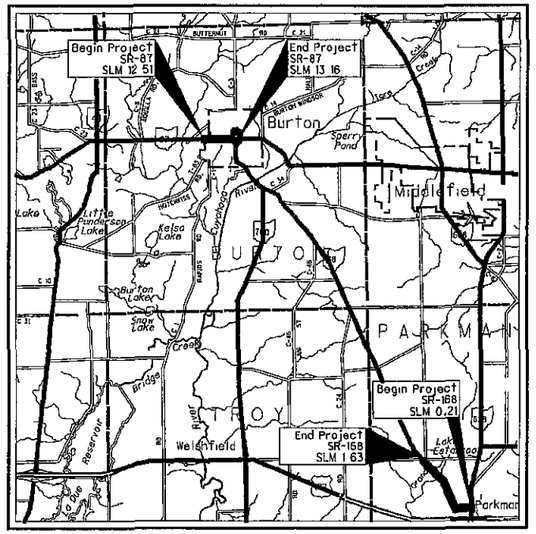
GEA - SR-87-12.51/VAR
080092 PID - 75055
Dist 12 1/25/2008

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

GEA-87-12.51/VAR

Village of Burton
Parkman Township
Geauga County



LOCATION MAP

SR-87	LATITUDE: 41°28'15"	LONGITUDE: 81°09'15"
SR-168	LATITUDE: 41°22'25"	LONGITUDE: 81°03'51"

SCALE IN MILES
0 1 2 3 4

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION	SR-87	SR-168
CURRENT ADT (2007)	11,600	1,900
DESIGN YEAR ADT (2015)	12,200	2,000
DESIGN HOURLY VOLUME (2015)	1,200	200
DIRECTIONAL DISTRIBUTION	60%	60%
TRUCKS (24 HOUR B&C)	6%	9%
DESIGN SPEED	35 mph	55 mph
LEGAL SPEED	35 mph	55 mph

DESIGN FUNCTIONAL CLASSIFICATION:
Rural Major Collectors
NHS PROJECT N/A

DESIGN EXCEPTIONS

None

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-929-0988

PLAN PREPARED BY:
ODOT - District 12 Production
5500 Transportation Blvd.
Garfield Heights, OH 44125

INDEX OF SHEETS:

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PROJECT DESCRIPTION

This project consists of the resurfacing of SR-87 from SLM 12.51 (Western Burton Corporation Limits) to SLM 13.16 (East Side of Burton Circle) within the Village of Burton, SR-168 from SLM 0 21 (SR-88/SR-528) to SLM 1.63 (Nash Rd.) within Parkman Township, and the ODOT Parkman Maintenance Yard in Geauga County.

PROJECT EARTH DISTURBED AREA = N/A (Maintenance Project)
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA = N/A (Maintenance Project)
NOTICE OF INTENT EARTH DISTURBED AREA = N/A (Maintenance Project)

2005 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

ENGINEERS SEAL:
STATE OF OHIO
Louis D. Hozapis
E-53285
REGISTERED PROFESSIONAL ENGINEER
SIGNED: Louis D Hozapis
DATE: 10/25/07

STANDARD CONSTRUCTION DRAWINGS												SUPPLEMENTAL SPECIFICATIONS	
												800	10/19/07
BP-3.1	10/19/07	MT-35.10	4/20/01	TC-41.20	1/19/01							832	4/25/06
BP-5.1	7/28/00	MT-97.10	9/5/06	TC-65.10	1/21/05								
		MT-97.11	9/5/06	TC-65.11	1/21/05								
		MT-99 20M	1/30/95	TC-71.10	1/19/07								
		MT-105.10	10/18/02	TC-73.10	1/19/01								
		MT-105 11	10/18/02										
RM-1 1	4/21/06												
												SPECIAL PROVISIONS	

APPROVED Brent H Tam PE
DATE 10/25/07 DISTRICT DEPUTY DIRECTOR

APPROVED James G Beasley
DATE 10-30-07 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. 100% State
PID NO. 75055
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT None
GEA-87-12.51/VAR
1/27

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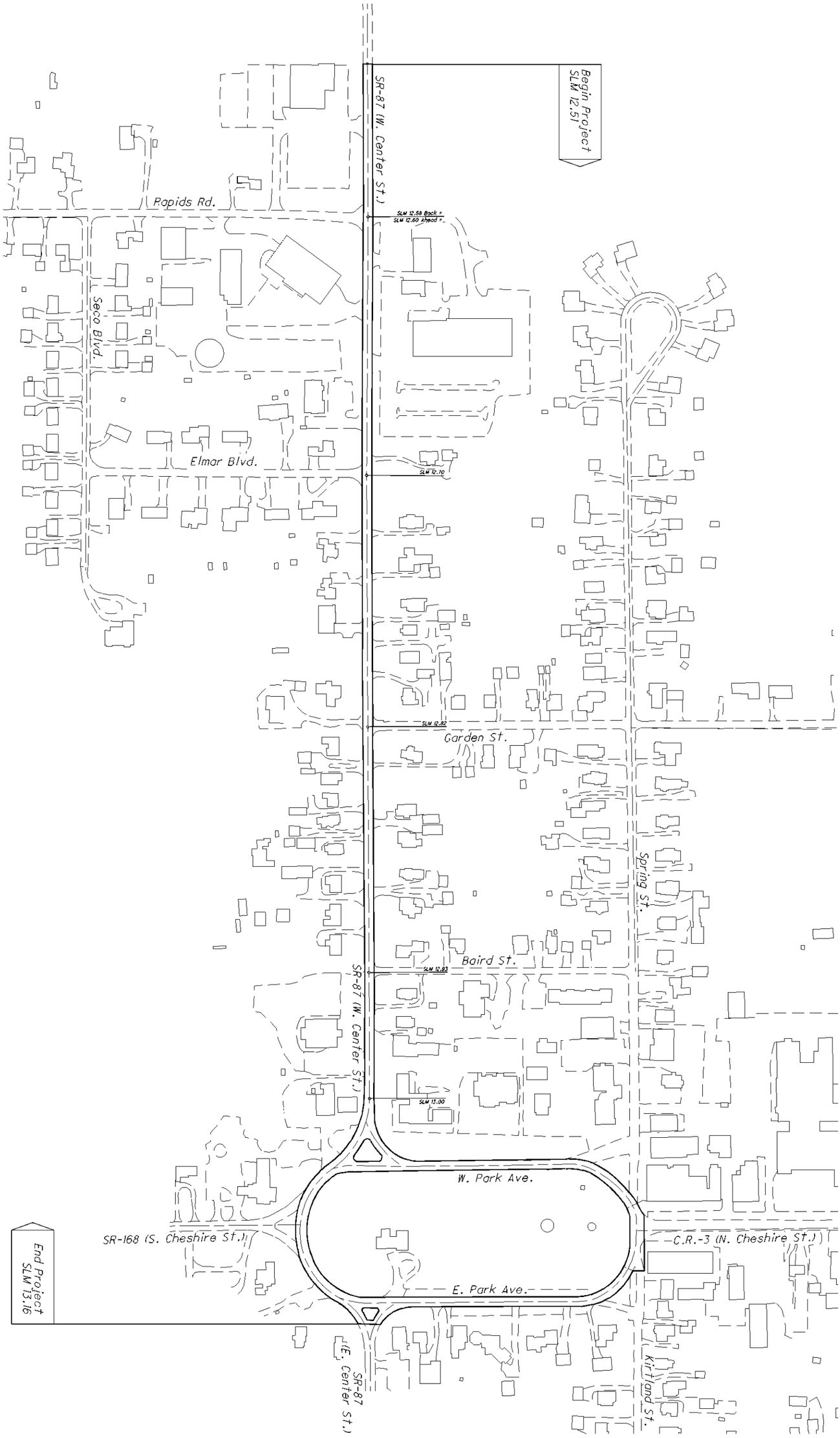
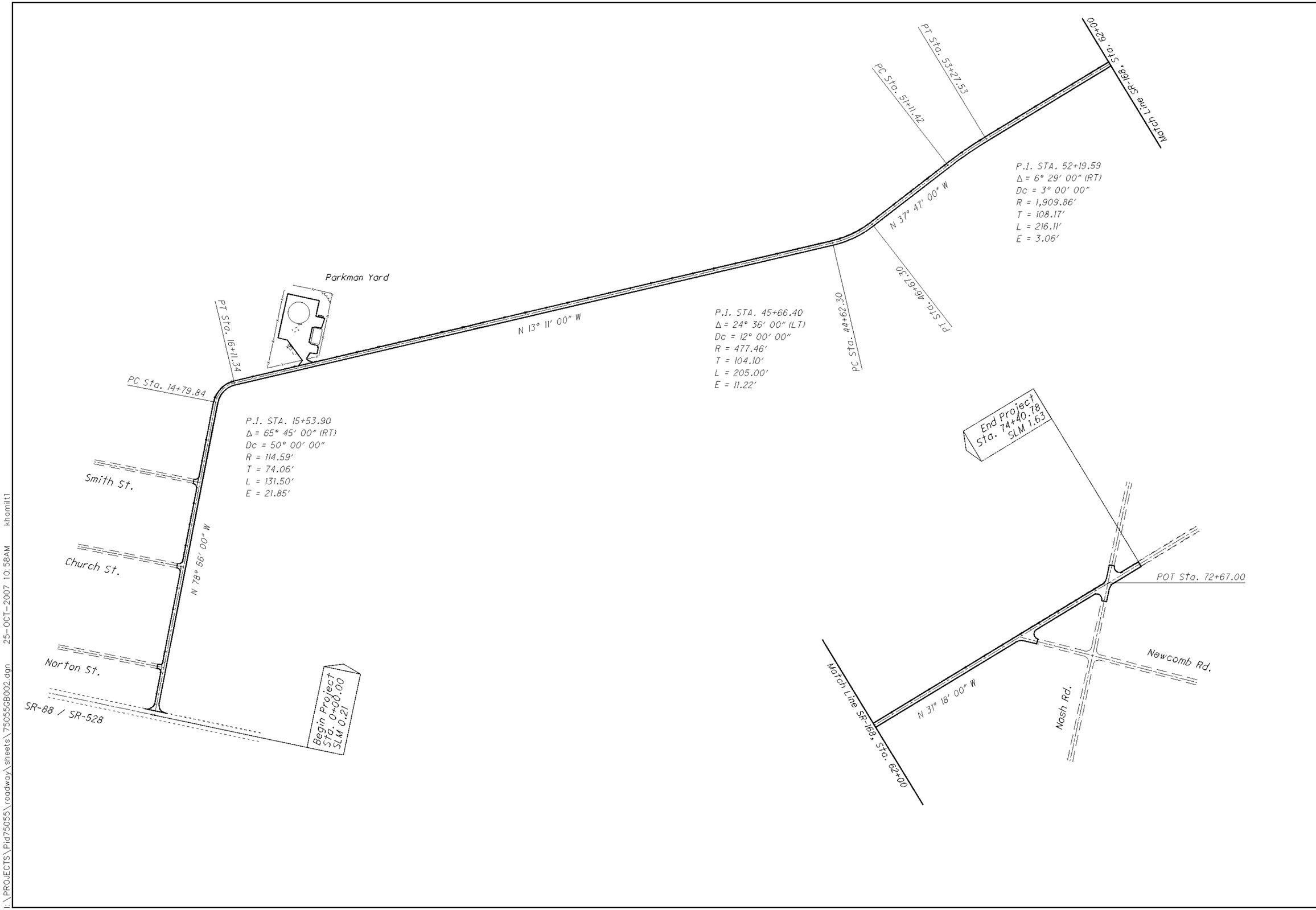


2/27	GEA-87-12.51/VAR	Schematic Plan SR-87, SLM 12.51 to SLM 13.16	CALCULATED KDH CHECKED EMK	0 50 100 200 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED KDH
CHECKED EMK

Schematic Plan
SR-168, SLM 0.21 to SLM 1.63

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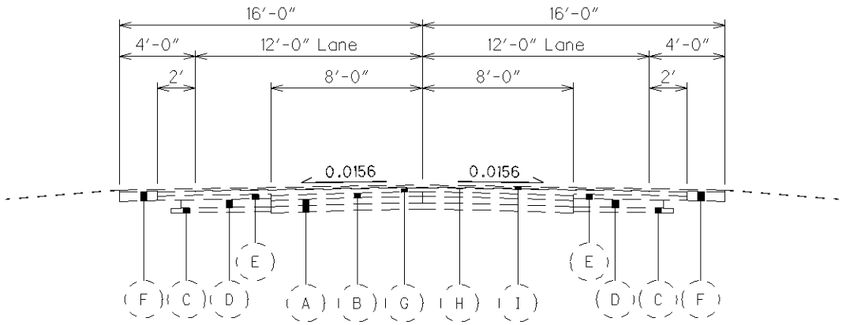
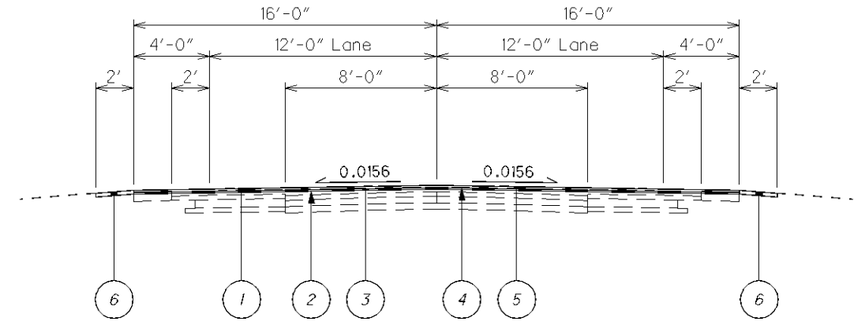


Existing Normal Section SR-87

SLM 12.51 to SLM 12.58 Back



Proposed Normal Section SR-87

SLM 12.51 to SLM 12.58 Back

Existing

- (A) 8" Waterbound Macadam Base
- (B) 3" Bituminous Macadam Surface Course
- (C) 3" Subbase
- (D) 5" Crushed Aggregate Base
- (E) 3" Asphalt Concrete Base
- (F) 6" Bituminous Aggregate Base
- (G) Asphalt Concrete Overlays, 2½" Min.
- (H) Asphalt Concrete Leveling Course, ½" Min.
- (I) 1¼" Asphalt Concrete Surface Course

Proposed

1. *Item 254 - 2½" Pavement Planing, Asphalt Concrete, As Per Plan*
2. *Item 407 - Tack Coat*
3. *Item 448 - 1" Asphalt Concrete Intermediate Course, Type 1, PG64-22 (Variable)*
4. *Item 407 - Tack Coat for Intermediate Course*
5. *Item 446 - 1½" Asphalt Concrete Surface Course, Type 1, PG70-22M, As Per Plan*
6. *Item 617 - Compacted Aggregate, As Per Plan, 1¼" Avg.*

Typical Sections - SR-87

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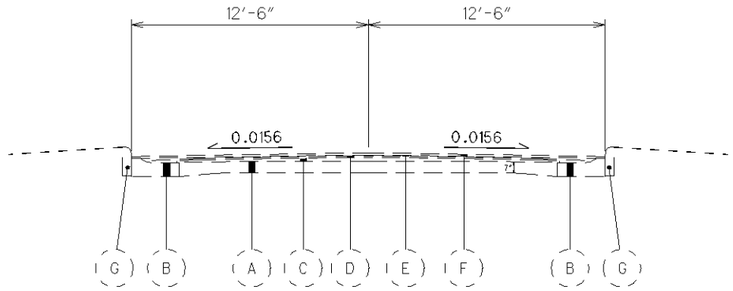
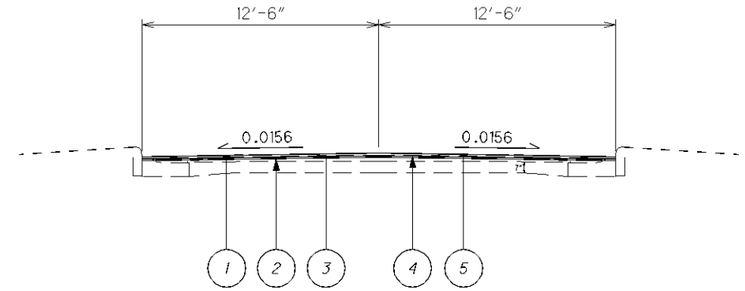


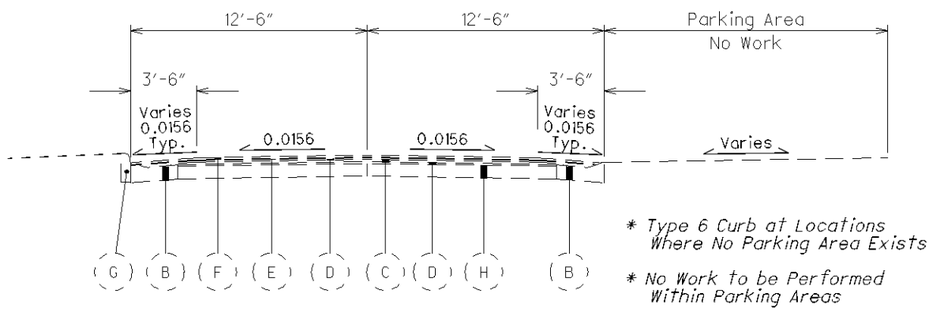
Existing Normal Section SR-87

SLM 12.60 Ahead to SLM 13.16



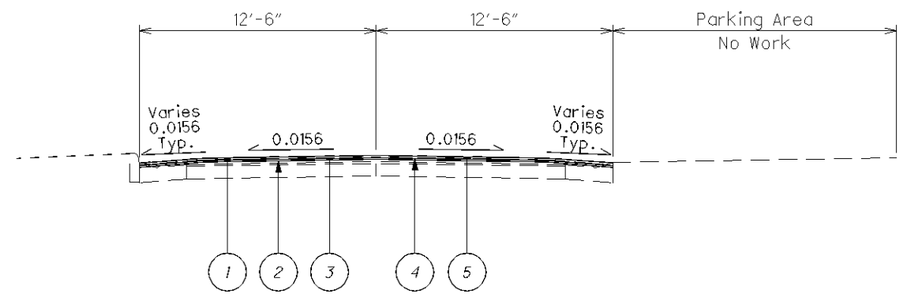
Proposed Normal Section SR-87

SLM 12.60 Ahead to SLM 13.16



Existing Normal Section SR-87D

SLM 0.00 to SLM 0.30



Proposed Normal Section SR-87D

SLM 0.00 to SLM 0.30

Existing

- (A) 9"-7"-9" Reinforced Concrete Base
- (B) 9" Reinforced Concrete Base (Original Type 3 Curb)
- (C) 1½" Asphalt Concrete Intermediate Course
- (D) 1" Asphalt Concrete Surface Course
- (E) ½" Asphalt Concrete Intermediate Course, Variable
- (F) 1¼" Asphalt Concrete Surface Course
- (G) Curb, Type 6
- (H) 8" Reinforced Concrete Base

Proposed

- (1) *Item 254 - 2½" Pavement Planing, Asphalt Concrete, As Per Plan*
- (2) *Item 407 - Tack Coat*
- (3) *Item 448 - 1" Asphalt Concrete Intermediate Course, Type 1, PG64-22 (Variable)*
- (4) *Item 407 - Tack Coat for Intermediate Course*
- (5) *Item 446 - 1½" Asphalt Concrete Surface Course, Type 1, PG70-22M, As Per Plan*
- (6) *Item 617 - Compacted Aggregate, As Per Plan, 1¼" Avg.*

Typical Sections - SR-87 & SR-87D

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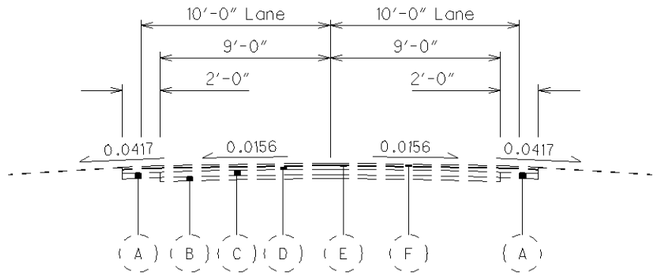
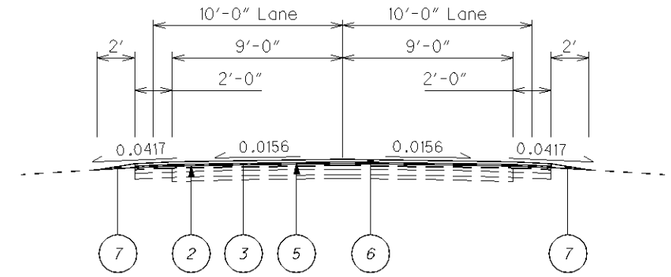


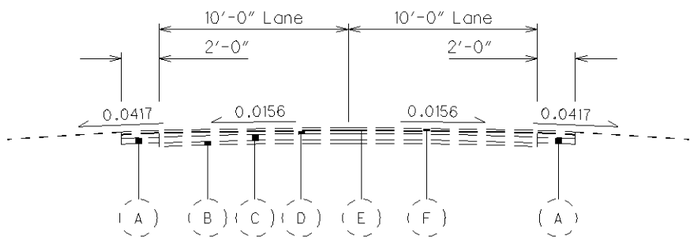
Existing SR-168 Normal Section

Sta. 0+00.00 (SLM 0.21) to Sta. 28+00.00 (SLM 0.74)



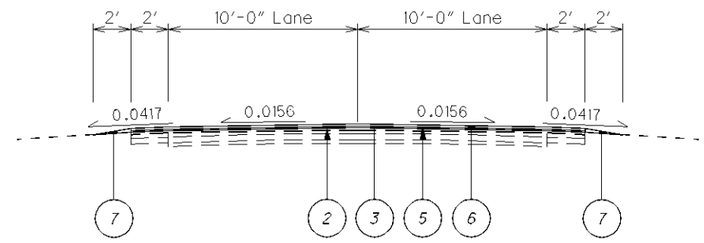
Proposed SR-168 Normal Section

Sta. 0+00.00 (SLM 0.21) to Sta. 28+00.00 (SLM 0.74)



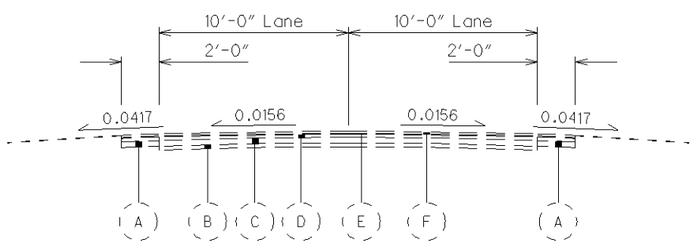
Existing SR-168 Normal Section

Sta. 28+00.00 (SLM 0.74) to Sta. 34+00.00 (SLM 0.85±)
Sta. 54+00.00 (SLM 1.23±) to Sta. 74+40.78 (SLM 1.63)



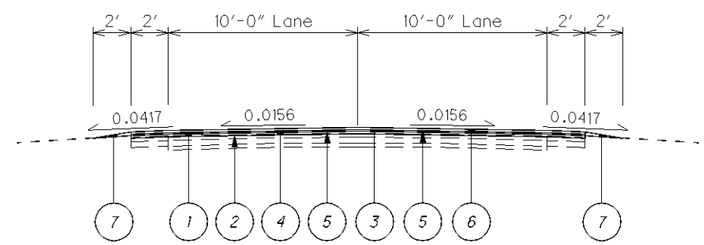
Proposed SR-168 Normal Section

Sta. 28+00.00 (SLM 0.74) to Sta. 34+00.00 (SLM 0.85±)
Sta. 54+00.00 (SLM 1.23±) to Sta. 74+40.78 (SLM 1.63)



Existing SR-168 Normal Section

Sta. 34+00.00 (SLM 0.85±) to Sta. 54+00.00 (SLM 1.23±)



Proposed SR-168 Normal Section

Sta. 34+00.00 (SLM 0.85±) to Sta. 54+00.00 (SLM 1.23±)

Existing

- (A) 3½" Stabilized Aggregate
- (B) 2½" Macadam Base
- (C) 3½" Asphalt Concrete Base
- (D) 2¼" Asphalt Concrete
- (E) ½" Asphalt Concrete Intermediate Course, Variable
- (F) 1¼" Asphalt Concrete Surface Course

Proposed

1. *Item 254 - 1½" Pavement Planing, Asphalt Concrete, As Per Plan*
2. *Item 407 - Tack Coat*
3. *Item 448 - 1" Asphalt Concrete Intermediate Course, Type 1, PG64-22 (Variable)*
4. *Item 448 - 1½" Asphalt Concrete Intermediate Course, Type 1, PG64-22 (Variable)*
5. *Item 407 - Tack Coat for Intermediate Course*
6. *Item 446 - 1½" Asphalt Concrete Surface Course, Type 1, PG70-22M, As Per Plan*
7. *Item 617 - Compacted Aggregate, As Per Plan, 1¼" Avg.*

Typical Sections - SR-168

GEA-87-12.51/VAR

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General

Project Description

This project consists of resurfacing SR-87 from the Burton Township WCL through 87DA in Burton Village, SR-168 from SR-528 to Nash Rd. in Parkman Township, and the ODOT Parkman Maintenance Yard.

Right of Way

All work shall be performed within the existing right of way or easements.

Existing Typical Sections

Existing typical sections have been taken from the records and are believed to represent the existing pavement, but the State of Ohio does not guarantee the accuracy of the same.

For further information in regard to the existing typical sections, the Contractor shall refer to the previous construction plans.

These plans may be reviewed at the following location:

Ohio Department of Transportation
District 12 Office
5500 Transportation Boulevard
Garfield Heights, Ohio 44125

Contingency Quantities

The Contractor shall not order materials or perform work for items designated by plan note to be used "as directed by the Engineer" unless authorized by the Engineer. The actual work locations and quantities used for such items shall be incorporated into the final change order governing completion of this project.

Conversion of Standard Construction Drawings

Convert the Metric Standard Drawings referenced in this plan to English units using the SI (Metric) to English Conversion Factors provided in Section 109.02 of the Construction and Material Specifications. Conversions will be appropriately precise and reflect standard industry English values where suitable.

Cooperation Between Contractors

The Contractor shall cooperate and coordinate his/her operations with the Contractors on other projects that may be in force during the life of the contract. No waiver of any provisions of 105.07 of the Construction and Material Specifications is intended.

Equipment and Material Storage

In order to provide for the safety of the traveling public the Contractor's attention is directed to 614.03. In addition the following provisions shall apply:

1. Any removed items shall not be stored on the right of way for more than thirty (30) days.
2. The storage of equipment, materials, and vehicles within the highway right of way will be permitted. The number of areas and exact locations shall be approved by the Engineer.
3. All disturbed areas shall be returned to their original condition at no expense to the state.

Work Limits

The work limits shown on these plans are for physical construction only. Provide the installation and operation of all work zone traffic control and work zone traffic control devices required by these plans whether inside or outside these work limits.

Utilities

There are no underground utilities shown on this plan. The nature of the work required by this project will not affect any known underground utilities that exist under or adjacent to the work area.

Construction Noise

Activities and lane use adjacent to this project may be affected by construction noise. In order to minimize any adverse construction noise impacts, do not operate power-operated construction-type devices between the hours of 9:00pm and 7:00am. In addition, do not operate at any time any device in such a manner that the noise created substantially exceeds the noise customarily and necessarily attendant to the reasonable and efficient performance of such equipment.

Plan Sheet Stationing

The roadway was not surveyed prior to the preparation of these plans. Previous construction plan stationing was used to prepare plan sheets and calculate estimated pavement area quantities and pavement marking quantities.

Item 619 - Field Office, Type B, As Per Plan

A Type B Field Office is required for this project.

In addition to the requirements as described in Item 619 of the CMS, the field office shall include broadband (DSL or cable) access.

Item 619 - Field Office, Type B, As Per Plan.....**6 Months**

Roadway

Item 202 – Raised Pavement Marker Removed

The following is an estimated quantity to be used as directed by the Engineer to remove existing raised pavement marker castings:

Item 202 Raised Pavement Marker Removed.....**155 Each**

Drainage

Item 604 Catch Basin Adjusted to Grade, As Per Plan
Item 604 Manhole Adjusted to Grade, As Per Plan
Item 604 Monument Box Adjusted to Grade, As Per Plan
Item 638 Valve Box Adjusted to Grade, As Per Plan

All castings shall be adjusted to the finished roadway elevation by the Contractor. The time between adjusting the castings and resurfacing shall be kept to an absolute minimum. No adjusting rings shall be permitted. When performing this work, the pavement shall be sawcut prior to removal and hook bolts shall be used where practical to connect existing pavement to new concrete. The following quantities have been carried to the General Summary:

Item 604 Catch Basin Adjusted to Grade, As Per Plan.....**20 Each**

Item 604 Manhole Adjusted to Grade, As Per Plan.....**10 Each**

Item 604 Monument Box Adjusted to Grade, As Per Plan.....**1 Each**

Item 638 Valve Box Adjusted to Grade, As Per Plan.....**3 Each**

Item 604 – Catch Basin Reconstructed to Grade

The Contractor and Field Engineer shall field check all existing catch basins, manholes, or monument boxes located within the limits of the project. Any catch basin, manhole, or monument box found that exhibits substantial deterioration and requires more work than is specified under "Adjusted to Grade" shall be "Reconstructed to Grade", as directed by the Engineer. If none are needed, these items are to be non-performed.

The following estimated quantities have been carried to the General Summary for use as directed by the Engineer:

Item 604 Catch Basin Reconstructed to Grade.....**4 Each**

Item Special - Miscellaneous Metal

Existing castings may prove to be unsuitable for reuse, as determined by the Engineer. It shall be the Contractor's responsibility to provide the castings of the required type, size and strength (heavy duty) for the particular structure in question. All materials must meet Item 604 of the Specifications and shall have the prior approval of the Engineer.

The Contractor is cautioned to use extreme care in the removal, storage and replacement of all existing castings. Castings damaged by the negligence of the Contractor, as determined by the Engineer, shall be replaced with the proper new castings at the expense of the Contractor. The Contractor shall not order materials until authorized by the Engineer and if none are needed the item is to be non-performed.

The following estimated quantity has been carried to the General Summary for use as directed by the Engineer.

Item Special Miscellaneous Metal.....**5000 Lbs**

Pavement

Profile and Alignment

Place the proposed pavement to follow the alignment and profile of the existing pavement. Place the proposed asphalt concrete overlay with a uniform thickness of 2½ inches as shown on the typical sections. The proposed profile of SR-87 will be the same elevation as the existing. The proposed profile of SR-168 will be raised 2½ inches above the existing elevation.

Item 251 Partial Depth Pavement Repair (SR-87)

This item shall be used for the repair of unsound, cold-patch, or pop-out areas of joints as directed by the Engineer. This work shall be performed after the milling operation and prior to resurfacing. The depth of the repair shall not exceed 3" below the top of the milled surface. The width of the repair shall be 24" centered over the distressed area.

The following estimated quantity is carried to the General Summary for this purpose:

Item 251 Partial Depth Pavement Repair.....**700 Sq Yds**

Item 251 Partial Depth Pavement Repair (SR-168)

This item shall be used for the repair of unsound, cold-patch, or pop-out areas of joints as directed by the Engineer. This work shall be performed prior to resurfacing. The depth of the repair shall not exceed 3" below the existing surface. The width of the repair shall be 24" centered over the distressed area.

The following estimated quantity is carried to the General Summary for this purpose:

Item 251 Partial Depth Pavement Repair.....**1000 Sq Yds**

Item 254 – Pavement Planing, Asphalt Concrete, As Per Plan

In addition to the requirements of Item 254, the Contractor shall deliver the following amount of asphalt grindings to the following locations:

1000 CY	Munson Yard 12453 Bass Lake Rd. Munson Township, OH 44024-8315

24 Hours prior to delivery, the Engineer shall contact the Geauga County Manager or Transportation Manager (440-834-4441) to forward the Contractor's schedule for deliveries.

Item 407 - Tack Coat
Item 407 - Tack Coat for Intermediate Course

The rate of application of the 407 Tack Coat shall be subject to adjustment as directed by the Engineer. Plan quantities indicate an average application rate of 0.10 gallons per square yard of tack coat and 0.05 gallons per square yard of tack coat for intermediate course.

Item 446 Asphalt Concrete Surface Course, Type 1, PG70-22M, As Per Plan

Use a minimum of 50% crushed air-cooled blast furnace slag for coarse aggregate. The remainder of the coarse aggregate may be either crushed air-cooled blast furnace slag or crushed carbonate stone.

Item 255 Full Depth Pavement Removal and Rigid Replacement, Class FS
Item 255 Full Depth Pavement Sawing

Sawcut and remove existing pavement repairs in the following areas as shown on the General Plan sheets:

SR-87 WB Lane Opposite Burton Yard Entrance	60' x 12'-6"
SR-87 WB Lane Outside Preston Chevy Main Entrance	30' x 12'-6"
SR-87 EB Lane Opposite Baird St.	62' x 12'-6"
SR-87 EB Lane Opposite Laundry Mat	40' x 12'-6"

Place rigid pavement material per Item 255 Full Depth Pavement Removal and Rigid Replacement. The rigid pavement elevation shall match the top of the planed surface when complete. Use only class FS concrete for this item.

The following estimated quantities are carried to the General Summary for use as directed by the Engineer:

Item 255 Full Depth Pavement Removal
and Rigid Replacement, Class FS.....**267 Sq Yds**

Item 255 Full Depth Pavement Sawing.....**292 Feet**

Item 617 - Compacted Aggregate, As Per Plan

This item shall be used along the shoulders. Materials shall be limited to crushed slag, crushed limestone, or asphalt grindings. If asphalt grindings are used, an additional material requirement is that 100% shall pass a 1" sieve.

The actual depth used will vary depending upon existing conditions. For estimating purposes, an average depth of 1¼ inches will be used. Water, if needed, is to be applied as per 617 and included under Item 617, Compacted Aggregate, As Per Plan.

Surface Smoothness Requirements for Pavements

Proposal Note 420 included within the bid proposal shall apply to SR-168 only.

Traffic Control

Item 621 – Raised Pavement Marker

The following is an estimated quantity to be used as directed by the Engineer to place proposed raised pavement markers on SR-168 only:

Item 621 Raised Pavement Marker.....**135 Each**

Item 646 - Epoxy Pavement Markings, As Per Plan

The epoxy pavement marking material furnished under these items shall be Epoplex LS-60 as furnished by Epoplex, Maple Shade, New Jersey.

Item 646 - Epoxy Pavement Markings - (Polycarb) – Alternate Bid

The epoxy pavement marking material shall be Mark 55.4 as furnished by Polycarb, Cleveland, Ohio.

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Maintenance of Traffic

Item 614 Maintaining Traffic

Generally the Contractor shall conduct his operations as to complete the proposed improvement with a minimum of hazard, delay and inconvenience to the motorists using the highway affected by the work done under this contract. In addition to the construction and material specifications, the following specific provisions are mandatory.

I. Notification

Since functional traffic control is a major concern on this project, it is essential that the motoring public be adequately forewarned of future lane closures and traffic constrictions. Therefore, the Contractor shall submit a written schedule to the Engineer, responsible law enforcement agencies, and the ODOT Public Information Office (216-584-2007) indicating the locations and dates of the lane closures at least 3 days prior to the implementation of any such closures.

Additionally, provide notice to the following individuals:

Honorable George Chitla, Jr., Mayor
Village of Burton
13959 East Center St.
P.O. Box 408
Burton, OH 44021
440-834-4474

George Hess II, Burton Village Engineer
Hess and Associates Engineering Inc.
12121 Kinsman Rd.
Newbury, OH 44065
440-564-8008

II. Work Hours

Night work is NOT permitted due to the residential nature of the surrounding areas.

III. Lane Closure, Planing and Paving Restrictions

1. Maintain a minimum of one 11' lane using flaggers.
2. On SR-87 from SLM 12.51 to SLM 13.00 & on SR-168, place the surface course with a single cold joint located at the centerline. SR-87 and SR-87D around the circle may be paved with a single cold joint located along the center of the 25' pavement width.

IV. Maintenance of Traffic Systems

A. When Required
Whenever any part of the traveled surface is being worked upon or is otherwise not suitable for safe and convenient use by vehicles, traffic control devices sufficient to protect such areas to assure the safe and convenient passage of vehicular traffic shall be installed and maintained. Such traffic control devices and the manner in which they are used shall be consistent with these plans and the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways, hereinafter referred to as the "Manual". The traffic control device system shall constitute the minimum provisions for traffic control for each particular situation. Whenever the Engineer deems it necessary especially where a grade, curve, or merge conditions exists, he may direct that additional or alternative devices be used.

B. Conditions
During all parts of this project, flaggers, signing, barricades, flashing arrows, etc. shall be located as indicated in the Manual or as shown in the Standard Drawings. Two-way traffic shall be maintained at all times.

C. Advance Warning Signs
All advance warning signs for any condition which restricts traffic shall be erected before any such restriction is put into effect. All such signs shall be covered or removed from the view of traffic whenever they are not applicable.

D. Flashing Arrow Requirement
Whenever any part of the traveled surface is closed, the motorists shall be warned and directed by the Contractor through the use of one flashing arrow for each lane closed. Additionally, the provisions set forth in the "Manual" and the applicable Standard Construction Drawings shall be met.

E. Flaggers and Law Enforcement Officers
At least two flaggers are required for each short-term closure for moving operations crossing side streets. The Contractor shall furnish additional flaggers as directed by the Engineer. Law Enforcement Officers (LEO's) shall be required for traffic direction as stated within these plans.

F. Protection of Public
Personal cars shall not be parked within the R/W.

G. Failure to Comply
If there is any failure to comply with provisions for traffic control set out in these plans and notes, or with the provisions of the "Manual", the highway in the vicinity of the work area shall not be considered in a condition for the safe and convenient use by the traveling public. Any failure to keep the highway, in the vicinity of the work area, in a condition for the safe and convenient use by the traveling public shall be considered a breach of this contract. Work shall be suspended until the Contractor complies with the provisions of the aforementioned items.

V. Maintenance of Traffic Materials

A. Signs
Sign dimensions and specifications, including letter sizes shall be as provided in the "Manual", or in design drawings provided by the Department of Transportation. The signs shall be subject to approval of the Engineer prior to the start of the project.

B. Sign Supports
Sign supports shall be of sufficient size and height as to support the signs at the appropriate height. Supports shall be adequate in mass and stability to prevent the signs from being blown over by wind or vehicular generated air turbulence.

C. Flashing Arrows
Whenever any part of the traveled surface is closed, the motorist shall be warned and diverted by the Contractor through the use of one flashing arrow barricade for each lane closed. The Contractor shall refer to Standard Construction Drawing MT-35.10 and the provisions set forth in the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways for all information regarding furnishing, maintaining, and use of flashing arrow barricades. Payment for the above shall be included in the lump sum bid for Item 614 Maintaining Traffic.

D. Drums
Drums shall be in accordance with pertinent sections of the Ohio Manual of Uniform Traffic Control Devices. All costs for installing, maintaining and subsequent removal of said drums shall be included in the lump sum bid price for Item 614 Maintaining Traffic.

E. Cones
Cones shall be located as shown in the 'Manual' and the Standard Drawings.

F. Flashers
Flashers shall be 12 volt battery-operated models with 7 inch diameter yellow lenses illuminated by rapid intermittent flashers of short duration and shall be placed on all signs at all times as required by the 'Manual' and the Standard Construction Drawings.

VI. Payment

All work and traffic control devices shall be in accordance with CMS 614 and other applicable portions of the specifications, as well as the Ohio Manual of Uniform Traffic Control Devices. Payment for all labor, equipment and materials shall be included in the lump sum contract price for Item 614, Maintaining Traffic, unless separately itemized in the plan.

Suspension of Work

If the Contractor fails to comply with the provisions for traffic control as set forth in these plans or with provisions of the OMUTCD, the Engineer shall suspend work until the Contractor complies with the necessary requirements.

Item 614 Asphalt Concrete for Maintaining Traffic

This item shall be used to install and remove temporary asphalt ramps at butt joints, and drainage/utility castings, where required. Material shall be removed prior to the placement of the next course of asphalt.

The following estimated quantity has been included in the General Summary for use as directed by the Engineer for the maintenance of traffic:

Item 614 Asphalt Concrete for Maintaining Traffic.....**100 Cu Yd**

Placement of Asphalt Concrete

Two-way traffic shall be maintained at all times except that one-way traffic will be permitted for minimum periods of time consistent with the requirements of the specifications for protection of completed asphalt concrete courses.

Item 614 Maintaining Traffic – Uneven Pavement Signs

Immediately after planing and paving operations, W8-11-48 "UNEVEN LANES" signs shall be installed to warn motorists of elevation differences where they exist. The signs shall be installed at intervals not to exceed ½ mile. Payment for providing, erecting, maintaining and removing W8-11-48 "UNEVEN LANES" signs shall be made under the lump sum price bid for Item 614 Maintaining Traffic.

Construction Traffic

All construction traffic shall use acceptable truck routes to access the construction area. Use of local residential streets is strictly prohibited unless allowed in writing by the local enforcement authority.

Alternate Methods

If the Contractor so elects, he may submit alternate methods for the maintenance of traffic, provided the intent of the provisions is followed and no additional inconvenience to the traveling public results there from. No alternate plan shall be placed into effect until approval has been granted in writing, by the Director.

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Item 614 Work Zone Pavement Markings

Class I pavement marking quantities shall be used during the time between the pavement planing and the placement of the intermediate course, between the placement of the intermediate course and the surface course, and the time between the placement of the surface course and the application of final markings, without regard for the duration of these periods. Quantities provided below are for the milled surface, intermediate surface and surface course (3 total applications) on SR-87, and for the intermediate surface in the planed area, intermediate course, and surface course (2000' strip of center & edge lines plus 2 total applications) on SR-168. The following estimated quantities have been carried to the General Summary for use at locations identified by the Engineer for work zone pavement markings.

Item 614 Work Zone Center Line, Class I, 642 Paint	6.06 Mile
Item 614 Work Zone Edge Line, Class I, 642 Paint	6.55 Mile
Item 614 Work Zone Transverse/Diagonal Line, Class I, 642 Paint	510 Feet
Item 614 Work Zone Stop Line, Class I, 642 Paint	238 Feet
Item 614 Work Zone Crosswalk Line, Class I, 642 Paint	3,019 Feet
Item 614 Work Zone School Symbol Marking, 72", Class I, 642 Paint	3 Each

Contractor's Equipment - Operation and Storage

Vehicles and equipment shall always move with, and not across or against the flow of traffic. Vehicles and other equipment shall not park or stop except within designated work areas; and shall not enter and leave work areas in a manner which will be hazardous to, or interfere with the normal traffic flow. Personal vehicles will not be permitted to park within the right-of-way except in specific areas designated by the Engineer.

Equipment, vehicles and materials shall not be stored or parked within 30 feet of the traveled way unless 6 feet behind PCB or guardrail.

All work vehicles and equipment that enters the work zone more than once a day must be equipped with at least one flashing, rotating, or oscillating amber light that is visible in all directions of traffic for at least one quarter of a mile, day or night.

Maintenance of Traffic Control Zones

The Contractor shall be responsible to maintain the signs, drums and temporary pavement markings at the locations detailed in the plans or specified in the Standard Drawings. When the Contractor is notified of deficiencies he shall correct the deficiencies as soon as possible, preferably within 12 hours and no later than 24 hours. If any noted deficiencies are not corrected within 24 hours the Engineer shall deduct one day pay for Item 614 Maintaining Traffic, not as a penalty but as liquidated damages. The Contractor shall be subject to these liquidated damages for each and every day that these provisions are not met. All costs for maintaining the work zones as described above shall be included under Item 614 Maintaining Traffic.

Lanes Open During Holidays and Special Events

No work shall be performed and all existing lanes shall be open to traffic during the following designated holidays or events:

Christmas	Forth of July
New Years	Labor Day
Memorial Day	Thanksgiving

The Great Geauga County Fair
(Thursday, August 28, 2008 – Monday, September 1, 2008)

The period of time that the lanes are to be open depends on the day of the week on which the holiday or event falls. The following schedule shall be used to determine this period:

Day of the Week	Times All Lanes Must Be Open to Traffic
Sunday	12:00 Noon Friday through 12:00 Noon Monday
Monday	12:00 Noon Friday through 12:00 Noon Tuesday
Tuesday	12:00 Noon Monday through 12:00 Noon Wednesday
Wednesday	12:00 Noon Tuesday through 12:00 Noon Thursday
Thursday	12:00 Noon Wednesday through 12:00 Noon Monday
Friday	12:00 Noon Thursday through 12:00 Noon Monday
Saturday	12:00 Noon Friday through 12:00 Noon Monday

No extensions of time shall be granted for delays in material deliveries, unless such delays are industry-wide, or for labor strikes, unless such strikes are area-wide.

Should the Contractor fail to meet any of these requirements, the Contractor shall be assessed liquidated damages in accordance with CMS 108.07.

Planed Surfaces

The duration of time between removing the existing asphalt concrete pavement and placing the intermediate course of asphalt shall be kept to a minimum. In no instance shall this time exceed 15 calendar days. This is to ensure that the potential degradation of the existing asphalt concrete due to traffic is kept to a minimum.

Sequence of Operations

SR-87 & SR-87D within circle

1. Plane asphalt from locations shown on plan sheets and place temporary pavement markings.
2. Perform pavement repairs.
3. Place asphalt concrete intermediate course and temporary pavement markings.
4. Adjust castings to grade and perform reconstructions to grade as needed.
5. Place asphalt concrete surface course and final pavement markings.

SR-87 from SLM 12.51 to SLM 13.00

1. Plane asphalt from locations shown on plan sheets and place temporary pavement markings.
2. Perform pavement repairs.
3. Place asphalt concrete intermediate course and temporary pavement markings.
4. Adjust castings to grade and perform reconstructions to grade as needed.
5. Place asphalt concrete surface course and final pavement markings.

SR-168

1. Plane asphalt between Sta. 34+00 and Sta. 54+00. Place 1½ inch lift of Item 448 Asphalt Concrete Intermediate Course, Type 1, PG64-22 (Variable) and temporary pavement markings on the repaired area prior to opening the lanes to traffic. Maintain at least one 10' lane with flaggers throughout the duration of this work.
2. Perform pavement repairs.
3. Place asphalt concrete intermediate course and temporary pavement markings.
4. Adjust castings to grade as needed.
5. Place asphalt concrete surface course and final pavement markings.

Parkman Yard

1. Excavate area shown on plan sheets behind salt dome.
2. Compact subgrade.
3. Place aggregate base and asphalt concrete base in excavated area.
4. Perform partial depth pavement repairs as needed.
5. Adjust castings to proposed grade as needed.
6. Plane areas adjacent to concrete or to allow for proper drainage as described in plan note on Sheet 25.
7. Place asphalt concrete surface course.

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Item 614 Law Enforcement Officer with Patrol Car

In addition to the requirements of CMS 614 and the Ohio Manual of Uniform Traffic Control Devices (OMUTCD), a uniformed law enforcement officer and official patrol car with working top-mounted emergency flashing lights shall be provided for controlling traffic for the following tasks:

- For lane closures within Burton Circle to help navigate traffic around paving operations.

Law enforcement officers (LEOs) should not be used where the OMUTCD intends that flaggers be used. The LEOs are considered to be employed by the Contractor and the Contractor shall be responsible for their actions. Although they are employed by the Contractor, the Engineer shall have control over their placement. The official patrol car shall be a public safety vehicle as required by the Ohio Revised Code. The Contractor shall make arrangements for these services with the following departments:

Burton Police Department
14588 W. Park St.
Burton, OH 44021
(440) 834-1234

Law enforcement officers with patrol car required by the traffic maintenance tasks above shall be paid for on a unit price hourly basis under Item 614, Law Enforcement Officer with Patrol Car.

The following estimated quantities have been carried to the General Summary:

Item 614 Law Enforcement Officer with Patrol Car.....**200 Hours**

The hours paid shall include minimum show-up time required by the law enforcement agency involved. If Contractors wish to utilize LEOs for flagging and traffic control other than for that required in these plans, they may do so at their own expense. Payment for the excess above the contract requirements will be included under Item 614, Maintaining Traffic.

Item 614 Portable Changeable Message Sign, As Per Plan

The Contractor shall furnish, install, maintain, and remove, when no longer needed, a changeable message sign, on site, for the duration of the project. The sign shall be of a type shown on a list of approved PCMS units maintained by the Director. This list is available on the ODOT website at http://www.dot.state.oh.us/testlab/applists/misc/pcms.htm.

Each sign shall be trailer-mounted and equipped with a functional dimming mechanism, to dim the sign during darkness, and a tamper and vandal proof enclosure. Each sign shall be provided with appropriate training and operation instructions to enable on-site personnel to operate and troubleshoot the unit. The sign shall also be capable of being powered by an electrical service drop from a local utility company. PCMS trailers should be delineated on a permanent basis by affixing retroreflective material, in a continuous line on the face of the trailer as seen by oncoming road users.

Placement, operation, maintenance, and all activation of the signs by the Contractor shall be as directed by the Engineer. The PCMS shall be located in a highly visible position yet protected from traffic. The Contractor shall, at the direction of the Engineer, relocate the PCMS to improve visibility or accommodate changed conditions. When not in use, the PCMS shall be turned off. Additionally, when not in use for extended periods of time, the PCMS shall be turned, facing away from all traffic, and shall display one or more high-intensity yellow reflective sheeting surfaces of 9-inch by 15-inch minimum size facing traffic.

The Engineer shall be provided access to each sign unit and shall be provided with appropriate training and operation instructions to enable ODOT personnel to operate and troubleshoot the unit, and to revise sign messages, if necessary.

All messages to be displayed on the sign will be provided by the Engineer. A list of required pre-programmed messages will be given to the Contractor at the project preconstruction conference. The sign shall have the capability to store up to 99 messages. Message memory or pre-programmed displays shall not be lost as a result of power failures to the on-board computer. The sign legend shall be capable of being changed in the field. Three-line presentation formats with up to six message phases shall be supported. PCMS format shall permit the complete message for each phase to be read at least once.

The PCMS shall contain an accurate clock and programming logic which will allow the sign to be activated, deactivated, or messages changed automatically at different times of the day for different days of the week.

The PCMS unit shall be maintained in good working order by the Contractor in accordance with the provisions of CMS 614.07. The Contractor shall, prior to activating the unit, make arrangements with an authorized service agent for the PCMS to assure prompt service in the event of failure. Any failure shall not result in the sign being out of service for more than 12 hours, including weekends. Failure to comply may result in an order to stop work and open all traffic lanes and/or in the Department taking appropriate action to safely control traffic. The entire cost to control traffic, accrued by the Department due to the Contractor's noncompliance, will be deducted from moneys due, or to become due the Contractor on his contract.

The Contractor shall be responsible for 24-hour-per-day operation and maintenance of these signs on the project for the duration of the phases when the plan requires their use.

Payment for the above described item shall be at the contract unit price. Payment shall include all labor, materials, equipment, fuels, lubricating oils, software, hardware, and incidentals to perform the above described work. There shall be two (2) Class I or Class II portable changeable message signs at 3 months each.

Item 614 Portable Changeable Message Sign, As Per Plan.....**6 Sign-Month**

SHEET NUMBER 7	8	9	10	11	14	15	25	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
												ROADWAY	
155								202	54000	155	EACH	RAISED PAVEMENT MARKER REMOVED	
							495	203	10000	495	CU YD	EXCAVATION	
							990	204	10000	990	SQ YD	SUBGRADE COMPACTION	
	1							604	39501	1	EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN	8
												EROSION CONTROL	
								832	30000	1,000	EACH	EROSION CONTROL	
												DRAINAGE	
	20							604	09001	20	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	8
	4							604	09500	4	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
	10							604	34501	10	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	8
	5,000							SPECIAL	60450000	5,000	POUND	MISCELLANEOUS METAL	8
							30	605	31100	30	FT	AGGREGATE DRAINS	
												PAVEMENT	
	1,700						50	251	01000	1,750	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR	
							200	254	01000	200	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
					21,382			254	01001	21,382	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	8
	267							255	10100	267	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS	
	292							255	20000	292	FT	FULL DEPTH PAVEMENT SAWING	
							165	301	46000	165	CU YD	ASPHALT CONCRETE BASE, PG64-22	
							330	304	20000	330	CU YD	AGGREGATE BASE	
					3,569		460	407	10000	4,029	GALLON	TACK COAT	
					2,029			407	14000	2,029	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
					1,469			446	47029	1,469	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN	8
					1,203			448	46020	1,203	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (VARIABLE)	
							190	448	47020	190	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
					32			448	48020	32	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	
					120			617	10101	120	CU YD	COMPACTED AGGREGATE, AS PER PLAN	8
												WATER WORK	
	3							638	10801	3	EACH	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN	8

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General Summary

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SHEET NUMBER 7	8	9	10	11	14	15	25	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
												TRAFFIC CONTROL	
	135							621	00100	135	EACH	RPM	
						66		644	00500	66	FT	STOP LINE	
						933		644	00600	933	FT	CROSSWALK LINE	
						170		644	00700	170	FT	TRANSVERSE/DIAGONAL LINE	
						2.53		646	10001	2.53	MILE	EDGE LINE, AS PER PLAN	8
						2.02		646	10201	2.02	MILE	CENTER LINE, AS PER PLAN	8
						20		646	10401	20	FT	STOP LINE, AS PER PLAN	8
						110		646	10501	110	FT	CROSSWALK LINE, AS PER PLAN	8
						1		646	20101	1	EACH	SCHOOL SYMBOL MARKING, 72", AS PER PLAN	8
						2.53		646	10001	2.53	MILE	EDGE LINE, AS PER PLAN - (POLYCARB) - ALTERNATE BID	8
						2.02		646	10201	2.02	MILE	CENTER LINE, AS PER PLAN - (POLYCARB) - ALTERNATE BID	8
						20		646	10401	20	FT	STOP LINE, AS PER PLAN - (POLYCARB) - ALTERNATE BID	8
						110		646	10501	110	FT	CROSSWALK LINE, AS PER PLAN - (POLYCARB) - ALTERNATE BID	8
						1		646	20101	1	EACH	SCHOOL SYMBOL MARKING, 72", AS PER PLAN - (POLYCARB) - ALTERNATE BID	8
												MAINTENANCE OF TRAFFIC	
				200				614	11100	200	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
		100						614	13000	100	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
				6				614	18601	6	SIGN MNTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	11
			6.06					614	21100	6.06	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
			6.55					614	22100	6.55	MILE	WORK ZONE EDGE LINE, CLASS I, 642 PAINT	
			510					614	25200	510	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
			238					614	26200	238	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
			3,019					614	27200	3,019	FT	WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT	
			3					614	31720	3	EACH	WORK ZONE SCHOOL SYMBOL MARKING, 72", CLASS I, 642 PAINT	
								614	11000	LUMP		MAINTAINING TRAFFIC	
6								619	16011	6	MONTH	FIELD OFFICE, TYPE B, AS PER PLAN	7
								623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
								624	10000	LUMP		MOBILIZATION	

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General Summary

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REF NO.	SHEET NO.	STATION TO STATION OR SLM TO SLM		LENGTH L	END WIDTHS W	SURFACE AREA A A=LxW/9	PLANIMETERED AREAS	254 Pavement Planing, Asphalt Concrete, As Per Plan 1½"	254 Pavement Planing, Asphalt Concrete, As Per Plan 2½"	407 Tack Coat	407 Tack Coat for Intermediate Course	446 Asphalt Concrete Surface Course, Type 1, PG70-22M, As Per Plan, 1½"	448 Asphalt Concrete Intermediate Course, Type 1, PG64-22 1½" (Variable)	448 Asphalt Concrete Intermediate Course, Type 1, PG64-22 1" (Variable)	448 Asphalt Concrete Surface Course, Type 1, PG64-22 (Driveways) 2½"	617 Compacted Aggregate, As Per Plan 1¼" Avg.
				Feet	Feet	Sq Yd	Sq Yd	Sq Yd	Sq Yd	Gallon	Gallon	Cu Yd	Cu Yd	Cu Yd	Cu Yd	Cu Yd
		SR-87 Mainline														
		SLM 12.51, SR-87	SLM 12.58 Back, SR-87	370	32	1,314			1314	131	66	55		37		6
		SLM 12.60 Ahead, SR-87	SLM 13.00, SR-87	2,112	25	5,867			5867	587	293	244		163		
		SLM 13.00, SR-87	SLM 13.01, SR-87	86	25-65		350		350	35	18	15		10		
		SLM 13.01, SR-87	SLM 13.04, SR-87 EB Turn	160	25	440			440	44	22	18		12		
		SLM 13.04, SR-87 EB Turn	SLM 13.12, SR-87	423	25	1,173			1173	117	59	49		33		
		SLM 13.12, SR-87 EB Turn	SLM 13.16, SR-87 EB Turn	83	25		143		143	14	7	6		4		
		SLM 13.12, SR-87	SLM 0.00, SR-87D	130	25	361			361	36	18	15		10		
		SLM 13.16, SR-87 WB Turn	SLM 0.00, SR-87D	72	25		135		135	14	7	6		4		
		SLM 0.00, SR-87D	SLM 0.13, SR-87D	687	25	1,907			1907	191	95	79		53		
		SLM 0.13, SR-87D	SLM 0.14, SR-87D	75	25-50		362		362	36	18	15		10		
		SLM 0.14, SR-87D	SLM 0.15, SR-87D	88	25-31		274		274	27	14	11		8		
		SLM 0.15, SR-87D	SLM 0.29, SR-87D	739	25	2,053			2053	205	103	86		57		
		SLM 0.29, SR-87D WB Turn	SLM 13.01, SR-87	75	25		158		158	16	8	7		4		
		SLM 0.29, SR-87D	SLM 0.30, SR-87D	138	25	383			383	38	19	16		11		
		SR-87 Intersections														
		Rapids Rd.					13		13	1	1	1		1		
		Elmar Blvd.					42		42	4	2	2		1		
		Garden St.		No Work												
		Baird St.		No Work												
		SR-168 Mainline														
		0+20.00 (SLM 0.21)	28+00.00 (SLM 0.74)	2,780	22	6,796				680	340	283		189		42
		28+00.00 (SLM 0.74)	34+00.00 (SLM 0.85±)	600	24	1,600				160	80	67		44		10
		34+00.00 (SLM 0.85±)	54+00.00 (SLM 1.23±)	2,000	24	5,333		5,333		533	533	222	222	148		30
		54+00.00 (SLM 1.23±)	74+40.78 (SLM 1.63)	2,040.78	24	5,442				544	272	227		151		32
		SR-168 Intersections														
		SR-528 Approach					78		78	8	4	4		2		
		Norton St. Approach		19			50		50	5	3	2		2		
		Church St. Approach		19			58		58	6	3	2		2		
		Smith St. Approach		19			58		58	6	3	2		2		
		Newcomb Rd. Approach					285		285	29	14	12		8		
		Nash Rd. East Approach					265		265	27	13	11		7		
		Nash Rd. West Approach					280		280	28	14	12		8		
		SR-168 Driveways														
		(Approx. 35 Drives)		10' Depth	12' Avg.	467				47					32	
		TOTALS CARRIED TO GENERAL SUMMARY						21,382		3,569	2,029	1,469	1,203		32	120

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Pavement Subsummary

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REF NO.	SHEET NO.	SLM TO SLM		LENGTH	LENGTH	644						646								
						Stop Line	Crosswalk Line	Transverse/Diagonal Line (Yellow)				Edge Line, As Per Plan (Yellow)	Edge Line, As Per Plan (White)	Center Line, As Per Plan	Stop Line, As Per Plan	Crosswalk Line, As Per Plan	School Symbol Marking, 72", As Per Plan			
				Mile	Feet	Feet	Feet	Feet				Feet	Feet	Feet	Feet	Feet	Each			
		SR-87 Long Lines																		
		SLM 12.51	SLM 12.58 Back	0.07	370								370	370						
		SLM 12.60 Ahead	SLM 13.04	0.53	2800							200	200	2800						
		SLM 13.04	SLM 13.16	0.12	635							635	635							
		SR-87D Long Lines																		
		SLM 0.00	SLM 0.30	0.30	1584							1700	1700							
		SR-87 Auxilliary Markings																		
		Rapids Rd.					80													
		Elmar Blvd.					52													
		Garden St.					42													
		Baird St. (CR-7 to CR-8 Across SR-87)					60													
		Baird St. (CR-9 to CR-10 Across Baird)					35													
		SLM 13.00	SLM 13.04	0.04	212	17	70													
		SLM 13.04	SLM 13.09	0.05	264		90						48							
		SLM 13.09	SLM 13.12	0.03	160	17	90						35							
		SLM 13.12	SLM 13.16	0.04	212	16	110					90	145							
		SR-87D Auxilliary Markings																		
		SLM 0.00	SLM 0.12	0.12	635		84													
		SLM 0.12	SLM 0.14	0.02	106	16	63	170				96								
		SLM 0.14	SLM 0.16	0.02	106		54													
		SLM 0.16	SLM 0.29	0.13	687															
		SLM 0.29	SLM 0.30	0.01	53		50													
		SLM 0.29	SLM 13.01, SR-87	0.02	106		53													
		SR-168 Long Lines																		
		SLM 0.21	SLM 1.63	1.42	7498								7500	7500						
		SR-168 Auxilliary Markings																		
		0+25														110				
		0+33													20					
		8+50±															1			
		Sub-Totals										2,721	10,633	10,670						
		TOTALS CARRIED TO GENERAL SUMMARY				66	933	170				= 2.53 Mi		= 2.02 Mi	20	110	1			

CALCULATED KDH
CHECKED LDH

Pavement Marking Subsummary

GEA-87-12.51/VAR

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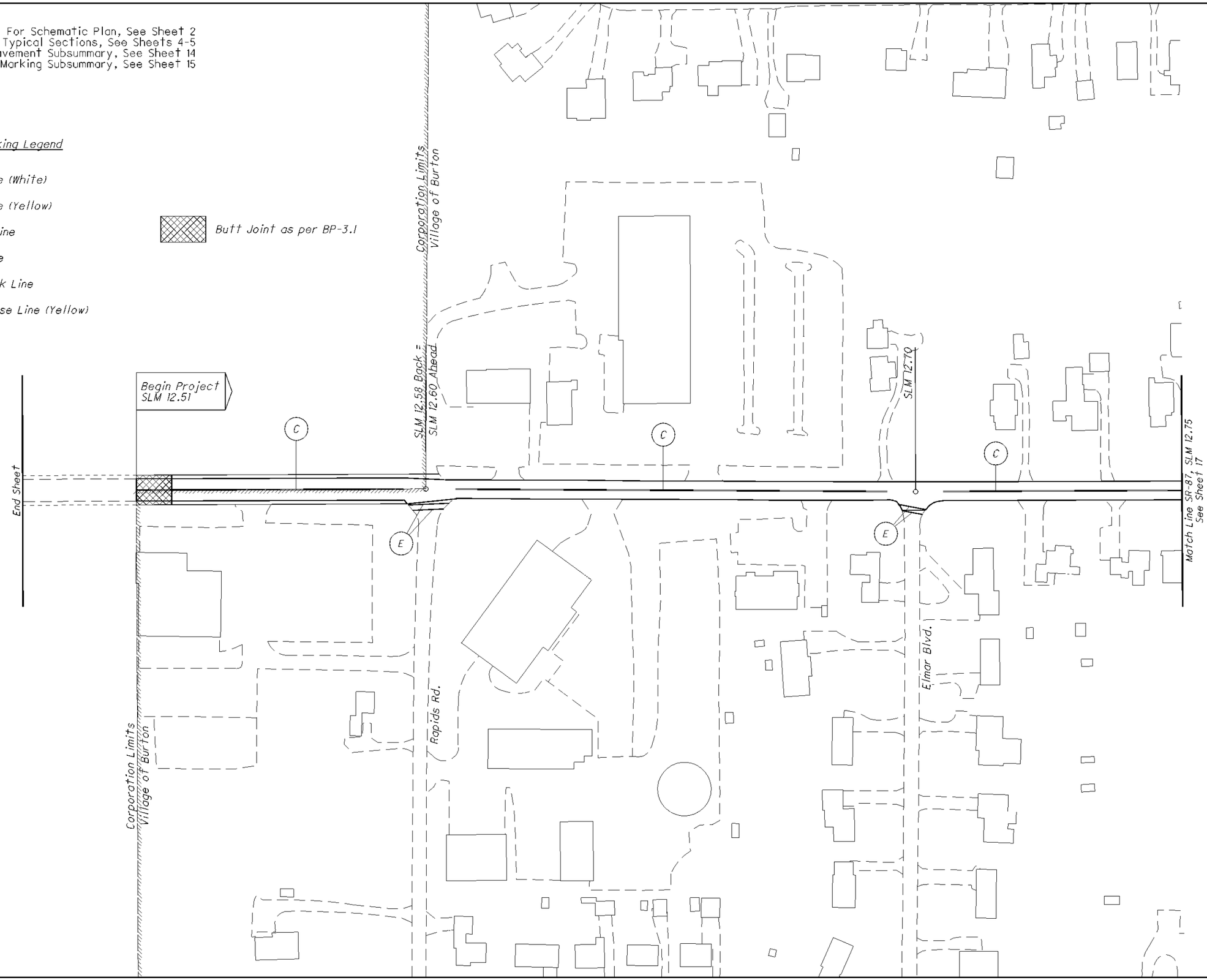
For Schematic Plan, See Sheet 2
For Typical Sections, See Sheets 4-5
For Pavement Subsummary, See Sheet 14
For Pavement Marking Subsummary, See Sheet 15

Pavement Marking Legend

- (A) *Edge Line (White)*
- (B) *Edge Line (Yellow)*
- (C) *Center Line*
- (D) *Stop Line*
- (E) *Crosswalk Line*
- (F) *Transverse Line (Yellow)*

Butt Joint as per BP-3.1



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KDH
CHECKED LDH

General Plan
SR-87, SLM 12.51 to SLM 12.75

GEA-87-12.51/VAR

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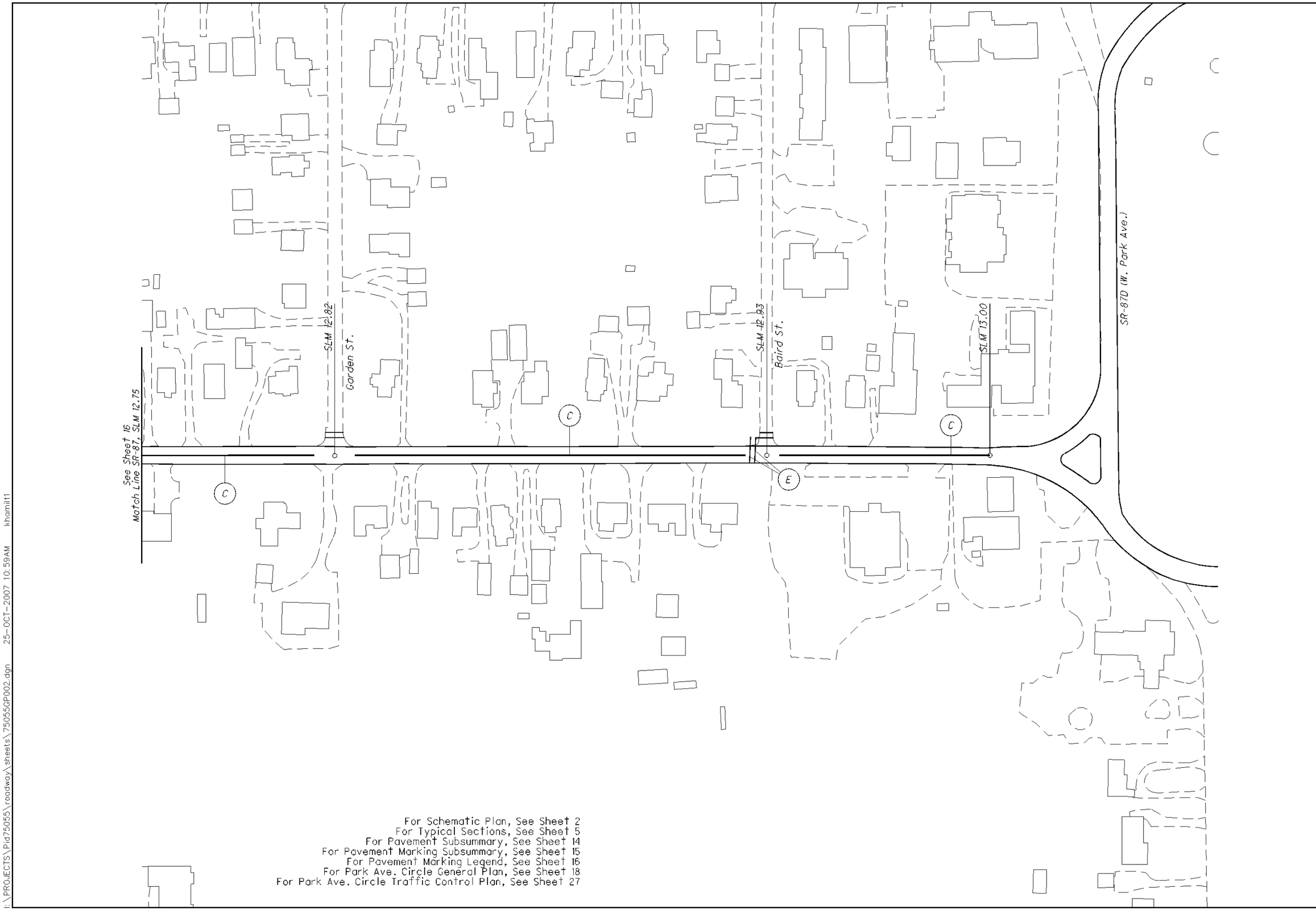

For Schematic Plan, See Sheet 2
For Typical Sections, See Sheet 5
For Pavement Subsummary, See Sheet 14
For Pavement Marking Subsummary, See Sheet 15
For Pavement Marking Legend, See Sheet 16
For Park Ave. Circle General Plan, See Sheet 18
For Park Ave. Circle Traffic Control Plan, See Sheet 27

CALCULATED KDH
CHECKED LDH

General Plan
SR-87, SLM 12.75 to SLM 13.00

GEA-87-12.51/VAR

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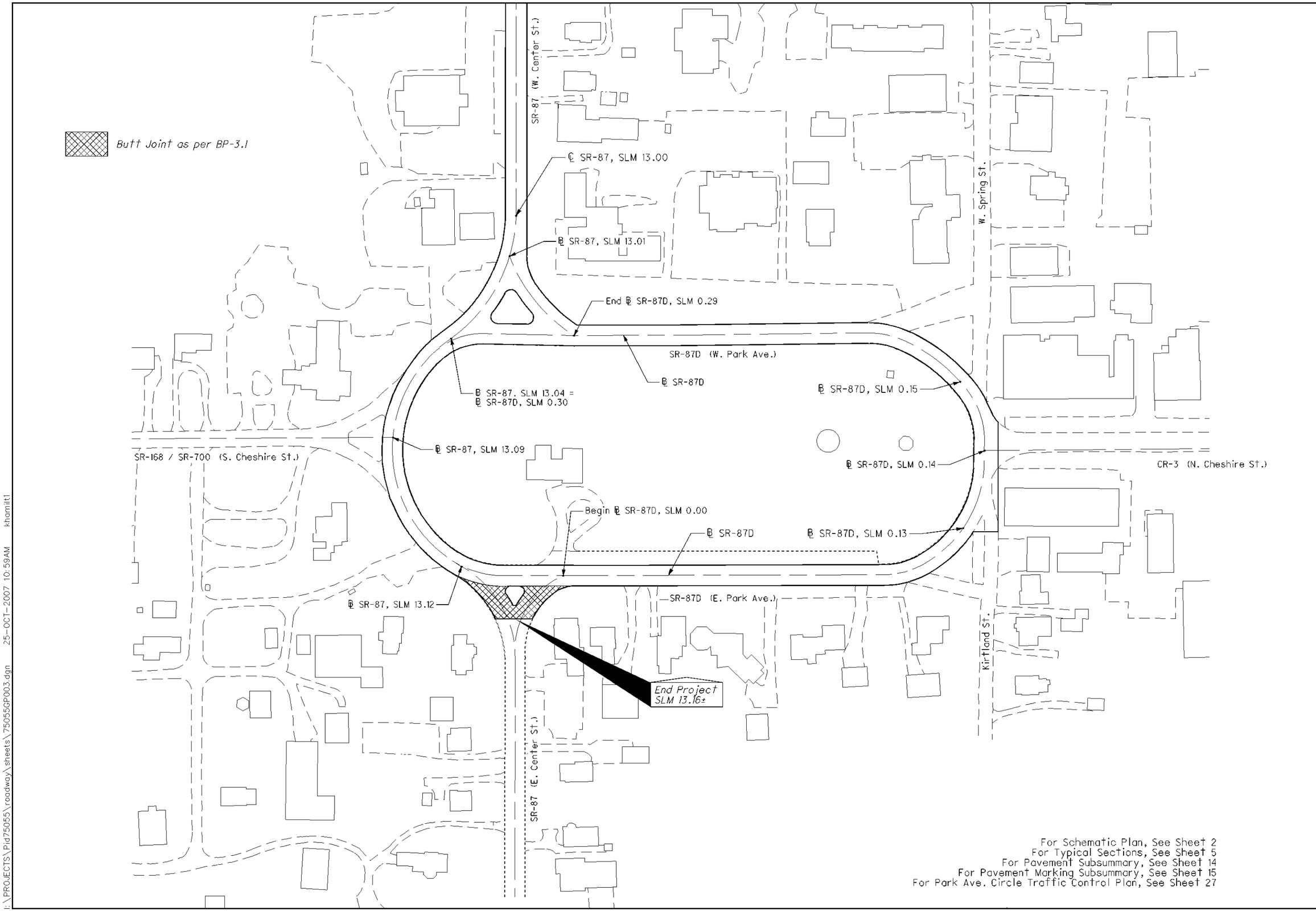

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KDH
CHECKED LDH

General Plan

SR-87, SLM 13.04 to SLM 13.16/ SR-87D SLM 0.00 to SLM 0.30

GEA-87-12.51/ VAR

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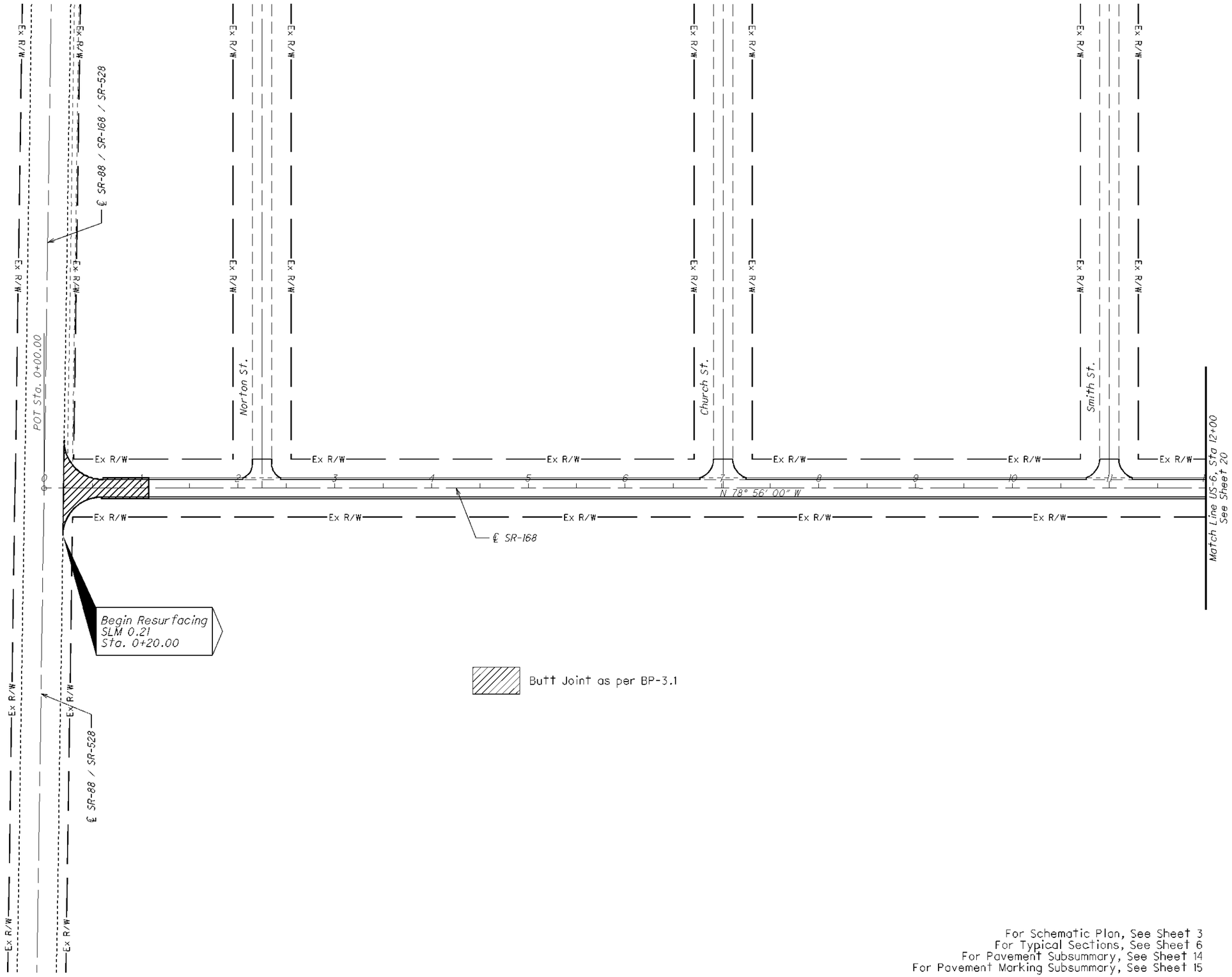

For Schematic Plan, See Sheet 3
For Typical Sections, See Sheet 6
For Pavement Subsummary, See Sheet 14
For Pavement Marking Subsummary, See Sheet 15

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KDH
CHECKED LDH

General Plan
SR-168, Sta 0+00 to Sta 12+00

GEA-87-12.51/VAR

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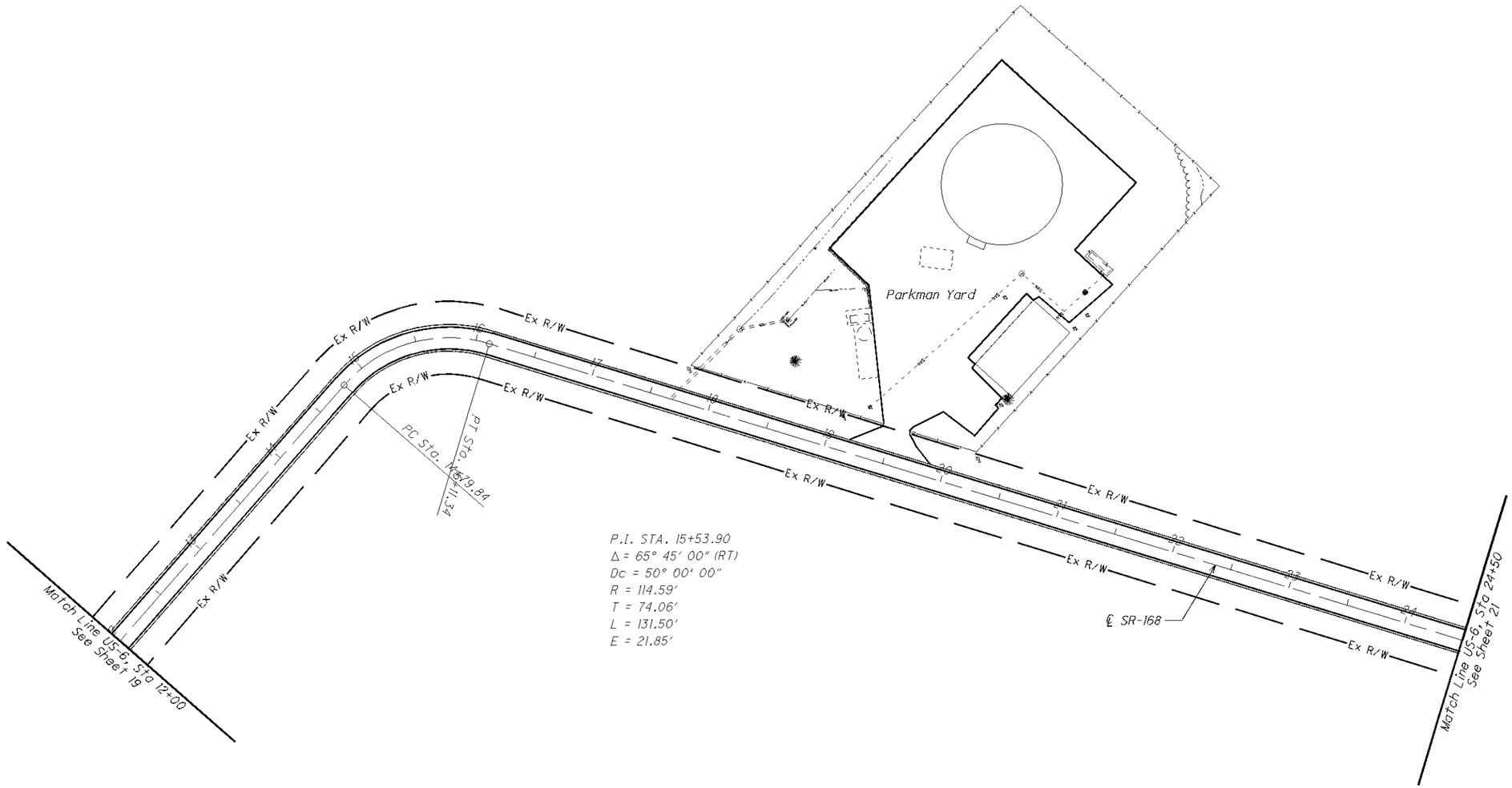

For Schematic Plan, See Sheet 3
For Typical Sections, See Sheet 6
For Pavement Subsummary, See Sheet 14
For Pavement Marking Subsummary, See Sheet 15
For Parkman Yard General Site Plan, See Sheet 25

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KDH
CHECKED LDH

General Plan
SR-168, Sta 12+00 to Sta 24+50

GEA-87-12.51/VAR

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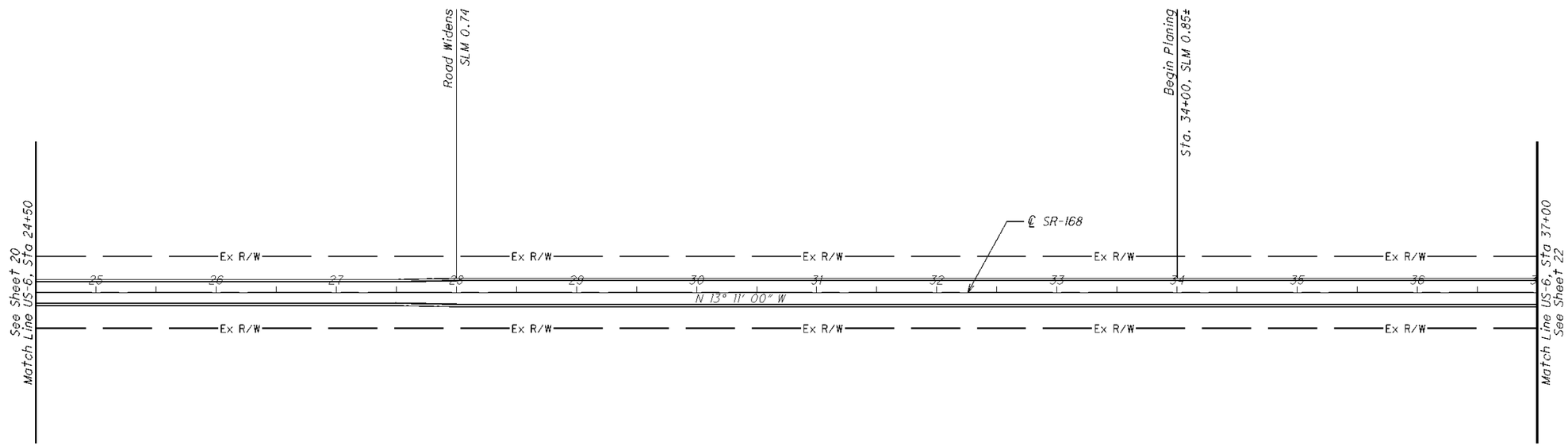

For Schematic Plan, See Sheet 3
For Typical Sections, See Sheet 6
For Pavement Subsummary, See Sheet 14
For Pavement Marking Subsummary, See Sheet 15

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KDH
CHECKED LDH

General Plan
SR-168, Sta 24+50 to Sta 37+00

GEA-87-12.51/VAR

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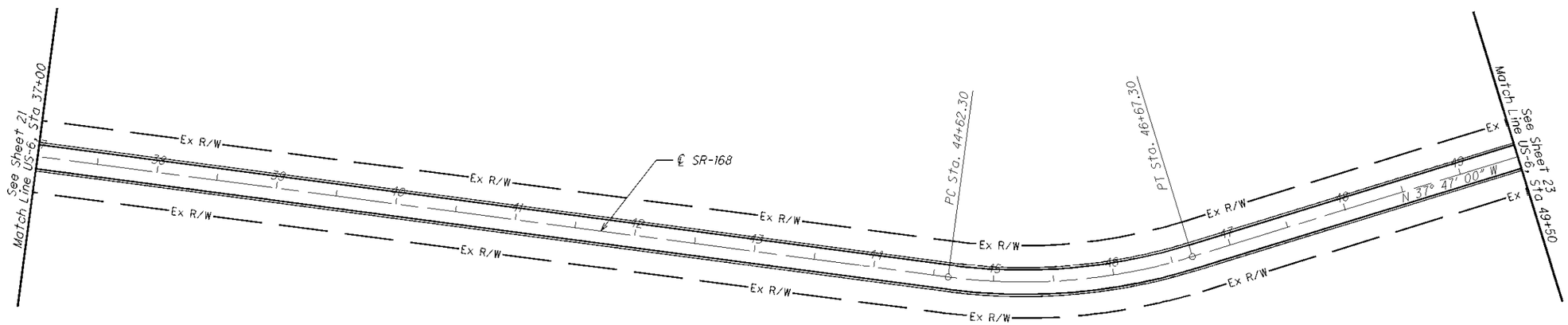

P.I. STA. 45+66.40
Δ = 24° 36' 00" (LT)
Dc = 12° 00' 00"
R = 477.46'
T = 104.10'
L = 205.00'
E = 11.22'

For Schematic Plan, See Sheet 3
For Typical Sections, See Sheet 6
For Pavement Subsummary, See Sheet 14
For Pavement Marking Subsummary, See Sheet 15

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KDH
CHECKED LDH

General Plan
SR-168, Sta 37+00 to Sta 49+50

GEA-87-12.51/VAR

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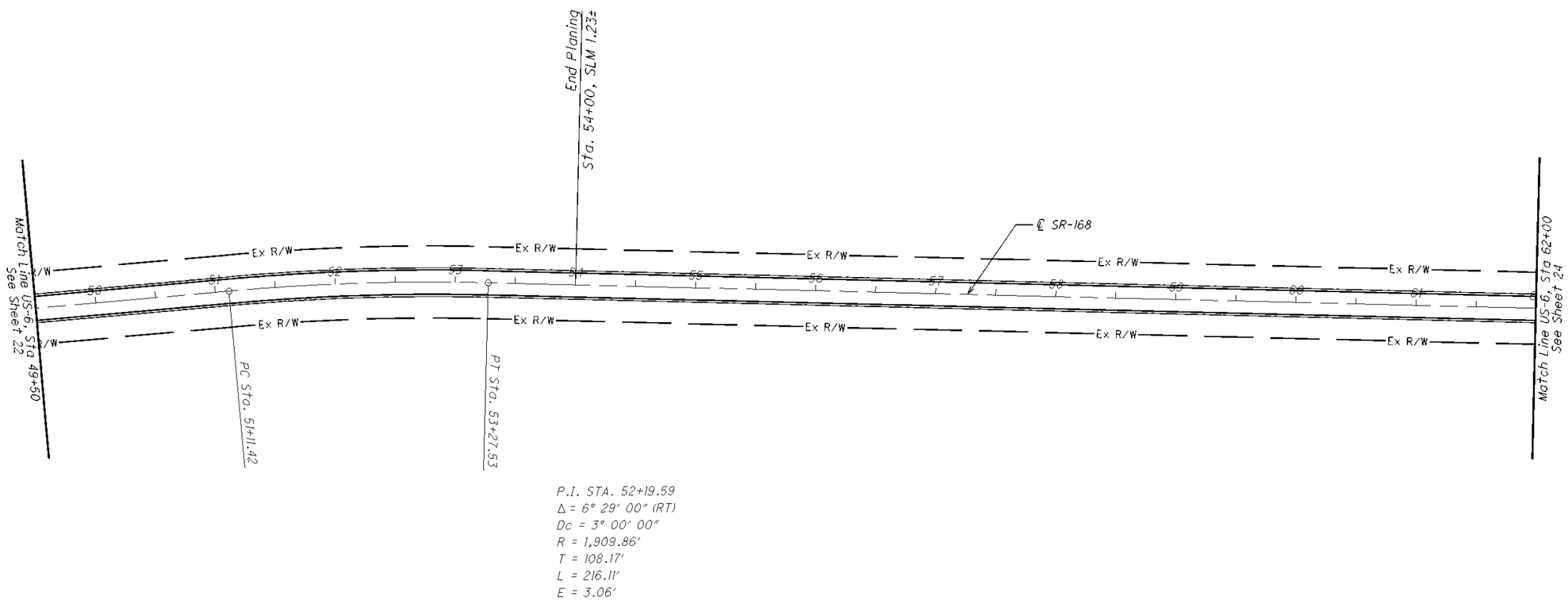

For Schematic Plan, See Sheet 3
For Typical Sections, See Sheet 6
For Pavement Subsummary, See Sheet 14
For Pavement Marking Subsummary, See Sheet 15

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KDH
CHECKED LDH

General Plan
SR-168, Sta 49+50 to Sta 62+00

GEA-87-12.51/VAR

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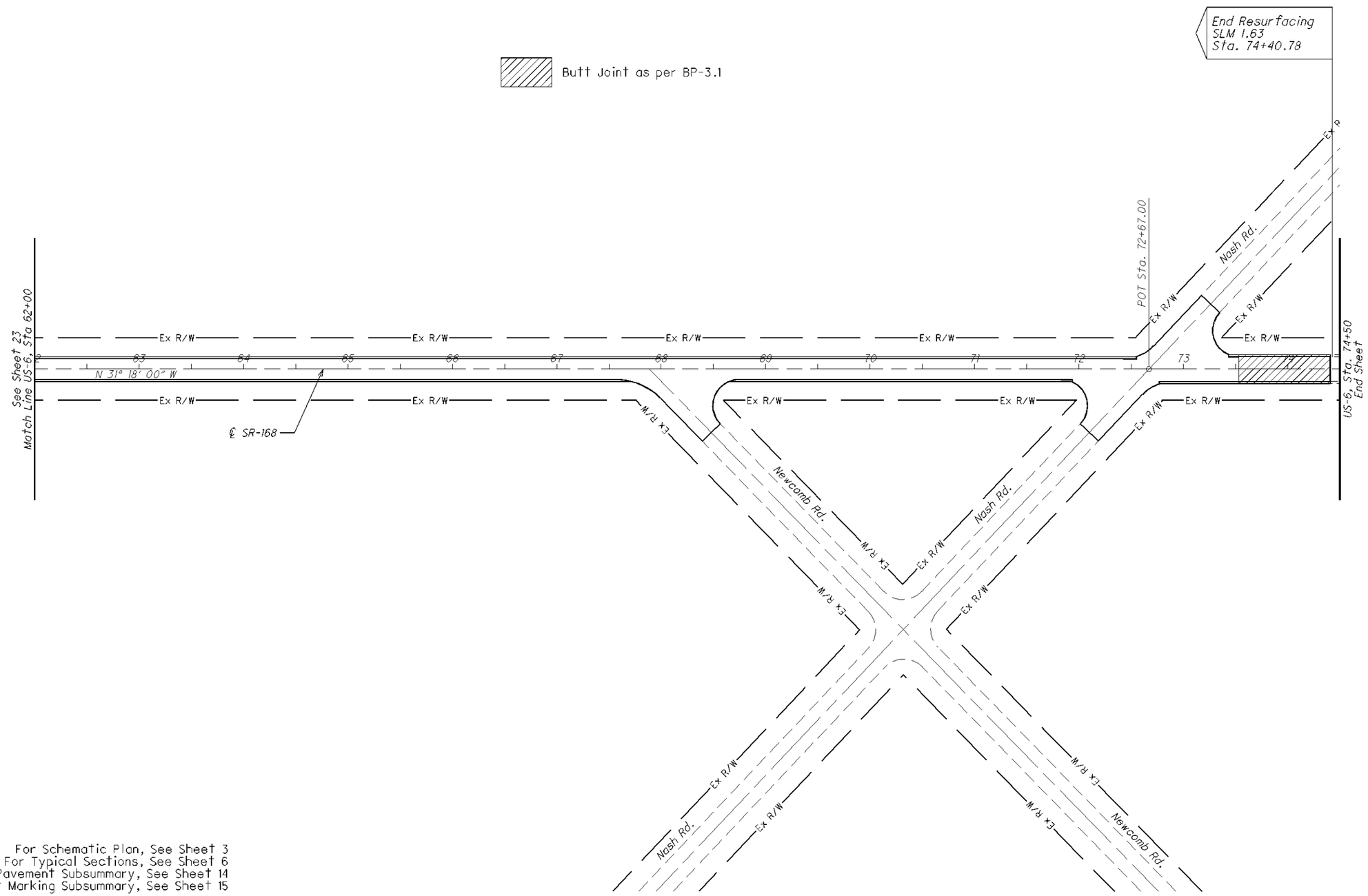

For Schematic Plan, See Sheet 3
For Typical Sections, See Sheet 6
For Pavement Subsummary, See Sheet 14
For Pavement Marking Subsummary, See Sheet 15

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KDH
CHECKED LDH

General Plan
SR-168, Sta 62+00 to Sta 74+40.78

GEA-87-12.51/VAR

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Item 251 - Partial Depth Pavement Repair (Parkman Yard)

Typical repairs in the Parkman Yard shall be 5' x 5' square areas 3" in depth.

For estimated quantities, see subsummary on this sheet.

Item 254 - Pavement Planing, Asphalt Concrete (Parkman Yard)

This item shall be used to plane the existing asphalt concrete that abuts existing concrete pavement or to allow proper drainage to eliminate ponding. The exact locations shall be determined by the Engineer.

For estimated quantities, see subsummary on this sheet.

Item 605 - Aggregate Drains

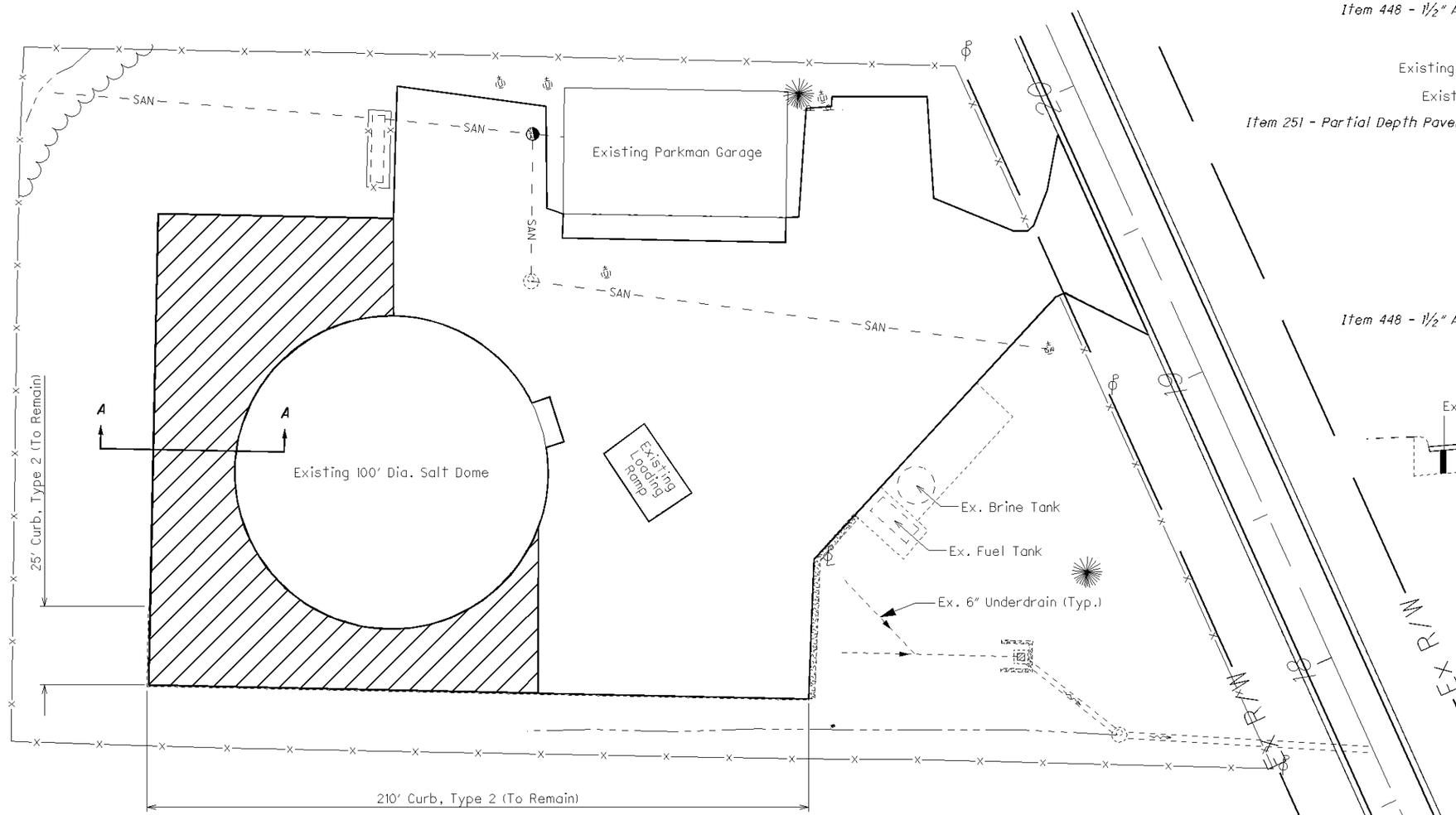
This item shall be used to drain 304 aggregate in the excavated area. The exact locations shall be determined by the Engineer.

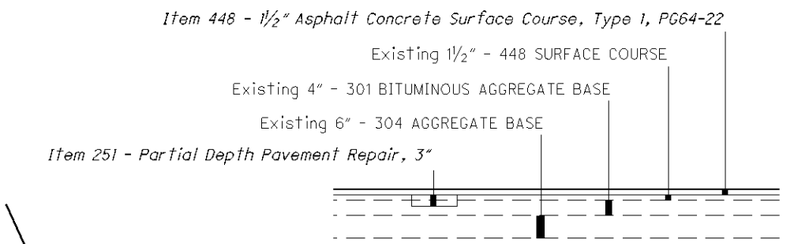
For estimated quantities, see subsummary on this sheet.

PARKMAN YARD ESTIMATED QUANTITIES

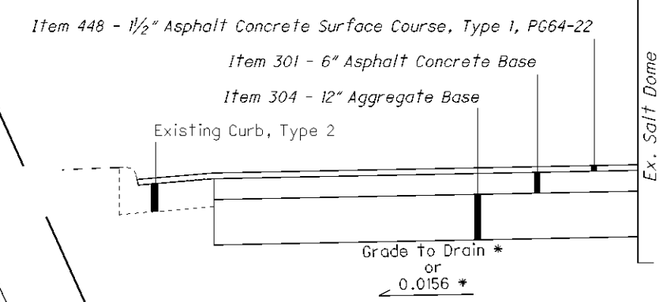
Item 203 - Excavation	495 Cu Yd
Item 204 - Subgrade Compaction	990 Sq Yd
Item 251 - Partial Depth Pavement Repair, 3"	50 Sq Yd
Item 254 - Pavement Planing, Asphalt Concrete	200 Sq Yd
Item 301 - Asphalt Concrete Base, PG64-22, 6"	165 Cu Yd
Item 304 - Aggregate Base, 12"	330 Cu Yd
Item 407 - Tack Coat	460 Gallon
Item 448 - Asphalt Concrete Surface Course, Type 1, PG64-22, 1½"	190 Cu Yd
Item 605 - Aggregate Drains	30 Feet

Area to be Excavated, Subgrade Compacted, Aggregate Base Placed, and Asphalt Concrete Base, PG64-22 Placed Prior to Placement of 448 Asphalt Concrete Surface Course, Type 1, PG64-22





Parkman Yard Pavement Composition



Parkman Yard Excavated Area Composition

Section A-A

* Where no curb exists, grade to drain water off edge of pavement

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED KDH CHECKED EMK

Parkman Maintenance Yard General Site Plan

GEA-87-12.51/VAR

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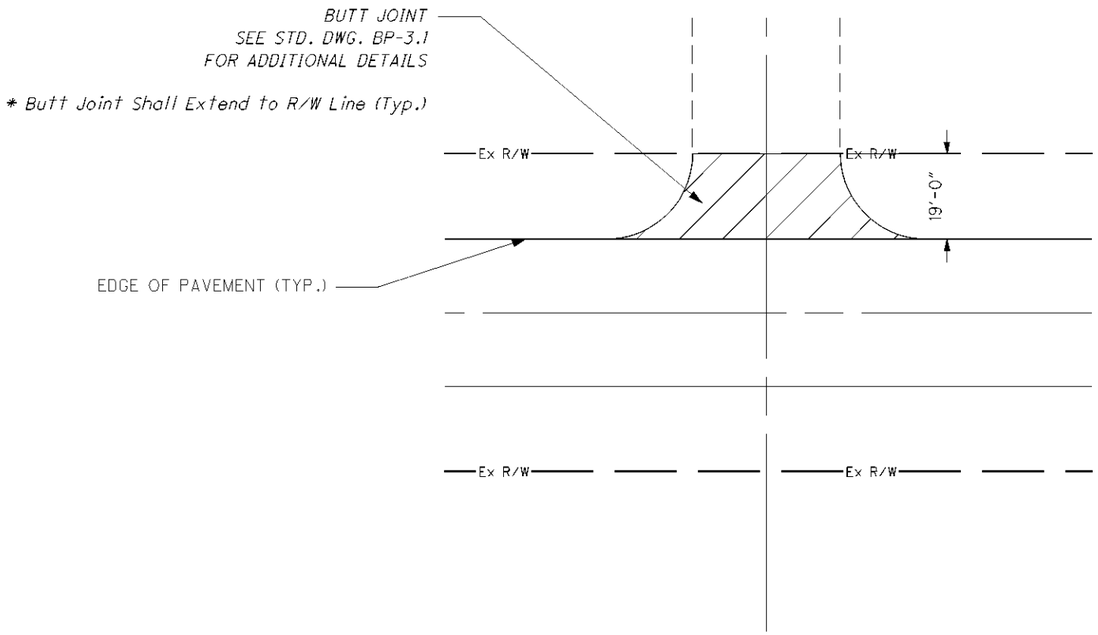
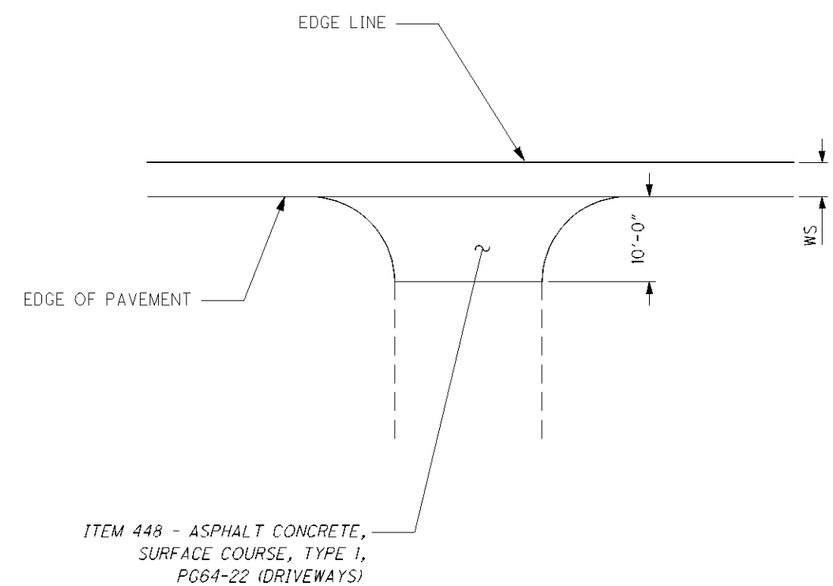


TYPICAL SR-168 INTERSECTION DETAIL



SR-168 DRIVEWAY APRON DETAIL

CALCULATED KDH
CHECKED LDH

Pavement Details - SR-168 Intersections & Driveway Aprons

GEA-87-12.51/VAR

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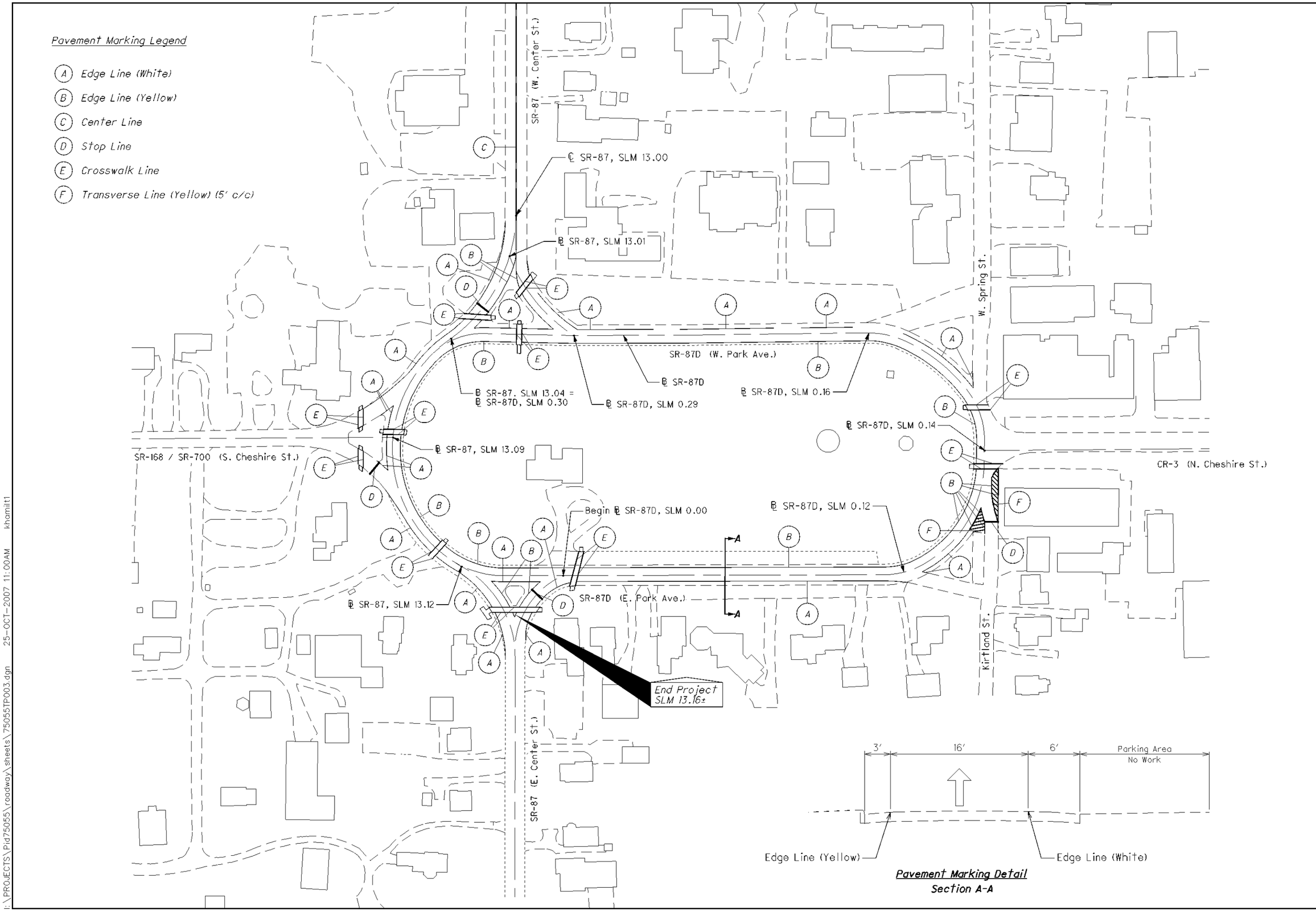
Pavement Marking Legend
A Edge Line (White)
B Edge Line (Yellow)
C Center Line
D Stop Line
E Crosswalk Line
F Transverse Line (Yellow) (5' c/c)
SR-87 (W. Center St.)
℄ SR-87, SLM 13.00
℄ SR-87, SLM 13.01
W. Spring St.
SR-87D (W. Park Ave.)
℄ SR-87D
℄ SR-87, SLM 13.04 =
℄ SR-87D, SLM 0.30
℄ SR-87D, SLM 0.29
℄ SR-87D, SLM 0.16
℄ SR-87D, SLM 0.14
℄ SR-87, SLM 13.09
SR-168 / SR-700 (S. Cheshire St.)
CR-3 (N. Cheshire St.)
Begin ℄ SR-87D, SLM 0.00
℄ SR-87D, SLM 0.12
℄ SR-87, SLM 13.12
SR-87D (E. Park Ave.)
Kirtland St.
End Project
SLM 13.16±
SR-87 (E. Center St.)
3'
16'
6'
Parking Area
No Work
Edge Line (Yellow)
Edge Line (White)
Pavement Marking Detail
Section A-A
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED KDH
CHECKED LDH
Traffic Control Plan
SR-87, SLM 13.04 to SLM 13.16/SR-87D SLM 0.00 to SLM 0.30
GEA-87-12.51/VAR
27
27
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