ADDENDUM ONE
2017 RESURFACING CONTRACT
CONTRACT NO. T-17-007-201
CITY OF CHATTANOOGA, TENNESSEE

The following changes shall be made to the Contract Documents, Specifications, and Drawings:

I. Updated Specifications

A. **The following Specification sections in the Contract Documents are hereby ADDED:**
   i. **Section 415 – Open Graded Interlayer**
   ii. **Section 604 – Diamond Grinding**
   iii. **Section 725 – Video Image Vehicle Tracking and Detection System**

B. **The following Specification sections in the Contract Documents have been revised and are included in this Addendum:**
   i. **00301 Rev 1 - Bid Schedule – delete original and update with Rev 1 Bid Schedule**
   ii. **1010 Summary of Work**

II. Updated Drawings

Design drawings have been added for Alternate A - Rubblization and Alternate B - Diamond Grinding and are included in this Addendum.

III. Clarifications

A. **Question - How will the winning bidder be determined? Answer - The winning bidder will be based on the lowest and best responsive bid for Base Bid plus Alternate "A" OR Base Bid plus Alternate "B".**
B. **Question - Does the City have a specification for the Stress Relieving Interlayer? Answer – See Section 415**
C. **Question – Will the entire roadway be diamond ground in Alternate "B"? Answer – The areas to be ground will be identified by the City's Transportation Engineer or his designee after the existing asphalt surface is removed.**
D. **Question – How thick is the current asphalt overlay? Answer – From Georgia Ave to Douglas St there is approximately 2 ½" of mix and from Douglas St to Central Ave there is approximately 1 ½" of mix.**
E. **Question – Will the gutterlines in the parking lanes be paved back? Answer – The parking lanes will be paved back to match the proposed overlay on the travel lanes.**

Leslie Rupert for

October 6, 2017

/s/ Blythe Bailey, Administrator
Chattanooga Department of Transportation

ITEM 415

Asphaltic Concrete Open Graded Crack Relief Layer

415.1 General Description

This work includes constructing a bituminous plant produced Asphaltic Concrete Open Interlayer over the existing roadway surface. The mixture shall serve as asphaltic concrete leveling over irregular surfaces and provide mitigation for reflective cracking prior to the placement of the final surface pavement. The mixture shall conform to the lines, grades, thicknesses, typical sections and cross sections shown on the Plans or established by the Engineer. This section includes the requirements for Asphaltic Concrete Open Graded Interlayer mixtures regardless of the gradation of the aggregates, type and amount of bituminous material, or pavement use. Follow the requirements in Section 407, and Section 411 for production and placement, materials, equipment, and acceptance plans except as noted or modified in this Specification.

Acceptance of work is on a lot-to-lot basis according to the requirements of this Section, Section 407 and Section 106.

415.1.01 Definitions

Asphaltic Concrete Open Graded Interlayer: an open graded mixture placed at a lift thickness that yields stone on stone contact that provides in-place air void content in excess of 20% to mitigate existing cracking within asphaltic concrete pavements.

415.1.02 Related References

A. Standard Specifications

Section 106—Control of Materials
Section 109—Measurement and Payment
Section 152—Field Laboratory Building
Section 407 – Hot Mix Asphaltic Concrete Construction
Section 413—Bituminous Tack Coat
Section 903 – Coarse Aggregate
Section 903—Coarse Aggregate for Asphaltic Concrete
Section 904 – Asphalt Cement
Section 411—Hot Mix Asphaltic Concrete Mixtures
Section 921 – Admixtures
Section 921 – Lime
Section 903 – Mineral Filler

B. Referenced Documents

AASHTO T 209
AASHTO T 202
AASHTO T 49
AASHTO T 315

415.1.03 Submittals

A. Invoices

Furnish formal written invoices from a supplier for all materials used in production of HMA when requested by Department. Show the following on the Bill of Lading:

- Date shipped
- Quantity in tons
- Included with or without additives (for asphalt cement)

B. Paving Plan

Before starting asphaltic concrete construction, submit a written paving plan to the Engineer for approval. Include the following on the paving plan:

- Proposed starting date
- Location of plant(s)
- Rate of production
- Average haul distance(s)
- Number of haul trucks
- Paver speed feet (meter)/minute for each placement operation
- Mat width for each placement operation
- Number and type of rollers for each placement operation
- Sketch of the typical section showing the paving sequence for each placement operation
- Electronic controls used for each placement operation
- Temporary pavement marking plan

If staged construction is designated in the Plans or contract, provide a paving plan for each construction stage. If segregation is detected, submit a written plan of measures and actions to prevent segregation. Work will not continue until the plan is submitted to and approved by the Department.

C. Job Mix Formula

Submit to the Engineer a written job mix formula proposed for each mixture type to be used based on an approved mix design. Furnish the following information for each mix:

- Specific project for which the mixture will be used
- Source and description of the materials to be used
- Mixture I.D. Number
- Proportions of the raw materials to be combined in the paving mixture
- Single percentage of the combined mineral aggregates passing each specified sieve
- Single percentage of asphalt by weight of the total mix to be incorporated in the completed mixture
- Single temperature at which to discharge the mixture from the plant
- Theoretical specific gravity of the mixture at the designated asphalt content
- Name of the person or agency responsible for quality control of the mixture during production

Do the following to have the formulas approved and to ensure their quality:

1. Submit proposed job mix formulas for review at least two weeks before beginning the mixing operations.
2. Do not start hot mix asphaltic concrete work until the Engineer has approved a job mix formula for the mixture to be used. No mixture will be accepted until the Engineer has given approval.
3. Provide mix designs for all mixes to be used.
4. After a job mix formula has been approved, assume responsibility for the quality control of the mixtures supplied to the Department according to Subsection 106.01, "Source of Supply and Quantity of Materials."

D. Quality Control Program

Submit a Quality Control Plan to the City Transportation Engineer for approval. The Quality Control Program will be included as part of the certification in the annual plant inspection report.

415.2 Materials

The requirements established in TDOT 407 are to be followed for Asphaltic Concrete Open Interlayer production and placement, materials, equipment, and acceptance plans except as noted or modified in this Specification. Ensure that materials comply with the specifications listed in Table 1.

Table 1—Materials Specifications

Material	Subsection
Asphalt Cement, Grade Specified	TDOT 904
Coarse Aggregates for Asphaltic Concrete	TDOT 903.11
Fine Aggregates for Asphaltic Concrete	TDOT 903.11
Mineral Filler	TDOT 903.16
Heat Stable Anti-Stripping Additive	TDOT 921.06
Hydrated Lime	TDOT 921.04
Silicone Fluid (When approved by the Office of Materials and Testing)	TDOT 921.06
Bituminous Tack Coat: PG 58-22, PG 64-22, PG 67-22	TDOT 403
Hot Mix Asphaltic Concrete Mixtures	TDOT 411

415.2.01 Mix Design Requirements

The Open Graded Mixture shall be formulated to contain approximately 20 to 25 percent in-place air voids after compaction. Use approved mixtures that meet the following mixture control tolerances and design criteria:

Table 1 – Asphaltic Concrete Open Graded Interlayer Mixture Design and Control

Sieve Size	Mixture Control Tolerance, %	Design Gradation Limits, % Passing Open Graded Interlayer
3/4 in (19 mm) sieve	±0.0	100
1/2 in (12.5 mm) sieve	±6.1	80 - 100
3/8 in (9.5 mm) sieve	±5.6	40 - 65
No. 4 (4.75 mm) sieve	±5.7	10 - 25
No. 8 (2.36 mm) sieve	±4.6	2 - 8
No. 200 (75 µm) sieve	±2.0	1 - 4
Range for % AC	±0.4	4.00 – 5.00
Class of stone (TDOT 903)		"A" only
Drain-down (AASHTO T305), %		<0.3
Design optimum air voids (%)		22% ±1
Control Sieves used in Acceptance Schedule		3/8 in., No. 8 (9.5 mm, 2.36 mm) and Asphalt Cement

Notes:
1. Use only PG 64-22 or PG 67-22 asphalt cement (specified in Section 904).
2. Use no less than 1.0% hydrated lime regardless of aggregates group or source(s) used.

The Contract will provide a job mix formula Department will design the Open Graded Interlayer mixture. All materials and appropriate related information (material sources, gradation and project for use) shall be furnished to the Office of Materials and Testing. Once the materials and related information has been provided, the Department shall have four weeks to design the mixture. The Department will establish the mix design Asphalt Cement content for the mix.

415.3 Construction Requirements

The requirements established in Section 407 are to be followed for warm mix asphaltic concrete production and placement, materials, equipment, and acceptance plans except as noted or modified in this Specification. Any discrepancy between items shall be brought to the attention of the Senior Engineer for further discussion and a determination of best solution.

415.3. 01 Personnel

General Provisions 101 through 150.

415.3.02 Construction

Follow requirements established in Section 407 for production and placement, materials, equipment, acceptance plans and adjustments except as noted or modified in this Specification.

A. Apply the bituminous tack coat according to Section 403. The Engineer will determine the application rate, which must be within the limits of 0.03 gal/yd_2 to 0.05 gal/yd_2.

B. The mix shall be produced and placed at a temperature of 250°F with a tolerance of ± 20°F.

C. Place the mix to a compacted lift thickness of $1^{1/2}$ - inch. For construction purposes, the target thickness will be converted to spread rate based on the bulk specific gravity of the asphaltic concrete mixture being used as shown in the following equation:

Spread rate (lbs/yd_2) = t * G_{mb}* 46.8
Where: t = Compacted lift thickness (inches)
G_{mb}= bulk specific gravity of the mix from the approved mix design
The spread rate shall be controlled within 10 lbs/yd_2 (6 kg/m_2).

D. Do not place mix at air temperatures below 50°F.

E. The mix shall be compacted in a manner to achieve 20% - 25% in-place air voids. Steel wheel rollers operating in static mode ***only*** will be used to seat the lift of Asphaltic Concrete Open Graded mixture. Pneumatic tire rollers shall not be allowed on the Asphaltic Concrete Open Graded mat.

415.4. Measurement

The Department will pay for accepted quantities of Asphaltic Concrete Open Graded Crack Relief Layer mix, at the contract prices, complete in place in accordance with section 407.

415.5 Payment

Asphaltic Concrete Open Graded Crack Relief Layer mix is paid for at the Contract Unit Price per ton. Payment is full compensation for furnishing and placing materials including asphalt cement, hydrated lime, approved additives, and for cleaning and repairing, preparing surfaces, hauling, mixing, spreading, rolling, and performing other operations to complete the Contract Item.

Payment will be made under:

Item No. 415	Asphaltic Concrete Open Graded Crack Relief Interlayer, group-blend, Including bituminous materials and hydrated lime	Per ton

END OF DOCUMENT

Conventional Diamond Grinding

SCOPE

This standard specifies the procedures for operations of continuous diamond grinding Portland cement concrete or asphalt concrete pavement and roadway surfaces to provide desired surface characteristics such as ride, friction and drainage. This standard does not apply to corrective bump grinding. The standard also provides guidelines for levels of acceptance for the desired surface characteristics. The user of this standard shall be responsible to ensure that all local safety, health and environmental standards are made a part of the project specification.

Conventional diamond grinding is also utilized to reduce the noise created by the interaction of the tire with the pavement surface in areas of low to moderate noise concern. When grinding solely for noise reduction, it is important to completely remove the existing surface texture such as transverse tining. The profile requirements stated elsewhere in this specification may not apply to grinding solely for noise abatement. In areas of high tire/pavement noise concern and speed limits above 45 mph, the pavement should be ground in accordance with the specification for the Next Generation Concrete Surface (NGCS) grinding.

EQUIPMENT

Grinding shall be performed using diamond blades mounted on a self-propelled machine designed for grinding and texturing pavement. The grinding equipment shall be at a minimum 35,000 pounds including the grinding head, and of a size that will grind a strip at least 3 feet wide. The effective wheel base of the machine shall be no less than 12 feet. The effective wheel base is defined as the distance from the front wheel assembly transverse pivot point to the transverse pivot point of the profile/depth control/ ground drive wheels.

The equipment shall have a positive means of vacuuming the grinding residue from the pavement surface, leaving the surface in a clean, near-dry condition.

Grinding equipment that causes raveling, aggregate fractures or disturbance to the joints shall not be permitted.

The equipment shall be maintained to ensure it is in proper working order, with attention paid to the "roundness" of the match and depth control wheels. Any wheels found to be out of round shall be immediately replaced.

CONSTRUCTION

The construction operation shall be scheduled and proceed in a manner that produces a neat, uniform finished surface. Shoulder, auxiliary or ramp lane grinding shall transition from the edge of the mainline as required to provide drainage leaving no more than a 3/16 – inch ridge and an acceptable riding surface. Full - and partial - depth concrete

repairs, slab stabilization and dowel bar retrofit shall be completed prior to any grinding. Joint sealing shall be completed subsequent to the diamond grinding operations.

Grinding shall be accomplished in a manner that eliminates joint or crack faults so there is no more than a 1/16 - inch differential between the adjacent sides of the joints and cracks. Grinding shall also substantially remove pavement conditions such as warp and curl to provide an acceptable ride.

Lateral drainage shall be achieved by maintaining a constant cross slope between grinding extremities in each lane. The finished cross slope shall mirror the pregrind cross slope and shall have no depressions or misalignment of slope greater than1/4 - inch in 12 feet when measured with a 12 - foot straightedge placed perpendicular to the centerline. Steps will be taken to ensure that wheel path rutting is substantially removed and that the grinding operation is simply not texturing the wheel path depressions. Areas of deviation shall be reground. Straightedge requirements will not apply across longitudinal joints or outside the ground area.

Grinding shall begin and end at lines normal to the pavement centerline at the project limits. Passes of the grinding head shall not overlap more than 1 - inch. No unground surface area between passes will be permitted.

FINAL SURFACE FINISH

The grinding process shall produce a pavement surface that is true in grade and uniform in appearance with longitudinal line - type texture. The line - type texture shall contain corrugations parallel to the outside pavement edge and present a narrow ridge corduroy type appearance. The peaks of the ridges shall be 1/8 - inch +/- 1/16 - inch higher than the bottom of the grooves with evenly spaced ridges.

It shall be the contractor's responsibility to select the number of blades per foot to be used to provide the proper surface finish for the aggregate type and concrete present on the project. The number of blades used for grinding will range between 50 - 60 blades per foot as necessary to provide the designated texture. Harder aggregate may require the use of 55 – 60 blades per foot. The engineer may require removal of unbroken fins at the contractor's expense. The project conditions may dictate that the contractor has to make multiple passes with the equipment to meet the specifications. It is the contractor's responsibility to determine the proper sequence of operations to meet the specification. If multiple passes of the grinding equipment are required, the area will only be considered for payment once. A minimum of 95 percent of any 100 - foot section of pavement surface shall be textured. Depressed pavement areas due to subsidence or other localized causes will be exempted from texture and smoothness requirements.

SLURRY HANDLING AND REMOVAL

Slurry shall be collected, processed and disposed of in accordance with the IGGA Diamond Grinding Slurry Handling -- Best Management Practices - April 2013. This document is available on the web at www.igga.net.

SMOOTHNESS REQUIREMENTS

Smoothness requirement may be 1/8 inch variance in a 12 - foot straightedge test.

METHOD OF MEASUREMENT

Grinding will be measured by the square yard of area diamond ground as identified by City Transportation Engineer. The measurement will be the final textured surface area regardless of the number of passes required to achieve acceptable results. Minor areas of unground pavement within the designated areas to be ground will be included in the measurement.

BASIS OF PAYMENT

Grinding will be paid for at the contract price per square yard. Payment shall be full compensation for all labor, equipment, material and incidentals to complete this work, including hauling and disposal of grinding residue.

END OF DOCUMENT

VIDEO IMAGE VEHICLE TRACKING AND DETECTION SYSTEM

1.0 Video Detection – Video Image Vehicle Tracking and Detection System (VIVTDS)

Included are the minimum requirements for a system that views, captures, and derives data based on the vehicles that pass within the sensor field of view along a highway, road, ramp, or other commonly used transit pathway via processing video images. The detection of vehicles by a VIVTDS can be accessed and used by and for a large number of applications, including:

- Vehicle detection and actuation at intersections
- Highway flow monitoring
- Ramp metering
- Advanced detection
- PED crossing extensions
- Temporary construction zone detection
- Situational awareness of location area, including an intersection center
- Automated alerts and reports of potentially unsafe conditions, incidents, malfunctions, or signal timing inefficiencies
- Collecting and archiving traffic data for future analysis to improve performance by optimizing timing plans at intersections

The system shall have a modular electrical design and use Ethernet to connect and network with the different system components. Streaming video images, alerts, and data shall be transmitted from the field back to a Traffic Operations Center (TOC) via the systems client software and to the VIVTDS's cloud by using any or combination of the following

- Fiber optic
- Microwave
- WAN
- TCP/IP
- Internal modem
- Any other means of commonly used communication practices and standards for digital content and information.

The VIVTDS client software shall provide graphical user interfaces between the administrator(s) and permissioned users of the system and the VIVTDS sensor(s) itself. The software shall allow the user to configure sites, conduct maintenance, monitor information relayed from the sensor(s), and provide access to real-time data, system and user defined alerts, and access to historical data collected by the sensor(s). The client software should be installed on a single personal computer or

across a network of computers. One or more users will be able to access VIVTDS simultaneously.

2.0 System Hardware

The required hardware shall include the following:

- One VIVTDS processor capable of connecting with 1 to 8 sensors
- One or more VIVTDS sensors, with at least one sensor having a fisheye lens for omnidirectional viewing of the roadway or intersection.
- One 1.5" straight-thread, swivel bracket, and surge protector junction unit, per each fisheye sensor
- One surge protector junction unit, per each advanced/stopline sensor
- One mounting pole and bracket (90° pole per each fisheye sensor; or straight, vertical pole per each advanced/stopline sensor)
- One Ethernet Protection Module (surge protector located in the traffic cabinet), per each VIVTDS sensor
- VIVTDS interface cables to the traffic signal controller based on model/type.
- Optional portable field computer to configure and monitor system operations
- Optional computer to configure and monitor system operations at the TOC or other remote location
- Optional Ethernet Repeater to extend VIVTDS sensors beyond 100 meters
- Optional POE Powered Switch for use with more than two sensors

2.1 Sensor Hardware

Fisheye Sensor

The VIVTDS should have at least one downward-facing fisheye sensor capable of seeing the center of the intersection and have an omnidirectional line of site to track vehicles entering and exiting the intersection. Other required features shall include the following:

- Color images outputted into digital format as MJPEG images
- Horizontal resolution of at least 2580 lines and vertical resolution of at least 1920 lines.
- A five (5) megapixel CMOS camera with an active-pixel sensor (APS)
- Camera lens shall not require adjustment and is always in focus
- A thermostatically controlled heater residing inside the enclosure to reduce the effects of ice and condensation
- Any plastics used in the enclosure shall have ultraviolet inhibitors
- A waterproof and dust tight aluminum enclosure

The sensor dimensions excluding connectors shall not exceed 9.9" x 7.9" (height x diameter). The weight of the sensor including the enclosure shall not exceed eight 8 lbs. The VIVTDS sensor manufacturer shall provide a lifetime "always in focus" guarantee on the iconic bell shaped fisheye camera.

Optional VIVTDS Sensors

Certain projects will have special requirements or needs, such as advanced or stopline detection. In these instances, an additional VIVTDS sensor with a field of view of either 30° - 50° for stopline detection or a field of view of 9° - 18° for advanced detection should be used. The sensor dimensions excluding connectors and mounting bracket shall not exceed 8" x 15" x 3.5" and the weight should not exceed eight (8) lbs. Other required features are the following:

- Color images outputted into digital format as MJPEG images
- Horizontal resolution of at least 2580 lines and vertical resolution of at least 1920 lines.
- A 5 – 50 mm varifocal lens set for the specific application
- A five (5) megapixel CMOS camera with an active-pixel sensor (APS)
- A thermostatically controlled heater residing inside the enclosure to reduce the effects of ice and condensation
- A sun shield to minimize lens exposure to the sun
- A waterproof and dust tight powdered coated aluminum housing

The sensor's mounting bracket should be easily mounted to a standard 1.5" vertical pole and allow for the installer to adjust the sensor's horizontal position with one hand and tighten the bracket without having to support the sensor simultaneously.

The VIVTDS shall also support thermal imaging sensors for use in specific situations.

2.2 Processor Hardware

The VIVTDS processor shall support 1 or 2 fisheye sensors, or if equipped with 1 fisheye sensor the VIVTDS processor should, at a minimum, be capable of simultaneously supporting up to four (4) additional VIVTDS sensors for special requirements such as advance detection or underpass detection.

The VIVTDS processor shall comply with NEMA standards, TS-1 Type 1, and 2; TS-2; 170/2070; and ITS. The VIVTDS processor shall provide the following inputs and outputs:

Type	Inputs	Outputs
TSI	24	24
TS2	16	64
170/2070	8	24
ITS	16	64

The VIVTDS processor will have at a minimum four (4) USB 3.0 ports for expansion flexibility and have a built-in modem.

The VIVTDS processor shall be no more than 1U high with dimensions, excluding connectors, not to exceed 8.5" x 11.5" x 1.75" and weigh no more than 5.2 lbs. The unit shall have flexible mounting options including the ability to lie flat on a cabinet shelf, be mounted in a standard traffic cabinet rack with optional mounting ears, or be installed vertically with optional base. The outer enclosure shall be a powdered coated aluminum.

2.3 Electrical

The VIVTDS sensor(s) will use five (5) watts nominally and a maximum of fifty (50) watts with active heaters. The sensor(s) will be Power Over Ethernet (POE) and will only require a single burial grade, gel-filled RJ-45 CAT5e cable for both power and data.

Each VIVTDS sensor shall have its own surge protector junction unit and EPM surge protection unit in the traffic cabinet.

The VIVTDS processor shall operate within a range of 89 to 240 VAC, 60Hz single phase. Power to the VIVTDS processor is from the transient protected side of the

AC power distribution system in the traffic control cabinet where the VIVTDS processor is installed.

2.4 Cabling and Surge Protection Units

RJ-45 CAT5e cabling shall be a high performance direct burial data cable capable of 350MHz bandwidth for data applications. The cabling shall consist of a 24 AWG solid bare copper wire with 8 conductors in a gel filled core. The jacket shall consist of linear low-density polyethylene (LLDPE) that is UV resistant and have a cable diameter of no more than 6.5 mm. The cable shall have easily identifiable striped pairs as follows:

- Orange-White, Orange
- Green-White, Blue
- Blue-White, Green
- Brown-White, Brown

The cable shall be rated at a minimum for 50 V.

The surge protector junction unit for the VIVTDS sensor shall be no more than three (3) ft. from the VIVTDS sensor and shall provide protection against a transient pulse with a pulse shape of 8/20μs and a max current of 75A. The unit shall weigh no more than two (2) lbs.

The EPM, surge protection unit for the VIVTDS sensor, shall have at most a max impulse discharge current of 40 KA and an impedance of at least 100 ohms. The unit should have at least Line-Line and Line-Ground protection options, and the POE current should not exceed 1.8A.

2.5 Environmental

The VIVTDS sensors and processor will need to meet or exceed the NEMA standard of -29° F up to 149° F and meet or exceed a 5-30Hz vibration test as well as a 10G shock test.

The VIVTDS processor shall have at least 0% to 95%, non-condensing. The VIVTDS sensor(s) shall have at least 0% to 100% relative humidity.

3.0 System Software

Each VIVTDS system will include client software for up to 8 sensors for detecting and counting the vehicle's entrance and exit of the intersection. The VIVTDS system will also include software for communicating with the traffic controllers and other electronic devices.

The client software shall be included with each VIVTDS system and should be downloaded and run on any personal computer with a Windows 7 or newer

operating system. The client software at minimum should include management tools to perform the following:

- View, diagnose, configure, and reset individual sensor outputs
- View the status of inputs to enable setup and troubleshooting in the field
- Configure and view calls and phases
- The ability to create and define, as well as edit, vehicle zones, road masks, object masks, and pedestrian zones by drawing arbitrary shaped polygons using a computer
- View the site's configuration history
- Publish and revert back to previous configuration
- View video and images from the sensor within the software's interface
- Optionally access and use an API that is documented online and that uses HTTP
- Provide System Alerts for diagnostic and administrative events

The VIVTDS system will need to have optional data packages for purchase that provide count data, access to real time data, and system and user defined alerts. The count data shall be accessible directly from the processor or from a remote computer with a network connection. The count data will include at least the following type of reports:

- Turning movement counts, including U-turns
- Length based vehicle classifications
- Incidents reporting
- Volume
- 7 Day Volume
- Occupancy on Green
- Occupancy on Red
- Percentage of Arrivals on Green
- Percentage of Arrivals on Red

All reports should be exportable and downloadable in any of the following formats:

- PDF
- Excel
- Rich Text Format
- TIFF Image
- Web Archive

The alerts/notifications package for purchase should include at a minimum the following types of alerts:

- Wrong way vehicle detection
- Loss of visibility event

- Volume Exceeded

4.0 Vehicle Detection.

VIVTDS system shall provide real time vehicle detection (within 500 milliseconds (ms) of vehicle arrival). The system should detect the presence of vehicles for up to 64 detection zones per VIVTDS senor. The detection zones shall be sensitive to the direction a vehicle travels and the direction to be detected by each detection zone shall be programmable by a client software user.

4.1 Detection Zone Placement

The VIVTDS system should provide a flexible detection zone placement anywhere within one hundred (100) meters of the VIVTDS sensors. Preferred presence detector configurations shall be arbitrarily shaped polygons, including simple boxes, drawn across lanes of traffic or placed in line with lanes of traffic. A single VIVTDS sensor should replace one or more conventional detector loops.

4.2 Detection Zone Programming

Placement of detection zones will be done by means of a graphical interface using the MJPEG image of the roadway. The client software displays images of the detection zones overlaid on the video image of traffic while the VIVTDS processor is running. The detection zones, when operating, shall display outlined or filled, with a visible change indicating activation.

A laptop should be used to draw detection zones. Alternatively, a mouse, keyboard, and monitor may be connected directly to the processor to configure a site. The detection zones should be capable of being sized and shaped to provide optimal road coverage and detection. It should be possible to upload detector configurations to the VIVTDS processor and to retrieve the sensor configuration that is currently running in the VIVTDS processor through the client software. The configuration should also be retrievable from the VIVTDS system's cloud if properly backed up.

The user will be able to edit previously defined detector configurations in order to fine tune the detection zone placement size and shape. Once a detection configuration has been created, the system will provide a graphic display of the new configuration on its monitor. While this fine-tuning is being done, the sensor will be required to continue to operate from the sensor configuration, currently in place. A user should be able to use a system command to revert to previous configurations stored in the client software or on the VIVTDS system's cloud if properly backed up.

When a vehicle occupies a detection zone, the detection zone on the live video will indicate the presence of a vehicle, thereby verifying proper operation of the system. The presence of the vehicle as well as the signal states will be indicated via colored LED lights on the front panel of VIVTDS processor. With the absence of images, the VIVTDS processor's display shall indicate proper operation of the detection zones.

Detection zones shall be sensitive to the direction of vehicle travel. The direction will be capable of being detected by each detection zone and will be programmable by the user. The vehicle detection zones will not activate if a vehicle is traveling in any direction other than the one specified for detection in the zone. Cross-street and wrong way traffic shall not cause a false detection.

Detection zones will be capable of an optional user defined call to detect a side entrance (90° or less angled entrance).

4.3 Design Field of View

The VIVTDS system will be able to reliably detect vehicle presence in the design field of view. The design field of view shall be defined as the sensor view when the image sensor is mounted thirty (30) feet (9 meters) or higher above the roadway, when the sensor is in front of all stop lines, no more than seventy-five (75) feet from the intersection center, and the beginning of the detection area is not greater than one hundred and fifty (150) feet from the image sensor. Within this design field of view, the VIVTDS processor should be capable of setting up a single detection zone for point detection (equivalent to the operation of a 6' x 6' inductive loop). A VIVTDS sensor, placed at the proper mounting height, is able to monitor up to and including five (5) traffic lanes per approach simultaneously. A single fisheye lens VIVTDS sensor, placed at the proper mounting height, should be able to monitor detection zones in an intersection of at a minimum of five (5) approaches.

4.4 Detection Performance

Detection accuracy of the VIVTDS system shall be comparable to properly operating inductive loops. Detection accuracy should include the presence of any vehicle in the defined detection zone regardless of the lane the vehicle is occupying. Occlusion produced by vehicles in the same or adjacent lanes shall not be considered a failure of the VIVTDS processor, but a limitation of the VIVTDS sensor placement.

Detection shall be 98% accurate in good weather conditions with slight degradation possible under adverse weather or road conditions (i.e. rain, snow, fog). Detection will be expected for the entire design field of view on a lane by lane or by approach basis.

Equipment failure, either sensor or VIVTDS processor, shall result in constant vehicle detection on affected detection zones. The VIVTDS system will be required to have the ability to place a constant call to a specific zone, if said zone loses visibility, while simultaneously making calls in the traditional manner in the remaining zones.

5.0 System Software Operation.

The VIVTDS must transmit and receive all information needed for sensor setup, to monitor vehicle detection, to view vehicle traffic flow, and to interpret stored data. The remote communications link between the VIVTDS processor shall not interfere with the on-street detection of the VIVTDS processor.

The user should be able to view the detection area in a horizon to horizon fisheye view or in a configurable four (4) pane flattened view on the same screen. Each view should be able to be customized by the user, with the ability to digitally pan-tilt-zoom.

6.0 Installation and Training

The supplier of the VIVTDS system shall supervise the installation and testing of the sensors, processor, and other sensor components.

System installers will be required to be certified by the system manufacturer. A manufacturer's instructional guide will not be considered an adequate substitute for practical, classroom training and formal certification by an approved agency.

However, the manufacturer shall provide an online user guide and an electronic copy of the user guide within the client software and on board the VIVTDS processor for reference.

Formal levels of factory authorized training are required for installers, contractors and system operators. All training must be certified by the VIVTDS system manufacturer.

7.0 Warranty, Maintenance and Support

The video detection system must be warranted to be free of defects in material and workmanship for a period of 3 years from date of shipment from the manufacturer's facility. During the warranty period, the system manufacturer will be required to repair with new or refurbished materials, or replace at no charge, any product containing a warranty defect provided the product is returned FOB to the supplier's factory or authorized repair site. Return product, product for repair, or product to be replaced under warranty by the supplier shall have prepaid transportation. This warranty does not apply to any products damaged by accident, improperly operated, abused, serviced by unauthorized personnel or unauthorized modification.

Ongoing software support by the manufacturer includes updates of the VIVTDS processor's engine and updates to the client software shall be provided free of charge for the life of the system.

END OF DOCUMENT

T-17-007-201 - 2017 Resurfacing Contract

ITEM	DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE	TOTAL
75	Cold Planing Bituminous Pavement (1½-inches Typical Depth)	53525	SY	$	$
717	Mobilization	1	LS	$	$
12.a	Asphalt Surfacing ($^{3}/_{8}$-inch Nominal Aggregate Size WMA JMF In-Place) ("E"-mix) including tack coat	17750	TON	$	$
12.b	$^{3}/_{4}$-inch Average Thickness Thin Lift ($^{3}/_{8}$-inch Nominal Aggregate Size WMA JMF (Complete-In-Place) (THIN LIFT) (INCLUDES TACK COAT)	650	TON	$	$
12.c	4- to 8-inch Base Repairs (1½-inch Nominal Aggregate Size WMA JMF (Complete-In-Place) (Binder-mix) including tack coat as required	3100	TON	$	$
12.d	Asphalt Binder Course Mix Design (1½-inch Nominal Aggregate Size WMA JMF Complete-In-Place) (3/4" to 3 1/2" depth) including tack coat as required	5250	TON	$	$
12.e	Asphalt Surfacing ($^{3}/_{8}$-inch Nominal Aggregate Size WMA JMF In-Place) ("D"-mix) including tack coat	150	TON	$	$
16.d.1	Installation of ADA Compliant Curb Ramp (Complete-in-Place including demolition and removal of existing ramp, layout, construction, installation of Standard Truncated Dome Composite Inlay.)	20	EA	$	$
33.04.a	Adjustment of Existing Sanitary Sewer Manholes	175	EA	$	$
33.04.b	Adjustment of Existing Catch Basins	50	EA	$	$
33.04.c	Lowering of Existing Manholes prior to milling	175	EA	$	$
33.04.d	Excess manhole adjustment	50	VI	$	$
33.04.e	Procurement, Transportation, and Installation of Manholes, Manhole Lids, and Frames - (Complete-In-Place) (Mueller Model AJ633 or approved equal)	45	EA	$	$
RCP	Base Repairs (Aggregate Cement Base In-Place)	2100	TON	$	$
TDOT Section 405	Bituminous Seal Coat (Complete-in-Place / Prior to Thin Lift)	15000	SY	$	$
TDOT Section 712	Traffic Control	1	LS	$	$
TDOT Section 716	Temporary Striping	35	LM	$	$
TDOT Section 716-02.03	Pavement Marking (Continental Cross Walk-City Standard) Complete-in-Place	4500	LF	$	$
TDOT Section 716-02.04	Pavement Marking (Channelization Striping) Complete-in-Place	1500	SY	$	$
TDOT Section 716-02.05	Pavement Marking (Stop Line) Complete-in-Place	1400	LF	$	$

TDOT Section 716-02.06	Pavement Marking (Turn Line Arrow) Complete-in-Place	55	EA	$	$	
TDOT Section 716-03.02	Pavement Marking (Railroad Crossing) Complete-in-Place	8	EA	$	$	
TDOT Section 716-03.04	Pavement Marking (School Crossing) Complete-in-Place	8	EA	$	$	
TDOT Section 716-04.05	Pavement Marking (Straight Arrow) Complete-in-Place	60	EA	$	$	
TDOT Section 716-04.11	Pavement Marking (Bicycle Symbol) Complete-in-Place	32	EA	$	$	
TDOT Section 716-04.12	Plastic Pavement Marking (Yield Line)	36	SF	$	$	
TDOT Section 716-06.02	Preformed Plastic Pavement Marking (Green)	450	SF	$	$	
TDOT Section 716-06.03	Plastic Pavement Marking (6 INCH DOTTED LINE) (CATTRACKS)	75	LF	$	$	
TDOT Section 716-06.04	CYCLE GRIP MMA or approved equal	800	SF	$	$	
TDOT Section 716-06.05	PREFORMED PLASTIC PAVEMENT MARKING (BIKE SYMBOL w/GREEN CONTRAST)	10	EA	$	$	
TDOT Section 716-06.06	PREFORMED PLASTIC PAVEMENT MARKING (ARROW w/GREEN CONTRAST)	10	EA	$	$	
TDOT Section 716-06.07	PREFORMED PLASTIC PAVEMENT MARKING (SHARROW)	20	EA	$	$	
TDOT Section 716-06.08	PREFORMED PLASTIC PAVEMENT MARKING (BIKE SYMBOL w/CHEVRON)	45	EA	$	$	
TDOT Section 716-06.09	PREFORMED PLASTIC PAVEMENT MARKING (6 INCH DOTTED LINE)	100	SF	$	$	
TDOT Section 716-08.32	Hydroblast removal of pavement marking	3750	LF	$	$	
TDOT Section 716-13.01	Thermoplastic Pavement Marking (4-inch wide lines, 60 mill min.)	24	LM	$	$	
TDOT Section 716-13.02	Thermoplastic Pavement Marking (6-inch wide lines, 60 mil min.)	5	LM	$	$	
TDOT Section 730	Signal Loop Installation (Includes Wire, Saw Cutting, Installing, and Sealing, etc.) - Complete-In-Place	33	EA	$	$	
TDOT Section 730-13.21	System Detection (Wireless Magnetometer Sensors)	5	EA	$	$	
TDOT Section 730-13.23	System Detection (Repeaters)	1	EA	$	$	

Total Base Bid $

Alternate A

75.a	Cold Planing Bituminous Pavement (1½-inches Typical Depth)	34000	SY	$		$	
75.b	Cold Planing Bituminous Pavement (approx. 1½-2½ inches Typical Depth)	12000	SY	$		$	
717	Mobilization	1	LS	$		$	
12.a	Asphalt Surfacing ($^{3}/_{8}$-inch Nominal Aggregate Size WMA JMF In-Place) ("E"-mix) including tack coat	3000	TON	$		$	
12.d	Asphalt Binder Course Mix Design (1½-inch Nominal Aggregate Size WMA JMF Complete-In-Place) (3/4" to 3 1/2" depth) including tack coat as required	4500	TON	$		$	
15.a	Demolition and Removal of Existing Concrete/Asphalt Sidewalk (Complete-in-place).	5750	SF	$		$	
15.d	Demolition and Removal of Existing Curb and Gutter (Complete-in-place).	1100	LF	$			
16.d.1	Installation of ADA Compliant Curb Ramp (Complete-in-Place including demolition and removal of existing ramp, layout, construction, installation of Standard Truncated Dome Composite Inlay.)	10	EA	$		$	
16.a	Concrete Sidewalk, 4-inch thick (SD-202.01) - Includes Class "A" Concrete portion of Standard ADA Ramps, Excavation up to 6-inch Depth, Base stone, Expansion Joints, Caulk, etc. (Complete-in-Place).	6300	SF	$		$	
16.c	Concrete Driveway Apron and/or Sidewalk, 6-inch thick (SD-202.02)- Includes Class "A" Concrete, Excavation up to 8-inch Depth, Base Stone, Reinforcing Steel, etc. (Complete-in-Place).	1025	SF	$		$	
16.b	Rubblize And Seat Layer Existing Roadway (10" Thick)	31000	SY	$		$	
17.a	ConcreteCurb and Gutter (Type "A") SD-202.01,Including Drop Curb at Driveways,Excavation,Backfill,Stone Base,etc. (Complete-in-Place)	1100	LF	$		$	
17.b	City Standard Detached Curb (SD-201.01) - Includes excavation, backfill, stone, concrete, etc., (Complete-in-Place).	60	LF	$		$	
19.a	Tree And/Or Stump Removal	4	EA	$		$	
19.b	Bush And/Or Stump Removal	6	EA	$		$	
23.a	Saw Cut 3' From Face Of Curb Or Concrete Crosswalk Section Of Existing Roadway (To Full Depth) Along Existing Curb Line And Gutter Line Before Rubblizing Roadway	11750	LF	$		$	
23.b	Removal Of Existing Concrete Roadway Along Curb (Full Depth)	1200	CY	$		$	
31.a	15" RCP Pipe Class III (0.0.' to 6.0' Deep) Including Excavation Bedding,Backfill,etc. (Complete-In-Place)	125	LF	$		$	
33.04.a	Adjustment of Existing Sanitary Sewer Manholes	10	EA	$		$	
33.04.b	Adjustment of Existing Catch Basins	10	EA	$		$	

33.04.c	Lowering of Existing Manholes prior to milling	10	EA	$		$	
33.04.e	Procurement, Transportation, and Installation of Manholes, Manhole Lids, and Frames - (Complete-In-Place) (Mueller Model AJ633 or approved equal)	5	EA	$		$	
34.a	Convert Existing Storm Sewer Manhole to New Catch Basin with back, Including Excavation,Backfill,Base Stone,Connection To Existing And Proposed Sewer Pipes,Frame And Lid etc. (SD300.01)	3	EA	$		$	
34.b	Install New Curb Inlet (0.0' To 6.0' Deep) (SD609.01) (Complete-In-Place)	4	EA	$		$	
34.c	Install New Catch Basin(0.0' to 6.0' Deep) (SD608.02) Use Old 2'x2' Frame And Grate (Complete-In -Place)	1	EA	$		$	
34.d	Install New Flat Top Catch Basin(0.0' to 6.0' Deep) (SD608.02) Use Old 2'x2' Frame And Grate (Complete-In -Place)	1	EA	$		$	
34.e	Convert Existing Storm Inlet to Manhole, Including Excavation,Backfill,Base Stone,Connection To Existing And Proposed Sewer Pipes,Frame And Lid etc. (SD300.01)	3	EA	$		$	
35.a	Seeding and Mulch (Complete-in-Place)	340	SY	$		$	
36.a	Topsoil (3" Thick)	340	CY	$		$	
98.a	Erosion Control Inlet Protection - Silt Saver,Siltsack,Gutterbuddy,Or As Directed By City Stormwater Dept. (Complete-In-Place)	8	EA	$		$	
98.b	Erosion Control Silt Soxx Or Silt Fence (Complete-In-Place)	1300	LF	$		$	
RCP	Base Repairs (Aggregate Cement Base In-Place)	1000	TON	$		$	
TDOT Section 712	Traffic Control	1	LS	$		$	
TDOT Section 716	Temporary Striping	8	LM	$		$	
TDOT Section 725-	Traffic Cameras	6	EA	$			
TDOT Section 793-14	Core drill into manhole (typical 15" pipe, including non-shrink grout for pipe installation)	6	EA	$		$	
16111-E	Handhole Box - Includes Excavation, Backfill, Pick-up and Installation, Box provided by EPB, etc. (Complete-in-Place).	4	EA	$		$	

Foundation Testing Allowance $ 25,000.00

Total Alternate "A" Bid $ _____

TOTAL BASE BID PLUS ALTERNATE "A" Bid $ _____

Alternate B

75.a	Cold Planing Bituminous Pavement (1½-inches Typical Depth)	34000	SY	$		$	
75.b	Cold Planing Bituminous Pavement (approx. 1½-2½ inches Typical Depth)	12000	SY	$		$	
717	Mobilization	1	LS	$		$	
12.a	Asphalt Surfacing ($^{3}/_{8}$-inch Nominal Aggregate Size WMA JMF In-Place) ("E"-mix) including tack coat	3000	TON	$		$	
12.d	Asphalt Binder Course Mix Design (1½-inch Nominal Aggregate Size WMA JMF Complete-In-Place) (3/4" to 3 1/2" depth) including tack coat as required	4500	TON	$		$	
15.a	Demolition and Removal of Existing Concrete/Asphalt Sidewalk (Complete-in-place).	1200	SF	$		$	
15.d	Demolition and Removal of Existing Curb and Gutter (Complete-in-place).	300	LF	$			
16.c	Concrete Driveway Apron and/or Sidewalk, 6-inch thick (SD-202.02)- Includes Class "A" Concrete, Excavation up to 8-inch Depth, Base Stone, Reinforcing Steel, etc. (Complete-in-Place).	1200	SF	$		$	
16.d.1	Installation of ADA Compliant Curb Ramp (Complete-in-Place including demolition and removal of existing ramp, layout, construction, installation of Standard Truncated Dome Composite Inlay.)	10	EA	$		$	
17.a	ConcreteCurb and Gutter (Type "A") SD-202.01,Including Drop Curb at Driveways,Excavation,Backfill,Stone Base,etc. (Complete-in-Place)	275	LF	$		$	
31.a	15" RCP Pipe Class III (0.0.' to 6.0' Deep) Including Excavation Bedding,Backfill,etc. (Complete-In-Place)	80	LF	$		$	
33.04.a	Adjustment of Existing Sanitary Sewer Manholes	10	EA	$		$	
33.04.b	Adjustment of Existing Catch Basins	10	EA	$		$	
33.04.c	Lowering of Existing Manholes prior to milling	10	EA	$		$	
33.04.e	Procurement, Transportation, and Installation of Manholes, Manhole Lids, and Frames - (Complete-In-Place) (Mueller Model AJ633 or approved equal)	5	EA	$		$	
34.a	Convert Existing Storm Sewer Manhole to New Catch Basin with back, Including Excavation,Backfill,Base Stone,Connection To Existing And Proposed Sewer Pipes,Frame And Lid etc. (SD300.01)	1	EA	$		$	
34.b	Install New Curb Inlet (0.0' To 6.0' Deep) (SD609.01) (Complete-In-Place)	2	EA	$		$	
34.d	Install New Flat Top Catch Basin(0.0' to 6.0' Deep) 2'x2' Frame And Heel Proof Grate (Complete-In - Place)	1	EA	$		$	
34.e	Convert Existing Storm Inlet to Manhole, Including Excavation,Backfill,Base Stone,Connection To Existing And Proposed Sewer Pipes,Frame And Lid etc. (SD300.01)	2	EA	$		$	
35.a	Seeding and Mulch (Complete-in-Place)	190	SY	$		$	

36.a	Topsoil (3" Thick)	17	CY	$		$	
RCP	Base Repairs (Aggregate Cement Base In-Place)	1000	TON	$		$	
TDOT Section 712	Traffic Control	1	LS	$		$	
TDOT Section 716	Temporary Striping	8	LM	$		$	
TDOT Section 725-20.91	Traffic Cameras	6	EA	$			
TDOT Section 604-05.32	Diamond Grinding	3300	SY	$		$	
TDOT Section 502-03.13	Concrete Pavement Removal	3000	SY	$		$	
16.e.1	Roadway Concrete 10-inch thick (SD-504.01) - Includes installation of 10"thick Class "A" Concrete, 4" Stone Base, includes Sawcutting, Excavation, Expansion Joints, Labor and other Incidentals, etc. (Complete in place)	3000	SY				
TDOT Section 793-14	Core drill into manhole (typical 15" pipe, including non-shrink grout for pipe installation)	3	EA	$		$	
16111-E	Handhole Box - Includes Excavation, Backfill, Pick-up and Installation, Box provided by EPB, etc. (Complete-in-Place).	3	EA	$		$	

Total Alternate "B" Bid $ _____

TOTAL BASE BID PLUS ALTERNATE "B" Bid $ _____

SUMMARY OF WORK

PART 1 – GENERAL

1.1 Section Includes

A. Description of Work

B. Items regulating the execution of the Work

1.2 Description of the Work

A. The work covered by this Contract consists of all work necessary for the resurfacing of various roadways within the City of Chattanooga. See Appendix A for list of roadways.

B. The Chattanooga Department of Transportation (CDOT) reserves the right to substitute, add, delete, increase, decrease in any form or fashion as necessary the scope of work under the provisions of this Contract, including the projects noted above.

C. This project shall be assigned a unique project number by the Engineer. The Contractor shall execute this project in complete compliance with the requirements of this contract. All records of the Contractor shall conspicuously identify them to be associated with the unique project number assigned by the Engineer.

D. The work covered under this project shall consist of furnishing all materials, equipment and labor for the milling, where required, resurfacing of designated streets including but not limited to mobilization, parking sign placement, public notification, placement of traffic control devices per MUTCD, cleaning and conditioning of the roadways, repair of base failures as needed, the adjustment of sanitary manholes and other publicly owned structures as required, diamond grinding or rubblization of concrete slabs, saw cutting and installation of traffic signal loop wires where required and placement of temporary and permanent pavement markings as required.

E. The Engineer shall provide a set of standard City details, as needed, which shall be applicable to this project. The Contractor shall be called in for a Pre-Construction meeting at which time the Engineer shall issue notice to proceed. The Contractor shall have ten (10) days or an agreed to start date to start construction.

F. The work shall consist of two phases which may be constructed concurrently. Phase 1 is the resurfacing of the existing concrete roadway on ML King Blvd from Georgia Ave to Central Ave including removal of the existing asphalt overlay, leveling of uneven concrete slabs through the use of diamond grinding or rubblization as directed by the City's Transportation Engineer, removal and replacement of concrete slabs as directed by the City's Transportation Engineer, placement of asphalt binder and topping and pavement marking. **This work shall be completed NO LATER THAN MARCH 30, 2018.**

Phase 2 is the milling and resurfacing of various roads within the City limits of Chattanooga as shown in Appendix A. **This work shall be completed NO LATER THAN JUNE 30, 2018.**

Both phases may proceed concurrently.

1.3 Items regulating the Execution of the Work.

A. Attention to Work

For this project, the Contractor shall give his personal attention to and shall supervise the work to the end that it shall be prosecuted faithfully; and, when he is not personally present on the work, he shall at all times be represented by a competent superintendent or foreman who shall be present at the work and who shall receive and obey all instruction or orders given under this Contract, and who shall have full authority to execute the same, and to supply materials, tools and labor without delay, and who shall be the legal representative of the Contractor. The Contractor shall be liable for the faithful observance of any instructions delivered to him or to his authorized representatives.

B. Access to Work

The Contractor shall at all times provide proper facilities for access and inspection of the work by representatives of the Owner and of such official Governmental agencies as may be designated by the Owner as having jurisdictional rights to inspect the work.

C. No Parking Signs

The Contractor shall place "NO PARKING" signs 48 hours prior to beginning work at a project location. The Contractor shall notify the City's designated Inspector/ Project Manager when the signs have been placed and if vehicles have not been moved at such time as work is scheduled to begin. No additional cost shall be paid to the Contractor while the Owner is making arrangements to get the vehicle moved or towed.

D. Work on State Highway

Where the work on this project encroaches upon the right-of-way of any State or Interstate Highway right-of-way, the owner will execute a contract with proper authorities for the proposed work.

The Contractor shall notify the proper authorities prior to entering upon such right-of-way and shall be responsible for all damage and for satisfying the requirements of these authorities.

E. Work on Private Property

Where the work on this project encroaches upon private property, the Owner shall provide easements and/or right-of-entry in or onto said property. Work performed in

such easements is subject to the provisions of the easement agreement on file with the City of Chattanooga Engineering Department.

The Contractor shall be responsible for obtaining any additional agreements which may be deemed necessary for the storage of equipment or materials outside of public easements or rights of ways for this project. The Contractor shall obtain a written agreement between the Contractor and Land Owner and forward it to the Engineer prior to use of said property.

The Contractor shall be responsible for the preservation of and shall use every precaution to prevent damage to all trees, shrubbery, fences, culverts, mailboxes, bridges, pavements, driveways, sidewalks, houses or building and all water, sewer, gas, telephone and electric lines thereto and all other private and public property along or adjacent to the work.

Any damage that occurs will be restored to a like condition as existed prior to construction, in the Contract Documents, unless otherwise indicated or specified.

Forty-eight (48) hours prior to construction on any easement or streets the Contractor shall notify in writing the affected property owners in the area. This notification shall include the Contractor's name and the name and phone number of the contact person.

F. Monthly Job Site Meetings

Once a month, on a date mutually agreed upon by the Contractor and the Engineer, a job site meeting shall be held for review of the Project, including, but not limited to: The construction schedule, traffic control, pending submittals, and any other issues that may arise. This meeting shall be used to review the contractor's monthly applications for payment.

G. Contract Working Hours

All work shall be performed during regular working hours and the Contractor will not permit overtime work or the performance of work on Sunday or any legal holiday without the Owner's written consent given after prior 24 hour written notice to the Engineer. Regular working hours are Monday through Friday from 7:00 A.M. to 8:00 P.M. and Saturday with prior 24 hour written notice. The contractor may request alternate work periods to enhance the quality of the project. The actual costs of the Owner's and Engineer's inspection of the work performed outside of regular working hours will be billed to the Contractor and deducted from the Contractor's application for payment as they occur.

END OF DOCUMENT

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CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

ALTERNATE 'A'

CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

HAMILTON COUNTY
EAST MLK BLVD. FROM GEORGIA AVE.
TO CENTRAL AVE. RUBBLIZATION

E. MLK BLVD.
GEORGIA AVE. TO CENTRAL AVE.

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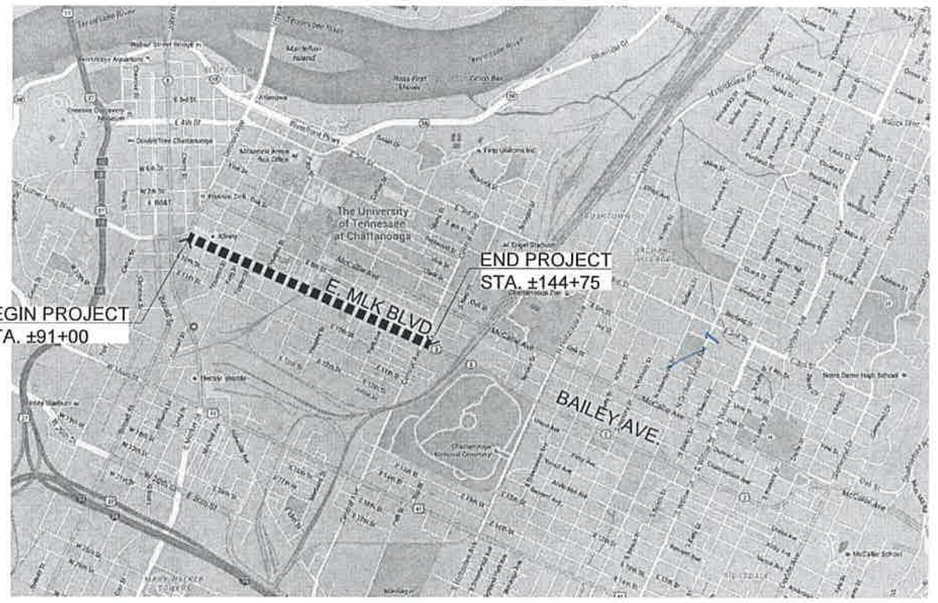
INDEX	SHEET
TITLE SHEET	1
GENERAL / SPECIAL NOTES	2-3
RUBBLIZATION DETAILS	4
E. MLK BLVD RUBBLIZATION PLAN	5-14
E. MLK BLVD INTERSECTION UPGRADE DETAILS	15-20
E. MLK BLVD. TEMPORARY STRIPING PLAN	21-30
TRAFFIC CONTROL	31

PROJECT LOCATION

CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

HAMILTON COUNTY
EAST MLK BLVD. FROM GEORGIA AVE.
TO CENTRAL AVE. RUBBLIZATION



PROJECT LENGTH: 1± MILES

CITY OF CHATTANOOGA SEAL
CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE CDOT ENGINEER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

MAYOR
ANDY BERKE

CITY COUNCIL
DISTRICT 1 - CHIP HENDERSON
DISTRICT 2 - JERRY MITCHELL, CHAIRPERSON
DISTRICT 3 - KEN SMITH, VICE-CHAIRPERSON
DISTRICT 4 - DARRIN LEDFORD
DISTRICT 5 - RUSSELL GILBERT
DISTRICT 6 - CAROL B. BERZ
DISTRICT 7 - ERSKINE OGLESBY JR
DISTRICT 8 - ANTHONY BYRD
DISTRICT 9 - DEMETRUS COONROD

NO EXCLUSIONS
NO EQUATIONS

APPROVED: _____
CITY TRANSPORTATION ENGINEER

DATE: Sept. 29, 2017

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
TITLE SHEET

SHEET NUMBER
1

LOCALLY LET - MANAGED PROJECT

TENN.	YEAR	SHEET NO.
	2017	4
FED. AID PROJ. NO.	CM-9202(121)	
CHATTANOOGA PROJ. NO.	T14-043	
STATE PROJ. NO. (SPN):	33LPLM-F3-151	

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

GENERAL NOTES

GRADING

1. Any area that is disturbed outside limits of construction during the life of this project shall be repaired by the contractor at his expense.

UTILITIES

1. The locations of utilities shown within these plans are approximate exact locations shall be determined in the field by contacting the utility companies involved. Notification by calling the TENNESSEE ONE CALL SYSTEM, INC. AT 1-800-351-1111 as required by TCA 65-31-106 will be required.
2. Unless otherwise noted, all utility adjustments will be performed by the utility or its representative. The contractor and utility owners will be required to cooperate with each other in order to expedite the work required by this contract. On contracts where construction stakes, lines, and grades are contract items, the contractor will be required to provide Right-Of-Way or slope stakes, ditch or stream bed grades, or other essential survey staking to prevent conflicts with the highway construction. Frequently, this will be required as the first item of work and at any location on the project directed by the engineer.
3. The contractor will provide all necessary protective measures to safeguard existing utilities from damage during construction of this project. In the event that special equipment is required to work over and around the utilities, the contractor will be required to furnish such equipment. The cost of protecting utilities from damage and furnishing special equipment will be included in the price bid for other items of construction.
4. Prior to submitting his bid, the contractor will be solely responsible for contacting owners of all affected utilities in order to determine the extent to which utility relocations and/or adjustments will have upon the schedule of work for the project. While some work may be required around utility facilities that will remain in place, other utility facilities may need to be adjusted concurrently with the contractor's operations. Advance clear cutting may be required by the engineer at any location where clearing is called for in the specifications and clear cutting is necessary for a utility relocation. Any additional cost will be included in the unit price bid for the clearing item specified in the plans.
5. The contractor shall notify each individual utility owner of his plan of operation in the area of the utilities. Prior to commencing work, the contractor shall contact the utility owners and request them to properly locate their respective utility on the ground. This notification shall be given at least three (3) business days prior to commencement of operations around the utility in accordance with TCA 65-31-106.

MISCELLANEOUS

1. All detour, access, service and frontage roads shall be constructed with a minimum of one (1) course of base material before traffic is interrupted on existing roads.
2. The contractor shall be required to remove and reset mailboxes where and as directed by the engineer.
3. Nothing in the general notes or special provisions shall relieve the contractor from his responsibilities toward the safety and convenience of the general public and the residents along the proposed construction area.

ROAD CLOSURE

1. No less than seven (7) days prior to the closure of the road, the contractor shall notify the following individuals or agencies completely describing the affected roads and the approximate duration of the construction: These parties include, but are not limited to: (1) Local law enforcement office, (2) Local fire department, (3) Ambulance service, (4) Local school superintendent, (5) United states postal service, and (6) Local road superintendent.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKINGS ON INTERMEDIATE LAYERS

1. Temporary pavement line markings on intermediate layers of pavement shall be reflective tape or reflectorized paint installed to permanent standards at the end of each days work. Short, unmarked sections shall not be allowed. These markings will be measured and paid for under Item NO. 716-05.01, painted pavement marking (4" line), l.m.
2. Temporary pavement line markings on intermediate layers of pavement shall be reflective tape or reflectorized paint installed to permanent standards at the end of each days work. Short, unmarked sections shall not be allowed. These markings will be measured and paid for under Item NO. 716-05.20, painted pavement marking (6" line), l.m.
3. Temporary pavement line markings on intermediate layers of pavement shall be reflective tape or reflectorized paint installed to permanent standards at the end of each days work. Short, unmarked sections shall not be allowed. These markings will be measured and paid for under Item NO. 716-05.02, painted pavement marking (8" barrier line), l.f.
3. Wide (8 inch) temporary pavement marking line will be measured and paid for under Item NO. 716-05.02 painted pavement marking (8" barrier line), l. f.

FINAL PAVEMENT MARKING

1. Permanent pavement line markings shall be 4" spray thermoplastic (60 mil) installed to permanent standards at the end of each day's work. Short unmarked sections shall not be allowed. Pavement markings will be measured and paid for under Item NO. 716-13.01, Spray thermo pvmt mrkng (60 mil) (4in line), l.m. The contractor shall have the option of using reflectorized paint installed to permanent standards at the end of each day's work and then installing the permanent markings after the paving operation is completed. The temporary markings for the final surface will not be measured and paid for directly, but the costs are to be included in the price bid for the permanent markings.
2. Permanent pavement line markings shall be 6" spray thermoplastic (60 mil) installed to permanent standards at the end of each day's work. Short unmarked sections shall not be allowed. Pavement markings will be measured and paid for under Item NO. 716-13.02, Spray thermo pvmt mrkng (60 mil) (6in line), l.m. The contractor shall have the option of using reflectorized paint installed to permanent standards at the end of each day's work and then installing the permanent markings after the paving operation is completed. The temporary markings for the final surface will not be measured and paid for directly, but the costs are to be included in the price bid for the permanent markings.
3. Permanent pavement line markings shall be 8" spray thermoplastic (60 mil) installed to permanent standards at the end of each day's work. Short unmarked sections shall not be allowed. Pavement markings will be measured and paid for under Item NO. 716-13.03, Spray thermo pvmt mrkng (60 mil) (8in barrier line), l.f. The contractor shall have the option of using reflectorized paint installed to permanent standards at the end of each day's work and then installing the permanent markings after the paving operation is completed. The temporary markings for the final surface will not be measured and paid for directly, but the costs are to be included in the price bid for the permanent markings.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

1. The pavement marking on the lane shift for centerline & lane lines will be installed and maintained to the same standards as for permanent markings on the main roadway. These markings shall be in place prior to allowing traffic onto the pavement. These pavement markings will be measured and paid for under Item NO.716-05.20, l.m.
2. Before opening the lane shift to traffic, the transitional markings on the existing roadway must be in place. These markings will be measured and paid for under Item NO. 712-09.01, removable pavement marking line, L.F. all existing markings in the area of these transitional markings shall be obliterated and all existing raised pavement markers shall be removed to eliminate conflicting markings. Removal of the existing conflicting markings and raised pavement markers will not be measured and paid for directly, but the cost will be included in Item NO. 712-01, traffic control, lump sum.
3. Before opening the lane shift to traffic, the transitional markings on the existing roadway must be in place. All existing markings in the area of these transitional markings shall be obliterated and all existing raised pavement markers shall be removed to eliminate conflicting markings. Removal of the existing conflicting markings and raised pavement markers will not be measured and paid for directly, but the cost will be included in Item NO. 712-01, traffic control, lump sum.

TRAFFIC CONTROL DIRECTIONAL SIGNING

1. All existing "EMERGENCY REFERENCE MARKERS" and "HOSPITAL SIGNS" shall be maintained within full view of the motoring public throughout all phases of construction. All work in moving and temporary supports shall be paid for under Item NO.712.01.
2. When "LOGO" signs are on access controlled and interstate reconstruction and new construction projects, the contractor shall be responsible for keeping these signs in full view to the motoring public during all phases of construction. The contractor shall be held responsible to the department for the reimbursement of the sign face if it is damaged. All work in moving these "LOGO" signs and the temporary supports are to be paid for under Item NO.712.01, as directed by the engineer. The supports for the final location of these signs will be paid for under other items of construction.
3. When existing "TOURIST ORIENTED DIRECTIONAL SIGNS" (TODS) are on non-access controlled construction projects, the contractor shall be responsible for keeping these signs in full view to the motoring public during all phases of construction. All work in moving these "TODS" and temporary supports are to be paid for under Item NO.712.01, as directed by the engineer. New supports and sign face for final location will be paid for under other items of construction.

SIGNALIZATION

1. Equipment and installation of traffic signals shall comply with TDOT standard specifications, Section 730.
2. Equipment and installation shall comply with the TDOT "SPECIAL PROVISIONS REGARDING SECTION 730C-TRAFFIC SIGNALS."
3. Salvageable equipment shall become the property of the (City or County) and shall be stockpiled at a location designated by the Engineer for pickup by the (City or County).
4. If resurfacing is included in the project, signal detection loops shall be installed before the final surface is applied.
5. Any signal heads, when visible to drivers but not operational, shall be completely covered.
6. An advance flash operation period is required to make motorists aware of the presence of new signal heads. New signal heads shall be put in flash operation for minimum of seven (7) calendar days up to fourteen (14) calendar days prior to activation of normal traffic signal operation. Other flash opertation time periods may be considered upon written approval from the REGIONAL TRAFFIC ENGINEER.
7. The contractor shall contact City of Chattanooga Department of Transportation Engineer a minimum of thirty (30) days prior to activation of the signal to obtain the initial signal timings.
8. The project engineer shall notify the local governmental agency responsible for traffic control maintenance at least one day in advance of the cold planing activity at signalized intersections where detector loops are on the pavement. The maintaining agency will then be responsible for disconnecting the loop detectors and making any necessary timing adjustments in the signal controller prior to the construction.
9. The project engineer shall be responsible for supplying the contractor with as built signal plans at the pre-construction conference. These plans will provide the contractor with the desired location for detector loop replacement.
10. Loops shall be installed in the leveling course if a leveling course is provided.
11. Loop replacement shall be in accordance with Section 730 of the STANDARD SPECIFICATIONS.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

1. Advanced warning signs shall not be displayed more than forty-eight (48) hours before physical construction begins. Signs may be erected up to one week before needed, if the sign face is fully covered.
2. If the contractor moves off the project, he shall cover or remove all unneeded signs as directed by the Engineer. Costs of removal, covering, and reinstalling signs shall not be measured and paid for separately, but all costs shall be included in the original unit price bid for Item NO 712-06, signs (construction) per square foot.
3. A long term but sporadic use warning sign, such as a flagger sign, may remain in place when not required provided the sign face is fully covered.
4. Traffic control devices shall not be displayed or erected unless related conditions are present necessitating warning.
5. Use of barricades, portable barrier rails, vertical panels, and drums shall be limited to the immediate areas of construction where a hazard is present. These devices shall not be stored along the roadway within thirty (30) feet of the edge of the traveled way before or after use unless protected by guardrail, bridge rail, and/or barriers installed for other purposes for roadways with current ADT'S less than 1500 and design speed of less than 60 MPH. This distance shall increase to forty-five (45) feet for roadways with current ADT'S of 1500 or greater and design speed of 60 MPH or greater or on the outside of a horizontal curve. These devices shall be removed from the construction work zone when the Engineer determines they are no longer needed. Where there is insufficient RIGHT-OF-WAY to provide for this required setback, The contractor shall determine the alternate locations and request the Engineer's approval to use them.
6. The contractor shall not be permitted to park any vehicles or construction equipment during periods of inactivity, within thirty (30) feet of the edge of pavement when the lane is open to traffic unless protected by guardrail, bridge rail, and/or barriers installed for other purposes for roadways with current ADT'S less than 1500 and design speed of less than 60 MPH. This distance shall be increased to forty-five (45) feet for roadways with current ADT'S of 1500 or greater and design speed of 60 MPH or greater or on the outside of a horizontal curve. Privately owned vehicles shall not be allowed to park within thirty (30) feet of an open traffic lane at any time unless protected as described above for roadways with current ADT'S less than 1500 and design speed of less than 60 MPH. This distance shall be increased to forty-five (45) feet for roadways with current ADT'S of 1500 or greater and design speed of 60 MPH or greater or on the outside of a horizontal curve. Where there is insufficient RIGHT-OF-WAY to provide for this required setback, the contractor shall determine the alternate locations and request the Engineer's approval to use them.
7. All detour and construction signing shall be in strict accordance with the manual on uniform traffic control devices.
8. All detours shall be paved, striped, signed and the vertical panels are to be in place before it is opened to traffic.

NATURAL RESOURCES

1. Soil materials must be prevented from entering Waters of the STATE/U.S. EPSC measures to protect natural resources and water quality shall be maintained throughout the construction period. Appropriate EPSC measures must be installed along the base of all fills and cuts, on the downhill side of stockpiled soil, and along natural resources in cleared areas to prevent sediment migration into streams, wetlands or other natural features in accordance with TDOT standards. EPSC measures shall be installed on the contour, entrenched and staked, and extend the width of the area to be cleared.
2. Instream EPSC devices require the tdot environmental division, permits section review and must be processed by the permits section to obtain water quality permits.
3. The contractor shall take appropriate steps prior to any construction and maintenance activities to ensure that environmental features (e.g., streams, wetlands, springs, etc.) are not impacted beyond permitted locations. If the contractor or TDOT inspector is unsure of the identity of an environmental feature, the inspector shall contact the TDOT region environmental tech group immediately.

INSPECTION, MAINTENANCE & REPAIR

1. The TDOT construction supervisor (or their designee) and the contractor's responsible party are responsible for inspections. Maintenance and repair activities are the responsibility of the contractor. THE TDOT construction supervisor or their designee shall complete the EPSC inspection reports and distribute copies per the contract.
2. TDOT consultants and contractor staff responsible for the inspection, implementation, maintenance, and/or repair of EPSC measures shall successfully complete the TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" course and any refresher courses as required to maintain certification. TDOT staff and supervisors responsible for the inspection, implementation, maintenance, and/or repair of EPSC measures shall successfully complete the TDOT "FUNDAMENTALS OF EROSION AND SEDIMENT CONTROL" class and any refresher courses as required to maintain certification.
3. EPSC controls shall be inspected according to permit requirements to verify measures have been installed and maintained in accordance with TDOT standard drawings, specifications, and good engineering practices. EPSC inspections shall be documented on the TDOT EPSC inspection report.
4. Discharge points shall be inspected to ascertain whether EPSC measures are effective in preventing erosion and controlling sediment including significant impacts to surrounding natural resources and adjacent property owners. Where discharge locations are inaccessible, nearby down gradient locations shall be inspected. Locations where vehicles enter and exit the site shall be inspected for evidence of offsite roadway sediment tracking.
5. Upon conclusion of the inspections, EPSC measures found to be ineffective shall be repaired, replaced, or modified before the next rain event, if possible, but in no case more than 24 hours after the inspection or when the condition is identified. If the repair, replacement or modification is not practical within the 24 hour timeframe, written documentation shall be provided in the field diary and epsc inspection report. An estimated repair, replacement or modification schedule shall be documented within 24 hours after identification.
6. Inspection, repair, and maintenance of EPSC measures shall be performed on a regular basis. sediment shall be removed from sediment control structures when the design capacity has been reduced by fifty percent (50%). During sediment removal, the contractor shall take steps to ensure that structural components of EPSC measures are not damaged and thus made ineffective. if damage does occur, the contractor shall repair the EPSC measures at the contractor's own expense.
7. The EPSC plan shall be updated whenever EPSC inspections indicate, or where state or federal officials determine epsc measures are proving ineffective in eliminating or significantly minimizing pollutant sources or are otherwise not achieving the general objectives of controlling pollutants in storm water discharges associated with the construction activity.
8. Sediment removed from sediment control structures shall be placed and treated in a manner so that the sediment is contained within the project limits and does not migrate onto adjacent properties and into waters of the State/U.S. cost for this treatment shall be included in price bid for Item NO. 209-05 sediment removal, c.y.

STRIPING

PEDESTRIAN CROSSWALKS TO ALIGN WITH EXISTING RAMPS AT ALL INTERSECTIONS

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
GENERAL / SPECIAL NOTES

SHEET NUMBER
2

GENERAL NOTES

EROSION PREVENTION

1. Construction shall be sequenced and staged to minimize the exposure time of graded or denuded soil areas, preserve topsoil, and minimize soil compaction.
2. No work shall be started until the contractor's plan for the staging of operations, including the plan for staging of temporary and permanent EPSC measures, has been accepted by the TDOT responsible party. The contractor's EPSC plan shall incorporate and supplement, as acceptable, the basic EPSC devices on the EPSC plan.
3. Temporary stabilization shall be initiated within 14 calendar days when construction activities on a portion of the site are temporarily ceased and earth disturbing activities will not resume until after 14 calendar days. Permanent stabilization measures in disturbed areas shall be initiated within 14 calendar days after final grading of any phase of construction.
4. Permanent stabilization will replace temporary measures as soon as practicable. Priority shall be given to finishing operations and permanent EPSC measures over temporary EPSC measures on all projects.
5. Temporary or permanent stabilization must be free of fines (silt and clay sized particles). Unpacked gravel containing fines or crusher-run will not be considered sufficient stabilization.
6. Delaying the planting of cover vegetation until winter months or dry months should be avoided.

PERMITS, PLANS & RECORDS

1. The contractor shall be solely responsible for and obtain any necessary environmental permits or approvals, including but not limited to archaeology, ecology, historical, hazardous materials, air and noise, TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, from federal, state and/or local agencies regarding any material and staging areas and the operation of any project-dedicated asphalt and/or concrete plants to be used. Any such permits shall be supplied to the TDOT project responsible party prior to the use of the permitted area(s).
2. Any disagreement between the construction plans, the project as constructed, and the permit(s) issued for the project, shall be brought to the attention of the TDOT project responsible party. The environmental division, design division, and headquarters construction office shall be contacted in these instances and decide which has precedence and whether permit or plans revisions are needed. in general, permit conditions will prevail.
3. If a change in project scope occurs during construction, including value engineering, the TDOT permit section shall be contacted to determine whether permit revisions are needed. The roadway design division shall be contacted to determine if any plan revisions are needed.
4. The contractor shall review all existing permits to ensure that work at permitted sites does not exceed expiration date. If work is going to be continued after expiration dates, the contractor shall contact the TDOT project responsible party to commence permit renewal process.
5. All water quality permits shall be posted near the main entrance of the construction site accessible to the public. The name, company name, email address, telephone number and address of the project site owner, operator, or a local contact person with a brief description of the project shall also be posted. If posting this information near a main entrance is infeasible, the information shall be placed in a publicly accessible location near where the construction is actively underway and moved as necessary. This location shall be posted at the construction site. All postings shall be maintained in legible condition.
6. The EPSC plan is to serve as an initial guide for site personnel as the construction process develops. It must be amended, modified, and updated whenever a change in the design or construction of the project occurs. The stages depicted in the EPSC plans may not coincide with the actual phases of construction established by the contractor during construction, thus modifications will be required to ensure the EPSC plan is maintained to depict current site conditions. It should be maintained such that it will always reflect the measures that are installed during the various phases of construction. It is impractical to determine all the intermediate phases of construction that will occur, thus these documents will have to be updated throughout the life of the construction project.

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

1. The contractor shall establish and maintain a proactive method to prevent litter and construction wastes from entering waters of the State/U.S. These materials shall be removed from stormwater exposure prior to anticipated storm events or before being carried offsite by wind, or otherwise prevented from becoming a pollutant source for stormwater discharges. After use, materials used for epsc shall be removed from the site.
2. The contractor shall take appropriate steps to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the State/U.S. All equipment refueling, servicing, and staging areas shall comply with all local, state, and federal laws, rules, regulations, and ordinances, including those of the National Fire Protection Association. Appropriate containment measures for these areas shall be used.
3. If portable sanitary facilities are provided on construction sites, sanitary waste shall be collected from the portable units in a timely manner by a licensed waste management contractor or as required by any regulations. The contractor shall obtain any and all necessary permits to dispose of sanitary waste.
4. Only construction products needed shall be stored onsite by the contractor. The contractor shall store all materials under cover and in appropriate containers. Products must be stored in original containers and labeled. Material mixing shall be conducted in accordance with the manufacturer's recommendations. The contractor's responsible party shall inspect materials storage areas regularly to ensure proper use and disposal.
5. When possible, all products shall be used completely before properly disposing of the container offsite. The manufacturer's directions for disposal of materials and containers shall be followed.
6. All paint containers shall be tightly sealed and stored when not required for use. Excess paint shall be disposed of according to the manufacturer's instructions and applicable state and local regulations.
7. All hazardous waste materials shall be disposed of in a manner which is compliant with local or state regulations. Site personnel shall be instructed in these practices, and the individual designated as the contractor's responsible party shall be responsible for seeing that these practices are followed. The contractor shall obtain any and all necessary permits to dispose of hazardous material.
8. Waste material (earth, rock, asphalt, concrete, etc.) not required for the construction of the project will be disposed of by the contractor. Impacts to waters of the STATE/U.S. shall be avoided if possible. If unavoidable, the contractor will obtain any and all necessary permits including, but not limited to NPDES, Aquatic Resources Alteration permit(s), Corps of Engineers section 404 permits, and TVA section 26A permits to dispose of waste materials.

SUPPORT ACTIVITIES

1. Materials and staging areas shall not affect any waters of the state/u.s. unless these areas are specifically covered by environmental permits, obtained solely by the contractor. The contractor shall review all existing permits to ensure that work at permitted sites does not exceed expiration dates. If work is going to be continued after expiration dates, the contractor shall contact the TDOT project responsible party to commence permit renewal process.
2. If offsite borrow and waste areas become necessary during the life of the project, this support activity shall be addressed per the TDOT waste and borrow manual.
3. Materials and staging areas shall be located in non-wetland areas and above the 100-YEAR, Federal Emergency Management Agency floodplain.
4. It will be the responsibility of the contractor to supply EPSC plans for the material and staging areas to the environmental division compliance and field services office for review.

SPILL PREVENTION, MANAGEMENT & NOTIFICATION

1. All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage and spills.
2. For all hazardous materials stored onsite, the manufacturer's recommended methods for spill clean up shall be clearly posted. Site personnel shall be made aware of the procedures and the locations of the information and cleanup supplies.
3. Appropriate cleanup materials and equipment shall be maintained by the contractor in the materials storage area onsite and under cover. Spill response equipment shall be inspected and maintained by the contractor as necessary to replace any materials used in spill response activities.
4. All spills shall be cleaned immediately after discovery and the materials disposed of properly. the spill area shall be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
5. The contractor's responsible party shall be the spill prevention and cleanup coordinator. The contractor is responsible for ensuring that the site superintendent has had appropriate training for hazardous materials handling, spill management, and cleanup.
6. If an oil sheen is observed on surface water (E.G. settling ponds, detention ponds, swales), action shall be taken immediately to remove the material causing the sheen. The contractor shall use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
7. Fertilizers shall be applied only in the amounts specified. Once applied, fertilizers shall be worked into the soil to limit the exposure to stormwater.
8. If a spill occurs the contractor's responsible party shall be responsible for completing the spill reporting form and for reporting the spill to the TDOT project responsible party. All spills must be reported to the appropriate agency, and measures shall be taken immediately to prevent the pollution of waters of the State/U.S., including groundwater, should a spill occur.
9. Where a release containing a hazardous substance in an amount equal to or in excess of a reportable quantity established under either 40 CFR 117 or 40 CFR 302 occurs during a 24 hour period, see the latest TENNESSEE general permit NO. TNR100000 stormwater discharges from construction activities section 5.1 for reporting requirements.
10. Contractor's bulk fuel and petroleum products stored onsite or adjacent to the R.O.W. in above ground storage containers with a combined capacity of 1320 gallons or more shall have secondary containment. The contractor shall be responsible for preparing a Spill Prevention Control and Countermeasure (SPCC) plan for the bulk storage and be solely responsible for obtaining any necessary local, state, and federal permits. The SPCC plan and/or permits shall be kept onsite and a copy provided to the TDOT project responsible prior to storing 1320 gallons on site.

SPECIAL NOTES

PAVEMENT RESURFACING

1. Traffic will be allowed to temporarily drive on the milled surface of the roadway under the following conditions only:
   a. The milled surface is fine textured. The fine texture shall be obtained by a milling machine utilizing a milling head with teeth spacing 3/8" or less operating at less than 80 feet per minute.
   b. The surface shall be swept and cleaned of all loose materials.
   c. The difference in elevation between the milled surface and the adjacent lane shall not exceed 1 1/2 inches.
   d. The milled surface shall be paved within 72 hours if the current ADT is ≥ 70,000 or within 96 hours if the current ADT is < 70,000.
   e. Rain or inclement weather is not expected or forecasted within 48 hours after milling.
   f. All applicable signing is installed in accordance with the MUTCD signing shall include motorcycle warning signs (TN-64) placed in advance of any milled areas.
   g. If milled surface begins to deteriorate, paving to cover up deteriorating milled surfaces should occur as directed by the engineer during the next working day. If severe distress occurs, immediate response will be required.
   h. Only one lane in each direction shall have a milled surface at one time.

SIGNALIZATION

1. The design of traffic signal support poles, mast arms, strain poles, etc. shall be in conformance with the AASHTO standard specifications for structural supports for highway signs, luminaries and traffic signals, current edition. Overhead cantilevered traffic signal structures shall be designed for Fatigue Category 1.

FINAL PAVEMENT MARKING

1. The contractor may elect to use either thermoplastic or preformed plastic for specialty striping These items include stop lines, cross walks, arrows, words, channelization, and other specialty striping items except lines.
2. The following footnote shall be added to all Specialty Striping Items: "The contractor may elect to substitute Preformed Plastic for Thermoplastic. Preformed Plastic shall be paid for at the same unit price as bid for Thermoplastic."

STRIPING
Pedestrian crosswalks to align with existing ramps at all intersections.

UTILITY OWNERS

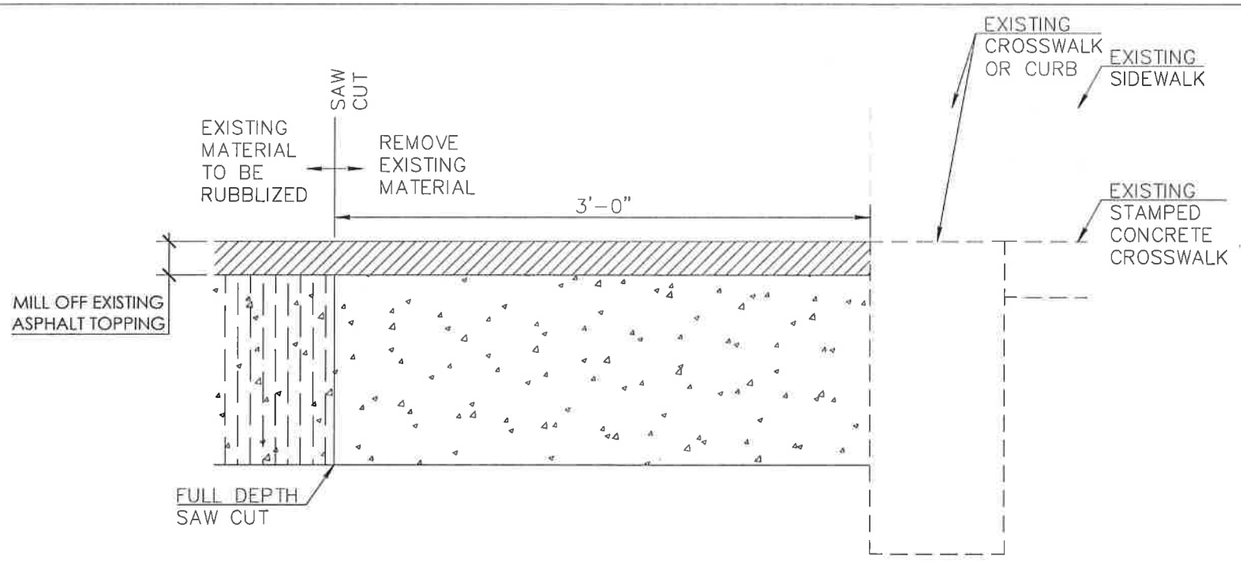
UTILITY	OWNER	PHONE NO.	CONTACT	ADDRESS	CITY	STATE	ZIP CODE
TRAFFIC SIGNAL	CITY OF CHATTANOOGA DEPARTMENT OF TRANSPORTATION	423-643-5950	TOMMY TROTTER	1250 MARKET ST, STE. 3000	CHATTANOOGA	TN	37402
TELEPHONE	BELLSOUTH dba AT&T	423-266-5962	STEVE McCORMICK	300 E. M.L.K. BOULEVARD	CHATTANOOGA	TN	37403
WATER	TENNESSEE AMERICAN WATER	423-771-4713	GRADY STOUT	P.O. BOX 6338	CHATTANOOGA	TN	37401
SEWAGE	CITY OF CHATTANOOGA WASTE RESOURCES	423-757-5026	DISPATCH	455 MOCCASIN BEND ROAD	CHATTANOOGA	TN	37405
GAS	CHATTANOOGA GAS COMPANY	423-490-4289	BENNIE KINSEY	6125 PRESERVATION DRIVE	CHATTANOOGA	TN	37416
POWER	ELECTRIC POWER BOARD	423-648-1372	DAVID HENDERSON	P.O. BOX 182255	CHATTANOOGA	TN	37422
CABLE TV	COMCAST CABLE TELEVISION	423-855-4300	GEOFF SHOOK	2030 EAST POLYMER DRIVE	CHATTANOOGA	TN	37421
RAILROAD (TVRM)	TENNESSEE VALLEY RAILROAD MUSEUM	423-605-2331	GEORGE WALKER	4119 CROMWELL RD	CHATTANOOGA	TN	37421
STORMWATER	CITY OF CHATTANOOGA PUBLIC WORKS	423-643-6311		1250 MARKET ST, STE. 2000	CHATTANOOGA	TN	37402
FIRE HYDRANT	CITY OF CHATTANOOGA FIRE DEPARTMENT	423-643-5622	MICHAEL WRIGHT		CHATTANOOGA	TN	37402

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

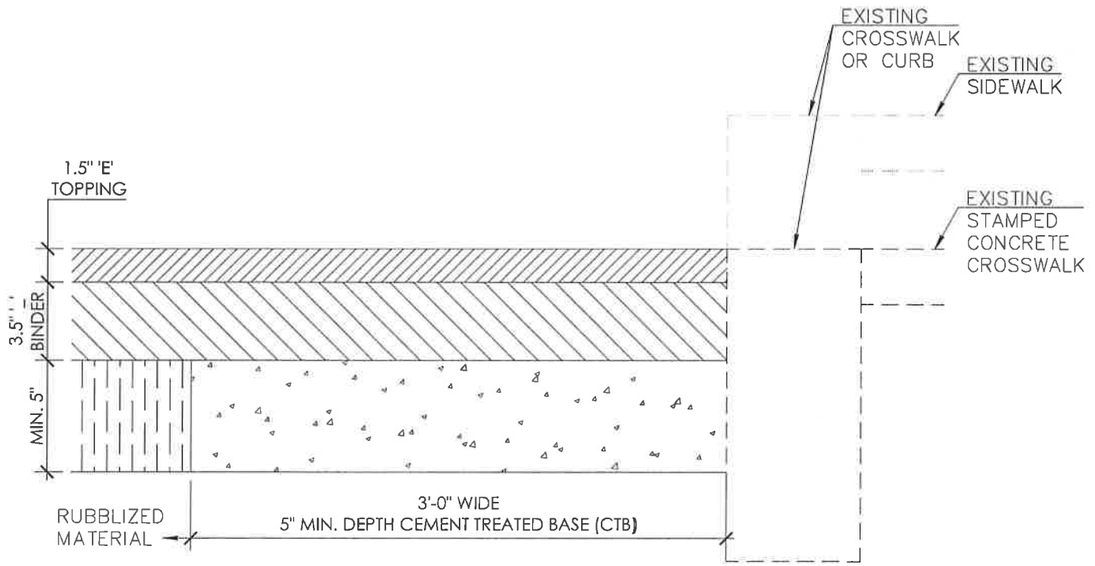
CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM
GEORGIA AVE. TO CENTRAL AVE.
GENERAL / SPECIAL NOTES

SHEET NUMBER
3



DEMOLITION PHASE



RESURFACING PHASE

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM
GEORGIA AVE. TO CENTRAL AVE.
RUBBLIZATION DETAILS

SHEET
NUMBER
4

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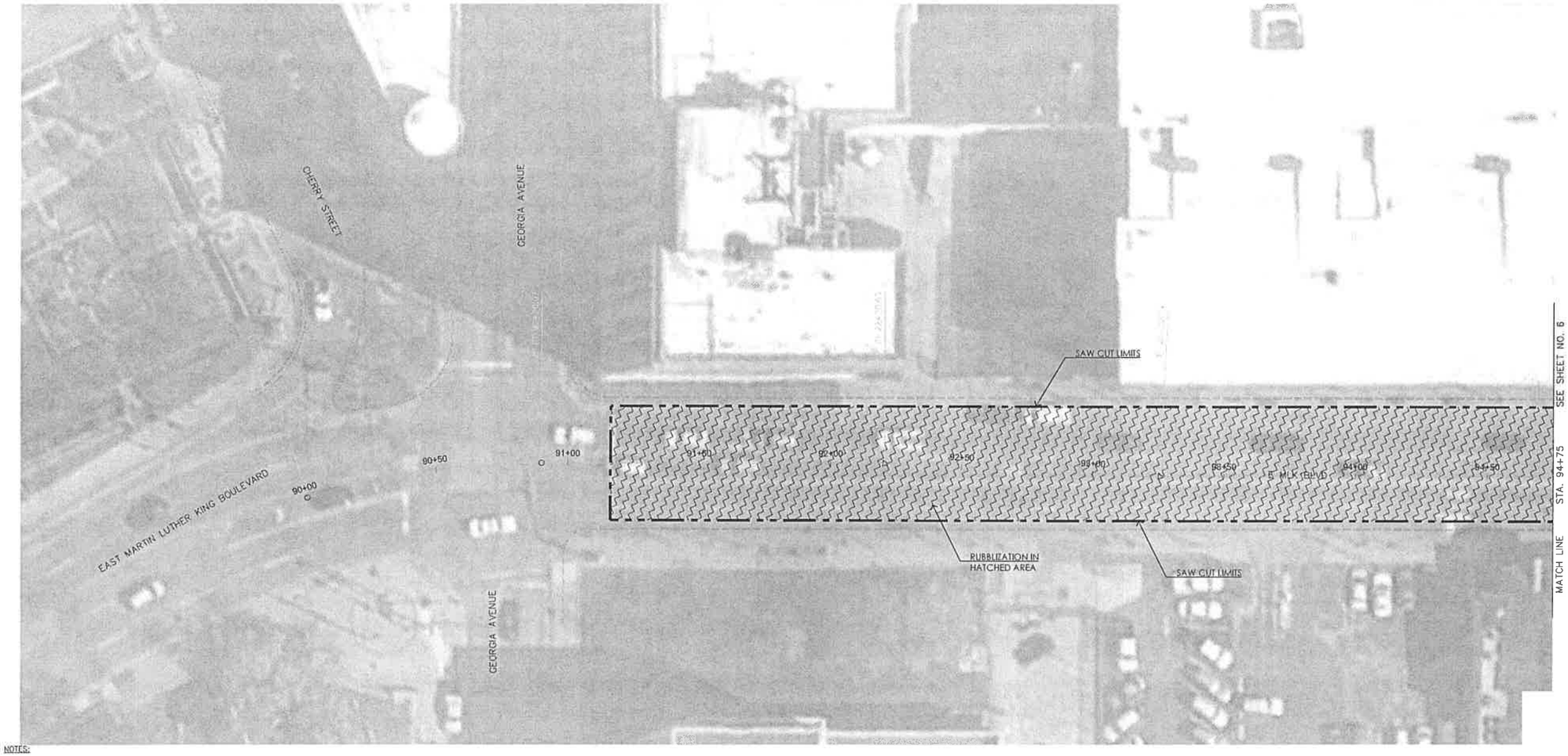

NOTES:

1. ALL EXISTING SIGNS SHALL REMAIN UNLESS NOTED OTHERWISE.
2. ALL EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.
3. EXISTING ROADWAY WIDTHS ARE BASED ON AERIAL PHOTOGRAPHY AND FIELD MEASUREMENTS. THE CONTRACTOR SHALL LAYOUT PROPOSED PAVEMENT MARKINGS MEASURED FROM FACE OF CURB. IF MINIMUM DIMENSIONS CANNOT BE ACHIEVED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
4. PAVEMENT MARKINGS NOT CALLED OUT ARE TO BE INSTALLED UNDER PROJECT TDOT PIN #119814.00.
5. COORDINATES ARE NAD/83 (1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000000 (CITY OF CHATTANOOGA DEVELOPMENT RESOURCE CENTER GPS BASE STATION) AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. RUBBLIZATION PLAN

SHEET NUMBER

5

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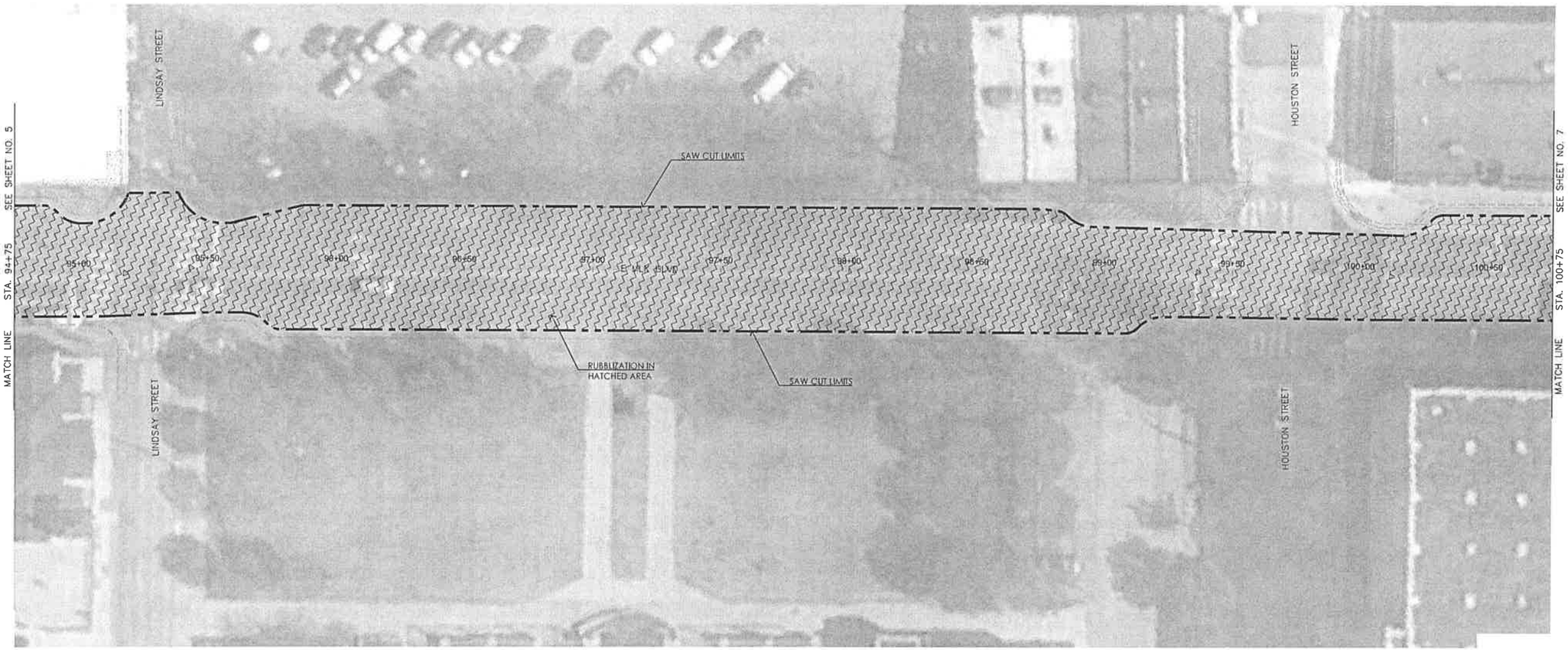
CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. RUBBLIZATION PLAN

SHEET NUMBER
6



NOTES:

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2. ALL EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.
3. EXISTING ROADWAY WIDTHS ARE BASED ON AERIAL PHOTOGRAPHY AND FIELD MEASUREMENTS. THE CONTRACTOR SHALL LAYOUT PROPOSED PAVEMENT MARKINGS MEASURED FROM FACE OF CURB. IF MINIMUM DIMENSIONS CANNOT BE ACHIEVED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
4. PAVEMENT MARKINGS NOT CALLED OUT ARE TO BE INSTALLED UNDER PROJECT TDOT PIN #119814.00.
5. COORDINATES ARE NAD/83 (1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000000 (CITY OF CHATTANOOGA DEVELOPMENT RESOURCE CENTER GPS BASE STATION) AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

0 20' 40'
SCALE: 1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

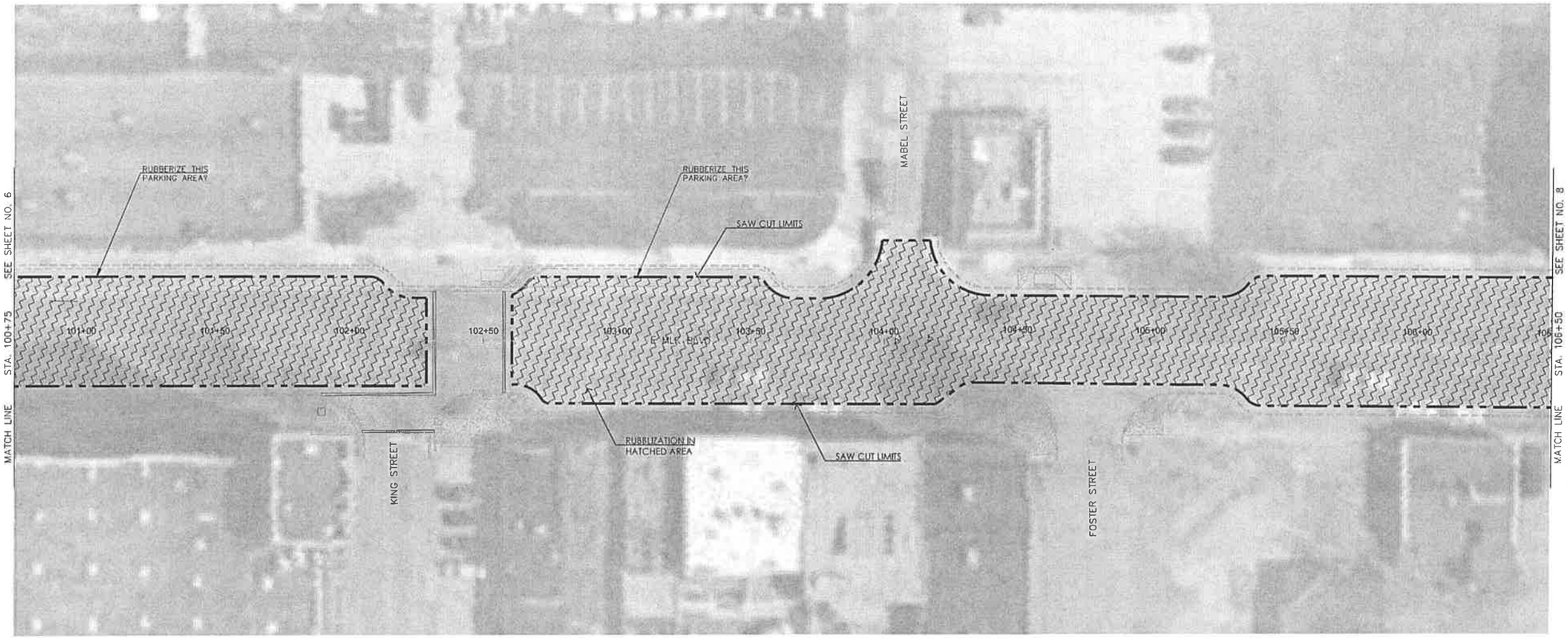
T:\Projects\T-17-007 2017 Resurfacing contract\Drawings\Base\MLK - Rubblization.dwg Sep 13,2017 - 8:45am, jhowell

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. RUBBLIZATION PLAN

SHEET NUMBER
7



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0 20' 40'
SCALE: 1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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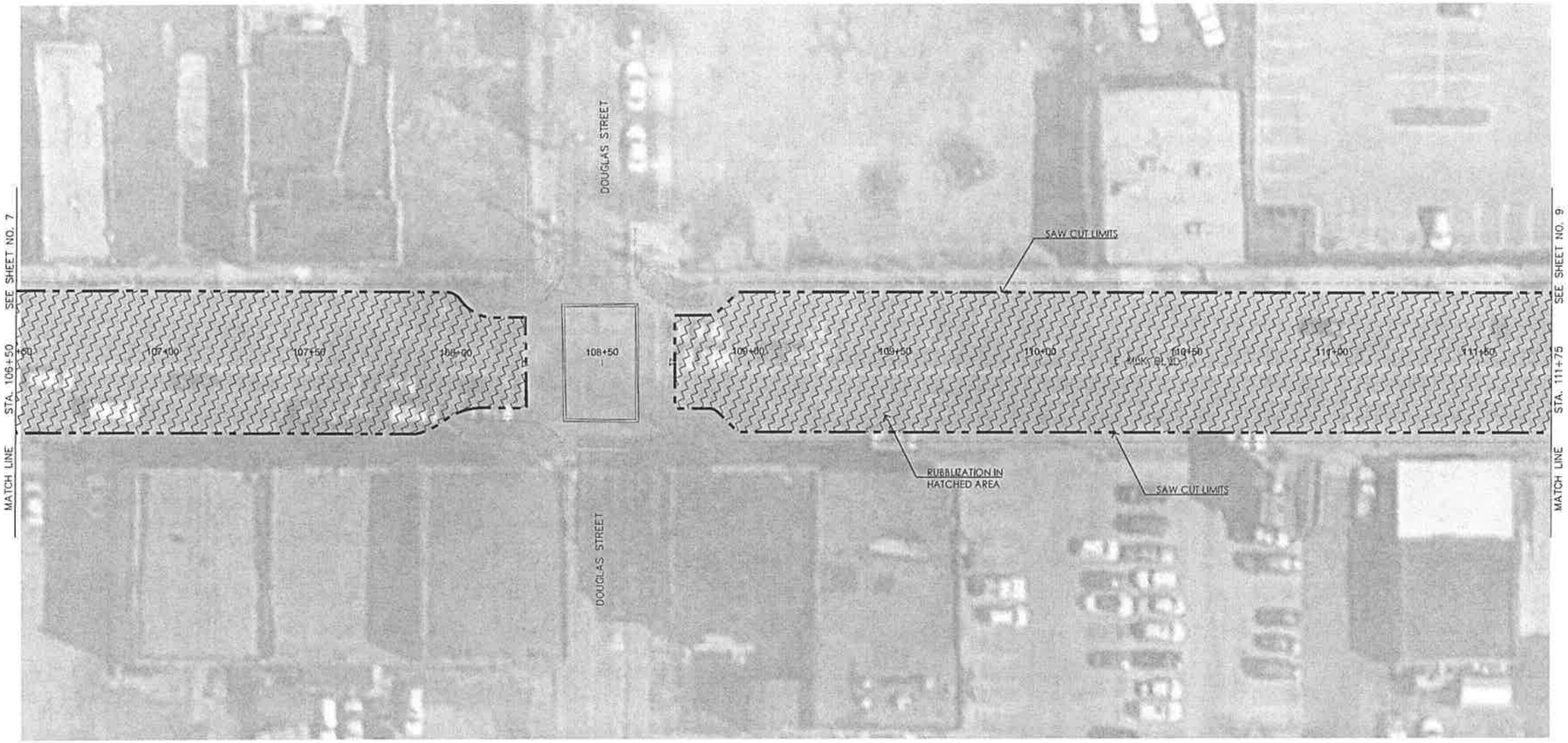
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. RUBBLIZATION PLAN

SHEET NUMBER
8



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0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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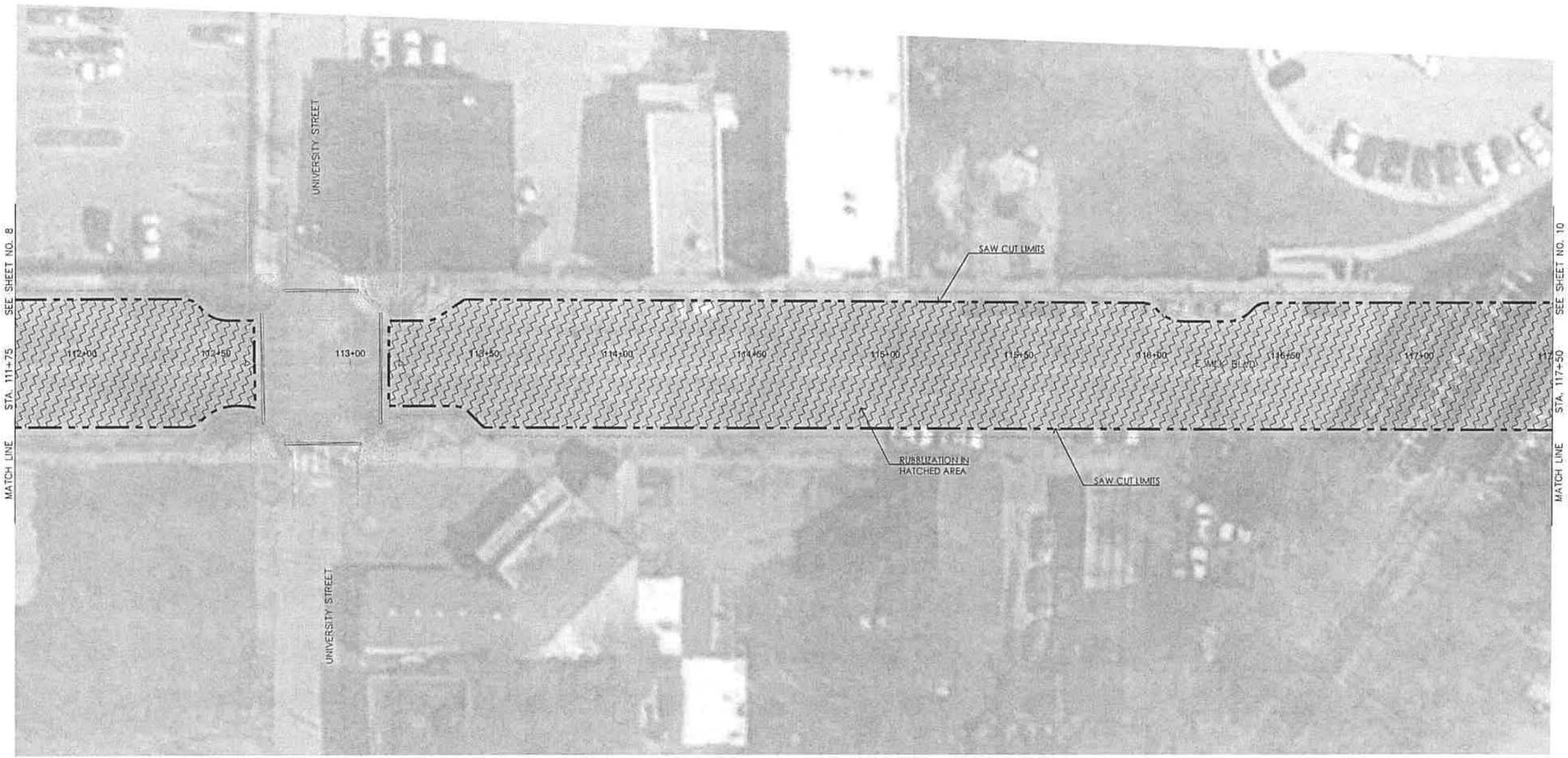

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0 20' 40'
SCALE: 1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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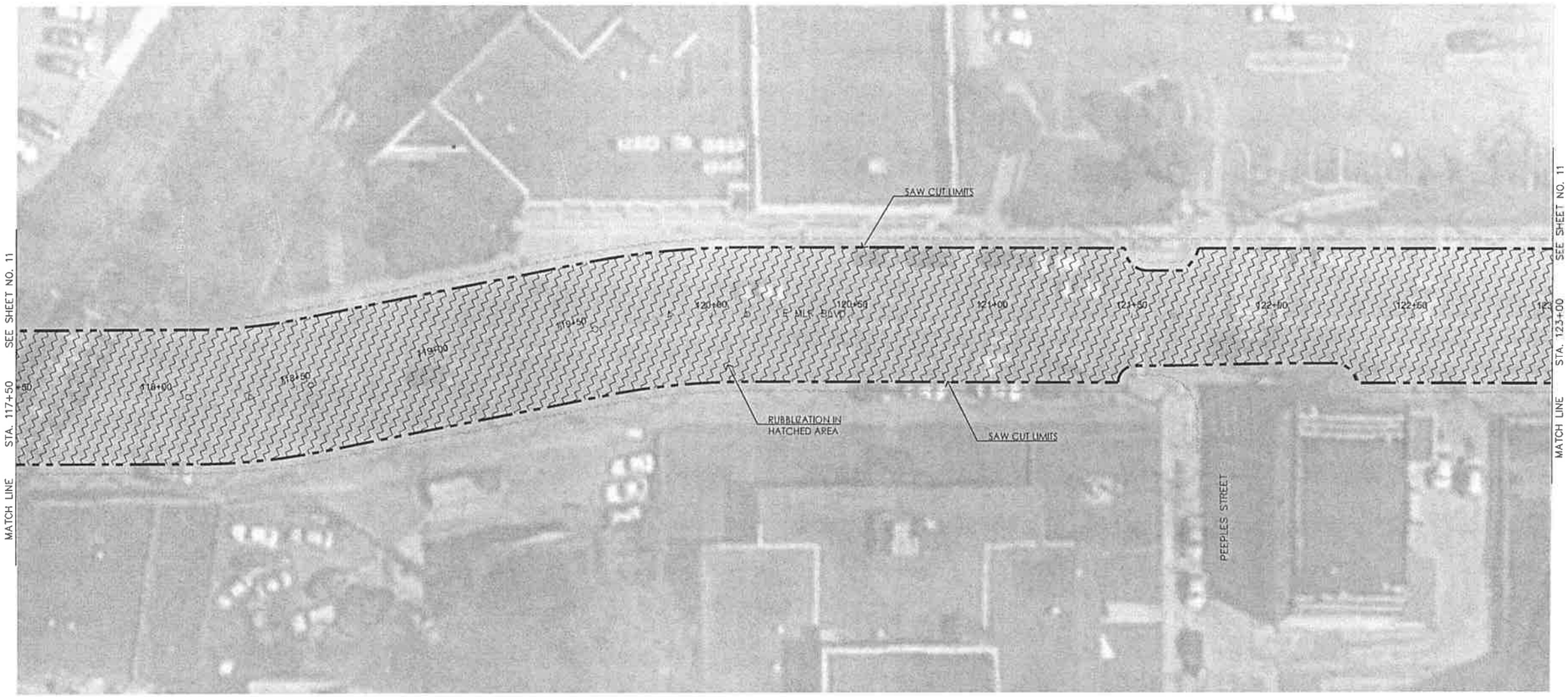
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM
GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. RUBBLIZATION PLAN

SHEET NUMBER
9

T:\Projects\T-17-007 2017 Resurfacing contract\Drawings\Base\MLK - Rubblization.dwg Sep 13,2017 - 8:45am, jhowell



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0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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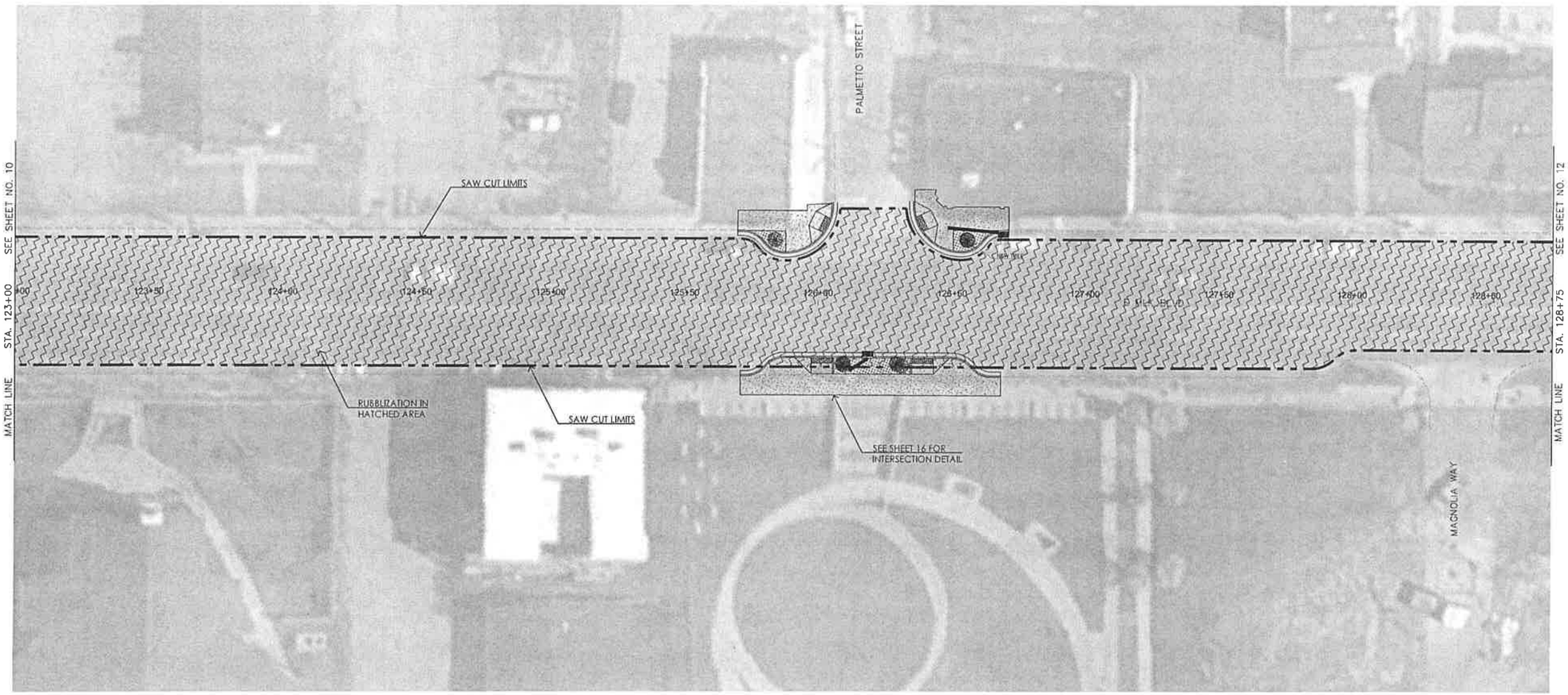
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. RUBBLIZATION PLAN

SHEET NUMBER
10



NOTES:

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0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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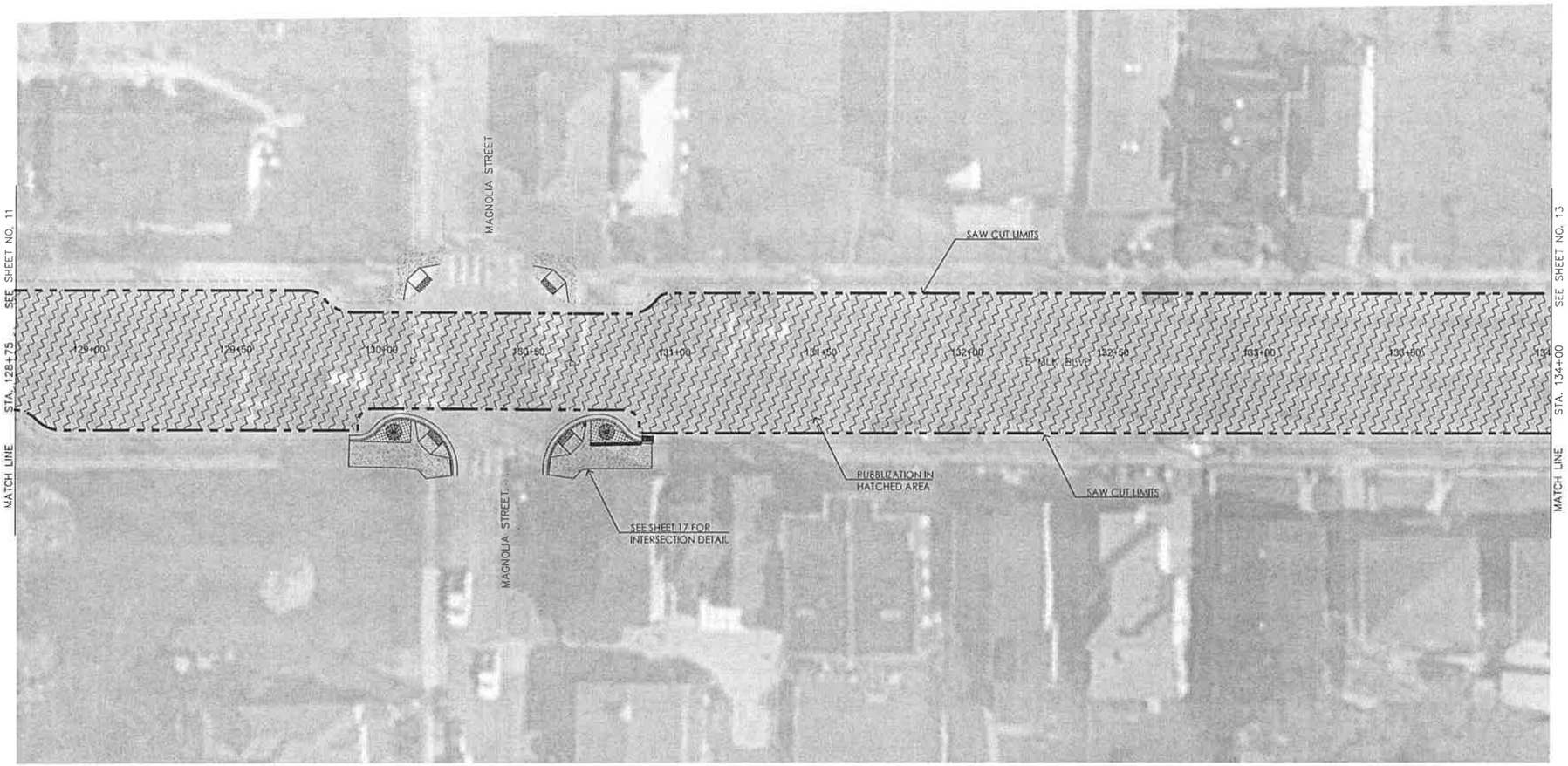
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. RUBBLIZATION PLAN

SHEET NUMBER
11

I:\Projects\17-007 2017 Resurfacing contract\Drawings\Base\MLK - Rubblization.dwg Sep 13,2017 - 8:45am jhowell



NOTES:

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0 20' 40'
SCALE: 1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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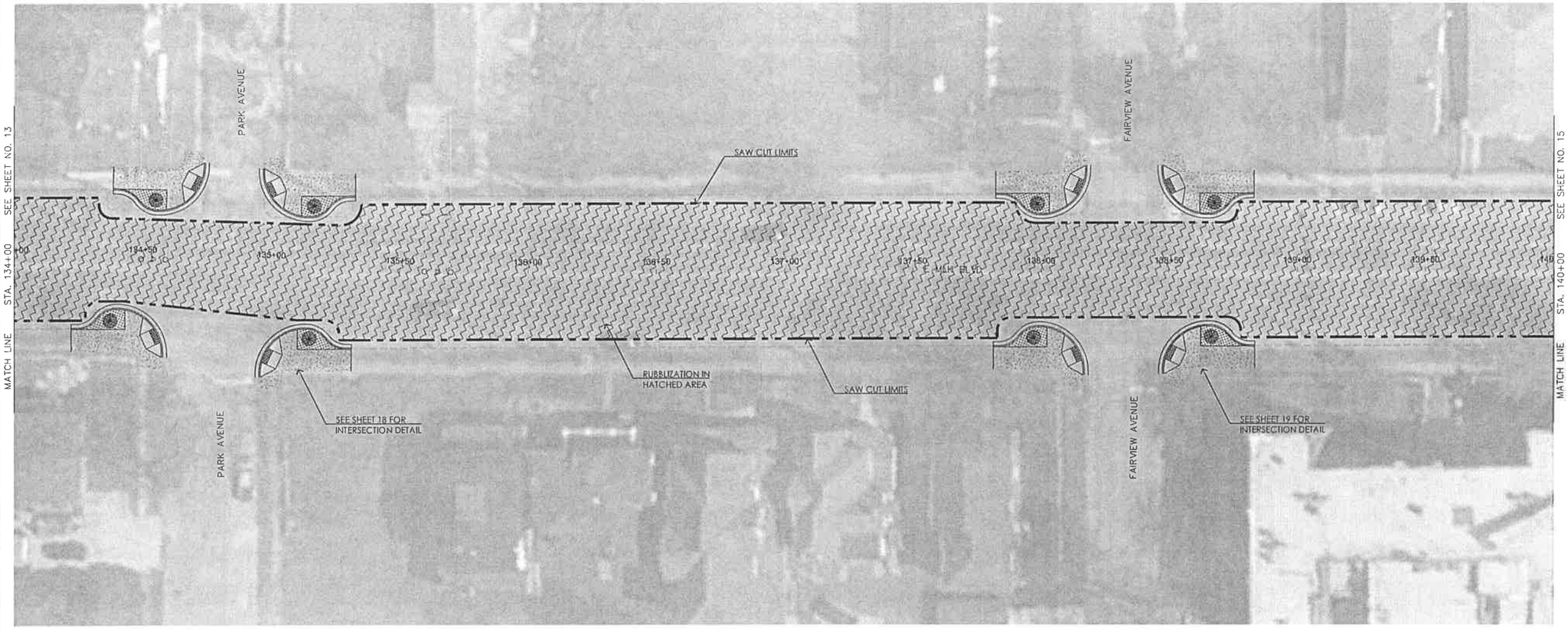
E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. RUBBLIZATION PLAN

SHEET NUMBER
12



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0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

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DESIGN / ENGINEERING DIVISION
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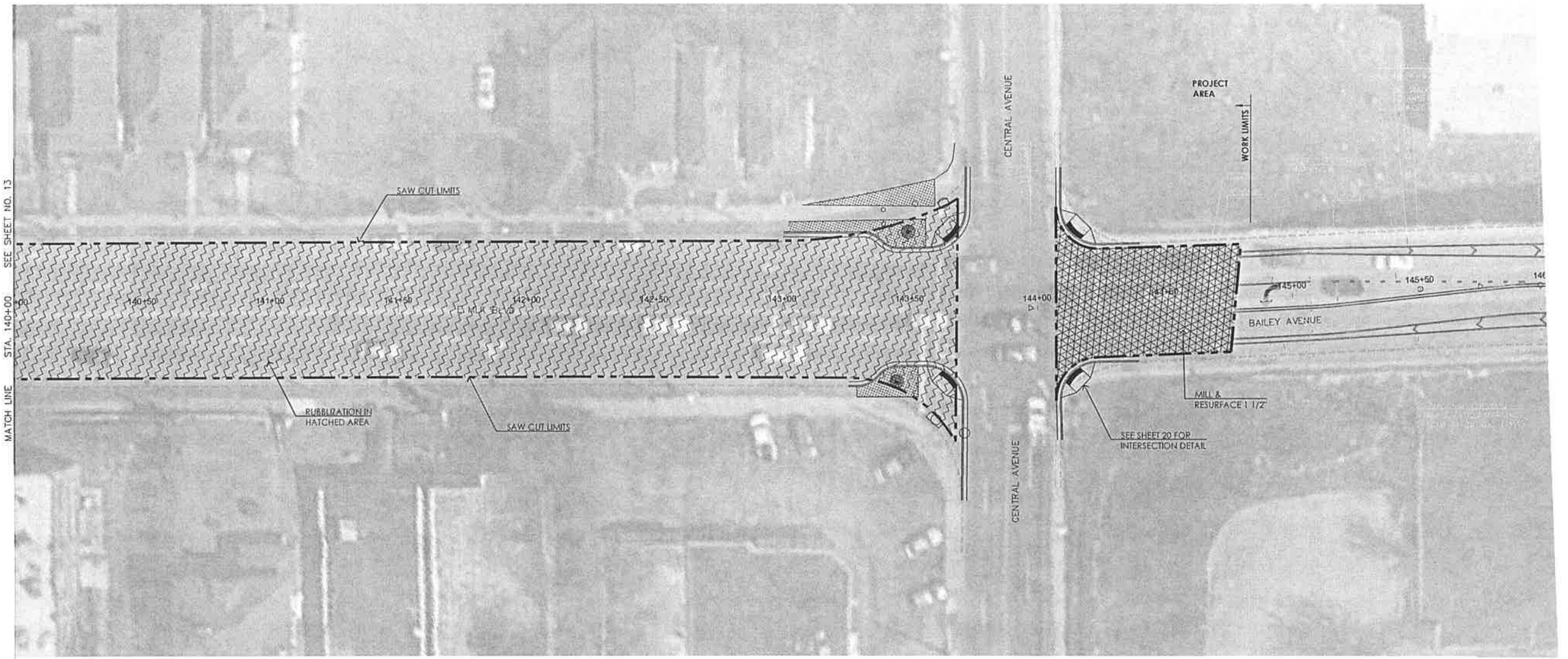
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. RUBBLIZATION PLAN

SHEET NUMBER
13



NOTES:

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4. ALONG BAILEY AVE. FROM CENTRAL AVE. TO DODDS AVE. THE ONLY STRIPING TO BE DONE IS THE FILLING BIKE LANES WITH GREEN PAINT AND ADDING FLEXIBLE BOLLARDS IN THE BUFFERED AREAS ARE TO BE INCLUDED IN THIS PROJECT. ALL OTHER STRIPING ALONG THIS AREA IS TO BE INSTALLED UNDER THE TIP PROJECT TDOT PIN #119814.00
5. COORDINATES ARE NAD/83 (1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000000 (CITY OF CHATTANOOGA DEVELOPMENT RESOURCE CENTER GPS BASE STATION) AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

0 20' 40'
SCALE: 1"=20'

CURRENT POSTED SPEED LIMIT

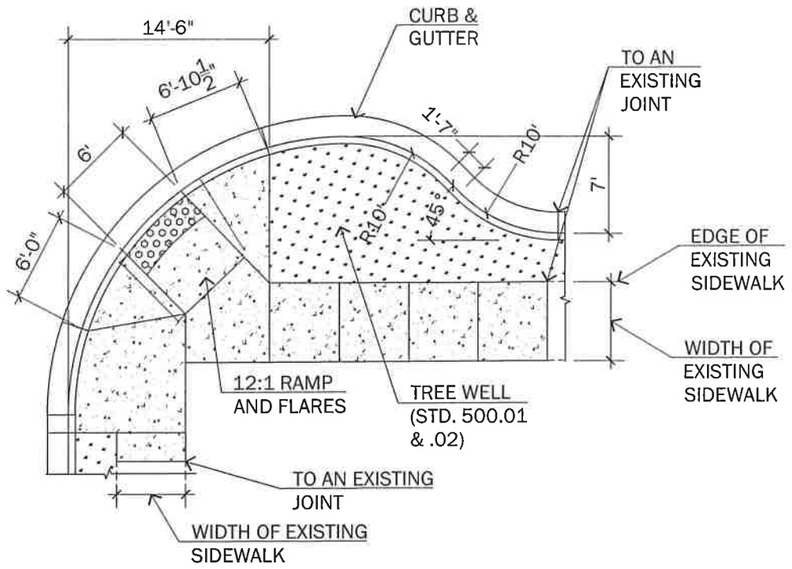
SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

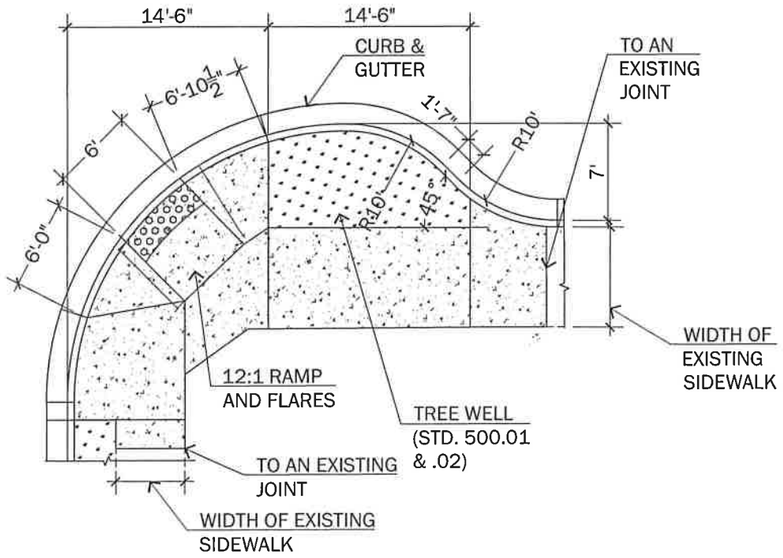
E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. RUBBLIZATION PLAN

SHEET NUMBER
14



CORNER ENHANCEMENT 'A' WITH VERGE

SCALE: 1"=5'



CORNER ENHANCEMENT 'B' WITHOUT VERGE

SCALE: 1"=5'

GUTTER PAN TO MAINTAIN A POSITIVE STORM WATER FLOW AROUND BULB-OUT.

IF EXISTING TREE IS AT EXISTING BULB-OUT, DO NOT DISTURB ROOT BALL AND USE TREE PROTECTION ON TREE TRUNK

0 5' 10'
SCALE: 1"=5'

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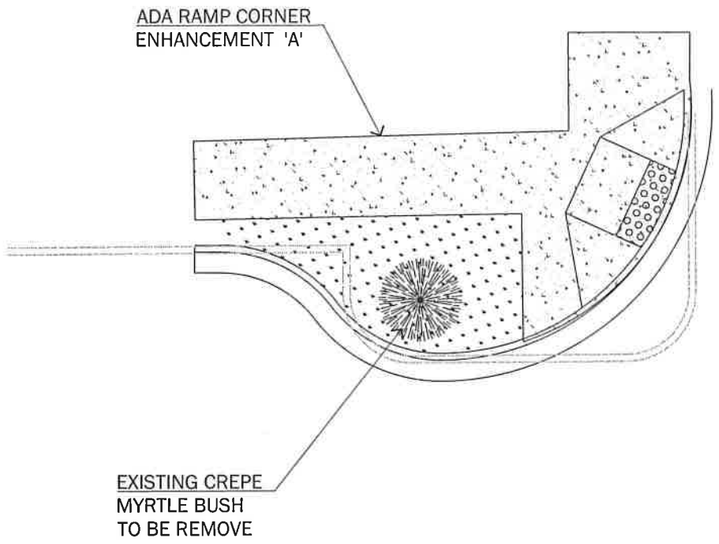
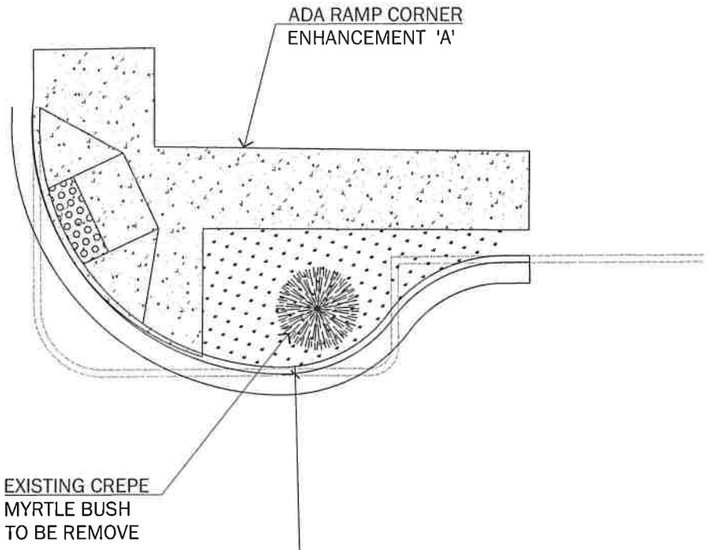
E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. INTERSECTION UPGRADE DETAILS

SHEET NUMBER
15



FAIRVIEW AVENUE

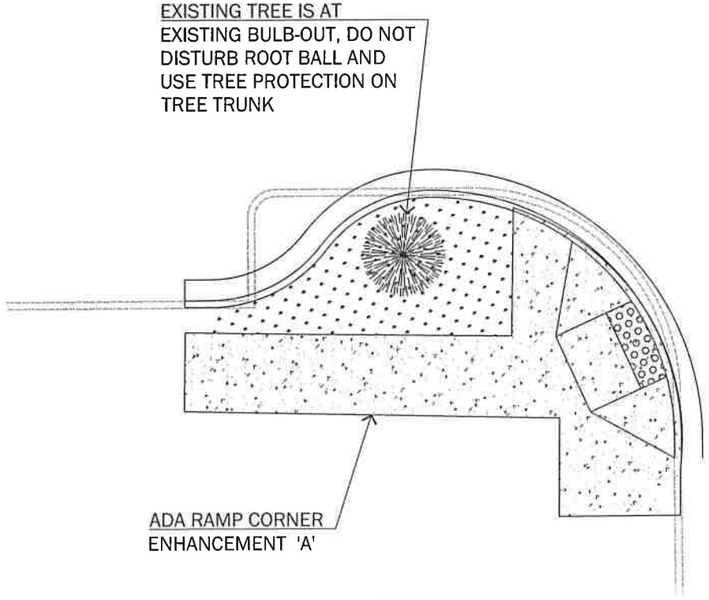


E MLK BLVD

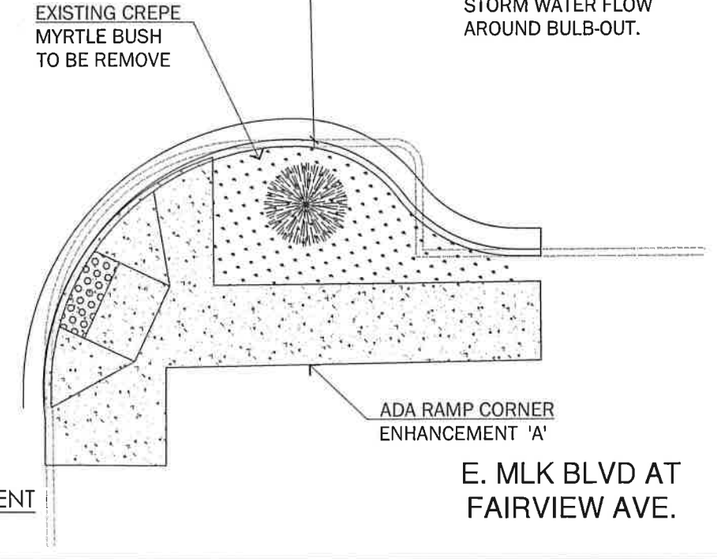
MIN. 40'

EXISTING TREE IS AT EXISTING BULB-OUT, DO NOT DISTURB ROOT BALL AND USE TREE PROTECTION ON TREE TRUNK

GUTTER PAN TO MAINTAIN A POSITIVE STORM WATER FLOW AROUND BULB-OUT.



MLK AT FAIRVIEW
CORNER ENHANCEMENT
1"=5'



E. MLK BLVD AT
FAIRVIEW AVE.

0 5' 10'
SCALE: 1"=5'

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
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CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. INTERSECTION UPGRADE DETAILS

SHEET NUMBER
15

ADA RAMP CORNER
ENHANCEMENT 'B'

R10'

7'

R10'

EXISTING CREPE
MYRTLE BUSH
TO BE REMOVE

INLAYED
TRUNCATED
DOME MAT

12:1 RAMP
AND FLARES

17'-9"

11'-9"

6'

11'-0"

INSTALL ADDITIONAL
CATCH BASIN W/ HOOD
TIE TO EXISTING BASIN
W/ 9 L.F. OF 15" R.C.P.

INSTALL SLAB WITH MANHOLE
ACCESS. CORE INTO SIDE OF
EXISTING JUNCTION BOX

ADA RAMP CORNER
ENHANCEMENT 'B'

CORE INTO EXISTING
MANHOLE FOR PIPE
CONNECTION AND USE
NON SHRINK GROUT

12:1 RAMP
AND FLARES

EXISTING CREPE
MYRTLE BUSH
TO BE REMOVE

INSTALL ADDITIONAL
CURB INLET TIE TO
EXISTING BASIN W/
20 L.F. OF 15" R.C.P.

REMOVE
TRENCH DRAIN
AND ABANDON
TIE-IN PIPE.

MIN. 40'

14'-6"

6'

8'-9"

7'

REMOVE EXISTING
TRENCH DRAIN.

MLK AT PALMETTO
CORNER ENHANCEMENT
1"=10'

E. MLK BLVD AT
PALMETTO ST.

SCALE: 1"=10'

CITY OF CHATTANOOGA
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CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM
GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. INTERSECTION UPGRADE DETAILS

SHEET
NUMBER
16

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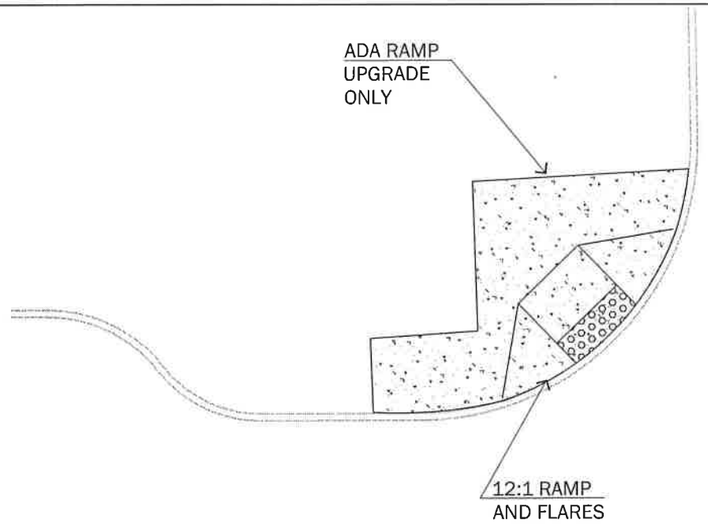
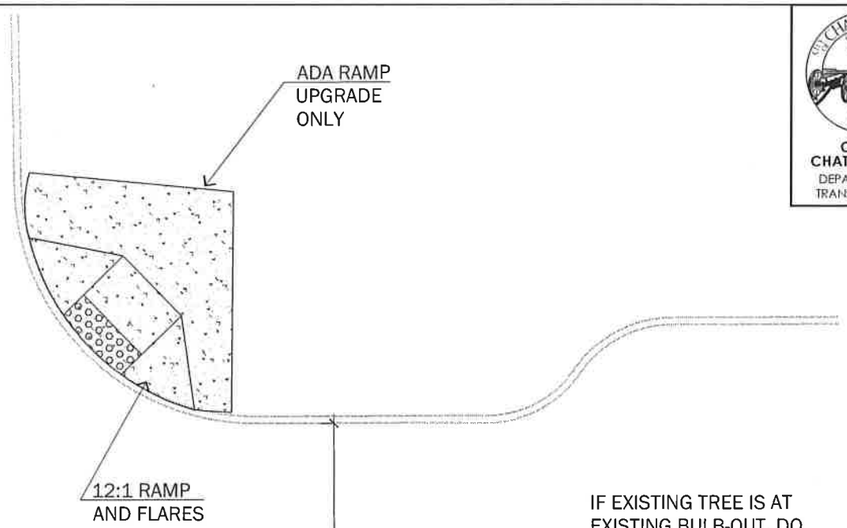


MAGNOLIA
STREET

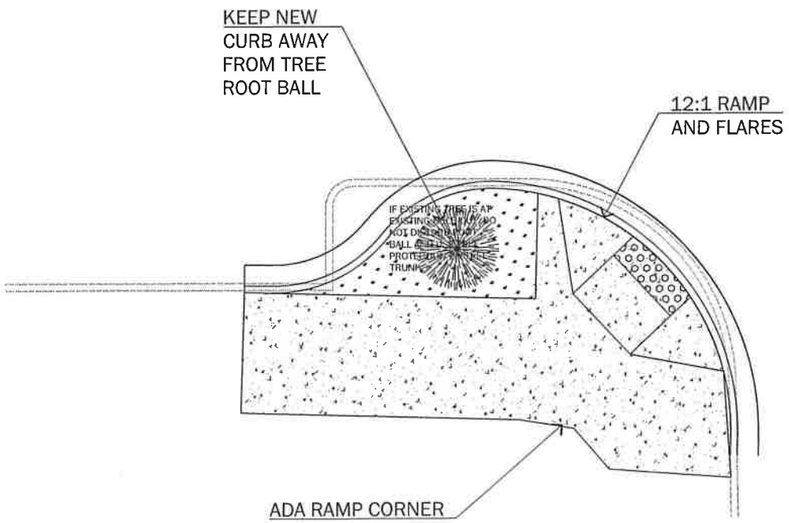


E MLK BLVD

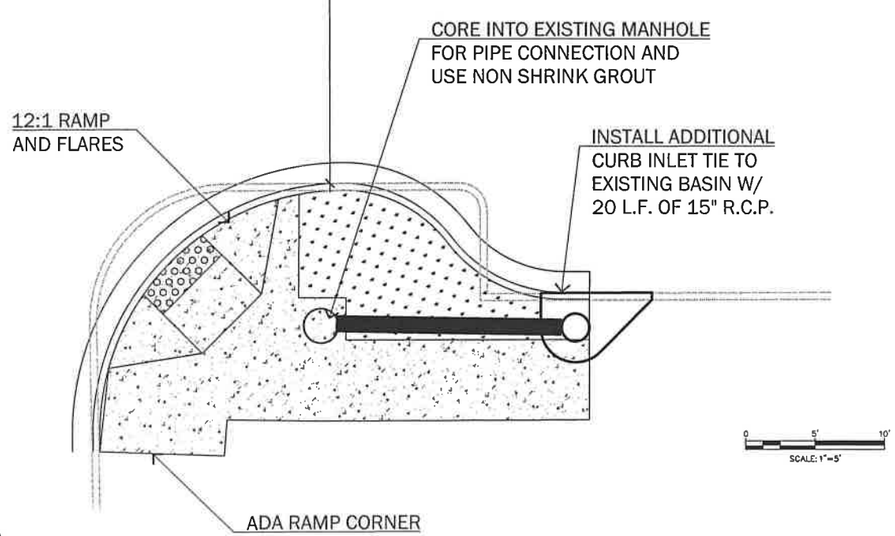
MIN. 40'

IF EXISTING TREE IS AT EXISTING BULB-OUT, DO NOT DISTURB ROOT BALL AND USE TREE PROTECTION ON TREE TRUNK

GUTTER PAN TO MAINTAIN A POSITIVE STORM WATER FLOW AROUND BULB-OUT.



MLK AT MAGNOLIA
CORNER ENHANCEMENT
1"=5'



0 5' 10'
SCALE: 1"=5'

E. MLK BLVD AT
MAGNOLIA ST

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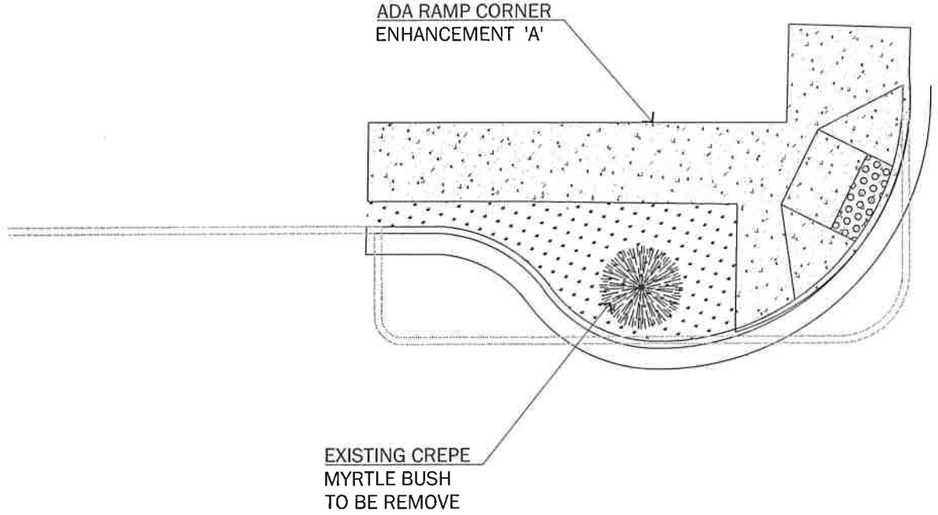
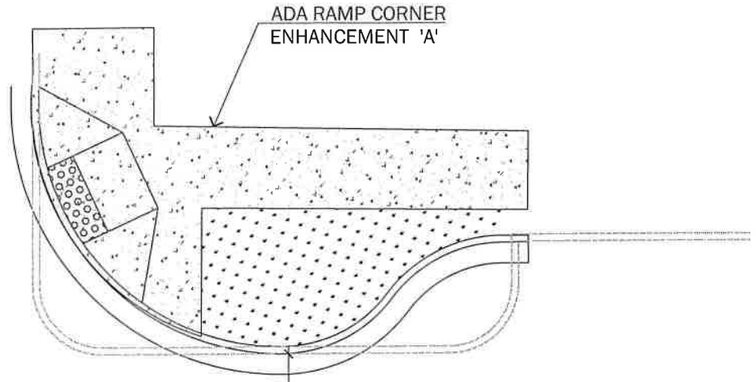
E. MLK BLVD. RUBBLIZATION FROM
GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. INTERSECTION UPGRADE DETAILS

SHEET
NUMBER
17



PARK AVENUE

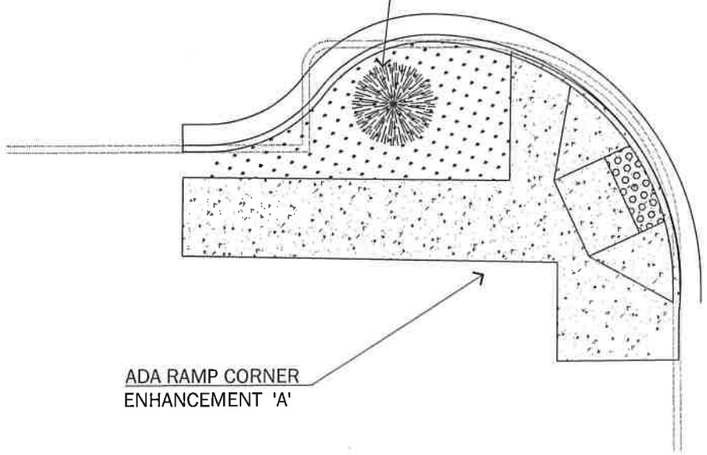


E MLK BLVD

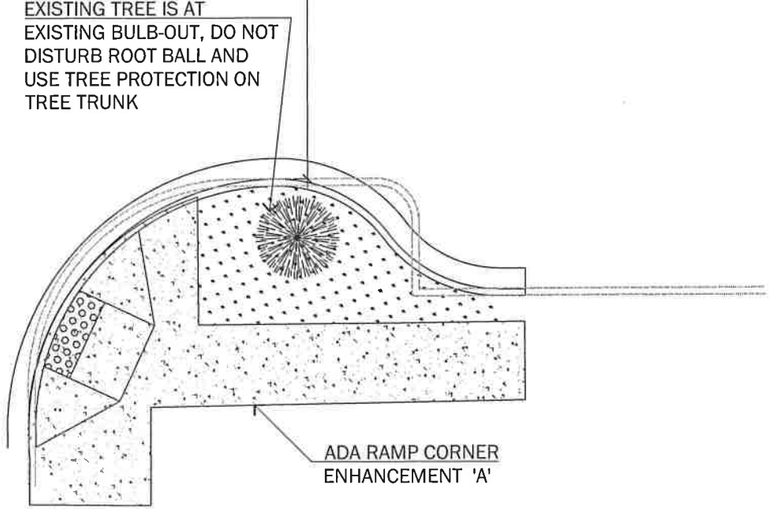
EXISTING TREE IS AT EXISTING BULB-OUT, DO NOT DISTURB ROOT BALL AND USE TREE PROTECTION ON TREE TRUNK

GUTTER PAN TO MAINTAIN A POSITIVE STORM WATER FLOW AROUND BULB-OUT.

MIN. 40'



MLK AT PARK
CORNER ENHANCEMENT
1"=5'



E. MLK BLVD AT
PARK AVE.

0 5' 10'
SCALE: 1"=5'

CITY OF CHATTANOOGA
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1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. INTERSECTION UPGRADE DETAILS

SHEET NUMBER
18

CONVERT INLET INTO JUNCTION BOX WITH CONCRETE LID DOWELED #4 BARS @12" O.C. WITH MANHOLE ACCESS CORE 15" RCP INTO EXISTING CATCH BASIN SEAL WITH NON-SHRINK GROUT

CONCRETE AROUND HANDHOLE AND PEDESTRIAN LIGHT BASE

PUT BACK TOP SOIL IN THIS LANDSCAPE AREA

PEDESTRIAN PUSH BUTTON RELOCATED TO THIS POLE

CURB INLET PER CDOT STANDARDS 706.75' 4.5' MIN INV EL MAX 702.25

32 LF 15"ø RCP @ 3.84%

ON THIS CORNER REPLACE ALL NEW AS 6" THICK SIDEWALK

12:1 RAMP AND FLARES

CURB RAMP WITH TRUNCATED DOME #RP-H-9

704.15' top
701.02' inv
3.13' depth

ON THIS CORNER REPLACE SIDEWALK BEHIND 20' RADIUS WITH 6" THICK

12:1 RAMP AND FLARES

PUT BACK TOP SOIL IN THIS LANDSCAPE AREA

CURB RAMP WITH TRUNCATED DOME #RP-H-7

CURB RAMP WITH TRUNCATED DOME #RP-H-7

PUT BACK TOP SOIL IN THIS LANDSCAPE AREA

12:1 RAMP AND FLARES

INLET AT LOW POINT WITH

12:1 RAMP

CURB INLET PER CDOT STANDARDS 707.20' 4.5' MIN INV EL 702.7 MAX

ON THIS CORNER REPLACE SIDEWALK BEHIND 20' RADIUS WITH 6" THICK

ON THIS CORNER REPLACE ALL NEW AS 6" THICK SIDEWALK

6" CURB AS NECESSARY BEHIND SIDEWALK

CURB RAMP WITH TRUNCATED DOME #RP-H-9

28 LF 15"ø RCP AT 2.68%

CONVERT INLET INTO JUNCTION BOX WITH CONCRETE LID DOWELED #4 BARS @12" O.C. WITH MANHOLE ACCESS CORE 15" RCP INTO EXISTING CATCH BASIN SEAL WITH NON-SHRINK GROUT

703.93' top over outlet
701.69' inv out
2.24' depth
704.19' top where tie in is
701.95 inv in

MODIFY EXISTING JUNCTION BOX INTO CATCH BASIN WITH BACK

PUT BACK TOP SOIL IN THIS LANDSCAPE AREA

GUTTER PAN TO MAINTAIN A POSITIVE STORM WATER FLOW AROUND BULB-OUT.

SCALE:1"=10'

NOTES:

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4. PAVEMENT MARKINGS NOT CALLED OUT ARE TO BE INSTALLED UNDER PROJECT TDOT PIN #119814.00.

NOTES:

1. Existing piping from inlet to manholes is 12"ø RCP.

E. MLK BLVD AT CENTRAL AVE.

FOR REVIEW ONLY

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E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. INTERSECTION UPGRADE DETAILS

SHEET NUMBER
20

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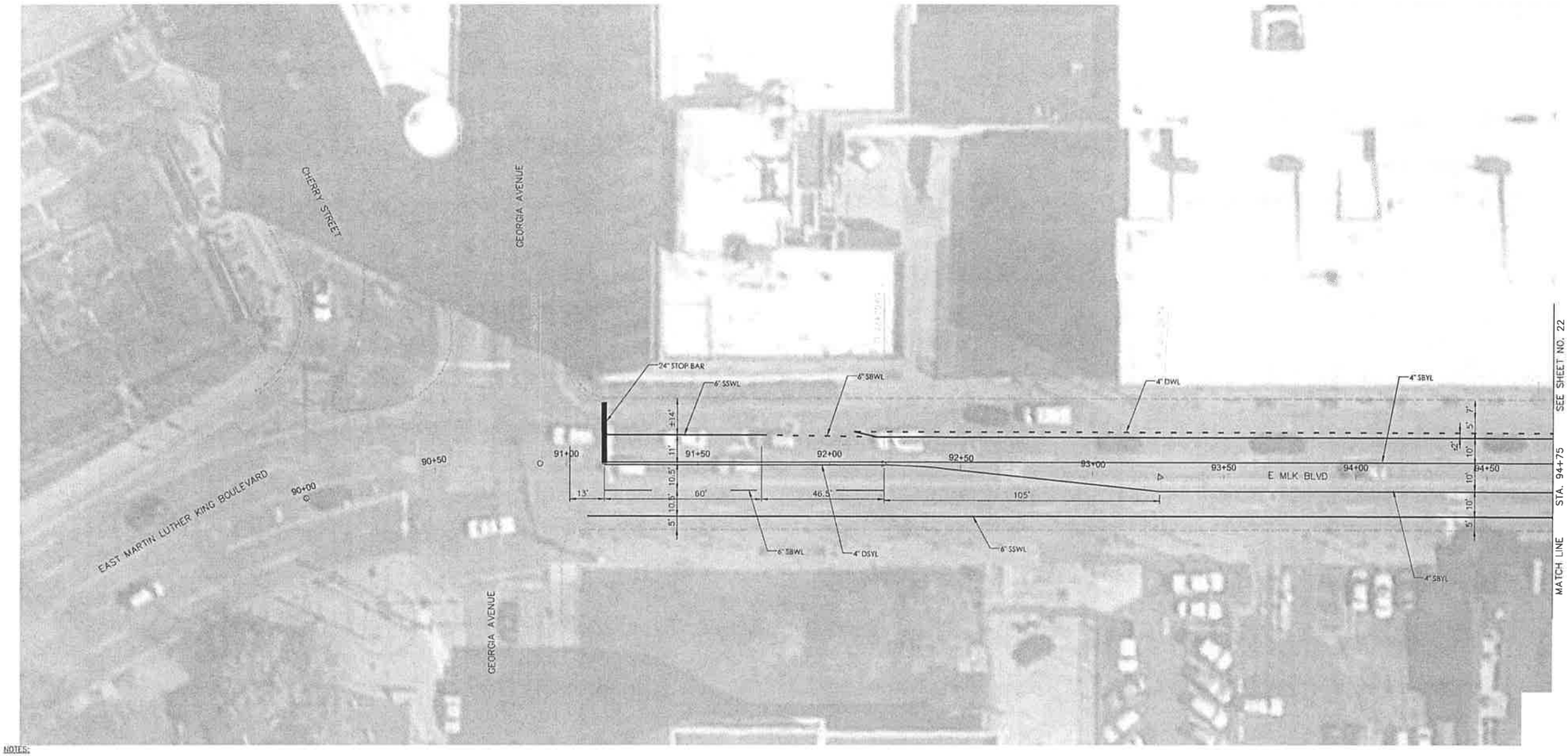

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0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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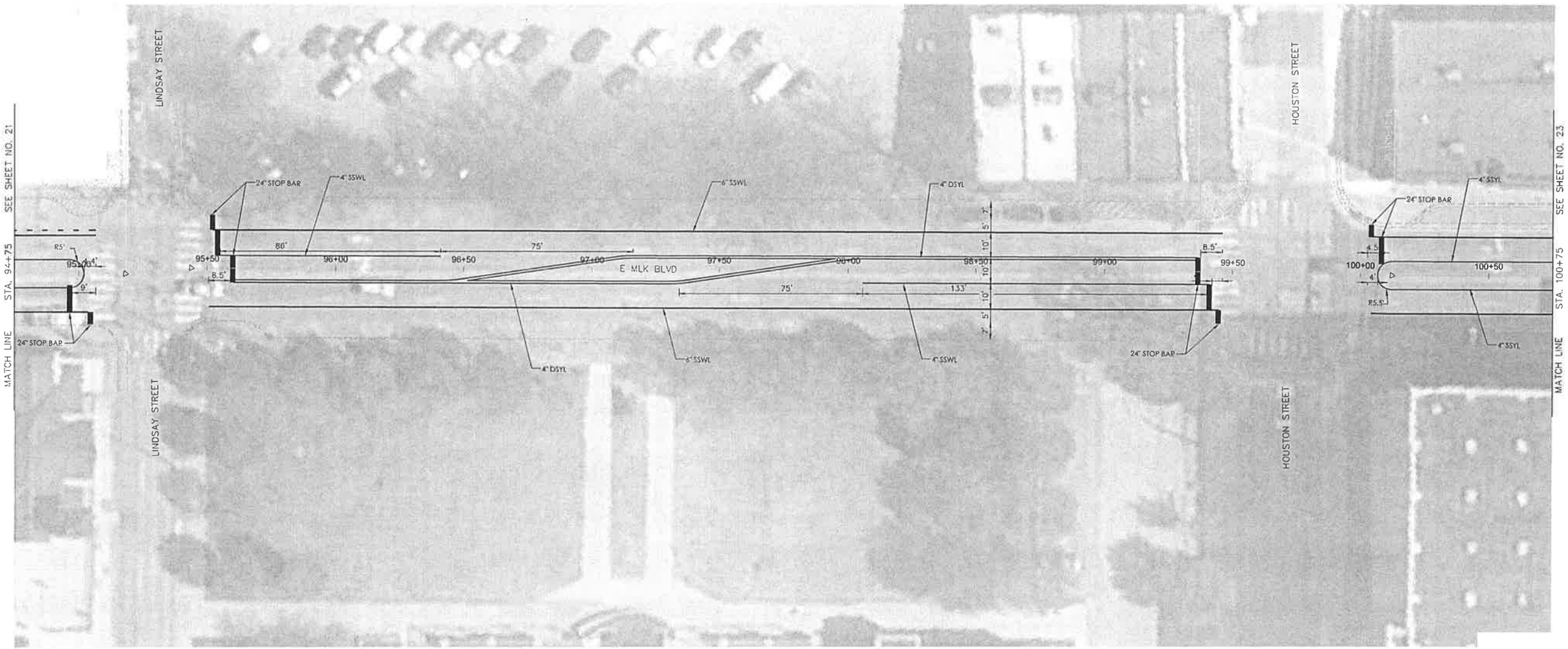
E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
21

T:\Projects\T-17-007 2017 Resurfacing contract\Drawings\Base\MLK - Rubblization.dwg Sep 13,2017 - 8:46am, jhowell



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0 20' 40'
SCALE: 1"=20'

CURRENT POSTED SPEED LIMIT

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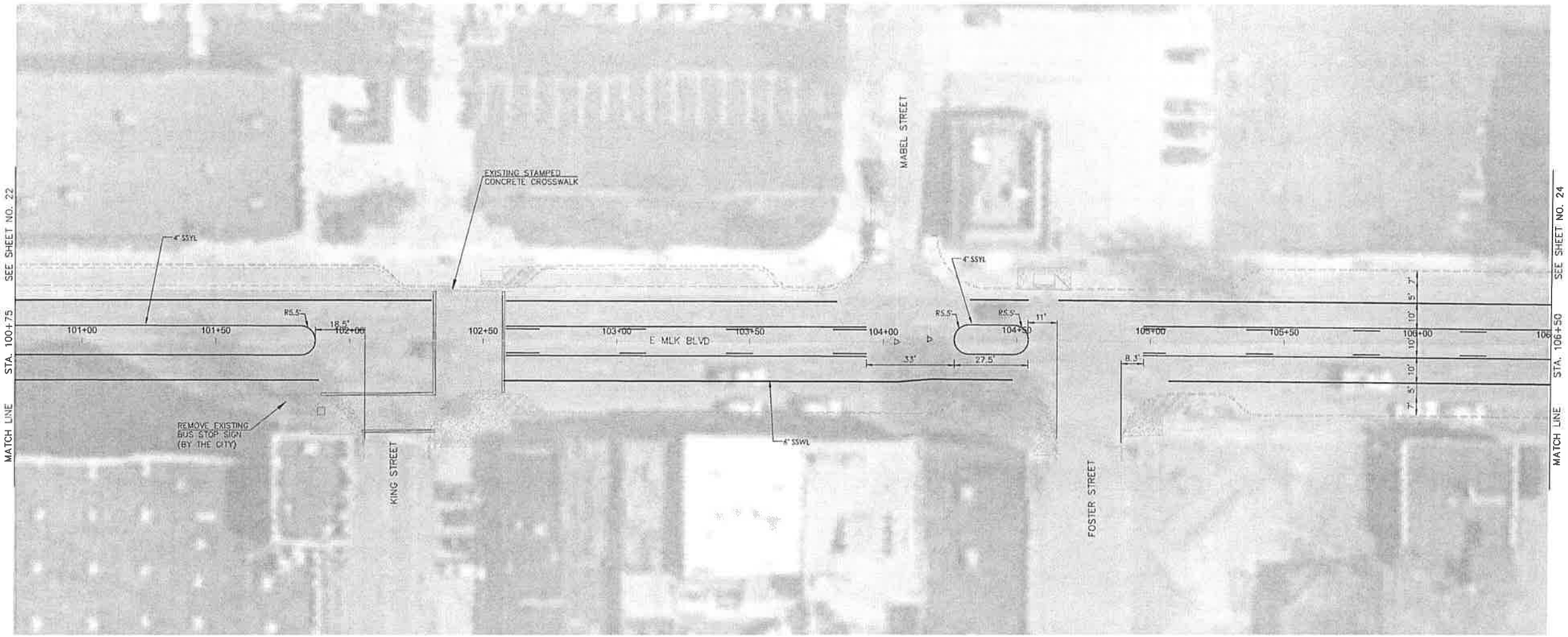
E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
22



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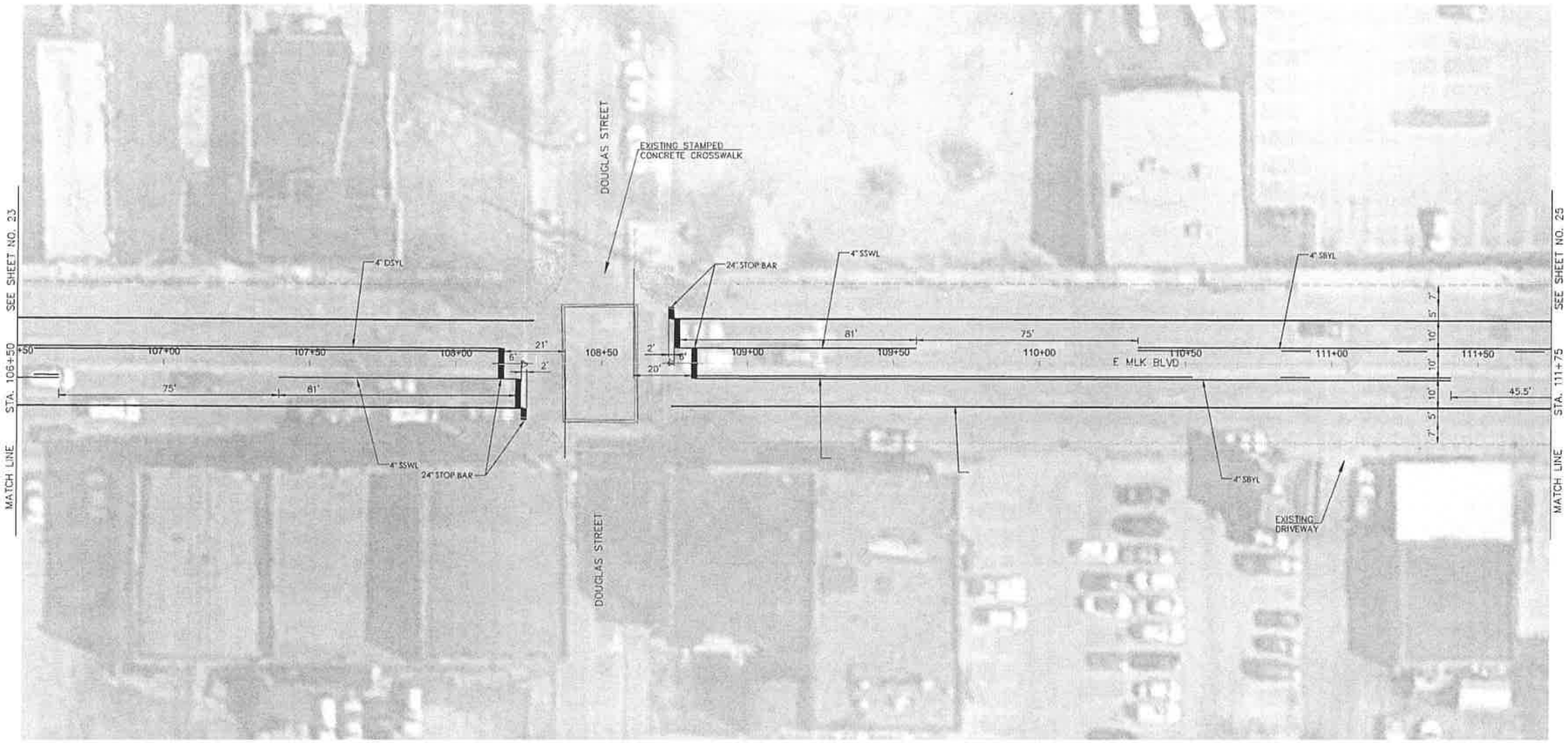
E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
23



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E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
24

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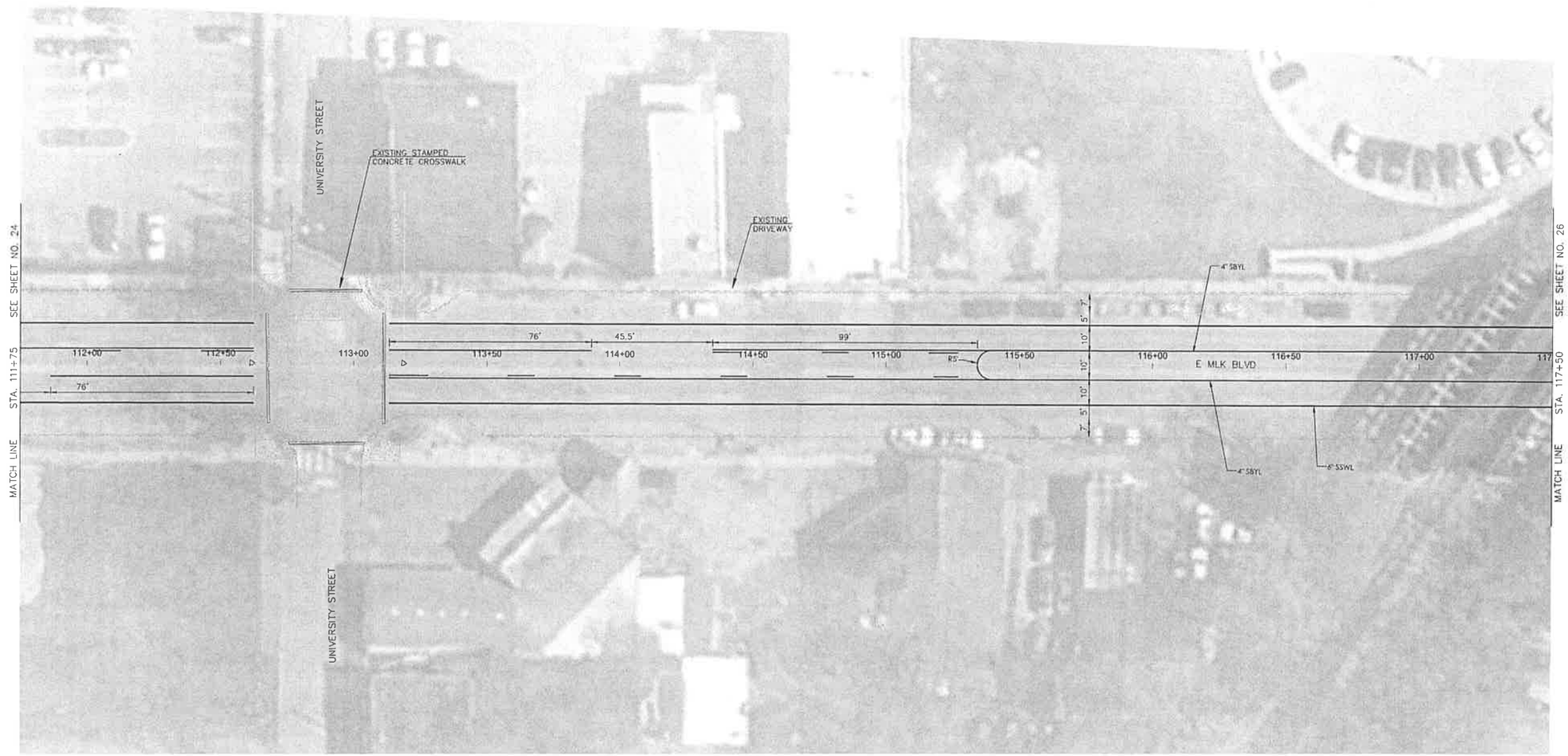
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
25



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0 20' 40'
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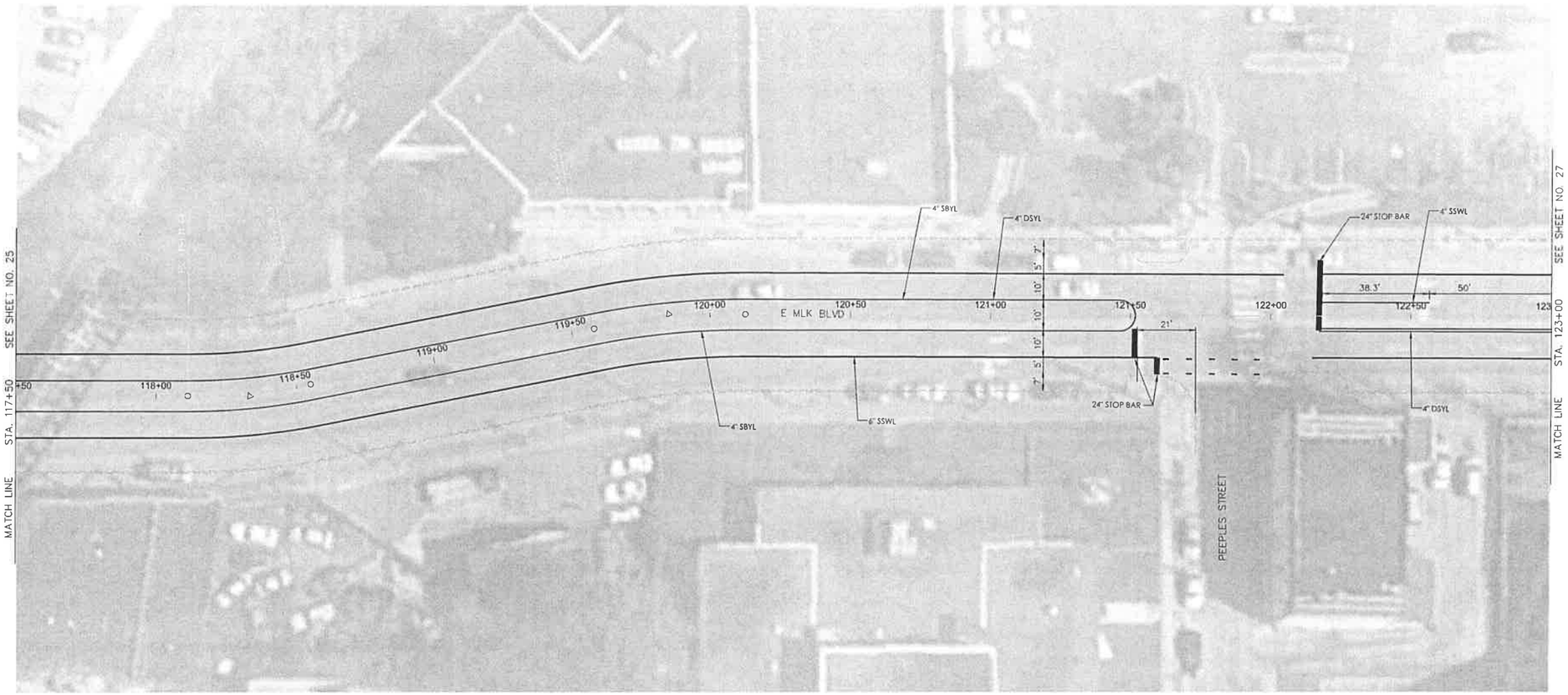
CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

T:\Projects\17-007 2017 Resurfacing contract\Drawings\Base\MLK - Rubblization.dwg Sep 13,2017 - 8:47am, jhowell



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E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
26

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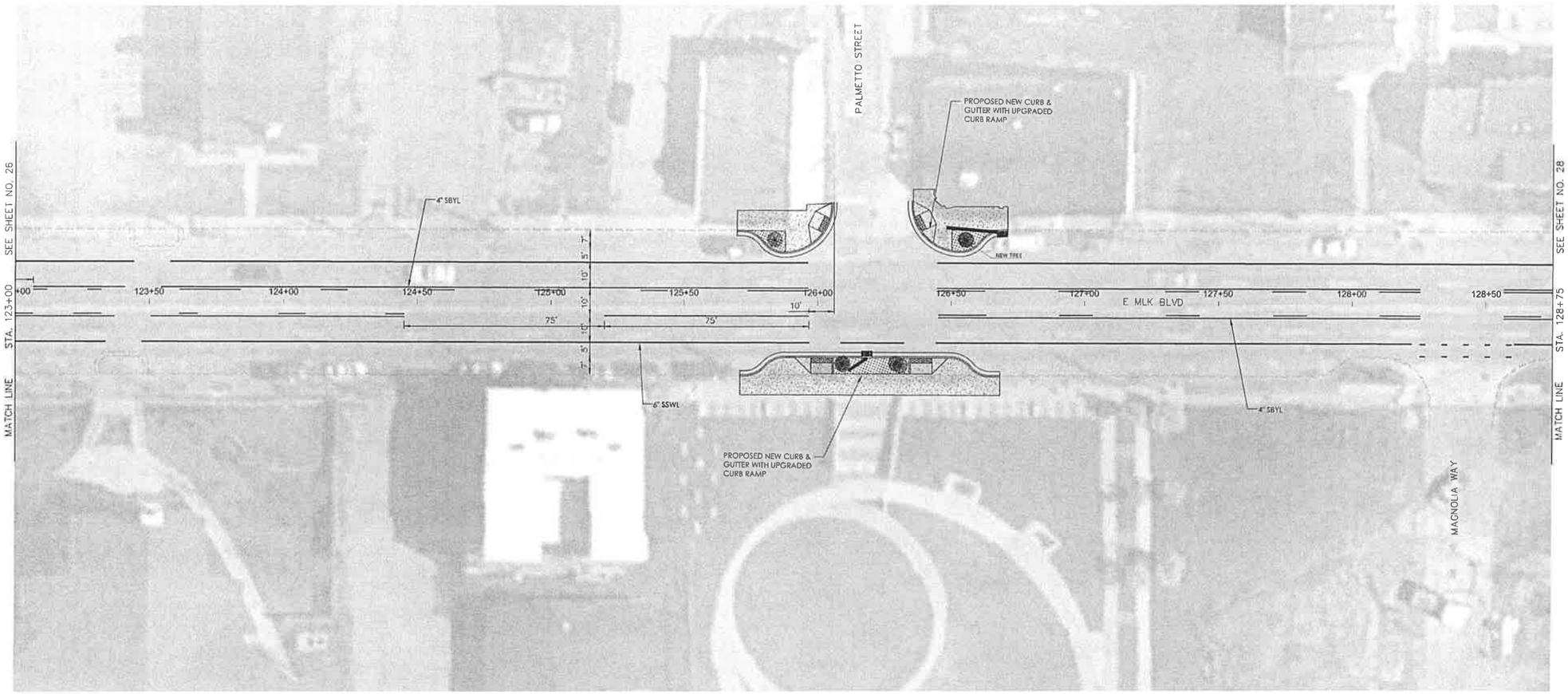

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SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

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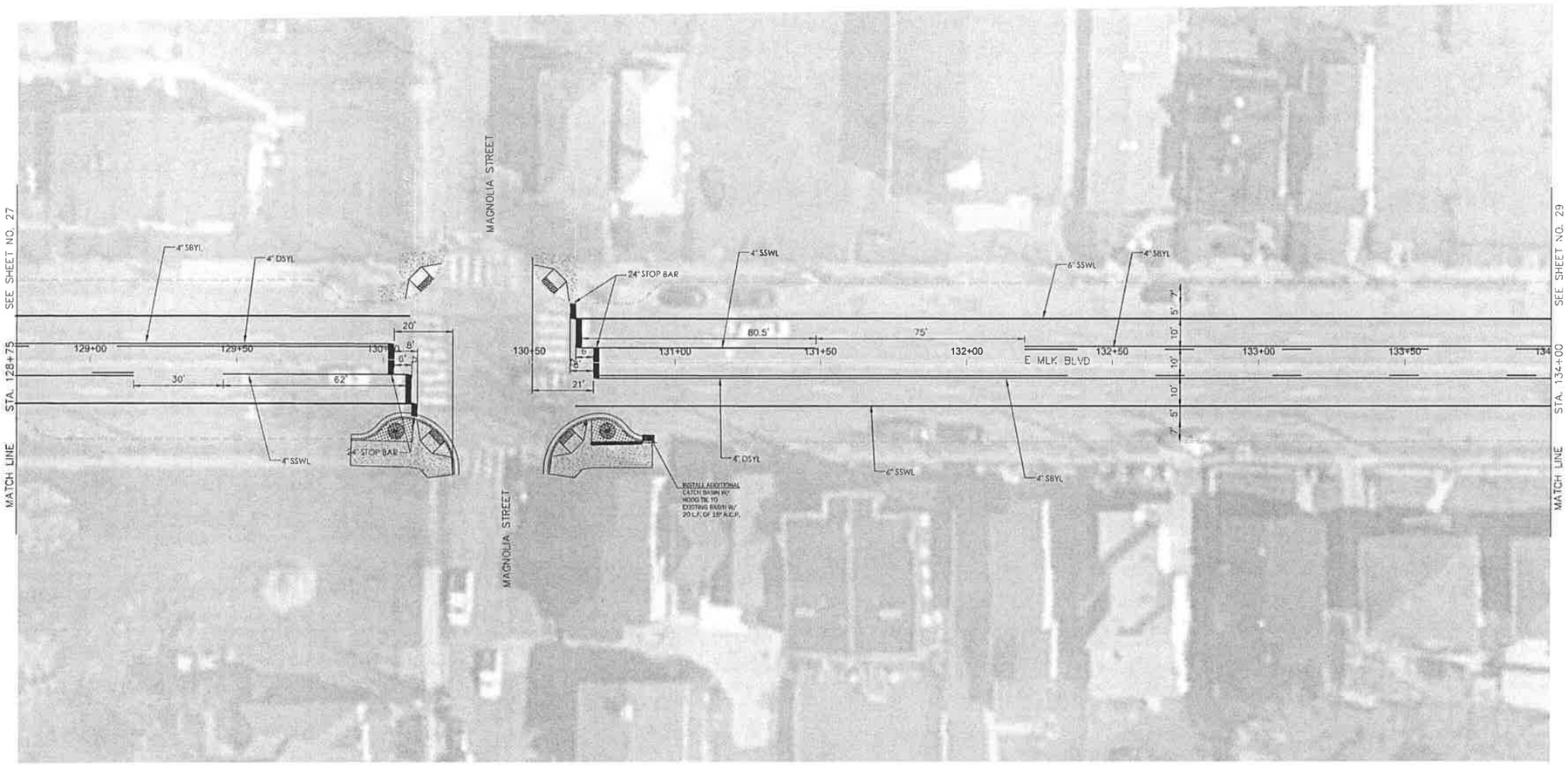
E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
27



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CURRENT POSTED SPEED LIMIT

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E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
28

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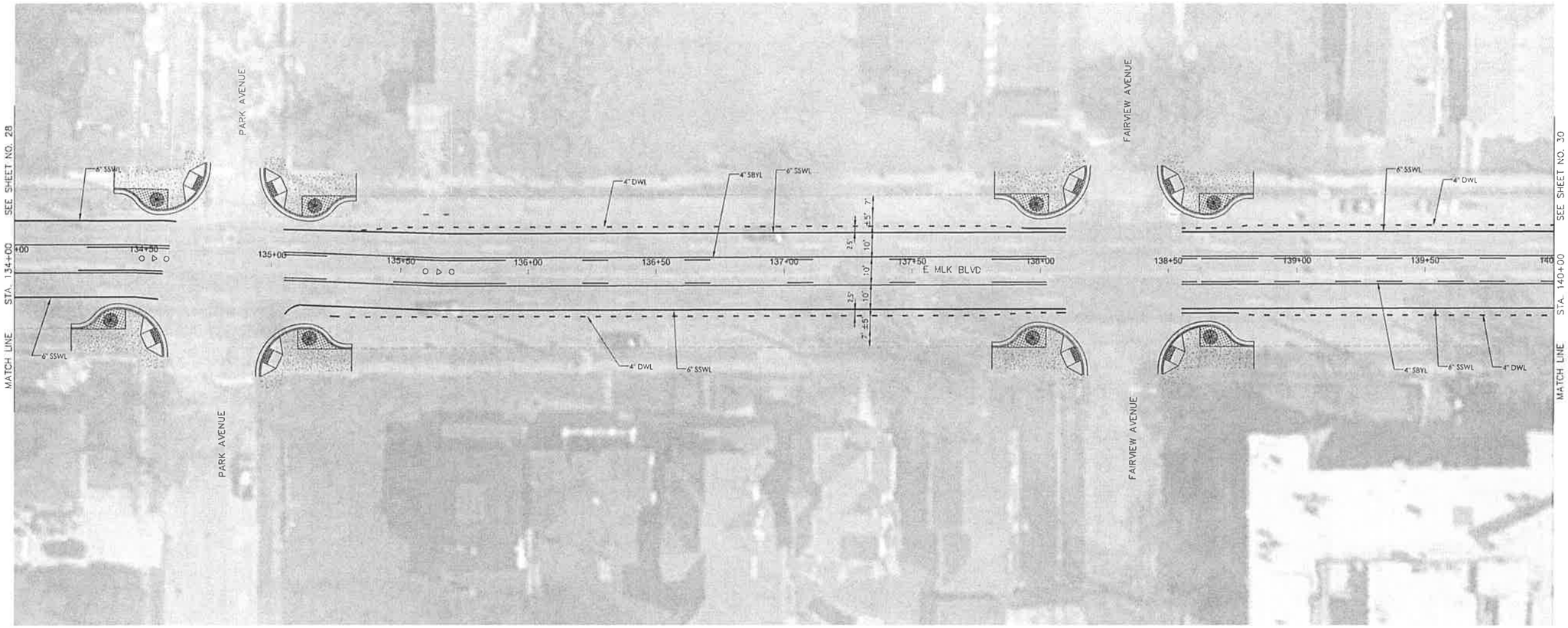

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E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
29

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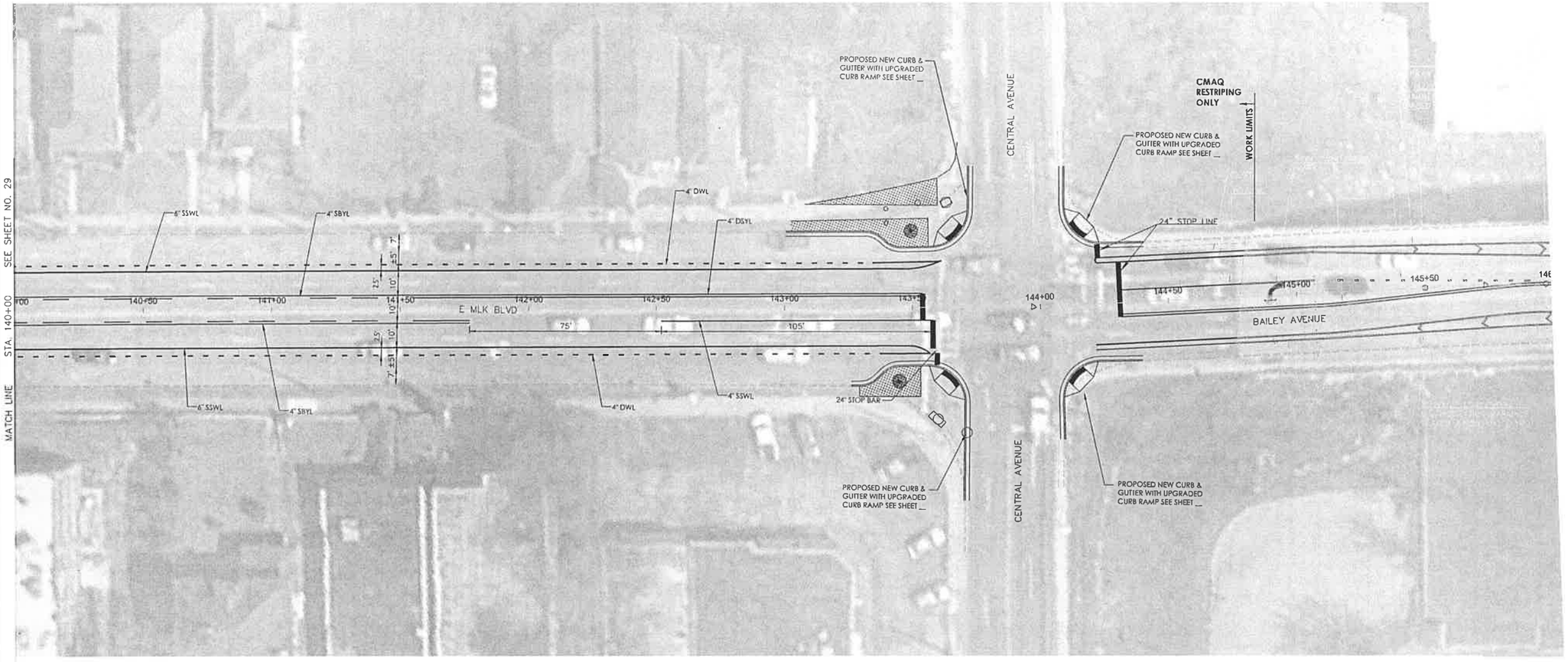
SHEET NUMBER
30



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4. ALONG BAILEY AVE. FROM CENTRAL AVE. TO DODDS AVE., THE ONLY STRIPING TO BE DONE IS THE FILLING BIKE LANES WITH GREEN PAINT AND ADDING FLEXIBLE BOLLARDS IN THE BUFFERED AREAS ARE TO BE INCLUDED IN THIS PROJECT. ALL OTHER STRIPING ALONG THIS AREA IS TO BE INSTALLED UNDER THE TIP PROJECT TDOT PIN #119814.00
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25 MPH
SPEED LIMIT 25

0 20' 40'
SCALE: 1"=20'

N

CURRENT POSTED SPEED LIMIT
SPEED LIMIT 25

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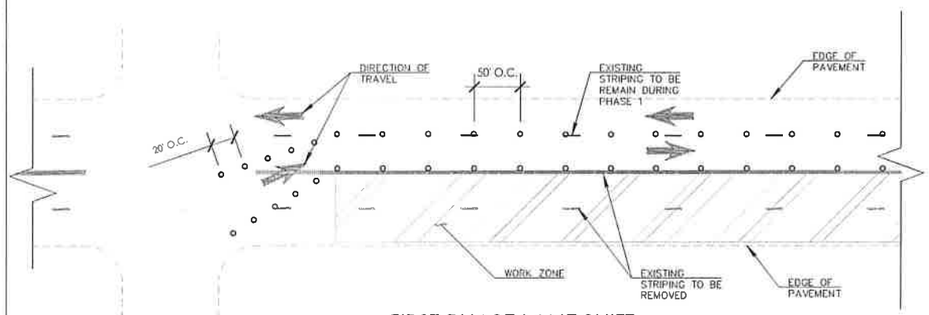
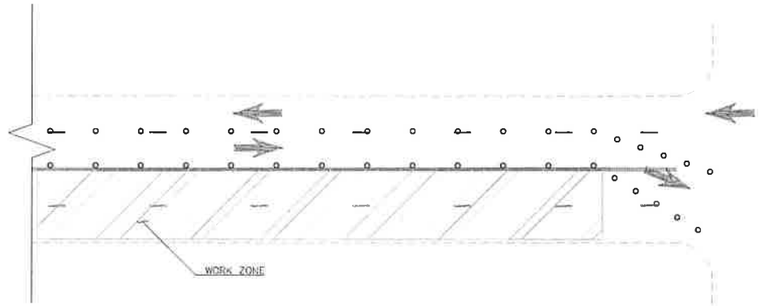
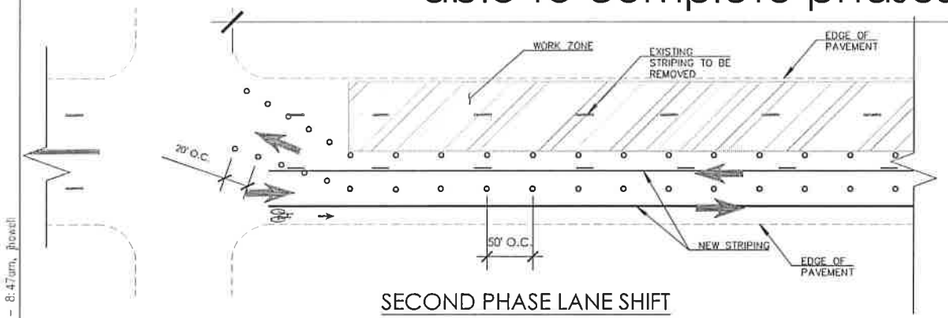


FIRST PHASE LANE SHIFT



Schedule traffic control and construction limits as to be able to complete phases 1 and 2 within one work day.



SECOND PHASE LANE SHIFT

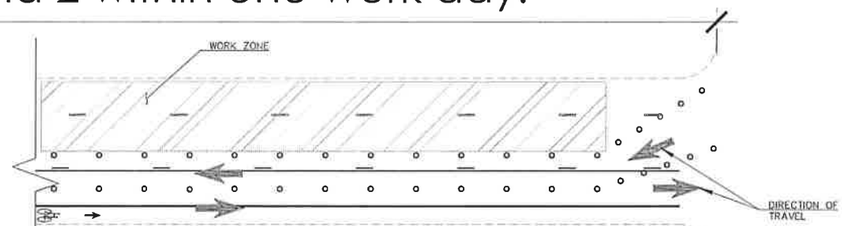
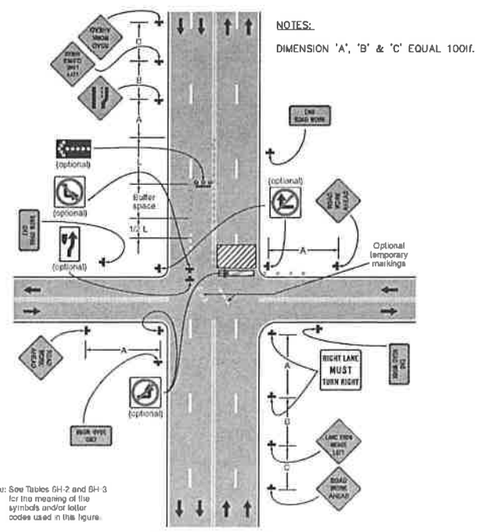


Figure 6H-24. Half Road Closure on the Far Side of an Intersection (TA-24)



Typical Application 24

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. RUBBLIZATION FROM GEORGIA AVE. TO CENTRAL AVE.
TRAFFIC CONTROL

SHEET NUMBER
31

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ALTERNATE 'B'

CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

HAMILTON COUNTY
EAST MLK BLVD. FROM GEORGIA AVE.
TO CENTRAL AVE. DIAMOND GRINDING

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM
GEORGIA AVE. TO CENTRAL AVE.
TITLE SHEET

SHEET NUMBER
1

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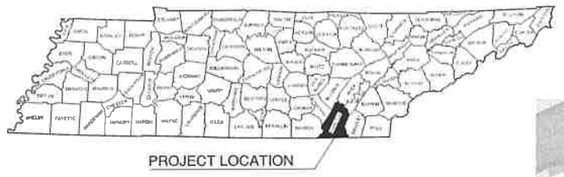
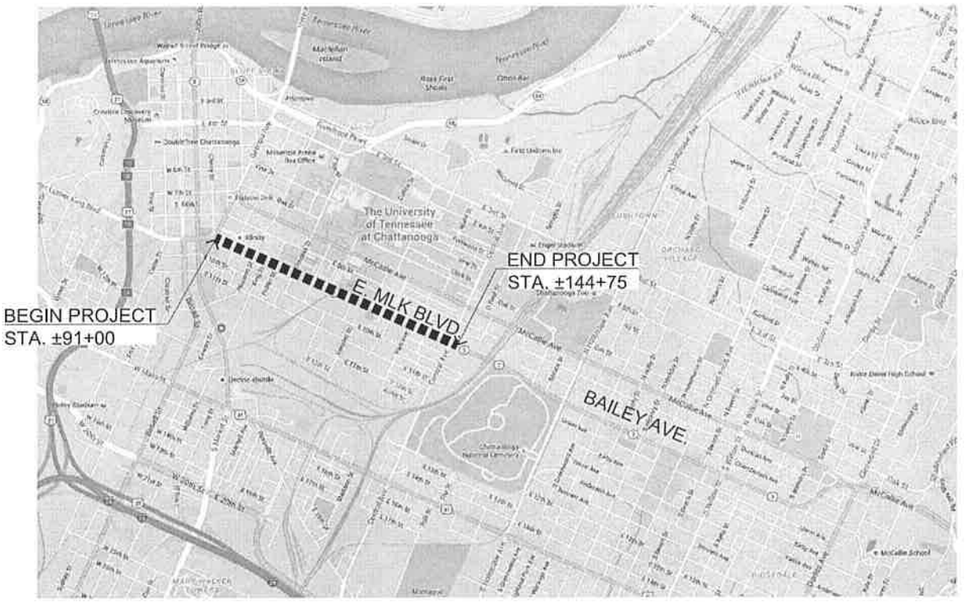
DIAMOND GRINDING DETAILS	4
E. MLK BLVD DIAMOND GRINDING PLAN	5-14
E. MLK BLVD. TEMPORARY STRIPING PLAN	15-24
TRAFFIC CONTROL	25



CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

HAMILTON COUNTY
EAST MLK BLVD. FROM GEORGIA AVE.
TO CENTRAL AVE. DIAMOND GRINDING



PROJECT LENGTH: 1± MILES

NO EXCLUSIONS
NO EQUATIONS

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE CDOT ENGINEER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

MAYOR
ANDY BERKE

CITY COUNCIL
DISTRICT 1 - CHIP HENDERSON
DISTRICT 2 - JERRY MITCHELL, CHAIRPERSON
DISTRICT 3 - KEN SMITH, VICE-CHAIRPERSON
DISTRICT 4 - DARRIN LEDFORD
DISTRICT 5 - RUSSELL GILBERT
DISTRICT 6 - CAROL B. BERZ
DISTRICT 7 - ERSKINE OGLESBY JR
DISTRICT 8 - ANTHONY BYRD
DISTRICT 9 - DEMETRUS COONROD

APPROVED: _____
CITY TRANSPORTATION ENGINEER

DATE: _____

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
TITLE SHEET

SHEET NUMBER
1

LOCALLY LET - MANAGED PROJECT

TENN.	YEAR	SHEET NO.
	2017	4
FED. AID PROJ. NO.	CM-9202(121)	
CHATTANOOGA PROJ. NO.	T14-043	
STATE PROJ. NO. (SPN):	33LPLM-F3-151	

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
GENERAL / SPECIAL NOTES

SHEET NUMBER
2

GENERAL NOTES

GRADING

1. Any area that is disturbed outside limits of construction during the life of this project shall be repaired by the contractor at his expense.

UTILITIES

1. The locations of utilities shown within these plans are approximate exact locations shall be determined in the field by contacting the utility companies involved. Notification by calling the TENNESSEE ONE CALL SYSTEM, INC. AT 1-800-351-1111 as required by TCA 65-31-106 will be required.
2. Unless otherwise noted, all utility adjustments will be performed by the utility or its representative. The contractor and utility owners will be required to cooperate with each other in order to expedite the work required by this contract. On contracts where construction stakes, lines, and grades are contract items, the contractor will be required to provide Right-Of-Way or slope stakes, ditch or stream bed grades, or other essential survey staking to prevent conflicts with the highway construction. Frequently, this will be required as the first item of work and at any location on the project directed by the engineer.
3. The contractor will provide all necessary protective measures to safeguard existing utilities from damage during construction of this project. In the event that special equipment is required to work over and around the utilities, the contractor will be required to furnish such equipment. The cost of protecting utilities from damage and furnishing special equipment will be included in the price bid for other items of construction.
4. Prior to submitting his bid, the contractor will be solely responsible for contacting owners of all affected utilities in order to determine the extent to which utility relocations and/or adjustments will have upon the schedule of work for the project. While some work may be required around utility facilities that will remain in place, other utility facilities may need to be adjusted concurrently with the contractor's operations. Advance clear cutting may be required by the engineer at any location where clearing is called for in the specifications and clear cutting is necessary for a utility relocation. Any additional cost will be included in the unit price bid for the clearing item specified in the plans.
5. The contractor shall notify each individual utility owner of his plan of operation in the area of the utilities. Prior to commencing work, the contractor shall contact the utility owners and request them to properly locate their respective utility on the ground. This notification shall be given at least three (3) business days prior to commencement of operations around the utility in accordance with TCA 65-31-106.

MISCELLANEOUS

1. All detour, access, service and frontage roads shall be constructed with a minimum of one (1) course of base material before traffic is interrupted on existing roads.
2. The contractor shall be required to remove and reset mailboxes where and as directed by the engineer.
3. Nothing in the general notes or special provisions shall relieve the contractor from his responsibilities toward the safety and convenience of the general public and the residents along the proposed construction area.

ROAD CLOSURE

1. No less than seven (7) days prior to the closure of the road, the contractor shall notify the following individuals or agencies completely describing the affected roads and the approximate duration of the construction: These parties include, but are not limited to: (1) Local law enforcement office, (2) Local fire department, (3) Ambulance service, (4) Local school superintendent, (5) United states postal service, and (6) Local road superintendent.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKINGS ON INTERMEDIATE LAYERS

1. Temporary pavement line markings on intermediate layers of pavement shall be reflective tape or reflectorized paint installed to permanent standards at the end of each days work. Short, unmarked sections shall not be allowed. These markings will be measured and paid for under Item NO. 716-05.01, painted pavement marking (4" line), l.m.
2. Temporary pavement line markings on intermediate layers of pavement shall be reflective tape or reflectorized paint installed to permanent standards at the end of each days work. Short, unmarked sections shall not be allowed. These markings will be measured and paid for under Item NO. 716-05.20, painted pavement marking (6" line), l.m.
3. Temporary pavement line markings on intermediate layers of pavement shall be reflective tape or reflectorized paint installed to permanent standards at the end of each days work. Short, unmarked sections shall not be allowed. These markings will be measured and paid for under Item NO. 716-05.02, painted pavement marking (8" barrier line), l.f.
3. Wide (8 inch) temporary pavement marking line will be measured and paid for under Item NO. 716-05.02 painted pavement marking (8" barrier line), l. f.

FINAL PAVEMENT MARKING

1. Permanent pavement line markings shall be 4" spray thermoplastic (60 mil) installed to permanent standards at the end of each day's work. Short unmarked sections shall not be allowed. Pavement markings will be measured and paid for under Item NO. 716-13.01, Spray thermo pvmt mrkng (60 mil) (4in line), l.m. The contractor shall have the option of using reflectorized paint installed to permanent standards at the end of each day's work and then installing the permanent markings after the paving operation is completed. The temporary markings for the final surface will not be measured and paid for directly, but the costs are to be included in the price bid for the permanent markings.
2. Permanent pavement line markings shall be 6" spray thermoplastic (60 mil) installed to permanent standards at the end of each day's work. Short unmarked sections shall not be allowed. Pavement markings will be measured and paid for under Item NO. 716-13.02, Spray thermo pvmt mrkng (60 mil) (6in line), l.m. The contractor shall have the option of using reflectorized paint installed to permanent standards at the end of each day's work and then installing the permanent markings after the paving operation is completed. The temporary markings for the final surface will not be measured and paid for directly, but the costs are to be included in the price bid for the permanent markings.
3. Permanent pavement line markings shall be 8" spray thermoplastic (60 mil) installed to permanent standards at the end of each day's work. Short unmarked sections shall not be allowed. Pavement markings will be measured and paid for under Item NO. 716-13.03, Spray thermo pvmt mrkng (60 mil) (8in barrier line), l.f. The contractor shall have the option of using reflectorized paint installed to permanent standards at the end of each day's work and then installing the permanent markings after the paving operation is completed. The temporary markings for the final surface will not be measured and paid for directly, but the costs are to be included in the price bid for the permanent markings.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

1. The pavement marking on the lane shift for centerline & lane lines will be installed and maintained to the same standards as for permanent markings on the main roadway. These markings shall be in place prior to allowing traffic onto the pavement. These pavement markings will be measured and paid for under Item NO.716-05.20, l.m.
2. Before opening the lane shift to traffic, the transitional markings on the existing roadway must be in place. These markings will be measured and paid for under Item NO. 712-09.01, removable pavement marking line, L.F. all existing markings in the area of these transitional markings shall be obliterated and all existing raised pavement markers shall be removed to eliminate conflicting markings. Removal of the existing conflicting markings and raised pavement markers will not be measured and paid for directly, but the cost will be included in Item NO. 712-01, traffic control, lump sum.
3. Before opening the lane shift to traffic, the transitional markings on the existing roadway must be in place. All existing markings in the area of these transitional markings shall be obliterated and all existing raised pavement markers shall be removed to eliminate conflicting markings. Removal of the existing conflicting markings and raised pavement markers will not be measured and paid for directly, but the cost will be included in Item NO. 712-01, traffic control, lump sum.

TRAFFIC CONTROL DIRECTIONAL SIGNING

1. All existing "EMERGENCY REFERENCE MARKERS" and "HOSPITAL SIGNS" shall be maintained within full view of the motoring public throughout all phases of construction. All work in moving and temporary supports shall be paid for under Item NO.712.01.
2. When "LOGO" signs are on access controlled and interstate reconstruction and new construction projects, the contractor shall be responsible for keeping these signs in full view to the motoring public during all phases of construction. The contractor shall be held responsible to the department for the reimbursement of the sign face if it is damaged. All work in moving these "LOGO" signs and the temporary supports are to be paid for under Item NO.712.01, as directed by the engineer. The supports for the final location of these signs will be paid for under other items of construction.
3. When existing "TOURIST ORIENTED DIRECTIONAL SIGNS" (TODS) are on non-access controlled construction projects, the contractor shall be responsible for keeping these signs in full view to the motoring public during all phases of construction. All work in moving these "TODS" and temporary supports are to be paid for under Item NO.712.01, as directed by the engineer. New supports and sign face for final location will be paid for under other items of construction.

SIGNALIZATION

1. Equipment and installation of traffic signals shall comply with TDOT standard specifications, Section 730.
2. Equipment and installation shall comply with the TDOT "SPECIAL PROVISIONS REGARDING SECTION 730C-TRAFFIC SIGNALS."
3. Salvageable equipment shall become the property of the (City or County) and shall be stockpiled at a location designated by the Engineer for pickup by the (City or County).
4. If resurfacing is included in the project, signal detection loops shall be installed before the final surface is applied.
5. Any signal heads, when visible to drivers but not operational, shall be completely covered.
6. An advance flash operation period is required to make motorists aware of the presence of new signal heads. New signal heads shall be put in flash operation for minimum of seven (7) calendar days up to fourteen (14) calendar days prior to activation of normal traffic signal operation. Other flash opertation time periods may be considered upon written approval from the REGIONAL TRAFFIC ENGINEER.
7. The contractor shall contact City of Chattanooga Department of Transportation Engineer a minimum of thirty (30) days prior to activation of the signal to obtain the initial signal timings.
8. The project engineer shall notify the local governmental agency responsible for traffic control maintenance at least one day in advance of the cold planing activity at signalized intersections where detector loops are on the pavement. The maintaining agency will then be responsible for disconnecting the loop detectors and making any necessary timing adjustments in the signal controller prior to the construction.
9. The project engineer shall be responsible for supplying the contractor with as built signal plans at the pre-construction conference. These plans will provide the contractor with the desired location for detector loop replacement.
10. Loops shall be installed in the leveling course if a leveling course is provided.
11. Loop replacement shall be in accordance with Section 730 of the STANDARD SPECIFICATIONS.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

1. Advanced warning signs shall not be displayed more than forty-eight (48) hours before physical construction begins. Signs may be erected up to one week before needed, if the sign face is fully covered.
2. If the contractor moves off the project, he shall cover or remove all unneeded signs as directed by the Engineer. Costs of removal, covering, and reinstalling signs shall not be measured and paid for separately, but all costs shall be included in the original unit price bid for Item NO 712-06, signs (construction) per square foot.
3. A long term but sporadic use warning sign, such as a flagger sign, may remain in place when not required provided the sign face is fully covered.
4. Traffic control devices shall not be displayed or erected unless related conditions are present necessitating warning.
5. Use of barricades, portable barrier rails, vertical panels, and drums shall be limited to the immediate areas of construction where a hazard is present. These devices shall not be stored along the roadway within thirty (30) feet of the edge of the traveled way before or after use unless protected by guardrail, bridge rail, and/or barriers installed for other purposes for roadways with current ADT'S less than 1500 and design speed of less than 60 MPH. This distance shall increase to forty-five (45) feet for roadways with current ADT'S of 1500 or greater and design speed of 60 MPH or greater or on the outside of a horizontal curve. These devices shall be removed from the construction work zone when the Engineer determines they are no longer needed. Where there is insufficient RIGHT-OF-WAY to provide for this required setback, The contractor shall determine the alternate locations and request the Engineer's approval to use them.
6. The contractor shall not be permitted to park any vehicles or construction equipment during periods of inactivity, within thirty (30) feet of the edge of pavement when the lane is open to traffic unless protected by guardrail, bridge rail, and/or barriers installed for other purposes for roadways with current ADT'S less than 1500 and design speed of less than 60 MPH. This distance shall be increased to forty-five (45) feet for roadways with current ADT'S of 1500 or greater and design speed of 60 MPH or greater or on the outside of a horizontal curve. Privately owned vehicles shall not be allowed to park within thirty (30) feet of an open traffic lane at any time unless protected as described above for roadways with current ADT'S less than 1500 and design speed of less than 60 MPH. This distance shall be increased to forty-five (45) feet for roadways with current ADT'S of 1500 or greater and design speed of 60 MPH or greater or on the outside of a horizontal curve. Where there is insufficient RIGHT-OF-WAY to provide for this required setback, the contractor shall determine the alternate locations and request the Engineer's approval to use them.
7. All detour and construction signing shall be in strict accordance with the manual on uniform traffic control devices.
8. All detours shall be paved, striped, signed and the vertical panels are to be in place before it is opened to traffic.

NATURAL RESOURCES

1. Soil materials must be prevented from entering Waters of the STATE/U.S. EPSC measures to protect natural resources and water quality shall be maintained throughout the construction period. Appropriate EPSC measures must be installed along the base of all fills and cuts, on the downhill side of stockpiled soil, and along natural resources in cleared areas to prevent sediment migration into streams, wetlands or other natural features in accordance with TDOT standards. EPSC measures shall be installed on the contour, entrenched and staked, and extend the width of the area to be cleared.
2. Instream EPSC devices require the tdot environmental division, permits section review and must be processed by the permits section to obtain water quality permits.
3. The contractor shall take appropriate steps prior to any construction and maintenance activities to ensure that environmental features (e.g., streams, wetlands, springs, etc.) are not impacted beyond permitted locations. If the contractor or TDOT inspector is unsure of the identity of an environmental feature, the inspector shall contact the TDOT region environmental tech group immediately.

INSPECTION, MAINTENANCE & REPAIR

1. The TDOT construction supervisor (or their designee) and the contractor's responsible party are responsible for inspections. Maintenance and repair activities are the responsibility of the contractor. THE TDOT construction supervisor or their designee shall complete the EPSC inspection reports and distribute copies per the contract.
2. TDOT consultants and contractor staff responsible for the inspection, implementation, maintenance, and/or repair of EPSC measures shall successfully complete the TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" course and any refresher courses as required to maintain certification. TDOT staff and supervisors responsible for the inspection, implementation, maintenance, and/or repair of EPSC measures shall successfully complete the TDOT "FUNDAMENTALS OF EROSION AND SEDIMENT CONTROL" class and any refresher courses as required to maintain certification.
3. EPSC controls shall be inspected according to permit requirements to verify measures have been installed and maintained in accordance with TDOT standard drawings, specifications, and good engineering practices. EPSC inspections shall be documented on the TDOT EPSC inspection report.
4. Discharge points shall be inspected to ascertain whether EPSC measures are effective in preventing erosion and controlling sediment including significant impacts to surrounding natural resources and adjacent property owners. Where discharge locations are inaccessible, nearby down gradient locations shall be inspected. Locations where vehicles enter and exit the site shall be inspected for evidence of offsite roadway sediment tracking.
5. Upon conclusion of the inspections, EPSC measures found to be ineffective shall be repaired, replaced, or modified before the next rain event, if possible, but in no case more than 24 hours after the inspection or when the condition is identified. If the repair, replacement or modification is not practical within the 24 hour timeframe, written documentation shall be provided in the field diary and epsc inspection report. An estimated repair, replacement or modification schedule shall be documented within 24 hours after identification.
6. Inspection, repair, and maintenance of EPSC measures shall be performed on a regular basis. sediment shall be removed from sediment control structures when the design capacity has been reduced by fifty percent (50%). During sediment removal, the contractor shall take steps to ensure that structural components of EPSC measures are not damaged and thus made ineffective. if damage does occur, the contractor shall repair the EPSC measures at the contractor's own expense.
7. The EPSC plan shall be updated whenever EPSC inspections indicate, or where state or federal officials determine epsc measures are proving ineffective in eliminating or significantly minimizing pollutant sources or are otherwise not achieving the general objectives of controlling pollutants in storm water discharges associated with the construction activity.
8. Sediment removed from sediment control structures shall be placed and treated in a manner so that the sediment is contained within the project limits and does not migrate onto adjacent properties and into waters of the State/U.S. cost for this treatment shall be included in price bid for Item NO. 209-05 sediment removal, c.y.

STRIPING

PEDESTRIAN CROSSWALKS TO ALIGN WITH EXISTING RAMPS AT ALL INTERSECTIONS

GENERAL NOTES

EROSION PREVENTION

1. Construction shall be sequenced and staged to minimize the exposure time of graded or denuded soil areas, preserve topsoil, and minimize soil compaction.
2. No work shall be started until the contractor's plan for the staging of operations, including the plan for staging of temporary and permanent EPSC measures, has been accepted by the TDOT responsible party. The contractor's EPSC plan shall incorporate and supplement, as acceptable, the basic EPSC devices on the EPSC plan.
3. Temporary stabilization shall be initiated within 14 calendar days when construction activities on a portion of the site are temporarily ceased and earth disturbing activities will not resume until after 14 calendar days. Permanent stabilization measures in disturbed areas shall be initiated within 14 calendar days after final grading of any phase of construction.
4. Permanent stabilization will replace temporary measures as soon as practicable. Priority shall be given to finishing operations and permanent EPSC measures over temporary EPSC measures on all projects.
5. Temporary or permanent stabilization must be free of fines (silt and clay sized particles). Unpacked gravel containing fines or crusher-run will not be considered sufficient stabilization.
6. Delaying the planting of cover vegetation until winter months or dry months should be avoided.

PERMITS, PLANS & RECORDS

1. The contractor shall be solely responsible for and obtain any necessary environmental permits or approvals, including but not limited to archaeology, ecology, historical, hazardous materials, air and noise, TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, from federal, state and/or local agencies regarding any material and staging areas and the operation of any project-dedicated asphalt and/or concrete plants to be used. Any such permits shall be supplied to the TDOT project responsible party prior to the use of the permitted area(s).
2. Any disagreement between the construction plans, the project as constructed, and the permit(s) issued for the project, shall be brought to the attention of the TDOT project responsible party. The environmental division, design division, and headquarters construction office shall be contacted in these instances and decide which has precedence and whether permit or plans revisions are needed. in general, permit conditions will prevail.
3. If a change in project scope occurs during construction, including value engineering, the TDOT permit section shall be contacted to determine whether permit revisions are needed. The roadway design division shall be contacted to determine if any plan revisions are needed.
4. The contractor shall review all existing permits to ensure that work at permitted sites does not exceed expiration date. If work is going to be continued after expiration dates, the contractor shall contact the TDOT project responsible party to commence permit renewal process.
5. All water quality permits shall be posted near the main entrance of the construction site accessible to the public. The name, company name, email address, telephone number and address of the project site owner, operator, or a local contact person with a brief description of the project shall also be posted. If posting this information near a main entrance is infeasible, the information shall be placed in a publicly accessible location near where the construction is actively underway and moved as necessary. This location shall be posted at the construction site. All postings shall be maintained in legible condition.
6. The EPSC plan is to serve as an initial guide for site personnel as the construction process develops. It must be amended, modified, and updated whenever a change in the design or construction of the project occurs. The stages depicted in the EPSC plans may not coincide with the actual phases of construction established by the contractor during construction, thus modifications will be required to ensure the EPSC plan is maintained to depict current site conditions. It should be maintained such that it will always reflect the measures that are installed during the various phases of construction. It is impractical to determine all the intermediate phases of construction that will occur, thus these documents will have to be updated throughout the life of the construction project.

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

1. The contractor shall establish and maintain a proactive method to prevent litter and construction wastes from entering waters of the State/U.S. These materials shall be removed from stormwater exposure prior to anticipated storm events or before being carried offsite by wind, or otherwise prevented from becoming a pollutant source for stormwater discharges. After use, materials used for epsc shall be removed from the site.
2. The contractor shall take appropriate steps to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the State/U.S. All equipment refueling, servicing, and staging areas shall comply with all local, state, and federal laws, rules, regulations, and ordinances, including those of the National Fire Protection Association. Appropriate containment measures for these areas shall be used.
3. If portable sanitary facilities are provided on construction sites, sanitary waste shall be collected from the portable units in a timely manner by a licensed waste management contractor or as required by any regulations. The contractor shall obtain any and all necessary permits to dispose of sanitary waste.
4. Only construction products needed shall be stored onsite by the contractor. The contractor shall store all materials under cover and in appropriate containers. Products must be stored in original containers and labeled. Material mixing shall be conducted in accordance with the manufacturer's recommendations. The contractor's responsible party shall inspect materials storage areas regularly to ensure proper use and disposal.
5. When possible, all products shall be used completely before properly disposing of the container offsite. The manufacturer's directions for disposal of materials and containers shall be followed.
6. All paint containers shall be tightly sealed and stored when not required for use. Excess paint shall be disposed of according to the manufacturer's instructions and applicable state and local regulations.
7. All hazardous waste materials shall be disposed of in a manner which is compliant with local or state regulations. Site personnel shall be instructed in these practices, and the individual designated as the contractor's responsible party shall be responsible for seeing that these practices are followed. The contractor shall obtain any and all necessary permits to dispose of hazardous material.
8. Waste material (earth, rock, asphalt, concrete, etc.) not required for the construction of the project will be disposed of by the contractor. Impacts to waters of the STATE/U.S. shall be avoided if possible. If unavoidable, the contractor will obtain any and all necessary permits including, but not limited to NPDES, Aquatic Resources Alteration permit(s), Corps of Engineers section 404 permits, and TVA section 26A permits to dispose of waste materials.

SUPPORT ACTIVITIES

1. Materials and staging areas shall not affect any waters of the state/u.s. unless these areas are specifically covered by environmental permits, obtained solely by the contractor. The contractor shall review all existing permits to ensure that work at permitted sites does not exceed expiration dates. If work is going to be continued after expiration dates, the contractor shall contact the TDOT project responsible party to commence permit renewal process.
2. If offsite borrow and waste areas become necessary during the life of the project, this support activity shall be addressed per the TDOT waste and borrow manual.
3. Materials and staging areas shall be located in non-wetland areas and above the 100-YEAR, Federal Emergency Management Agency floodplain.
4. It will be the responsibility of the contractor to supply EPSC plans for the material and staging areas to the environmental division compliance and field services office for review.

SPILL PREVENTION, MANAGEMENT & NOTIFICATION

1. All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage and spills.
2. For all hazardous materials stored onsite, the manufacturer's recommended methods for spill clean up shall be clearly posted. Site personnel shall be made aware of the procedures and the locations of the information and cleanup supplies.
3. Appropriate cleanup materials and equipment shall be maintained by the contractor in the materials storage area onsite and under cover. Spill response equipment shall be inspected and maintained by the contractor as necessary to replace any materials used in spill response activities.
4. All spills shall be cleaned immediately after discovery and the materials disposed of properly. the spill area shall be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
5. The contractor's responsible party shall be the spill prevention and cleanup coordinator. The contractor is responsible for ensuring that the site superintendent has had appropriate training for hazardous materials handling, spill management, and cleanup.
6. If an oil sheen is observed on surface water (E.G. settling ponds, detention ponds, swales), action shall be taken immediately to remove the material causing the sheen. The contractor shall use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
7. Fertilizers shall be applied only in the amounts specified. Once applied, fertilizers shall be worked into the soil to limit the exposure to stormwater.
8. If a spill occurs the contractor's responsible party shall be responsible for completing the spill reporting form and for reporting the spill to the TDOT project responsible party. All spills must be reported to the appropriate agency, and measures shall be taken immediately to prevent the pollution of waters of the State/U.S., including groundwater, should a spill occur.
9. Where a release containing a hazardous substance in an amount equal to or in excess of a reportable quantity established under either 40 CFR 117 or 40 CFR 302 occurs during a 24 hour period, see the latest TENNESSEE general permit NO. TNR100000 stormwater discharges from construction activities section 5.1 for reporting requirements.
10. Contractor's bulk fuel and petroleum products stored onsite or adjacent to the R.O.W. in above ground storage containers with a combined capacity of 1320 gallons or more shall have secondary containment. The contractor shall be responsible for preparing a Spill Prevention Control and Countermeasure (SPCC) plan for the bulk storage and be solely responsible for obtaining any necessary local, state, and federal permits. The SPCC plan and/or permits shall be kept onsite and a copy provided to the TDOT project responsible prior to storing 1320 gallons on site.

CITY OF CHATTANOOGA SEAL
CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES

PAVEMENT RESURFACING

1. Traffic will be allowed to temporarily drive on the milled surface of the roadway under the following conditions only:
   a. The milled surface is fine textured. The fine texture shall be obtained by a milling machine utilizing a milling head with teeth spacing 3/8" or less operating at less than 80 feet per minute.
   b. The surface shall be swept and cleaned of all loose materials.
   c. The difference in elevation between the milled surface and the adjacent lane shall not exceed 1 1/2 inches.
   d. The milled surface shall be paved within 72 hours if the current ADT is ≥ 70,000 or within 96 hours if the current ADT is < 70,000.
   e. Rain or inclement weather is not expected or forecasted within 48 hours after milling.
   f. All applicable signing is installed in accordance with the MUTCD signing shall include motorcycle warning signs (TN-64) placed in advance of any milled areas.
   g. If milled surface begins to deteriorate, paving to cover up deteriorating milled surfaces should occur as directed by the engineer during the next working day. If severe distress occurs, immediate response will be required.
   h. Only one lane in each direction shall have a milled surface at one time.

SIGNALIZATION

1. The design of traffic signal support poles, mast arms, strain poles, etc. shall be in conformance with the AASHTO standard specifications for structural supports for highway signs, luminaries and traffic signals, current edition. Overhead cantilevered traffic signal structures shall be designed for Fatigue Category 1.

FINAL PAVEMENT MARKING

1. The contractor may elect to use either thermoplastic or preformed plastic for specialty striping These items include stop lines, cross walks, arrows, words, channelization, and other specialty striping items except lines.
2. The following footnote shall be added to all Specialty Striping Items: "The contractor may elect to substitute Preformed Plastic for Thermoplastic. Preformed Plastic shall be paid for at the same unit price as bid for Thermoplastic."

STRIPING
Pedestrian crosswalks to align with existing ramps at all intersections.

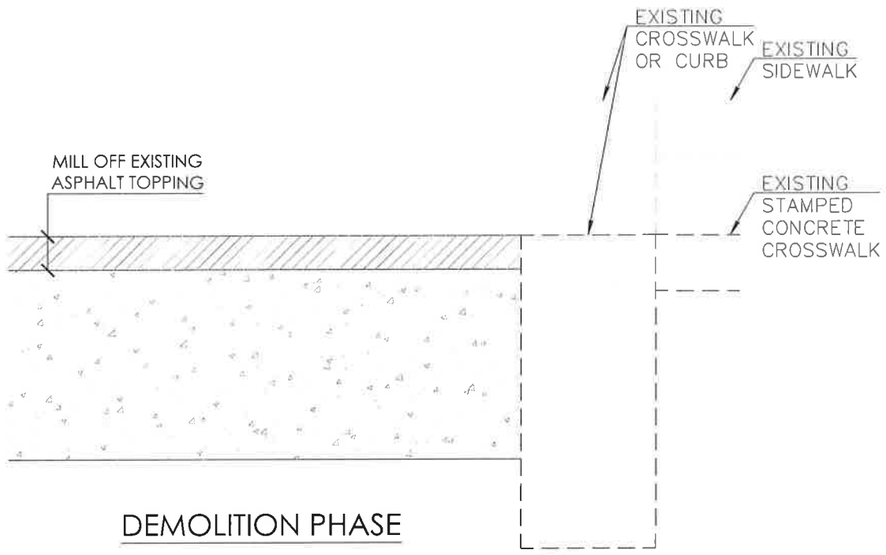
UTILITY OWNERS

UTILITY	OWNER	PHONE NO.	CONTACT	ADDRESS	CITY	STATE	ZIP CODE
TRAFFIC SIGNAL	CITY OF CHATTANOOGA DEPARTMENT OF TRANSPORTATION	423-643-5950	TOMMY TROTTER	1250 MARKET ST, STE. 3000	CHATTANOOGA	TN	37402
TELEPHONE	BELLSOUTH dba AT&T	423-266-5962	STEVE McCORMICK	300 E. M.L.K. BOULEVARD	CHATTANOOGA	TN	37403
WATER	TENNESSEE AMERICAN WATER	423-771-4713	GRADY STOUT	P.O. BOX 6338	CHATTANOOGA	TN	37401
SEWAGE	CITY OF CHATTANOOGA WASTE RESOURCES	423-757-5026	DISPATCH	455 MOCCASIN BEND ROAD	CHATTANOOGA	TN	37405
GAS	CHATTANOOGA GAS COMPANY	423-490-4289	BENNIE KINSEY	6125 PRESERVATION DRIVE	CHATTANOOGA	TN	37416
POWER	ELECTRIC POWER BOARD	423-648-1372	DAVID HENDERSON	P.O. BOX 182255	CHATTANOOGA	TN	37422
CABLE TV	COMCAST CABLE TELEVISION	423-855-4300	GEOFF SHOOK	2030 EAST POLYMER DRIVE	CHATTANOOGA	TN	37421
RAILROAD (TVRM)	TENNESSEE VALLEY RAILROAD MUSEUM	423-605-2331	GEORGE WALKER	4119 CROMWELL RD	CHATTANOOGA	TN	37421
STORMWATER	CITY OF CHATTANOOGA PUBLIC WORKS	423-643-6311		1250 MARKET ST, STE. 2000	CHATTANOOGA	TN	37402
FIRE HYDRANT	CITY OF CHATTANOOGA FIRE DEPARTMENT	423-643-5622	MICHAEL WRIGHT		CHATTANOOGA	TN	37402

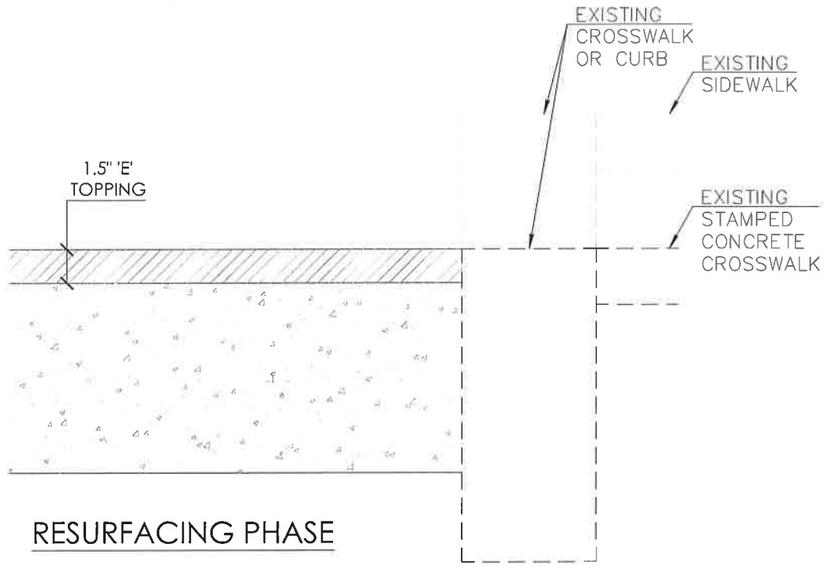
CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
GENERAL / SPECIAL NOTES

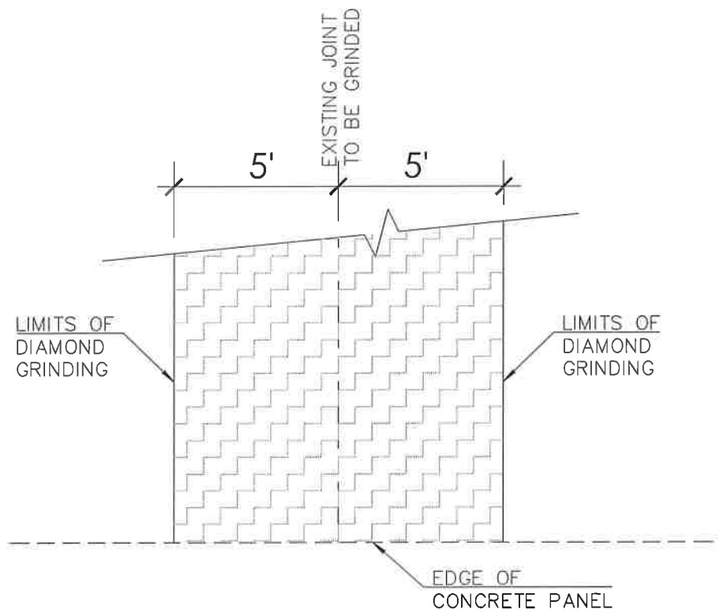
SHEET NUMBER
3



DEMOLITION PHASE



RESURFACING PHASE



DIAMOND GRINDING - LIMITS DETAIL

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM
GEORGIA AVE. TO CENTRAL AVE.
DIAMOND GRINDING DETAILS

SHEET
NUMBER
4

NOTES:

1. ALL EXISTING SIGNS SHALL REMAIN UNLESS NOTED OTHERWISE.
2. ALL EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.
3. EXISTING ROADWAY WIDTHS ARE BASED ON AERIAL PHOTOGRAPHY AND FIELD MEASUREMENTS. THE CONTRACTOR SHALL LAYOUT PROPOSED PAVEMENT MARKINGS MEASURED FROM FACE OF CURB. IF MINIMUM DIMENSIONS CANNOT BE ACHIEVED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
4. PAVEMENT MARKINGS NOT CALLED OUT ARE TO BE INSTALLED UNDER PROJECT TDOT PIN #119814.00.
5. COORDINATES ARE NAD/83 (1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000000 (CITY OF CHATTANOOGA DEVELOPMENT RESOURCE CENTER GPS BASE STATION) AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. DIAMOND GRINDING PLAN

SHEET NUMBER

5

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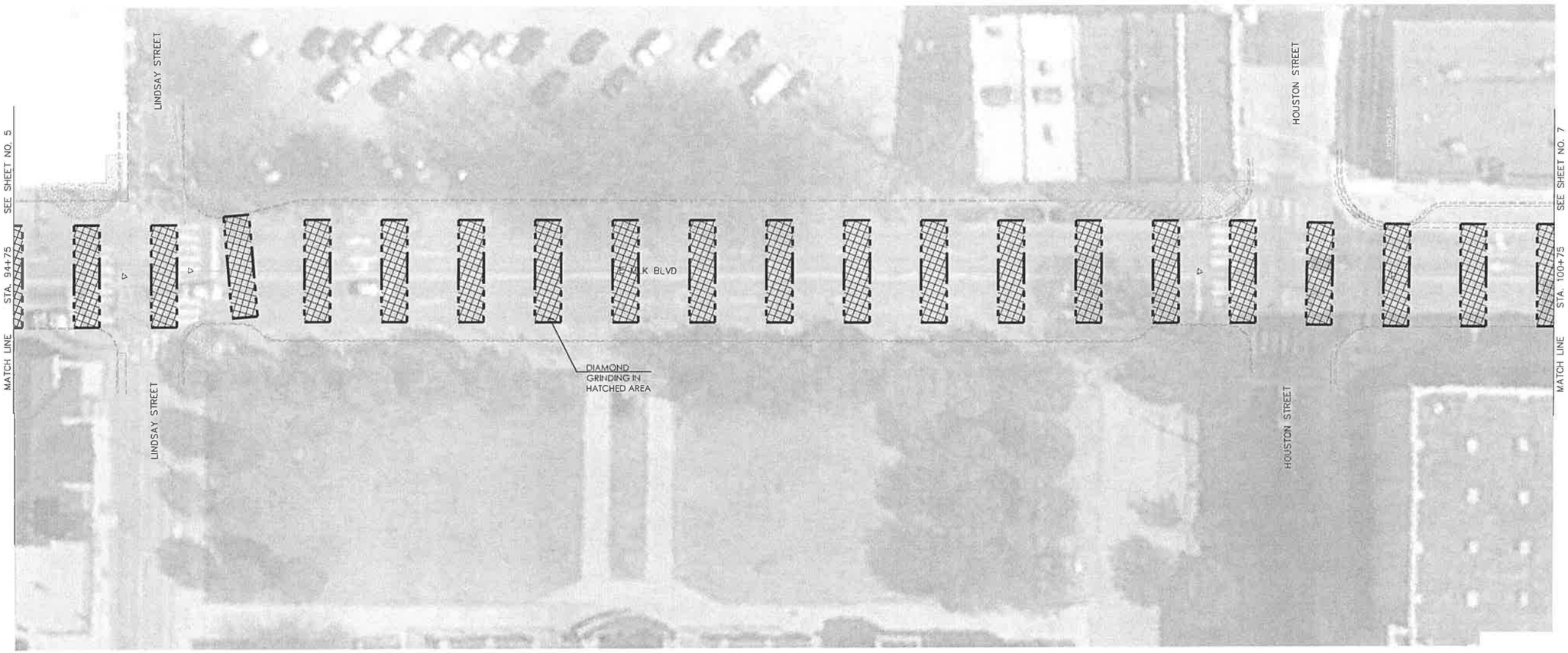

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CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

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DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM
GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. DIAMOND GRINDING PLAN

SHEET NUMBER

6

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CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

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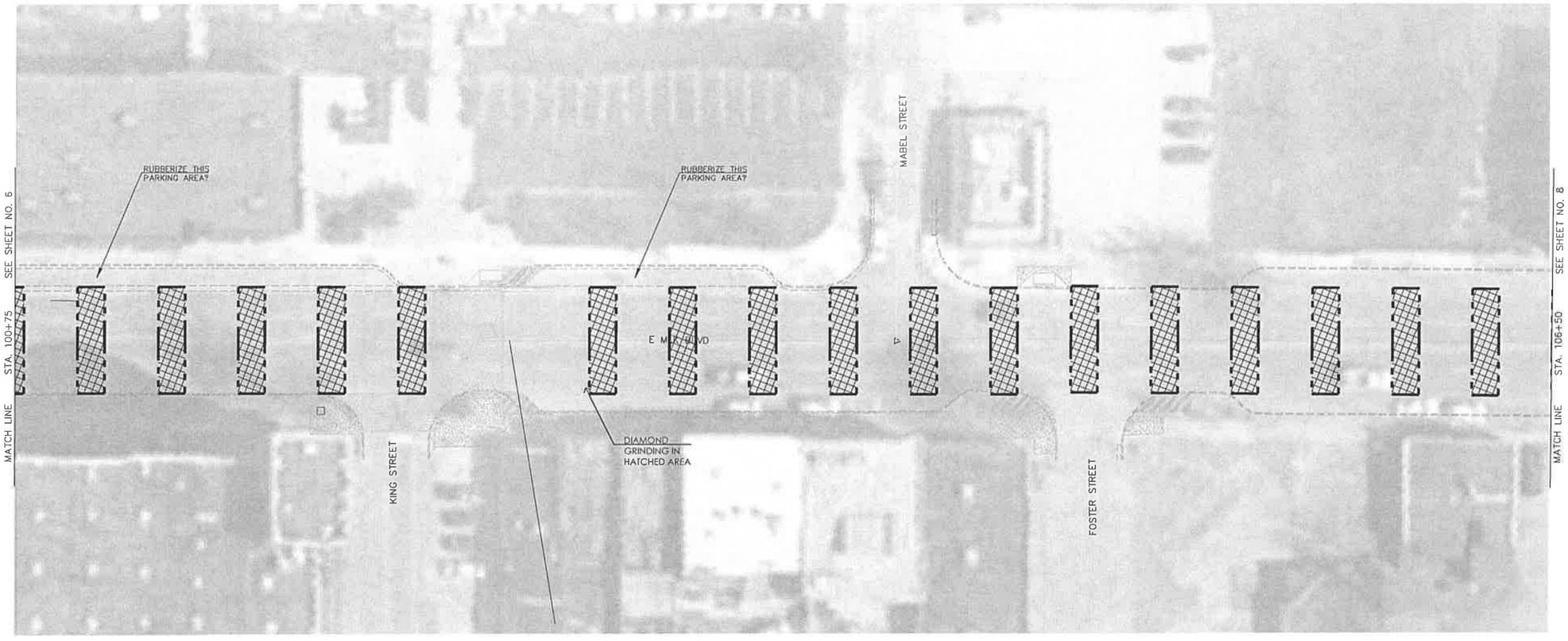
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. DIAMOND GRINDING PLAN

SHEET NUMBER
7



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0 20' 40'
SCALE: 1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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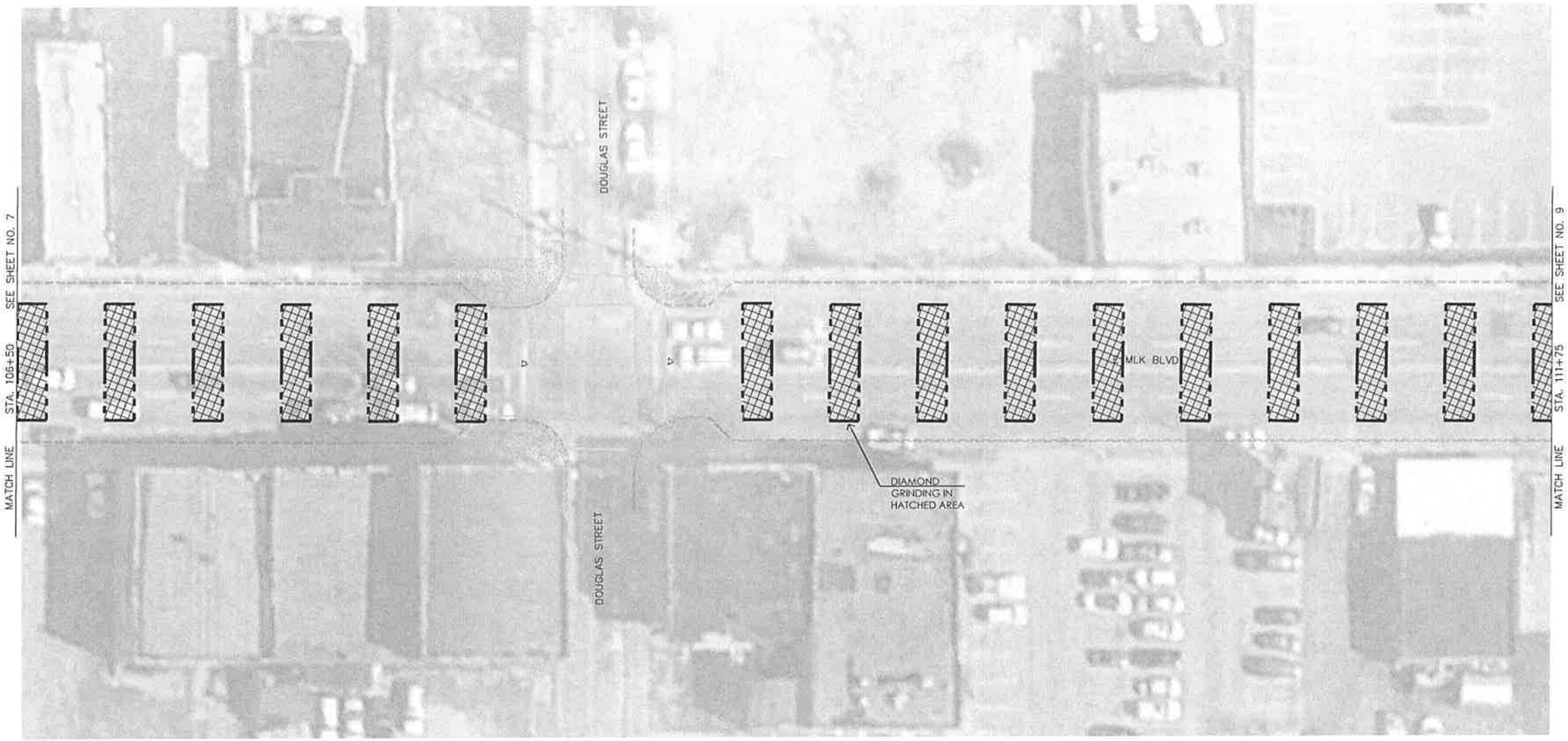

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0 20' 40'
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CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
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CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. DIAMOND GRINDING PLAN

SHEET NUMBER
8

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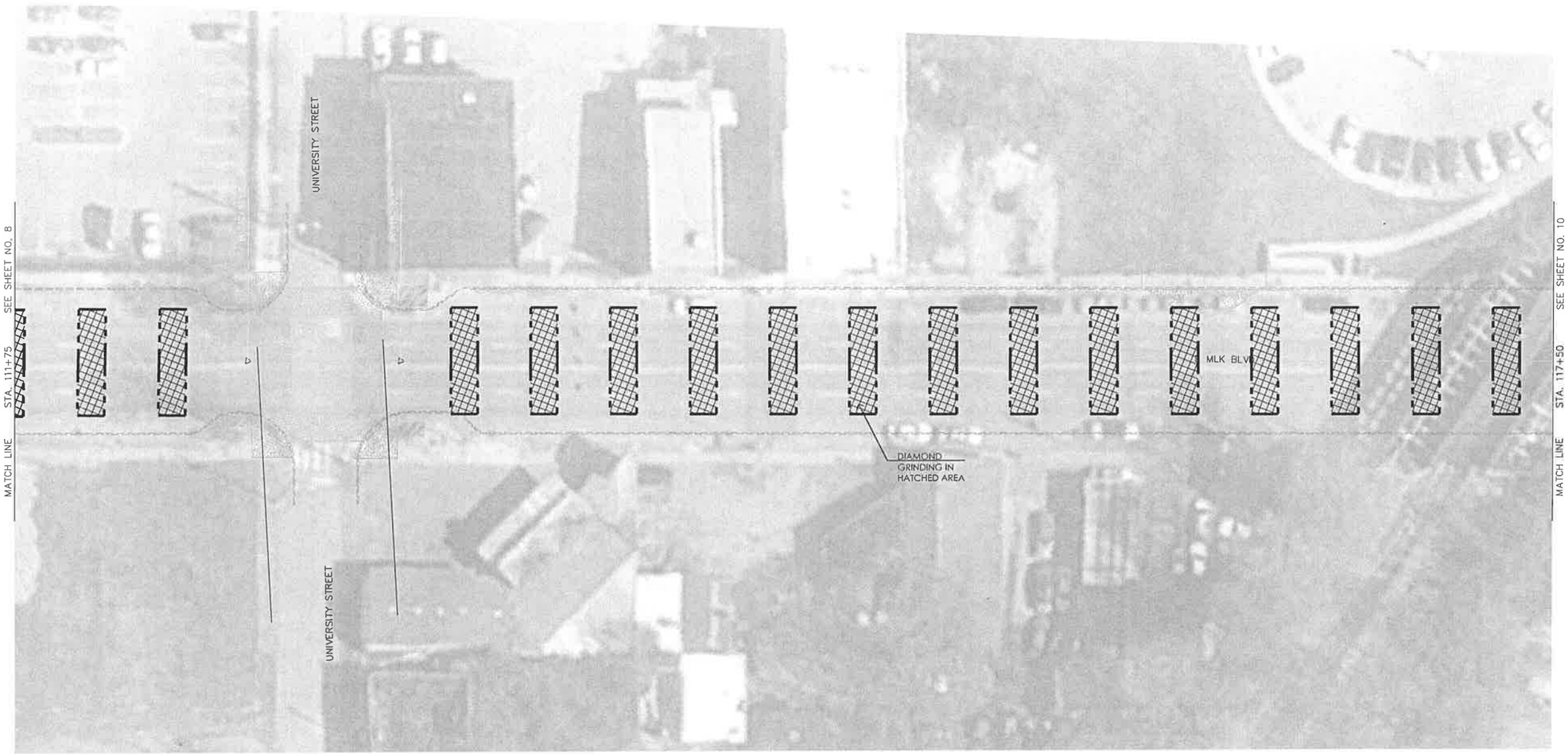

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0 20' 40'
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CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. DIAMOND GRINDING PLAN

SHEET NUMBER
9

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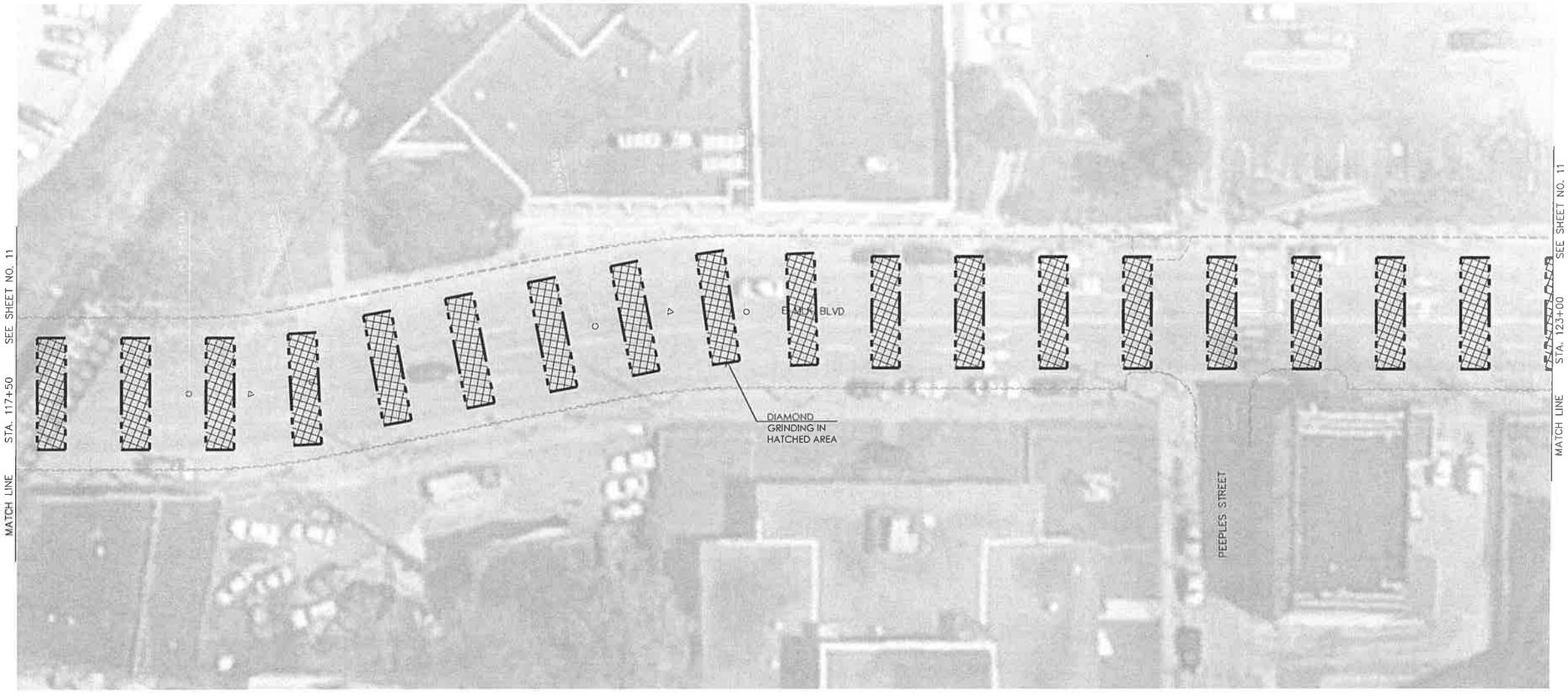

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0 20' 40'
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CURRENT POSTED SPEED LIMIT

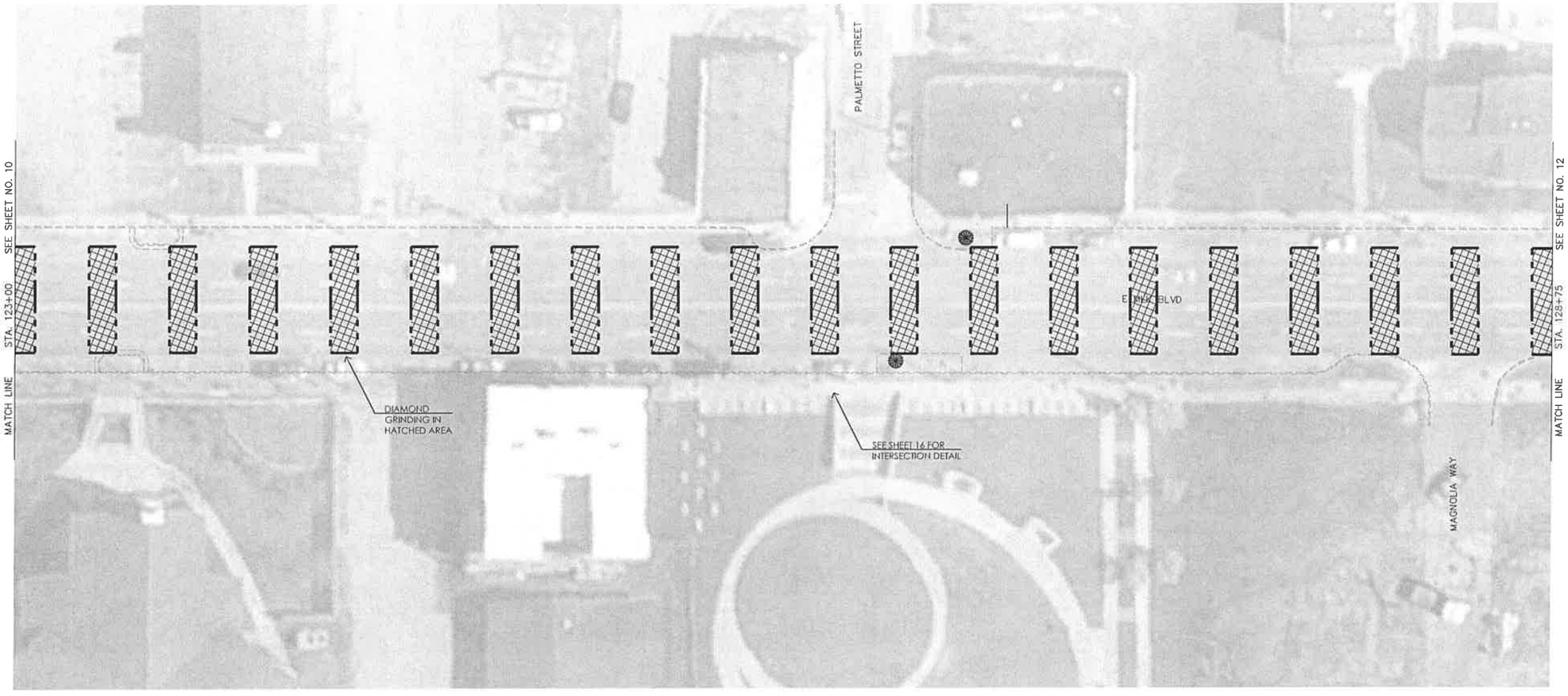
SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. DIAMOND GRINDING PLAN

SHEET NUMBER
10



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0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

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1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. DIAMOND GRINDING PLAN

SHEET NUMBER
11

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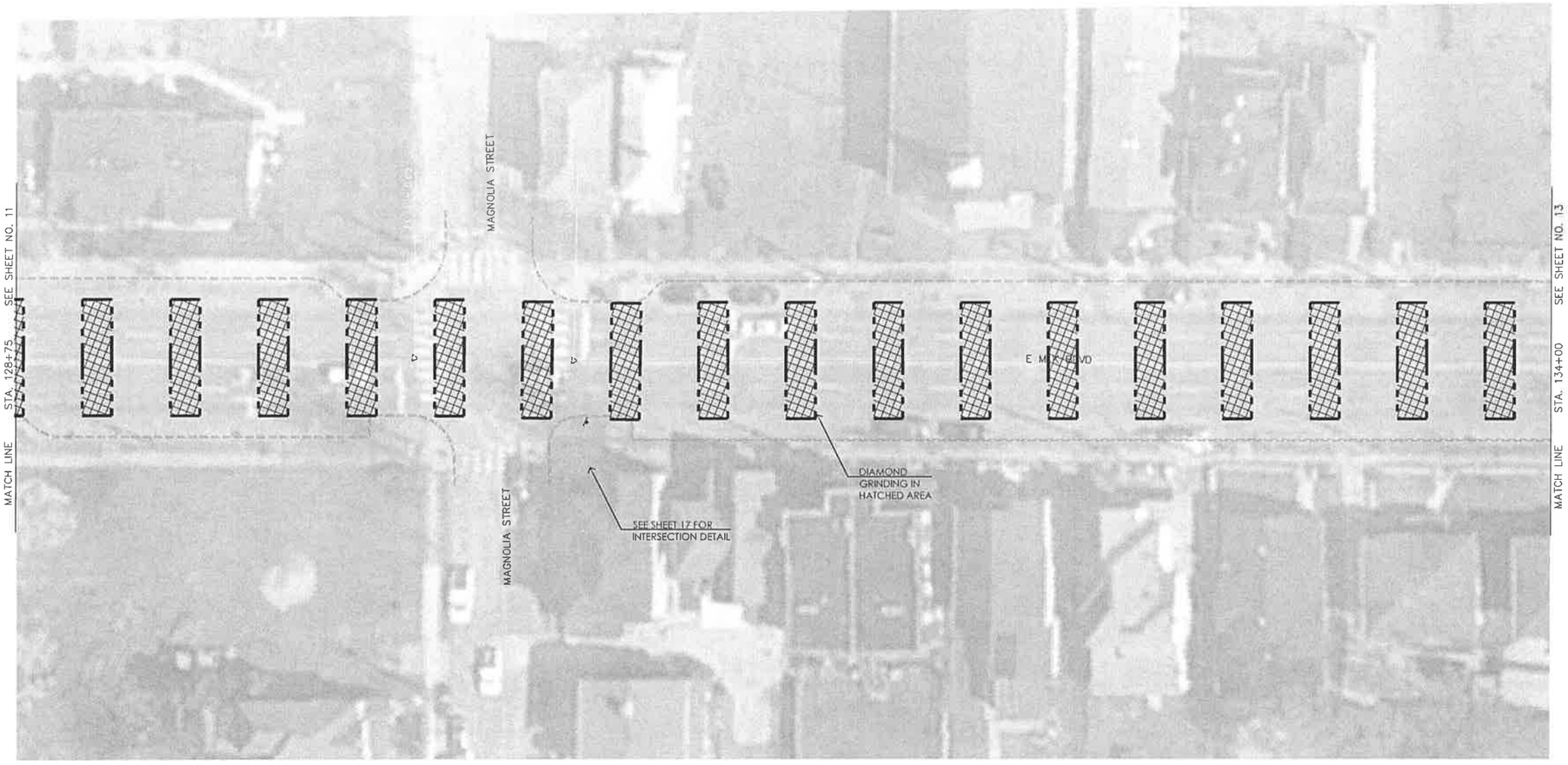

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0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. DIAMOND GRINDING PLAN

SHEET NUMBER
12

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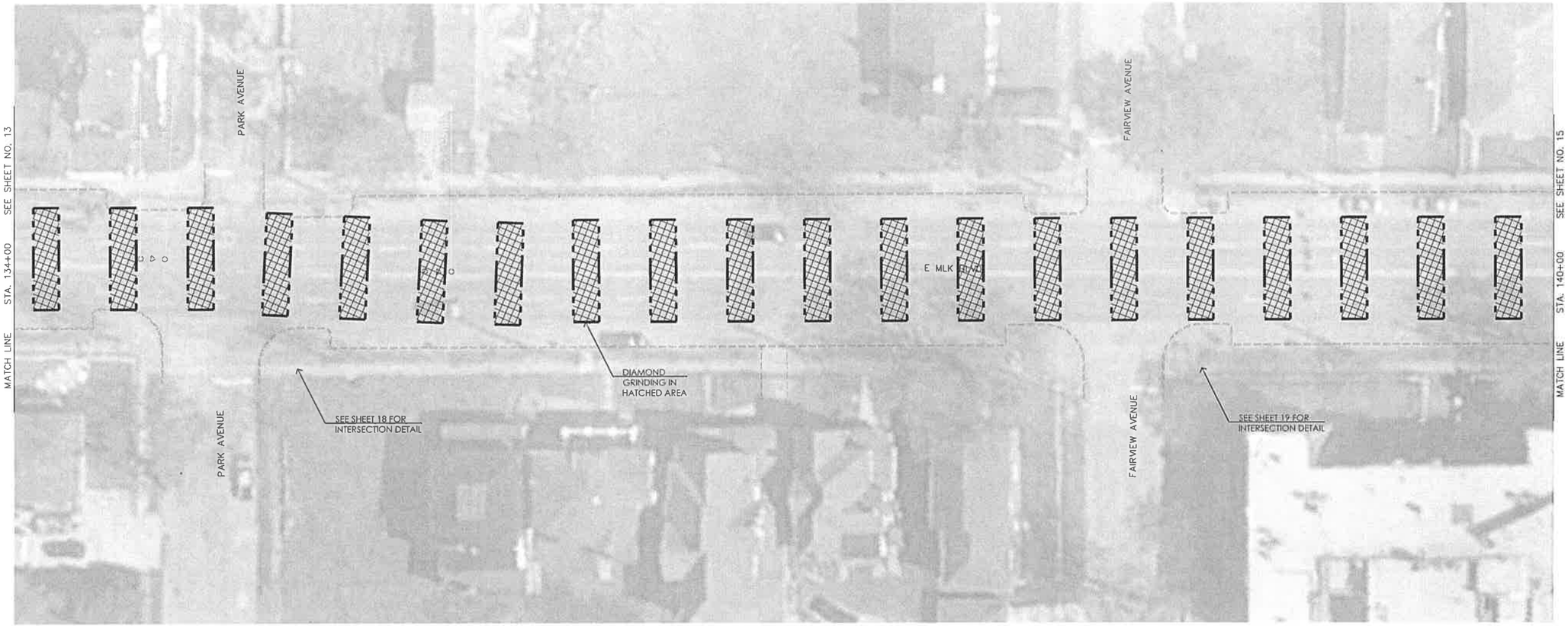

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0 20' 40'
SCALE: 1"=20'

N

CURRENT POSTED SPEED LIMIT

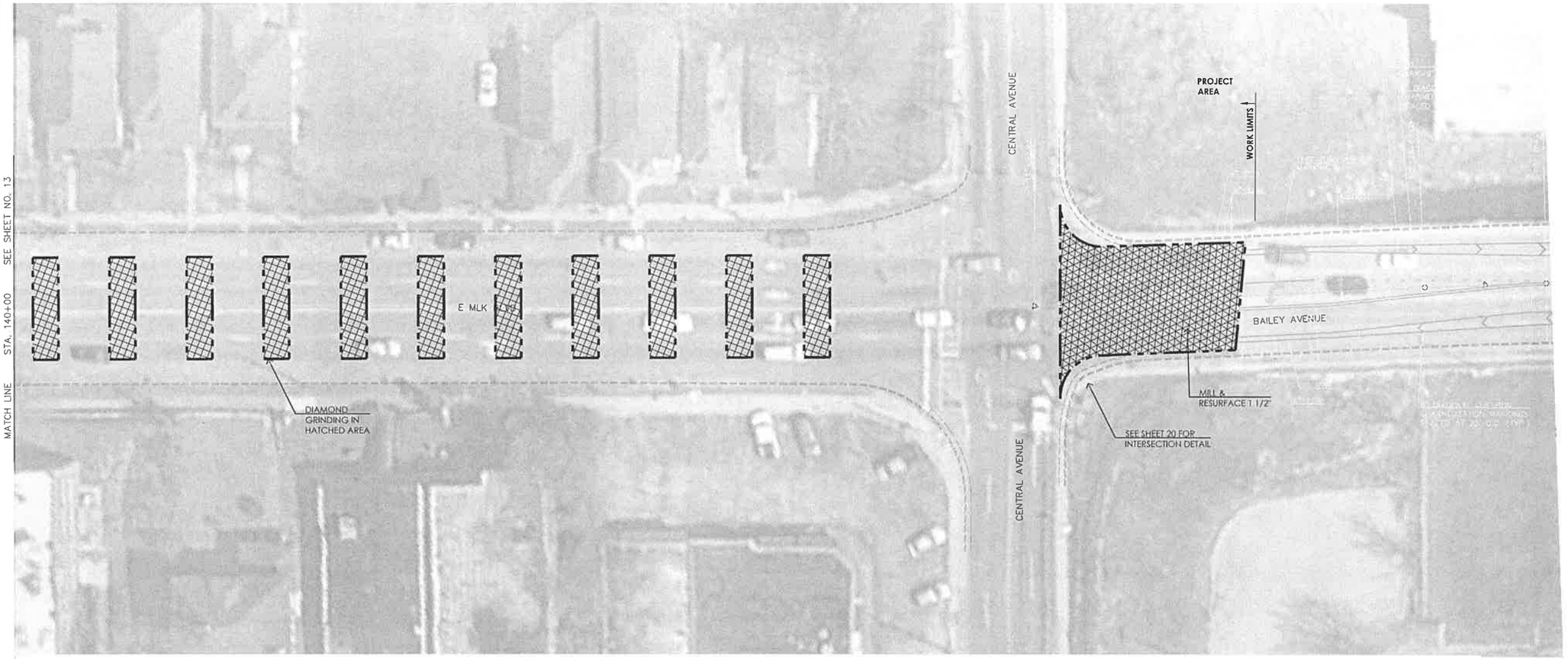
SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. DIAMOND GRINDING PLAN

SHEET NUMBER
13



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4. ALONG BAILEY AVE. FROM CENTRAL AVE. TO DODDS AVE. THE ONLY STRIPING TO BE DONE IS THE FILLING BIKE LANES WITH GREEN PAINT AND ADDING FLEXIBLE BOLLARDS IN THE BUFFERED AREAS ARE TO BE INCLUDED IN THIS PROJECT. ALL OTHER STRIPING ALONG THIS AREA IS TO BE INSTALLED UNDER THE TIP PROJECT TDOT PIN #119814.00
5. COORDINATES ARE NAD/83 (1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000000 (CITY OF CHATTANOOGA DEVELOPMENT RESOURCE CENTER GPS BASE STATION) AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

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DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. DIAMOND GRINDING PLAN

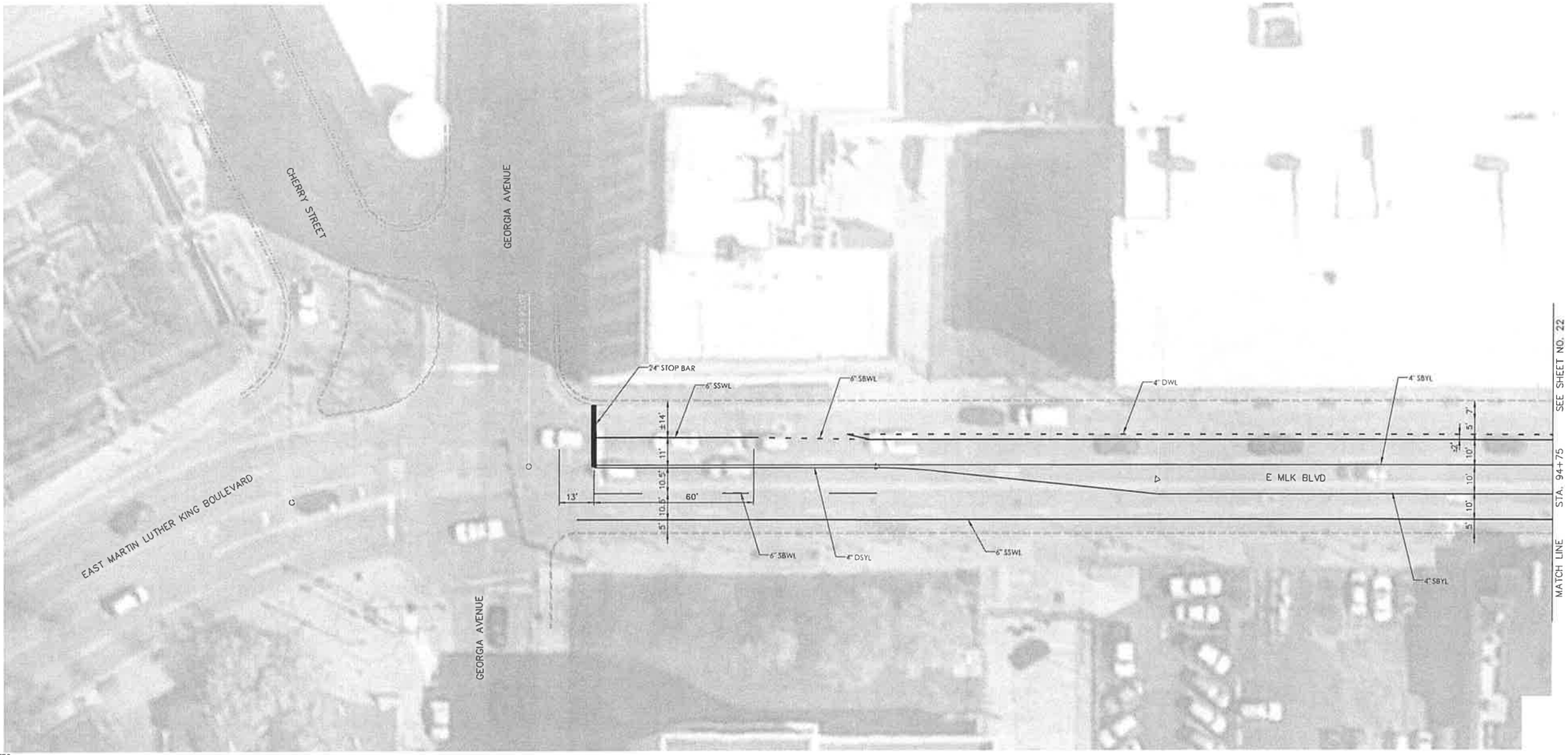
SHEET NUMBER
14

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
15



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SBWL - SINGLE BROKEN WHITE LINE
DWL - DOTTED WHITE LINE
DYL - DOTTED YELLOW LINE

0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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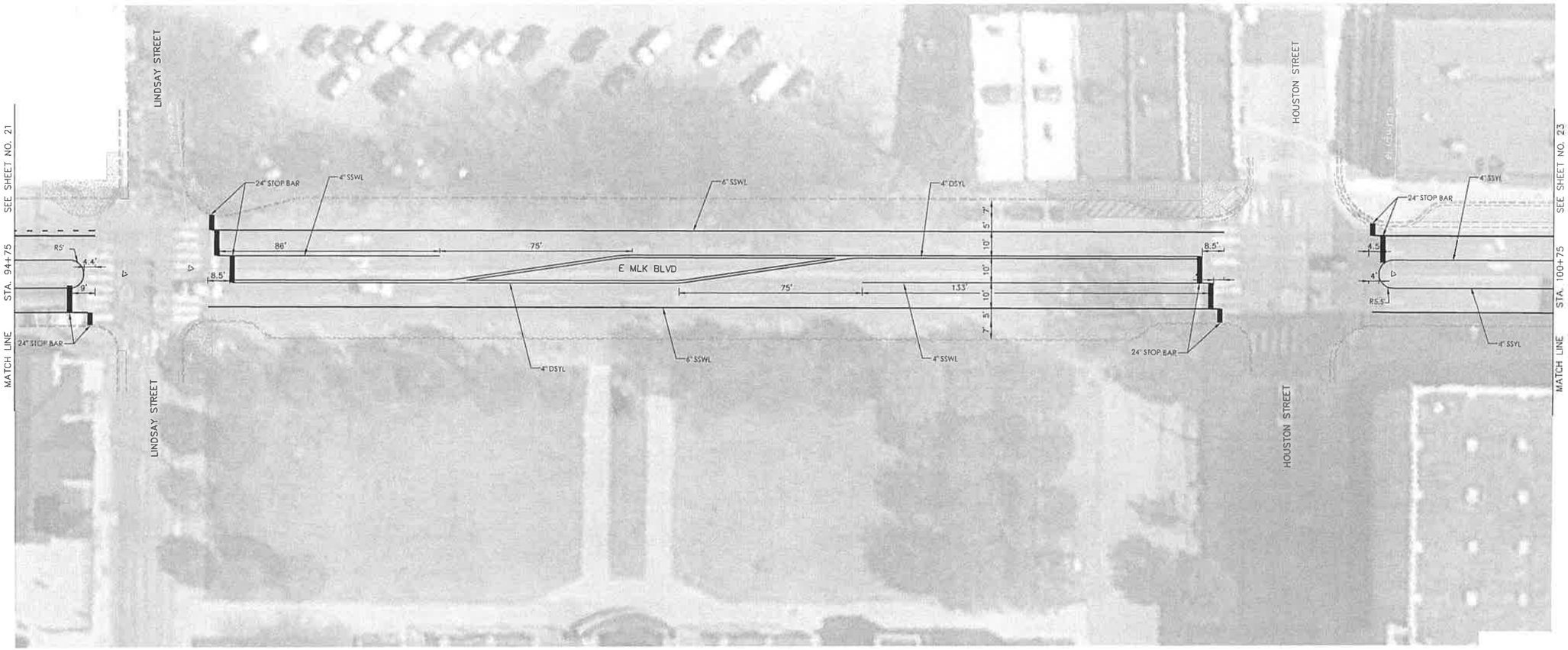

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CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
16

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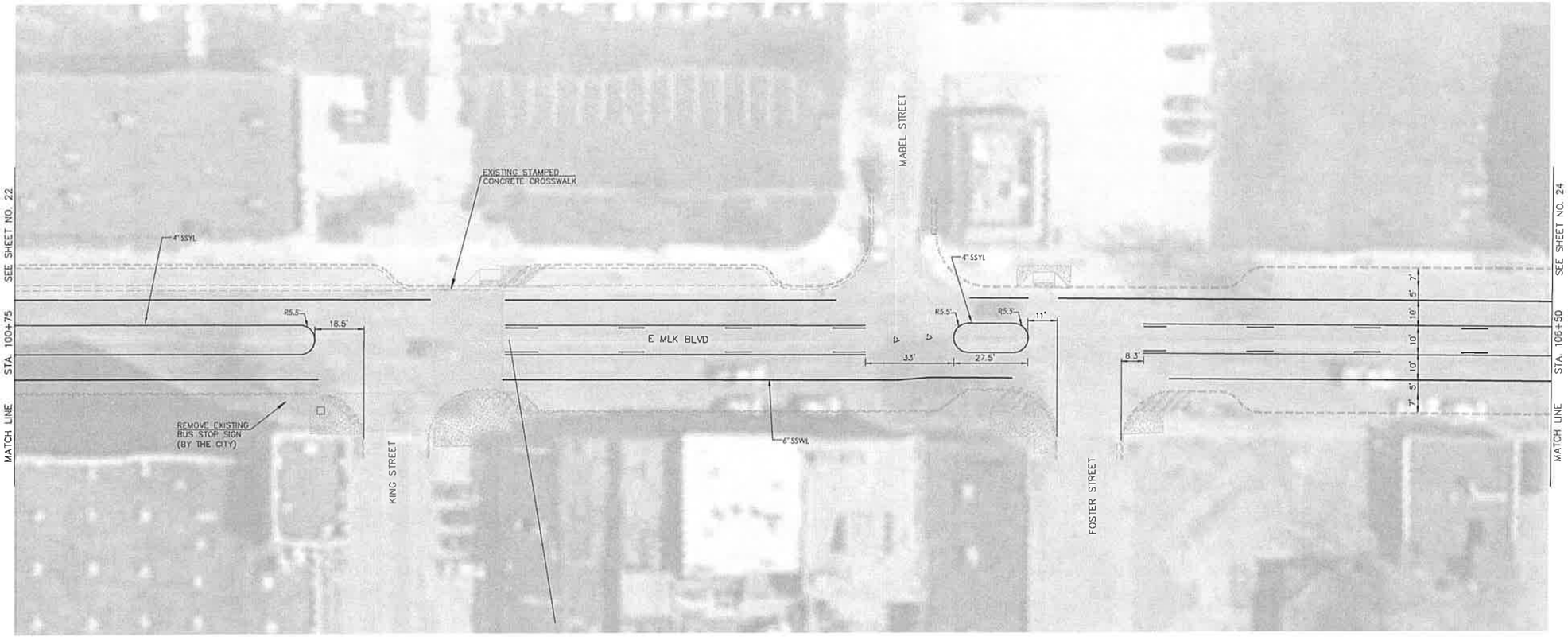

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CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

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DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
17

CITY OF CHATTANOOGA
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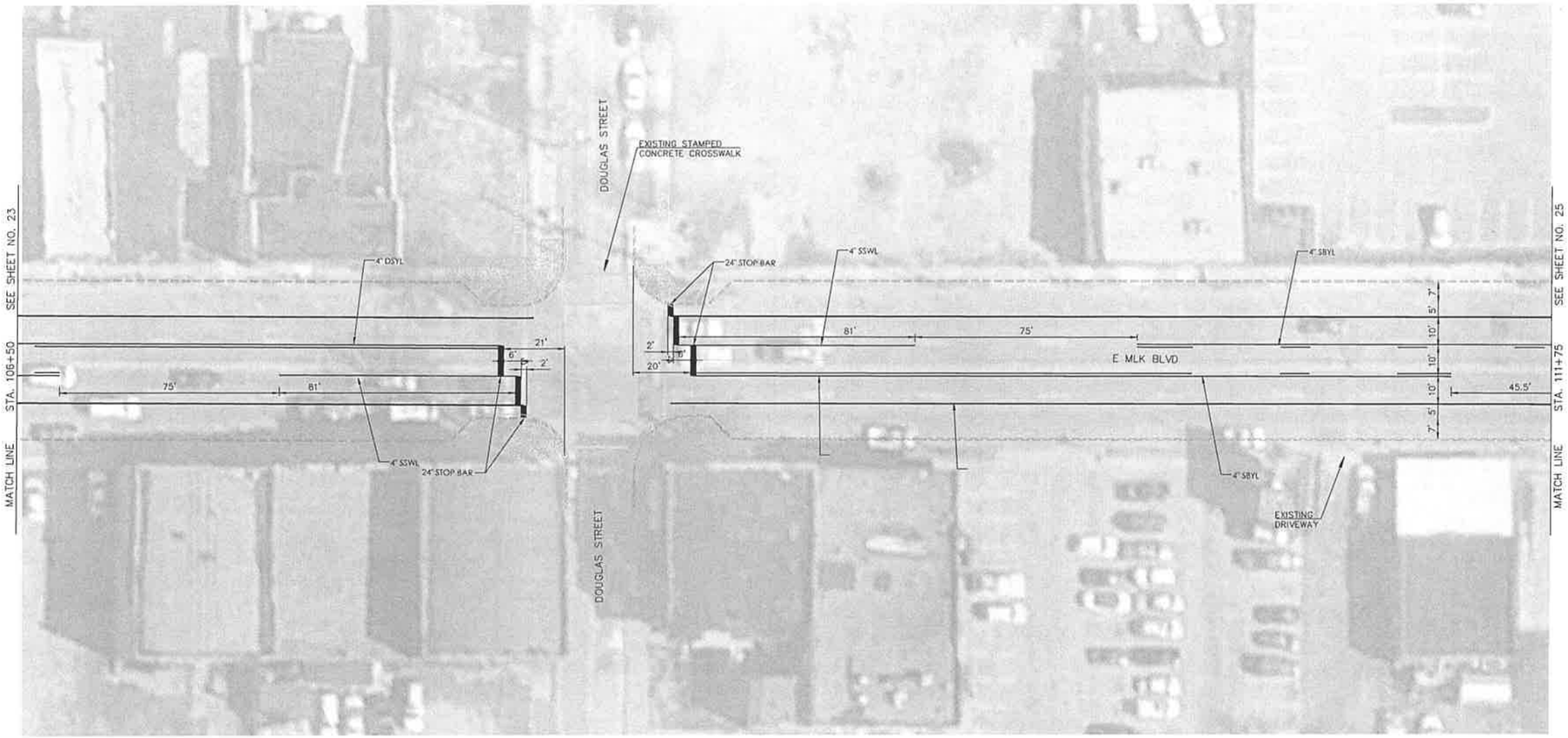
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
18



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0 20' 40'
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CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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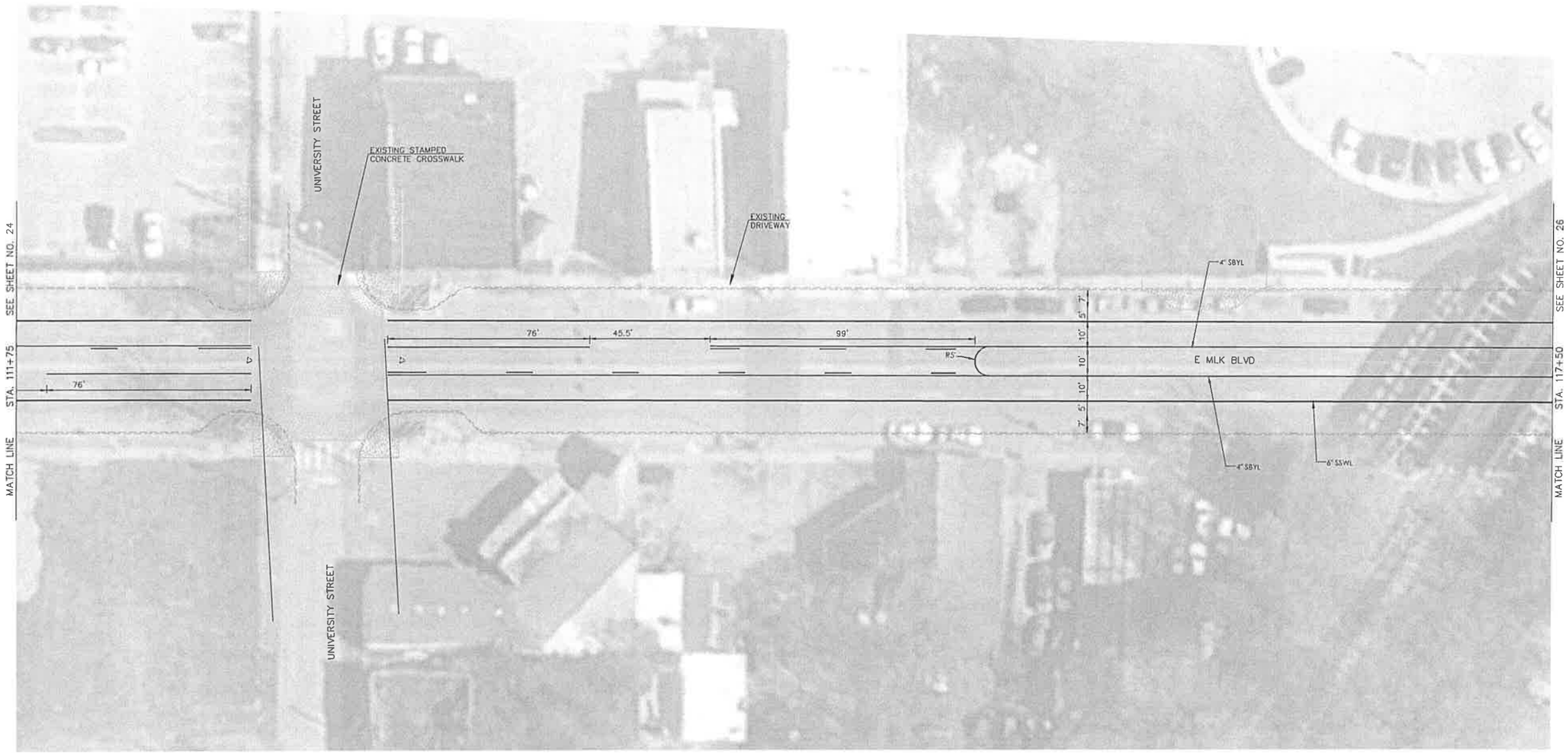
CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
19



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0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

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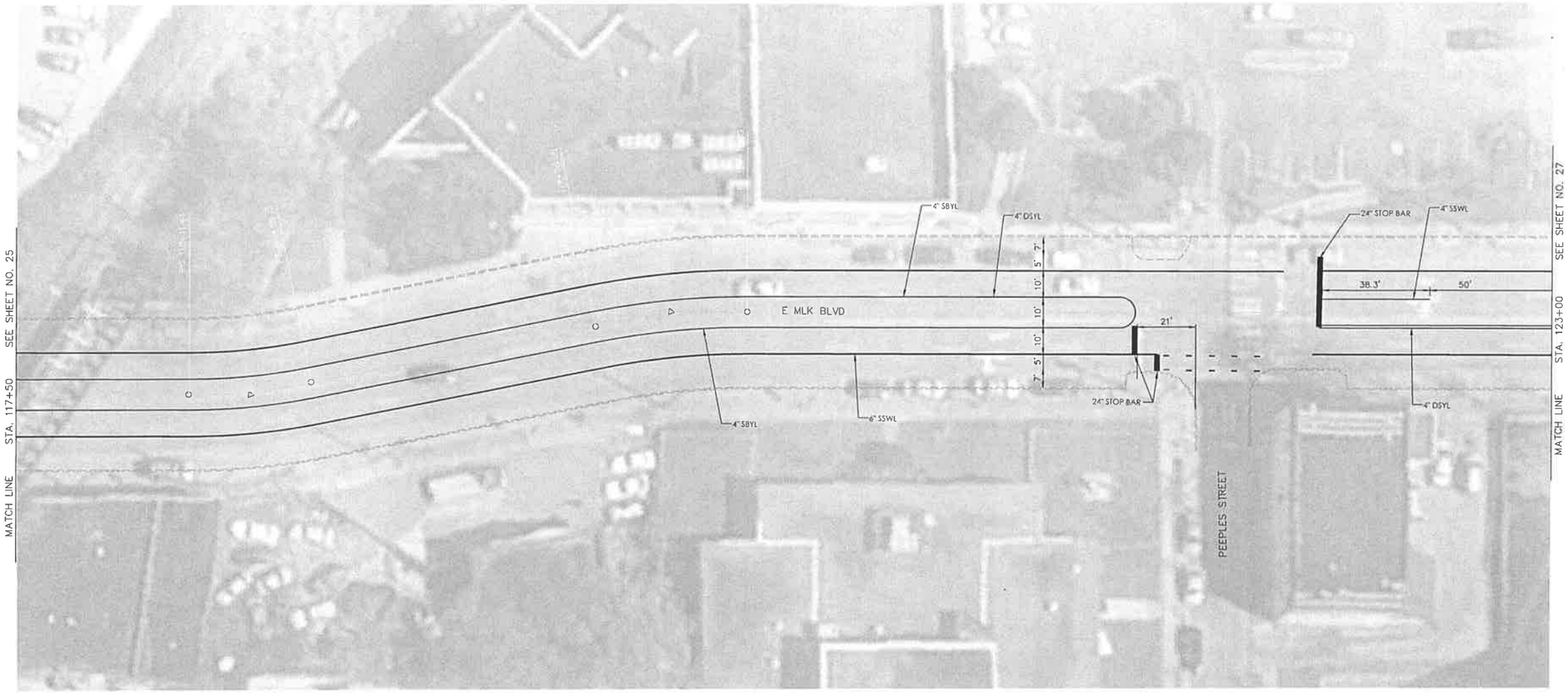

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0 20' 40'
SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

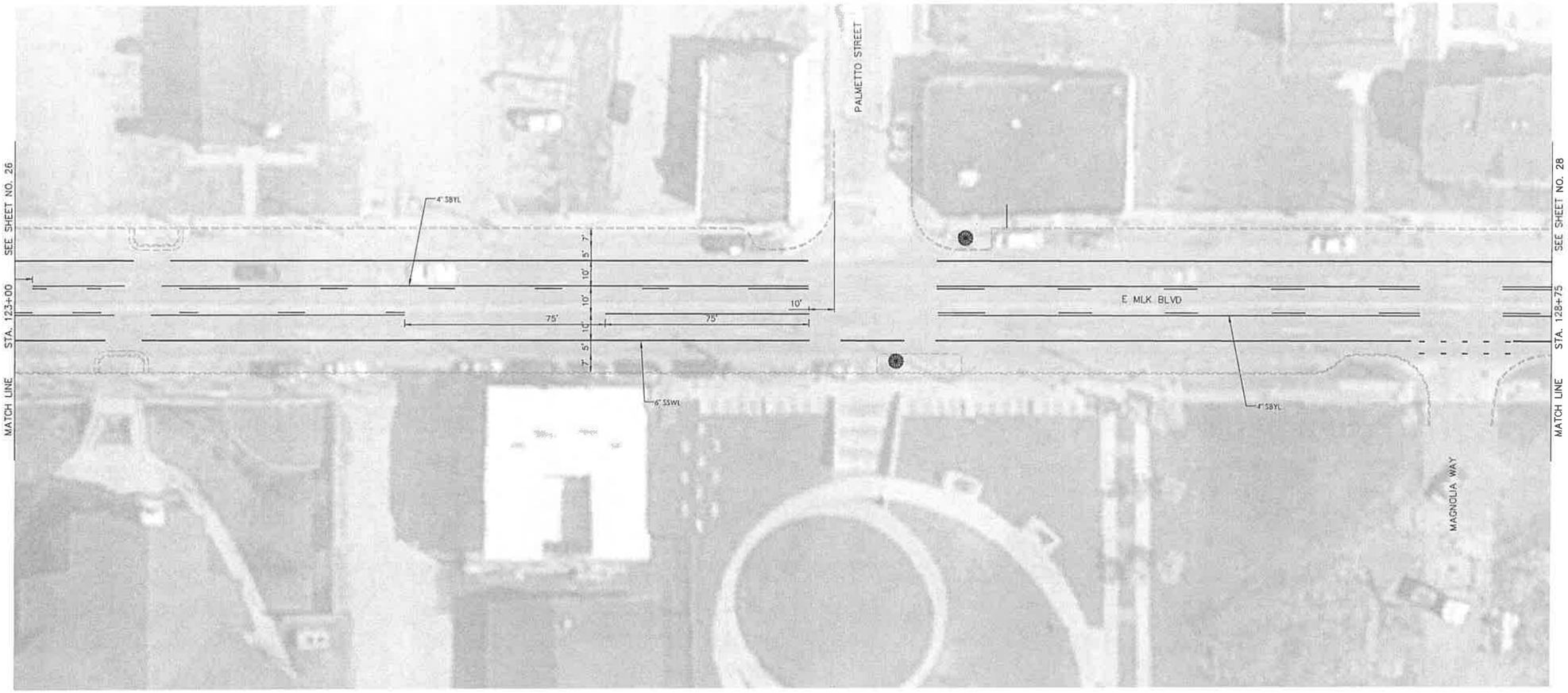
SPEED LIMIT 25

CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
20



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SCALE:1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
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DESIGN / ENGINEERING DIVISION
1250 MARKET ST., SUITE 3000
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
21

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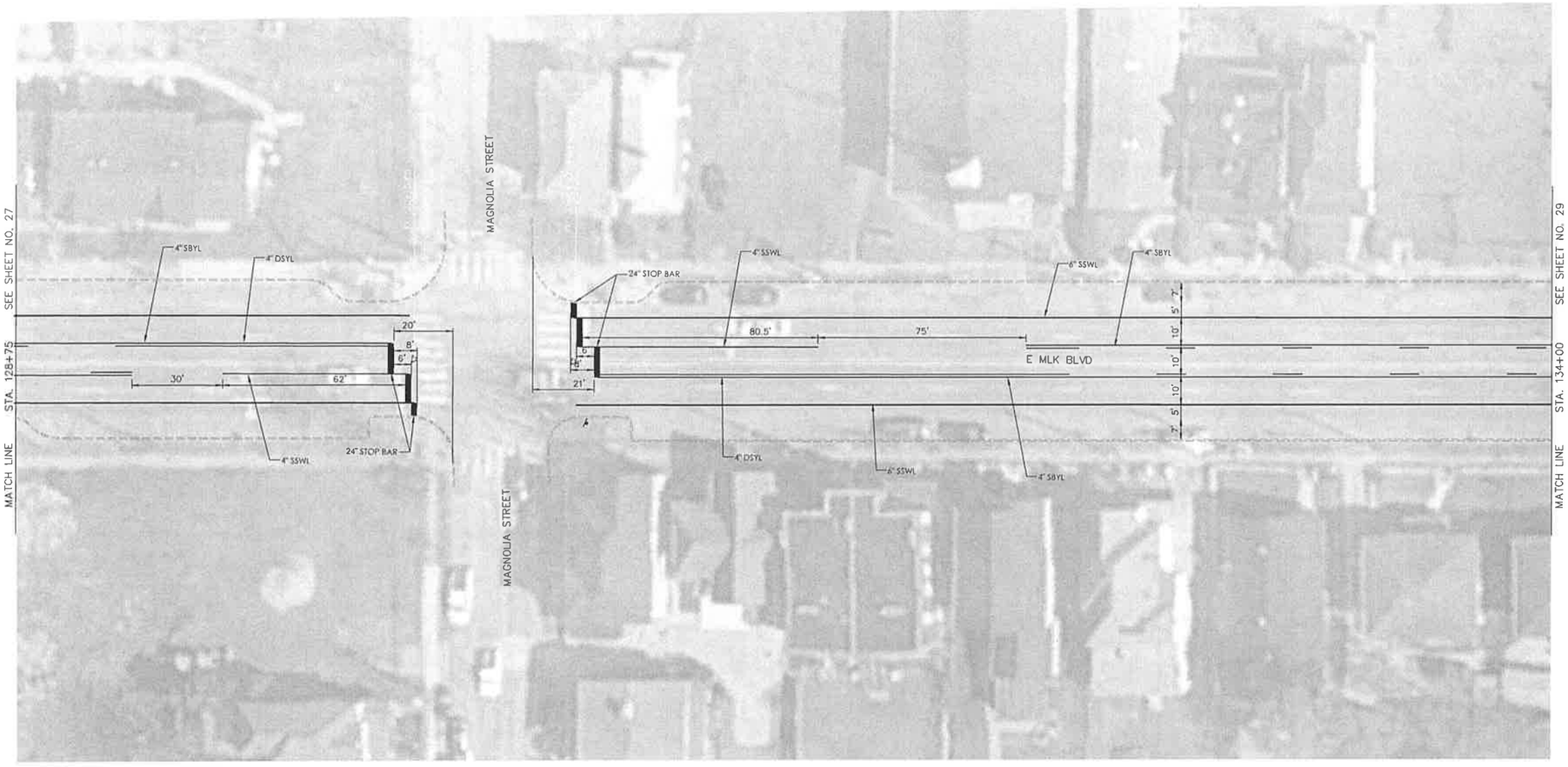

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0 20' 40'
SCALE: 1"=20'

CURRENT POSTED SPEED LIMIT

SPEED LIMIT 25

CITY OF CHATTANOOGA
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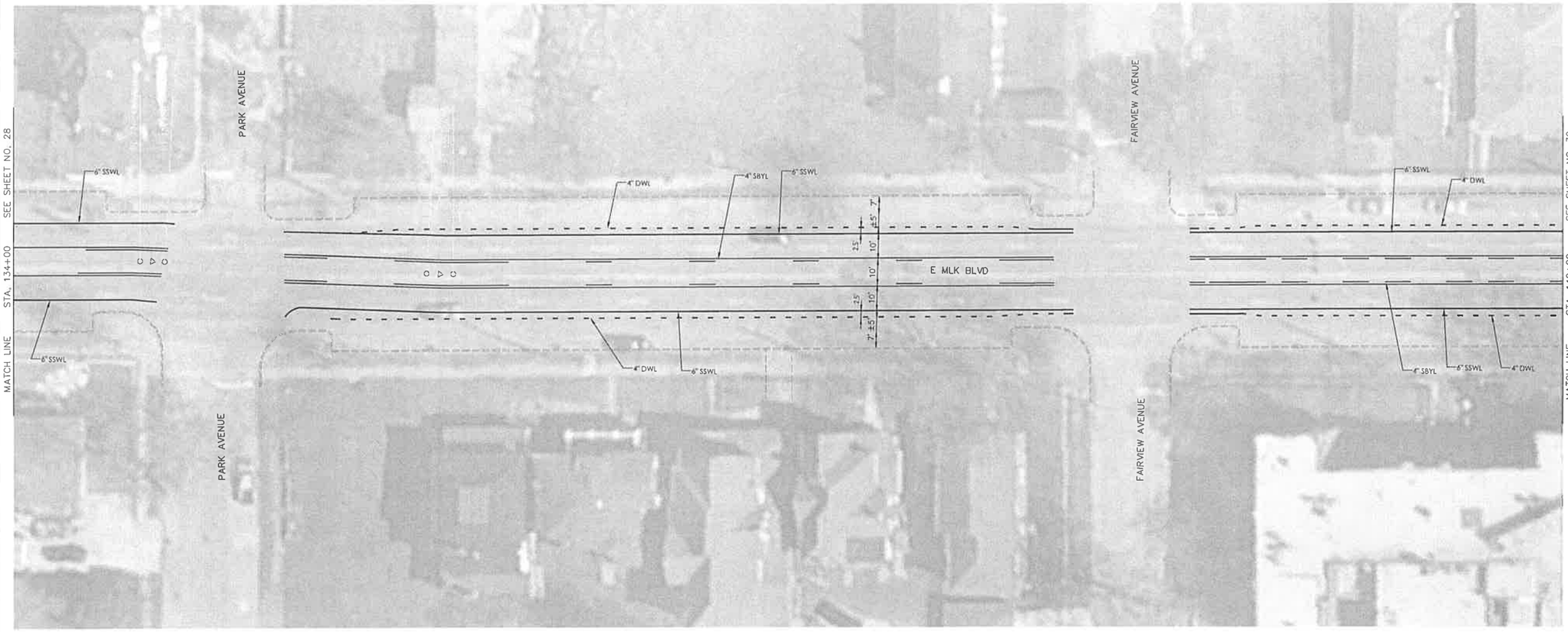
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
22



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0 20' 40'
SCALE: 1"=20'

CURRENT POSTED SPEED LIMIT

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CITY OF CHATTANOOGA
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CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER

23

CITY OF CHATTANOOGA
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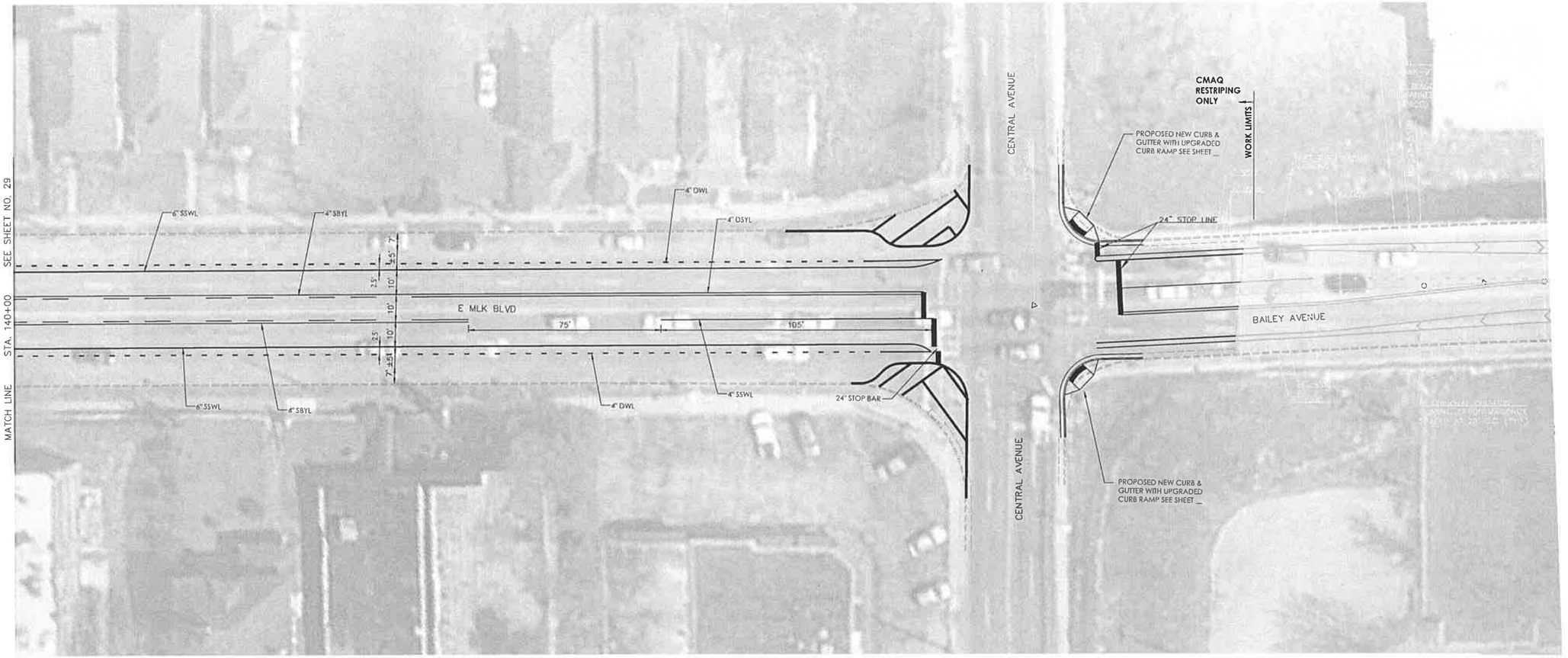
E. MLK BLVD. TEMPORARY STRIPING PLAN

SHEET NUMBER
24



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4. ALONG BAILEY AVE. FROM CENTRAL AVE. TO DODDS AVE. THE ONLY STRIPING TO BE DONE IS THE FILLING BIKE LANES WITH GREEN PAINT AND ADDING FLEXIBLE BOLLARDS IN THE BUFFERED AREAS ARE TO BE INCLUDED IN THIS PROJECT. ALL OTHER STRIPING ALONG THIS AREA IS TO BE INSTALLED UNDER THE TIP PROJECT TDOT PIN #119814.00
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25 MPH
SPEED LIMIT 25

0 20' 40'
SCALE: 1"=20'

CURRENT POSTED SPEED LIMIT
SPEED LIMIT 25

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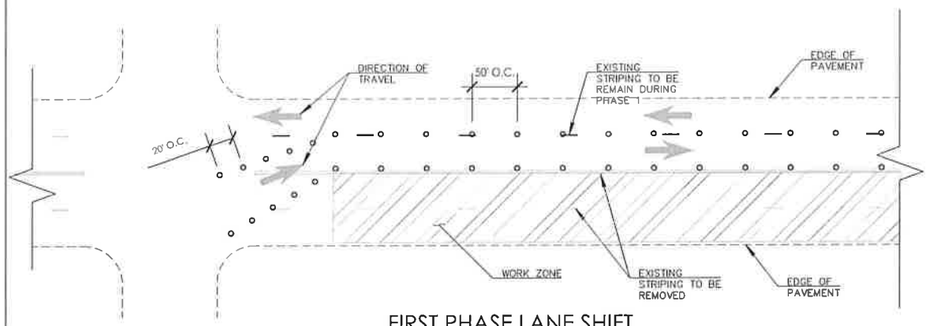
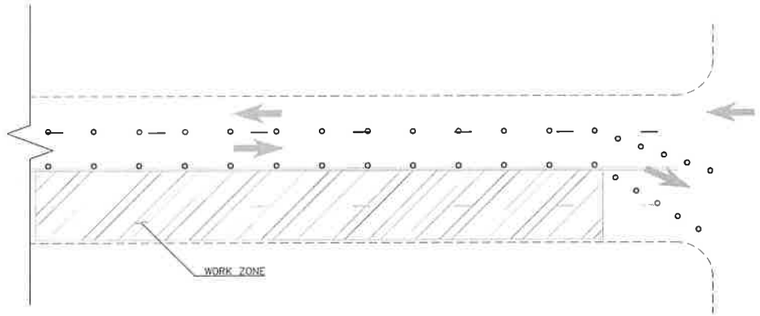
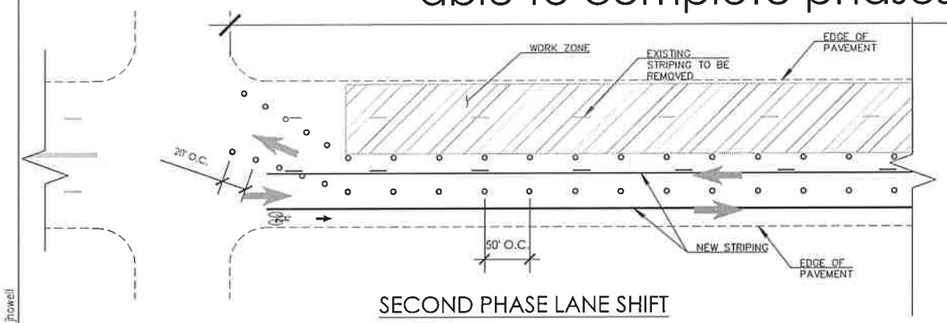


FIRST PHASE LANE SHIFT



Schedule traffic control and construction limits as to be able to complete phases 1 and 2 within one work day.



SECOND PHASE LANE SHIFT

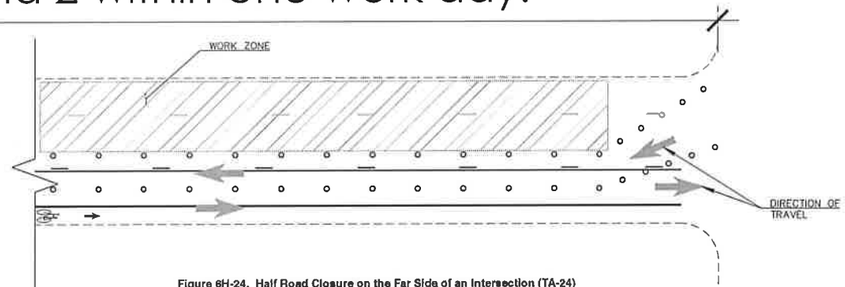
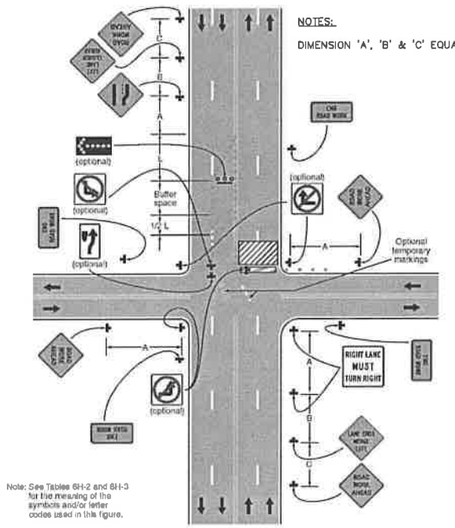


Figure 6H-24. Half Road Closure on the Far Side of an Intersection (TA-24)



Typical Application 24

CITY OF CHATTANOOGA DEPT. OF TRANSPORTATION
DESIGN / ENGINEERING DIVISION
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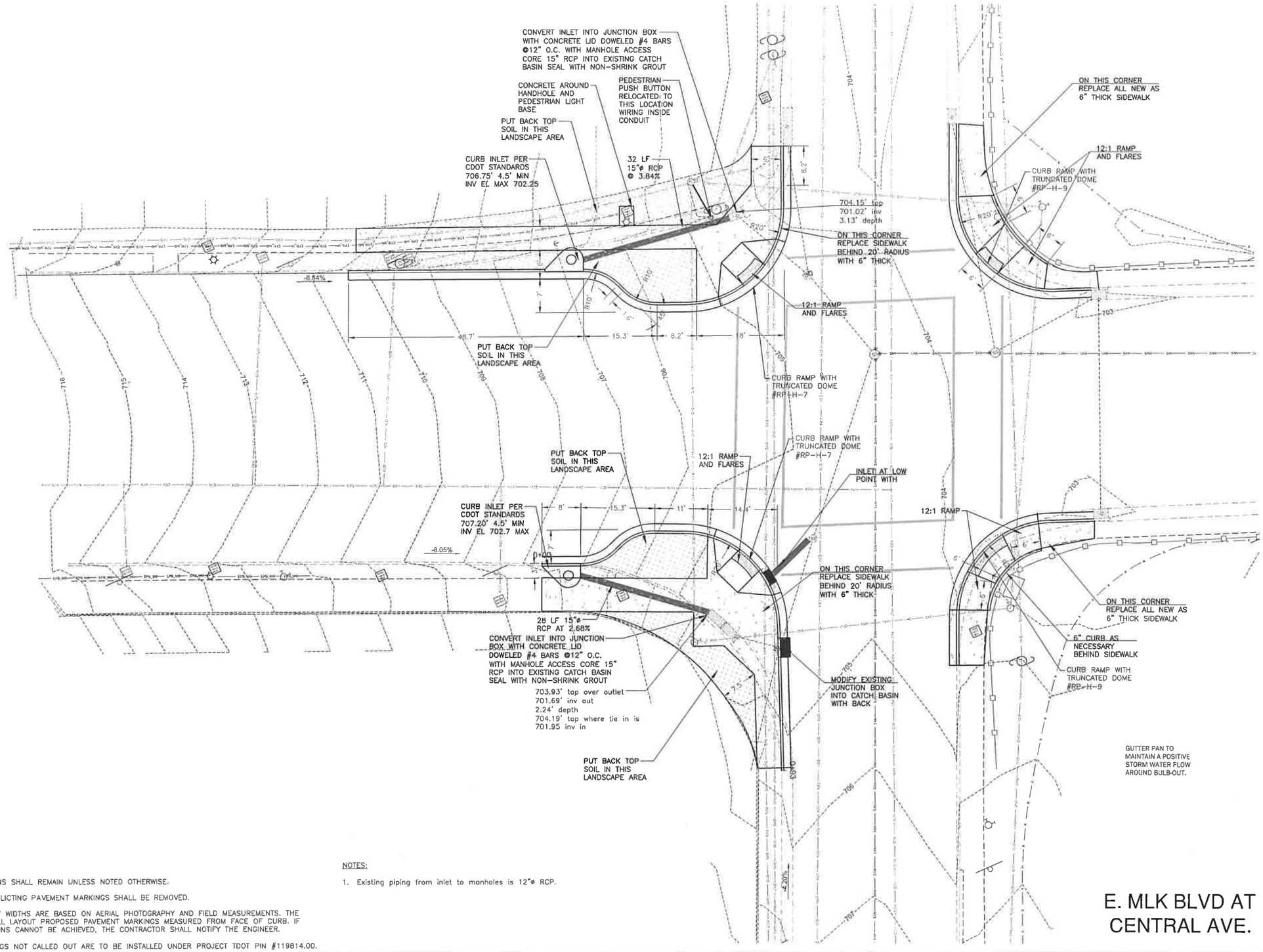
CHATTANOOGA, TN 37402

E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
TRAFFIC CONTROL

SHEET NUMBER

25



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NOTES:

1. Existing piping from inlet to manholes is 12"ø RCP.

FOR REVIEW ONLY

CITY OF CHATTANOOGA
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E. MLK BLVD. DIAMOND GRINDING FROM GEORGIA AVE. TO CENTRAL AVE.
E. MLK BLVD & CENTRAL AVE UPGRADE DETAILS

SHEET NUMBER
26

T:\Projects\T-17-007 2017 Resurfacing contract\Drawings\Base\MLK @ Central intersection upgrade.dwg Oct 05,2017 - 3:17pm, jhowell