US Army Corps
of Engineers
Fort Worth District

Public Notice

Applicant: Valwood Improvement Authority

Permit Application No.: SWF-2005-00681

Date: April 4, 2012

The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

Regulatory Program

Since its early history, the U.S. Army Corps of Engineers has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the U.S. Army Corps of Engineers Regulatory Program.

Section 10

The U.S. Army Corps of Engineers is directed by Congress under Section 10 of the Rivers and Harbors of 1899 (33 USC 403) to regulate *all work or structures in or affecting the course, condition or capacity of navigable waters of the United States.* The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

Section 404

The U.S. Army Corps of Engineers is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the *discharge of dredged and fill material into all waters of the United States, including wetlands.* The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

Contact

Name: Mr. Eric Dephouse, Project Manager

Phone Number: (817) 886-1820

JOINT PUBLIC NOTICE

U.S. ARMY CORPS OF ENGINEERS, FORT WORTH DISTRICT

AND

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUBJECT: Application for a Department of the Army Permit under Section 404 of the Clean Water Act (CWA) and for water quality certification under Section 401 of the CWA to discharge dredged and fill material into waters of the United States associated with channel improvements to Farmers Branch Creek and the expansion of the railroad bridge which crosses the creek north IH 635 and west of IH 35 in Farmers Branch, Dallas County, Texas.

APPLICANT: Pat Canuteson
Valwood Improvement Authority, Executive Director
3509 NW 69th Street
Oklahoma City, Oklahoma 73116

APPLICATION NUMBER: SWF-2005-00681

DATE ISSUED: April 4, 2012

LOCATION: The project site is located within and adjacent to Cell A of the Valwood Improvement Authority (VIA) North of IH 635, south of Valley View Lane, west of IH 35, and east of Luna Road, Dallas County, Texas (Figure 1). USGS NAD 83 coordinates for the approximate center point of the proposed project are as follows: Latitude 32.912° North, Longitude 96.908° West. The site is mapped on the Carrollton 7.5-minute USGS quadrangle map (Figure 2). The site is located in the Elm Fork Trinity River Watershed - USGS Hydrologic Unit 12030103.

OTHER AGENCY AUTHORIZATIONS: Section 401 State Water Quality Certification

PROJECT DESCRIPTION: The Valwood Improvement Authority (VIA) proposes to discharge 2,740 cubic yards of dredged and fill material into 3.32 acres of waters of the United States (US) associated with the Farmers Branch Creek Improvements project located in the city of Farmers Branch, Dallas County, Texas.

The VIA is a Flood Control District and political subdivision of the State of Texas. The VIA's primary responsibility is to provide flood protection to property and development located inside the District from significant flood events. The VIA's geographic area is divided into three cells which are protected from flooding from the Elm Fork Trinity River, Farmers Branch Creek, Cooks Branch and Hutton Branch by a series of earthen levees, pump stations, channel improvements, interior drainage sumps, and fill placement. VIA proposes channel and structure improvements for the purpose of providing an increased level of protection from the 500-yr flood

event. These improvements include replacement of the railroad bridge over Farmers Branch Creek and modifications to the channel reaches located downstream and upstream of the bridge. The increased bridge size and channel capacity would lower the water surfaces of Farmers Branch Creek upstream of the railroad and would decrease erosive velocities through the bridge. In order to increase the capacity, the bridge structure must be lengthened by approximately 115 feet creating a proposed structure with a total length of approximately 230 feet. The structure would also be widened to accommodate two sets of rails, and raised in order to obtain the desired freeboard to the top or rail from the low chord of the structure in accordance with the District guidelines. DART/Trinity Railway Express (TRE) has review and approval rights to any improvements made in the right-of-way and requires these to be designed to their current criteria. VIA is developing an Inter Local Agreement (ILA) with DART/TRE and the City of Dallas in order to accomplish the proposed improvements. This ILA addresses the long-term goals of DART/TRE to double track this section of the railroad line for future passenger improvements. The DART/TRE goals have been incorporated into the project improvements as a part of meeting the ILA requirements.

VIA proposes additional flow capacity be provided in the channel of Farmers Branch Creek, both downstream and upstream of the proposed bridge, by excavating in the bottom of the channel, removing the existing concrete pilot channel, regrading the channel bottom, and lining it with articulated concrete blocks (ACB). The lined channel design would have a typical bottom width of approximately 140 feet with 4-foot horizontal to 1-foot vertical side slopes. The channel modifications downstream of the proposed bridge would provide additional flow capacity and protect the existing levee section from erosive channel velocities. The ACB lining downstream of the bridge would extend up the side slope to a height of 5 feet. Some minor levee modifications are also proposed in this downstream reach. The channel section through the new railroad bridge would be lined with reinforced concrete for a short distance to address erosive velocities, protect the bridge columns and deal with high turbulence in this area. Upstream of the bridge, the ACB lining extends up the side slope to a height of 5 feet on the left before transitioning to a maintained grass slope. On the right side the ACB extends up the side slope for 2.5 feet before transitioning to a benched area that ties into the natural channel side slope.

In addition to the improvements on the main channel of Farmers Branch Creek, VIA proposes improvements to the split flow channel near the railroad structure. This is an overflow channel that only receives flow under high flow events. Although these improvements would not result in impacts to jurisdictional waters, they are an integral element of the overall project.

The Natural Resources Conservation Service (NRCS) digital soil survey data for Dallas County (Figure 3) mapped three soil series within the project area – Arents, loamy, gently undulating; Silstid loamy fine sand, 0 to 3 percent slopes; and Trinity clay, frequently flooded. Trinity clay, frequently flooded was listed on the Hydric Soils of Texas list prepared by the National Technical Committee for Hydric Soils (revision February 2010).

The FEMA FIRM map number 48113C0170J, effective 23 August 2001 (Figure 4) illustrates the project area to be within Zone X (areas determined to be outside the 500-year floodplain) and Zone AE (Special flood hazard areas inundated by the 100-year flood with base flood elevations determined). Based on a review of the existing maps (i.e., USGS Topographic Map and soil

survey), Rawhide Creek was re-aligned in the past to empty into Farmers Branch Creek, with the confluence being east of Interstate Highway 35E. The conditions that are present today appear to be the normal conditions associated with Farmers Branch Creek since the realignment.

A site survey and delineation of waters of the U.S. and other water features (Figure 5) was performed in accordance with the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) on August of 2010 by Integrated Environmental Solutions. A delineation of waters of the U. S. identified a total of eight potentially jurisdictional waters and two potentially non-jurisdictional waters were delineated within the project area as detailed below.

Table 1 – Delineated Waters of the United States

Water ID	Water of the US	Stream Flow Regime And Wetland Type	Length (Linear Feet)	Area (Acres)
Tributary 1	Yes	Intermittent	2,627	1.442
Tributary 2	Yes	Ephemeral	43	0.005
Tributary 3	Yes	Ephemeral	362	0.090
Drainage 1	No	Ephemeral	96	0.013
Drainage 2	No	Ephemeral	96	0.016
Wetland 1	Yes	Non-Forested	NA	1.603
Wetland 2	Yes	Non-Forested	NA	0.434
Wetland 3	Yes	Non-Forested	NA	0.054
Wetland 4	Yes	Non-Forested	NA	0.030
Wetland 5	Yes	Non-Forested	NA	0.035
Wetland 6	Yes	Non-Forested	NA	0.220
JURISDICTIONAL TOTAL			3,032	3.913

The project area is dominated by an herbaceous riparian plant community. The herbaceous riparian community is located in floodplain areas along Farmers Branch Creek with a mixture of upland and hydrophytic plant species. Dominant upland species within the community consist of Bermudagrass (*Cynodon dactylon*), broadleaf wood oats (*Chasmanthium latifolium*), perennial ryegrass (*Lolium perenne*), Japanese brome (*Bromus japonicus*), and St. John's wort (*Hypericum sp.*). Dominant hydrophytic species within the community consist of giant ragweed (*Ambrosia trifida*), barnyardgrass (*Echinochloa crus-galli*), American water-willow (*Justicia americana*), spike rush (*Eleocharis palustris*), curly dock (*Rumex crispus*), sesbania (*Sesbania herbacea*), crowfoot sedge (*Carex crus-corvi*), annual aster (*Aster subulatus*), cattail (*Typha latifolia*), boxelder (*Acer negundo*) black willow (*Salix nigra*), and green ash *(Fraxinus pennsylvanica*).

The topography of the area is generally flat with a gentle slope towards Farmers Branch and the south. The area surrounding the project site consists of commercial property, a railroad, and open grassland. The majority of the watershed within the project area flows into Tributary 1

(Farmers Branch) which ultimately empties into the Elm Fork Trinity River, which is considered Traditional Navigable Waters (TNW), outside the project boundary.

Tributary 1 (Farmers Branch) is the central water feature located within the project area. It transects the project area in a north to south direction. This tributary is concrete-lined throughout the project area with the exception of a small portion near the southern limits. The presence of certain hydrological features indicates that this tributary regularly overtops its banks into the surrounding floodplain area. Tributary 1 has an ordinary high water mark (OHWM) that ranges in width from ten to sixty-seven feet. It was delineated in the field based upon bed and bank, destruction of terrestrial vegetation, and the observed water line. Given the amount of flow observed during the delineation, pooled nature of the tributary upstream and downstream of the project area, and the presence of hydrological indicators in the tributaries floodplain it was determined that the tributary could be classified as an intermittent stream. Tributary 1 has a direct connection to the Elm Fork Trinity River, which is considered a TNW.

Tributary 2 is a relatively small water feature near the northeastern limits of the project area. It provides a connection between Tributary 1 and Tributary 3. This water feature is a natural channel throughout and had a soil substrate. The OHWM of Tributary 2 was delineated in the field based upon natural shelving, destruction of terrestrial vegetation, and the observed waterline. It ranged in width from one to three feet wide. This tributary receives runoff from the local area and has no other hydrological influence (i.e., no groundwater influence) other than local rain events. Due to these facts, this water feature is considered ephemeral and non-relatively permanent waters (RPW).

Tributary 3 is located near the northeastern limits of the project area. It flows into Tributary 1 approximately 300 feet inside the project area. Review of aerial photography indicates that Tributary 3 originates at Tributary 1 outside the project area. Tributary 3 has an OHWM that ranges in width from two to forty-four feet and was delineated in the field based upon bed and bank, destruction of terrestrial vegetation, and the observed water line. Given the amount of flow observed during the delineation and pooled nature of the tributary, it is probable that the stream has some groundwater influence, and should be considered to have intermittent flow and to be RPW.

Wetland 1, 2 and 6 are located within the floodplain area of Tributary 1. These wetlands are a result of Tributary 1 overtopping its banks and water collecting in low-lying depressed areas within the floodplain. The boundary of the wetland was delineated based on distinct changes in plant communities from wetland to upland species and changes in topography. Hydrological indicators present during the survey included saturation, water lines, drift deposits, and drainage patterns. Saturation was also visible on aerial photography. The soils exhibited indicators of Redox Dark Surface through abundant redoximorphic features in a dark matrix.

Wetland 3, 4, and 5 abut a curb that runs along of Tributary 1 throughout the project area. These wetlands are a result of Tributary 1 overtopping its banks and scouring out along the concrete curb of the channel. The scouring has created low-lying depressed areas that now hold water. The boundary of the wetland was delineated based on distinct changes in plant communities from wetland to upland species, shift to concrete, and changes in topography. Hydrological

indicators present during the survey included saturation, drift deposits, and drainage patterns. The soils exhibited indicators of Redox Dark Surface through abundant redoximorphic features in a dark matrix.

Drainage 1 and 2 are channels providing drainage from upland areas adjacent to the project area. Drainage 1 is concrete lined throughout the project area while Drainage 2 is earthen within the project area and concrete lined upstream. Both of these drainages are man-made features constructed to drain upland areas. Review of present and historic aerial photographs provided no evidence that these water features were created to take the place of an existing jurisdictional water, or that they were constructed in a wetland.

Based on the preliminary jurisdictional determination, the proposed project would result in the discharge of approximately 2,740 cubic yards of fill material into 3.324 acres of waters of the U.S.

Table 2 – Impacts to Waters of the United States within the Project Site

Water Feature Type	Name of Water Body	Type of Impact	Length (Linear feet)	Impact (Acres)
Non-forested wetland	Wetland 1-6	Permanent - Fill	-	2.05
Intermittent stream	Tributary 1	Permanent - Fill	2,373	1.274
Total Permanent Impact to Emergent Wetlands				2.05
Total Permanent Impact to Streams			2,373	1.274
Total Permanent Impacts to Waters of the United States				3.324

ALTERNATIVE SITE LOCATIONS AND ALTERNATIVE LAYOUTS: Other alternatives that were investigated to achieve the project purposes included the following:

1. No-Action Alternative: The desired level of protection from the 500-year flood event is not provided for existing and proposed development within Cell A.

2. Detention: This alternative would reduce the flow in the channel by creating detention somewhere along Farmers Branch Creek upstream of the project area. Sufficient detention would have to be provided to attenuate the peak discharge of over 12,000 cfs at the railroad bridge for the 100-year flood event. In order to detain that much water, massive amounts of open land would need to be used. The Farmers Branch Creek watershed upstream of the project area is fully developed and open land is not readily available. Also, a facility to detain this large amount of water would be considered an urban reservoir with a high hazard dam classification. Constructing a high hazard dam structure upstream of an area protected by existing levees would

pose a safety risk due to possible failure. In addition, the construction of an in-stream detention facility of this magnitude would also impact jurisdictional areas and change the nature of the stream corridor in this area.

3. Channel improvements downstream of bridge without replacing the bridge: Extensive channel improvements downstream of the railroad bridge structure would be required in order to lower the design water surface elevations. This would involve removing and reconstructing the existing levee. Benefits would be minimal due to the limited impact on the existing bridge hydraulics and the upstream channel section. This alternative was eliminated due to the limited benefits, cost of acquiring additional property, disturbing the most channel length, and issues associated with removing and reconstructing the existing levee sections. Additionally, this option would not incorporate the DART/TRE goals.

4. Minor channel improvements with levee parallel to railroad track: This alternative would require the purchasing of both developed and undeveloped properties and addressing the associated relocations. The developed areas would have to be demolished and a new levee, parallel to the existing railroad embankment, would be constructed to Valley View Lane. The length of the levee would be extended significantly and the annual operation and maintenance costs would also be increased. This option would not incorporate the DART/TRE goals either.

5. Widening of the channel and replacement of the railroad bridge (Applicant's Preferred Alternative): Many options were considered when analyzing this alternative including different lining materials. Satisfactory flood protection and channel stability would be achieved only when combining a widened concrete lined main channel, with improvements to the bridge, levee, and the overflow channel. The lining options considered included reinforced concrete, loose rock riprap, and articulated concrete blocks (ACB).

The applicant believes that all practicable measures have been taken to avoid and minimize impacts to waters of the U.S. and the proposed project has been designed to avoid and minimize impacts to the maximum extent possible. Onsite impacts would be minimized by limiting the disturbance to the minimum necessary to accomplish the project. Construction activities associated with this project would be performed under the Texas Commission on Environmental Quality (TCEQ) TXR 150000 Storm Water General Permit for Construction Activities and a Storm Water Pollution Prevention Plan in order to minimize offsite impacts. As directed by that Plan, best management practices (BMPs) would be employed to prevent the introduction of contaminants, including particulates, into the streams.

COMPENSATORY MITIGATION: To mitigate unavoidable impacts to the waters of the US, the applicant is proposing to enhance existing wetlands located off-site, in the overbanks of the Elm Fork Trinity River. The Elm Fork Trinity River is the receiving water body for Farmers Branch Creek. The City of Farmers Branch plans to create the John F. Burke Nature Preserve in the area located between the Elm Fork Trinity River and the SH161 toll road. VIA and the City of Farmers Branch have entered into an Interlocal Agreement in regards to this area.

The areas proposed to be enhanced presently have a herbaceous canopy cover, and abut wetlands with shrub cover. The mitigation plan consists of the construction of 2,574 linear feet of a

shallow channel (slough), as well as other depressional areas. The proposed slough has a 10' bottom width, 6:1 side slopes, varies in depth from 0.5' to 3' and would be planted with native grass species tolerant of frequent inundation like: Bushy bluestem (Andropogon glomeratus), Broomsedge bluestem (Andropogon virginicus), Prairie cordgrass (Spartina pectinata), Eastern Gamagrass (Tripsacum dactyloides), Canada wildrye (Elymus canadensis), Virginia wildrye (Elymus virginiana), Florida paspalum (Paspalum floridanum), and Switchgrass (Panicum virgatum). The excavation would be in a serpentine pattern generally parallel to the existing contours. This would allow for more frequent inundation of the area and enhanced plant growth and variety. The depressional areas would be excavated to a depth of 1', with 8:1 side slopes and would be both seeded and planted with a mix of native wetland plant species. The depressional areas would be excavated in a matter that would provide for a variable water depth. The initial planting in this areas would occur prior to flooding and would include the following plant species: Smartweed (Polygomum spp.), Water primrose (Ludwigia spp.), Bulrush (Scirpus spp.), Common rush (Juncus effuses), Duck Potato (Sagittaria latifolia), Water lily (Numphaea spp.), Horsetail (Equisetum spp.), Lizard's tail (Saururus cernuus), Ravenfoot sedge (Carex crus-corv), Flatsedge (Cyperus spp.), Burrhead (Echinodorus spp.), Spikerush (Eleocharis spp.), Fimbry (Fimbristylis spp.). Once the depressional areas are flooded, they would be planted with wetland live plants and Buttonbrush (Cephalanthus occidentalis). The total area enhanced by the mitigation plan is 13.3 acres. Additional areas disturbed during the enhancement process would be re-seeded with native grass species tolerable to inundation.

The USACE Fort Worth District's Texas Rapid Assessment Method (TXRAM) was used to determine the number of functional credits provided by the off-site mitigation areas. A summary of the scores is provided in Table 3. The proposed mitigation enhancement activities will lift the existing wetland from this score to a 73.8, increasing physical and biotic structure elements of the wetland. Utilizing the USACE Fort Worth District's mitigation calculator with a 2-year maturation rate and a 20 percent risk of failure, the enhancement activities to the existing wetland at the off-site mitigation area would compensate for the impacts to the wetlands located along Farmers Branch Creek.

Table 3 – Summary of Impact and Mitigation Area Functional Credits

	TxRAM Score	Prorated By Length	Length/Area
Existing Conditions			
Tributaries			
Tributary 1-E (SAR 1)	50.2	53.8	1,300 ft.
Tributary 1-E (SAR 2)	58.2		968 ft.
Tributary 3-E	58.3		105 ft.
JB Tributary-E	0.0	NA	0 ft.
Wetlands			
Wetlands 1-6-E	60.0	NA	2.047 ac.
JB Wetland 3-E	63.1	NA	13.3 ac.
Proposed Conditions			
Tributaries			
JB Tributary-P	61.3	NA	2,574 ft.
Tributary 1-P*	35.5	NA	2,268 ft.
Wetlands			
JB Wetland 3-P	73.8	NA	13.3 ac.

*This area was not included within the balance of functional credits, but is shown to demonstrate there is not a complete loss of function within this segment of Farmers Branch Creek.

PUBLIC INTEREST REVIEW FACTORS: This application will be reviewed in accordance with 33 CFR 320-331, the Regulatory Program of the U. S. Army Corps of Engineers (USACE), and other pertinent laws, regulations, and executive orders. Our evaluation will also follow the guidelines published by the U. S. Environmental Protection Agency pursuant to Section 404(b)(1) of the CWA. The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impact, of the proposed activity on the public interest. That decision will reflect the national concerns for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including its cumulative effects. Among the factors addressed are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The USACE is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the USACE in determining whether to issue; issue with modifications or conditions; or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

STATE WATER QUALITY CERTIFICATION: This project would result in a direct impact of greater than three acres of waters of the state or 1,500 linear feet of streams (or a combination of the two is above the threshold), and as such would not fulfill Tier I criteria for the project. Therefore, Texas Commission on Environmental Quality (TCEQ) certification is required. Concurrent with USACE processing of this Department of the Army application, the TCEQ is reviewing this application under Section 401 of the Clean Water Act, and Title 30, Texas Administrative Code Section 279.1-13 to determine if the work would comply with State water quality standards. By virtue of an agreement between the USACE and the TCEQ, this public notice is also issued for the purpose of advising all known interested persons that there is pending before the TCEQ a decision on water quality certification under such act. Any comments concerning this application may be submitted to the Texas Commission on Environmental Quality, 401 Coordinator, MSC-150, P.O. Box 13087, Austin, Texas 78711-3087. The public comment period extends 30 days from the date of publication of this notice. A copy of the public notice with a description of the work is made available for review in the TCEQ's Austin Office. The TCEQ may conduct a public meeting to consider all comments concerning water quality if requested in writing. A request for a public meeting must contain the following information: the name, mailing address, application number, or other recognizable reference to the application; a brief description of the interest of the requestor, or of persons

represented by the requestor; and a brief description of how the application, if granted, would adversely affect such interest.

ENDANGERED AND THREATENED SPECIES: The USACE has reviewed the U.S. Fish and Wildlife Service's latest published version of endangered and threatened species to determine if any may occur in the project area. The proposed project would be located in Dallas County where the black-capped vireo (*Vireo atricapilla*), golden-cheeked warbler (*Dendroica chrysoparia*), whooping crane (*Grus americana*), least tern (*Sterna antillarum*), piping plover (*Charadrius melodus*) and bald eagle (*Haliaeetus leucocephalus*), are known to occur or may occur as migrants. The black-capped vireo, golden-cheeked warbler, whooping crane, least tern, and piping plover are all listed as endangered species and the bald eagle has been delisted but is being monitored. Our initial review indicates that the proposed work would have no effect on federally-listed endangered or threatened species.

NATIONAL REGISTER OF HISTORIC PLACES: The project area has never been specifically surveyed for the presence of historic or prehistoric sites. No sites listed in or eligible for inclusion in the National Register of Historic Places are known to exist on the property. Prehistoric sites are known from the vicinity of the project area, as is one historic bridge and one historic homestead. None of the known sites are closer than half-a-mile to this project area. The area was also utilized for gravel mining in the 1950's. Aerial photos indicated the majority of the property was impacted by gravel mining. The probability of encountering historic properties is considered low. No additional work to identify historic properties is currently planned.

FLOODPLAIN MANAGEMENT: The USACE is sending a copy of this public notice to the local floodplain administrator. In accordance with 44 CFR part 60 (Flood Plain Management Regulations Criteria for Land Management and Use), the floodplain administrators of participating communities are required to review all proposed development to determine if a floodplain development permit is required and maintain records of such review.

SOLICITATION OF COMMENTS: The public notice is being distributed to all known interested persons in order to assist in developing facts upon which a decision by the USACE may be based. For accuracy and completeness of the record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition.

PUBLIC HEARING: Prior to the close of the comment period any person may make a written request for a public hearing setting forth the particular reasons for the request. The District Engineer would determine whether the issues raised are substantial and should be considered in his permit decision. If a public hearing is warranted, all known interested persons would be notified of the time, date, and location.

CLOSE OF COMMENT PERIOD: All comments pertaining to this Public Notice must reach this office on or before May 4, 2012, which is the close of the comment period. Extensions of the comment period may be granted for valid reasons provided a written request is received by the limiting date. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to Mr. Eric

Dephouse; Regulatory Branch, CESWF-PER-R; U. S. Army Corps of Engineers; Post Office Box 17300; Fort Worth, Texas 76102-0300. You may visit the Regulatory Branch in Room 3A37 of the Federal Building at 819 Taylor Street in Fort Worth between 8:00 A.M. and 3:30 P.M., Monday through Friday. Telephone inquiries should be directed to (817) 886-1820. Please note that names and addresses of those who submit comments in response to this public notice may be made publicly available.

DISTRICT ENGINEER
FORT WORTH DISTRICT
CORPS OF ENGINEERS

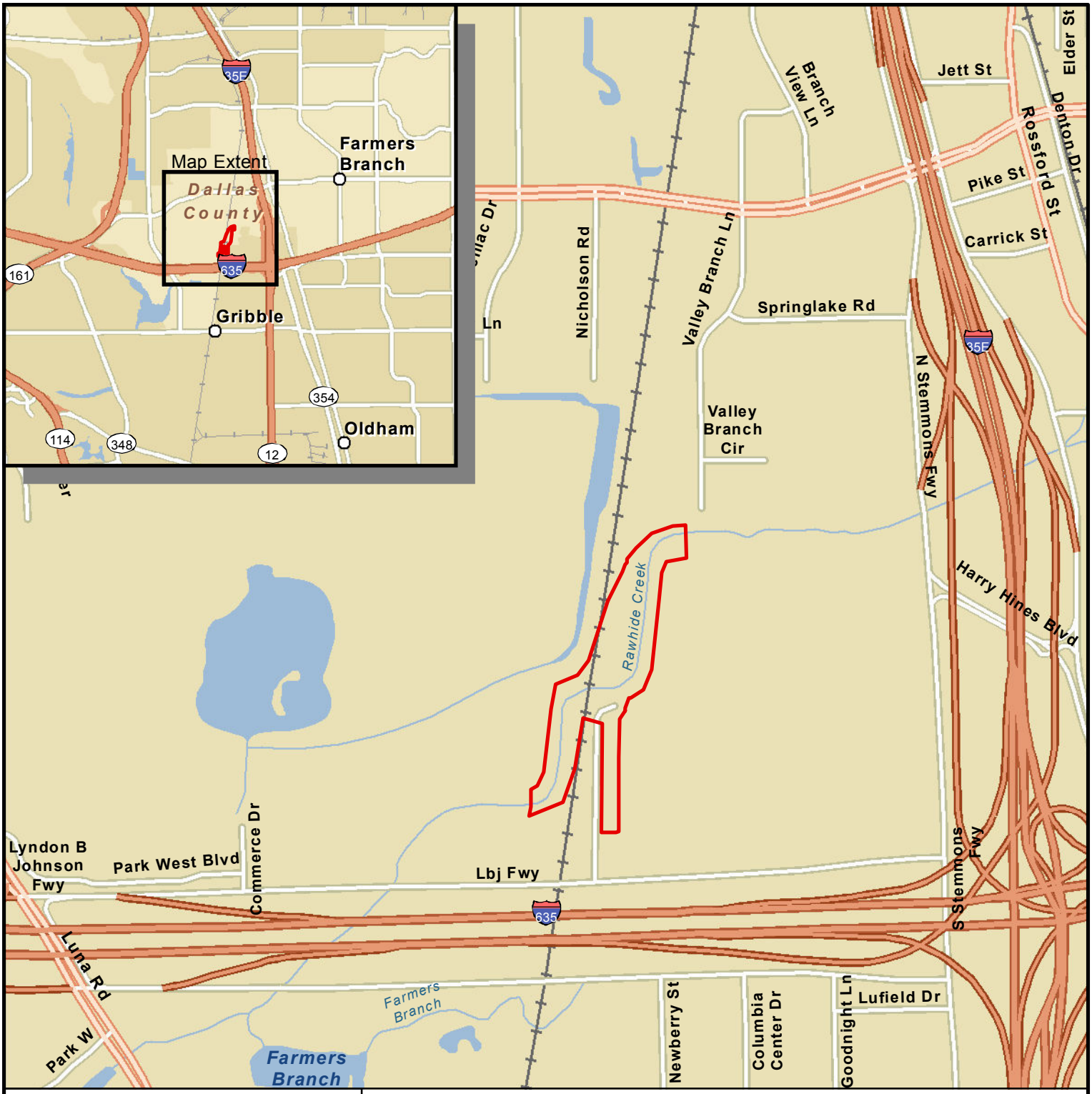


Figure 1
General Location Map

Project Area

N

State: Texas
County: Dallas
Date Map Created: 3/27/2012
USACE Project #: SWF-2005-00681
Source: ESRI 10 Streetmap North America

1 inch = 1,000 feet

0 1,000 2,000 4,000 Feet

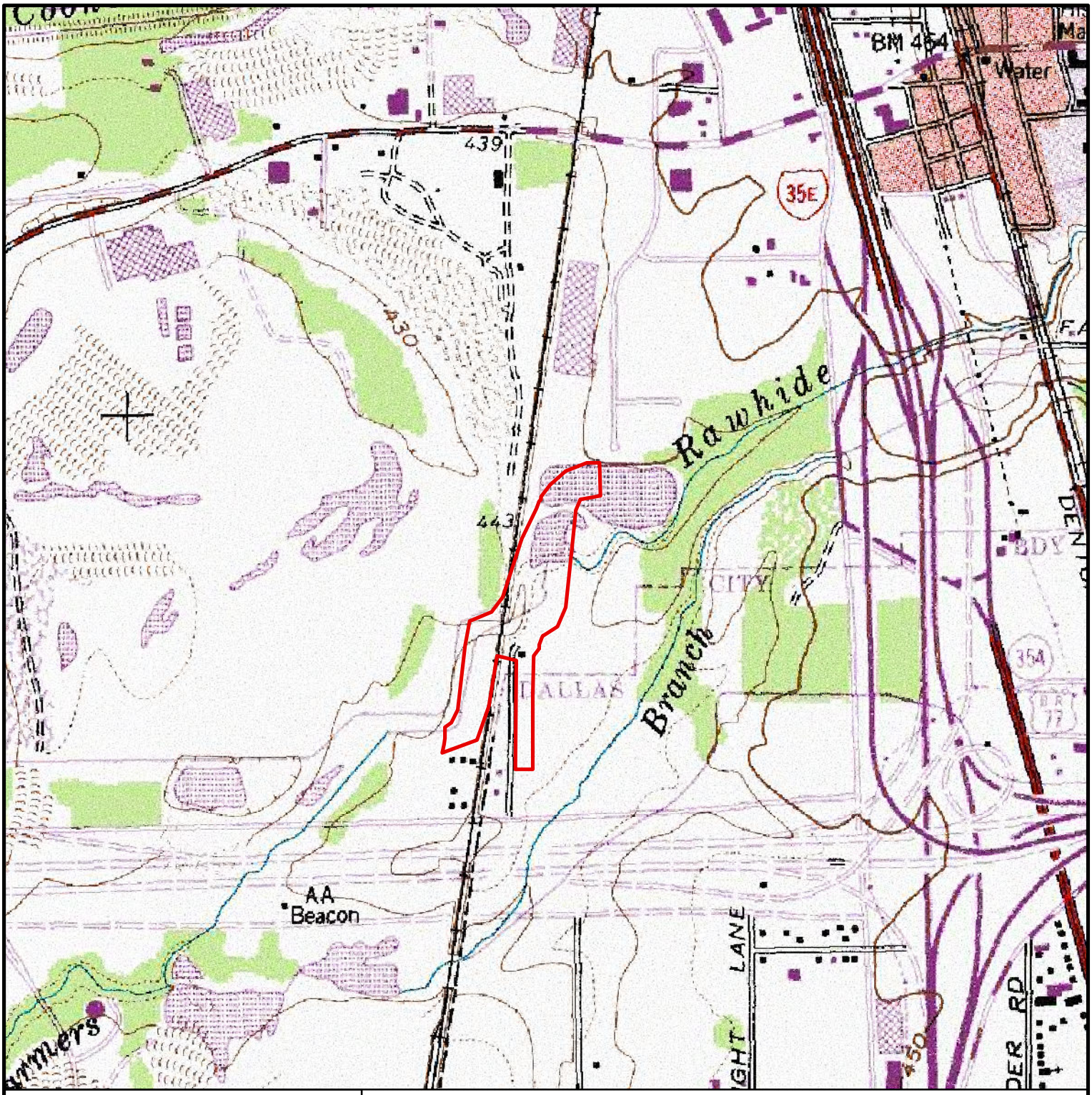


Figure 2
Topography of Project Area

Project Area

N

1 inch = 1,000 feet

0 1,000 2,000 4,000 Feet

State: Texas
County: Dallas
Date Map Created: 3/27/2012
USACE Project #: SWF-2005-00681
Source: USGS Topographic Map
Carrollton 7.5' Quadrangle, 1982

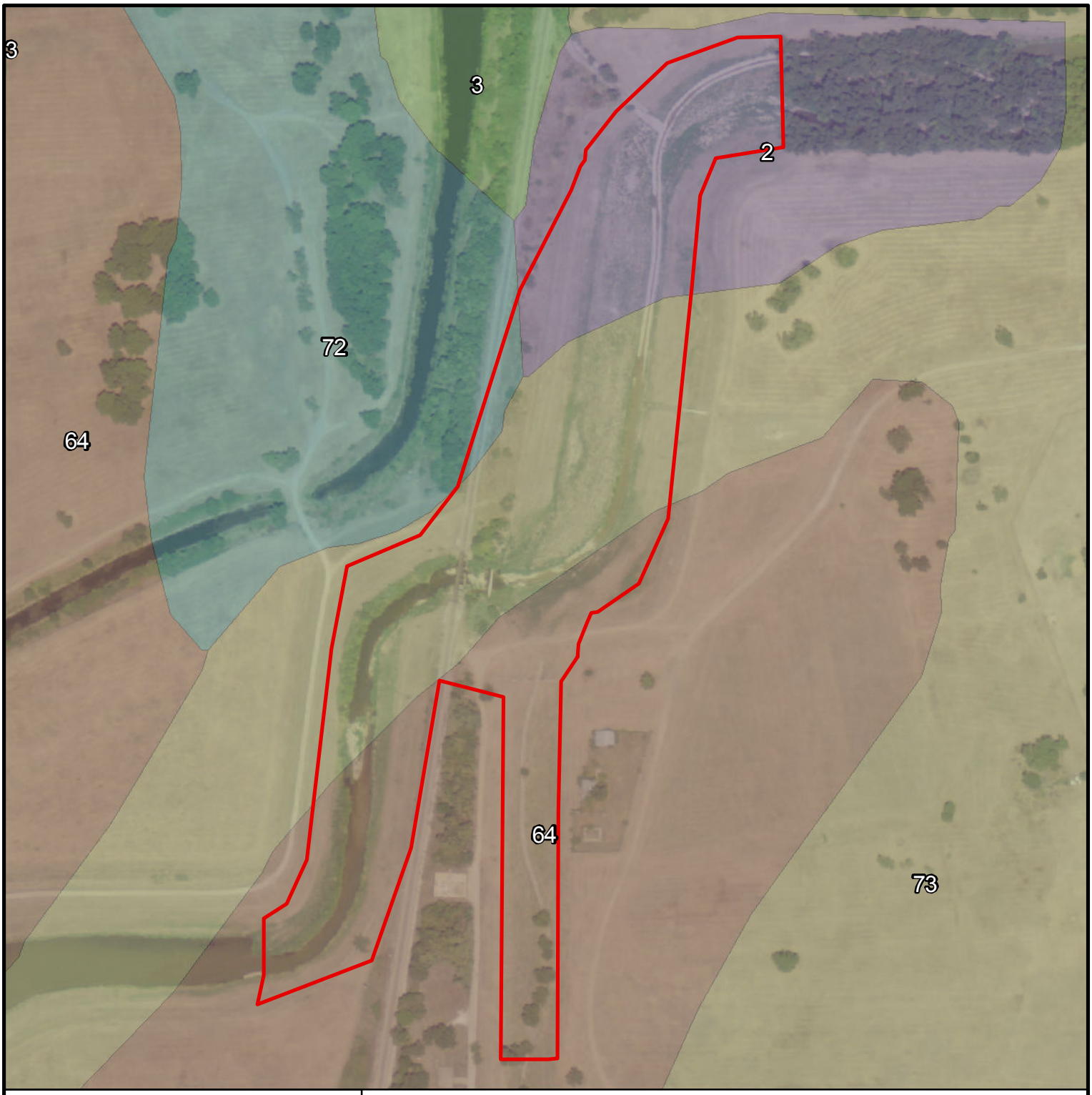


Figure 3
Soil Series located within the Project Area

State: Texas
County: Dallas
Date Map Created: 3/27/2012
USACE Project #: SWF-2005-00681
Source: 2007 NRCS Soil Survey Geographic Database, Dallas County; USDA TOP FSA Aerial Photography, Dallas County, 2008

Soil Series Description

- 2 - Arents, loamy, gently undulating
- 3 - Arents, loamy, hilly
- 64 - Silstid loamy fine sand, 0-3% slopes
- 72 - Trinity clay, occasionally flooded
- 73 - Trinity clay, frequently flooded

Project Area

N

1 inch = 300 feet

0 250 500 1,000 Feet

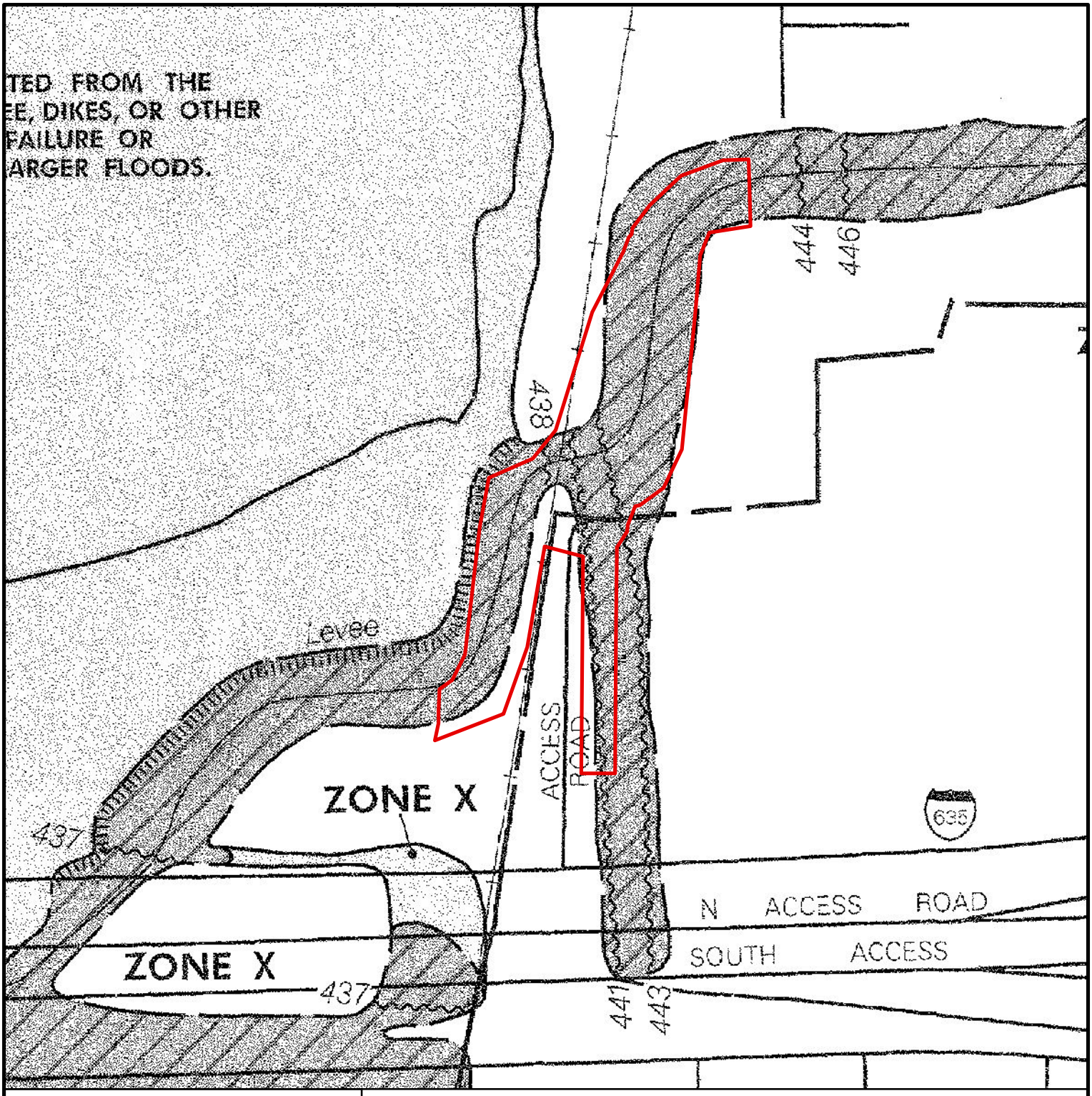


Figure 4
FEMA FIRM
of Project Area

State: Texas
County: Dallas
Date Map Created: 3/27/2012
USACE Project #: SWF-2005-00681
Source: Federal Emergency Management Agency Flood InsuranceMap Digital Data
Map Panel 48113C0170J
Effective Date August 23, 2001

Project Area

FEMA Zone Descriptions:

Zone X - Areas determined to be outside the 500-year floodplain

Zone X - Areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas proctected by levees from 100-year flood

Zone AE - Special Flood Hazard Areas indundated by 100-year flood; Base flood elevations determined.

1 inch = 500 feet

N

0 500 1,000 2,000 Feet

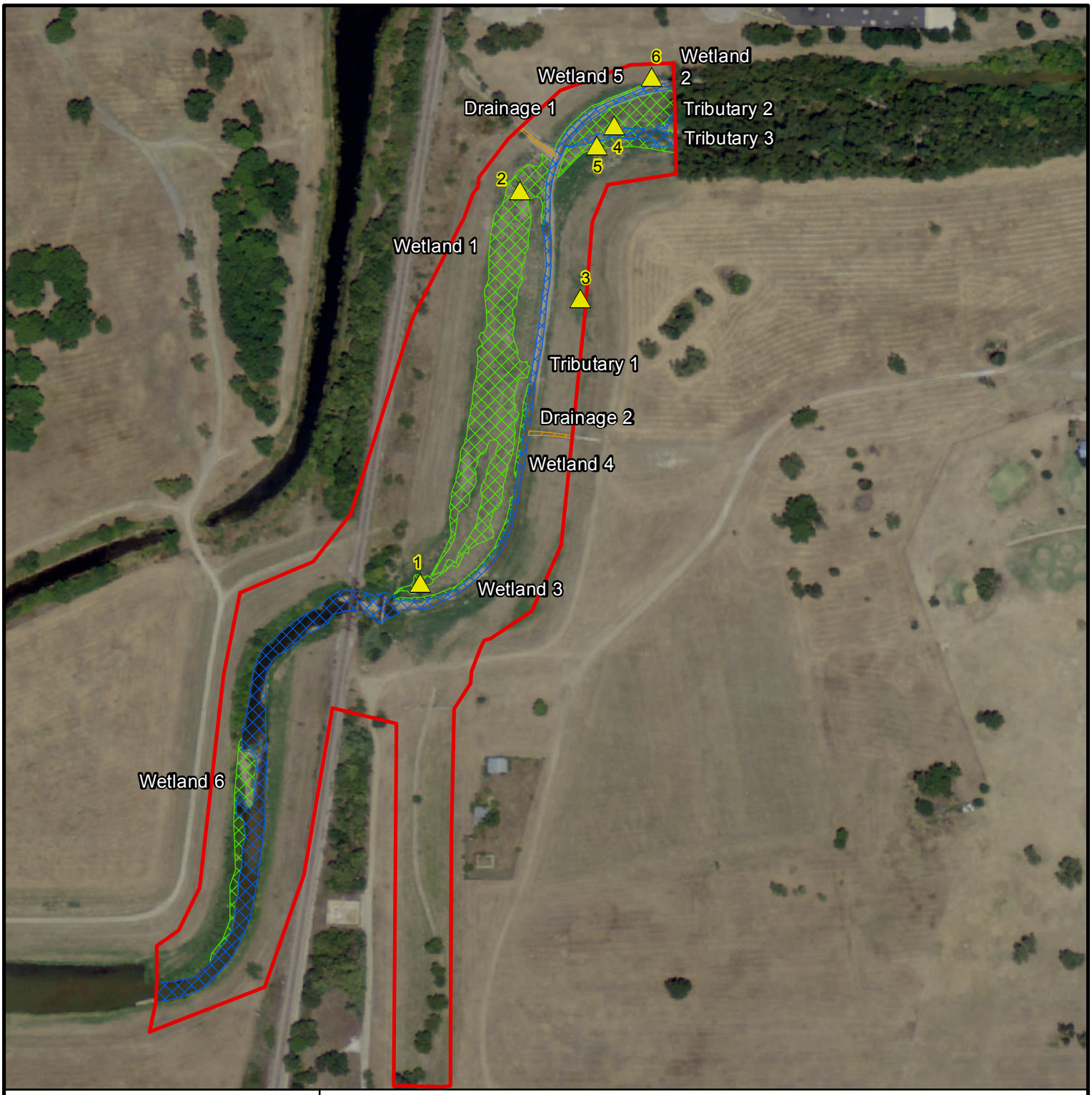


Figure 5
Water Features located within the Project Area

State: Texas
County: Dallas
Date Map Created: 3/27/2012
USACE Project #: SWF-2005-00681
Source: USDA FSA TOP Aerial Photography, Dallas County, 2008

Project Area
Dataform Locations

Features that meet a definition of a Water of the United States

Tributary

Wetland

Features that do not meet a definition of a Water of the United States

Man-Made Drainage

1 inch = 300 feet

N

0 250 500 1,000 Feet

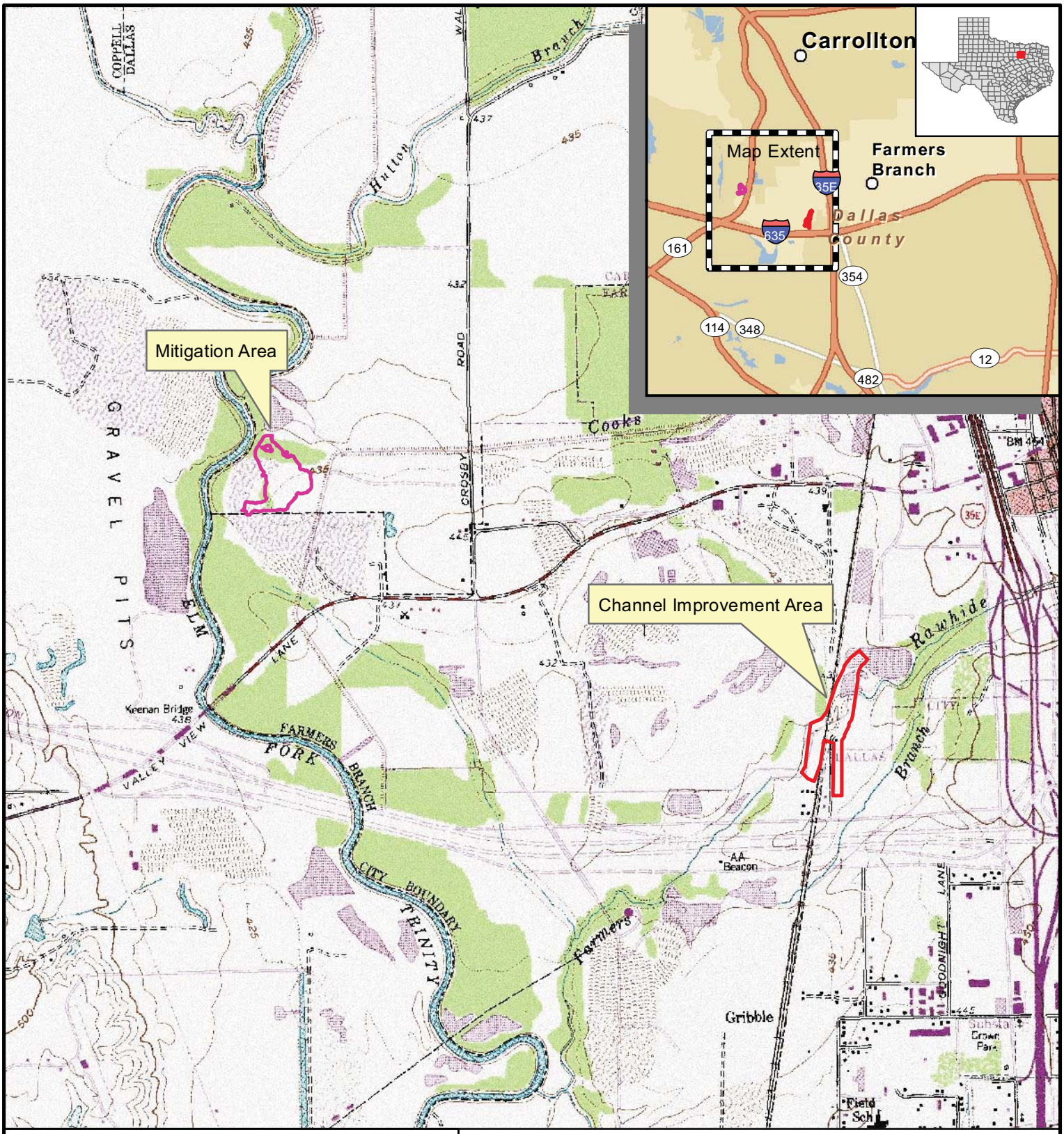


Figure 6
Proposed Channel Improvement Area and Mitigation Area Locations

Proposed Mitigation Area

Proposed Channel Improvement Area

N
W E
S

1:24,000

Feet
0 1,500 3,000 6,000

Meters
0 375 750 1,500

County: Dallas
State: Texas
Date map created: 12/7/2011
Source: USGS Topographic Map Carrollton 7.5' Quadrangle, 1982; ESRI 10 Streetmap North America

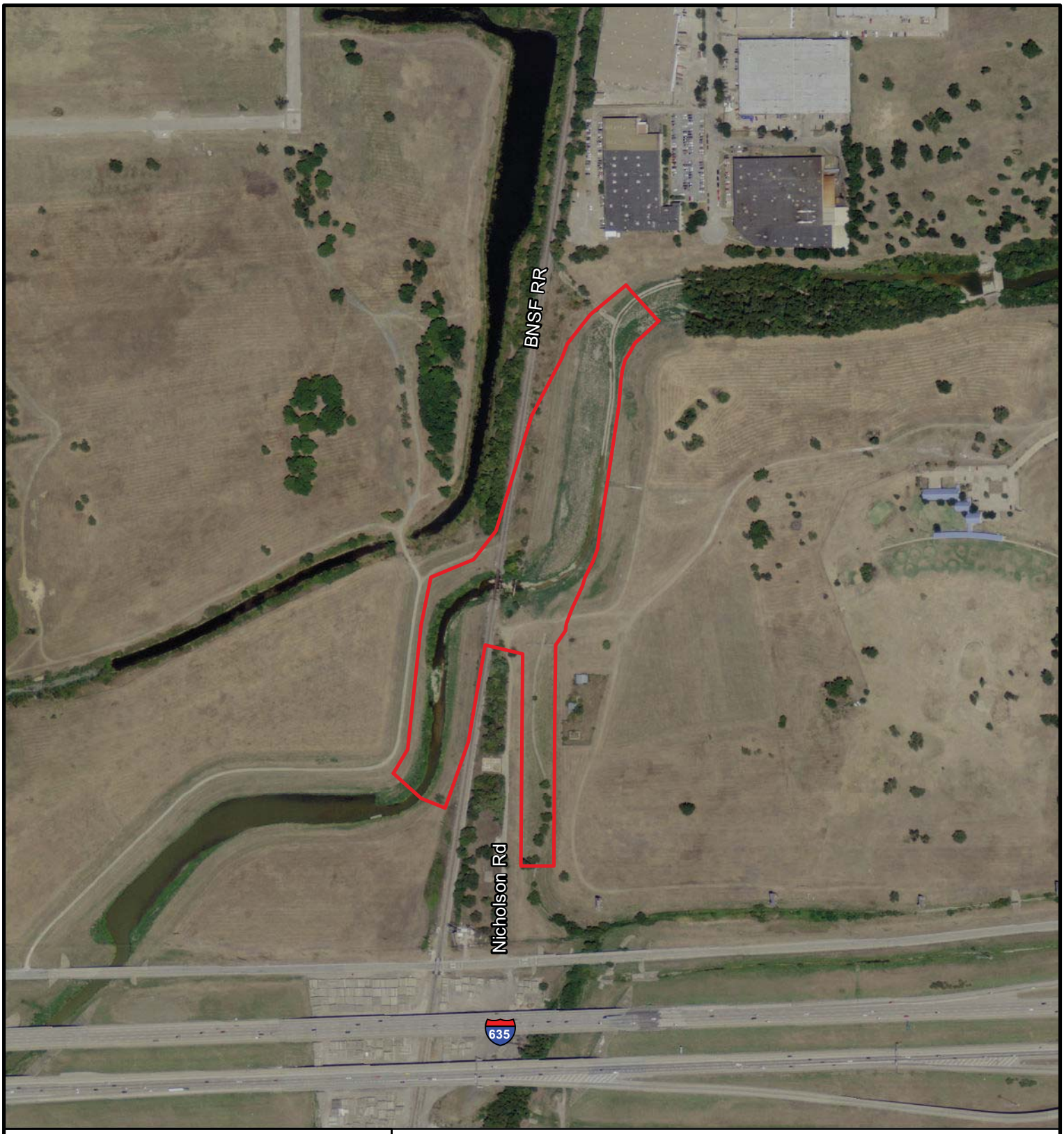


Figure 7
Proposed Channel Improvement Area on Aerial Photograph

County: Dallas
State: Texas
Date map created: 12/7/2011
Source: 2008 USDA FSA TOP Aerial Photography, Dallas County; ESRI 10 Streetmap North America

Proposed Channel Improvement Area

N
W E
S

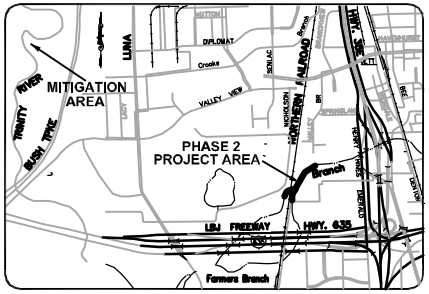
1 inch = 500 feet

Feet
0 375 750 1,500

Meters
0 75 150 300

VALWOOD IMPROVEMENT AUTHORITY

LEVEE IMPROVEMENTS PROJECT - PHASE 2



Sheet Index:

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NDM

NATHAN D. MAIER
CONSULTING ENGINEERS, INC.
FIRM REGISTRATION NO.: F-356

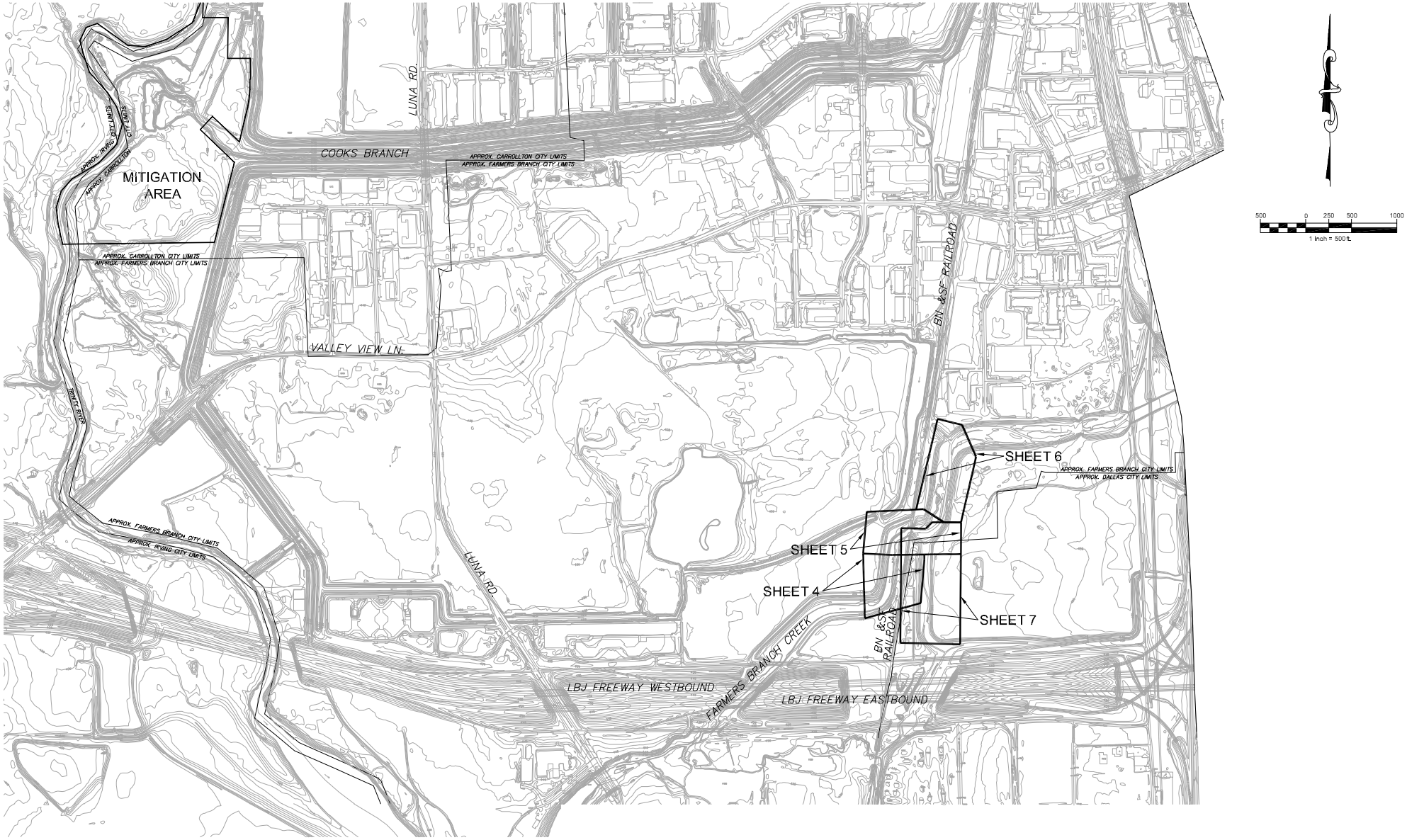
TWO PARK LANE PLACE / 8080 PARK LANE / SUITE 600
DALLAS, TEXAS 75231 / (214) 739-4741 / FAX (214) 739-5961

Client:

Valwood Improvement Authority

Job Number:

06-11-107B



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KEY MAP
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 2 / 32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	1"=500'	02-11	KY-02	08-11-107B

EROSION CONTROL AND PHASING NOTES

1. CONTRACTOR SHALL PHASE THE CONSTRUCTION OF THE PROJECT AND ASSOCIATED LAND CLEARING AS SHOWN ON THE PLANS.

2. ANY ADDITIONAL DISTURBANCE BEYOND THE ALLOWED PHASE SHALL BE IMMEDIATELY STABILIZED BY THE CONTRACTOR AT NO ADDITIONAL COST.

3. THE CONSTRUCTION SHALL BE COMPLETED AND STABILIZED AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS.

4. CONTRACTOR SHALL STORE ALL EQUIPMENT AND STOCKPILE MATERIAL WITHIN THE DESIGNATED CONSTRUCTION STAGING AREAS.

5. CONTRACTOR SHALL PLACE THE CONSTRUCTION ENTRANCES PRIOR TO BEGINNING LAND CLEARING AND CREEK CONSTRUCTION FOR EACH PHASE. EACH CONSTRUCTION ENTRANCE SHALL BE REMOVED AT THE COMPLETION OF EACH APPROPRIATE PHASE.

6. CONTRACTOR SHALL PLACE CONSTRUCTION FENCE AROUND CONSTRUCTION ACCESS, STAGING AREAS, AND LIMITS OF DISTURBANCE FOR EACH PHASE.

7. CONTRACTOR SHALL BE PERMITTED 15' FOR CONSTRUCTION ACCESS ROADS FROM THE DESIGNATED CONSTRUCTION ENTRANCE LOCATIONS.

8. NO EQUIPMENT STORAGE OR PARKING OR MATERIAL STORAGE SHALL BE PERMITTED UNDER THE DRIP LINE OF EXISTING TREES.

9. CONTRACTOR SHALL MODIFY ACCESS ROUTE AND STAGING AREAS, AS REQUIRED IN THE FIELD, TO AVOID DAMAGE TO EXISTING TREES. ANY TREES TO BE REMOVED IN ACCESS, WORK AREA OR STAGING MUST BE APPROVED BY THE CITY PRIOR TO REMOVAL.

10. CONTRACTOR SHALL PLACE ROCK BERMS AND SILT FENCE PRIOR TO LAND CLEARING ACTIVITIES. SILT FENCE SHALL BE PLACED IN DESIGNATED AREAS AND IN THE DOWN SLOPE OF ALL STAGING AREAS. ROCK BERMS AND SILT FENCE SHALL BE MAINTAINED UNTIL THE CONSTRUCTION PHASE HAS ACHIEVED FINAL STABILIZATION.

11. ACCUMULATED SEDIMENT SHALL BE REMOVED AFTER FINAL STABILIZATION OF THE ENTIRE PROJECT TO THE PROPOSED LINE AND GRADE.

12. CONTRACTOR SHALL PROVIDE NECESSARY TEMPORARY CREEK CROSSING ACCESS. TEMPORARY ACCESS SHALL BE REMOVED AND RESTORED FOLLOWING THE COMPLETION OF THE CONSTRUCTION PHASE.

13. CONTRACTOR SHALL NOT ENTER PRIVATE PROPERTY OR DISTURB AREAS OUTSIDE OF THE LIMIT OF DISTURBANCE SHOWN.

!! CAUTION !!

EXISTING AND/OR PROPOSED UTILITIES IN AREA.
CONTRACTOR SHALL CONTACT THE PROPER UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
CONTRACTOR SHALL CALL THE NOTIFICATION CENTER AT 800-344-8377 TWO DAYS BEFORE DIGGING BEGINS. UTILITY CONTACTS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING COMPANIES:

COSERV ELECTRIC	800-274-4014
VERIZON	972-578-3233
TXU	972-323-8915
AT&T CABLE	214-320-7529
SOUTHWESTERN BELL TELEPHONE	214-745-8193
CITY OF FARMERS BRANCH	XXX-XXX-XXXX

CONSTRUCTION NOTES

1. ALL REMOVED TREES, BRUSH, EXISTING CONCRETE HEADWALLS, CONCRETE RUBBLE, DEBRIS, ETC. SHALL BE LEGALLY DISPOSED OF OFF-SITE.

2. ANY EXCESS EARTHEN MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE AT CONTRACTOR'S EXPENSE.

3. THE LOCATIONS, ELEVATIONS, AND SIZES OF EXISTING UTILITIES SHOWN ON THESE PLANS WERE OBTAINED FROM EXISTING CONSTRUCTION PLANS AND ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS, ELEVATIONS, AND SIZES OF ALL EXISTING UTILITIES BEFORE CONSTRUCTION. VERIFICATION SHALL INCLUDE ESTABLISHMENT OF THE HORIZONTAL AND VERTICAL LOCATIONS. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. THE CITY'S FIELD REPRESENTATIVE SHALL BE NOTIFIED WHEN PROPOSED FACILITY GRADES OR LOCATIONS CONFLICT WITH EXISTING UTILITY GRADES OR LOCATIONS.
   CONTACT: CITY OF FARMERS BRANCH ENGINEERING DEPT.
   PHONE: 972-919-2588

4. ALL DISTURBED AREAS SHALL BE RESTORED TO EXISTING CONDITION OR BETTER. MINIMUM RESTORATION USING HYDROMULCH BERMUDA GRASS UNLESS OTHERWISE SPECIFIED IN PLANS. SEE SPECIFICATIONS FOR GROWTH AND COVERAGE REQUIREMENTS.

5. ALL TREES WITHIN THE LIMITS OF PROPOSED GRADING SHALL BE REMOVED BY THE CONTRACTOR. EXISTING TREES BEYOND THE LIMITS OF GRADING OR AS NOTED ON THE PLANS, SHALL NOT BE DISTURBED.

6. ALL TREES TO BE TRIMMED OR REMOVED SHALL BE FLAGGED BY THE CONTRACTOR. CONTRACTOR SHALL MARK THE EXTENT OF TRIMMING. TRIMMING SHALL BE PERFORMED BY SAWING BRANCHES CLEANLY. THE CITY SHALL REVIEW AND APPROVE ALL TRIMMING AND REMOVAL PRIOR TO WORK. TREE TRIMMING SHALL BE PERFORMED BY A PROFESSIONAL LANDSCAPER.

7. WORK AREA IS LOCATED IN AND ALONG THE CHANNEL OF FARMERS BRANCH CREEK, WHICH IS SUBJECT TO FLASH FLOODING. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER PROTECTION OF WORK AND EQUIPMENT.

8. NO MATERIAL OR EQUIPMENT SHALL BE STORED WITHIN THE CREEK CHANNEL.

9. ANY DAMAGE DUE TO CONSTRUCTION TO THE ROADWAYS, ALLEYS, SIDEWALKS, OR ANY OTHER EXISTING INFRASTRUCTURE MUST BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST.

10. NO KNOWN IRRIGATION SYSTEMS ARE LOCATED WITHIN THE CONSTRUCTION AREA.

11. TOPOGRAPHIC INFORMATION IS BASED ON SURVEY BY NDMCE. CONDITIONS MAY HAVE CHANGED SINCE TIME OF ORIGINAL SURVEY. SURVEYS WERE COMPLETED FROM MMMMM 20XX.

12. THE LOCATION OF THE PROPOSED SANITARY SEWER IMPROVEMENTS SHOWN ON THESE PLANS IS APPROXIMATE. THE CONTRACTOR MUST REFER TO THE SANITARY SEWER IMPROVEMENT PLANS FOR ACTUAL HORIZONTAL AND VERTICAL LOCATIONS.

13. EXISTING PUBLIC FACILITIES THAT ARE DAMAGED OR REMOVED DURING CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST.

14. THIS PROJECT IS SUBJECT TO THE TEXAS ARCHITECTURAL BARRIERS ACT, AND HAS BEEN DESIGNED ACCORDING TO CRITERIA REQUIRED BY THE TEXAS ACCESSIBILITY STANDARDS EFFECTIVE AS OF THE PLAN DATE. NO SIGNS, LIGHT OR SIGNAL STANDARDS, UTILITY POLES OR OTHER OBSTRUCTIONS SHALL BE PLACED AS TO AFFECT ANY ACCESSIBLE FEATURE INCLUDING BUT NOT LIMITED TO ACCESSIBLE PEDESTRIAN ROUTES. CURB RAMPS AND CROSSWALKS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER ACCOMPANIED BY CONTINGENCY FOR RESTORING THE AFFECTED ACCESSIBLE ELEMENT.

15. CONTRACTOR SHALL PROVIDE FINAL GRADING IN CONSTRUCTION AREA THAT PROVIDES FOR POSITIVE DRAINAGE TOWARD THE CHANNEL. ANY AREA OF PONDING SHALL BE ELIMINATED PRIOR TO INSTALLATION OF GROUND COVER.

LEGEND

	FIRE HYDRANT	FH
	WATER METER	WM
	WATER VALVE	WV
W	WATER MANHOLE	WMH
	SPRINKLER HEAD	SH
	SPRINKLER CONTROL BOX	ICV
D	STORM DRAIN MANHOLE	STMMH
S	SANITARY SEWER MANHOLE	SSMH
	SANITARY SEWER CLEANOUT	SSCO
	POWER POLE	PP
	POWER POLE ANCHOR	GUY
	LIGHT POLE	LP
	GROUND LIGHT	GL
E	ELECTRIC MANHOLE	EMH
-E-	UNDERGROUND ELECTRIC MARKER	UEM
	ELECTRIC RISER	UER
-H-	OVERHEAD ELECTRIC	OE
	ELECTRIC TRANSFORMER PAD	XFMR
	TRAFFIC LIGHT POLE	TLP
	TRAFFIC SIGNAL CONTROL BOX	TSCB
	ELECTRIC SERVICE	ESRV
	CABLE TELEVISION RISER	CTVR
-T-	UNDERGROUND CATV MARKER	UCTVM
P	PHONE MANHOLE	PHMH
-P-	BURIED PHONE LINE	UPM
	PHONE RISER	PHR
	GAS METER	GM
	GAS VALVE	GV
-G-	UNDERGROUND GAS MARKER	UGM
G	GAS MANHOLE	GMH
-x-	FENCE LINE	FNC
	ASPHALT PAVEMENT	ASPH
	TRAFFIC SIGN	SGN
	BOLLARD POST	BP
	GABION PROTECTION	
	ROCK RIP RAP	
	PROPOSED CONCRETE	
	PROPOSED MILSAP	

BENCHMARKS

T31 – TxDOT DISC DO570012, IN MEDIAN OF LUNA ROAD, +/-675' SOUTH OF LBJ FRWY., +/-21.5' SOUTH OF FIRST BRIDGE, 1.1' SOUTH OF EDGE OF CONCRETE APPROACH SLAB. NDM ELEVATION = 441.23' (CALL ELEVATION = 441.26')

T30 – TxDOT DISC RE570085, LOCATED IN NW CORNER OF INTERSECTION OF LBJ FRWY. AND I35-E, +/-33' SOUTH OF C.L. OF WESTBOUND FRONTAGE ROAD, +/-89' WEST OF C.L. OF EMERALD STREET. NDM ELEVATION = 447.36' (CALL ELEVATION = 447.29')

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GENERAL NOTES
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

DESIGN	DRAWN	SCALE	DATE	FILE NAME
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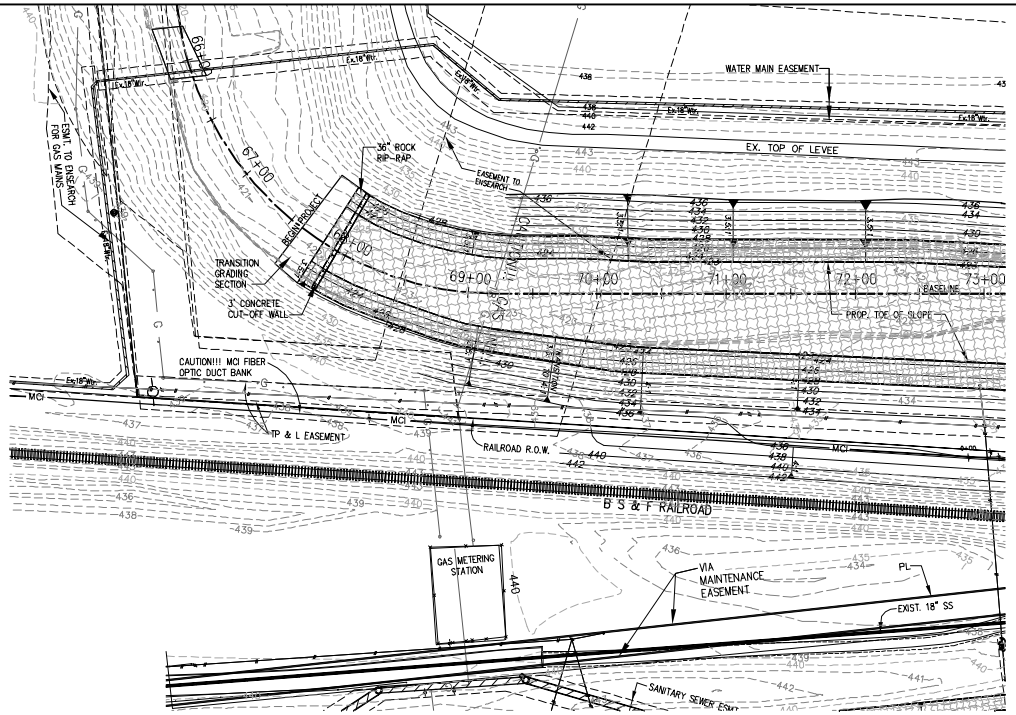
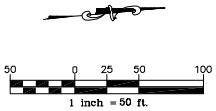
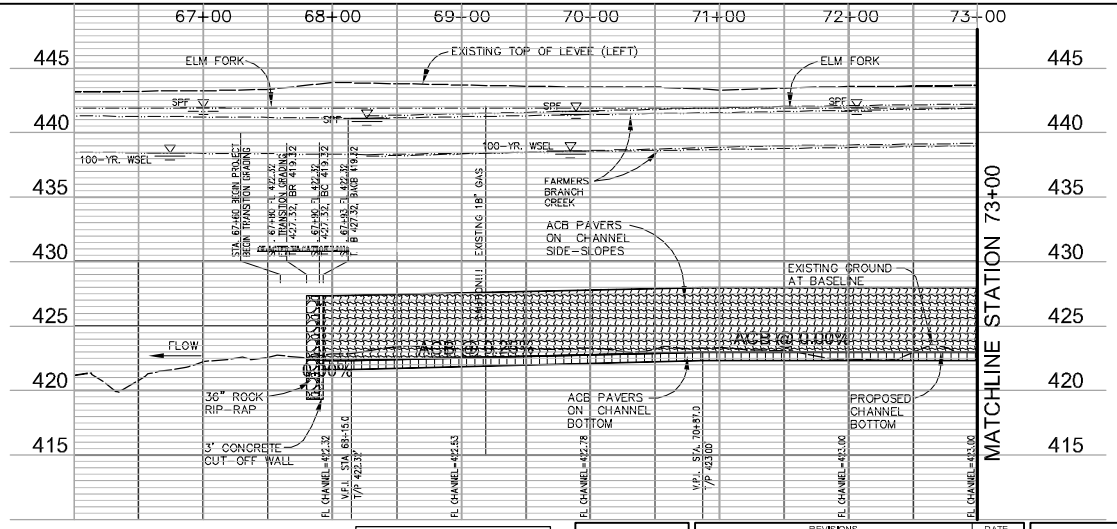
SHEET NO. 3/32

JOB NUMBER 06-11-107B







LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED GRADE
- ROCK RIP RAP PROTECTION
- ACB PROTECTION
- CONCRETE PROTECTION
- GABION PROTECTION

TACB = TOP OF ACB
BACB = BOTTOM OF ACB
TR = TOP OF ROCK
BR = BOTTOM OF ROCK
TC = TOP OF CONCRETE
BC = BOTTOM OF CONCRETE
FL = FLOW LINE

NOTE:
LEFT AND RIGHT ARE ESTABLISHED LOOKING UPSTREAM.

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CHANNEL IMPROVEMENTS
STATION 67+00 TO 73+00
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 4/32

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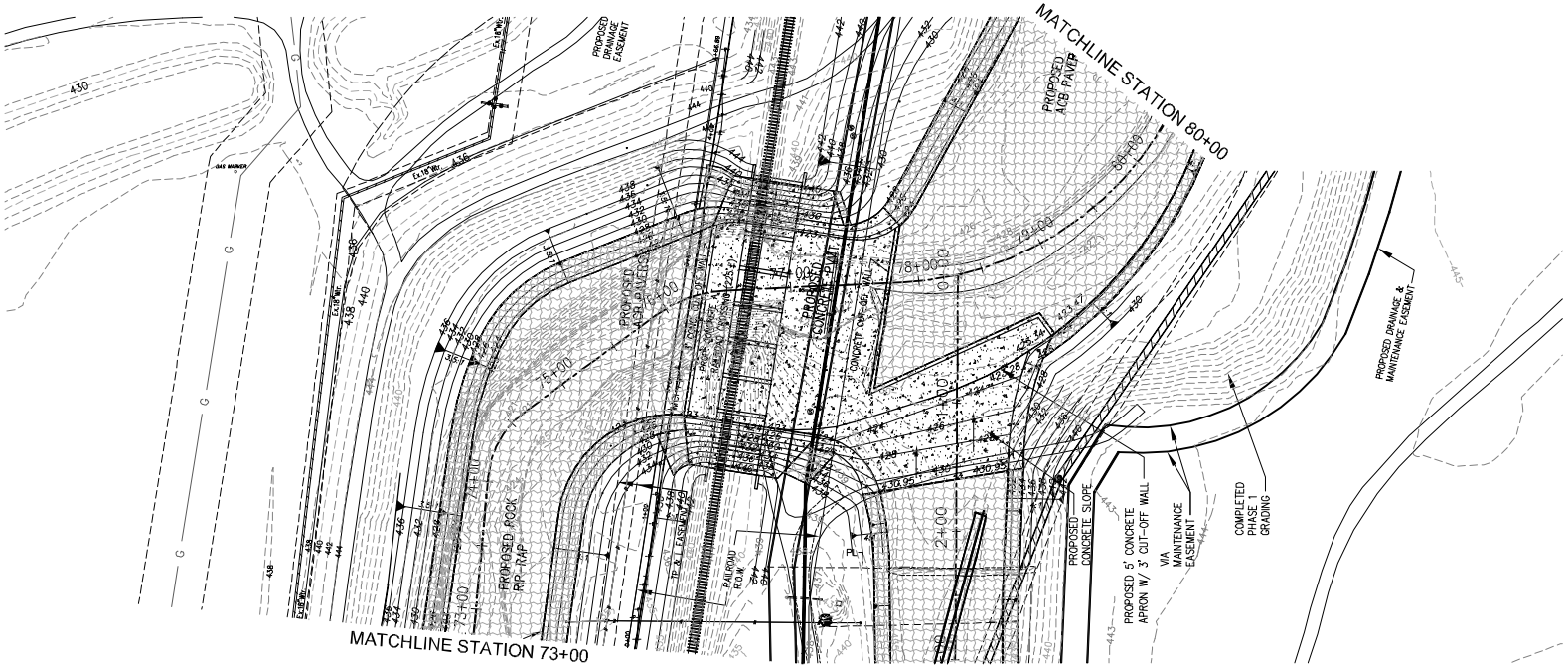

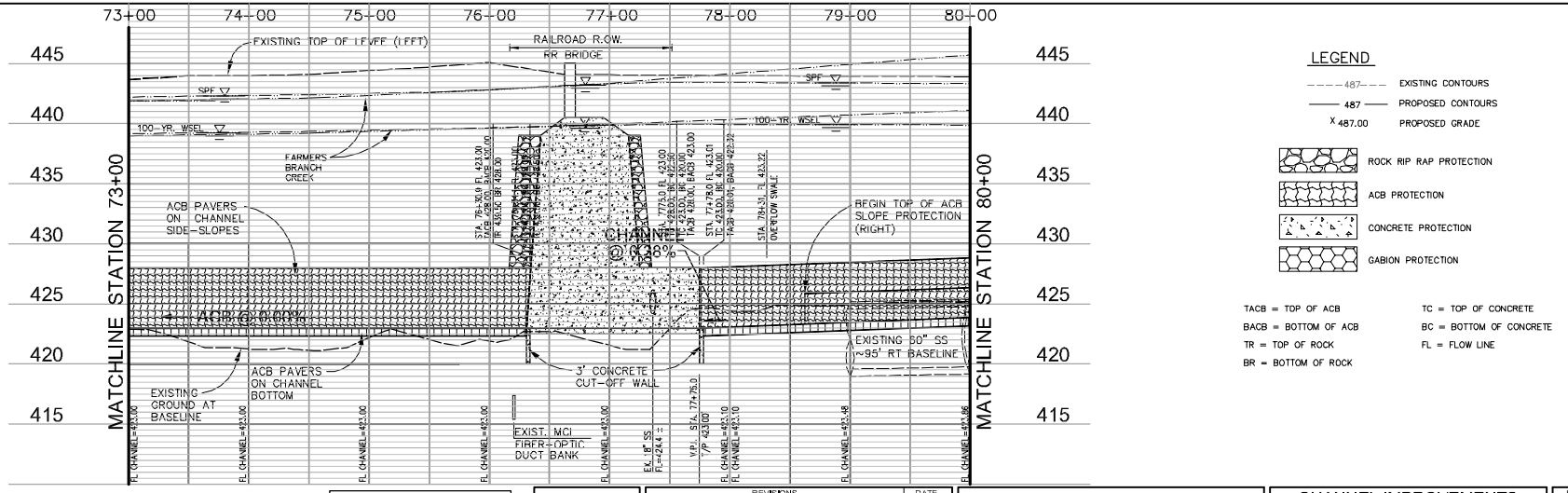

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CHANNEL IMPROVEMENTS
STATION 73+00 TO 80+00
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 5 / 32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
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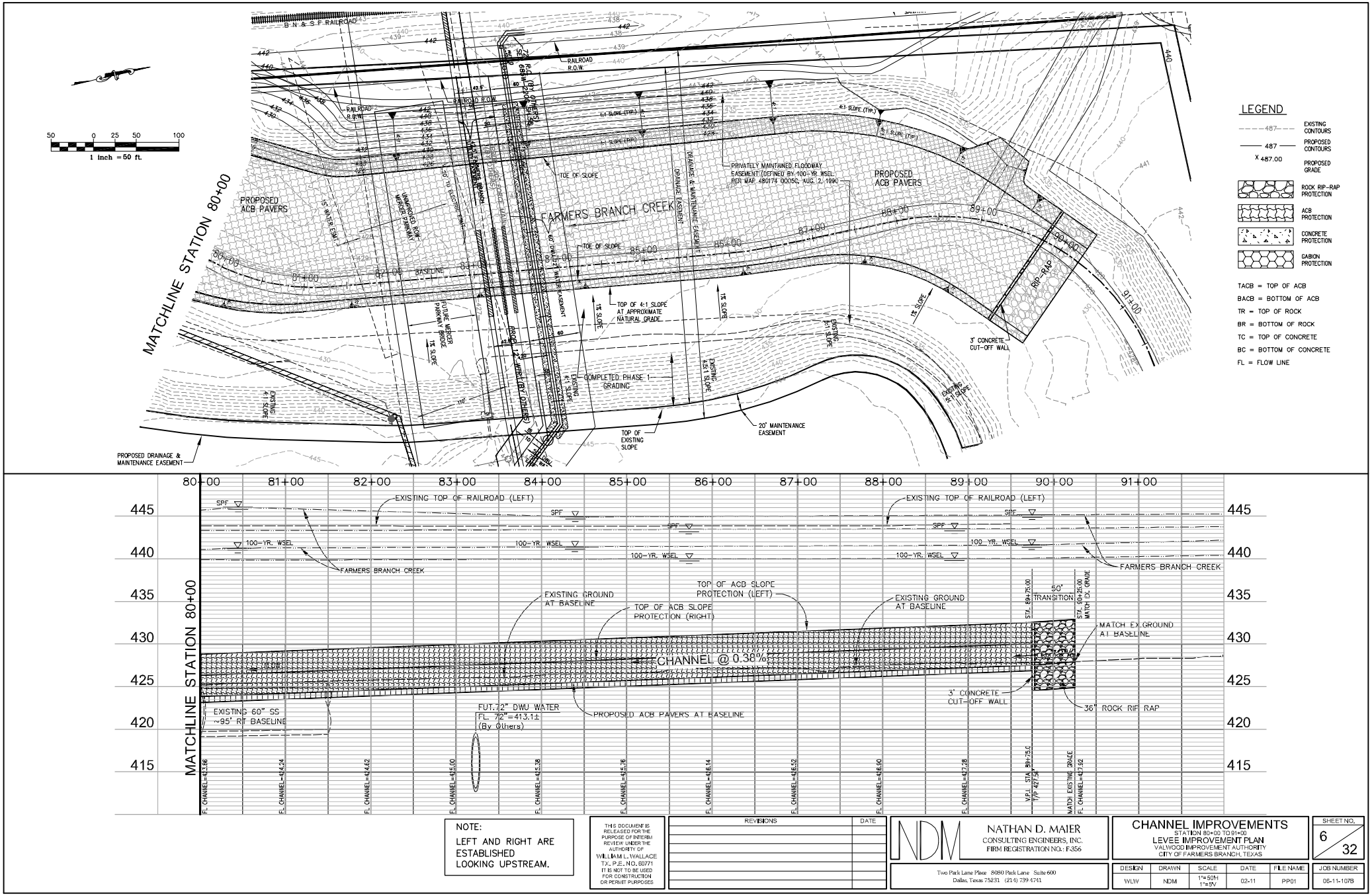

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CHANNEL IMPROVEMENTS
STATION 80+00 TO 91+00
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 6/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
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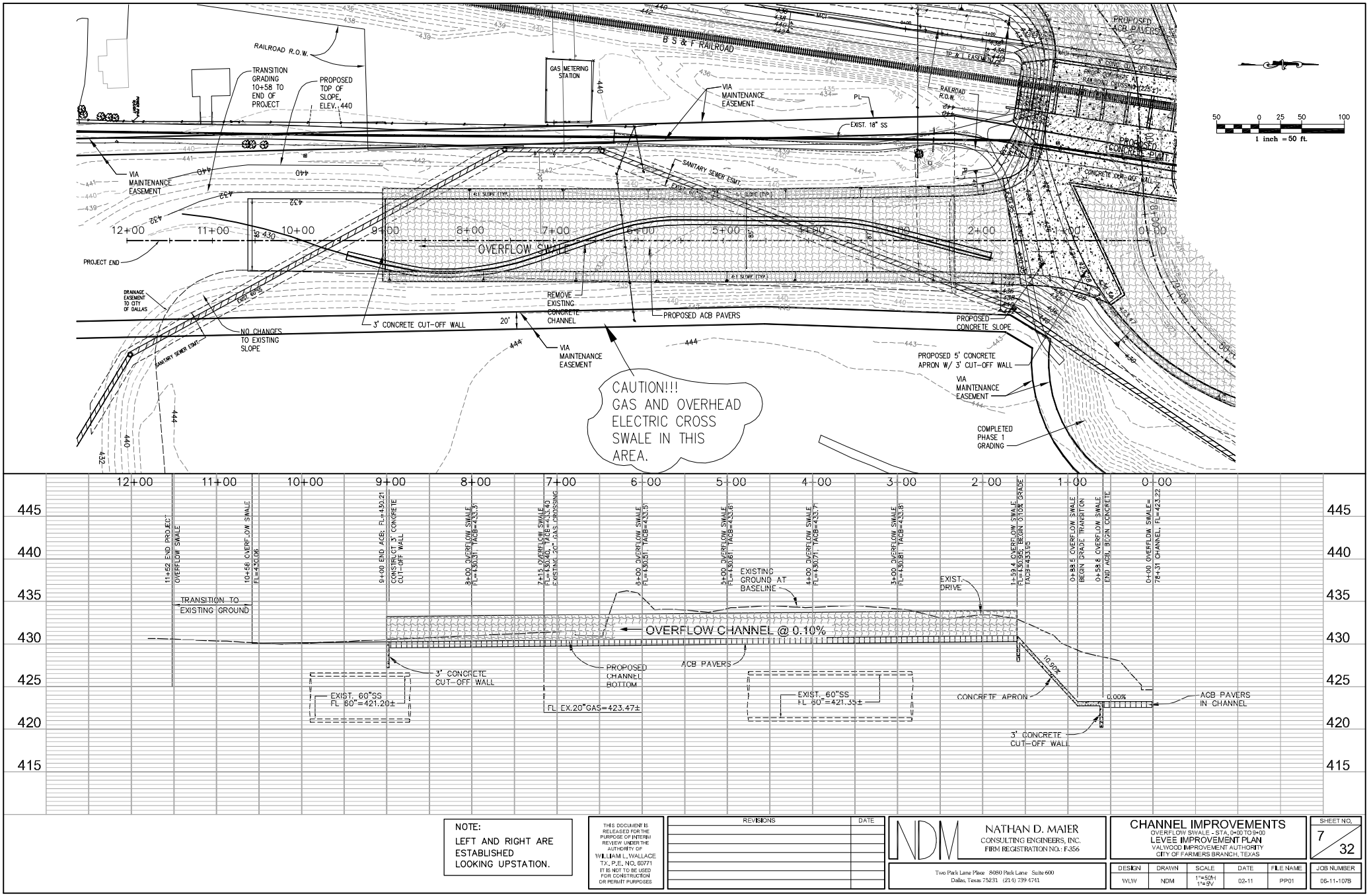

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Dallas, Texas 75231 (214) 739-4741

CHANNEL IMPROVEMENTS
OVERFLOW SWALE - STA. 0+00 TO 9+00
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 7/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
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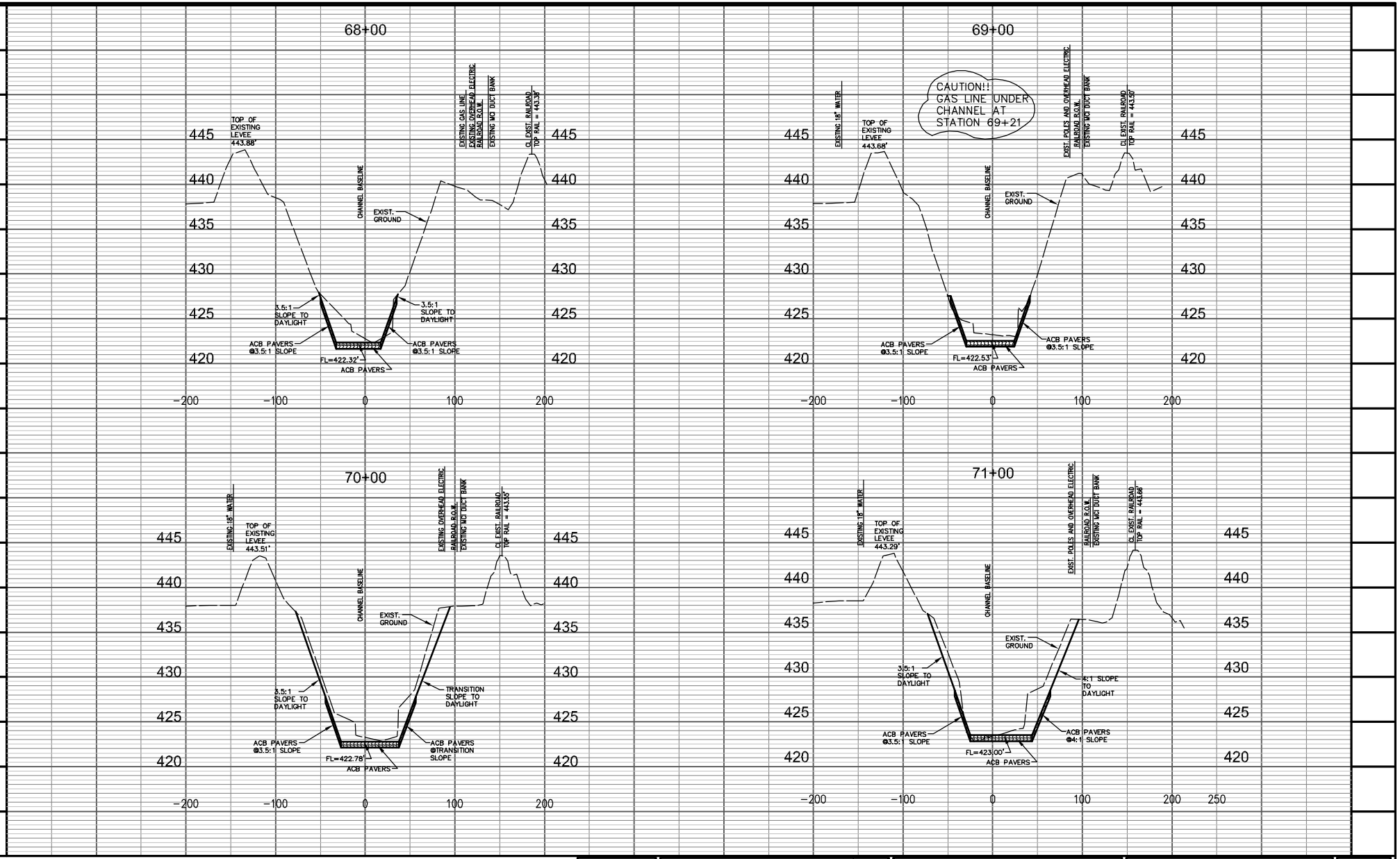

LEGEND

TR = TOP OF ROCK
BR = BOTTOM OF ROCK
TC = TOP OF CONCRETE
BC = BOTTOM OF CONCRETE
FL = FLOW LINE
TACB = TOP OF ACB
BACB = BOTTOM ACB

ROCK RIP RAP PROTECTION
ACB PROTECTION
CONCRETE PROTECTION

NOTE:
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CROSS SECTIONS
CHANNEL SECTIONS 68+00 TO 71+00
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

DESIGN	DRAWN	SCALE	DATE	FILE NAME
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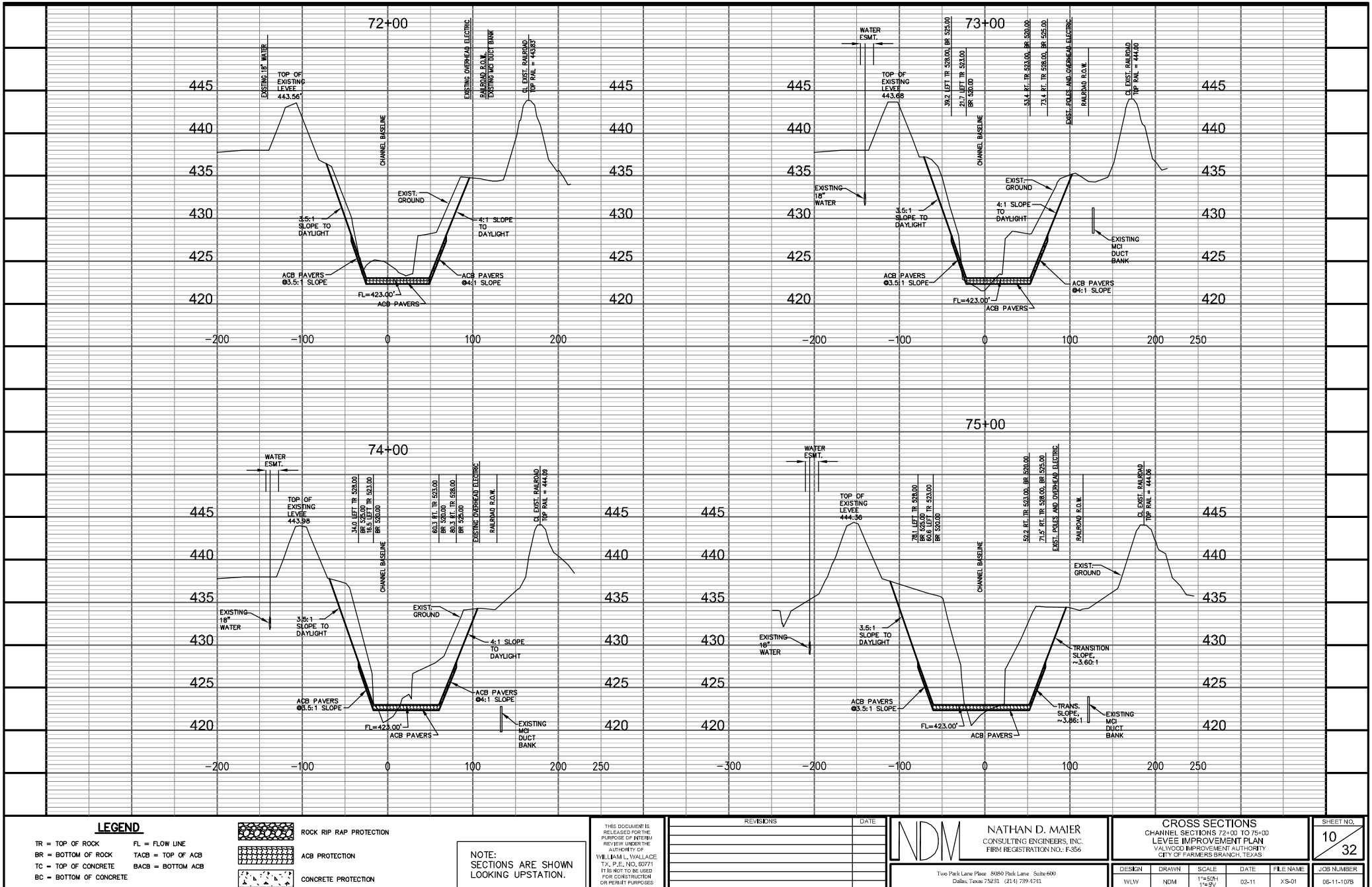
SHEET NO. 9 / 32

JOB NUMBER 08-11-107B



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ROCK RIP RAP PROTECTION
ACB PROTECTION
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CROSS SECTIONS
CHANNEL SECTIONS 72+00 TO 75+00
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 10/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
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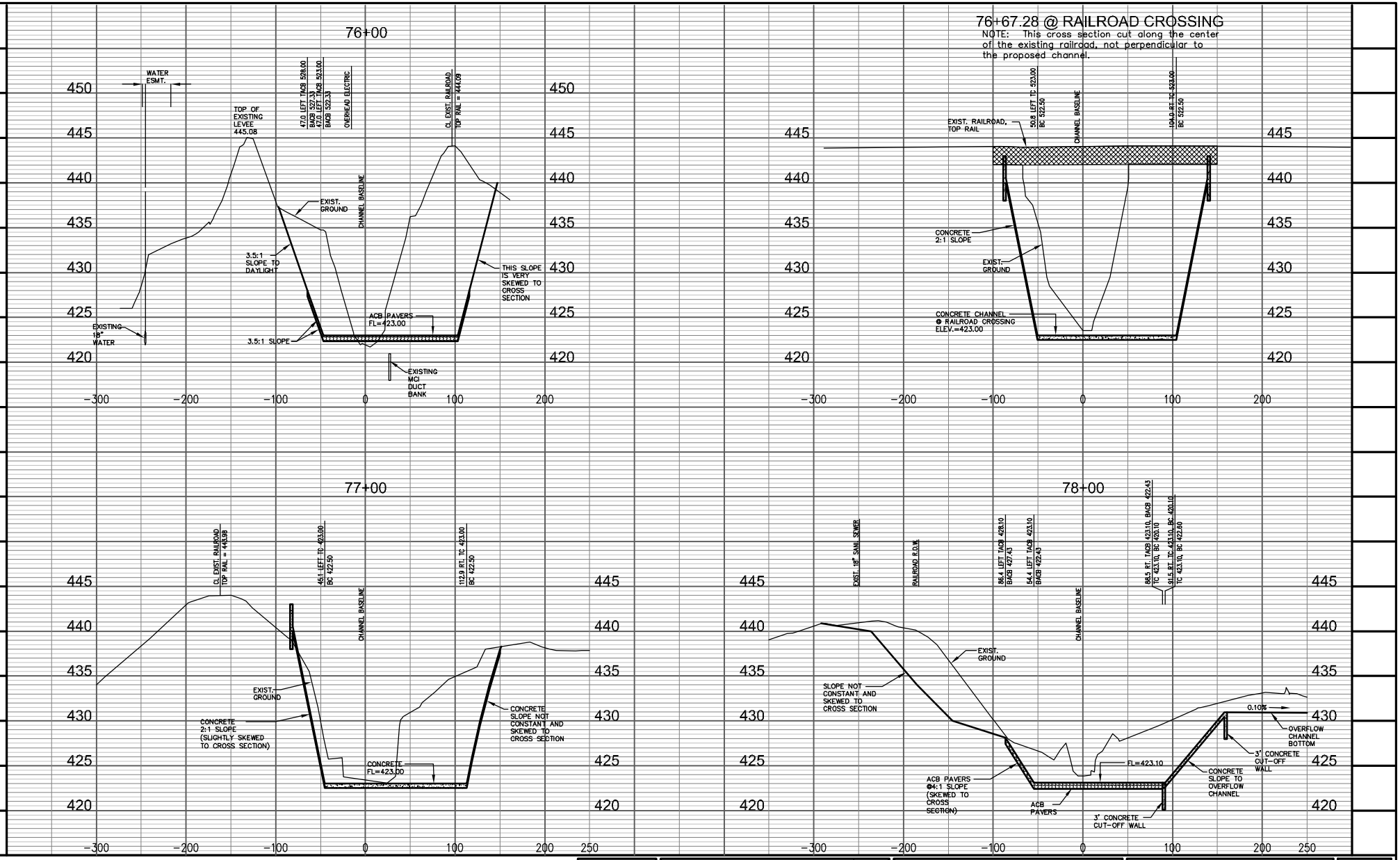

LEGEND

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ROCK RIP RAP PROTECTION
ACB PROTECTION
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CROSS SECTIONS
CHANNEL SECTIONS 76+00 TO 78+00
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

DESIGN	DRAWN	SCALE	DATE	FILE NAME
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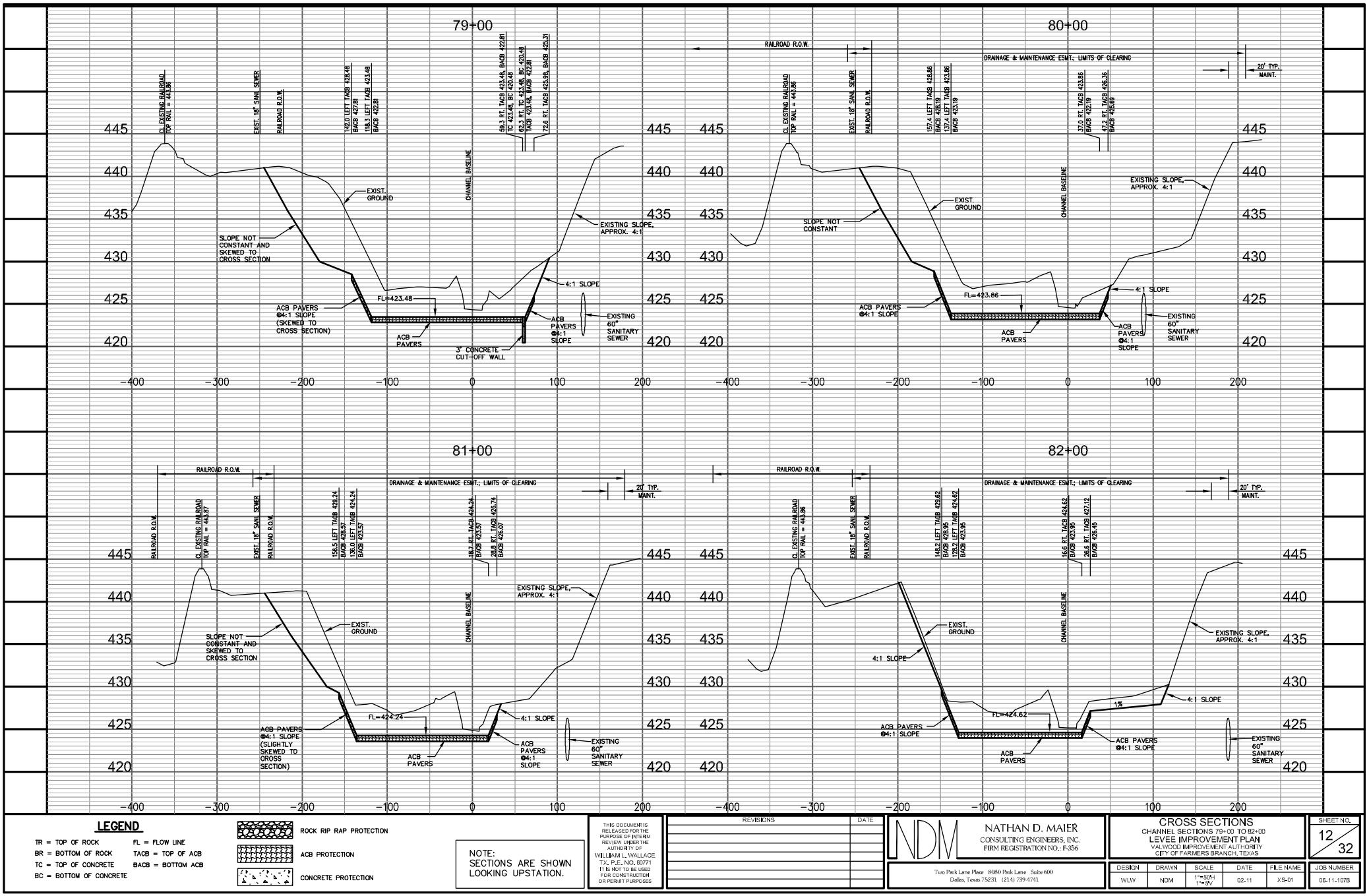
SHEET NO. 11/32

JOB NUMBER 08-11-107B



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ROCK RIP RAP PROTECTION
ACB PROTECTION
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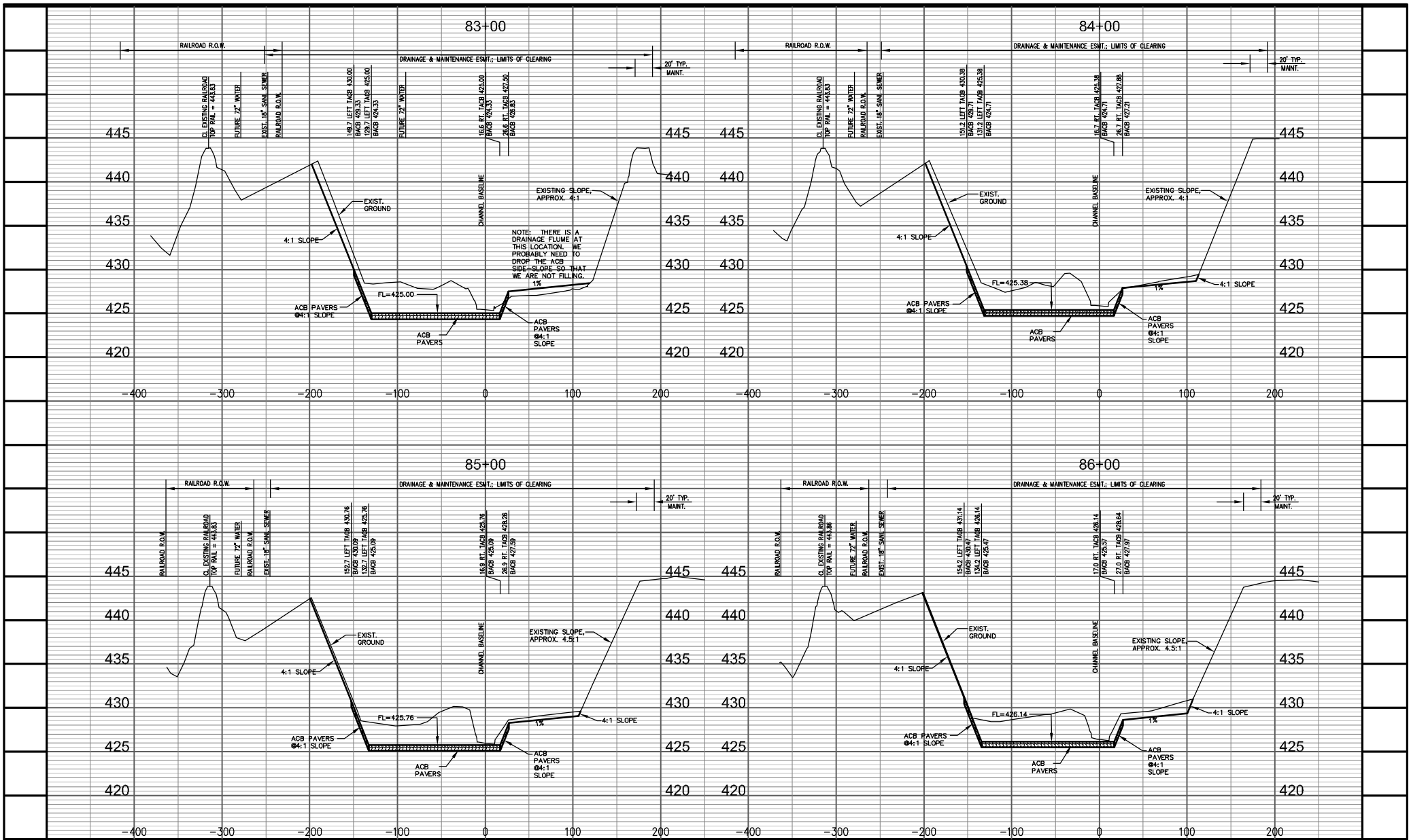
Dallas, Texas 75231 (214) 739-4741

CROSS SECTIONS
CHANNEL SECTIONS 79+00 TO 82+00
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

DESIGN	DRAWN	SCALE	DATE	FILE NAME
WLW	NDM	1"=50'-H 1"=5'-V	02-11	XS-01

SHEET NO. 12/32
JOB NUMBER 08-11-107B



LEGEND

TR = TOP OF ROCK
BR = BOTTOM OF ROCK
TC = TOP OF CONCRETE
BC = BOTTOM OF CONCRETE
FL = FLOW LINE
TACB = TOP OF ACB
BACB = BOTTOM ACB

ROCK RIP RAP PROTECTION
ACB PROTECTION
CONCRETE PROTECTION

NOTE:
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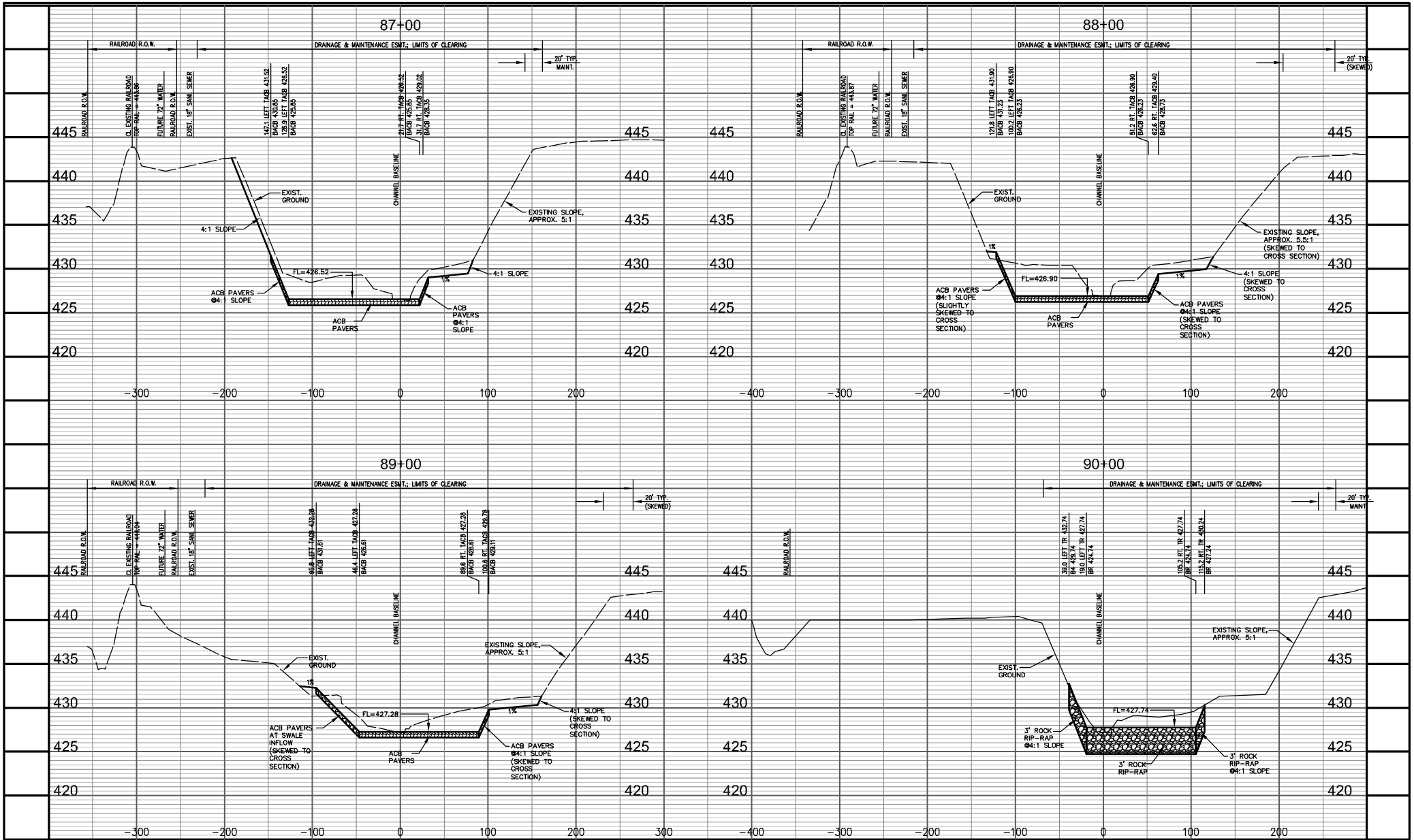
SHEET NO. 13/32

JOB NUMBER 08-11-107B



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CHANNEL SECTIONS 87+00 TO 90+00
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DESIGN	DRAWN	SCALE	DATE	FILE NAME
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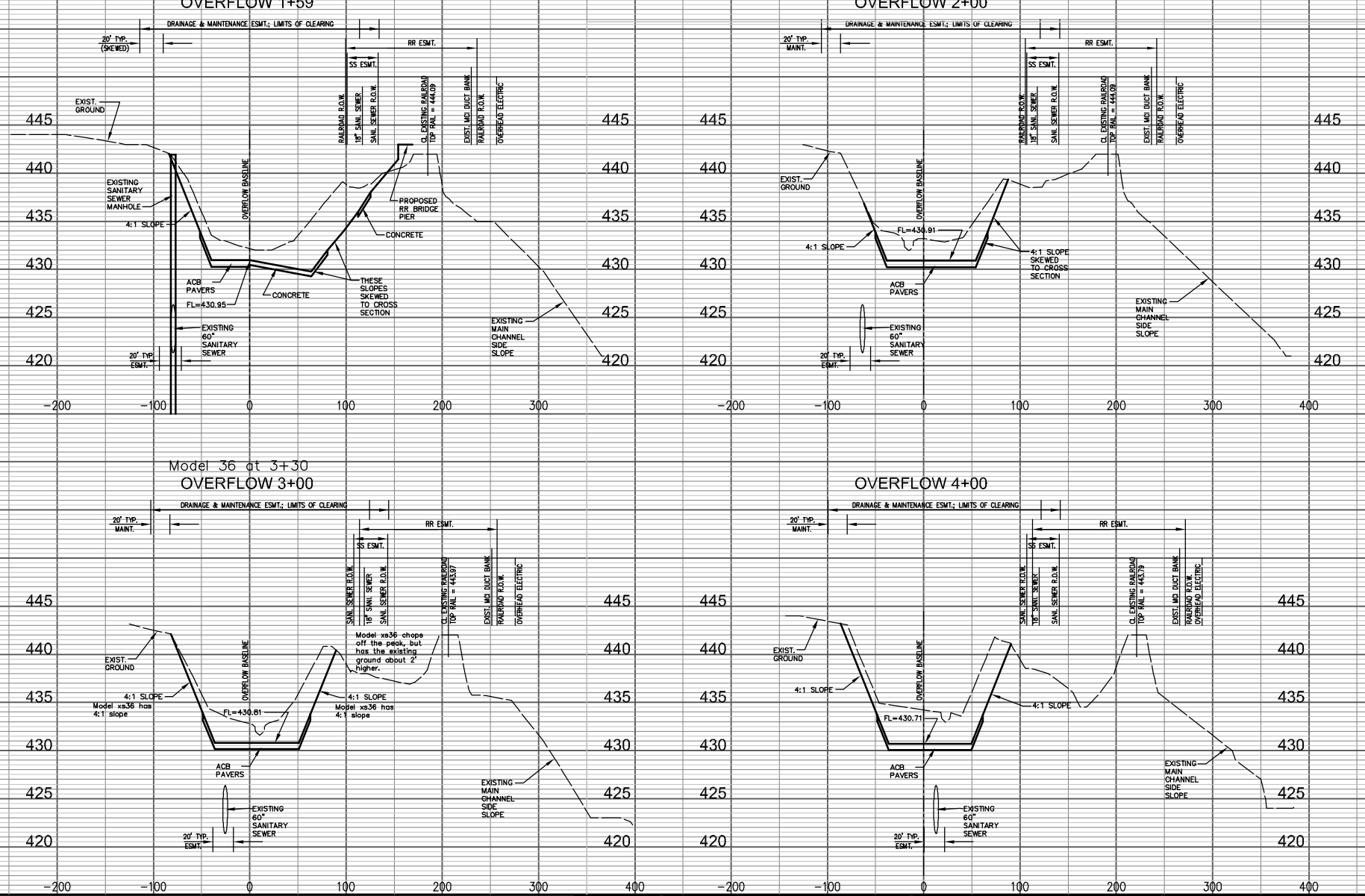
SHEET NO. 14/32

JOB NUMBER 08-11-107B



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CROSS SECTIONS
OVERFLOW SWALE SECTIONS 0+00 TO 4+00
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SHEET NO. 15/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
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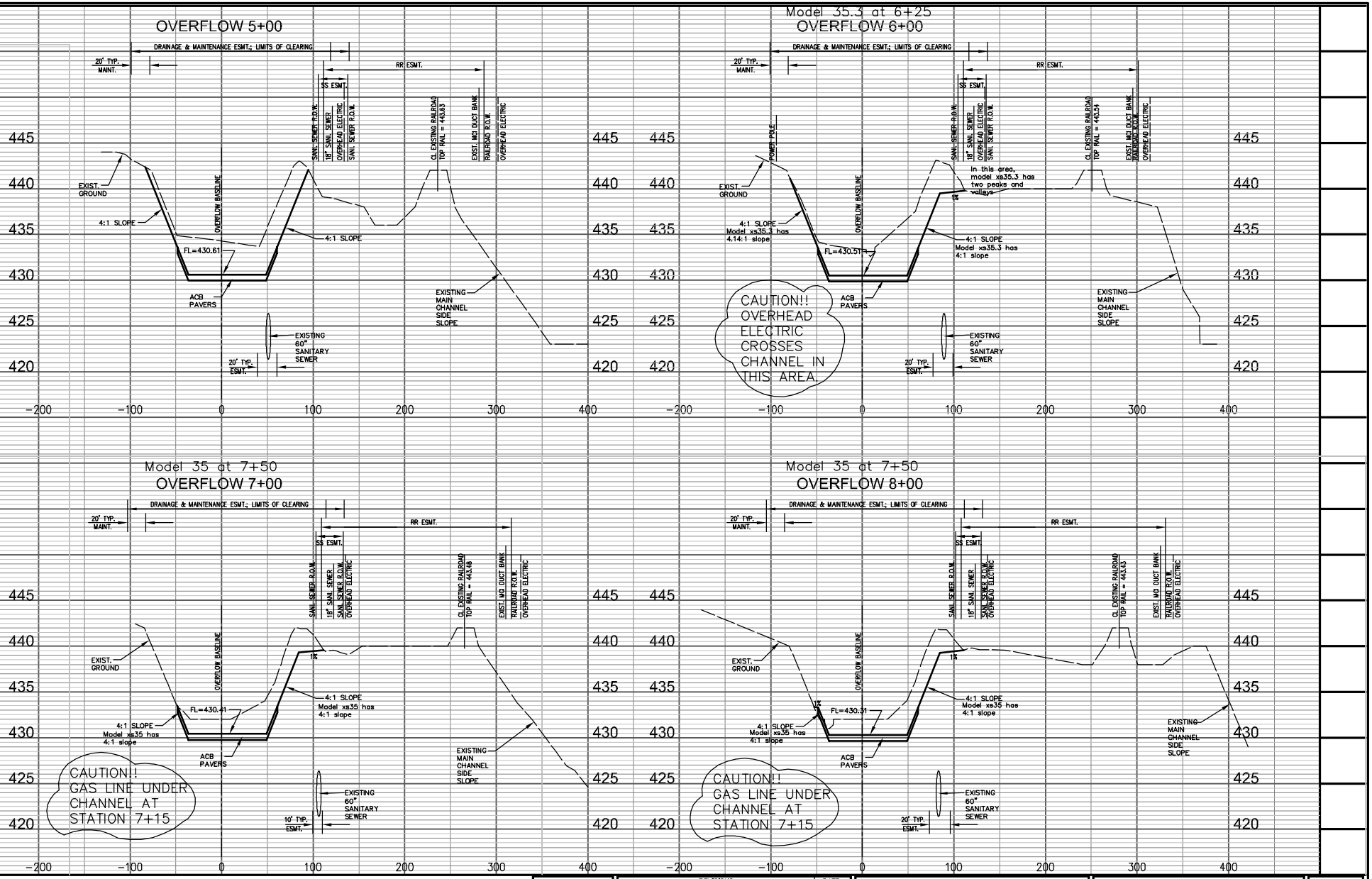

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ROCK RIP RAP PROTECTION
ACB PROTECTION
CONCRETE PROTECTION

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CROSS SECTIONS
OVERFLOW SWALE SECTIONS 5+00 TO 8+00
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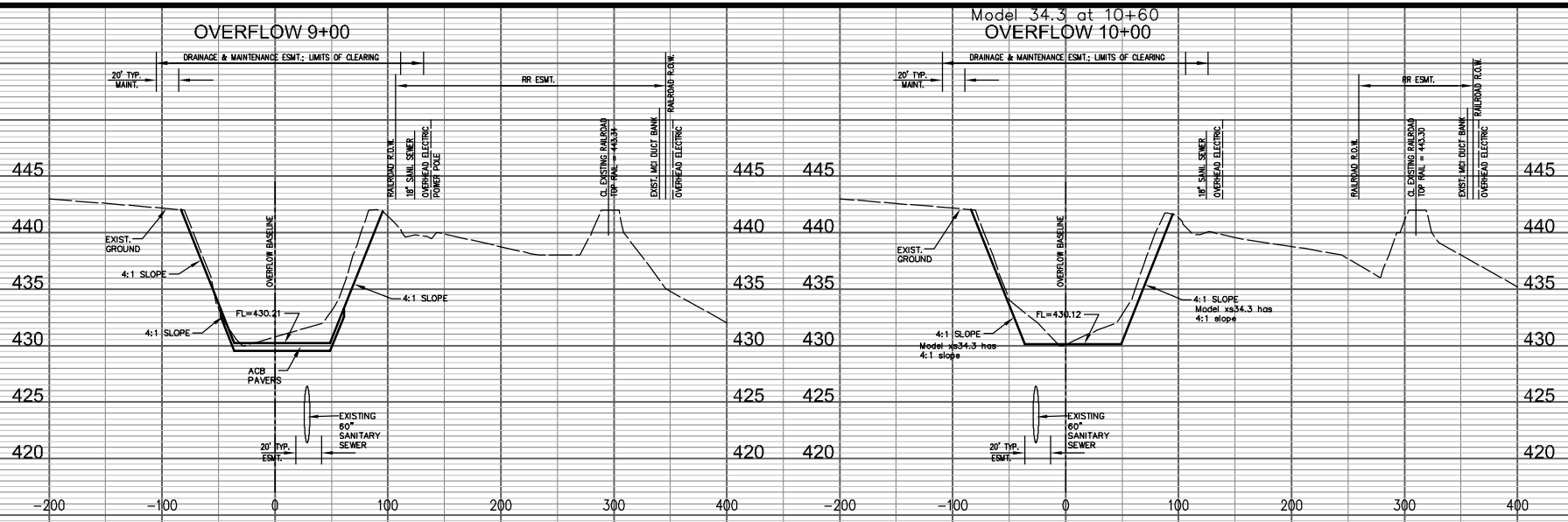
CITY OF FARMERS BRANCH, TEXAS

DESIGN	DRAWN	SCALE	DATE	FILE NAME
WLW	NDM	1"=50-H 1"=5V	02-11	XS-01

SHEET NO. 16/32

JOB NUMBER 08-11-107B



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ROCK RIP RAP PROTECTION
ACB PROTECTION
CONCRETE PROTECTION

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CROSS SECTIONS
OVERFLOW SWALE SECTIONS 9+00 TO 10+00
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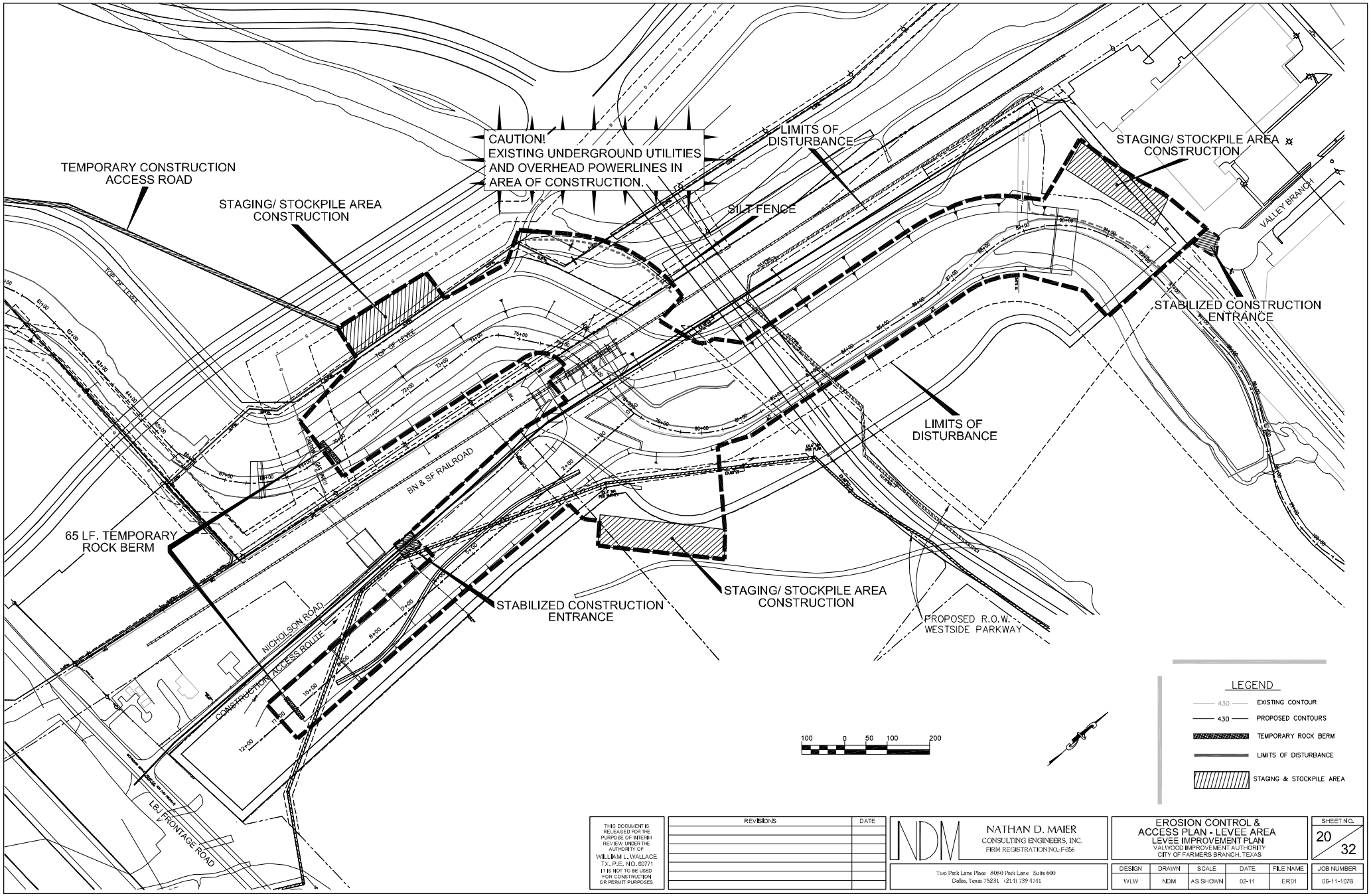
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 17/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	1"=50'-H 1"=5'V	02-11	XS-01	08-11-107B



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EROSION CONTROL &
ACCESS PLAN - LEVEE AREA
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 20/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	AS SHOWN	02-11	ER01	08-11-107B

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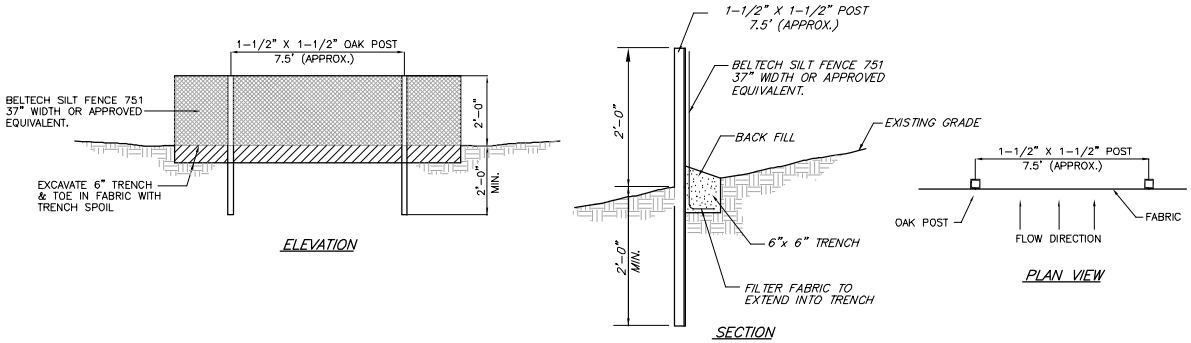
EROSION CONTROL & ACCESS PLAN – MITIGATION AREA
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

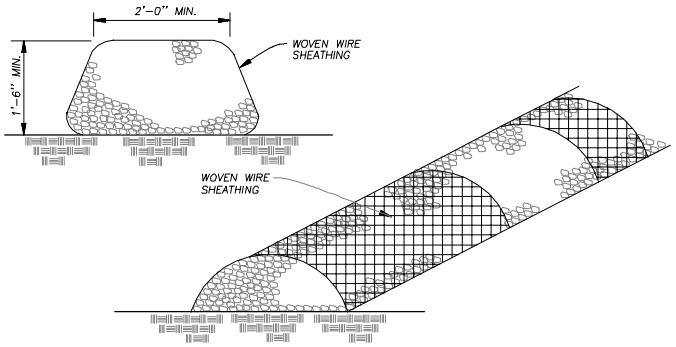
DESIGN	DRAWN	SCALE	DATE	FILE NAME
WLW	NDM	As Shown	02-11	ER02

SHEET NO. 21/32

JOB NUMBER 06-11-107B



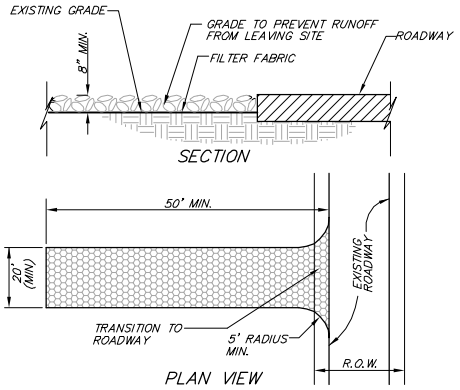
SILT FENCE DETAIL
NTS



GENERAL NOTES:

1. USE ONLY OPEN GRADED ROCK 3–5 INCHES DIAMETER.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENINGS AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE – WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE–THIRD THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 6 INCHES.
6. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

ROCK BERM
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE
NTS

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EROSION CONTROL & ACCESS PLAN DETAILS
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 22/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	N/A	02-11	ER01	06-11-107B

LEGEND

FUTURE TRAIL — — —

150 0 75 150 300

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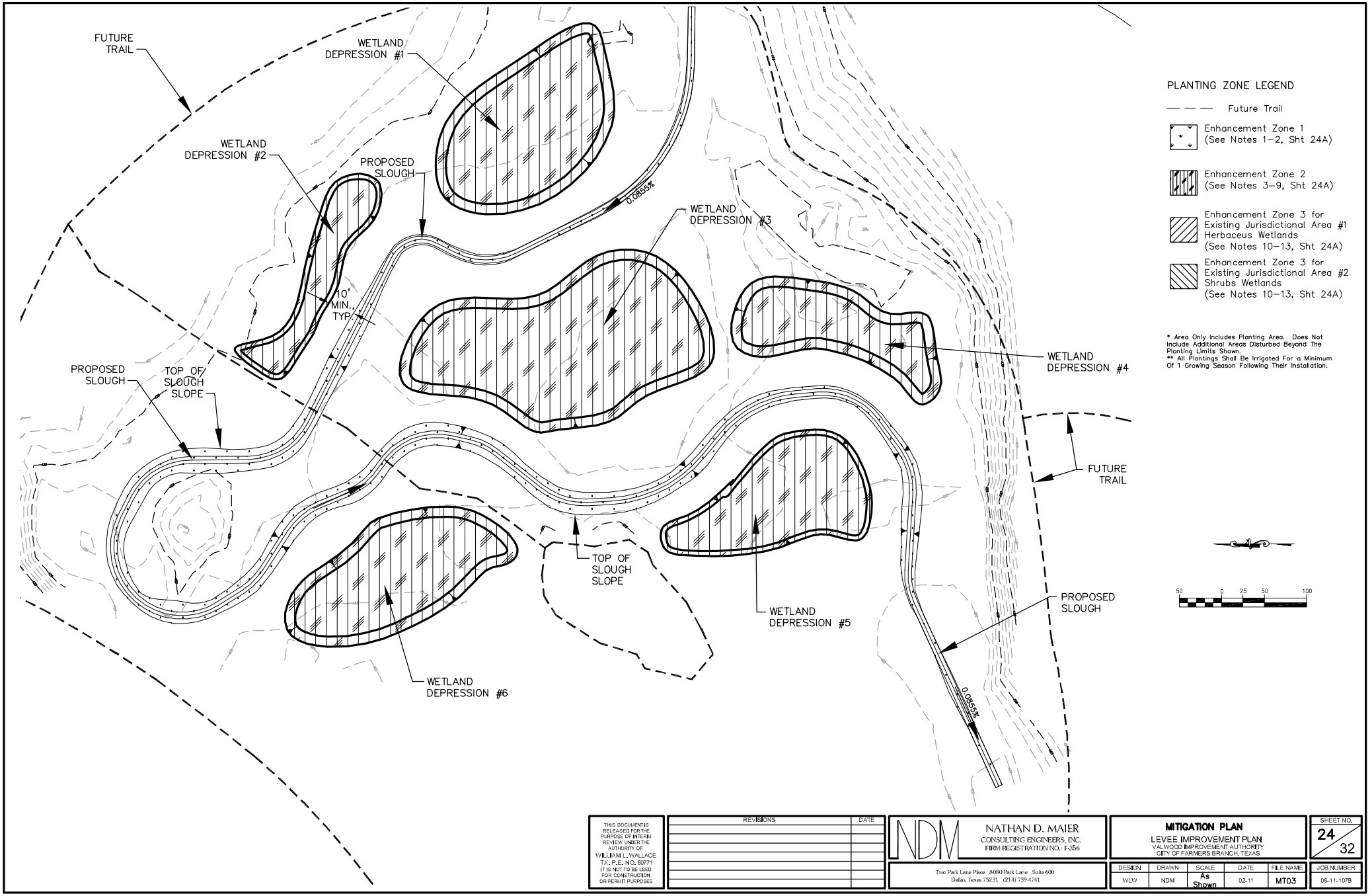
MITIGATION AREA PLAN
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 23/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	As Shown	02-11	MT02	06-11-107B


FUTURE TRAIL
WETLAND DEPRESSION #1
WETLAND DEPRESSION #2
PROPOSED SLOUGH
0.0655ft
WETLAND DEPRESSION #3
10' MIN., TYP.
PROPOSED SLOUGH
TOP OF SLOUGH SLOPE
WETLAND DEPRESSION #4
FUTURE TRAIL
TOP OF SLOUGH SLOPE
WETLAND DEPRESSION #5
PROPOSED SLOUGH
0.0655ft
WETLAND DEPRESSION #6
PLANTING ZONE LEGEND
Future Trail
Enhancement Zone 1 (See Notes 1–2, Sht 24A)
Enhancement Zone 2 (See Notes 3–9, Sht 24A)
Enhancement Zone 3 for Existing Jurisdictional Area #1 Herbaceus Wetlands (See Notes 10–13, Sht 24A)
Enhancement Zone 3 for Existing Jurisdictional Area #2 Shrubs Wetlands (See Notes 10–13, Sht 24A)
* Area Only Includes Planting Area. Does Not Include Additional Areas Disturbed Beyond The Planting Limits Shown.
** All Plantings Shall Be Irrigated For a Minimum Of 1 Growing Season Following Their Installation.
50 0 25 50 100
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MITIGATION PLAN
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS
SHEET NO. 24/32
DESIGN WLW
DRAWN NDM
SCALE As Shown
DATE 02-11
FILE NAME MT03
JOB NUMBER 06-11-107B

NOTES

Zone 1:

1. Seeds shall be drilled into the ground approximately ⅛ to ¼ inch deep in late fall or early spring.

2. Any changes to the approved list of species to be planted (see Table 1) most be approved by the responsible USACE oficial prior to plantings. This modification shalll include written notification of change in species composition and the proposed replacement species.

Zone 2:

3. Wetland palnt seed shall be broadcast at 20 lb/ac and raked immediately after the grading of the wetland areas and the redressing of topsoil. Examples of suitable plaint species in the wetland plant mix include: Smartweed (*Polygomum spp.* [see Table 2]), Water primrose (*Ludwigia spp.* [see Table 2]), Bulrush (*Scirpus spp.* [see Table 2]), Common rush (*Juncus effuses* [see Table 2]), Duck Potato (*Sagittaria latifolia* [see Table 2]), Water lily (*Numphaea spp.* [see Table 2]), Horsetail (*Equisetum spp.* [see Table 2]), Lizard's tail (*Saururus cernuus* [see Table 2]), Ravenfoot sedge (*Carex crus–corv* [see Table 2]), Flatsedge (*Cyperus spp.* [see Table 2]), Burrhead (*Echinodorus spp.* [see Table 2]), Spikerush (*Eleocharis spp.* [see Table 2]), Fimbry (*Fimbristylis spp.* [see Table 2]).

4. The wetland seed mix shall be sowed prior to the wetland filling with water.

5. After the wetland has filled with water, emergent wetland plant plugs or containerized plants of the same native species (see Table 2) shall be planted on three foot centers.

6. A minimum of six species from the list on Table 2 shall be used with no one species exceeding 25% of the total quantity.

7. Buttonbrush (*Cephalanthus occidentalis*) shall be planted utilizing 1–gallon contanerized stock during the winter after the depressions are graded. Buttonbrush shall be planted in grouped patterns at a density of 50 per acre.

8. The plug and containerized shrubs plantings shall be determined once the depressins have been graded and the water depths under normal conditions have been evaluated. Available plant materials shall then be grouped based on their affinity to water, and assambeled based on their tolerance to water. Those species that tolerate inundation the longest shall be planted in the deepest areas and those species that tolerate the least amount of inundation shall be planted in the shallower areas.

9. Any changes to the approved list of species to be planted (see Table 2) most be approved by the responsible USACE oficial prior to plantings. This modification shalll include written notification of change in species composition and the proposed replacement species.

Zone 3:

10. Existing herbacious cover shall be shredded to reduce the height and facilitate the drilling of the native seed mix.

11. The native grass seed shall be drilled with a no–till native grass drill equiped with with a native grass seed box and agitator.

12. The restoration activities shall occur in the winter and th eplanting of the grass seed in the spring.

13. The native seed mix shall include the same species listed for Zone 1 (see Table 1).

Table 1
Native Prarie Grass Species and Rate to be Planted in the Zone 1 Mitigation Areas

Species	Pounds of Pure Live Seed Per Acre
Bushybluestem (*Andropogonglomeratus*)	8
Broomsedgebluestem (*Andropogonvirginicus*)	8
Prairiecordgrass (*Spartinapectinata*)	3
EasternGamagrass (*Tripsacumdactyloides*)	8
Canadawildrye (*Elymuscanadensis*)	10
Virginiawildrye (*Elymusvirginiana*)	10
Floridapaspalum (*Paspalumfloridanum*)	8
Switchgrass (*Panicumvirgatum*)	3
Total	**58**

Table 2
Zone 2 Mitigation Areas Plant Species by Scientific Name

Cyperus:	**Cyperus:**	**Eleocharis:**	**Polygonum**
Cyperus acumjnatus	*Cyperus spectabilis*	*Eleocharis radicans*	*Polygonum convolvulus*
Cyperus aggregatus	*Cyperus sphaerolepis*	*Eleocharis reverchonii*	*Polygonum glabrum*
Cyperus articulatus	*Cyperus squanosus*	*Eleocharis rostellata*	*Polygonum hydropiper*
Cyperus bipaftitus	*Cyperus sttigosus*	*Eleocharis tenuis*	*Polygonum hydropiperoides*
Cyperus cephalanthus	*Cyperus surindmensis*	*Eleocharis tortilis*	*Polygonum lacerum*
Qperus compressus	*Cyperus tetragonus*	*Eleocharis tuberculosa*	*Polygonum mejsnerjanum*
Cyperus croceus	*Cyperus thyrsillorus*	*Eleocharis vivipara*	*Polygonum punctatum*
Cyperus cuspidatus	*Cyperus virens*	*Eleocharis wolfii*	*Polygonum ramosissimum*
Cyperus djgitatus	**Echinodorus:**	**Equisetum:**	*Polygonum robustius*
Cyperus drummondii	*Echinodorus befteroi*	*Equisetum ferrissii*	*Polygonum sagjttdtum*
Cyperus echjnatus	*Echinodorus tenellus*	*Equisetum hyemale*	*Polygonum scandens*
Cyperus elegans	**Eleocharis:**	**Fimbristylis:**	*Polygonum setaceum*
Cyperus eragrostis	*Eleocharis acicularis*	*Fimbristylis annua*	*Polygonum striatulum*
Cyperus erythorhizos	*Eleocharis acutangula*	*Fimbristylis autumnalis*	*Polygonum tenue*
Cyperus fendlerianus	*Eleocharis albjda*	*Fimbristylis caroliniana*	*Polygonum virginianum*
Cyperus flavescens	*Eleocharis atropurpurea*	*Fimbristylis castanea*	**Scirpus:**
Cyperus flavicomus	*Eleocharis austrotexana*	*Fimbristylis decjpjens*	*Scirpus atrovirens*
Cyperus fugax	*Eleocharis baldwinii*	*Fimbristylis djchotoma*	*Scirpus cyperinus*
Cyperus grayoides	*Eleocharis brachyaerpa*	*Fimbristylis ljttoralis*	*Scjrpus divaricatus*
Cyperus haspan	*Eleocharis brjttonii*	*Fimbristylis puberula*	*Scirpus georgianus*
Cyperus hermaphroditus	*Eleocharis cancellata*	*Fimbristylis tomentosa*	*Scirpus pallidus*
Cyperus hystricinus	*Eleocharis cellulosa*	*Fimbristylis vahlii*	*Scirpus pendulus*
Cyperus laevjgatus	*Eleocharis compressa*	**Ludwigia:**	**Nymphaea:**
Cyperus lancastriensis	*Eleocharis cylindrica*	*Ludwigia alternifolia*	*Nymphaea ampla*
Cyperus lanceolatus	*Eleocharis elongata*	*Ludwigia glandulosa*	*Nymphaea elegans*
Cyperus lentiginosus	*Eleocharis engelmannii*	*Ludwigid grandiflora*	*Nymphaea odorata*
Cyperus lupulinus	*Eleocharis equisetoides*	*Ludwigia hirtella*	**Polygonum:**
Cyperus niger	*Eleocharis fallax*	*Ludwjgia leptocarpa*	*Polygonum amphibium*
Cyperus ochraceus	*Eleocharis flavescens*	*Ludwjgja linearis*	*Polygunum argyrocoleon*
Cyperus odoratus	*Eleocharis geniculata*	*Ludwigia microcarpa*	*Polygonum caespitosum*
Cyperus onerosus	*Eleocharis interstincta*	*Ludwigia octovalvis*	
Cyperus oxylepis	*Eleocharis ldnceolatd*	*Ludwigia palustris*	
Cyperus pallidicolor	*Eleocharis macrostachya*	*Ludwigia peruviana*	
Cyperus plukenetij	*Eleocharis melanocarpa*	*Ludwjgia pilosa*	
Cyperus polystachyos	*Eleocharis microcarpa*	*Ludwigia repens*	
Cyperus pseudovegetus	*Eleocharis minima*	*Ludwigia sphaerocarpa*	
Cyperus reflexus	*Eleocharis montana*		
Cyperus refractus	*Eleocharis montevidensis*		
Cyperus retroflexus	*Eleocharis obtusa*		
Cyperus retrofractus	*Eleocharis occulata*		
Cyperus retrorsus	*Eleocharis olivacea*		
Cyperus schweiniaii	*Eleocharis palustris*		
Cyperus seslerioides	*Eleocharis parvula*		
Cyperus setigerus	*Eleocharis quadrangulata*		

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MITIGATION PLAN
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 24A/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	As Shown	02-11	MT03	06-11-107B

NOTES

Zone 1:

1. Seeds shall be drilled into the ground approximately ⅛ to ¼ inch deep in late fall or early spring.

2. Any changes to the approved list of species to be planted (see Table 1) most be approved by the responsible USACE oficial prior to plantings. This modification shalll include written notification of change in species composition and the proposed replacement species.

Zone 2:

3. Wetland palnt seed shall be broadcast at 20 lb/ac and raked immediately after the grading of the wetland areas and the redressing of topsoil. Examples of suitable plaint species in the wetland plant mix include: Smartweed (*Polygomum spp.* [see Table 2]), Water primrose (*Ludwigia spp.* [see Table 2]), Bulrush (*Scirpus spp.* [see Table 2]), Common rush (*Juncus effuses* [see Table 2]), Duck Potato (*Sagittaria latifolia* [see Table 2]), Water lily (*Numphaea spp.* [see Table 2]), Horsetail (*Equisetum spp.* [see Table 2]), Lizard's tail (*Saururus cernuus* [see Table 2]), Ravenfoot sedge (*Carex crus–corv* [see Table 2]), Flatsedge (*Cyperus spp.* [see Table 2]), Burrhead (*Echinodorus spp.* [see Table 2]), Spikerush (*Eleocharis spp.* [see Table 2]), Fimbry (*Fimbristylis spp.* [see Table 2]).

4. The wetland seed mix shall be sowed prior to the wetland filling with water.

5. After the wetland has filled with water, emergent wetland plant plugs or containerized plants of the same native species (see Table 2) shall be planted on three foot centers.

6. A minimum of six species from the list on Table 2 shall be used with no one species exceeding 25% of the total quantity.

7. Buttonbrush (*Cephalanthus occidentalis*) shall be planted utilizing 1–gallon contanerized stock during the winter after the depressions are graded. Buttonbrush shall be planted in grouped patterns at a density of 50 per acre.

8. The plug and containerized shrubs plantings shall be determined once the depressins have been graded and the water depths under normal conditions have been evaluated. Available plant materials shall then be grouped based on their affinity to water, and assambeled based on their tolerance to water. Those species that tolerate inundation the longest shall be planted in the deepest areas and those species that tolerate the least amount of inundation shall be planted in the shallower areas.

9. Any changes to the approved list of species to be planted (see Table 2) most be approved by the responsible USACE oficial prior to plantings. This modification shalll include written notification of change in species composition and the proposed replacement species.

Zone 3:

10. Existing herbacious cover shall be shredded to reduce the height and facilitate the drilling of the native seed mix.

11. The native grass seed shall be drilled with a no–till native grass drill equiped with with a native grass seed box and agitator.

12. The restoration activities shall occur in the winter and th eplanting of the grass seed in the spring.

13. The native seed mix shall include the same species listed for Zone 1 (see Table 1).

Table 1
Native Prarie Grass Species and Rate to be Planted in the Zone 1 Mitigation Areas

Species	Pounds of Pure Live Seed Per Acre
Bushybluestem (*Andropogonglomeratus*)	8
Broomsedgebluestem (*Andropogonvirginicus*)	8
Prairiecordgrass (*Spartinapectinata*)	3
EasternGamagrass (*Tripsacumdactyloides*)	8
Canadawildrye (*Elymuscanadensis*)	10
Virginiawildrye (*Elymusvirginiana*)	10
Floridapaspalum (*Paspalumfloridanum*)	8
Switchgrass (*Panicumvirgatum*)	3
Total	**58**

Table 2
Zone 2 Mitigation Areas Plant Species by Scientific Name

Cyperus:	**Cyperus:**	**Eleocharis:**	**Polygonum**
Cyperus acumjnatus	*Cyperus spectabilis*	*Eleocharis radicans*	*Polygonum convolvulus*
Cyperus aggregatus	*Cyperus sphaerolepis*	*Eleocharis reverchonii*	*Polygonum glabrum*
Cyperus articulatus	*Cyperus squanosus*	*Eleocharis rostellata*	*Polygonum hydropiper*
Cyperus bipaftitus	*Cyperus sttigosus*	*Eleocharis tenuis*	*Polygonum hydropiperoides*
Cyperus cephalanthus	*Cyperus surindmensis*	*Eleocharis tortilis*	*Polygonum lacerum*
Qperus compressus	*Cyperus tetragonus*	*Eleocharis tuberculosa*	*Polygonum mejsnerjanum*
Cyperus croceus	*Cyperus thyrsillorus*	*Eleocharis vivipara*	*Polygonum punctatum*
Cyperus cuspidatus	*Cyperus virens*	*Eleocharis wolfii*	*Polygonum ramosissimum*
Cyperus djgitatus	**Echinodorus:**	**Equisetum:**	*Polygonum robustius*
Cyperus drummondii	*Echinodorus befteroi*	*Equisetum ferrissii*	*Polygonum sagjttdtum*
Cyperus echjnatus	*Echinodorus tenellus*	*Equisetum hyemale*	*Polygonum scandens*
Cyperus elegans	**Eleocharis:**	**Fimbristylis:**	*Polygonum setaceum*
Cyperus eragrostis	*Eleocharis acicularis*	*Fimbristylis annua*	*Polygonum striatulum*
Cyperus erythorhizos	*Eleocharis acutangula*	*Fimbristylis autumnalis*	*Polygonum tenue*
Cyperus fendlerianus	*Eleocharis albjda*	*Fimbristylis caroliniana*	*Polygonum virginianum*
Cyperus flavescens	*Eleocharis atropurpurea*	*Fimbristylis castanea*	**Scirpus:**
Cyperus flavicomus	*Eleocharis austrotexana*	*Fimbristylis decjpjens*	*Scirpus atrovirens*
Cyperus fugax	*Eleocharis baldwinii*	*Fimbristylis djchotoma*	*Scirpus cyperinus*
Cyperus grayoides	*Eleocharis brachyaerpa*	*Fimbristylis ljttoralis*	*Scjrpus divaricatus*
Cyperus haspan	*Eleocharis brjttonii*	*Fimbristylis puberula*	*Scirpus georgianus*
Cyperus hermaphroditus	*Eleocharis cancellata*	*Fimbristylis tomentosa*	*Scirpus pallidus*
Cyperus hystricinus	*Eleocharis cellulosa*	*Fimbristylis vahlii*	*Scirpus pendulus*
Cyperus laevjgatus	*Eleocharis compressa*	**Ludwigia:**	**Nymphaea:**
Cyperus lancastriensis	*Eleocharis cylindrica*	*Ludwigia alternifolia*	*Nymphaea ampla*
Cyperus lanceolatus	*Eleocharis elongata*	*Ludwigia glandulosa*	*Nymphaea elegans*
Cyperus lentiginosus	*Eleocharis engelmannii*	*Ludwigid grandiflora*	*Nymphaea odorata*
Cyperus lupulinus	*Eleocharis equisetoides*	*Ludwigia hirtella*	**Polygonum:**
Cyperus niger	*Eleocharis fallax*	*Ludwjgia leptocarpa*	*Polygonum amphibium*
Cyperus ochraceus	*Eleocharis flavescens*	*Ludwjgja linearis*	*Polygunum argyrocoleon*
Cyperus odoratus	*Eleocharis geniculata*	*Ludwigia microcarpa*	*Polygonum caespitosum*
Cyperus onerosus	*Eleocharis interstincta*	*Ludwigia octovalvis*	
Cyperus oxylepis	*Eleocharis ldnceolatd*	*Ludwigia palustris*	
Cyperus pallidicolor	*Eleocharis macrostachya*	*Ludwigia peruviana*	
Cyperus plukenetij	*Eleocharis melanocarpa*	*Ludwjgia pilosa*	
Cyperus polystachyos	*Eleocharis microcarpa*	*Ludwigia repens*	
Cyperus pseudovegetus	*Eleocharis minima*	*Ludwigia sphaerocarpa*	
Cyperus reflexus	*Eleocharis montana*		
Cyperus refractus	*Eleocharis montevidensis*		
Cyperus retroflexus	*Eleocharis obtusa*		
Cyperus retrofractus	*Eleocharis occulata*		
Cyperus retrorsus	*Eleocharis olivacea*		
Cyperus schweiniaii	*Eleocharis palustris*		
Cyperus seslerioides	*Eleocharis parvula*		
Cyperus setigerus	*Eleocharis quadrangulata*		

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REVISIONS	DATE

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NATHAN D. MAIER
CONSULTING ENGINEERS, INC.
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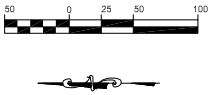
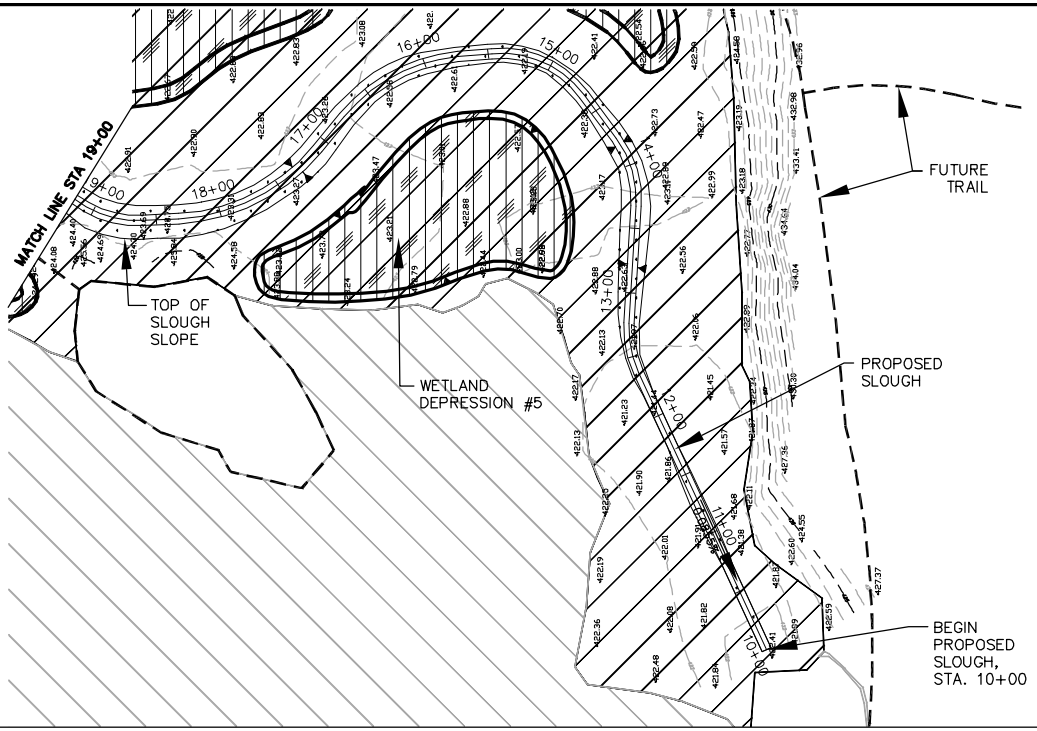
Dallas, Texas 75231 (214) 739-4741

MITIGATION PLAN
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 25/32

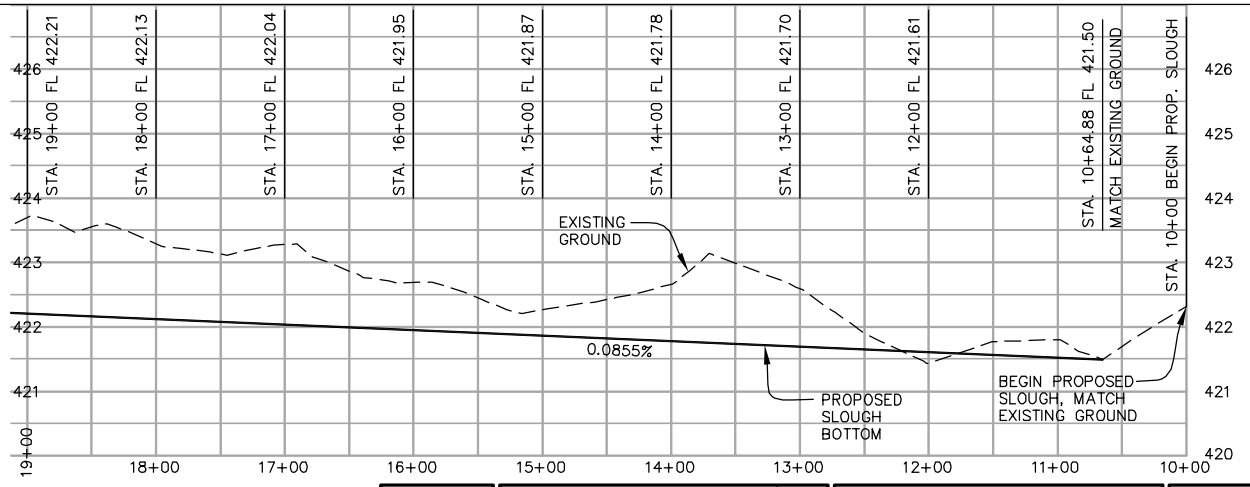
DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	As Shown	02-11	MT03	06-11-107B





LEGEND

- Future Trail
- Enhancement Zone 1 (See Notes 1–2, Sht 24A)
- Enhancement Zone 2 (See Notes 3–9, Sht 24A)
- Enhancement Zone 3 for Existing Jurisdictional Area #1 Herbaceus Wetlands (See Notes 10–13, Sht 24A)
- Enhancement Zone 3 for Existing Jurisdictional Area #2 Shrubs Wetlands (See Notes 10–13, Sht 24A)



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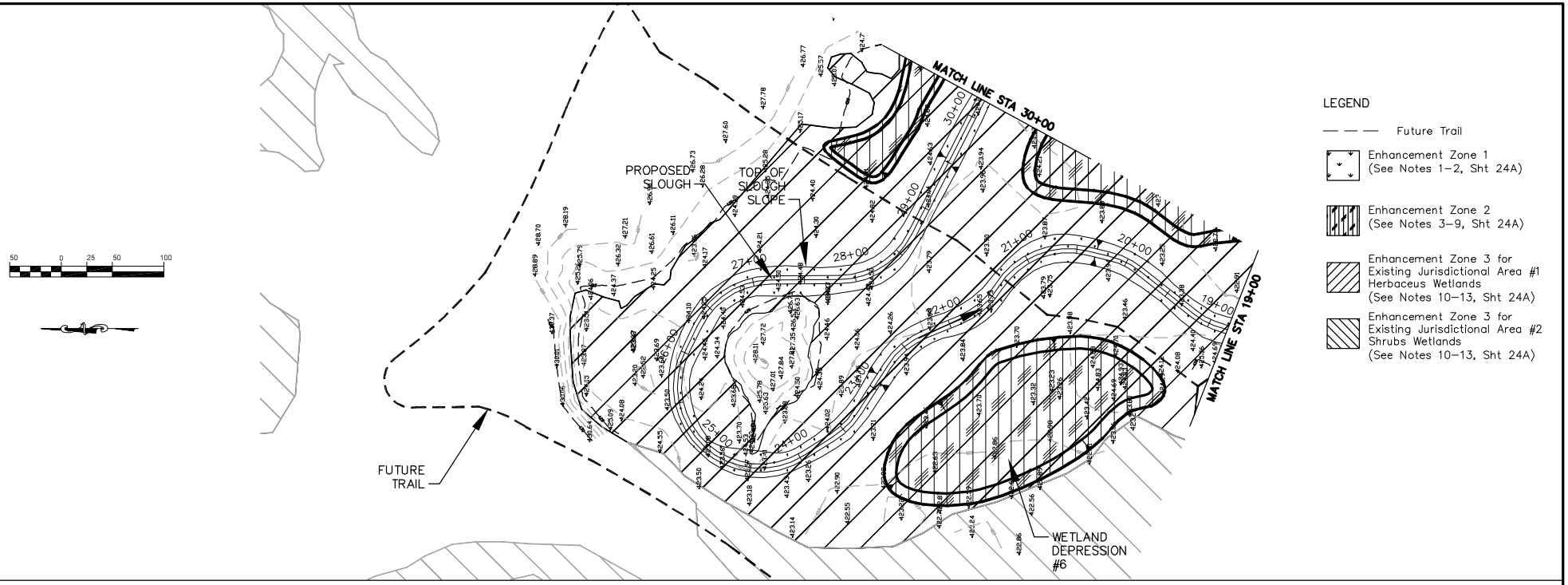
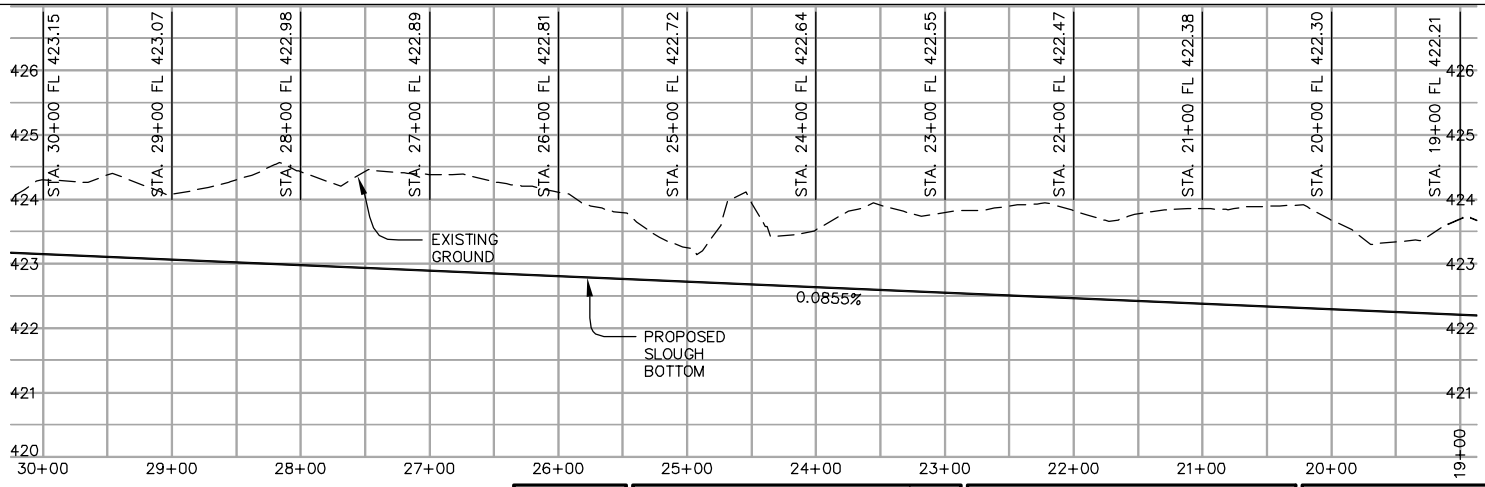
MITIGATION PLAN AND PROFILE
SLOUGH STATIONS 10+00 TO 19+00
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 25/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	As Shown	02-11	PP02	06-11-107B





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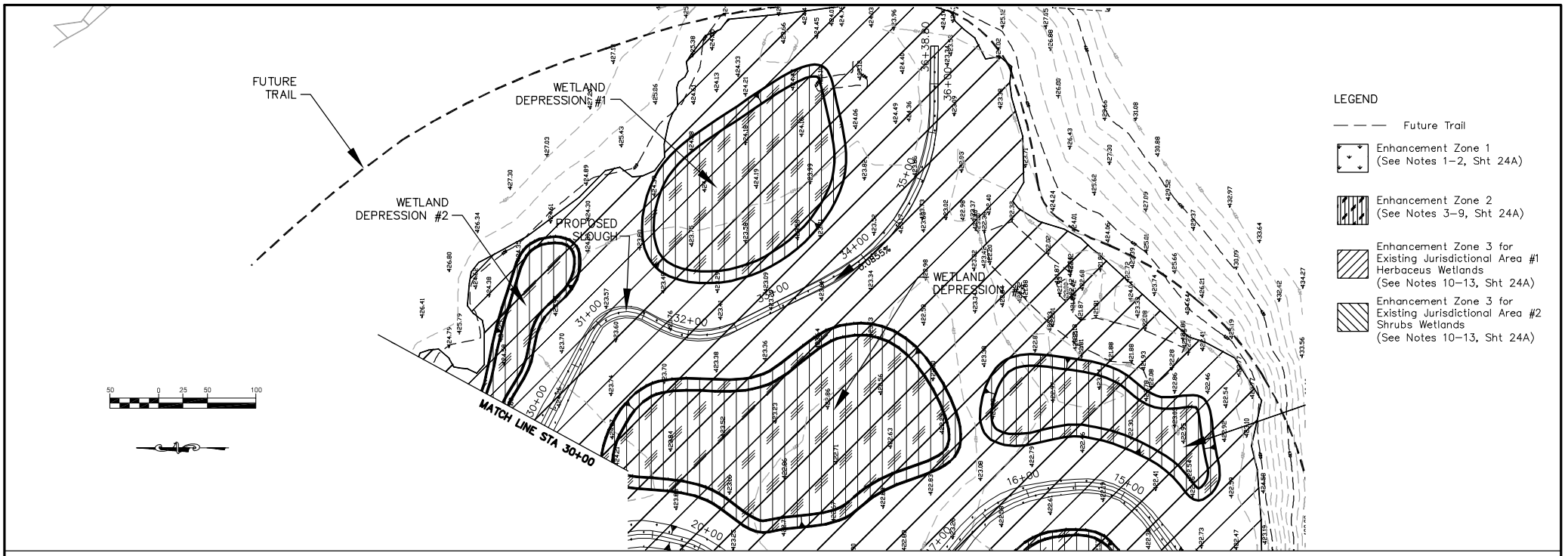
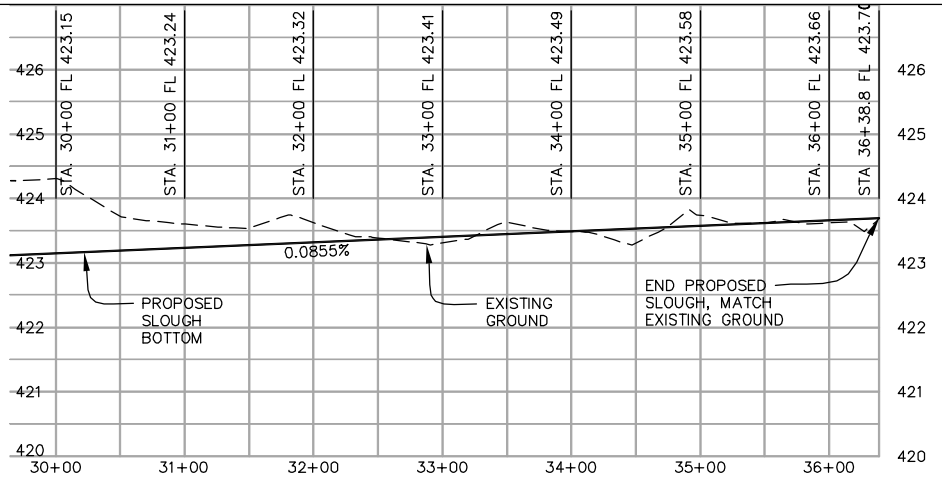
MITIGATION PLAN AND PROFILE
SLOUGH STATIONS 19+00 TO 30+00
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 26/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	As Shown	02-11	PP02	06-11-107B





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MITIGATION PLAN AND PROFILE
SLOUGH STATIONS 30+00 TO 36+80
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 27/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
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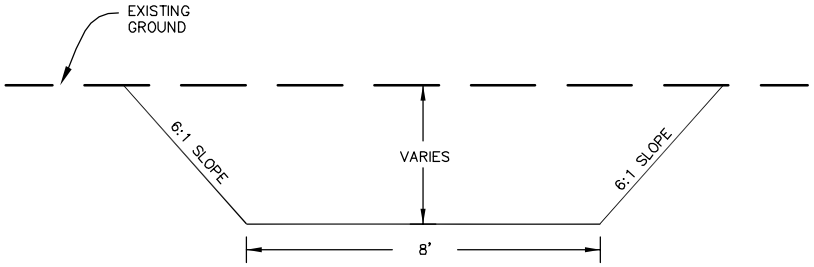
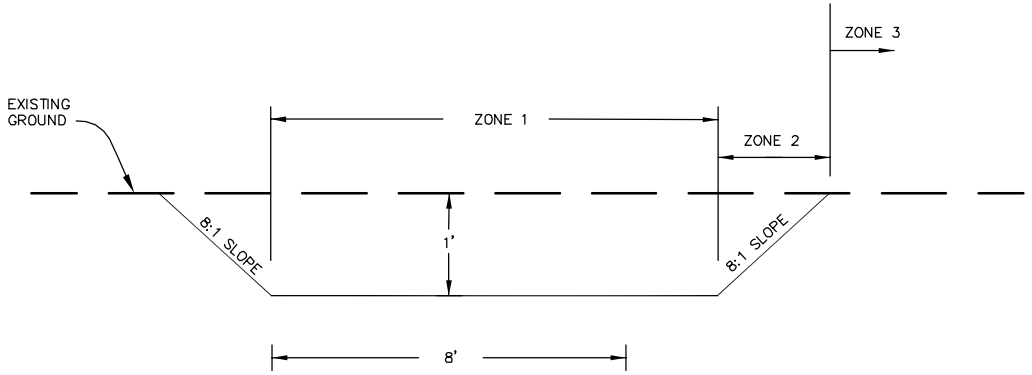


TYPICAL SLOUGH SECTION
N.T.S.

PROPOSED PLANTINGS:
- ZONE 2 FOR SLOUGH
- ZONE 3 ABOVE SLOUGH SIDESLOPES



TYPICAL WETLAND DEPRESSION SECTION
N.T.S.

PROPOSED PLANTINGS:
- ZONE 1 ON DEPRESSION BOTTOM
- ZONE 2 ON DEPRESSION SIDESLOPES
- ZONE 3 ABOVE DEPRESSION SIDESLOPES

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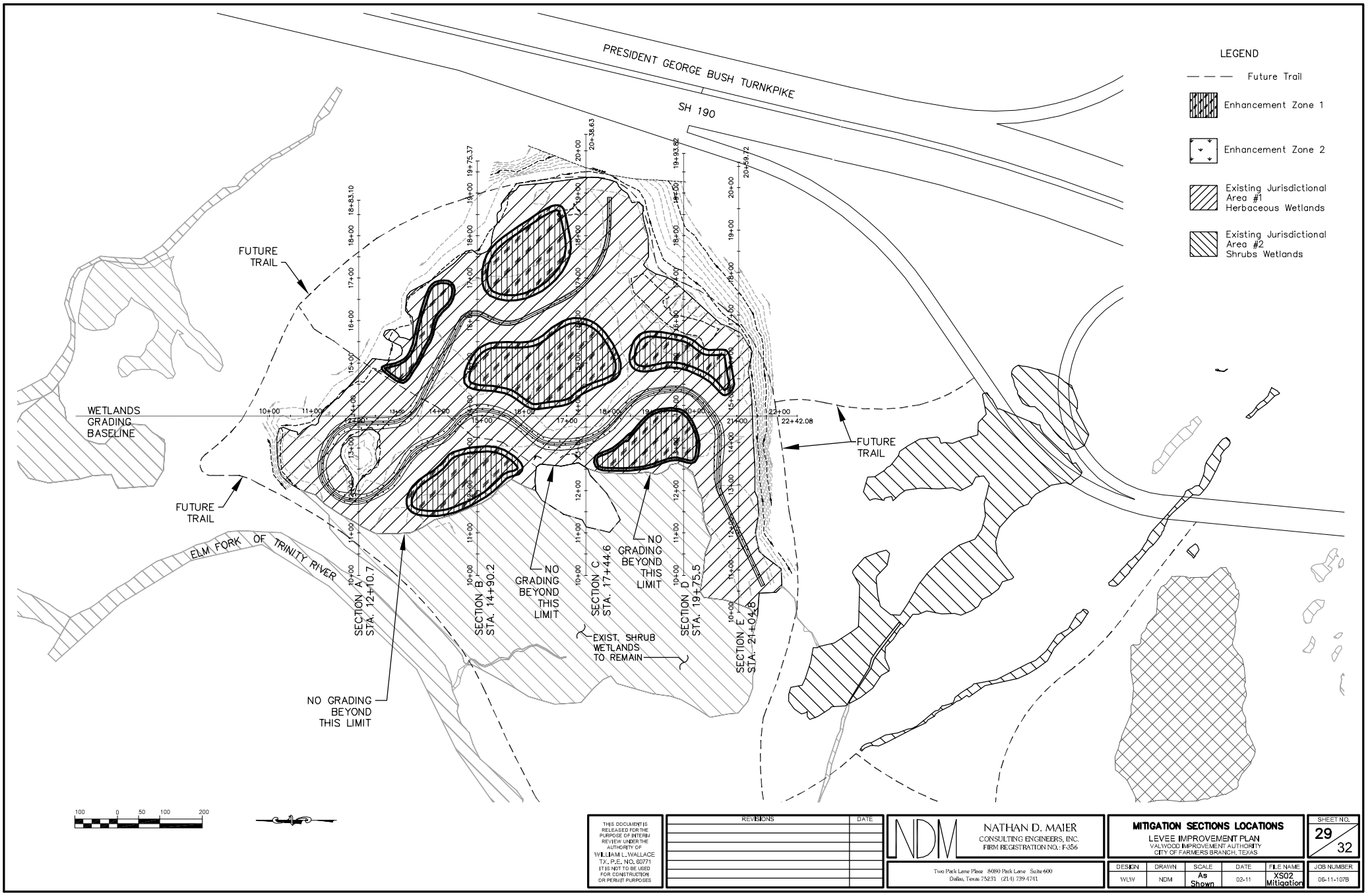
MITIGATION DETAILS
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

DESIGN	DRAWN	SCALE	DATE	FILE NAME
WLW	NDM	As Shown	02-11	XS02 Mitigation

JOB NUMBER
06-11-107B

SHEET NO. 28/32



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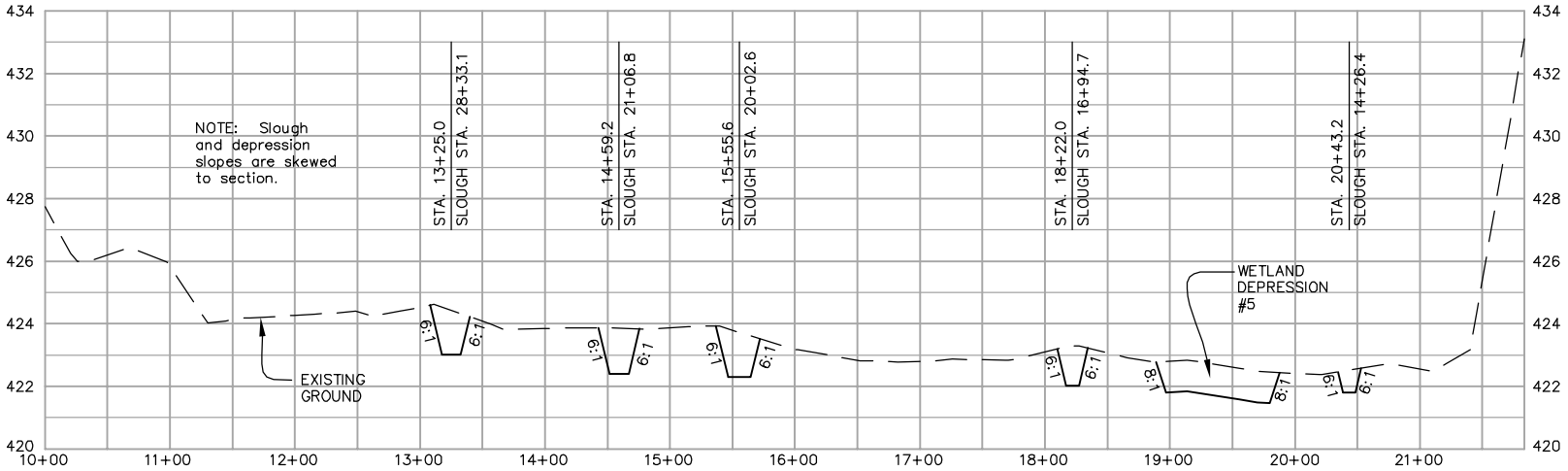
MITIGATION SECTIONS LOCATIONS
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 29/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	As Shown	02-11	XS02 Mitigation	06-11-107B

Wetlands Grading Baseline



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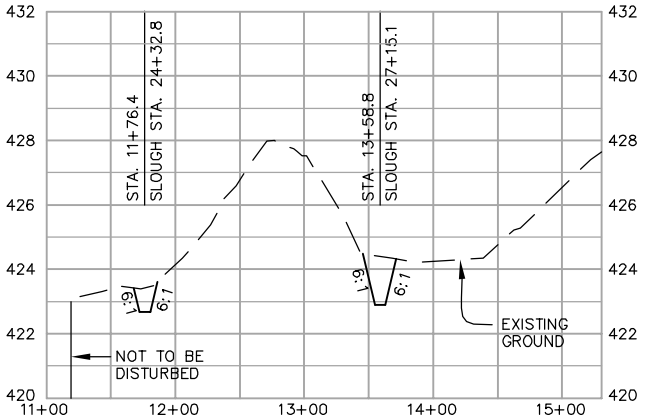

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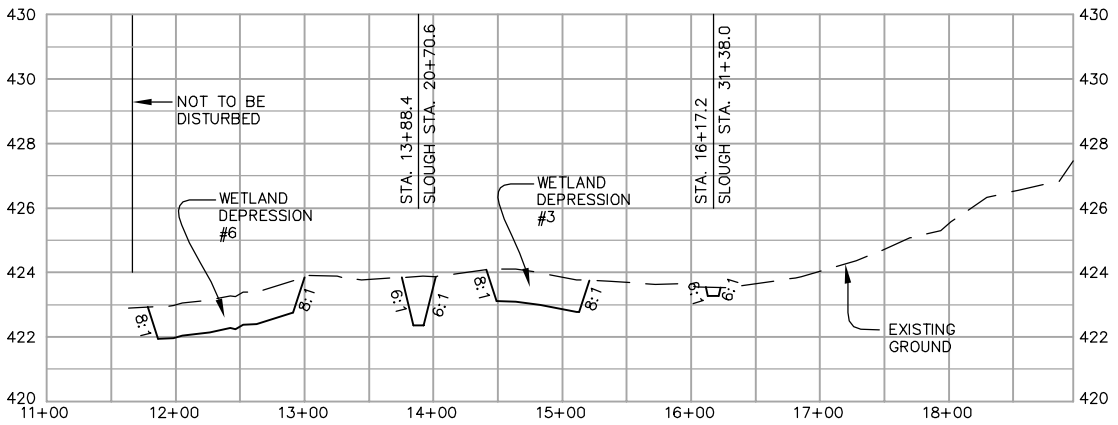

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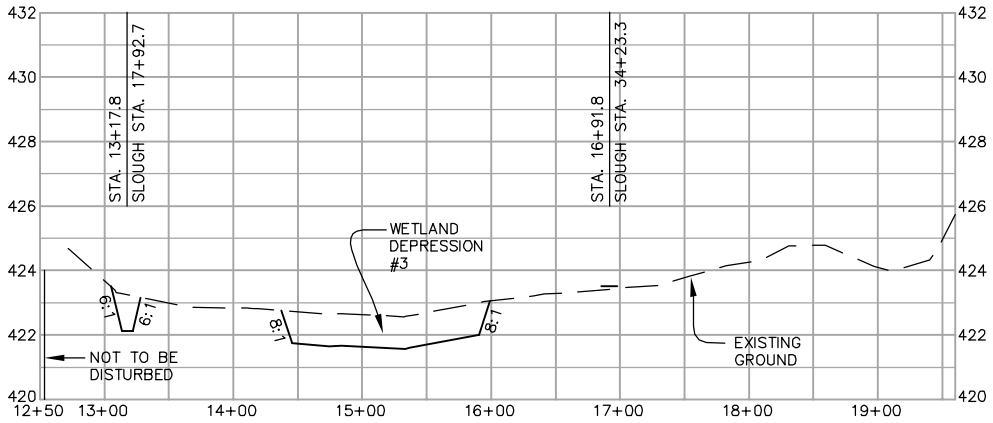
MITIGATION SECTIONS
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 30/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM	As Shown	02-11	XS02 Mitigation	06-11-107B

Section C



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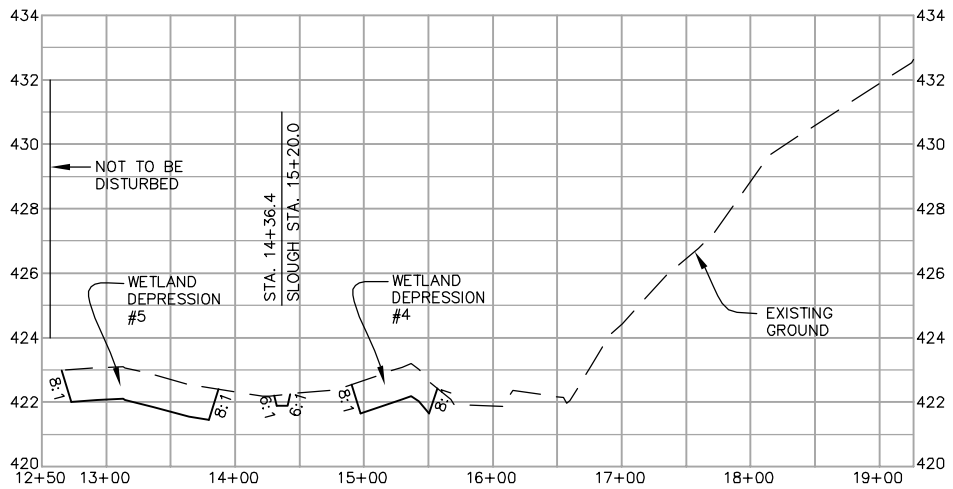

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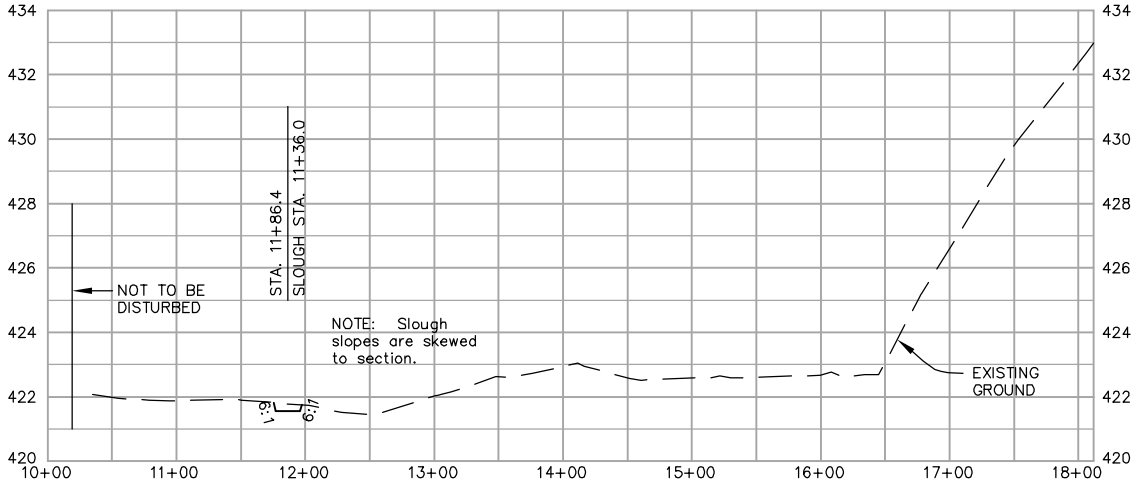

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MITIGATION SECTIONS
LEVEE IMPROVEMENT PLAN
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CITY OF FARMERS BRANCH, TEXAS

DESIGN	DRAWN	SCALE	DATE	FILE NAME
WLW	NDM	As Shown	02-11	XS02 Mitigation

JOB NUMBER: 06-11-107B

SHEET NO. 31/32

GENERAL PLANTING REQUIREMENTS

1. Remove Willows and other invasive plant species from Mitigation Area prior to placing proposed plantings.

2. Erosion Control Fabric – Erosion control fabric shall be Recyclex TRM or approved equal. Any approved equal shall be made of recycled post consumer material, be a permanent material, and provide the same or better engineering properties.

3. Application – Spray native grass seed onto prepared slopes using hydromulching equipment without the addition of the mulch material. Immediately after applying the native grass seed spray hydromulch over the seeded area using a product based on wood fiber (eg: Terraguard or Soilguard).

4. Temporary irrigation – Provide temporary irrigation to ensure germination of seed and establishment of plants. Temporary irrigation shall be provided until plants are established and for a minimum of 2 months.

5. Additional disturbed area beyond the Mitigation Area shall be stabilized with Buffalo Grass at a rate of 90 lbs/acre.

PLANTING ZONE REQUIREMENTS

Planting Zone #1

Prepare proposed slope and place erosion control fabric (as shown in sections). Plant rhizomes below coir logs prior to placement of logs. Earthfill gabions prior to planting.

Planting Materials – The following materials will be used in this zone.

Rhizomes or live plants with attached leaves of:
Sawgrass
Hardstem bulrush
Squarestem spikerush
} 2 plants / sq. ft.

Planting Requirements – Zone 1 plants shall consist of at least 2 species of the materials proposed. No plant species shall exceed 55% of the overall plant materials. Combined plantings in the area will be two (2) plants or four (4) 8" rhizomes/sq. ft.

Planting Zone #2

Prepare slope within this zone, as shown. Install and anchor erosion control fabric into prepared slope per manufacturer's and Engineer's directions. Spread 1 to 2 inches of topsoil over the installed erosion control blanket, ensuring that topsoil fills the blanket and there are no air pockets. Place native grass seed per General Requirements.

Planting Materials – The following materials will be used in this zone.

Canada wild rye – 20 lbs/acre
Broom sedge – 10 lbs/acre
Inland sea oats – 10 lbs/acre
Switchgrass – 5 lbs/acre
Bushy bluestem – 10 lbs/acre
Eastern gamagrass – 12 lbs/acre

Planting Requirements – Zone 2 plants shall consist of at least 4 species of the materials. Final plant species shall provide an overall density of 67 lbs/acre. No plant species shall exceed 35% of the overall plant materials.

Planting Zone #3

Prepare area by removing invasive species and scarifying soil for planting areas. Install and anchor erosion control fabric into prepared slope per manufacturer's and Engineer's directions. Spread 1 to 2 inches of topsoil over the installed erosion control blanket, ensuring that topsoil fills the blanket and there are no air pockets. Place native grass seed per General Requirements.

Planting Materials – The following materials will be used in this zone is a combination or turf and bunch grasses.

Buffalo Grass – 30 lbs/acre
Indian Grass – 5 lbs/acre
Bushy Blue Stem – 10 lbs/acre
Switchgrass – 5 lbs/acre
Eastern gamagrass – 10 lbs/acre
Little Bluestem – 30 lbs/acre

Planting Requirements – Zone 3 native grasses shall consist of at least 4 species of the materials. Final overall seed application shall be 90 lbs/acre. No native grass species shall exceed 40% of the overall application rate.

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PLANTING ZONE REQUIREMENTS
LEVEE IMPROVEMENT PLAN
VALWOOD IMPROVEMENT AUTHORITY
CITY OF FARMERS BRANCH, TEXAS

SHEET NO. 32/32

DESIGN	DRAWN	SCALE	DATE	FILE NAME	JOB NUMBER
WLW	NDM		02-11	LA01	08-11-107B

VALWOOD IMPROVEMENT AUTHORITY
AND
TRINITY RAILWAY EXPRESS

PLANS OF PROPOSED
BRIDGE REPLACEMENT

MP 703.57 on the BNSF MADILL SUBDIVISION

Farmers Branch, Dallas County, Texas

LENGTH OF PROJECT:

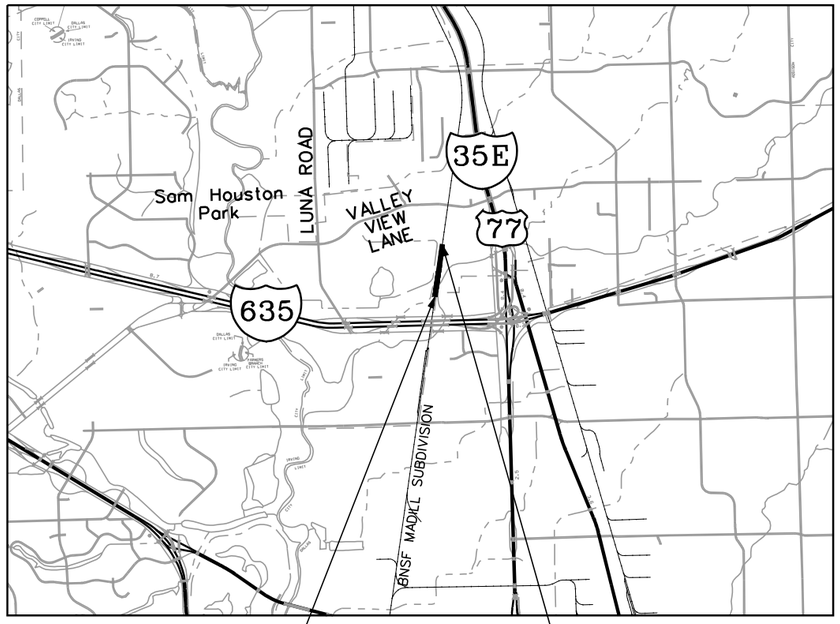
PERMANENT TRACKBED:	3,564 ft	=	0.675 mi
TEMPORARY TRACKBED:	929 ft	=	0.176 mi
TEMPORARY BRIDGE:	0 ft	=	0 mi
PERMANENT BRIDGE:	220 ft	=	0.042 mi
TOTAL	4,713 ft	=	0.893 mi

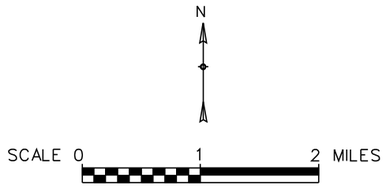
DESIGN SPEED

EXISTING MAIN	= 30 mph
PROPOSED MAIN	= 30 mph
PROPOSED SHOOFLY	= 30 mph

TYPE OF WORK: REPLACING AN EXISTING 113' SINGLE TRACK OPEN DECK TIMBER PILE TRESTLE WITH A 220' DUAL TRACK CONCRETE BOX BEAM BRIDGE ON DRIVEN STEEL PILES.

CONSISTING OF: GRADING, STRUCTURES, RAIL, TIES, BALLAST, AND APPURTENANCES.





INDEX OF SHEETS

PRELIMINARY DESIGN

PRELIMINARY FOR REVIEW ONLY

GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

TITLE SHEET

SCALE: NOT TO SCALE

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 1

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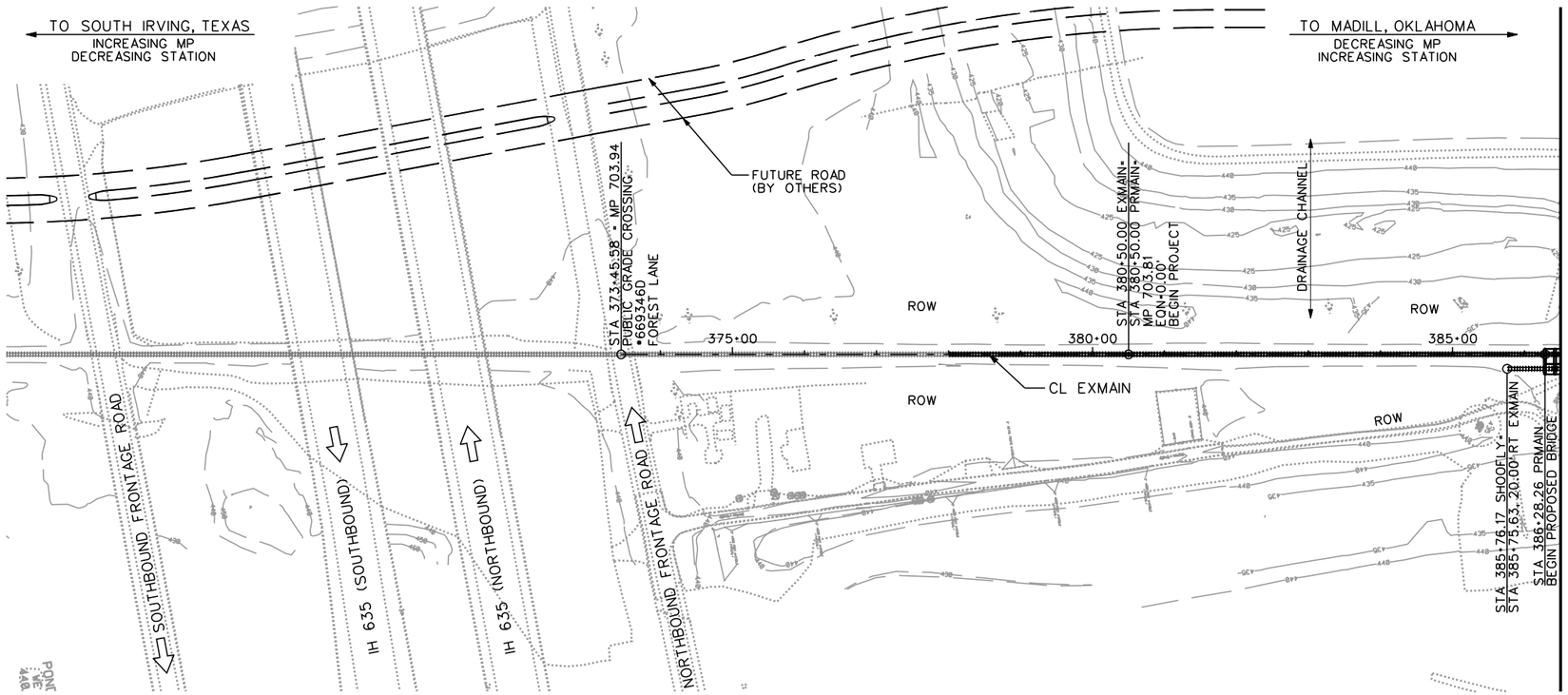

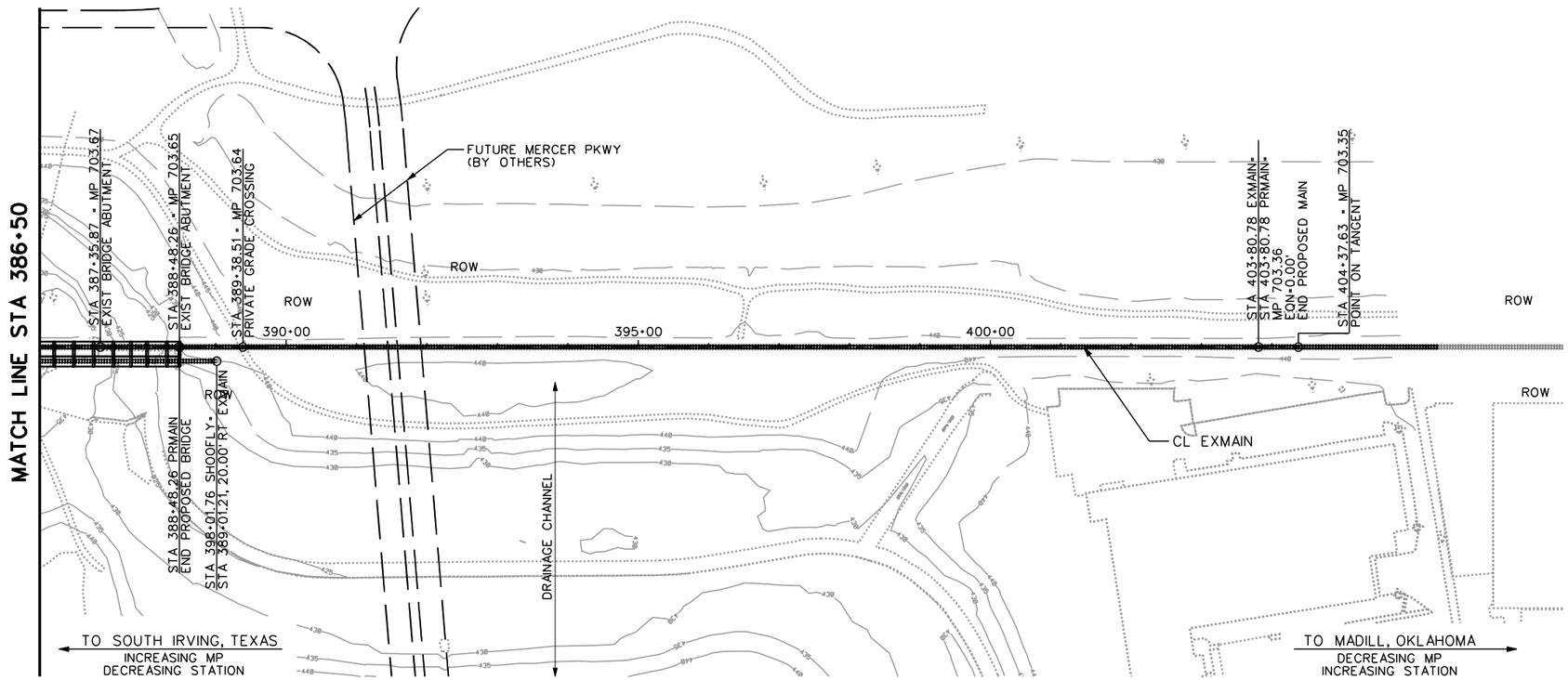

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SCALE IN FEET

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13-SEP-2011

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PROJECT LAYOUT

SCALE: 1" = 200'

SHEET 1 OF 1

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Between Gribble MP 704.9 and Carrollton MP 700.5
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VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION	BNSF MADILL
MILEPOST REFERENCE	703.57
MUNICIPALITY	FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER	2

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RAILROAD GENERAL NOTES

RAILROADS

THE TRINITY RAILWAY EXPRESS IS HEREINAFTER REFERRED TO AS THE "RAILROAD".

NOTIFICATION OF WORK

THE CONTRACTOR IS REQUIRED TO GIVE THE RAILROAD AT LEAST 30 WORKING DAYS ADVANCE NOTICE, IN WRITING, BEFORE ANY WORK IS STARTED ON THE SITE. TO AVOID HAZARDS, THE RAILROAD MAY HAVE A REPRESENTATIVE PRESENT, IF DEEMED NECESSARY, FOR THE PURPOSE OF INSPECTION AND THE ISSUANCE OF ANY APPROPRIATE INSTRUCTIONS FOR RAILWAY OPERATIONS DURING THE CONSTRUCTION OF THE THIS WORK PACKAGE AS IT RELATES TO THE RAILROAD. THE CONTRACTOR SHALL NOTIFY THE RESPONSIBLE PERSONNEL AT:

TRINITY RAILWAY EXPRESS
ACTING CHIEF ENGINEER/AVP COMMUTER RAIL
WAYNE FRIESNER
(214) 749-3566

PRE-WORK MEETING

PRIOR TO EACH EVENT OF WORKING ON THE RAILROAD'S RIGHT-OF-WAY, OR IN THE VICINITY OF IT'S TRACKS, CONTACT MUST BE MADE WITH THE RAILROAD TO COORDINATE THE WORK. IT IS VITAL THAT THE RAILROAD BE CONTACTED PRIOR TO GETTING ON THE RAILROAD'S PROPERTY.

COORDINATION WITH RAILROAD

THE CONTRACTOR IS REQUIRED TO GIVE THE RAILROAD AT LEAST 30 WORKING DAYS ADVANCE NOTICE, IN WRITING, BEFORE ANY WORK IS STARTED ON THE SITE. TO AVOID HAZARDS, THE RAILROAD MAY HAVE A REPRESENTATIVE PRESENT, IF DEEMED NECESSARY, FOR THE PURPOSE OF INSPECTION AND THE ISSUANCE OF ANY APPROPRIATE INSTRUCTIONS FOR RAILWAY OPERATIONS DURING THE CONSTRUCTION OF THIS WORK PACKAGE AS IT RELATES TO THE RAILROAD. THE CONTRACTOR SHALL CONDUCT CONSTRUCTION OPERATIONS IN A MANNER WHICH WILL NOT DELAY OR INTERFERE WITH TRAIN OPERATIONS. CONSTRUCTION ACTIVITY WITHIN 25' OF ACTIVE TRACKS WILL REQUIRE A FLAGMAN TO BE PROVIDED BY THE RAILROAD AT THE STATE'S EXPENSE. PRIOR TO EACH EVENT OF WORKING ON THE RAILROAD RIGHT-OF-WAY, OR IN THE VICINITY OF IT'S TRACKS, CONTACT MUST BE MADE BY THE CONTRACTOR WITH THE RAILROAD TO COORDINATE THE WORK. IT IS VITAL THAT THE RAILROAD BE CONTACTED PRIOR TO GETTING ON THE RAILROAD'S PROPERTY. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE RAILROAD, A MINIMUM OF 30 CALENDAR DAYS IN ADVANCE OF WHEN FLAGGING IS REQUIRED. SPECIAL PERMISSION MUST BE OBTAINED FROM THE RAILROAD BEFORE MOVING ANY EQUIPMENT OR OTHER OBJECT WHICH COULD MAKE THE TRACK IMPASSABLE.

RAILROAD FLAGGERS, PROTECTIVE SERVICES, AND PROTECTIVE DEVICES WILL BE REQUIRED, BUT NOT BE LIMITED TO EVENTS WHEN:

- THE CONTRACTORS WORK ACTIVITIES ARE WITHIN TWENTY-FIVE (25) FEET OF THE TRACK, MEASURED FROM THE TRACK CENTERLINE.
- ACTIVITIES ARE OVER OR UNDER THE TRACK
- CRANES OR SIMILAR EQUIPMENT WILL BE POSITIONED WHERE THEY COULD FOUL THE TRACK IF THEY TIPPED OVER OR EXPERIENCED SOME OTHER CATASTROPHIC EVENT.
- IN THE OPINION OF THE RAILROAD REPRESENTATIVE:
  1) IT IS NECESSARY TO SAFEGUARD RAILROAD PROPERTY, EMPLOYEES, TRAINS, ENGINES, AND FACILITIES.
  2) WHEN ANY EXCAVATION IS PERFORMED BELOW THE BOTTOM OF TIE ELEVATIONS AND TRACK OR OTHER RAILROAD FACILITIES MAY BE SUBJECT TO MOVEMENT OR SETTLEMENT.
  3) WHEN WORK IN ANY WAY INTERFERES WITH THE SAFE OPERATION OF TRAINS AND TIMETABLE SPEEDS.
  4) WHEN ANY HAZARD IS PRESENTED TO RAILROAD TRACK, SIGNAL, COMMUNICATIONS, ELECTRICAL, OR OTHER FACILITIES EITHER DUE TO PERSONS, MATERIAL, EQUIPMENT, OR BLASTING IN THE AREA.

COORDINATION WITH ADJACENT PROPERTY OWNERS

CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH ADJACENT PROPERTY OWNERS FOR ANY WORK WHICH AFFECTS THE PROPERTY OWNER. ANY AGREEMENTS BETWEEN ADJACENT PROPERTY OWNERS AND CONTRACTOR SHALL BE MADE IN WRITING. A COPY OF SUCH AGREEMENT SHALL BE PROVIDED TO THE RAILROAD PRIOR TO THE BEGINNING OF CONSTRUCTION.

PROTECTION OF RAILROAD TRACK

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE RAILROAD TRACK BED DURING ALL DEMOLITION AND CONSTRUCTION OPERATIONS.

INSURANCE

THE CONTRACTOR WILL BE REQUIRED TO ENTER INTO A CONTRACTOR'S RIGHT-OF-ENTRY AGREEMENT WITH THE RAILROAD BEFORE BEING ALLOWED ON THE RAILROAD'S RIGHT-OF-WAY.

INSURANCE SHALL BE PROVIDED BY THE CONTRACTOR AS SPECIFIED IN THE RAILROAD'S CONTRACTOR'S RIGHT-OF-ENTRY AGREEMENT.

SHEETING AND SHORING

SHEETING AND SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DESIGNED, SIGNED, AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS. PRIOR TO CONSTRUCTION, DESIGN CALCULATIONS AND DRAWINGS SHALL BE SUBMITTED TO THE RAILROAD FOR APPROVAL. SHEETING AND SHORING DESIGN SHALL CONFORM TO THE REQUIREMENTS OF THE RAILROAD'S GUIDELINES FOR TEMPORARY SHORING. THE LIMITS OF THE SHEETING AND SHORING ARE TO BE DETERMINED BY THE CONTRACTOR. ALL COST OF SHEETING AND SHORING TO BE INCLUDED IN THE PRICE BID FOR TEMPORARY SPECIAL SHORING.

THE CONTRACTOR SHALL ALLOW A MINIMUM OF 6 WEEKS FOR REVIEW BY THE RAILROAD.

DEMOLITION

DEMOLITION WILL OCCUR IN PROPER SEQUENCE WITH CONSTRUCTION OF NEW TRACKS IN ORDER TO LIMIT RAIL TRAFFIC DELAYS.

DEMOLITION OF TRACKS
CONTRACTOR WILL REMOVE BALLAST, TIES, SUBBALLAST, SUBGRADE, TURNOUTS, RAIL AND OTM.

CONSTRUCTION OF NEW TRACKS

CONTRACTOR WILL CONSTRUCT SUBGRADE AND INSTALL SUBBALLAST, TURNOUTS, BALLAST, TIES, RAIL, AND FASTENINGS. CONTRACTOR WILL INSTALL THE TRACK SHIFTS. ALL TRACKS WILL BE CONSTRUCTED IN ACCORDANCE WITH THE RAILROAD'S COMMON STANDARDS WHERE SUCH STANDARDS ARE APPLICABLE. THE RAILROAD WILL PERFORM THE TRACK TIE-INS OF THE PROPOSED PERMANENT RAIL AND THE EXISTING RAIL.

SUBBALLAST WILL MEET THE FOLLOWING REQUIREMENTS:

SIEVE SIZE	PERCENT PASSING (BY WEIGHT)
1 1/4"	100
3/4"	60-85
3/8"	15-45
No. 4	7-25
No. 8	0-10
No. 200	0-3

(PER ASTM LATEST REVISION)

ROADWAYS

ALL PUBLIC ACCESS ROADS SHALL BE MAINTAINED AND RETURNED TO ORIGINAL CONDITION OR BETTER AT THE COMPLETION OF THE PROJECT. THIS WORK SHALL BE COORDINATED THROUGH AND COMPLETED TO THE SATISFACTION OF THE OFFICIAL HAVING JURISDICTION OVER THE ROAD. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND CONTRACTOR WILL NOT BE PAID SEPARATELY FOR THIS WORK.

UTILITIES

THE INFORMATION SHOWN ON THESE PLANS CONCERNING TYPES AND LOCATIONS OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE TO MAKE THE DETERMINATIONS AS TO TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES BY CONTACTING OWNERS OF UTILITIES IN ADVANCE OF CONSTRUCTION OPERATIONS.

AT GRADE ROAD/RAILROAD CROSSINGS

IF CONTRACTOR REQUIRES AN AT GRADE ROAD CROSSING AT ANY TIME AT ANY LOCATION WHERE NO SIGNALIZED CROSSING EXISTS, CONTRACTOR MUST REQUEST A PRIVATE ROAD CROSSING FROM THE RAILROAD. WHERE SIGNALS EXIST, FLAGGING WILL NOT BE REQUIRED.

PRELIMINARY DESIGN

PRELIMINARY
FOR REVIEW ONLY

GEAS A. BULBUL, P.E., 101954
13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

GENERAL NOTES

SCALE: AS SHOWN

SHEET 1 OF 2

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER 3

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SURVEY AND STATIONING

THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL SURVEY CONTROL MONUMENTS. SHOULD ANY SURVEY CONTROL MONUMENT BE DAMAGED OR DESTROYED BY THE CONTRACTOR, THE ENGINEER WILL REPLACE THE MONUMENT SOLELY AT THE CONTRACTOR'S EXPENSE. THE COST FOR SETTING A MONUMENT SHALL BE $1500.00 PER MONUMENT.

CONFLICT IN SPECIFICATIONS

WHEN SPECIFICATIONS ARE IN CONFLICT, RAILROAD SPECIFICATIONS SUPERCEDE OTHER SPECIFICATIONS.

MODIFICATIONS/CHANGES

ALL PROPOSALS TO MODIFY OR CHANGE RAILROAD WORK WILL BE SUBMITTED FOR APPROVAL BY THE RAILROAD.

RAIL TRAFFIC

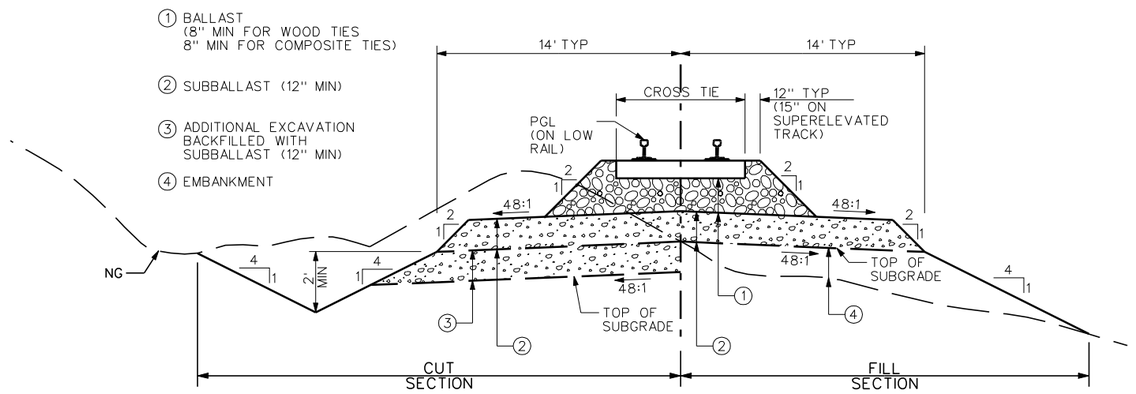
THE EXISTING MAIN TRACK CARRIES AN AVERAGE OF 14 TO 20 FREIGHT TRAINS PER DAY. THE EXISTING MAIN TRACK DOES NOT CURRENTLY SERVE PASSENGER TRAINS.

SEQUENCE OF WORK NARRATIVE

THIS PROJECT IS TO BE CONSTRUCTED IN TWO (2) PHASES WITHOUT STOPPING THE THROUGH TRAIN TRAFFIC ON THE EXISTING MAIN TRACK.

PHASE 1 ENCOMPASSES THE CONSTRUCTION OF THE EAST PART OF THE BRIDGE AND THE SHOOFLY BETWEEN THE EXISTING MAIN TRACK AND THE PROPOSED BRIDGE. DURING PHASE 1, THE THROUGH TRAIN TRAFFIC SHALL REMAIN ON THE EXISTING MAIN TRACK. THE EAST PART OF THE BRIDGE SHALL BE CONSTRUCTED AND THE SHOOFLY EMBANKMENT, SUBBALLAST, BALLAST, TIES, RAIL, AND APPURTENANCES SHALL BE INSTALLED.

PHASE 2 ENCOMPASSES THE RECONSTRUCTION OF THE MAIN TRACK TO THE HIGHER PROFILE GRADE LINE. DURING PHASE 2, THE THROUGH TRAIN TRAFFIC SHALL BE ON THE SHOOFLY TRACK AND EAST PART OF THE BRIDGE CONSTRUCTED IN PHASE 1. THE REMAINDER OF THE BRIDGE SHALL BE CONSTRUCTED AND THE MAIN TRACK EMBANKMENT, SUBBALLAST, BALLAST, TIES, RAIL, AND APPURTENANCES SHALL BE INSTALLED. ONCE THE MAIN TRACK HAS BEEN RE-ESTABLISHED AND THROUGH TRAIN TRAFFIC HAS BEEN ROUTED TO THE PROPOSED MAIN TRACK, THE SHOOFLY BALLAST, TIES, RAIL, AND APPURTENANCES SHALL BE REMOVED ON EITHER APPROACH TO THE NEW BRIDGE. THE SHOOFLY BALLAST, TIES, RAIL, AND APPURTENANCES ON THE NEW BRIDGE SHALL BE LEFT IN PLACE FOR FUTURE USE BY THE RAILROAD.



TYPICAL PROPOSED ROADBED GEOMETRY

NOT TO SCALE

NOTES:

SLOPES SHOWN ARE FT/FT UNLESS OTHERWISE NOTED.

RAIL, BALLAST, TIES AND OTHER TRACK MATERIALS ARE PART OF THIS CONTRACT.

PROPOSED RAIL SHALL BE 136-LBS HEADHARDENED CONTINOUSLY WELDED RAIL (136-LBS HH CWR).

8'-6" COMPOSITE PLASTIC TIES SHALL BE INSTALLED ON ROADBEDS. WOOD TIES (7"x9"x9') SHALL BE INSTALLED ON THE BRIDGES. TEN WOOD TRANSITION TIES (7"x9"x10') SHALL BE INSTALLED ADJACENT TO THE END OF THE BRIDGE APPROACH SLABS IN THE COMPOSITE TIE ZONE. ALL TIES WILL BE INSTALLED AT 19-1/2" CENTERS.

TIE PLATES SHALL BE CAST PLATES FROM PANDROL OR SAFELOCK OR AN APPROVED EQUIVALENT.

SPIKES SHALL BE "EVERTIGHT" SCREW SPIKES OR AN APPROVED EQUIVALENT.

ALL EMBANKMENT SLOPES AND DITCHES ARE TO RECEIVE 6" OF TOP SOIL, SEEDING, AND EROSION CONTROL MATTING.

THE EMBANKMENT UNDER THE TRACK SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY EXCEPT FOR THE EMBANKMENT UNDER THE TRACK WITHIN 40 FEET OF A STRUCTURE. THE EMBANKMENT UNDER THE TRACK WITHIN 40 FEET OF A STRUCTURE SHALL BE COMPACTED TO 100% MAXIMUM DRY DENSITY. THE MAXIMUM DRY DENSITY SHALL BE DETERMINED BY TEST METHOD TEX-114-E AND THE IN PLACE DENSITY SHALL BE DETERMINED BY TEST METHOD TEX-115-E.

EXISTING RAIL ALIGNMENTS AND STATIONING

1. THE EXISTING RAIL ALIGNMENTS (BOTH HORIZONTAL AND VERTICAL) SHOWN HEREON WERE DEVELOPED FROM THE BEST FIT OF THE FIELD TIES AND MAY NOT MATCH OTHER RECORD DRAWINGS.
2. THE STATIONING IS BASED UPON A BNSF TRACK CHART OF THE MADILL SUBDIVISION (DATED 30-NOV-1998) THAT SHOWS THE FOLLOWING INFORMATION:
   a. EQUATION STA 370+31 = MP 704.0
   b. EQUATION STA 422+74 = MP 703.0
   c. PUBLIC GRADE CROSSING, FL, 672160T, FOREST LANE MP 703.94
   d. PROFILE GRADE LINE AT BRIDGE IS EL= 445.14 WITH 0% GRADE
3. THE ASSUMED STATIONING IS ANCHORED AT THE INTERSECTION OF THE EXISTING RAIL ALIGNMENT AND THE CENTER OF THE NORTHBOUND FRONTAGE ROAD TRAVEL LANES. THE ASSUMED STATION OF THIS ANCHOR POINT IS STA 373+45.58 = MP 703.94.

PRELIMINARY DESIGN

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GEAS A. BULBUL, P.E., 101954
13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

GENERAL NOTES

SCALE: AS SHOWN

SHEET 2 OF 2

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Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
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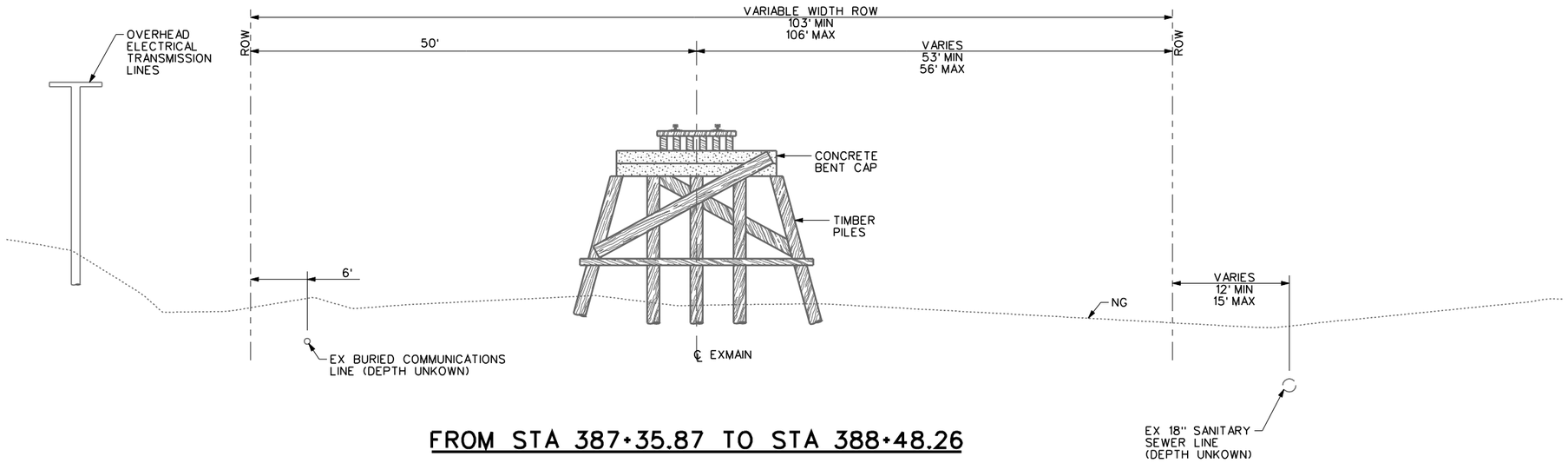
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 4



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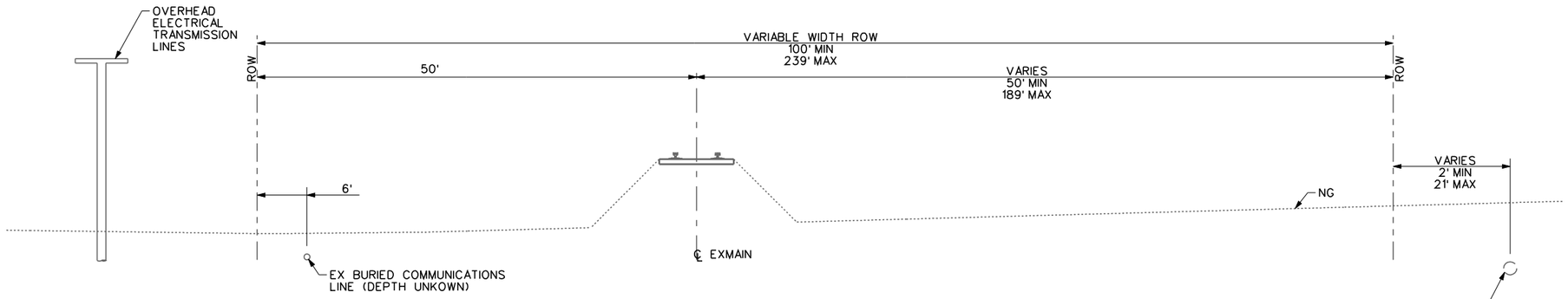

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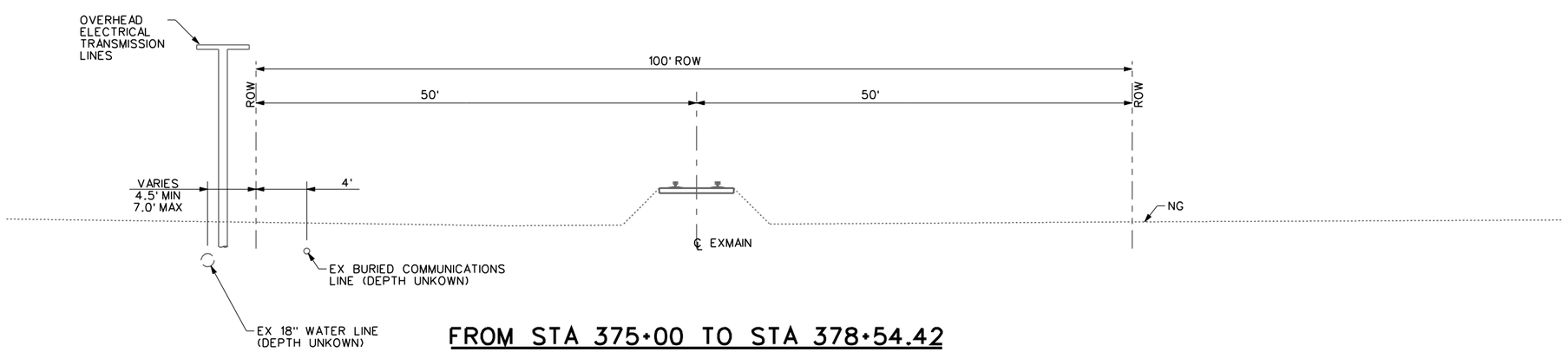

FROM STA 375+00 TO STA 378+54.42

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TYPICAL SECTIONS EXISTING MAIN TRACK

SCALE: NOT TO SCALE

SHEET 1 OF 2

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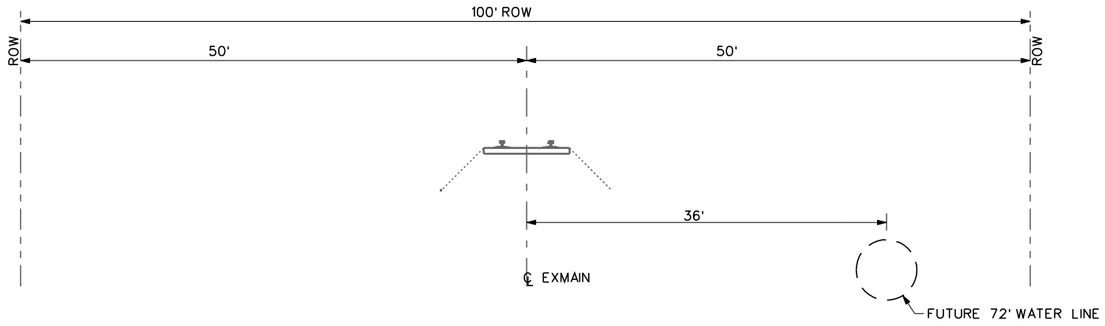
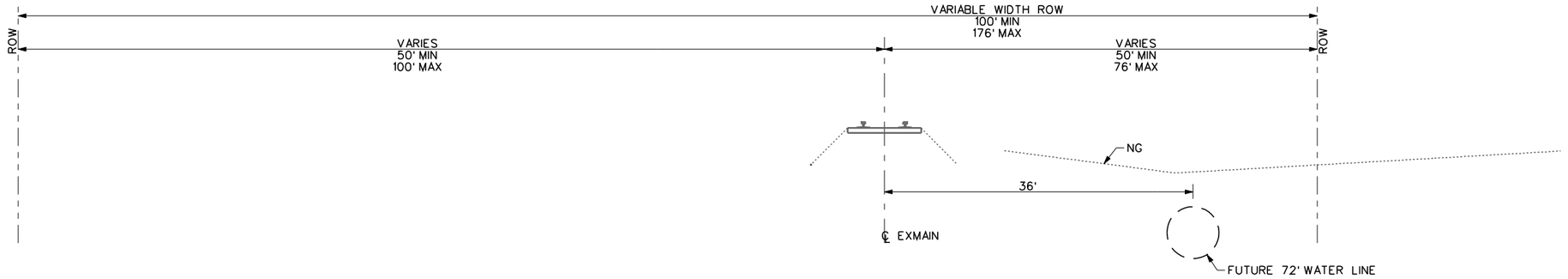
SHEET NUMBER	5



FROM STA 397+01.99 TO STA 406+00.00



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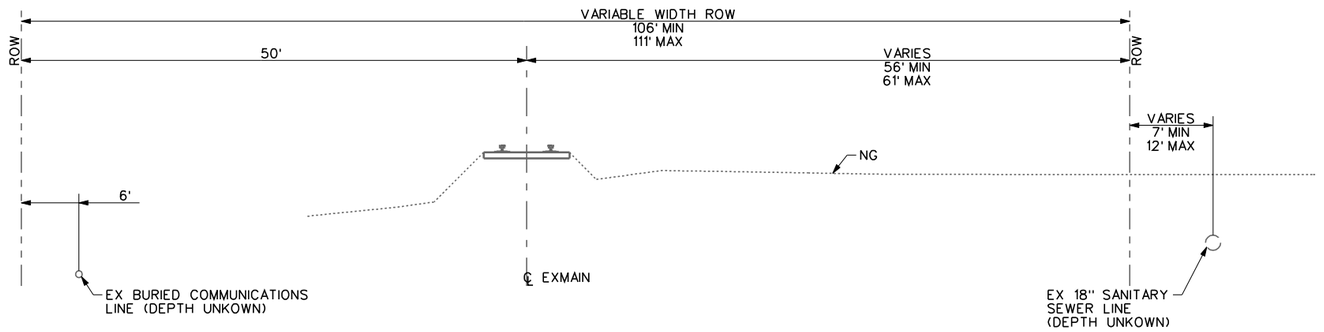

FROM STA 388+48.26 TO STA 390+65.23

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TYPICAL SECTIONS
EXISTING MAIN TRACK

SCALE: NOT TO SCALE

SHEET 2 OF 2

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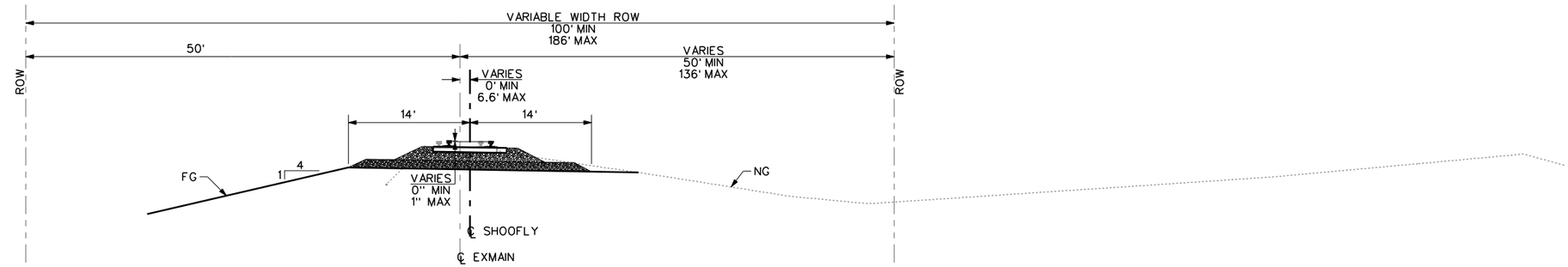
MILEPOST REFERENCE
703.57

MUNICIPALITY
FARMER'S BRANCH
DALLAS CO., TEXAS

SHEET NUMBER 6



CURVE TO THE RIGHT

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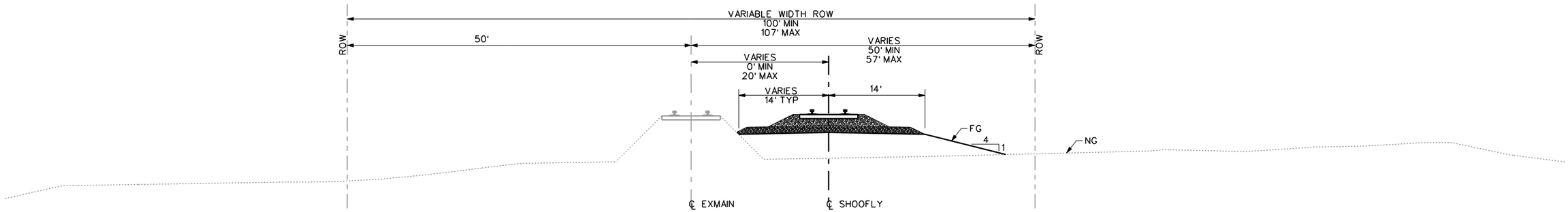
FROM STA 392+02.60 TO STA 393+99.64



ON TANGENT (EMBANKMENT)

FROM STA 380+50.00 TO STA 380+79.13
FROM STA 382+76.00 TO STA 383+78.50
FROM STA 385+76.17 TO STA 386+28.81
FROM STA 388+48.81 TO STA 389+01.75
FROM STA 390+98.79 TO STA 392+02.60

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TYPICAL SECTIONS
PHASE 1

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SHEET 1 OF 3

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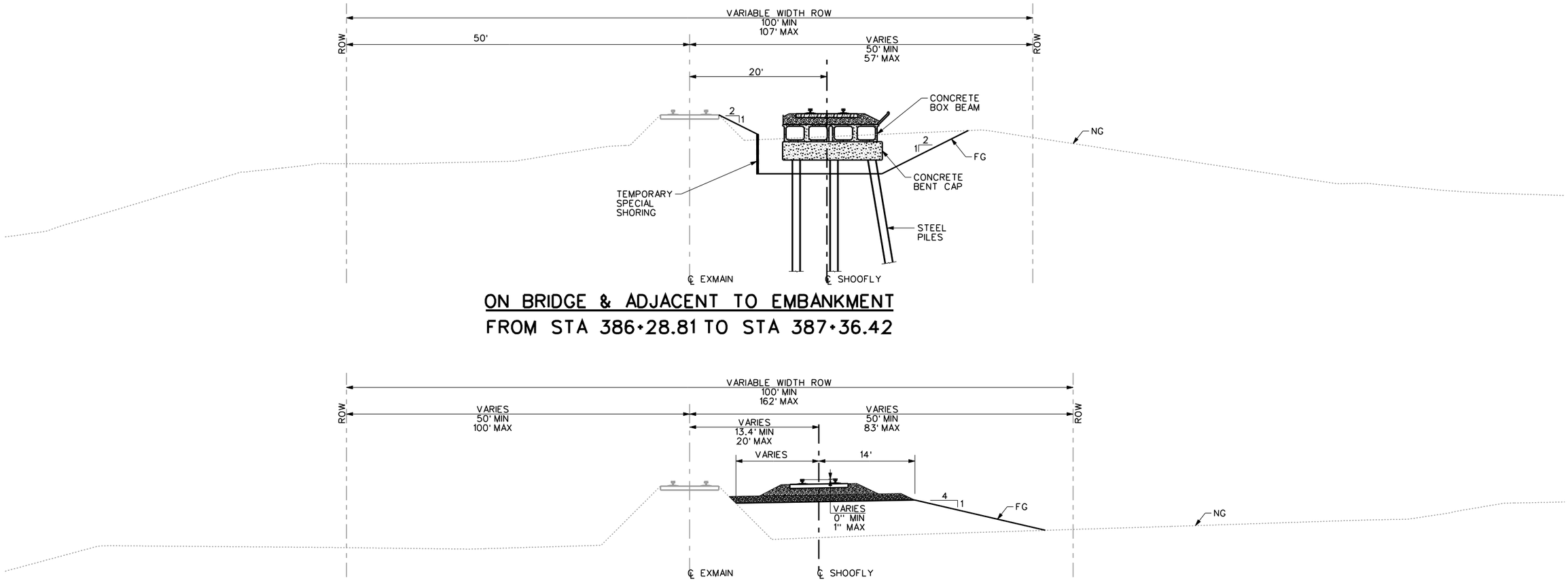
MUNICIPALITY
FARMER'S BRANCH
DALLAS CO., TEXAS

SHEET NUMBER 7



ON BRIDGE & ADJACENT TO EMBANKMENT
FROM STA 386+28.81 TO STA 387+36.42

CURVE TO THE LEFT
FROM STA 383+78.50 TO STA 385+76.17
FROM STA 389+01.75 TO STA 390+98.79

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TYPICAL SECTIONS
PHASE 1

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SHEET 2 OF 3

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MUNICIPALITY
FARMER'S BRANCH
DALLAS CO., TEXAS

SHEET NUMBER 8

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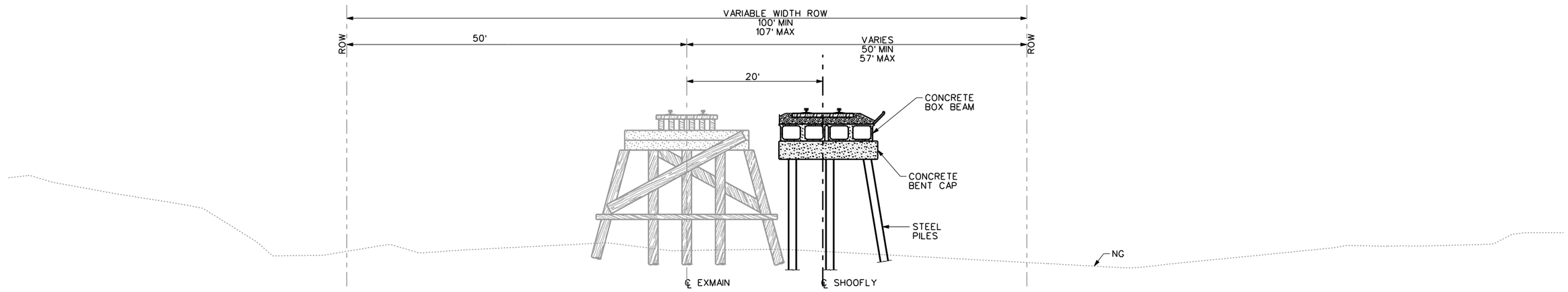


ON BRIDGE & ADJACENT TO BRIDGE
FROM STA 387+36.42 TO STA 388+48.81

PRELIMINARY DESIGN

PRELIMINARY
FOR REVIEW ONLY

GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

TYPICAL SECTIONS
PHASE 1

SCALE: NOT TO SCALE

SHEET 3 OF 3

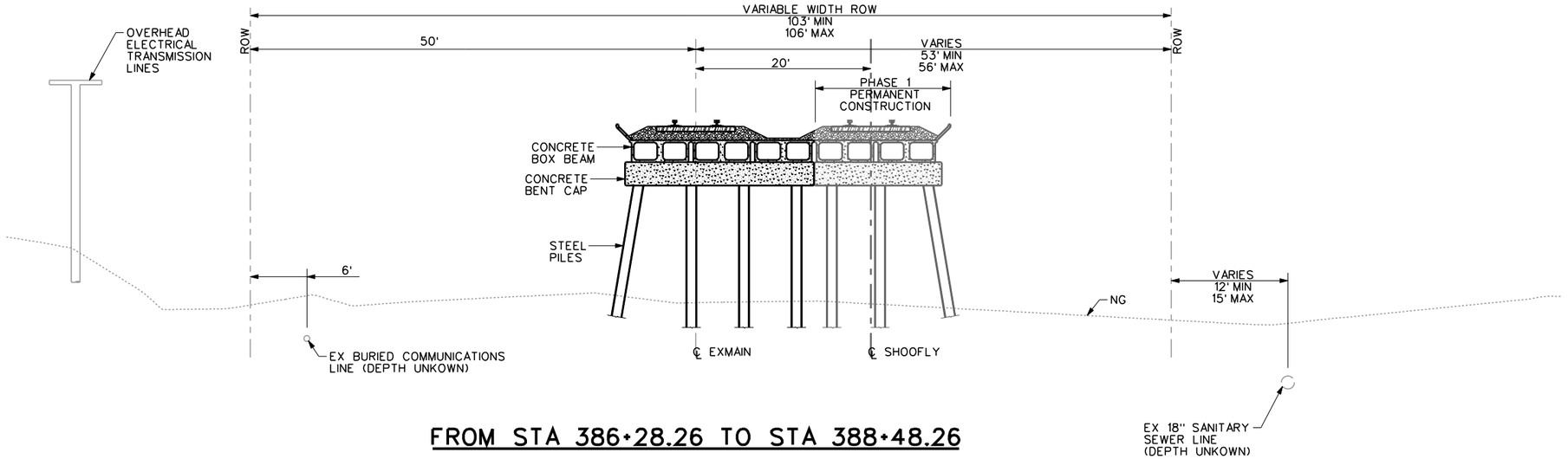
EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and
Carrollton MP 700.5
by
VALWOOD IMPROVEMENT
AUTHORITY

SUBDIVISION
BNSF MADILL

MILEPOST REFERENCE
703.57

MUNICIPALITY
FARMER'S BRANCH
DALLAS CO., TEXAS

SHEET NUMBER 9



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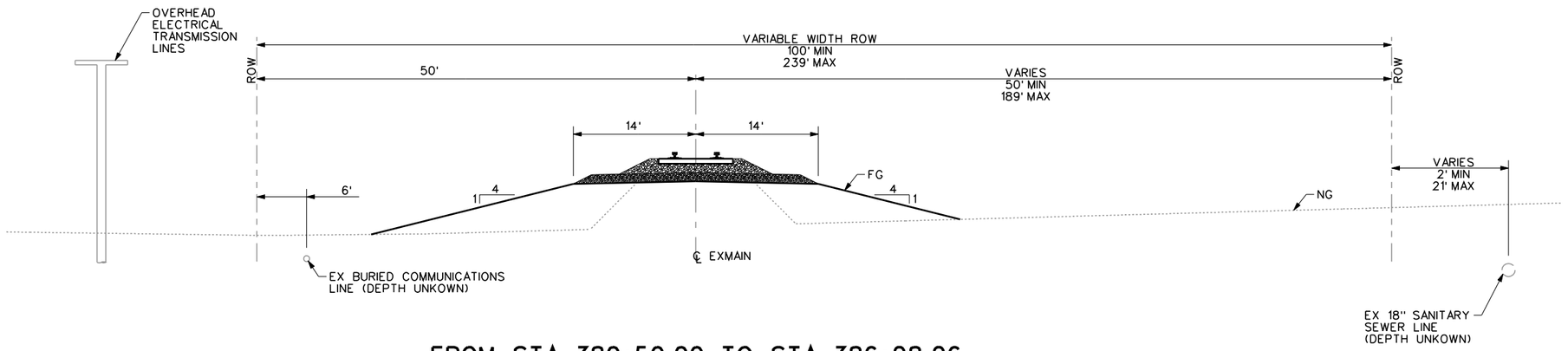

FROM STA 380+50.00 TO STA 386+28.26

PRELIMINARY DESIGN

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13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

TYPICAL SECTIONS PHASE 2

SCALE: NOT TO SCALE

SHEET 1 OF 2

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 10

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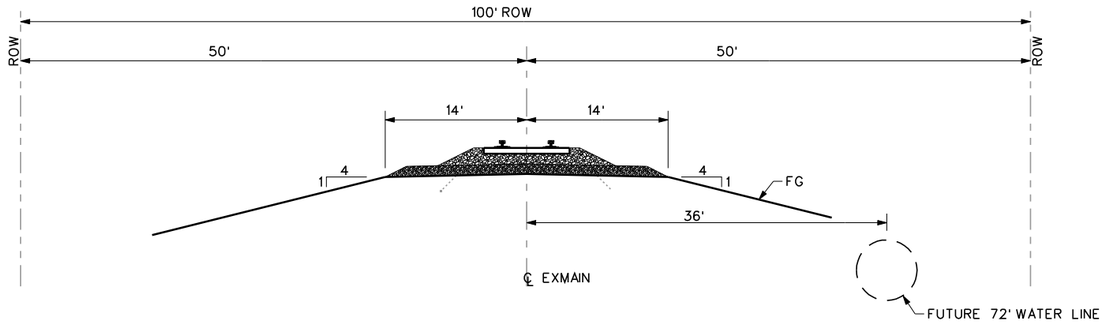

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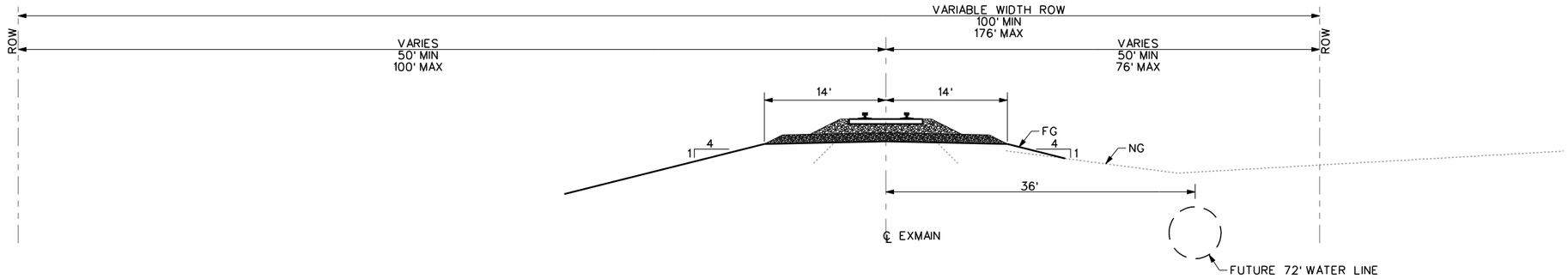

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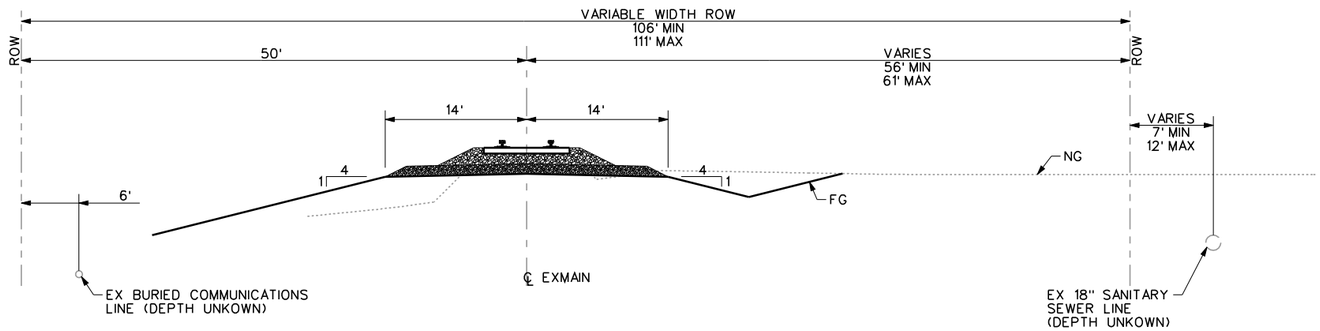

FROM STA 388+48.26 TO STA 390+65.23

PRELIMINARY DESIGN

PRELIMINARY
FOR REVIEW ONLY

GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

TYPICAL SECTIONS
PHASE 2

SCALE: NOT TO SCALE

SHEET 2 OF 2

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 11

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EXISTING MAIN TRACK

Chain EXMAIN contains:
 EXMAIN102 EXMAIN103 EXMAIN104

Beginning chain EXMAIN description
==========

Point EXMAIN102 N 7,017,175.27 E 2,456,768.84 Sta 373+45.58

Course from EXMAIN102 to EXMAIN103 N 8° 50' 28" E Dist 3,092.05

Point EXMAIN103 N 7,020,230.58 E 2,457,244.08 Sta 404+37.63

Course from EXMAIN103 to EXMAIN104 N 8° 50' 28" E Dist 562.37

Point EXMAIN104 N 7,020,786.27 E 2,457,330.51 Sta 410+00.00

==========
Ending chain EXMAIN description

PHASE 1 SHOOFLY TRACK

** 1 DESCRIBE CHAIN SHOOFLY

Chain SHOOFLY contains:
 SH00015 SCS SH00-01 SCS SH00-02 SCS SH00-03 SCS SH00-04

Beginning chain SHOOFLY description
==========

Point SH00015 N 7,017,871.32 E 2,456,877.11 Sta 380+50.00

Course from SH00015 to TS SH00-01B N 8° 50' 28" E Dist 29.13

SCS SH00-01 found within chain SHOOFLY, contains:
SPI SH00-01B CUR SH00-01 SPI SH00-01A

PISCS SH00-01 N 7,017,997.80 E 2,456,896.78 STA 381+78.00
Total Tangent = 98.87
Total Length = 197.67
Total Delta = 3° 49' 47" (RT)
Back Tangent = N 8° 50' 28" E
Ahead Tangent = N 12° 40' 16" E

Beginning SCS SH00-01 description

Spiral Back
Spiral SH00-01B Type 1 Spiral Element

**** Chord Definition ****

Angle	1° 03' 00" (RT)	P	0.11	BK N	8° 50' 28" E
LS	70.00	K	35.00	AH N	9° 53' 28" E
R	1,910.08	LT	46.67	CB N	9° 11' 28" E
YS	0.43	ST	23.33	Defl	0° 21' 00"
XS	70.00	LC	70.00	Deg	3° 00' 00"

Spiral Coordinates

Point	North	East	Station
TS	7,017,900.11	2,456,881.59	380+79.13
PI	7,017,946.22	2,456,888.76	381+25.80
SC	7,017,969.21	2,456,892.77	381+49.13
CC	7,017,641.10	2,458,774.45	

Circular Section

Curve Data

Curve SH00-01		(Chord Definition)			
P.I. Station	381+77.98	N 7,017,997.62	E	2,456,897.72	
Delta =	1° 43' 48" (RT)				
Degree =	3° 00' 00"				
Tangent =	28.84				
Length =	57.67				
Radius =	1,910.08				
External =	0.22				
Long Chord =	57.67				
Mid. Ord. =	0.22				
P.C. Station	381+49.13	N 7,017,969.21	E	2,456,892.77	
P.T. Station	382+06.80	N 7,018,025.87	E	2,456,903.53	
C.C.		N 7,017,641.10	E	2,458,774.45	
Back	= N 9° 53' 28" E				
Ahead	= N 11° 37' 16" E				
Chord Bear	= N 10° 45' 22" E				

Spiral Ahead
Spiral SH00-01A Type 2 Spiral Element

**** Chord Definition ****

Angle	1° 03' 00" (RT)	P	0.11	BK N	11° 37' 16" E
LS	70.00	K	35.00	AH N	12° 40' 16" E
R	1,910.08	LT	46.67	CB N	12° 19' 16" E
YS	0.43	ST	23.33	Defl	0° 21' 00"
XS	70.00	LC	70.00	Deg	3° 00' 00"

Spiral Coordinates

Point	North	East	Station
CS	7,018,025.87	2,456,903.53	382+06.80
PI	7,018,048.73	2,456,908.23	382+30.14
ST	7,018,094.26	2,456,918.47	382+76.80
CC	7,017,641.10	2,458,774.45	

Ending SCS SH00-01 description

Course from ST SH00-01A to TS SH00-02B N 12° 40' 16" E Dist 101.70

SCS SH00-02 found within chain SHOOFLY, contains:
SPI SH00-02B CUR SH00-02 SPI SH00-02A

PISCS SH00-02 N 7,018,289.94 E 2,456,962.46 STA 384+77.37
Total Tangent = 98.87
Total Length = 197.67
Total Delta = 3° 49' 47" (LT)
Back Tangent = N 12° 40' 16" E
Ahead Tangent = N 8° 50' 28" E

Beginning SCS SH00-02 description

Spiral Back
Spiral SH00-02B Type 1 Spiral Element

**** Chord Definition ****

Angle	1° 03' 00" (LT)	P	0.11	BK N	12° 40' 16" E
LS	70.00	K	35.00	AH N	11° 37' 16" E
R	1,910.08	LT	46.67	CB N	12° 19' 16" E
YS	0.43	ST	23.33	Defl	0° 21' 00"
XS	70.00	LC	70.00	Deg	3° 00' 00"

Spiral Coordinates

Point	North	East	Station
TS	7,018,193.48	2,456,940.78	383+78.50
PI	7,018,239.01	2,456,951.01	384+25.17
SC	7,018,261.86	2,456,955.71	384+48.50
CC	7,018,646.63	2,455,084.79	

Circular Section

Curve Data

Curve SH00-02		(Chord Definition)			
P.I. Station	384+77.34	N 7,018,290.11	E	2,456,961.52	
Delta =	1° 43' 48" (LT)				
Degree =	3° 00' 00"				
Tangent =	28.84				
Length =	57.67				
Radius =	1,910.08				
External =	0.22				
Long Chord =	57.67				
Mid. Ord. =	0.22				
P.C. Station	384+48.50	N 7,018,261.86	E	2,456,955.71	
P.T. Station	385+06.17	N 7,018,318.53	E	2,456,966.48	
C.C.		N 7,018,646.63	E	2,455,084.79	
Back	= N 11° 37' 16" E				
Ahead	= N 9° 53' 28" E				
Chord Bear	= N 10° 45' 22" E				

Spiral Ahead
Spiral SH00-02A Type 2 Spiral Element

**** Chord Definition ****

Angle	1° 03' 00" (LT)	P	0.11	BK N	9° 53' 28" E
LS	70.00	K	35.00	AH N	8° 50' 28" E
R	1,910.08	LT	46.67	CB N	9° 11' 28" E
YS	0.43	ST	23.33	Defl	0° 21' 00"
XS	70.00	LC	70.00	Deg	3° 00' 00"

Spiral Coordinates

Point	North	East	Station
CS	7,018,318.53	2,456,966.48	385+06.17
PI	7,018,341.51	2,456,970.48	385+29.51
ST	7,018,387.63	2,456,977.66	385+76.17
CC	7,018,646.63	2,455,084.79	

Ending SCS SH00-02 description

Course from ST SH00-02A to TS SH00-03B N 8° 50' 28" E Dist 325.58

SCS SH00-03 found within chain SHOOFLY, contains:
SPI SH00-03B CUR SH00-03 SPI SH00-03A

PISCS SH00-03 N 7,018,806.72 E 2,457,042.85 STA 390+00.31
Total Tangent = 98.55
Total Length = 197.04
Total Delta = 3° 48' 40" (LT)
Back Tangent = N 8° 50' 28" E
Ahead Tangent = N 5° 01' 49" E

PRELIMINARY DESIGN

PRELIMINARY
FOR REVIEW ONLY

GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

GEOMETRIC DATA

SCALE: NOT TO SCALE

SHEET 1 OF 2

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and
Carrollton MP 700.5
by
VALWOOD IMPROVEMENT
AUTHORITY

SUBDIVISION
BNSF MADILL

MILEPOST REFERENCE
703.57

MUNICIPALITY
FARMER'S BRANCH
DALLAS CO., TEXAS

SHEET NUMBER 12

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Beginning SCS SHOO-03 description

Spiral Back
Spiral SHOO-03B Type 1 Spiral Element

**** Chord Definition ****

Angle	1° 03′ 00″ (LT)	P	0.11	BK N	8° 50′ 28″ E
LS	70.00	K	35.00	AH N	7° 47′ 29″ E
R	1,910.08	LT	46.67	CB N	8° 29′ 29″ E
YS	0.43	ST	23.33	Defl	0° 21′ 00″
XS	70.00	LC	70.00	Deg	3° 00′ 00″

Spiral Coordinates

Point	North	East	Station
TS	7,018,709.34	2,457,027.70	389+01.76
PI	7,018,755.45	2,457,034.87	389+48.42
SC	7,018,778.57	2,457,038.03	389+71.76
CC	7,019,037.51	2,455,145.59	

Circular Section

Curve Data

Curve SHOO-03	(Chord Definition)				
P.I. Station	390+00.28	N	7,018,806.84	E	2,457,041.90
Delta =	1° 42′ 41″ (LT)				
Degree =	3° 00′ 00″				
Tangent =	28.53				
Length =	57.04				
Radius =	1,910.08				
External =	0.21				
Long Chord =	57.05				
Mid. Ord. =	0.21				
P.C. Station	389+71.76	N	7,018,778.57	E	2,457,038.03
P.T. Station	390+28.80	N	7,018,835.20	E	2,457,044.92
C.C.		N	7,019,037.51	E	2,455,145.59
Back = N	7° 47′ 29″ E				
Ahead = N	6° 04′ 48″ E				
Chord Bear = N	6° 56′ 09″ E				

Spiral Ahead
Spiral SHOO-03A Type 2 Spiral Element

**** Chord Definition ****

Angle	1° 03′ 00″ (LT)	P	0.11	BK N	6° 04′ 48″ E
LS	70.00	K	35.00	AH N	5° 01′ 49″ E
R	1,910.08	LT	46.67	CB N	5° 22′ 49″ E
YS	0.43	ST	23.33	Defl	0° 21′ 00″
XS	70.00	LC	70.00	Deg	3° 00′ 00″

Spiral Coordinates

Point	North	East	Station
CS	7,018,835.20	2,457,044.92	390+28.80
PI	7,018,858.41	2,457,047.39	390+52.13
ST	7,018,904.89	2,457,051.49	390+98.80
CC	7,019,037.51	2,455,145.59	

Ending SCS SHOO-03 description

Course from ST SHOO-03A to TS SHOO-04B N 5° 01′ 49″ E Dist 103.80

SCS SHOO-04 found within chain SHOOFLY, contains:
SPI SHOO-04B CUR SHOO-04 SPI SHOO-04A

PISCS SHOO-04 N 7,019,106.47 E 2,457,069.23 STA 393+01.15
Total Tangent = 98.55
Total Length = 197.04
Total Delta = 3° 48′ 40″ (RT)
Back Tangent = N 5° 01′ 49″ E
Ahead Tangent = N 8° 50′ 28″ E

Beginning SCS SHOO-04 description

Spiral Back
Spiral SHOO-04B Type 1 Spiral Element

**** Chord Definition ****

Angle	1° 03′ 00″ (RT)	P	0.11	BK N	5° 01′ 49″ E
LS	70.00	K	35.00	AH N	6° 04′ 48″ E
R	1,910.08	LT	46.67	CB N	5° 22′ 49″ E
YS	0.43	ST	23.33	Defl	0° 21′ 00″
XS	70.00	LC	70.00	Deg	3° 00′ 00″

Spiral Coordinates

Point	North	East	Station
TS	7,019,008.30	2,457,060.59	392+02.60
PI	7,019,054.78	2,457,064.68	392+49.27
SC	7,019,077.99	2,457,067.15	392+72.60
CC	7,018,875.67	2,458,966.48	

Circular Section

Curve Data

Curve SHOO-04	(Chord Definition)				
P.I. Station	393+01.13	N	7,019,106.35	E	2,457,070.17
Delta =	1° 42′ 41″ (RT)				
Degree =	3° 00′ 00″				
Tangent =	28.53				
Length =	57.04				
Radius =	1,910.08				
External =	0.21				
Long Chord =	57.05				
Mid. Ord. =	0.21				
P.C. Station	392+72.60	N	7,019,077.99	E	2,457,067.15
P.T. Station	393+29.64	N	7,019,134.62	E	2,457,074.04
C.C.		N	7,018,875.67	E	2,458,966.48
Back = N	6° 04′ 48″ E				
Ahead = N	7° 47′ 29″ E				
Chord Bear = N	6° 56′ 09″ E				

Spiral Ahead
Spiral SHOO-04A Type 2 Spiral Element

**** Chord Definition ****

Angle	1° 03′ 00″ (RT)	P	0.11	BK N	7° 47′ 29″ E
LS	70.00	K	35.00	AH N	8° 50′ 28″ E
R	1,910.08	LT	46.67	CB N	8° 29′ 29″ E
YS	0.43	ST	23.33	Defl	0° 21′ 00″
XS	70.00	LC	70.00	Deg	3° 00′ 00″

Spiral Coordinates

Point	North	East	Station
CS	7,019,134.62	2,457,074.04	393+29.64
PI	7,019,157.73	2,457,077.20	393+52.98
ST	7,019,203.85	2,457,084.38	393+99.64
CC	7,018,875.67	2,458,966.48	

Ending SCS SHOO-04 description

Ending chain SHOOFLY description

PRELIMINARY DESIGN

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GEAS A. BULBUL, P.E., 101954
13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

GEOMETRIC DATA

SCALE: NOT TO SCALE

SHEET 2 OF 2

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 13

9:34:58 AM
9/14/2011
gb

TO SOUTH IRVING, TEXAS
INCREASING MP
DECREASING STATION

TO MADILL, OKLAHOMA
DECREASING MP
INCREASING STATION

EX. 18" WTR.
EX. 18" WTR.
ROW
MCI
STA 373+45.58 = MP 703.94
PUBLIC GRADE CROSSING
•669346D
FOREST LANE
SERVICE POLE
374+00
375+00
376+00
377+00
CL EXISTING MAIN TRACK
N 8° 50' 28" E
ROW
ROW
IH 635 NORTHBOUND FRONTAGE ROAD
MATCH LINE STA 377+50

50 25 0 50
SCALE: 1" = 50' HORIZ
1" = 10' VERT

460
455
450
445
440
435
430
425
420
415

PGL FROM TRACK CHART
FIELD SHOT TOP OF RAIL (TYP)
PVI 375+13.72
EL 443.40
+0.0%
+0.019%
EX MAIN PGL/TOP OF RAIL
MATCH LINE STA 377+50

EX MAIN+ 443.40
EX MAIN+ 443.41
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EX MAIN+ 443.43
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EX MAIN+ 443.45
EX NG+ 442.65

374+00
375+00
376+00
377+00

PRELIMINARY DESIGN

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13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

EXISTING MAIN PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 1 OF 7

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION
BNSF MADILL
MILEPOST REFERENCE
703.57
MUNICIPALITY
FARMER'S BRANCH
DALLAS CO., TEXAS
SHEET NUMBER 14

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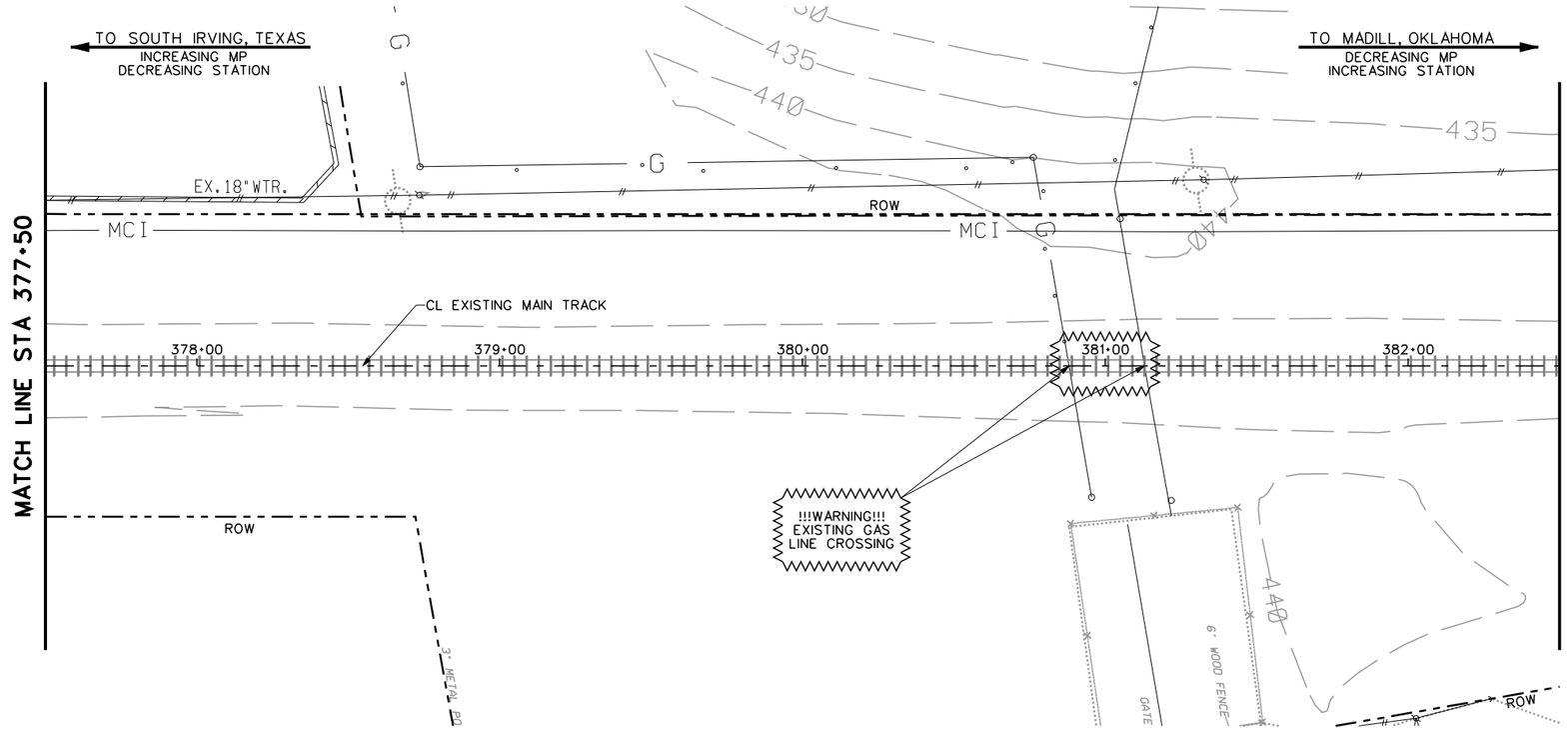

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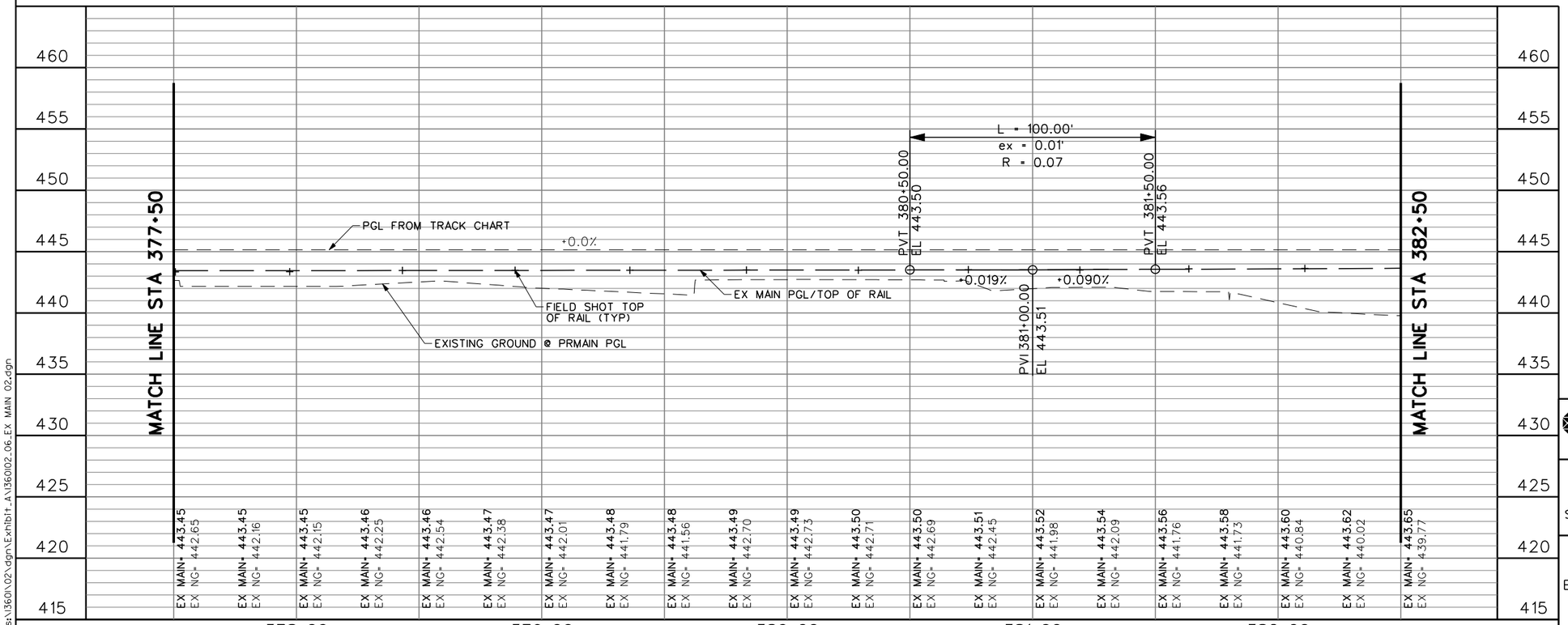
SCALE: 1" = 50' HORIZ
1" = 10' VERT



PRELIMINARY DESIGN

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13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

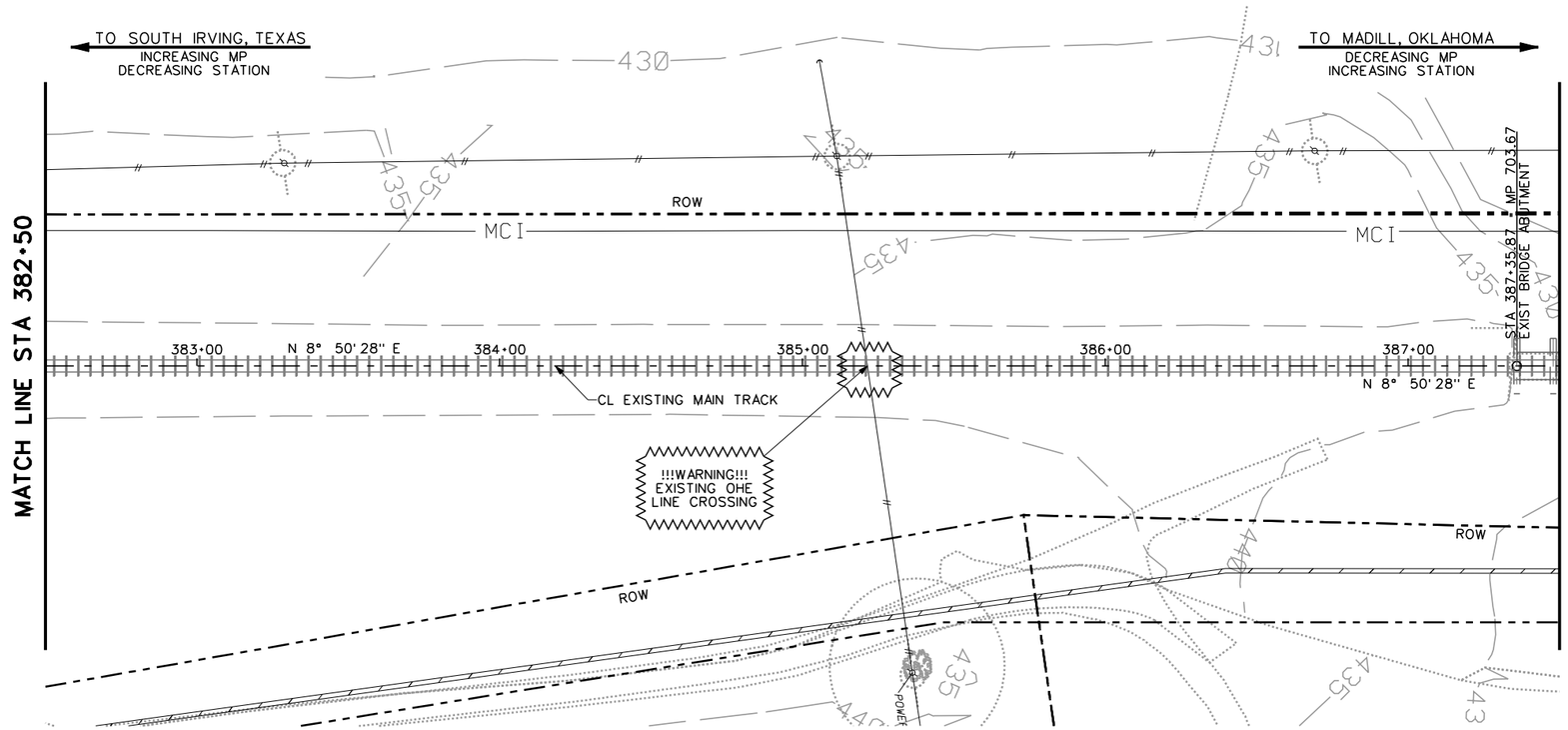
EXISTING MAIN PLAN & PROFILE

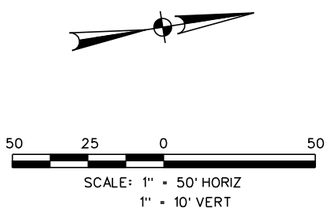
SCALE: 1" = 50' HORZ
1" = 10' VERT

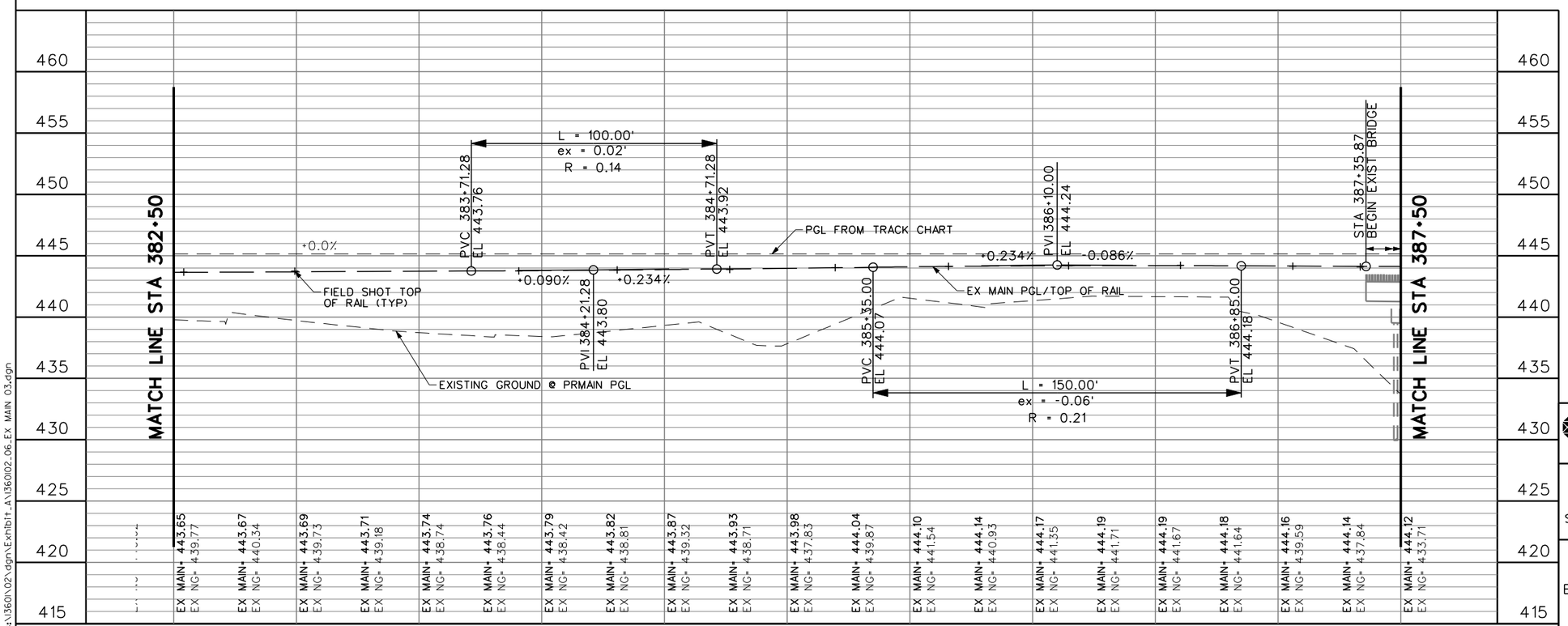
SHEET 2 OF 7

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION	BNSF MADILL
MILEPOST REFERENCE	703.57
MUNICIPALITY	FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER	15







PRELIMINARY DESIGN

PRELIMINARY
FOR REVIEW ONLY

GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

EXISTING MAIN PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 3 OF 7

EXHIBIT 'A'

TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 16

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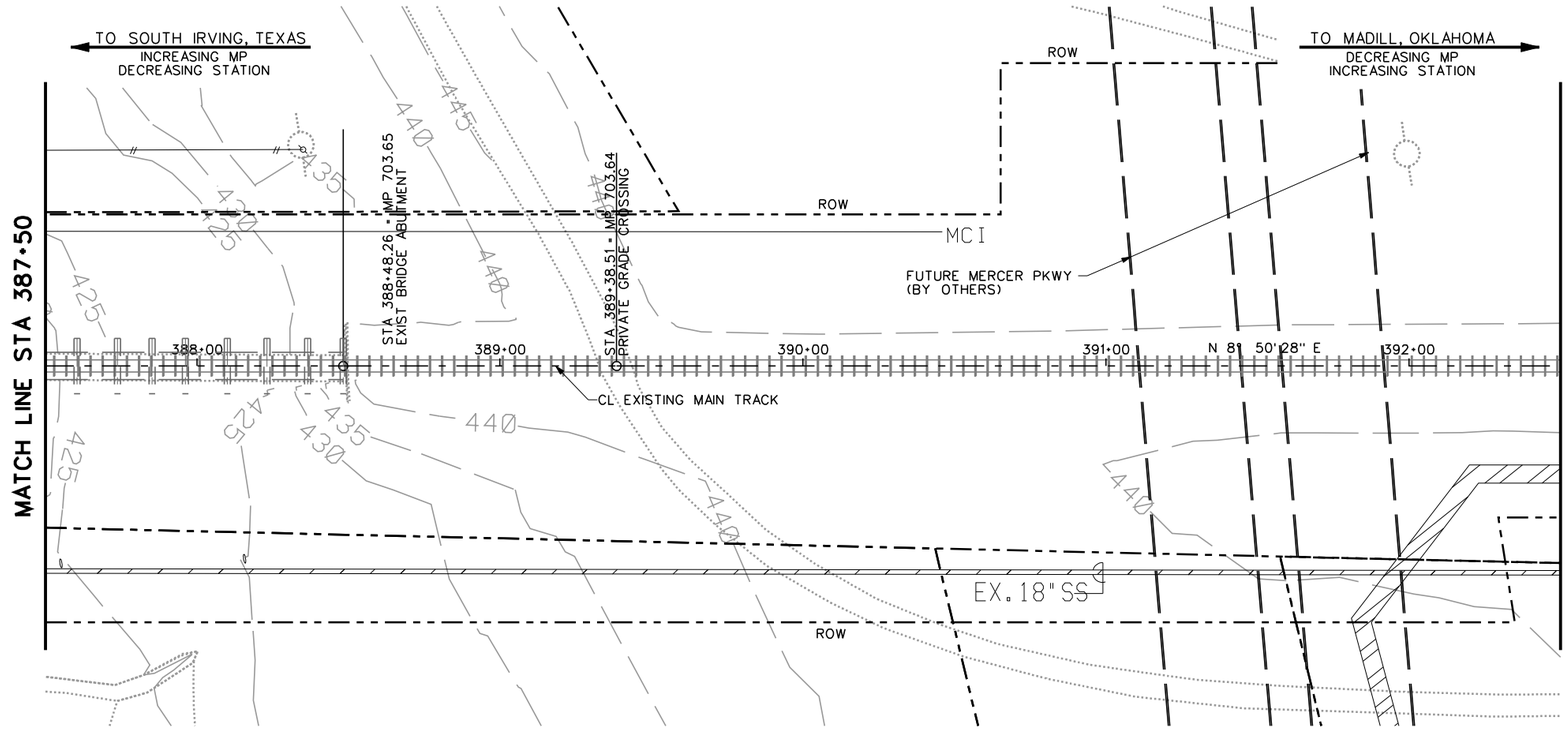

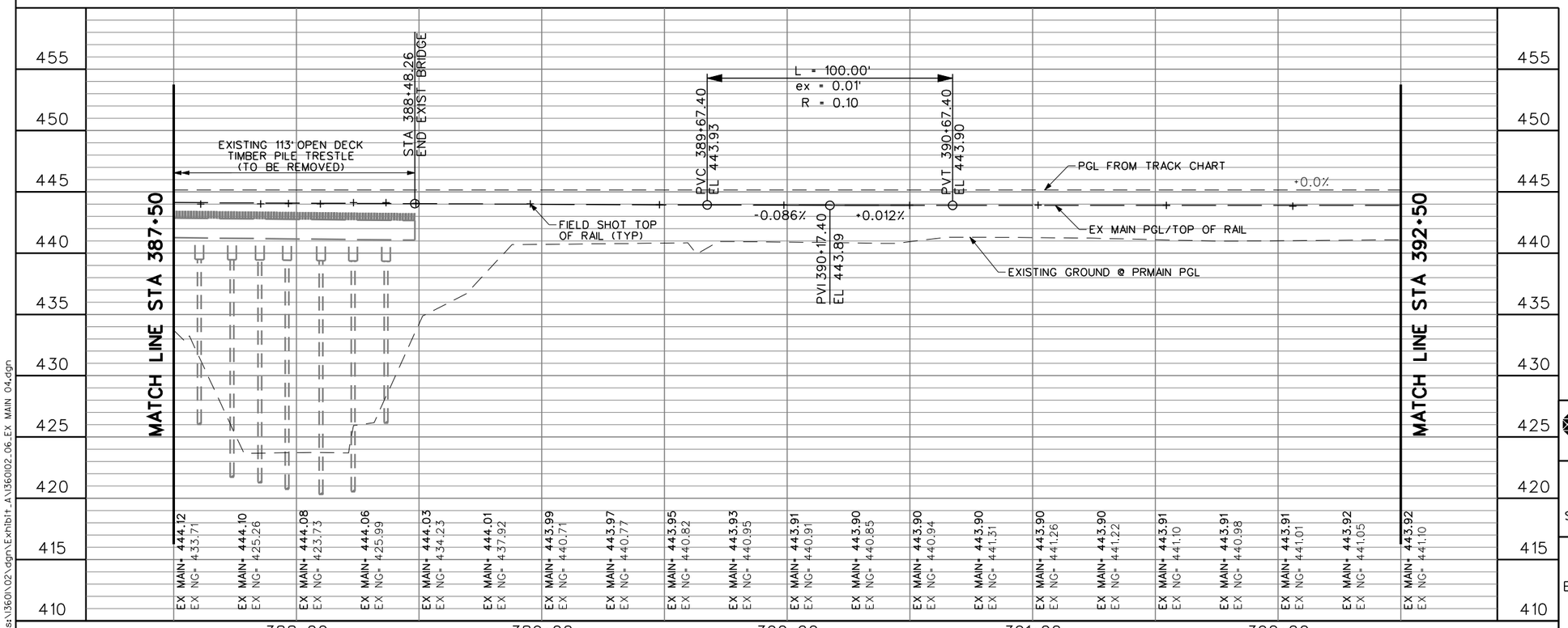

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SCALE: 1" = 50' HORIZ
1" = 10' VERT

PRELIMINARY DESIGN

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FOR REVIEW ONLY

GEAS A. BULBUL, P.E., 101954
13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

EXISTING MAIN PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 4 OF 7

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 17

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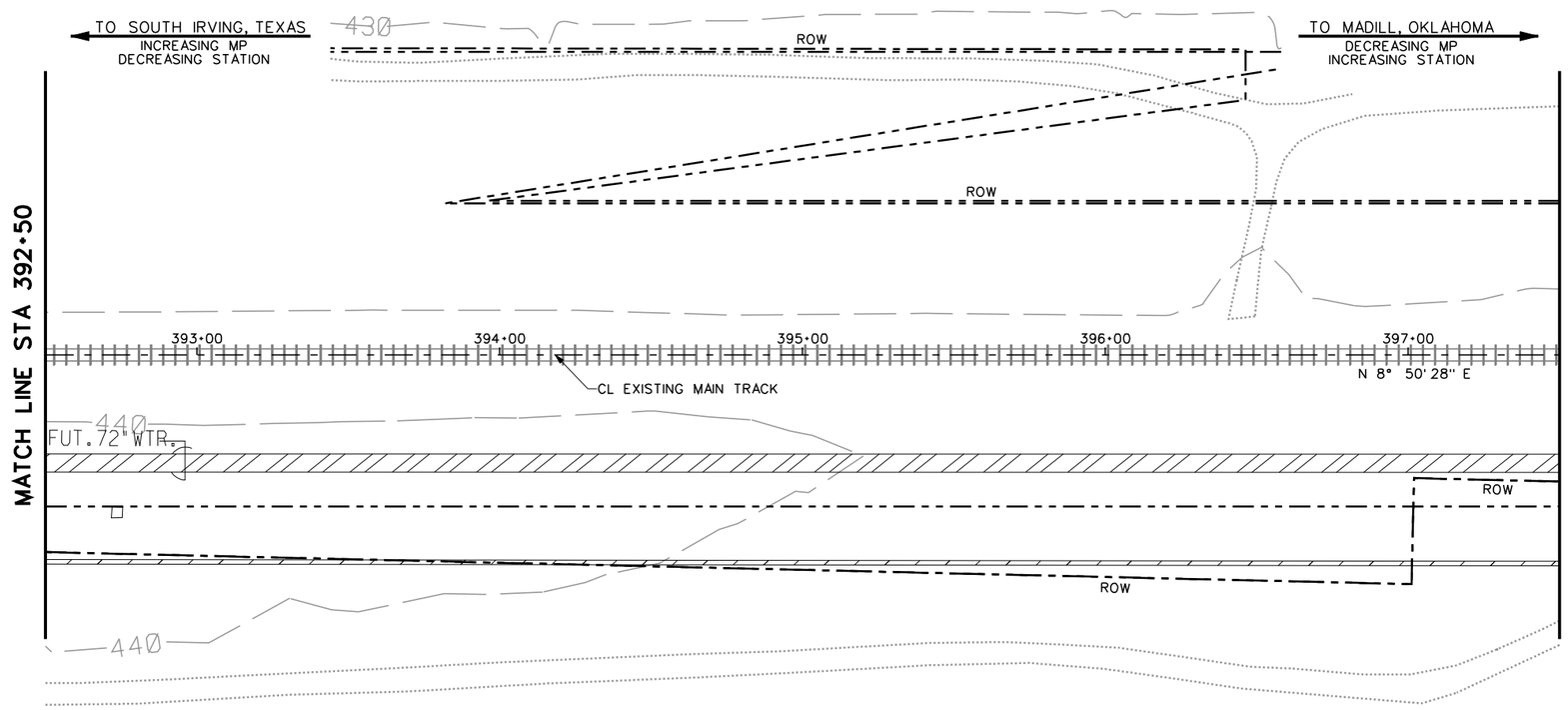

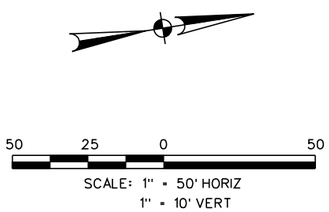

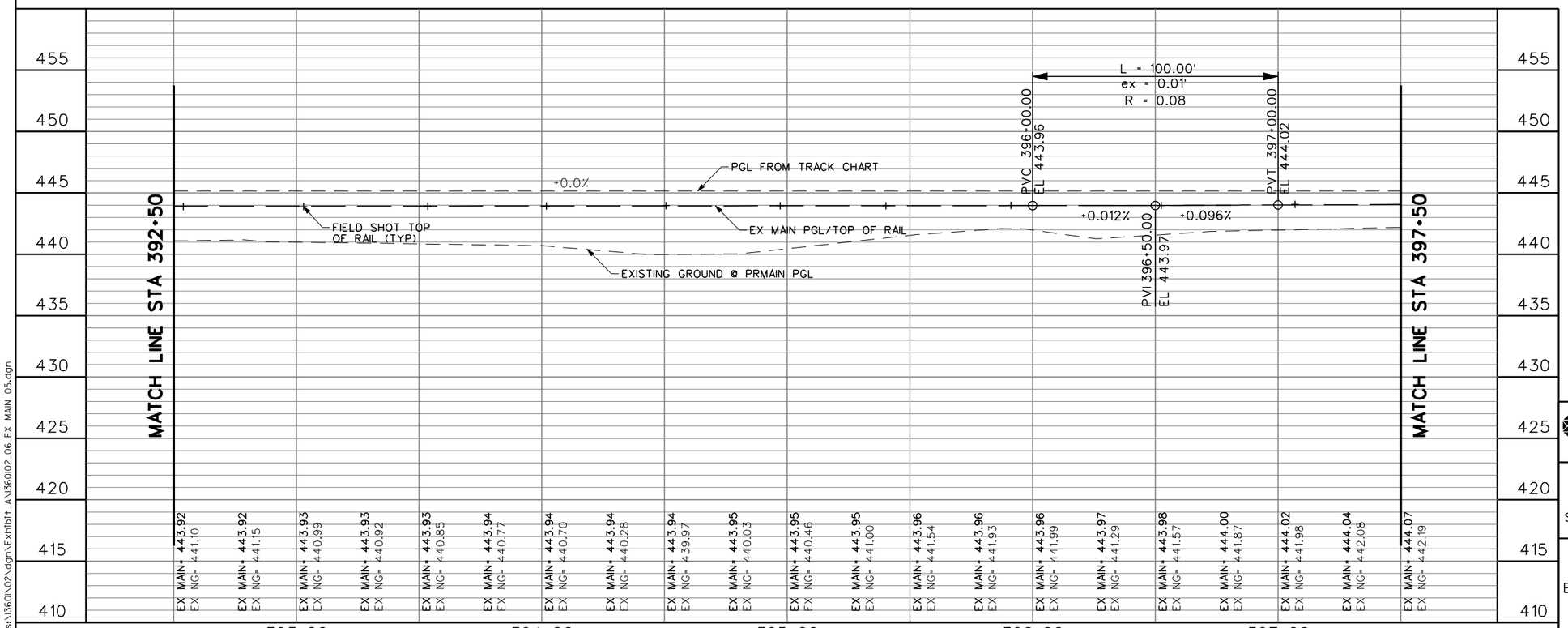

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GEAS A. BULBUL, P.E., 101954
13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

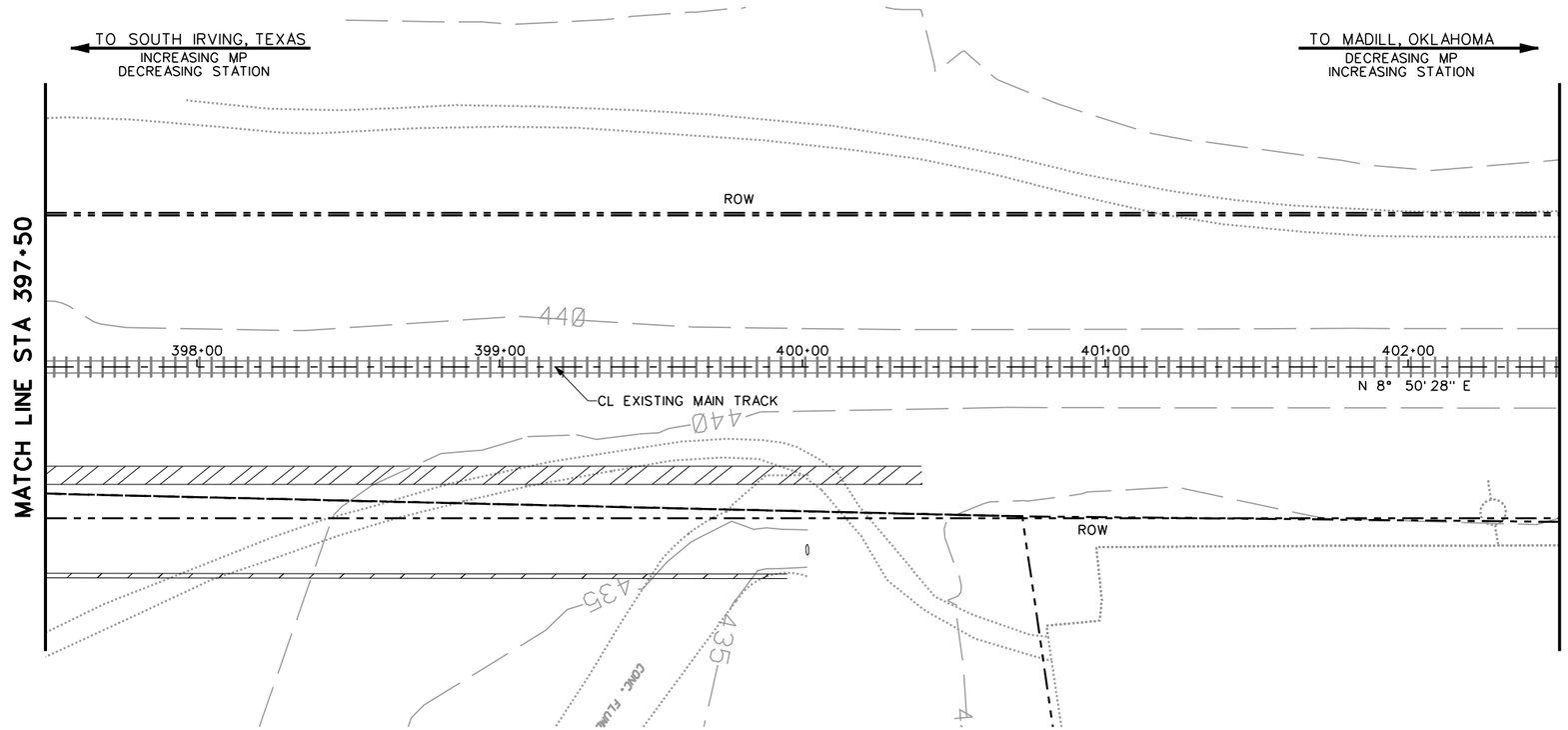
EXISTING MAIN PLAN & PROFILE

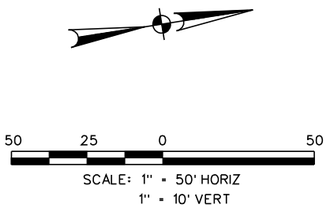
SCALE: 1" = 50' HORZ
1" = 10' VERT

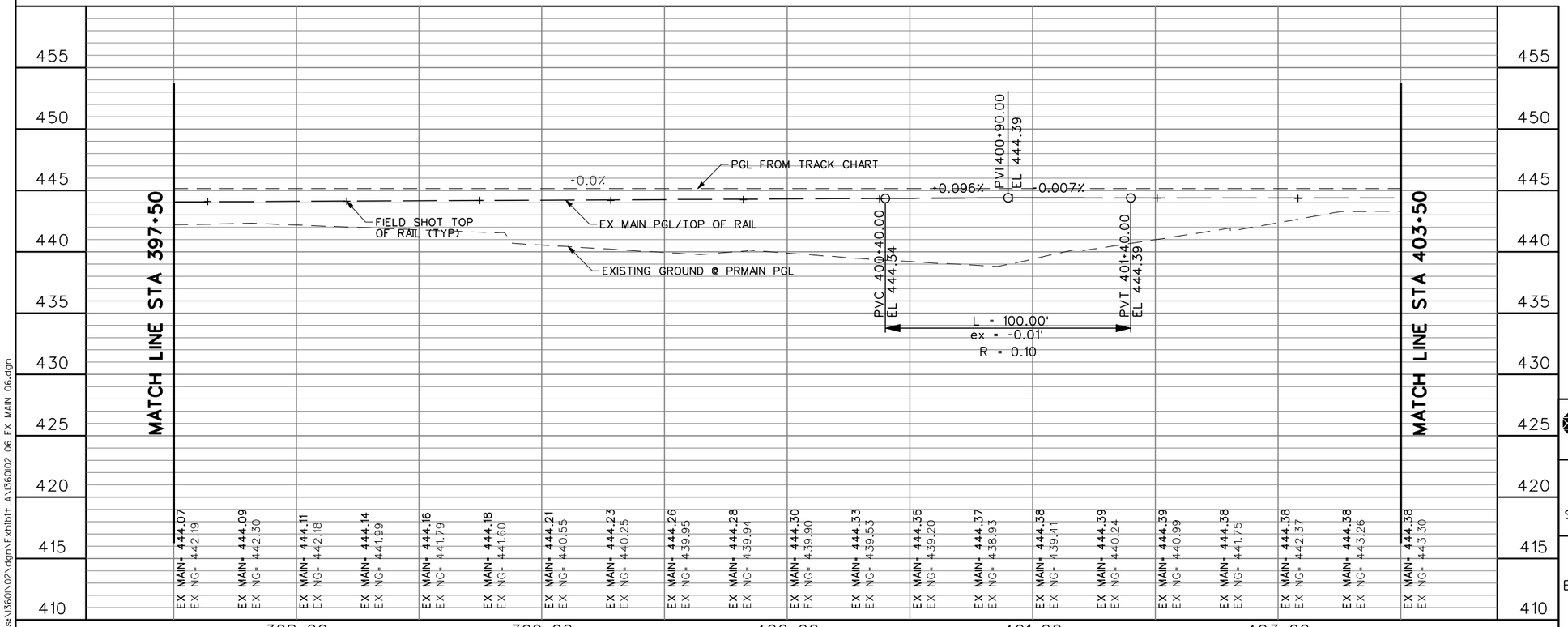
SHEET 5 OF 7

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 18







PRELIMINARY DESIGN

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GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

EXISTING MAIN PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 6 OF 7

EXHIBIT 'A'

TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 19

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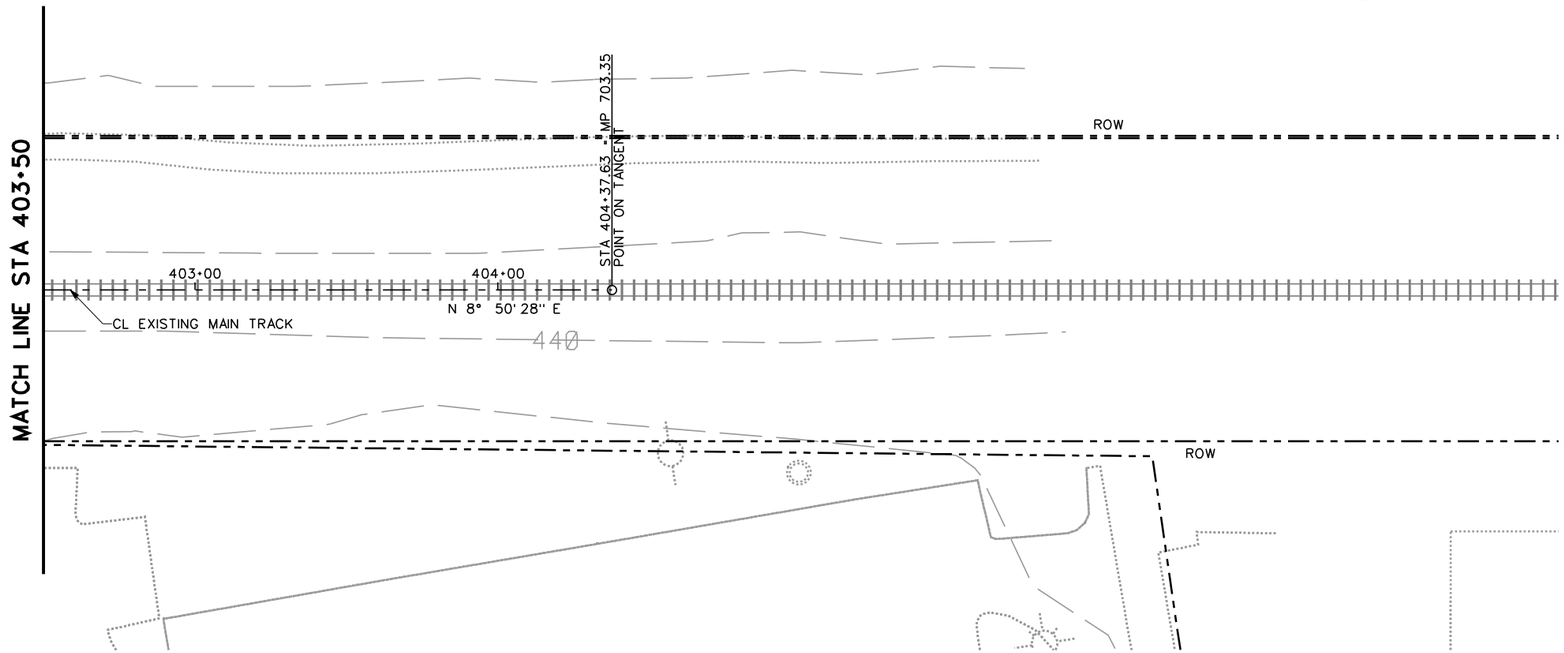

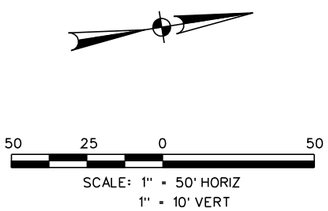

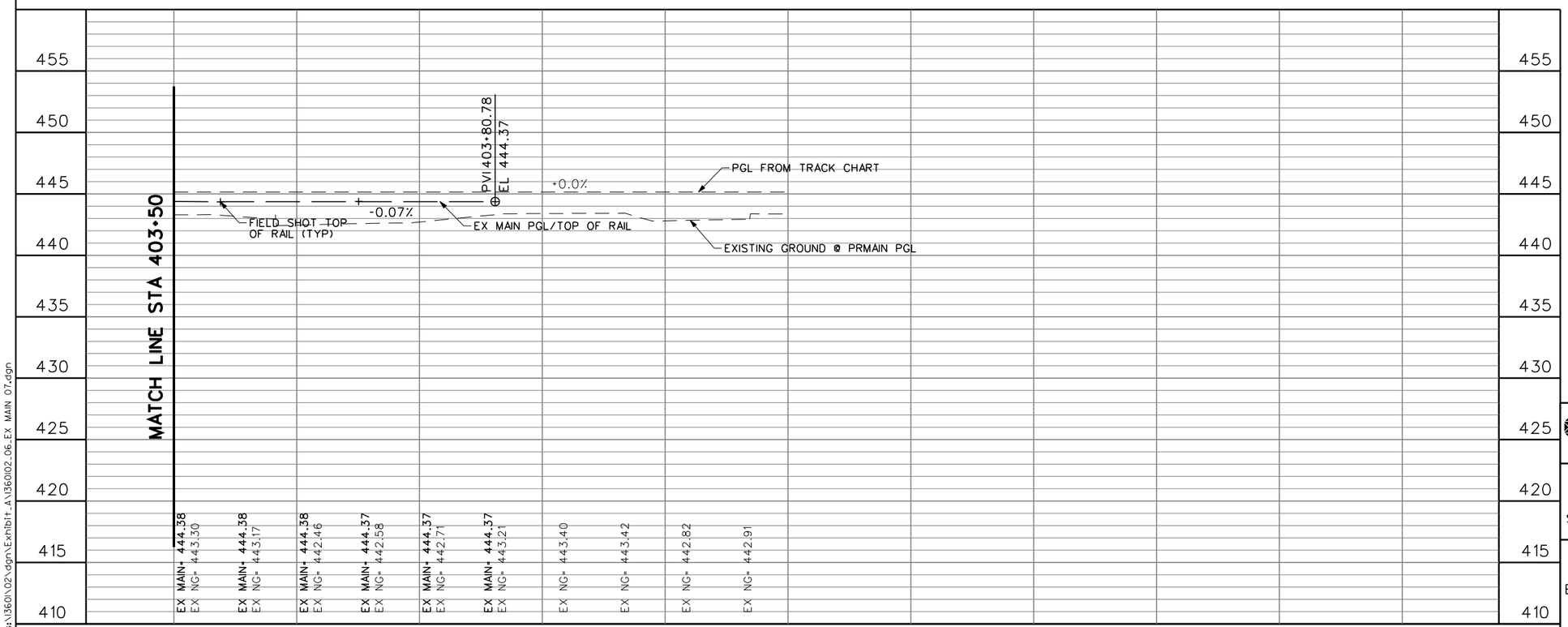

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GEAS A. BULBUL, P.E., 101954
13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

EXISTING MAIN PLAN & PROFILE

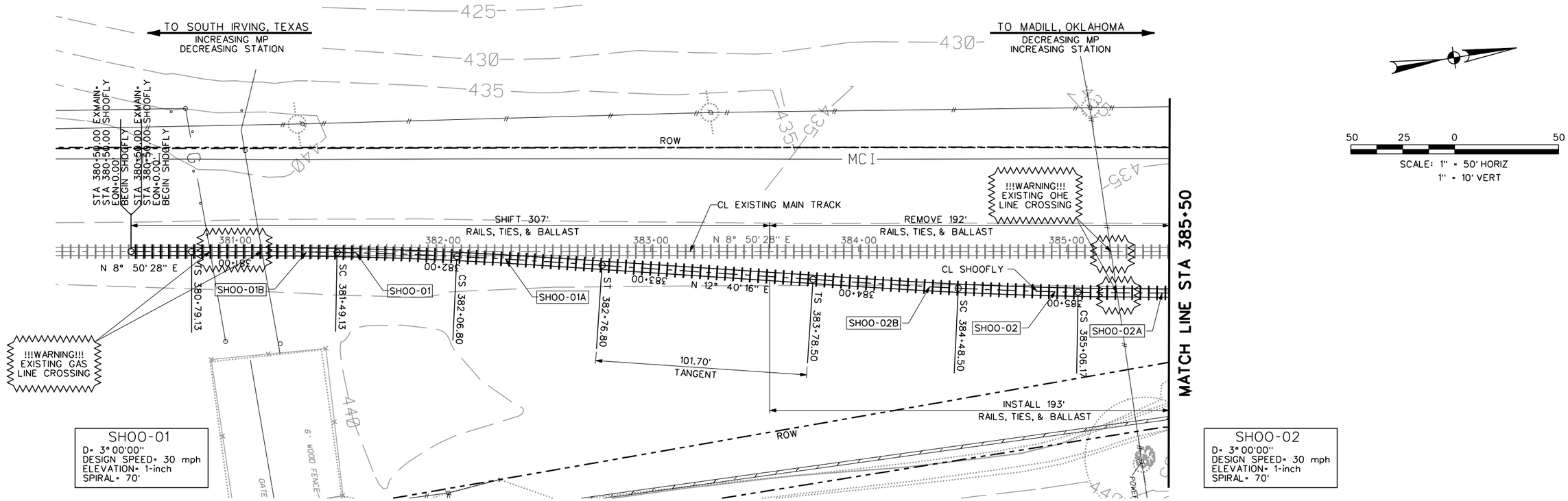
SCALE: 1" = 50' HORZ
1" = 10' VERT

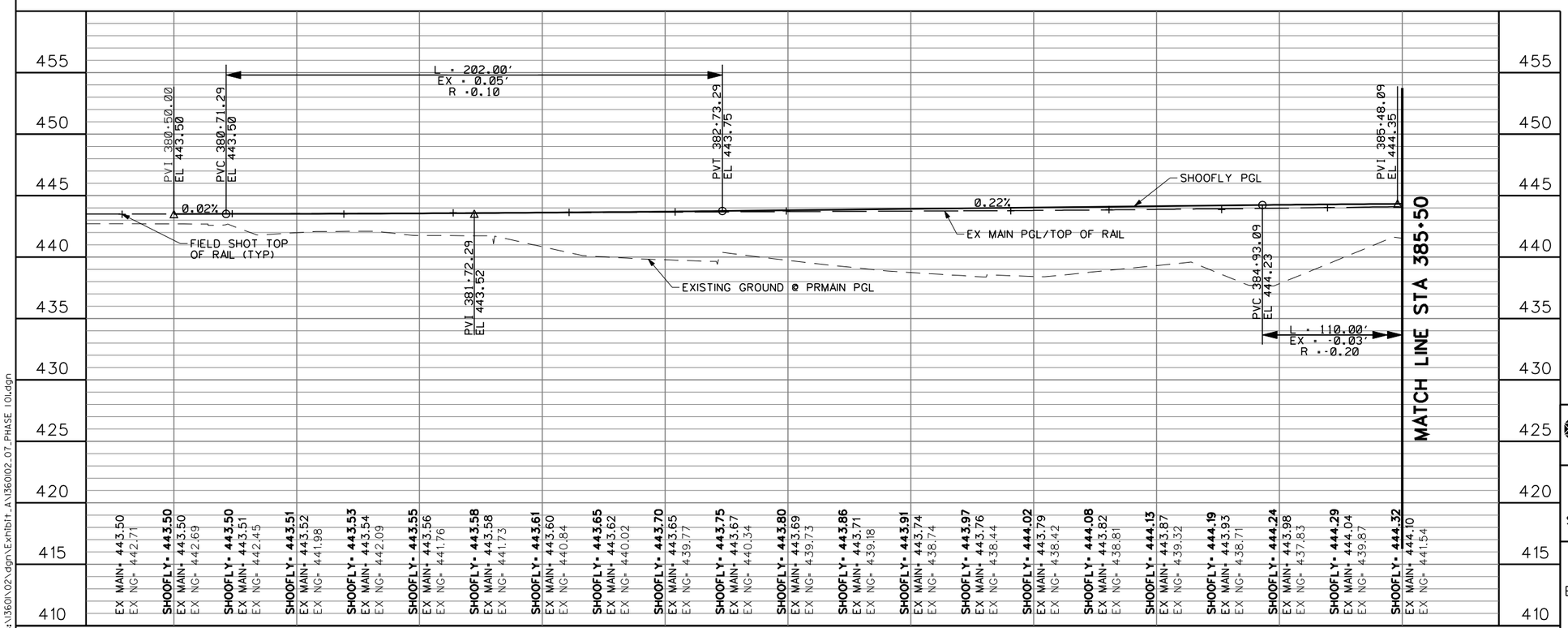
SHEET 7 OF 7

EXHIBIT 'A'

TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 20





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GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

PHASE 1
SHOOFLY PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 1 OF 3

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
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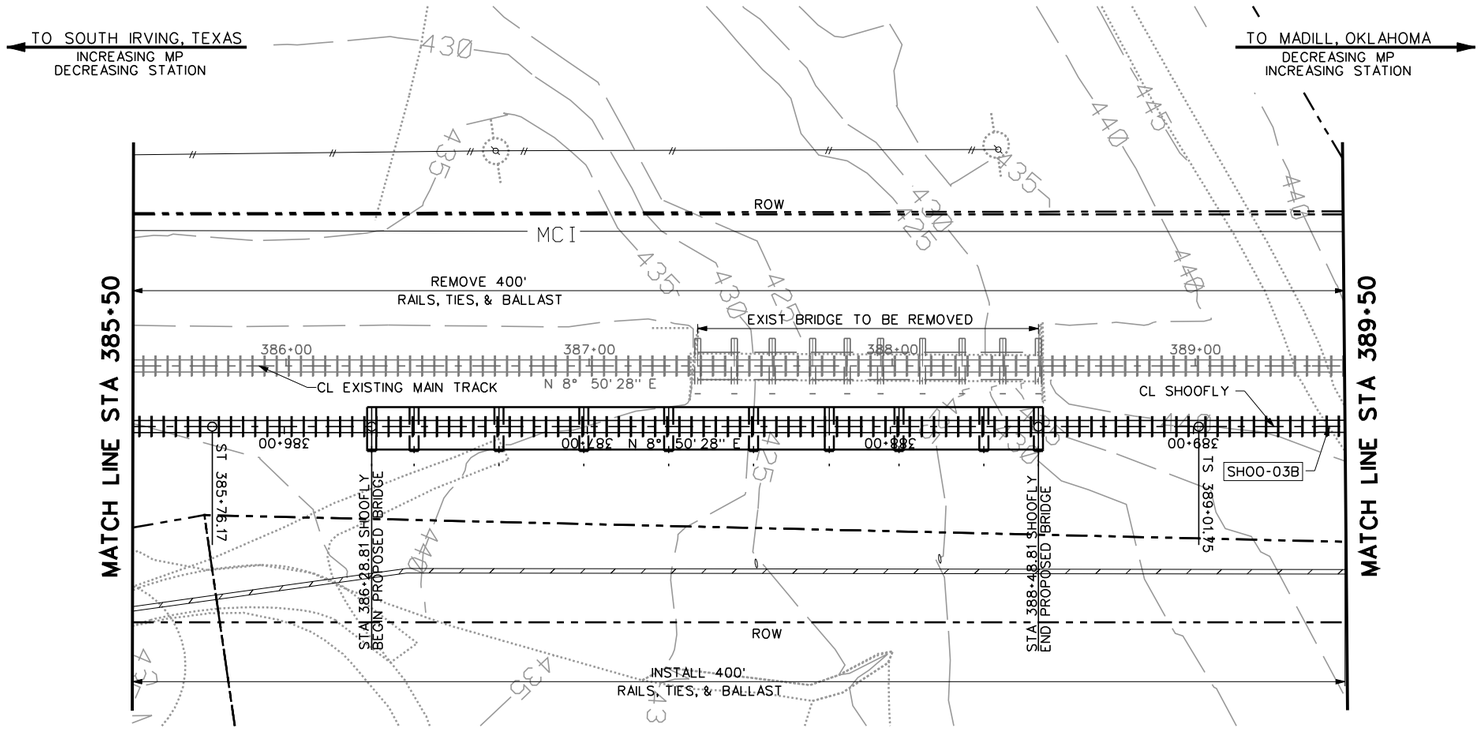

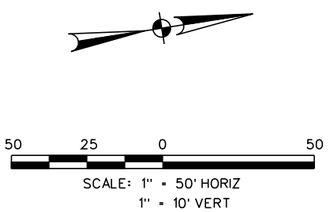

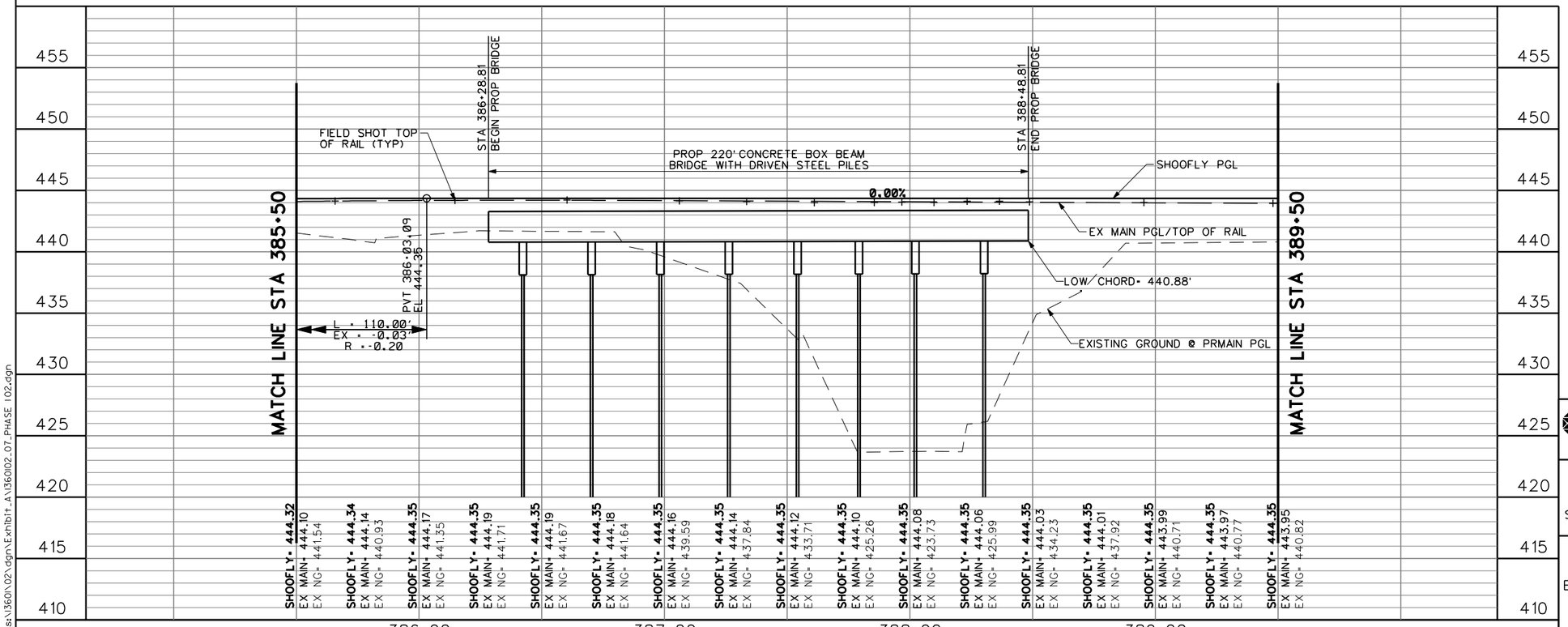

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PRELIMINARY
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GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

PHASE 1
SHOOFLY PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 2 OF 3

EXHIBIT 'A'

TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and
Carrollton MP 700.5
by
VALWOOD IMPROVEMENT
AUTHORITY

SUBDIVISION
BNSF MADILL

MILEPOST REFERENCE
703.57

MUNICIPALITY
FARMER'S BRANCH
DALLAS CO., TEXAS

SHEET NUMBER 22

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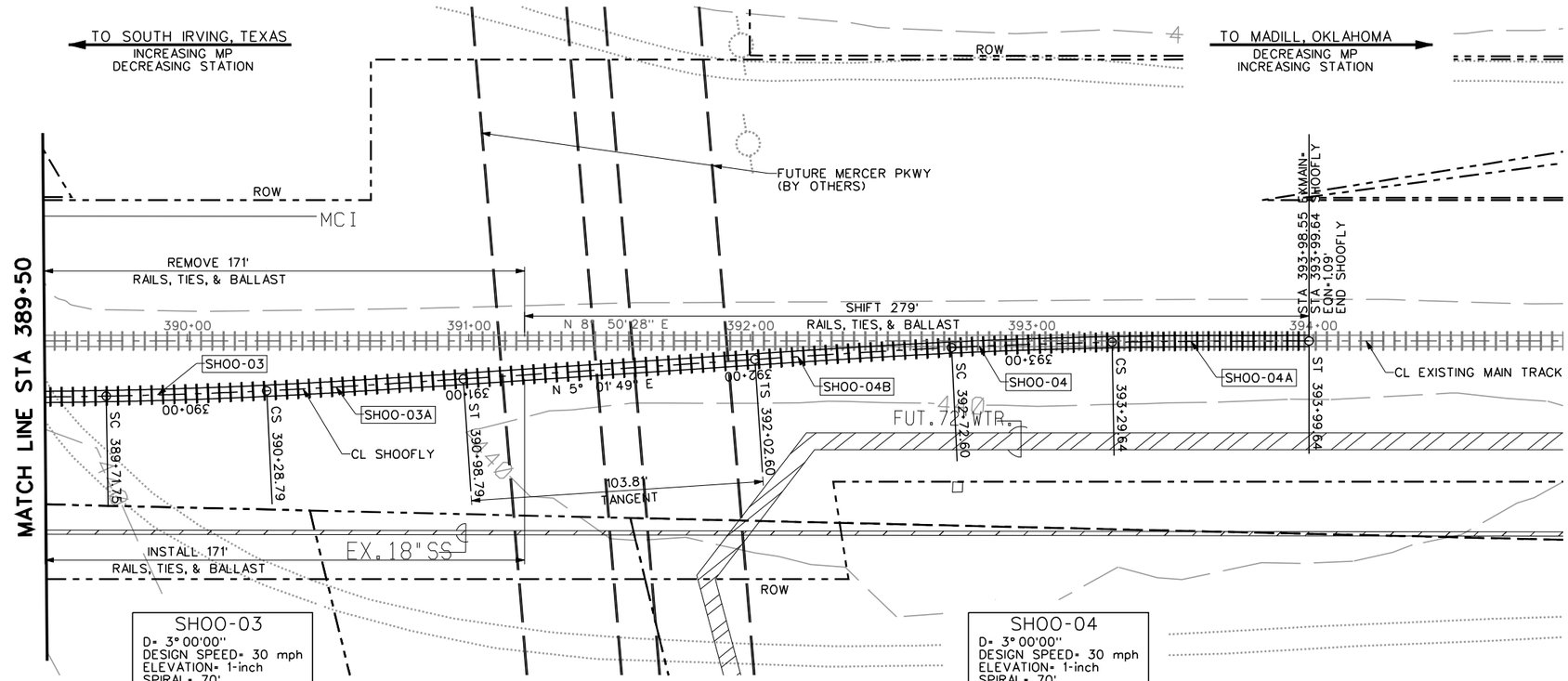

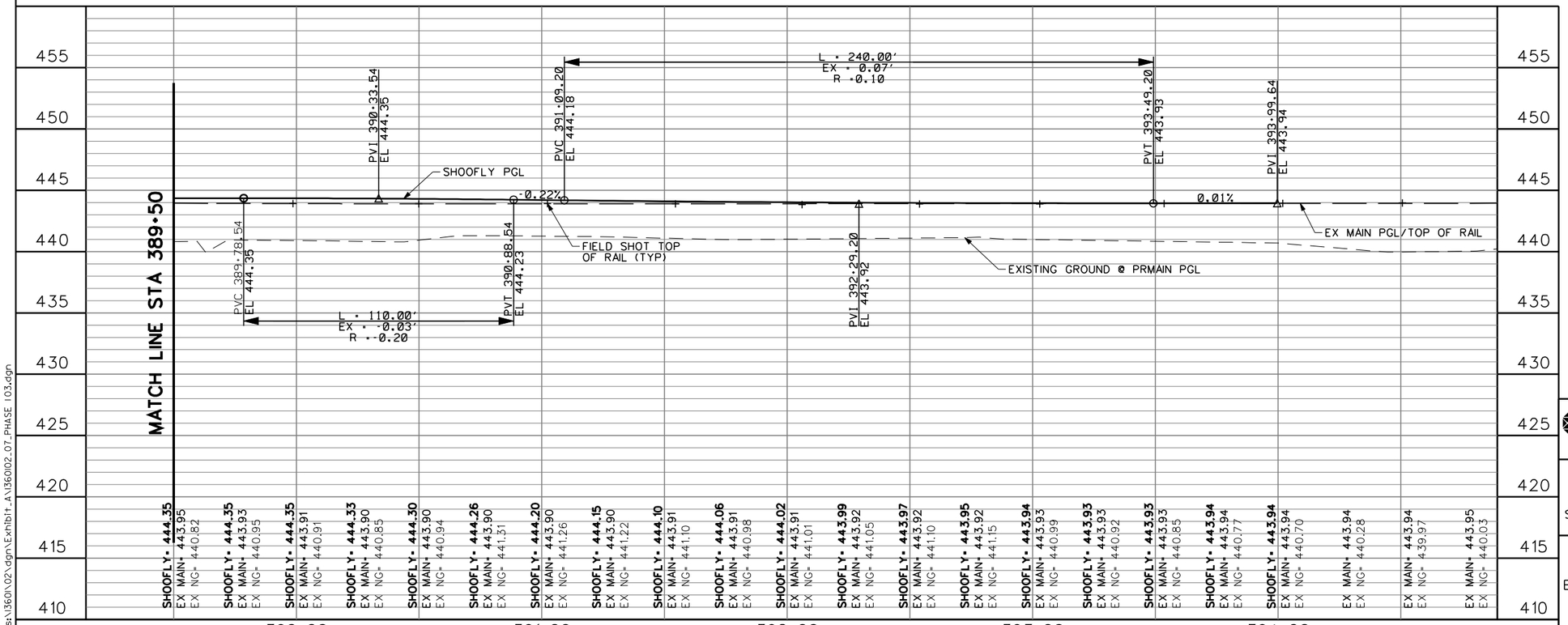

PRELIMINARY DESIGN

PRELIMINARY
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GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

PHASE 1
SHOOFLY PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 3 OF 3

EXHIBIT 'A'

TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and
Carrollton MP 700.5
by
VALWOOD IMPROVEMENT
AUTHORITY

SUBDIVISION	BNSF MADILL
MILEPOST REFERENCE	703.57
MUNICIPALITY	FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER	23

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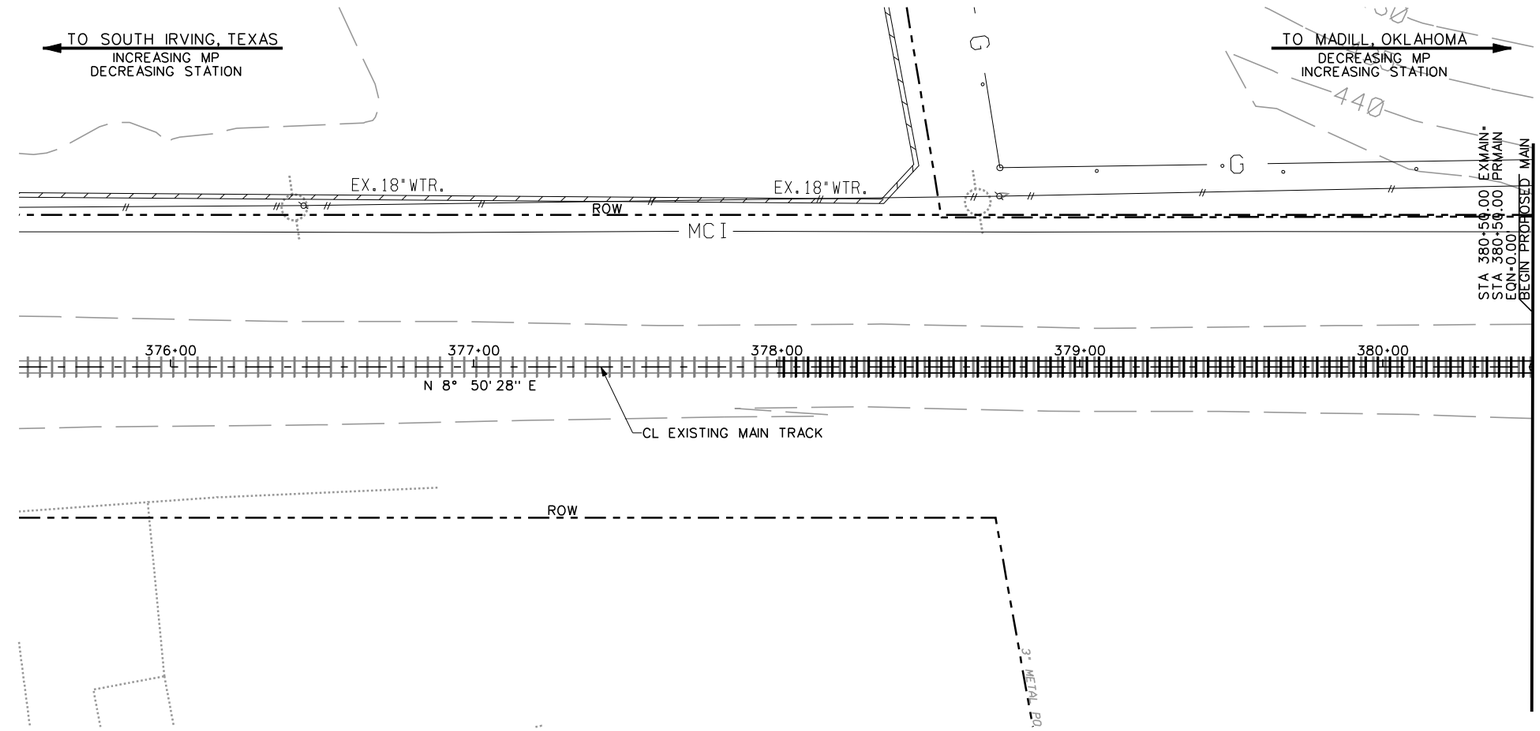

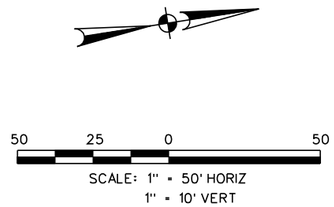

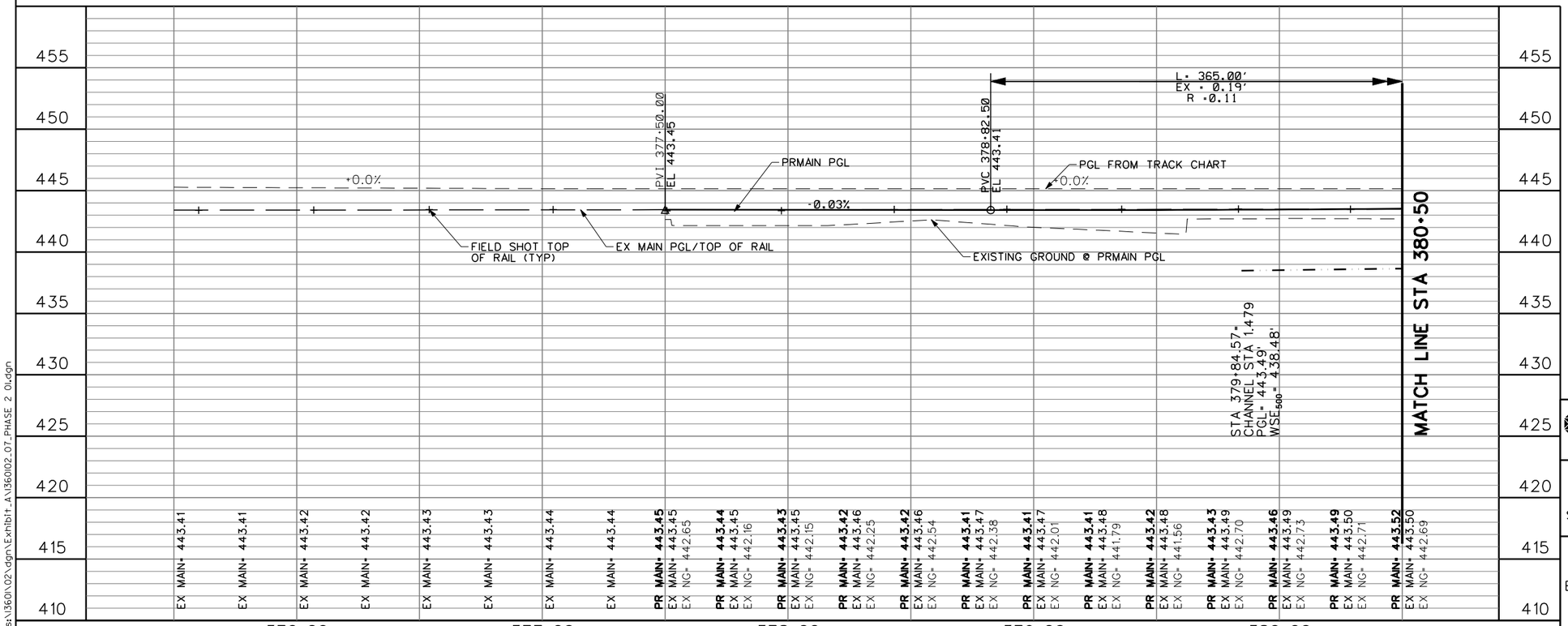

PRELIMINARY DESIGN

PRELIMINARY FOR REVIEW ONLY

GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

PHASE 2
MAIN LINE PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 1 OF 6

EXHIBIT 'A'

TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 24

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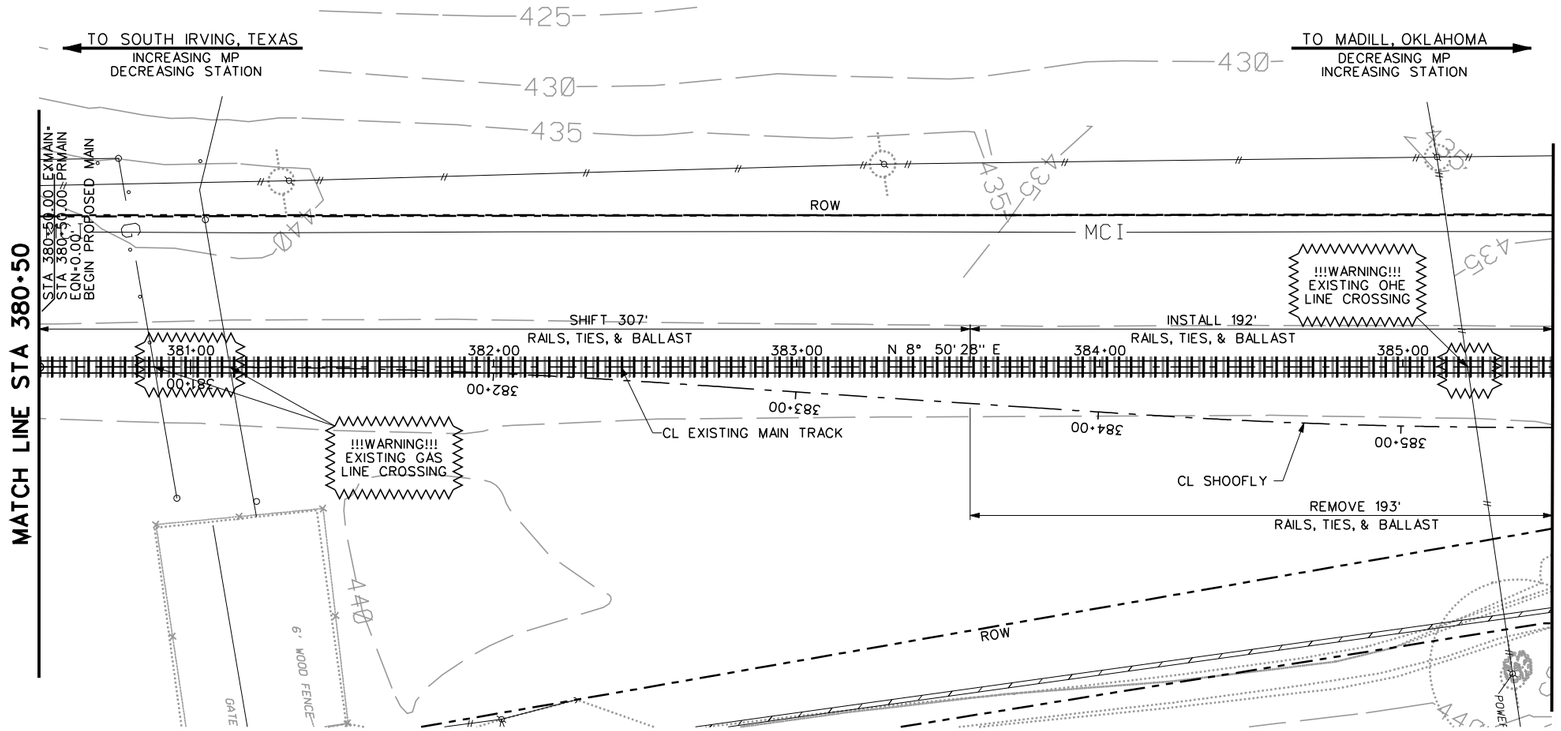

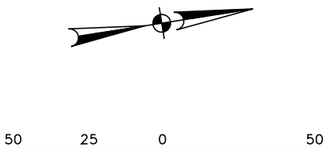

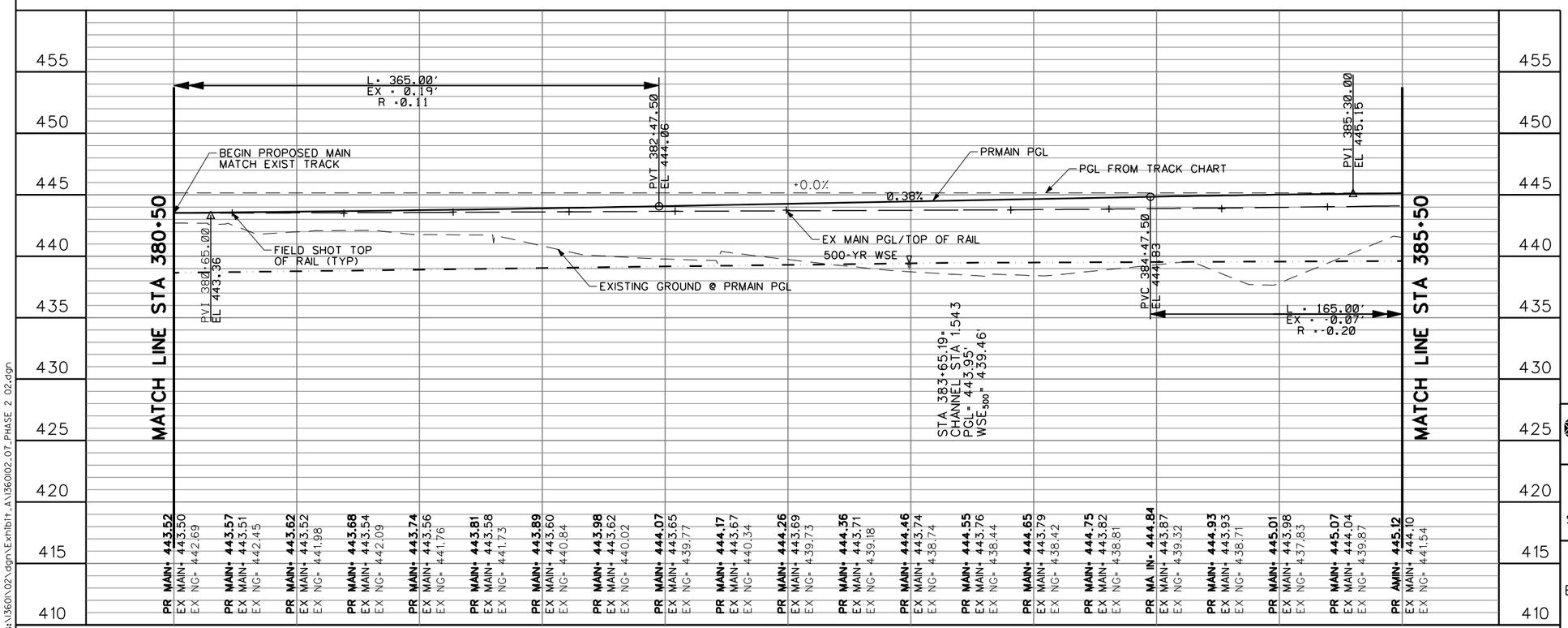

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GEAS A. BULBUL, P.E., 101954
13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

PHASE 2
MAIN LINE PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 2 OF 6

EXHIBIT 'A'

TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and
Carrollton MP 700.5
by
VALWOOD IMPROVEMENT
AUTHORITY

SUBDIVISION
BNSF MADILL

MILEPOST REFERENCE
703.57

MUNICIPALITY
FARMER'S BRANCH
DALLAS CO., TEXAS

SHEET NUMBER 25

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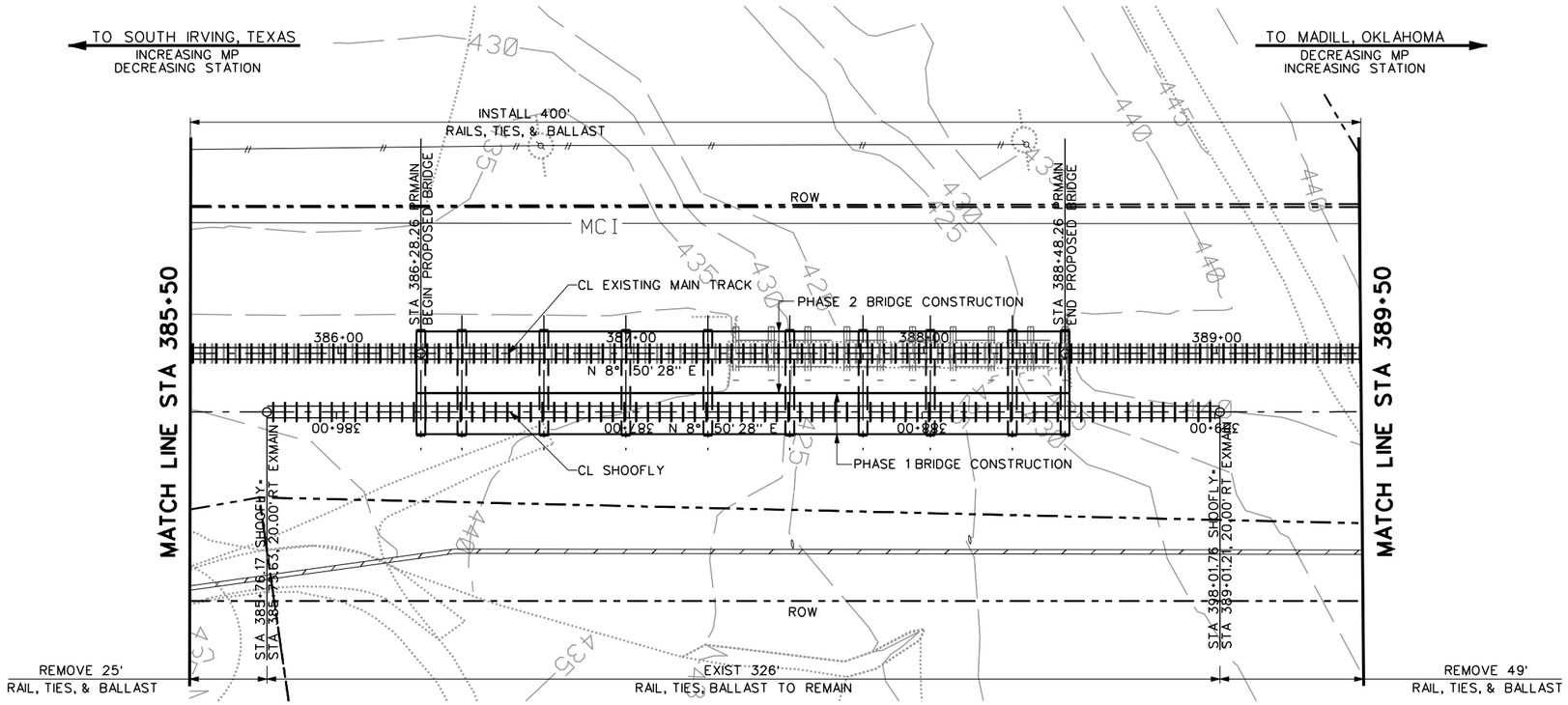

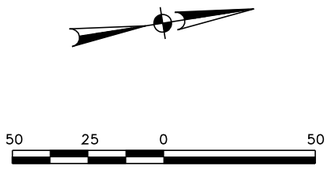

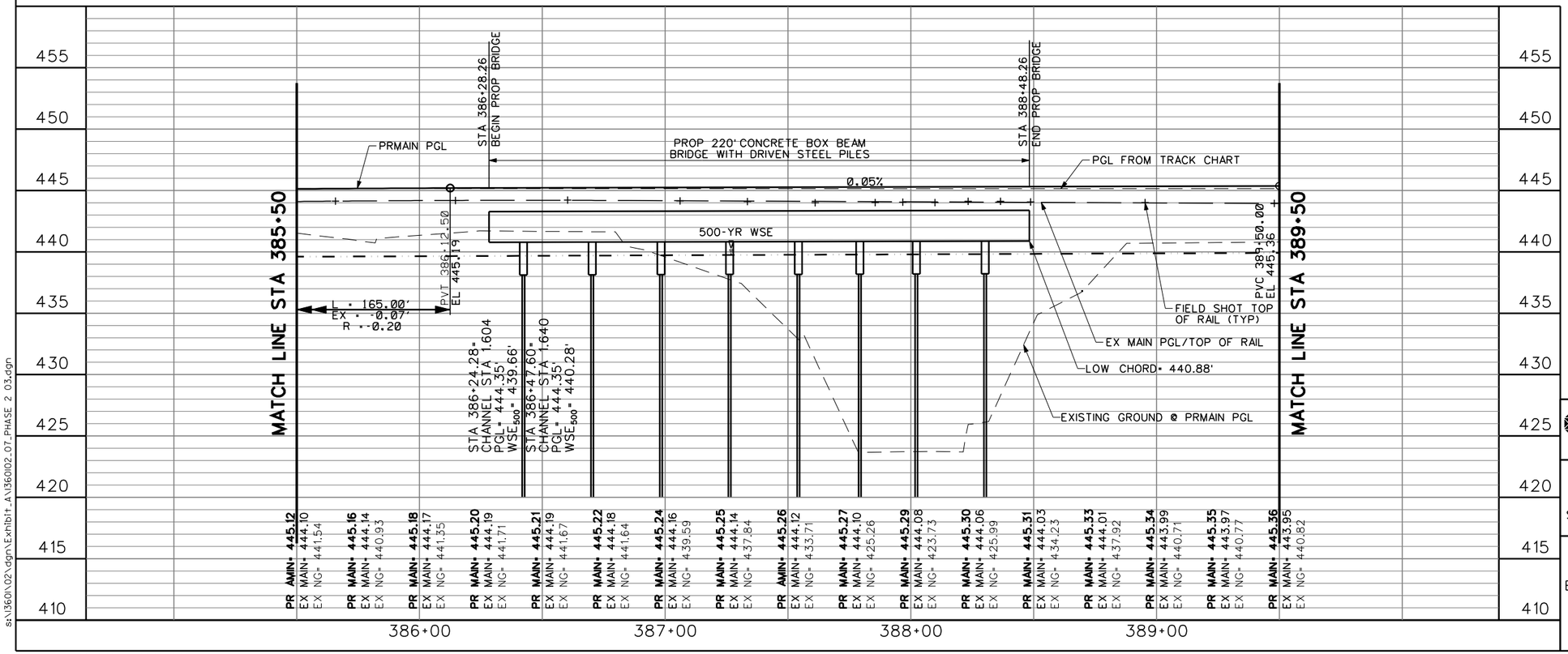

PRELIMINARY DESIGN

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GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

PHASE 2
MAIN LINE PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 3 OF 6

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER: 26

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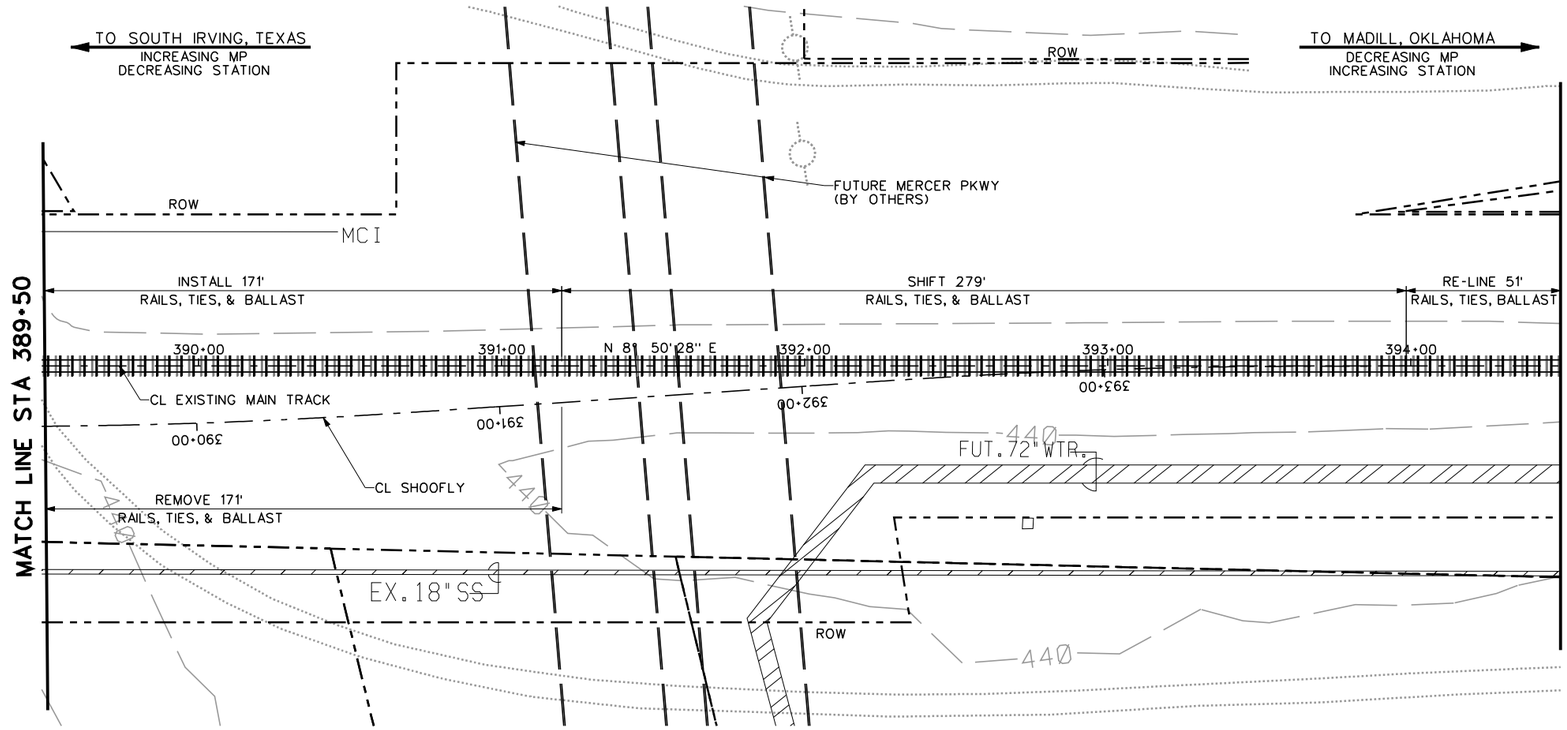

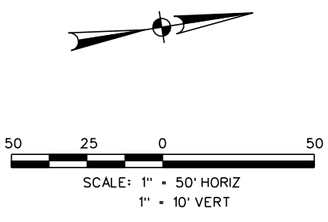

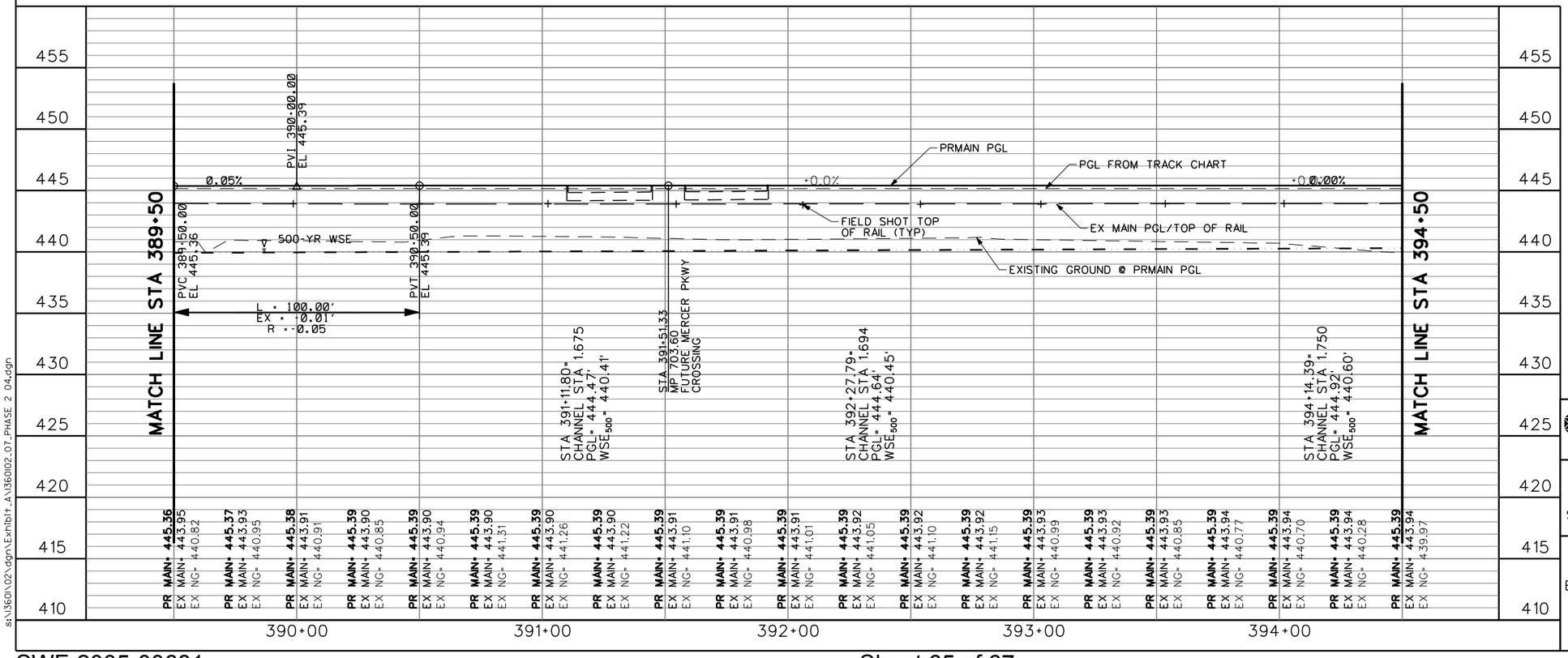

PRELIMINARY DESIGN

PRELIMINARY
FOR REVIEW ONLY

GEAS A. BULBUL, P.E., 101954
13-SEP-2011

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BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

PHASE 2
MAIN LINE PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 4 OF 6

EXHIBIT 'A'

TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and
Carrollton MP 700.5
by
VALWOOD IMPROVEMENT
AUTHORITY

SUBDIVISION
BNSF MADILL

MILEPOST REFERENCE
703.57

MUNICIPALITY
FARMER'S BRANCH
DALLAS CO., TEXAS

SHEET NUMBER 27

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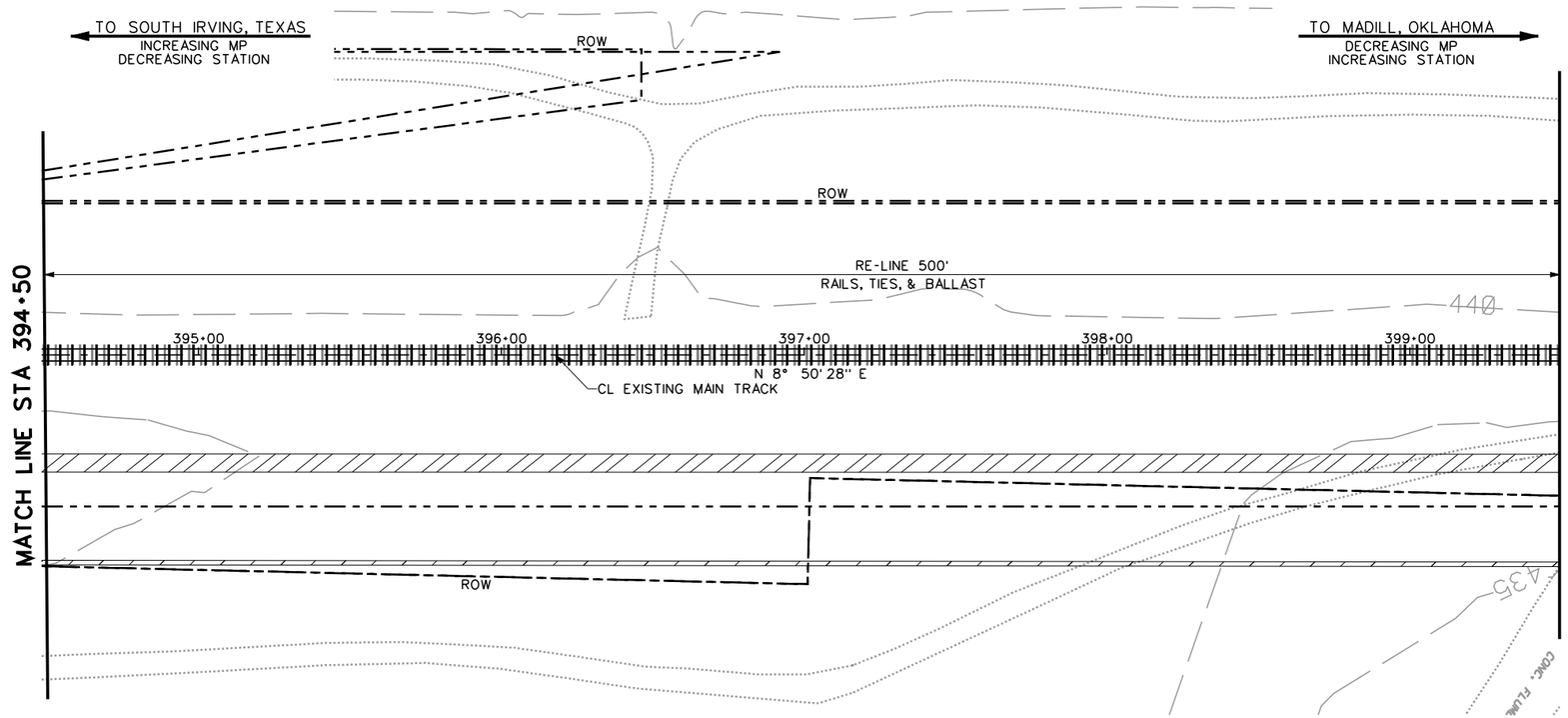

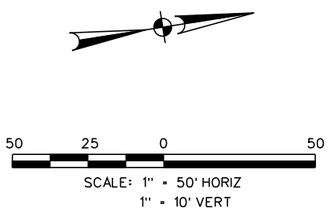

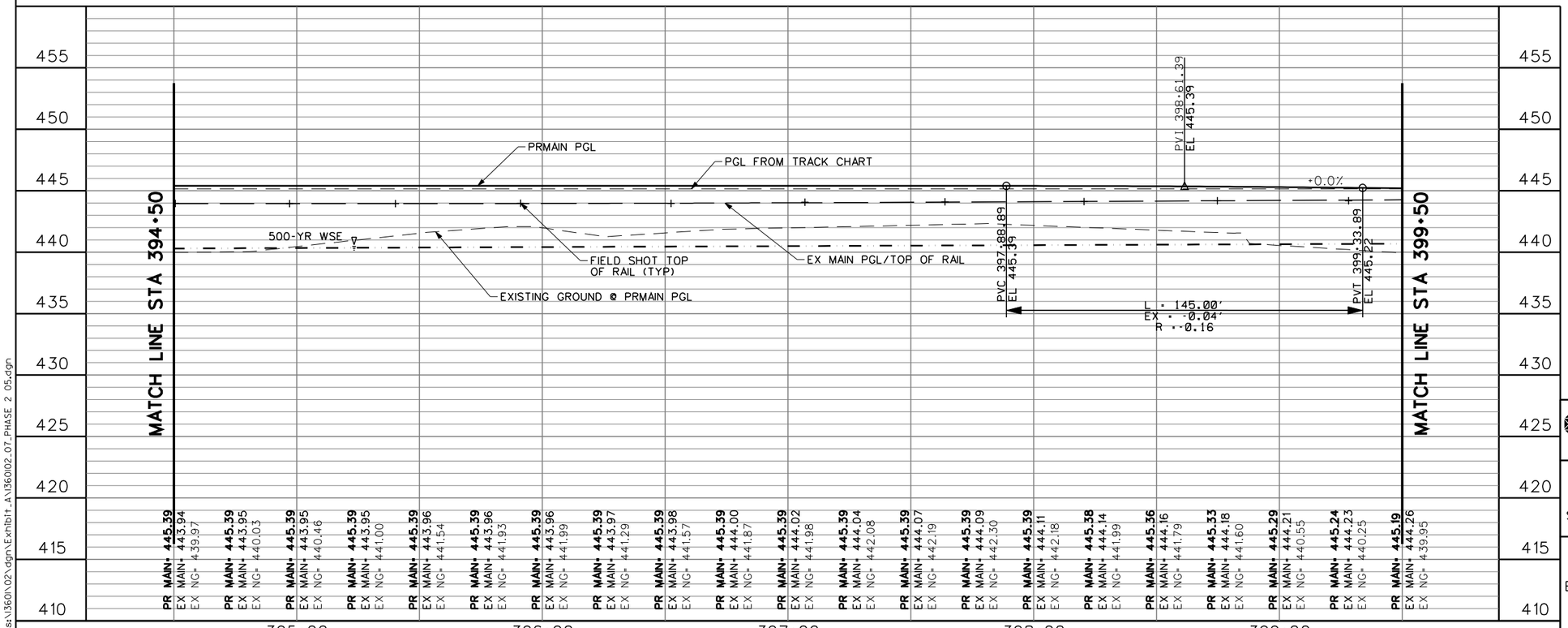

PRELIMINARY DESIGN

PRELIMINARY FOR REVIEW ONLY

GEAS A. BULBUL, P.E., 101954
13-SEP-2011

EXHIBIT-NOT FOR CONSTRUCTION OR BIDDING PURPOSES

BRIDGEFARMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION NUMBER 264

PHASE 2
MAIN LINE PLAN & PROFILE

SCALE: 1" = 50' HORZ
1" = 10' VERT

SHEET 5 OF 6

EXHIBIT 'A'
TRE BRIDGE REPLACEMENT
Between Gribble MP 704.9 and Carrollton MP 700.5
by
VALWOOD IMPROVEMENT AUTHORITY

SUBDIVISION: BNSF MADILL
MILEPOST REFERENCE: 703.57
MUNICIPALITY: FARMER'S BRANCH DALLAS CO., TEXAS
SHEET NUMBER 28

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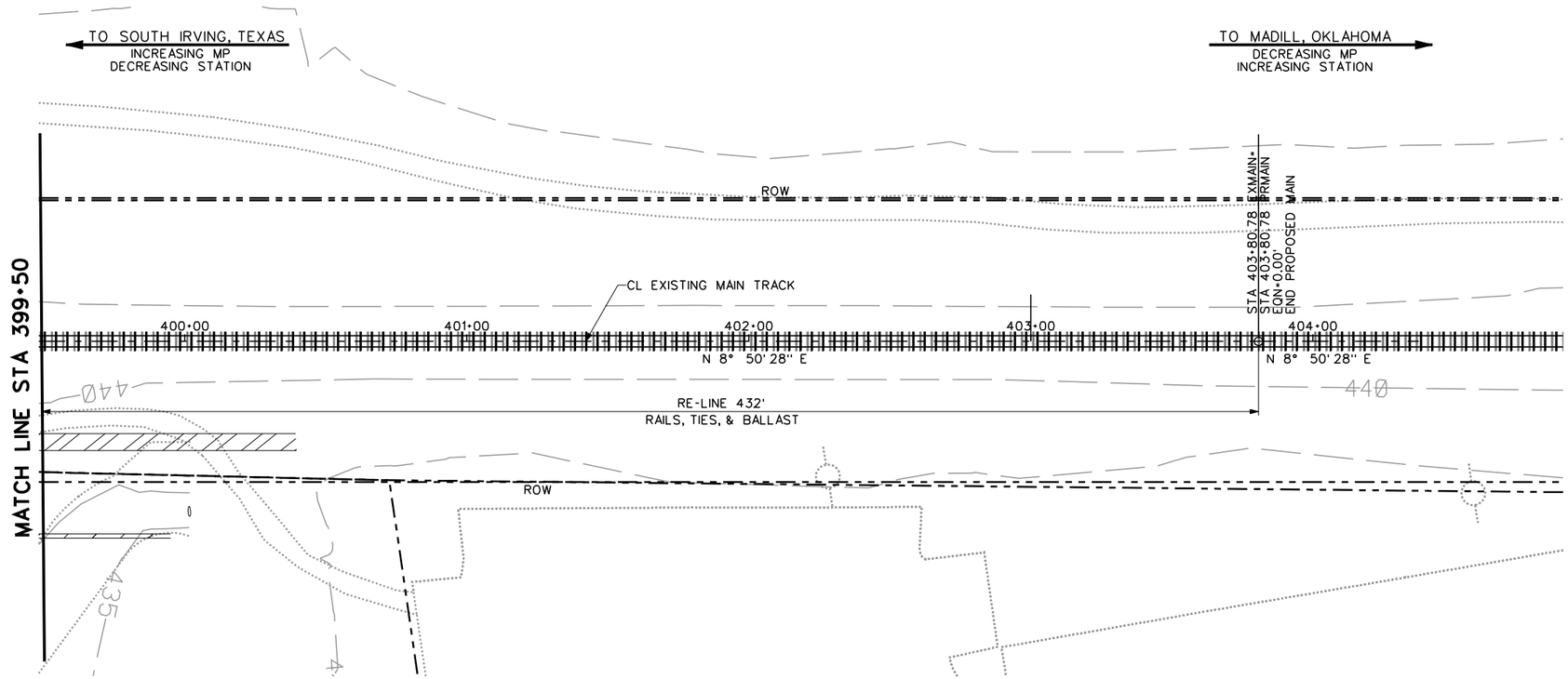

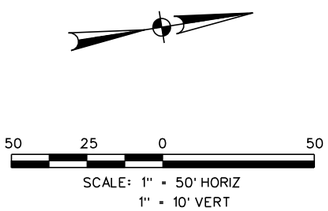

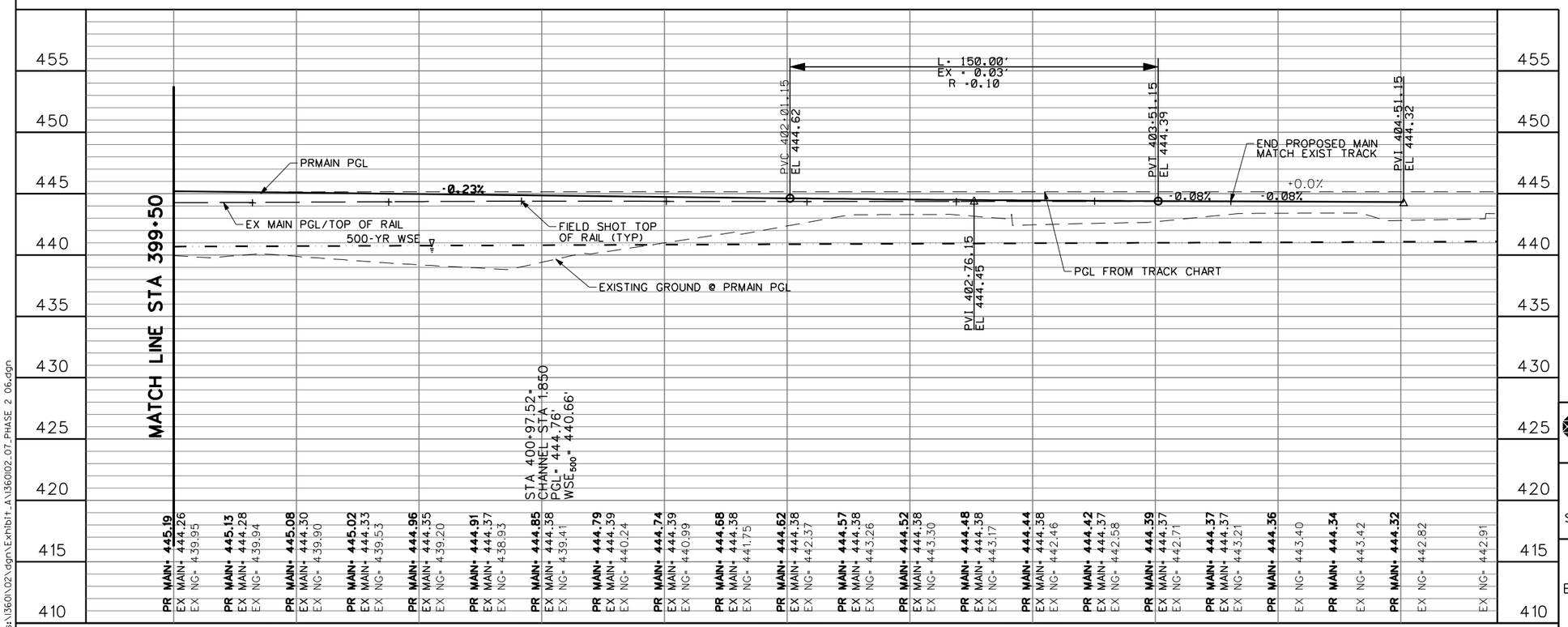

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SHEET NUMBER: 29

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