

**SECTION 905 -- PROPOSAL (CONTINUED)**

I (We) hereby certify by digital signature and electronic submission via Bid Express of the Section 905 proposal below, that all certifications, disclosures and affidavits incorporated herein are deemed to be duly executed in the aggregate, fully enforceable and binding upon delivery of the bid proposal. I (We) further acknowledge that this certification shall not extend to the bid bond or alternate security which must be separately executed for the benefit of the Commission. This signature does not cure deficiencies in any required certifications, disclosures and/or affidavits. I (We) also acknowledge the right of the Commission to require full and final execution on any certification, disclosure or affidavit contained in the proposal at the Commission's election upon award. Failure to so execute at the Commission's request within the time allowed in the Standard Specifications for execution of all contract documents will result in forfeiture of the bid bond or alternate security.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO.	<u>  1  </u>	DATED	<u>  11/21/2017  </u>	ADDENDUM NO.	<u>          </u>	DATED	<u>          </u>
ADDENDUM NO.	<u>          </u>	DATED	<u>          </u>	ADDENDUM NO.	<u>          </u>	DATED	<u>          </u>
ADDENDUM NO.	<u>          </u>	DATED	<u>          </u>	ADDENDUM NO.	<u>          </u>	DATED	<u>          </u>

Number	Description
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1	Revised Table of Contents; Revised NTB No. 420, Added NTB Nos. 507, 508, 509, & 510; SP 907-650-3 replaces SP 907-650-2; Revised or Added Plan Sheets 2, 11, 17-18, 32-34, 42, 3007, 9010; Amendment EBS Download Required.
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TOTAL ADDENDA:   1    
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE \_\_\_\_\_

\_\_\_\_\_  
Contractor

BY \_\_\_\_\_  
Signature

TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY, STATE, ZIP \_\_\_\_\_

PHONE \_\_\_\_\_

FAX \_\_\_\_\_

E-MAIL \_\_\_\_\_

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of \_\_\_\_\_ and the names, titles and business addresses of the executives are as follows:

_____ President	Address
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_____ Secretary	Address
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_____ Treasurer	Address
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The following is my (our) itemized proposal.

HSIP-0018-03(024)/ 106863303000

Oktibbeha County(ies)

Revised 01/26/2016

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
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**PROJECT: HSIP-0018-03(024)/106863303 - Oktibbeha**

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OF SECTION 905 AS ADDENDA)

11/21/2017 10:20 AM

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 420

CODE: (SP)

DATE: 11/21/2017

SUBJECT: Sequence of Operations

PROJECT: HSIP-0018-03(024) / 106863303 – Oktibbeha County

Bidders are hereby advised of the following sequence of operations and additional work requirements.

NOTE: In some instances before the next phase of work can commence, certain requirements must be met within the following sections of the project:

Sections: Station 1787+20 to South Montgomery Street  
South Montgomery Street to Jackson Street  
Jackson Street to Station 1746+94

**All Phases of work will be progressed East to West.**

## **PHASE 1**

Perform work on the outside lanes of SR 12. During this time, widening work on city streets will also begin with the exception of the final lift of asphalt. Sawcuts on the inside turn lanes may be performed concurrently with work on the outside and may be done from beginning to the end of the project.

**Concrete work on the outside lanes and asphalt work with the exception of the final lift must be completed in a section before beginning Phase 2 work in that section.**

Work not requiring a lane closure of the outside lane of SR 12 may be performed simultaneously with work in the turn lane and may be done during daytime hours.

## **PHASE 2**

Perform work on the inside lane using the following steps.

1. Remove the existing turn lane 6" except for sections where asphalt is to remain in place for designated left turns and city streets. **See drop-off detail on Working Sheet No. SDSC-1. The use of Milled Material in place of Granular Material shown on Working Sheet No. SDSC-1 will be allowed. The 6" removal may be performed by milling or by other methods. It is the intent of the contract to remove to something solid for the curb to sit on. In the event that the curb comes out below the 6", either concrete or asphalt will be required to get to the elevation of the bottom of the curb grade. The cost of the concrete or asphalt to bring this back to grade will be absorbed by the contractor.**

2. Remove the turn lane to a neat clean line from a point 6" behind the back of the curb on both sides.
3. Backfill with B9-6 to match the milled depth. **NOTE: The contractor will not be allowed to begin removal operations in a new section until this backfill is completed.**
4. Place 3A Modified Curb and Slotted Curb. **3A Modified Curb and Slotted Curb must be complete in a section before beginning removal operations for 3A Modified Curb and Slotted Curb in the next section.**

Additionally, prior to removal for the slotted curb, mill a 1'-6" strip in the future location of the Slotted Curb as shown on Working Sheet No. TS-5. **Note: The contractor will not be allowed to mill this strip in a new section until the Slotted Curb in the currently milled section is complete. Once a strip has been milled, work in that area must begin within in two (2) Calendar Days. Should the Contractor not adhere to the above requirement, the contractor will be charged a fee of \$500.00 for each five minute period until the roadway is back in compliance.**

### **PHASE 3**

Perform remaining Milling and Asphalt work for the entire project. Milling and asphalt work will not begin in a section until all concrete work is completed in that section.

**Bidders are further advised that traffic will not be allowed on the milled surface.**

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 507**

**CODE: (SP)**

**DATE: 11/21/2017**

**SUBJECT: Liquidated Damages**

**PROJECT: HSIP-0018-03(024) / 106863303 – Oktibbeha County**

Bidders are hereby advised to disregard the values in the “Schedule of Deductions for Each Day of Overrun in Contract Time” table shown in Subsection 108.07.

Liquidated damages of \$5,000.00 per calendar day shall be applicable to each calendar day after the expiration of contract time.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 508**

**CODE: (SP)**

**DATE: 11/21/2017**

**SUBJECT: Pull Box Correction**

**PROJECT: HSIP-0018-03(024) / 106863303 – Oktibbeha County**

Bidders are hereby advised that a Type 4 Pullbox is shown on Sheet 3007 in the southeast quadrant of the Intersection of MS 12 at Stone Blvd. nearest the MSU campus. This is in error. This pullbox should be a Type 5 Pullbox as shown on Sheet 3004. This does not affect the summary of quantities. The Bid Sheets are correct.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 509**

**CODE: (SP)**

**DATE: 11/21/2017**

**SUBJECT: Additional Cleaning Requirements**

**PROJECT: HSIP-0018-03(024) / 106863303 – Oktibbeha County**

Bidders are hereby advised that as part of the Maintenance of Traffic Pay Item, the project will be required to be swept with a Vacuum Sweeper up to 3 times per each of the sections listed in the Sequence of Operations Notice to Bidders through the life of the project as directed by the Engineer.



**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 510**

**CODE: (SP)**

**DATE: 11/21/2017**

**SUBJECT: Employee Training Requirements**

**PROJECT: HSIP-0018-03(024) / 106863303 – Oktibbeha County**

Bidders are hereby advised the MDOT Employee Training requirements referred to in Special Provisions 907-650-3, 907-661-1 and 907-663-3 **WILL NOT** be required and should be disregarded.

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-650-3

CODE: (SP)

DATE: 11/14/2017

SUBJECT: On-Street Video Equipment

Section 907-650, On-Street Video Equipment, is hereby added to and made part of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

## SECTION 907-650 - ON-STREET VIDEO EQUIPMENT

**907-650.01--Description.** This work shall consist of providing all labor, materials, equipment, and incidentals necessary to furnish, install, test, train, and operate CCTV Camera Systems. CCTV Camera System shall be provided to provide TMC personnel with live streaming video of the roadway network via CCTV Camera Systems. CCTV Camera Systems include both fixed and PTZ cameras.

**907-650.02--Materials.** All materials furnished, assembled, fabricated or installed shall be new, corrosion resistant.

Support equipment for the CCTV Camera Systems shall be provided in a Type B ITS Equipment Cabinet as described in Section 660.

The CCTV Camera System shall comply with the following minimum materials specifications:

**907-650.02.1--General Capabilities and Performance Requirements.** Overall CCTV Camera System capabilities and performance requirements include the following:

- 1) CCTV PTZ Cameras shall be placed and installed at fixed locations to provide full coverage of the mainline travel lanes and shoulders.
- 2) CCTV Fixed Cameras shall be placed and installed at fixed locations to provide coverage of the mainline travel lanes. The cameras shall be provided with a varifocal lens which shall be adjusted by the Contractor for the desired view of the mainline. At major intersections fixed cameras shall also be adjusted to the desired view of the surface streets. The Contractor shall record the adjusted views and submit to the MDOT ITS Engineer or his designee for approval and the MDOT Project Engineer. This recording shall be in a format playable with Windows Media Player or pre approved by MDOT ITS Engineer.
- 3) The CCTV Camera System components shall be compatible with each other and be of rugged design and suitable for reliable operation when mounted in their fixed locations.
- 4) The PTZ and the Fixed cameras shall be provided as either Ethernet IP-based or Analog as indicated in either project plan sheets or Notice to Bidders or should be assumed Ethernet IP if description isn't provided.
- 5) The CCTV Camera System shall be capable of attended and unattended, continuous 24 hours per day operation at fixed sites.

- 6) The Contractor shall ensure that the installed equipment provides unobstructed video of the roadway, traffic, and other current conditions around a roadside CCTV field site; that it responds to camera control signals from an operator of the system; and that the video images can be transmitted to remote locations interfaced to the system for observation.
- 7) PTZ and IP based cameras shall be capable of being remotely controlled and programmed.
- 8) All PTZ enclosures shall be provided with the ability to be pressurized for environmental protection.
- 9) PTZ Dome type cameras shall be mounted together with the zoom lens and integrated into the pan and tilt device within the dome enclosure forming a totally integrated, easily removable assembly.
- 10) All cameras shall include a high quality integrated camera/lens combination.
- 11) The camera shall also be equipped with an auto-iris lens capability compatible with the zoom lens supplied.
- 12) Iris capability shall include a provision for manual override via software.
- 13) The PTZ camera shall be capable of auto-focus during zoom-in or zoom-out, with provisions for override via software.
- 14) Overexposure protection shall be provided - the camera shall not be degraded or damaged under normal reasonable operating conditions.
- 15) The capability for local control of pan, tilt and zoom functions shall be provided at the roadside cabinet using vendor-supplied software installed on a laptop computer.
- 16) All IP Based CCTV cameras shall support the NTCIP 1205 v1.08 or later version if backward compatible communication protocol.

**907-650.02.2--Analog Camera Unit.** The minimum Camera Unit requirements include:

- 1) The camera unit shall incorporate solid-state design and provide digital signal processing (DSP) capable of providing clear and low-bloom color video pictures during daylight hours and monochrome video at night when the roadway is illuminated with minimal roadway lighting.
- 2) The Analog Camera shall be fully compliant with all aspects of the National Television Standards Committee (NTSC) specification, and produce NTSC compatible video.
- 3) The Analog camera shall operate over wide dynamic light conditions ranging from low light/dusk to full sunlight having day (color)/night (monochrome) switchover and iris control, with user-selectable manual and automatic control capabilities.
- 4) The camera unit shall be equipped with a low light level sensor to automatically switch the camera to Black and White mode.
- 5) The camera unit shall be equipped with an override capability to allow the camera to be manually switched via software to turn off the automatic low light level sensor switch feature for Color or Monochrome operation.
- 6) Image sensor: 1/3 inch charge-coupled device (CCD) employing digital video signal processing (DSP) technology with a minimum Effective Picture Elements of 768 horizontal x 494 vertical pixels.
- 7) The camera unit shall include integrated image stabilization.
- 8) Sensitivity: The camera shall maintain usable video under both day and nighttime lighting conditions.

- 9) Video output synchronization shall be 2 to 1 interlace and will observe the NTSC (color) and EIA RS-170 (black and white) standards.
- 10) Resolution: 470 lines horizontal and 350 TV lines vertical, NTSC equivalent.
- 11) Signal-to-noise ratio: 48 dB, minimum with AGC off, un-weighted, and 4.5MHz filter.
- 12) Video Signal Format: National Television Standards Committee (NTSC) composite video output of 1 Volt<sub>p-p</sub> at 75 ohms, unbalanced.

**907-650.02.3--Internet Protocol IP Camera Unit.** IP cameras shall provide the same functionality as the analog camera units specified in subsection 907-650.02.2, in addition to the following minimum requirements:

- 1) Power over Ethernet or 24 VAC Power Input.
- 2) Open Architecture.
- 3) Shall utilize H.264 (Video Coding Experts Group (VCEG)/Moving Picture Experts Group) Video Compression Technology types as directed by the Intelligent Transportation Systems Program Manager
- 4) Standard Definition (SD) Units Shall be capable of 2 simultaneous H.264 video streams.
  - a. The primary stream shall provide 480p at 30 fps and the ability to be reduced to D1 resolution at 30 fps.
  - b. The secondary stream shall provide a minimum CIF resolution 30fps.
- 5) High Definition Units (HD) Shall be capable of 2 simultaneous H.264 video streams.
  - a. The primary stream shall provide 720p at 30 fps at a minimum and the ability to be reduced to D1 resolution at 30 fps.
  - b. The secondary stream shall provide a minimum CIF resolution 30fps.
- 6) Image sensor: 1/3 inch charge-coupled device (CCD)
- 7) Shall be capable to take video snapshots in JPEG format and transfer image via FTP.
- 8) IP encoded streams and Video Compression Technology shall be compatible with the existing video streaming servers and decoders for the www.mdottraffic.com WEB site or as approved by the Intelligent Transportation Systems Program Manager.
- 9) Internet Protocols: TCP, UDP (Unicast, Multicast IGMP V2), UPnP, DNS, DHCP, RTP, NTP
- 10) Support Real Time Streaming Protocol (RTSP)
- 11) Multilevel Password Protection.
- 12) EDR (Extended Dynamic Range).
- 13) C/CS Lens Mount.
- 14) Backlight Compensation.
- 15) Low Profile Top/Bottom Mount.
- 16) BNC Service Connector. Tap shall be installed inside cabinet.

**907-650.02.4--PTZ Camera Lens.** The minimum camera lens requirements include:

- 1) The camera lens shall have a minimum F-Stop of 1.4 to 1.6.
- 2) Optical and Digital Zoom:
  - a. Shall provide an optical zoom of 35X for analog dome cameras.
  - b. Shall provide a minimum optical zoom of 18X and a minimum digital zoom of 6X for IP PTZ cameras.

- 3) Zoom Control: The zoom magnification shall be fully controllable via the remote PTZ mechanism. The time to pass through the full range of movement of Iris, Zoom and Focus shall in no case exceed 10 seconds.
- 4) Iris and Focus: Support automatic iris and focus control with manual override capability. The iris shall be in a closed position when there is no power.
- 5) White or Color Balance: Support automatic or set to yield optical results under various outdoor lighting conditions.
- 6) Shutter Speed: Support automatic or set to yield optimal results under low lighting conditions without blooming or smearing, auto-iris on. Provide electronic shutter that is selectable in steps.
- 7) The lens shall be equipped for continuous remote control of zoom, focus and iris.
- 8) Mechanical or electrical means shall be provided to protect motors from overrunning in extreme positions.
- 9) The zoom lens shall be an integrated camera/lens combination.
- 10) Vibration or ambient temperature changes shall not affect the automatic iris function, focus mechanism and zoom mechanism.
- 11) The lens shall be optically clear, impact resistant and acrylic. The acrylic lens shall not yellow and shall not introduce appreciable light loss or geometric distortion over a 10-year service life when exposed to the environment.
- 12) The zoom mechanism shall be designed for maintenance-free operations. All gearing and bearings shall be self-lubricating with lubrication and gearing tolerances compatible with the environmental specifications contained herein.

**907-650.02.5--Character Generator.** The minimum character generator requirements include:

- 1) The capability of generating and superimposing lines of English language text on the video image/stream shall be provided.
- 2) A minimum of 20 characters per line that are between 10 and 30 horizontal TV lines in height shall be provided.
- 3) Control (enable, disable and edit) of this feature shall be available remotely and at the field site using a laptop computer.
- 4) The text messages shall be stored in non-volatile memory.
- 5) Characters shall be white with a black border to ensure legibility in varied scenes.
- 6) The following minimum text insertion requirements shall be provided with the ability to individually turn each one on or off:
  - a. Camera ID
  - b. Sector Message
  - c. Alarm Messages
  - d. Pan/Tilt Azimuth/Elevation
  - e. Compass Direction in 8 discreet zones

**907-650.02.6--PTZ Enclosure.** The minimum PTZ enclosure requirements include:

- 1) Sealed, pressurized dome enclosure that provides complete protection for the camera and lens assembly from moisture and airborne contaminants.
- 2) Environmental resistant and tamper proof meeting NEMA 4X or IP-67 rating requirements.

- 3) The dome enclosure shall be constructed in such a way that unrestricted camera views can be obtained at all camera and lens positions.
- 4) Dome environmental control shall be provided by nitrogen pressurization with a Schrader Valve for pressurization and purging. The enclosure shall be designed to be pressurized to the manufactures recommended level .with dry nitrogen. The notation “CAUTION – PRESSURIZED” shall be printed on the rear plate of the enclosure and shall be clearly visible and readable.
- 5) An alarm shall be displayed under low-pressure conditions and displayed on the camera video. The low-pressure alarm shall be on/off selectable by the operator at the TMC.
- 6) The PTZ dome enclosure shall consist of a two-piece (upper and lower half) dome.
- 7) A harness and cables shall be provided with each enclosure to extend the video, power and data from the CCTV Camera System to the field cabinet. No harness shall be exposed. All entry points shall have gaskets to prevent moisture entry. A sealed connector shall be at the top of the dome.
- 8) The dome enclosure shall assist in preventing lens fogging and effectively reduce internal temperatures.
- 9) The enclosure shall minimize glare and provide overexposure protection for the camera when pointed directly at the sun.
- 10) The enclosure shall be equipped with a heater, a defroster and a thermostat.
- 11) The camera equipment inside the dome enclosure shall meet all its specified requirements when operating under the following conditions:
  - a. Ambient Temperatures: From -40°C to +65°C (-40°F to +149°F). A heater/blower shall be used to maintain internal dome temperatures within the manufacturer required operating temperatures for their equipment.
  - b. Relative Humidity: 5% and 95%, non-condensing.
- 12) Total weight of CCTV cameras (including the housing, sunshield, and all internal components shall be less than 18 pounds.
- 13) At a minimum, dome enclosures shall be secured with a mounting plate/attachment designed to withstand a 90mph sustained wind speed with a 30% gust factor. For projects that are in areas with higher wind standards, the higher standard is required.

**907-650.02.7--Pan and Tilt Unit (PTU).** The minimum pan and tilt unit requirements include:

- 1) The motorized, remotely controlled Pan/Tilt unit shall be mounted within the dome enclosure. The unit shall be integrated with the CCTV control system.
- 2) For dome enclosed units, the unit shall provide a minimum continuous tilt (vertical) movement of 90 degrees from horizontal and continuous pan (horizontal) movement of 360 degrees. Tilt speed shall be variable from zero up to 40 degrees per second, minimum, and the pan speed shall be variable from zero up to 80 degrees per second, minimum.
- 3) For separately housed tilt motor units (non-Dome Cameras), the unit shall provide a minimum continuous tilt (vertical) movement of +90° to -90° degrees from horizontal and continuous pan (horizontal) movement of 360 degrees. Tilt speed shall be variable from zero up to 34 degrees per second, minimum, and the pan speed shall be variable from zero up to 80 degrees per second, minimum.
- 4) The unit shall be capable of simultaneous pan, tilt movements and zoom on one camera

- 5) Drive motors shall be capable of instantaneous reversing, be corrosion resistant, not require lubrication, and have overload protection.
- 6) Braking shall be provided in both pan and tilt movements to enable fast stop and reversal and to prevent drifting.
- 7) The viewing limits shall be set by a minimum of eight (8) discreet privacy zones that are software selectable.

**907-650.02.8--Camera Control Receiver – Driver.** The minimum camera control receiver-driver requirements include:

- 1) The camera control receiver shall provide a single point interface for control, power and video communications.
- 2) The camera control receiver-driver shall be included within the dome enclosure and control the camera, pan/tilt and lens functions at each CCTV site.
- 3) The unit shall provide alphanumeric generation for on-screen titles.
- 4) The unit shall provide the ability to display diagnostic information on the screen in response to user commands.
- 5) The diagnostic information shall include current pan, tilt, zoom and focus positions, and error codes for power, communication, position and memory problems.
- 6) The capability for programmed tours shall be provided.
- 7) The camera control receiver shall use non-volatile memory to store the required information for presets, camera ID and sector text.
- 8) Presets shall meet the following requirements:
  - a. A minimum of 64 presets shall be supported. Each preset shall consist of pan, tilt, zoom and focus positions.
  - b. The Contractor shall develop and install ten (10) presets for each camera. The Contractor shall submit the preset locations to the MDOT ITS Engineer for review and approval.
- 9) Protocols: CCTV cameras shall support at a minimum the Pelco D and the NTCIP 1205 v1.08 communication protocol. No camera control receiver-driver shall use non-published protocols. The Contractor shall provide protocol documentation.
- 10) Communications Interface: The communications interface shall support communications compliant with RS- 232,and/or 485 (user selectable), or shall provide a network interface port.
- 11) Serial communications interface shall be compatible with the Video Encoder serial port as defined in Section 907-662 .
- 12) Standard interface connectors shall be provided.
- 13) The local video input and output connections shall be the BNC type for analog cameras. IP Based Cameras should stream video over the Ethernet connection but include a BNC type connection for local testing, configuration, and calibration.
- 14) Connector(s) shall also be used for connecting the control outputs from the control receiver-driver unit to the camera, lens and pan/tilt mechanisms.

**907-650.02.9--Fixed Camera Lens.** The fixed camera lens shall meet the following minimum requirements.

- 1) Type ..... Varifocal

- 2) Format Size ..... 1/3 Inch
- 3) Mount Type ..... CS
- 4) Focal Length ..... 5-50
- 5) Zoom Ratio ..... 1.4 -360
- 6) Relative Aperture (F) ..... 1.6-360
- 7) Iris ..... Auto (Direct Drive)
- 8) Focus ..... Manual
- 9) Zoom ..... Manual
- 10) Minimum Object Distance ..... 0.5 m
- 11) Back Focal Length ..... 10.05 mm
- 12) The camera lens shall have a minimum F-Stop of 1.4 to 1.6.
- 13) Shall provide a varifocal zoom of 5-50 mm.
- 14) Iris: Support automatic iris control with manual override capability. The iris shall be in a closed position when there is no power.
- 15) White or Color Balance: Support automatic or set to yield optical results under various outdoor lighting conditions.
- 16) Shutter Speed: Support automatic or set to yield optimal results under low lighting conditions without blooming or smearing, auto-iris on. Provide electronic shutter that is selectable in steps.
- 17) Vibration or ambient temperature change shall not affect the automatic iris function, focus mechanism or zoom mechanism.
- 18) The lens shall be optically clear, impact resistant and acrylic. The acrylic lens shall not yellow and shall not introduce appreciable light loss or geometric distortion over a 10-year service life when exposed to the environment.

**907-650.02.10--Fixed Camera Enclosure.** The fixed camera lens shall meet the following minimum requirements.

- 1) Designed for Outdoor Applications
- 2) Maintenance access for servicing
- 3) Environmental resistant and tamper proof meeting NEMA 4X or IP-66 rating requirements.
- 4) A harness and cables shall be provided with each enclosure to extend the video, power and data from the CCTV Camera System to the field cabinet. No harness shall be exposed. All entry points shall have gaskets to prevent moisture
- 5) The enclosure shall minimize glare and provide overexposure protection for the camera when pointed directly at the sun.
- 6) The enclosure shall be equipped with a heater, a defroster and a thermostat.
- 7) The camera equipment inside the enclosure shall meet all its specified requirements when operating under the following conditions:
  - a. Ambient Temperatures: -10°C to +50°C (14°F to +122°F). A heater/blower shall be used to maintain internal temperatures within the manufacturer required operating temperatures for their equipment.
  - b. Relative Humidity: 5% and 95%, non-condensing.
- 8) Total weight of CCTV cameras (including the housing, sunshield, and all internal components shall be less than 18 pounds.



- 9) The enclosure shall be secured with a mounting plate/attachment designed to withstand a 90mph sustained wind speed with a 30% gust factor. For projects that are in areas with higher wind standards, the higher standard is required.

**907-650.02.11--Electrical.** The minimum electrical requirements include:

- 1) The CCTV Camera System shall be furnished with any and all equipment required for a fully functional system, including all appropriate power and communications cables as defined by the manufacturer.
- 2) The power cables shall be sized to meet the applicable National Electrical Code (NEC) requirements.
- 3) Total power consumption shall not exceed 125 watts.
- 4) All devices supplied as system components shall accept, as a primary power source, 120 volts of alternating current (VAC) at an input of 60 hertz. Any device that requires source input other than 120 VAC at 60 hertz, such as cameras, PTUs, receiver/drives and dome heaters/blowers that operate at 24 volts or other, shall be furnished with the appropriate means of conversion.
- 5) IP fixed cameras shall receive Power over Ethernet (POE) with appropriate cabling.

**907-650.02.12--Coaxial Cabling.** The minimum coaxial interconnect cable requirements include:

- 1) The coaxial cable from the CCTV Camera System to the equipment cabinet shall be double braided (95% coverage) coaxial cable.
- 2) RG 59/U, 20AWG, bare copper conductor, polyethylene insulation.
- 3) 98% tinned copper, double braid shield, black polyethylene jacket.
- 4) Characteristic Impedance: 75 ohms, nominal.
- 5) Capacitance (conductor to shield): 21pF/ft; Inductance: 0.131uH/ft, nominal.

**907-650.02.13--Surge Protection.** All CCTV Camera System electrical interconnects shall be protected from voltage surges caused by lightning and external electromagnetic fields. The minimum surge protection requirements include:

- 1) Surge protectors shall be furnished for all non-dielectric cable and conductors (video, data/signal and device/assembly power) between the CCTV Camera System and the equipment cabinet.
- 2) The surge protectors shall have leads that are kept to a minimum length as recommended by the surge device manufacturer.
- 3) All surge protection devices shall be designed to meet the temperature and humidity requirements expected in this type of outdoor application.
- 4) All Surge protectors shall be U.L. listed (UL 1449, UL 497, 497A, 497B, etc., as appropriate) and bonded to the same single-point ground point.
- 5) Coaxial Cable Surge protectors for coaxial cable shall meet/provide the following functionality:
  - a. Attenuation: 0.1dB @10 MHz, typical
  - b. Input/Output Impedance: 75 ohms nominal

- c. Operating Voltage of the surge protector shall match characteristics of the ITS device/assembly
- d. Peak Surge Current: 5,000-amperes for an 8x20 microsecond waveform
- e. Response Time: 1 nanosecond or less
- 6) Low Voltage/Signal Cable Surge protectors for data/signal/control cable shall meet/provide the following functionality:
  - a. Peak Surge Current: 10,000-amperes for an 8x20 microsecond waveform
  - b. Response Time: 1 nanosecond or less
  - c. Life Expectancy: Capable of surviving at a minimum of 25 occurrences at 2000-amperes
- 7) CCTV power surge protectors for power from equipment cabinet power distribution to the CCTV Camera System shall meet/provide the following functionality:
  - a. Frequency: DC to 10MHz
  - b. Clamping Voltage: < 30VAC (rms) or 42VDC
  - c. Insertion Loss: < 0.2dB
  - d. Input/Output Impedance: 75 ohms, typical
  - e. Peak Surge Current: 3000-amperes
  - f. Response Time: 1 nanosecond or less
- 8) Surge protection for the IP Fixed cameras shall include provisioning for the Power over ETHERNET (POE) cabling and voltages.

**907-650.03--Installation Requirements.** All equipment shall be installed according to the manufacturer's recommendations, the Plans and as follows:

- 1) The Contractor shall provide the MDOT with a written inventory of items received and the condition in which they were received. Inventory shall be inclusive of make, model, and serial numbers, MAC address, and installation GPS coordinates. All equipment shall be installed according to the manufacturer's recommendations or as directed by the MDOT.
- 2) Materials and associated accessories/adapters shall not be applied contrary to the manufacturer's recommendations and standard practices.
- 3) Shall include all materials needed to permanently mount the CCTV camera to the support structure as indicated in the plans.
- 4) Furnish and install power, video, and data cables, and any and all ancillary equipment required to provide a complete and fully operational CCTV system site.
- 5) Verify all wiring meets NEC requirements where applicable.
- 6) All above requirements apply to both new CCTV sites as well as sites where an existing CCTV is being replaced.
- 7) Any new, additional or updated drivers required for the existing ATMS software to communicate and control new CCTV installed by the Contractor shall be the responsibility of the Contractor.

**907-650.03.1--CCTV Test Requirements.** The Contractor shall conduct a Project Testing Program. All costs associated with the Project Testing Program shall be included in overall contract prices; no separate payment will be made for any testing.

- 1) The Contractor is responsible for planning, coordinating, conducting and documenting all aspects of the Project Testing Program. The Project Engineer, ITS Engineer, and/or their

designee(s) are only responsible for attending and observing each test, and reviewing and approving the Contractor's test results documentation. The ITS Engineer, Project Engineer and/or their designee(s) reserve the right to attend and observe all tests. The Contractor is required to perform the final project acceptance test with the MDOT ITS Engineer or his designee present.

- 2) Each test shall fully demonstrate that the equipment being tested is clearly and definitely in full compliance with all project requirements. Test procedures shall be submitted and approved for each test as part of the project submittals. Test procedures shall include every action necessary to fully demonstrate that the equipment being tested is clearly and definitely in full compliance with all project requirements. Test procedures shall cross-reference to these Technical Specifications or the Project Plans. Test procedures shall contain documentation regarding the equipment configurations and programming.
- 3) No testing shall be scheduled until approval of all project submittals and approval of the test procedures for the given test.
- 4) The Contractor shall provide all ancillary equipment and materials as required in the approved test procedures.
- 5) The Contractor shall request in writing the Project Engineer's approval for each test occurrence a minimum of 14 days prior to the requested test date. Test requests shall include the test to be performed and the equipment to be tested. The Project Engineer reserves the right to reschedule test request if needed.
- 6) All tests shall be documented in writing by the Contractor in accordance with the test procedure and submitted to the Project Engineer within seven (7) days of the test. Any given test session is considered incomplete until the Project Engineer has approved the documentation for that test session.
- 7) All tests deemed by the Project Engineer to be unsatisfactorily completed shall be repeated by the Contractor. In the written request for each test occurrence that is a repeat of a previous test, the Contractor shall summarize the diagnosis and correction of each aspect of the previous test that was deemed unsatisfactory. The test procedures for a repeated test occurrence shall meet all the requirements of the original test procedures, including review and approval by the Project Engineer and ITS Program Manager or his designee.
- 8) The satisfactory completion of any test shall not relieve the Contractor of responsibility to provide a completely acceptable and operating system that meets all requirements of this project.
- 9) Standalone Acceptance Test (SAT). The Contractor shall perform a complete SAT on all equipment and materials associated with the field device site, including but not limited to electrical service, conduit, pull boxes, communication links (fiber, leased copper, wireless), control cables, poles, etc. An SAT shall be conducted at every field device site. Where applicable, a SAT shall be conducted for a fully installed and completed connection to the designated Traffic Management Center (TMC) or central data/video collection site.
- 10) The SAT shall demonstrate that all equipment and materials are in full compliance with all project requirements and fully functional as installed and in final configuration. The SAT shall also demonstrate full compliance with all operational and performance requirements of the project. All SATs will include a visual inspection of the cabinet and all construction elements at the site to ensure they are compliant with the specifications.

**907-650.03.2--Warranty.** Minimum warranty requirements are as follows:

- 1) All warranties and guarantees shall be assigned to the Mississippi Department of Transportation.
- 2) The warranty shall be a **minimum of one (1) year warranty** per CCTV and all other installed and/or attached appurtenances.
- 3) The one year warranty period begins upon final acceptance of the video subsystem.
- 4) During the warranty period, the Contractor shall repair or replace with new or refurbished material, at no additional cost to the State, any product containing a warranty defect, provided the product is returned postage-paid by the Department to the manufacturer's factory or authorized warranty site.
- 5) Products repaired or replaced under warranty by the manufacturer shall be returned prepaid by the manufacturer.
- 6) During the warranty period, technical support shall be available from the Contractor via telephone within **four (4) hours** of the time a call is made by the Department, and this support shall be available from factory certified personnel.
- 7) During the warranty period, **updates and corrections to hardware**, software and firmware shall be made available to the Department by the Contractor at no additional cost.

**907-650.03.3--MDOT Employee Training.** Minimum Training requirements are as follows:

- 1) The Contractor shall provide a camera system training plan that includes a schedule, documentation to be provided, identified trainer, and location at a minimum to MDOT Project Manager. The camera system training plan must be accepted by the MDOT Project Manager and ITS Engineer and training must be completed before burn in period may start.
- 2) The training shall be approved two (2) weeks ahead of the scheduled date.
- 3) For provided devices that MDOT already has the same make and model existing in the system:
  1. One (1) day of on site device operation, maintenance, and configuration training for up to 10 individuals.
  2. One (1) day of on site system training at TMC for up to 10 people, that is separate from above training and specifically for software control of integrated devices.
- 4) For provided devices that MDOT does not have the same make and model existing in the system:
  1. Three (3) days of on site device operation, maintenance, and configuration training for up to 10 individuals.
  2. Three (3) days of on site system training at TMC for up to 10 people, that is separate from above training and specifically for software control of integrated devices.

**907-650.04--Method of Measurement.** On-Street Video Equipment will be measured per each camera installation.

**907-650.05--Basis of Payment.** On-Street Video Equipment, measured as prescribed above, will be paid for at the contract unit price bid per each, which price shall be full compensation for furnishing all materials inclusive of camera unit, housing, pan/tilt drive, receiver/driver, software driver, mounting hardware, any necessary enclosures, items necessary to mount the camera unit

from a mast arm pole, steel strain pole, pole extension pipe, etc., for all installing, connecting, cutting, pulling and testing and for all equipment, tools, labor, and incidentals necessary to complete the work.

Required cabinet facilities, including transformer and/or disconnects, will not be measured for separate payment.

Progress payments for the On-Street Video System will be paid as follows:

- 1) 50% of the contract unit price upon delivery of equipment and approval of any bench and/or pre-installation test results, as prescribed in Project Testing Program;
- 2) An additional 40% of the contract unit price upon approval of Stand Alone Acceptance Test results; and
- 3) Final 10% of the contract unit price upon Final Project Acceptance.

Payment will be made under:

907-650-A: On-Street Video Equipment Type \_\_\_\_\_ - per each

STATE	PROJECT NO.
MISS.	HSIP-0018-03(024)

WKG. NO. \_\_\_\_\_ SH. NO. \_\_\_\_\_

DESCRIPTION OF SHEET

DESCRIPTION OF SHEET

TITLE SHEET (1)

DETAILED INDEX & GENERAL NOTES (5)

DETAILED INDEX  
DETAILED INDEX  
DETAILED INDEX

GENERAL NOTES  
GENERAL NOTES

TYPICAL SECTION SHEETS (6)

TYPICAL SECTIONS - HWY 12  
TYPICAL SECTIONS - HWY 12  
TYPICAL SECTIONS - MILL & OVERLAY  
TYPICAL SECTIONS - SPECIAL CURB DETAILS  
TYPICAL SECTIONS - SPECIAL CURB DETAILS  
TYPICAL SECTIONS - TRENCH WIDENING, SIDEWALK REPLACEMENT.

QUANTITY SHEETS (14)

SUMMARY OF QUANTITIES  
SUMMARY OF QUANTITIES  
SUMMARY OF QUANTITIES  
SUMMARY OF QUANTITIES

ESTIMATED QUANTITIES - DRAINAGE STRUCTURES  
ESTIMATED QUANTITIES - JUNCTION BOXES, CURB AND GUTTER  
ESTIMATED QUANTITIES - SIDEWALK, DRIVEWAYS, CAP EXISTING INLET

ESTIMATED QUANTITIES - PERMANENT EROSION CONTROL  
ESTIMATED QUANTITIES - TRAFFIC CONTROL ITEMS, PAVEMENT MARKINGS  
ESTIMATED QUANTITIES - TRAFFIC CONTROL SIGNS

ESTIMATED QUANTITIES - STANDARD ROADSIDE SIGNS  
ESTIMATED QUANTITIES - REMOVAL ITEMS  
ESTIMATED QUANTITIES - TRAFFIC SIGNAL  
ESTIMATED QUANTITIES - ITS ITEMS

PLAN & PROFILE SHEETS (13)

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PLAN VIEW - STA. 1751+60 TO STA. 1757+60  
PLAN VIEW - STA. 1757+60 TO STA. 1763+60  
DRAINAGE PROFILES - HWY 12  
PLAN VIEW - STA. 1763+60 TO STA. 1769+60  
PLAN VIEW - STA. 1769+60 TO STA. 1775+60  
PLAN VIEW - S. MONTOMERY ST. / MS HWY 12  
DRAINAGE PROFILES - HWY 12  
PLAN VIEW - STA. 1775+60 TO STA. 1781+60  
PLAN VIEW - STA. 1781+60 TO STA. 1787+60  
PLAN VIEW - BLACKJACK RD AND SPRING ST / MS HWY 12  
PLAN VIEW - B.O.P. TO STA. 1772+00  
PLAN VIEW - STA. 1772+00 TO E.O.P.

FORM GRADE SHEETS (3)

FORM GRADE - INTERSECTION AT STA. 1762+01.000 RT., 1762+11.133 LT.  
FORM GRADE - INTERSECTION AT STA. 1772+67.851 LT.  
FORM GRADE - INTERSECTION AT STA. 1772+74.524 RT.

PAVEMENT MARKING SHEETS (2)

PAVEMENT MARKING DETAILS - SR 12 B.O.P TO STA. 1770+00  
PAVEMENT MARKING DETAILS - SR 12 STA. 1770+00 TO E.O.P.

TRAFFIC CONTROL SHEETS (5)

CONSTRUCTION SIGNING  
TRAFFIC CONTROL PLAN - NARRATIVE  
TRAFFIC CONTROL PLAN - SRI2 MEDIUM  
TRAFFIC CONTROL PLAN - OUTSIDE LANE CLOSURE  
TRAFFIC CONTROL PLAN - SRI2 LANE SHIFT

SPECIAL DESIGN SHEETS (18)

MISCELLANEOUS CONSTRUCTION DETAILS - INLET CAP, DRIVEWAY DETAIL  
MISCELLANEOUS CONSTRUCTION DETAILS  
MISCELLANEOUS CONSTRUCTION DETAILS  
MISCELLANEOUS CONSTRUCTION DETAILS  
VEGETATION SCHEDULE

RIGHT-OF-WAY MARKERS COORDINATES  
EASEMENT COORDINATES

PLAN VIEW - B.O.P. TO STA. 1751+60  
PLAN VIEW - STA. 1751+60 TO STA. 1757+60  
PLAN VIEW - STA. 1757+60 TO STA. 1763+60  
DRAINAGE PROFILES - HWY 12  
PLAN VIEW - STA. 1763+60 TO STA. 1769+60  
PLAN VIEW - STA. 1769+60 TO STA. 1775+60  
PLAN VIEW - S. MONTOMERY ST. / MS HWY 12  
DRAINAGE PROFILES - HWY 12  
PLAN VIEW - STA. 1775+60 TO STA. 1781+60  
PLAN VIEW - STA. 1781+60 TO STA. 1787+60  
PLAN VIEW - BLACKJACK RD AND SPRING ST / MS HWY 12

FG-1 40  
FG-2 41  
FG-3 42

PM-1 43  
PM-2 44

DCS-1 45  
TC-NAR 46  
TC-1 47  
TC-2 48  
TC-3 49

MCD-1 50  
MCD-2 51  
MCD-3 52  
MCD-4 53  
VS-1 54

RWM-1 55  
REC-1 56

ECP3 57  
ECP4 58  
ECP5 59  
ECP5A 60  
ECP6 61  
ECP7 62  
ECP7A 63  
ECP7B 64  
ECP8 65  
ECP9 66  
ECP9A 67

NEEL-SCHAFFER

PS & E PLANS-DATE: 9-13-2017	
FMS CON. # 106863-303000	
REVISIONS	
DATE	SHEET NO. BY
09/25/17	7.8,14 RKE
10/23/17	11,14,15,17,18,19,23,24, RKE
	25,32,33,34,64,1004, DMM
11/16/17	11,17,18,32,33,34,42, RKE
	3007,9010



11-16-17

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

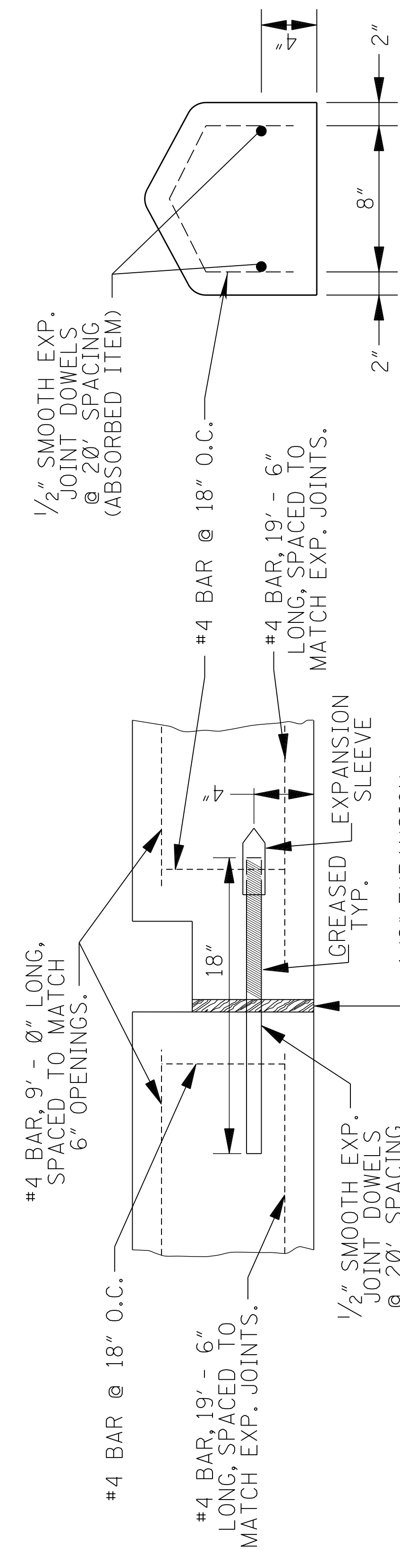
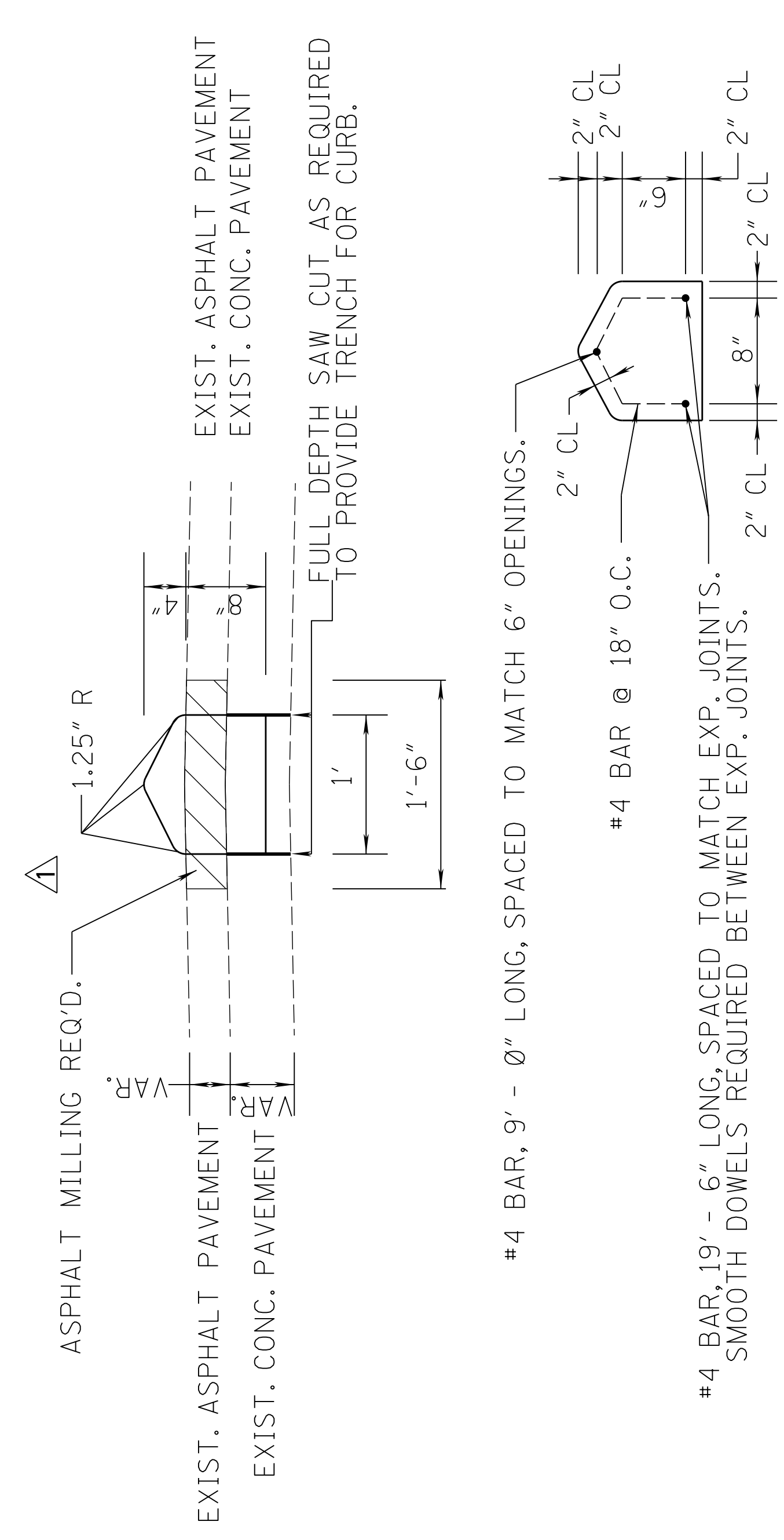
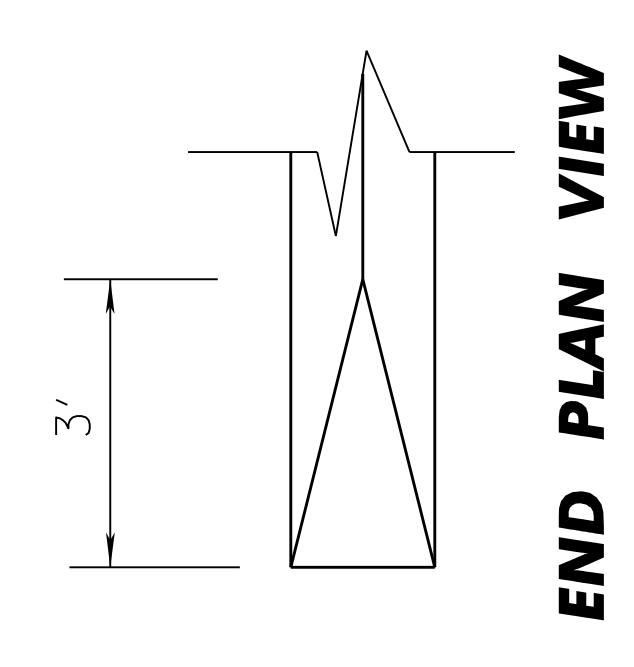
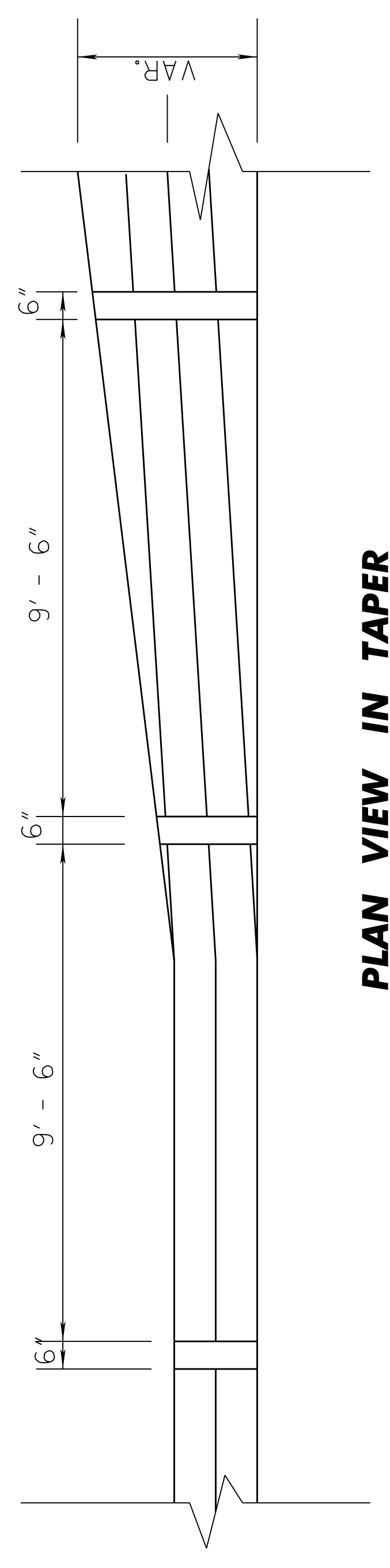
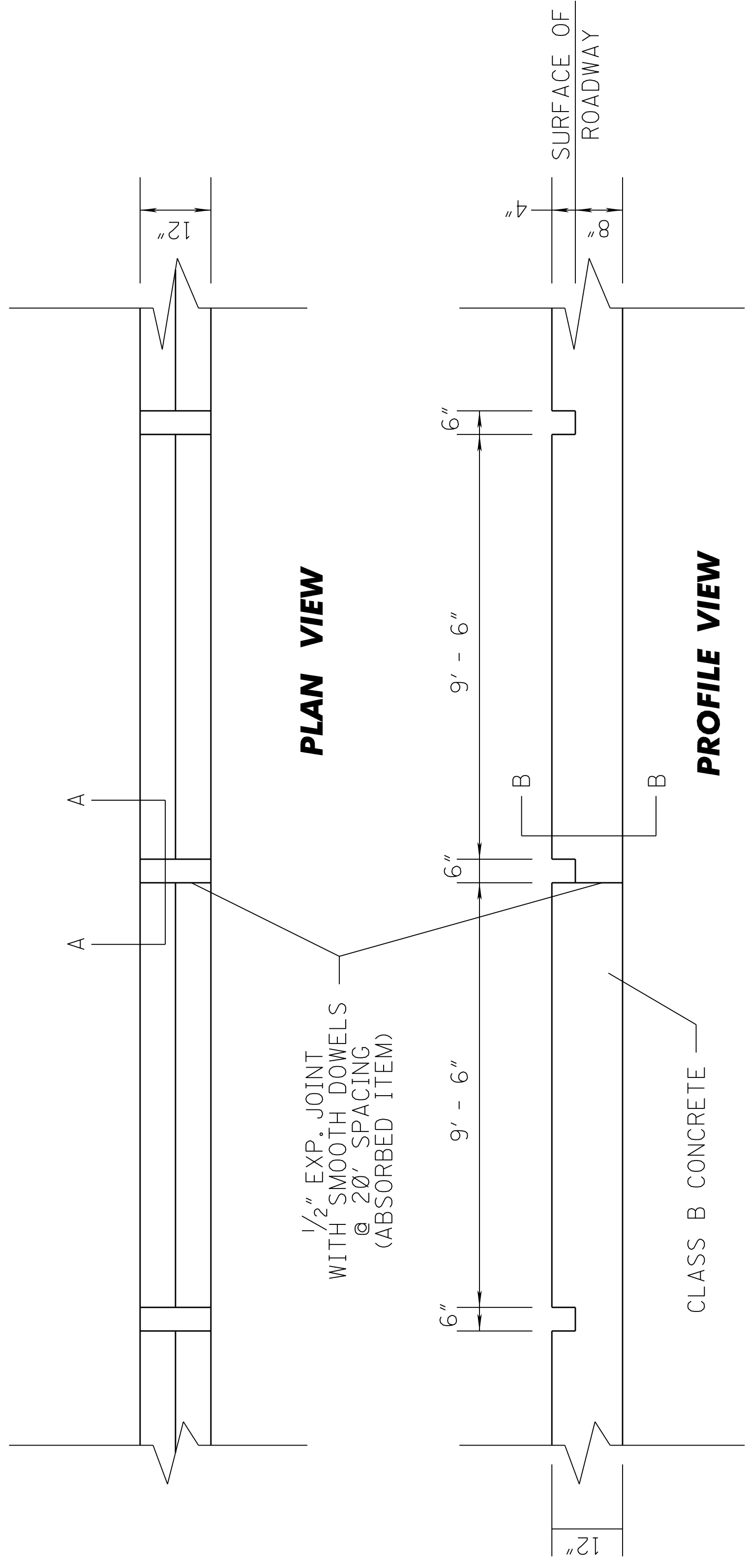
**DETAILED INDEX**

COUNTY: OK TIBBEHA  
PROJ. NUM.: HSIP-0018-03(024)  
WORKING NUMBER: DI-1  
SHEET NUMBER: 2

FILENAME: DI.DGN  
DESIGN TEAM: NEEL-SCHAFFER/CHECKED

DATE	REVISION	BY

STATE	PROJECT NO.
MISS.	HSIP-0018-03(024)



- NOTES:
- REINFORCEMENT TO BE COST ABSORBED IN THE SPECIAL DESIGN SLOTTED CURB.
  - DOWEL BAR SPECIFICATIONS: AASHTO M 31 GRADE 60

SPECIAL DESIGN SLOTTED CURB DETAIL  
PAID FOR UNDER 609-B003

BY	REVISION	DATE
RKE	MODIFIED DETAIL	11/6/17

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
**TYPICAL SECTIONS**  
**SPECIAL CURB DETAILS**

COUNTY: OKTIBBEHA  
PROJ. NO.: HSIP-0018-03(024)  
FILENAME: TYP.DGN  
DESIGN: TEAMNEEL-SCHAFFER/CHECKED: \_\_\_\_\_ DATE: \_\_\_\_\_

WORKING NUMBER  
**TS-5**  
SHEET NUMBER  
**11**





STATE	PROJECT NO.
MISS.	HSIP-0018-03(024)

### JUNCTION BOXES

WORKING SHEET NO.	ID NO.	STATION	SIDE 1		SIDE 2		SIDE 3		SIDE 4		SIDE W1 - 3 W2 - 4 (FT.)	INLET CL. "B" REINF. HEIGHT CONC. STEEL	BAR LIST						REMARKS				
			SIZE	SKEW	SIZE	SKEW	SIZE	SKEW	SIZE	SKEW			A1	A2	A3	A4	B	C		D	E	F	
																							A1
5	1	1761+45	18	0	15	0	15	0	3.67	2.50	2.92	0.85	219	2@28	0@0	2@28	0@0	5@40	5@26	12@35	17@26	12@40	
5	3	1761+58	24	0	18	0	18	0	4.25	3.67	3.50	1.35	347	2@31	0@0	2@31	2@28	5@47	8@40	13@42	19@40	17@47	
5	7	1762+33	30	0	30	0	18	0	4.83	3.67	4.38	1.65	405	2@35	0@0	2@34	2@28	5@54	9@40	13@53	22@40	17@54	
7	9	1772+27.7	24	0	24	0	24	0	4.25	3.67	3.75	1.38	352	2@31	2@28	2@31	0@0	5@47	8@40	13@45	19@40	17@47	
7	13	1773+28.2	24	0	24	0	18	0	4.25	3.67	3.75	1.38	352	2@31	0@0	2@31	2@28	5@47	8@40	13@45	19@40	17@47	
7A	17	19+54	24	0	24	0	24	0	4.25	2.50	3.75	1.03	260	2@31	0@0	2@31	0@0	5@47	6@26	12@45	19@26	12@47	
													CU.YD	LBS									
													7.64	1935									

WK. NO.	STATION TO STATION	SPECIAL DESIGN	TYPE "3A" MODIFIE D	TYPE "3B" MODIFIED	CONC. MEDIUM AND ISLAND PAV'T. (10" THICK.)	CONC. MEDIUM AND ISLAND PAV'T. (4" THICK.)	HEADER CURB	REMARKS
3	1746+94	298	361	15	3.4	4.7	61	
4	1751+60	507	26	15	0.8	0.5		
5	1757+60	495	402	282	133.5	178		
6	1763+60	400		1.7	5.2			
7	1770+60	500		325	50.9	179		
7A	18+84	21+43		110	8.7	29		
8	1775+60	436	368	32	6.5	10		
9	1781+60	417		37	1.0			
9A	8+75	10+90						
<b>TOTALS</b>		<b>L.F. 3053</b>	<b>L.F. 1157</b>	<b>L.F. 816</b>	<b>SQ. YDS. 12.4</b>	<b>SQ. YDS. 209.7</b>	<b>L.F. 457</b>	

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
**ESTIMATED QUANTITIES**  
**JUNCTION BOXES,  
CURB AND GUTTER**

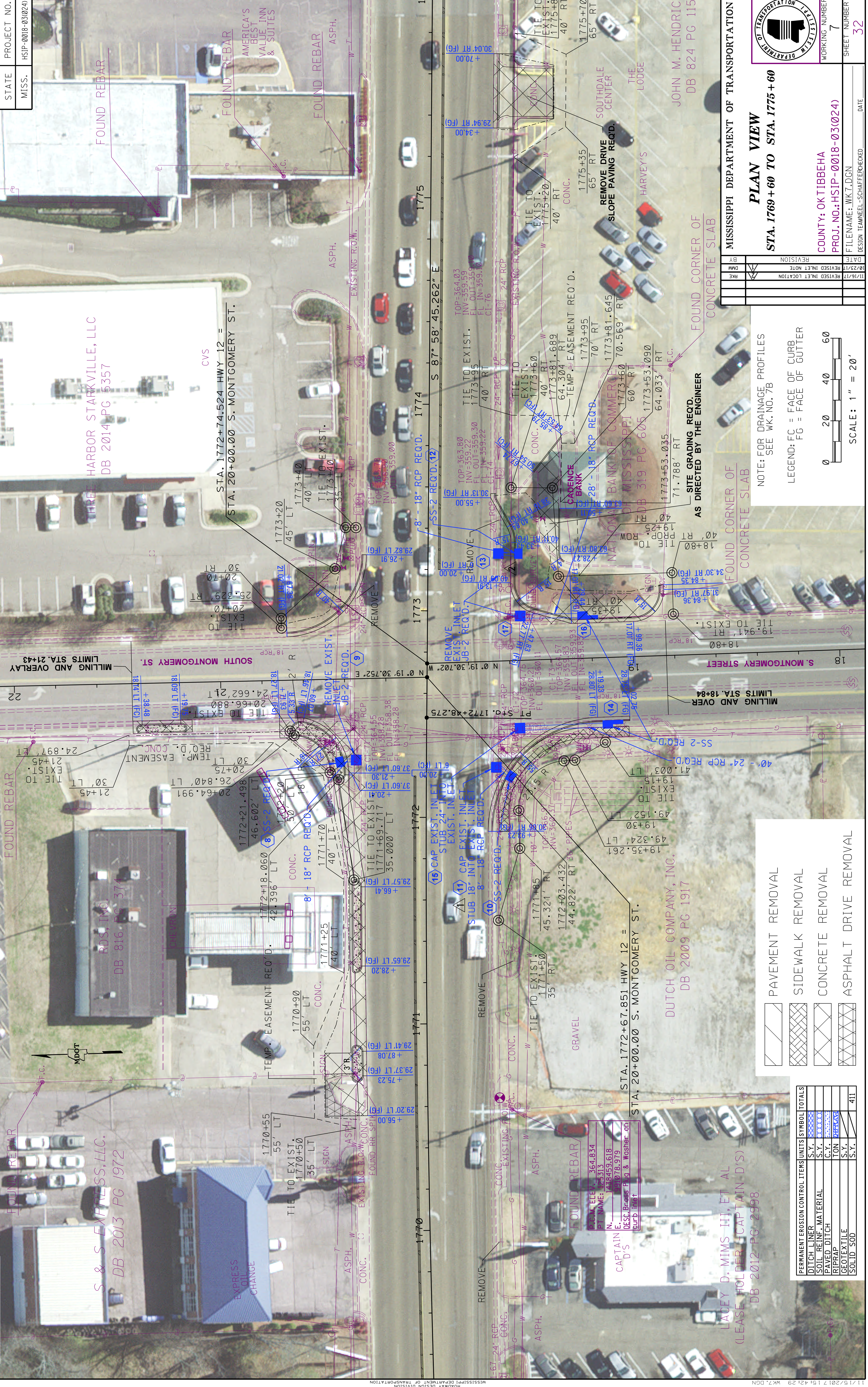
COUNTY: OK TIBBEHA  
PROJ. NUM.: HSIP-0018-03(024)

FILENAME: RECAP.DGN  
DESIGN TEAM: NEEL-SCHAFFER/CHECKED

WORKING NUMBER  
EQ-2

SHEET NUMBER  
18

STATE	MISS.
PROJECT NO.	HSIP-0018-03(024)



NOTE: FOR DRAINAGE PROFILES  
SEE WK. NO. 7B

LEGEND: FC = FACE OF CURB  
FG = FACE OF GUTTER

0 20 40 60  
SCALE: 1" = 20'

- PAVEMENT REMOVAL
- SIDEWALK REMOVAL
- CONCRETE REMOVAL
- ASPHALT DRIVE REMOVAL

PERMANENT EROSION CONTROL ITEMS	UNITS	SYMBOL	TOTALS
DITCH LINER	S.Y.		
SOIL REINFORCEMENT MATERIAL	S.Y.		
PAVED DITCH	S.Y.		
RIPRAP	TON		
GEOTEXTILE	S.Y.		
SOLID SOIL	S.Y.		411

LACEY D. MIMS III, ET AL  
(LEASE HOLDER, CAPTAIN D'S)  
DB 2012 PG 2998

CAPTAIN D'S  
DESC: Brass Plug & Washer on curb inlet  
N. 151078.979  
PT NAME: 25313  
ELEV: 364.834

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
**PLAN VIEW**  
STA. 1769 + 60 TO STA. 1775 + 60

DATE	11/16/17	REVISION	REVISED INLET LOCATION
BY	DAM	REVISION	REVISED INLET NOTE

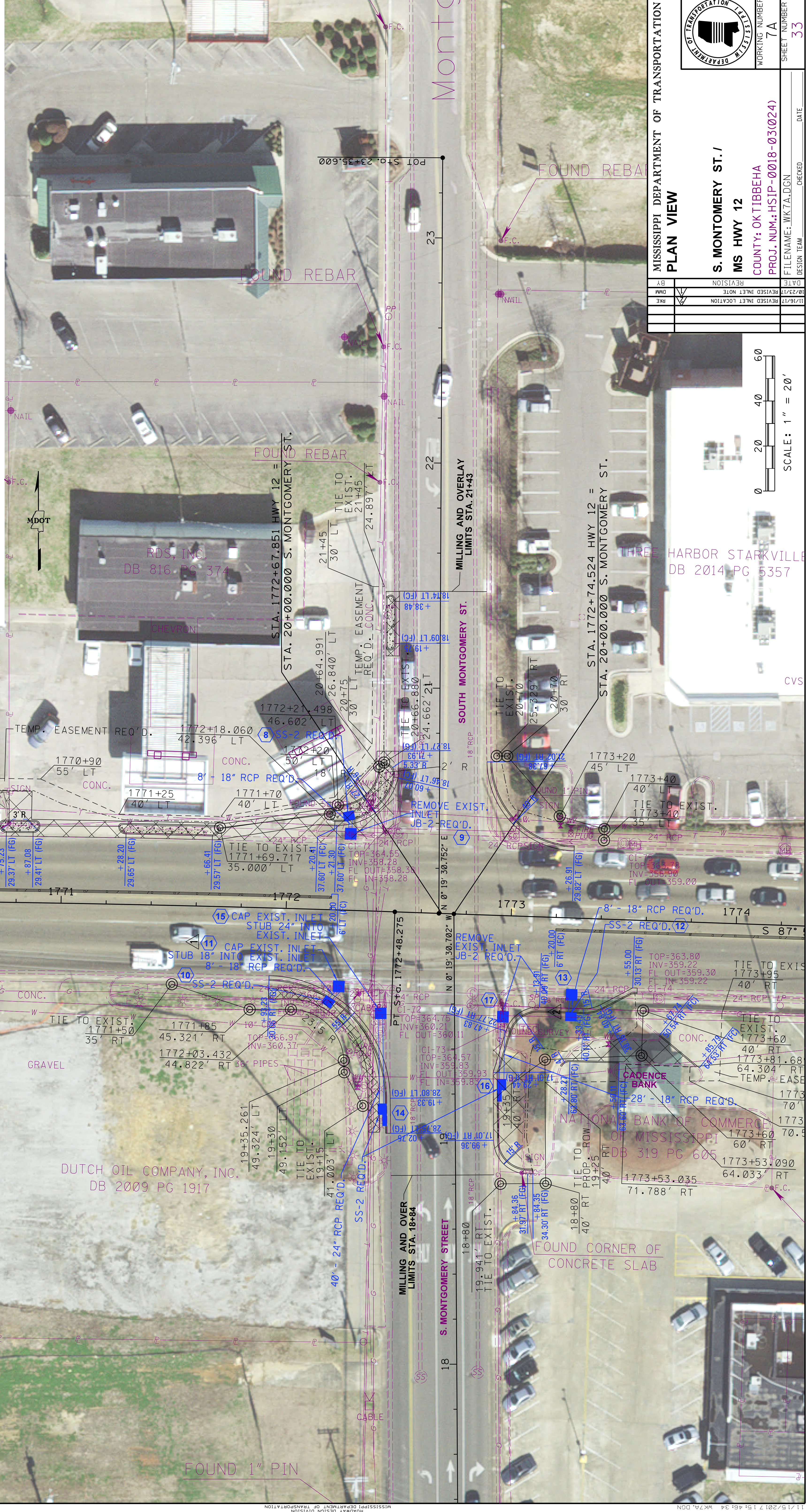
WORKING NUMBER: 7  
SHEET NUMBER: 32  
COUNTY: OKTIBBEHA  
PROJ. NO.: HSIP-0018-03(024)  
FILENAME: WK7.DGN  
DESIGN TEAM: NEEL-SCHAEFER/CHECKED

PROJECT NO.	HSIP-0018-03(024)
STATE	MISS.
NOTE: FOR DRAINAGE PROFILES SEE WK. NO. 7B	

PERMANENT EROSION CONTROL ITEMS	UNITS	SYMBOL	TOTALS
DITCH LINER	S.Y.		
SOIL REINF. MATERIAL	S.Y.		
PAVED DITCH	C.Y.		
RIPRAP	TON		
GEOTEXTILE	S.Y.		
SOLID SOD	S.Y.		

LEGEND: FC = FACE OF CURB  
FG = FACE OF GUTTER

	PAVEMENT REMOVAL
	SIDEWALK REMOVAL
	CONCRETE REMOVAL
	ASPHALT DRIVE REMOVAL



MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
**PLAN VIEW**

S. MONTGOMERY ST. /  
MS HWY 12  
COUNTY: OKTIBBEHA  
PROJ. NUM.: HSIP-0018-03(024)

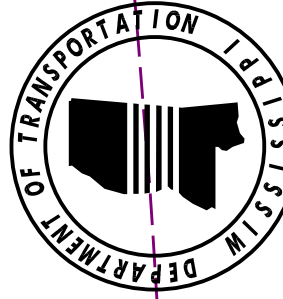
DATE	11/16/17
BY	DMM
REVISION	REVISED INLET LOCATION
DATE	10/23/17
BY	RKE
REVISION	REVISED INLET NOTE

WORKING NUMBER: 7A  
SHEET NUMBER: 33  
FILENAME: WK7A.DGN  
DESIGN TEAM: \_\_\_\_\_  
CHECKED: \_\_\_\_\_  
DATE: \_\_\_\_\_

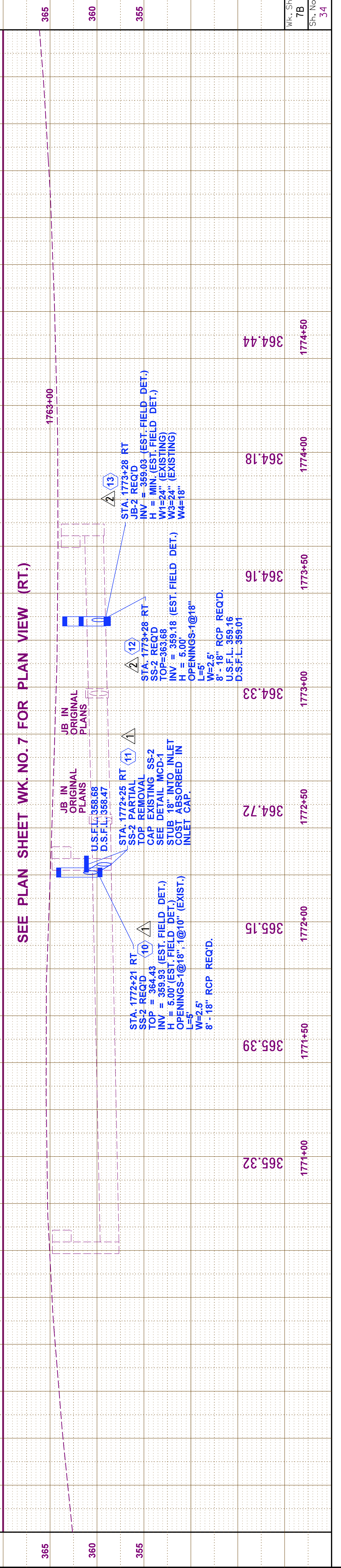
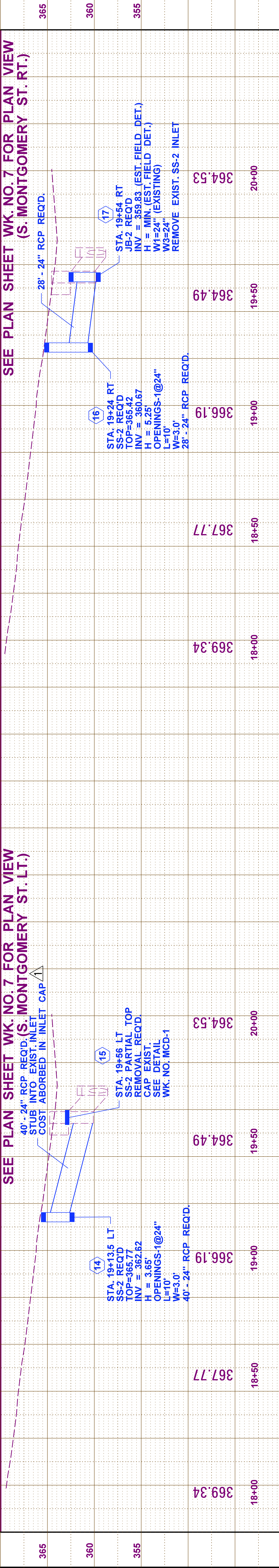
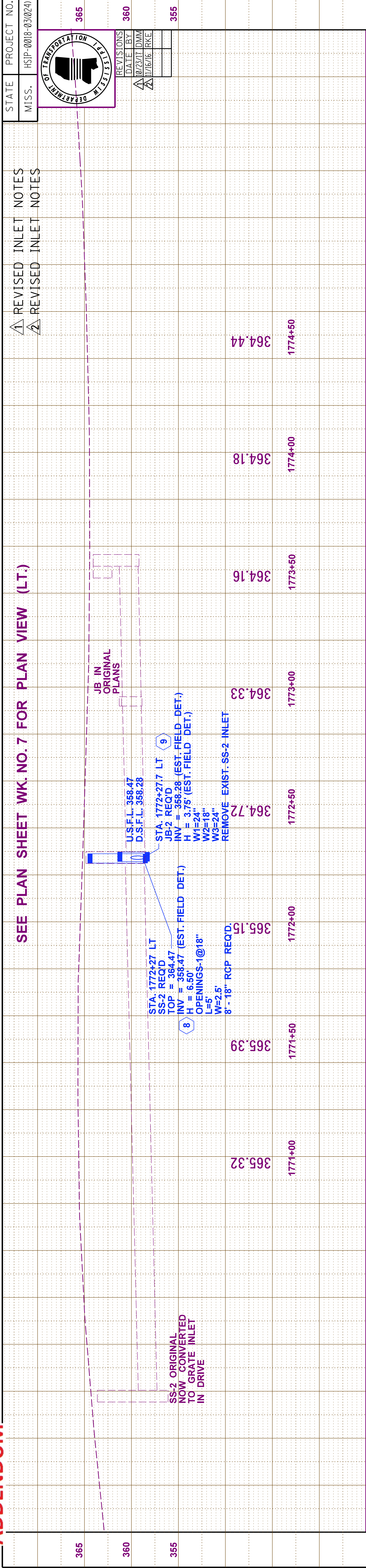
**ADDENDUM**

FMS COM:106863-303000

STATE	PROJECT NO.
MISS.	HSIP-0018-03(024)

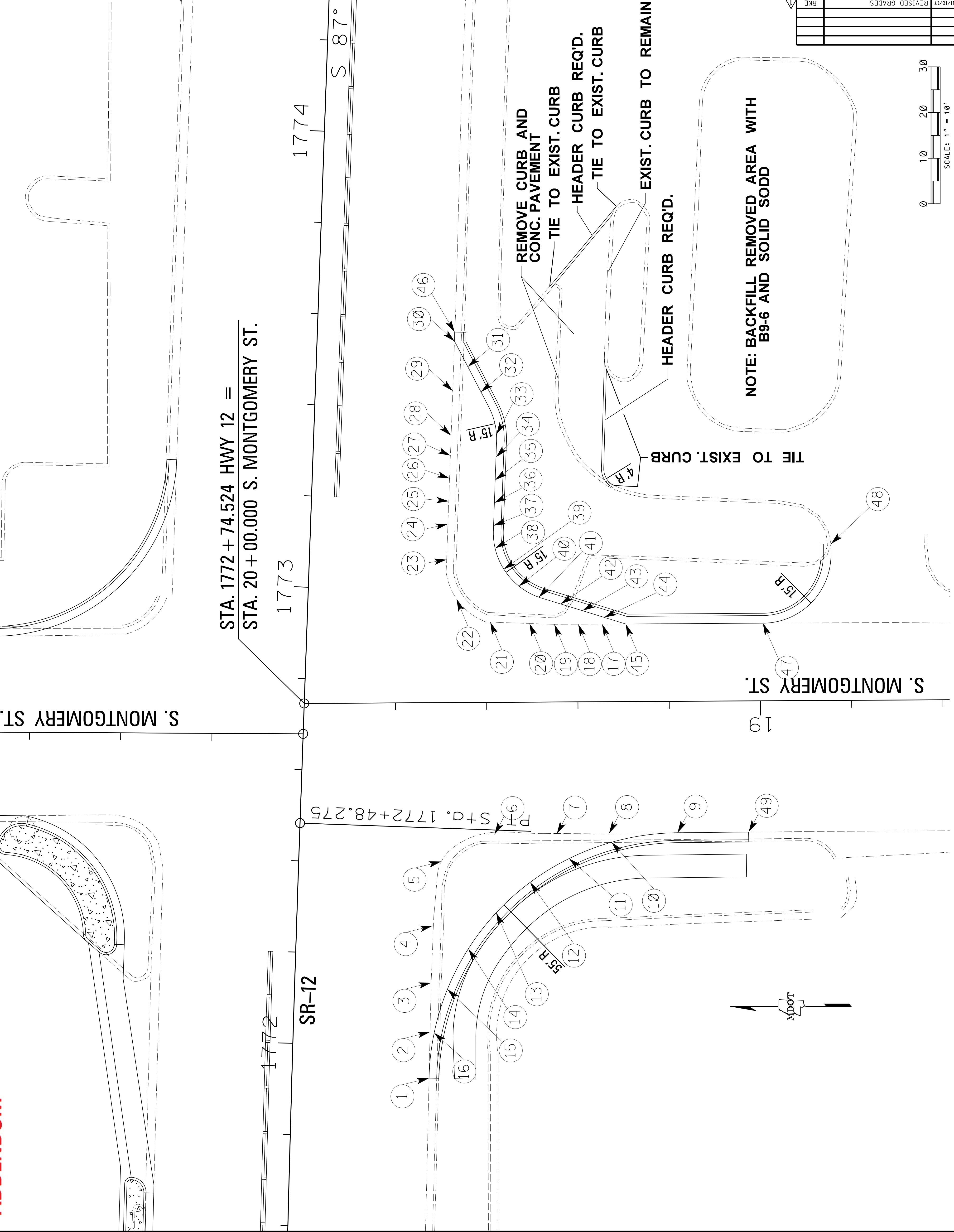


REVISIONS	
DATE	BY
10/23/17	DMM
11/16/16	RKE



STATE	PROJECT NO.
MISS.	HSIP-0018-03(024)

INTERSECTION STATION 1772+74			
NO	NORTHING	EASTING	ELEVATION
1	1438461.72	991208.05	364.69
2	1438461.49	991218.15	364.58
3	1438461.25	991228.97	364.48
4	1438460.97	991241.41	364.38
5	1438459.05	991255.51	364.22
6	1438447.36	991261.45	364.30
7	1438433.70	991261.58	364.58
8	1438422.26	991261.68	364.85
9	1438407.24	991261.82	365.22
10	1438421.71	991259.74	364.64
11	1438431.03	991256.16	364.45
12	1438439.55	991250.96	364.28
13	1438446.99	991244.29	364.15
14	1438453.11	991236.40	364.04
15	1438457.69	991227.52	364.27
16	1438460.59	991217.97	364.50
17	1438418.61	991307.57	364.70
18	1438429.01	991307.51	364.54
19	1438434.25	991307.48	364.28
20	1438439.70	991307.67	364.24
21	1438448.29	991307.98	363.97
22	1438455.67	991313.03	363.64
23	1438457.86	991321.67	363.51
24	1438457.58	991329.48	363.52
25	1438457.40	991334.48	363.49
26	1438457.22	991339.48	363.51
27	1438457.04	991344.48	363.40
28	1438456.88	991348.86	363.43
29	1438456.52	991358.64	363.43
30	1438456.13	991369.52	363.49
31	1438453.22	991363.94	363.43
32	1438450.34	991358.41	363.39
33	1438446.94	991349.11	363.31
34	1438447.04	991344.11	363.29
35	1438447.22	991339.12	363.34
36	1438447.40	991334.12	363.39
37	1438447.58	991329.12	363.44
38	1438447.24	991324.15	363.48
39	1438445.32	991319.56	363.62
40	1438442.00	991315.85	363.81
41	1438437.65	991313.43	364.08
42	1438432.88	991311.95	364.26
43	1438428.10	991310.48	364.46
44	1438423.32	991309.01	364.65
45	1438418.61	991307.57	364.74
46	1438456.10	991371.53	363.42
47	1438388.53	991307.74	365.81
48	1438373.63	991325.11	367.21
49	1438391.66	9912161.97	365.49



DATE	DESIGN	TEAM/LEAD	SCHAFFER/CHECKED	DATE
REVISION	BY	DATE		

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
**FORM GRADES**  
 INTERSECTION AT  
**STA. 1772+74.524 RT.**

COUNTY: OK TIBBEHA  
 PROJ. NO.: HSIP-0018-03(024)  
 FILENAME: FG-3.DGN

WORKING NUMBER  
**FG-3**  
 SHEET NUMBER  
**42**

SCALE: 1" = 10'  
 0 10 20 30

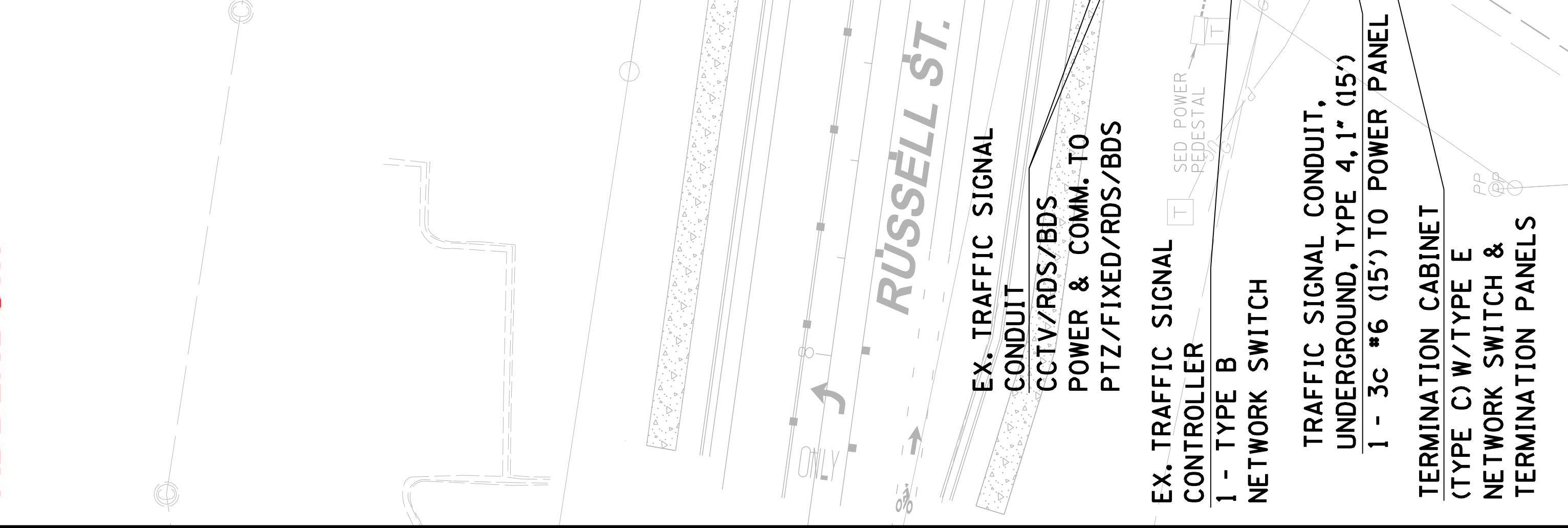
STATE	PROJECT NO.
MISS.	HSIP-0018-03(024)

GENERAL NOTES

1. PAY ITEMS FOR ITS WORK (FIBER OPTIC CABLE, FIBER DROP, 15' OF 3C #6, POWER & COMM. CABLE, CONDUIT BANK, AND 15' EACH OF TRAFFIC SIGNAL CONDUIT, UNDERGROUND, TYPE 4, 1" & 2") ARE INCLUDED IN THE ITS EG. REMAINING TRAFFIC SIGNAL CONDUIT AND SIGNAL POLES ARE EXISTING.
2. INSTALL FIBER TERMINATION CABINET: TYPE C W TYPE E NETWORK SWITCH & 144 TOTAL COUNT TERMINATION PANELS. TERMINATE ALL 72 FIBERS. (ALL OTHER COMPONENTS BESIDES CABINET & SWITCH TO BE COST ABSORBED IN PAY ITEM 970-661-A).  
POWER TO TIE INTO EX. SIGNAL SERVICE PANEL. F.O. DROP TO GO TO EX. SIGNAL CONTROLLER. LOCATE AND TIE INTO SPARE CONDUIT AT SIGNAL CONTROLLER CABINET FOUNDATION.
3. EX. SIGNAL CONTROLLER TO HAVE TYPE B NETWORK SWITCH INSTALLED. ALL ITS EQUIPMENT AND EXISTING SENSYS WIRELESS VEHICLE DETECTION SYSTEM TO BE CONNECTED TO TYPE B NETWORK SWITCH (COST ABSORBED). USE EX. CONTROLLER FOR POWER.
4. CONTRACTOR SHALL FURNISH AND INSTALL CCTV SITE #3:  
1 - PTZ CCTV ON SHAFT OF SE MAST ARM TRAFFIC SIGNAL POLE.  
4 - FIXED CCTV ON MAST ARMS OF NW, NE AND SW TRAFFIC SIGNAL POLES.  
1 - RDS AND 1 - BDS ON SHAFT OF NE MAST ARM TRAFFIC SIGNAL POLE.
5. ALL SIGNAL EQUIPMENT SHOWN ON THIS SHEET IS EXISTING.

- CCTV SITE #3**
- 1 - PTZ TYPE (IP)
  - 4 - FIXED TYPE (IP)
  - 1 - RDS (IP)
  - 1 - BDS (IP)
- MOUNTED ON MAST ARM SIGNAL POLES  
CONNECT TO TYPE B NETWORK SWITCH IN EX. TRAFFIC SIGNAL CONTROLLER

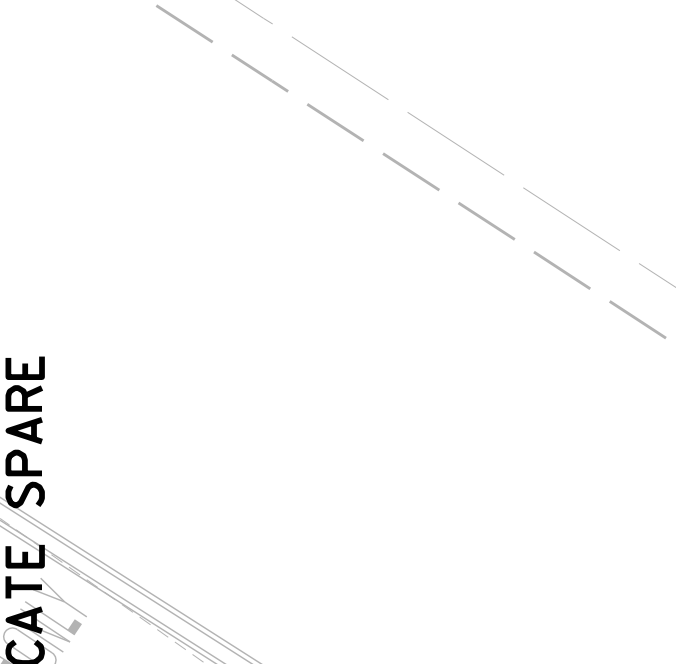
- 1 - FIXED CCTV (IP) MOUNTED ON MAST ARM OF SIGNAL POLE
- 1 - RDS MOUNTED ON SHAFT OF SIGNAL POLE
- 1 - BDS MOUNTED ON SHAFT OF SIGNAL POLE



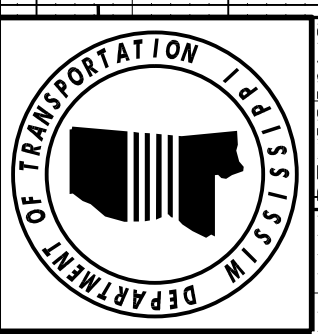
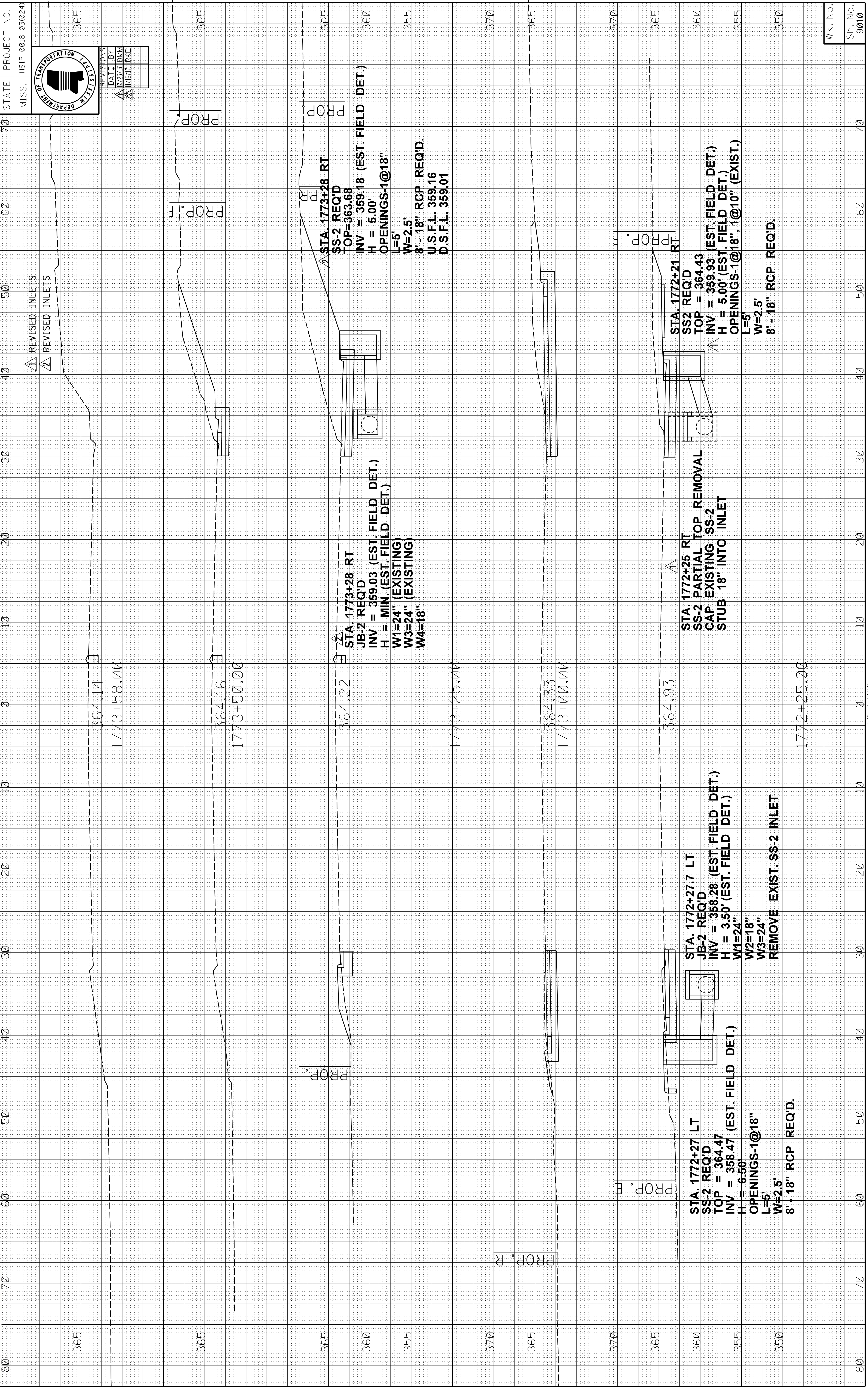
DATE	DESIGN TEAM	CHECKED	DATE
DATE	DESIGN TEAM	CHECKED	DATE
DATE	DESIGN TEAM	CHECKED	DATE
DATE	DESIGN TEAM	CHECKED	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
**ITS PLAN**  
CAMERA INSTALL - SR 12 @  
RUSSELL STREET

COUNTY: OK TIBBEHA  
PROJ. NUM.: HSIP-0018-03(024)  
FILENAME: ITS-5.DGN  
WORKING NUMBER  
ITS-5  
SHEET NUMBER  
3007



COND. BANK (2-2" ROLL PIPE) (BORED) FOR FUTURE MSU FIBER



REVISIONS	
DATE	BY
11/27/17	DMM
1/16/17	RKE

STATE PROJECT NO.  
MISS. HSIP-0018-03(024)