1-24"x139' CMP NORMAL IN PLACE
 W/ CONC. BLANKET LT. & END SECTION RT.
 TO BE REMOVED
 BUILD 2-24"x134' CULVERT PIPES
 BUILD SPECIAL END SECTION LT. W/SAFETY BARS & END SECTION RT.
 BUILD EROSION CONTROL PAD RT. 9'L x 11'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01,
 BRR-001-08, EC-61, ES-1, M-16-71, 44-DD5



D4-252

STA. 4223+65.20
 EXIST. 1-30"x203' CMP NORMAL IN PLACE
 W/CONC. BLANKET LT.
 BUILD EROSION CONTROL PAD RT. 7'L x 7.5'W x 1'D
 STD DWG: BRR-001-08, EC-61

SHEET TITLE

STRUCTURE PLACEMENT
 SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

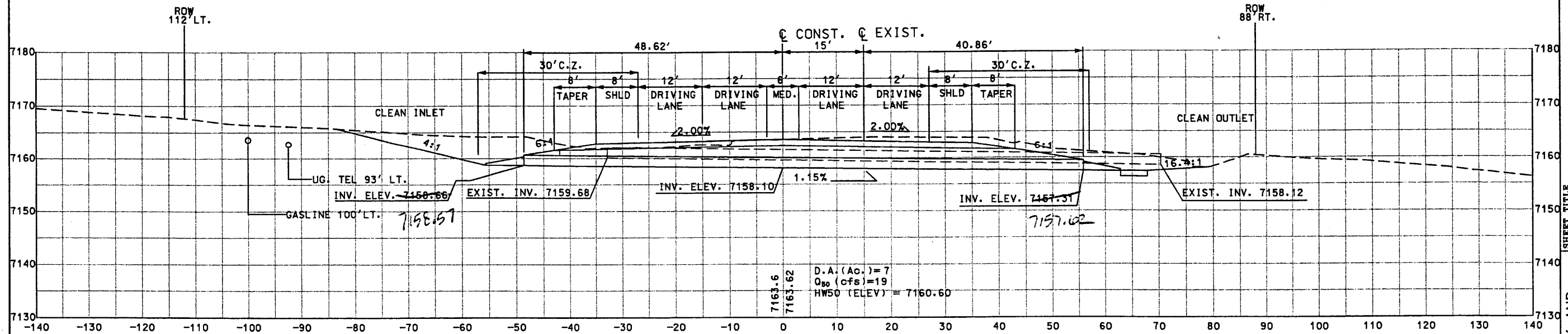
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



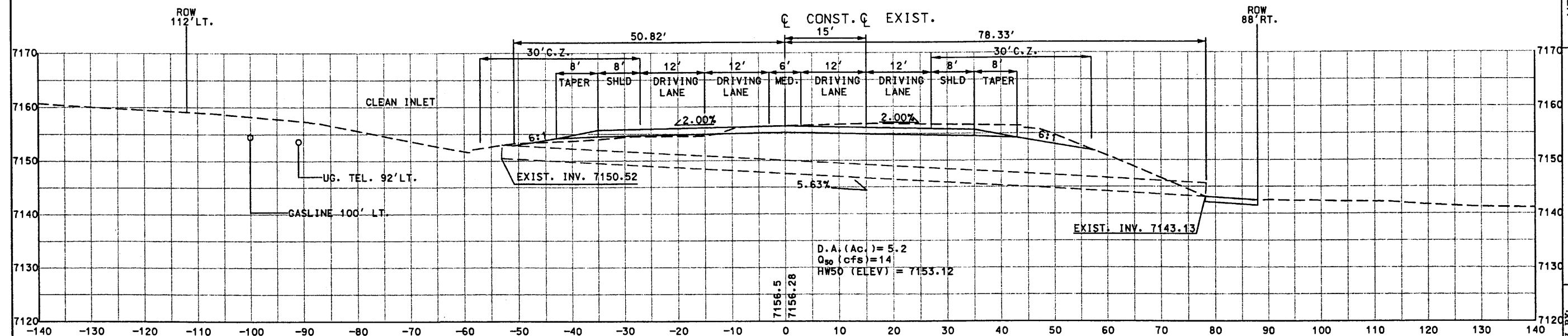
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 Plot Date: 07/19/99



D4-255

STA. 4234+12.39
 EXIST. 1-24"x129' CMP NORMAL IN PLACE
 W/CONC. BLANKET LT. & END SECTION RT.
 TO BE REMOVED
 BUILD 2-24"x90' CULVERT PIPES
 BUILD SPECIAL END SECTION W/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD RT.
 5'L x 11'W x 1'D RT.

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01,
 BRR-001-08, EC-61, M-16-71, 44-D05



D4-254

STA. 4231+58.17
 EXIST. 1-30"x132' CMP NORMAL IN PLACE
 W/CONC. BLANKET LT. AND END SECTION RT.
 BUILD EROSION CONTROL PAD RT.
 10'L x 7.5'W x 1'D RT.

STD DWG: BRR-001-08, EC-61

SHEET TITLE

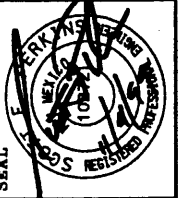
STRUCTURE PLACEMENT
 SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

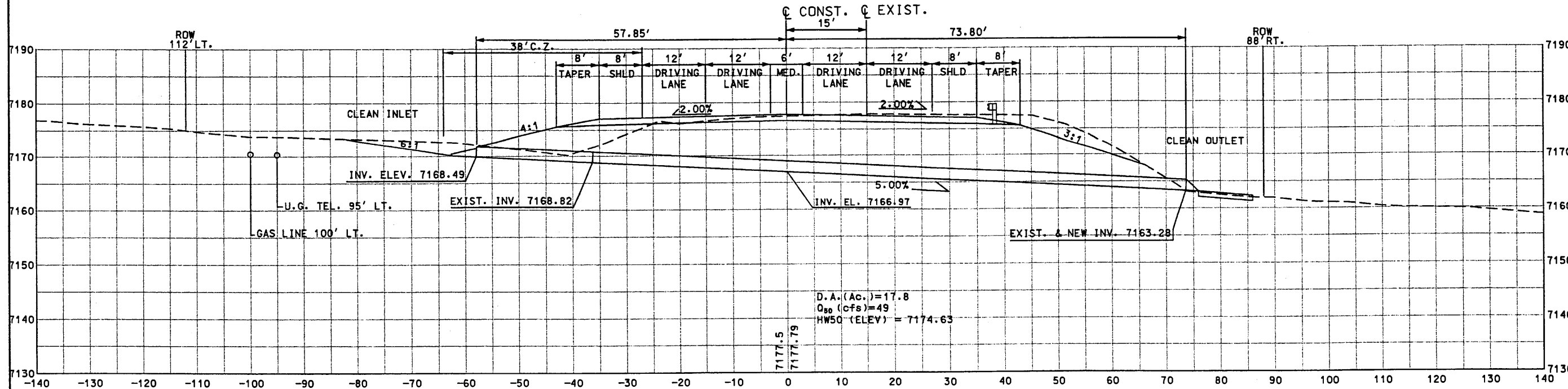
NM 44
 PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
 & COMPANY**

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 CHECKED BY: SFP



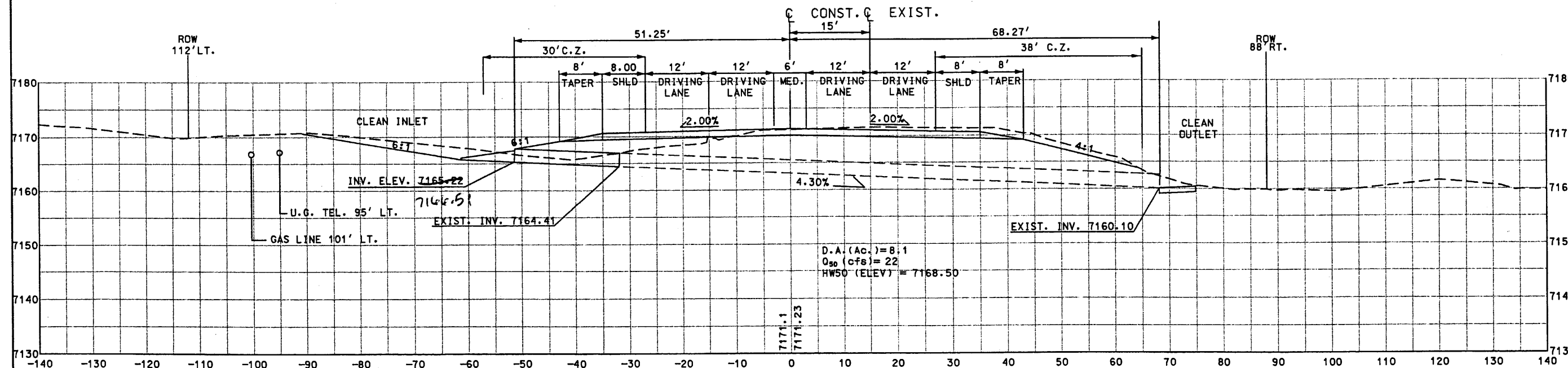
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 Plot Date: 04 NOV 1999



◊D4-25◊ STA. 4247+97.33

EXIST. 1-24"x110' CMP NORMAL IN PLACE
 W/ CONC. BLANKET LT. & END SECTION RT.
 REMOVE CONC. BLANKET LT.
 EXTEND LT. W/1-24"x21' CULVERT PIPE
 BUILD 1-24"x134' CULVERT PIPES
 BUILD SPECIAL END SECTION W/SAFETY BARS LT. & END SECTION RT.
 BUILD EROSION CONTROL PAD RT.
 10'L x 11'W x 1'D RT.

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-DD5



◊D4-256◊

STA. 4237+58.34
 EXIST. (1)-30"x101' CMP, NORMAL (IN PLACE)
 W/CONC. BLANKET LT. & RT.
 REMOVE CONC. BLANKETS LT. → 50
 EXTEND LT. W/1-30"x20' CULVERT PIPE.
 BUILD SPECIAL END SECTION W/SAFETY BARS LT.
 BUILD EROSION CONTROL PAD RT.
 6.5'L x 7.5'W x 1'D RT.

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-DD5

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

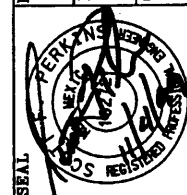
STRUCTURE PLACEMENT

SECTIONS

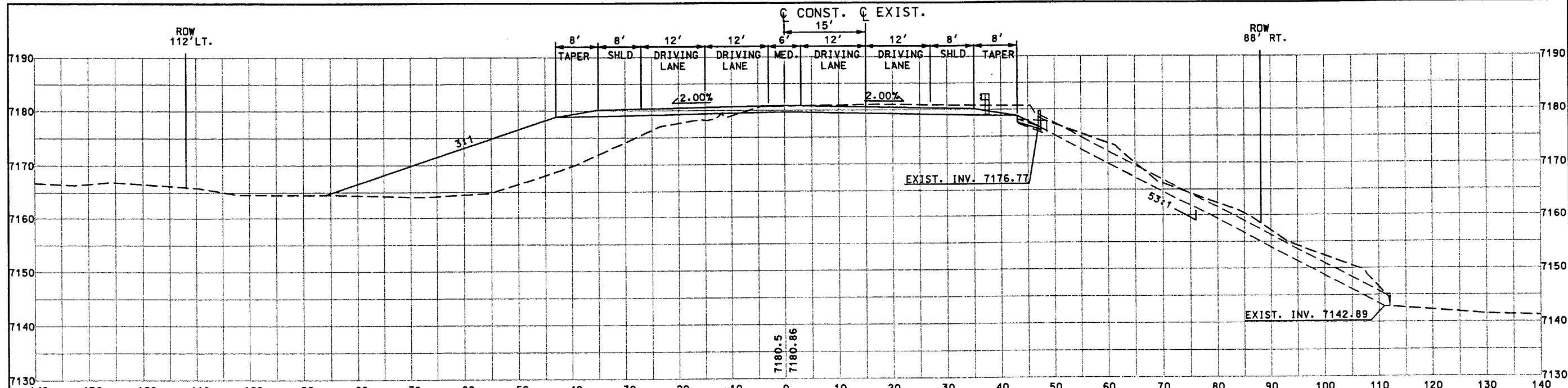
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 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

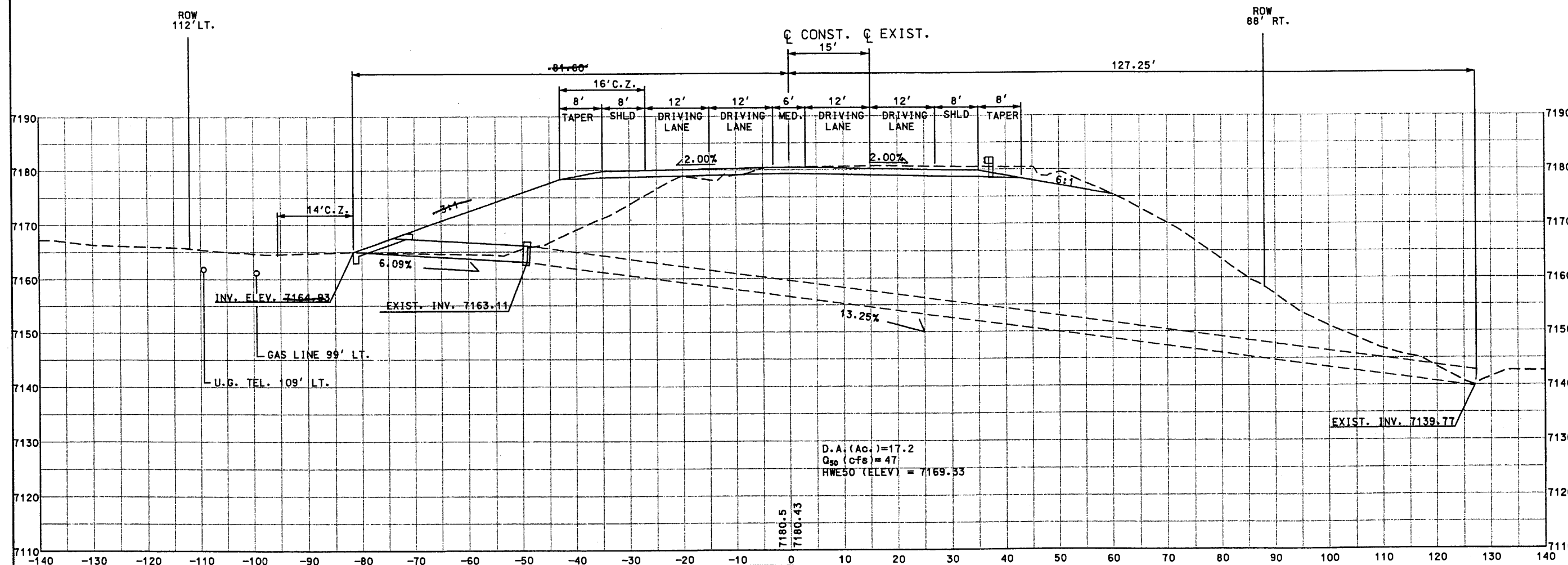
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 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \\slic\projects\98082-01\sect8\44448sp1.dgn
 Plot Date: 01/01/1999



D4-258A
 STA. 4253+66.45
 EXIST. 1-24"x64" CMP NORMAL IN PLACE
 w/CONC. CATCH INLET & HEAD WALL AT THE INLET
 REMOVE THE CONC. INLET AND HEADWALL
 REBUILD CONC. INLET AND HEADWALL
 SEE SHEET 2-6 & 2-7 FOR RUNDOWN DETAILS.
 STD DWG: BBG-020, BMC-001-03, BMC-003-01, BMC-005-01,
 BRR-001-08, EC-61, M-16-71, 44-001



D4-258B
 STA. 4253+44.53
 EXIST. 1-36"x178" CMP NORMAL IN PLACE
 w/CONC. BLANKET LT.
 REMOVE CONC. BLANKET LT.
 BUILD CONC. COLLAR LT.
 EXTEND LT. w/1-36"x30" CULVERT PIPE
 BUILD CONC. BLANKET w/SAFETY GRATES LT.
 STD DWG: BBG-021, BBG-023, BMC-001-03, BMC-003-01,
 BMC-005-01, M-16-71, 44-001

STRUCTURE PLACEMENT SECTIONS

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

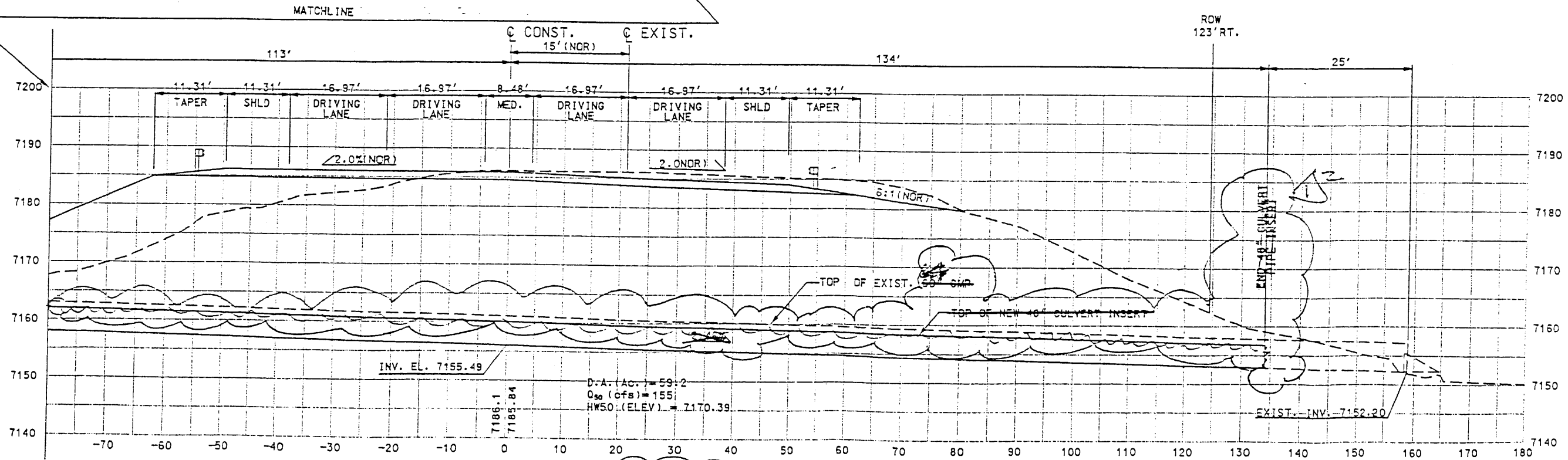
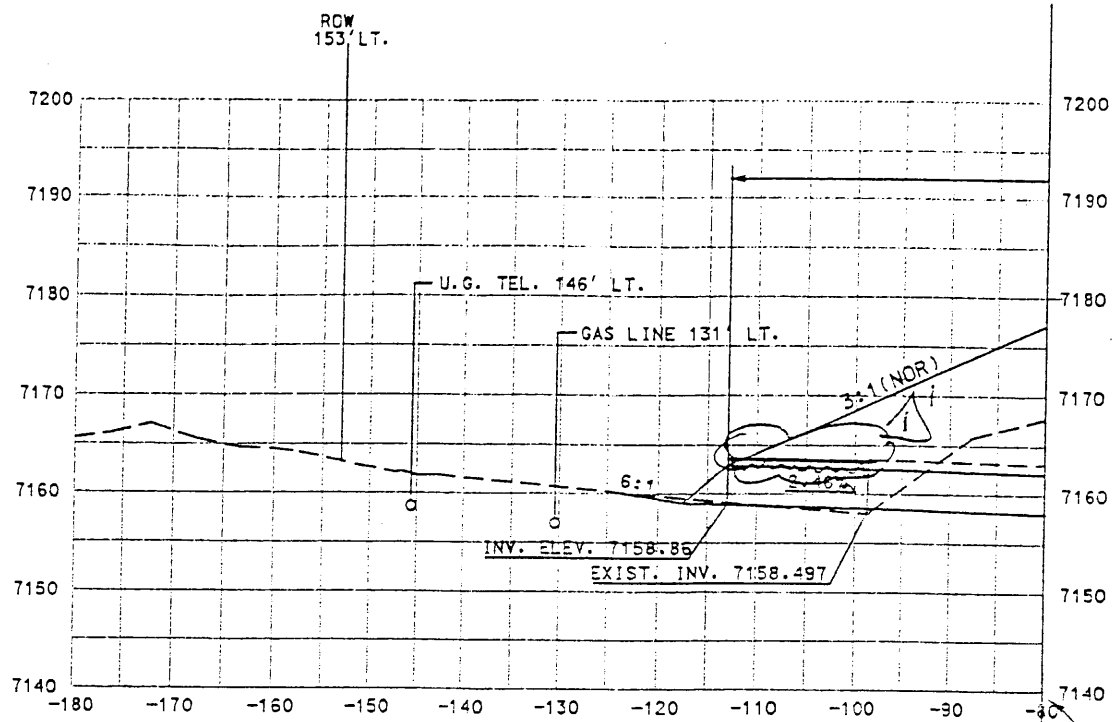
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

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8-16



04-259
 STA. 4255+76.27
 EXIST. 14\"/>

SHEET TITLE
 STRUCTURE PLACEMENT
 SECTIONS

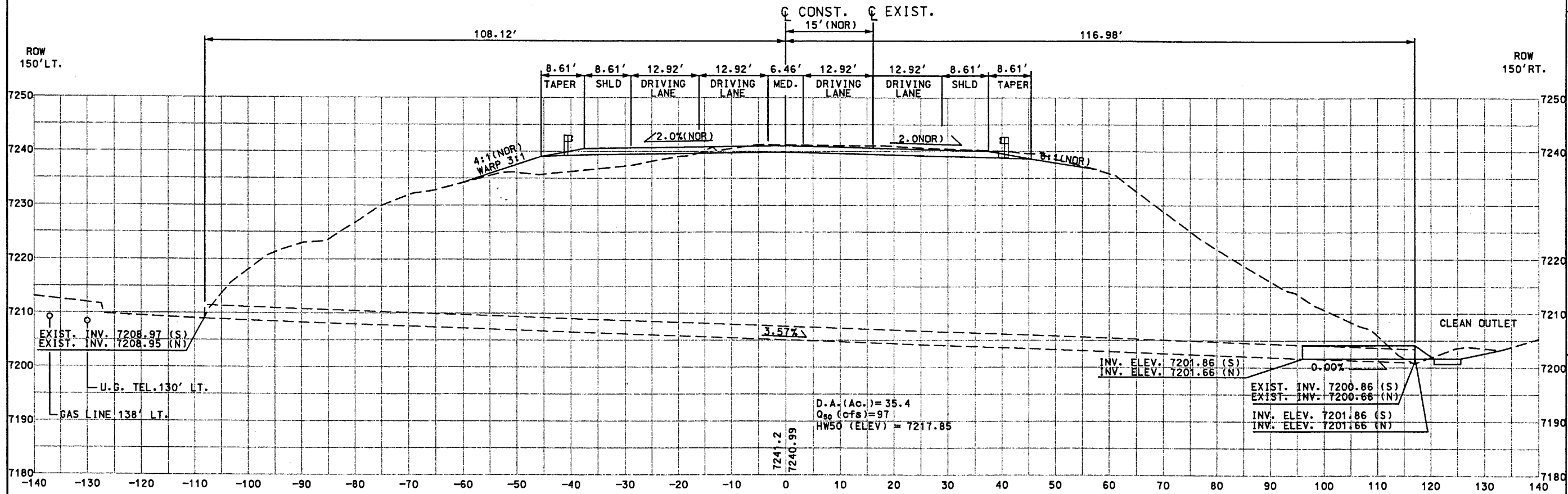
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NII-044-2(39)64
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \\public\projects\98082-01\sect8\44448spl.dgn
 Plot Date: 10V 1999



D4-260

STA. 4275+39.73
 EXIST. 2-30"x225' CMP @ 22° LT. FWD.
 REMOVE 2x30"x21' OF CMP RT.
 EXTEND RT. w/2-30"x21' CULVERT PIPES @ 22° LT. FWD.
 BUILD END SECTION RT.
 BUILD EROSION CONTROL PAD RT. 5'L x 13.5'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01,
 BRR-001-08, EC-61, ES-1, M-16-71, 44-001

45' → EXTENDED DUE TO SLOPE FAILURE,
 @ 0.00% SLOPE, ELEVATIONS DON'T
 CHANGE

SHEET TITLE

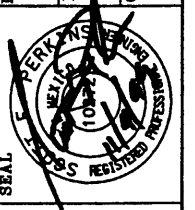
STRUCTURE PLACEMENT
 SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

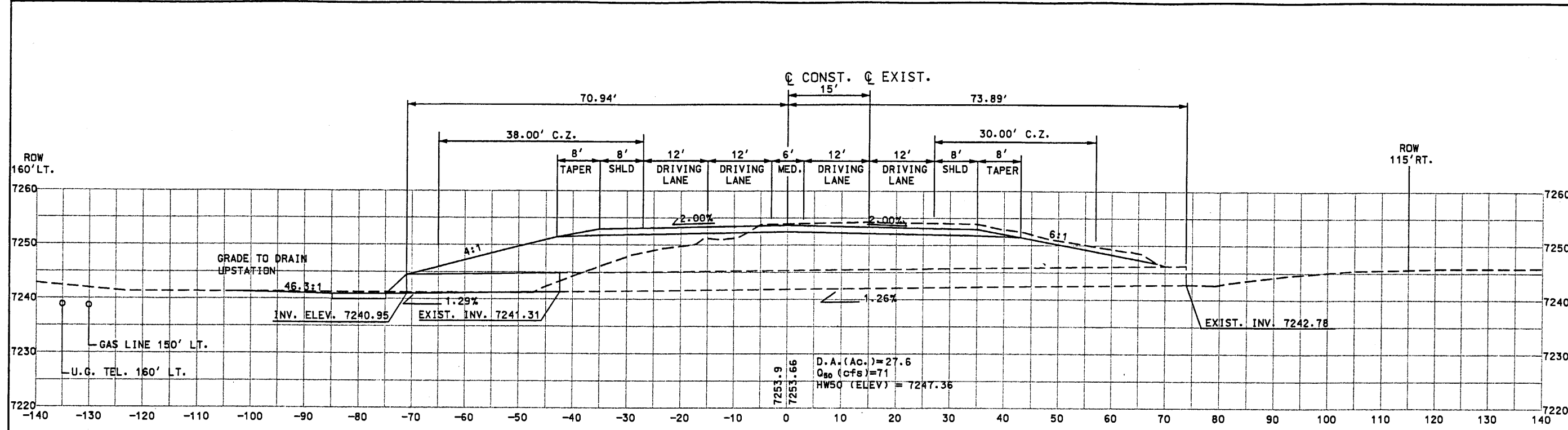
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

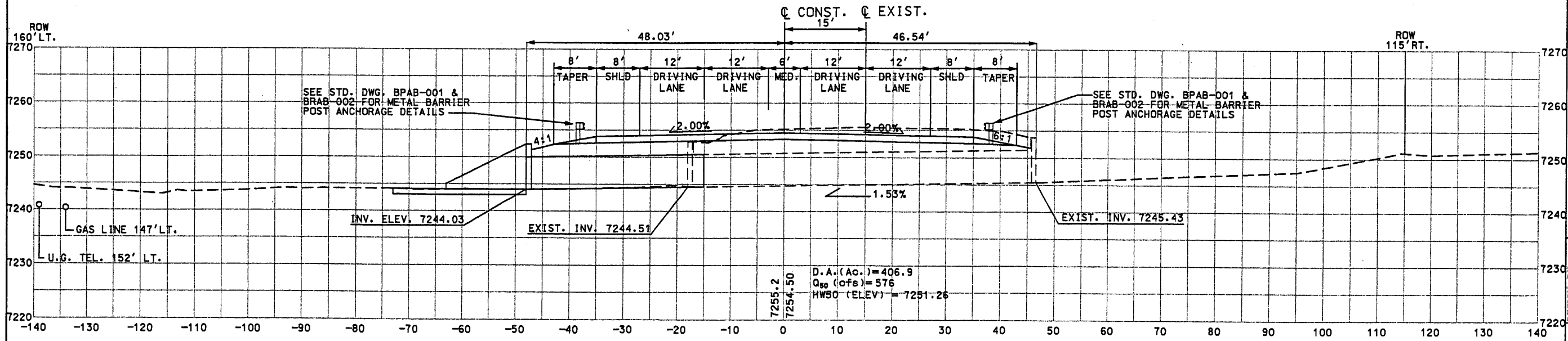


STRUCTURE PLACEMENT SECTIONS



44-263

STA. 4325+06.54
 EXIST. 1-42"x116' RCP NORMAL IN PLACE
 W/ END SECTIONS LT. & RT.
 REMOVE END SECTION LT.
 EXTEND LT. W/1-42"x29' CULVERT PIPE
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT. 10'L X 10.5'W X 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01,
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D01



44-262

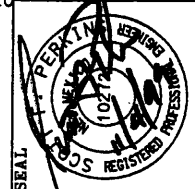
STA. 4308+12.31
 EXIST. 2-8'x6'x65' CBC'S DESIGN 1, NORMAL IN PLACE
 W/WINGWALLS LT. & RT.
 REMOVE WINGWALLS LT. & 2' OF CBC LT.
 EXTEND LT. W/2-8'x6'x33' CBC'S DESIGN 1, TYPE II EXTENSION
 BUILD WINGWALLS LT.
 BUILD EROSION CONTROL PAD LT. 30'L X 25'W X 1'D
 STD DWG: BCE-001, BEB-001-04, BRR-001-08, CB-32(SHT. 1 OF 5), CB-32(SHT. 2 OF 5),
 EC-61, WCB-0(SHT. 1 OF 2), WCB-0(SHT. 2 OF 2)

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

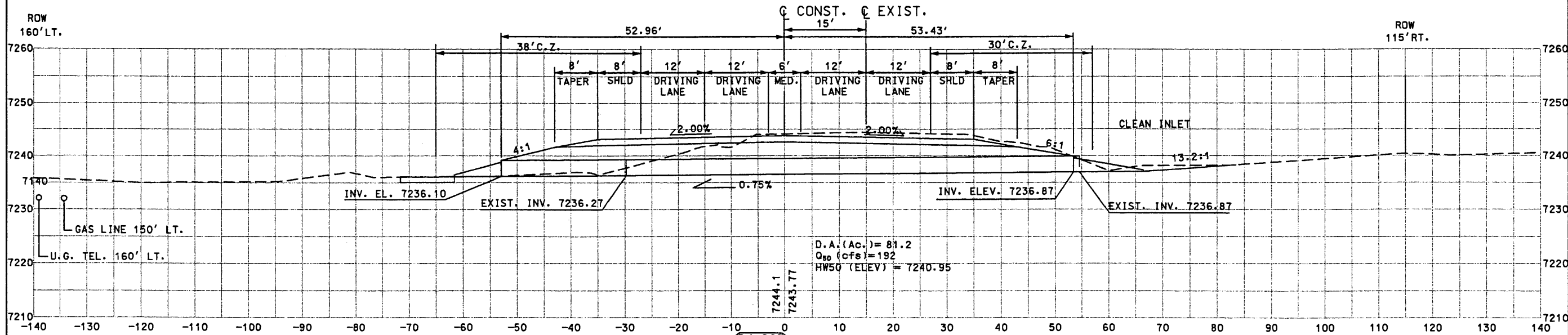
**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



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 Plot Date: 04 NOV 1999

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 Plot Date: 04/11/1999

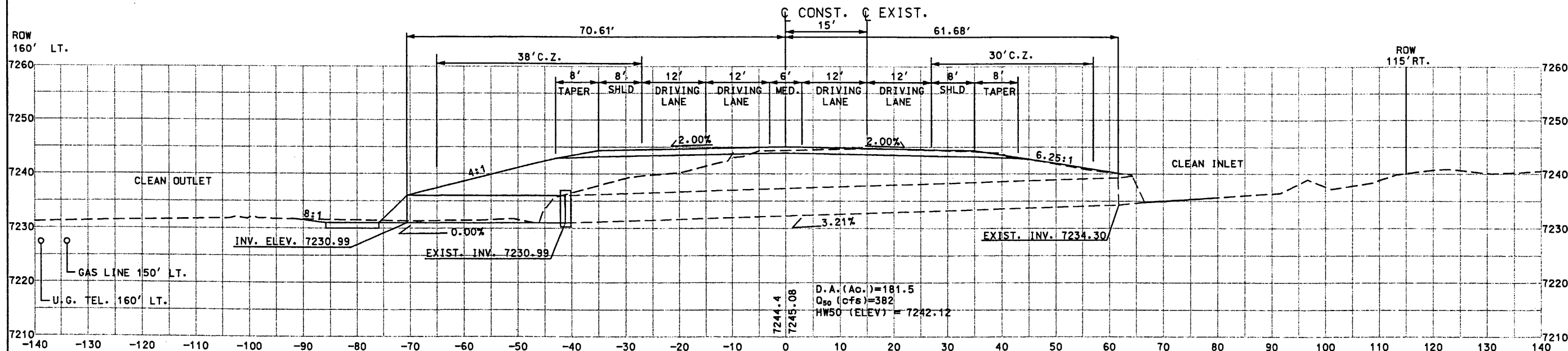


D4-265

STA. 4343+56.08

EXIST. 3-36"x84' RCP'S NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 REMOVE 3-36"x1' OF RCP RT.
 EXTEND LT. w/3-36"x23' CULVERT PIPES
 BUILD 1-36"x108' CULVERT PIPES
 BUILD SPECIAL END SECTION W/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 10'L x 33'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01,
 BRR-001-08, EC-61, M-16-71, 44-D01, 44-D05



D4-264

STA. 4336+56.26

EXIST. 2-60"x103' RCP'S NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT.
 EXTEND LT. w/2-60"x36' CULVERT PIPES
 BUILD CONC. COLLAR LT.
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT.
 10'L x 23'W x 1'D LT.

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01,
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D01

SHEET TITLE

STRUCTURE PLACEMENT
 SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
 & COMPANY**

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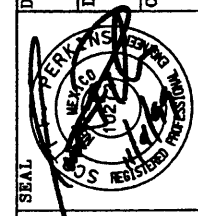
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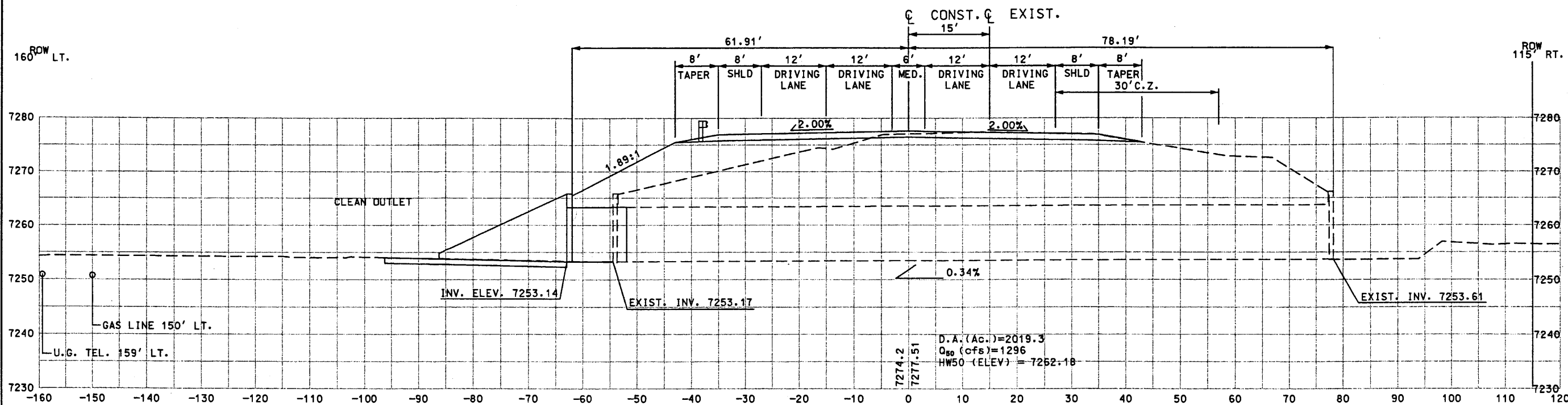
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CHECKED BY:

SFP



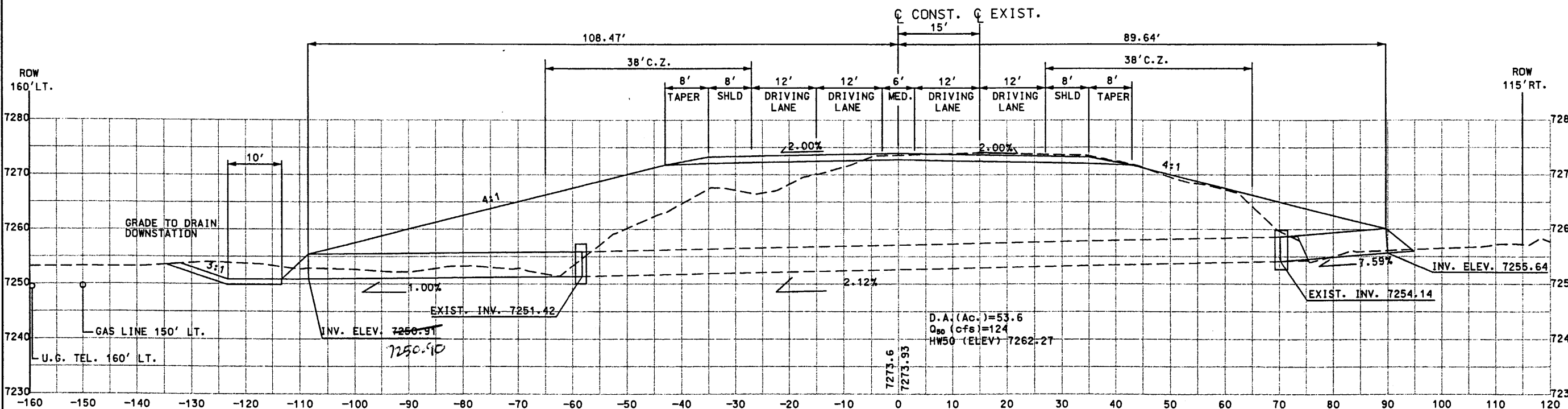
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 Plot Date: 01/05/1999



BRASS CAP SHALL BE 2-INCH DIAMETER WITH HAND STAMPED LETTERS 1/4 HIGH.

EXISTING BRIDGE #7060
 CONTRACTOR SHALL INSTALL A BRASS CAP ON TOP OF THE NEW PARAPET WALL LT. WITH "BRIDGE #7060". PLACE CAP ON APPROACH SIDE OF THE NEW PARAPET WALL.

D4-267
 STA. 4370+03.66
 EXIST. 2-10'x10'x133' CBC'S DESIGN 2 NORMAL IN PLACE w/WINGWALLS LT. & RT.
 REMOVE WINGWALLS AND HEADWALL LT.
 REMOVE 2' OF CBC LT.
 EXTEND LT. w/2-10'x10'x11' CBC'S DESIGN 2, TYPE II EXTENSION
 BUILD WINGWALLS LT. BUILD EROSION CONTROL PAD LT. 33.5'L x 37'W x 1'D
 STD DWG: BCE-001, BEB-001-04, BRR-001-08, CB-32(SHT. 1 OF 5), CB-32 (SHT 3 OF 5), EC-61, WCB-0(SHT. 1 OF 2), WCB-0(SHT. 2 OF 2)



D4-266
 STA. 4360+11.60
 EXIST. 1-54"x128' RCP NORMAL IN PLACE w/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 BUILD CONC. COLLAR LT. & RT.
 EXTEND LT. w/1-54"x54' CULVERT PIPE
 EXTEND RT. w/1-54"x20' CULVERT PIPE
 BUILD END SECTIONS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 20'L x 13.5'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, BRR-001-08, EC-61, ES-1, M-16-71, 44-D01

STRUCTURE PLACEMENT SECTIONS

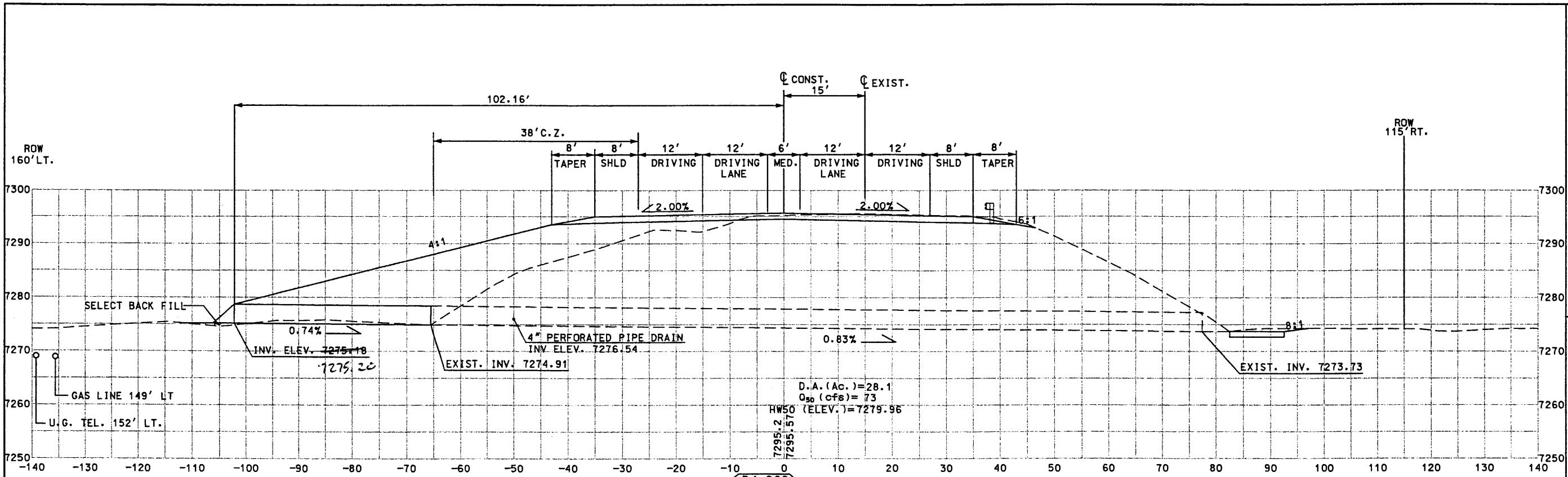
SHEET TITLE
 NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

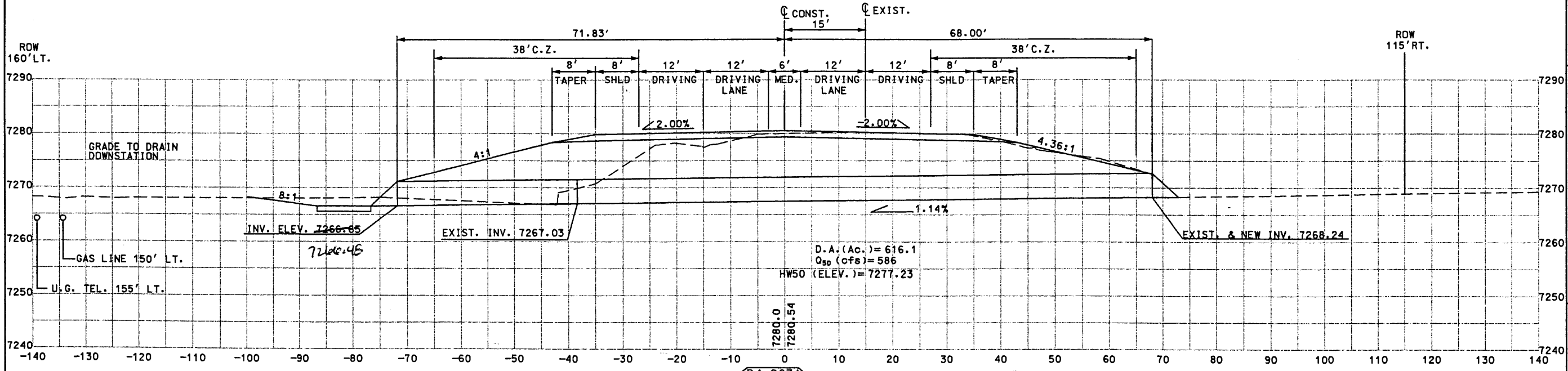


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 Plot Date: 2/19/99



D4-268
 STA. 4389+55.08
 EXIST. 1-42"x143" RCP NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTION LT.
 EXTEND LT. W/1-42"x34" CULVERT PIPE
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD RT 10'L x 11'W x 1'D.
 CORE DRILL AND CONNECT 4" PERFORATED PIPE DRAIN
 AT 50' LT. GROUT 4" PIPE WITH NON-SHRINK GROUT

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D01



D4-267A
 STA. 4380+13.47
 EXIST. 1-54"x107' RCP NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT.
 EXTEND LT. W/1-54"x34" CULVERT PIPE
 BUILD 2-54"x140" CULVERT PIPES
 BUILD END SECTIONS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 10'L x 28'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D01

STRUCTURE PLACEMENT
SECTIONS

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44

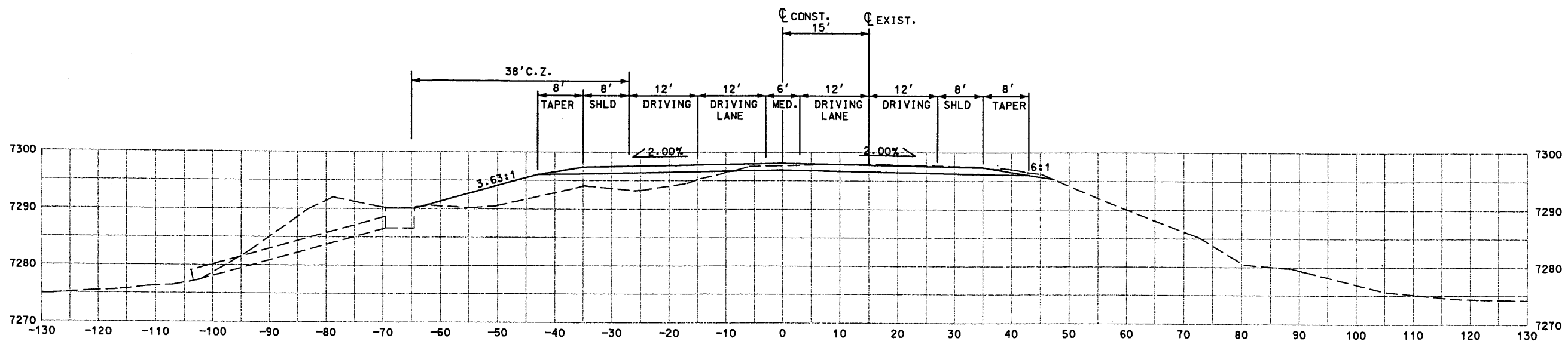
NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

8-22

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Plot Data
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NOV 1999



◊D4-268A◊

STA. 4390+54.36 - 67' LT. OF
CENTERLINE OF US44

EXIST. DROP INLET W/ 1-24"x30' CMP
& END SECTION LT. TO REMAIN IN PLACE.

* DI REMAINED IN PLACE,
BUT WAS BURIED BECAUSE
IT WOULD NOT DRAIN.
PER FSC (Schlar/McSorley)

SHEET TITLE

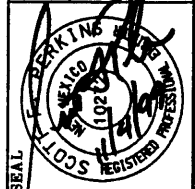
STRUCTURE PLACEMENT
SECTIONS

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

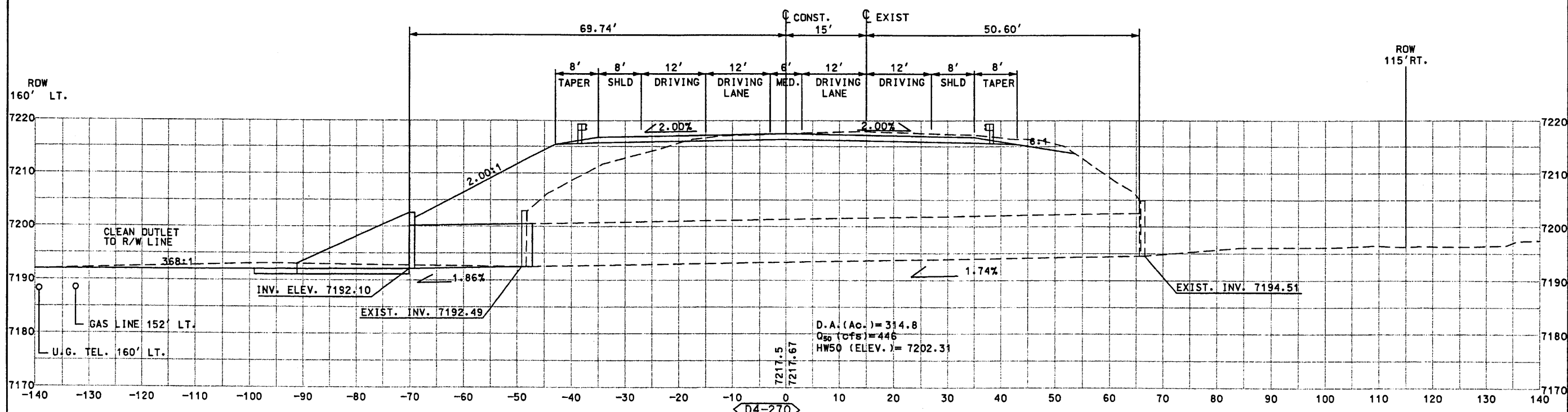
**WILSON
& COMPANY**

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



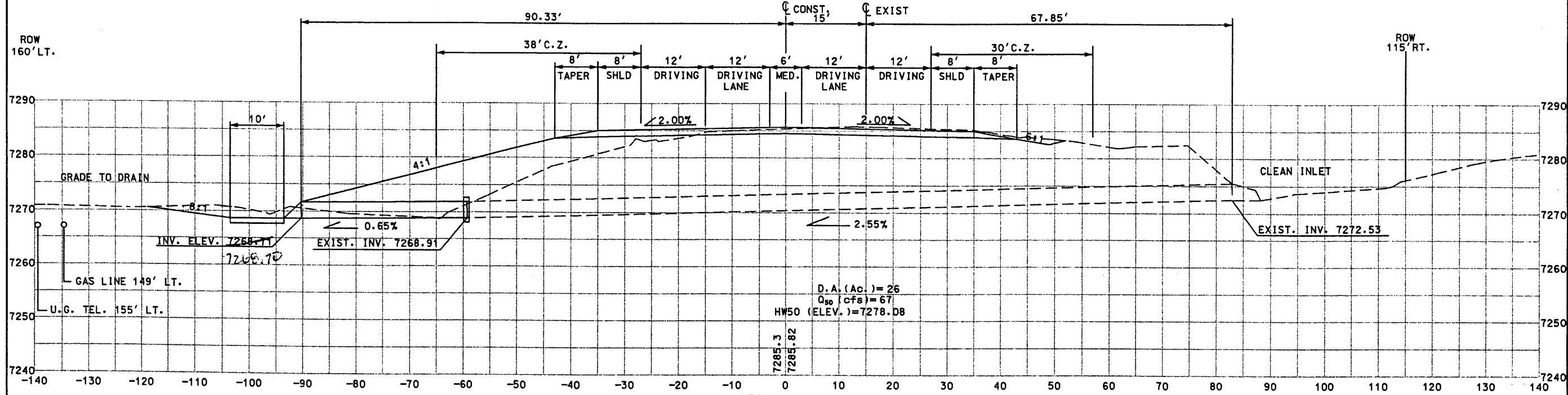
8-22A

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 Plot Date: NOV 1999



D4-270
 STA. 4432+39.92
 EXIST. 1-8'x8'x116' CBC DESIGN II NORMAL IN PLACE
 w/WINGWALLS & HEADWALLS LT. & RT.
 REMOVE WINGWALLS AND HEADWALL AND 2' OF CBC LT.
 EXTEND LT. w/1-8'x8'x21' CBC DESIGN II TYPE II EXTENSION
 BUILD WINGWALLS & PARAPET LT.
 BUILD EROSION CONTROL PAD LT. 29'L x 32'W x 1'D

STD DWG: BCE-001, BEB-001-04, BRR-001-08, CB-31(SHT. 2 OF 4)
 EC-61, WCB-0.(SHT. 1 OF 2), WCB-0(SHT. 2 OF 2)



D4-269
 STA. 4409+66.74
 EXIST. 1-36"x142' RCP NORMAL IN PLACE
 w/END SECTIONS LT. & RT.
 REMOVE END SECTION LT.
 EXTEND LT. w/1-36"x31' CULVERT PIPE
 BUILD CONC. COLLAR LT.
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT. 10'L x 9'W x 1'D

STD DWG: BBR-023, BMC-001-03, BMC-005-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D01

SHEET TITLE

STRUCTURE PLACEMENT
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NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

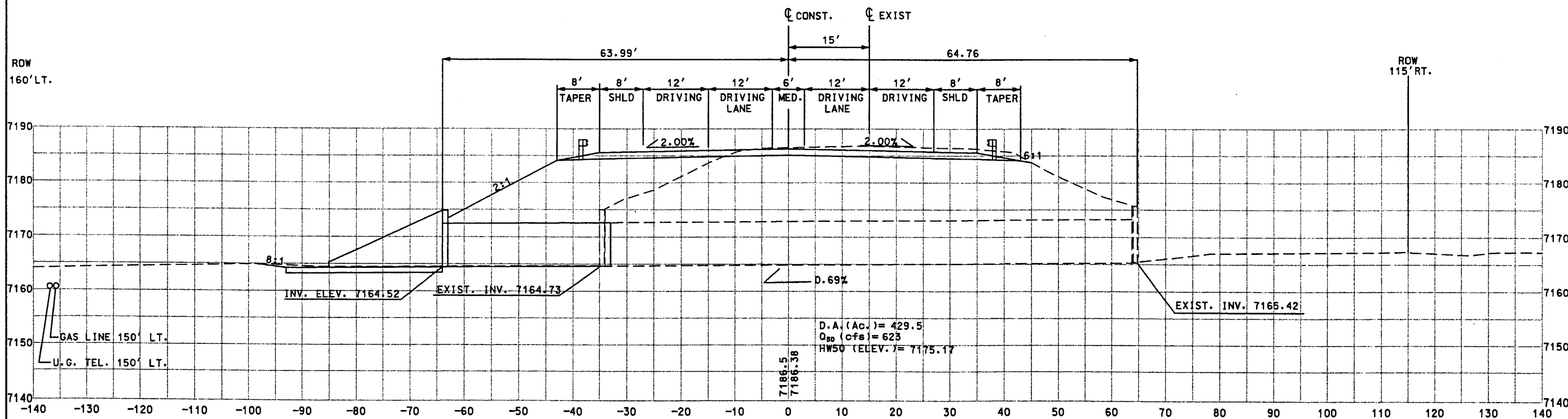
**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



D4-272

SEE SECTION 5 OF THE PLANS FOR THIS STRUCTURE SECTION AND CONSTRUCTION DETAILS.



D4-271

STA. 4455+83.76
 EXIST. 1-8'x8'x99' CBC DESIGN II NORMAL IN PLACE W/WINGWALLS & HEADWALLS LT. & RT.
 REMOVE WINGWALLS AND HEADWALL AND 2' OF CBC LT.
 EXTEND LT. w/1-8'x8'x29' CBC DESIGN II TYPE II EXTENSION
 BUILD WINGWALLS & PARAPET LT.
 BUILD EROSION CONTROL PAD LT. 29'L x 32'W x 1'D (SHT. 3 OF 4)
 STD DWG: BCE-001, BEB-001-04, BRR-001-08, CB-31(SHT. 2 OF 4)
 EC-61, WCB-0.(SHT. 1 OF 2), WCB-0(SHT. 2 OF 2)

EXTEND LT w/1-8'x8'x29' CBC DESIGN 3 TYPE II EXTENSION

CONSTRUCTION NOTE: AN EXISTING WETLAND HAS BEEN IDENTIFIED AT THE INLET OF THE EXISTING STRUCTURE. THE CONTRACTOR SHALL RESTRICT ALL CONSTRUCTION ACTIVITY IN THE AREA TO WITHIN THE PROPOSED SLOPE LIMITS AND WILL MINIMIZE IMPACTS TO THE EXISTING WETLAND AREAS.

SHEET TITLE

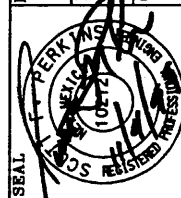
STRUCTURE PLACEMENT SECTIONS

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

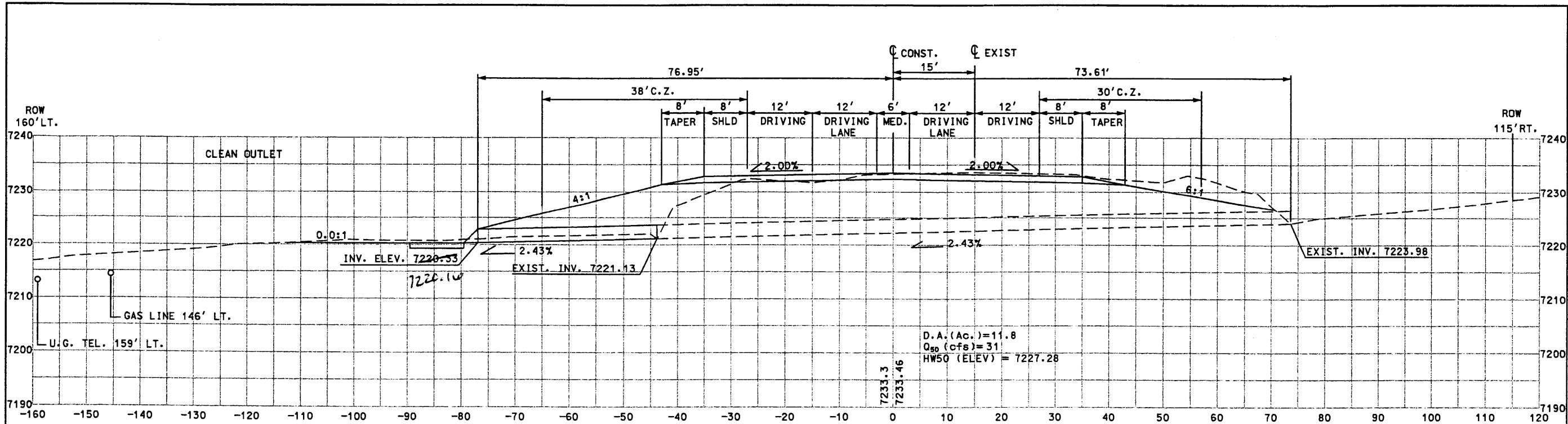
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 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

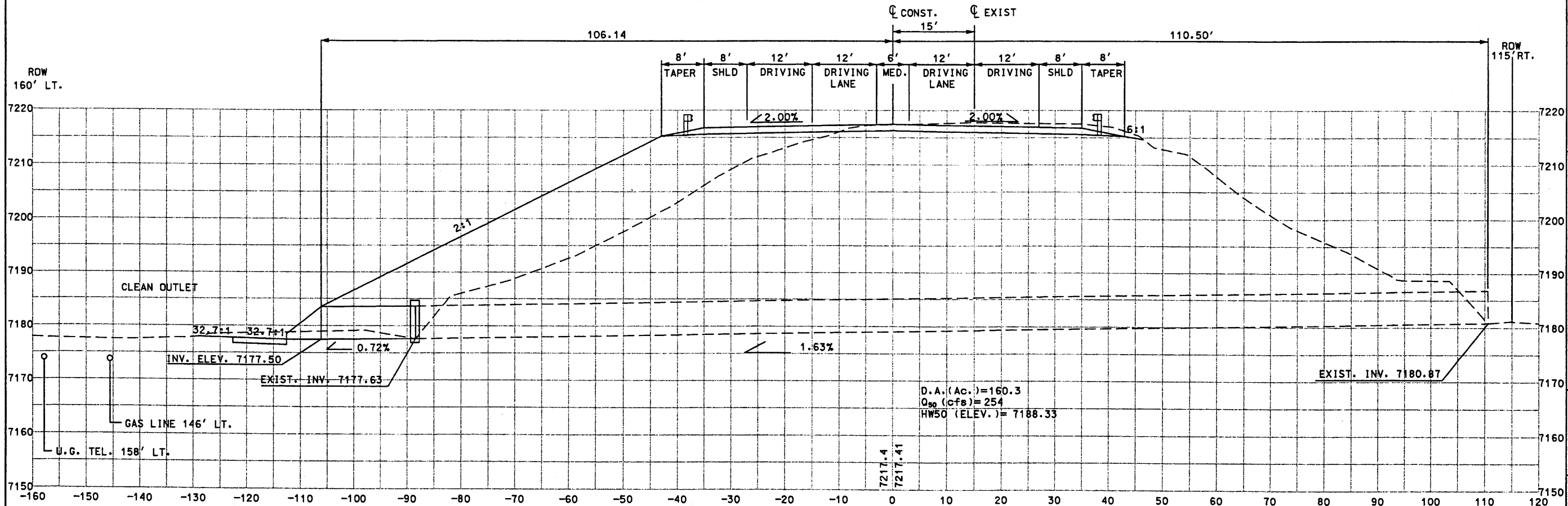


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 Plot Date: NOV 1999



D4-274 STA. 4540+78.20
 EXIST. 1-30"x117' RCP NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTION LT.
 EXTEND LT. W/1-30"x33' CULVERT PIPE
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT. 10'L x 8'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71



D4-273 STA. 4526+19.50
 EXIST. 1-72"x199' RCP NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTION LT.
 EXTEND LT. W/1-72"x18' CULVERT PIPE
 BUILD CONC. COLLAR LT.
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT. 10'L x 15'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D01

STRUCTURE PLACEMENT
 SECTIONS

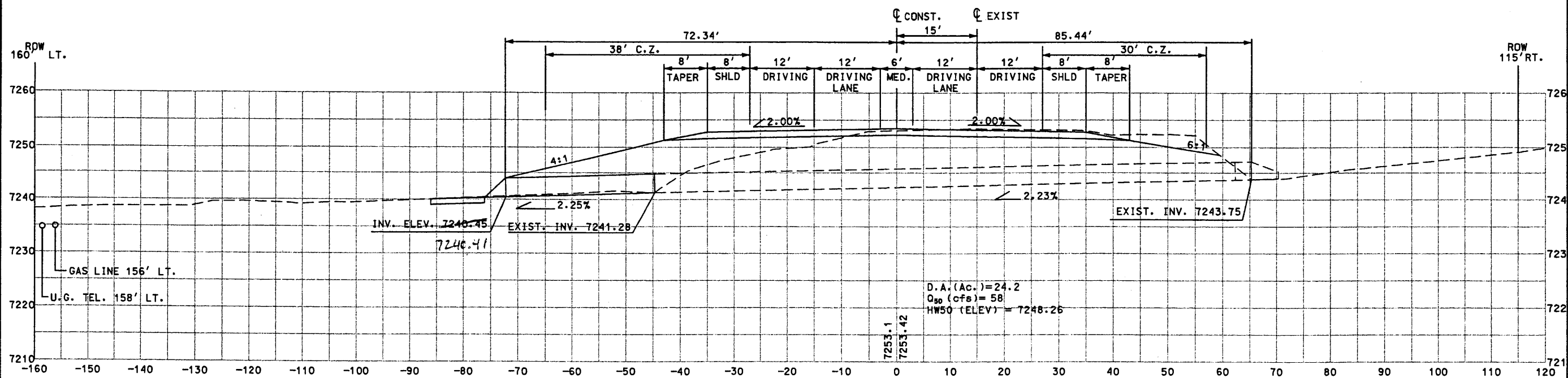
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(89)164
 CN 3766

**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design F1: public\projects\98082-01\sect8\44448sp2.dgn
 Plot Date: NOV 1999

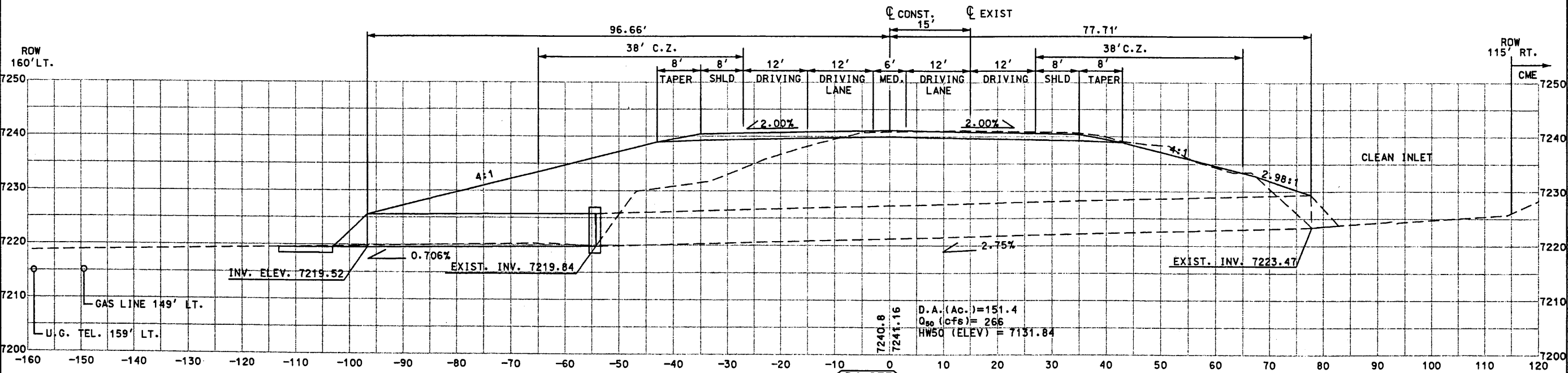


D4-276

STA. 4558+92.61

EXIST. 1-42"x111' RCP NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTION LT.
 EXTEND LT. W/1-42"x28' CULVERT PIPE
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT.
 10'L x 11'W x 1'D LT.

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71



D4-275

STA. 4547+78.56

EXIST. 1-72"x132' RCP NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT.
 BUILD CONC. COLLAR LT.
 EXTEND LT. W/1-72"x42' CULVERT PIPE
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT. 10'L x 18'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-001

STRUCTURE PLACEMENT SECTIONS

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

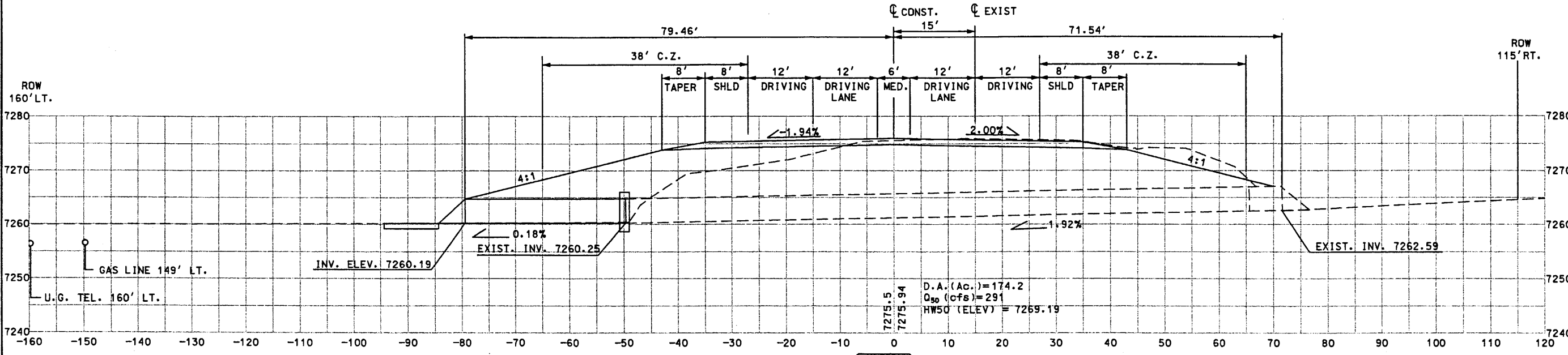
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

SEAL: PERKINS
 WILSON & COMPANY
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF NEW MEXICO

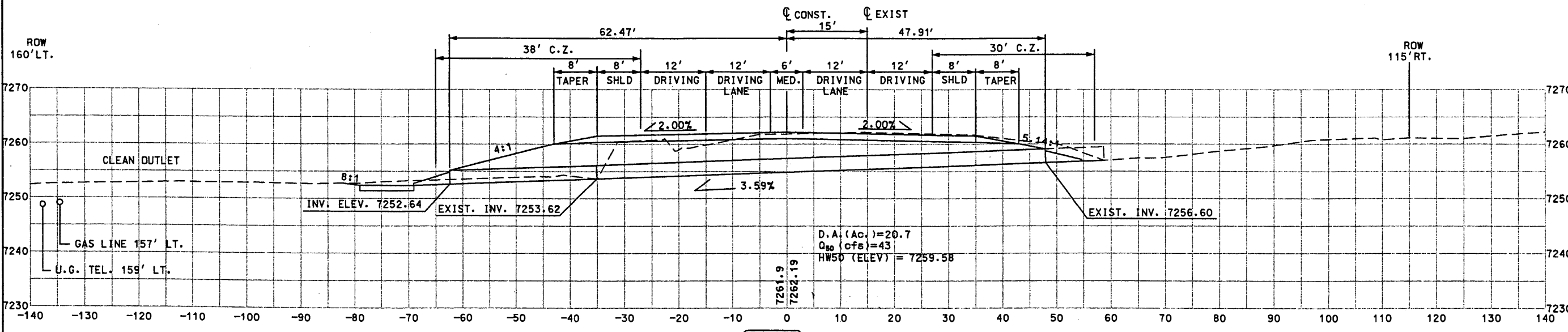
Design F: public\projects\98082-01\sect8\44448sp2.dgn
 Plot Date: NOV 1999



D4-278

STA. 4579+40.38
 EXIST. 2-54"x122' RCP'S NORMAL IN PLACE
 W/ END SECTIONS LT. & RT.
 REMOVE END SECTION LT.
 BUILD CONC. COLLAR LT.
 EXTEND LT. W/ 2-54"x122' CULVERT PIPES
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT. 10'L x 21'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D01



D4-277

STA. 4566+90.01
 EXIST. 1-30"x94' RCP NORMAL IN PLACE
 W/ END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 REMOVE 11' OF 30" CULVERT PIPE RT.
 EXTEND LT. W/ 1-30"x28' CULVERT PIPE 18'L x 19"W
 BUILD 1-30"x28' CULVERT PIPES
 BUILD SPECIAL END SECTION W/ SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 10'L x 13'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-D05

STRUCTURE PLACEMENT
 SECTIONS

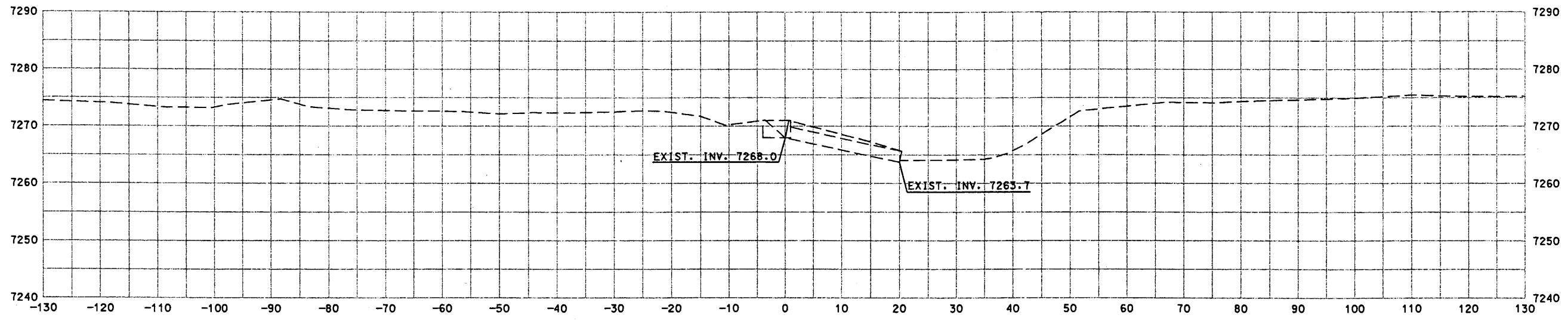
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 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: public\projects\98082-01\sect8\44448sp2.dgn
Plot Date: NOV 1999



D4-278A
STA. 4579+74.18 - 80' RT. OF
CENTERLINE OF NM44
EXIST. DROP INLET w/1-24"x20' CMP
TO REMAIN IN PLACE
CLEAN INLET AND OUTLET

SHEET TITLE

STRUCTURE PLACEMENT
SECTIONS

NEW MEXICO STATE HIGHWAY AND
TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

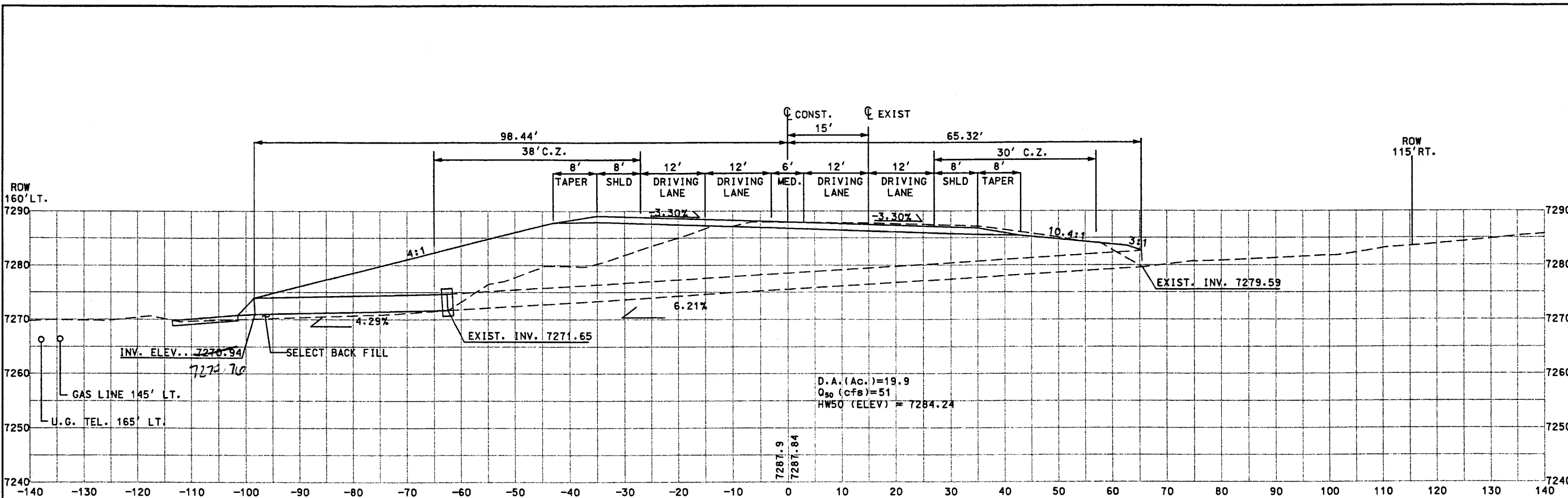
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CN 3766



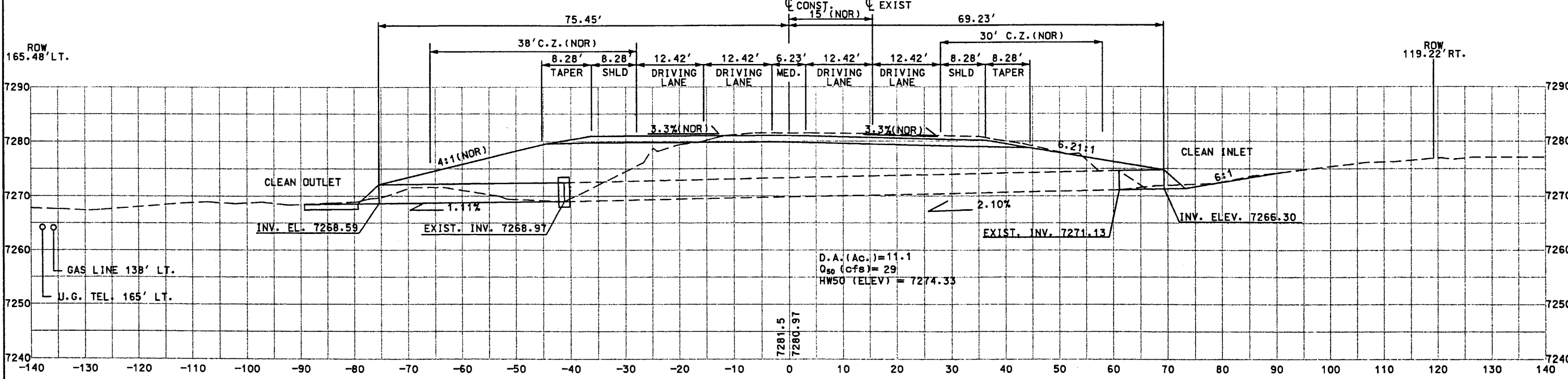
DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



Design File: public\projects\98082-01\sect8\44448sp2.dgn
 Plot Date: NOV 1999



D4-280 STA. 4589+22.29
 EXIST. 1-36"x128' RCP NORMAL IN PLACE w/END SECTIONS LT. & RT. & RIP RAP PAD LT. & RT. & RIP RAP LT. & RT.
 BUILD CONC. COLLAR LT. & RT. w/1-36"x36' CULVERT PIPE w/ END SECTION LT. & RT.
 BUILD EROSION CONTROL PAD LT. 12'L x 15'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, BRR-001-08, EC-61, ES-1, M-16-71, 44-D01



D4-279 STA. 4583+97.41
 EXIST. 1-42"x103' RCP @ 15° LT. FWD. w/END SECTIONS LT. & RT. REMOVE END SECTIONS LT. & RT. EXTEND RT. w/1-42"x8' CULVERT PIPE @ 15° LT. FWD. BUILD CONC. COLLAR LT. & RT. EXTEND LT. w/1-42"x34' CULVERT PIPE @ 15° LT. FWD. BUILD END SECTIONS LT. & RT. BUILD EROSION CONTROL PAD LT. 10'L x 11'W x 1'D LT.

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, BRR-001-08, EC-61, ES-1, M-16-71, 44-D01

STRUCTURE PLACEMENT SECTIONS

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

8-29

STRUCTURE PLACEMENT
SECTIONS

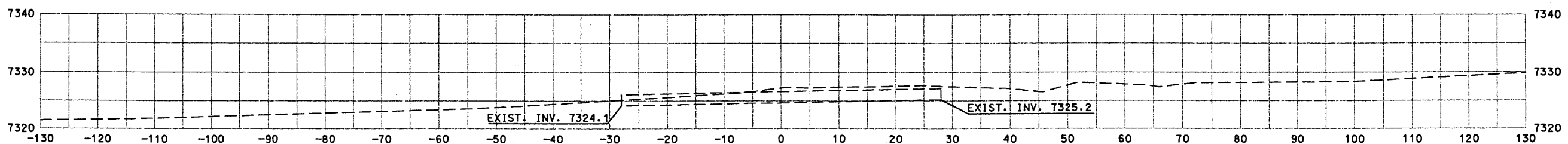
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NEW MEXICO STATE HIGHWAY AND
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F.H.W.A. REGION NO 6

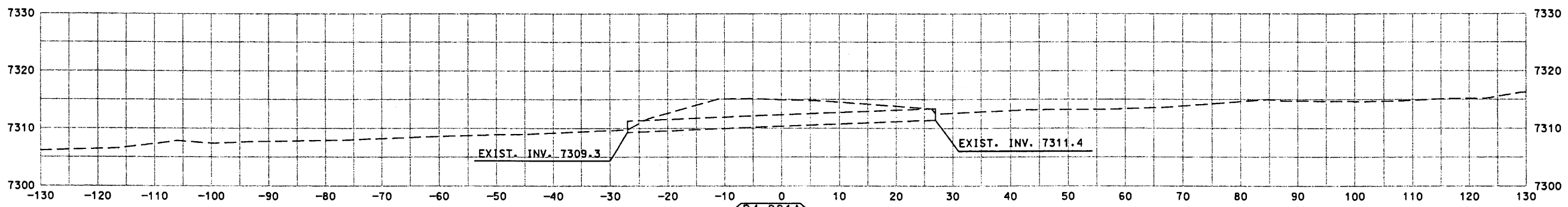
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CN 3766

**WILSON
& COMPANY**

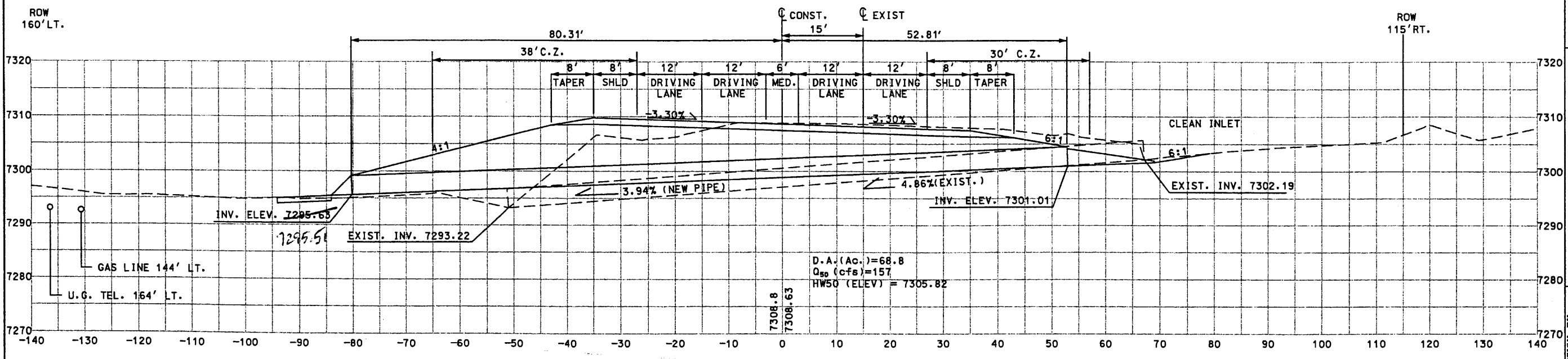
DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



D4-281B
STA. 4604+07 - 25' LT.
CENTERLINE OF NM44
EXIST. 1-24"x56' CMP
TO BE REMOVED



D4-281A
STA. 4600+00 - 41.5' LT
CENTERLINE OF NM44
EXIST. 1-24"x54' CMP
TO BE REMOVED

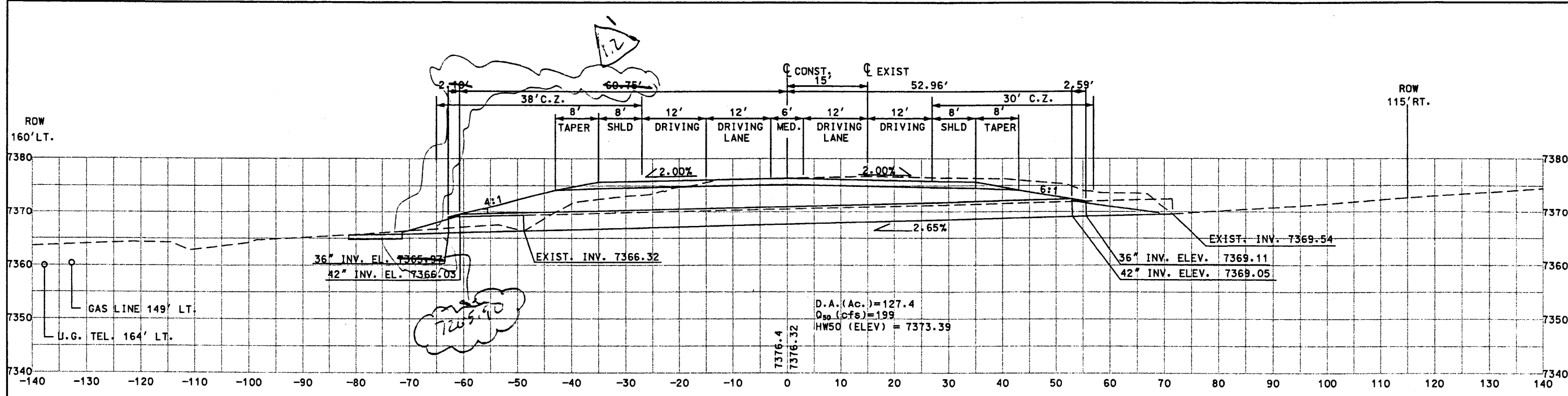


D4-281
STA. 4597+32.74
EXIST. 1-42"x119' BCP-NORMAL IN PLACE
TO BE REMOVED
BUILD 3-42"x134' CULVERT PIPES
BUILD END SECTION LT.
BUILD SPECIAL END SECTION w/SAFETY BARS RT
BUILD EROSION CONTROL PAD LT. 10'L x 24'W x 1'D

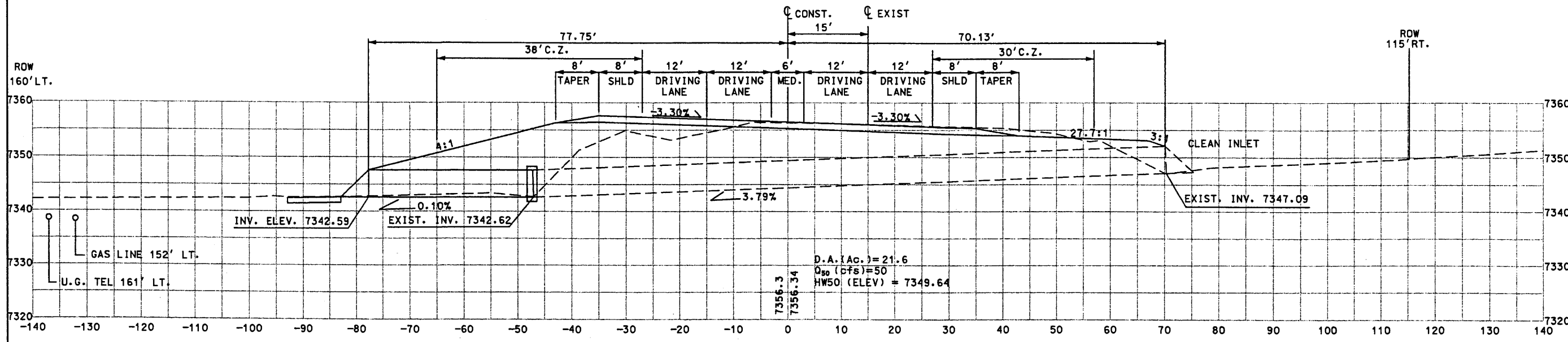
STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
BRR-001-08, EC-61, ES-1, M-16-71, 44-D05

Design File: public\projects\98082-01\sect8\44448sp2.dgn
Plot Date: NOV 1999

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 Plot Date: NOV 1999



D4-283
 STA. 4622+10.32
 EXIST. 1-36"x120' RCP NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 REMOVE 16' OF 36" RCP RT.
 EXTEND LT. W/1-36"x120' CULVERT PIPE
 BUILD 3-42"x120' CULVERT PIPES
 BUILD SPECIAL END SECTION W/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 10'L x 26'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-005



D4-282
 STA. 4613+28.53
 EXIST. 2-60"x118' RCP'S NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT.
 BUILD CONC. COLLAR LT.
 EXTEND LT. W/2-60"x34' CULVERT PIPES
 BUILD END SECTION LT.
 BUILD EROSION CONTROL PAD LT. 10'L x 23'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-001

STRUCTURE PLACEMENT SECTIONS

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F. H. W. A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

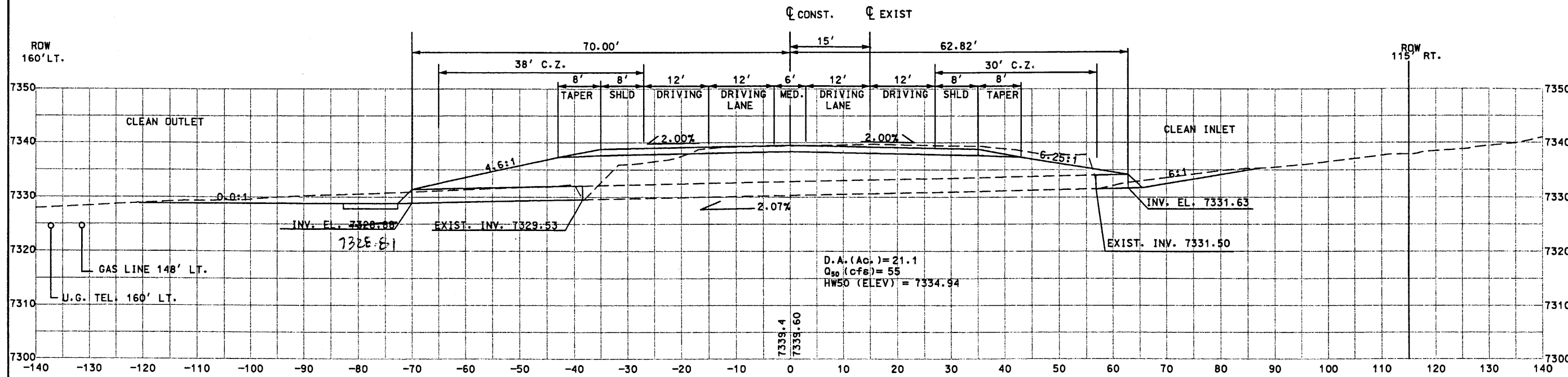
WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

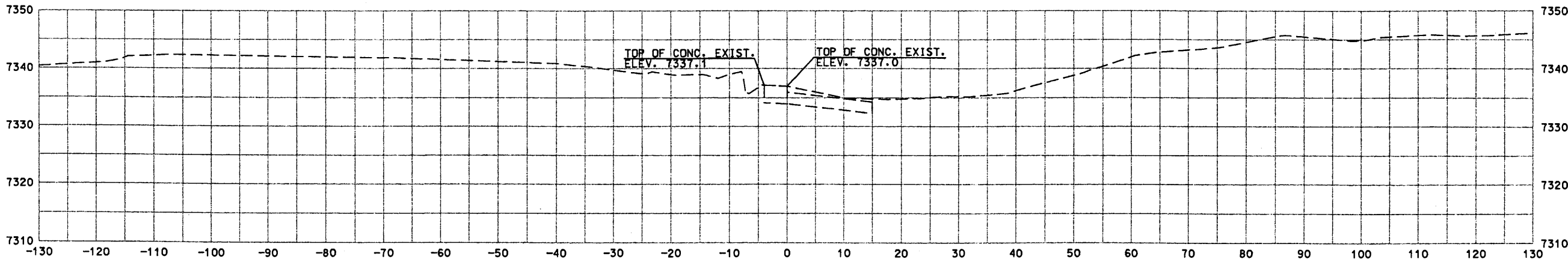
SEAL: [Professional Engineer Seal]

8-30A

STRUCTURE PLACEMENT SECTIONS



D4-285
 STA. 4641+41.66
 EXIST. 2-30"x96' RCP'S NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 EXTEND LT. w/2-30"x36' CULVERT PIPES
 EXTEND RT. w/2-30"x6' CULVERT PIPES
 BUILD END SECTIONS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 10'L x 13'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71



D4-284A
 STA. 4641+22 - 64' RT.
 EXIST. DROP INLET w/24" CMP OUTLET PIPE
 END BURIED, TO BE REMOVED

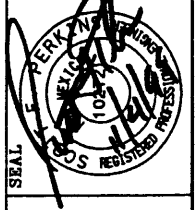
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NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

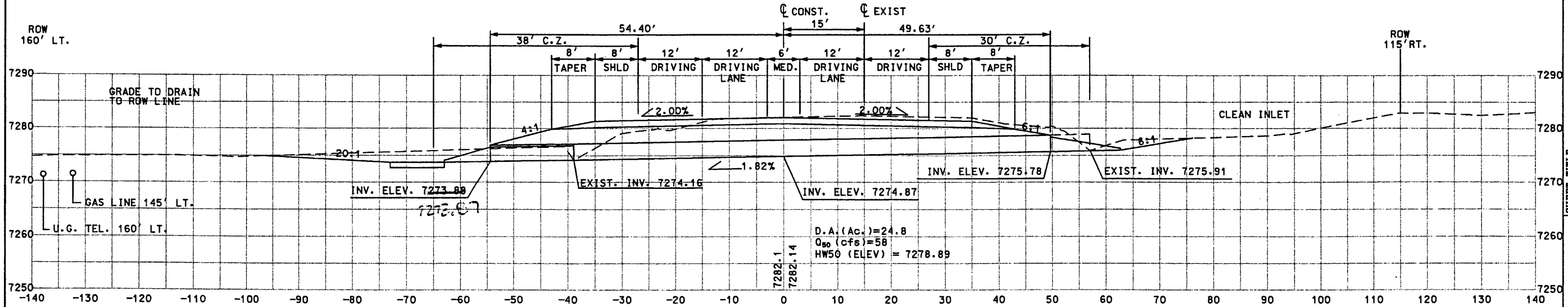
NM 44
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 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

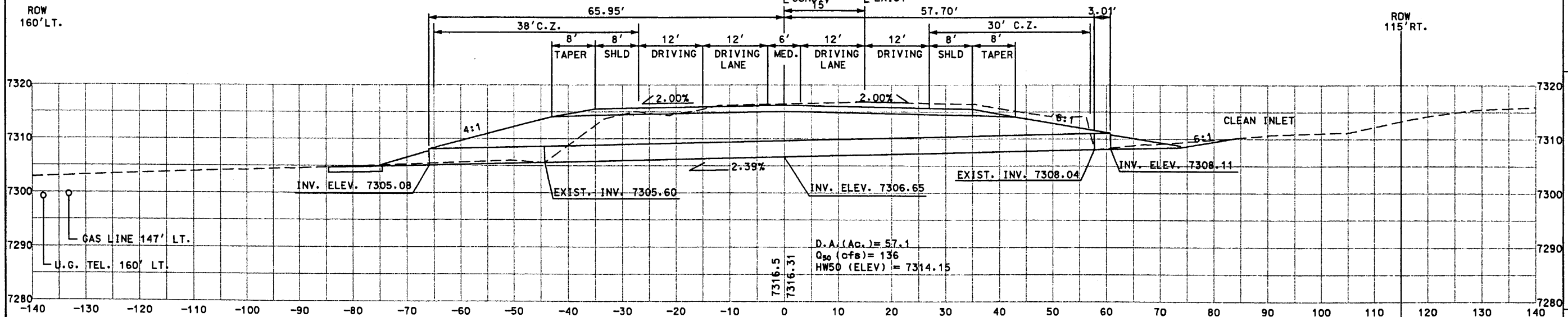


STRUCTURE PLACEMENT SECTIONS



D4-287

STA. 4664+41.99
 EXIST. 1-36"x96' RCP NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 REMOVE 13' OF 8' PIPE RT.
 EXTEND LT. W/1-36"x15' CULVERT PIPE
 BUILD 1-36"x10' CULVERT PIPE UPSTATION
 BUILD SPECIAL END SECTION W/SAFETY BARS
 BUILD EROSION CONTROL PAD LT. 10'L x 15'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-D05



D4-286

STA. 4651+40.93
 EXIST. 1-36"x102' RCP NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 EXTEND LT. W/1-36"x21' CULVERT PIPE
 EXTEND RT. W/1-36"x3' CULVERT PIPE
 BUILD 1-36"x126' CULVERT PIPE UPSTATION
 BUILD SPECIAL END SECTION W/ SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 10'L x 15'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-D05

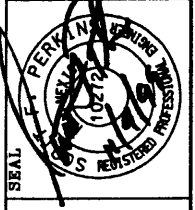
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NEW MEXICO STATE HIGHWAY AND
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 F.H.W.A. REGION NO 6

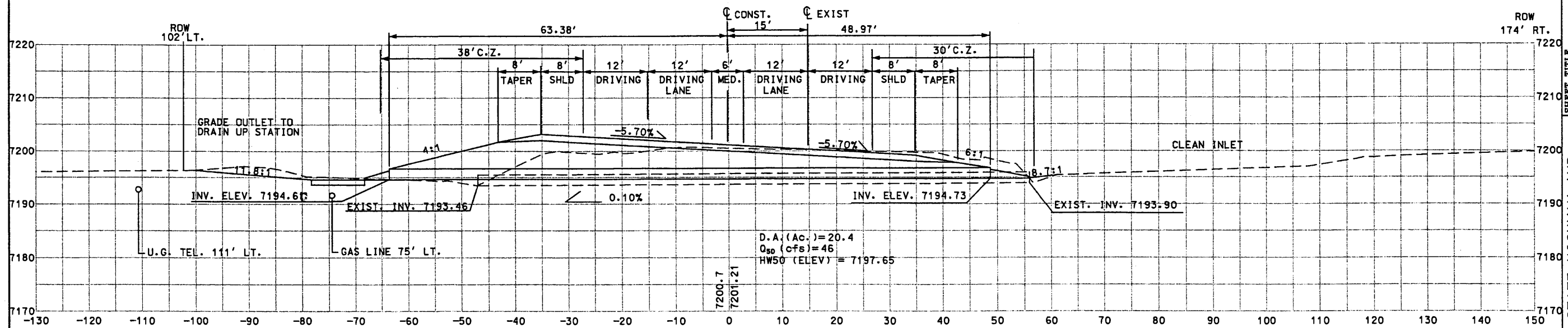
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 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

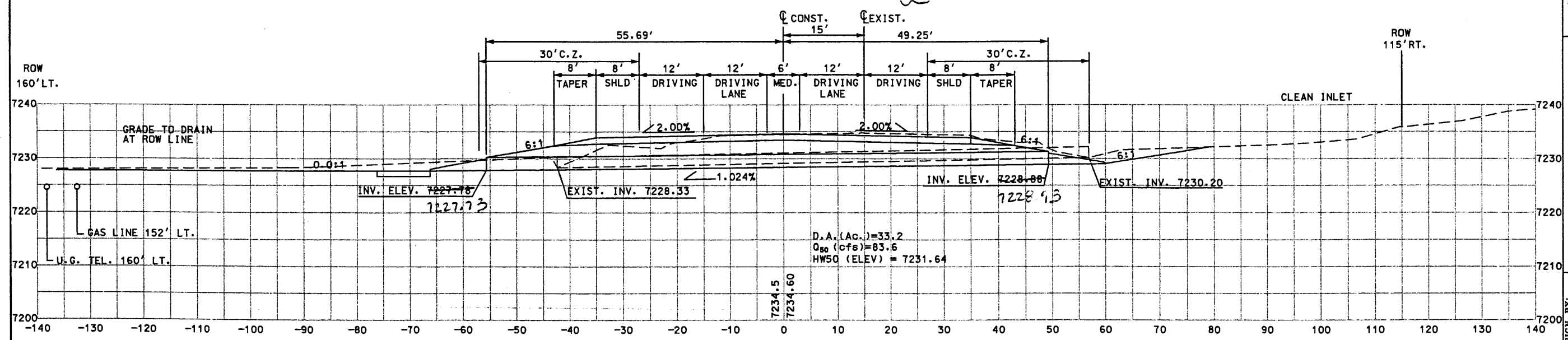


STRUCTURE PLACEMENT SECTIONS



D4-289
 STA. 4689+57.11
 EXIST. 1-24"x103' RCP NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 TO BE REMOVED
 BUILD 4-24"x112' CULVERT PIPES
 BUILD SPECIAL END SECTION W/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 5'L x 11'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-D01, 44-D05



D4-288
 STA. 4678+92.27
 EXIST. 3-24"x100' RCP'S NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 TO BE REMOVED
 BUILD 4-30"x105' CULVERT PIPES
 BUILD SPECIAL END SECTION W/SAFETY BARS, LT. & RT.
 BUILD EROSION CONTROL PAD LT. 10'L x 18'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-D01, 44-D05

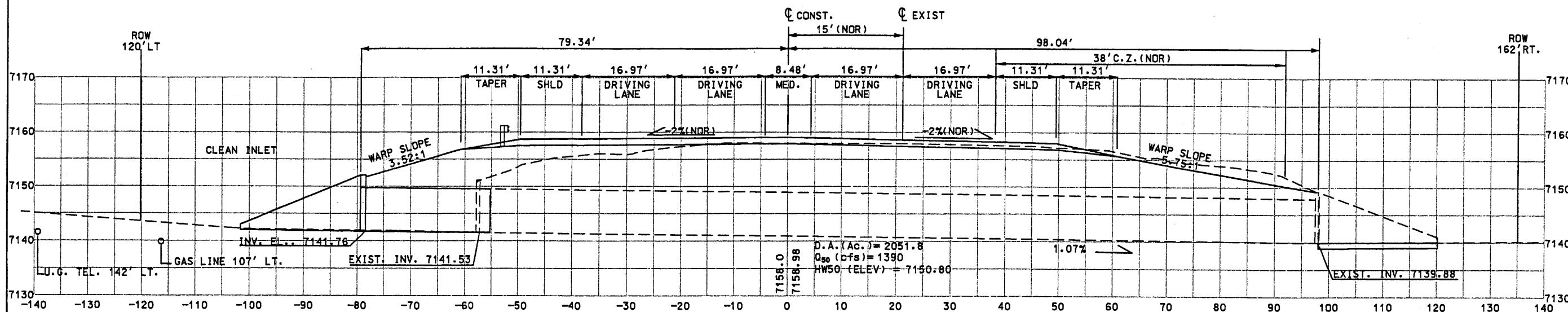
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 F.H.W.A. REGION NO 6
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 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



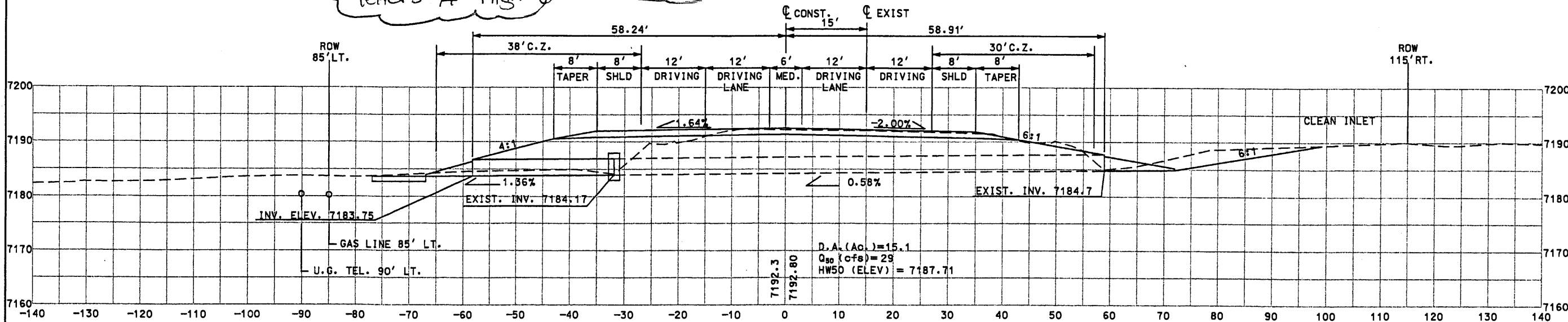
STRUCTURE PLACEMENT SECTIONS



EXISTING BRIDGE #7972
 CONTRACTOR SHALL INSTALL A BRASS CAP ON TOP OF THE PARAPET WALL LT. WITH "BRIDGE #7972". PLACE CAP ON APPROACH SIDE OF THE NEW PARAPET WALL.
Brass cap shall be 2 inch diameter with hand stamped letters 1/4" high.

D4-291
 STA. 4715+85.84
 EXIST. 2-10'x8'x155' CBC'S DESIGN 2 @ 45° RT. FWD. w/WINGWALLS LT. & RT. REMOVE WINGWALLS LT. REMOVE 2-10'x8'x24' CBC LT. EXTEND LT. w/2-10'x8'x24' CBC @ 45° RT. FWD. DESIGN 2, TYPE II CONNECTION. BUILD WINGWALLS, LT. BUILD EROSION CONTROL PAD RT. 37'L x 40'W x 1'D

STD DWG: BCE-001, BEB-001-04, BRR-001-08, CB-32(SHT. 3 OF 5) CB-32-45(SHT. 1 OF 2), EC-61, WCB-45(SHT. 1 OF 2) WCB-45(SHT. 2 OF 2)



D4-290
 STA. 4698+00.17
 EXIST. 1-36"x92' CMP NORMAL IN PLACE w/END SECTIONS LT. & RT. REMOVE END SECTIONS LT. & RT. BUILD CONC. COLLAR LT. EXTEND LT. w/1-36"x26' CULVERT PIPE BUILD SPECIAL END SECTION w/SAFETY BARS LT. & RT. BUILD EROSION CONTROL PAD LT. 10'L x 9'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01 BRR-001-08, EC-61, M-16-71, 44-D01, 44-D05

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

WILSON & COMPANY

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



Design File: \\publro\projects\98082-01\sect8\44448sp2.dgn
 Plot Date: 04 NOV 1999

STRUCTURE PLACEMENT
SECTIONS

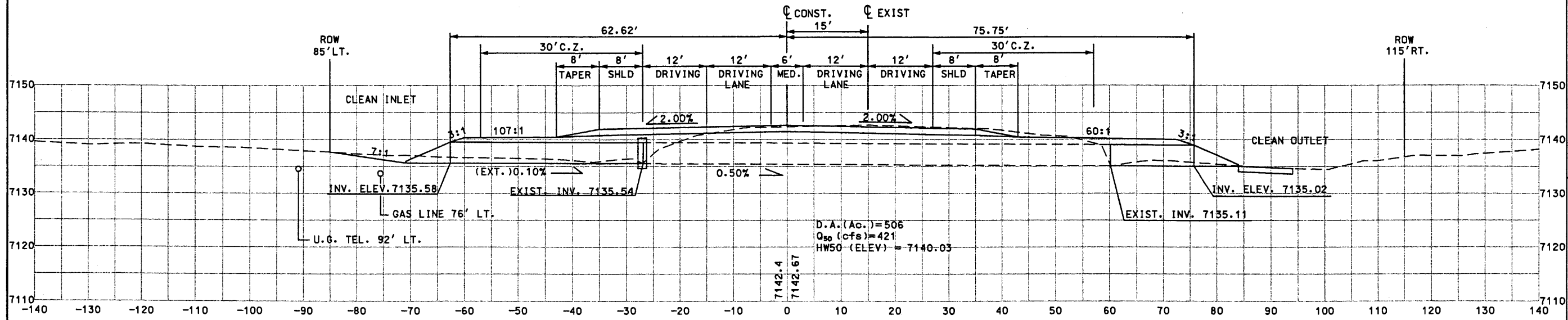
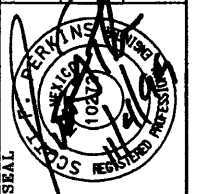
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TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

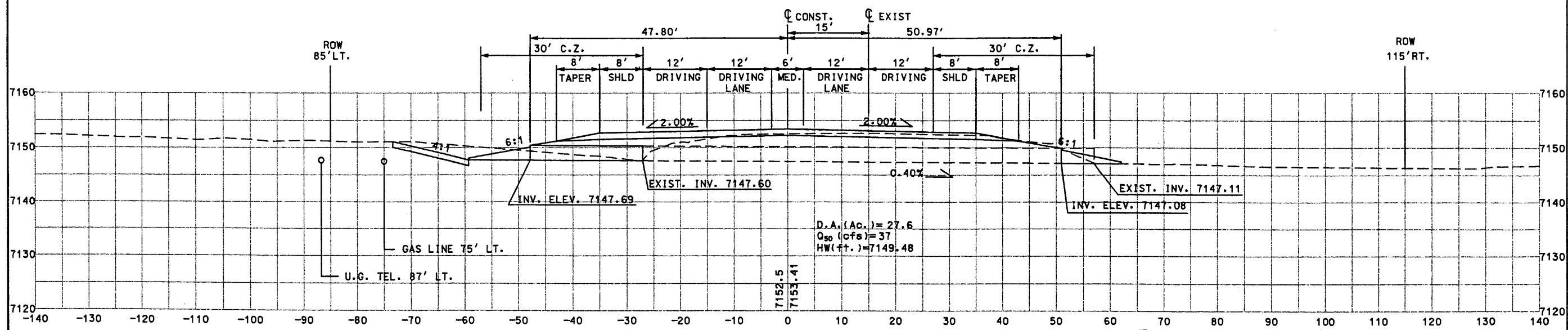
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NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



D4-293
 STA. 4733+38.53
 EXIST. 4-71"x47"x87' CMP ARCH PIPES NORMAL IN PLACE
 W/END SECTIONS LT. & RT - 14' CENTERS
 REMOVE END SECTIONS LT. & RT.
 EXTEND RT. w/4-71"x47"x16' OF CULVERT ARCH PIPES
 BUILD CONC. COLLARS LT.
 EXTEND LT. w/4-71"x47"x36' CULVERT ARCH PIPES
 BUILD END SECTIONS LT. & RT.
 BUILD EROSION CONTROL PAD RT. 10'L x 45'W x 1'D
 STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D01



D4-292
 STA. 4725+38.50
 EXIST. 2-49"x33"x84' CMP ARCH PIPE NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT. REMOVE 6' OF ARCH PIPE RT.
 EXTEND LT. w/2-49"x33"x22' CULVERT ARCH PIPES
 BUILD SPECIAL END SECTION w/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 14'L x 20'W x 1'D
 STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-D05

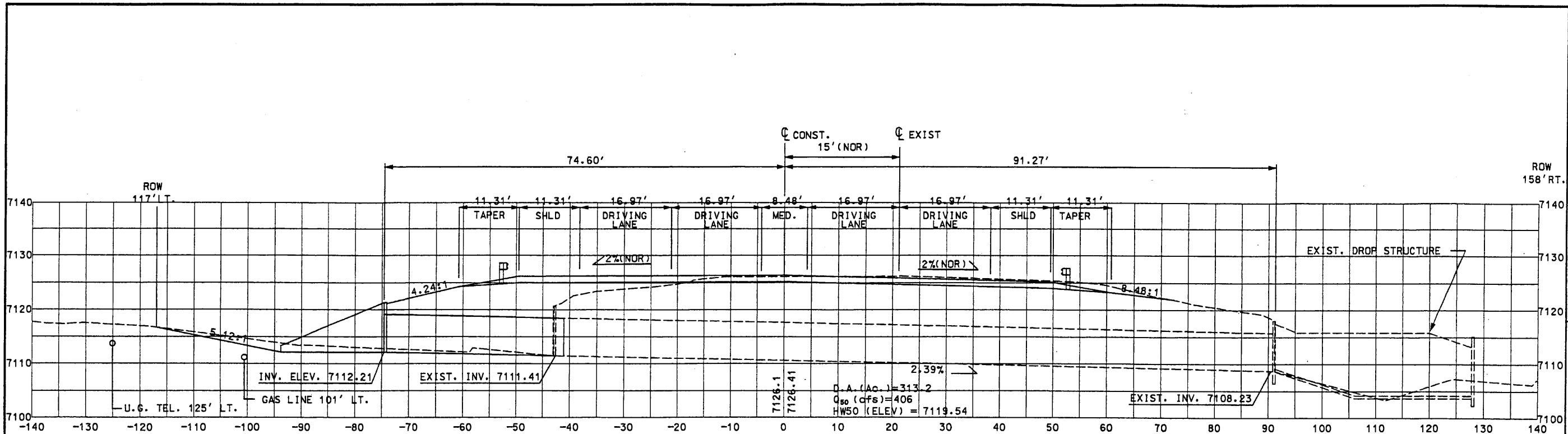
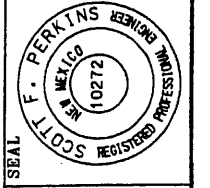
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 Plot Date: NOV 1999

STRUCTURE PLACEMENT SECTIONS

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(89)64
 CN 3766

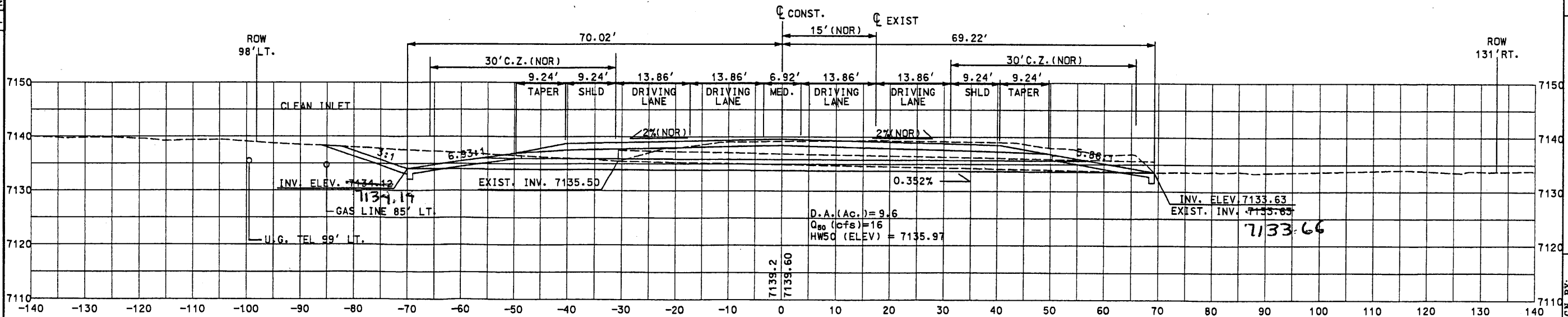


DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



D4-295
 STA. 4751+12.74
 EXIST. 1-8"x7"x133' CBC DESIGN 2 @ 45° RT. FWD
 w/WINGWALLS LT. & RT.
 REMOVE WINGWALLS & 2' OF CBC LT.
 EXTEND LT. w/1-8"x7"x34' CBC DESIGN 2. TYPE II EXTENSION
 BUILD WINGWALLS LT.

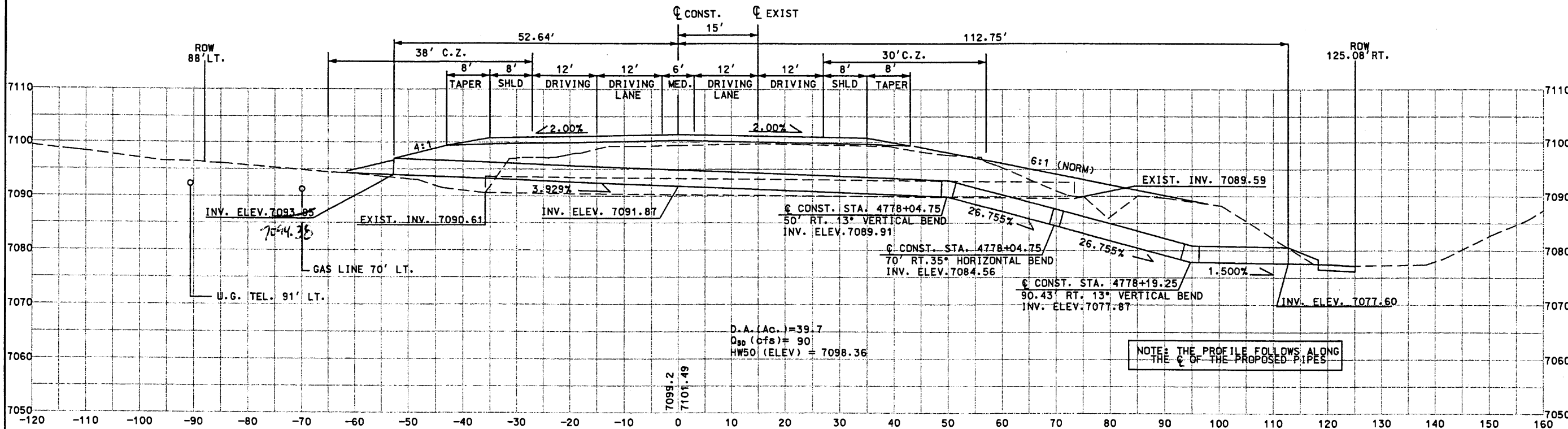
STD DWG: BCE-001, BEB-001-04, BRR-001-08, **CB-31 (SHT. 2 OF 4)**,
 EC-61, WCB-45, (SHT. 1 OF 2), WCB-45 (SHT. 2 OF 2)
CB-31 (SHT. 2 OF 4)



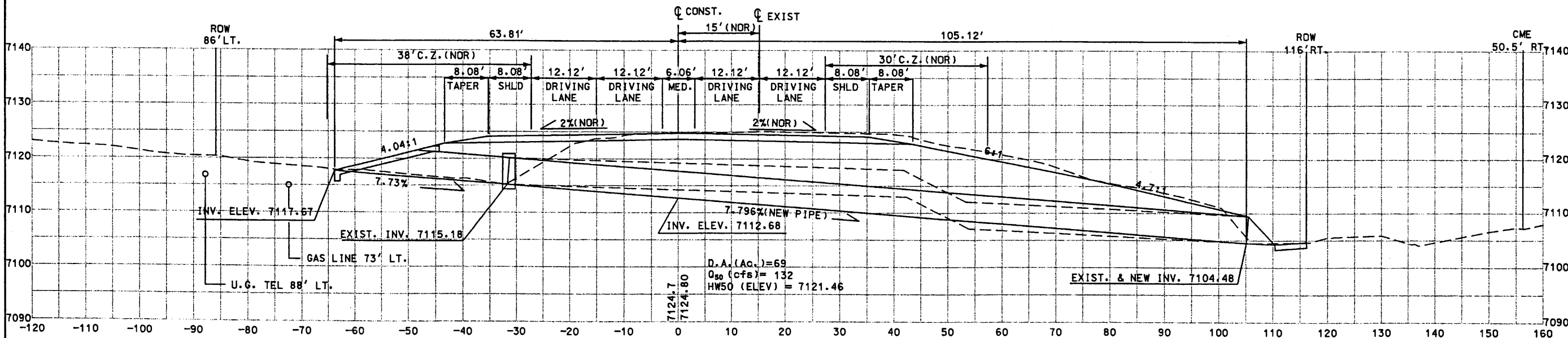
D4-294
 STA. 4738+54.30
 EXIST. 1-24"x100' CMP @ 30° RT. FWD.
 w/END SECTIONS LT. & RT.
 TO BE REMOVED
 BUILD 2-24"x140' CULVERT PIPES @ 30° RT. FWD.
 BUILD CONC. BLANKETS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 16'L x 12'W x 1'D
 STD DWG: BBG-022, BBG-026, BMC-001-03, BMC-003-01, BMC-005-01
 BRR-01-08, EC-61, M-16-71
SPECIAL END SECTIONS

NO.	REVISIONS DESCRIPTION	DATE
1	NOTE CHANGED	01-2000

Design File: 44448sp2.dgn
 Plot Date: 27-JAN-2000



D4-297 STA. 4778+04.75
 EXIST. 1-36"x109' CMP, NORMAL IN PLACE
 TO BE REMOVED
 BUILD 2-36"x166' CULVERT PIPE
 BUILD SPECIAL END SECTION W/SAFETY BARS LT.
 BUILD END SECTION RT.
 BUILD EROSION CONTROL PAD RT. 7'L x 26'W x 1'D
 STD DWG: BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D05



D4-296 STA. 4758+33.13
 EXIST. 1-60"x137' CMP, @ 8° RT. FWD.
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT.
 EXTEND LT. W/ 1-60"x32' CULVERT PIPE @ 8° RT. FWD.
 BUILD 1-60"x169' CULVERT PIPE @ 8° RT. FWD. UP STATION
 BUILD CONC. BLANKETS W/SAFETY GRATES LT. & END SECTIONS RT.
 BUILD EROSION CONTROL PAD RT. 5.8'L x 23'W x 1'D
 STD DWG: BBG-022, BBG-024, BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71, 44-D01

STRUCTURE PLACEMENT SECTIONS

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
 CN 3768

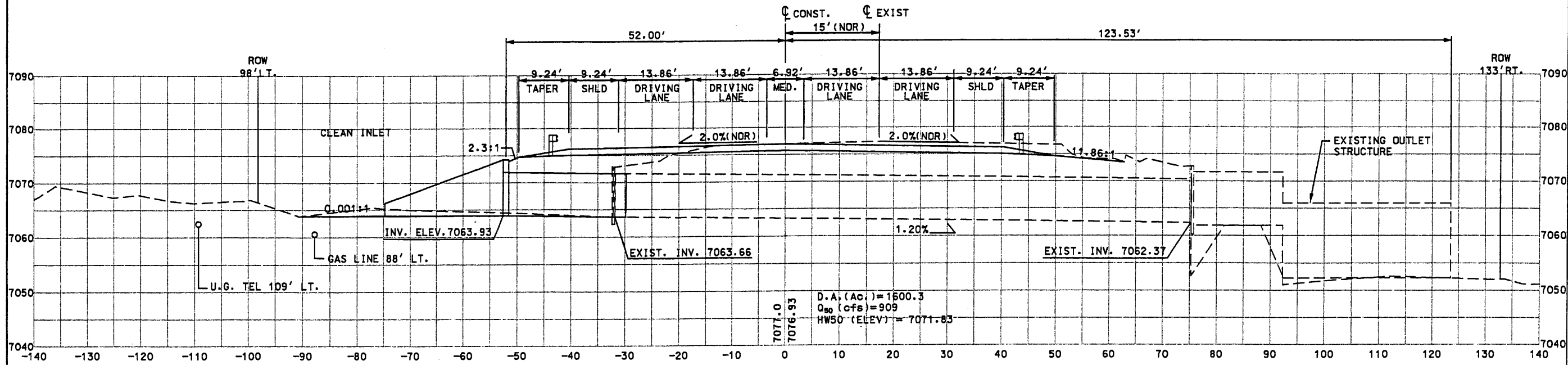


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 DRAWN BY: STAFF
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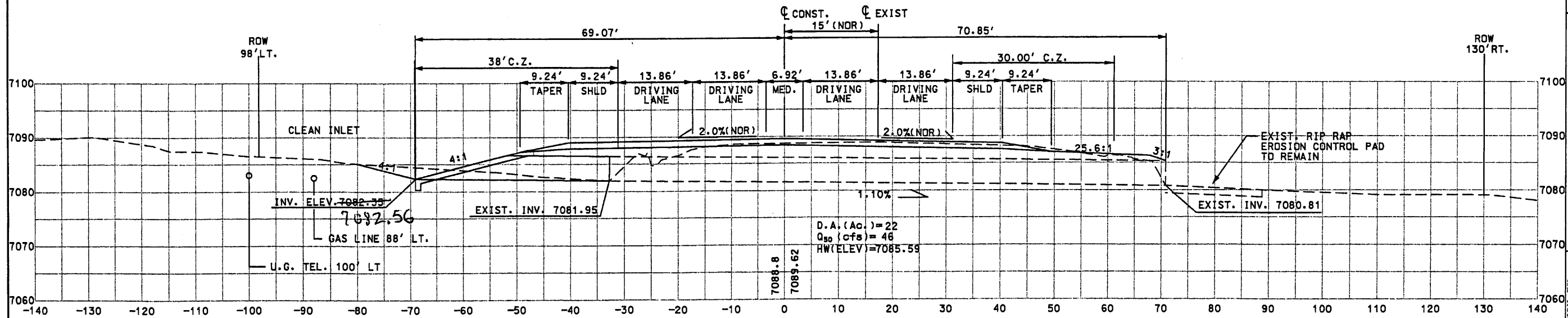
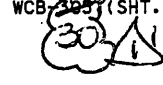


Design File: public\projects\98082-01\sect8\44448sp2.dgn
 Plot Date: NOV 1999

STRUCTURE PLACEMENT SECTIONS



D4-299
 STA. 4805+20.18
 EXIST. 2-8'x8'x107' CBC, DESIGN 2, @30° RT. FWD.
 W/ WINGWALLS LT. & RT.
 REMOVE WINGWALLS & 2-8' x8' x2' OF CBC LT.
 EXTEND LT. W/2-8'x8'x23' CBC'S DESIGN 2 TYPE II EXTENSION @30° RT. FWD.
 BUILD WINGWALLS LT.
 STD DWG: BCE-001, BEB-001-04, BRR-001-08, CB-32-30(SHT. 1 OF 2)
 EC-61, WCB-001(SHT. 1 OF 2), WCB-30(SHT. 2 OF 2)



D4-298
 STA. 4787+42.07
 EXIST. 1-54"x104' CMP @ 30° RT. FWD. W/END SECTIONS LT. & RT.
 W/18'x12' RIP RAP EROSION CONTROL PAD RT.
 REMOVE END SECTIONS LT.
 EXTEND LT. W/1-54"x37' CULVERT PIPE @ 30° RT. FWD.
 BUILD CONC. BLANKETS W/SAFETY GRATES LT.
 STD DWG: BBG-022, BBG-026, BMC-001-03, BMC-003-01, BMC-005-01
 M-16-71

SPECIAL END SECTION

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)164
 CN 3766

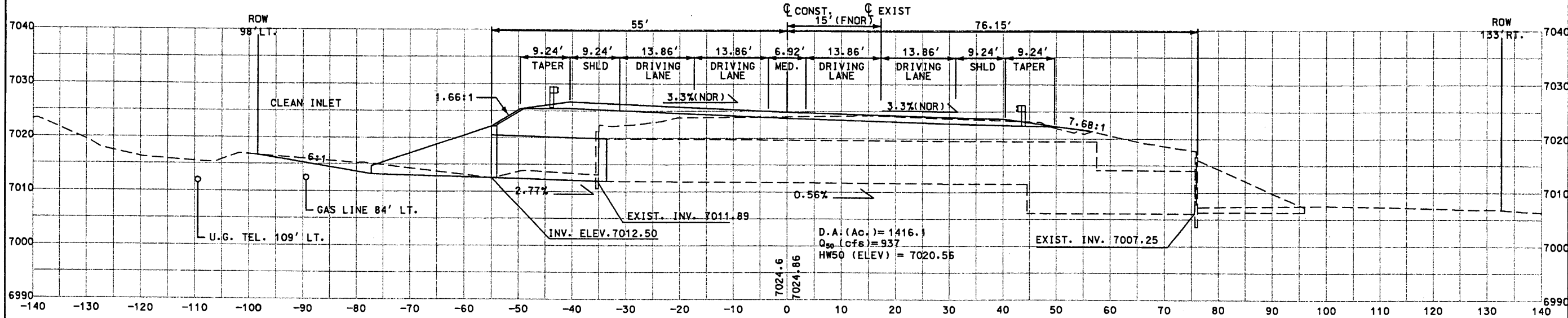


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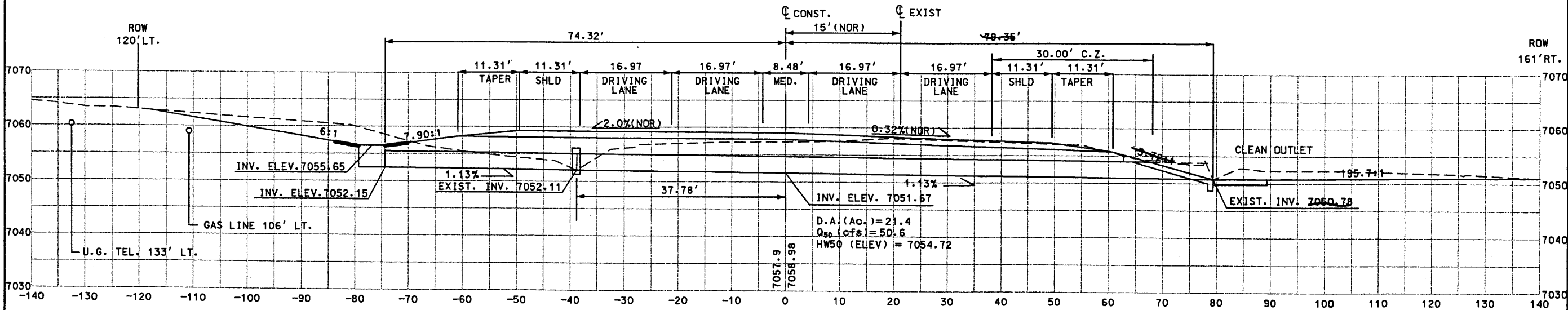
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 Plot Date: 04 NOV 1999

STRUCTURE PLACEMENT SECTIONS



D4-301
 STA. 4850+45.73
 EXIST. 2-8' x 8' x 111' CBC DESIGN 2 @ 30° RT. FWD.
 WITH WINGWALLS LT. & RT.
 REMOVE WINGWALLS & 2-8' x 8' x 2' OF CBC LT.
 EXTEND LT. W/2-8' x 8' x 22' CBC'S DESIGN 2 TYPE II EXTENSION
 @ 30° RT. FWD.
 BUILD WINDWALLS LT. PAVE SLOPE FROM TAPER TO PARAPET
 WITH 2" ASPHALT PAVEMENT TO PREVENT EROSION

STD DWG: BCE-001, BEB-001-04, CB-32-30(SHT. 1 OF 2),
 WCB-30(SHT. 1 OF 2), WCB-30(SHT. 2 OF 2)



D4-300 STA. 4826+97.19
 EXIST. 1-36"x118' CMP. @ 45° RT. FWD. W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 BUILD CONC. COLLAR LT.
 EXTEND LT. W/1-36"x36' CULVERT PIPE @ 45° RT. FWD.
 BUILD 1-36"x154' CULVERT PIPE @ 45° RT. FWD.
 BUILD 1-10'x5' DROP INLET LT. (H=3.5') BUILD 2' WIDE x 2" THICK
 ASPHALT PAD AROUND DROP INLET
 CONNECT CULVERT RIBS TO DROP INLET
 BUILD CONCRETE BLANKET W/SAFETY GRATES RT.
 BUILD EROSION CONTROL PAD RT. TO L x 19' W x 1' D
 STD DWG: BBG-028, BMC-001-03, BMC-003-01, BMC-005-01
 BMDI-005, BRR-001-08, EC-61, M-16-71, 44-D01

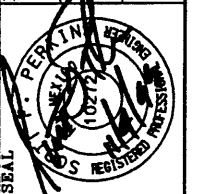
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

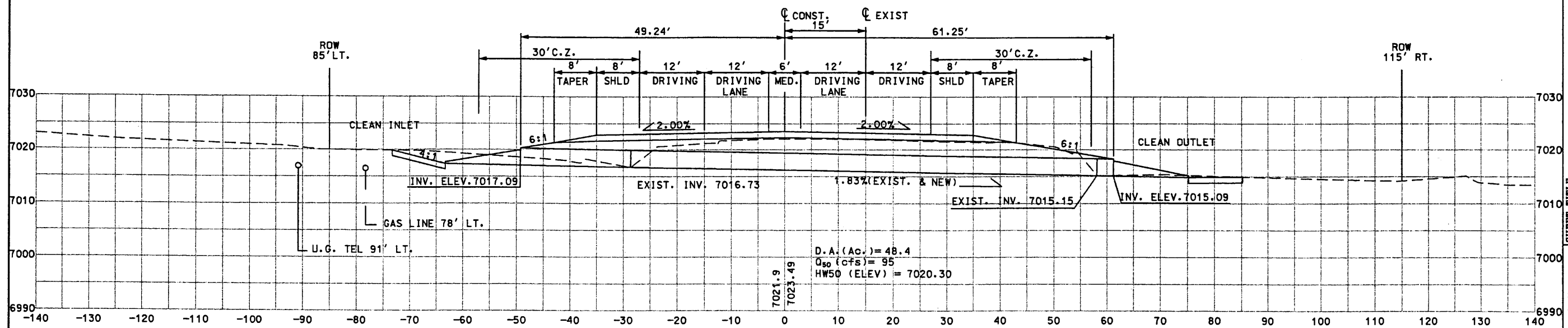
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3786

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DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

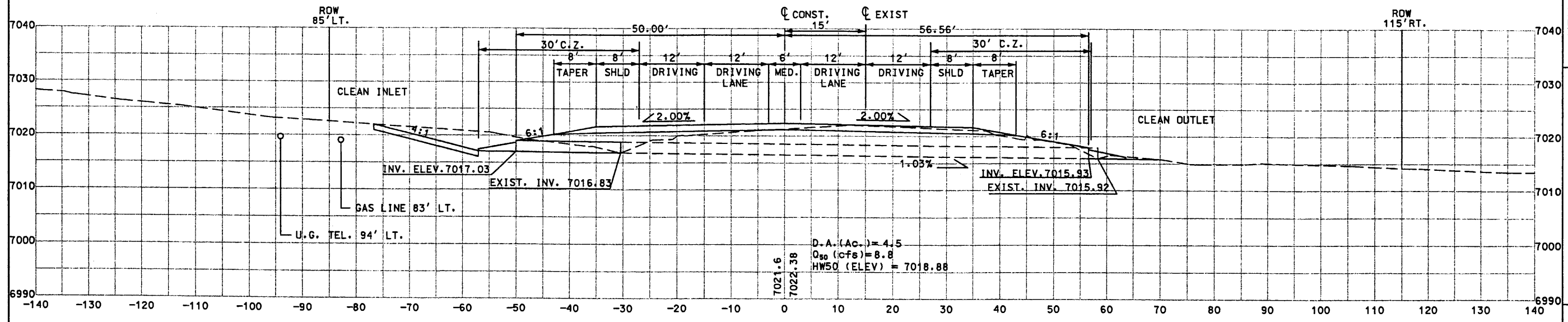


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D4-303
 STA. 4864+64.73
 EXIST. 1-57"x38"x86' CMP ARCH PIPE NORMAL IN PLACE
 w/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 EXTEND RT. w/1-57"x38"x31' CULVERT ARCH PIPE
 EXTEND LT. w/1-57"x38"x21' CULVERT ARCH PIPE
 BUILD 1-57"x38"x110' CULVERT ARCH PIPE
 BUILD SPECIAL END SECTION w/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD LT. & RT.
 11'L x 22'W x 1'D LT. & 10'L x 22'W x 1'D RT.

STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-D05



D4-302
 STA. 4858+30.32
 EXIST. 1-24"x88' CMP, NORMAL IN PLACE
 w/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 REMOVE 2' OF 24" CMP RT.
 EXTEND LT. w/1-24"x31' CULVERT PIPE
 BUILD SPECIAL END SECTION w/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 19'L x 11'W x 1'D

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-D05

STRUCTURE PLACEMENT SECTIONS

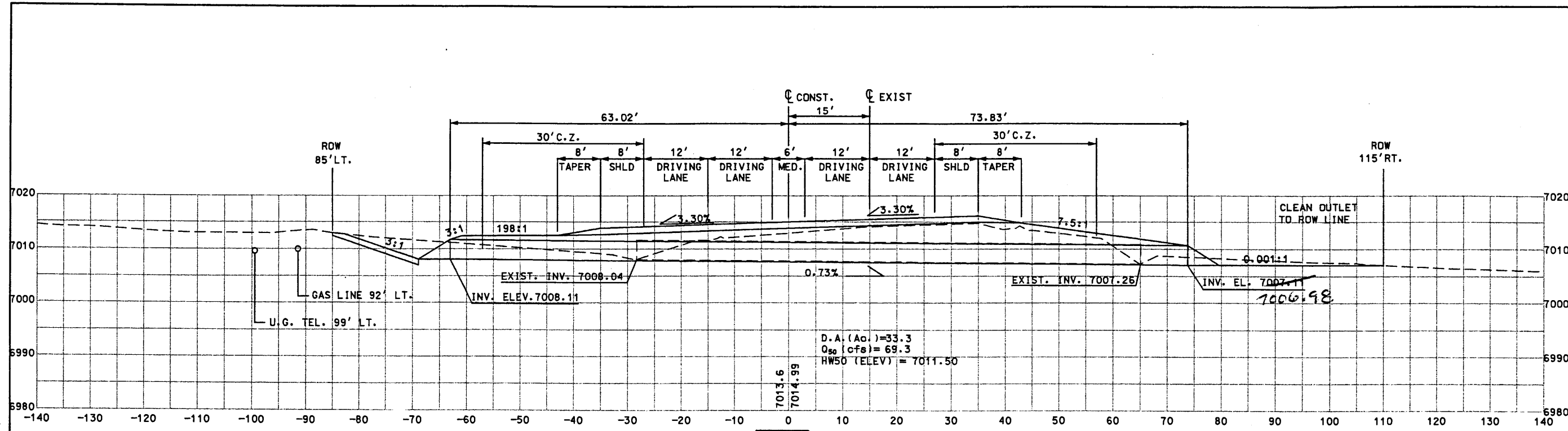
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 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
 CN 3766



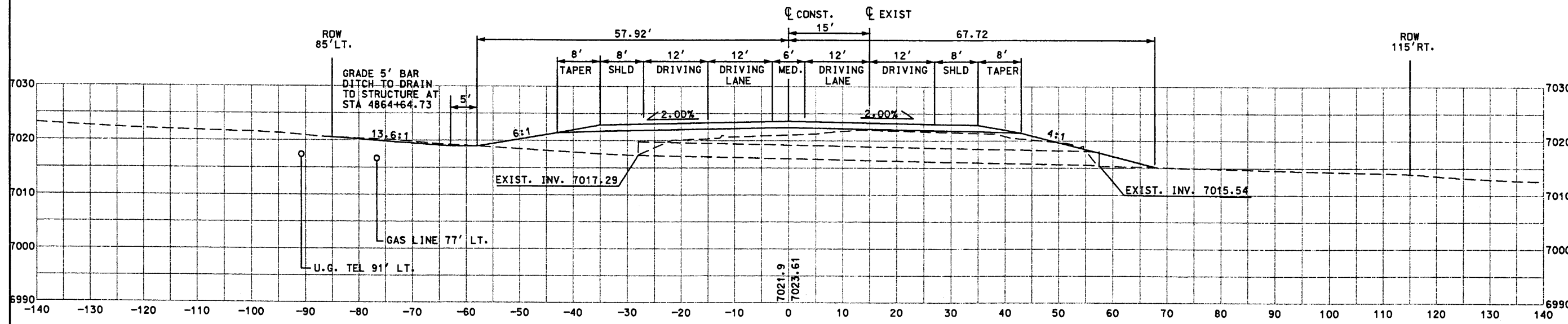
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 CHECKED BY: SFP

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 Plot Date: NOV 1999
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 Plot Date: NOV 1999



D4-305
 STA. 4884+45.68
 EXIST. 1-64"x43"x94' CMP ARCH PIPE NORMAL IN PLACE
 W/END SECTIONS LT. & RT. TO BE REMOVED
 BUILD 1-64"x43"x138' CULVERT ARCH PIPE
 BUILD END SECTIONS LT. & RT.
 BUILD EROSION CONTROL PAD LT. 17'L x 24'W x 1'D
 STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71



D4-304
 STA. 4865+02.93
 EXIST. 2-30"x85' CMP'S NORMAL IN PLACE
 W/END SECTIONS LT. & RT. TO BE REMOVED

STRUCTURE PLACEMENT SECTIONS

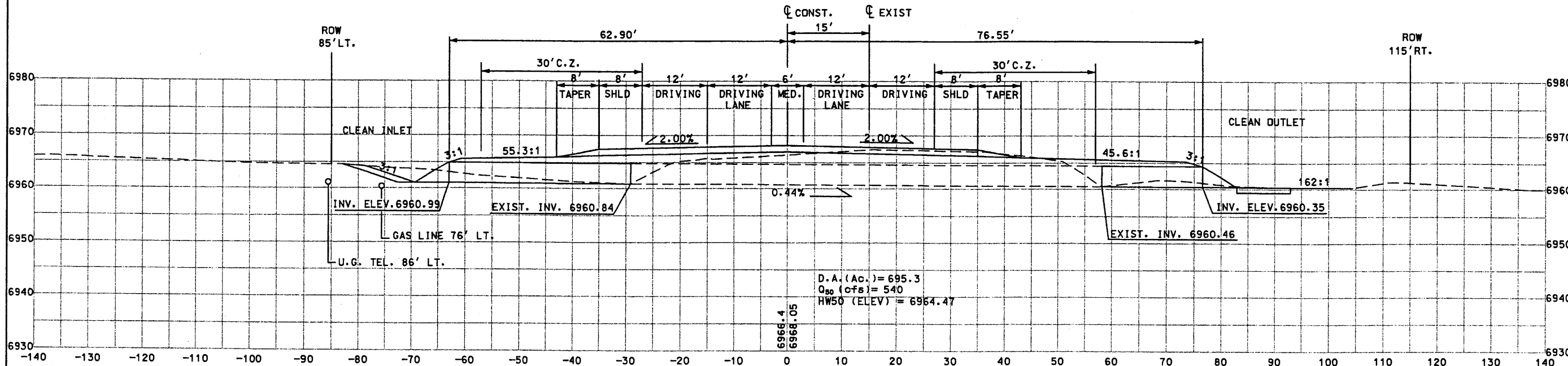
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3786



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

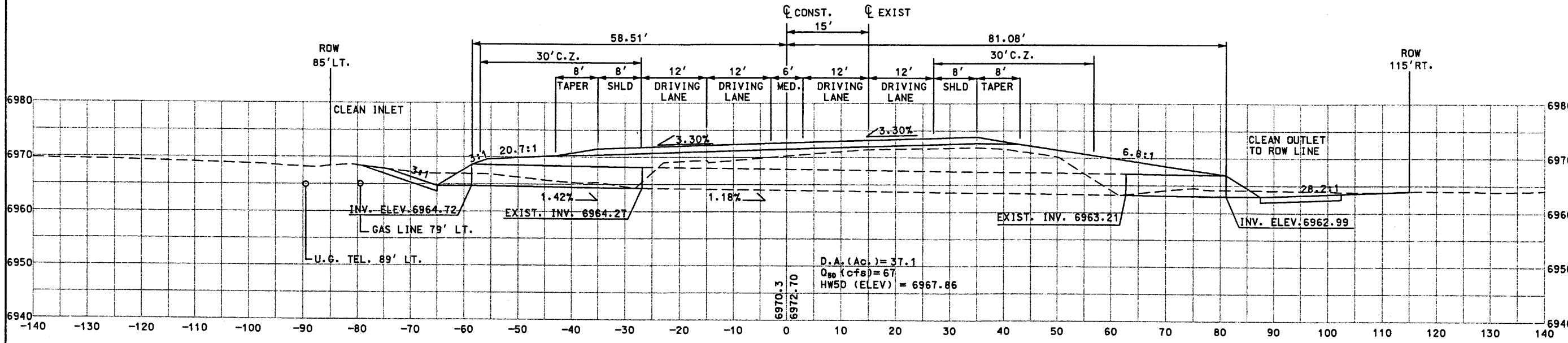


STRUCTURE PLACEMENT SECTIONS



D4-307
 STA. 4910+36.97
 EXIST. 7-71"x47"x87' CMP ARCH PIPES NORMAL IN PLACE @ 16.5' CENTERS
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 EXTEND RT. W/7-71"x47"x18' CULVERT ARCH PIPES
 EXTEND LT. W/7-71"x47"x34' CULVERT ARCH PIPES
 BUILD END SECTIONS LT. & RT.
 BUILD EROSION CONTROL PAD LT. & RT.
 10'L x 117'W x 1'D RT. & 15'L x 117'W x 1'D LT.

STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71-A



D4-306 STA. 4902+21.16
 EXIST. 1-71"x47"x90' CMP ARCH PIPE NORMAL IN PLACE
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 EXTEND RT. W/1-71"x47"x20' CULVERT ARCH PIPE
 EXTEND LT. W/1-71"x47"x32' CULVERT ARCH PIPE
 BUILD END SECTIONS LT. & RT.
 BUILD EROSION CONTROL PAD LT. & RT.
 15'L x 18'W x 1'D LT. & 10'L x 18'W x 1'D RT.

STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71-A

SHEET TITLE

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 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

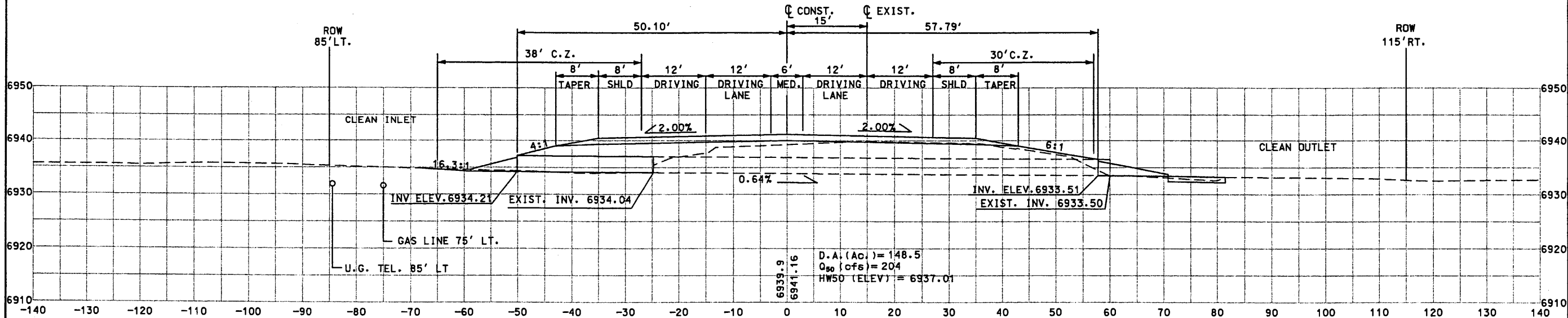


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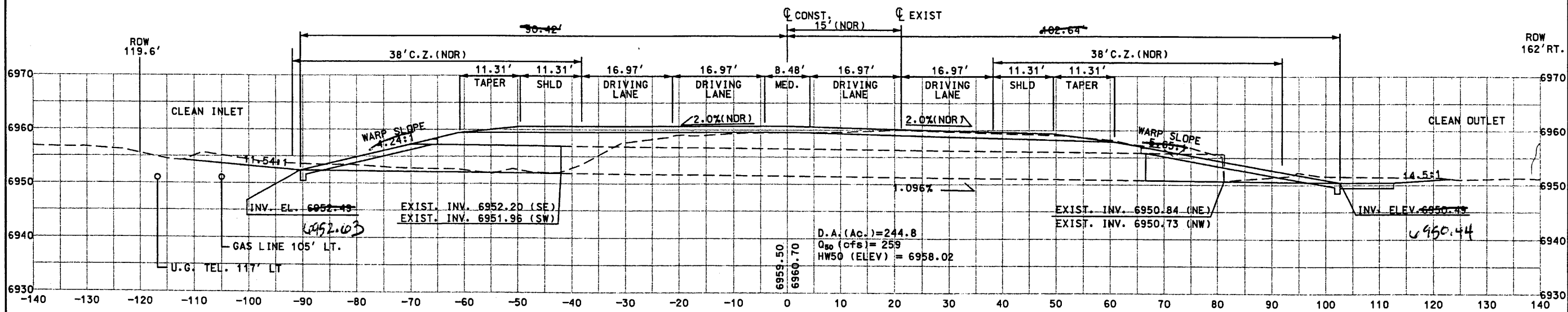


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D4-309
 STA. 4937+28.66
 EXIST. 8-36"x85' CMP'S NORMAL IN PLACE @ 13.5' CENTERS
 w/END SECTIONS LT. & RT. & RIP RAP PAD RT.
 REMOVE RIP RAP PAD RT.
 REMOVE END SECTIONS LT. & RT.
 REMOVE 8-36"x2' OF CMP'S RT.
 EXTEND LT. w/8-36"x26' CULVERT PIPES
 BUILD SPECIAL END SECTION w/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD RT. 11'L x 104'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-005



D4-308
 STA. 4919+22.74
 EXIST. 2-60"x123' CMP'S @ 45° RT. FWD. @ 15.2' CENTERS
 w/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 REMOVE 2-60"x15' OF CMP RT. 37'
 EXTEND RT. w/2-60"x36' CULVERT PIPES
 EXTEND LT. w/2-60"x48' CULVERT PIPES
 BUILD GBC BLANKETS w/SAFETY GRATES LT. & RT.
 BUILD EROSION CONTROL PAD RT. 10'L x 37'W x 1'D
 STD DWG: BBG-028, BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71

STRUCTURE PLACEMENT
 SECTIONS

NEW MEXICO STATE HIGHWAY AND
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 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)164
 CN 3766

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 DRAWN BY: STAFF
 CHECKED BY: S.F.P.



STRUCTURE PLACEMENT SECTIONS

SHEET TITLE

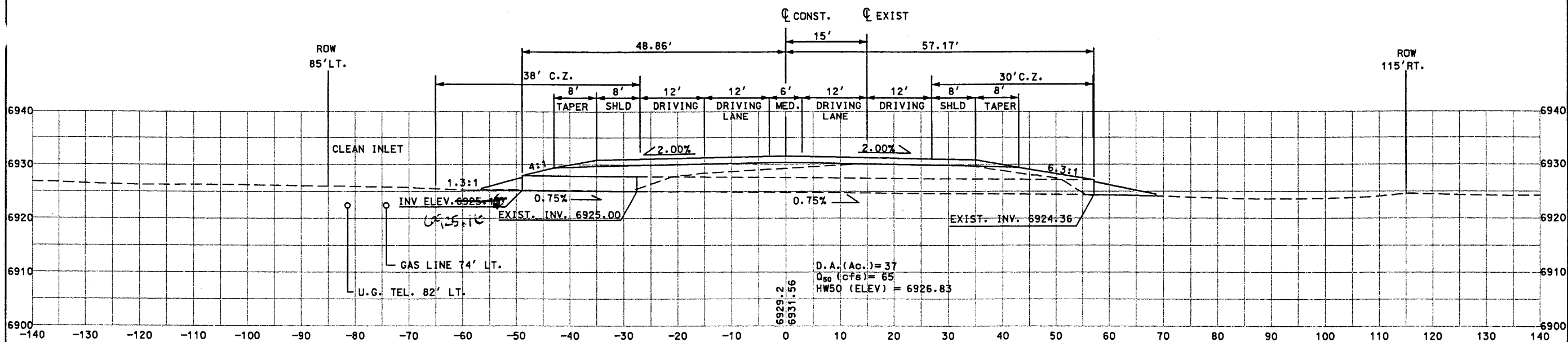
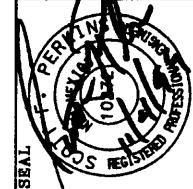
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

F.H.W.A. REGION NO 6

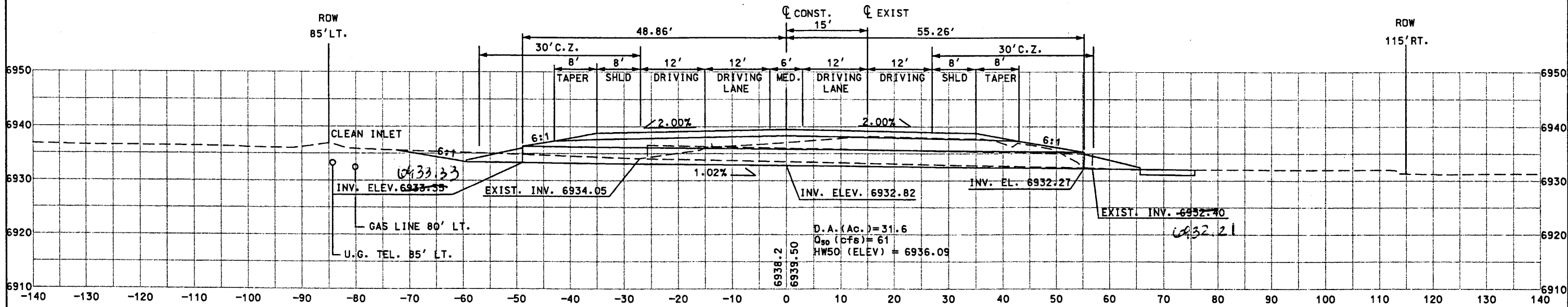
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CN 3766

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DRAWN BY: STAFF
CHECKED BY: SFP



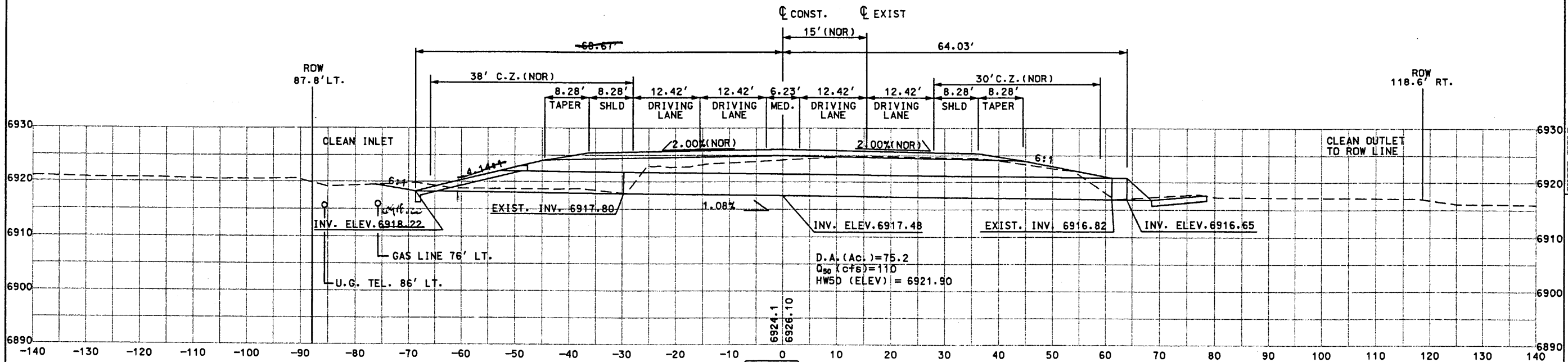
D4-311
 STA. 4955+97.95
 EXIST. 4-49"x33"x85' CMP ARCH PIPES NORMAL IN PLACE @ 14' CENTERS
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT. 24'
 EXTEND LT. w/4-49"x33"x22' CULVERT ARCH PIPES
 BUILD SPECIAL END SECTION w/SAFETY BARS LT. & RT.
 STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 M-16-71-A, 44-005
 D.A. (Ac.) = 37
 Q₅₀ (cfs) = 65
 HW50 (ELEV) = 6926.83
 6929.2
 6931.56



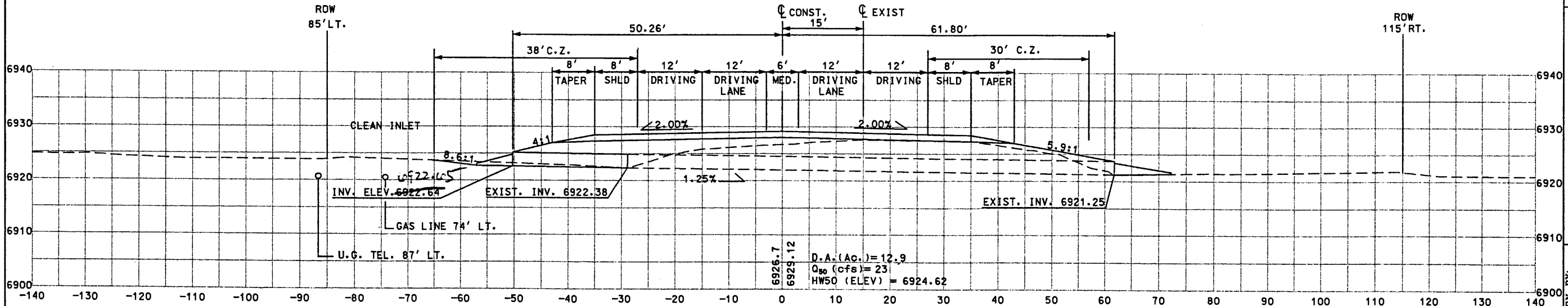
D4-310
 STA. 4942+83.10
 EXIST. 2-30"x85' CMP's. NORMAL IN PLACE
 W/END SECTIONS LT. & RT. & RIP RAP PAD RT.
 TO BE REMOVED 110'
 BUILD 3-30"x85' CULVERT PIPES
 BUILD SPECIAL END SECTION w/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD RT. 10'L x 19'W x 1'D
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71, 44-005
 D.A. (Ac.) = 31.6
 Q₅₀ (cfs) = 61
 HW50 (ELEV) = 6936.09
 6938.2
 6938.50
 6932.21

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NOV 1999

STRUCTURE PLACEMENT
SECTIONS



D4-313
 STA. 4969+90.60
 EXIST. 1-48"x91' CMP @ 15° RT. FWD
 w/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT.
 EXTEND RT. w/1-48"x3' CULVERT PIPE @ 15° RT. FWD.
 EXTEND LT. w/1-48"x39' CULVERT PIPE @ 15° RT. FWD.
 BUILD 1-48"x133' CULVERT PIPE @ 15° RT. FWD. UPSTATION
 BUILD ~~CONC. BLANKETS w/SAFETY GRATES~~ LT. & END SECTION RT.
 BUILD EROSION CONTROL PAD RT. (10' L x 20' W x 1' D)
 SPECIAL END SECTION
 STD DWG: BBG-022, BBG-025, BMC-001-03, BMC-003-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71



D4-312
 STA. 4960+18.60
 EXIST. 2-30"x91' CMP'S NORMAL IN PLACE
 w/END SECTIONS LT. & RT.
 REMOVE END SECTIONS LT. & RT. 32'
 EXTEND LT. w/2-30"x3' CULVERT PIPES
 BUILD SPECIAL END SECTION w/SAFETY BARS LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01
 M-16-71, 44-005

NEW MEXICO STATE HIGHWAY AND
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 NM 44
 PROJECT NO AC-NH-044-2(39)64
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP
 SEAL: [Professional Engineer Seal]

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STRUCTURE PLACEMENT SECTIONS

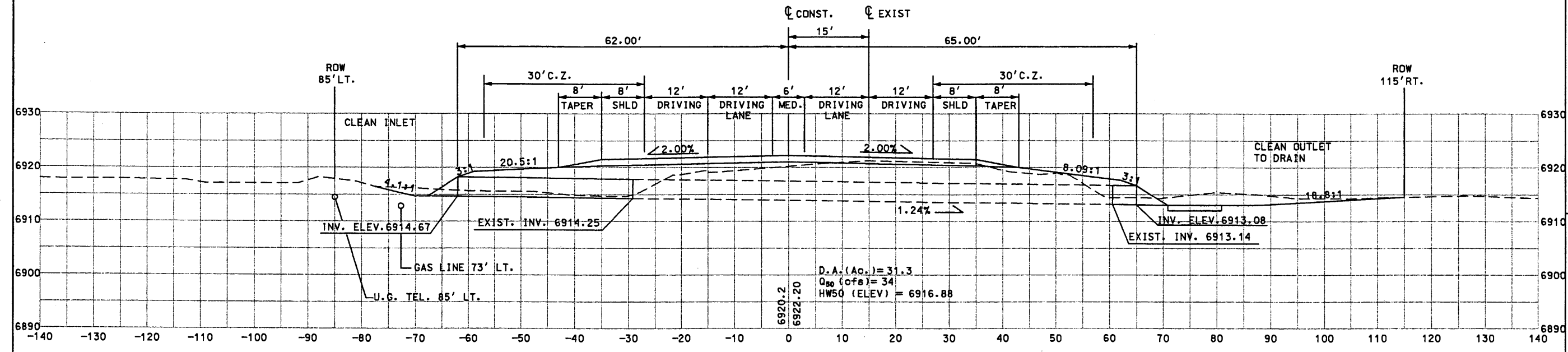
SHEET TITLE

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
F.H.W.A. REGION NO 6

NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
CN 3766

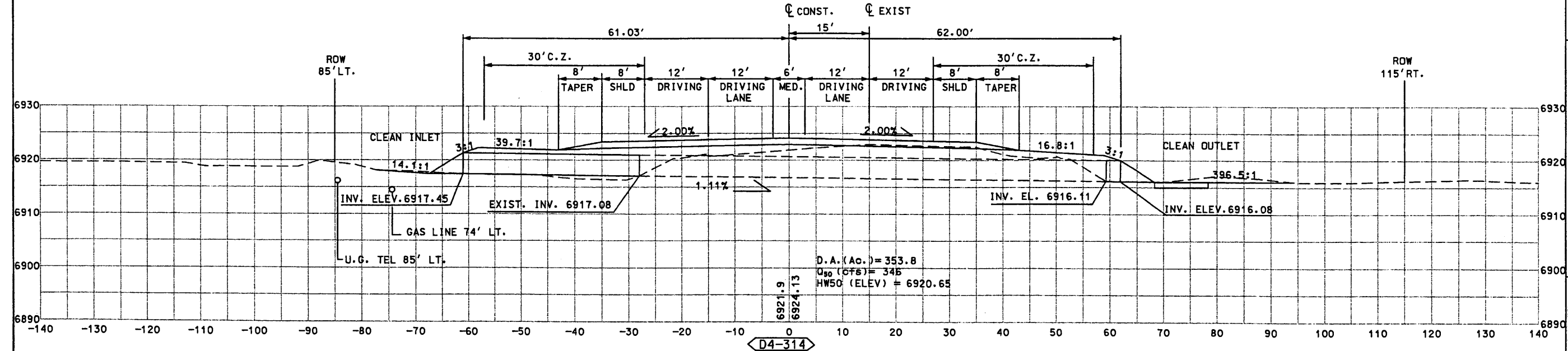
WILSON & COMPANY

DESIGN BY: DDM
DRAWN BY: STAFF
CHECKED BY: SFP



D4-315

STA. 4982+55.20
EXIST. 1-64"x43"x90' CMP ARCH PIPE NORMAL IN PLACE w/ END SECTIONS LT. & RT.
REMOVE END SECTIONS LT. & RT.
EXTEND RT. w/1-64"x43"x3' CULVERT ARCH PIPE
EXTEND LT. w/1-64"x43"x3' CULVERT ARCH PIPE
BUILD END SECTIONS LT. & RT.
BUILD EROSION CONTROL PAD RT. 10' L x 16' W x 1' D
D.A. (Ac.) = 31.3
Q₅₀ (GFS) = 34
HW50 (ELEV) = 6916.88
STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
BRR-001-08, EC-61, ES-1, M-16-71-A

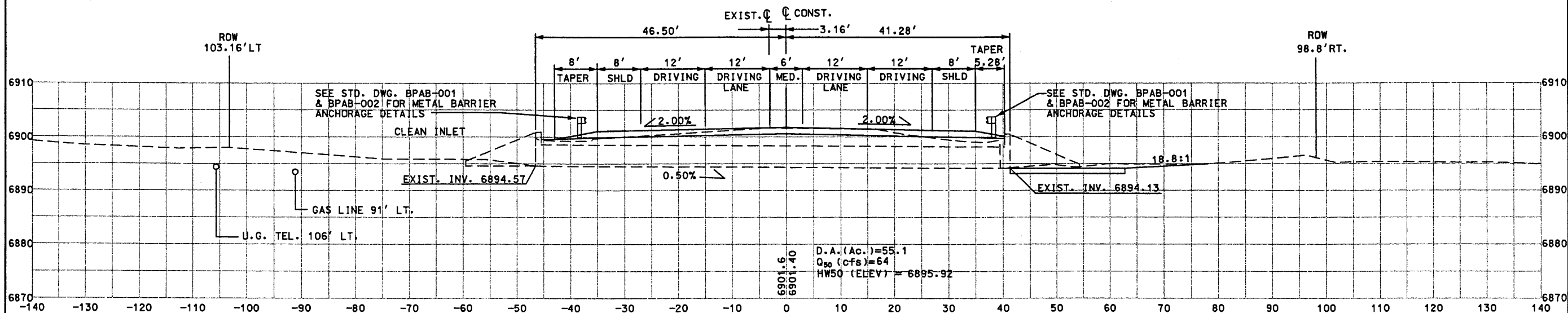


D4-314

STA. 4976+29.65
EXIST. 5-71"x47"x87' CMP ARCH PIPES NORMAL IN PLACE @ 15.3' CENTERS
w/ END SECTIONS LT. & RT.
REMOVE END SECTIONS LT. & RT.
EXTEND RT. w/5-71"x47"x3' CULVERT ARCH PIPES
EXTEND LT. w/5-71"x47"x3' CULVERT ARCH PIPES
BUILD END SECTIONS LT. & RT.
BUILD EROSION CONTROL PAD RT. 10' L x 79' W x 1' D
D.A. (Ac.) = 353.8
Q₅₀ (GFS) = 346
HW50 (ELEV) = 6920.65
STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
BRR-001-08, EC-61, ES-1, M-16-71-A

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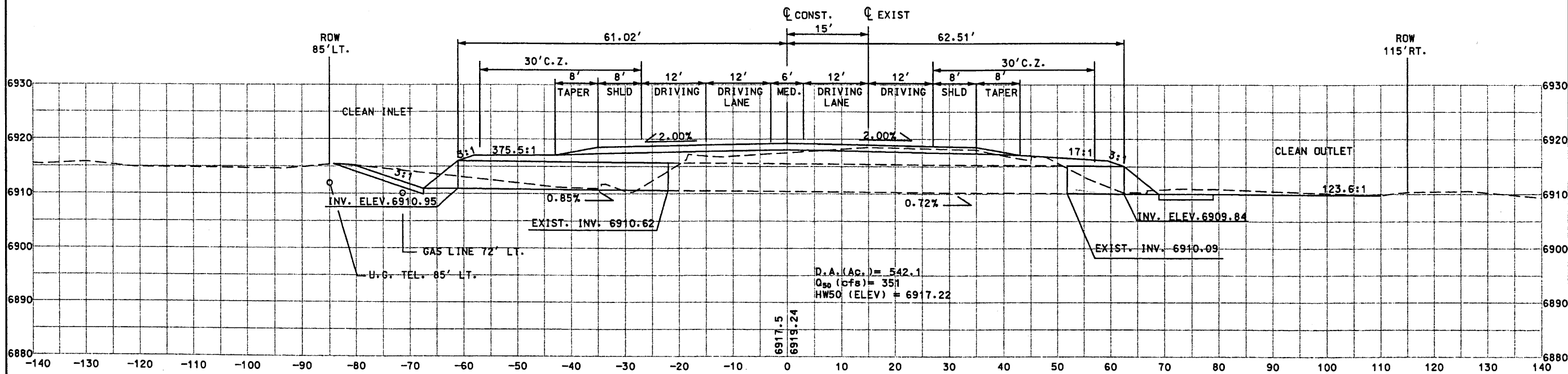
STRUCTURE PLACEMENT SECTIONS



D4-317

STA. 5012+16.40
 EXIST. 2-8'x4'x88' CBC's, DESIGN 1, NORMAL IN PLACE
 w/WINGWALLS & HEADWALLS LT. & RT.
 BUILD EROSION CONTROL PAD RT. 21.5L x 21'W x 1'D

STD DWG: BRR-001-08, EC-61



D4-316

STA. 4992+17.57
 EXIST. 2-83"x57"x74' SPP ARCH PIPES NORMAL IN PLACE
 w/CONC. BLANKETS LEFT & RT.
 REMOVE CONC. BLANKETS LT. & RT.
 EXTEND RT. w/2-83"x57"x12' CULVERT ARCH PIPES
 EXTEND LT. w/2-83"x57"x40' CULVERT ARCH PIPES
 BUILD END SECTIONS LT. & RT. *2-83" x 57" BUILT LT*
 BUILD EROSION CONTROL PAD LT. & RT.
 10'L x 31'W x 1'D RT. & 16'L x 31'W x 1'D LT.

STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71-A

SHEET TITLE

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

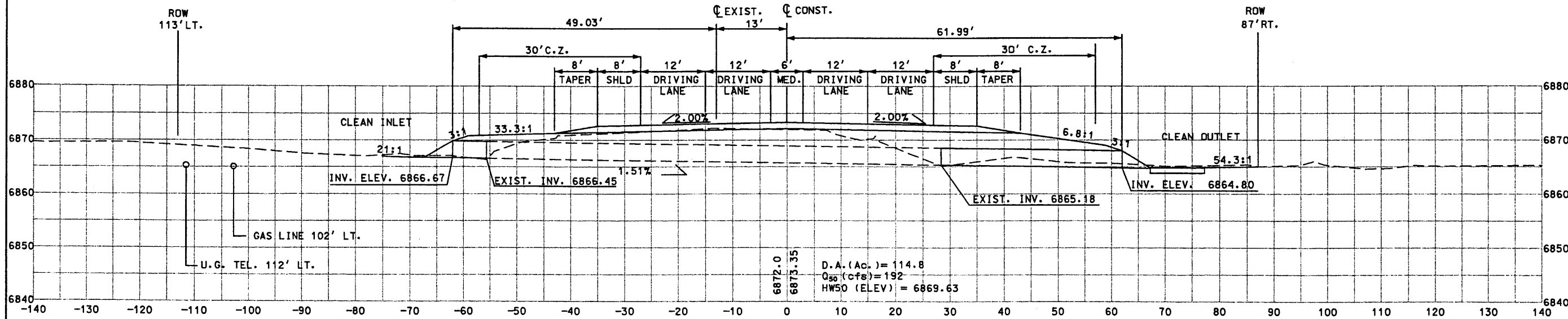
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



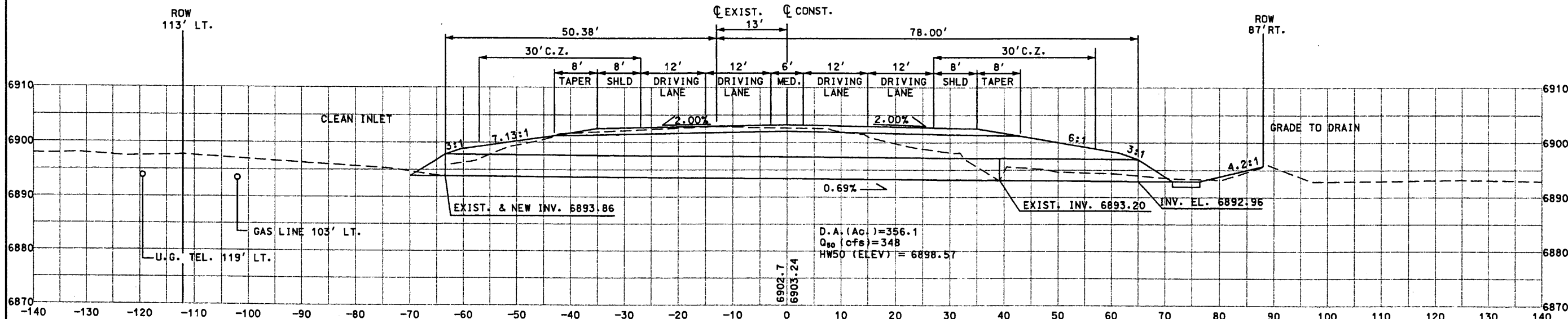
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 Plot Date: NOV 1999



D4-319

STA. 5060+21.73
 EXIST. 4-57"x38"x84' CMP ARCH PIPES NORMAL IN PLACE @ 13.2' CENTERS
 W/END SECTIONS LT. & RT. & RIP RAP PAD RT.
 REMOVE END SECTIONS LT. & RT. & RIP RAP PAD RT. → 37'
 EXTEND RT. W/4-57"x38"x34' CULVERT ARCH PIPES
 EXTEND LT. W/4-57"x38"x27' CULVERT ARCH PIPES
 BUILD END SECTIONS LT. & RT. → 6'
 BUILD EROSION CONTROL PAD RT. 10' L x 54' W x 1' D

STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71-A



D4-318

STA. 5022+90.43
 EXIST. 2-71"x47"x103' CMP ARCH PIPES NORMAL IN PLACE @ 15' CENTERS
 W/END SECTIONS LT. & RT.
 REMOVE END SECTIONS RT.
 EXTEND RT. W/2-71"x47"x26' CULVERT ARCH PIPES
 BUILD 1-71"x47"x129' CULVERT PIPE ARCH UPSTATION
 BUILD END SECTIONS LT. & RT.
 BUILD EROSION CONTROL PAD RT. 5' L x 36' W x 1' D

STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, ES-1, M-16-71-A

STRUCTURE PLACEMENT SECTIONS

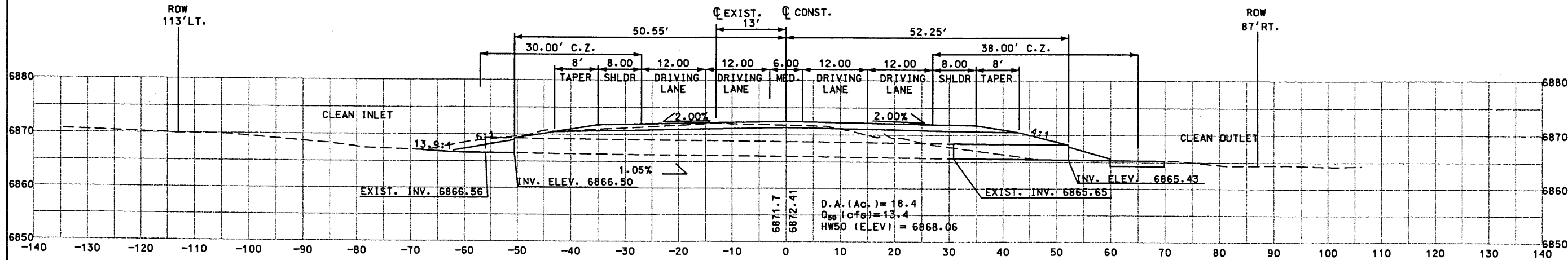
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(3)9164
 CN 3766



DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



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 Plot Date: NOV 1999



D4-320

STA. 5063+48.34

EXIST. 1-49"x33"x87' CMP ARCH PIPE NORMAL IN PLACE
 w/END SECTIONS LT. & RT.
 REMOVE 6' OF CMP ARCH PIPE LT.
 REMOVE END SECTIONS LT. & RT.
 EXTEND RT. w/1-49"x33"x22' CULVERT ARCH PIPE
 BUILD SPECIAL END SECTION w/SAFETY BARS LT. & RT.
 BUILD EROSION CONTROL PAD RT. 10'L x 13'W x 1'D

STD DWG: BMC-002-07, BMC-004-01, BMC-005-01
 BRR-001-08, EC-61, M-16-71-A, 44-005

SHEET TITLE

STRUCTURE PLACEMENT
 SECTIONS

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

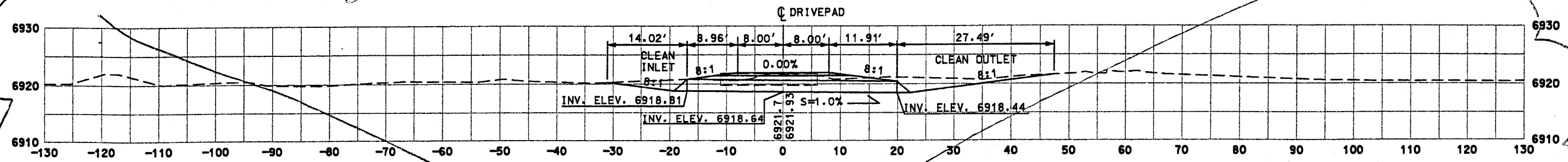
**WILSON
 & COMPANY**

DESIGN BY: DDM
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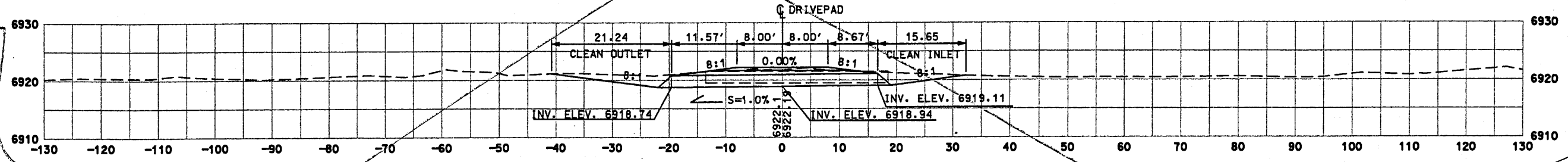
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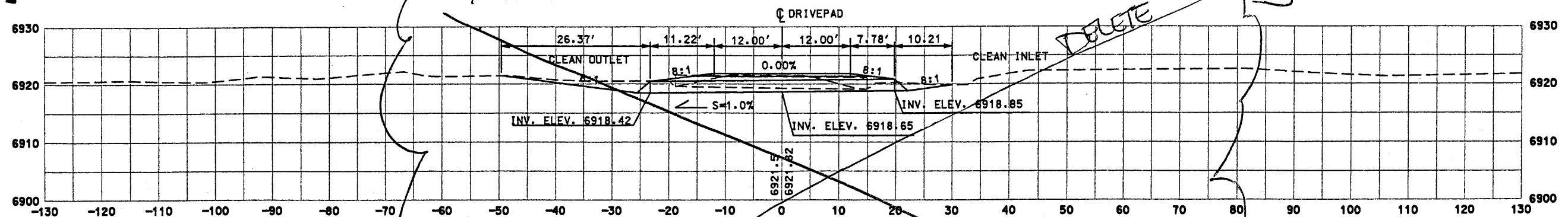


TD4-06 STA. 4003+90.44 - 47' RT.
 EXIST. 1-24"x17.5' CMP RT.
 TO BE REMOVED
 BUILD 1-24"x39' CULVERT PIPE
 BUILD END SECTIONS. LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71

See Sheet 8.49B



TD4-05A STA. 4003+33.00 - 47' RT.
 EXIST. 1-24"x32' CMP RT.
 TO BE REMOVED
 BUILD 1-24"x37' CULVERT PIPE
 BUILD END SECTIONS. LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71



TD4-03 STA. 4001+38.89 - 45.6' RT.
 EXIST. 1-24"x34' CMP
 TO BE REMOVED
 BUILD 1-24"x43' CULVERT PIPE
 BUILD END SECTIONS. LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71

SHEET TITLE

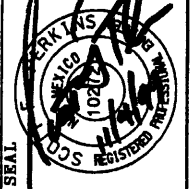
TURNOUT STRUCTURES

NEW MEXICO STATE HIGHWAY AND
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 F.H.W.A. REGION NO 6

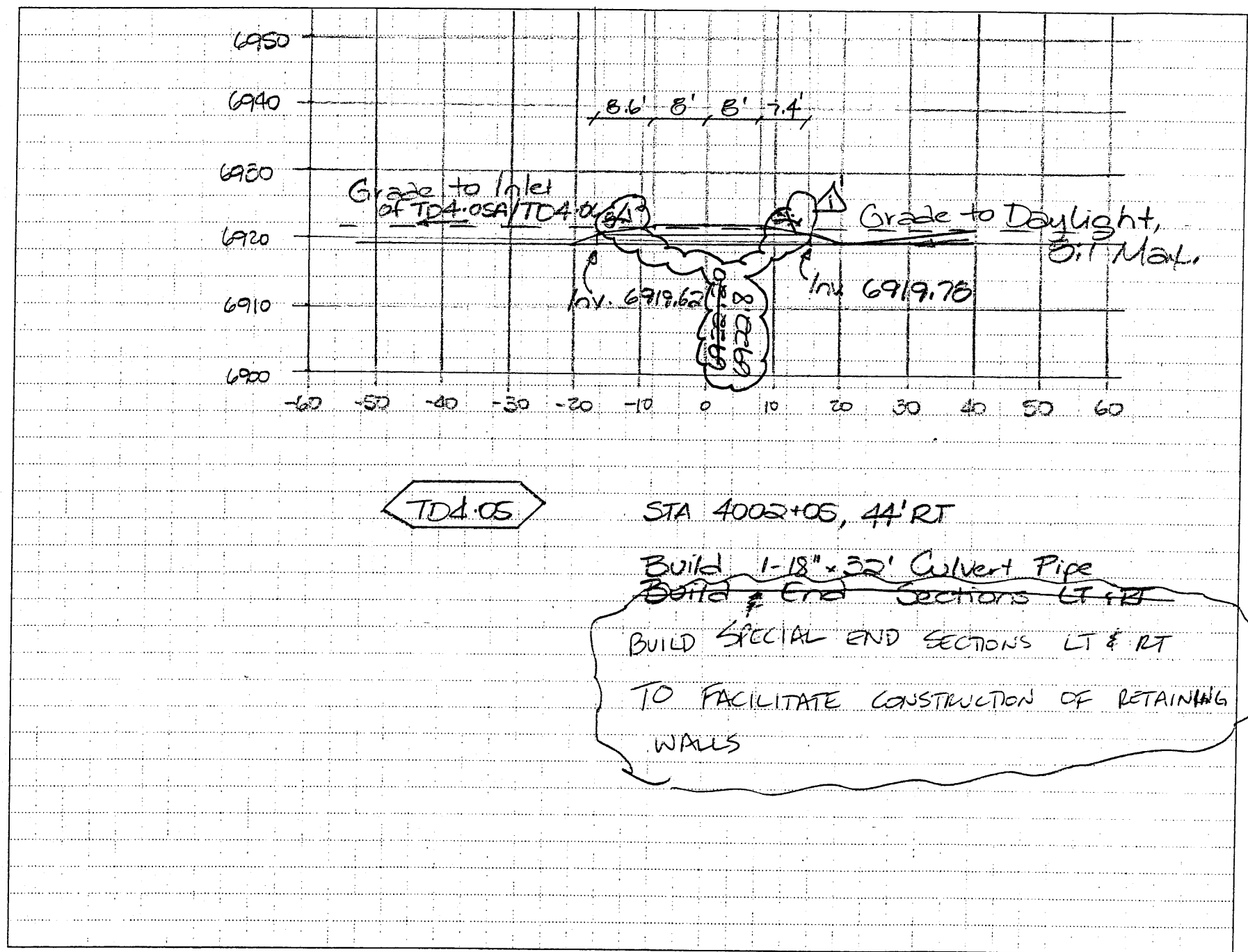
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
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**WILSON
 & COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP



TORNOUT
STRUCTURES

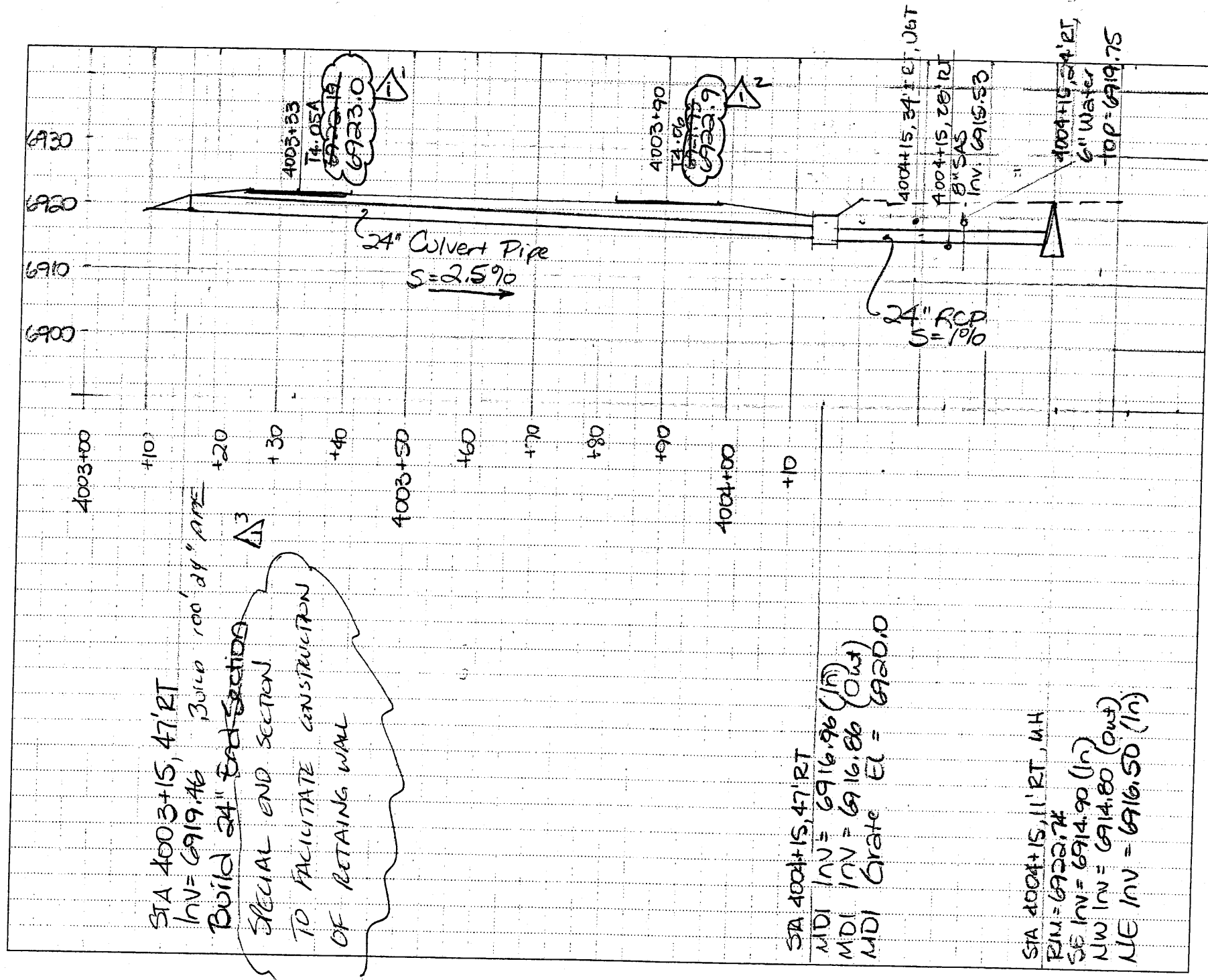


NMUP
AC. 04.04.2(39)64
CW 3760

New Sheet
8.4.01
FSC/FNF-0478

PROJECT NO. AC NH. 044.2(39) 64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 8.49A - Turnout Structures.

NO.	REVISION	DATE	BY
A ¹	Revise Grade for PGL REVISION,		
	4000 to 4000+100 to 4026+100	10.6.01	FSC/FNF-0537
A ²	CHANGE TO SPECIAL END SECTIONS	11-27-01.	FIELD MODIFICATION



STA 4003+15, 47' RT
 INV = 6919.46
 Build 24" End Section
 SPECIAL END SECTION
 TO FACILITATE CONSTRUCTION
 OF RETAINING WALL

STA 4004+15, 47' RT
 MDI INV = 6916.96 (In)
 MDI INV = 6916.86 (Out)
 MDI Grate EL = 6920.0

STA 4004+15, 11' RT, MH
 INV = 6922.74
 SE INV = 6914.90 (In)
 NW INV = 6914.80 (Out)
 NE INV = 6916.50 (In)

New Sheet
 8.4.01
 FSC/FNF-0478

NM44
 AC.NH.044-2(39)64
 CW 3766

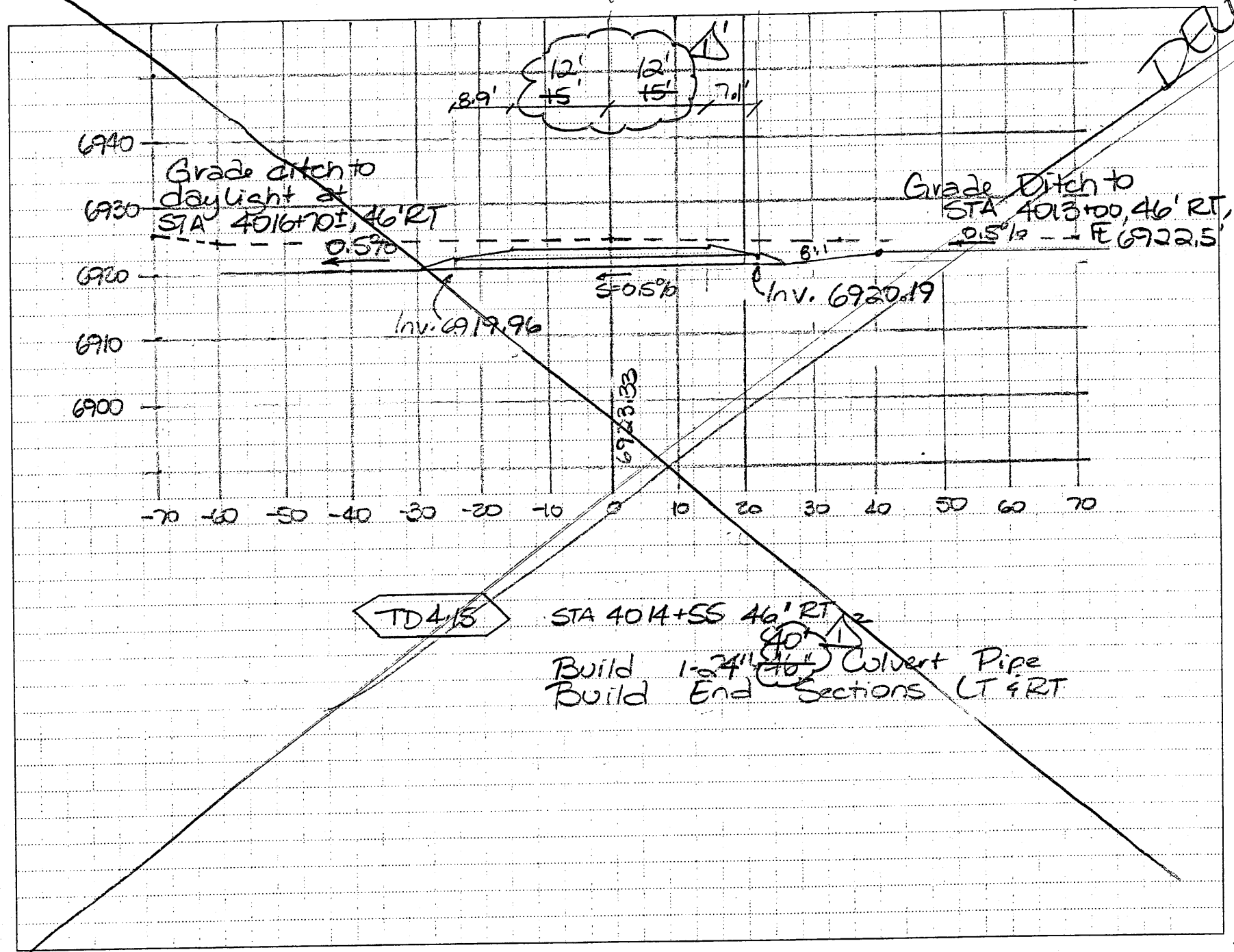
TURNOUT
 STRUCTURES

PROJECT NO. AC-WA-04-2(39)6
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 8.49B, Turnout Structures

NO.	REVISION	DATE	BY
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Δ ³	CHANGE TO SPECIAL END SECTION	11-27-01	

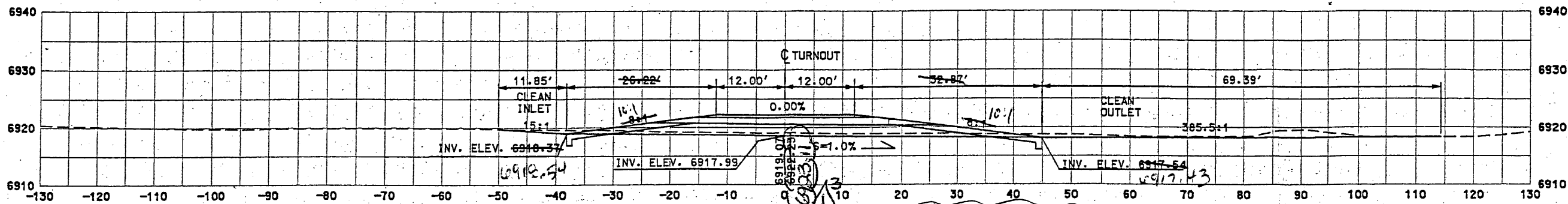
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NM44
AC 04.04.2(39)64
CW 3766

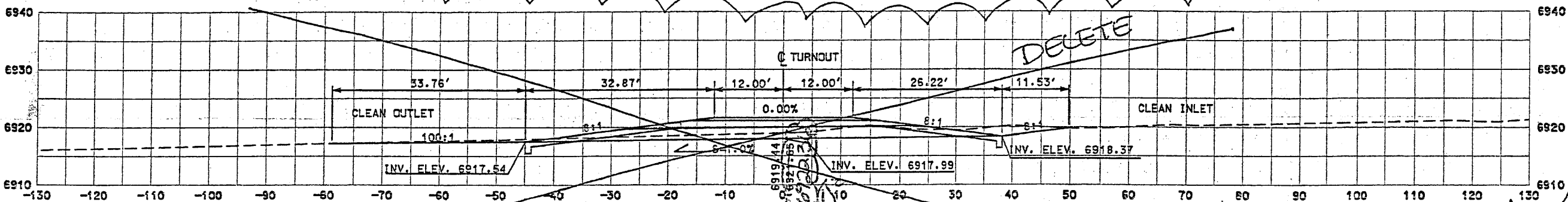


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PSC/FNF-0478

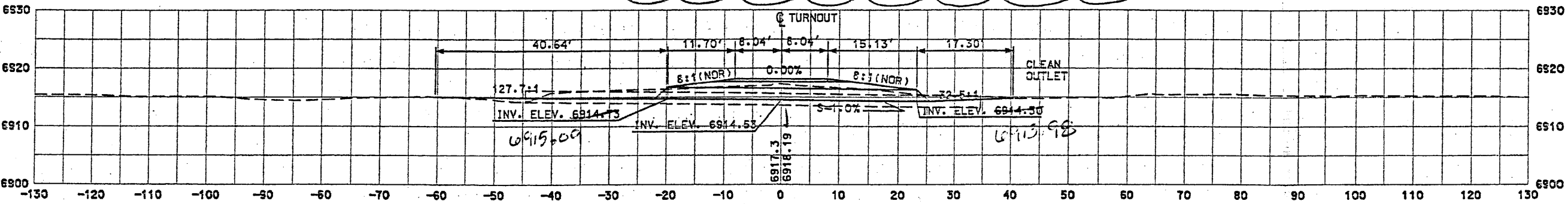
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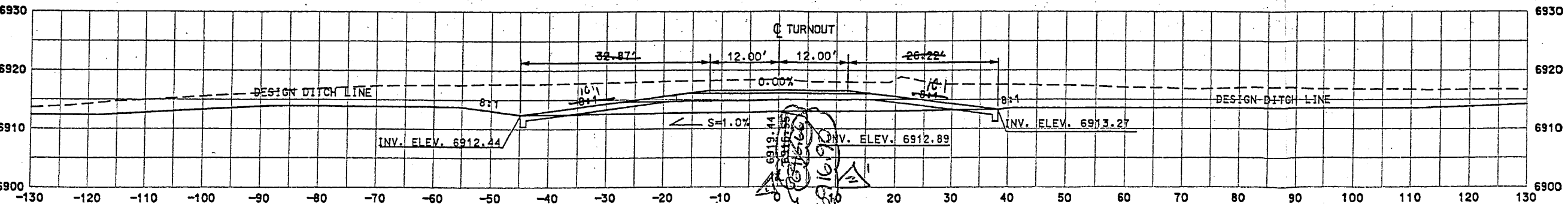
TD4-26 STA. 4039+57.36 - 60' RT. SPECIAL END SECTIONS
BUILD 1-24"x83' CULVERT PIPE
BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.
STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-25 STA. 4039+57.36 - 58' LT.
BUILD 1-24"x83' CULVERT PIPE
BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.
STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-23 STA. 4033+75.41 - 90' RT.
EXIST. 1-24"x80' CMP @ 5'27' RT. FWD.
TO BE REMOVED
BUILD 1-24"x44' CULVERT PIPE @ 5'27' RT. FWD.
BUILD END SECTIONS LT. & RT.
STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71



TD4-17 STA. 4024+11.66 - 52' RT. SPECIAL END SECTIONS
BUILD 1-24"x83' CULVERT PIPE
BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.
STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71

SHEET TITLE

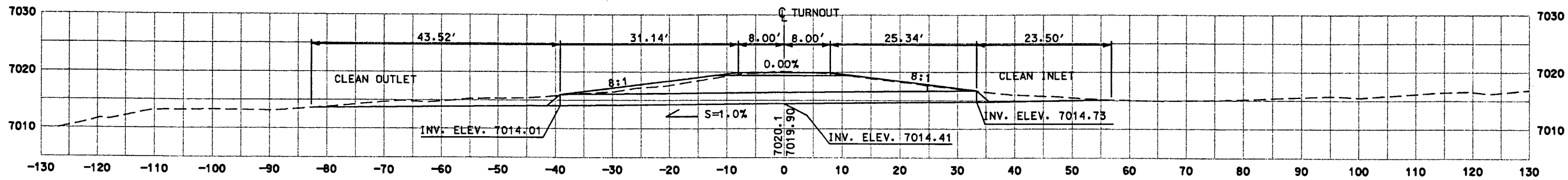
TURNOUT STRUCTURES

NEW MEXICO STATE HIGHWAY AND
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F.H.W.A. REGION NO 6
NM 44
NEW MEXICO PROJECT NO AC-NH-044-2(39)04
CN 3766



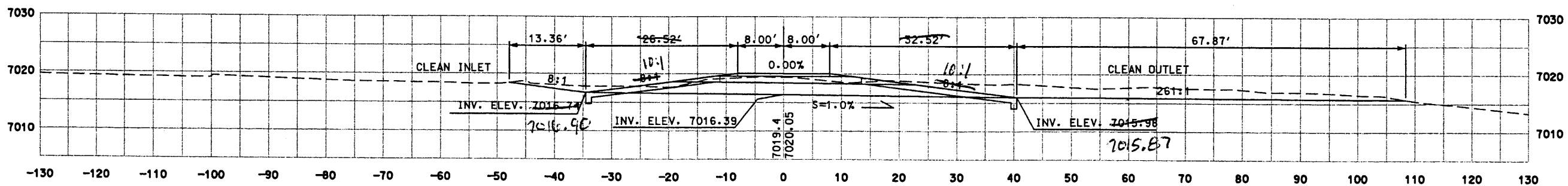
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DRAWN BY: STAFF
CHECKED BY: SFP
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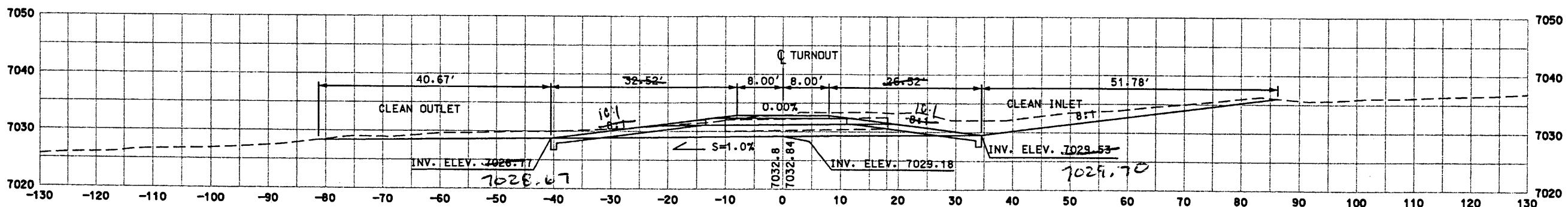
TD4-32 STA. 4089+95.27 - 85' RT.
 BUILD 1-24"x74' CULVERT PIPE
 BUILD END SECTIONS LT. & RT.
 NOTE: THE PURPOSE OF THIS CULVERT PIPE IS TO DRAIN
 THE PONDING AREA @ STA 4089+20 - RT. TO
 THE DRAINAGE STRUCTURE @ STA 4019+08 RT.

STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71



TD4-31 STA. 4083+57.06 - 52' RT. *SPECIAL END SECTIONS*
 BUILD 1-24"x75' CULVERT PIPE
 BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.

STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-29 STA. 4075+27.70 - 52' RT. *SPECIAL END SECTIONS*
 EXIST. 1-24"x28' CMP - 55' RT
 TO BE REMOVED
 BUILD 1-24"x75' CULVERT PIPE
 BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.

STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71

SHEET TITLE

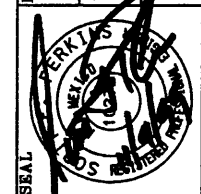
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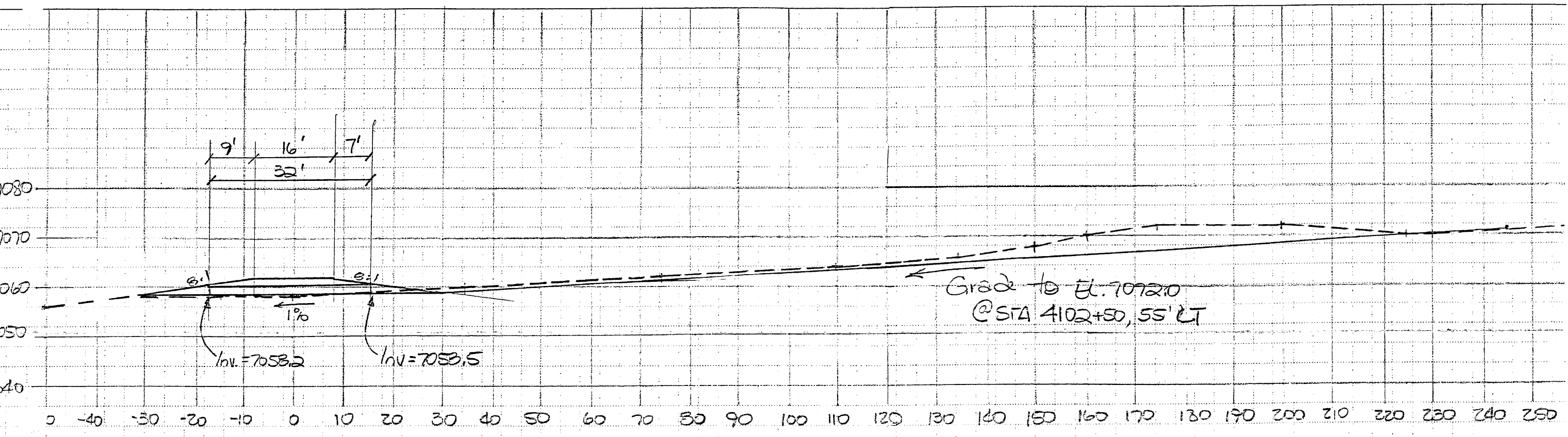
NEW MEXICO STATE HIGHWAY AND
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 F.H.W.A. REGION NO. 6

NM 44
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 CN 3766

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& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP

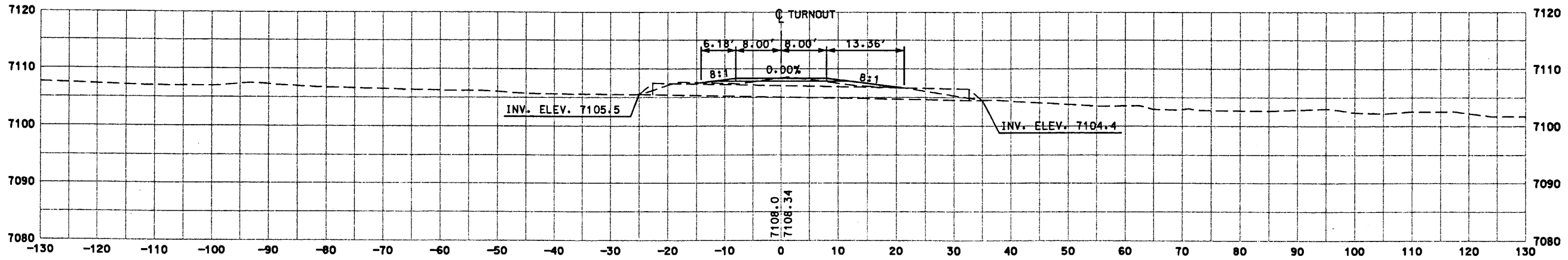




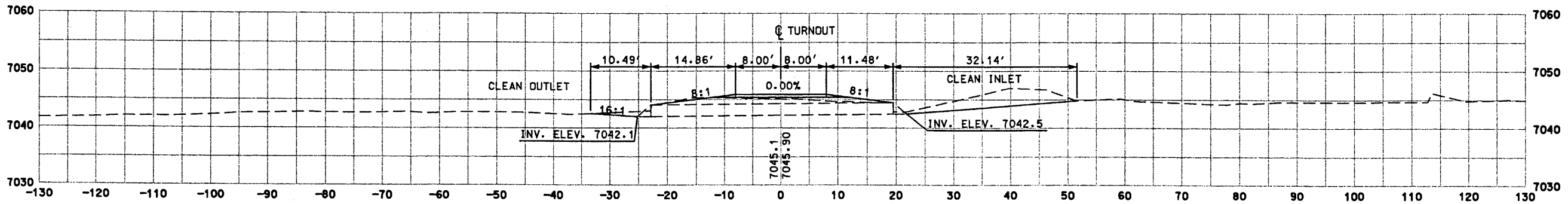
TD 4.35

STA 4100+00, 55' LT
 Build 1-24" x 30' Culvert pipe
 Build End Sections
 w/ Safety Grates,
 LT & RT

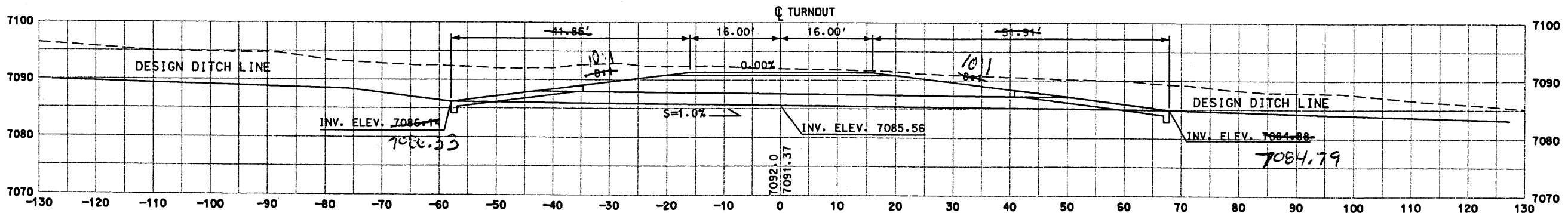
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 FWF/FSC-0619



TD4-42 STA. 4165+55.51 - 64' RT.
 EXIST. 1-24"x60' CMP
 W/END SECTIONS LT. & RT.
 TO REMAIN IN PLACE



TD4-40 STA. 4152+22.60 - 87' LT.
 EXIST. 1-24"x42' CMP
 W/END SECTIONS LT. & RT.
 TO REMAIN IN PLACE



TD4-36 STA. 4105+58.90 - 52' RT. *SPECIAL END SECTIONS*
 BUILD 1-24"x126' CULVERT PIPE
 BUILD CONG. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71

SHEET TITLE

TURNOUT STRUCTURES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

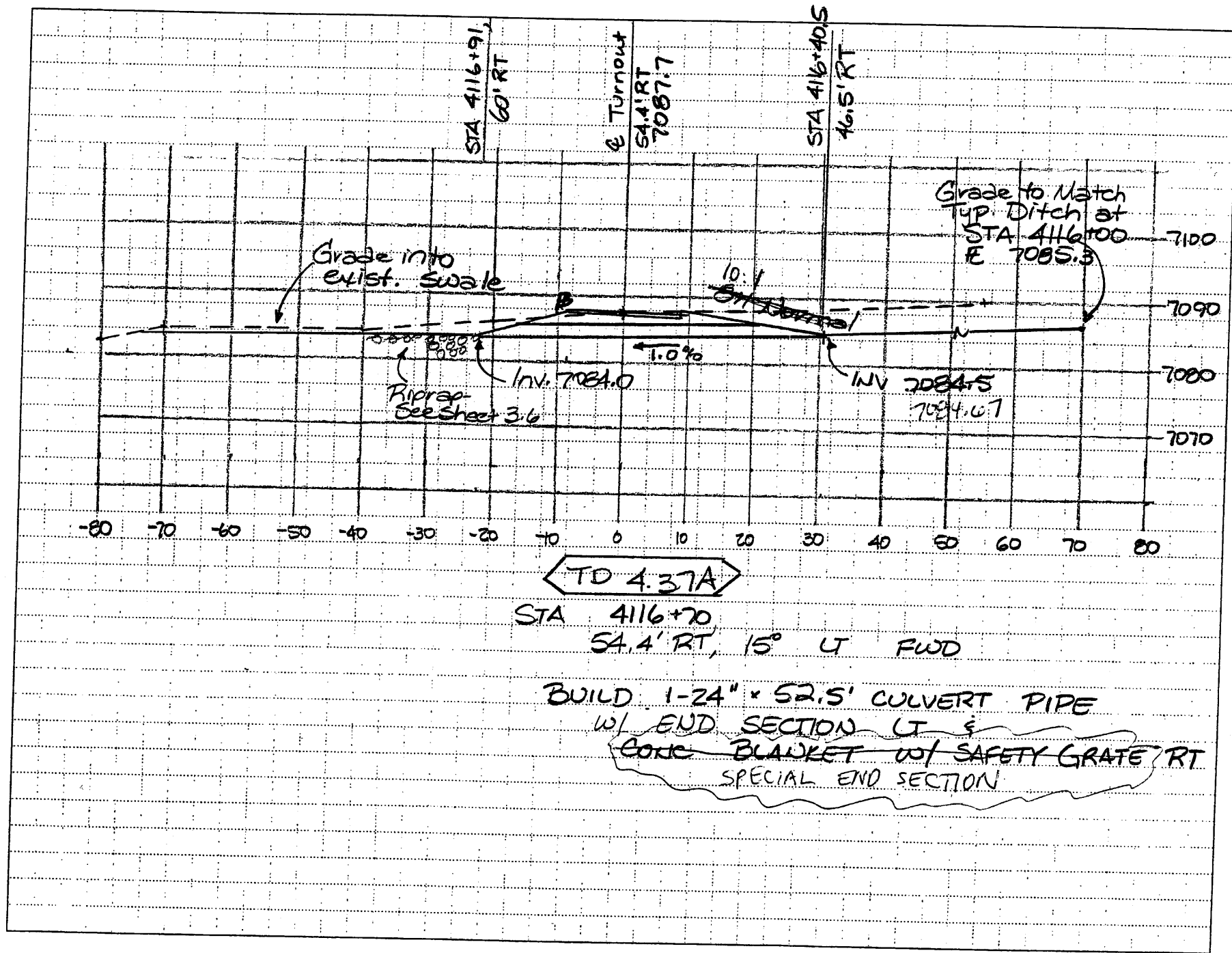
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 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
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 CHECKED BY: SFP



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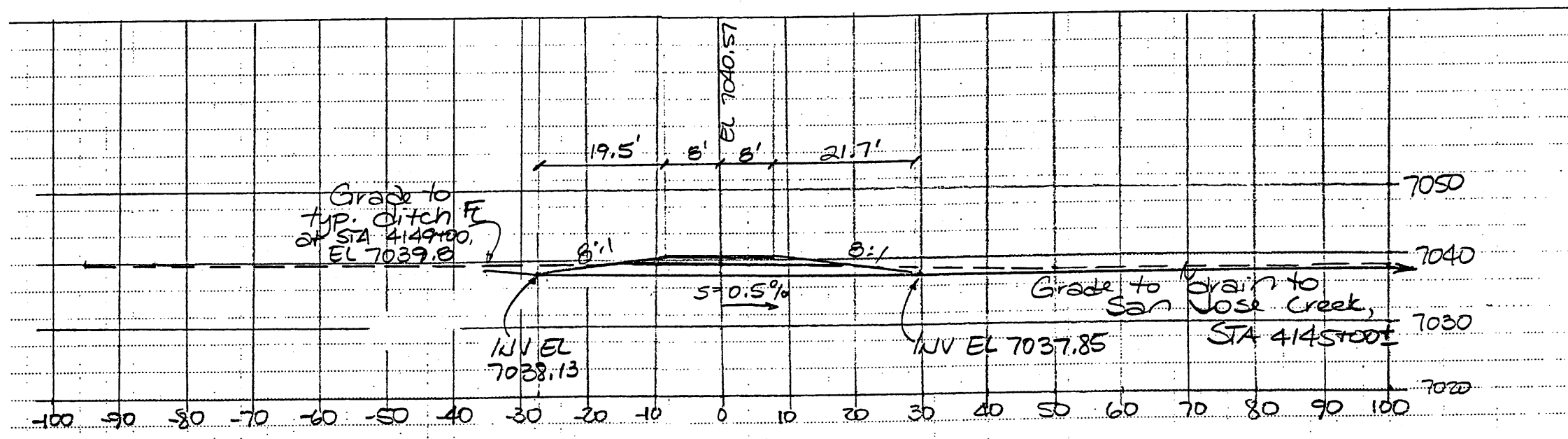
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W/4
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 4/11/01
 CW 3766

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STRUCTURE
PLACEMENT
CENTR. 1

01/14/14
AC-NH-0442(39)64
FPHM
CN 3766



TD 4.39 B

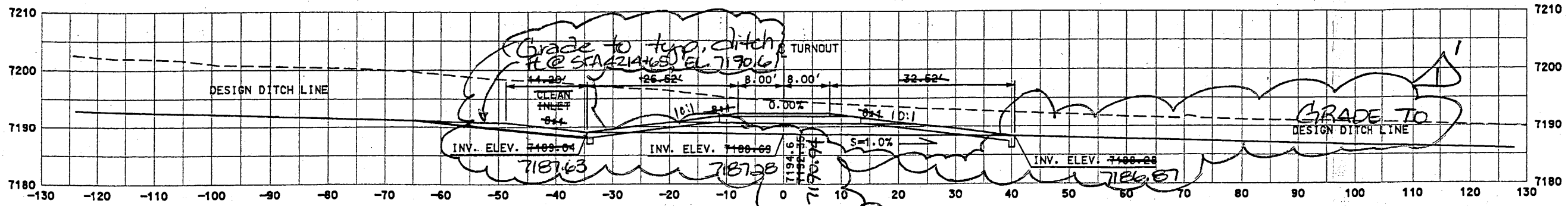
STA 4148+80, 70' RT

Build 1-24" x 57' culvert pipe
Build end sections, LT & RT

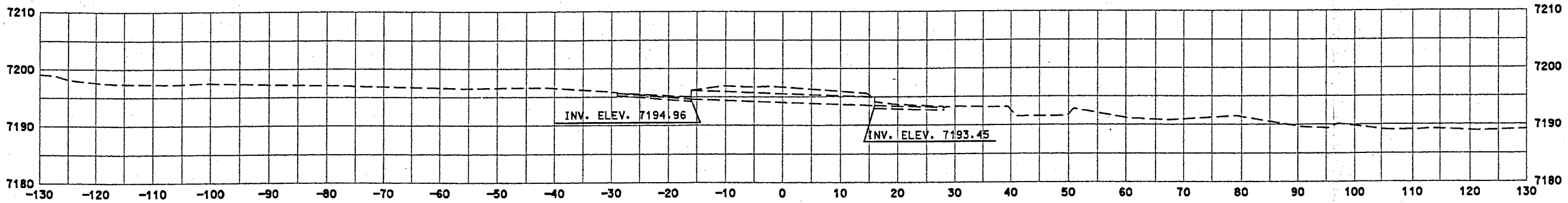
STD DWG: BNC.001.03, BNC.003.01,
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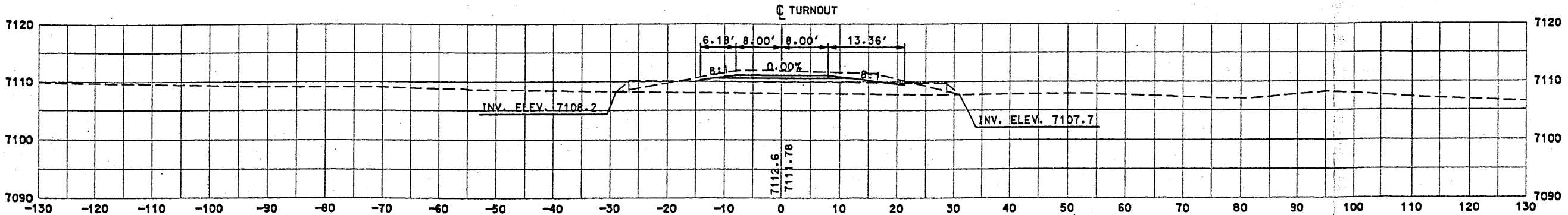
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TD4-46 STA. 4215+25 - 52' LT.
 BUILD 1-24" x 75' CULVERT PIPE SPECIAL END SECTIONS
 BUILD CONC. BLANKETS w/ SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-46A STA. 4214+72 - 23' LT.
 EXIST. 1-18" x 34' CMP
 W/ CONC. PADS LT. & RT.
 TO BE REMOVED



TD4-43 STA. 4167+44.17 - 67' RT.
 EXIST. 1-24" x 60' CMP
 W/ END SECTIONS LT. & RT.
 TO REMAIN IN PLACE

SHEET TITLE

TURNOUT STRUCTURES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

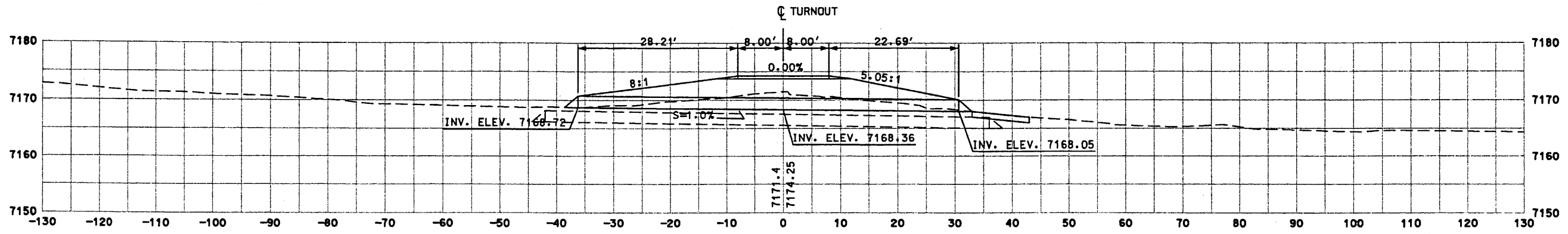
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 CN 3766

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& COMPANY**

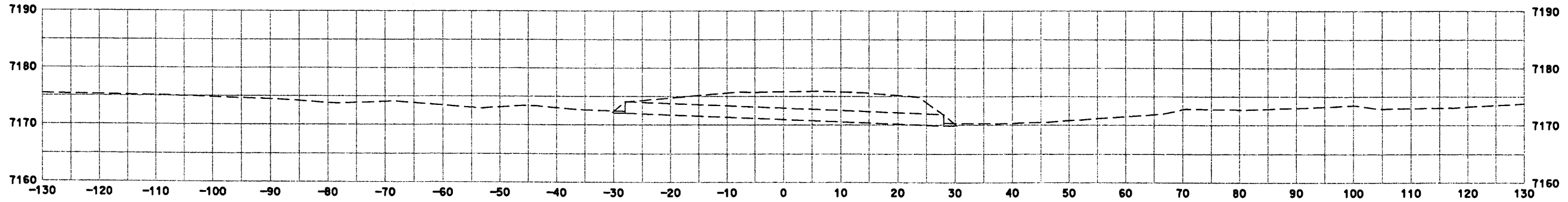
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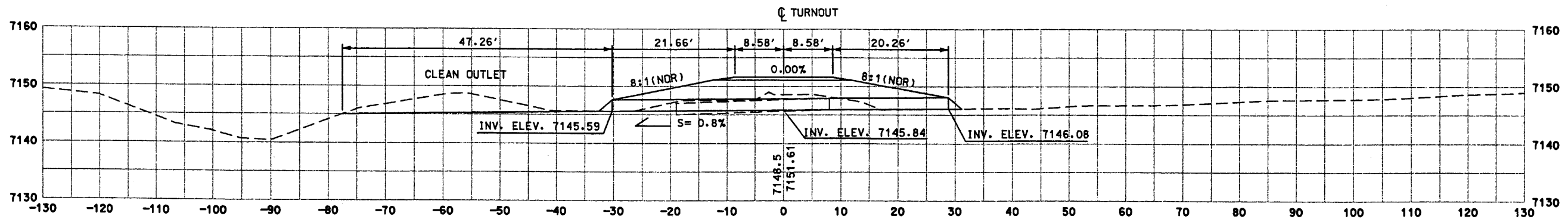
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TD4-49 STA. 4252+37.71 - 78' LT.
 EXIST. 1-24"x78' CMP - 64.5' LT.
 W/END SECTIONS LT. & RT.
 TO BE REMOVED
 BUILD 1-24"x68' CULVERT PIPE
 BUILD END SECTIONS LT. & RT.
 BUILD EROSION CONTROL PAD RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71



TD4-48 STA. 4247+57 - 35' LT.
 EXIST. 1-24"x56' CMP
 W/END SECTIONS LT. & RT.
 TO BE REMOVED



TD4-47 STA. 4224+27.22 - 80' LT.
 EXIST. 1-24"x27' STEEL PIPE - 97' LT.
 TO BE REMOVED
 BUILD 1-24"x60' CULVERT PIPE @ 21'20' RT. FWD.
 BUILD END SECTIONS LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71

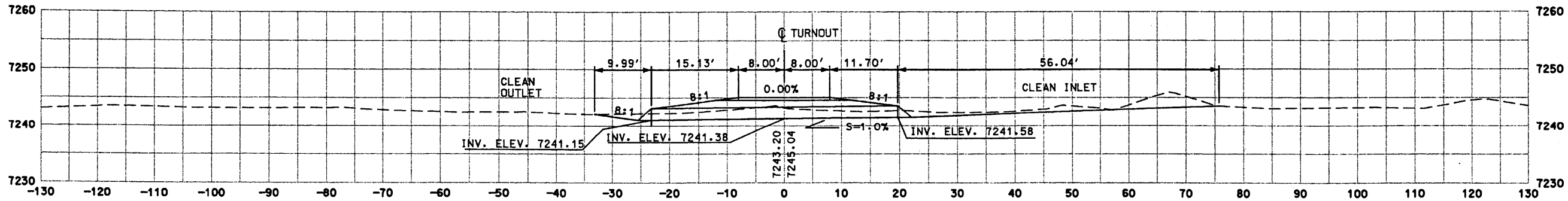
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TURNOUT STRUCTURES
 NEW MEXICO STATE HIGHWAY AND
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 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

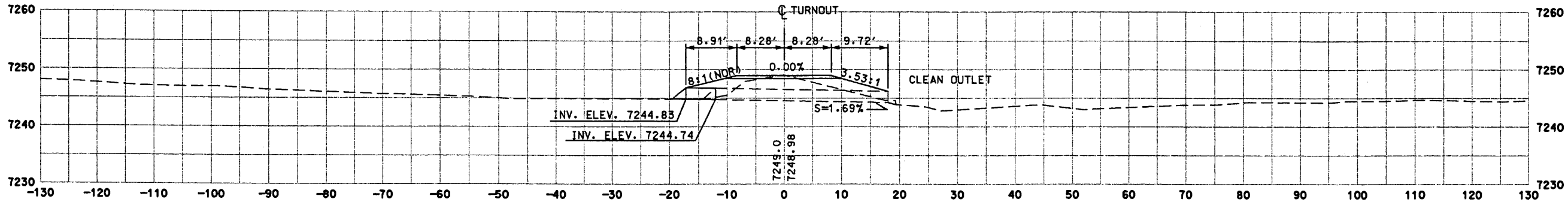
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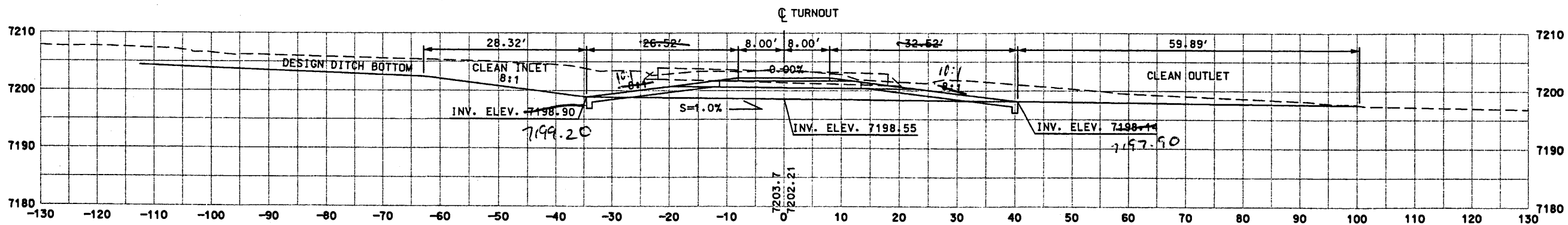
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 Plot Date: 1 NOV 1999



TD4-52 STA. 4329+35.25 - 80' RT.
 BUILD 1-24"x44' CULVERT PIPE
 BUILD END SECTIONS LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71



TD4-51 STA. 4307+33.65 - 137' LT.
 EXIST. 1-24"x30' CMP @ 15° RT. FWD.
 EXTEND LT. w/1-24"x5' CULVERT PIPE @ 15° RT. FWD.
 BUILD END SECTION LT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71



TD4-50 STA. 4259+96.39 - 52' RT.
 EXIST. 1-24"x40' CMP - 58' RT.
 W/END SECTIONS LT. & RT.
 TO BE REMOVED
 BUILD 1-24"x75' CULVERT PIPE SPECIAL END SECTIONS
 BUILD CONC. BLANKETS w/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71

SHEET TITLE

TURNOUT STRUCTURES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

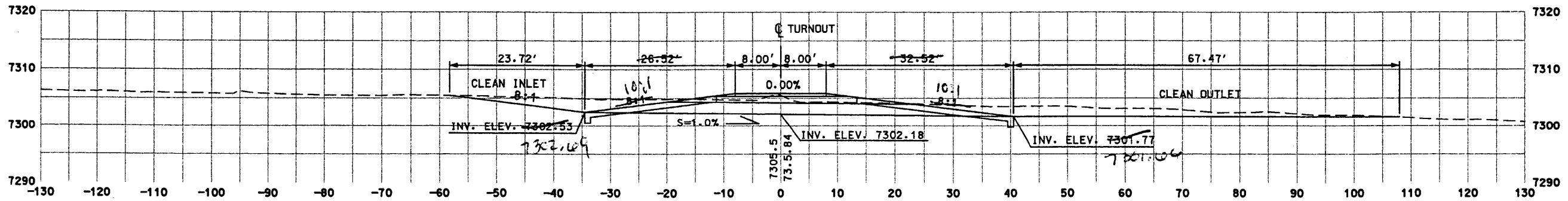
NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

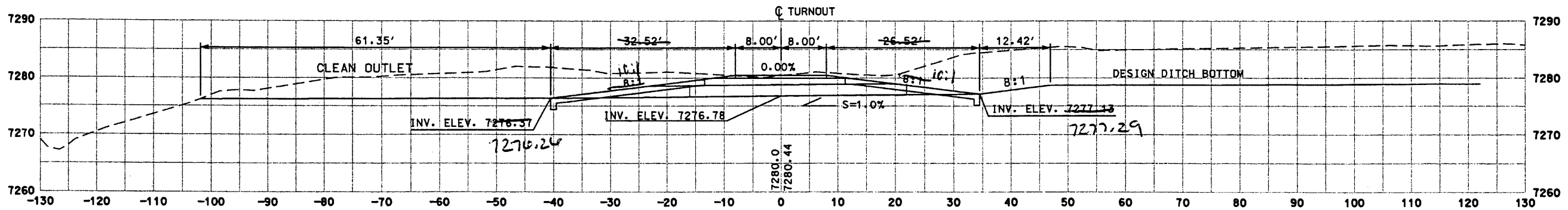
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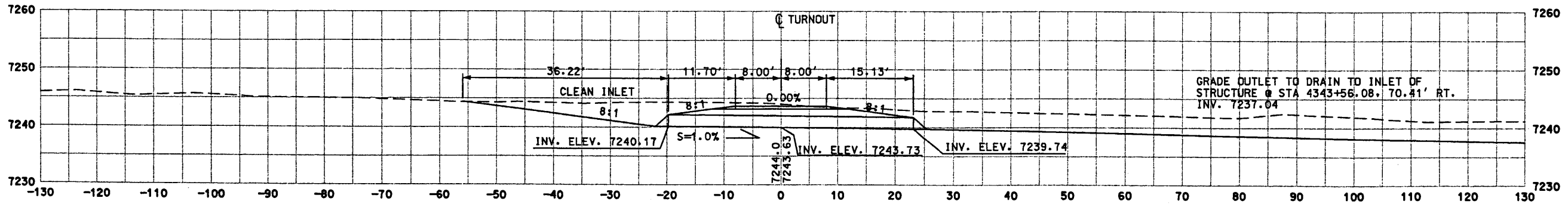
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 Plot Date: NOV 1999



TD4-56 STA. 4394+14.92 - 52' RT.
 BUILD 1-24"x75' CULVERT PIPE SPECIAL END SECTIONS
 BUILD CONG. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-55 STA. 4381+40.59 - 52' LT.
 EXIST. 1-24"x38' CMP - 19' LT. TO BE REMOVED
 BUILD 1-24"x75' CULVERT PIPE SPECIAL END SECTIONS
 BUILD CONG. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-53 STA. 4348+69.58 - 90' RT.
 BUILD 1-24"x44' CULVERT PIPE
 BUILD END SECTIONS LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71

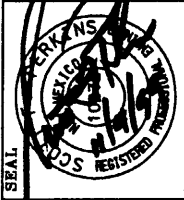
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 TURNOUT STRUCTURES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

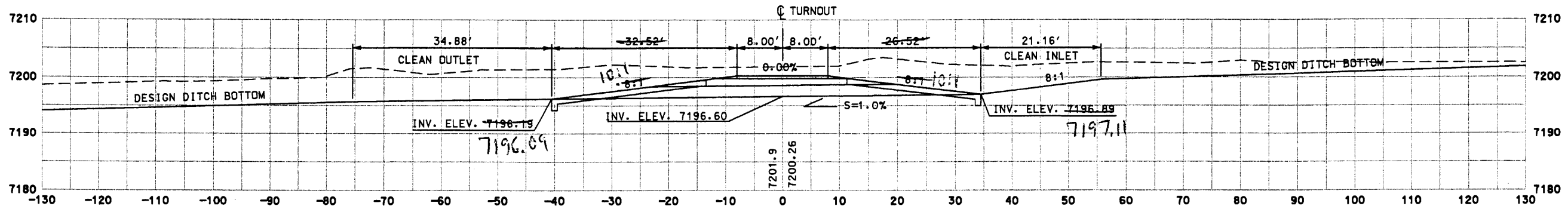
NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766
 NM 44

**WILSON
& COMPANY**

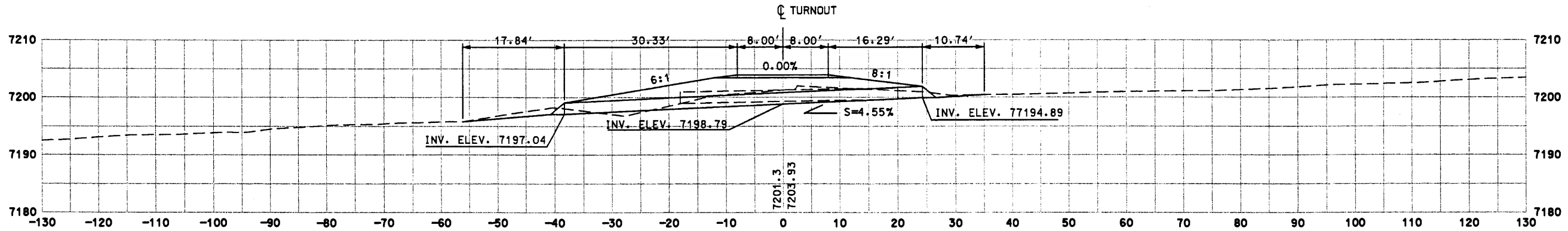
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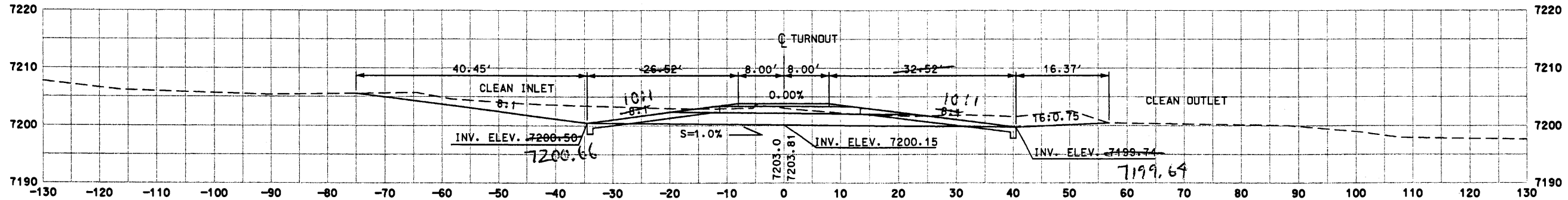
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 Plot Date: 04 NOV 1999



TD4-63 STA. 4517+37.74 - 52' LT.
 BUILD 1-24"x75' CULVERT PIPE
 BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71
SPECIAL END SECTIONS



TD4-61 STA. 4465+83.51 - 62' LT.
 EXIST. 1-24"x38' CMP LT.
 TO BE REMOVED
 BUILD 1-24"x64' CULVERT PIPE
 BUILD END SECTIONS LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71

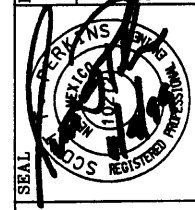


TD4-60 STA. 4465+28.58 - 52' RT.
 BUILD 1-24"x75' CULVERT PIPE
 BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71
SPECIAL END SECTIONS

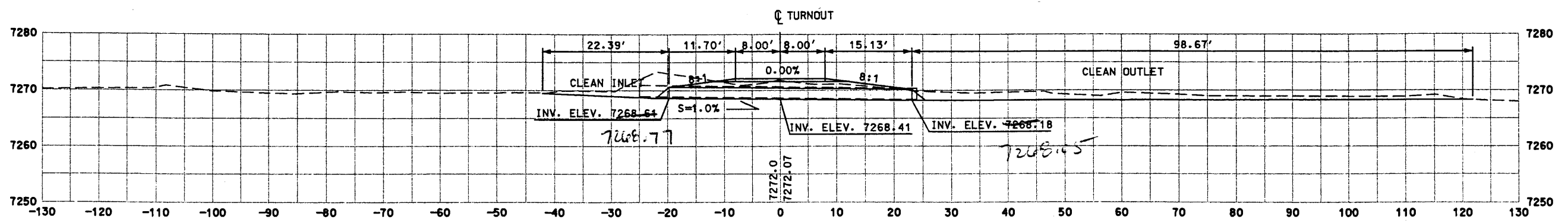
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TURNOUT STRUCTURES
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



DESIGN BY: DDM
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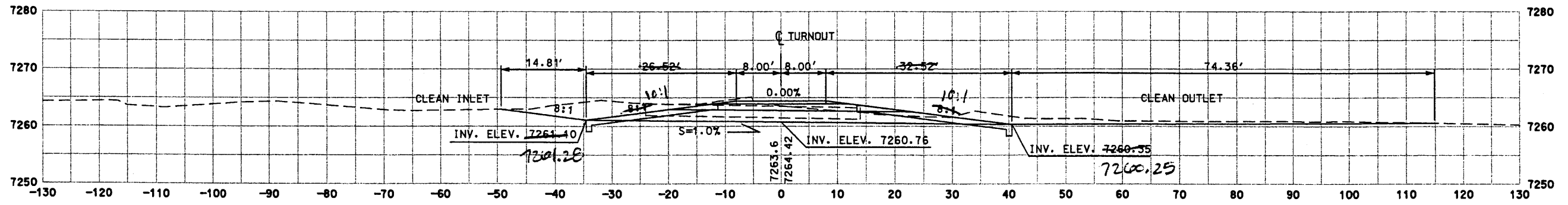


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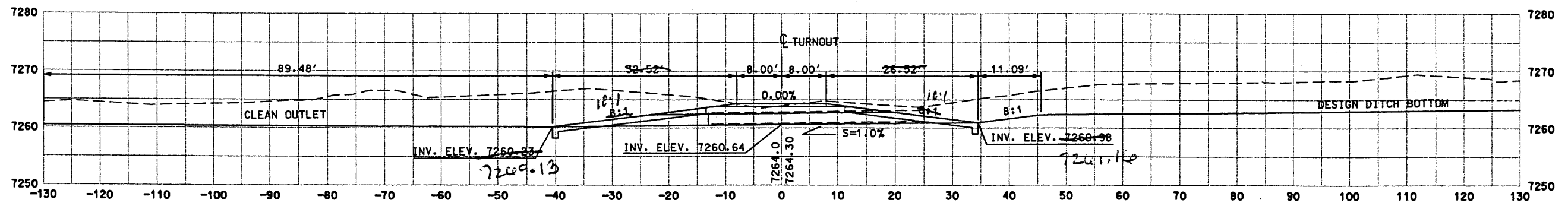
TD4-67 STA. 4575+56.64 - 60' RT.
 EXIST. 1-24"x49' CMP - 60' RT.
 TO BE REMOVED
 BUILD 1-24"x44' CULVERT PIPE
 BUILD END SECTIONS LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71

BUILD SPECIAL ENDS LT & RT



TD4-66 STA. 4569+18.33 - 52' RT.
 EXIST. 1-24"x38' CMP - 58' RT.
 TO BE REMOVED
 BUILD 1-24"x75' CULVERT PIPE
 BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71

SPECIAL END SECTIONS



TD4-65 STA. 4569+17.22 - 52' LT.
 EXIST. 1-24"x38' CMP - 18' LT.
 TO BE REMOVED
 BUILD 1-24"x75' CULVERT PIPE
 BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71

SPECIAL END SECTIONS

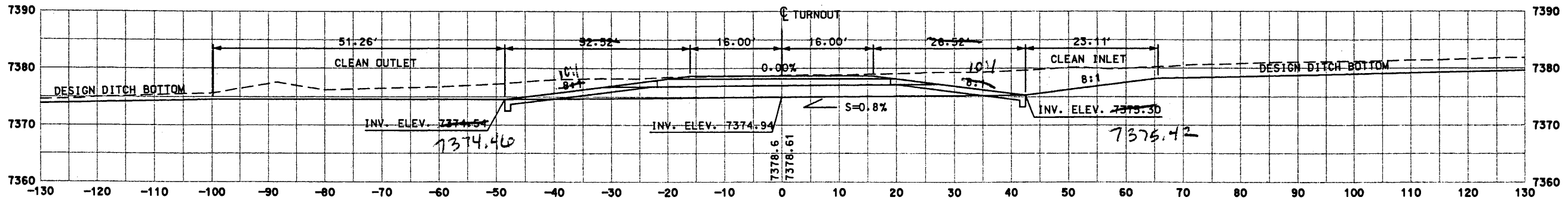
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 TURNOUT STRUCTURES
 NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



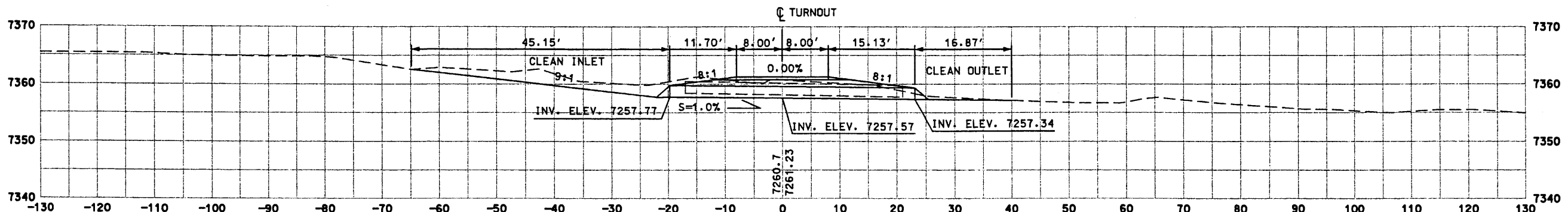
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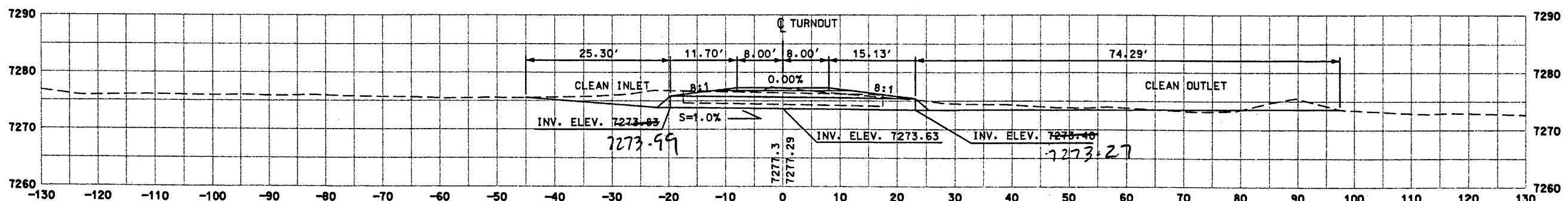
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 Plot Date: 04 NOV 1999



TD4-71 STA. 4624+60.50 - 52' LT.
 BUILD 1-24"x91' CULVERT PIPE SPECIAL END SECTIONS
 BUILD CONC. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-70 STA. 4616+10.45 - 71' RT.
 EXIST. 1-24"x38' CMP - 71' RT.
 TO BE REMOVED
 BUILD 1-24"x44' CULVERT PIPE
 BUILD END SECTIONS LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71



TD4-69 STA. 4581+51.58 - 59' RT.
 EXIST. 1-24"x35' CMP - 58' RT.
 TO BE REMOVED
 BUILD 1-24"x44' CULVERT PIPE
 BUILD END SECTIONS LT. & RT.
 BUILD SPCL E/S LT. & RT.
 STD DWG: BMC-001-03, BMC-003-01, BMC-005-01, ES-1, M-16-71

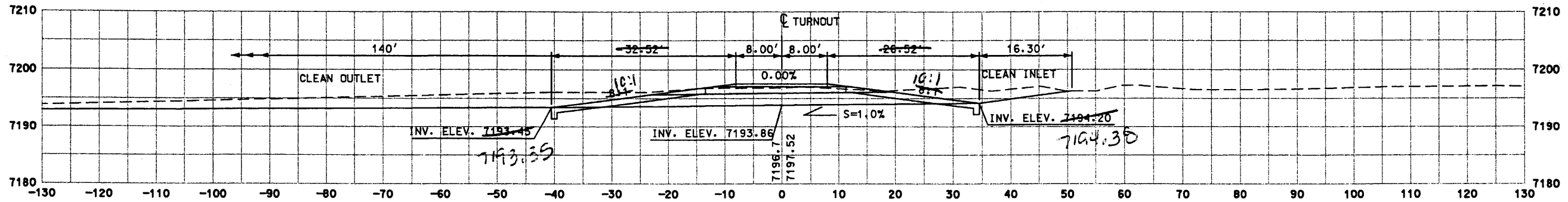
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 NEW MEXICO STATE HIGHWAY AND
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 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766



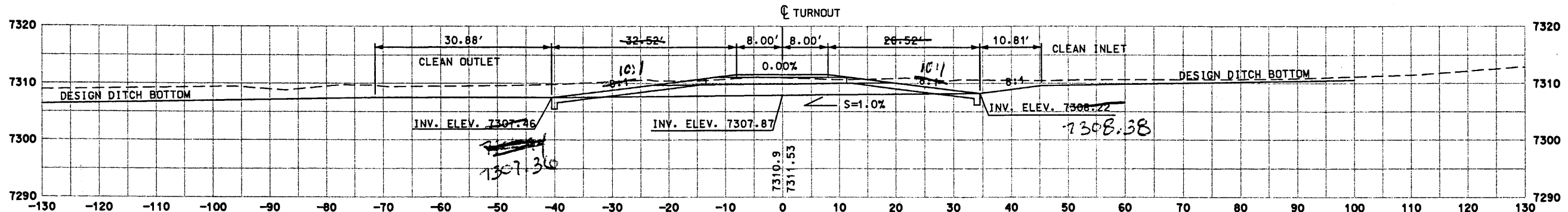
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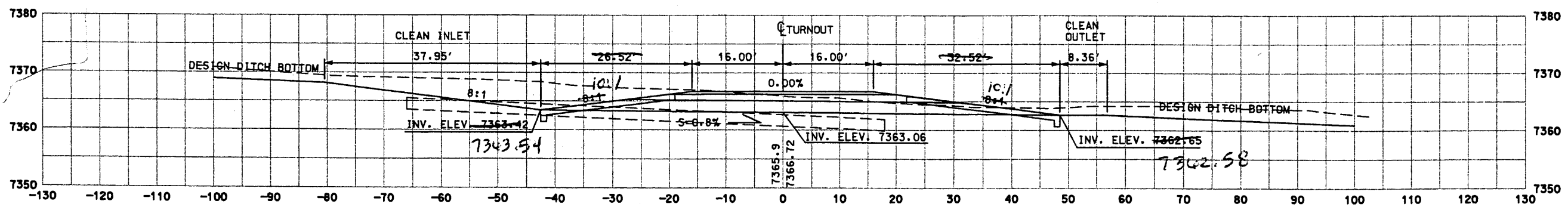
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 Plot Date: 04 NOV 1999



TD4-74 STA. 4691+49.43 - 52' RT. **SPECIAL END SECTIONS**
 BUILD 1-24"x75' CULVERT PIPE
 BUILD CONG. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-73 STA. 4654+03.32 - 52' RT. **SPECIAL END SECTIONS**
 BUILD 1-24"x75' CULVERT PIPE
 BUILD CONG. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-72 STA. 4634+04.14 - 52' LT. **SPECIAL END SECTIONS**
 EXIST. 1-24"x84' CMP - 48' LT.
 W/END SECTIONS LT. & LT.
 TO BE REMOVED
 BUILD 1-24"x91' CULVERT PIPE
 BUILD CONG. BLANKETS W/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71

SHEET TITLE

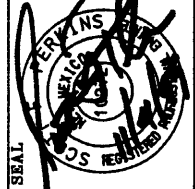
TURNOUT STRUCTURES

NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

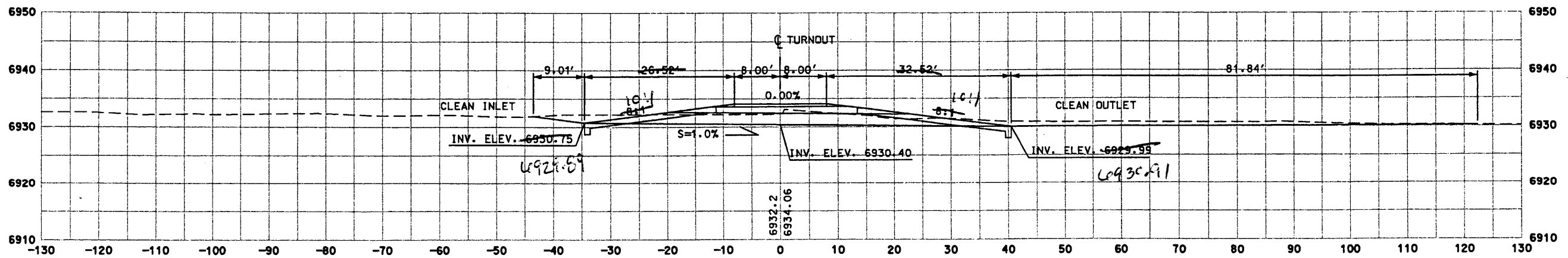
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 CN 3766



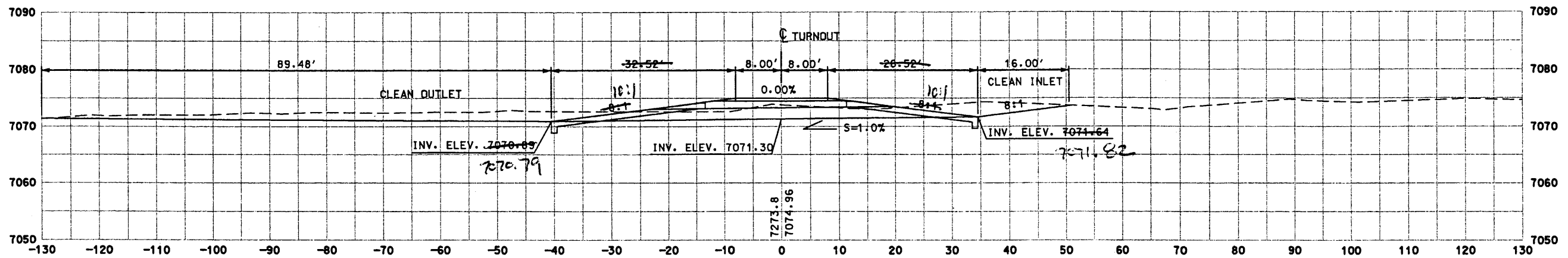
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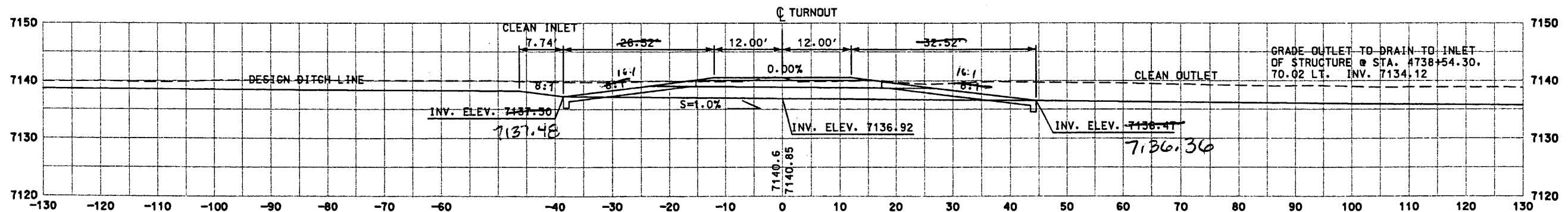
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 Plot Date: 01/05/1999



TD4-77 STA. 4950+96.79 - 52' LT. SPECIAL END SECTIONS
 BUILD 1-24"x75' CULVERT PIPE
 BUILD CONC. BLANKETS w/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-76A STA. 4807+18.97 - 55' LT. SPECIAL END SECTIONS
 BUILD 1-24"x75' CULVERT PIPE
 BUILD CONC. BLANKETS w/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71



TD4-75 STA. 4735+57.49 - 52' LT. SPECIAL END SECTIONS
 BUILD 1-24"x83' CULVERT PIPE
 BUILD CONC. BLANKETS w/SAFETY GRATES LT. & RT.
 STD DWG: BBG-029, BMC-001-03, BMC-003-01, BMC-005-01, M-16-71

SHEET TITLE

TURNOUT STRUCTURES

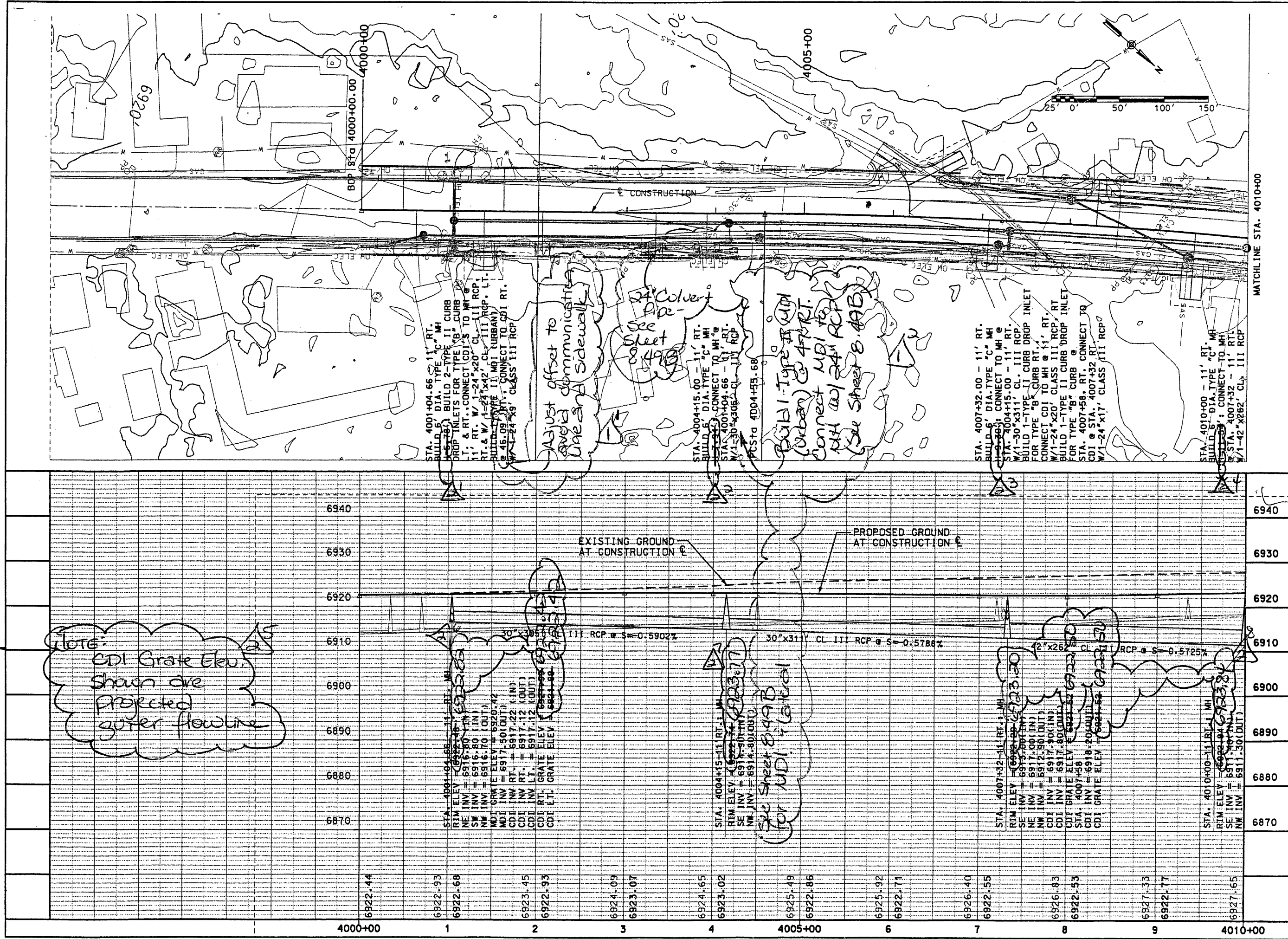
NEW MEXICO STATE HIGHWAY AND
 TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

**WILSON
& COMPANY**

DESIGN BY: DDM
 DRAWN BY: STAFF
 CHECKED BY: SFP





SEAL:

DESIGN BY: DDM
 DRAWN BY: RAG
 CHECKED BY: SFP

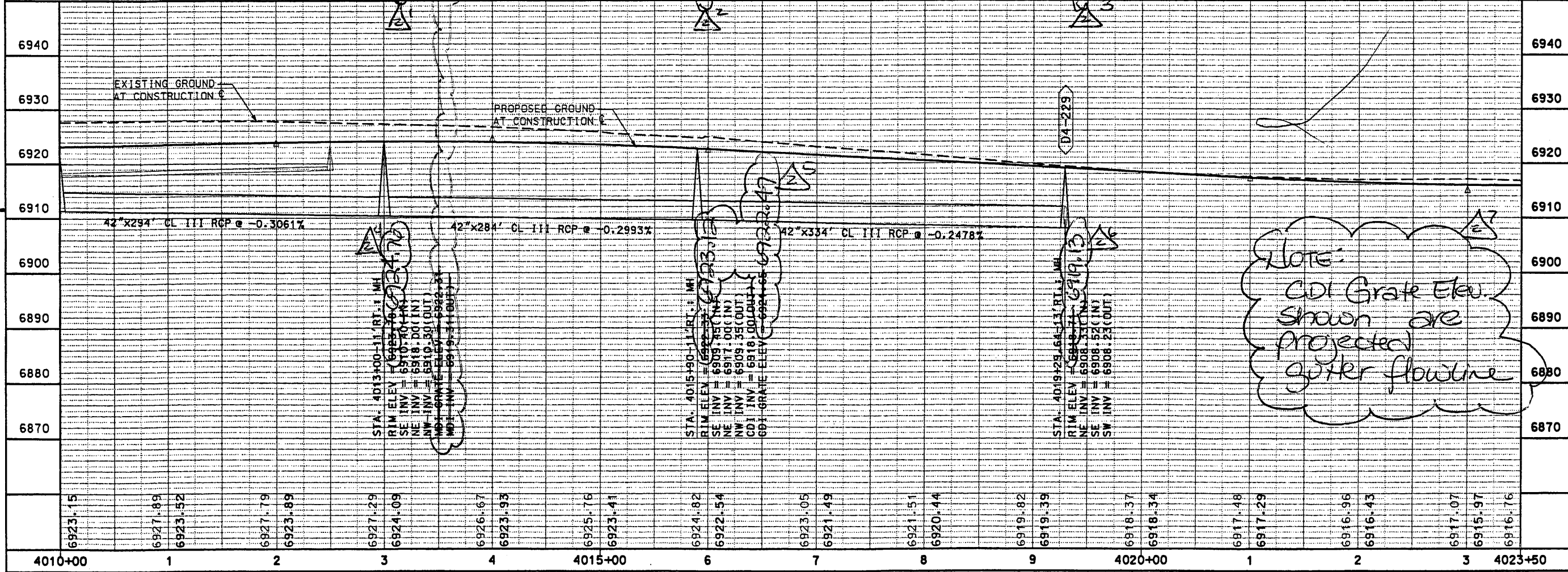
9-1

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

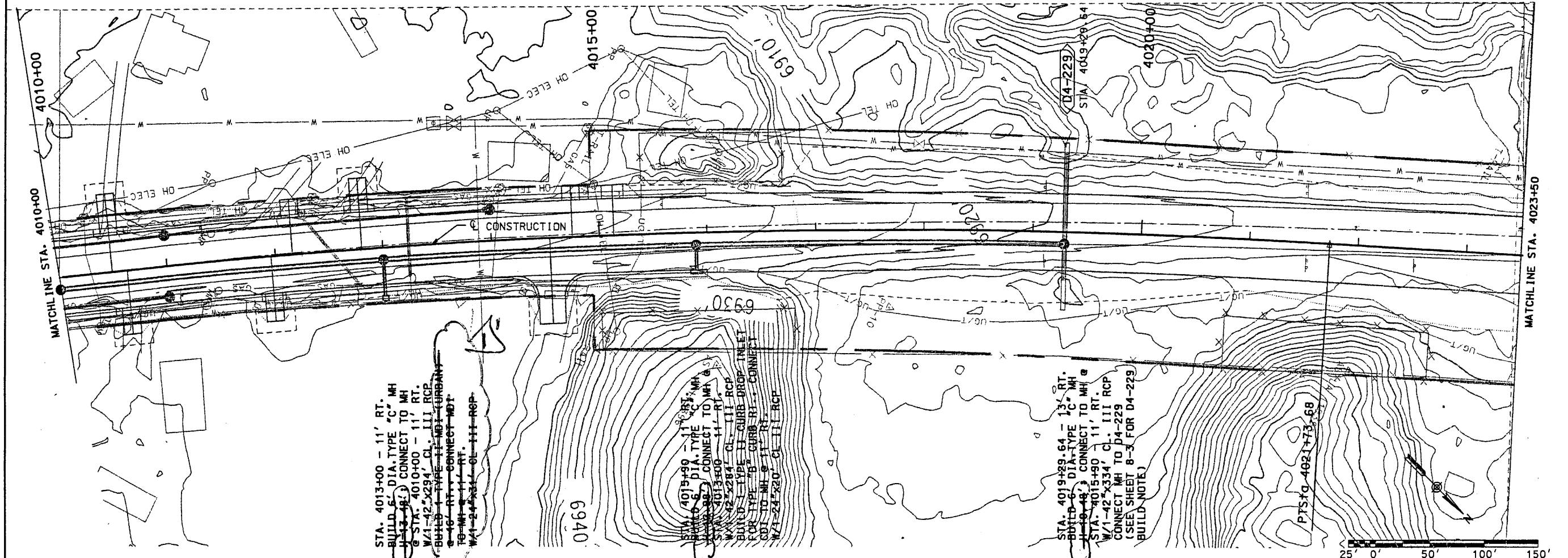
NEW MEXICO PROJECT NO AC-NH-044-2(3)964
 NM 44
 CN 3766

SHEET TITLE
 STORM DRAIN PLAN & PROFILE
 STATION 4000+00
 TO
 STATION 4010+00

MATCHLINE STA. 4010+00



NOTE:
 CDI Grate Elev.
 shown are
 projected
 gutter flowline



SEAL

DESIGN BY: DDM
 DRAWN BY: RAG
 CHECKED BY: SFP

WILSON & COMPANY

NEW MEXICO PROJECT NO AC-NH-044-2(39)164
 CN 3766

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

STORM DRAIN PLAN & PROFILE
 STATION 4010+00 TO STATION 4023+50

SHEET TITLE

PROJECT NO. AC-NH-044.2(39)64
CN NO. 3766
PACKAGE NO. 4
SHEET NO. 9.2, Storm Drain P&P, STA 4010+00 to STA 4023+50

NO.	REVISION	DATE	BY
1	Delete MD @ STA 4013+00	9.4.01	FSC/FNF-0478
2	Revise MH's & CDI's for PGL		
	Revision, 4000+00 to 4026+00	10.6.01	FSC/FNF-0537

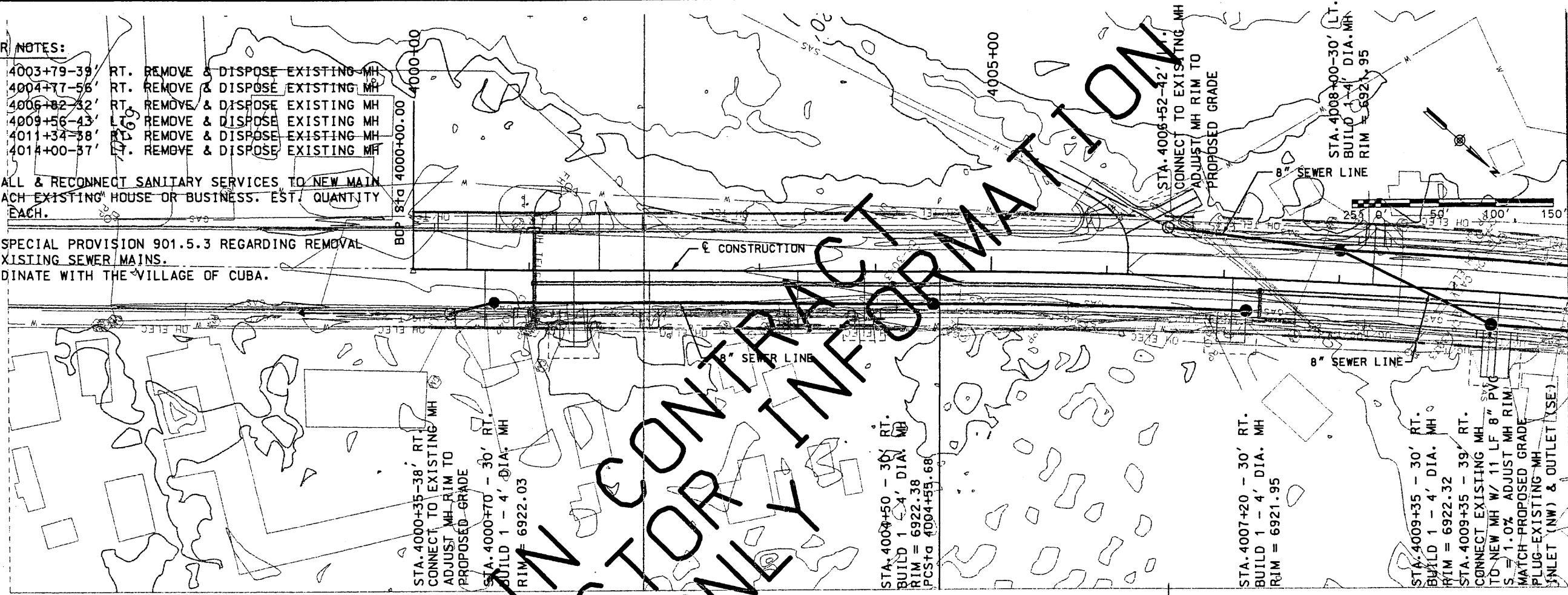
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 Plot Date: XX/XX/XX

SEWER NOTES:

- STA. 4003+79-39 RT. REMOVE & DISPOSE EXISTING MH
- STA. 4004+77-56 RT. REMOVE & DISPOSE EXISTING MH
- STA. 4006+82-32 RT. REMOVE & DISPOSE EXISTING MH
- STA. 4009+56-43 LT. REMOVE & DISPOSE EXISTING MH
- STA. 4011+34-38 RT. REMOVE & DISPOSE EXISTING MH
- STA. 4014+00-37 LT. REMOVE & DISPOSE EXISTING MH

INSTALL & RECONNECT SANITARY SERVICES TO NEW MAIN AT EACH EXISTING HOUSE OR BUSINESS. EST. QUANTITY - 11 EACH.

SEE SPECIAL PROVISION 901.5.3 REGARDING REMOVAL OF EXISTING SEWER MAINS. COORDINATE WITH THE VILLAGE OF CUBA.



FOR CONTRACTOR ONLY INFORMATION

Station	Manhole	Notes	Inventory	Notes	Inventory	Notes	Inventory	Notes	Inventory	Notes	Inventory	Notes	Inventory	Notes	Inventory	Notes	Inventory	Notes	Inventory	Notes	Inventory		
6890	6922.44	STA. 4000+35 RT. CONNECT TO EXISTING MH	13.84	EXISTING 8" SEWER LINE	13.55	EXISTING MH	13.55	EXISTING 8" SEWER LINE	13.55	EXISTING MH	13.55	EXISTING MH	13.55	EXISTING MH	13.55	EXISTING MH	13.55	EXISTING MH	13.55	EXISTING MH	13.55	EXISTING MH	13.55
6920	6922.93	STA. 4000+70 RT. BUILD 1-4' DIA. MH	14.05	EXISTING 8" SEWER LINE	14.45	EXISTING MH	14.45	EXISTING 8" SEWER LINE	14.45	EXISTING MH	14.45	EXISTING MH	14.45	EXISTING MH	14.45	EXISTING MH	14.45	EXISTING MH	14.45	EXISTING MH	14.45	EXISTING MH	14.45
6930	6922.68	STA. 4000+70 RT. BUILD 1-4' DIA. MH	14.15	EXISTING 8" SEWER LINE	14.55	EXISTING MH	14.55	EXISTING 8" SEWER LINE	14.55	EXISTING MH	14.55	EXISTING MH	14.55	EXISTING MH	14.55	EXISTING MH	14.55	EXISTING MH	14.55	EXISTING MH	14.55	EXISTING MH	14.55
6940	6923.45		6923.45	EXISTING 8" SEWER LINE	6923.45	EXISTING MH	6923.45	EXISTING 8" SEWER LINE	6923.45	EXISTING MH	6923.45	EXISTING MH	6923.45	EXISTING MH	6923.45	EXISTING MH	6923.45	EXISTING MH	6923.45	EXISTING MH	6923.45	EXISTING MH	6923.45
6950	6922.93		6922.93	EXISTING 8" SEWER LINE	6922.93	EXISTING MH	6922.93	EXISTING 8" SEWER LINE	6922.93	EXISTING MH	6922.93	EXISTING MH	6922.93	EXISTING MH	6922.93	EXISTING MH	6922.93	EXISTING MH	6922.93	EXISTING MH	6922.93	EXISTING MH	6922.93
6960	6924.09		6924.09	EXISTING 8" SEWER LINE	6924.09	EXISTING MH	6924.09	EXISTING 8" SEWER LINE	6924.09	EXISTING MH	6924.09	EXISTING MH	6924.09	EXISTING MH	6924.09	EXISTING MH	6924.09	EXISTING MH	6924.09	EXISTING MH	6924.09	EXISTING MH	6924.09
6970	6923.07		6923.07	EXISTING 8" SEWER LINE	6923.07	EXISTING MH	6923.07	EXISTING 8" SEWER LINE	6923.07	EXISTING MH	6923.07	EXISTING MH	6923.07	EXISTING MH	6923.07	EXISTING MH	6923.07	EXISTING MH	6923.07	EXISTING MH	6923.07	EXISTING MH	6923.07
6980	6924.65		6924.65	EXISTING 8" SEWER LINE	6924.65	EXISTING MH	6924.65	EXISTING 8" SEWER LINE	6924.65	EXISTING MH	6924.65	EXISTING MH	6924.65	EXISTING MH	6924.65	EXISTING MH	6924.65	EXISTING MH	6924.65	EXISTING MH	6924.65	EXISTING MH	6924.65
6990	6923.02		6923.02	EXISTING 8" SEWER LINE	6923.02	EXISTING MH	6923.02	EXISTING 8" SEWER LINE	6923.02	EXISTING MH	6923.02	EXISTING MH	6923.02	EXISTING MH	6923.02	EXISTING MH	6923.02	EXISTING MH	6923.02	EXISTING MH	6923.02	EXISTING MH	6923.02
7000	6925.49		6925.49	EXISTING 8" SEWER LINE	6925.49	EXISTING MH	6925.49	EXISTING 8" SEWER LINE	6925.49	EXISTING MH	6925.49	EXISTING MH	6925.49	EXISTING MH	6925.49	EXISTING MH	6925.49	EXISTING MH	6925.49	EXISTING MH	6925.49	EXISTING MH	6925.49
7010	6922.86		6922.86	EXISTING 8" SEWER LINE	6922.86	EXISTING MH	6922.86	EXISTING 8" SEWER LINE	6922.86	EXISTING MH	6922.86	EXISTING MH	6922.86	EXISTING MH	6922.86	EXISTING MH	6922.86	EXISTING MH	6922.86	EXISTING MH	6922.86	EXISTING MH	6922.86
7020	6925.92		6925.92	EXISTING 8" SEWER LINE	6925.92	EXISTING MH	6925.92	EXISTING 8" SEWER LINE	6925.92	EXISTING MH	6925.92	EXISTING MH	6925.92	EXISTING MH	6925.92	EXISTING MH	6925.92	EXISTING MH	6925.92	EXISTING MH	6925.92	EXISTING MH	6925.92
7030	6922.71		6922.71	EXISTING 8" SEWER LINE	6922.71	EXISTING MH	6922.71	EXISTING 8" SEWER LINE	6922.71	EXISTING MH	6922.71	EXISTING MH	6922.71	EXISTING MH	6922.71	EXISTING MH	6922.71	EXISTING MH	6922.71	EXISTING MH	6922.71	EXISTING MH	6922.71
7040	6926.40		6926.40	EXISTING 8" SEWER LINE	6926.40	EXISTING MH	6926.40	EXISTING 8" SEWER LINE	6926.40	EXISTING MH	6926.40	EXISTING MH	6926.40	EXISTING MH	6926.40	EXISTING MH	6926.40	EXISTING MH	6926.40	EXISTING MH	6926.40	EXISTING MH	6926.40
7050	6922.55		6922.55	EXISTING 8" SEWER LINE	6922.55	EXISTING MH	6922.55	EXISTING 8" SEWER LINE	6922.55	EXISTING MH	6922.55	EXISTING MH	6922.55	EXISTING MH	6922.55	EXISTING MH	6922.55	EXISTING MH	6922.55	EXISTING MH	6922.55	EXISTING MH	6922.55
7060	6926.83		6926.83	EXISTING 8" SEWER LINE	6926.83	EXISTING MH	6926.83	EXISTING 8" SEWER LINE	6926.83	EXISTING MH	6926.83	EXISTING MH	6926.83	EXISTING MH	6926.83	EXISTING MH	6926.83	EXISTING MH	6926.83	EXISTING MH	6926.83	EXISTING MH	6926.83
7070	6922.53		6922.53	EXISTING 8" SEWER LINE	6922.53	EXISTING MH	6922.53	EXISTING 8" SEWER LINE	6922.53	EXISTING MH	6922.53	EXISTING MH	6922.53	EXISTING MH	6922.53	EXISTING MH	6922.53	EXISTING MH	6922.53	EXISTING MH	6922.53	EXISTING MH	6922.53
7080	6927.33		6927.33	EXISTING 8" SEWER LINE	6927.33	EXISTING MH	6927.33	EXISTING 8" SEWER LINE	6927.33	EXISTING MH	6927.33	EXISTING MH	6927.33	EXISTING MH	6927.33	EXISTING MH	6927.33	EXISTING MH	6927.33	EXISTING MH	6927.33	EXISTING MH	6927.33
7090	6922.77		6922.77	EXISTING 8" SEWER LINE	6922.77	EXISTING MH	6922.77	EXISTING 8" SEWER LINE	6922.77	EXISTING MH	6922.77	EXISTING MH	6922.77	EXISTING MH	6922.77	EXISTING MH	6922.77	EXISTING MH	6922.77	EXISTING MH	6922.77	EXISTING MH	6922.77
7100	6927.65		6927.65	EXISTING 8" SEWER LINE	6927.65	EXISTING MH	6927.65	EXISTING 8" SEWER LINE	6927.65	EXISTING MH	6927.65	EXISTING MH	6927.65	EXISTING MH	6927.65	EXISTING MH	6927.65	EXISTING MH	6927.65	EXISTING MH	6927.65	EXISTING MH	6927.65

MATCH LINE STA. 4010+00

WILSON & COMPANY

DESIGN BY: GRS
 DRAWN BY: RAG
 CHECKED BY: SFP

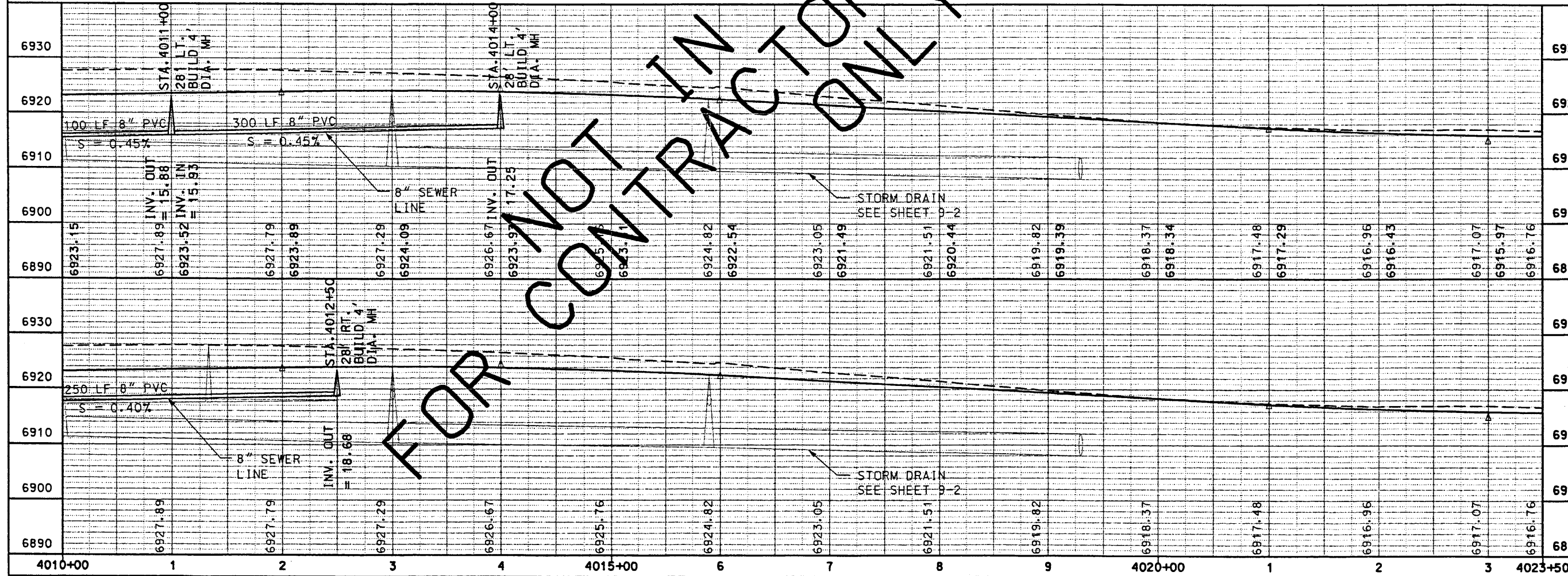
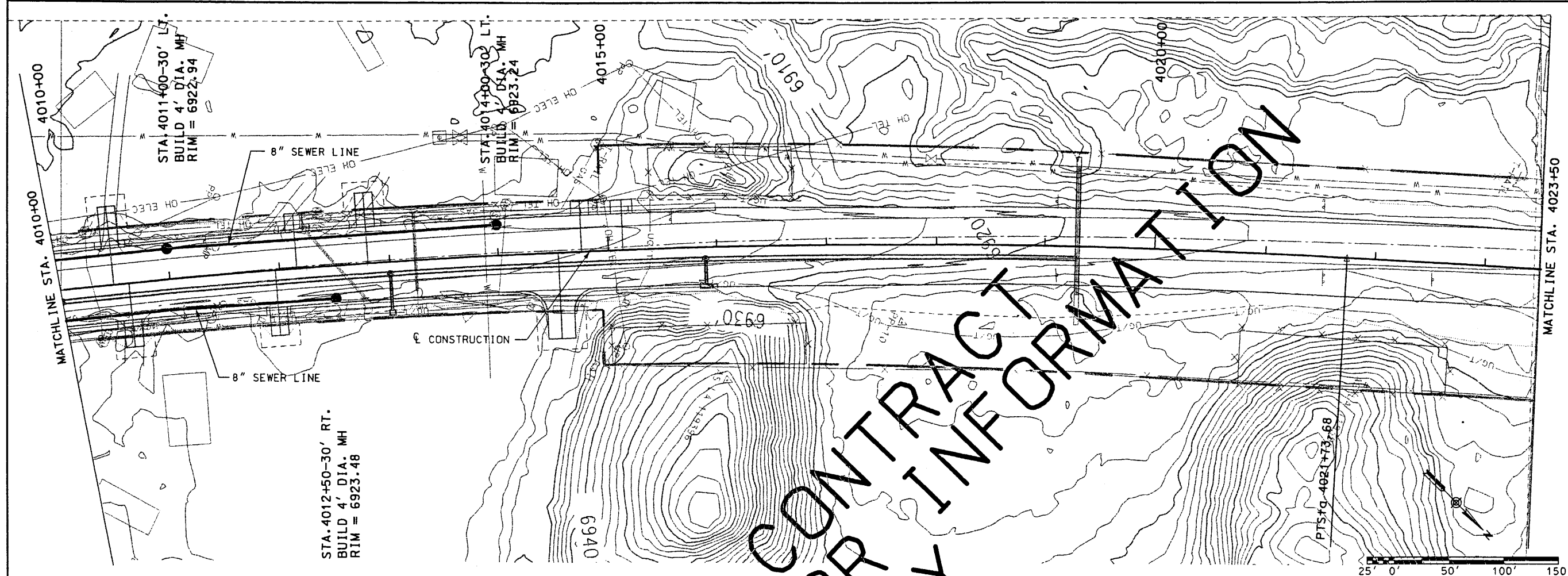
SEAL: [Professional Engineer Seal]


NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

NM 44
 F.H.W.A. REGION NO 6

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 SANITARY SEWER PLAN & PROFILE
 STATION 4000+00 TO STATION 4010+00

Design File: \$XXXXXXXXX.XXX
 Plot Date: \$X/XX/XX



SEAL: 

DESIGN BY: GRS
 DRAWN BY: RAG
 CHECKED BY: SFP

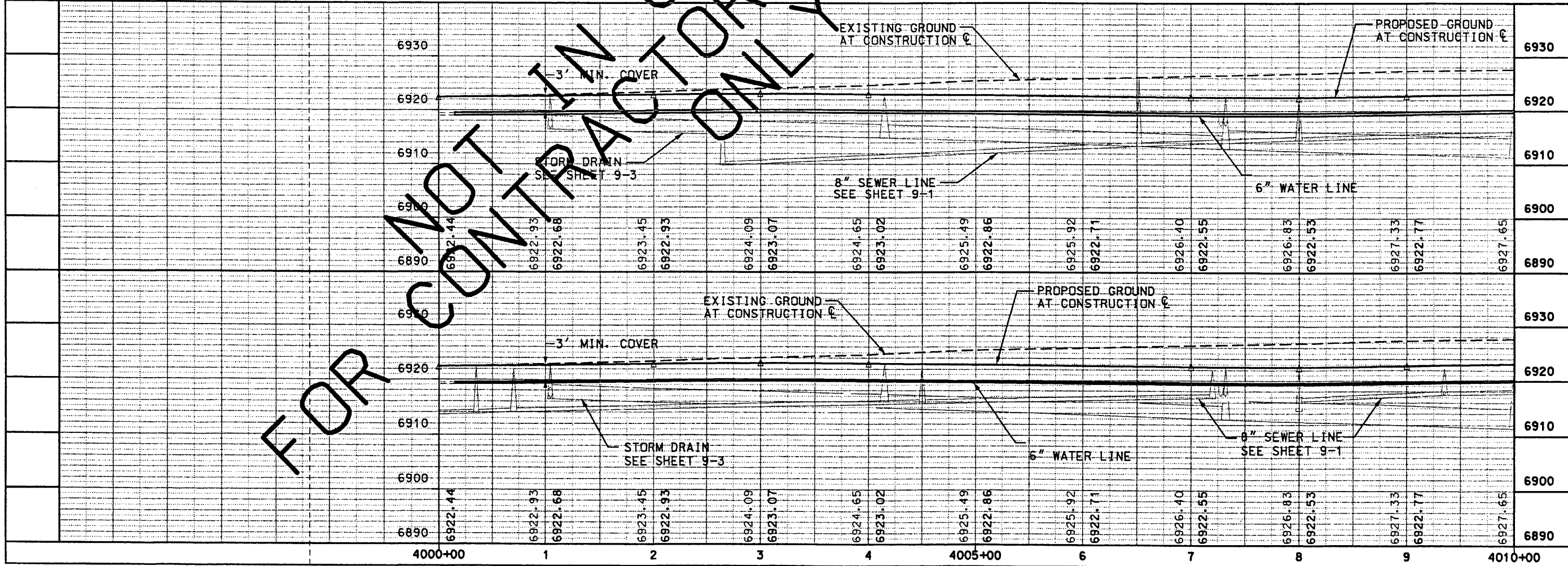
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

NM 44
 TO STATION 4010+00
 FROM STATION 4023+50

SHEET TITLE: SANITARY SEWER PLAN & PROFILE

Design File: *****
 Plot Date: **/**/**



FOR CONTRACTOR ONLY

STA. 4000+15 TO STA. 4010+00-42' LT.
 INSTALL 985 LF 6" PVC WATERLINE
 INSTALL 2-NEW SERVICE CONNECTIONS

STA. 4000+15 TO STA. 4010+00-42' RT.
 INSTALL 985 LF 6" PVC WATERLINE
 REPLACE & TRANSFER TRANSFER 5
 SERVICE CONNECTIONS FROM EXISTING
 WATERLINE TO NEW WATERLINE.

STA. 4000+15 - 42' RT.
 CONNECT TO EXISTING
 WATERLINE

STA. 4000+15 - 42' LT.
 INSTALL 1-6"x6"x6" TEE
 INSTALL 1-6" GATE VALVE
 W/ VALVE BOX
 CONNECT TO EXISTING
 6" WATERLINE

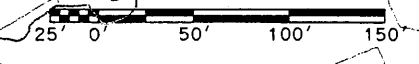
STA. 4004+75 - 42' LT.
 REMOVE & SALVAGE
 EXISTING FH & VALVE
 INSTALL 1-6"x6"x6" TEE
 INSTALL 1-6" GATE VALVE
 W/ VALVE BOX
 INSTALL 1" FIRE HYDRANT

STA. 4004+70
 INSTALL 94 LF 6" PVC
 IN 74 LF (4") STEEL CASING
 INSTALL 1-6" TEE
 PCS TO 4004+53.68

STA. 4004+75 - 42' RT.
 REMOVE & SALVAGE 3-
 EXISTING WATER VALVES
 REMOVE & SALVAGE
 EXISTING FIRE HYDRANT
 INSTALL 1-6" GATE VALVE
 W/ VALVE BOX
 INSTALL 1" FIRE HYDRANT

STA. 4004+70 - 42' LT.
 INSTALL 1-6"x6"x6" TEE

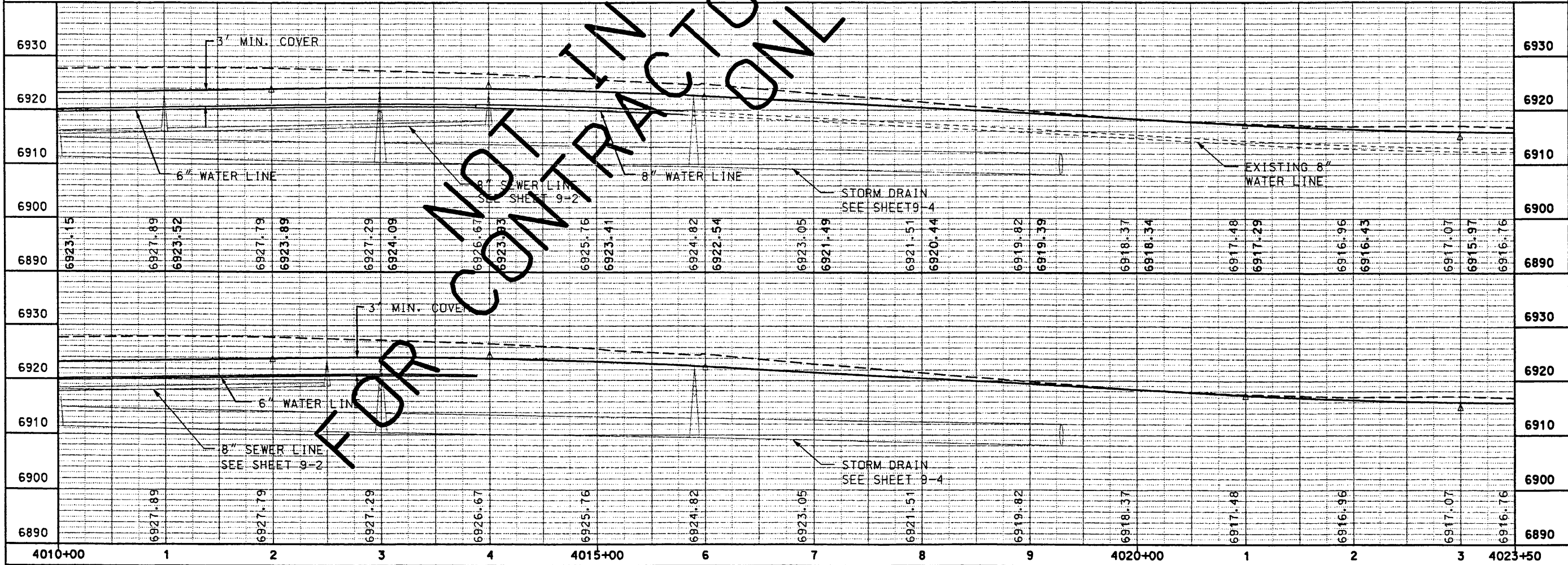
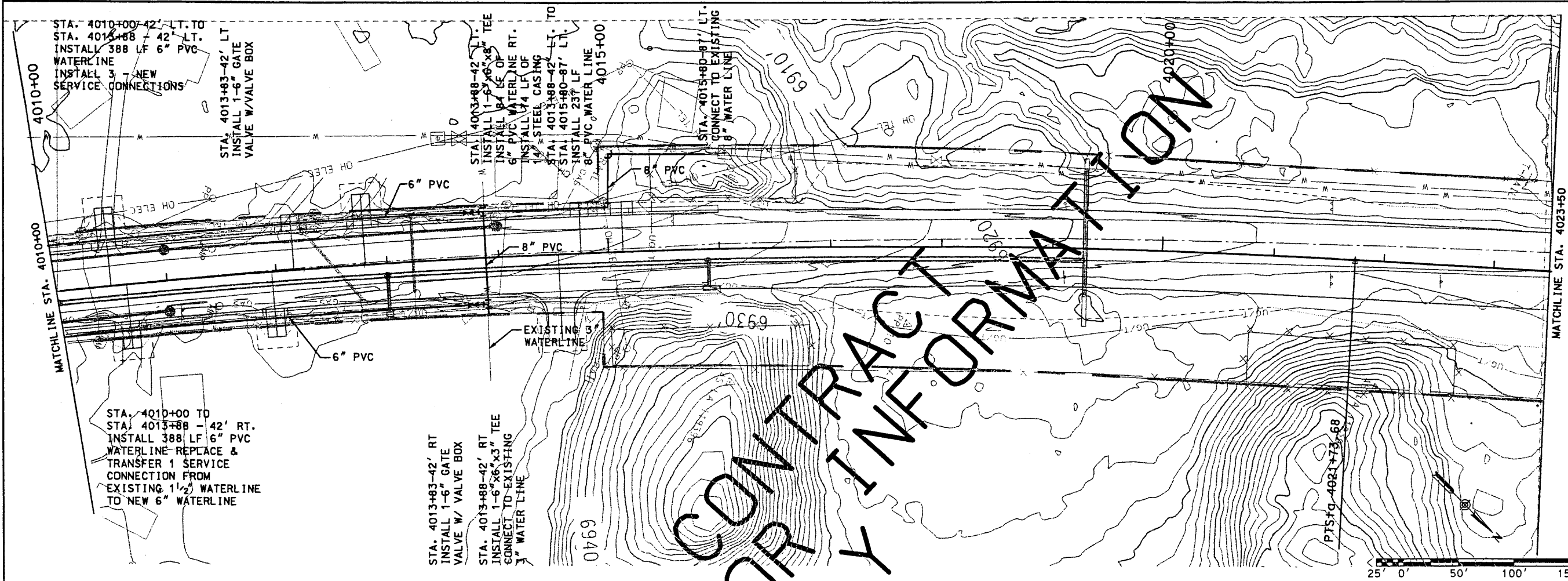
STA. 4005+20 - 42' LT.
 INSTALL 1-6"x2"x6" TEE
 INSTALL 1-2" GATE VALVE
 W/ VALVE BOX
 CONNECT TO EXISTING
 WATER LINE



MATCHLINE STA. 4010+00

SEAL		DESIGN BY: GRS	DRAWN BY: RAG	CHECKED BY: SFP	9-5
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6					
SHEET TITLE WATER PLAN & PROFILE STATION 4000+00 TO STATION 4010+00					
NEW MEXICO PROJECT NO AC-NH-044-2(39)64 NM 44 CN 3766					

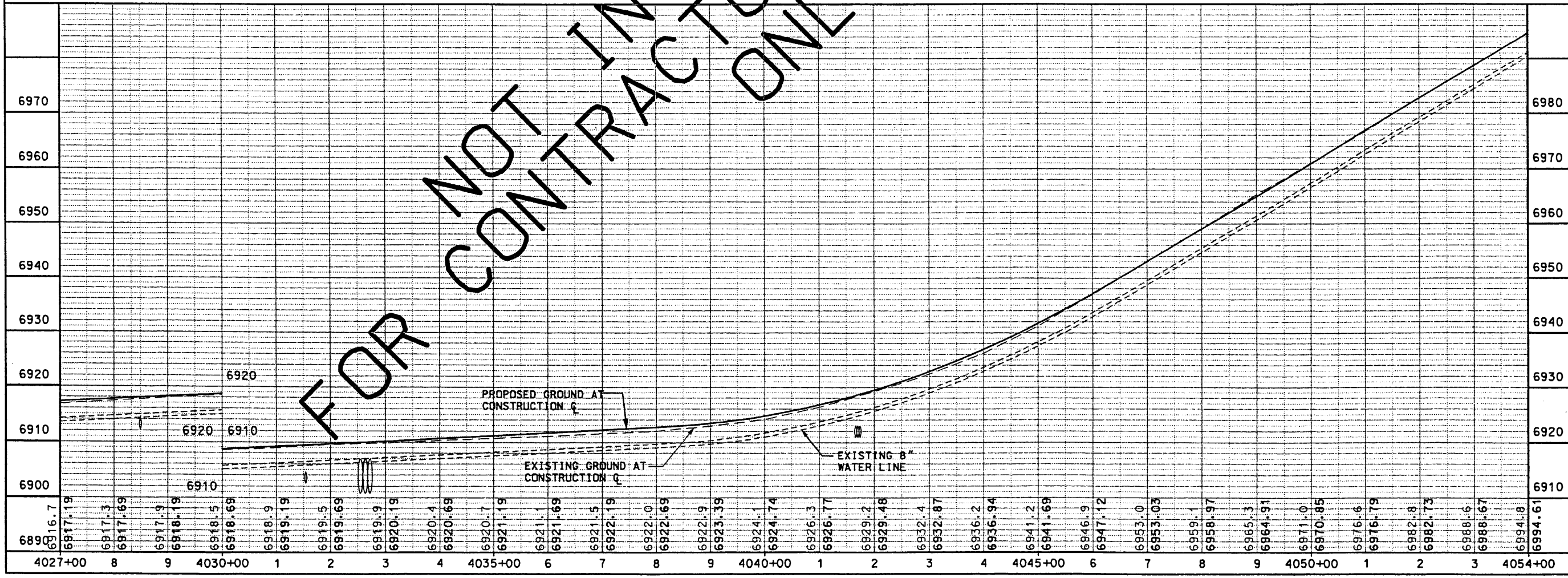
Design Files: XXXXXXXX.XXX
 Plot Dates: XXX/XX/XX



FOR CONTRACTOR ONLY - CONTRACT INFORMATION

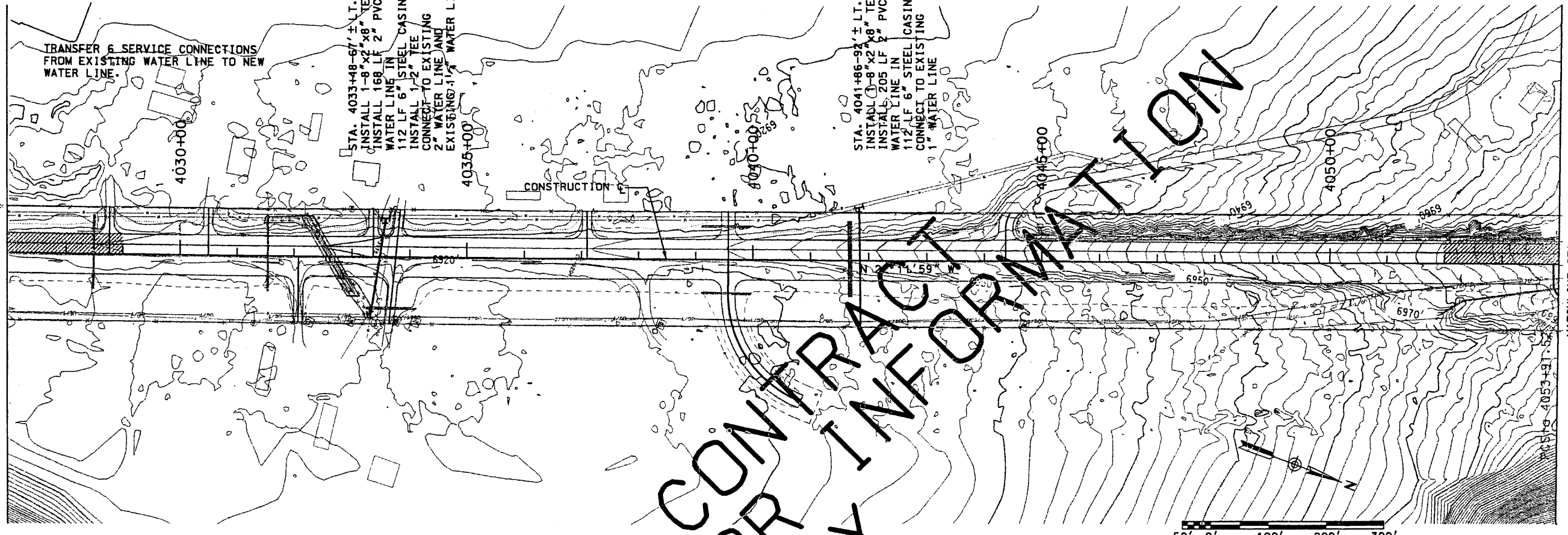
	DESIGN BY: GRS DRAWN BY: RAG CHECKED BY: SFP	WILSON & COMPANY
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6		
SHEET TITLE WATER PLAN & PROFILE STATION 4010+00 TO STATION 4023+50		
NEW MEXICO PROJECT NO AC-NH-044-2(3)9164 CN 3766		

Design File: \$\$\$\$\$\$\$\$\$\$.XXX\$
 Plot Date: \$XX/XX/XX\$



FOR NOT IN CONTRACTOR ONLY INFORMATION

MATCHLINE STA. 4027+00



MATCHLINE STA. 4054+00.00

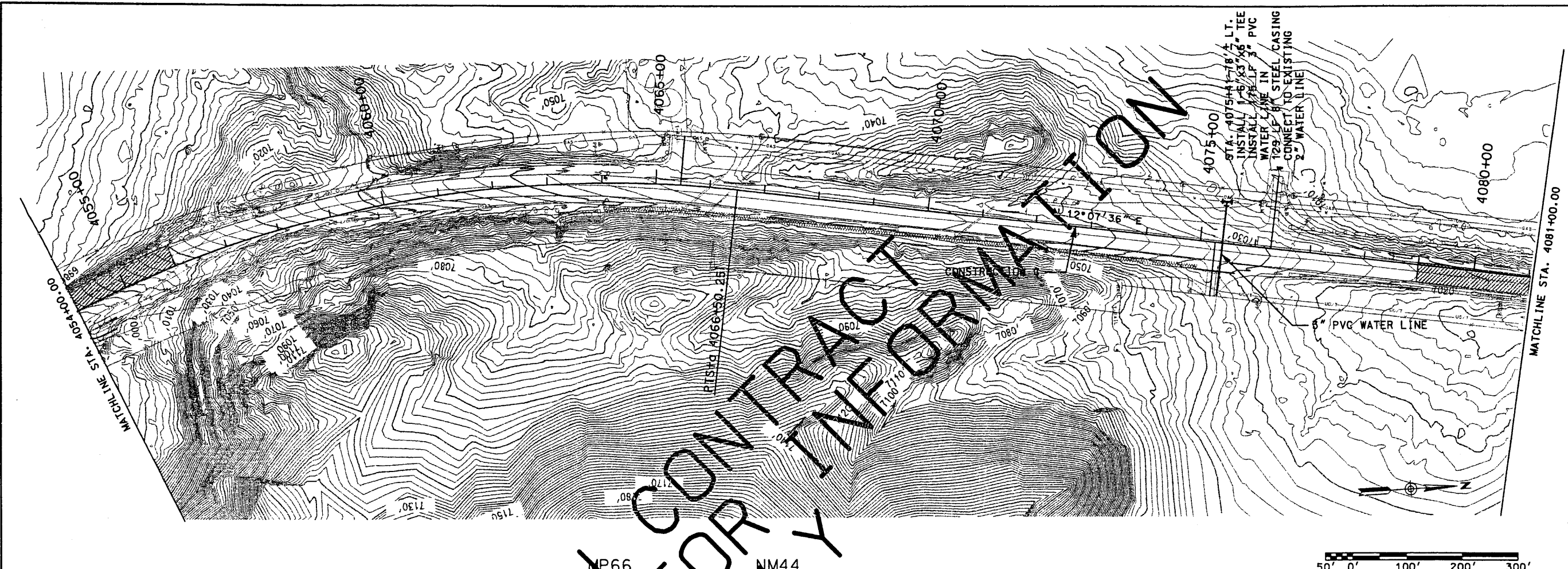
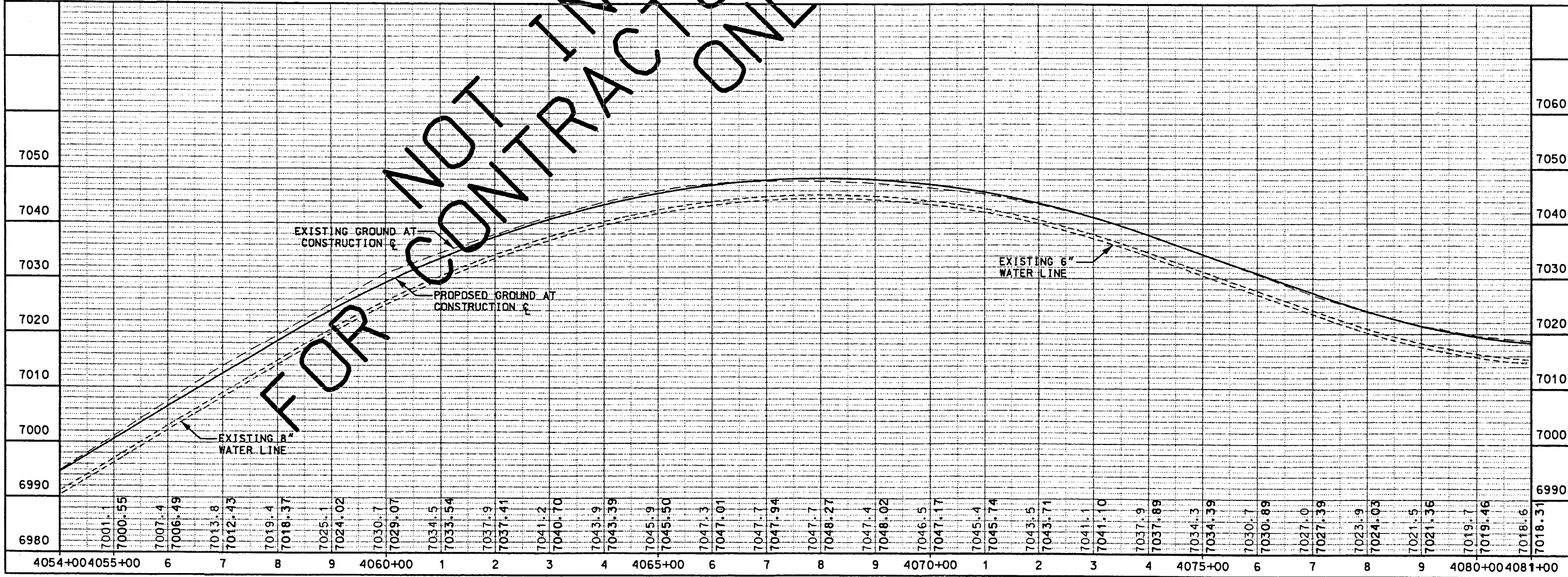
DESIGN BY: GRS
 DRAWN BY: RAG
 CHECKED BY: SFP

WILSON & COMPANY


NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6
 NM 44
 NEW MEXICO PROJECT NO AC-NH-044-2(39)64
 CN 3766

SHEET TITLE
 WATER PLAN & PROFILE
 STATION 4027+00.00
 TO
 STATION 4054+00.00

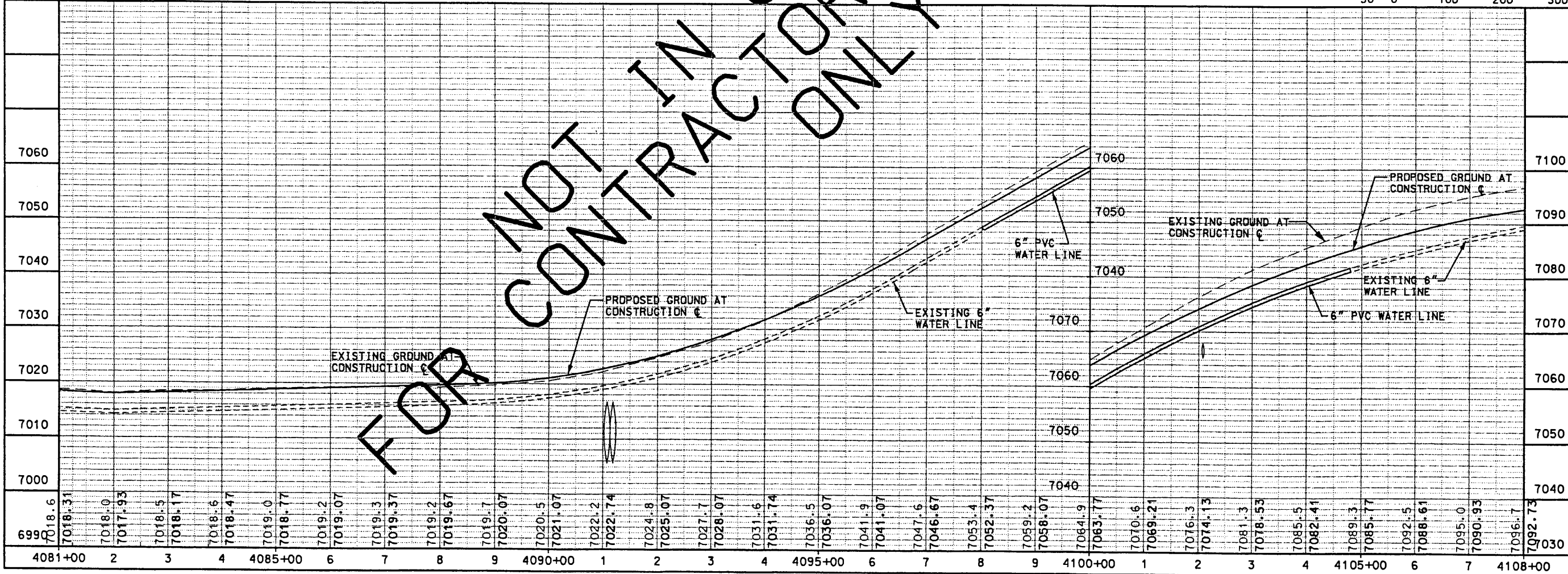
Design File: \$XXXXXXXXXX\$
 Plot Date: \$XX/XX/XX\$



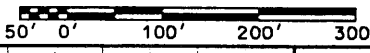
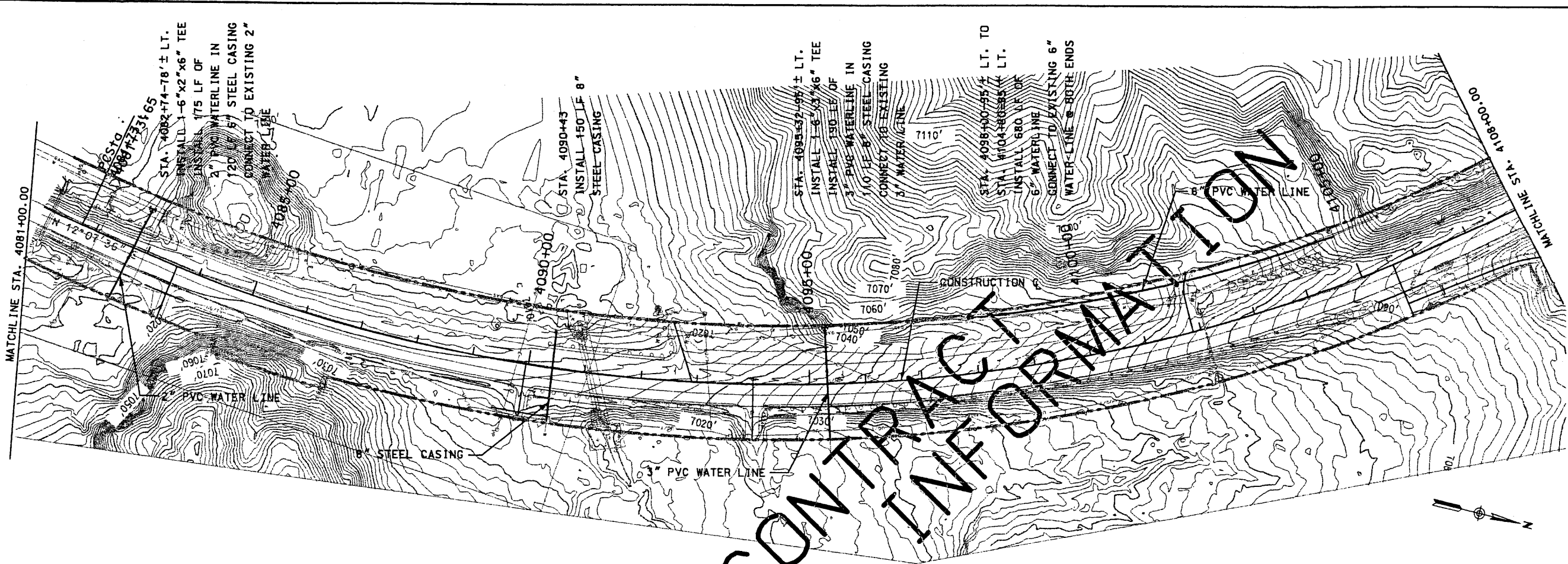
FOR CONTRACTOR ONLY

	SHEET TITLE WATER PLAN & PROFILE STATION 4054+00.00 TO STATION 4081+00.00
DESIGN BY: GRS DRAWN BY: RAG CHECKED BY: SFP	NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6 NM 44 NEW MEXICO PROJECT NO AC-NH-044-2(39)64 CN 3766

Design File: \$\$\$\$\$\$.XXX\$
 Plot Date: \$XX/XX/XX\$

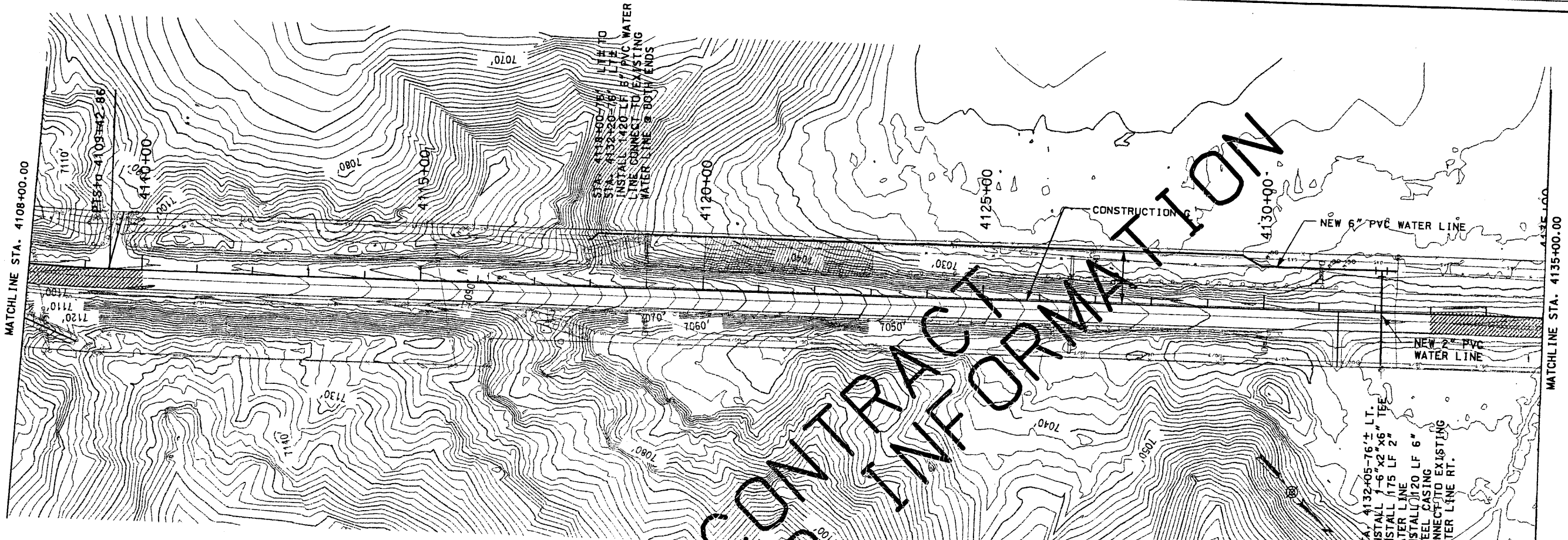
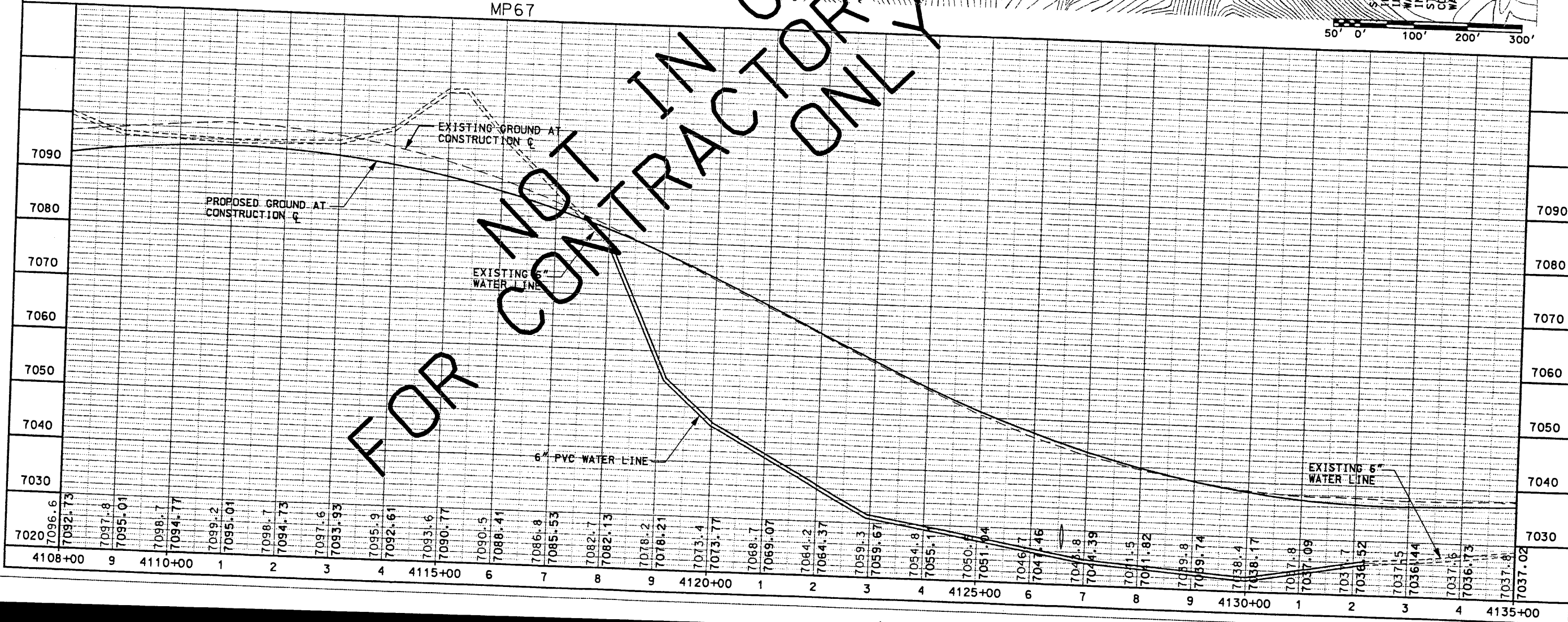


FOR CONTRACTOR ONLY



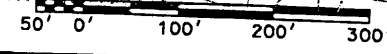
SHEET TITLE WATER PLAN & PROFILE STA. 4081+00.00 TO STA. 4108+00.00	NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6	NM 44 NEW MEXICO PROJECT NO AC-NH-044-2(39)164 CN 3766	<div style="font-size: 24pt; font-weight: bold; margin-bottom: 10px;">WILSON & COMPANY</div> DESIGN BY: GRS DRAWN BY: RAG CHECKED BY: SFP
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Design File: \$XXXXXXXXXX\$
 Plot Date: \$XX/XX/XX\$



MATCHLINE STA. 4108+00.00

MATCHLINE STA. 4135+00.00



STA. 4132+05-76'± I.T.
 INSTALL 7'-6" X 2' X 6" TEE
 WATER LINE
 INSTALL 175 LF 2"
 STEEL CASING
 CONNECT TO EXISTING
 WATER LINE RT.

STA. 4118+00-75' I.T.
 STA. 4132+20-76' I.T.
 INSTALL 1420 LF 6" PVC WATER
 LINE CONNECT TO EXISTING
 WATER LINE @ BOTH ENDS

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 F.H.W.A. REGION NO 6

NEW MEXICO PROJECT NO AC-NH-044-2(39)164
 CN 3766

NM 44

DESIGN BY: GRS
 DRAWN BY: RAG
 CHECKED BY: SFP

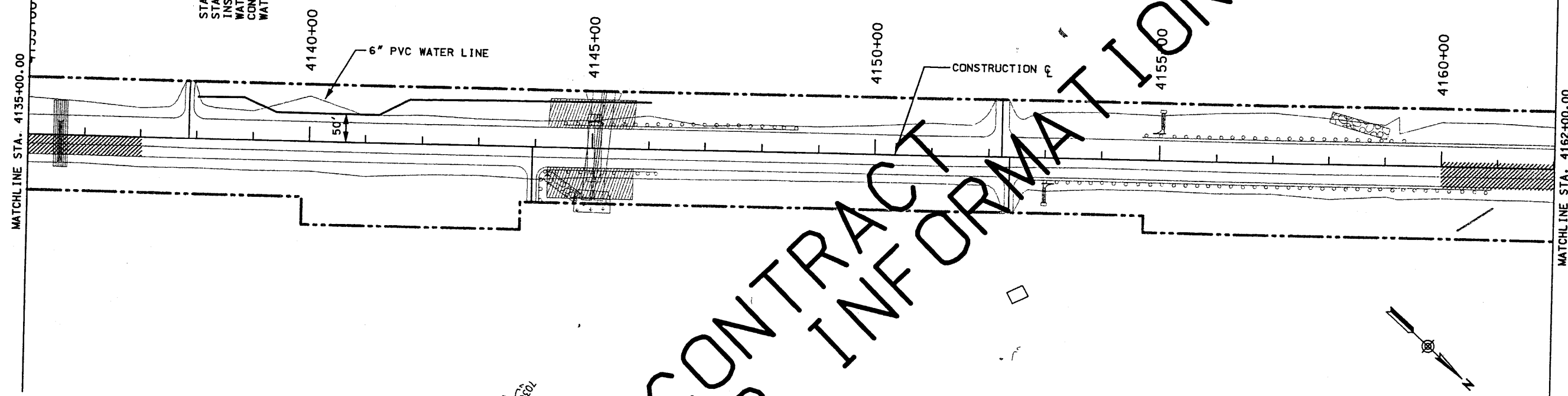
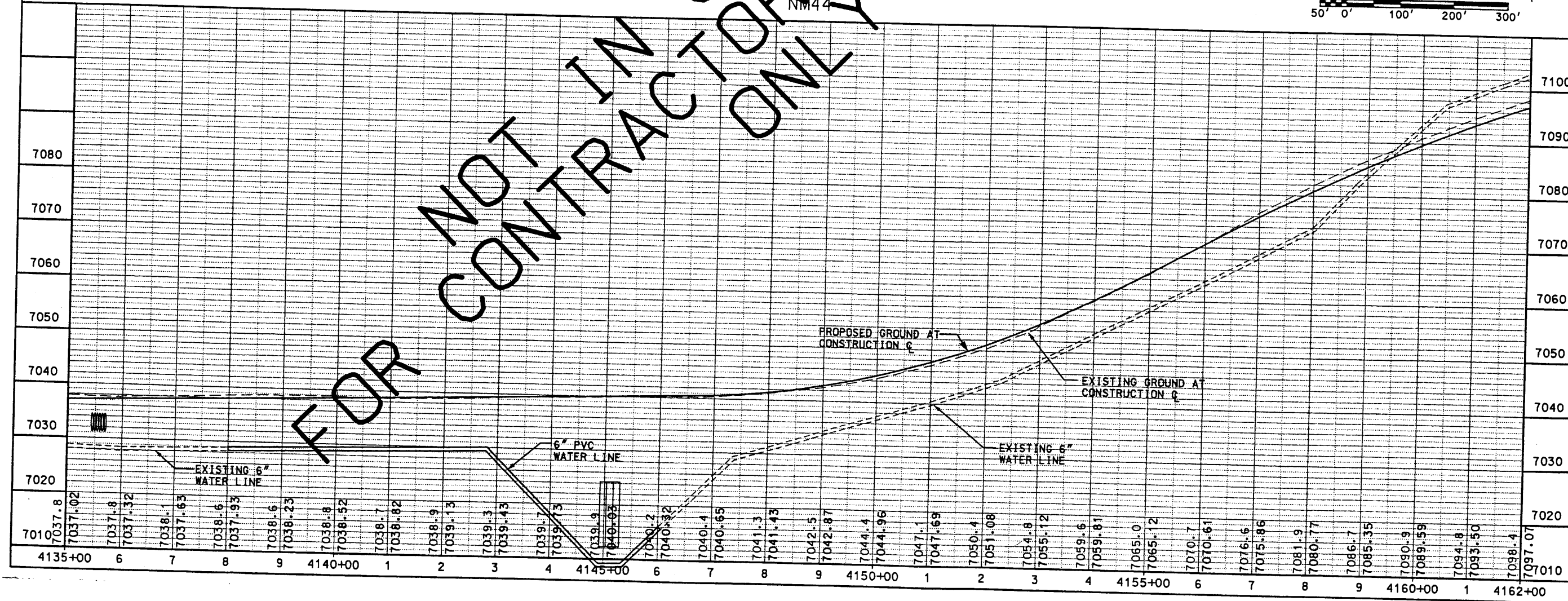
SEAL: [Professional Engineer Seal]

9-10

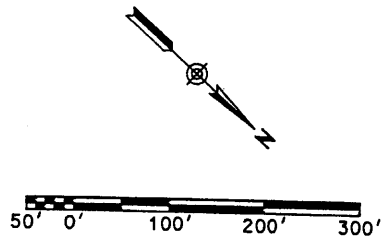
SHEET TITLE: WATER PLAN & PROFILE
 STATION 4108+00.00 TO STATION 4135+00.00

WILSON & COMPANY



Design File: n:\98082-01\sect9\utilites\p04\4449\4-11.100
 Plot Date: 03 NOV 99



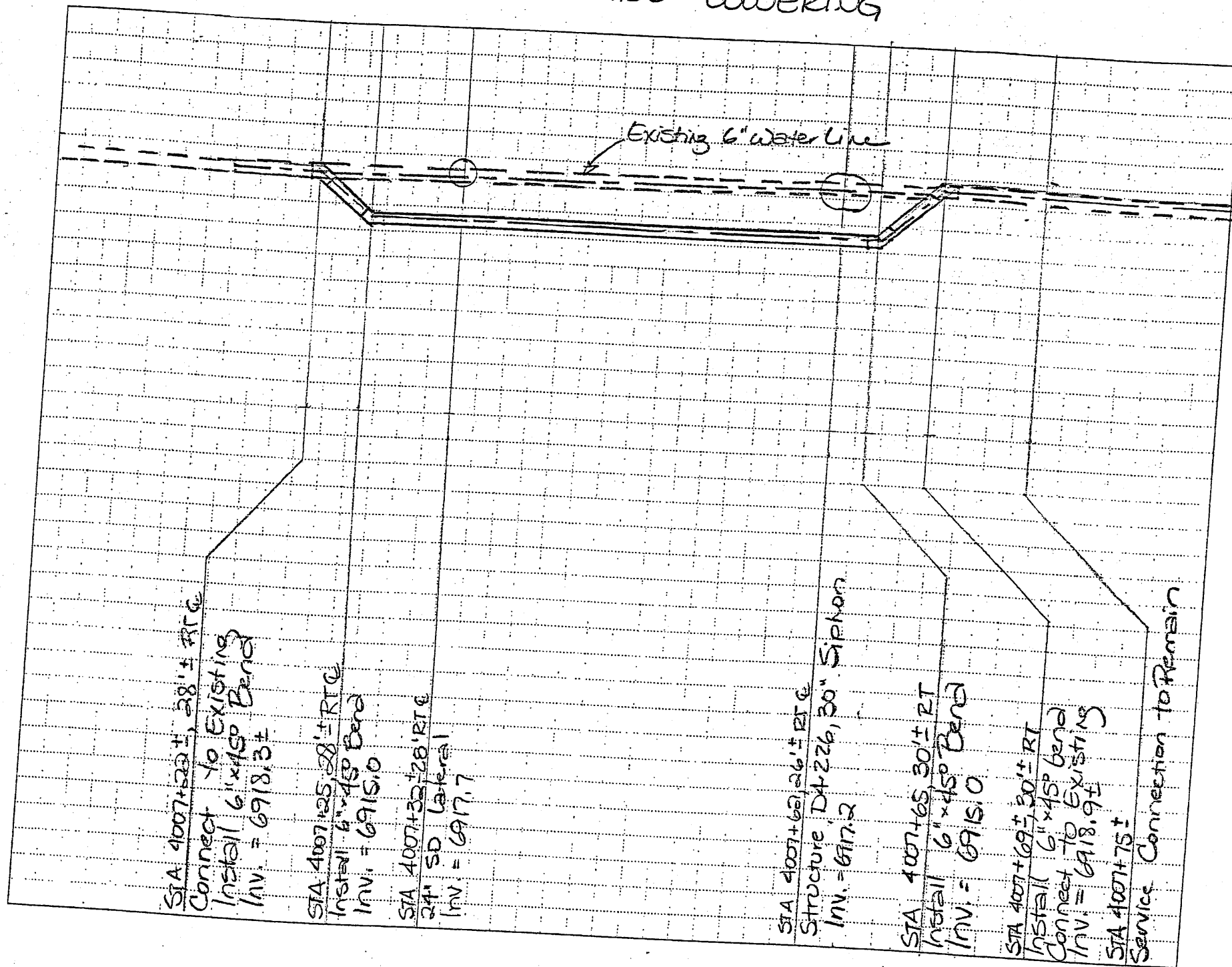
STA. 4138+00-76'± LT. TO
 STA. 4146+00-76'± LT. TO
 INSTALL 800 LF 6"
 WATER LINE
 CONNECT TO EXISTING
 WATER LINE @ BOTH ENDS



FOR CONTRACTOR ONLY INFORMATION

SEAL 	DESIGN BY: GRS DRAWN BY: RAG CHECKED BY: SFP		SHEET TITLE WATER PLAN & PROFILE STATION 4135+00.00 TO STATION 4162+00.00
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT F.H.W.A. REGION NO 6		NM 44 NEW MEXICO PROJECT NO AC-NH-044-2(39)64 CN 3766	
9-11			

SECTION-WATER LINE LOWERING



STA 4007+33±, 28'± RTG
Connect to Existing
Install 6" x 45° Bend
Inv. = 6918.3±

STA 4007+35±, 28'± RTG
Install 6" x 45° Bend
Inv. = 6915.0

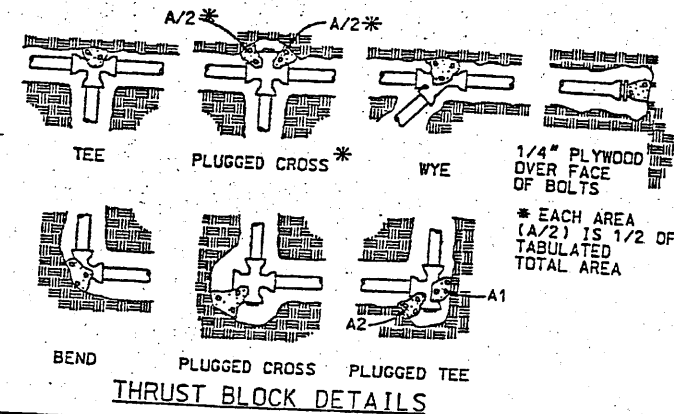
STA 4007+32±, 28' RTG
24" SD Lateral
Inv. = 6917.7

STA 4007+62±, 26'± RTG
Structure D+226, 30" Siphon
Inv. = 6917.2

STA 4007+65±, 30'± RT
Install 6" x 45° Bend
Inv. = 6915.0

STA 4007+69±, 30'± RT
Install 6" x 45° Bend
Connect to Existing
Inv. = 6918.9±

STA 4007+75±
Service Connection to Remain



THRUST BLOCK SCHEDULE							
BEARING AREA OF THRUST BLOCKS IN SQ. FT. (HORIZONTAL BENDS)							
FITTING SIZE	TEE, WYE, PLUG. OR CAP	90° BEND PLUGGED CROSS	TEE PLUGGED RUN		BEND ANGLE		
			A1	A2	45°	22 1/2°	11 1/4°
4	1.0	1.4	1.9	1.4	1.0	-	-
6	2.1	3.0	4.3	3.0	1.6	1.0	-
8	3.8	5.3	7.6	5.4	2.9	1.5	1.0
10	5.9	8.4	11.8	8.4	4.6	2.4	1.2
12	8.5	12.0	17.0	12.0	6.6	3.4	1.7

THRUST BLOCK NOTES

- KEEP CONCRETE CLEAR OF JOINT AND JOINT ACCESSORIES.
- CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH.
- REQUIRED VOLUMES OR BEARING AREAS AT FITTINGS SHALL BE AS INDICATED.
- BEARING AREA OF THRUST BLOCK SHALL NOT BE LESS THAN 1.0 SQ FT.

CONCRETE THRUST BLOCKING DETAILS

NTS

NOTE: ALL FITTINGS SHALL BE MECHANICALLY RESTRAINED OR CONCRETE THRUST BLOCKING SHALL BE PROVIDED.

New Sheet
8.24.01
RFI 64

Jul 44
AC.NH. 044-2(39)61
CN 3766

WATER LINE LOWERING DETAILS



Appendix E: NMDOT Traffic Information



Transportation Data Management System

List View All DIRs Report Center

Record	1	of 1	Goto Record	go
Location ID	6578	MPO ID	185540	
Type	SPOT	HPMS ID		
On NHS	Yes	On HPMS	No	
LRS ID	US550P	LRS Loc Pt.	76.72471	
SF Group	10	Route Type	Two-Way Roadway	
AF Group	10	Route	US0550	
GF Group	10	Active	Yes	
Class Dist Grp	10	Category		
Seas Class Grp	Statewide			
WIM Group	6578			
QC Group	Perm			
Funct'l Class	(3) Other Principal Arterial	Milepost		
Located On	US HIGHWAY 550			
Loc On Alias	JCT NM 96 (NORTH AND EAST TO US 84).			

More Detail [Show Data](#)

Directions: 2-WAY **NEG** **POS**
 1 2 1 2

AAADT

Year	AAADT	DHV-30	K %	D %	PA	BC	Src
2022	4,839 ³		12	62	4,141 (86%)	698 (14%)	Grown from 2021
2021	4,923 ³		12	62	3,780 (77%)	1,143 (23%)	Grown from 2020
2020	4,334 ³		12	62	3,649 (84%)	685 (16%)	Grown from 2019
2019	5,010 ³		12	62	4,349 (87%)	661 (13%)	Grown from 2018
2018	5,112	626	12	62	3,280 (64%)	1,832 (36%)	

1-5 of 18

Model Year	Model AADT	AM PHV	AM PPV	MD PHV	MD PPV	PM PHV	PM PPV	NT PHV	NT PPV
------------	------------	--------	--------	--------	--------	--------	--------	--------	--------

VOLUME COUNT			
Date	Int	Total	
Tue 12/11/2018	15	3,827	
Mon 12/10/2018	15	3,999	
Sun 12/9/2018	15	4,238	
Sat 12/8/2018	15	3,949	
Fri 12/7/2018	15	4,389	
Thu 12/6/2018	15	4,277	
Wed 12/5/2018	15	4,189	
Tue 12/4/2018	15	4,297	

VOLUME TREND	
Year	Annual Growth
2022	-2%
2021	14%
2020	-13%
2019	-2%
2018	39%
2017	-6%
2016	-23%
2015	8%



Traffic Monitoring Program

AADT and AADT Trucks by Year for 1/1/2018 - 12/31/2022 Criteria: Location ID = 6578, From 1/1/1900 To 12/31/2049 12:00:00 AM

District 6

Location ID 6578

County (043) Sandoval

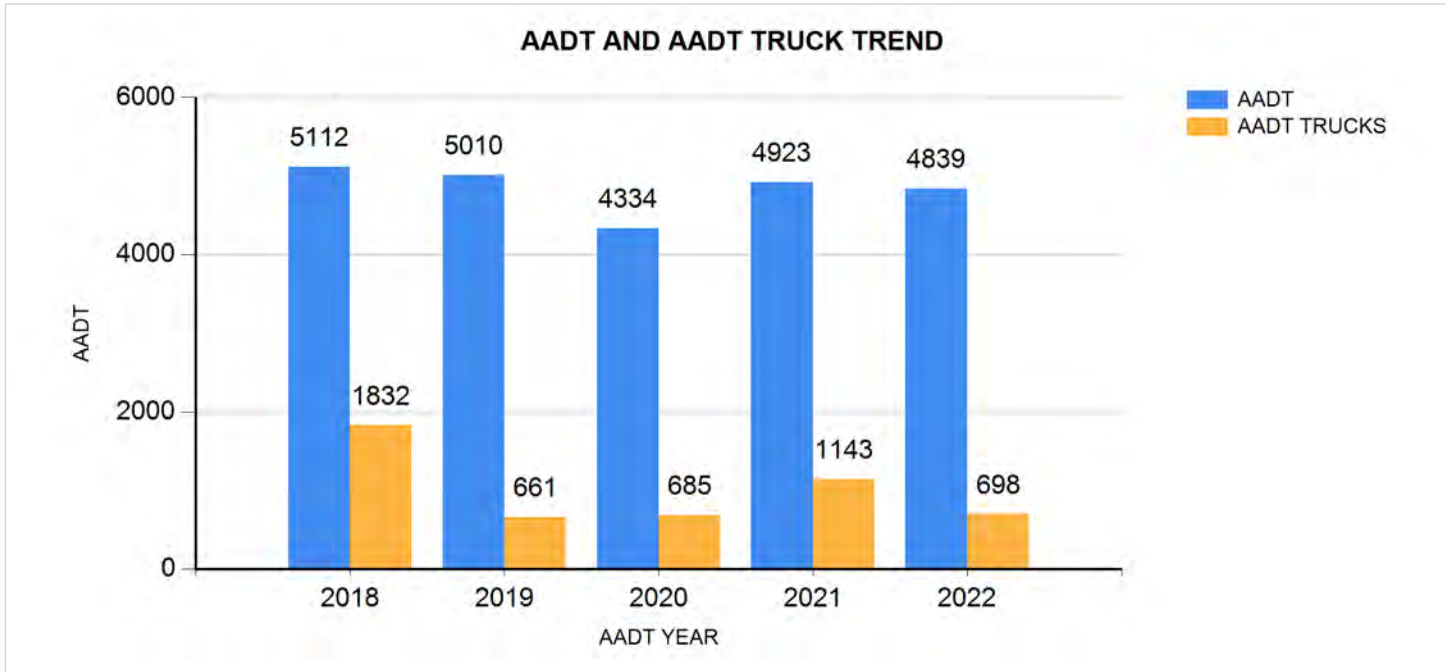
Located On US HIGHWAY 550

At

Community

LRS ID US550P

LRS Point 76.7247100





List View All DIRs Report Center

Record	1	of 1	Goto Record	go
Location ID	6566	MPO ID		
Type	SPOT	HPMS ID	180629	
On NHS	Yes	On HPMS		
LRS ID	US550P	LRS Loc Pt.	66.17126	
SF Group	10	Route Type	Two-Way Roadway	
AF Group	10	Route	US0550	
GF Group	10	Active	Yes	
Class Dist Grp	10	Category		
Seas Class Grp	Statewide			
WIM Group	FC-NOT-1			
QC Group	Default			
Funct'l Class	(3) Other Principal Arterial	Milepost		
Located On	US HIGHWAY 550			
Loc On Alias	JCT NM 126 IN CUBA (EAST TO JCT NM 4).			
More Detail				
STATION DATA				

Directions: 2-WAY NEG POS

AADT

Year	AADT	DHV-30	K %	D %	PA	BC	Src
2022	4,841 ³		9	59	4,142 (86%)	699 (14%)	Grown from 2021
2021	4,925 ³		9	59	3,782 (77%)	1,143 (23%)	Grown from 2020
2020	4,335 ³		9	59	3,650 (84%)	685 (16%)	Grown from 2019
2019	5,012 ³		9	59	4,351 (87%)	661 (13%)	Grown from 2018
2018	5,114 ³				4,336 (85%)	778 (15%)	Grown from 2017

1-5 of 14

Travel Demand Model										
Model Year	Model AADT	AM PHV	AM PPV	MD PHV	MD PPV	PM PHV	PM PPV	NT PHV	NT PPV	

VOLUME COUNT		
Date	Int	Total
No Data		

VOLUME TREND	
Year	Annual Growth
2022	-2%
2021	14%
2020	-14%
2019	-2%
2018	1%
2017	4%
2016	0%
2015	5%



Traffic Monitoring Program

AADT and AADT Trucks by Year for 1/1/2018 - 12/31/2022 Criteria: Location ID = 6566, From 1/1/1900 To 12/31/2049 12:00:00 AM

District 6

Location ID 6566

County (043) Sandoval

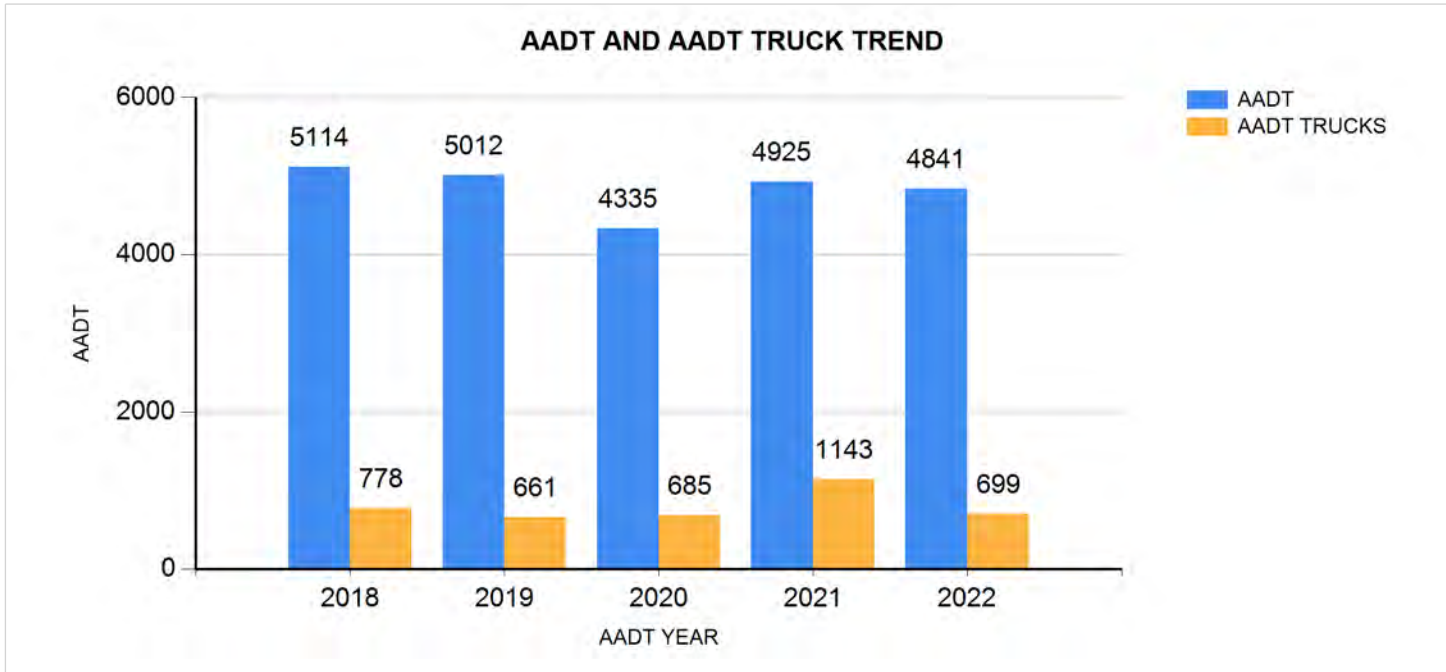
Located On US HIGHWAY 550

At

Community

LRS ID US550P

LRS Point 66.1712600



Appendix F: Bridge Inspection Reports

X

X

Project Bridge Color Template

Bridge_Number: 07060

Proj_Doc_Date: 7/25/2022

PROJ_DOC_DESC: ACTIVE

Proj_Control_Number:

Project_Number:

Document Type: INSPECTION REPORTS

X

PB1

X



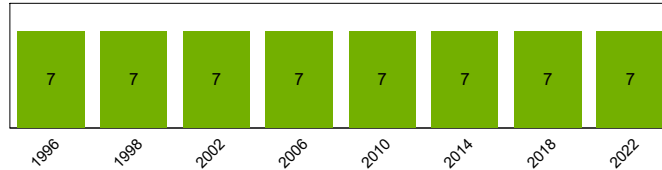
IDENTIFICATION

NBI Number:	07060	County (3):	43 SANDOVAL	Custodian (21):	State Highway Ager
Location (9):	3.6 MI N OF JCT NM-96	Health Index:	100.00	Year Built (27):	1969
SHD District (2):	District 6	SR:	65.00	Year Recon (106):	
Type of Service On (42A):	1 Highway	SD/FO:	ND	Historical (37):	5 Not eligible for NRHP
Feature Intersected (6):	ARROYO CHIUILLA	Latitude (16):	36.07		
Type of Service Under(42B)	5 Waterway	Longitude (17):	-107.05		
Placecode (4):	Unknown	Owner (22):	State Highway Agency		

BRIDGE NOTES

Patrol 46-43, Sandoval County: 2 - 10 ft X 10 ft X 140 ft CBC design III. 14 ft of fill over CBC. Since the last inspection of 07/17/20 No work has been noted. ...

CULVERT GEOMETRY



Deck Area:	1,411.21
O. to O. Width (52):	0.00
Curb / Sidewalk Width L (50A):	0.00
Curb / Sidewalk Width R (50B):	0.00
Median (33):	2 Closed Med w/o Barrier
Width Curb to Curb (51):	0.00
# of Main Spans (45):	2
Main Material (43 A):	1 Concrete
Main Design (43 B):	19 Culvert
Max Span Length (48):	10.00
Structure Length (49):	20.60
NBIS Length (112):	Long Enough
Skew (34):	0
Structure Flared (35):	0 No flare
Approach Alignment (72):	8 Equal Desirable Crit

CULVERT CONDITION

Culvert Rating (62):	7 Minor Deterioration
Bridge Rail (36A):	1 Meets Standards
Transition (36B):	1 Meets Standards
Approach Rail (36C):	1 Meets Standards
Approach Rail Ends (36D):	1 Meets Standards
Approach Roadway Width (32):(w/ shoulders)	68.50
Structure Evaluation (67):	7 Above Min Criteria
Scour Rating (113):	8 Stable Above Footing
Waterway Adequacy (71):	8 Equal Desirable
Channel Rating (61):	7 Minor Damage

Team Leader

Signature and Date Pat Salazar
07/25/2022

Reviewed By

Signature and Date

INSPECTION

Date of Inspection (90): 7/25/2022
Frequency (91): 48
Next Inspection: 7/25/2026
Crew Hours: 0.50
Snooper Hours: 0.00

Inspection Type	Freq (92)	Last Insp (93)	Next Insp
Element	48	7/25/2022	7/25/2026
Fracture Critical (A)		1/1/1901	1/1/1901
Underwater (B)		1/1/1901	1/1/1901
Special Insp (C)		1/1/1901	1/1/1901

LOAD RATING AND POSTING

Posting Status (41): A Open, no restriction
Posting % (70): 5 At/Above Legal Loads
Design Load (31): 5 MS 18 (HS 20)
Opr Method (63): 1 LF Load Factor
Opr Rating (64): HS54.5
Inv Method (65): 1 LF Load Factor
Inv Rating (66): HS19.8

Posting Loads Operating
NM-2 Axle:
NM-3A Axle:
NM-5A Axle:

ROADWAY

LOCATION

Kind of Hwy (5B): 2 U.S. Numbered H
Milepost (11): 71.79 mi (115.54 km)
Lanes On (28A): 4
Detour Length (19): 98.80 mi (159.00 km)
Lanes Under (28B): 0.00
Route Posted Speed: 70
Direction of Traffic (102): 2 2-way traffic

CLEARANCES

Horizontal (47): 68.50
Min Lat Left (56): 0.00
Min Lat Right (55B): 0.00
Minimum Lateral Underclearance R (55): 0.00
Minimum Lateral Underclearance L (56): 0.00
Minimum Vertical Clearance Minus: 0
Minimum Vertical Clearance Plus: 0
Horiz Ref (55A): N Feature not hwy or RR
Underclearance (69): N Not applicable (NBI)

CLASSIFICATION

Funct Class (26): 02 Rural Other Princ
NHS (104): 1 On the NHS
Defense Hwy (100): 0 Not a STRAHNET hwy
ADT (29): 4,923 Cars/Day
Pct Trucks (109): 24.00%
ADT Year (30): 2021
Future ADT (114): 6,695.00
Year Of Future ADT (115): 2041

CRITICAL FINDINGS SUMMARY

Critical Findings: None
Date Found: Inspector Name:
Date Updated:

Notes:
None

Action Taken:

NMDOT MISC. DATA

Old Bridge Number:

Known Utilities:

Stay In Place Forms: No

Stay In Place Form Type: 0

Overlay Thickness:

Culvert Fill Depth: 14.00

SIP Notes:

Approach Roadway Condition:

Approach pavement is superpave in good condition. Shoulders are asphalt with minor sealed transverse and longitudinal cracks. Embankment has minor erosion. 2 delineators for bridge signing.

Channel & Channel Protection:

Small intermittent stream with steep mostly barren banks and flat brushy bottom. Good alignment. Minor silt. Fence across channel at both R/W lines.

Recommendations:

RECOMMENDATIONS: None

Directions:

ELEMENT CONDITION SUMMARY

Element	Env	Description	Total Qty	CS 1		CS 2		CS 3		CS 4	
				Qty	%	Qty	%	Qty	%	Qty	%
241	2	Re Conc Culvert	279	249	100%	30	0%	0	0%	0	0%
1130		Cracking (RC and Other)	30	0	0%	30	100%	0	0%	0	0%
7369	2	Wingwalls	72	72	100%	0	0%	0	0%	0	0%
7370	2	Rip Rap	807	807	100%	0	0%	0	0%	0	0%
7371	2	Guardrail	387	387	100%	0	0%	0	0%	0	0%
7374	2	Parapets	46	46	100%	0	0%	0	0%	0	0%

ELEMENT NOTES

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
241/2	Re Conc Culvert	279.00	ft	249.00	30.00	0.00	0.00

Top slab: light leaching at NE corner. Large crack at construction joint, 1/8" minor transverse cracks with light leaching. Bottom

Slab: gouges, rough finish, good condition. Walls: minor to medium vertical cracks 1/8", minor scale at the bottom.

ELEM/ENV	DEFECTS	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
1130/2	Cracking (RC and Other)	30.00	ft	0.00	30.00	0.00	0.00

Minor transverse cracks on top slab. Minor vertical cracks on barrel walls. Large crack at construction joint.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7369/2	Wingwalls	72.00	(LF)	72.00	0.00	0.00	0.00

The two south wingwalls are newer with equipment gouges, minor diagonal cracks, & hairline separation cracks. The two north wingwalls have minor diagonal & map cracks, medium scale.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7370/2	Rip Rap	807.00	sq.ft	807.00	0.00	0.00	0.00

Grouted riprap at outlet in good condition.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7371/2	Guardrail	387.00	(LF)	387.00	0.00	0.00	0.00

W beam on steel I beam posts and blocks. ET 2000 end treatments. Minor scrapes.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7374/2	Parapets	46.00	(LF)	46.00	0.00	0.00	0.00

South parapet is newer. North parapet has light to moderate scale. Minor horizontal and vertical cracks.

INSPECTION NOTES

Date-07-25-2022

Present: D. Trujillo, P. Salazar, Partly Cloudy, Light Breeze, 79 Deg.

Work History

From completed work candidates.

Completion Date

Action

Notes



Bridge Inspection Report

00000000007060

Facility Carried(7): US-550
Mile Post(11): 71.79 mi (115.54 km)

Team Leader: Pat Salazar
Inspection Date: 07/25/2022

Work Candidates

Status	Priority	Action	Date Proposed	Notes
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X

X

Project Bridge Color Template

Bridge_Number: 07061

Proj_Doc_Date: 5/26/2020

PROJ_DOC_DESC: ACTIVE

Proj_Control_Number:

Project_Number:

Document Type: INSPECTION REPORTS

X

PB1

X



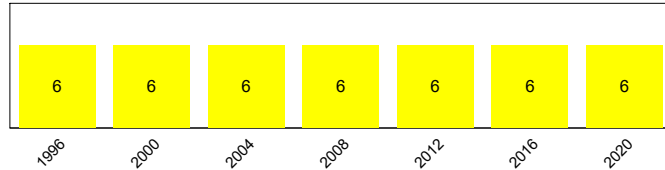
IDENTIFICATION

NBI Number:	07061	County (3):	43 SANDOVAL	Custodian (21):	State Highway Ager
Location (9):	6.1 MI NW OF JCT NM-96	Health Index:	82.15	Year Built (27):	1969
SHD District (2):	District 6	SR:	65.00	Year Recon (106):	2002
Type of Service On (42A):	1 Highway	SD/FO:	ND	Historical (37):	5 Not eligible for NRHP
Feature Intersected (6):	UNNAMED WATERWAY	Latitude (16):	36.07		
Type of Service Under(42B)	5 Waterway	Longitude (17):	-107.09		
Placecode (4):	Unknown	Owner (22):	State Highway Agency		

BRIDGE NOTES

Patrol 46-43, Sandoval County: 2 - 10 ft X 10 ft X 133 ft CBC design II . 8 ft fill cover. Since the last inspection of 5/17/2016 No work was noted. ...

CULVERT GEOMETRY



Deck Area:	1,436.20
O. to O. Width (52):	0.00
Curb / Sidewalk Width L (50A):	0.00
Curb / Sidewalk Width R (50B):	0.00
Median (33):	2 Closed Med w/o Barrier
Width Curb to Curb (51):	0.00
# of Main Spans (45):	2
Main Material (43 A):	1 Concrete
Main Design (43 B):	19 Culvert
Max Span Length (48):	9.84
Structure Length (49):	21.00
NBIS Length (112):	Long Enough
Skew (34):	0
Structure Flared (35):	0 No flare
Approach Alignment (72):	8 Equal Desirable Crit

CULVERT CONDITION

Culvert Rating (62):	6 Deterioration
Bridge Rail (36A):	1 Meets Standards
Transition (36B):	1 Meets Standards
Approach Rail (36C):	1 Meets Standards
Approach Rail Ends (36D):	1 Meets Standards
Approach Roadway Width (32):(w/ shoulders)	68.40
Structure Evaluation (67):	6 Equal Min Criteria
Scour Rating (113):	8 Stable Above Footing
Waterway Adequacy (71):	8 Equal Desirable
Channel Rating (61):	6 Bank Slumping

Team Leader

Signature and Date DEMETRIO TRUJILLO
05/26/2020

Reviewed By

Signature and Date

INSPECTION

Date of Inspection (90): 5/26/2020
Frequency (91): 48
Next Inspection: 5/26/2024
Crew Hours: 0.75
Snooper Hours: 0.00

Inspection Type	Freq (92)	Last Insp (93)	Next Insp
Element	48	5/26/2020	5/26/2024
Fracture Critical (A)		1/1/1901	1/1/1901
Underwater (B)		1/1/1901	1/1/1901
Special Insp (C)		1/1/1901	1/1/1901

LOAD RATING AND POSTING

Posting Status (41): A Open, no restriction
Posting % (70): 5 At/Above Legal Loads
Design Load (31): 5 MS 18 (HS 20)
Opr Method (63): 1 LF Load Factor
Opr Rating (64): HS54.5
Inv Method (65): 1 LF Load Factor
Inv Rating (66): HS19.8

Posting Loads Operating
NM-2 Axle:
NM-3A Axle:
NM-5A Axle:

ROADWAY

LOCATION

Kind of Hwy (5B): 2 U.S. Numbered H
Milepost (11): 74.33 mi (119.61 km)
Lanes On (28A): 4
Detour Length (19): 98.80 mi (159.00 km)
Lanes Under (28B): 0.00
Route Posted Speed: 70
Direction of Traffic (102): 2 2-way traffic

CLEARANCES

Horizontal (47): 40.03
Min Lat Left (56): 0.00
Min Lat Right (55B): 0.00
Minimum Lateral Underclearance R (55): 0.00
Minimum Lateral Underclearance L (56): 0.00
Minimum Vertical Clearance Minus: 0
Minimum Vertical Clearance Plus: 0
Horiz Ref (55A): N Feature not hwy or RR
Underclearance (69): N Not applicable (NBI)

CLASSIFICATION

Funct Class (26): 02 Rural Other Princ
NHS (104): 1 On the NHS
Defense Hwy (100): 1 On Interstate STRAHNET
ADT (29): 4,923 Cars/Day
Pct Trucks (109): 24.00%
ADT Year (30): 2021
Future ADT (114): 6,695.00
Year Of Future ADT (115): 2041

CRITICAL FINDINGS SUMMARY

Critical Findings: None
Date Found: Inspector Name:
Date Updated:

Notes:
None

Action Taken:

NMDOT MISC. DATA

Old Bridge Number:		Known Utilities:	
Stay In Place Forms:	No	Stay In Place Form Type:	0
Overlay Thickness:		Culvert Fill Depth:	10.00

SIP Notes:

Approach Roadway Condition:

Approach pavement is asphalt with longitudinal cracks in wheel path of the driving lane. PMBP shoulders are in good condition. Minor erosion of well vegetated embankment. 2 delineators for bridge signing.

Channel & Channel Protection:

Small intermittent stream with mildly sloping to vertical sides, good alignment. Approx. 3 inch of silt, minor debris, 4 ft of scour or head cut at the outlet (stream degrading). Riprap has been washed downstream. Slope paving is being undermined.

Recommendations:

RECOMMENDATIONS: Short Term: Patrol: Backfill erosion at SE side drainage. Bridge crew: Repair washed out riprap at SW corner. Place gabion baskets at outlet.

Directions:

ELEMENT CONDITION SUMMARY

Element	Env	Description	Total Qty	CS 1		CS 2		CS 3		CS 4	
				Qty	%	Qty	%	Qty	%	Qty	%
241	2	Re Conc Culvert	266	116	44%	150	56%	0	0%	0	0%
1130		Cracking (RC and Other)	150	0	0%	150	100%	0	0%	0	0%
7369	2	Wingwalls	48	0	0%	48	100%	0	0%	0	0%
520		Conc Re Prot Sys	48	0	0%	48	100%	0	0%	0	0%
7370	2	Rip Rap	2,400	0	0%	0	0%	2,400	100%	0	0%
7371	2	Guardrail	820	820	100%	0	0%	0	0%	0	0%
7372	2	Retaining Walls	124	124	100%	0	0%	0	0%	0	0%
7374	2	Parapets	20	0	0%	20	100%	0	0%	0	0%
521		Conc Prot Coating	20	20	100%	0	0%	0	0%	0	0%

ELEMENT NOTES

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
241/2	Re Conc Culvert	266.00	ft	116.00	150.00	0.00	0.00
<p>Top Slab: Transverse cracks with leaching. Exposed rebar in top slab barrel 2 inlet - old section. Barrel Walls: Minor vertical, horizontal & map cracks light leaching - most filled with epoxy, large crack in barrel #1, light scale, honeycomb. Horizontal cracks & honeycomb in new section. Bottom Slab: Minor longitudinal & transverse cracks, minor abrasion. Scour at outlet (Stream degrading 3').</p>							
1130/2	Cracking (RC and Other)	150.00	ft	0.00	150.00	0.00	0.00
<p>Transverse, vertical and horizontal cracks in barrels, up to 0.070.</p>							
7369/2	Wingwalls	48.00	(LF)	0.00	48.00	0.00	0.00
<p>Numerous epoxy filled cracks, hairline to minor vertical & map cracks unfilled, separation cracks, areas of light scale, minor delamination. Surface finish is peeling.</p>							
520/2	Conc Re Prot Sys	48.00	sq.ft	0.00	48.00	0.00	0.00
<p>Surface finish is peeling.</p>							
7370/2	Rip Rap	2,400.00	sq.ft	0.00	0.00	2,400.00	0.00
<p>Rip Rap has been washed away on SW corner.</p>							
7371/2	Guardrail	820.00	(LF)	820.00	0.00	0.00	0.00
<p>W beam on square wood posts with wood blocks & Steel I Beam posts, ET 2000 Anchors.</p>							
7372/2	Retaining Walls	124.00	(LF)	124.00	0.00	0.00	0.00
<p>Good condition with minor transverse & longitudinal cracks in open channel</p>							
7374/2	Parapets	19.69	(LF)	0.00	19.69	0.00	0.00
<p>Areas of medium scale, med. cracks, minor longitudinal crack on bottom side with delamination & leaching.</p>							



Bridge Inspection Report

00000000007061

Facility Carried(7): US-550
 Mile Post(11): 74.33 mi (119.61 km)
 Team Leader: DEMETRIO TRUJILLO
 Inspection Date: 05/26/2020

ELEM/ENV	PROTECTIVE COATING	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
521/2	Conc Prot Coating	19.69	sq.ft	19.69	0.00	0.00	0.00

Surface finish is peeling.

INSPECTION NOTES

Date-2020-05-26-Present: D. Trujillo, P. Salazar, P. Steinback; Clear, Breezy, 66 Deg.

Work History

From completed work candidates.

Completion Date	Action	Notes
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Work Candidates

Status	Priority	Action	Date Proposed	Notes
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X

X

Project Bridge Color Template

Bridge_Number: 07972

Proj_Doc_Date: 8/17/2021

PROJ_DOC_DESC: ACTIVE

Proj_Control_Number:

Project_Number:

Document Type: INSPECTION REPORTS

X

PB1

X



IDENTIFICATION

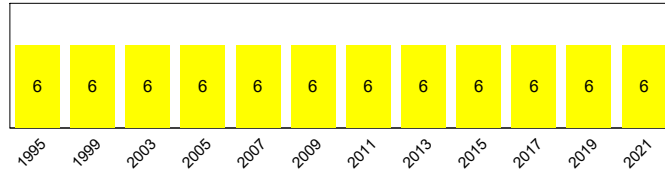
NBI Number:	07972	County (3):	43 SANDOVAL	Custodian (21):	State Highway Ager
Location (9):	13.9 MI NW OF JCT NM-126	Health Index:	98.17	Year Built (27):	1978
SHD District (2):	District 6	SR:	65.00	Year Recon (106):	
Type of Service On (42A):	1 Highway	SD/FO:	ND	Historical (37):	5 Not eligible for NRHP
Feature Intersected (6):	UNNAMED WATERWAY	Latitude (16):	36.09		
Type of Service Under(42B)	5 Waterway	Longitude (17):	-107.16		
Placecode (4):	Unknown	Owner (22):	State Highway Agency		

BRIDGE NOTES

Patrol 46-43, Sandoval Co.: 2 - 10 ft x 8 ft x 177 ft CBC, Design II. 8 ft Fill cover. Since the last inspection of 8/29/2019 No work was noted. ...

CULVERT GEOMETRY

Deck Area:	1,788.36
O. to O. Width (52):	0.00
Curb / Sidewalk Width L (50A):	0.00
Curb / Sidewalk Width R (50B):	0.00
Median (33):	0 No median
Width Curb to Curb (51):	0.00
# of Main Spans (45):	2
Main Material (43 A):	1 Concrete
Main Design (43 B):	19 Culvert
Max Span Length (48):	9.84
Structure Length (49):	25.92
NBIS Length (112):	Long Enough
Skew (34):	45
Structure Flared (35):	0 No flare
Approach Alignment (72):	8 Equal Desirable Crit



CULVERT CONDITION

Culvert Rating (62):	6 Deterioration
Bridge Rail (36A):	1 Meets Standards
Transition (36B):	1 Meets Standards
Approach Rail (36C):	1 Meets Standards
Approach Rail Ends (36D):	1 Meets Standards
Approach Roadway Width (32):(w/ shoulders)	69.00
Structure Evaluation (67):	6 Equal Min Criteria
Scour Rating (113):	8 Stable Above Footing
Waterway Adequacy (71):	9 Above Desirable
Channel Rating (61):	7 Minor Damage

Team Leader

Signature and Date DEMETRIO TRUJILLO
08/17/2021

Reviewed By

Signature and Date

INSPECTION

Date of Inspection (90): 8/17/2021
Frequency (91): 24
Next Inspection: 8/17/2023
Crew Hours: 0.50
Snooper Hours: 0.00

Inspection Type	Freq (92)	Last Insp (93)	Next Insp
Element	24	8/17/2021	8/17/2023
Fracture Critical (A)		1/1/1901	1/1/1901
Underwater (B)		1/1/1901	1/1/1901
Special Insp (C)		1/1/1901	1/1/1901

LOAD RATING AND POSTING

Posting Status (41): A Open, no restriction
Posting % (70): 5 At/Above Legal Loads
Design Load (31): 5 MS 18 (HS 20)
Opr Method (63): 1 LF Load Factor
Opr Rating (64): HS49.6
Inv Method (65): 1 LF Load Factor
Inv Rating (66): HS19.8

Posting Loads Operating
NM-2 Axle:
NM-3A Axle:
NM-5A Axle:

ROADWAY

LOCATION

Kind of Hwy (5B): 2 U.S. Numbered H
Milepost (11): 78.60 mi (126.50 km)
Lanes On (28A): 4
Detour Length (19): 98.80 mi (159.00 km)
Lanes Under (28B): 0.00
Route Posted Speed: 70
Direction of Traffic (102): 2 2-way traffic

CLEARANCES

Horizontal (47): 34.78
Min Lat Left (56): 0.00
Min Lat Right (55B): 0.00
Minimum Lateral Underclearance R (55): 0.00
Minimum Lateral Underclearance L (56): 0.00
Minimum Vertical Clearance Minus: 0
Minimum Vertical Clearance Plus: 0
Horiz Ref (55A): N Feature not hwy or RR
Underclearance (69): N Not applicable (NBI)

CLASSIFICATION

Funct Class (26): 02 Rural Other Princ
NHS (104): 1 On the NHS
Defense Hwy (100): 0 Not a STRAHNET hwy
ADT (29): 4,923 Cars/Day
Pct Trucks (109): 24.00%
ADT Year (30): 2021
Future ADT (114): 6,695.00
Year Of Future ADT (115): 2041

CRITICAL FINDINGS SUMMARY

Critical Findings: None
Date Found: Inspector Name:
Date Updated:

Notes:
none

Action Taken:

NMDOT MISC. DATA

Old Bridge Number:		Known Utilities:	
Stay In Place Forms:	No	Stay In Place Form Type:	0
Overlay Thickness:	0.00	Culvert Fill Depth:	8.00

SIP Notes:
none

Approach Roadway Condition:
Approach roadway is Asphalt in good condition, with transverse and longitudinal cracks. Bridge signing is 1 delineator (1 missing).

Channel & Channel Protection:
Small intermittent stream with steep to vertical banks. Well vegetated banks. Flat sandy bottom. Good alignment. 4 ft to 6 ft silt at outlet, scour at nose of inlet barrels, fences at ROW. Waste material from construction used as backfill at rundowns, wire ties not installed. Settlement on pad behind guardrail.

Recommendations:
Recommendations: Replace delineators. Install Type III Object Markers. Patch guardrail pad and bury Type A end treatment at SW corner. Clear silt from barrels.

Directions:

ELEMENT CONDITION SUMMARY

Element	Env	Description	Total Qty	CS 1		CS 2		CS 3		CS 4	
				Qty	Per%	Qty	Per%	Qty	Per%	Qty	Per%
241	2	Re Conc Culvert	354	335	95%	19	5%	0	0%	0	0%
1130		Cracking (RC and Other)	19	0	0%	19	100%	0	0%	0	0%
7369	2	Wingwalls	40	33	84%	7	16%	0	0%	0	0%
1130		Cracking (RC and Other)	7	0	0%	7	100%	0	0%	0	0%
7370	1	Rip Rap	1,000	1,000	100%	0	0%	0	0%	0	0%
7371	1	Guardrail	430	430	100%	0	0%	0	0%	0	0%
7374	2	Parapets	56	30	53%	26	47%	0	0%	0	0%
1130		Cracking (RC and Other)	26	0	0%	26	100%	0	0%	0	0%

ELEMENT NOTES

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
241/2	Re Conc Culvert	354.00	ft	335.24	18.76	0.00	0.00

Top Slab: Minor to 1/8" transverse cracks with moderate to heavy leaching and light scale. Moderate leaching thru construction joints with rust stains from chairs. Barrel walls: Minor vertical and random cracks with leaching. Minor delamination near construction joint. Bottom Slab: 4' - 6' silt.

ELEM/ENV	DEFECTS	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
1130/2	Cracking (RC and Other)	18.76	ft	0.00	18.76	0.00	0.00

Transverse and vertical cracks on top slab and barrel walls.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7369/2	Wingwalls	40.00	(LF)	33.44	6.56	0.00	0.00

Minor vertical and map cracks. Peeling surface finish with minor honeycomb on west side. Separation crack on the NE wing - 2" - 3". Patched separation crack on the SW wing spalling. Vertical crack with delamination on south east wingwall.

ELEM/ENV	DEFECTS	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
1130/2	Cracking (RC and Other)	6.56	(LF)	0.00	6.56	0.00	0.00

Large separation crack on north west side 2 - 3 inches.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7370/1	Rip Rap	1,000.00	sq.ft	1,000.00	0.00	0.00	0.00

Wire enclosed riprap rundowns. Good condition.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7371/1	Guardrail	430.00	(LF)	430.00	0.00	0.00	0.00

Installed on west side of roadway. W Beam with Steel I Beam Posts with wooden blocks. ET 2000 and Class A turn down (not buried) end treatments. Fair condition and alignment (minor wave). Cracks in guardrail pad.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7374/2	Parapets	55.77	(LF)	29.52	26.25	0.00	0.00

East side: Horizontal cracks with scale and minor spalls and delamination above barrel 2. West side: newer construction with peeling surface finish. Hairline vertical cracks.

ELEM/ENV	DEFECTS	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
1130/2	Cracking (RC and Other)	26.25	(LF)	0.00	26.25	0.00	0.00

Moderate horizontal crack over barrel 1, with random cracks on parapets.

INSPECTION NOTES

Date 2021-8-17- Present: D. Trujillo; P.Salazar, clear, Calm,66 deg.

Work History From completed work candidates.

Completion Date	Action	Notes
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Work Candidates

Status	Priority	Action	Date Proposed	Notes
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X

X

Project Bridge Color Template

Bridge_Number: 08730

Proj_Doc_Date: 3/28/2022

PROJ_DOC_DESC: ACTIVE

Proj_Control_Number:

Project_Number:

Document Type: INSPECTION REPORTS

X

PB1

X



IDENTIFICATION

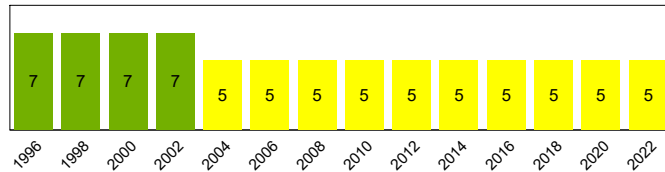
NBI Number:	08730	County (3):	43 SANDOVAL	Custodian (21):	State Highway Ager
Location (9):	0.5 MI S OF JCT NM-96	Health Index:	98.68	Year Built (27):	1989
SHD District (2):	District 6	SR:	54.00	Year Recon (106):	2001
Type of Service On (42A):	1 Highway	SD/FO:	ND	Historical (37):	5 Not eligible for NRHP
Feature Intersected (6):	SAN JOSE CREEK	Latitude (16):	36.06		
Type of Service Under(42B)	5 Waterway	Longitude (17):	-106.98		
Placecode (4):	Unknown	Owner (22):	State Highway Agency		

BRIDGE NOTES

Patrol 46-43, Sandoval County: 3 - 15 ft - 4 inch x 9 ft - 3 inch X 196 ft CMP with concrete blankets. 18.5 feet of fill over CMP. Since the last inspection of 3/10/2020 No work was noted. ...

CULVERT GEOMETRY

Deck Area:	2,748.74
O. to O. Width (52):	0.00
Curb / Sidewalk Width L (50A):	0.00
Curb / Sidewalk Width R (50B):	0.00
Median (33):	2 Closed Med w/o Barrier
Width Curb to Curb (51):	0.00
# of Main Spans (45):	3
Main Material (43 A):	3 Steel
Main Design (43 B):	19 Culvert
Max Span Length (48):	15.33
Structure Length (49):	39.33
NBIS Length (112):	Long Enough
Skew (34):	15
Structure Flared (35):	0 No flare
Approach Alignment (72):	8 Equal Desirable Crit



CULVERT CONDITION

Culvert Rating (62):	5 Moderate Damage
Bridge Rail (36A):	1 Meets Standards
Transition (36B):	1 Meets Standards
Approach Rail (36C):	1 Meets Standards
Approach Rail Ends (36D):	1 Meets Standards
Approach Roadway Width (32):(w/ shoulders)	69.88
Structure Evaluation (67):	5 Above Min Tolerable
Scour Rating (113):	8 Stable Above Footing
Waterway Adequacy (71):	8 Equal Desirable
Channel Rating (61):	7 Minor Damage

Team Leader

Signature and Date DEMETRIO TRUJILLO
03/28/2022

Reviewed By

Signature and Date

INSPECTION

Date of Inspection (90): 3/28/2022
Frequency (91): 24
Next Inspection: 3/28/2024
Crew Hours: 0.50
Snooper Hours: 0.00

Inspection Type	Freq (92)	Last Insp (93)	Next Insp
Element	24	3/28/2022	3/28/2024
Fracture Critical (A)		1/1/1901	1/1/1901
Underwater (B)		1/1/1901	1/1/1901
Special Insp (C)		1/1/1901	1/1/1901

LOAD RATING AND POSTING

Posting Status (41): A Open, no restriction
Posting % (70): 5 At/Above Legal Loads
Design Load (31): 5 MS 18 (HS 20)

Opr Method (63): 1 LF Load Factor
Opr Rating (64): HS33.7
Inv Method (65): 1 LF Load Factor
Inv Rating (66): HS19.8

Posting Loads Operating
NM-2 Axle:
NM-3A Axle:
NM-5A Axle:

ROADWAY

LOCATION

Kind of Hwy (5B): 2 U.S. Numbered H
Milepost (11): 67.54 mi (108.70 km)
Lanes On (28A): 4
Detour Length (19): 98.80 mi (159.00 km)

Lanes Under (28B): 0.00
Route Posted Speed: 70
Direction of Traffic (102): 2 2-way traffic

CLEARANCES

Horizontal (47): 34.45
Min Lat Left (56): 0.00
Min Lat Right (55B): 0.00
Minimum Lateral Underclearance R (55): 0.00
Minimum Lateral Underclearance L (56): 0.00
Minimum Vertical Clearance Minus: 0
Minimum Vertical Clearance Plus: 0

Horiz Ref (55A): N Feature not hwy or RR
Underclearance (69): N Not applicable (NBI)

CLASSIFICATION

Funct Class (26): 02 Rural Other Princ
NHS (104): 1 On the NHS
Defense Hwy (100): 0 Not a STRAHNET hwy
ADT (29): 4,925 Cars/Day
Pct Trucks (109): 24.00%
ADT Year (30): 2021
Future ADT (114): 6,698.00
Year Of Future ADT (115): 2041

CRITICAL FINDINGS SUMMARY

Critical Findings: None
Date Found: Inspector Name:
Date Updated:

Notes:
None

Action Taken:

NMDOT MISC. DATA

Old Bridge Number:

Known Utilities:

Stay In Place Forms: No

Stay In Place Form Type: 0

Overlay Thickness:

Culvert Fill Depth: 18.00

SIP Notes:

Approach Roadway Condition:

Approach pavement is PMBP with minor longitudinal and transverse cracks. PMBP shoulders are in good condition. 2
Delineators for bridge signing.

Channel & Channel Protection:

Small seasonal stream with steep to vertical banks and flat sandy channel. Good alignment. Main stream flow thru Barrel 1.
Minor scour, heavy debris on fence, water gate. Fence and water gate across channel upstream.

Recommendations:

RECOMMENDATIONS: Short Term: Patrol: Remove debris from water gate and repair.

Directions:

ELEMENT CONDITION SUMMARY

Element	Env	Description	Total Qty	CS 1		CS 2		CS 3		CS 4	
				Qty	Percentage	Qty	Percentage	Qty	Percentage	Qty	Percentage
240	2	Steel Culvert	587	560	95%	27	5%	0	0%	0	0%
515		Steel Protective Coating	10,753	10,753	100%	0	0%	0	0%	0	0%
1120		Efflorescence/Rust Staining	27	0	0%	27	100%	0	0%	0	0%
7370	2	Rip Rap	2,616	2,616	100%	0	0%	0	0%	0	0%
7371	2	Guardrail	686	686	100%	0	0%	0	0%	0	0%
7373	2	Slope Paving	2,034	2,034	100%	0	0%	0	0%	0	0%

ELEMENT NOTES

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
240/2	Steel Culvert	587.00	ft	560.00	27.00	0.00	0.00

Good upper profile. Minor to moderate leaching on top. Sag in barrel 2 invert due to water piping underneath at inlet. Some minor rust, abrasion at invert. Areas of light to moderate leaching at bolts and seams. Barrel 1 is newer. Gaps at some of the seams. Large bulge in barrel 3 near East end. Newer section in barrel 2 has misfitted joints. Peeling galvanization in barrel 2. Large vertical cracks in concrete seal - junction of new and old pipe sections. Construction bulges, dings in barrel 3. The culvert is not anchored to the concrete blanket at barrel 2. 2 feet of silt in 2, 3 feet - 5 feet silt in barrel 3. Heavy debris on Watergate at inlet.

ELEM/ENV	PROTECTIVE COATING	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
515/2	Steel Protective Coating	10,753.00	sq.ft	10,753.00	0.00	0.00	0.00

Some minor rust, abrasion at invert. Areas of light to moderate leaching at bolts and seams. Peeling galvanization in barrel 2.

ELEM/ENV	DEFECTS	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
1120/2	Efflorescence/Rust Staining	27.00	ft	0.00	27.00	0.00	0.00

Areas of leaching at seams and bolts.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7370/2	Rip Rap	2,616.00	sq.ft	2,616.00	0.00	0.00	0.00

Grouted riprap with heavy abrasion at outlet (buried). Riprap rundown has been moderately undermined.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7371/2	Guardrail	686.00	(LF)	686.00	0.00	0.00	0.00

W beam on steel I beam posts with wooden blocks. Type C anchors and ET 2000. Good condition with minor traffic damage.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7373/2	Slope Paving	2,034.00	(SF)	2,034.00	0.00	0.00	0.00

Hairline to medium horizontal, vertical and radial cracks at inlet and outlet.

INSPECTION NOTES

Date 2022-03-28-
Present: D.Trujillo, P.Salazar; Cloudy, Breezy, 62 Deg.



Bridge Inspection Report

00000000008730

Facility Carried(7): US-550
Mile Post(11): 67.54 mi (108.70 km)
Team Leader: DEMETRIO TRUJILLO
Inspection Date: 03/28/2022

Work History From completed work candidates.

Completion Date	Action	Notes
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Work Candidates

Status	Priority	Action	Date Proposed	Notes
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X

X

Project Bridge Color Template

Bridge_Number: 09141

Proj_Doc_Date: 1/24/2022

PROJ_DOC_DESC: ACTIVE

Proj_Control_Number:

Project_Number:

Document Type: INSPECTION REPORTS

X

PB1

X



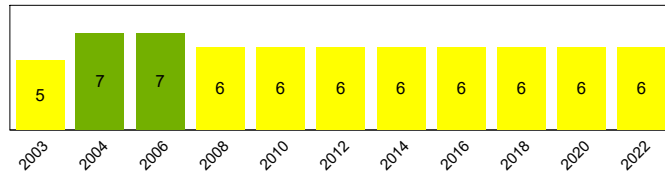
IDENTIFICATION

NBI Number:	09141	County (3):	43 SANDOVAL	Custodian (21):	State Highway Ager
Location (9):	2.8 MI N JCT US-550/NM19	Health Index:	99.61	Year Built (27):	2000
SHD District (2):	District 6	SR:	65.00	Year Recon (106):	
Type of Service On (42A):	1 Highway	SD/FO:	ND	Historical (37):	5 Not eligible for NRHP
Feature Intersected (6):	RITO DE LOS PINOS WETLAN	Latitude (16):	36.05		
Type of Service Under(42B)	5 Waterway	Longitude (17):	-106.97		
Placecode (4):	Cuba	Owner (22):	State Highway Agency		

BRIDGE NOTES

Maintenance Responsibility: Mesa PDC/NMDOT Patrol: 46-43, Sandoval County:
Structure Description: 2 - 132 inch x 181 ft CMSPP, with concrete blankets. Fill cover 3 ft. Since the last inspection of 1/22/2020
No work noted. ...

CULVERT GEOMETRY



Deck Area:	1,742.44
O. to O. Width (52):	0.00
Curb / Sidewalk Width L (50A):	0.00
Curb / Sidewalk Width R (50B):	0.00
Median (33):	2 Closed Med w/o Barrier
Width Curb to Curb (51):	0.00
# of Main Spans (45):	2
Main Material (43 A):	3 Steel
Main Design (43 B):	19 Culvert
Max Span Length (48):	11.16
Structure Length (49):	24.93
NBIS Length (112):	Long Enough
Skew (34):	0
Structure Flared (35):	0 No flare
Approach Alignment (72):	8 Equal Desirable Crit

CULVERT CONDITION

Culvert Rating (62):	6 Deterioration
Bridge Rail (36A):	1 Meets Standards
Transition (36B):	1 Meets Standards
Approach Rail (36C):	1 Meets Standards
Approach Rail Ends (36D):	0 Substandard
Approach Roadway Width (32):(w/ shoulders)	69.88
Structure Evaluation (67):	6 Equal Min Criteria
Scour Rating (113):	8 Stable Above Footing
Waterway Adequacy (71):	8 Equal Desirable
Channel Rating (61):	6 Bank Slumping

Team Leader

Signature and Date DEMETRIO TRUJILLO
01/24/2022

Reviewed By

Signature and Date

INSPECTION

Date of Inspection (90): 1/24/2022
 Frequency (91): 24
 Next Inspection: 1/24/2024
 Crew Hours: 0.50
 Snooper Hours: 0.00

Inspection Type	Freq (92)	Last Insp (93)	Next Insp
Element	24	1/24/2022	1/24/2024
Fracture Critical (A)		11/29/2003	1/1/1901
Underwater (B)		11/29/2003	1/1/1901
Special Insp (C)		11/29/2003	1/1/1901

LOAD RATING AND POSTING

Posting Status (41): A Open, no restriction
 Posting % (70): 5 At/Above Legal Loads
 Design Load (31): 5 MS 18 (HS 20)

Opr Method (63): 1 LF Load Factor
 Opr Rating (64): HS43.6
 Inv Method (65): 1 LF Load Factor
 Inv Rating (66): HS19.8

Posting Loads Operating	
NM-2 Axle:	0.00
NM-3A Axle:	0.00
NM-5A Axle:	0.00

ROADWAY

LOCATION

Kind of Hwy (5B): 2 U.S. Numbered H
 Milepost (11): 66.40 mi (106.86 km)
 Lanes On (28A): 4
 Detour Length (19): 98.80 mi (159.00 km)

Lanes Under (28B): 0.00
 Route Posted Speed: 70
 Direction of Traffic (102): 2 2-way traffic

CLEARANCES

Horizontal (47): 69.88
 Min Lat Left (56): 0.00
 Min Lat Right (55B): 0.00
 Minimum Lateral Underclearance R (55): 0.00
 Minimum Lateral Underclearance L (56): 0.00
 Minimum Vertical Clearance Minus: 0
 Minimum Vertical Clearance Plus: 0

Horiz Ref (55A): N Feature not hwy or RR
 Underclearance (69): N Not applicable (NBI)

CLASSIFICATION

Funct Class (26): 02 Rural Other Princ
 NHS (104): 1 On the NHS
 Defense Hwy (100): 0 Not a STRAHNET hwy
 ADT (29): 4,925 Cars/Day
 Pct Trucks (109): 24.00%
 ADT Year (30): 2021
 Future ADT (114): 6,698.00
 Year Of Future ADT (115): 2041

CRITICAL FINDINGS SUMMARY

Critical Findings: None
 Date Found: Inspector Name:
 Date Updated:

Notes:
 None

Action Taken:

NMDOT MISC. DATA

Old Bridge Number:

Known Utilities:

Stay In Place Forms: No

Stay In Place Form Type: 0

Overlay Thickness: 0.00

Culvert Fill Depth: 3.00

SIP Notes:

Approach Roadway Condition:

Approach Roadway Condition: Asphalt pavement has minor longitudinal and transverse cracks in good condition. Asphalt shoulders are in good condition. Embankments have moderate slopes with vegetation. Bridge signing: 2 Delineators. Traffic Safety Features: W Beam on steel posts and wooden blocks with Type C and Type A Anchors.

Channel & Channel Protection:

Small intermittent stream with undefined banks and narrow incised channel, heavy vegetation in channel. Alignment good at inlet, fair at outlet. Fence across channel on East side.

Recommendations:

Recommendations: None

Directions:

ELEMENT CONDITION SUMMARY

Element	Env	Description	Total Qty	CS 1		CS 2		CS 3		CS 4	
				Qty	Comp %	Qty	Comp %	Qty	Comp %	Qty	Comp %
240	2	Steel Culvert	362	357	99%	5	1%	0	0%	0	0%
515		Steel Protective Coating	7,964	7,964	100%	0	0%	0	0%	0	0%
1900		Distortion	5	0	0%	5	100%	0	0%	0	0%
7371	2	Guardrail	627	627	100%	0	0%	0	0%	0	0%
7373	1	Slope Paving	3,032	3,032	100%	0	0%	0	0%	0	0%

ELEMENT NOTES

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
240/2	Steel Culvert	362.00	ft	357.04	4.96	0.00	0.00

Pipe has a 4" gash and flame cut at lap joint in pipe 2 near middle. 2 Bulges in top near east end in pipe 1 with a 4" gash north side of culvert mid span with minor silt / ice buildup. A few loose bolts with gaps in the plate. Minor construction dings - irregularities in ribs at outlet of pipe 1. Missing bolts in barrel 2. No changes in this inspection.

ELEM/ENV	PROTECTIVE COATING	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
515/2	Steel Protective Coating	7,964.00	sq.ft	7,964.00	0.00	0.00	0.00

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
1900/2	Distortion	4.96	ft	0.00	4.96	0.00	0.00

Pipe has 2 areas of bulging.

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7371/2	Guardrail	626.64	(LF)	626.64	0.00	0.00	0.00

W Beam rail on steel posts & wooden blocks with Type C and Type A Anchors. Rail turns into driveways. Minor damage to NW C anchor (side road).

ELEM/ENV	ELEMENT NAME	QUANTITY	UNITS	QTY ST 1	QTY ST 2	QTY ST 3	QTY ST 4
7373/1	Slope Paving	3,032.00	(SF)	3,032.00	0.00	0.00	0.00

Minor horizontal and radial cracks.

INSPECTION NOTES

Date 2022-01-24-

Present: P.Salazar; Clear, Light Breeze, 41 Deg.

Work History

From completed work candidates.

Completion Date

Action

Notes



Bridge Inspection Report

00000000009141

Facility Carried(7): US-550 NBL/SBL

Mile Post(11): 66.40 mi (106.86 km)

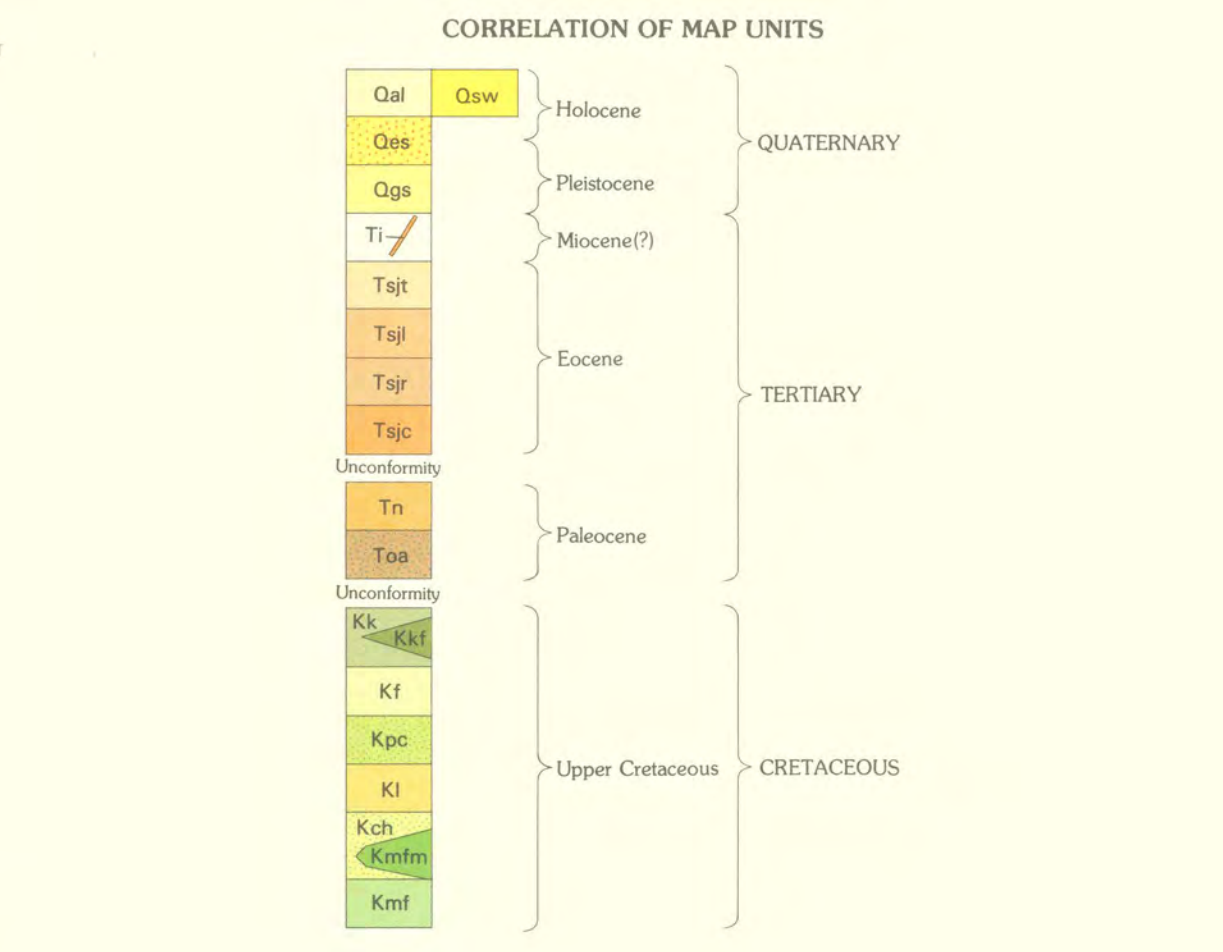
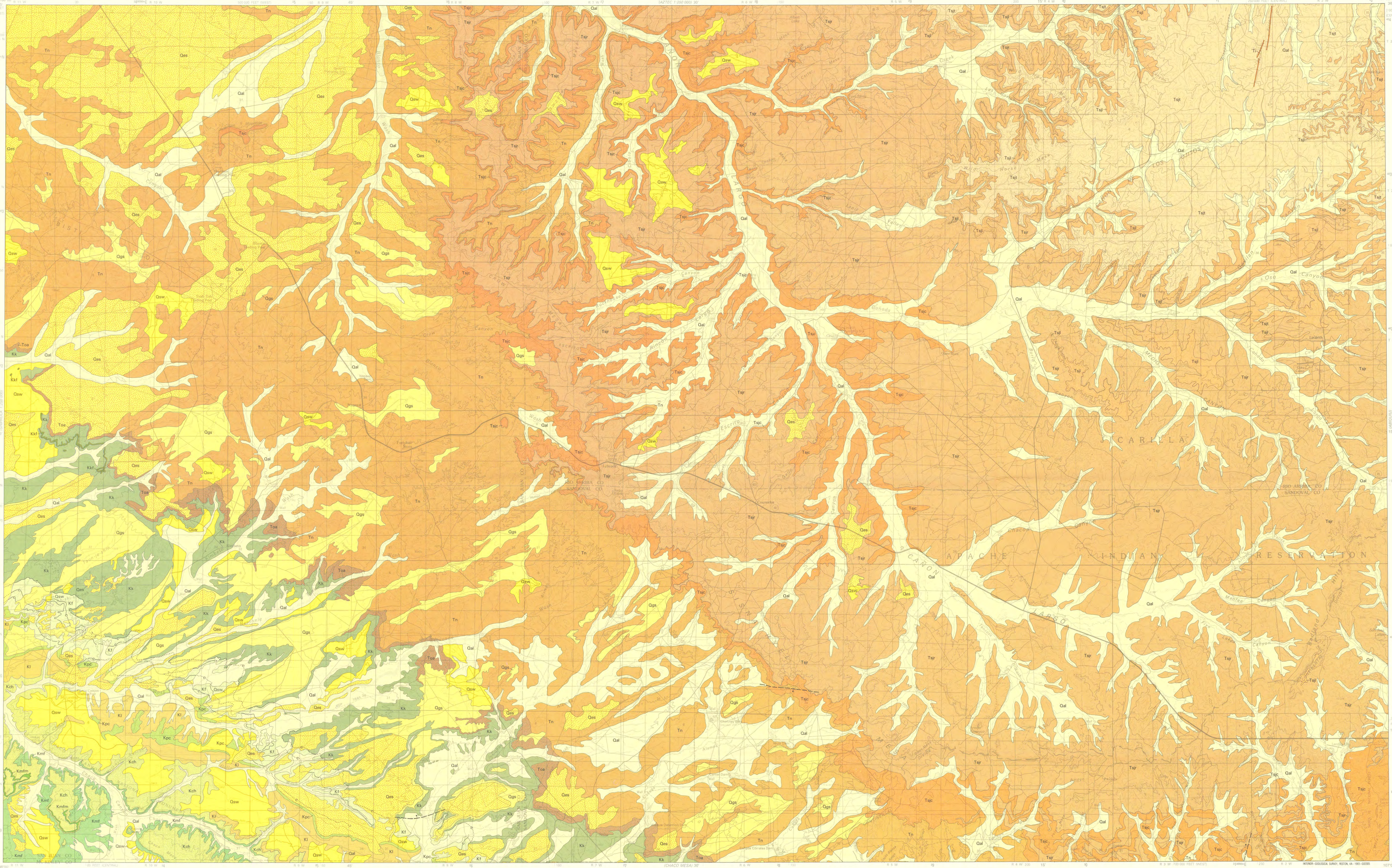
Team Leader: DEMETRIO TRUJILLO

Inspection Date: 01/24/2022

Work Candidates

Status	Priority	Action	Date Proposed	Notes
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Appendix G: Geological Formation Maps



DESCRIPTION OF MAP UNITS

Qal ALLUVIUM (HOLOCENE)—Stream-deposited clay, silt, sand, and gravel on valley floor and in lowest terrace deposits. Generally consists of light gray to white fine to coarse-grained sand and dark gray silt derived from sandstone bedrock or reworked deposits of older alluvium. In southwest part of quadrangle contains clasts of sandstone and ironstone from local bedrock and sparse well-rounded red quartzite pebbles and fragments of petrified wood. Includes some fan and sheetwash alluvium consisting of grayish-brown, poorly consolidated, friable to slightly indurated, thinly laminated and cross-stratified sand and silt equivalent to Naha Alluvium of Hack (1941). Thickness as much as 10 m (30 ft).

Qaw SHEETWASH ALLUVIUM (HOLOCENE)—Poorly consolidated clay, silt, and coarse- to medium-grained sand. Includes fine to coarse-grained colluvium on steep slopes. On Fruitland Formation and Rio Arriba Shale sheetwash deposits may include small mudflows. Thickness 1-3 m (3-10 ft).

Qes EOLIAN SAND (HOLOCENE TO UPPER PLEISTOCENE)—PENEPLATE AGE—Loose to slightly consolidated sand in sheets or dunes. Younger deposits consist of white, well-sorted, cross-stratified, loose quartz sand in active linear or crescent-shaped dunes along valleys. Older deposits weather light-brown and consist of slightly consolidated fine to medium-grained sand containing unrounded to rounded frosted grains in stabilized linear dunes and sand sheets on uplands. Thickness as much as 5 m (16 ft).

Qgs GRAVELLY SAND (PLEISTOCENE)—Very pale brown to grayish-orange, stratified, gravely sand containing chert and quartzite pebbles averaging about 2.5 cm (1 in.) in diameter. Pebbles are more abundant in lower part and decrease in abundance and size upward. Size and composition of clasts varies with location in quadrangle and whether source of deposit is nearby or distant. In southwestern part of quadrangle, quartzite sandstone and chert clasts are chiefly from Rio Arriba Sandstone (Toa); ironstone and clinker rock baled by heat from burning coal are chiefly from the Fruitland Formation. Deposits occur on alluvial terraces and in stream channels across more resistant bedrock and dip toward Chaco Wash to the southwest and Gallegos Canyon and Blanco Wash to the north. At least seven erosion surfaces and their associated gravely sand deposits are recognized in the drainage basin of Chaco Wash and each reflects an erosional episode related to changes in the grade of the Chaco River or the San Juan River northwest of the quadrangle. Thickness 3-7 m (10-23 ft).

Tn INTRUSIVE IGNEOUS ROCKS (MIOCENE)—Lampyrophre dikes and sills of probable Miocene age. The dikes at the surface are 1-3 km (0.62-1.9 mi) long and as much as 10 m (30 ft) wide.

Tj SAN JOSE FORMATION (Eocene)—Sandstone, shale, and minor conglomerate. Divided into four lithologic units (Baird, 1967).

Tpc Tapache Member—Maroon and variegated shale and intercalated lenticular, brown to yellowish-buff, coarse-grained, locally conglomeratic, cross-stratified sandstone. Represents flood-plain and stream-channel deposits. Lower part of member intertongues locally with upper part of Leaves Member. Maximum thickness about 150 m (500 ft).

Tj Leaves Member—Light-tan, coarse-grained, conglomeratic, cross-stratified sandstone, containing quartz grains and feldspar fragments, and some pebbles and cobbles of metagranite. Pebbles and cobbles of granite common at some places. Includes numerous thin beds of maroon, green, and gray clay shale, mudstone, sandy shale, and shaly sandstone. Deposited as an alluvial fan made up of coarse detritus carried by streams from site of present Blanco and Sargento de Cristo washes. Lower part tongues out to south into the Regina Member. Thickness about 400 m (1300 ft).

Tpc Regina Member—Light-gray to tan to olive-purple to dark purple, and green clay shale, siltstone, mudstone, shaly sandstone and sandy shale with numerous beds of white to buff, gray and brown, fine to coarse-grained, argillaceous sandstone and sparse, resistant, conglomeratic, arkosic, cliff-forming sandstone. Flood-plain and stream-channel deposits derived mostly from the tectonically active Sacramento uplift. Thickness as much as 490 m (1600 ft).

Toa Coa Member—Buff and yellow, rhyolitic, cross-stratified, coarse-grained, conglomeratic sandstone with pebbles and cobbles of quartzite and granite derived from highlands east and northeast of present San Juan Basin. Siltstone and carbonaceous shale common in some places. Lower part contains thin lenses of gray and purple-gray sandy shale. Intertongues with Regina Member. Thickness nearly 245 m (800 ft) in east, thinning to about 60 m (200 ft) in west.

Tn Nacimiento Formation (Paleocene)—Gray to olive-gray clay shale and sandy shale, some sandstone, and a few minor resistant sandstone lenses in southern part of quadrangle; mostly sandstone in northern part. Intertongues with the Animas Formation north of the quadrangle. Thickness as much as 580 m (1900 ft).

Qa ALAMO SANDSTONE (PALEOCENE)—Brown, cross-stratified sandstone containing conglomerate near base, and buff, tan, and brown, medium-grained to very coarse grained sandstone containing local lenses of olive-green to gray shale. Pebbles varying in size from 0.5 m (0.5 ft) to several centimeters in diameter scattered throughout sandstone; pebble-to-cobble conglomerate in lower part. Fossil logs replaced by alio and lenticular concretion with the Animas Formation north of quadrangle. Thickness 25-65 m (80-200 ft).

Kk Kirtland Shale (Upper Cretaceous)—Shale, siltstone, mudstone, and minor coal beds that usually are no more than 0.3 m (1 ft) thick. Upper part contains variegated mudstone and interbedded lenses of friable sandstone, thin southeast of quadrangle. Lower part consists of gray to greenish-gray, silty and sandy mudstone with a few interbeds of buff siltstone and sandstone, contains carbonaceous shale and sparse coal, mudstone is commonly lenticular. Thickness as much as 170 m (560 ft). In the adjoining Shiprock 1" x 2" Quadrangle (O'Sullivan and Bestman, 1963) to the west, the formation is divided into an upper shale member, the intermediate Farrington Sandstone Member, and a lower shale member.

Kf Farrington Sandstone Member—Intertongued sandstone, siltstone, and mudstone. Sandstone beds are cliff-forming and distinguish the member from the upper and lower parts of formation. Member pinches out short distance east of eastern boundary of quadrangle.

Kf Fruitland Formation (Upper Cretaceous)—Highly variable sequence of gray to yellowish-gray, interbedded lenticular sandstone, siltstone, and mudstone, and dark brown to black carbonaceous shale and coal. Mudstone units are commonly 0.1-0.5 m (0.3-20 ft) thick and contain swelling clay layers. Sandstone lenses are commonly 0.5-1 m (1.5-3 ft) thick, but locally are as much as 14 m (47 ft) thick, and at places contain ironstone concretions as large as 1.2 m (3.5 ft) in diameter. Formation is restricted to principal coal zones and the contact with the Fruitland and Kirtland is arbitrarily placed at the top of uppermost principal coal bed. Individual coal beds are commonly 0.2-4 m (0.5-20 ft) thick. In places, red dikes mark the outcrop of coal beds. Thickness of formation is 20-40 m (65-130 ft) near western boundary of quadrangle and 18 m (60 ft) near southern boundary, but within the quadrangle may be as much as 52 m (170 ft) to thickness.

Kpc Pictured Cliffs Sandstone (Upper Cretaceous)—Upper part consists of yellowish-gray to grayish-orange, massive, cross-stratified, marine sandstone interbedded with a few thin beds of shale. Intertongues with Fruitland Formation, and distinct units of Pictured Cliffs lithology within the Fruitland are common. Lower part interbedded brown sandstone and gray matrix shale. Diphasic nature characteristic of formation. Thickness about 18 m (60 ft).

Ki Lewis Shale (Upper Cretaceous)—Upper part olive-gray, calcareous, sandy, marine shale with light-brown sandstone interbeds 0.3-1.5 m (1-5 ft) thick, gradational with the overlying Pictured Cliffs Sandstone. Middle part light gray to dark-olive-gray calcareous, gray shale and siltstone containing thin layers of concretionary limestone. Lower part sandy and gradational with the underlying Cliff House Sandstone. Concretions in formation contain marine invertebrate fossils equivalent in age to Pueblo Shale of eastern Colorado. Thickness 30-35 m (100-115 ft).

Kch Cliff House Sandstone (Upper Cretaceous)—White to dark-yellowish-orange, thin- to thick-bedded, fine to medium-grained, lenticular, and cross-stratified to massive marine sandstone and gray or brown carbonaceous shale lenses. Forms prominent cliffs in area of Chaco Culture National Historical Park. Chaco Canyon is locally disstable into upper and lower massive sandstone units separated by a middle unit consisting of interbedded sandstone and shale, intertongues with both the Lewis Shale and Menefee Formation. Thickness about 100-112m (300-340 ft).

Kmf Menefee Formation (Upper Cretaceous)—Yellowish-gray, lenticular, cross-stratified, fine to medium-grained sandstone interbedded with greenish-gray calcareous, gray shale and siltstone, contains black carbonaceous shale and thin coal beds; coal is buried in some areas. Only the upper part of formation in quadrangle. Thickness of formation in quadrangle about 165 m (550 ft).

Kmfm Mudstone tongue (Upper Cretaceous)—Gray mudstone and siltstone, black carbonaceous shale, and thin beds of highly weathered coal interbedded with gray and brown lenticular sandstone. Extends into the Cliff House Sandstone from the southwest. Thickness 0-55 m (0-180 ft).

CONTACT—Solid line

PROBABLE FAULT—Dashed where approximately located, bar and ball on downthrown side

COAL ZONE—Dashed where approximately located, dotted where concealed

REFERENCES

Baird, E. H., Ash, S. R., and Anderson, R. Y., 1966, History of nomenclature and stratigraphy of rocks adjacent to the Cretaceous-Tertiary boundary, western San Juan basin, New Mexico. U.S. Geological Survey Professional Paper 524-D, p. D1-D23.

Baird, E. H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous and Tertiary rocks, central San Juan basin, New Mexico. U.S. Geological Survey Professional Paper 552, 101 p.

Basor, C. M., and Reeside, J. B., Jr., 1921, Coal in the middle and eastern parts of San Juan County, New Mexico. U.S. Geological Survey Bulletin 716-C, 155-237.

Dane, C. H., 1938 [1937], Geology and fuel resources of the southern part of the San Juan basin, New Mexico, part 3. The La Ventana-Chaco area coal field. U.S. Geological Survey Bulletin 660-C, p. 81-161.

Fassett, J. E., and Hinds, J. S., 1971, Geology and fuel resources of the Fruitland Formation and Rio Arriba Shale of the San Juan basin, New Mexico and Colorado. U.S. Geological Survey Professional Paper 676, 76 p.

Hack, J. T., 1941, Dunes of the western New Mexico country. Geographical Review, v. 31, no. 2, p. 240-263.

Manley, Kim, and Scott, G. R., 1978, Preliminary geologic map of the Arize 1" x 2" quadrangle, northwestern New Mexico and southern Colorado. U.S. Geological Survey Open-File Report 78-466.

O'Sullivan, R. B., and Bestman, H. M., compilers, 1963, Geology, structure, and uranium deposits of the Shiprock quadrangle, New Mexico and Arizona. U.S. Geological Survey Miscellaneous Investigations Map I-345, scale 1:250,000.

Schneider, G. B., Weide, D. L., Myton, J. W., and Scott, G. R., 1979, Geologic map of the Pueblo Bonito NW quadrangle, San Juan County, New Mexico. U.S. Geological Survey Miscellaneous Field Studies Map MF-1117, scale 1:24,000.

Weide, D. L., Myton, J. W., and Scott, G. R., 1979, Geologic map of the Kimbeto quadrangle, San Juan County, New Mexico. U.S. Geological Survey Miscellaneous Field Studies Map MF-1118, scale 1:24,000.

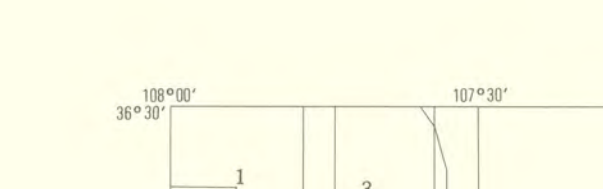
Weide, D. L., Myton, J. W., and Scott, G. R., 1979, Geologic map of the Rock Wash quadrangle, San Juan County, New Mexico. U.S. Geological Survey Miscellaneous Field Studies Map MF-1124, scale 1:24,000.

Weide, D. L., Myton, J. W., and Scott, G. R., 1979, Geologic map of the Pueblo Bonito quadrangle, San Juan County, New Mexico. U.S. Geological Survey Miscellaneous Field Studies Map MF-1119, scale 1:24,000.

Weide, D. L., Myton, J. W., and Scott, G. R., 1979, Geologic map of the Sargent Ranch quadrangle, San Juan County, New Mexico. U.S. Geological Survey Miscellaneous Field Studies Map MF-1120, scale 1:24,000.

Note: Chaco Canyon National Monument was increased in size and designated Chaco Culture National Historical Park December 19, 1980.

Done from U.S. Geological Survey, 1978

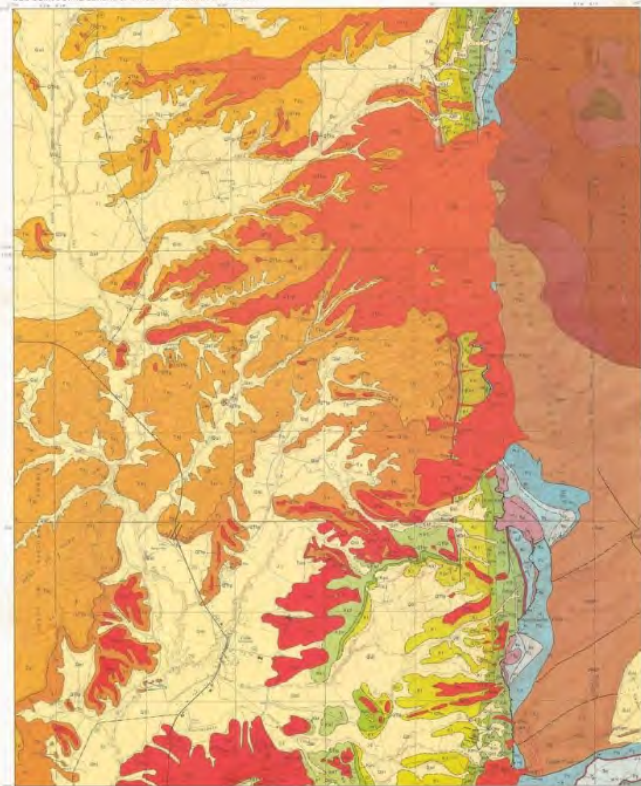


SOURCES OF GEOLOGIC DATA

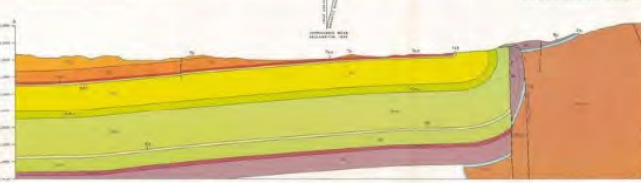
1. Manley and Scott, 1978.
2. Baird, 1967.
3. Olson, A. B., 1977, unpub. mapping.
4. Stone, W. J., 1979, unpub. mapping.
5. Schneider, Weide, Myton, and Scott, 1979.
6. Schneider, Weide, and Scott, 1979.
7. Weide, Schneider, Myton, and Scott, 1979a.
8. Weide, Schneider, Myton, and Scott, 1979b.
9. Weide, Myton, and Scott, 1979.
10. Brown, J. L., 1981, unpub. mapping.

GEOLOGIC MAP OF CHACO CANYON 30' x 60' QUADRANGLE, SHOWING COAL ZONES OF FRUITLAND FORMATION, SAN JUAN, RIO ARRIBA, AND SANDOVAL COUNTIES, NEW MEXICO

By
James W. Myton
1983



Geologic map of the Cuba quadrangle, New Mexico, showing various geological units in different colors (red, orange, yellow, green, blue, purple). The map includes a grid and a north arrow.



GEOLOGIC MAP AND SECTION OF CUBA QUADRANGLE, NEW MEXICO

by Lee A. Woodward et al.

INTRODUCTION AND REVISION HISTORY
This map is based on the geologic map of the Cuba quadrangle, New Mexico, published in 1952 by Lee A. Woodward and others. It is a revision of the map, showing the results of additional field work and laboratory studies. The map is based on the geologic map of the Cuba quadrangle, New Mexico, published in 1952 by Lee A. Woodward and others. It is a revision of the map, showing the results of additional field work and laboratory studies.

SYNOPSIS
This map is based on the geologic map of the Cuba quadrangle, New Mexico, published in 1952 by Lee A. Woodward and others. It is a revision of the map, showing the results of additional field work and laboratory studies. The map is based on the geologic map of the Cuba quadrangle, New Mexico, published in 1952 by Lee A. Woodward and others. It is a revision of the map, showing the results of additional field work and laboratory studies.

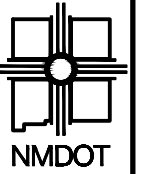
CONCLUSIONS
This map is based on the geologic map of the Cuba quadrangle, New Mexico, published in 1952 by Lee A. Woodward and others. It is a revision of the map, showing the results of additional field work and laboratory studies. The map is based on the geologic map of the Cuba quadrangle, New Mexico, published in 1952 by Lee A. Woodward and others. It is a revision of the map, showing the results of additional field work and laboratory studies.

REFERENCES
Bull. U. S. Geol. Surv., 1952, 700, 1-100.
Bull. U. S. Geol. Surv., 1953, 710, 1-100.
Bull. U. S. Geol. Surv., 1954, 720, 1-100.
Bull. U. S. Geol. Surv., 1955, 730, 1-100.
Bull. U. S. Geol. Surv., 1956, 740, 1-100.

EXPLANATION
A detailed legend for the geologic map, listing various geological units with their corresponding colors and symbols. The legend is organized into sections: QUATERNARY, TERTIARY, CRETACEOUS, JURASSIC, TRIASSIC, PERMIAN, MISSISSIPPIAN, and Carboniferous. Each entry includes a color swatch and a brief description of the unit.



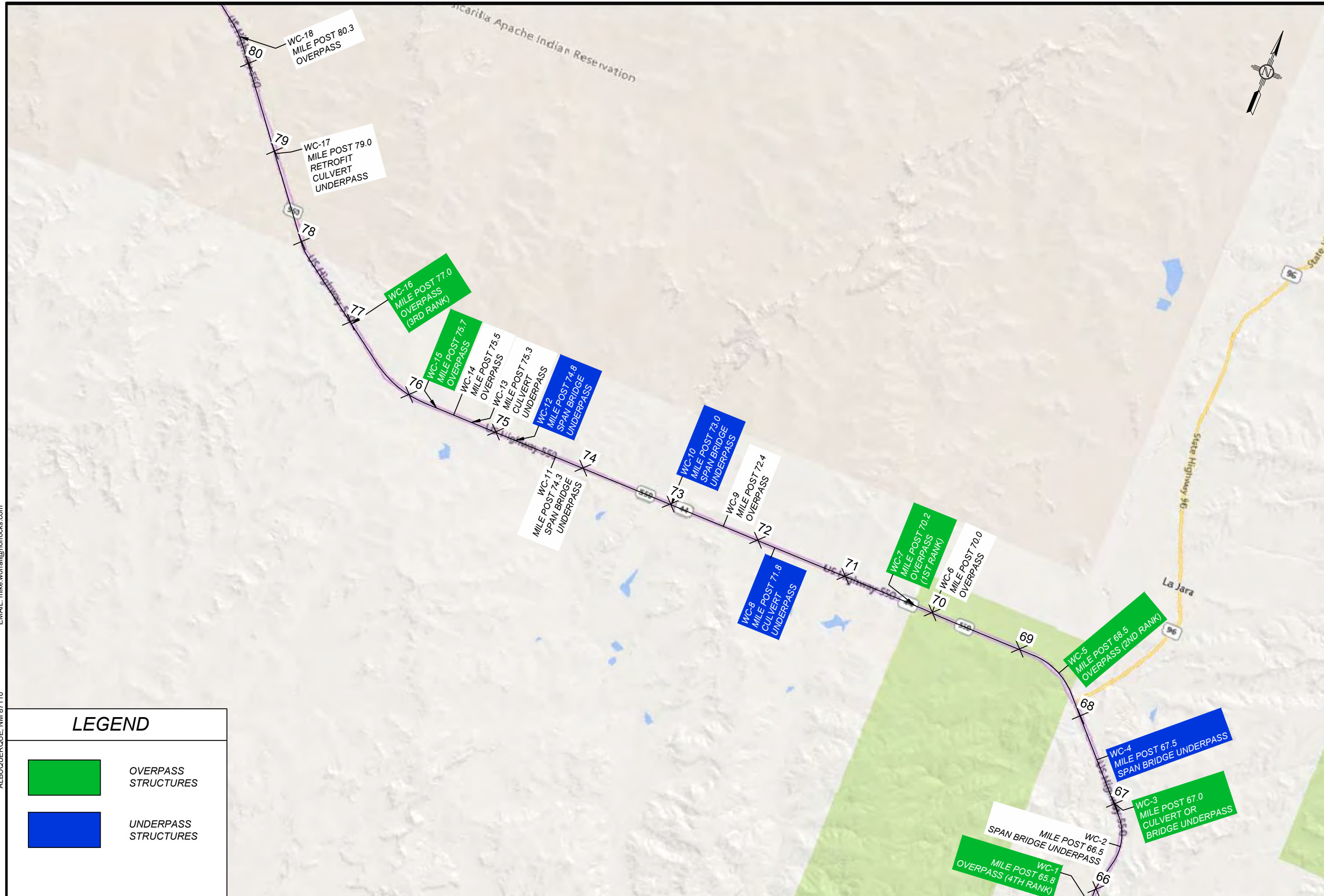
Appendix H: Conceptual Layouts and Standard Drawings



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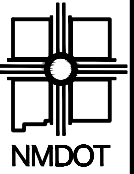


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LEGEND

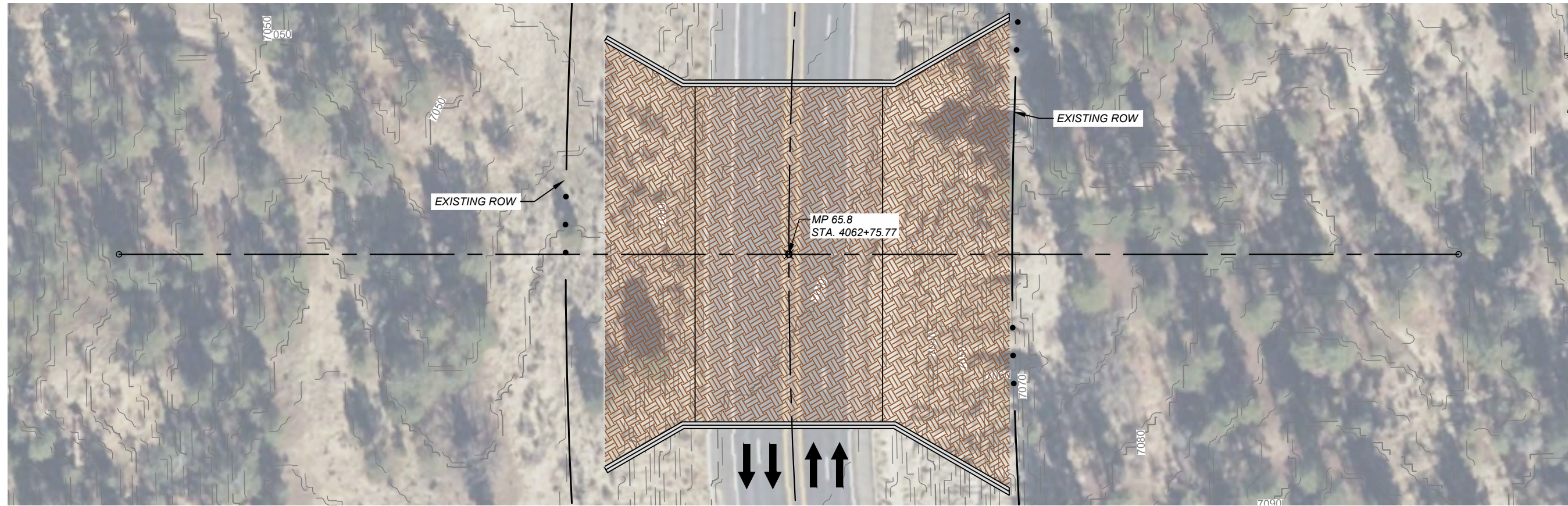
	OVERPASS STRUCTURES
	UNDERPASS STRUCTURES



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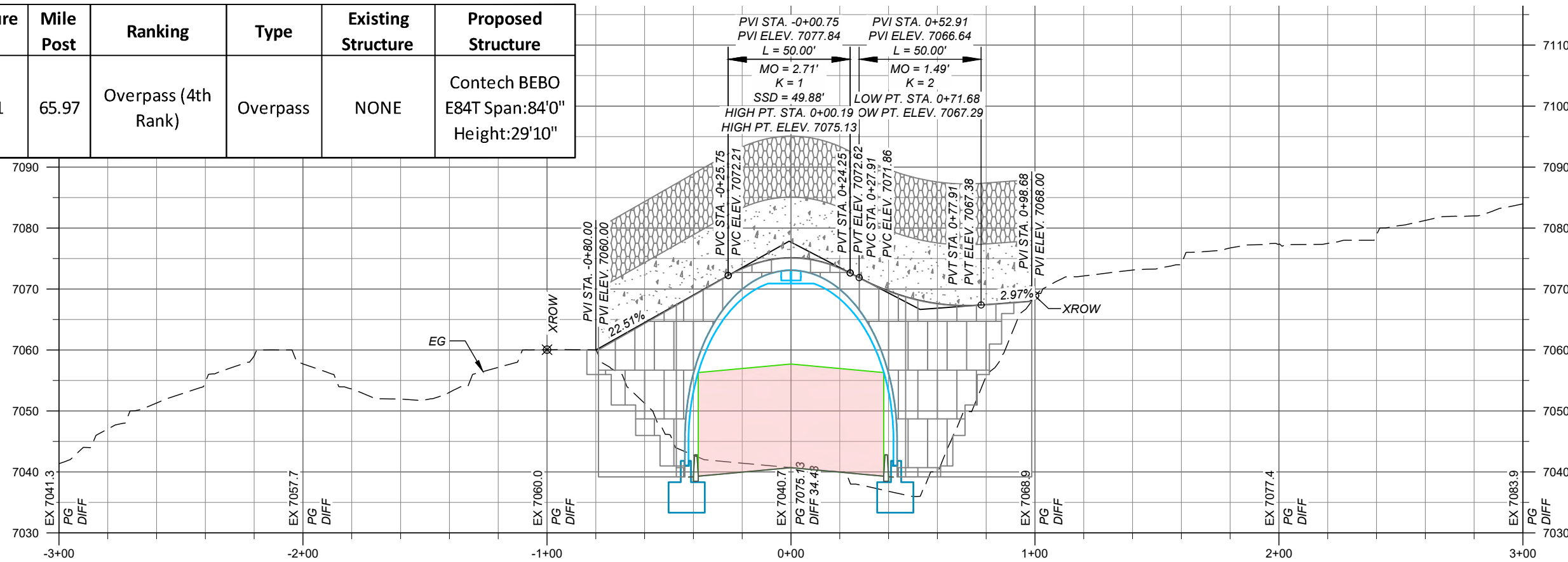
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WILDLIFE CROSSING 01 PLAN & PROFILE



PLAN DRAWING SCALE: 1" = 50'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-1	65.97	Overpass (4th Rank)	Overpass	NONE	Contech BEBO E84T Span:84'0" Height:29'10"

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 20'

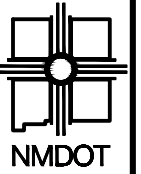


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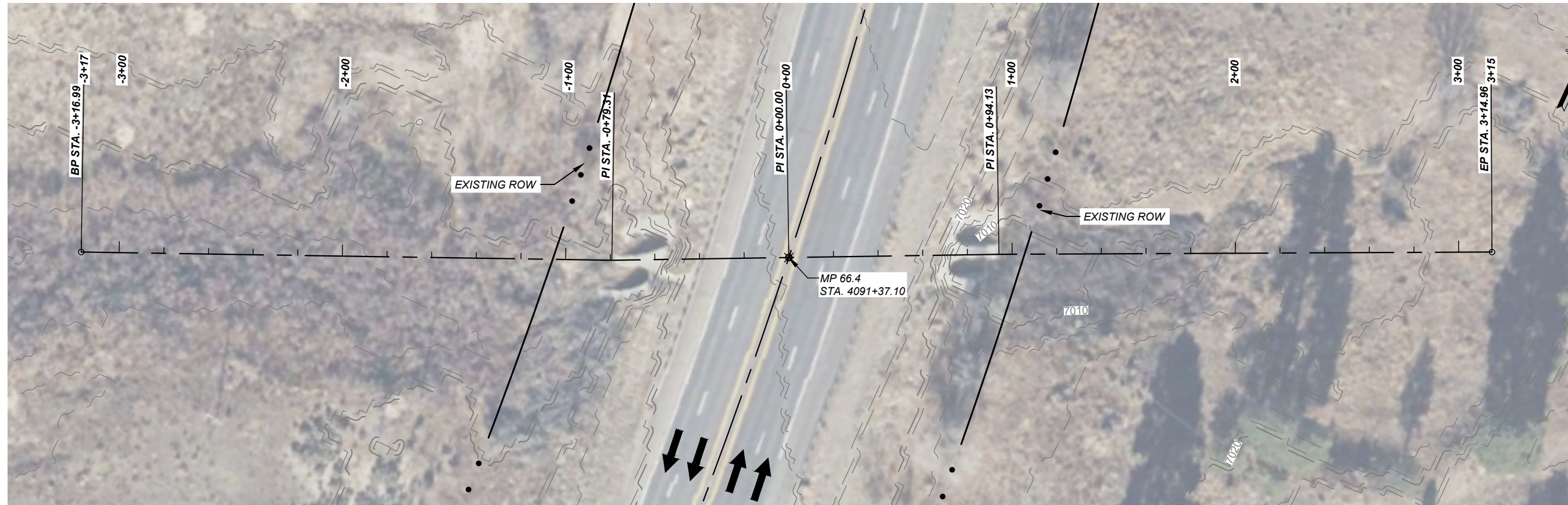




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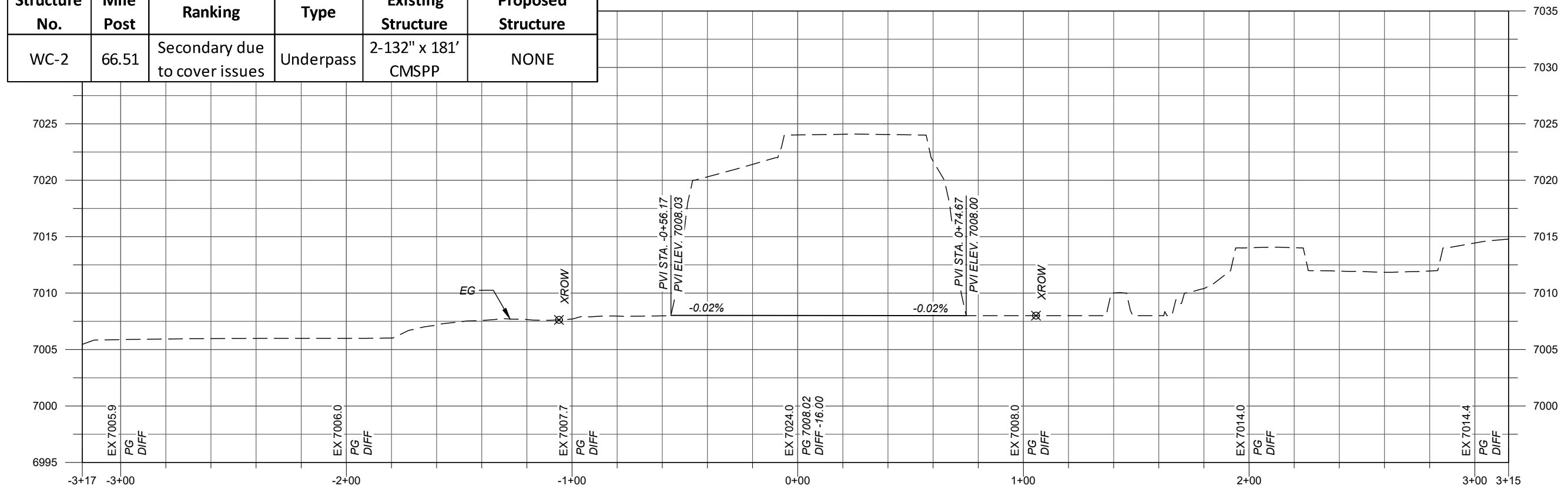
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WILDLIFE CROSSING 02 PLAN & PROFILE



PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 10'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-2	66.51	Secondary due to cover issues	Underpass	2-132" x 181' CMSPP	NONE

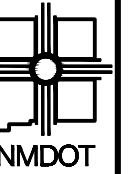


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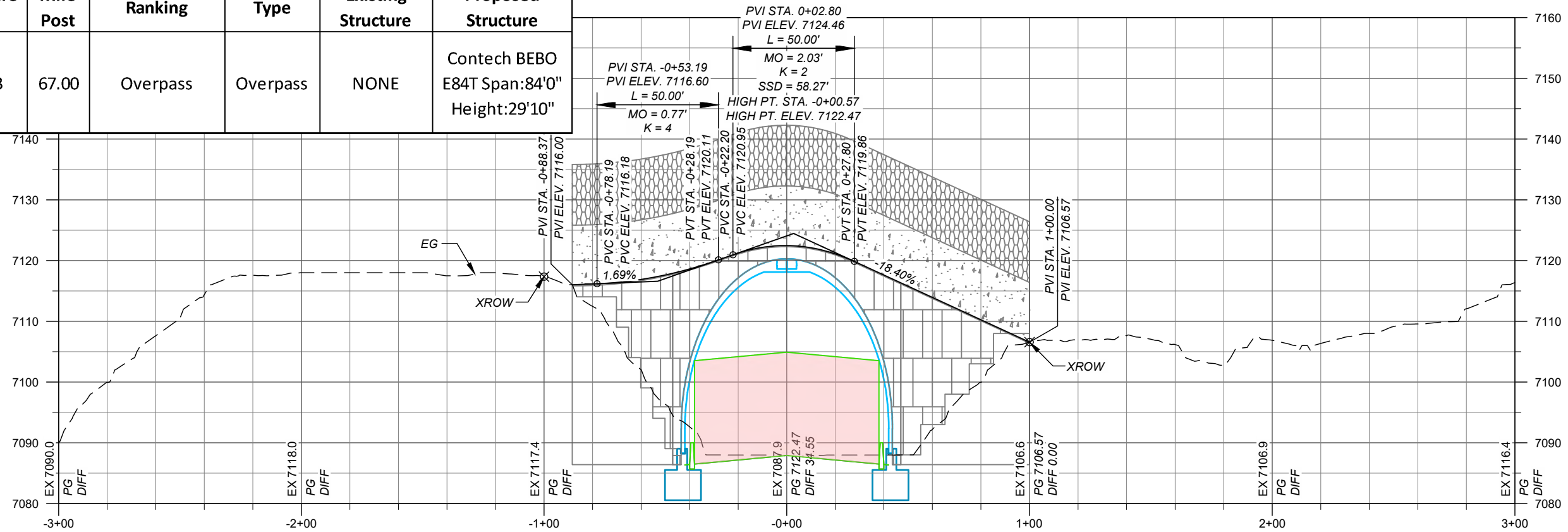
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PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 20'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-3	67.00	Overpass	Overpass	NONE	Contech BEBO E84T Span:84'0" Height:29'10"

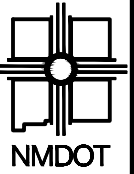


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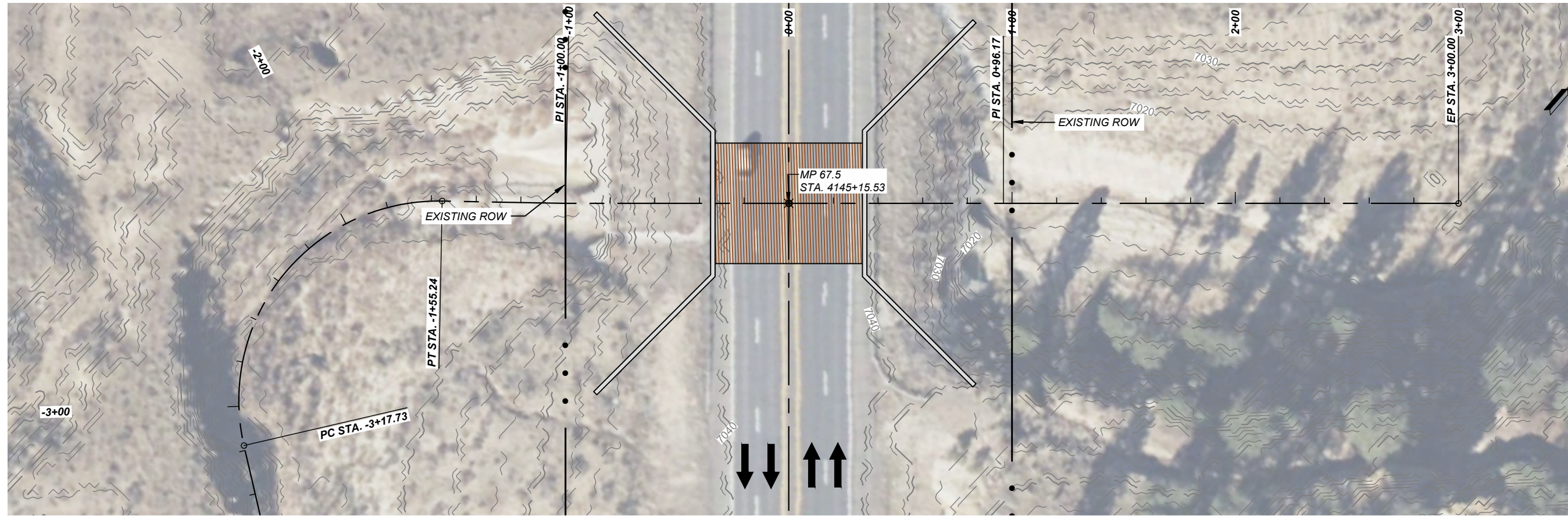




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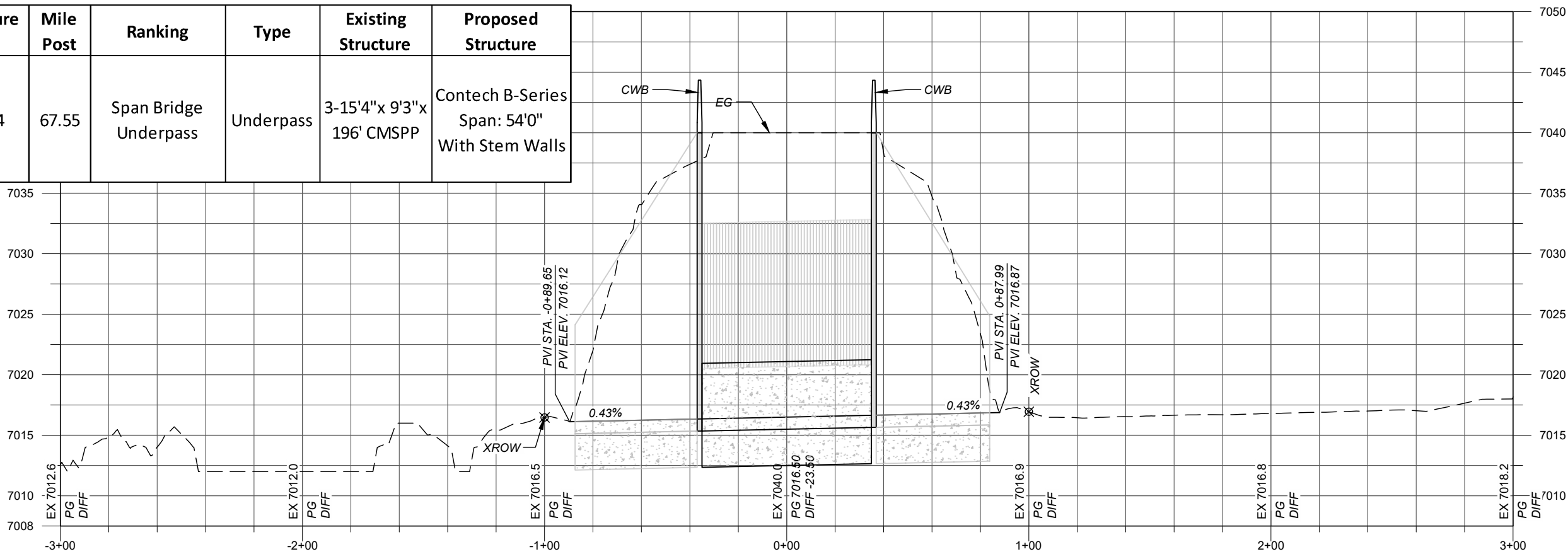
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PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 10'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-4	67.55	Span Bridge Underpass	Underpass	3-15'4"x 9'3"x 196' CMSPP	Contech B-Series Span: 54'0" With Stem Walls

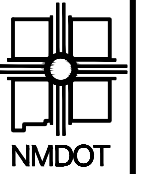


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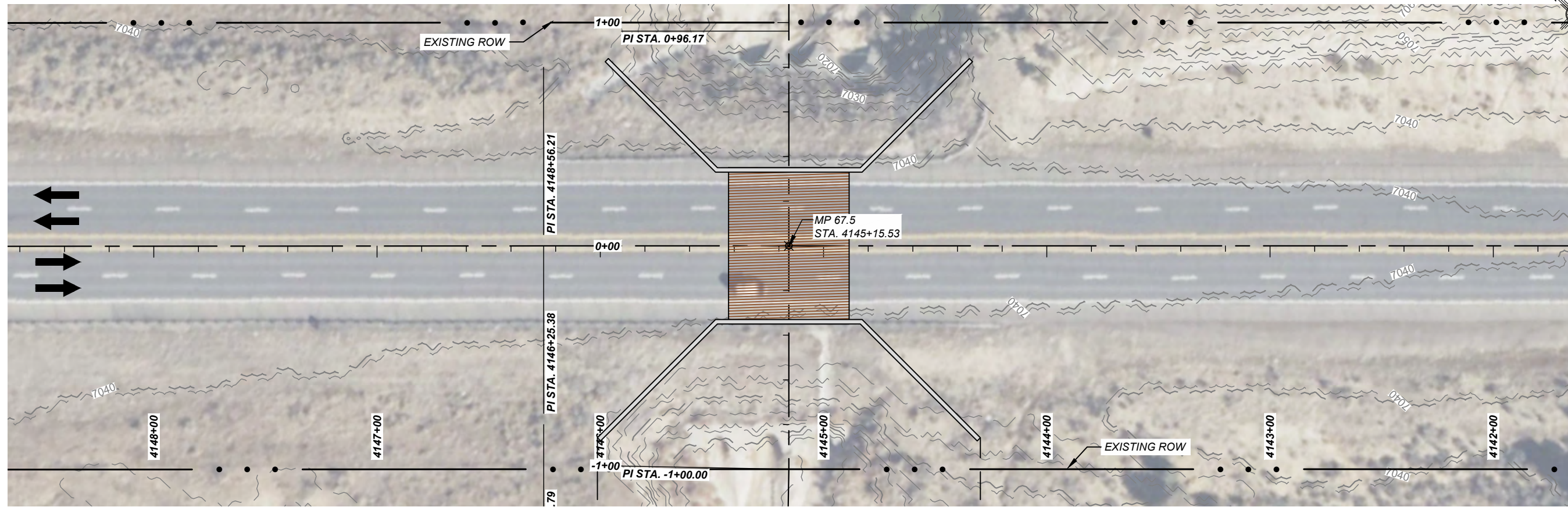




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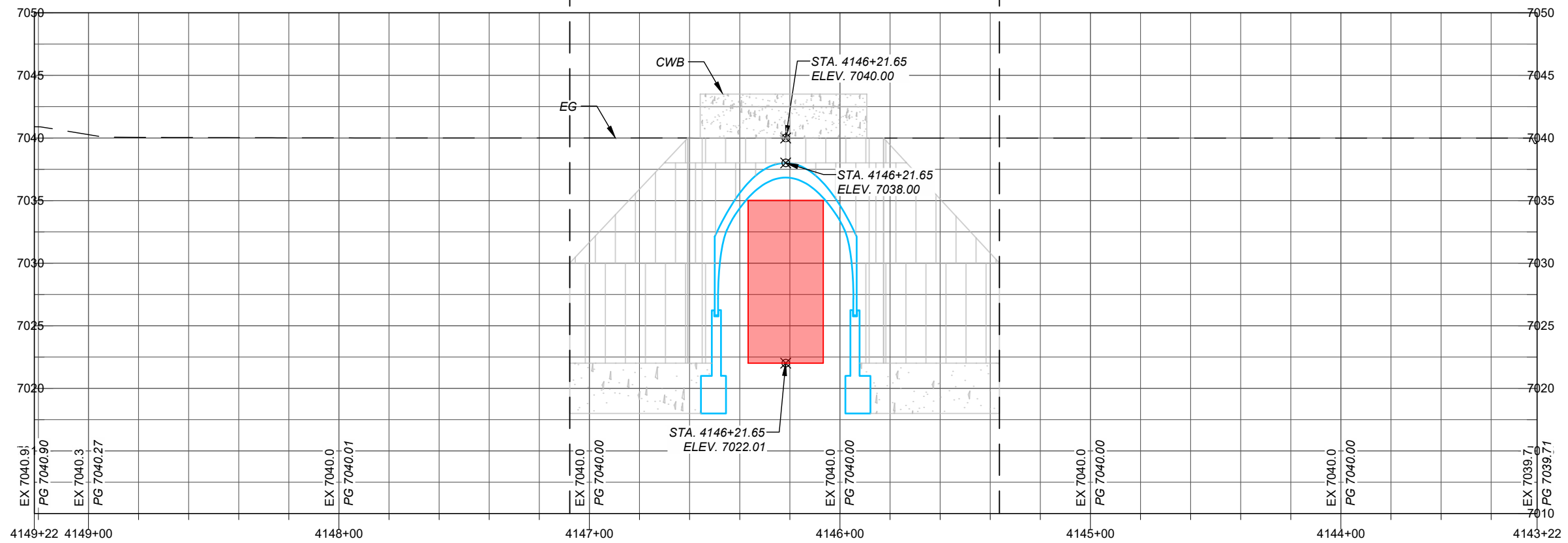
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HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 10'

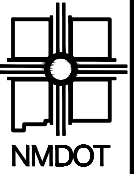


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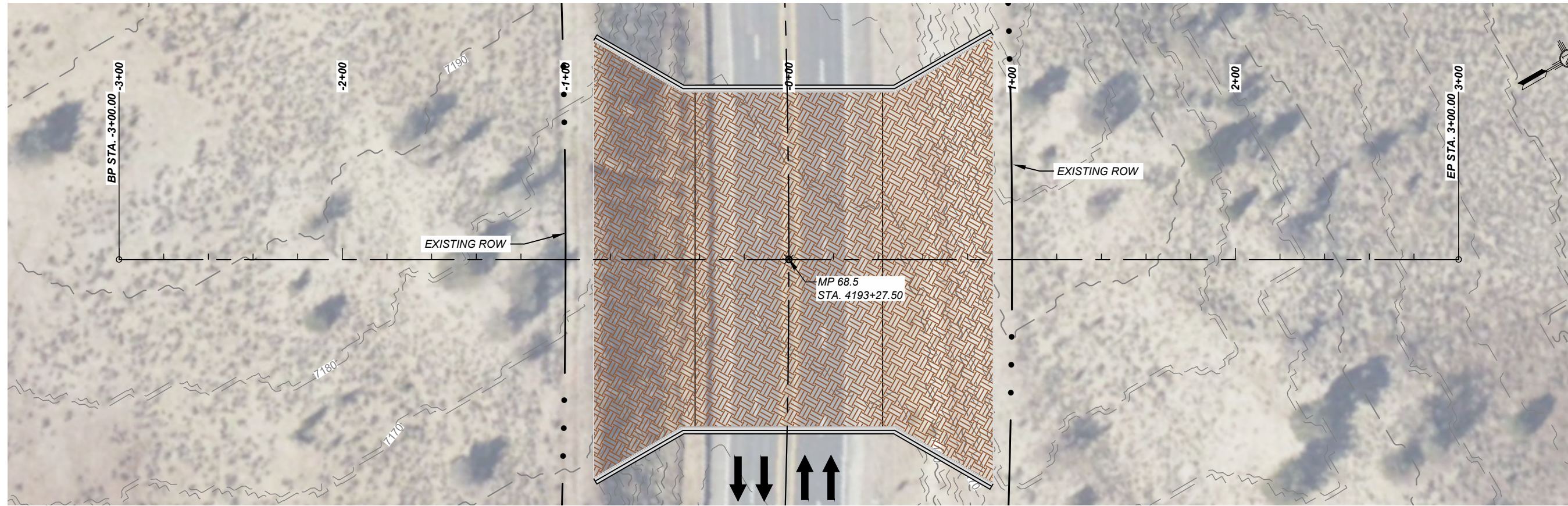
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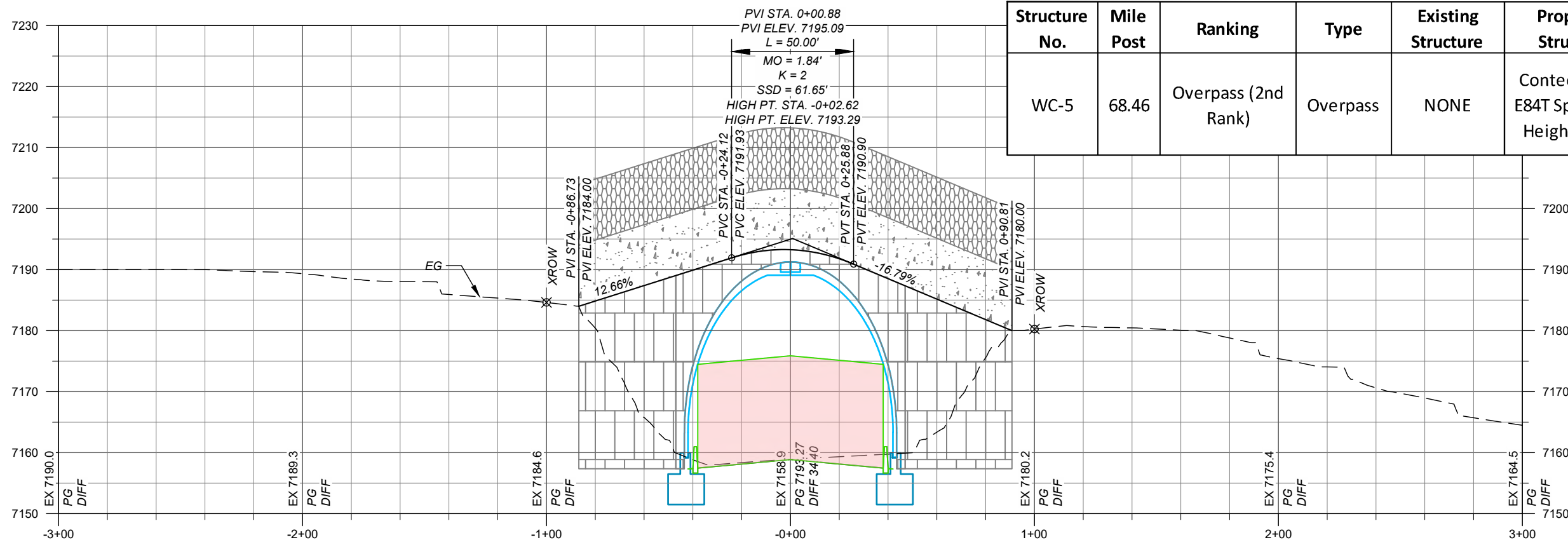
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PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 20'



Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-5	68.46	Overpass (2nd Rank)	Overpass	NONE	Contech BEBO E84T Span:84'0" Height:29'10"

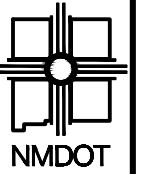
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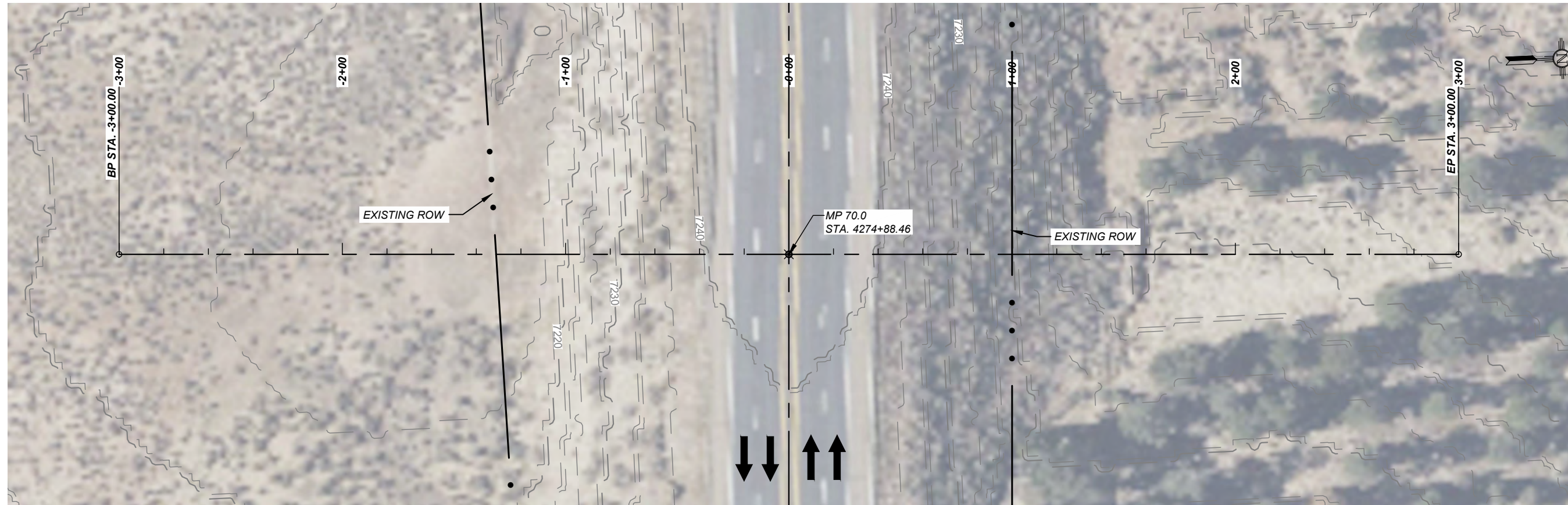
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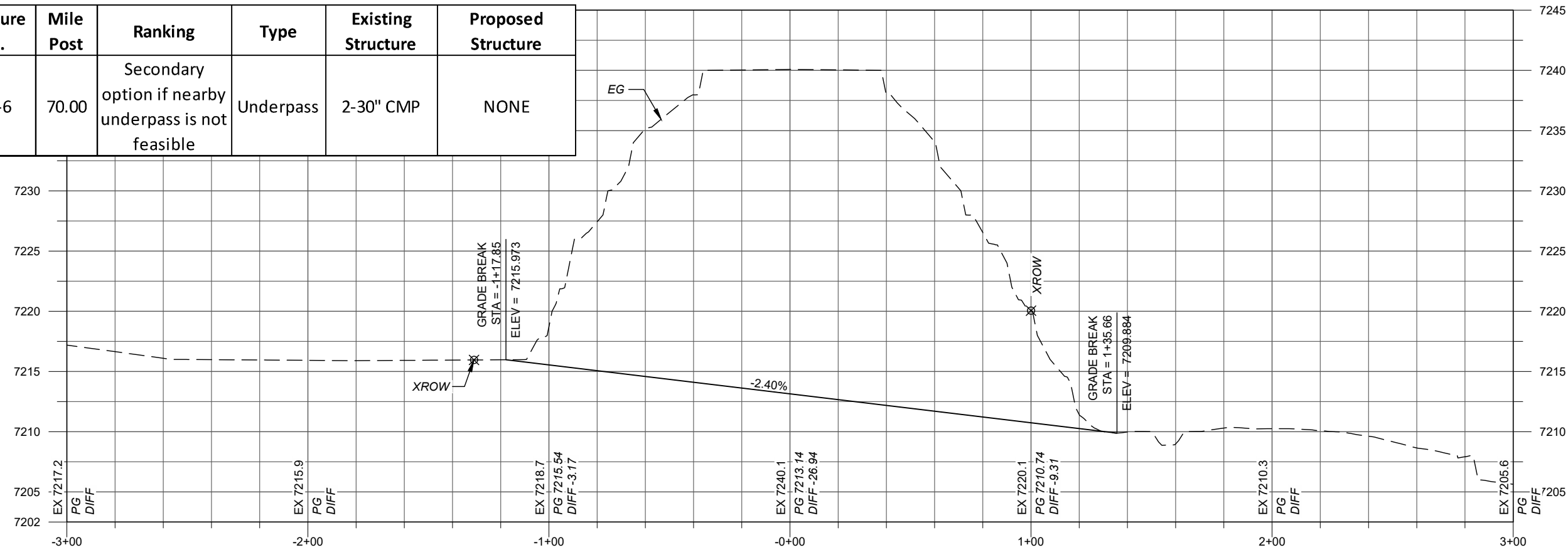
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PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 10'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-6	70.00	Secondary option if nearby underpass is not feasible	Underpass	2-30" CMP	NONE

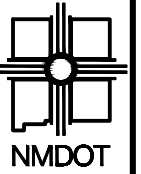


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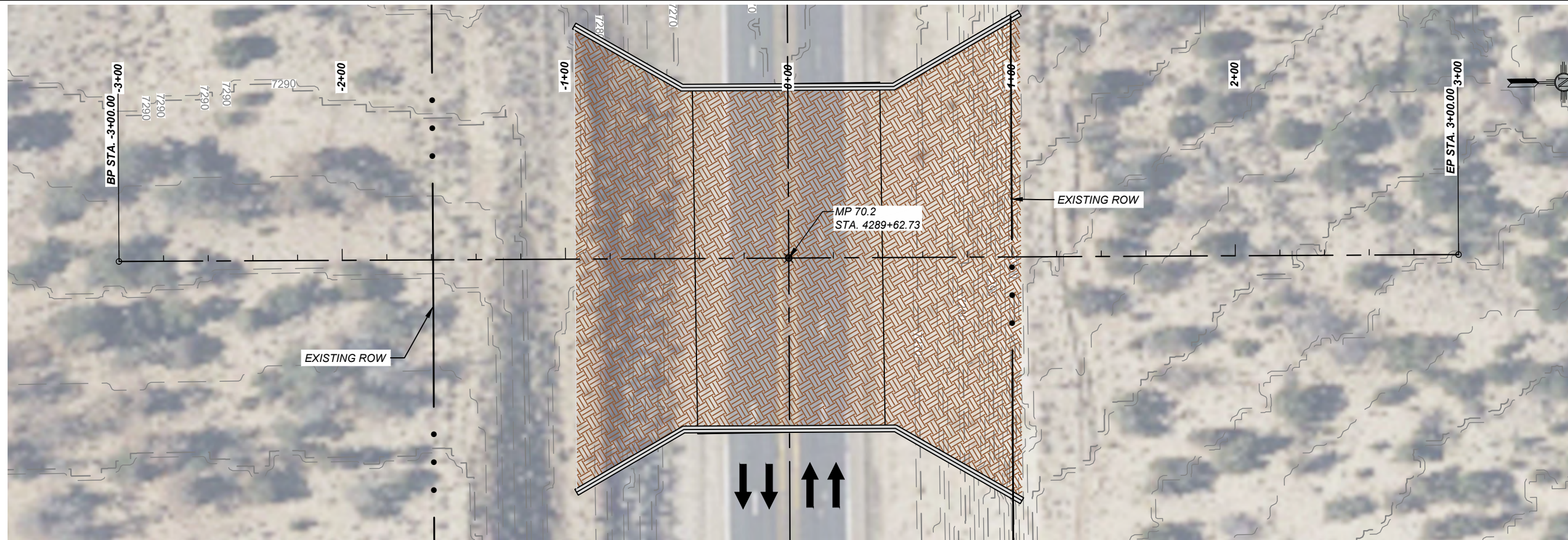




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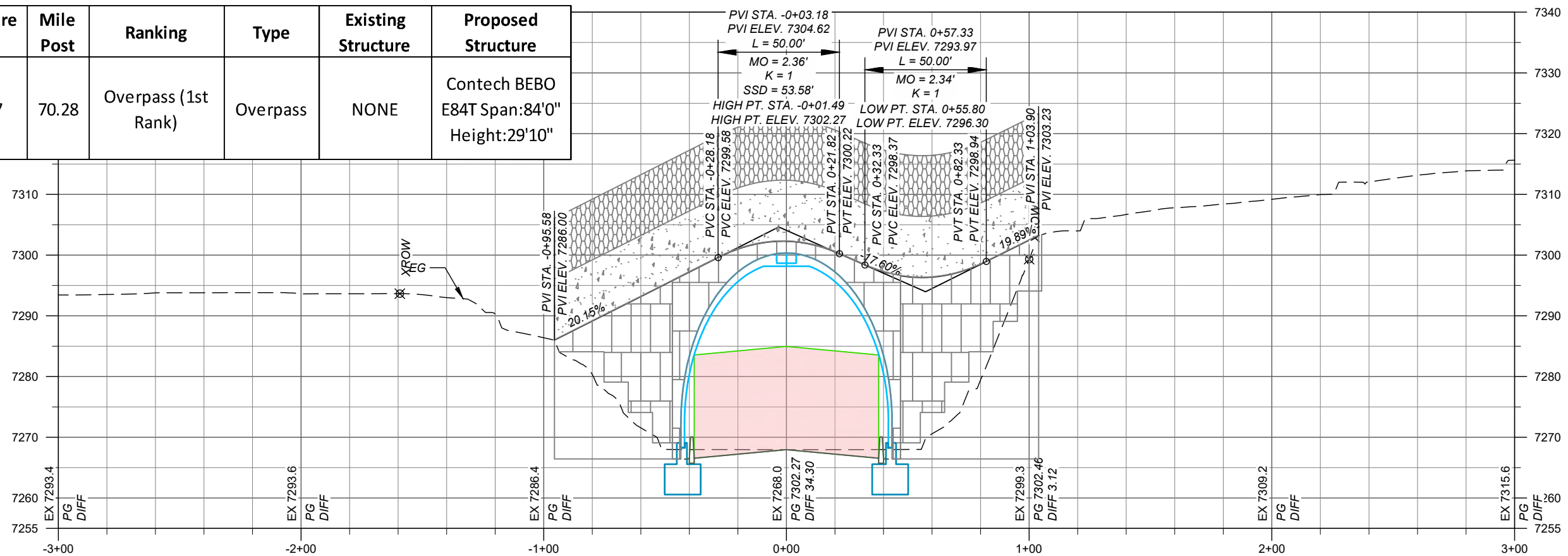
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PLAN DRAWING SCALE: 1" = 50'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-7	70.28	Overpass (1st Rank)	Overpass	NONE	Contech BEBO E84T Span:84'0" Height:29'10"

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 20'

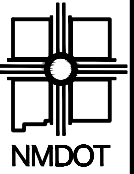


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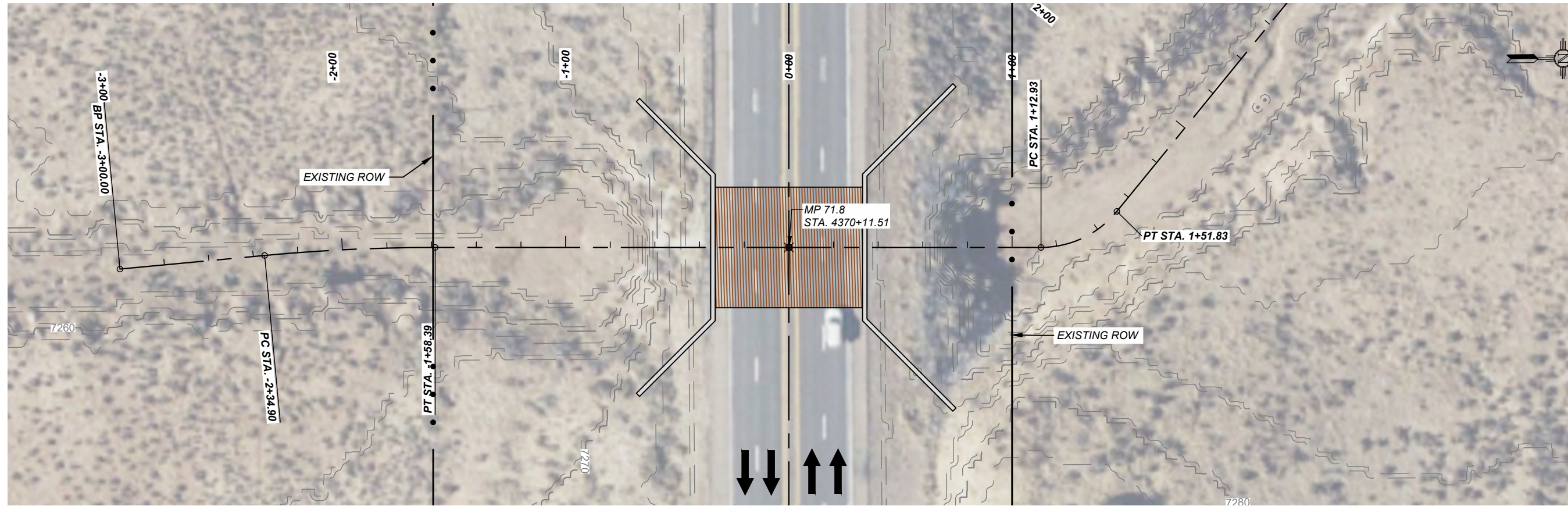
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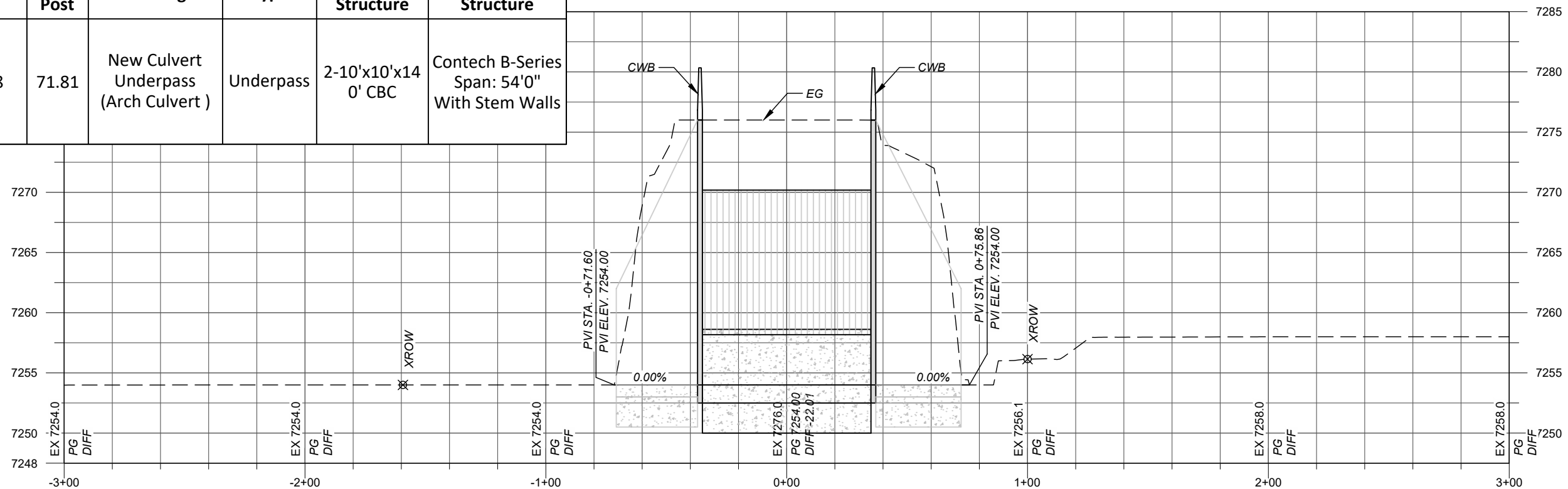
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PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 10'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-8	71.81	New Culvert Underpass (Arch Culvert)	Underpass	2-10'x10'x14' 0' CBC	Contech B-Series Span: 54'0" With Stem Walls

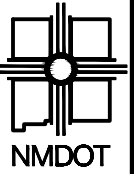


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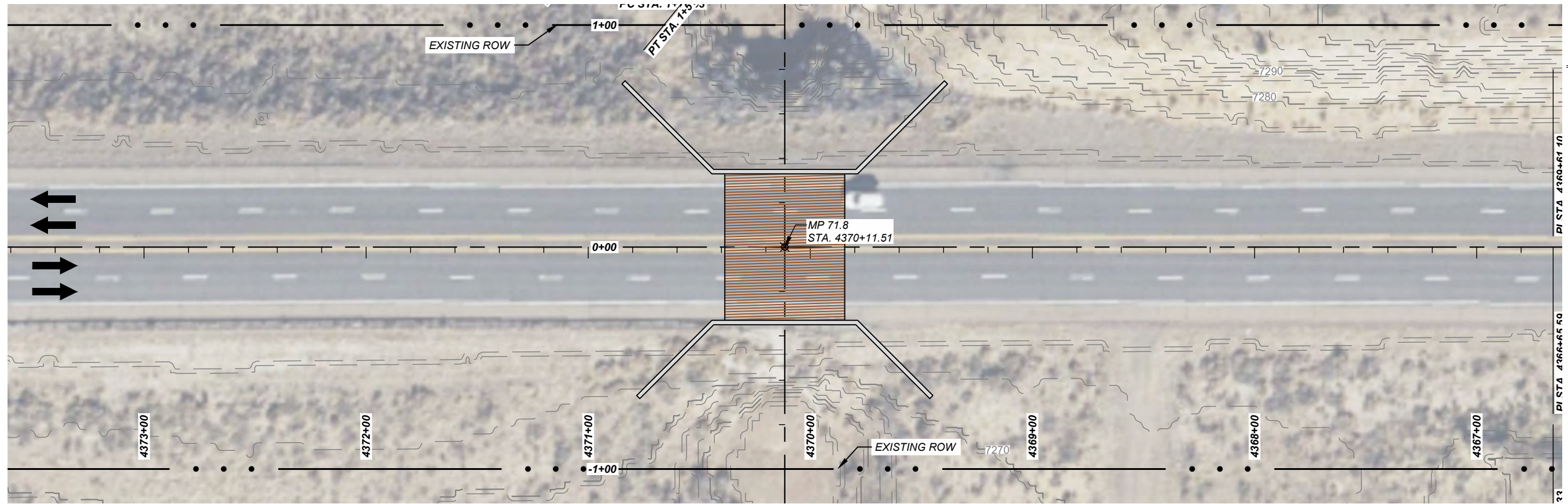
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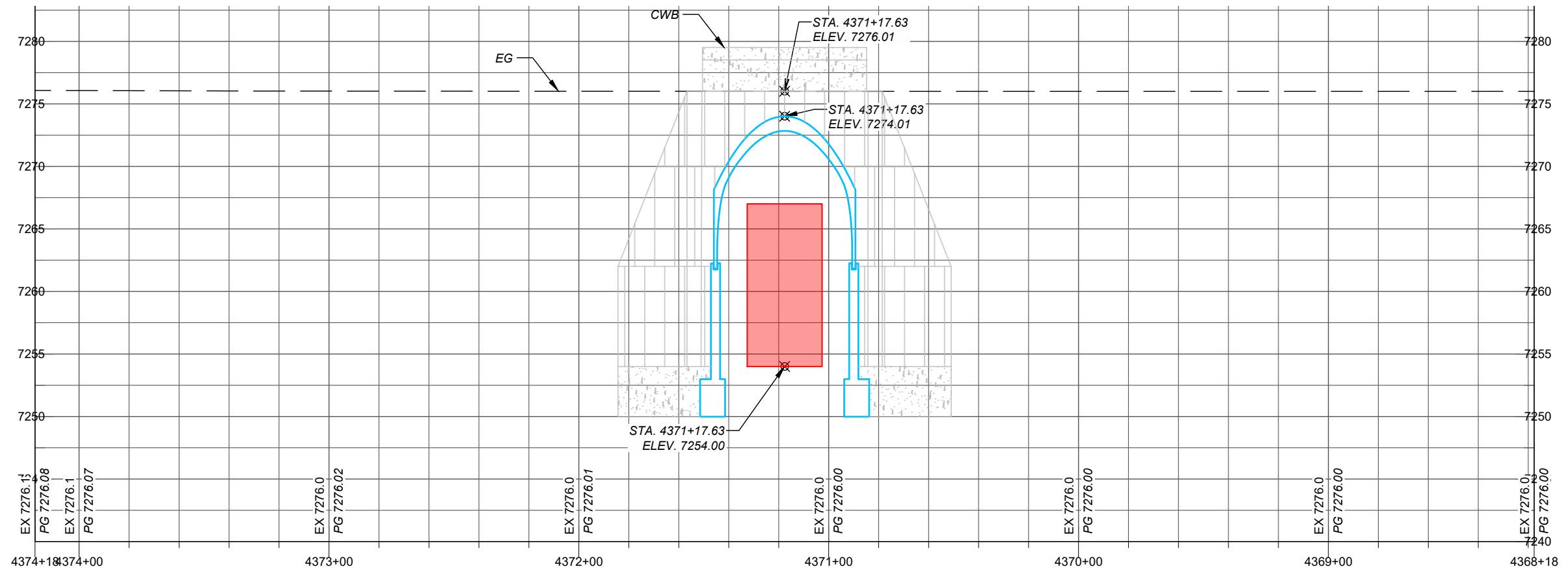
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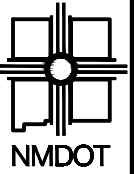


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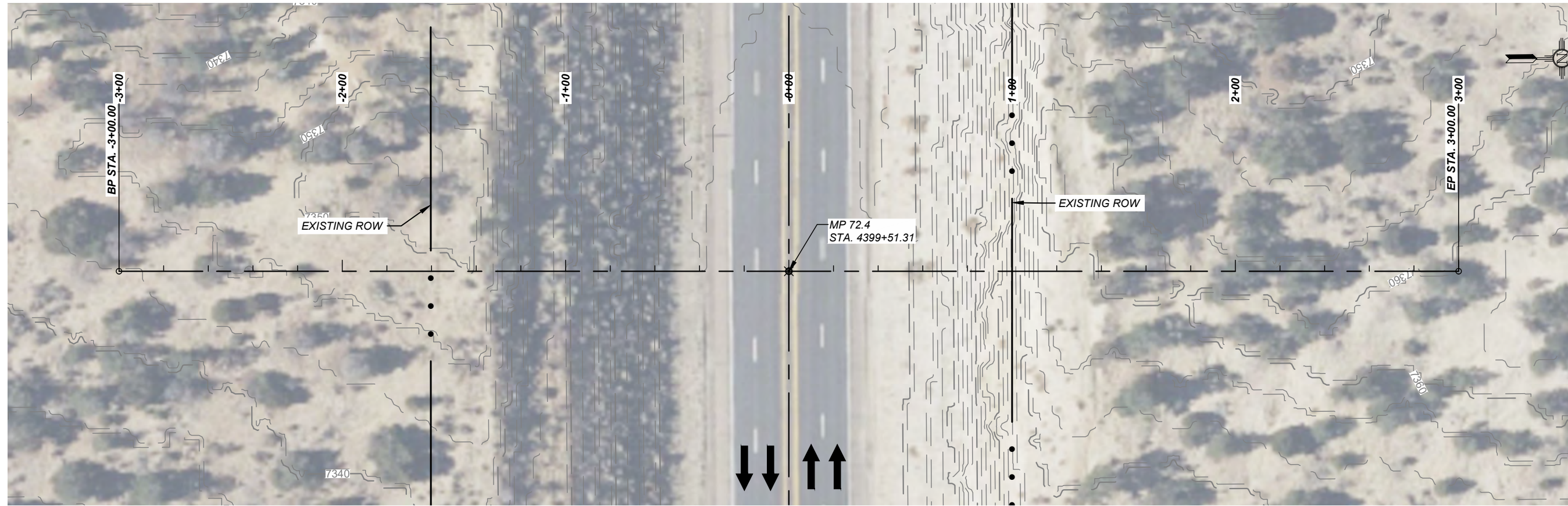




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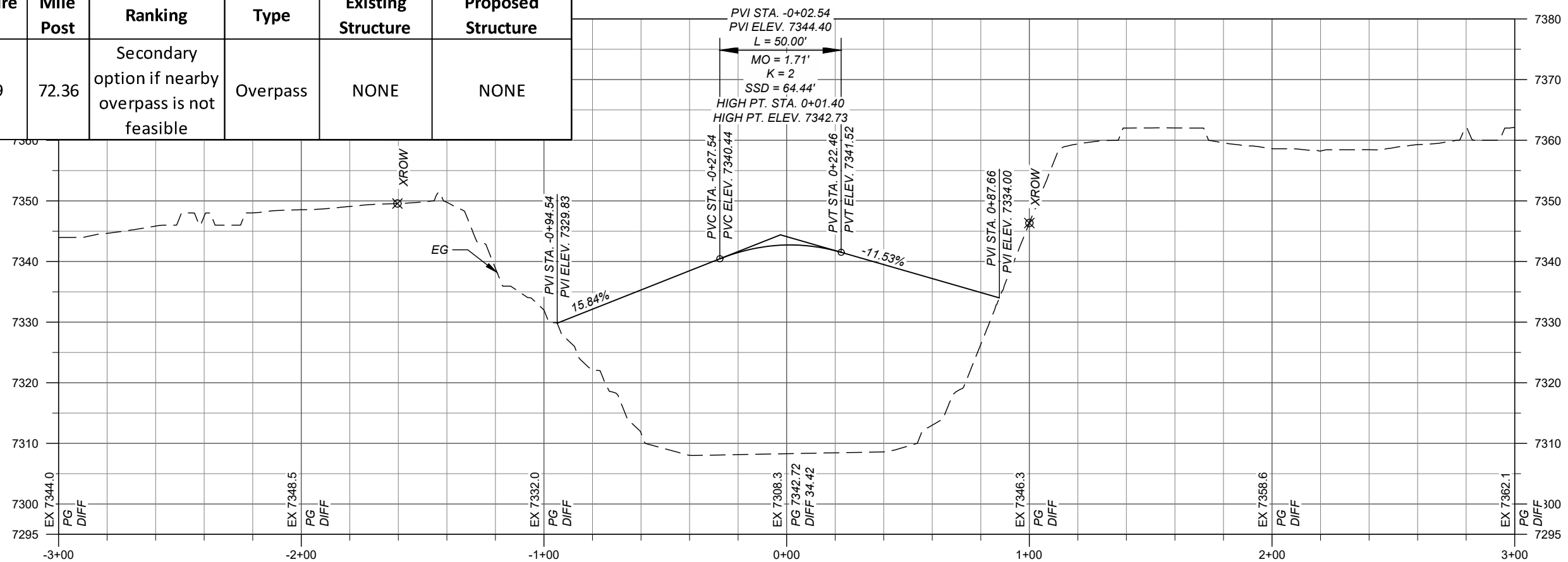
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Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-9	72.36	Secondary option if nearby overpass is not feasible	Overpass	NONE	NONE

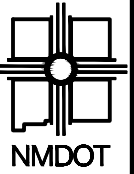


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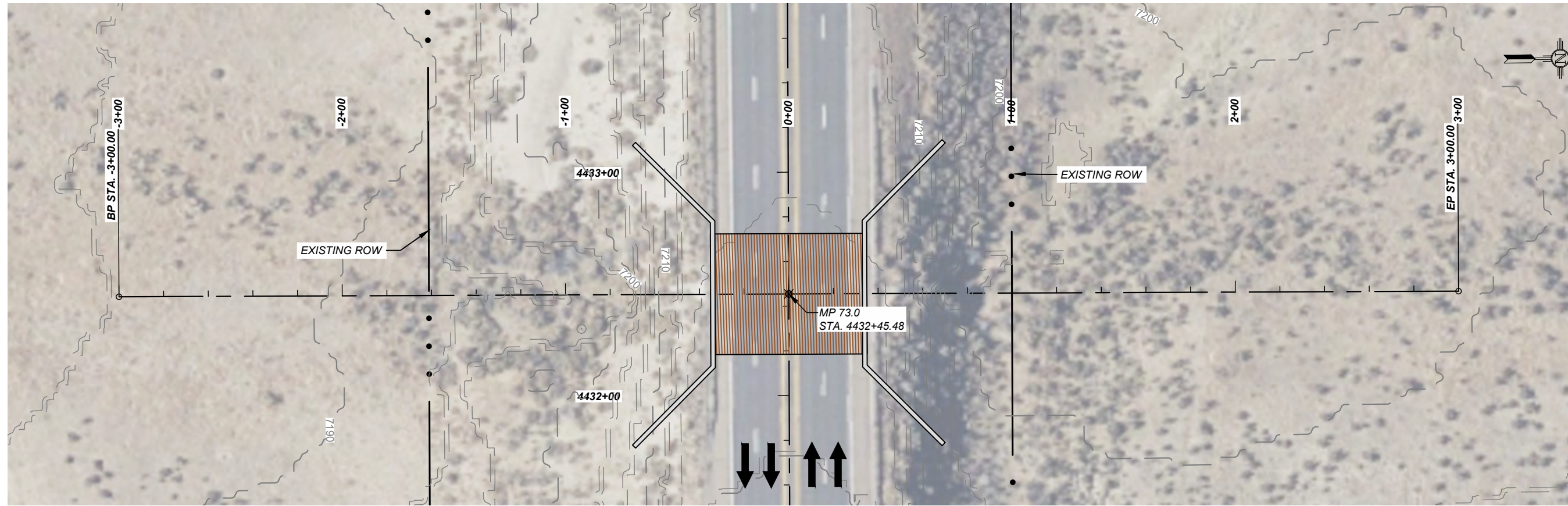




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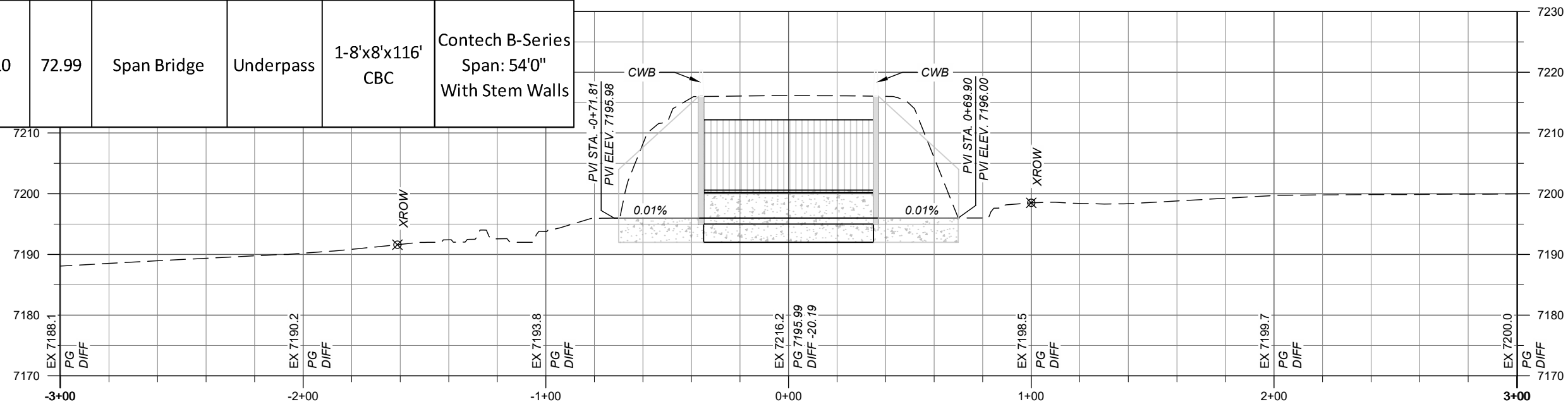
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PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 20'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-10	72.99	Span Bridge	Underpass	1-8'x8'x116' CBC	Contech B-Series Span: 54'0" With Stem Walls

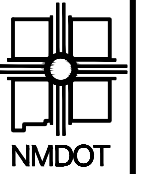


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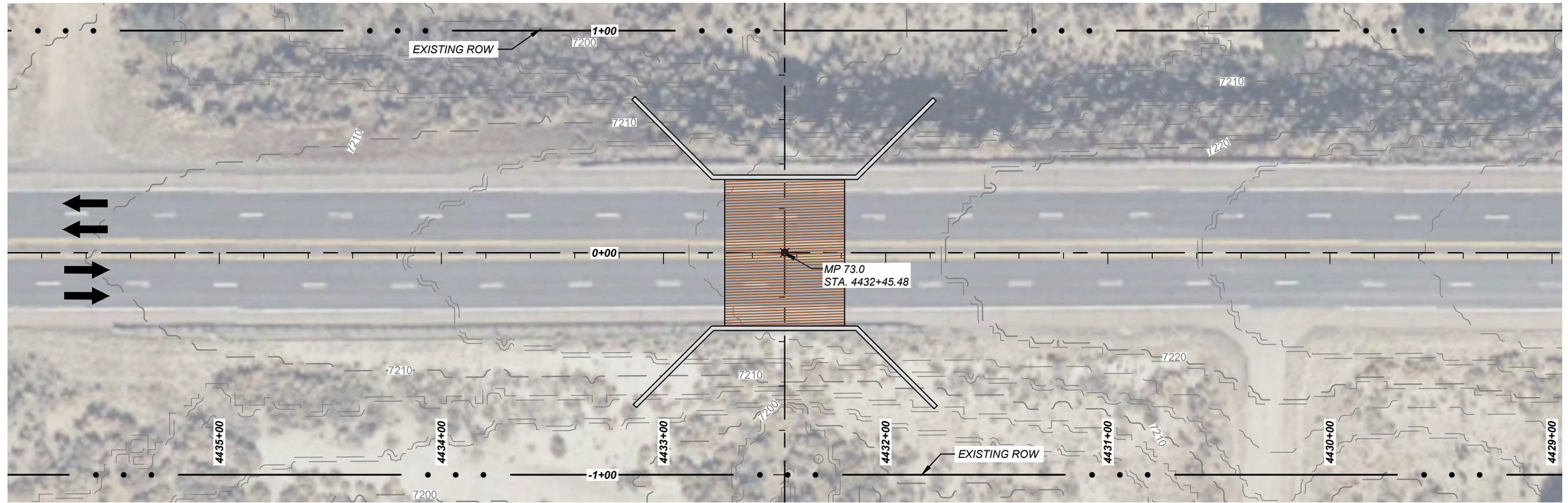




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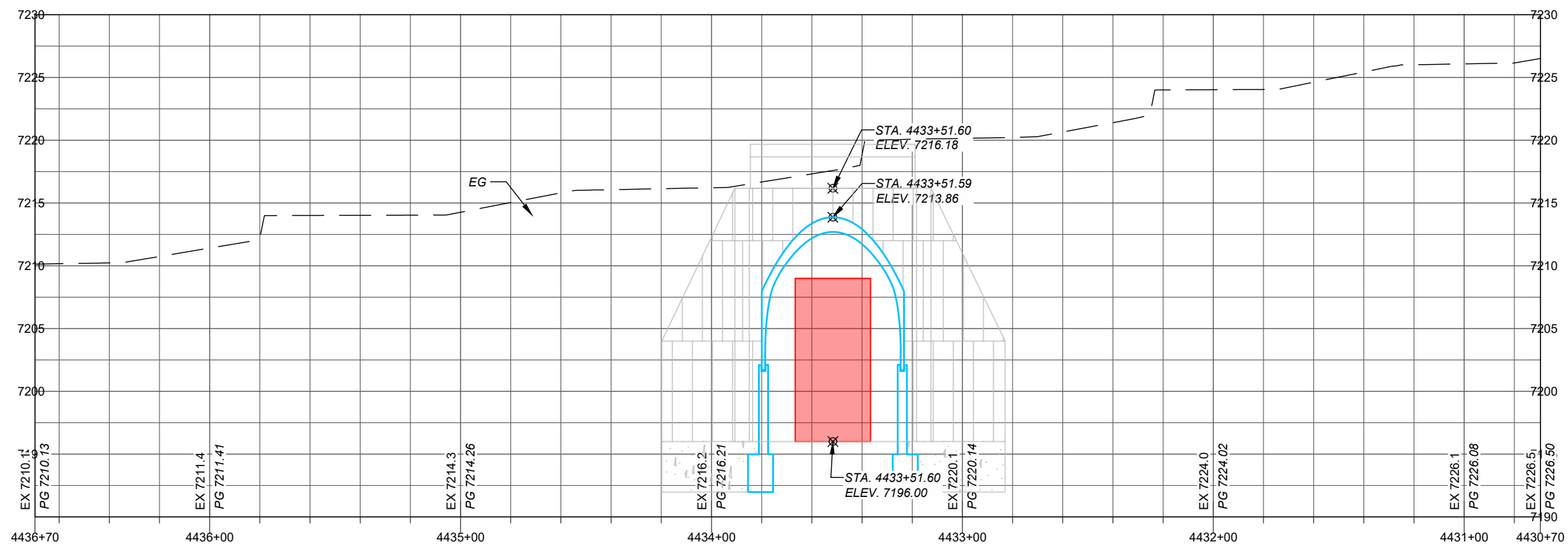
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WILDLIFE CROSSING 10 PLAN & PROFILE



PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 10'

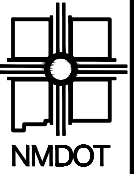


HORROCKS JOB No. NM-5398-22 NMDOT CRD ON-CALL U900028

www.horrocks.com
PHONE: (505)431-9782
EMAIL: mike.worral@horrocks.com

HORROCKS ENGINEERS
6001 INDIAN SCHOOL ROAD NE, SUITE 250
ALBUQUERQUE, NM 87110

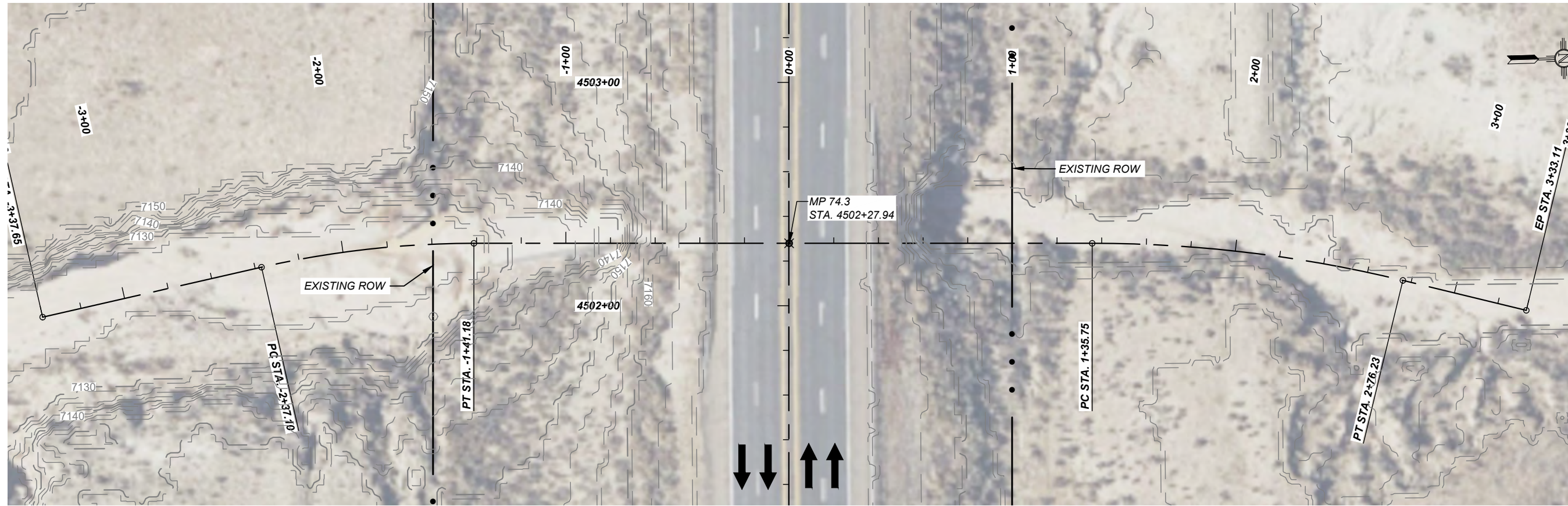




NEW MEXICO DEPARTMENT
OF TRANSPORTATION

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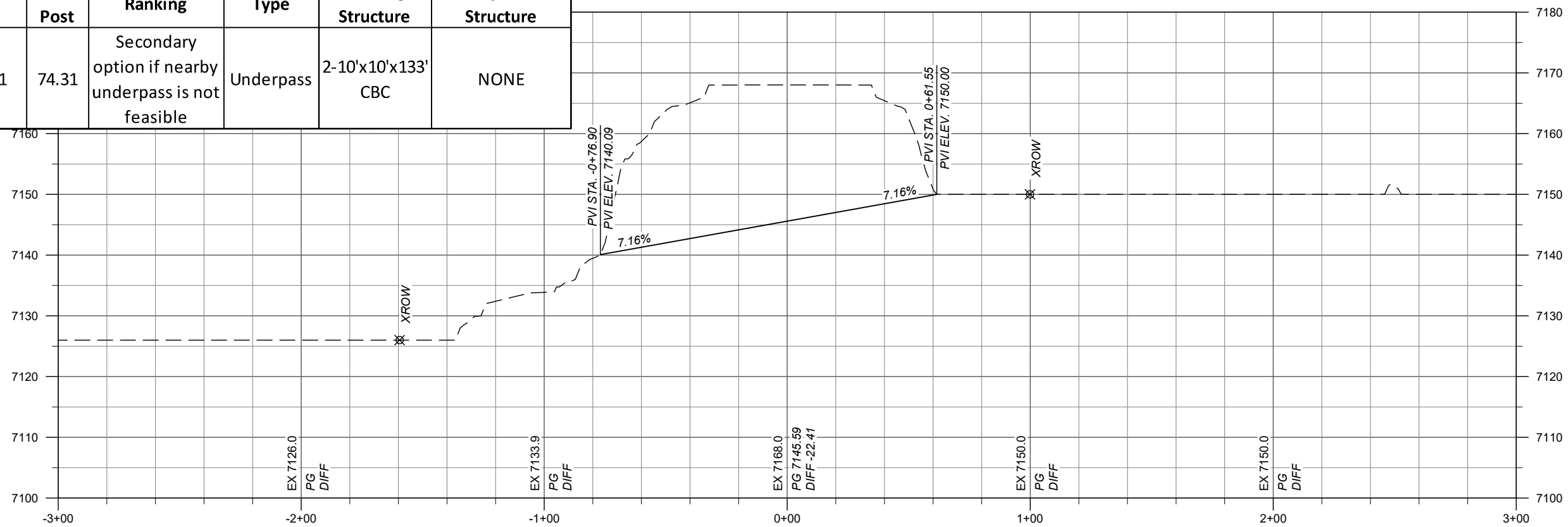
NM-5398-22
US 550 WILDLIFE MITIGATION
WILDLIFE CROSSING 11 PLAN & PROFILE



PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 20'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-11	74.31	Secondary option if nearby underpass is not feasible	Underpass	2-10'x10'x133' CBC	NONE

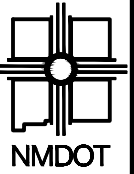


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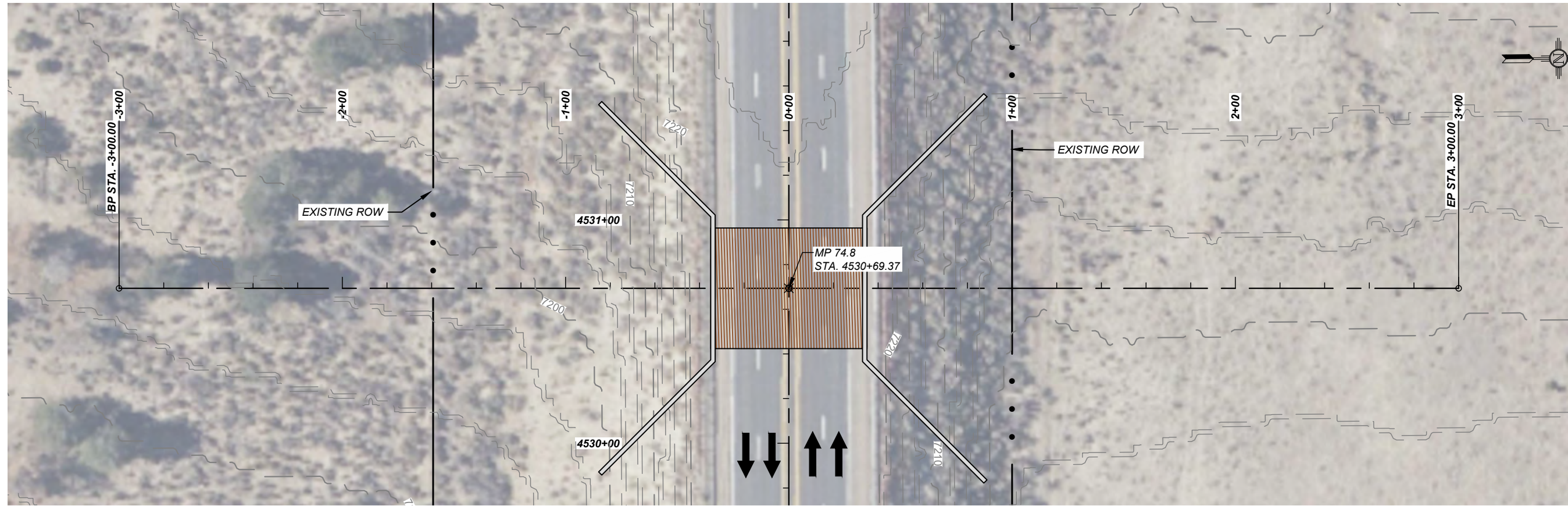




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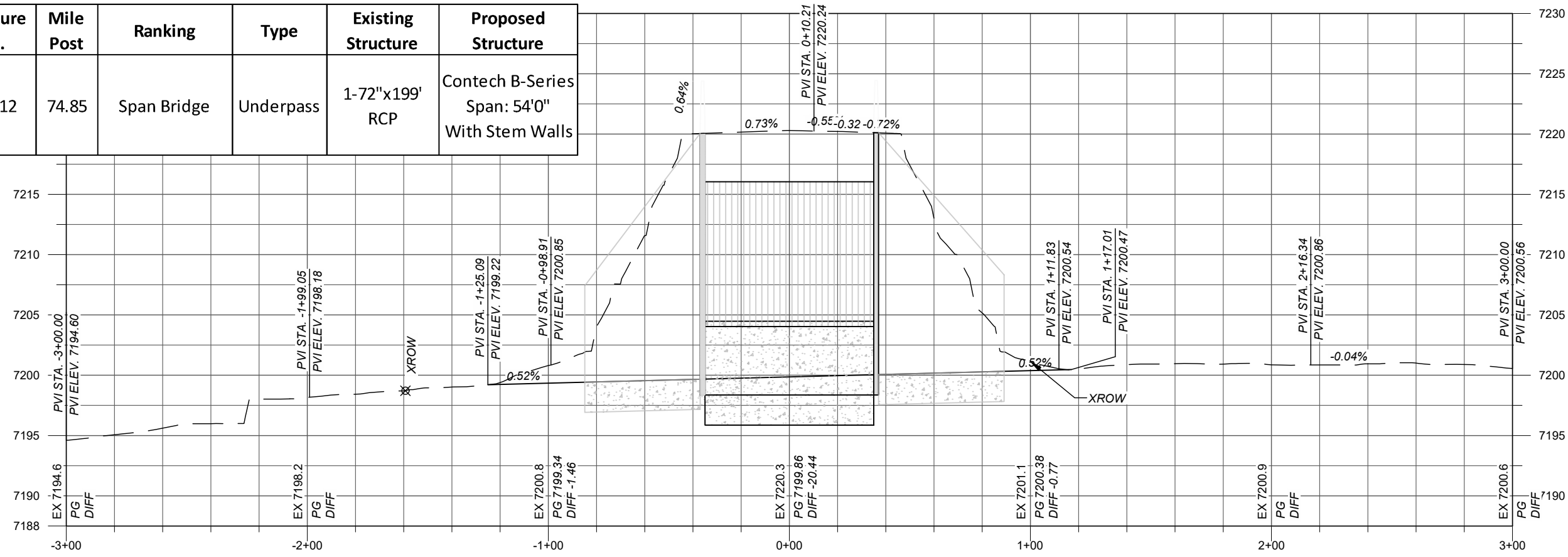
NM-5398-22
US 550 WILDLIFE MITIGATION
WILDLIFE CROSSING 12 PLAN & PROFILE



PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 20'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-12	74.85	Span Bridge	Underpass	1-72"x199' RCP	Contech B-Series Span: 54'0" With Stem Walls

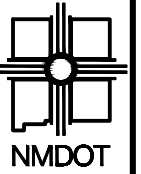


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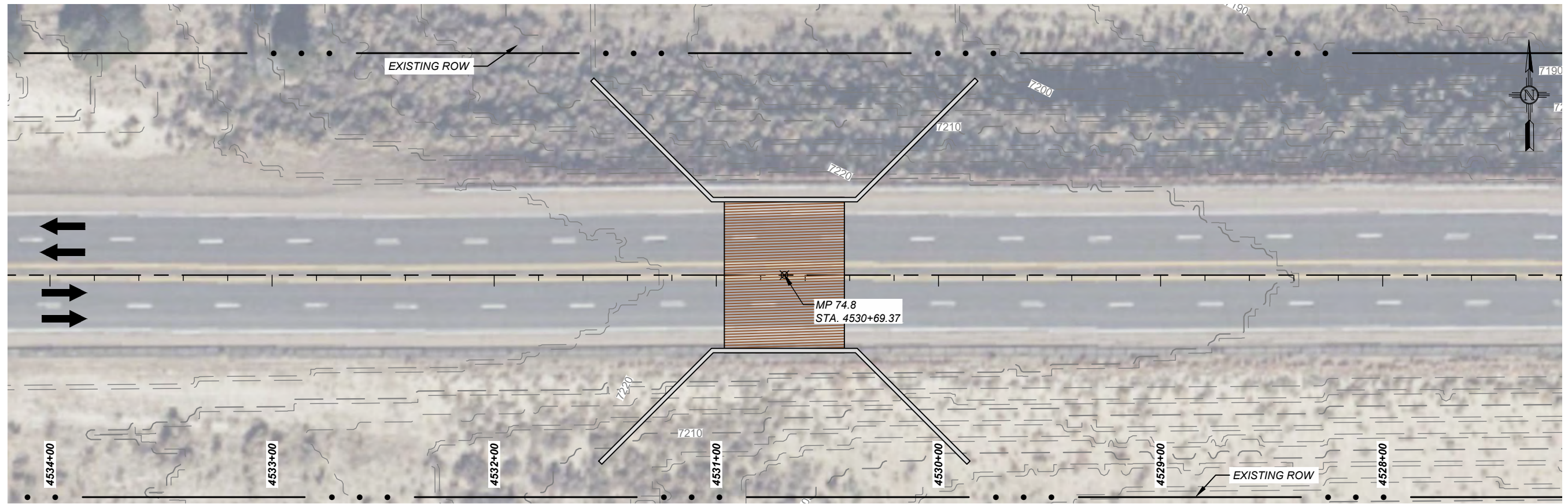




NEW MEXICO DEPARTMENT
OF TRANSPORTATION

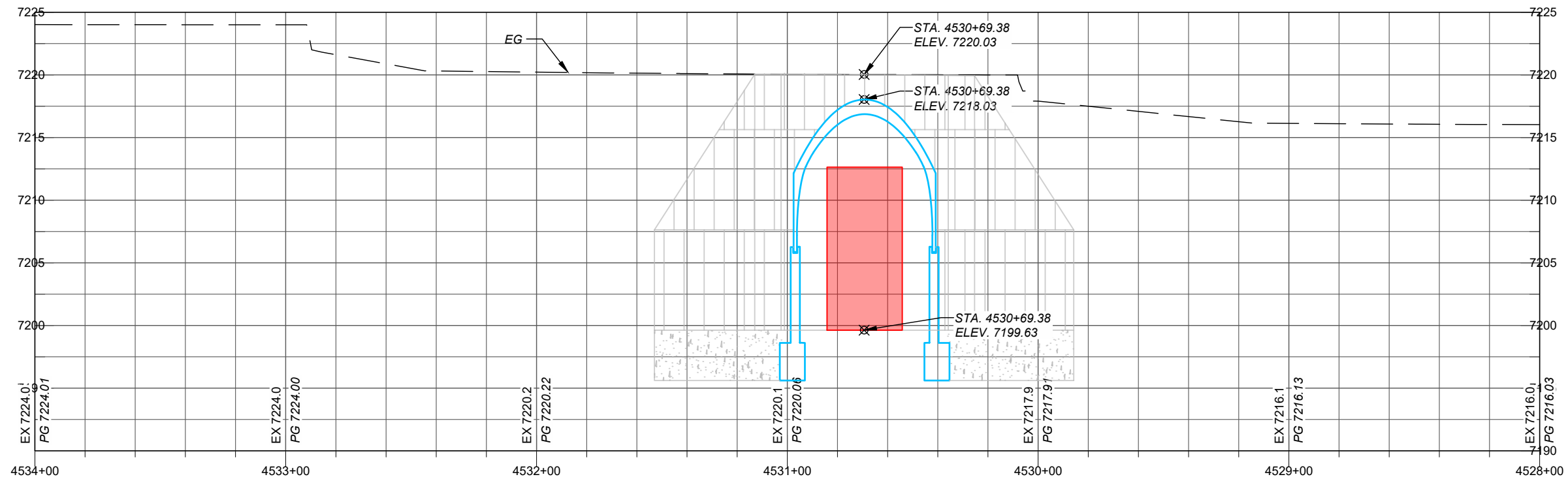
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NM-5398-22
US 550 WILDLIFE MITIGATION
WILDLIFE CROSSING 12 PLAN & PROFILE



PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 10'

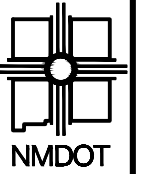


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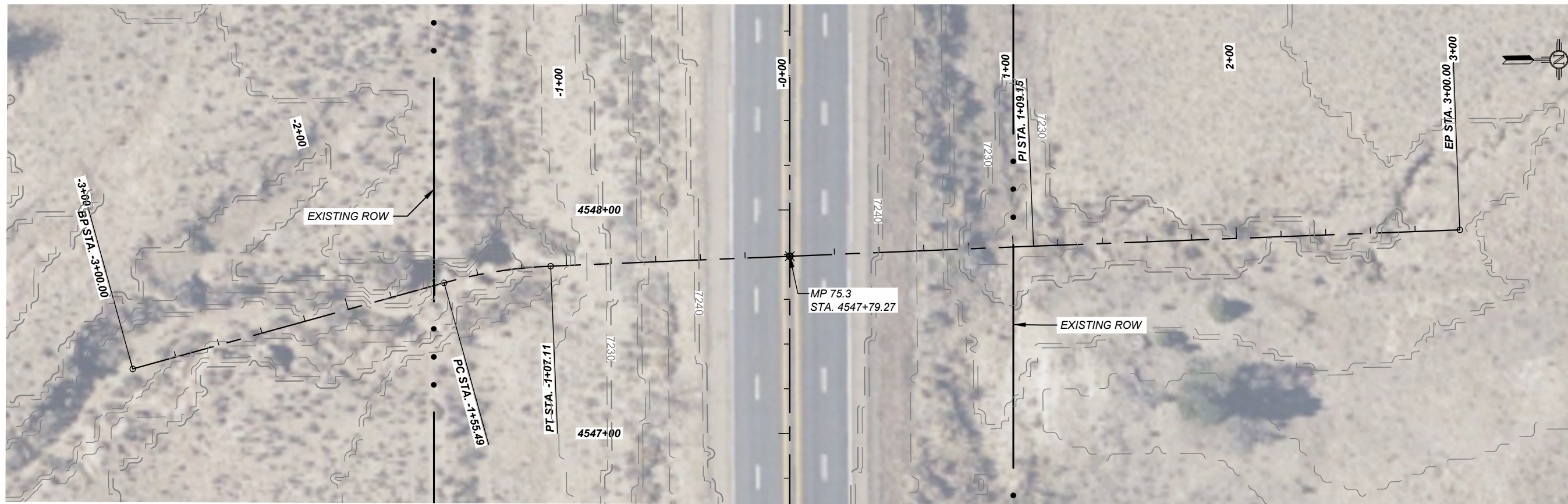




NEW MEXICO DEPARTMENT
OF TRANSPORTATION

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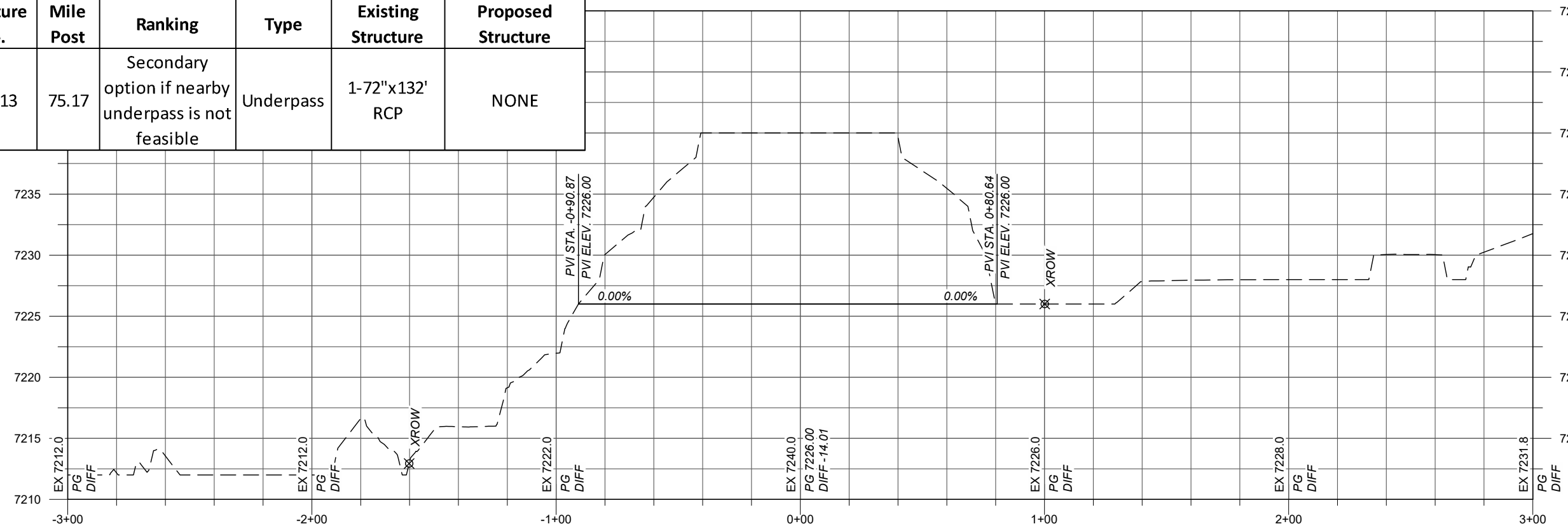
NM-5398-22
US 550 WILDLIFE MITIGATION
WILDLIFE CROSSING 13 PLAN & PROFILE



PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 20'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-13	75.17	Secondary option if nearby underpass is not feasible	Underpass	1-72"x132' RCP	NONE

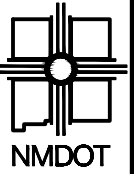


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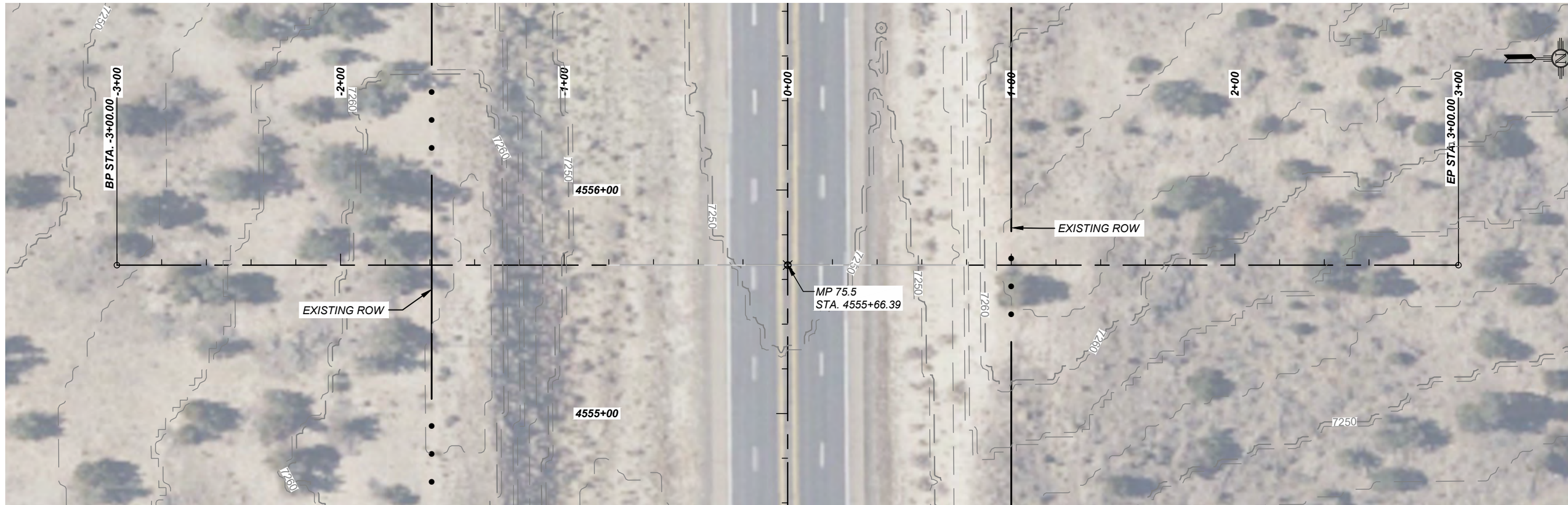




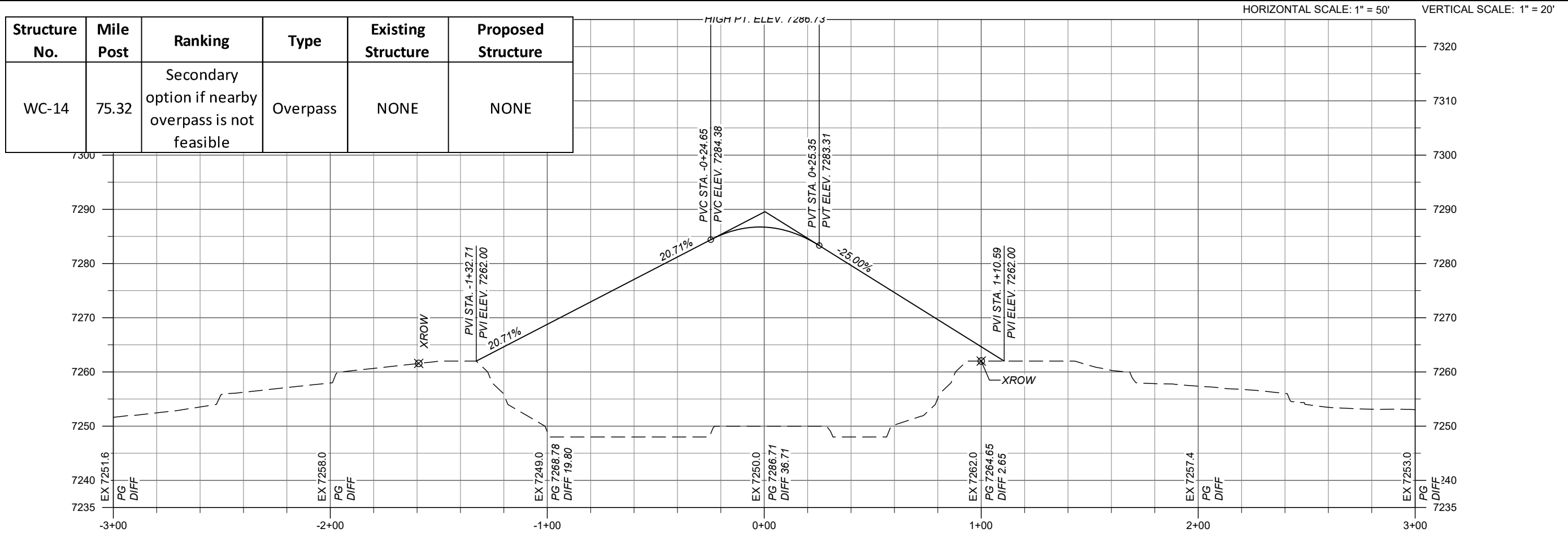
NEW MEXICO DEPARTMENT
OF TRANSPORTATION

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NM-5398-22
US 550 WILDLIFE MITIGATION
WILDLIFE CROSSING 14 PLAN & PROFILE



PLAN DRAWING SCALE: 1" = 50'



HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 20'

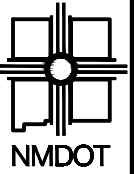
Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-14	75.32	Secondary option if nearby overpass is not feasible	Overpass	NONE	NONE

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NEW MEXICO DEPARTMENT
OF TRANSPORTATION

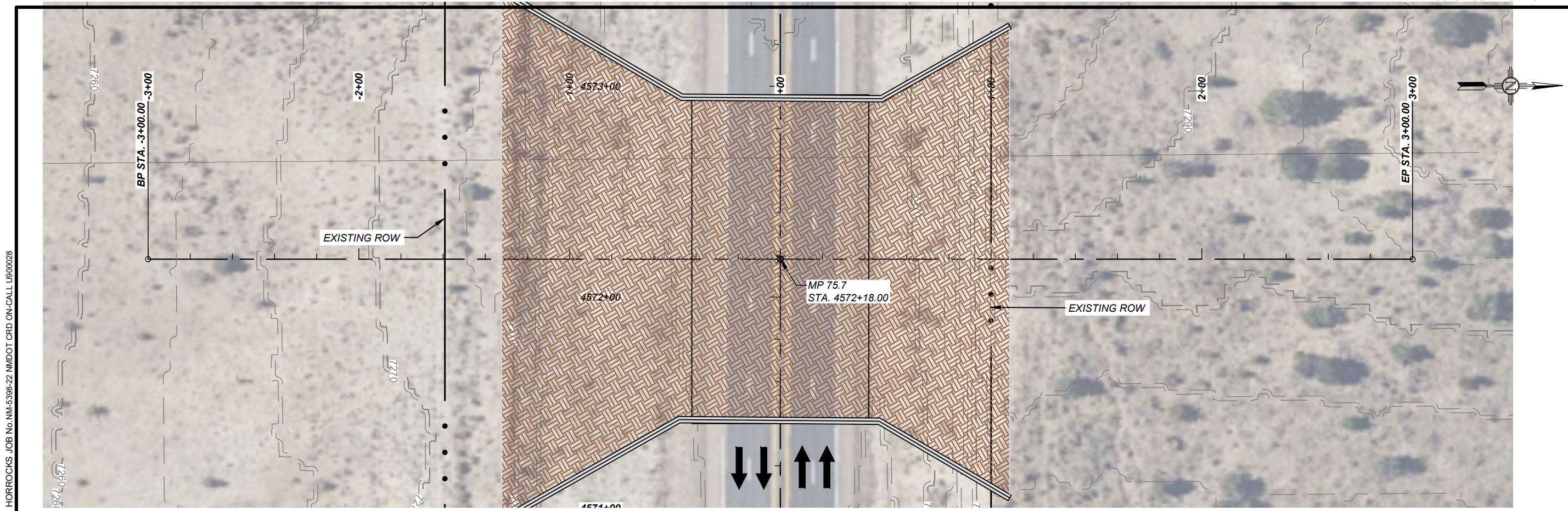
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NM-5398-22
US 550 WILDLIFE MITIGATION
WILDLIFE CROSSING 15 PLAN & PROFILE

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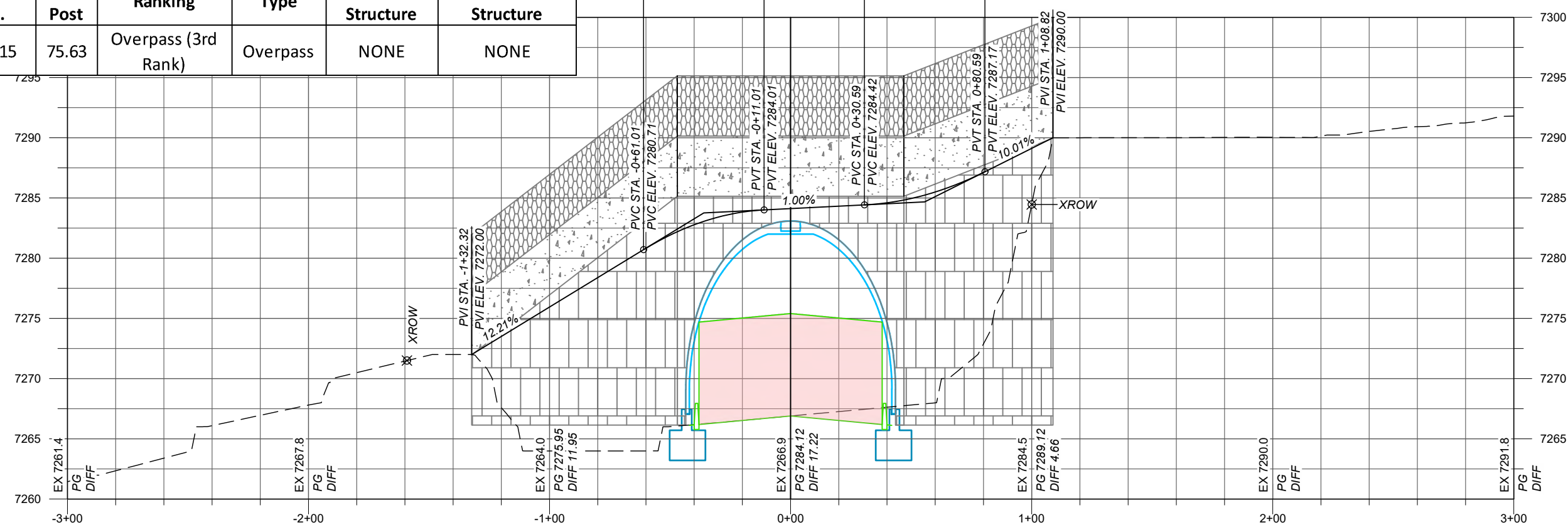
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ALBUQUERQUE, NM 87110

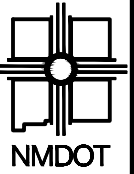


PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 10'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-15	75.63	Overpass (3rd Rank)	Overpass	NONE	NONE

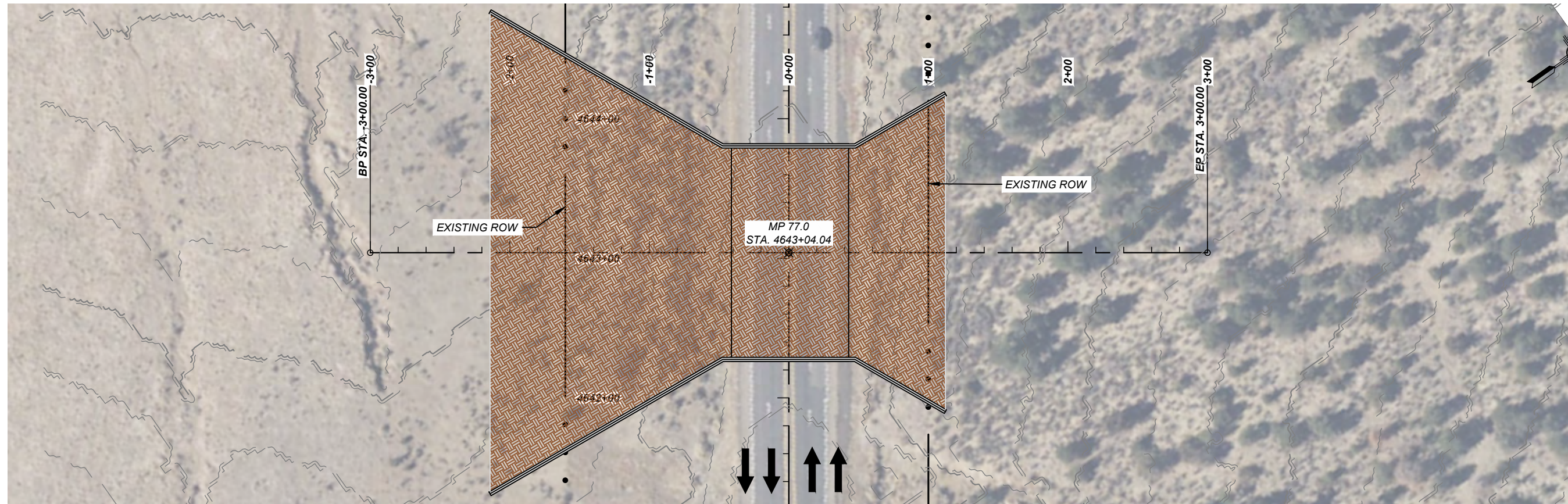




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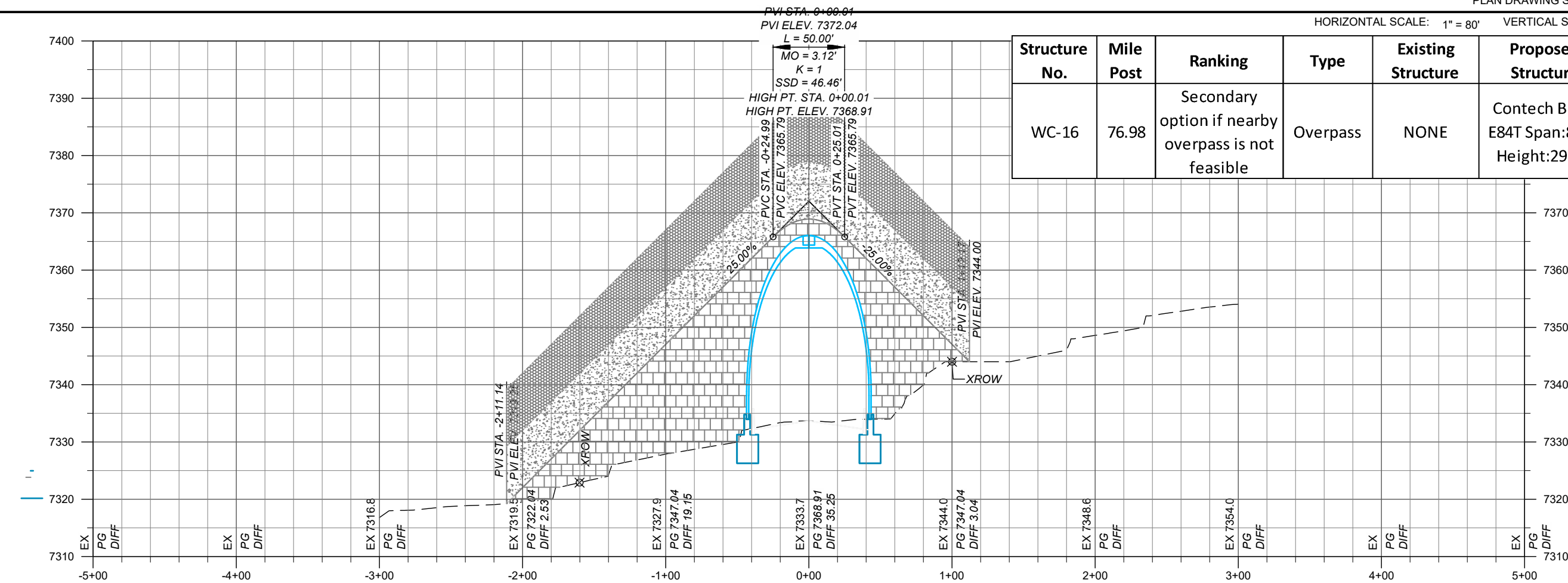
NM-5398-22
US 550 WILDLIFE MITIGATION
WILDLIFE CROSSING 16 PLAN & PROFILE



PLAN DRAWING SCALE: 1" = 80'

HORIZONTAL SCALE: 1" = 80' VERTICAL SCALE: 1" = 20'

Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-16	76.98	Secondary option if nearby overpass is not feasible	Overpass	NONE	Contech BEBO E84T Span:84'0" Height:29'10"

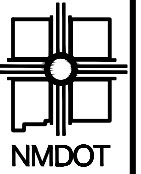


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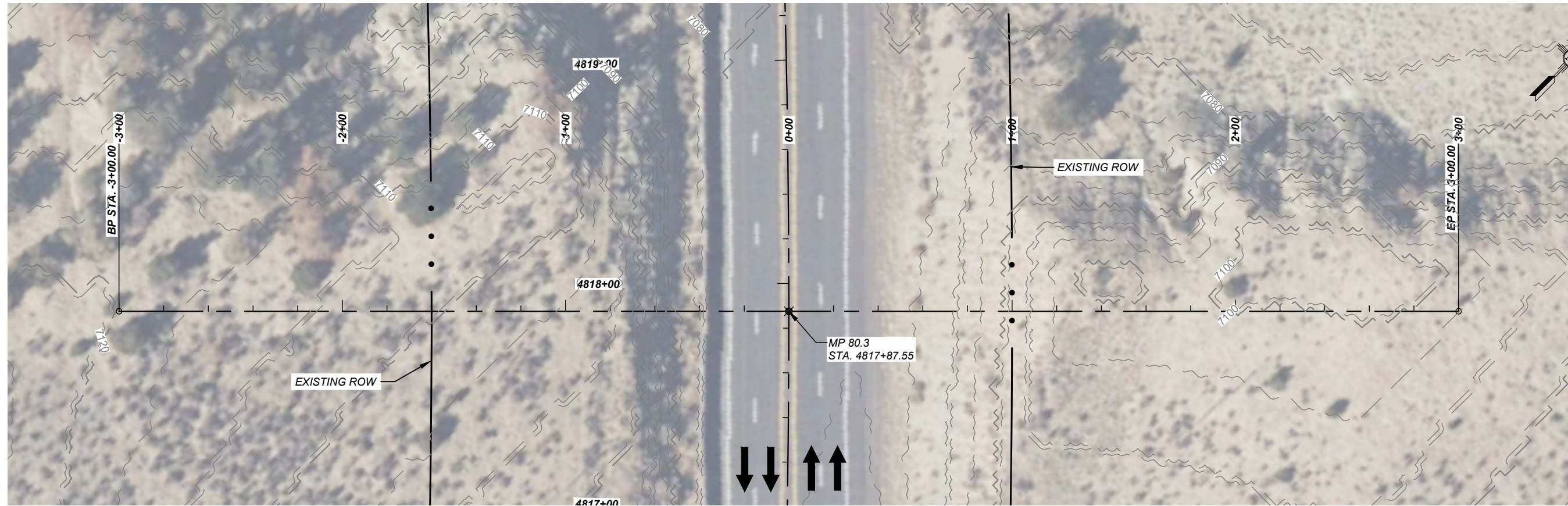




NEW MEXICO DEPARTMENT
OF TRANSPORTATION

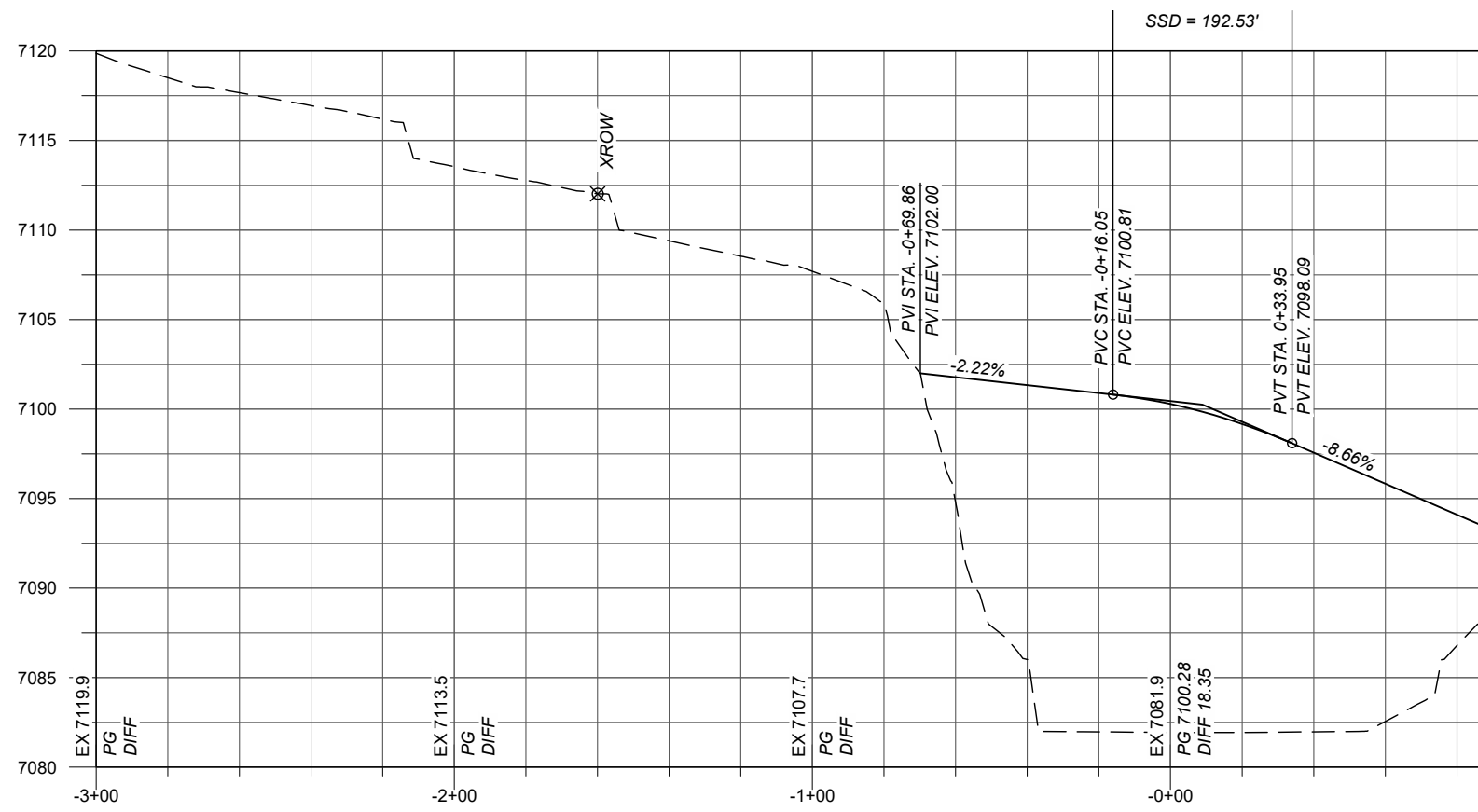
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NM-5398-22
US 550 WILDLIFE MITIGATION
WILDLIFE CROSSING 18 PLAN & PROFILE



PLAN DRAWING SCALE: 1" = 50'

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 10'



Structure No.	Mile Post	Ranking	Type	Existing Structure	Proposed Structure
WC-18	80.32	Secondary option if nearby overpass is not feasible	Overpass	NONE	NONE

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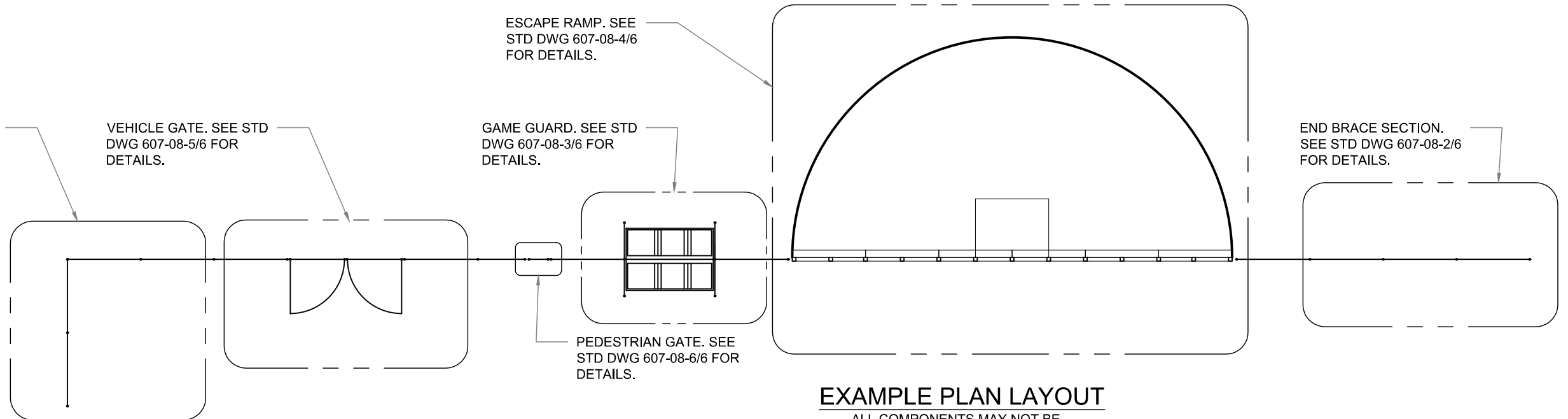
CORNER BRACE SECTION.
SEE STD DWG 607-08-2/6
FOR DETAILS.

VEHICLE GATE. SEE STD
DWG 607-08-5/6 FOR
DETAILS.

GAME GUARD. SEE STD
DWG 607-08-3/6 FOR
DETAILS.

PEDESTRIAN GATE. SEE
STD DWG 607-08-6/6 FOR
DETAILS.

END BRACE SECTION.
SEE STD DWG 607-08-2/6
FOR DETAILS.



EXAMPLE PLAN LAYOUT

ALL COMPONENTS MAY NOT BE
REQUIRED FOR EVERY PROJECT

GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. ALL WORK AND MATERIAL ASSOCIATED WITH CONSTRUCTION OF GAME FENCE INCLUDING GAP CLOSURES SHALL BE INCLUDED IN THE COST OF THE GAME FENCE, ITEM NO. 607012 - "GAME FENCE".
3. ALL WORK AND MATERIAL ASSOCIATED WITH CONSTRUCTION OF VEHICLE CHAIN LINK GATES, INCLUDING HARDWARE SHALL BE INCLUDED IN ITEM NUMBER 607455 - "CHAIN LINK GATE, 8'S X8'R." ASSOCIATED FENCE POSTS AND FOUNDATION SHALL BE INCLUDED IN BID ITEM 607012 GAME FENCE.
4. ALL WORK AND MATERIAL ASSOCIATED WITH CONSTRUCTION OF PEDESTRIAN CHAIN LINK GATES, INCLUDING HARDWARE AND SIGNAGE SHALL BE INCLUDED IN ITEM NUMBER 607308 - "STANDARD GATE, 8'0". ASSOCIATED FENCE POSTS AND FOUNDATION SHALL BE INCLUDED IN BID ITEM 607012 GAME FENCES.
5. LINE BRACE POSTS SHALL BE PLACED AT 330' INTERVALS, WHERE FENCING IS CONTINUOUS AND WHERE, END, CORNER AND LINE BRACE POSTS ARE NOT SPECIFIED.
6. ALL LINE POSTS SHALL BE 2 7/8" MIN. IN DIAMETER AND 12' LONG. ALL END, CORNER AND LINE BRACE POSTS SHALL BE 6" MIN. IN DIAMETER AND 12' LONG.
7. ALL PIPE CAPS MUST BE STEEL AND FULLY WELDED ON TO THE TOP OF THE POSTS.
8. FENCE WIRE SHALL BE PLACED ON EITHER THE ROAD SIDE OR THE FIELD SIDE OF POSTS. DEPENDING ON LOCAL CONDITIONS: I.E. ON CURVES. THE WIRE SHALL BE PLACED ON THE SIDE WHICH WOULD RESULT IN THE LEAST AMOUNT OF TENSION ON THE TIE WIRE. THIS SHALL ALSO APPLY WHERE WIND DRIFT OR OTHER CONDITIONS WOULD EXERT UNUSUAL PRESSURE AGAINST THE WIRE.
9. ALL FENCE WIRE TIES, BRACE WIRES AND OTHER WIRE APPURTENANCES SHALL BE GALVANIZED.
10. GAME FENCE FABRIC SHALL CONFORM TO A HIGH TENSILE 12.5 GA. WIRE WITH A CLASS III COATING. DESIGN No. 2096-6-12.5.
11. GAME FENCE WILL BE TIED TO EVERY LINE POST WITH 9 GA. GALVANIZED WIRE AT A MAX SPACING OF 16".
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEYING AND STAKING PROPOSED ESCAPE RAMP AND GATE LOCATIONS. ONCE STAKED, THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT MANAGER TO FIELD REVIEW AND APPROVE THE LOCATIONS. THIS WORK SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED BID ITEM.
13. ALL FENCE HARDWARE SHALL BE INCIDENTAL TO THE COST OF THE GAME FENCE, ITEM NO. 607012 - "GAME FENCE".
14. ALL FOOTING FOR END, CORNER AND LINE BRACE POSTS SHALL BE CLASS "A" CONCRETE. THE COST INVOLVED SHALL BE INCLUDED IN THE BID PRICE ITEM FOR THE GAME FENCE ITEM No.607012 - "GAME FENCE".
15. ALL GATE OPENINGS REQUIRE AN END BRACE SECTION ON EACH SIDE.

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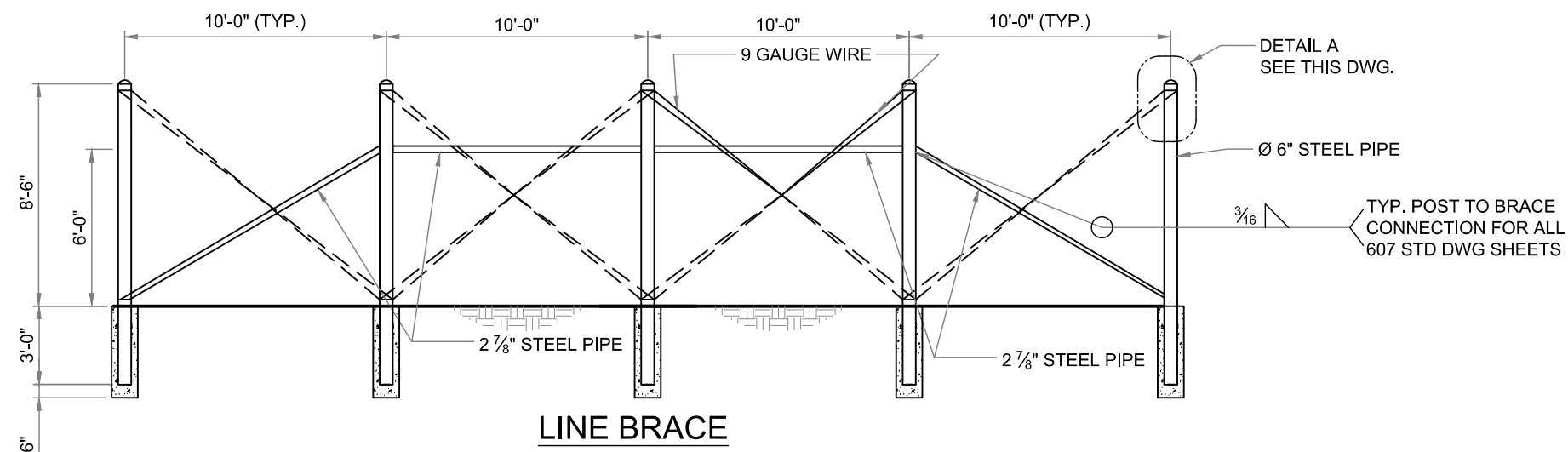
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REVISIONS (OR CHANGE NOTICES)

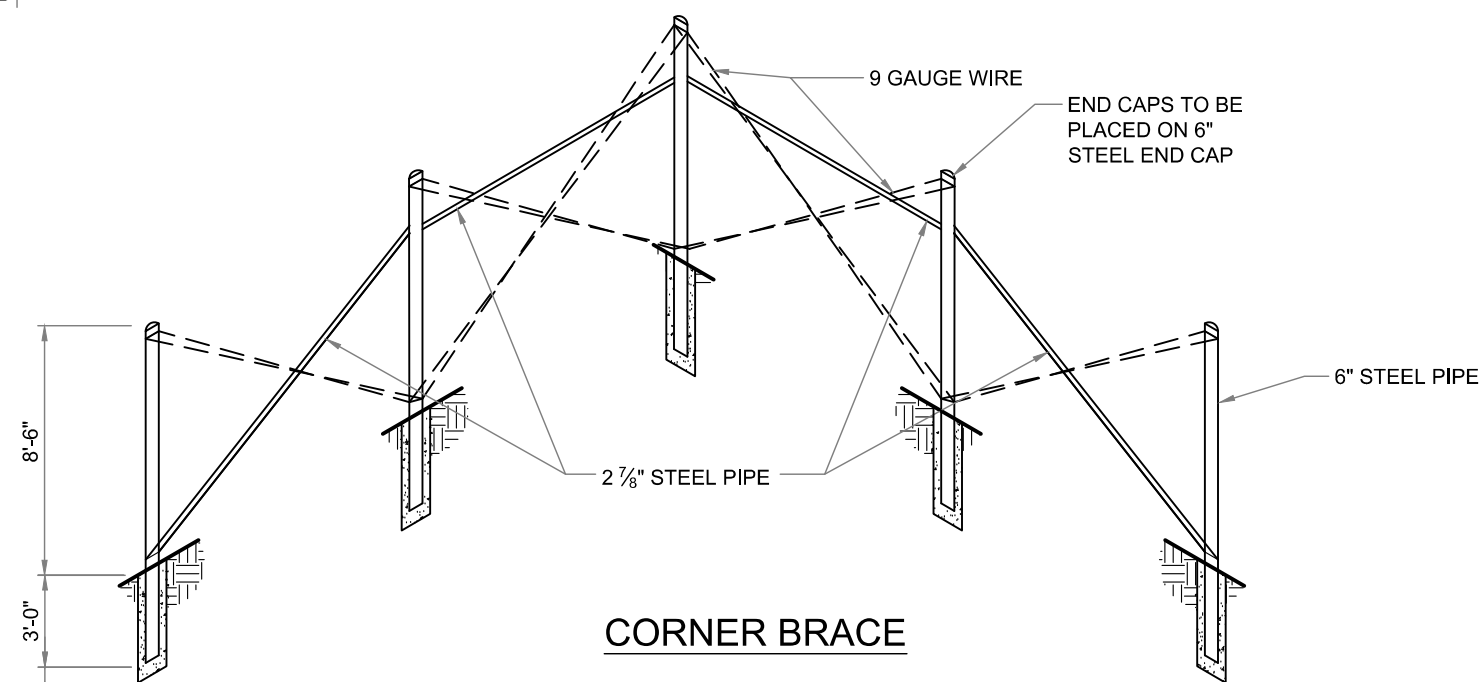
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

GAME FENCE
GENERAL NOTES & OVERALL PLAN

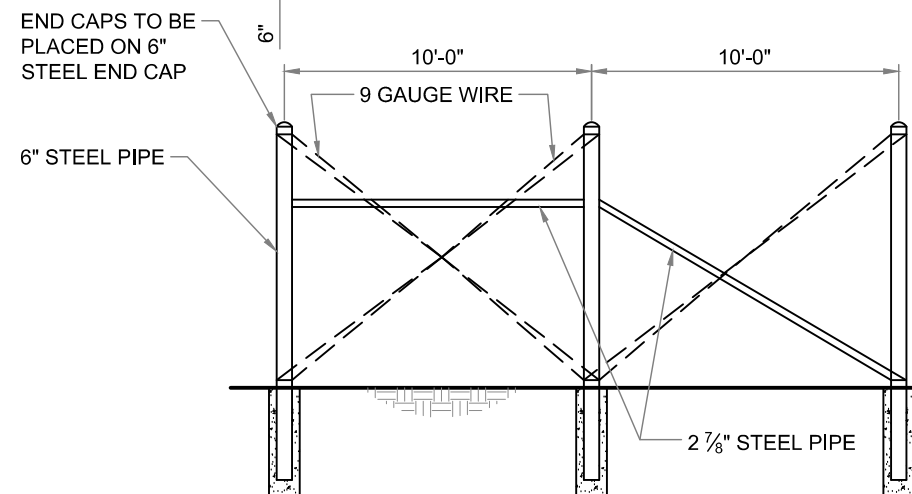




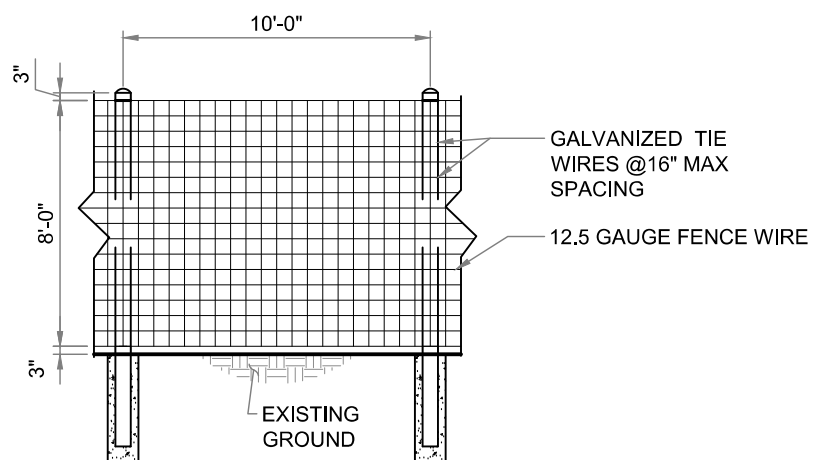
LINE BRACE



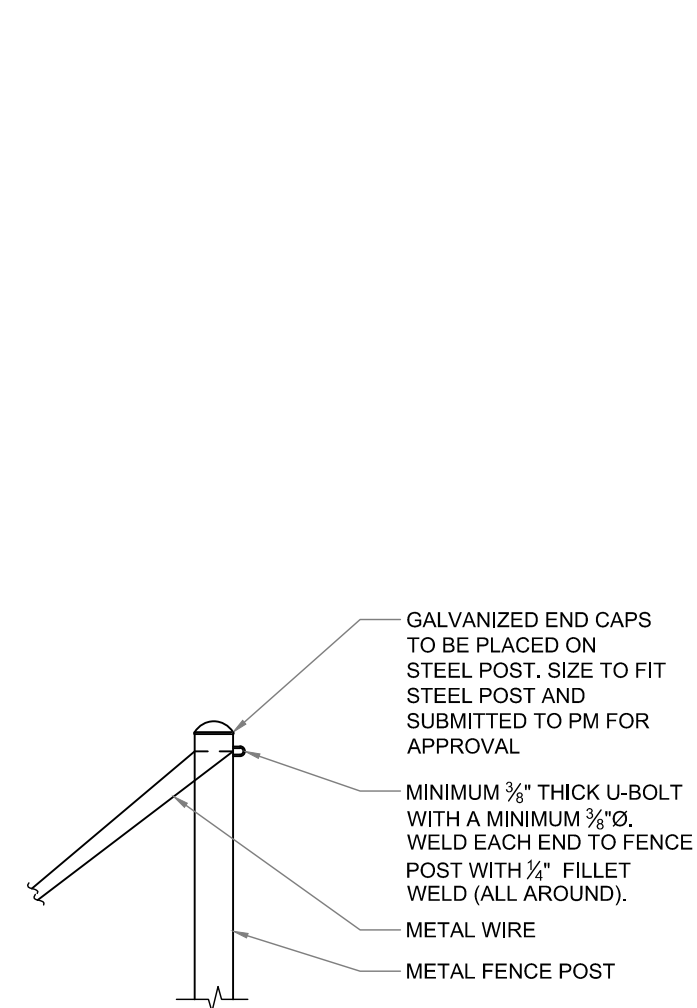
CORNER BRACE



END BRACE



8' FENCE TYPICAL INSTALLATION



DETAIL A

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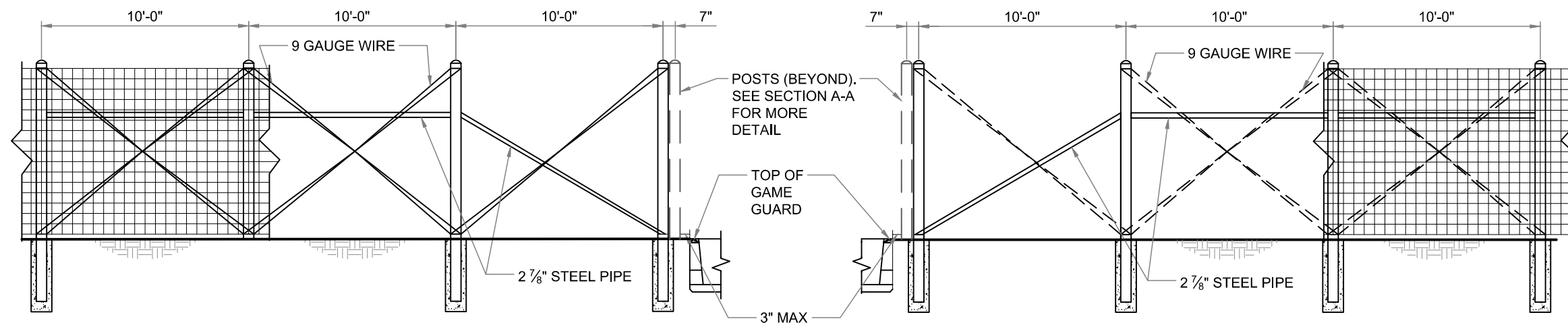
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REVISIONS (OR CHANGE NOTICES)

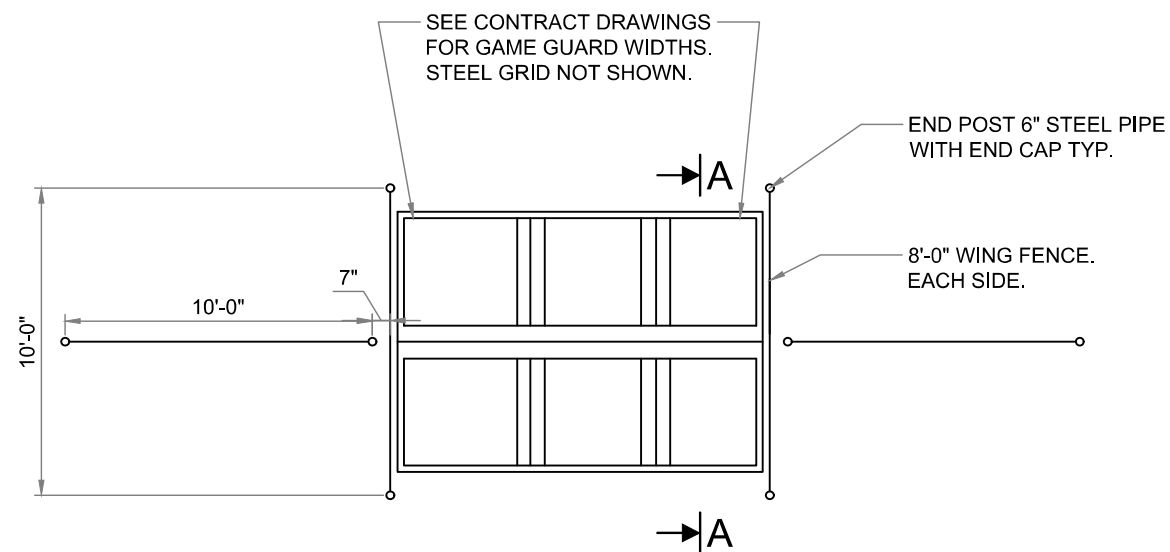
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

GAME FENCE
BRACING AND TYPICAL INSTALLATION

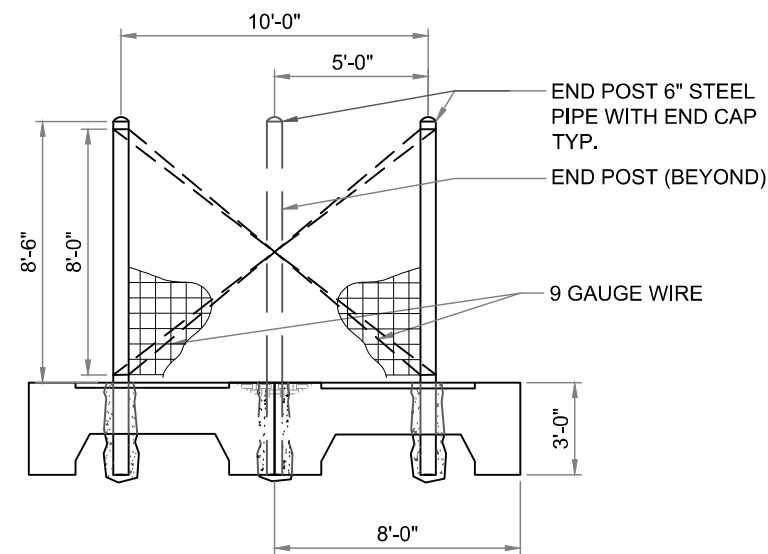




ELEVATION ON GAME GUARD



GAME GUARD PLAN
SEE STANDARD DRAWINGS 610-02
FOR GAME GUARD DETAILS



SECTION A-A

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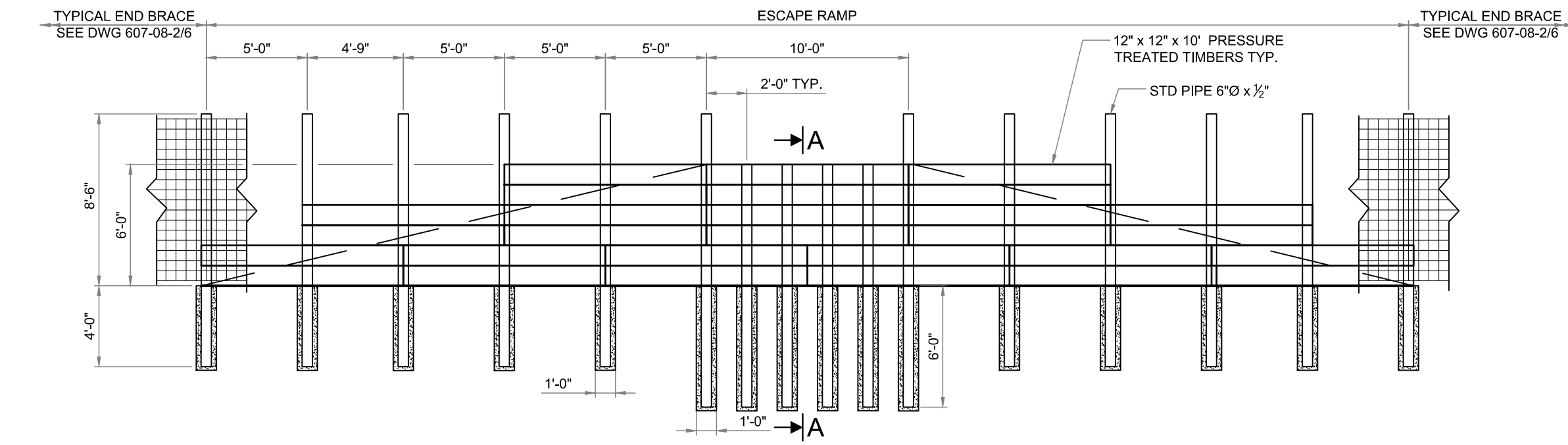
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REVISIONS (OR CHANGE NOTICES)

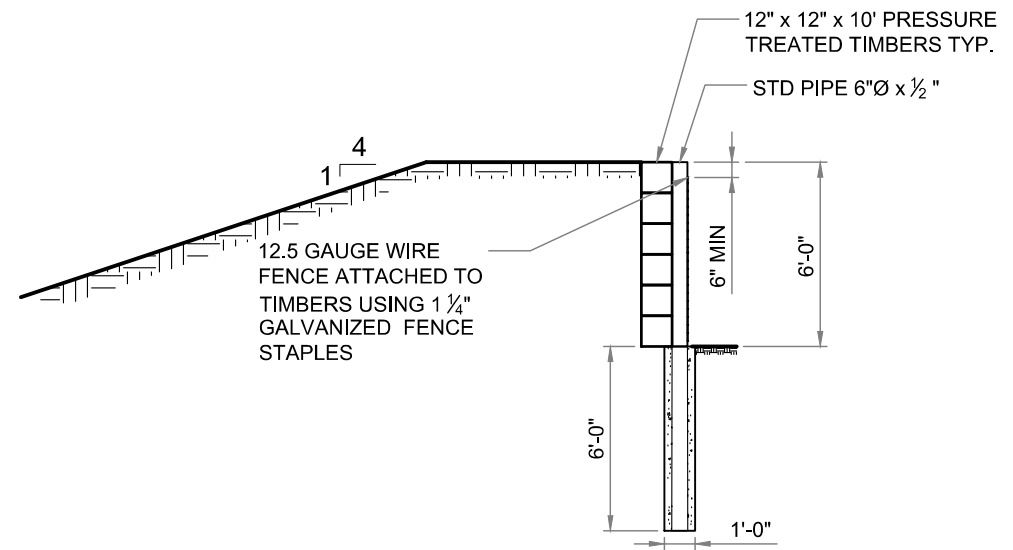
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

GAME FENCE DETAILS
AT GAME GUARD LOCATIONS

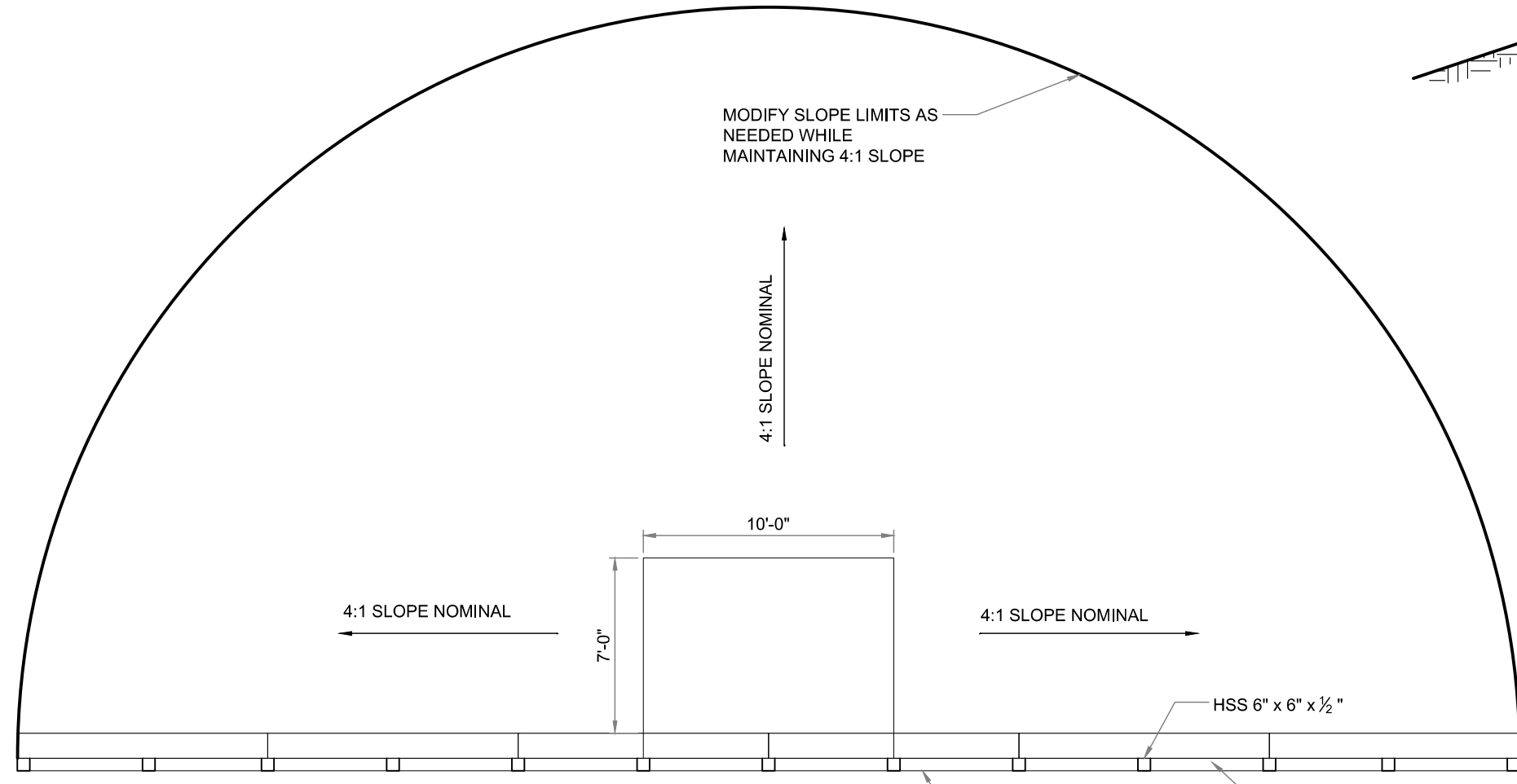




PROFILE



SECTION A-A



PLAN

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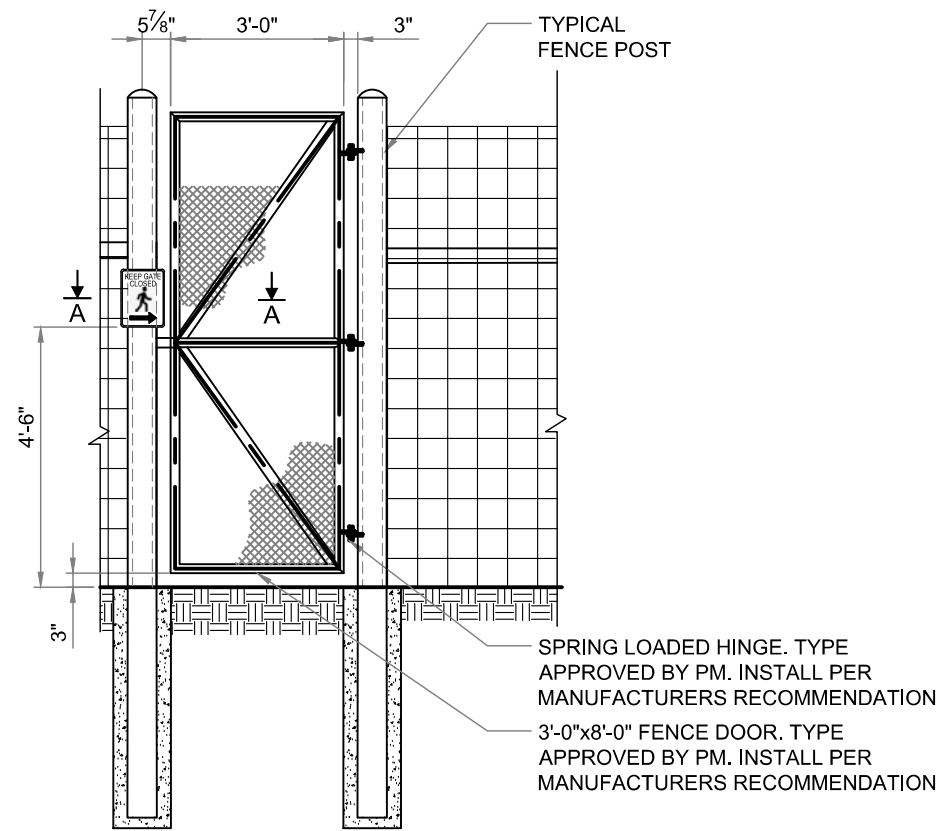
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REVISIONS (OR CHANGE NOTICES)

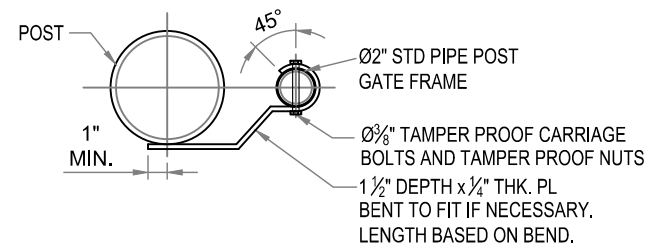
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DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

ESCAPE RAMP
PLAN AND PROFILE

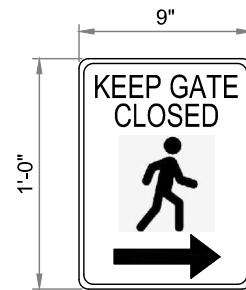




PEDESTRIAN GATE ELEVATION



SECTION A-A



SIGN DETAIL

NOTES:

1. A PEDESTRIAN GATE IN A GAME FENCE SHALL BE PROVIDED AT LOCATIONS SHOWN IN THE DRAWING SET.
2. SIGNAGE AS SHOWN SHALL BE INSTALLED ON BOTH SIDES OF THE PEDESTRIAN GATE. SIGNAGE IS INCIDENTAL TO THE PEDESTRIAN GATE.

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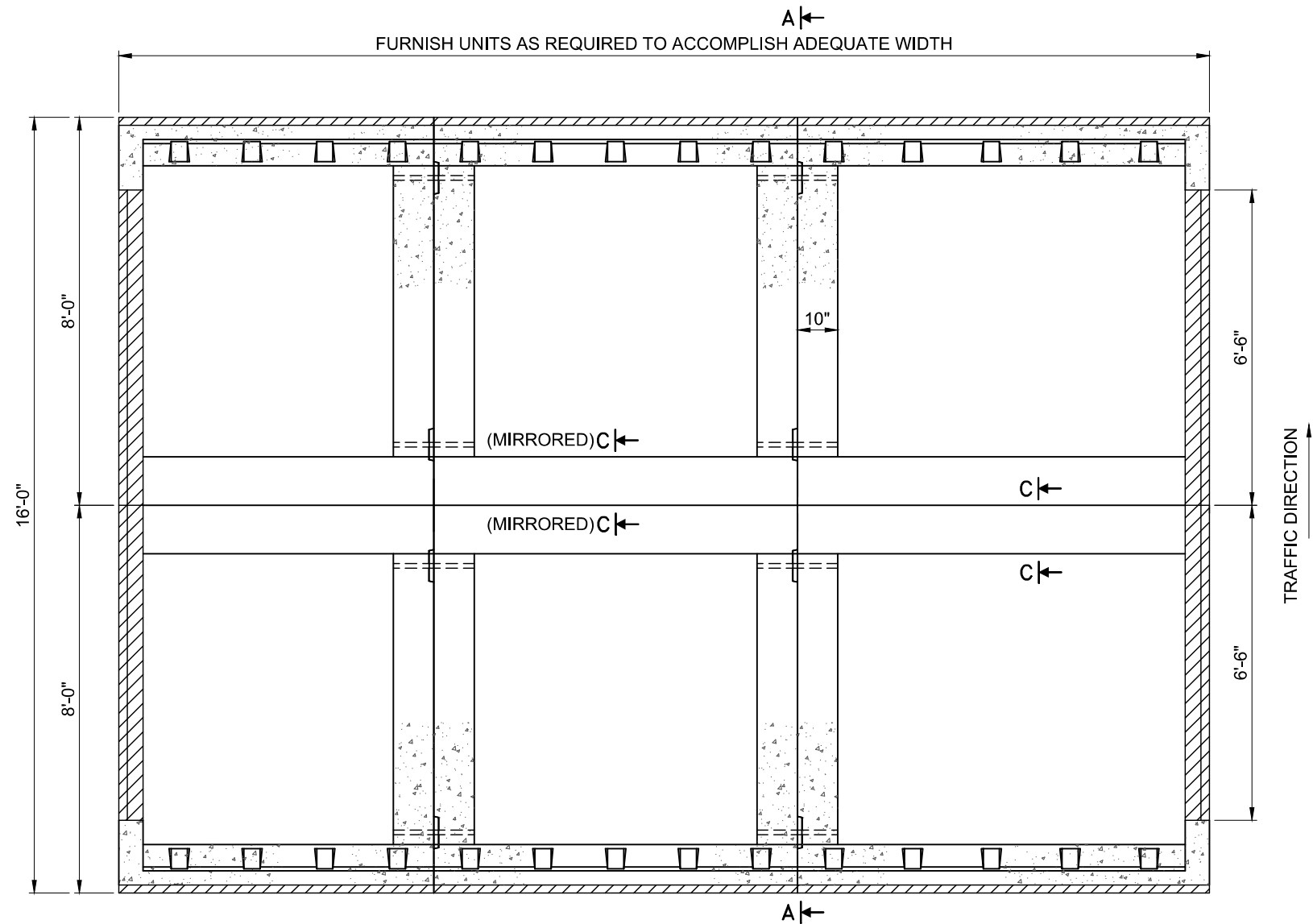
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REVISIONS (OR CHANGE NOTICES)

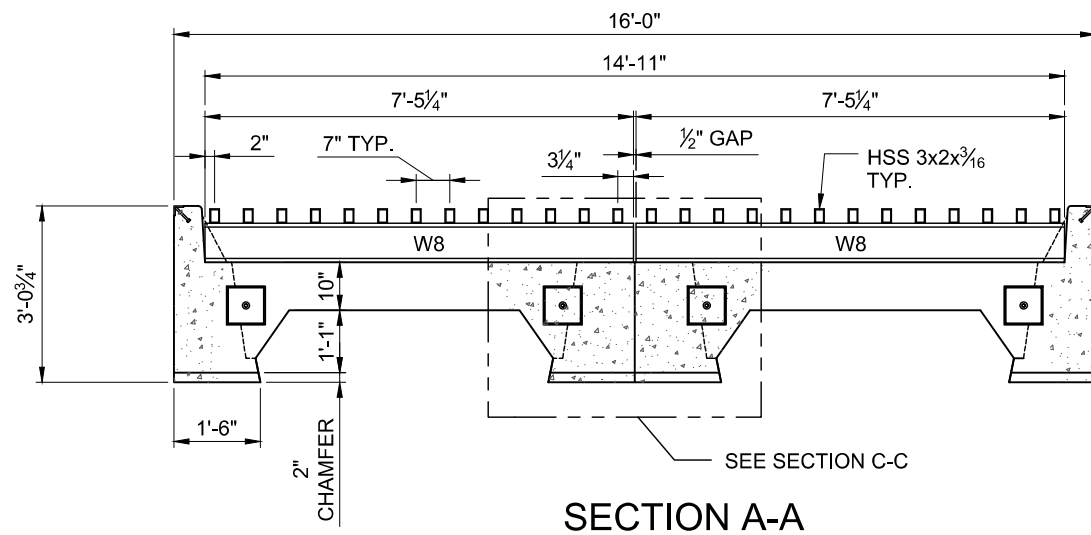
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

GAME FENCE
PEDESTRIAN GATE DETAIL





PLAN



SECTION A-A

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. STEEL STRUCTURES SHALL CONFORM TO NMDOT SECTION 541 - "STEEL STRUCTURES" OF THE STANDARD SPECIFICATIONS AND AASHTO M270, GRADE 50. TUBING SHALL CONFORM TO ASTM 500, GRADE B.
3. BOLTS, NUT, AND WASHERS SHALL BE GALVANIZED PER SECTION 542 - "HIGH-STRENGTH BOLTS".
4. WELDING SHALL MEET THE REQUIREMENTS OF THE ANSI/AWS D1.1 STRUCTURAL WELDING CODE, AND SECTION 541 - "STEEL STRUCTURES" OF THE STANDARD SPECIFICATION.
5. PAINTING OF STRUCTURAL STEEL SHALL CONFORM TO SECTION 545 OF THE STANDARD SPECIFICATIONS "PROTECTIVE COATING OF MISCELLANEOUS STRUCTURAL STEEL". COLOR SHALL BE "SAFETY YELLOW."
6. SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH 610 - "CATTLE GUARDS". THE CONTRACTOR MAY SUBSTITUTE FLOWABLE FILL FOR THE SUBGRADE PREPARATION. NO ADDITIONAL PAYMENT SHALL BE MADE.
7. THE CONTRACTOR SHALL SLOPE THE BASES OF THE GAME GUARDS AS REQUIRED TO PROVIDE ROADWAY CROWNS OR SUPERELEVATION.
8. STEEL GRID UNITS:
 - WIDTH MUST BE CONSISTENT WITH THE OVERALL GAME GUARD WIDTH.
 - SPACING OF STEEL COMPONENTS MAY BE REDUCED BUT MAY NOT EXCEED SPACING SHOWN.
9. MODIFICATIONS OF MINOR DIMENSIONS TO ACCOMMODATE FABRICATION PREFERENCES MAY BE PERMITTED AT THE DISCRETION OF THE PROJECT MANAGER.
10. TYPICAL BUTT JOINT DESIGN IS SHOWN ON SECTION C-C ON STD. DWG. 602-02-2./2.
11. FOR ALL PRECAST BASE DESIGN REQUIREMENTS, SEE STANDARD DRAWING 610-01.

TRAFFIC DIRECTION

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

GAME GUARD PLAN
AND ELEVATION



Appendix I: Cost Estimates by Structure and Phase

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

WC-04 UNDERPASS

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
203100	BORROW	C.Y.	7,957.77	\$ 25.00	\$ 198,944.27
210002	MAJOR STRUCTURE	C.Y.	11,987.43	\$ 65.00	\$ 779,183.04
210003	MAJOR STRUCTURE BACKFILL	C.Y.	887.26	\$ 95.00	\$ 84,289.91
501124	DRIVEN PILES (24" PIPE)	L.F.	3,600.00	\$ 310.00	\$ 1,116,000.00
506000	MSE PANEL WALL	S.F.	1,197.80	\$ 205.00	\$ 245,549.82
511000	STRUCTURAL CONCRETE, CLASS A	C.Y.	255.27	\$ 1,200.00	\$ 306,324.98
514042	CONCRETE BARRIER RAILINGS 42"	L.F.	202.00	\$ 480.00	\$ 96,960.00
540060	REINFORCING BARS GRADE 60	LB	18,544.54	\$ 2.75	\$ 50,997.49
607012	GAME FENCE	L.F.	171.32	\$ 30.00	\$ 5,139.60
	B-SERIES SPAN: 54'0" RISE:11'0" LENGTH:70'	LS	1.00	\$1,064,933.33	\$ 1,064,933.33
	Un-Itemized Costs	LS		10%	\$ 374,937.82
	Contingency	LS		15%	\$ 618,647.40
TOTAL ESTIMATED COST					\$ 5,000,000.00

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

WC-08 UNDERPASS

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
203100	BORROW	C.Y.	5,893.72	\$ 25.00	\$ 147,342.96
210002	MAJOR STRUCTURE	C.Y.	10,283.10	\$ 65.00	\$ 668,401.67
210003	MAJOR STRUCTURE BACKFILL	C.Y.	1,001.28	\$ 95.00	\$ 95,121.88
501124	DRIVEN PILES (24" PIPE)	L.F.	3,600.00	\$ 310.00	\$ 1,116,000.00
506000	MSE PANEL WALL	S.F.	1,351.73	\$ 205.00	\$ 277,105.06
511000	STRUCTURAL CONCRETE, CLASS A	C.Y.	331.77	\$ 1,200.00	\$ 398,123.91
514042	CONCRETE BARRIER RAILINGS 42"	L.F.	202.00	\$ 480.00	\$ 96,960.00
540060	REINFORCING BARS GRADE 60	LB	20,880.86	\$ 2.75	\$ 57,422.36
607012	GAME FENCE	L.F.	171.32	\$ 30.00	\$ 5,139.60
	B-SERIES SPAN: 54'0" RISE:11'0" LENGTH:70'	LS	1.00	\$1,064,933.33	\$ 1,064,933.33
	Un-Itemized Costs			10%	\$ 392,655.08
	Contingency			15%	\$ 647,880.88
TOTAL ESTIMATED COST					\$ 5,000,000.00

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

WC-10 UNDERPASS

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
203100	BORROW	C.Y.	4,943.96	\$ 25.00	\$ 123,598.95
210002	MAJOR STRUCTURE	C.Y.	8,980.63	\$ 65.00	\$ 583,741.00
210003	MAJOR STRUCTURE BACKFILL	C.Y.	976.30	\$ 95.00	\$ 92,748.15
501124	DRIVEN PILES (24" PIPE)	L.F.	3,600.00	\$ 310.00	\$ 1,116,000.00
506000	MSE PANEL WALL	S.F.	1,318.00	\$ 205.00	\$ 270,190.00
511000	STRUCTURAL CONCRETE, CLASS A	C.Y.	290.86	\$ 1,200.00	\$ 349,027.47
514042	CONCRETE BARRIER RAILINGS 42"	L.F.	202.00	\$ 480.00	\$ 96,960.00
540060	REINFORCING BARS GRADE 60	LB	19,712.70	\$ 2.75	\$ 54,209.93
607012	GAME FENCE	L.F.	171.32	\$ 30.00	\$ 5,139.60
	B-SERIES SPAN: 54'0" RISE:11'0" LENGTH:70'	LS	1.00	\$1,064,933.33	\$ 1,064,933.33
	Un-Itemized Costs			10%	\$ 375,654.84
	Contingency			15%	\$ 619,830.49
TOTAL ESTIMATED COST					\$ 4,800,000.00

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

WC-12 UNDERPASS

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
210002	MAJOR STRUCTURE	C.Y.	6,062.60	\$ 25.00	\$ 151,564.91
210002	MAJOR STRUCTURE	C.Y.	10,478.60	\$ 65.00	\$ 681,108.95
210003	MAJOR STRUCTURE BACKFILL	C.Y.	1,273.60	\$ 95.00	\$ 120,992.42
501124	DRIVEN PILES (24" PIPE)	L.F.	3,600.00	\$ 310.00	\$ 1,116,000.00
506000	MSE PANEL WALL	S.F.	1,719.37	\$ 205.00	\$ 352,470.03
511000	STRUCTURAL CONCRETE, CLASS A	C.Y.	301.13	\$ 1,200.00	\$ 361,358.67
514042	CONCRETE BARRIER RAILINGS 42"	L.F.	202.00	\$ 480.00	\$ 96,960.00
540060	REINFORCING BARS GRADE 60	LB	20,004.74	\$ 2.75	\$ 55,013.04
607012	GAME FENCE	L.F.	171.32	\$ 30.00	\$ 5,139.60
	B-SERIES SPAN: 54'0" RISE:11'0" LENGTH:70'	LS	1.00	\$1,064,933.33	\$ 1,064,933.33
	Un-Itemized Costs			10%	\$ 400,554.09
	Contingency			15%	\$ 660,914.26
TOTAL ESTIMATED COST					\$ 5,100,000.00

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

WC-01 OVERPASS

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
203100	BORROW	C.Y.	12,595.46	\$ 25.00	\$ 314,886.51
210002	MAJOR STRUCTURE	C.Y.	934.94	\$ 65.00	\$ 60,771.12
210003	MAJOR STRUCTURE BACKFILL	C.Y.	4,343.26	\$ 95.00	\$ 412,609.91
501124	DRIVEN PILES (24" PIPE)	L.F.	7,920.00	\$ 310.00	\$ 2,455,200.00
506000	MSE PANEL WALL	S.F.	5,863.40	\$ 205.00	\$ 1,201,997.82
511000	STRUCTURAL CONCRETE, CLASS A	C.Y.	1,035.32	\$ 1,200.00	\$ 1,242,384.00
514042	CONCRETE BARRIER RAILINGS 42"	L.F.	392.00	\$ 480.00	\$ 188,160.00
515000	REINF. CONCRETE FOR MINOR STRUCTURES	C.Y.	436.81	\$ 1,800.00	\$ 786,256.40
540060	REINFORCING BARS GRADE 60	LB	44,581.99	\$ 2.75	\$ 122,600.48
607012	GAME FENCE	L.F.	359.46	\$ 30.00	\$ 10,783.92
	BEBO PRECAST E84T RISE:19'10" LENGTH: 156'	LS	1.00	\$4,222,400.00	\$ 4,222,400.00
	Un-Itemized Costs			10%	\$ 1,101,805.02
	Contingency			15%	\$ 1,817,978.28
TOTAL ESTIMATED COST					\$ 14,000,000.00

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

WC-03 OVERPASS

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
203100	BORROW	C.Y.	14,222.02	\$ 25.00	\$ 355,550.53
210002	MAJOR STRUCTURE	C.Y.	1,254.51	\$ 65.00	\$ 81,543.23
210003	MAJOR STRUCTURE BACKFILL	C.Y.	4,904.15	\$ 95.00	\$ 465,893.79
501124	DRIVEN PILES (24" PIPE)	L.F.	7,920.00	\$ 310.00	\$ 2,455,200.00
506000	MSE PANEL WALL	S.F.	6,620.60	\$ 205.00	\$ 1,357,222.18
511000	STRUCTURAL CONCRETE, CLASS A	C.Y.	1,035.32	\$ 1,200.00	\$ 1,242,384.00
514042	CONCRETE BARRIER RAILINGS 42"	L.F.	392.00	\$ 480.00	\$ 188,160.00
515000	REINF. CONCRETE FOR MINOR STRUCTURES	C.Y.	496.82	\$ 1,800.00	\$ 894,278.00
540060	REINFORCING BARS GRADE 60	LB	44,581.99	\$ 2.75	\$ 122,600.48
607012	GAME FENCE	L.F.	380.12	\$ 30.00	\$ 11,403.66
	BEBO PRECAST E84T RISE:19'10" LENGTH: 156'	LS	1.00	\$4,222,400.00	\$ 4,222,400.00
	Un-Itemized Costs			10%	\$ 1,139,663.59
	Contingency			15%	\$ 1,880,444.92
TOTAL ESTIMATED COST					\$ 14,500,000.00

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

WC-05 OVERPASS

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
203100	BORROW	C.Y.	12,595.46	\$ 25.00	\$ 314,886.51
210002	MAJOR STRUCTURE	C.Y.	383.15	\$ 65.00	\$ 24,904.78
210003	MAJOR STRUCTURE BACKFILL	C.Y.	4,343.26	\$ 95.00	\$ 412,609.91
501124	DRIVEN PILES (24" PIPE)	L.F.	7,920.00	\$ 310.00	\$ 2,455,200.00
506000	MSE PANEL WALL	S.F.	5,863.40	\$ 205.00	\$ 1,201,997.82
511000	STRUCTURAL CONCRETE, CLASS A	C.Y.	1,035.32	\$ 1,200.00	\$ 1,242,384.00
514042	CONCRETE BARRIER RAILINGS 42"	L.F.	392.00	\$ 480.00	\$ 188,160.00
515000	REINF. CONCRETE FOR MINOR STRUCTURES	C.Y.	394.59	\$ 1,800.00	\$ 710,256.40
540060	REINFORCING BARS GRADE 60	LB	44,581.99	\$ 2.75	\$ 122,600.48
607012	GAME FENCE	L.F.	355.08	\$ 30.00	\$ 10,652.40
	BEBO PRECAST E84T RISE:19'10" LENGTH: 156'	LS	1.00	\$4,222,400.00	\$ 4,222,400.00
	Un-Itemized Costs			10%	\$ 1,090,605.23
	Contingency			15%	\$ 1,799,498.63
TOTAL ESTIMATED COST					\$ 13,800,000.00

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

WC-07 OVERPASS

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
203100	BORROW	C.Y.	16,062.75	\$ 25.00	\$ 401,568.69
210002	MAJOR STRUCTURE	C.Y.	427.36	\$ 65.00	\$ 27,778.34
210003	MAJOR STRUCTURE BACKFILL	C.Y.	5,538.88	\$ 95.00	\$ 526,193.46
501124	DRIVEN PILES (24" PIPE)	L.F.	7,920.00	\$ 310.00	\$ 2,455,200.00
506000	MSE PANEL WALL	S.F.	7,477.49	\$ 205.00	\$ 1,532,884.63
511000	STRUCTURAL CONCRETE, CLASS A	C.Y.	1,035.32	\$ 1,200.00	\$ 1,242,384.00
514042	CONCRETE BARRIER RAILINGS 42"	L.F.	392.00	\$ 480.00	\$ 188,160.00
515000	REINF. CONCRETE FOR MINOR STRUCTURES	C.Y.	443.12	\$ 1,800.00	\$ 797,613.60
540060	REINFORCING BARS GRADE 60	LB	44,581.99	\$ 2.75	\$ 122,600.48
607012	GAME FENCE	L.F.	404.03	\$ 30.00	\$ 12,121.02
	BEBO PRECAST E84T RISE:19'10" LENGTH: 156'	LS	1.00	\$4,222,400.00	\$ 4,222,400.00
	Un-Itemized Costs			10%	\$ 1,152,890.42
	Contingency			15%	\$ 1,902,269.20
TOTAL ESTIMATED COST					\$ 14,600,000.00

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

WC-15 OVERPASS

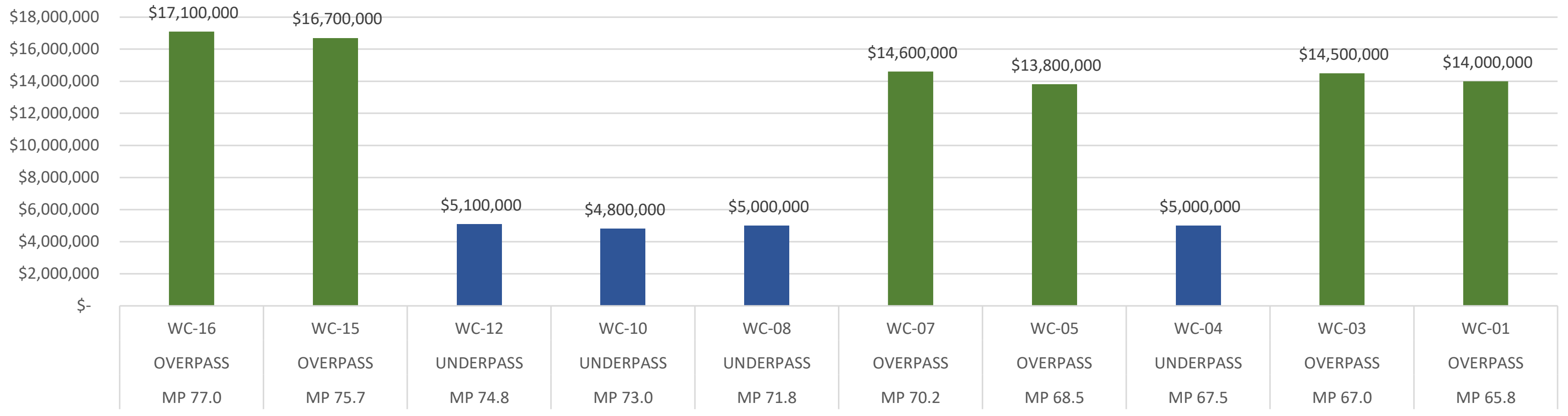
ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
203100	BORROW	C.Y.	25,394.63	\$ 25.00	\$ 634,865.74
210002	MAJOR STRUCTURE	C.Y.	523.06	\$ 65.00	\$ 33,999.08
210003	MAJOR STRUCTURE BACKFILL	C.Y.	8,756.77	\$ 95.00	\$ 831,893.04
501124	DRIVEN PILES (24" PIPE)	L.F.	7,920.00	\$ 310.00	\$ 2,455,200.00
506000	MSE PANEL WALL	S.F.	11,821.64	\$ 205.00	\$ 2,423,435.79
511000	STRUCTURAL CONCRETE, CLASS A	C.Y.	1,035.32	\$ 1,200.00	\$ 1,242,384.00
514042	CONCRETE BARRIER RAILINGS 42"	L.F.	392.00	\$ 480.00	\$ 188,160.00
515000	REINF. CONCRETE FOR MINOR STRUCTURES	C.Y.	535.87	\$ 1,800.00	\$ 964,560.80
540060	REINFORCING BARS GRADE 60	LB	44,581.99	\$ 2.75	\$ 122,600.48
607012	GAME FENCE	L.F.	491.56	\$ 30.00	\$ 14,746.74
	BEBO PRECAST E84T RISE:19'10" LENGTH: 156'	LS	1.00	\$4,222,400.00	\$ 4,222,400.00
	Un-Itemized Costs			10%	\$ 1,313,424.57
	Contingency			15%	\$ 2,167,150.54
TOTAL ESTIMATED COST					\$ 16,700,000.00

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

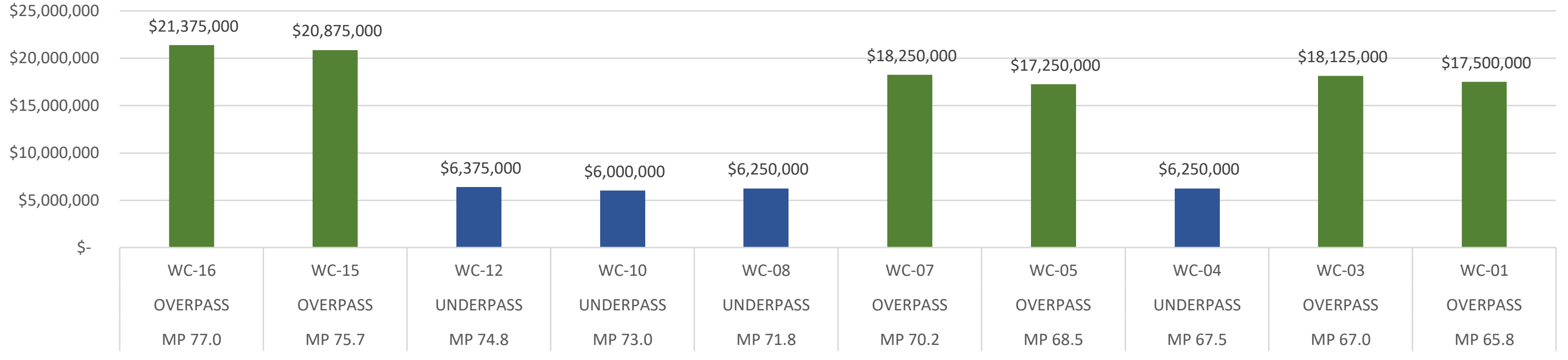
WC-16 OVERPASS

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
203100	BORROW	C.Y.	18,521.92	\$ 25.00	\$ 463,047.99
210002	MAJOR STRUCTURE	C.Y.	239.54	\$ 65.00	\$ 15,570.14
210003	MAJOR STRUCTURE BACKFILL	C.Y.	6,386.87	\$ 95.00	\$ 606,752.54
501124	DRIVEN PILES (24" PIPE)	L.F.	8,712.00	\$ 310.00	\$ 2,700,720.00
506000	MSE PANEL WALL	S.F.	8,622.27	\$ 205.00	\$ 1,767,565.97
511000	STRUCTURAL CONCRETE, CLASS A	C.Y.	1,138.85	\$ 1,200.00	\$ 1,366,622.40
514042	CONCRETE BARRIER RAILINGS 42"	L.F.	431.20	\$ 480.00	\$ 206,976.00
515000	REINF. CONCRETE FOR MINOR STRUCTURES	C.Y.	1,095.36	\$ 1,800.00	\$ 1,971,640.00
540060	REINFORCING BARS GRADE 60	LB	49,040.19	\$ 2.75	\$ 134,860.53
607012	GAME FENCE	L.F.	728.17	\$ 30.00	\$ 21,845.08
	BEBO PRECAST E84T RISE:19'10" LENGTH: 156'	LS		\$4,222,400.00	\$ 4,222,400.00
	Un-Itemized Costs			10%	\$ 1,347,800.06
	Contingency			15%	\$ 2,223,870.11
TOTAL ESTIMATED COST					\$ 17,100,000.00

US 550 WVC Mitigation Construction Cost Per Structure @ MP



US 550 WVC Mitigation Cost Per Structure (including PE & CM) @ MP



		Fencing Lengths		
	\$90,400,000	MP Start	MP End	Lengths (Miles)
Phase 1 - Valley of Death (WC-01 O & WC-04 U)				
FENCE 4.71-MILES w/NM 96	\$22,200,000	64.93	69.14	4.71
MP 64.93 to MP 69.14				
WC-4 - Underpass (MP 67.5)	\$5,000,000			
WC-1 - Overpass(4th Rank) (MP 65.8)	\$14,000,000			
Fencing In the area - 4.71 miles total (US 550 & NM 96)	\$3,200,000			
Phase 2 - Moving West (WC-07 O & WC-08 U)				
FENCE 3.84-MILES	\$22,200,000	69.14	72.98	3.84
MP 69.14 to MP 72.98				
WC-7 Overpass (1st Rank) (MP 70.2)	\$14,600,000			
WC-8 Underpass (MP 71.8)	\$5,000,000			
Fencing In the area - 3.84 miles total	\$2,600,000			
Phase 3 (WC-10 U WC-12 U)				
FENCE 2.64-MILES	\$11,700,000	72.98	75.62	2.64
MP 72.98 to MP 75.62				
WC-10 - Underpass (MP 73)	\$4,800,000			
WC-12 - Underpass (MP 74.8)	\$5,100,000			
Fencing In the area - 2.64 miles total	\$1,800,000			
Phase 4 - Continental Divide Overpass (WC-16 O)				
FENCE 5.02-MILES	\$20,500,000	75.62	80.64	5.02
MP 75.62 TO MP 80.64				
WC-16 Overpass (3rd Rank) (MP 77.0)	\$17,100,000			
Fencing In the area - 5.02 miles total	\$3,400,000			
Phase 5 (Optional) (WC-5 O)				
MP 68.46	\$13,800,000			
WC-5 Overpass (3rd Rank) (MP 68.46)	\$13,800,000			

Appendix J: Contech Manufacturing Costs

March 16, 2023

Project: US 550 - MP 64.0-80.3 – Wildlife Overpass - in Nageezi, New Mexico

The following is a Bebo Bridge System ENGINEER'S COST ESTIMATE. This ESTIMATE is intended for preliminary estimating purposes only and should **not** be interpreted as a final QUOTATION. The information presented is based on the most current data made available to CONTECH.

CONTECH will fabricate and deliver the following described Bebo Bridge components and appurtenances:

DESCRIPTION OF SUPPLIED MATERIALS:

- 1 Cell of 60 L.F. of 84'-0" FT. span x 29'-10" FT. rise Bebo Precast Concrete units (15 units of 4'-0" lay length, 30 half arches)
- Joint sealant material
- Masonite shims
- Filter fabric
- On-site consultation during installation

ESTIMATE - \$1,160,000.00 Delivered (F.O.B.)

ESTIMATED HEAVIEST CRANE PICK = 28 TONS

These costs do not include the headwalls, wingwalls, foundation, or installation costs. As part of the construction process, the contractor is to perform the items listed below in accordance with the installation drawings:

- Excavate for the structure & foundations
- Construct cast-in-place foundations
- Unload and set structure utilizing crane
- Grout the unit legs into the keyway
- Apply all joint sealing material
- Backfill the structure

Please contact me at 303-715-8534 should you have any questions or need additional information. Thank you for your interest in the Bebo Bridge System.

Respectfully,

Gavin MacWilliam

**Estimate assumes production facility is within 400 miles of the jobsite.*

This estimate was prepared using a number of assumptions for design loads, earth cover, freight and other considerations. Sales tax, if applicable is not included. Contact your local Contech representative to request a formal quotation.

March 16, 2023

Project: US 550 - MP 64.0-80.3 – Wildlife Crossing – WC-8 / WC-10 / W in Nageezi, New Mexico

The following is a CON/SPAN B-Series Bridge System ENGINEER'S COST ESTIMATE. This ESTIMATE is intended for preliminary estimating purposes only and should **not** be interpreted as a final QUOTATION. The information presented is based on the most current data made available to CONTECH.

CONTECH will fabricate and deliver the following described CON/SPAN B-Series Bridge components and appurtenances:

DESCRIPTION OF SUPPLIED MATERIALS:

- 60 L.F. of 54'-0" FT. span x 11'-0" FT. rise CON/SPAN B-Series Bridge Precast Concrete units (15 units of 4'-0" lay length)
- Two (2) Precast Headwalls (1'-0" thick x 2'-0" tall at midspan)
- Joint sealant material
- Masonite shims
- Filter fabric
- On-site consultation during installation

ESTIMATE - \$652,000.00 Delivered (F.O.B.)

ESTIMATED HEAVIEST CRANE PICK = 30 TONS

These costs do not include the wingwalls, foundation, or installation costs. As part of the construction process, the contractor is to perform the items listed below in accordance with the installation drawings:

- Excavate for the structure & foundations
- Construct cast-in-place foundations
- Unload and set structure utilizing crane
- Grout the unit legs and wingwalls into the keyway
- Apply all joint sealing material
- Backfill the structure

Please contact me at 303-715-8534 should you have any questions or need additional information. Thank you for your interest in the CON/SPAN B-Series Bridge System.

Respectfully,

Gavin MacWilliam

**Estimate assumes production facility is within 400 miles of the jobsite.*

This estimate was prepared using a number of assumptions for design loads, earth cover, freight and other considerations. Sales tax, if applicable is not included. Contact your local Contech representative to request a formal quotation.

Appendix K: Cost Estimate for Fencing

US-550 WILDLIFE CROSSINGS MP64.93 - MP80.64

FENCING COST

DESCRIPTION	UNIT	QTY	UNIT PRICE	XTD PRICE
REMOVAL OF FENCE	L.F.	168,960.00	\$ 5.77	\$ 975,516.70
JUMPOUT STRUCTURE @ Every 2/4 Mile	E.A.	32.00	\$ 25,829.51	\$ 826,544.25
WILDLIFE GUARD 30FT	E.A.	25.00	\$ 84,477.68	\$ 2,111,942.11
RIPRAP END TREATMENT	E.A.	4.00	\$ 5,117.28	\$ 20,469.13
WILDLIFE GATE 20FT	E.A.	16.00	\$ 4,673.62	\$ 74,777.94
EROSION AND SEDIMENT CONTROL	L.S.	1.00	\$ 82,654.43	\$ 82,654.43
REVEGETATION	L.S.	1.00	\$ 48,012.50	\$ 48,012.50
TRAFFIC CONTROL	L.S.	1.00	\$ 103,318.03	\$ 103,318.03
SIGNAGE	L.S.	1.00	\$ 13,978.32	\$ 13,978.32
WILDLIFE FENCE	L.F.	168,960.00	\$ 30.00	\$ 5,068,508.28
MOBILIZATION	L.S.	1.00	\$ 278,107.83	\$ 278,107.83
TOTAL ESTIMATED COST				\$ 9,603,829.51
			Subtotal Per Ft of Fence	\$ 113.68
			Contingency 10%	\$ 11.37
			Total/LF	\$ 125.05
			Price/Mile	\$ 660,263.28

Appendix L: Detailed Species and Habitat Descriptions Table

ESA, New Mexico Endangered, and USFS Sensitive Species with the Potential to Occur Along the US-550 Corridor

Species Name	Status	Habitat Description	Potentially Suitable Habitat Present?
<i>Abronia bigelovii</i> Tufted Sand Verbena	USFS Sensitive	Hills and ridges of gypsum in the Todilto Formation between 5,700 and 7,400 ft amsl.	No. The Todilto Formation is not present along the US-550 corridor.
<i>Accipiter gentilis</i> Northern Goshawk	USFS Sensitive	Old growth montane forests often in mesic areas or drainages with north or east facing slopes. Suitable nest trees include, ponderosa pines, Douglas fir, Engelmann spruce, blue spruce, white fir, cottonwoods, quaking aspen, and others.	Yes. Potentially suitable habitat may exist within ponderosa pine forested areas.
<i>Asclepias uncialis ssp. uncialis</i> Greene Milkweed	USFS Sensitive	Prairie or grassland components of juniper woodland and savanna ecosystems.	Yes. Potentially suitable habitat may exist within pinyon-juniper and sagebrush-steppe habitats along the US-550 corridor.
<i>Astragalus micromerius</i> Chaco Milkvetch	USFS Sensitive	Gypsiferous or limy sandstone outcroppings in pinyon-juniper woodlands or Great Basin desert scrub between 6,600 ft and 7,300 ft amsl.	Yes. Potentially suitable habitat may exist within pinyon-juniper woodlands along the US-550 corridor.
<i>Athene cucularia hypugaea</i> Burrowing Owl	USFS Sensitive	In New Mexico, suitable habitat includes Chihuahuan desert scrub, closed basin scrub, desert grassland, Great Basin desert scrub, juniper savanna, lava beds, plains-mesa grassland, plains-mesa sand scrub, sand dunes, urban, and farmland. More generally, suitable habitat includes dry, open, short-grass, treeless plains that are occupied by other fossorial animals.	Yes. Potentially suitable habitat may exist in open areas along the US-550 corridor.
<i>Calochortus gunnisonii var. perpulcher</i> Pecos Mariposa Lily	USFS Sensitive	Meadows and aspen glades in upper montane coniferous forests from 9,500 ft to 11,200 ft amsl.	No. The elevation within proximity to the US-550 corridor is below 9,500 ft amsl.
<i>Catostomus plebeius</i> Rio Grande Sucker	USFS Sensitive	Clear pools and clean gravel riffles in streams with abundant woody cover and aquatic vegetation.	No. There are no pools or streams containing suitable

			habitat within proximity to the US-550 corridor.
<i>Coccyzus americanus</i> Yellow-billed Cuckoo (YBCU)	ESA Threatened	Wooded habitat with dense cover and nearby water, typically streams with shrubby edges of willow and a nearby cottonwood gallery most often 12 ha or larger in size. Stopover habitat can include low, scrubby vegetation, abandoned orchards or farmland, and dense thickets along streams or other water features.	No. Riparian habitat along the US-550 corridor is extremely limited and does not meet the described requirements.
<i>Corynorhinus townsendii pallescens</i> Pale Townsend's Big-eared Bat	USFS Sensitive	Low and mid-elevation shrub, pinyon-juniper, and ponderosa pine forests, and other forests up to 10,000 ft amsl. Distribution is strongly correlated with the availability of caves and cave-like roosting habitat. May utilize buildings, bridges, rock crevices, and hollow trees as roost sites.	Yes. Potentially suitable habitat may exist on man-made structures (e.g. bridges and culverts) along the US-550 corridor.
<i>Cynomys gunnisoni</i> Gunnison's Prairie Dog (montane and prairie populations)	USFS Sensitive	Grasslands and semi-desert and montane shrublands. Associated with intermountain valleys, benches, and plateaus that offer prairie-like topography and vegetation.	Yes. Potentially suitable habitat may exist in open areas along the US-550 corridor.
<i>Cypripedium parviflorum var. pubescens</i> Yellow Lady's-slipper	USFS Sensitive	Mesic deciduous and coniferous forests, openings, thickets, prairies, meadows, and fens from 5,750 ft to 11,000 ft amsl.	Yes. Potentially suitable habitat may exist in coniferous forests and openings along the US-550 corridor.
<i>Danaus plexippus</i> Monarch butterfly	ESA Candidate	Fields, roadside areas, open grasslands or riparian areas can support milkweed and other flowering plants, which are essential to suitable monarch habitat.	Yes. Potentially suitable habitat may exist along San Jose Arroyo or Rito de los Pinos.
<i>Delphinium robustum</i> Robust Larkspur	USFS Sensitive	Canyon bottoms and aspen groves in lower and upper montane coniferous forests from 7,200 ft to 11,200 ft amsl.	No. There are no canyon bottoms or aspen groves along the US-550 corridor that meet the habitat and elevation requirements for this species.
<i>Draba heilii</i>	USFS Sensitive	Alpine tundra growing in association with other low, caespitose or	No. Within proximity to the US-

Heil's Alpine Whitlowgrass		pulvinate alpine plants at about 12,100 ft amsl.	550 corridor there are no alpine tundra habitats and the elevation is below 12,100 ft amsl.
<i>Empidonax trailii extimus</i> Southwestern Willow Flycatcher (SWFL)	ESA Endangered	Breeding habitat is relatively dense tree or shrub riparian vegetation with surface water or marshy habitat nearby and can encompass a wide elevational range.	Yes. Potentially suitable habitat may occur along San Jose Arroyo and Rito de los Pinos.
<i>Erigeron subglaber</i> Pecos Fleabane	USFS Sensitive	Rocky, open meadows in subalpine coniferous forests between 10,000 ft and 11,500 ft amsl.	No. The elevation within proximity to the US-550 corridor is below 10,000 ft amsl.
<i>Eudema maculatum</i> Spotted Bat	USFS Sensitive	In New Mexico, rock cliffs within 1-mile of water with cracks and crevices for roosting. Vegetative requirements are diverse and include high elevation (8,000 – 9,000 ft amsl) pine forests, pinyon pine and juniper forests, and desert scrub.	No. There are no suitable cliff formations within proximity to the US-550 corridor.
<i>Falco peregrinus anatum</i> American Peregrine Falcon	USFS Sensitive	Mountainous areas with cliffs containing ledges or potholes for nesting.	No. There are no suitable cliff formations within proximity to the US-550 corridor.
<i>Gastrocopta ruidosensis</i> Ruidoso Snaggletooth	USFS Sensitive	Bare soil, under stones, and in thin layers of vegetative litter at mid-elevation cliffs and limestone grasslands of the Sacramento and Sangre de Cristo Mountains of eastern New Mexico.	No. The US-550 corridor is not located within the Sacramento or Sangre de Cristo Mountains.
<i>Gila pandora</i> Rio Grande Chub	USFS Sensitive	Pools in cool fast-flowing stream reaches with gravel or cobble bottoms. Undercut banks with overhanging vegetation in rivers and lakes.	No. There are no streams, rivers, or lakes containing suitable habitat within proximity to the US-550 corridor.
<i>Haliaeetus leucocephalus</i> Bald Eagle	USFS Sensitive	Tall trees and cliffs near water, especially reservoirs and lakes.	No. There are no reservoirs or lakes within proximity to the US-550 corridor.
<i>Hybognathus amarus</i> Rio Grande Silvery Minnow	ESA Endangered	Large streams with slow to moderate current moving over silt or silty sand substrates, and with water depths less than 15.75 in.	No. There are no streams containing suitable habitat

			within proximity to the US-550 corridor.
<i>Lagopus leucura</i> White-tailed Ptarmigan	USFS Sensitive	Alpine heath or tundra habitats, mostly above tree line.	No. There are no alpine heath or tundra habitats within proximity to the US-550 corridor.
<i>Lilium philadelphicum</i> var. <i>andinum</i> Wood Lily	NM Endangered USFS Sensitive	Moist woodlands and meadows in mixed conifer forests and canyon bottoms, between 7,550 and 10,000 ft amsl.	No. There are no suitable woodlands or meadows within proximity to the US-550 corridor.
<i>Lithobates pipiens</i> Northern Leopard Frog	USFS Sensitive	Aquatic habitats including slow-moving or still water along streams, rivers, wetlands, permanent or temporary pools, beaver ponds, and human constructed habitats like stock tanks and borrow pits.	No. There are no suitable slow-moving or still water habitats within proximity to the US-550 corridor.
<i>Martes americana</i> <i>origenes</i> American Marten	USFS Sensitive	Mature spruce fir, Douglas fir, and other conifer forests in northern New Mexico. Ideal habitat includes shady trees, fallen logs and stumps, lush shrubs, and ground vegetation.	Yes. Potentially suitable habitat may exist within ponderosa pine forested areas.
<i>Mentzelia conspicua</i> Chama Blazing Star	USFS Sensitive	Road cuts and baren hillsides, on gray to red shales and clays of the Mancos and Chinle formations in pinyon-juniper woodlands from about 5,900 ft to 7,200 ft amsl.	No. The Mancos and Chinle formations are not present in proximity to the US-550 corridor.
<i>Mentzelia springeri</i> Springer's Blazing Star	USFS Sensitive	Volcanic pumice and unconsolidated pyroclastic ash in pinyon-juniper woodlands and lower montane coniferous forests between 7,000 ft and 8,000 ft amsl.	Yes. Potentially suitable habitat may existing within pinyon-juniper woodlands along the US-550 corridor.
<i>Ochotona princeps</i> <i>nigrescens</i> Goat Peak Pika	USFS Sensitive	Rocky talus slopes near alpine-montane wet meadows.	No. There are no talus habitats within proximity to the US-550 corridor.
<i>Ochotona princeps</i> <i>saxatilis</i> American Pika	USFS Sensitive	Rocky talus slopes near alpine-montane wet meadows.	No. There are no talus habitats within proximity to the US-550 corridor.
<i>Oncorhynchus clarkii</i> <i>virginalis</i> Rio Grande Cutthroat Trout (RGCT)	ESA Candidate USFS Sensitive	Small, high-elevation headwater streams and lakes; historical occupation of the Rio Grande, Canadian and Pecos River basins.	No. There are no streams or lakes containing suitable habitat within

			proximity to the US-550 corridor.
<i>Pediocactus knowltonii</i> Knowlton's cactus	ESA Endangered	Tertiary alluvial deposits overlying the San Jose Formation where they form rolling, gravelly hills with piyon pine, Rocky Mountain juniper, and black sagebrush along with relatively dense foliose lichen soil coverage.	Yes. The San Jose Formation occurs along the US-550 corridor and may contain potentially suitable habitat.
<i>Pisidium liljeborgi</i> Lilljeborg Peaclam	USFS Sensitive	In New Mexico, only found in the freshwaters of Nambe Lake.	No. Nambe Lake is not located within proximity to the US-550 corridor.
<i>Puccinellia parishii</i> Parish's alkali grass	NM Endangered	Alkaline springs, seeps, and seasonally wet areas that occur at the heads of drainages or on gentle slopes at 2,600 to 7,200 ft. Requires continuously damp soils during the late winter to spring growing period. Frequently grows with <i>Distichlis spicata</i> , <i>Sporobolus airoides</i> , <i>Carex</i> spp., <i>Scirpus</i> spp., <i>Juncus</i> spp., <i>Eleocharis</i> spp., and <i>Anemopsis californica</i> .	Yes. Potentially suitable habitat may occur along San Jose Arroyo and Rito de los Pinos.
<i>Rumex orthoneurus</i> Blumer's Dock	USFS Sensitive	Perennial springs, wet meadows, stream sides in canyons, and moist organic soils.	No. There are no suitable perennial springs, wet meadows, stream sides, or moist organic soils within proximity to US-550.
<i>Salix arizonica</i> Arizona Willow	USFS Sensitive	Sedge meadows and wet drainages in subalpine coniferous forests from 10,000 ft to 11,200 ft amsl.	No. The elevation within proximity to the US-550 corridor is below 10,000 ft amsl.
<i>Sclerocactus cloverae</i> Clover's cactus	NM Endangered	Sandy clay strata of the Nacimiento Formation in sparse shadscale scrub; sandy, gravelly, or clay hills, mesas, and washes, desert grasslands, saltbush, sagebrush, rabbitbrush flats, and pinyon-juniper woodlands between 4,900 and 7,200 ft.	Yes. The Nacimiento Formation occurs along the U.S. 550 corridor and may contain potentially suitable habitat.
<i>Sorex cinereus</i> Cinereus (Masked) Shrew	USFS Sensitive	Open and closed forests, meadows, river banks, lake shores, and willow thickets are most common. Moist environments tend to have the highest population densities. Habitats	Yes. Potentially suitable forest habitat is within proximity to the US-550 corridor.

		disturbed by fire or logging can also be used.	
<i>Sorex navigator</i> Western Water Shrew	USFS Sensitive	Streamside habitat in coniferous forests, particularly in or under overhanging banks, crevices, or other areas with good cover. May also utilize seasonal streams, small seeps, rivers, lakes, bogs, and other wet areas.	Yes. Potentially suitable wet areas with good cover may be present in proximity to the US-550 corridor.
<i>Sorex preblei</i> Preble's Shrew	USFS Sensitive	Sagebrush-grassland habitats and other arid and semiarid shrub-grass associations.	Yes. Potentially suitable sagebrush-grassland habitat is located within proximity to the US-550 corridor.
<i>Strix occidentalis lucida</i> Mexican spotted owl (MSO)	ESA Threatened	Nesting and roosting can occur in mixed conifer forest structure. Nesting in this part of the MSO's range is most often in complex Douglas fir forest structure or rocky canyons; Foraging habitat use patterns include a broader spectrum of habitat types.	Yes. Potentially suitable forest habitat is within proximity to the US-550 corridor.
<i>Townsendia gypsophila</i> Gypsum Townsend's aster	NM Endangered	Weathered gypsum outcrops of the Jurassic-age Todilto and overlying Morrison formations. The largest populations occur on highly gypsiferous soils rather than pure gypsum. Smaller populations grow on Todilto gypsite, a highly pure, crustose form of gypsum.	No. Neither the Todilto nor the Morrison formations are present along the US-550 corridor.
<i>Vireo vicinior</i> Gray Vireo	USFS Sensitive	Pinyon pine-juniper, mesquite scrub, oak scrub, and chaparral.	Yes. Potentially suitable pinyon-juniper habitat is present along the US-550 corridor.
<i>Xyrauchen texanus</i> Razorback sucker	ESA Endangered	Riverine backwaters, floodplains, flat water river sections and reservoirs.	No. There are no backwaters, floodplains, or rivers containing suitable habitat within proximity to the US-550 corridor.

Appendix M: IPaC Report

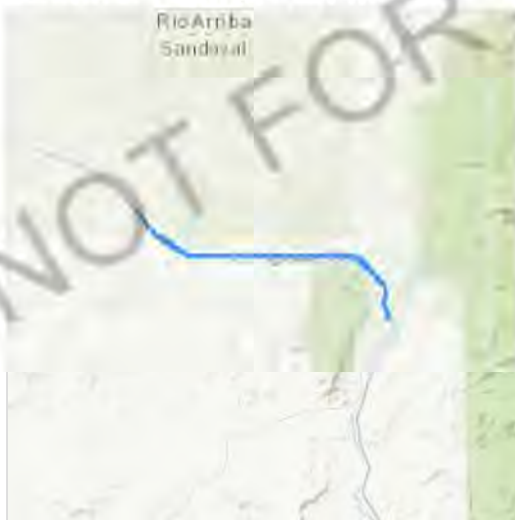
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Sandoval County, New Mexico



Local office

New Mexico Ecological Services Field Office

☎ (505) 346-2525

🏠 (505) 346-2542

2105 Osuna Road Ne

2100 Central Avenue NE
Albuquerque, NM 87113-1001

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
<p>Mexican Spotted Owl <i>Strix occidentalis lucida</i></p> <p>Wherever found</p> <p>There is final critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/8196</p>	Threatened
<p>Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i></p> <p>Wherever found</p> <p>There is final critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/6749</p>	Endangered
<p>Yellow-billed Cuckoo <i>Coccyzus americanus</i></p> <p>There is final critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/3911</p>	Threatened

Fishes

NAME	STATUS
<p>Razorback Sucker <i>Xyrauchen texanus</i></p> <p>Wherever found</p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none"> Water depletions in the upper Colorado River basin adversely affect this species and its critical habitat. Effects of water depletions must be considered even outside of occupied range. <p>There is final critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/530</p>	Endangered

Rio Grande Cutthroat Trout *Oncorhynchus clarkii virginalis* Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/920>

Rio Grande Silvery Minnow *Hybognathus amarus* Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/1391>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus* Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Flowering Plants

NAME

STATUS

Knowlton's Cactus *Pediocactus knowltonii* Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/1590>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\)](#) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Cassin's Finch <i>Carpodacus cassinii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Clark's Nutcracker <i>Nucifraga columbiana</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Jan 15 to Jul 15

<p>Evening Grosbeak <i>Coccothraustes vespertinus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 15 to Aug 10
<p>Grace's Warbler <i>Dendroica graciae</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds May 20 to Jul 20
<p>Lewis's Woodpecker <i>Melanerpes lewis</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9408</p>	Breeds Apr 20 to Sep 30
<p>Pinyon Jay <i>Gymnorhinus cyanocephalus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9420</p>	Breeds Feb 15 to Jul 15
<p>Virginia's Warbler <i>Vermivora virginiae</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9441</p>	Breeds May 1 to Jul 31
<p>Western Grebe <i>aechmophorus occidentalis</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/6743</p>	Breeds Jun 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

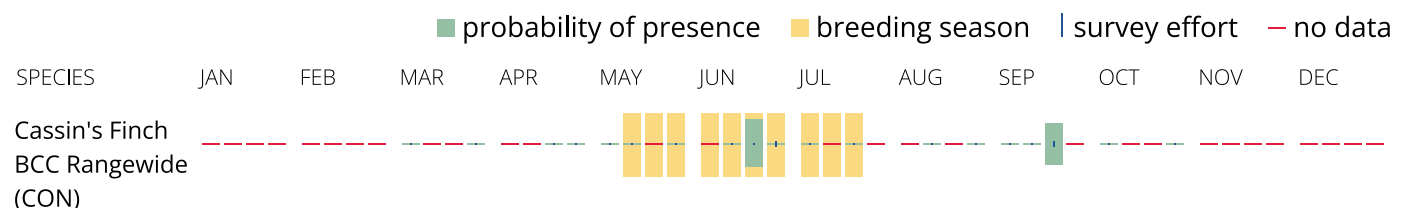
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

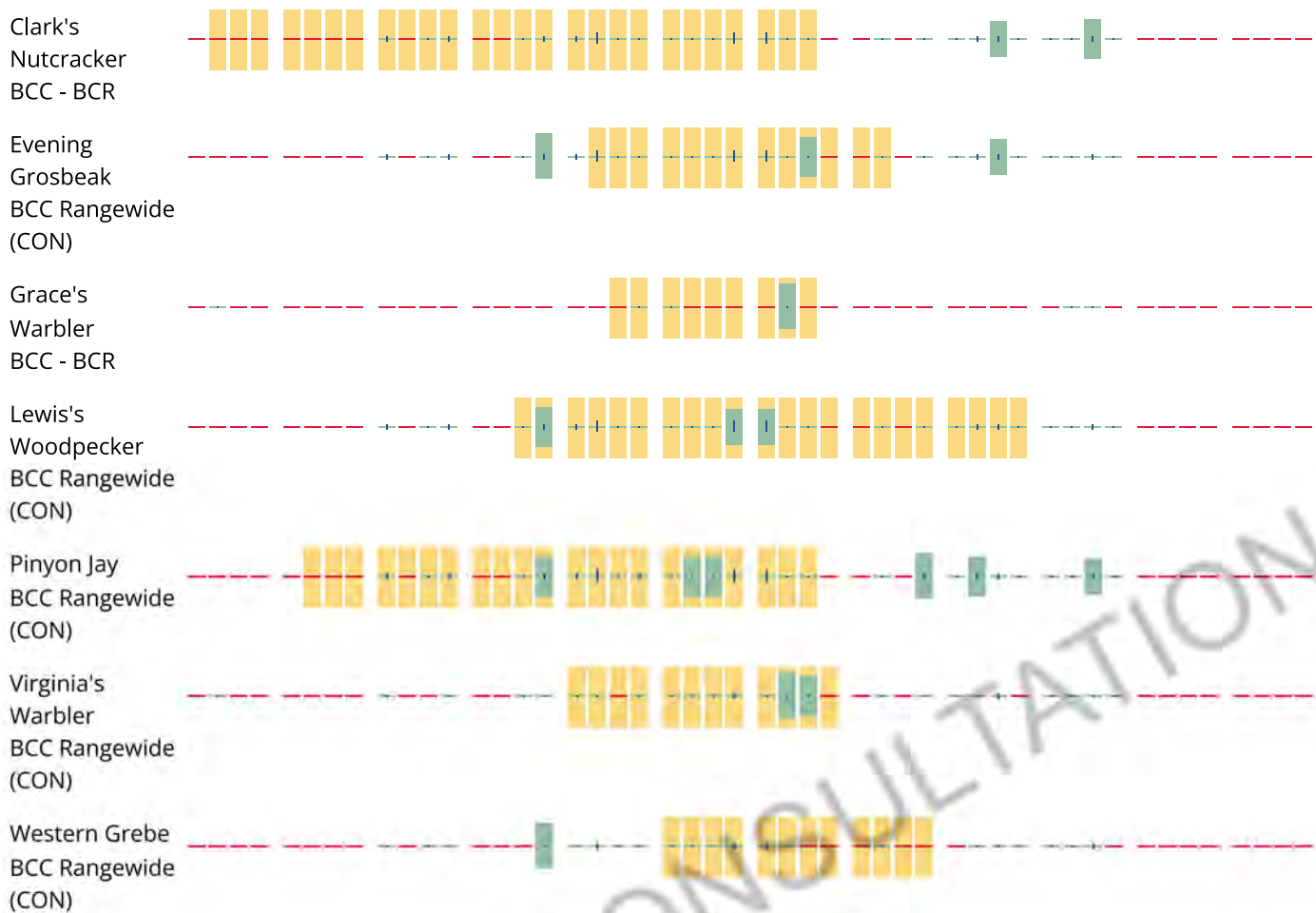
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also

been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix N: New Mexico Environmental Review Species List



PROJECT INFORMATION

Project Title: US-550 Wildlife Vehicle Collision Mitigation Scoping Report
Project Type: (NO PROJECT REVIEW) SPECIES LIST ONLY
Latitude/Longitude (DMS): 36.071664 / -107.060551
County(s): SANDOVAL
Project Description: Horrocks is helping NMDOT prepare a scoping report to inform the future phased construction of wildlife crossings along the US-550 corridor between the Jicaria-Apache Nation and Cuba, NM, as part of the 2022 New Mexico Wildlife Corridors Action Plan. At this stage, no wildlife crossings are planned. Instead, the purpose of the project is to evaluate the entire corridor and identify the best locations for crossings and wildlife fencing (both economically and ecologically), and to identify logical phasing for construction. As part of the scoping/phasing report, Horrocks is providing NMDOT with baseline environmental information to help inform future NEPA documents. The purpose is not to provide environmental clearances for the projects at this stage, but to inform the department what resources/species may need clearances in the future when construction is more eminent.

REQUESTOR INFORMATION

Project Organization: NM DEPARTMENT OF TRANSPORTATION
Contact Name: Marley Madsen
Email Address: marley.madsen@horrocks.com
Organization: Horrocks
Address: 4919 1500 W Suite 300, Riverdale UT 84405
Phone: 4355904550

OVERALL STATUS

This report contains an initial list of recommendations regarding potential impacts to wildlife or wildlife habitats from the proposed project; see the Project Recommendations section below for further details. Your project proposal is being forwarded to a New Mexico Department of Game and Fish (Department) biologist for review to determine whether there are any additional recommendations regarding the proposed actions. A Department biologist will be in touch within 30 days if there are further recommendations regarding this project proposal.

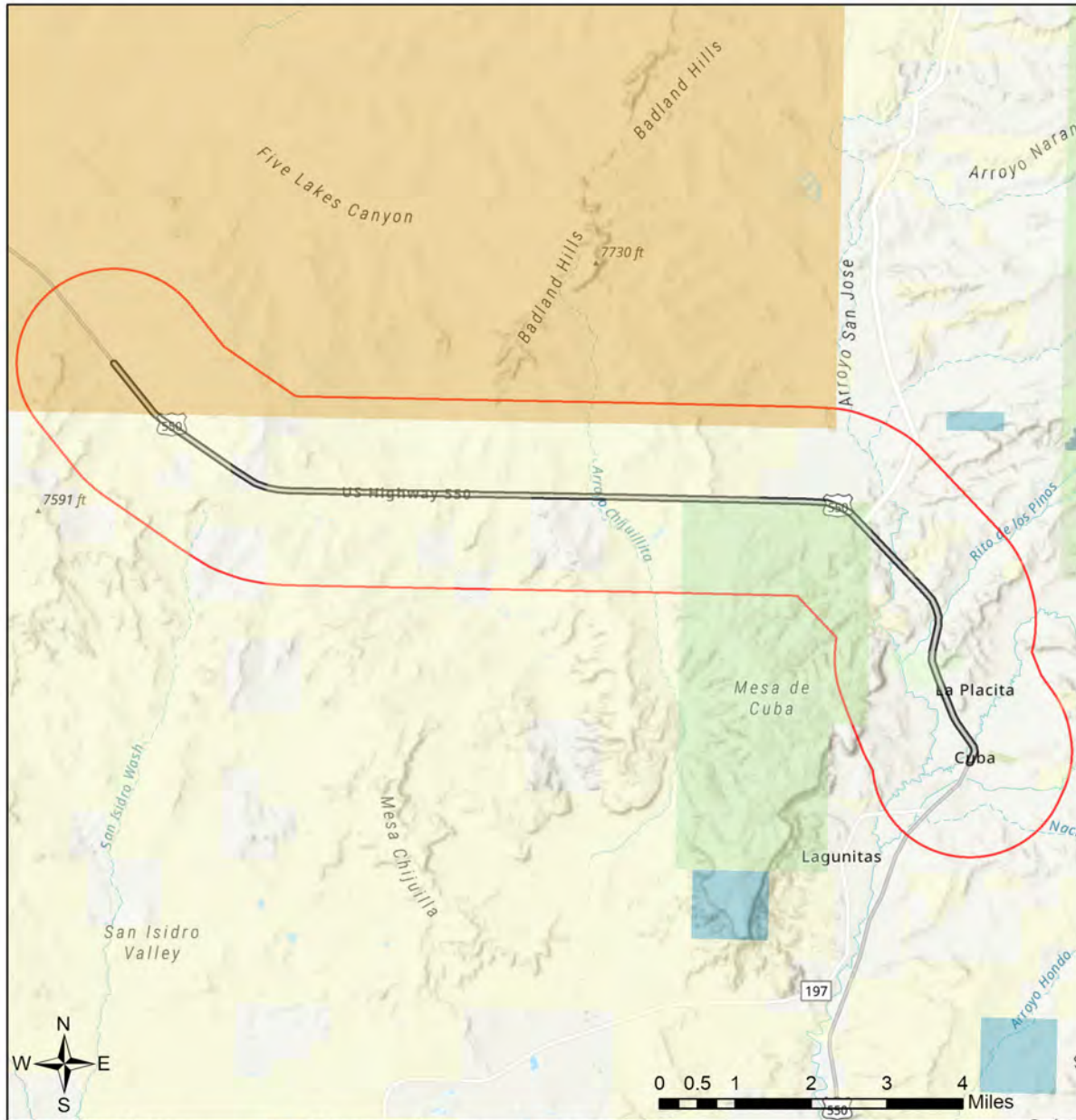


About this report:

- This environmental review is based on the project description and location that was entered. The report must be updated if the project type, area, or operational components are modified.
- This is a preliminary environmental screening assessment and report. It is not a substitute for the potential wildlife knowledge gained by having a biologist conduct a field survey of the project area. Federal status and plant data are provided as a courtesy to users. The review is also not intended to replace consultation required under the federal Endangered Species Act (ESA), including impact analyses for federal resources from the U.S. Fish and Wildlife Service (USFWS) using their [Information for Planning and Consultation tool](#).
- The New Mexico Environmental Review Tool (ERT) utilizes species observation locations and species habitat suitability models, both of which are subject to ongoing change and refinement. Inclusion or omission of a species within a report cannot guarantee species presence or absence within your project area. To determine occurrence of any species listed in this report, or other wildlife that may be present within your project area, onsite surveys conducted by a qualified biologist during appropriate, species-specific survey timelines may be necessary.
- The Department encourages use of the ERT to modify proposed projects for avoidance, minimization, or mitigation of wildlife impacts. However, the ERT is not intended to be used in a repeatedly iterative fashion to adjust project attributes until a previously determined recommendation is generated. The ERT serves to assess impacts once project details are developed. The [New Mexico Crucial Habitat Assessment Tool](#) is the appropriate system for advising early-stage project planning and design to avoid areas of anticipated wildlife concerns and associated regulatory requirements.



US-550 Wildlife Vehicle Collision Mitigation Scoping Report



- | | | | |
|---------------------------|------------------------------|------------------------------|---|
| Buffered Project Boundary | Department of Energy | State Land Office | U.S. Department of Agriculture |
| Project Boundary | NM Department of Game & Fish | State of New Mexico | U.S. Fish and Wildlife Service |
| Bureau of Land Management | NM State Forestry Division | Tribal Land | U.S. Forest Service |
| City Land | NM State Parks | U.S. Army Corps of Engineers | U.S. Natural Resources Conservation Service |
| County Land | National Park Service | U.S. Bureau of Reclamation | |
| Department of Defense | Private | | |

USGS, New Mexico Department of Game and Fish (NMDGF), Natural Heritage New Mexico (NHNM), and USDA Forest Service,

Compiled by Richard Norwood of NHNM over the period 2020 to 2021.

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodastysreisen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community



Special Status Animal Species Potentially within 2000 Meters of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Jemez Mountains Salamander	Plethodon neomexicanus	LE	E	SGCN
Boreal Chorus Frog	Pseudacris maculata			SGCN
Northern Leopard Frog	Lithobates pipiens			SGCN
Eared Grebe	Podiceps nigricollis			SGCN
Clark's Grebe	Aechmophorus clarkii			SGCN
American Bittern	Botaurus lentiginosus			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Flammulated Owl	Psiloscoops flammeolus			SGCN
Western Burrowing Owl	Athene cunicularia hypugaea			SGCN
Mexican Spotted Owl	Strix occidentalis lucida	LT		SGCN
Common Nighthawk	Chordeiles minor			SGCN
Black Swift	Cypseloides niger			SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Mountain Bluebird	Sialia currucoides			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Gray Vireo	Vireo vicinior		T	SGCN
Black-Throated Gray Warbler	Setophaga nigrescens			SGCN
Grace's Warbler	Setophaga graciae			SGCN
Painted Redstart	Myioborus pictus			SGCN
Black-chinned Sparrow	Spizella atrogularis evura			SGCN
Vesper Sparrow	Poocetes gramineus			SGCN
McCown's Longspur	Rhynchophanes mccownii			SGCN
Chestnut-collared Longspur	Calcarius ornatus			SGCN
Cassin's Finch	Haemorhous cassinii			SGCN
Evening Grosbeak	Coccothraustes vespertinus			SGCN
Rio Grande Cutthroat Trout	Oncorhynchus clarkii virginalis			SERI
Spotted Bat	Euderma maculatum		T	SGCN
Pale Townsend's Big-Eared Bat	Corynorhinus townsendii pallescens			SGCN
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN



Special Status Animal Species Potentially within 2000 Meters of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Common Checkered Whiptail	Aspidoscelis tessellata		E	SGCN
California Kingsnake	Lampropeltis californiae			SGCN

ESA = Endangered Species Act, WCA = Wildlife Conservation Act, SGCN = Species of Greatest Conservation Need, SERI = Species of Economic and Recreational Importance, C = Candidate, E = Endangered, T = Threatened

Project Recommendations

This report includes a preliminary species list that may be used during early stages of project or conservation planning. Even if this report indicates that your proposed project location would require a custom review from a biologist, **no review will be returned** until additional project details are provided. **To obtain a project review**, please submit additional details regarding the **type** of project, project **objectives**, anticipated project **duration**, **timing** of project construction, the composition and dimensions/quantities of **materials** that will be utilized for project implementation, any **equipment** that will be used, anticipated **ground disturbance** that will occur, wildlife surveys or observations that have occurred on or near the project site, and **any other relevant details** regarding potential effects of project activities on wildlife or wildlife habitat. **Photographs** of the project site are especially useful.

Although this project report may include management recommendations based on the project location, additional conservation measures may be needed. The Department can not fully assess potential effects and associated management recommendations until a **project type and description** have been submitted and an appropriate **impact buffer** for that project type has been applied. Also, the species list within this report represents an estimation of special status species that could be present at the site of a small-scale project. Species lists for projects that occur across **broader geographic scales** (e.g., one or more counties, multiple habitat types) are more appropriately obtained from the **Department's Biota Information System of New Mexico (BISON-M) database**. Species lists generated by the ERT may contain modeled species distributions in order to predict species occurrences within areas that lack previous wildlife inventories or surveys. This list can be refined using occurrence-based information within BISON-M regarding wildlife-habitat relationships and biological needs for species that might be present within the project footprint.

Burrowing owl (*Athene cunicularia*) may occur within your project area. Before any ground disturbing activities occur, the Department recommends that a preliminary burrowing owl survey be conducted by a qualified biologist using the Department's [burrowing owl survey protocol](#). Should burrowing owls be documented in the project area, please contact the Department or USFWS for further recommendations regarding relocation or avoidance of impacts.

Prairie dog colonies may occur within the vicinity of your project area. Both black-tailed prairie dogs (*Cynomys ludovicianus*) and Gunnison's prairie dogs (*Cynomys gunnisoni*) are designated as New Mexico Species of Greatest Conservation Need, and their colonies provide important habitat for other grassland wildlife. Wherever possible, occupied prairie dog colonies should be left undisturbed, and all project activities should be directed off the colony. Any burrows that are located on the project site should be surveyed by a qualified biologist to determine whether burrows are active or inactive and whether burrowing owls may be utilizing the site. Colonies within the range of the black-tailed prairie dog can be surveyed by a qualified biologist diurnally, year-round using binoculars. Colonies within the range of the Gunnison's prairie dog can be surveyed by a qualified biologist diurnally, using binoculars during the warmer months from April through October and by searching for fairly fresh scat and lack of cobwebs or debris at the mouths of burrows during the cold months (November through March). If ground-disturbing activities cannot be relocated off the prairie dog colony, or if project activities involve control of prairie dogs, the Department recommends live-trapping and relocation of prairie dogs. The Department can provide recommendations regarding suitability of potential translocation areas and procedures.



The proposed project occurs within or near a riparian area. Because riparian areas are important wildlife habitats, the project footprint should avoid removing any riparian vegetation or creating ground disturbance either directly within or affecting the riparian area, unless the project is intended to restore riparian habitat through non-native plant removal and replanting with native species. If your project involves removal of non-native riparian trees or planting of native riparian vegetation, please refer to the Department's habitat handbook guideline for [Restoration and Management of Native and Non-native Trees in Southwestern Riparian Ecosystems](#).

Your proposed project occurs within an area where springs or other important natural water features occur. This may result in the presence of a high use area for wildlife relative to the surrounding landscape. To ensure continued function of these important wildlife habitats, your project should consider measures to avoid the following.

- Altering surface or groundwater flow or hydrology,
- Disturbance to soil that modifies geomorphic properties or facilitates invasion of non-native vegetation.
- Affecting local surface or groundwater quality.
- Creating disturbance to wildlife utilizing these water features. Disturbance to wildlife can be reduced through practices including clustering infrastructure and activity wherever possible, avoiding large visual obstructions around water features, and limiting nighttime project operations or activities.

Department biologists are available for site-specific consultation regarding measures to assist with management and conservation of these habitat resources.

Your project could affect important components of wildlife habitat, including fawning/calving or wintering areas for species such as deer and elk, or general high wildlife movement and activity areas for large mammals. Mitigation measures should focus on high use sites and movement areas based on collar data and expert knowledge of Department of Game and Fish and land management agency personnel. Management recommendations within these areas may include the following.

- Restrictions on noise-generating activities during wintering and calving/fawning seasons, specific timing of which may vary throughout the state. These activities would include oil and gas well pad development and operations that expose wildlife to loud noises from drilling, compressors, and pumping stations within 400 feet of the source.
- Modifying fences along high use areas to make them wildlife friendly and facilitate large animal movement.



Disclaimers regarding recommendations:

- The Department provides technical guidance to support the persistence of all protected species of native fish and wildlife, including game and nongame wildlife species. Species listed within this report include those that have been documented to occur within the project area, and others that may not have been documented but are projected to occur within the project vicinity.
- Recommendations are provided by the Department under the authority of § 17-1-5.1 New Mexico Statutes Annotated 1978, to provide "communication and consultation with federal and other state agencies, local governments and communities, private organizations and affected interests responsible for habitat, wilderness, recreation, water quality and environmental protection to ensure comprehensive conservation services for hunters, anglers and nonconsumptive wildlife users".
- The Department has no authority for management of plants or Important Plant Areas. The [New Mexico Endangered Plant Program](#), under the Energy, Minerals, and Natural Resources Department's Forestry Division, identifies and develops conservation measures necessary to ensure the survival of plant species within New Mexico. Plant status information is provided within this report as a courtesy to users. Recommendations provided within the ERT may not be sufficient to preclude impacts to rare or sensitive plants, unless conservation measures are identified in coordination with the Endangered Plant Program.
- Additional coordination may also be necessary under the federal ESA or National Environmental Policy Act (NEPA). Further site-specific recommendations may be proposed during ESA and/or NEPA analyses, or through coordination with affected federal agencies.

Appendix O: Federal and Tribal Agencies Species Correspondence

Marley Madsen

From: Kyle Tator <kyle.tator@gmail.com>
Sent: Tuesday, March 7, 2023 2:10 PM
To: Marley Madsen
Subject: Re: US-550 Wildlife Crossings - Jicarilla Apache Nation Protected Species List

Follow Up Flag: Follow up
Flag Status: Flagged

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Hi Marley,

In this case, we use the USFWS species list for Sandoval county. Based on that list of species, there are no known T&E concerns at this time regarding the US 550 project on Jicarilla lands. There are some species of tribal concern, but again not warranted along or near US 550.

Hope this helps,

Kyle

On Tue, Mar 7, 2023 at 1:57 PM Marley Madsen <marley.madsen@horrocks.com> wrote:

Hello Kyle,

My name is Marley Madsen. I'm a biologist for Horrocks Engineers and I am working with NMDOT and NMDGF on the US-550 wildlife vehicle collision mitigation project. I am reaching out because I was wondering if you could provide me with a list of Jicarilla Apache Nation listed/protected species that any future wildlife structure projects may need to consider as part of their environmental clearances? I am helping with the preparation of the scoping report, and we are including some baseline environmental information in there to help inform future phases of this project.

Hopefully, this request makes sense. I'm happy to chat over the phone or video call if that is helpful.

Thanks!

Marley Madsen

Biologist

she/her pronouns



Work Phone: (385) 419-2863

Mobile Phone: (435) 590-4550

Email: marley.madsen@horrocks.com

Web: www.horrocks.com

--

Kyle J. Tator

Wildlife Biologist

Jicarilla Game & Fish Dept.

(575) 759-3255 / jicarillahunt.com

Marley Madsen

From: Lujan, Adam L <ALujan@blm.gov>
Sent: Monday, March 13, 2023 10:54 AM
To: Marley Madsen; Barela, Isidro A
Subject: Re: [EXTERNAL] US-550 Wildlife Vehicle Collision Mitigation - BLM Sensitive Species for Consideration

Follow Up Flag: Follow up
Flag Status: Flagged

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Good morning Marley,

As discussed, our biologist started today (Isidro Barela) so I wanted to bring him into the loop for the project moving forward. We will have another biologist starting in two weeks who will also be added to the list. I will work with Isidro to get him up to speed on the sensitive species list and the habitat types of the proposed project.

We will work on a response by the end of the week but at this stage we are not too concerned with the general concept and need for developed wildlife crossings in the area. To my knowledge we do not have any sensitive populations in close proximity to the major highway 550 (in this area) but I'll work with the biologists to confirm that.

Regards,
Adam

From: Marley Madsen <marley.madsen@horrocks.com>
Sent: Wednesday, March 8, 2023 2:25 PM
To: Lujan, Adam L <ALujan@blm.gov>
Subject: [EXTERNAL] US-550 Wildlife Vehicle Collision Mitigation - BLM Sensitive Species for Consideration

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hello Adam,

My name is Marley Madsen. I am a biologist for Horrocks Engineers, and I am working with NMDOT on the US-550 wildlife vehicle collision mitigation project. This project is part of the greater New Mexico Wildlife Corridors Action Plan that was completed in June of 2022. My company has been tasked with putting together a scoping report to help NMDOT determine the best phasing for future wildlife crossing structures (both over and underpasses) along US-550 between the City of Cube and the Jicarilla Apache Nation.

I am reaching out because I was wondering if you could provide me with a list of BLM sensitive plant and animal species that any future wildlife structure projects may need to consider as part of their environmental clearances? At this point, no structures are being proposed for construction, but we would like to include some baseline information in our scoping report to help inform future phases of this project.

If you have any questions, feel free to reach out. I am also happy to schedule a time to speak over the phone or video chat if that is helpful.

Thank you in advance for your help with this!

Marley



Marley Madsen
Biologist

Marley Madsen

From: Meza, Diana - FS, NM <diana.meza@usda.gov>
Sent: Wednesday, March 15, 2023 11:32 AM
To: Marley Madsen
Subject: RE: [External Email]US-550 Wildlife Vehicle Collision Mitigation - USFS Sensitive Species for Consideration
Attachments: Basic RFSS Animal List_Feb-1-2017.pdf; Basic RFSS Plant List_3-26-15.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

You don't often get email from diana.meza@usda.gov. [Learn why this is important](#)

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Good morning Marley,

I apologize for the late response as I have been away at training and then fighting a cold. I am providing our regionally sensitive species and plants list (attached). I look forward to hearing more about this project as it progresses. Excited to see that NM is jumping on board with more safe wildlife crossings.

Cheers,



Diana Meza (she/her)
Wildlife Biologist
Forest Service
Supervisors Office
Santa Fe National Forest

Office: 505-438-5463
Cell: 505-629-6071
diana.meza@usda.gov

11 Forest Lane
Santa Fe, NM 87508
www.fs.fed.us



Caring for the land and serving people

From: Marley Madsen <marley.madsen@horrocks.com>
Sent: Wednesday, March 8, 2023 4:44 PM
To: Meza, Diana - FS, NM <diana.meza@usda.gov>
Subject: [External Email]US-550 Wildlife Vehicle Collision Mitigation - USFS Sensitive Species for Consideration

[External Email]

If this message comes from an **unexpected sender** or references a **vague/unexpected topic**;
Use caution before clicking links or opening attachments.
Please send any concerns or suspicious messages to: Spam.Abuse@usda.gov

Hello Diana,

My name is Marley Madsen. I am a biologist for Horrocks Engineers, and I am working with NMDOT on the US-550 wildlife vehicle collision mitigation project. This project is part of the greater New Mexico Wildlife Corridors Action Plan that was completed in June of 2022. My company has been tasked with putting together a scoping report to help NMDOT determine the best phasing for future wildlife crossing structures (both over and underpasses) along US-550 between the City of Cube and the Jicarilla Apache Nation.

I am reaching out because I was wondering if you could provide me with a list of USFS sensitive plant and animal species that any future wildlife structure projects may need to consider as part of their environmental clearances? At this point, no structures are being proposed for construction, but we would like to include some baseline information in our scoping report to help inform future phases of this project.

If you have any questions, feel free to reach out. I am also happy to schedule a time to speak over the phone or video chat if that is helpful. My number is (435)590-4550.

Thank you in advance for your help with this!



Marley Madsen
Biologist

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USFS REGION 3 SENSITIVE ANIMALS - Feb 1, 2017

Common Name	Scientific Name	Forest(s)
AMPHIBIANS (7)		
BOREAL TOAD (Western toad)	<i>Anaxyrus boreas boreas</i> (DPS)	CAR
SACRAMENTO MOUNTAINS SALAMANDER	<i>Aneides hardii</i>	LIN
WESTERN BARKING FROG	<i>Craugastor augusti cactorum</i>	COR, TON
ARIZONA TREEFROG (Not a DPS after all.)	<i>Hyla wrightorum</i>	
NORTHERN LEOPARD FROG	<i>Lithobates pipiens</i>	A-S, CAR, CIB, COC, KAI, SFE, TON
TARAHUMARA FROG	<i>Lithobates tarahumarae</i>	COR
LOWLAND LEOPARD FROG	<i>Lithobates yavapaiensis</i>	A-S, COC, COR, GIL, PRE, TON
BIRDS (35)		
NORTHERN GOSHAWK	<i>Accipiter gentilis</i>	A-S, CAR, CIB, COC, COR, GIL, KAI, LIN, PRE, SFE, TON
BOREAL OWL	<i>Aegolius funereus</i>	CAR, SFE
VIOLET-CROWNED HUMMINGBIRD	<i>Amazilia violiceps</i>	COR
BAIRD'S SPARROW	<i>Ammodramus bairdii</i>	A-S, COR, LIN
ARIZONA GRASSHOPPER SPARROW	<i>Ammodramus savannarum ammoregus</i>	COR
BURROWING OWL (Western)	<i>Athene cunicularia hypugaea</i>	A-S, CAR, CIB, COC, GIL, KAI, LIN, SFE
COMMON BLACK HAWK	<i>Buteogallus anthracinus</i>	GIL
LUCIFER HUMMINGBIRD	<i>Calothorax lucifer</i>	COR
COSTA'S HUMMINGBIRD	<i>Calypte costae</i>	GIL
NORTHERN BEARDLESS-TYRANULET	<i>Campostoma imberbe</i>	COR (Douglas RD)
BUFF-COLLARED NIGHTJAR	<i>Caprimulgus ridgwayi</i>	COR
MOUNTAIN PLOVER	<i>Charadrius montanus</i>	CIB (KRB)
COMMON GROUND DOVE	<i>Columbina passerina</i>	GIL
BROAD-BILLED HUMMINGBIRD	<i>Cynanthus latirostris</i>	COR
GRAY CATBIRD	<i>Dumetella carolinensis</i>	A-S
BUFF-BREASTED FLYCATCHER	<i>Empidonax fulvifrons</i>	COR
EARED QUETZAL	<i>Euphonia neoxenus</i>	COR
AMERICAN PEREGRINE FALCON	<i>Falco peregrinus anatum</i>	A-S, CAR, CIB (except BK), COC, COR, GIL, KAI, LIN, PRE, SFE, TON
CACTUS FERRUGINOUS PYGMY OWL	<i>Glaucidium brasilianum cactorum</i>	COR
BALD EAGLE	<i>Haliaeetus leucocephalus</i>	ALL
WHITE-EARED HUMMINGBIRD	<i>Hylocharis leucotis</i>	GIL, COR
YELLOW-EYED JUNCO	<i>Junco phaeonotus</i>	COR (Douglas RD in NM), TON
WHITE-TAILED PTARMIGAN	<i>Lagopus leucura</i>	CAR, SFE
WHISKERED SCREECH OWL	<i>Megascops trichopsis</i>	COR

GILA WOODPECKER	<i>Melanerpes uropygialis</i>	GIL
GOULD'S WILD TURKEY	<i>Meleagris gallopavo mexicana</i>	COR
ABERT'S TOWHEE	<i>Melospiza aberti</i>	COR, GIL
SULPHUR-BELLIED FLYCATCHER	<i>Myiodynastes luteiventris</i>	COR, TON
ROSE-THROATED BECARD	<i>Pachyramphus aglaiae</i>	COR
VARIED BUNTING	<i>Passerina versicolor</i>	COR, LIN
ARIZONA WOODPECKER	<i>Picoides arizonae</i>	COR
ELEGANT TROGON	<i>Trogon elegans</i>	COR
THICK-BILLED KINGBIRD	<i>Tyrannus crassirostris</i>	COR
ARIZONA BELL'S VIREO	<i>Vireo bellii arizonae</i>	GIL, LIN
GRAY VIREO	<i>Vireo vicinior</i>	CAR, COR (Douglas RD), SFE, CIB, GIL, LIN

CLAMS (3)

CALIFORNIA FLOATER	<i>Anodonta californiensis</i>	A-S, COC
LILLJEBORG PEACLAM	<i>Pisidium lilljeborgi</i>	SFE
SANGRE DE CRISTO PEA-CLAM	<i>Pisidium sanguinichristi</i>	CAR

CRUSTACEANS (2)

KAIBAB FAIRY SHRIMP	<i>Branchinecta kaibabensis</i>	KAI
DUMONT'S FAIRY SHRIMP	<i>Streptocephalus henridumontis</i>	CIB, LIN

FISH (12)

MEXICAN STONEROLLER	<i>Camptostoma ornatum</i>	COR
DESERT SUCKER	<i>Catostomus clarkii</i>	A-S, COC, COR, GIL, PRE, TON
SONORA SUCKER	<i>Catostomus insignis</i>	A-S, COC, COR, GIL, TON, PRE
RIO GRANDE SUCKER	<i>Catostomus plebeius</i>	CIB, CAR, GIL, SFE
LITTLE COLORADO SUCKER	<i>Catostomus sp.3</i>	COC, A-S (indirect effects as likely not on Forest Service lands {A-S only}).
GREENTHROAT DARTER	<i>Etheostoma lepidum</i>	LIN could have indirect effects. Likely not on Forest.
HEADWATER CHUB	<i>Gila nigra</i>	COC, GIL, TON
RIO GRANDE CHUB	<i>Gila pandora</i>	CAR, CIB, LIN, SFE
ROUNDTAIL CHUB	<i>Gila robusta</i>	A-S, COC, CAR, GIL, TON, PRE
HEADWATER CATFISH	<i>Ictalurus lupus</i>	LIN
RIO GRANDE CUTTHROAT TROUT	<i>Oncorhynchus clarki virginalis</i>	CAR, GIL, LIN, SFE
SUCKERMOUTH MINNOW	<i>Phenacobius mirabilis</i>	CIB (KRB)

INSECTS (26)

SUNRISE SKIPPER	<i>Adopaeoides prittwitzii</i>	COR
NETWING MIDGE	<i>Agathon arizonicus</i>	TON
HUACHUCA GIANT SKIPPER	<i>Agathymus evansi</i>	COR
SABINO CANYON DAMSELFLY (aka Dancer)	<i>Argia sabino</i>	COR
CESTUS SKIPPER	<i>Atrytonopsis cestus</i>	COR

A STONEFLY	<i>Capnia caryi</i>	A-S, GIL
PARKER'S CYLLOEPUS RIFFLE BEETLE	<i>Cylloepus parkeri</i>	TON
CHIRICAHUA WATER SCAVENGER BEETLE	<i>Cymbiodyta arizonica</i>	COR
DASHED RINGTAIL	<i>Erpetogomphus heterodon</i>	GIL
MOTH (Notodontid moth)	<i>Euhyparpax rosea</i>	GIL
PINALENO MONKEY GRASSHOPPER	<i>Eumorsea pinaleno</i>	COR
SACRAMENTO MOUNTAINS CHECKERSPOT BUTTERFLY	<i>Euphydryas anicia cloudcrofti</i>	LIN
A MAYFLY	<i>Fallceon eatoni</i>	TON
A MAYFLY	<i>Moribaetis mimbresaurus</i>	COC
"GILA" MAY FLY	<i>Lachlania dencyanna</i>	GIL
A CADDISFLY	<i>Lepidostoma apache</i>	A-S
A CADDISFLY	<i>Lepidostoma knulli</i>	A-S, COC
A CADDISFLY	<i>Limnephilus granti</i>	A-S, COR
A CADDISFLY	<i>Psychoronia brooksi</i>	LIN; Ruidoso RD
A CADDISFLY	<i>Wormaldia planae</i>	COC, PRE, TON
BALMORHEA SADDLE-CASE CADDISFLY	<i>Protophila balmorhea</i>	COC
FERRIS' COPPER	<i>Lycaena ferrisi</i>	A-S
NOKOMIS FRITILLARY (aka Great Basin silverspot)	<i>Speyeria nokomis nokomis</i>	CAR (COC?)
BONITA DIVING BEETLE	<i>Stictotarusus neomexicana</i> (aka. <i>Deroneotes n.</i>)	LIN
A Cave Obligate Pseudoscorpion	<i>Tuberochernes ubicki</i>	COR

MAMMALS (33)

NORTHERN PYGMY MOUSE	<i>Baiomys taylori ater</i>	COR
MEXICAN LONG-TONGUED BAT	<i>Choeronycteris mexicana</i>	COR
PALE TOWNSEND'S BIG-EARED BAT	<i>Corynorhinus townsendii pallescens</i>	A-S, CAR, CIB, COC, COR, GIL, KAI, LIN, PRE, SFE, TON
GUNNISON'S PRAIRIE DOG (prairie population)	<i>Cynomys gunnisoni</i>	CAR, CIB, SFE, GIL
GUNNISON'S PRAIRIE DOG (montane population)	<i>Cynomys gunnisoni pop. 1</i>	CAR, CIB, SFE, GIL
BLACK-TAILED PRAIRIE DOG	<i>Cynomys ludovicianus</i>	CIB (KRB only)
HOUSEROCK VALLEY CHISEL TOOTHED KANGAROO RAT (aka: Marble Canyon Kangaroo Rat)	<i>Dipodomys microps leucotis</i>	KAI
SPOTTED BAT	<i>Euderma maculatum</i>	A-S, CAR, CIB, COC, GIL, KAI, LIN, SFE, TON
WHITE MOUNTAINS GROUND SQUIRREL	<i>Ictidomys tridecemlineatus monticola</i>	A-S
ALLEN'S LAPPET-BROWED BAT	<i>Idionycteris phyllotis</i>	A-S, CIB, COC, COR, GIL, KAI, TON
WESTERN RED BAT	<i>Lasiurus blossevillii</i>	A-S, COC, COR, GIL, KAI, LIN, PRE, TON
WESTERN YELLOW BAT	<i>Lasiurus xanthinus</i>	COR
AMERICAN MARTEN	<i>Martes americana origenes</i>	CAR, SFE

HOODED SKUNK	<i>Mephitis macroura milleri</i>	COR*, GIL
WHITE-BELLIED LONG-TAILED VOLE	<i>Microtus longicaudus leucophaeus</i>	COR
NAVAJO MOGOLLON VOLE	<i>Microtus mogollonensis navaho</i>	A-S, COC, KAI
ARIZONA MONTANE VOLE	<i>Microtus montanus arizonensis</i>	A-S, GIL
WHITE MOUNTAINS CHIPMUNK	<i>Neotamias minimus arizonensis</i>	A-S
PEÑASCO LEAST CHIPMUNK	<i>Neotamias minimus atristriatus</i>	LIN
GOAT PEAK PIKA	<i>Ochotona princeps nigrescens</i>	SFE
AMERICAN PIKA	<i>Ochotona princeps saxatilis</i>	CAR, SFE
SPRINGERVILLE SILKY POCKET MOUSE	<i>Perognathus flavus goodpasteri</i>	A-S
MESQUITE (Merriam's) MOUSE	<i>Peromyscus merriami</i>	COR
ARIZONA GRAY SQUIRREL	<i>Sciurus arizonensis arizonensis</i>	GIL
CHIRICAHUA FOX SQUIRREL	<i>Sciurus nayaritensis chiricahuae</i>	COR
ARIZONA SHREW	<i>Sorex arizonae</i>	COR
CINEREUS (MASKED) SHREW	<i>Sorex cinereus</i>	CAR, SFE
NEW MEXICO SHREW	<i>Sorex neomexicanus</i>	LIN
WESTERN WATER SHREW (previously American water shrew)	<i>Sorex navigator</i> (previously <i>S. palustris navigator</i>)	A-S, CAR, SFE
PREBLE'S SHREW	<i>Sorex preblei</i>	SFE
GUADALUPE POCKET GOPHER	<i>Thomomys bottae guadalupensis</i>	LIN
CEBOLLETA SOUTHERN POCKET GOPHER	<i>Thomomys bottae paguatae</i>	CIB
SWIFT FOX	<i>Vulpes velox</i>	CIB NGs

REPTILES (15)

GIANT SPOTTED WHIPTAIL	<i>Aspidoscelis stictogramma</i>	COR
RED-BACKED WHIPTAIL	<i>Aspidoscelis xanthonota</i>	COR
MOTTLED ROCK RATTLESNAKE	<i>Crotalus lepidus lepidus</i>	LIN
TWIN-SPOTTED RATTLESNAKE	<i>Crotalus pricei</i>	COR
ARIZONA RIDGENOSE RATTLESNAKE	<i>Crotalus willardi willardi</i>	COR
SONORAN DESERT TORTOISE	<i>Gopherus morafkai</i>	COR, PRE, TON
THORNSCRUB HOOK-NOSED SNAKE	<i>Gyalopion quadrangulare</i>	COR
BROWN VINESNAKE	<i>Oxybelis aeneus</i>	COR
MOUNTAIN SKINK	<i>Plestiodon callicephalus</i>	COR
SLEVIN'S BUNCHGRASS LIZARD	<i>Sceloporus slevini</i>	COR
GREEN RATSNAKE	<i>Senticolis triaspis</i>	COR
CHIHUAHAUN BLACK-HEADED SNAKE	<i>Tantilla wilcoxi</i>	COR
YAQUI BLACK-HEADED SNAKE	<i>Tantilla yaquia</i>	COR
ARID LAND RIBBONSNAKE (aka Western ribbonsnake)	<i>Thamnophis proximus diabolicus</i>	CIB (KRB), LIN
BEZY'S NIGHT LIZARD	<i>Xantusia bezyi</i>	COR, TON

SNAILS (38)

SILVER CREEK WOODLANDSNAIL	<i>Ashmunella binneyi</i>	GIL
NO COMMON NAME	<i>Ashmunella cockerelli argenticola</i>	GIL

BLACK RANGE WOODLANDSNAIL	<i>Ashmunella cockerelli cockerelli</i>	GIL
NO COMMON NAME	<i>Ashmunella cockerelli perobtusa</i>	GIL
WHITEWATER CREEK WOODLANDSNAIL	<i>Ashmunella danielsi</i>	GIL
IRON CREEK WOODLANDSNAIL	<i>Ashmunella mendax</i>	GIL
CAPITAN WOODLANDSNAIL	<i>Ashmunella pseudodonta</i>	LIN
NO COMMON NAME	<i>Ashmunella tetrodon animorum</i>	GIL
NO COMMON NAME	<i>Ashmunella tetrodon inermis</i>	GIL
NO COMMON NAME	<i>Ashmunella tetrodon mutator</i>	GIL
DRY CREEK WOODLANDSNAIL	<i>Ashmunella tetrodon tetrodon</i>	GIL
RIO GRANDE SNAGGLETOOTH	<i>Gastrocopta riograndensis</i>	LIN
RUIDOSO SNAGGLETOOTH	<i>Gastrocopta ruidosensis</i>	LIN, SNF
VAGABOND HOLOSPIRA	<i>Holospira montivaga</i>	LIN
NORTHERN THREEBAND (Snail)	<i>Humboldtiana ultima</i>	LIN
BEARDED MOUNTAINSNAIL	<i>Oreohelix barbata</i>	GIL, COR
PINALENO MOUNTAINSNAIL	<i>Oreohelix grahamensis</i>	COR
MAGDALENA MOUNTAINSNAIL	<i>Oreohelix magdalenae</i>	CIB
NO COMMON NAME	<i>Oreohelix metcalfei acutidiscus</i>	GIL
NO COMMON NAME (Black Range mountainsnail)	<i>Oreohelix metcalfei concentrica</i>	GIL
NO COMMON NAME	<i>Oreohelix metcalfei metcalfei</i>	GIL
NO COMMON NAME	<i>Oreohelix metcalfei radiata</i>	GIL
NO COMMON NAME	<i>Oreohelix nogalensis</i> (aka <i>O. strigosa nogalensis</i>)	LIN
MINERAL CREEK MOUNTAINSNAIL	<i>Oreohelix pilsbryi</i>	GIL
MORGAN CREEK MOUNTAINSNAIL	<i>Oreohelix swopei</i>	GIL
GILA SPRINGSNAIL	<i>Pyrgulopsis gilae</i>	GIL
VERDE RIM SPRINGSNAIL	<i>Pyrgulopsis glandulosa</i>	PRE
PAGE SPRINGSNAIL	<i>Pyrgulopsis morrisoni</i>	COC
FOSSIL SPRINGSNAIL	<i>Pyrgulopsis simplex</i>	COC, TON
BROWN SPRINGSNAIL	<i>Pyrgulopsis sola</i>	PRE
NEW MEXICO SPRINGSNAIL	<i>Pyrgulopsis thermalis</i>	GIL
HUACHUCA SPRINGSNAIL	<i>Pyrgulopsis thompsoni</i>	COR
CLARK PEAK TALUSSNAIL	<i>Sonorella christenseni</i>	COR
PINALENO TALUSSNAIL	<i>Sonorella grahamensis</i>	COR
NO COMMON NAME GIVEN; see Metcalf and Smartt (1997)	<i>Sonorella hachitana peloncillensis</i>	COR
MIMIC TALUSSNAIL	<i>Sonorella imitator</i>	COR
WET CANYON TALUSSNAIL	<i>Sonorella macrophallus</i>	COR
SONORAN TALUSSNAIL	<i>Sonorella magdalenensis</i>	COR

DEFINITIONS

A-S	Apache-Sitgreaves National Forest
CAR	Carson National Forest
CIB	Cibola National Forest
COC	Coconino National Forest
GIL	Gila National Forest

KAI	Kaibab National Forest
LIN	Lincoln National Forest
PRE	Prescott National Forest
SFE	Santa Fe National Forest
TON	Tonto National Forest

US FS Region 3 Sensitive Plants - 3-26-15 v.

Common Name	Scientific Name	Forest(s)
TUFTED SAND VERBENA	<i>Abronia bigelovii</i>	CAR, SFE
PIMA INDIAN MALLOW	<i>Abutilon parishii</i>	COR, TON
WRIGHT'S DOGWEED	<i>Adenophyllum wrightii</i> var. <i>wrightii</i>	GIL
TONTO BASIN AGAVE	<i>Agave delamateri</i>	COC, PRE, TON
HOHOKAM AGAVE	<i>Agave murpheyi</i>	TON
SANTA CRUZ STRIPED AGAVE	<i>Agave parviflora</i> ssp. <i>parviflora</i>	COR
PHILLIPS' AGAVE	<i>Agave phillipsiana</i>	COC, PRE
TRELEASE AGAVE	<i>Agave schottii</i> var. <i>treleasei</i>	COR
SACRED MOUNTAIN AGAVE	<i>Agave verdensis</i>	COC
PAGE SPRINGS AGAVE	<i>Agave yavapaiensis</i>	COC
GOODDING'S ONION	<i>Allium gooddingii</i>	A-S, COR, GIL, LIN
SAIYA	<i>Amoreuxia gonzalezii</i>	COR
LARGE-FLOWERED BLUE STAR	<i>Amsonia grandiflora</i>	COR
MOGOLLON DEATH CAMAS	<i>Anticlea mogollonensis</i> (= <i>Zigadenus m.</i>)	GIL
CHAPLINE'S COLUMBINE	<i>Aquilegia chaplinei</i> (= <i>A. chrysantha</i> var. <i>chaplinei</i>)	LIN
CHIRICAHUA ROCK CRESS	<i>Arabis tricornuta</i>	COR
MT. DELLENBAUGH SANDWORT	<i>Arenaria aberrans</i>	COC, KAI, PRE, TON
LEMMON MILKWEED	<i>Asclepias lemmonii</i>	COR
GREENE MILKWEED	<i>Asclepias uncialis</i> ssp. <i>uncialis</i>	A-S, CIB, COR, GIL, PRE, SFE
ZUNI MILKVETCH	<i>Astragalus accumbens</i>	CIB
GUMBO MILKVETCH	<i>Astragalus ampullarius</i>	KAI
TALL MILKVETCH	<i>Astragalus altus</i>	LIN
MAGUIRE'S (COPPERMINE) MILKVETCH	<i>Astragalus cobrensis</i> var. <i>maguirei</i>	COR
MARBLE CANYON MILKVETCH	<i>Astragalus cremnophylax</i> var. <i>hevronii</i>	KAI
CLIFF MILKVETCH	<i>Astragalus cremnophylax</i> var. <i>myriorrhaphis</i>	KAI
VILLOUS GROUNDCOVER MILKVETCH	<i>Astragalus humistratus</i> var. <i>crispulus</i>	A-S, CIB, GIL
HUACHUCA MILKVETCH	<i>Astragalus hypoxylus</i>	COR
KERR'S MILKVETCH	<i>Astragalus kerrii</i>	LIN
CHACO MILKVETCH	<i>Astragalus micromerius</i>	CIB, SFE
PAGOSA MILKVETCH	<i>Astragalus missouriensis</i> var. <i>humistratus</i>	CAR
RIPLEY MILKVETCH	<i>Astragalus ripleyi</i>	CAR
RUSBY'S MILKVETCH	<i>Astragalus rusbyi</i>	COC, KAI
ONE-FLOWERED MILKVETCH	<i>Astragalus wittmannii</i>	CIB
AYENIA	<i>Ayenia jaliscana</i> (= <i>A. truncata</i>)	COR
SIERRA BLANCA KITTENTAILS	<i>Besseyia oblongifolia</i>	LIN

CRENULATE MOONWORT	<i>Botrychium crenulatum</i>	COC
BUSH-VIOLET	<i>Browallia eludens</i>	COR
PECOS MARIPOSA LILY	<i>Calochortus gunnisonii</i> var. <i>perpulcher</i>	SFE
CHILTEPIN	<i>Capsicum annuum</i> var. <i>glabriusculum</i>	COR
CHIHUAHUAN SEDGE	<i>Carex chihuahuensis</i>	COR, TON
COCHISE SEDGE	<i>Carex ultra</i> (=C. <i>spissa</i> var. <i>ultra</i>)	COC, COR, PRE, TON
KAIBAB PAINTBRUSH	<i>Castilleja kaibabensis</i>	KAI
WHITE MOUNTAINS PAINTBRUSH	<i>Castilleja mogollonica</i>	A-S
TRANS-PECOS INDIAN PAINTBRUSH	<i>Castilleja nervata</i>	COR
SANTA CRUZ STAR LEAF	<i>Choisya mollis</i>	COR
TUSAYAN RABBITBRUSH, DISTURBED RABBITBRUSH	<i>Chrysothamnus molestus</i>	COC, KAI
ARIZONA BUGBANE	<i>Cimicifuga arizonica</i>	COC, KAI, TON
GILA THISTLE	<i>Cirsium gilense</i>	A-S, GIL
MOGOLLON THISTLE	<i>Cirsium parryi</i> ssp. <i>mogollonicum</i>	COC
WRIGHT'S MARSH THISTLE	<i>Cirsium wrightii</i>	LIN
ARIZONA LEATHERFLOWER, CLUSTERED LEATHERFLOWER	<i>Clematis hirsutissima</i> var. <i>hirsutissima</i>	CAR, CIB, COC, LIN, KAI, SFE (Sensitive only for AZ forests)
MEXICAN HEMLOCK PARSLEY	<i>Conioselinum mexicanum</i>	COR
SANTA CRUZ BEEHIVE CACTUS	<i>Corypantha recurvata</i>	COR
SMOOTH BABYBONNETS	<i>Coursetia glabella</i>	COR
WOOTON'S HAWTHORN	<i>Crategus wootoniana</i>	GIL, LIN
YELLOW LADY'S-SLIPPER	<i>Cypripedium parviflorum</i> var. <i>pubescens</i> (=C. <i>calceolus</i> var. <i>pubescens</i> , C. <i>pubescens</i>)	A-S, CAR, GIL, LIN, SFE
GENTRY INDIGO BUSH	<i>Dalea tentaculoides</i>	COR
ALPINE LARKSPUR	<i>Delphinium alpestre</i>	CAR
ROBUST LARKSPUR	<i>Delphinium robustum</i>	CAR, SFE
METCALFE'S TICK-TREFOIL	<i>Desmodium metcalfei</i>	COC, COR, PRE, GIL
HEIL'S ALPINE WHITLOWGRASS	<i>Draba heilii</i>	SFE
SMALL-HEADED GOLDENWEED	<i>Ericameria microcephala</i> (=Haplopappus m.)	CAR
GUADALUPE RABBITBRUSH	<i>Ericameria nauseosa</i> var. <i>texensis</i> (=Chrysothamnus n. ssp t.)	LIN
MOGOLLON FLEABANE	<i>Erigeron anchana</i>	TON
ARID THRONE FLEABANE	<i>Erigeron arisolius</i>	COR
HELIOGRAPH PEAK FLEABANE	<i>Erigeron heliographis</i>	COR
HESS' FLEABANE	<i>Erigeron hessii</i>	GIL
CHIRICAHUA FLEABANE	<i>Erigeron kuschei</i>	COR
FISH CREEK FLEABANE	<i>Erigeron piscaticus</i>	TON

ROCK FLEABANE	<i>Erigeron saxatilis</i>	COC, KAI, PRE
SIVINSKI'S FLEABANE	<i>Erigeron sivinskii</i>	CIB
PECOS FLEABANE	<i>Erigeron subglaber</i>	CAR, SFE
HEATHLEAF WILD BUCKWHEAT	<i>Eriogonum ericifolium</i> var. <i>ericifolium</i>	A-S, COC, PRE
MORTON WILD BUCKWHEAT	<i>Eriogonum mortonianum</i>	KAI
RIPLEY WILD BUCKWHEAT	<i>Eriogonum ripleyi</i>	COC, PRE, TON
ATWOOD WILD BUCKWHEAT	<i>Eriogonum thompsonae</i> var. <i>atwoodii</i>	KAI
VILLARD'S PINCUSHION CACTUS	<i>Escobaria villardii</i>	LIN
WISLIZENI GENTIAN	<i>Gentianella wislizeni</i>	A-S, COR
SHOOTINGSTAR GERANIUM	<i>Geranium dodecatheoides</i>	LIN
BARTRAM STONECROP	<i>Graptopetalum bartramii</i>	COR
FLAGSTAFF PENNYROYAL	<i>Hedeoma diffusum</i>	COC, KAI, PRE
ARIZONA SNEEZEWEED	<i>Helenium arizonicum</i>	A-S, COC
ARIZONA SUNFLOWER	<i>Helianthus arizonensis</i>	A-S, COC
RUTTER'S FALSE GOLDENASTER	<i>Heterotheca rutteri</i>	COR
EASTWOOD ALUM ROOT	<i>Heuchera eastwoodiae</i>	A-S, COC, PRE, TON
ARIZONA ALUM ROOT	<i>Heuchera glomerulata</i>	A-S, COR, TON
SANDIA ALUM ROOT	<i>Heuchera pulchella</i>	CIB
CAPITAN PEAK ALUMROOT	<i>Heuchera woodsiaephila</i>	LIN
COLEMAN'S CRESTED CORALROOT	<i>Hexalectris colemanii</i>	COR
CHISOS MT. CRESTED CORALROOT	<i>Hexalectris revoluta</i>	LIN
WOOTON'S ALUMROOT	<i>Heuchera wootonii</i>	LIN
ARIZONA CORALROOT	<i>Hexalectris spicata</i> var. <i>arizonica</i>	COR, GIL, LIN
TEXAS PURPLE-SPIKE	<i>Hexalectris warnockii</i>	COR
MOGOLLON HAWKWEED	<i>Hieracium brevipilum</i> (= <i>H. fendleri</i> var. <i>mogollense</i>)	A-S, GIL
RUSBY HAWKWEED	<i>Hieracium abscissum</i> (= <i>H. rusbyi</i>)	COR, GIL
NEW MEXICO BITTERWEED	<i>Hymenoxys ambigens</i> var. <i>neomexicana</i>	COR
TALL BITTERWEED	<i>Hymenoxys brachyactis</i>	CIB
SIERRA BLANCA CLIFF DAISY	<i>Ionactis elegans</i> (= <i>Chaetopappa e.</i>)	LIN
KAIBAB BLADDERPOD	<i>Lesquerella kaibabensis</i>	KAI
LEMON LILY	<i>Lilium parryi</i>	COR
WOOD LILY	<i>Lilium philadelphicum</i>	LIN, SFE
CHIRICAHUA MUDWORT	<i>Limosella pubiflora</i>	COR
ALAMOS DEER VETCH	<i>Lotus alamosanus</i>	COR
HORSESHOE DEER VETCH	<i>Lotus mearnsii</i> var. <i>equisolensis</i>	TON
HUACHUCA MOUNTAINS LUPINE	<i>Lupinus huachucanus</i>	COR
BROADLEAF LUPINE	<i>Lupinus latifolius</i> ssp. <i>leucanthus</i>	PRE

LEMMON'S LUPINE	<i>Lupinus lemmonii</i>	COR
MAPLELEAF FALSE SNAPDRAGON	<i>Mabrya acerifolia</i> (= <i>Maurandya a.</i>)	TON
SUPINE BEAN	<i>Macroptilium supinum</i>	COR
ARIZONA MANIHOT	<i>Manihot davisiae</i>	COR
CHAMA BLAZING STAR	<i>Mentzelia conspicua</i>	CAR, SFE
SPRINGER'S BLAZING STAR	<i>Mentzelia springeri</i>	SFE
WIGGINS MILKWEED VINE	<i>Metastelma mexicanum</i> (= <i>Cynanchum wigginsii</i>)	COR
LADIES'-TRESSES	<i>Microthelys rubrocallosa</i> (= <i>Schiedeella r.</i> , <i>Spiranthes r.</i>)	LIN
SOUTHWESTERN MUHLY	<i>Muhlenbergia palmeri</i> (=M. <i>dubioides</i>)	COR
SYCAMORE CANYON MUHLY	<i>Muhlenbergia elongata</i> (=M. <i>xerophila</i>)	COR
HEARTLEAF GROUNDSEL	<i>Packera cardamine</i> (= <i>Senecio cardamine</i>)	A-S, GIL
TOUMEY GROUNDSEL	<i>Packera neomexicana</i> var. <i>toumeyi</i> (=Senecio n. var. t.)	COR, TON
SPELLENBERG'S GROUNDSEL	<i>Packera spellenbergii</i> (= <i>Senecio s.</i>)	CIB
VIRLET PASPALUM	<i>Paspalum virletii</i>	COR
ARIZONA PASSIONFLOWER	<i>Passiflora arizonica</i>	COR
BEARDLESS CHINCHWEED	<i>Pectis imberbis</i>	COR
KAIBAB PINCUSHION CACTUS	<i>Pediocactus paradinei</i>	KAI
FICKEISEN PINCUSHION CACTUS	<i>Pediocactus peeblesianus</i> var. <i>flickeisniae</i>	KAI
CHIHUAHUA SCURF-PEA	<i>Pediomelum pentaphyllum</i>	COR
VERDE BREADROOT	<i>Pediomelum verdiensis</i>	COC, PRE, TON
LYNGHOLM'S BRAKEFERN	<i>Pellaea lyngholmii</i>	COC
ALAMO PENSTEMON	<i>Penstemon alamosensis</i>	LIN
GUADALUPE PENSTEMON	<i>Penstemon cardinalis</i> ssp. <i>regalis</i>	LIN
SUNSET CRATER BEARDTONGUE	<i>Penstemon clutei</i>	COC
CATALINA BEARDTONGUE	<i>Penstemon discolor</i>	COR
MAGUIRE'S BEARDTONGUE	<i>Penstemon linarioides</i> ssp. <i>maguirei</i>	A-S, GIL
METCALFE'S PENSTEMON	<i>Penstemon metcalfei</i>	GIL
FLAGSTAFF BEARDTONGUE	<i>Penstemon nudiflorus</i>	COC, KAI, PRE
SAN MATEO PENSTEMON	<i>Penstemon pseudoparvus</i>	CIB
CHIRICAHUA ROCKDAISY	<i>Perityle cochisensis</i>	COR
SALT RIVER ROCKDAISY	<i>Perityle gilensis</i> var. <i>salensis</i>	TON
FISH CREEK ROCKDAISY	<i>Perityle saxicola</i>	TON
CLOUDCROFT SCORPIONWEED	<i>Phacelia cloudcroftensis</i>	LIN
ARIZONA PHLOX	<i>Phlox amabilis</i>	A-S, COC, KAI, PRE, TON
BROADLEAF GROUND CHERRY	<i>Physalis latiphysa</i>	COR

ALCOVE BOG ORCHID	<i>Platanthera zothecina</i>	COC
HINCKLEY'S POLEMONIUM	<i>Polemonium pauciflorum</i> <i>ssp. hinckleyi</i>	COR
HUALAPAI MILKWORT	<i>Polygala rusbyi</i>	COC, PRE, TON
WHITE-FLOWERED CINQUEFOIL	<i>Potentilla albiflora</i>	COR
CHIRICAHUA CINQUEFOIL	<i>Potentilla rhyolitica</i> var. <i>chiricahuensis</i>	COR
HUACHUCA CINQUEFOIL	<i>Potentilla rhyolitica</i> var. <i>rhyolitica</i>	COR
MEXICAN TANSY ASTER	<i>Psilactis gentryi</i> (= <i>machaeranthera</i> <i>mexicana</i>)	COR
WHISK FERN	<i>Psilotum nudum</i>	COR
DAVIDSON'S CLIFF CARROT	<i>Pteryxia davidsonii</i>	A-S, GIL
PARISH'S ALKALI GRASS	<i>Puccinellia parishii</i>	A-S
GRAND CANYON ROSE	<i>Rosa stellata</i> ssp. <i>abyssa</i>	KAI
ERTTER'S ROSE	<i>Rosa woodsii</i> var. <i>ertterae</i>	COC
SIERRA BLANCA CINQUEFOIL	<i>Potentilla sierrae-blancae</i>	LIN
BLUMER'S DOCK	<i>Rumex orthoneurus</i>	A-S, CAR, COC, COR, GIL, LIN, SFE, TON (sensitive only for AZ forests)
ARIZONA WILLOW	<i>Salix arizonica</i>	A-S, CAR, SFE
BEBB'S WILLOW	<i>Salix bebbiana</i>	Several (sensitive only for A-S and COC)
GALIURO SAGE	<i>Salvia amissa</i>	COR, TON
MEARNS SAGE	<i>Salvia dorrii</i> ssp. <i>mearnsii</i>	COC, PRE
CHIRICAHUA MOUNTAIN BROOKWEED	<i>Samolus vagans</i>	COR
MIMBRES FIGWORT	<i>Scrophularia macrantha</i>	GIL
NEW MEXICAN STONECROP	<i>Sedum integrifolium</i> ssp. <i>neomexicana</i>	LIN
HUACHUCA GROUNDSEL	<i>Senecio multidentatus</i> var. <i>huachucanus</i> (=s. <i>huachucanus</i>)	COR
NODDING BLUE-EYED GRASS	<i>Sisyrinchium cernuum</i>	COR
GUADALUPE MOUNTAINS GOLDENROD	<i>Solidago wrightii</i> var. <i>guadalupensis</i>	LIN
GUADALUPE MESCAL BEAN	<i>Sophora gypsophila</i> var. <i>guadalupensis</i>	LIN
PORSILD'S STARWORT	<i>Stellaria porsildii</i>	COR, GIL
LEMMON'S STEVIA	<i>Stevia lemmonii</i>	COR
GUADALUPE JEWELFLOWER	<i>Streptanthus sparsiflorus</i>	LIN
PINOS ALTOS FLAME FLOWER	<i>Talinum humile</i>	COR, GIL
TEPIC FLAME FLOWER	<i>Talinum marginatum</i>	COR
ARAVAIPA WOODFERN	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	COR, TON
SONORAN NOSEBURN	<i>Tragia laciniata</i>	COR

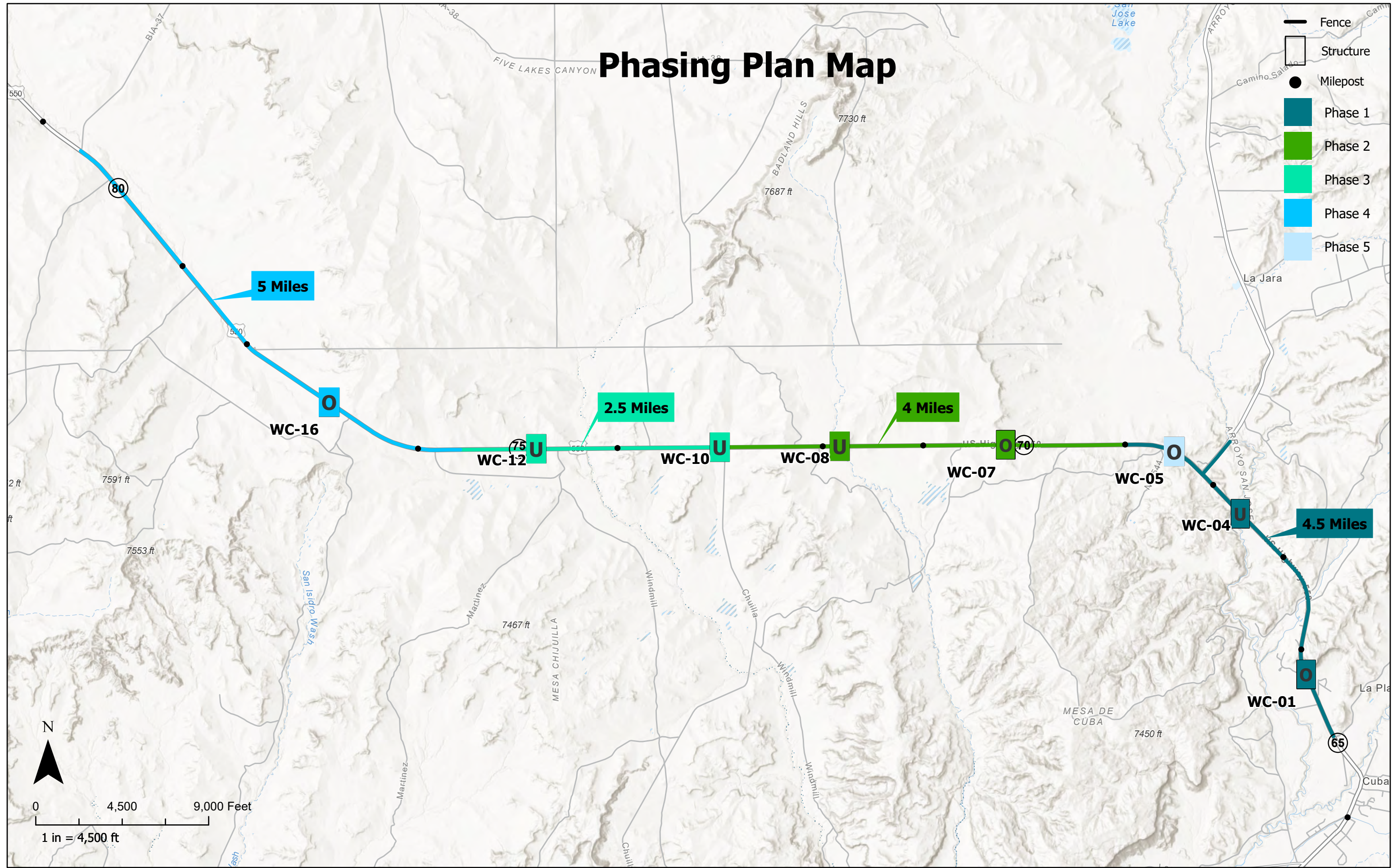
MOGOLLON CLOVER	<i>Trifolium longipes</i> ssp. <i>neurophyllum</i> (=T. <i>neurophyllum</i>)	A-S, GIL
TUMAMOC GLOBEBERRY	<i>Tumamoca macdougallii</i>	COR
SHADE VIOLET	<i>Viola umbraticola</i>	COR

P* = species is proposed for federal listing, and will be removed from the RFSS list if/once the final rule is pu

Appendix P: Phasing Summary Map

Phasing Plan Map

- Fence
- Structure
- Milepost
- Phase 1
- Phase 2
- Phase 3
- Phase 4
- Phase 5



5 Miles

2.5 Miles

4 Miles

4.5 Miles

WC-16

WC-12

WC-10

WC-08

WC-07

WC-05

WC-04

WC-01

0 4,500 9,000 Feet
1 in = 4,500 ft