



**DEPARTMENT OF THE ARMY**  
**CORPS OF ENGINEERS, TULSA DISTRICT**  
**1645 SOUTH 101ST EAST AVENUE**  
**TULSA, OKLAHOMA 74128-4609**

Application Number SWT-2012-378

**JOINT PUBLIC NOTICE**  
**U.S. ARMY CORPS OF ENGINEERS**  
**AND**  
**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ)**  
**(30-DAY COMMENT PERIOD)**

Interested parties are hereby notified that the District Engineer (DE) has received an application for a Department of the Army (DA) permit and water quality certification pursuant to Sections 404 and 401 of the Clean Water Act (CWA). The ODEQ hereby incorporates this public notice and procedure as its own public notice and procedure by reference thereto.

The application is for the realignment of State Highway 28 (SH 28) and the replacement of one structurally deficient bridge and two Reinforced Concrete Boxes (RCB).

Name of Applicant:

Ms. Siv Sundarum, P.E.  
Oklahoma Department of Transportation  
200 N.E. 21<sup>st</sup> Street  
Oklahoma City, OK 73105

Name of Agent:

Ms. Kim Shannon  
Kleinfelder, Inc.  
10835 E. Independence St., Suite 102  
Tulsa, OK 74116

Location: The proposed project is located in Section 29 and 30, Township 22 North, Range 19 East, Rock Creek, Mayes County, Oklahoma. The project site can be found on the USGS Strang, OK 7.5 Minute USGS Quadrangle map.

Latitude: 33.86260

Longitude: -95.03112 Decimal Degrees (NAD83)

Purpose: The basic purpose of this work is to bring this portion of SH 28 into compliance with Federal Safety Standards by providing wider shoulders to ensure public safety and efficient traffic flow.

A water dependency determination will be made upon consideration of the basic purpose for the placement of fill material for construction of road shoulders and bridge piers. There are a total of 6.88 acres of wetlands that would be impacted by the proposed project.

The overall purpose of this work is to provide a safe and efficient transportation facility to accommodate the present and future transportation needs of the area.

Description of Work: The applicant proposes the placement of fill material into jurisdictional waters and wetlands located within Rock Creek. The total project length is 1.28 miles. The fill material would consist of 224,731 cubic yards (cys) of earthen material for construction of a new road with shoulders and embankment; and concrete for bridge piers and two RCB's that has

approximately 157 cys for Bridge “A” (0.13 acre), 713 cys for RCB “Structure 102” (0.29 acre), and 61 cys for RCB “Structure 103” (0.07 acre).

The temporary work road consists of 39,000 cys of earthen material and rock from a borrow site or quarry. All material from the temporary work road would be removed, the channel bottom would be restored to its original contours, and all debris would be removed from Rock Creek.

During construction of the new SH 28 bridge, the existing structurally deficient bridge would remain open to traffic. Demolition of the existing structure would occur after the new roadway and bridge are opened. All dredged material would be hauled off-site to an upland disposal area. The work would be performed using conventional earthmoving equipment.

Avoidance and Minimization Information: The applicant provided the following statement with regard to how avoidance and minimization of impacts to aquatic resources was incorporated into the project plan:

Oklahoma Department of Transportation (ODOT) minimized impacts to jurisdictional waters by reducing impacts from 7.80 acres to 7.02 acres by reducing the size of the construction footprint.

Impacted Waterbody	Acres (ac)	Mitigation Type	Proposed Mitigation Ratio/Acres
Waterbody 1	Emergent Wetlands - 1.5 ac	Restoration	3.5 to 1 / 5.25 ac
Waterbody 2	Rock Creek - 0.2 ac	Restoration	2.3 to 1 / 0.28 ac
Waterbody 3	Forested Wetlands - 2.5 ac	Restoration	2 to 1 / 5.0 ac
Waterbody 4	Forested Wetlands - 0.13 ac	Restoration	2 to 1 / 0.26 ac
Waterbody 5	Forested Wetlands - 0.87 ac	Restoration	2 to 1 / 1.7 ac
Waterbody 6	Forested Wetlands - 0.58 ac	Restoration	2 to 1 / 1.2 ac
Waterbody 7	Forested Wetlands - 1.3 ac	Restoration	2 to 1 / 2.6 ac
Waterbody 8	Unnamed Tributary - 0.02 ac 85 linear feet	Restoration	2.3 to 1 / 0.05 ac
Total	6.88 acres of wetlands impacts 0.14 acre of streams impacts		16.34 acres of Forested Wetland Restoration

Another important factor taken into account regarding minimization of impacts to the rural communities of the area includes the option to build on the existing alignment. Based on the information, ODOT has chosen to construct the bridge on a new alignment on the north side of the existing bridge.

Several alternative configurations were considered during the preliminary design of the project:

Alternative 1: No Action

Alternative 2 (Design 1): Close SH 28 and construct a new bridge on the existing alignment. This option is not feasible as it would require closing the road during construction and re-routing traffic.

Alternative 3 (Design 2): Build a new bridge on the south side of SH 28. This proposal would impact approximately 18.25 acres of wetlands.

Alternative 4 (Design 3): Build a new bridge on the north side of SH 28. This proposal would impact approximately 7.80 acres of wetlands.

Alternative 5 (Design 4): Build a new bridge on the north side of SH 28 and leave the existing bridge open during construction. This proposal includes Design 4 and the applicant has reduced the project impacts from 7.80 acres to 7.02 acres by reducing the size of the construction footprint. (Current Proposal)

Mitigation: The applicant has proposed compensatory mitigation for unavoidable impacts to aquatic resources expected from the proposed project:

The mitigation plan includes mitigation goals and objectives, mitigation site selection and justification, mitigation work plan, performance standards, site protection and maintenance, and a monitoring plan. The project would impact one perennial stream, one emergent wetland, five forested wetlands, and one intermittent stream. To offset impact to 6.88 acres of emergent and forested wetlands and 0.14 acre of stream impacts, a total of 16.34 acres of forested wetland has been proposed for restoration at the mitigation site. The mitigation site has an ideal wetland reference site that occurs immediately east on the opposite bank of the Grand (Neosho) River. This wetland provides both a target for restoration efforts and gauge to judge restoration success.

The applicant has proposed the removal of non-native plants within the mitigation site and would conduct soil samples for nutrient content and pH. The applicant desires to construct shallow excavations of the site to enhance water retention from sheet flow and inundation from the on-site intermittent stream and the Grand (Neosho) River during flood events. Reforestation plantings of hydrophytic tree and shrub species may include Boxelder (*Acer nugundo*), Pecan (*Carya illinoensis*), American elm (*Ulmus americana*), Common buttonbush (*Cephalanthus occidentalis*), or Blackgum (*Nyssa sylvatica*).

The mitigation site is located one mile south of Langley, in Section 27, Township 23 North, Range 21 East, in Mayes County, Oklahoma. The project site can be found on the Spavinaw, OK USGS 7.5 Minute USGS Quadrangle map. The mitigation site is approximately 134 acres and is within the same HUC unit as the project impacts and has suitable hydrology from multiple sources. The only natural plant community is Deciduous Bottomland Forest dominated by non-native grass species. Domination plant species found on both the mitigation site and impact site include American elm, Eastern cottonwood, pecan, Bermuda grass, smartweed and various sedges. The applicant has proposed to plant approximately 1,630 one or two gallon containerized trees or shrubs that have 25 square feet spacing and 100 trees or shrubs per acre over 16.3 acres. A variety of common and uncommon native plant species found within the Springfield Plateau ecoregion are proposed for the restoration planting. The native trees, shrubs, and herbaceous species for mitigation plantings are American sycamore (*Platanus occidentalis*), Black willow (*Salix nigra*), Blackgum (*Nyssa sylvatica*), Boxelder (*Acer negundo*), Common buttonbush (*Cephalanthus occidentalis*), Common spikerush (*Eleocharis palustris*), Fowl manna grass (*Glyceria striata*), Green ash (*Fraxinus pennsylvanica*), Hackberry (*Celtis occidentalis*), Ozark witchhazel (*Hamamelis vernalis*), Pecan (*Carya illinoensis*), Prairie cordgrass (*Spartina pectinata*), River birch (*Betula nigra*), Switch grass (*Panicum virgatum*), and Virginia cutgrass (*Leersia virginica*). The tree and shrub include planting approximately 100 trees or shrubs per acre with 12 to 16 vertical snags per acre; 10 to 12 root hole/horizontal snags per acre, and 6 to 8 micro-depressions per acre. Planting will be staggered to avoid

unnatural spacing patterns. Herbaceous planting will consist of native, annual, perennial grasses, and sedges will be incorporated in conjunction with the trees and shrub plantings in order to stabilize the top soil in newly planted areas. The applicant has included a proposal to control non-native species and has proposed to use best management practices for the proposed mitigation activities. The performance standards include an as-built assessment, completed after construction, would be used to determine if the project was built as planned. Indicators of wetland hydrology such as water marks, drift lines, and drainage patterns will be used to document hydrologic conditions. Vegetation will be monitored and compared to a reference site to determine if goals are being met. The percent of ground cover of wetland plant species in forested wetlands would exceed 80 percent after five years. The survival rate of planted and naturally recruited trees would be 80 percent or more after five years (approximately 1,300 trees). The stems per acre count for containerized reforestation would be achieved when 75 percent or 1,220 trees survive after five years. The wetland functions and values would be evaluated using standards methods such as the Charleston Method, a hydrogeomorphic approach, or other method as prescribed by Corps, Tulsa District. ODOT proposed to purchase a suitable site and place a perpetual deed (conservation easement) on the site for its dedication as an aquatic ecosystem preserve. The maintenance plan includes maintaining fence and gates, installation of fence post to define the boundary and, appropriate signage to indicate a USACE Mitigation Area. Long-term management of the site, including monitoring, regularly scheduled maintenance and adaptive management plan would most likely transfer to a state agency. ODOT has proposed to monitor the site for five years and provide an annual report for five years. The annual report would include photographs and results of the qualitative and quantitative monitoring, progress of the mitigation area relative to success standards, and any recommended remedial measures. ODOT would be responsible for all financial assurance regarding the planning, implementation, monitoring, and success of the proposed mitigation project. A cash bond or other financial instrument would be provided, if required by Corps.

The Corps has made no determination at this time with regard to the adequacy of the proposed mitigation relative to the federal mitigation rules and guidance, including Tulsa District's Mitigation and Monitoring Guidelines. The Corps is accepting comments on the need for and nature of the proposed mitigation in addition to comments on the applicant's primary proposal. The Corps bears the final decision on the need for and extent of mitigation required if the project proposed herein is authorized.

Project Setting: This project is located within the limits of the State of Oklahoma, in the Oklahoma Ecoregion of Springfield Plateau which is part of the Ozark Highlands geomorphic province. The transition is nearly level and is susceptible to flooding. This area includes terraces and spring fed meandering streams.

Plans and Data: Plans showing the location of the proposed activity and other data are enclosed with this notice (Enclosures 1 through 10). If additional information is desired, it may be obtained from Mr. Marcus Ware, U.S. Army Corps of Engineers, Tulsa District, ATTN: Regulatory Office, 1645 South 101st East Avenue, Tulsa, OK 74128-4609, or telephone 918-669-7403.

Cultural Resources: The DE has consulted the National Register of Historic Places, and it has been determined that there are no properties currently listed in the National Register which would be directly affected by the proposed work. The DE has also consulted the listing of Eligibility

Determinations for Oklahoma and determined that the proposed project is not in the vicinity of properties eligible for listing. This public notice is also being sent to the State Historic Preservation Officer and to Native American Tribal governments to reveal if other known historic or archeological resources that might be eligible for listing in the National Register exist in the project area and which could be directly affected by the proposed work. This coordination is being done to fulfill our requirements under the National Historic Preservation Act of 1966 (Public Law 89-665) and associated historic preservation laws. If we are made aware, as a result of comments received in response to this notice, or by other means, of specific archeological or other historic properties which might be affected by the proposed work, the DE would immediately take the appropriate action necessary pursuant to the National Historic Preservation Act of 1966, as amended, and 36 CFR Part 800, in accordance with implementing regulations 33 CFR 325, Appendix C.

Threatened and Endangered Species: The following federally-listed species are known to occur in the vicinity or are listed for the county in which the proposed action is located: American burying beetle (*Nicrophorus americanus*), Gray Bat (*Myotis grisescens*), Interior Least tern (*Sterna antillarum*), Piping plover (*Charadrius melodus*), and Ozark cavefish (*Amblyopsis rosae*). A copy of this notice is being furnished to the U.S. Fish and Wildlife Service and appropriate state agencies. This notice constitutes a request to those agencies for information on whether any other listed or proposed-to-be-listed endangered or threatened species may be present in the area which would be affected by the proposed activity.

Environmental Considerations: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity and its intended use on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit 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 the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownerships, and, in general, the needs and welfare of the people. A permit will be denied if the discharge does not comply with the Environmental Protection Agency's 404(b)(1) Guidelines. Subject to the 404(b)(1) Guidelines and any other applicable guidelines or criteria, a permit will be granted unless the DE determines that it would be contrary to the public interest.

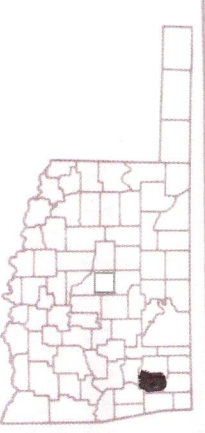
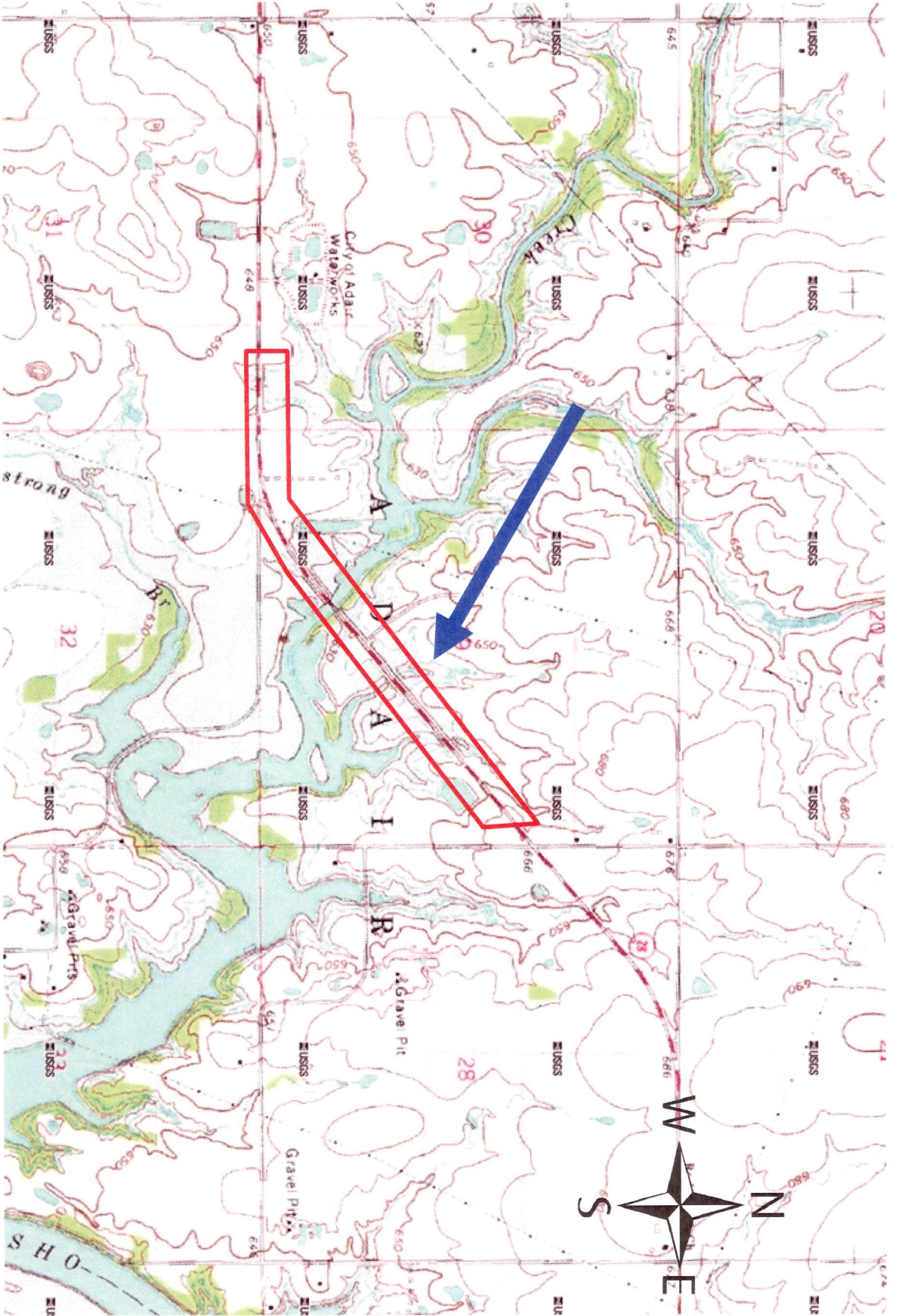
Comments: The Corps is soliciting comments from the public; federal, state, and local agencies and officials; Indian tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Comments concerning the issuance of this permit should be received by the DE no later than 30 days from the date of this public notice. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, 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. Any person may request in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. At the request of the Oklahoma Water Resources Board's National Flood Insurance Program State Coordinator, we are sending a copy of this notice to the local flood plain administrator to apprise the administrator of proposed development within their jurisdiction. In accordance with 44 CFR Part 60 (Flood Plain Management Regulations Criteria for Land Management and Use), participating communities are required to review all proposed development to determine if a flood plain development permit is required. The local Flood Plain Administrator is required to perform this review for all proposed development and maintain records of such review.

Comments concerning water quality impacts will be forwarded to the ODEQ for consideration in issuing a water quality Section 401 certification for the proposed project. Work may **not** commence until decisions have been made on both Sections 401 and 404 of the CWA.

Andrew R. Commer  
Chief, Regulatory Office

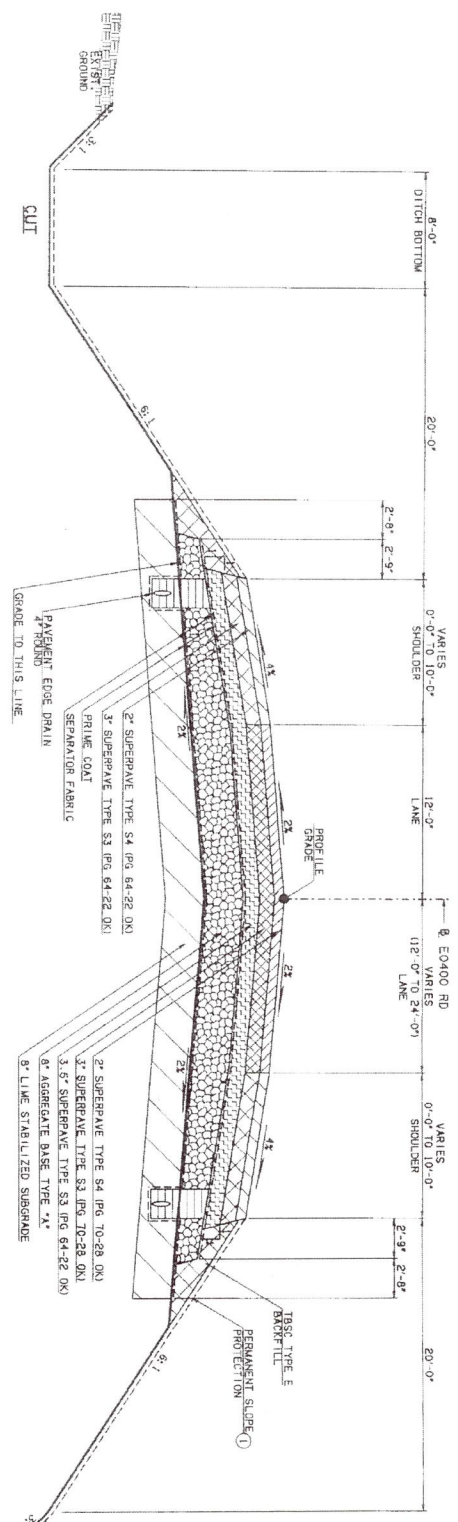
Enclosures



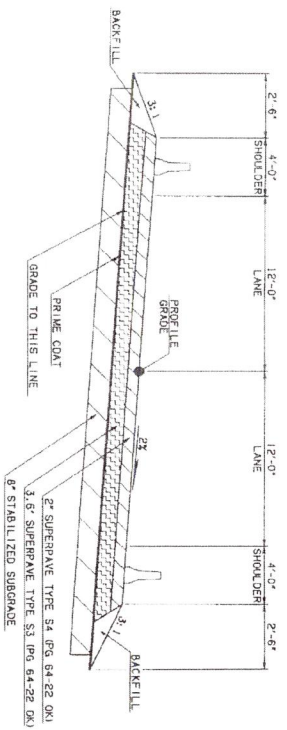
SWT-2012-378  
Oklahoma Department of Transportation  
SH-28 Rock Creek  
Mayes County, Oklahoma  
Enclosure 1 of 10







2  
TYPICAL SECTION  
E0400 RD.  
STA. 10+20.98 TO STA. 13+98.45  
N.T.S.



3  
TYPICAL SECTION  
WEST DETOUR  
STA. TO STA.  
NORTHEAST DETOUR  
STA. TO STA.  
N.T.S.

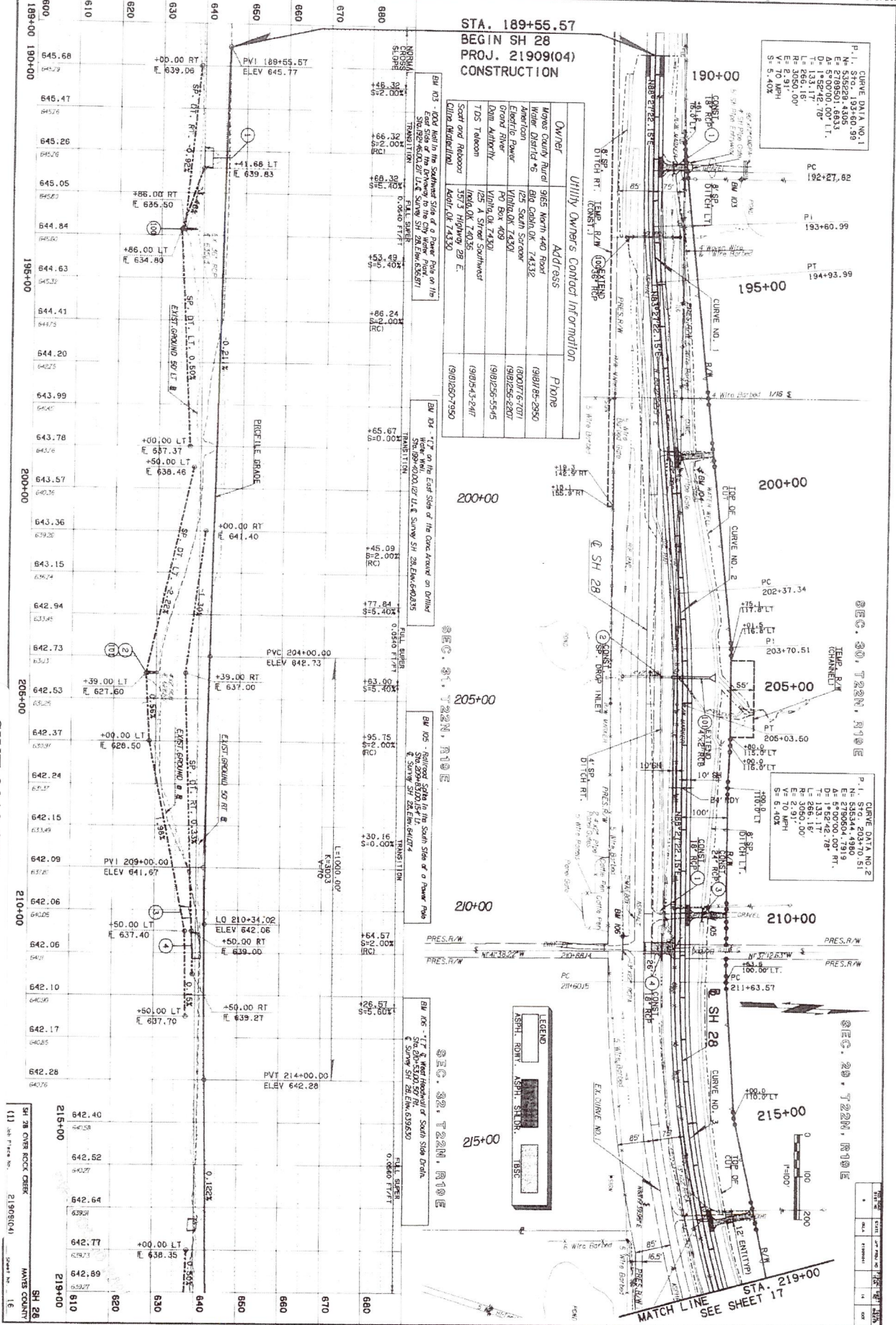
- ① PERMANENT SLOPE PROTECTION
- ② FILL SLOPE DEPTHS ARE DEFINED FROM EDGE OF SHOULDER.
- ③ NOT USED

**ROUNDING NOTE:**  
 ① cut and fill slopes with the ground line are to be rounded on a part of the finishing operations. Rounding shall be minimum for smaller cuts and fills. To the Engineer's cost of rounding to be included in the price bid for other items of work. See sheet 5.

**TOPSOILS NOTE:**  
 The contractor shall strip all of the available topsoil, stockpile it and place it back on the section in accordance with the approved plan. The contractor shall spread the topsoil in thin layers on the completed fill slopes of the cut sections and the remainder on completed fill slopes or other priority areas indicated by the Engineer. The topsoil may be used for Salvage Topsoil, Lump sum.

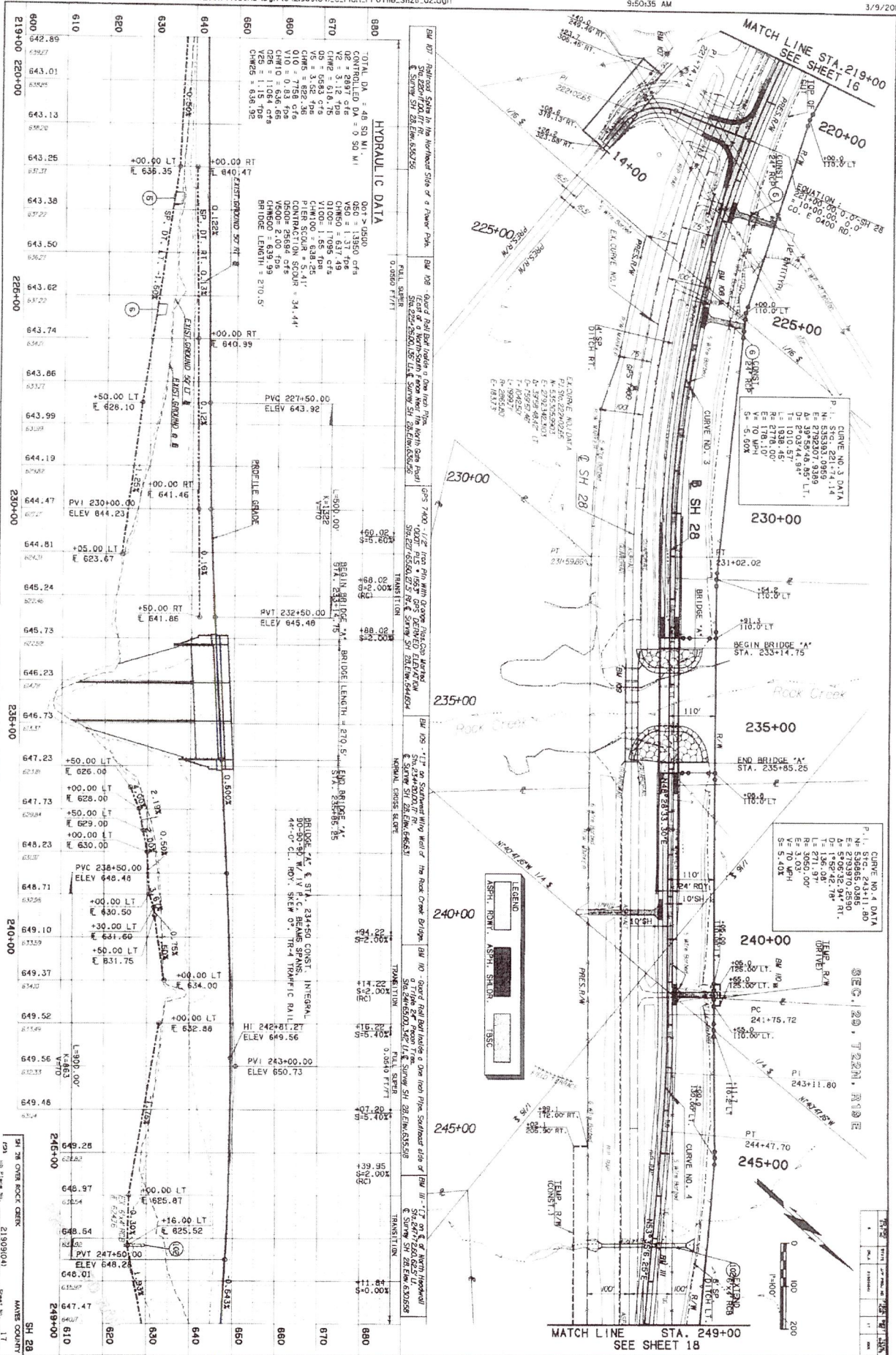
DATE	BY	CHKD	APP'D	NO.
TYPICAL SECTIONS (2)				
SH 28 OVER ROCK CREEK			JAMES COUNTY	
JOB SHEET NO. 21909041				
SHEET NO. 4				

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 Mayes County, Oklahoma  
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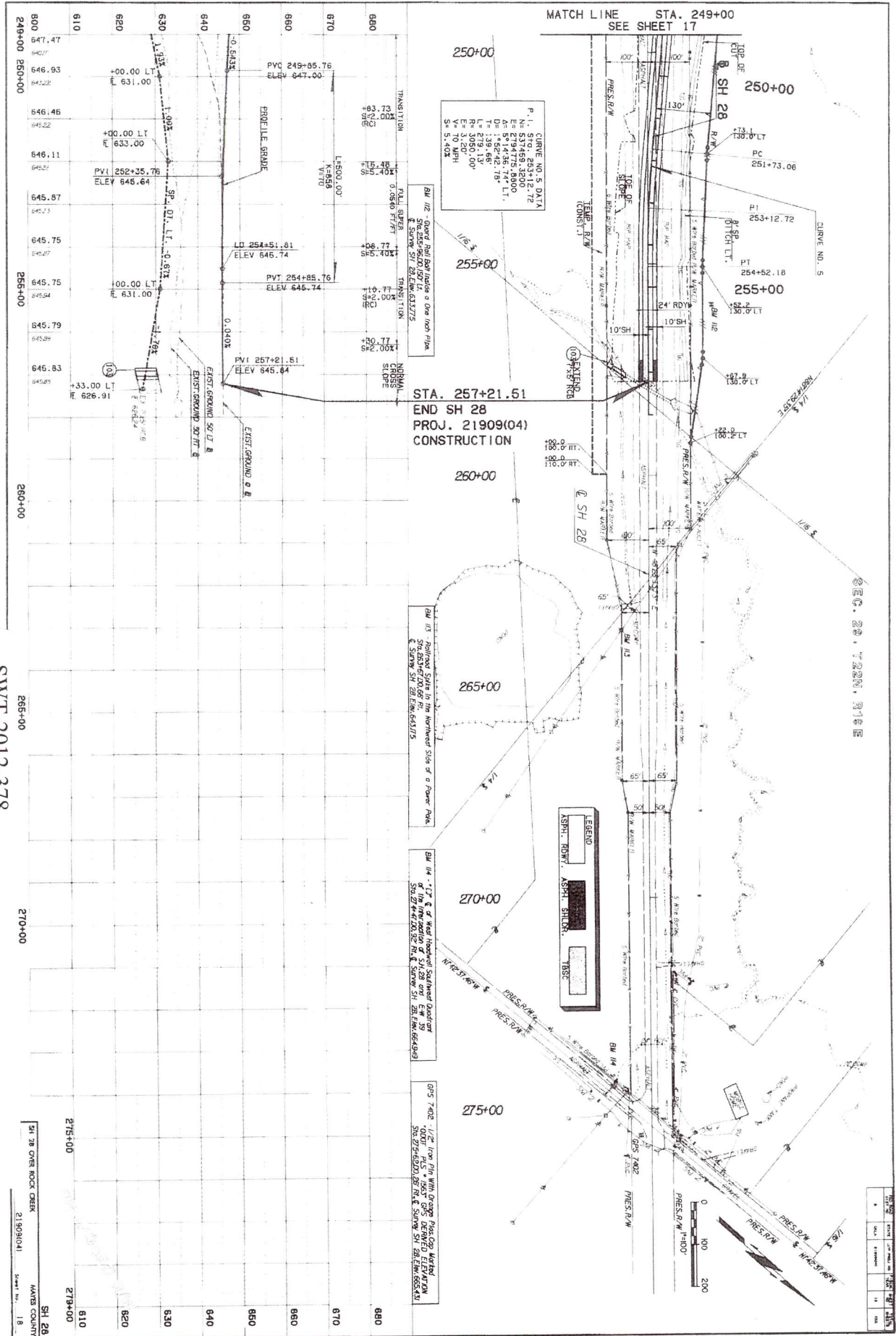


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Mayes County, Oklahoma  
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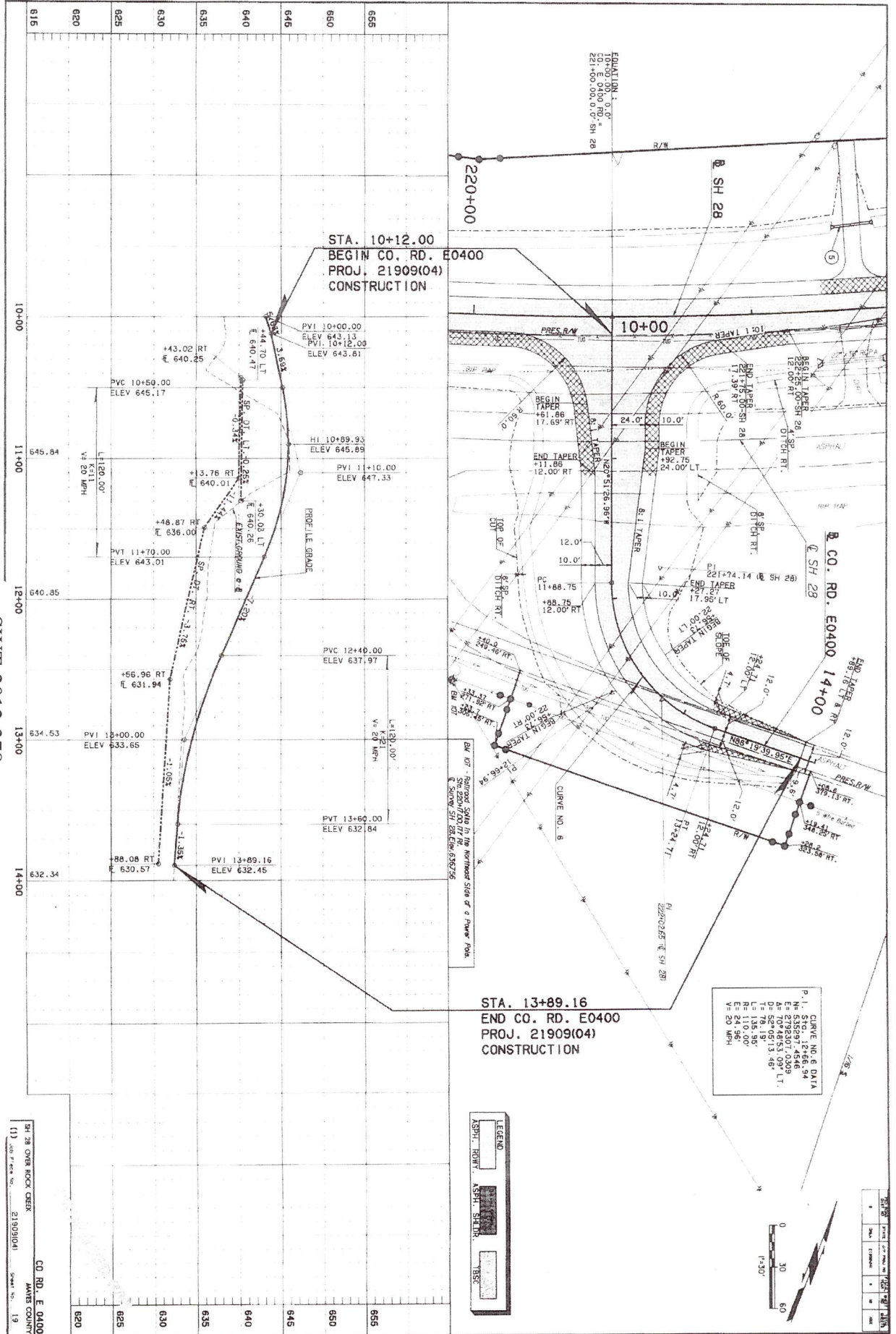
SH 28 OVER ROCK CREEK  
21909(04)  
SHEET NO. 16



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 Oklahoma Department of Transportation  
 SH-28 Rock Creek  
 Mayes County, Oklahoma  
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 Oklahoma Department of Transportation  
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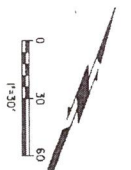


SWT-2012-378  
 Oklahoma Department of Transportation  
 SH-28 Rock Creek  
 Mayes County, Oklahoma  
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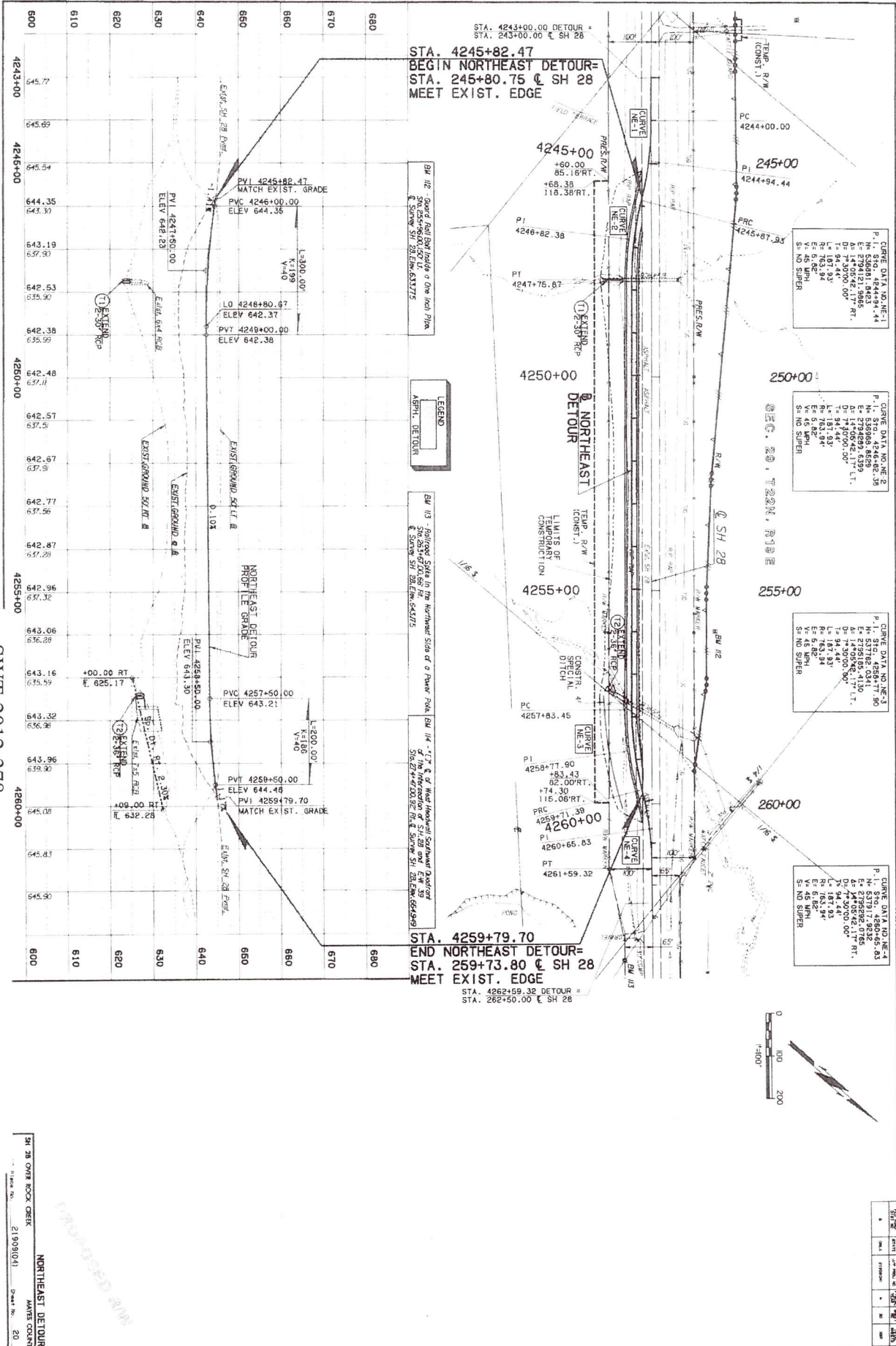
SH 28 OVER ROCK CREEK  
 (1) 200' Plan Scale  
 21909(04)  
 Sheet No. 19  
 CO. RD. E. 0400  
 MAYES COUNTY

CURVE NO. 6 DATA  
 P.I. STA. 12+68.94  
 N= 535.97  
 A= 70°48'53.09" LT.  
 D= 52+05'13.48"  
 L= 78.19'  
 E= 24.96'  
 V= 20 MPH

LEGEND  
 ASPH. R/W.  
 ASPH. SECTION  
 TRSS

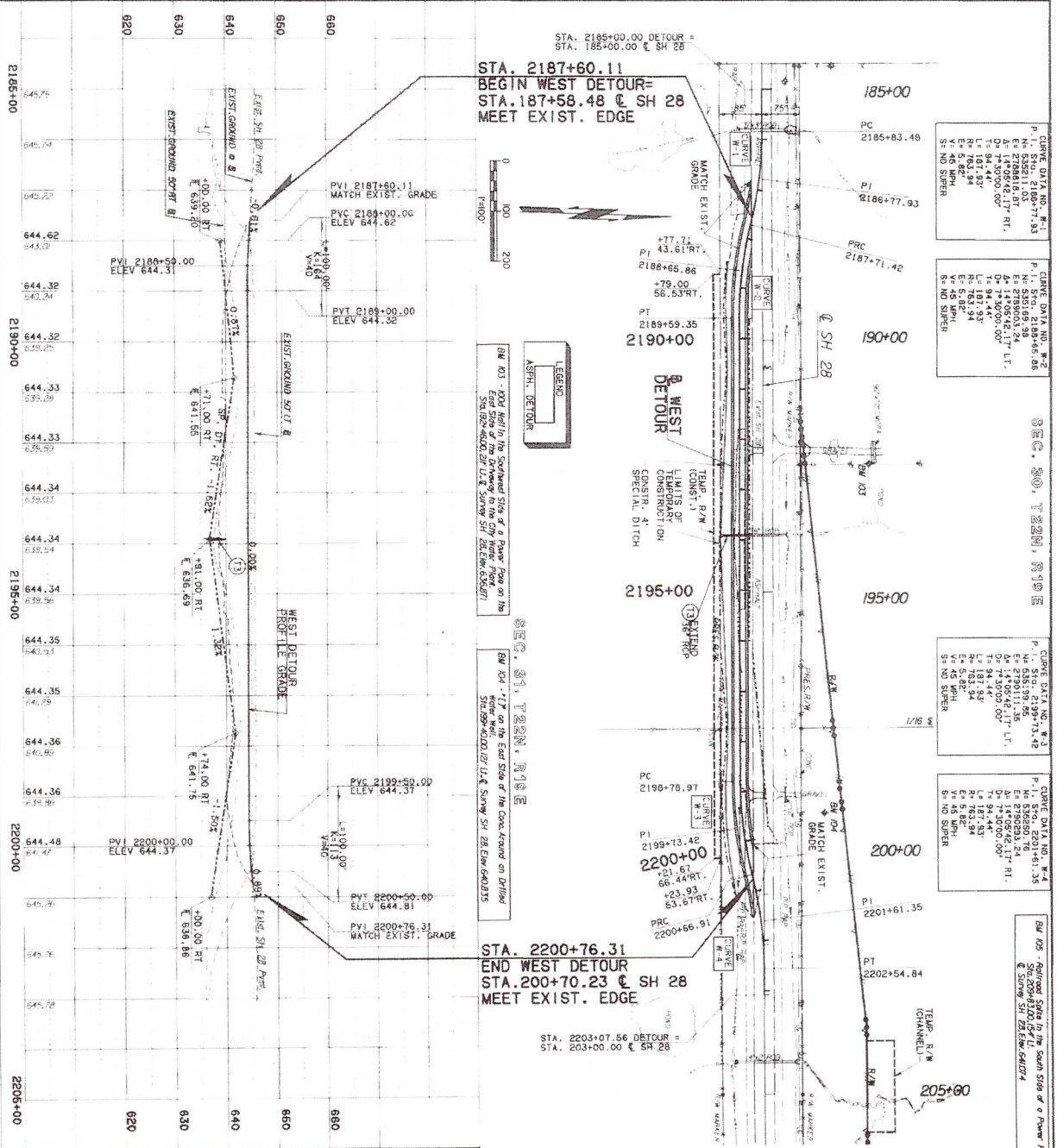


NO.	DATE	BY	CHKD.



SWT-2012-378  
 Oklahoma Department of Transportation  
 SH-28 Rock Creek  
 Mayes County, Oklahoma  
 Enclosure 8 of 10

SH 28 OVER ROCK CREEK  
 NORTH EAST DETOUR  
 MAYES COUNTY  
 SHEET NO. 20



Curve Data No. #-1

P.I.	2187+77.93
E	2188016.97
D	14+05/42.17' RT.
T	94.44'
L	107.53'
E	5.82'
S	NO SUPER

Curve Data No. #-2

P.I.	2189+59.35
E	2189003.24
D	14+05/42.17' LT.
T	94.44'
L	107.53'
E	5.82'
S	NO SUPER

Curve Data No. #-3

P.I.	2192+50.00
E	2192011.35
D	14+05/42.17' LT.
T	94.44'
L	107.53'
E	5.82'
S	NO SUPER

Curve Data No. #-4

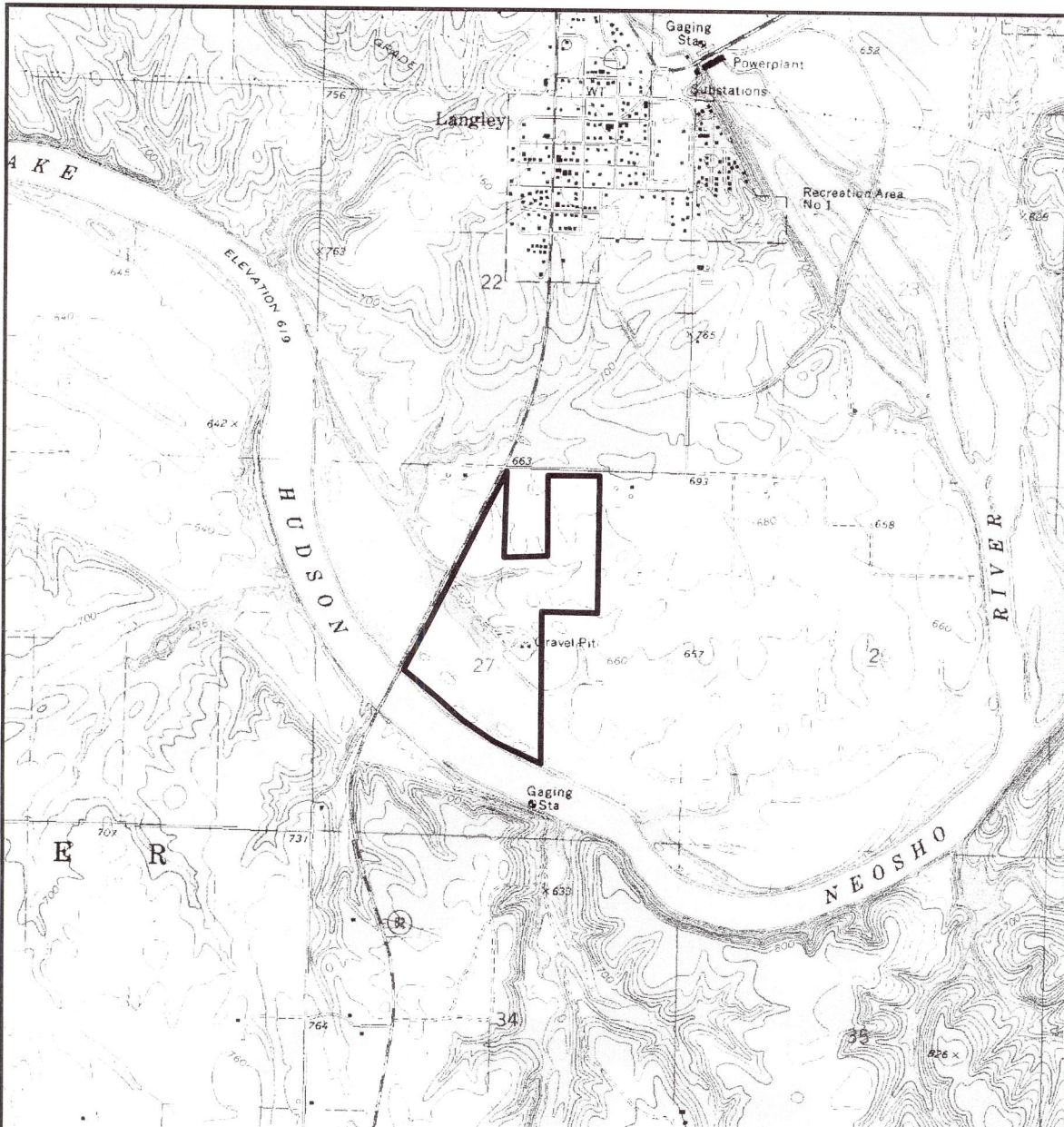
P.I.	2200+76.31
E	2200023.24
D	14+05/42.17' RT.
T	94.44'
L	107.53'
E	5.82'
S	NO SUPER

BU 105 - Revised Station in the South Side of a Power Pole  
 Station 2200+76.31  
 @ SH 28 ELEV. 644.35

SWT-2012-378  
 Oklahoma Department of Transportation  
 SH-28 Rock Creek  
 Mayes County, Oklahoma  
 Enclosure 9 of 10

WEST DETOUR  
 MATCH COORDINATE  
 SHEET NO. 21

DATE: 3/9/2010  
 TIME: 9:50:50 AM




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**Legend**

 Mitigation Site 1

 <p><b>KLEINFELDER</b> Bright People. Right Solutions. www.kleinfelder.com</p>	PROJECT NO. 118852	<b>USGS Topographic Map</b> 1971 Spavinaw, OK Quad	FIGURE  <b>5</b>
	DRAWN: July 2011		
	DRAWN BY: PAR	SH-28 Rock Creek Mitigation Plan Mayes County, OK	
	CHECKED BY: BHN		
SOURCE: United States Geological Survey			

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 Mayes County, Oklahoma  
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